

# **Workflow Management Using MXES**



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# Workflow Management Using MXES

Rel. 6.0 07/2005

Part Number MED0148







# MXES Curriculum for EAM

**For Training Info, Course Descriptions, and Availability, go to:**

**Web:** <http://www.mro.com/corporate/mroservices/training/>  
**E-mail:** [TrainSVC@mro.com](mailto:TrainSVC@mro.com)  
**Fax:** 781.280.2201

**Key**



*Instructor-Led Training*



*Virtual Classroom Training*

## Foundation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0138	MXES Navigation & Querying	½ day, or 3-hr virtual		None

## Upgrade

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0136	MXES for EAM - New Features	3 days		None (Note: for users upgrading from Maximo 5)

## Implementation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0146	MXES Immersion Training for EAM	5 days		MXES Navigation & Querying
MED0155	Maintenance Best Practices Using MXES	2 days		None

## End-User / Functional

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0137	System Administration for MXES	3 days		MXES Navigation & Querying
MED0139	Inventory Management Using MXES	3 days		MXES Navigation & Querying
MED0143	Work Management Using MXES	3 days		MXES Navigation & Querying
MED0147	Using SQL with MXES	1 day		MXES Navigation & Querying
MED0148	Workflow Management Using MXES	5 days		MXES Immersion Training for EAM (Note: Extensive hands-on Maximo experience preferred)
MED0150	Purchasing with MXES	2 days		MXES Navigation & Querying
MED0151	Developing MXES Reports with Actuate	TBD		MXES Navigation & Querying, Using SQL with MXES
MED0154	The MXES KPI Manager (VCT)	3-hr virtual		Using SQL with MXES





# MXES Curriculum for ITSM / ITAM

**For Training Info, Course Descriptions, and Availability, go to:**

**Web:** <http://www.mro.com/corporate/mroservices/training/>  
**E-mail:** [TrainSVC@mro.com](mailto:TrainSVC@mro.com)  
**Fax:** 781.280.2201

**Key**



*Instructor-Led  
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*Virtual Classroom  
Training*

## Foundation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0138	MXES Navigation & Querying	½ day, or 3-hr virtual		None
MED0140	Introduction to ITIL (VCT)	3-hr virtual		None

## Implementation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0149	MXES Immersion Training for IT	5 days		MXES Navigation & Querying
MED0145	Implementing ITIL with MXES	1 day		Introduction to ITIL (VCT)

## End-User / Functional

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0141	IT Service Management Using MXES	3 days		MXES Navigation & Querying
MED0142	IT Asset Configuration & Management in MXES	2 days		MXES Navigation & Querying
MED0137	System Administration for MXES	3 days		MXES Navigation & Querying
MED0147	Using SQL with MXES	1 day		MXES Navigation & Querying
MED0148	Workflow Management Using MXES	5 days		MXES Immersion Training for IT ( <i>Note: Extensive hands-on Maximo experience preferred</i> )
MED0150	Purchasing with MXES	2 days		MXES Navigation & Querying
MED0151	Developing MXES Reports with Actuate	TBD		MXES Navigation & Querying, Using SQL with MXES
MED0154	The MXES KPI Manager (VCT)	3-hr virtual		Using SQL with MXES

Course Name	Manager Track		Implementation Track		Developer Track			Administrator Track			End-User Track			
	Managers, Supervisors, & Directors	Service Level Managers	Maximo Implementation Team	Workflow Implementation Team	Maximo Developer / Maximo App Support	Report Writer	Workflow Developer	Maximo Admin	Database Admin	Report Admin	Service Desk / Support Personnel & Supervisors	IT Asset Managers / Configuration Managers	Contracts Manager	Procurement Personnel
<u>MED0138</u> MXES Nav & Query (1/2 day)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<u>MED0137</u> System Admin for MXES (3 days)				✓	✓			✓	✓			✓		
<u>MED0140</u> Intro to ITIL (VCT) (3 hours)	✓													
<u>MED0141</u> IT Service Mgmt Using MXES (3 days)		✓									✓			
<u>MED0142</u> IT Asset Config & Mgmt in MXES (3 days)												✓		
<u>MED0145</u> Implement ITIL w/ MXES (1 day)	✓	✓	✓											
<u>MED0147</u> Using SQL with MXES (1 day)						✓			✓	✓				
<u>MED0148</u> Workflow Mgmt Using MXES (5 days)				✓			✓							
<u>MED0149</u> MXES Immersion Training for IT (5 days)			✓	✓	✓			✓						
<u>MED0150</u> Purchasing with MXES (2 days)														✓
<u>MED0151</u> Dev. MXES Reports w/ Actuate						✓				✓				
<u>MED0152</u> Contract Mgmt Using MXES													✓	
<u>MED0153</u> Using MXES App Designer			✓		✓									
<u>MED0154</u> The MXES KPI Manager (3 hours)						✓				✓				

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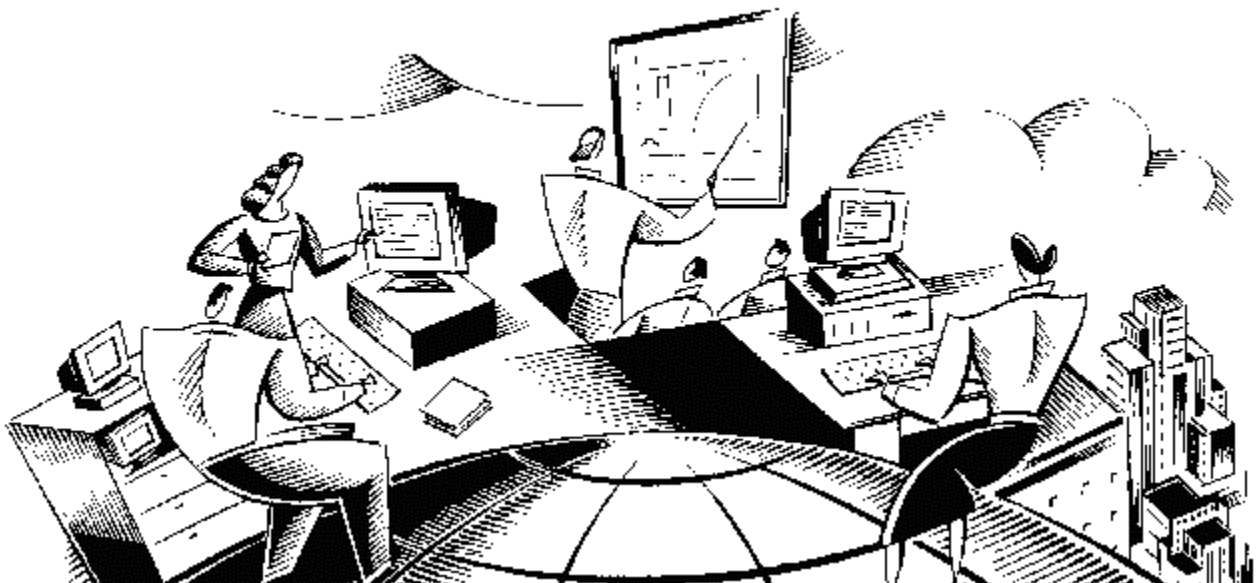
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# Workflow Management Using MXES

## Unit 1: Course, Product, and Implementation Overviews



**In This Unit**

This unit contains the following chapters:

<b>Chapter</b>	<b>Topic</b>
1	Course Overview
2	Introduction to Workflow
3	Implementation Process Overview

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## Unit Overview

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### Introduction

In this unit, we will look at course methodology. We will also look at the **Workflow Designer** application and related applications, and discuss their roles in your system implementation

We will also look at some commonly asked questions and answers associated with the Workflow product and its implementation in an organization.

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### Unit Focus

This unit introduces you to the course methodology, the Workflow tools, and the implementation process.

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### Learning Objectives

When you have completed this unit, you should be able to:

- describe the goals and learning objectives of this course;
  - discuss your learning objectives;
  - list the advantages of including workflows in your system implementation;
  - describe the areas involved in documenting, designing, and deploying your Workflow processes; and
  - answer some commonly asked questions.
- 

continued on next page

## Unit Overview continued

### Course Organization: Units and Chapters

This course is organized into units and chapters.

- A unit consists of several chapters.
- Each unit provides an overview of topics and concepts related to the chapters that make up that unit.
- Each chapter in this student guide is an individual teaching module designed to provide an overview of its topic(s), as well as in-depth instruction and practice.

### Student Guide Organization

This table contains a list of the units and chapters in this student guide.

Unit/Chapter	Title	Description
<b>Unit 1</b>	<b>Course, Product, and Implementation Overviews</b>	<b>This unit consists of three chapters, each giving an in-depth look at the course methodology, the Workflow tools, and the implementation process.</b>
Chapter 1	Course Overview	Describes the goals, objectives, organization, conventions, and agenda for this course.
Chapter 2	Introduction to Workflow	Describes the <b>Workflow Designer</b> application and its components and the Inbox area using the Maximo Start Center.
Chapter 3	Implementation Process Overview	Focuses on the phases involved with a Workflow Implementation process: Establishing, Developing, Testing, and Deploying.
<b>Unit 2</b>	<b>Establishing the Workflow Process Foundation</b>	<b>This unit consists of two chapters, each covering concepts including process determination and application configuration.</b>
Chapter 4	Analysis	Identification and discussion of the different methods involved for implementing Workflow at your site.
Chapter 5	Setup	Using Maximo applications to set up and manage users and to set up options.

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**Unit Overview** continued**Student Guide Organization** continued

Unit/Chapter	Title	Description
<b>Unit 3</b>	<b>Developing the Workflow Process</b>	<b>This unit consists of three chapters that focus on the design, creation, and configuration of workflow processes using the Workflow Designer application.</b>
Chapter 6	Design	Organizing and documenting an organization's business processes and practices.
Chapter 7	Creation	Focuses on the steps and formats used to create a basic workflow process using Workflow Designer.
Chapter 8	Node Configuration	Define and configure Node behavior using node properties.
<b>Unit 4</b>	<b>Testing the Workflow Process</b>	<b>This unit consists of one chapter that focuses on the testing of workflow processes.</b>
Chapter 9	Testing	Enable and activate workflow processes and then test by bringing them through all possible paths.
<b>Unit 5</b>	<b>Deploying the Workflow Process</b>	<b>The last unit consists of one chapter, which focuses on the deployment and management of workflow processes.</b>
Chapter 10	Maintenance	Focuses on the system options that help you manage workflow processes.



# Workflow Management Using MXES

## Chapter 1: Course Overview



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Course Introduction	1-1
Course Goals and Objectives	1-3
The Maximo Curriculum	1-6
Course Organization	1-7
Exercise Approach and Objectives	1-8
Typographical Conventions	1-9

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## Course Introduction

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### Welcome

Welcome to the *Workflow Management Using MXES* course.

When you have completed this course, you should have a good understanding of how Workflow can help you to move records through a business process

- to the right people,
  - at the right time,
  - with the right information.
- 

### Audience

This course is intended for:

- Workflow implementation team members
  - Workflow managers
  - Maximo administrators
- 

### A General Description of Maximo Workflow

Maximo Workflow provides a dependable and repeatable method of moving records through a business process determined by your organization.

Workflow-enabled records follow a map called a *process* that guides the right information to the appropriate people in your organization based on how their data attributes intersect your business rules.

This is useful for managing the flow of those records through the organization and for making sure records are acted on in a timely manner.

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continued on next page

## Course Introduction continued

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### **Workflow and Maximo Business Objects**

Workflow processes can be created for any Maximo Business Object (MBO). All applications are associated with an MBO. Therefore, Workflow processes can be developed for any application.

Because it is up to you to determine which of your organization's business processes (and which related applications) require Workflow processes, Maximo applications do not come preconfigured with Workflow interactivity.

When a Workflow process for an application is activated, Maximo creates the needed linkages, icons, actions, and so forth in the application needed to move related records through the process.

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### **Additional Uses**

In addition to moving records through business processes in Workflow, you can also:

- run executables on a local server, and
  - execute custom Java classes.
-

## Course Goals and Objectives

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**Course Overview**

The Workflow Designer is the core of the development of processes. However, there are a number of related applications used to create records used in Workflow processes.

This course introduces users to the Maximo Workflow Designer and its related applications.

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**Course Prerequisites**

You must have extensive working experience with MAXIMO 5.x or greater. We also strongly suggest the *Work Management Using MXES* or the *MXES Immersion Training* course, as well as the *System Administration for MXES* course.

You should also be comfortable using a personal computer and the Microsoft Windows operating system.

---

**Course Goal**

The overall goal of this course is to develop competency in Workflow. At the end of this course, you should have an understanding of how to determine and document existing business processes and use Workflow to assist in automating them.

This course is not intended to teach you how to redesign your company's business processes.

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## Course Goals and Objectives continued

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### Course Objectives

When you have completed this course, you should be able to:

- list the benefits of using Workflow to automate the business process for work orders, purchase requisitions, and purchase orders;
  - describe the steps involved in designing a new Workflow process;
  - flowchart approval processes in various case studies;
  - create a new Workflow process by adding nodes and connecting them by using the Workflow Designer application;
  - use security functionality to create data needed for assignments, notifications, and application access;
  - configure additional information to be used with Workflow processes, such as notifications, roles, and actions;
  - start a Workflow process on a work order and on a service request;
  - view in-progress workflows;
  - use the Workflow Inbox to access and perform task assignments;
  - route a work order to the next action in the process; and
  - reassign tasks when a user cannot perform his or her assignment.
- 

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## Course Goals and Objectives continued

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### Your Learning Objectives



The most important learning objectives are those *you* bring to the course. We want to ensure that these are clearly stated, mutually understood, and achieved.

List your objectives in the space below. We will conclude the course by asking whether or not you have met your objectives. If you have not, we will address your questions and unmet objectives.

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## The Maximo Curriculum

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### Overview

In order to help you learn to use Maximo more fully, we have developed a training curriculum that takes you logically from one subject to another, thus increasing your level of expertise.

The *Workflow Management Using MXES* course is part of the Maximo Extended Enterprise training series.

---

### Structure of the Courses

- Each course is self-contained. Although we have intentionally used similar or related examples among the courses, no course is dependent on data entered in another.
  - Each course includes more than one mode of instruction; specifically, presentation of information (“lecture”), hands-on exercises, and problem-solving challenges.
-

## Course Organization

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### Introduction

In this section we will introduce you to the organization of this course.

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### Course Structure

This course is broken into units and chapters.

Each unit is an individual teaching module comprised of one or more chapters.

Units provide an overview of the chapters and their topics.

Each chapter provides an overview of its topic(s) and then provides in-depth instruction and practice.

Specifically, each chapter contains these components:

- subject matter overview and objectives,
  - instruction in concepts and procedures, and
  - hands-on practice.
- 

### Class Activities

As you go through this course, you will participate in four methods of instruction, usually in this order:

1. The instructor will give a brief overview of the objectives and content of each chapter.
  2. The instructor will introduce and demonstrate procedures and concepts.
  3. You and the instructor will work through a procedure together, or you will work through a procedure on your own.
  4. You will complete a workshop exercise at the end of each chapter to reinforce what you have learned.
-

## Exercise Approach and Objectives

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### Introduction

Most chapters in this course include a hands-on workshop, where you review the information learned in that chapter, as well as in the chapters before it.

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### Our Approach

The exercises and workshops use a case-study approach. Each exercise builds on the work you completed in the previous exercise. It is critical that you complete each step as you progress through the course.

By following this approach:

- You will learn faster and remember more of what you have done when you are an active participant in the learning process.
  - You will be able to think through the processes and procedures you need to use in the real world in order to do your work.
- 

### Our Goal

Our goal is to help you learn to apply Workflow to your workplace.

You will not necessarily leave this class knowing everything about Workflow, but you should have a good understanding of the basic concepts important for Workflow.

This class is your opportunity to explore Workflow and ask questions along the way. **Ask lots of questions!!**

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## Typographical Conventions

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### Introduction

We use a number of typographical conventions and icons in our course books.

Workflow also uses typographical conventions to help you work quickly and easily.

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### Conventions Used in the Course Materials

Here are some of the conventions you will see most frequently in the course materials

Convention	Usage	Example
<i>Italics</i>	Introduces or emphasizes a term	A <i>system</i> is a single instance of a Maximo database.
<b>Boldface</b>	Indicates that the word or phrase names a menu item, field, button, or keyboard key	From the <b>Go To</b> drop-down menu, select <b>Administration</b> .
Arial font	Indicates that this is text you type into a field	Type ASSET_NDX8 in this field.
Courier font	Indicates programming code, a system message, or part of a screen display	Maximo displays the following message: Work order 1000 status changed to APPR.











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## Typographical Conventions continued

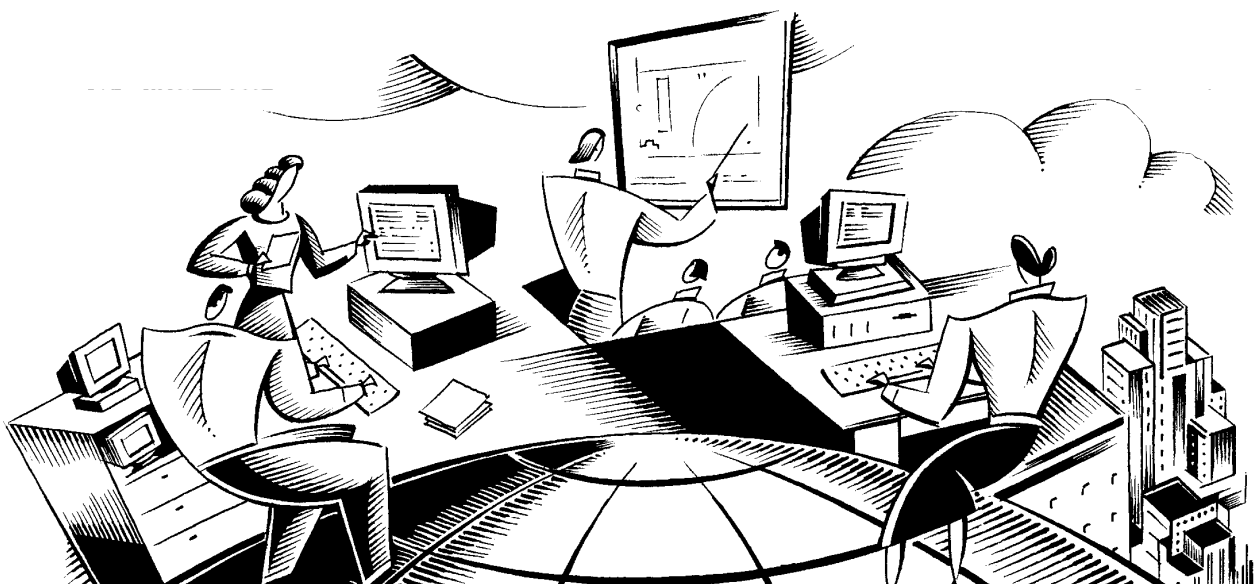
### Icons

You will see several icons throughout this student guide. This table explains what they mean.

This icon...	Indicates...
	A procedure that you will practice on your own or with guidance from an instructor
	A paper-and-pencil exercise
	A special note or reminder
	A warning or cautionary note
	A question-and-answer session with the instructor, or a group discussion
	Your role in the next exercise is changing, e.g., from manager to user
	The data you are being asked to enter will be used in another exercise
	A challenge question or exercise
	An industry best practice, tip, or suggestion
	A recording that provides additional course content is available

# Workflow Management Using MXES

## Chapter 2: Introduction to Workflow



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	2-1
What Is Workflow?	2-2
Workflow Components	2-8
Workflow Stages	2-18
Creating Workflow Processes	2-19
Starting a Record in a Workflow Process	2-37
Checking the Workflow	2-57
Completing My Workflow Assignments	2-59
Chapter Summary	2-67
Workshop	2-70

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## Chapter Overview

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**Chapter Focus**

In this chapter, we will discuss the nature of a Workflow solution. We will also discuss the process you will use to design, build, test, and deploy a new workflow.

---

**Learning Objectives**

When you have completed this chapter, you should be able to:

- describe the purpose of Workflow,
  - define what the Workflow solution consists of,
  - demonstrate by written example what a Workflow business process is,
  - list two Workflow components,
  - list the advantages of using Workflow,
  - enable and validate a Workflow process,
  - start a Workflow process,
  - view the history of a Workflow process,
  - view an in-process assignment, and
  - complete a Workflow assignment.
- 

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## What Is Workflow?

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### Introduction

In this section we define and explore the tools used to create, modify, and complete a Workflow process.

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### Workflow Goals

The goals of Workflow are to:

- provide a solution that allows you to customize business processes,
  - manage defined processes from start to finish,
  - push information to the right people at the right time,
  - provide access to required applications and functions at the right time, and
  - provide an audit trail of your business processes.
- 

### What Makes Up Workflow?

*Workflow* is comprised of a number of related components that are integrated with Maximo. These components are used to:

- design and administer processes, and
- create the elements used to develop the workflow process.

Most of these components are created using a variety of applications, including:

- Workflow Administration
  - Workflow Designer
  - Actions
  - Roles
  - Communication Templates
  - Escalations
- 

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## What Is Workflow? continued

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### What Makes Up Workflow?

continued

You use several other applications when designing workflow processes and related components:

- People
- People Groups
- Security
- Security Groups
- Labor

There a couple of other Workflow components to consider:

- A *non-application* component of Workflow is the **Inbox/Assignments** table, which resides on each user's Start Center.
- **Workflow options** are configured using the Organizations application.

Note: Each of these components will be introduced as they are first used in the course.

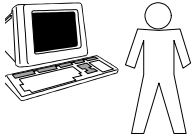
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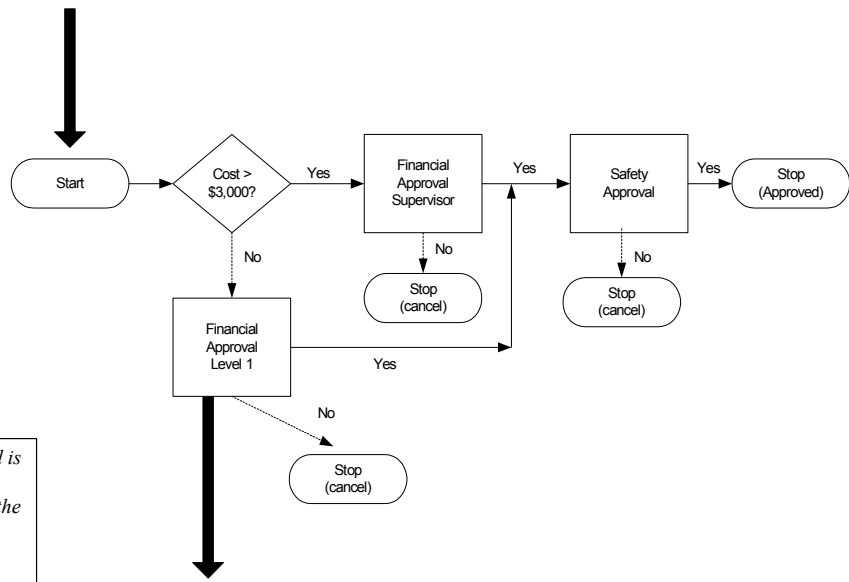
# What Is Workflow? continued

## Pushing Information

Workflow gets information to the right people at the right time. Therefore, Workflow provides you with all of your work assignments *in one place*. You do not need to search through long lists of information to find what you need to do.



Service work is requested and, using the Work Order Tracking application, is entered into Maximo.



A work order begins its Workflow journey and is waiting for approval; thus, based on the right criteria, pushing the right task assignment to the right person.

Inbox / Assignments (2)				
Next Assignment Due: 12/1/2004 12:00:00 AM <span style="float:right">Refresh</span>				
Description	Due Date	Priority	Start Date	Route
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM	
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM	

1 to 2 of 2

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## What Is Workflow? continued

---

### **Workflow Capabilities**

The Workflow components provide a variety of features that you can include in your Workflow design to streamline your approval processes.

These features include:

- assignments to Roles that can be comprised of Labor, People, Person Groups, Supervisors, and Delegates
- user-defined escalation periods and procedures
- manual initiation of a Workflow process
- automatic initiation of Workflow process when selected system activities occur; for example, when the system generates purchase requisitions or purchase orders from inventory reorder
- automated initiation when specified record types are saved
- escalation of processes based on determined time intervals
- notifications using communication templates
- use of an SQL Expression Builder to more easily build detailed criteria for process points
- context-based interactivity to bring the right application or application component to people when needed to perform a specific task in the process
- manual reassignment of tasks using the Workflow Administrator

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## What Is Workflow? continued

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### Several Categories of Workflows

You can create several different general categories of workflow processes:

- **Process workflow** (traditional, assignment-oriented)

Where a structured process manages a record's lifecycle, conditionally pushing assignments to people, running actions, and sending notifications along the routing paths.

Example: Route a corrective work order for cost approval, safety approval, scheduling, labor assignments, and supervisory signoff on completion.

- **Context-based interactions** (assignment-less)

Where a menu of action choices is presented to the user based on the current record's data properties, "scripting" the user's interaction with the application.

Example: When a help desk technician enters an SR and presses Route, properties such as ticket type and status conditionally present the available next steps—for example, close or create incident. Close could go to the Start Center; incident could take the user to the newly inserted incident in its application.

- **Hybrids**

Where there is a mix of structured routings along with interactive, conditional page, and dialog navigation.

Example: Detect at the time of a work order's completion that a failure report should have been entered, and take the user to the Failure Reporting tab with instructions to that effect.

---

## What Is Workflow? continued

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### Notifications

Workflow allows you to send a configurable e-mail message (called a *notification*) when events occur during the process.

These notifications are created in **Communication Templates** that are linked to the process using the Workflow Designer and that specify *recipients* of the notifications.

Notification recipients are defined in Roles. These roles include:

- a Maximo person or a person group as defined in the People and Person Groups applications, respectively; and
- an e-mail address to someone outside the Maximo system.

With Communication Templates, you can create templates used to notify the right people at the right time about what is happening in the process.

Communication Templates are reusable many times within a process or within a number of processes.

You can configure the system to generate e-mail messages whenever the process moves from one node to the next.

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## Workflow Components

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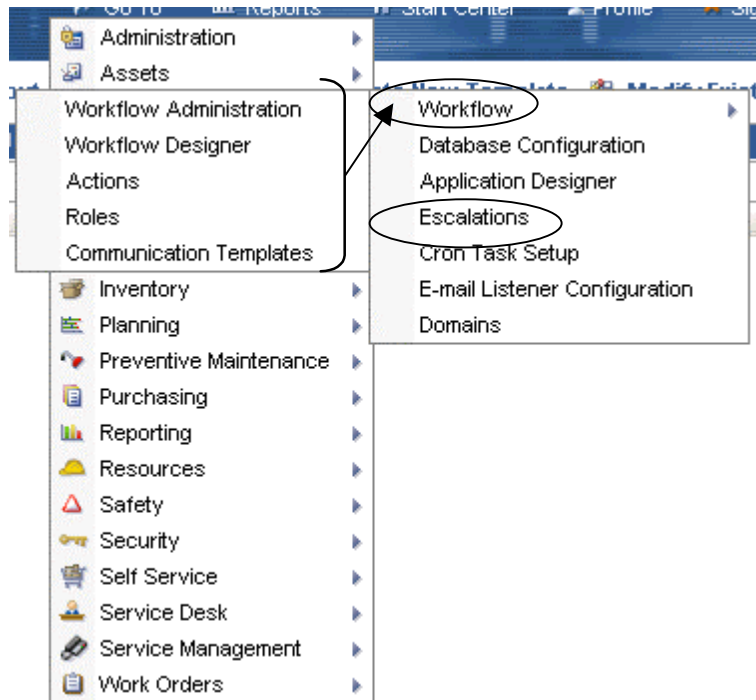
### Overview

In the previous section, we mentioned the Workflow-related components and how to access them. In this section, we will briefly describe each component. You will be given more detailed information on these components as they are used in exercises.

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### Locations of Workflow-Related Components

All directly Workflow-related applications, except for Escalations, are located in the **Workflow submodule** of the **Configuration module**. The Escalations application is located directly within the Configuration module.



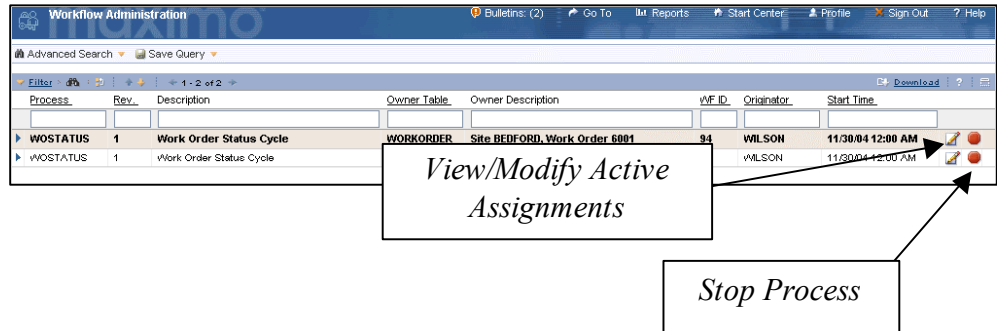
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## Workflow Components continued

### Workflow Administration Application

The **Workflow Administration** application allows the stopping or reassignment of existing records in a Workflow process.



There are two key buttons on this screen:

- View/Modify Active Assignments
- Stop Process

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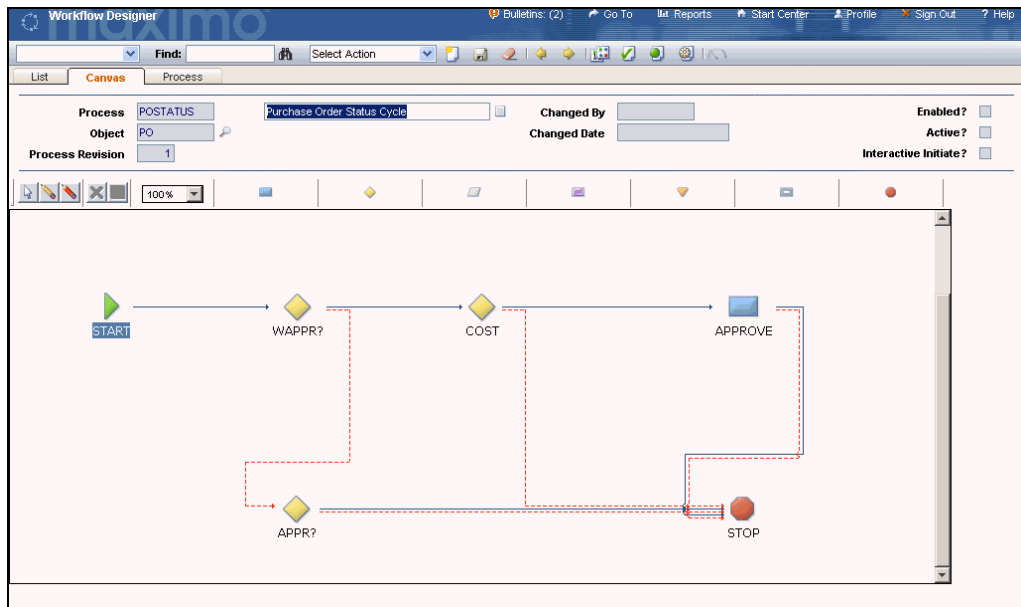
## Workflow Components continued

### Workflow Designer Application

You use the **Workflow Designer** application to create a series of paths for records to flow through, called a *process*.

A Workflow process can be thought of as a map that guides a record, or a user's interaction with that record through a set of steps.

The graphical interface of the Workflow Designer illustrates the possible paths the record can follow.



You can use Workflow to create a set of paths as simple or as complex as your business process demands.

A process might be able to handle all of the routing necessary for *one type* of record. However, more complex process flows (or processes that involve a number of record types) might require a series of processes.

For that reason, Workflow processes might appear quite simple or complex, depending on the business need.

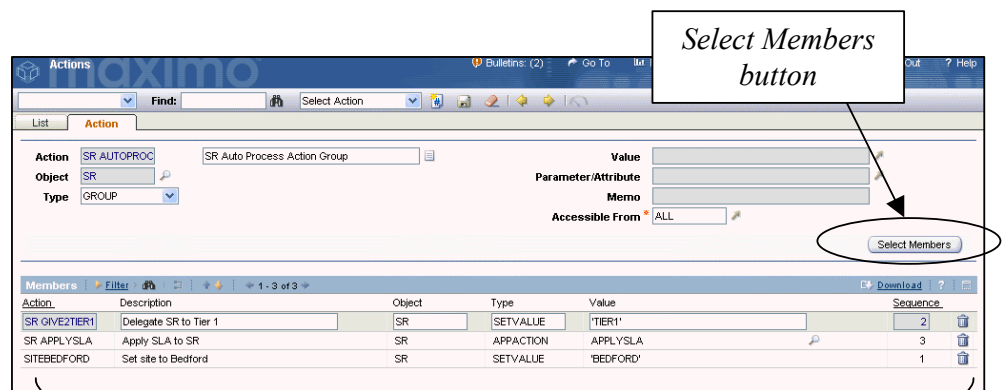
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## Workflow Components continued

### Actions Application

*Actions* are scheduled events that occur when a record leaves a Workflow node. For example, an action can cause a Maximo status change, execute a defined program, set a field value, or execute a custom class action.

You use the **Actions** application to manage the administrative functions of creating actions and action groups within Workflow, Escalation, and Service Level Agreements (SLA) processes.



Members table

You manage actions in a central administrative application because they are used in multiple applications. Use the Actions application to build individual actions or action *groups*.

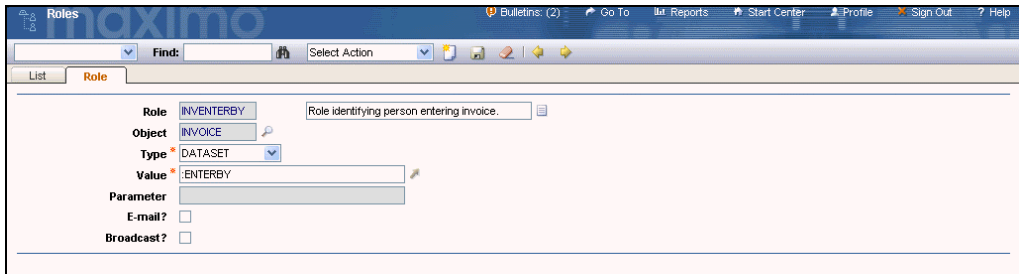
Note: When creating an action group, you can add *members* (i.e., other actions) to the group by clicking the **Select Members** button. The members are displayed in the Members table. The Sequence column in the Members table is used to determine the order in which the member actions occur.

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## Workflow Components continued

### Roles Application

You use the **Roles** application to create and manage roles in Maximo. You manage roles in a central administrative application because they are used in multiple applications.



The table below describes the role types.

Role Type	Description
CUSTOM	Calls a custom class that resolves to some type of data as determined by the called class and associated parameters.
DATASET	A relationship that resolves to a piece of data found within the record type in the workflow.
EMAILADDRESS	One or more literal strings of e-mail addresses that can be used on notifications but not on assignments.
PERSON	Resolves to a Person record.
PERSONGROUP	Resolves to one or more available people from a Person Group record, or all the people in a person group if the broadcast flag is set.
USERDATA	Data that relates to the user that is currently signed in to Maximo.

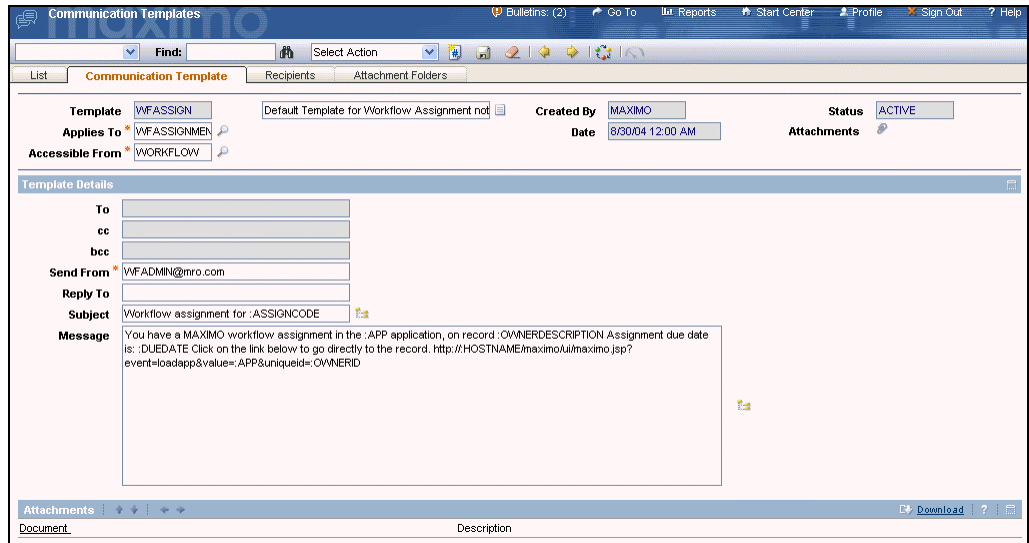
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## Workflow Components continued

### Communication Templates Application

You use the **Communication Templates** application to create and manage generic communication templates that Maximo users can leverage to standardize frequently used e-mail communications (also known as *notifications*).

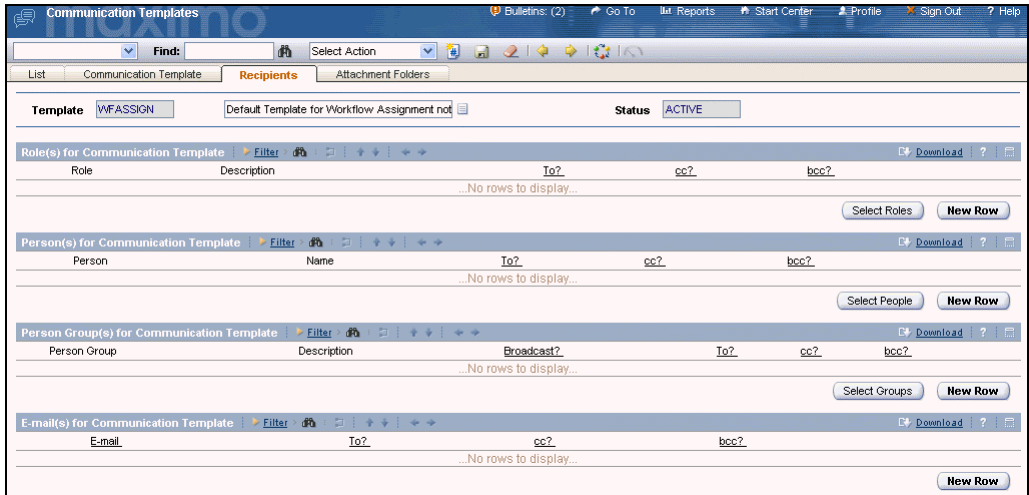


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## Workflow Components continued

**Communication Templates Application: Recipients Tab**

The **Recipients** tab of Communication Templates indicates who will receive the notification. The four distinct types of recipients are described in the table below.



Note: When this tab first opens, all the sections are collapsed. They must be manually opened.

Recipient Type	Description
Role	A variable used in Workflow that Maximo resolves to one or more people or an e-mail address.
Person	A specific person to whom you want to send the communication.
Person Group	A set of people that are grouped together, typically by function or department. By default, Maximo sends the communication to all of the people in the group.
E-mail	An e-mail address, typically for someone who is not a known Maximo user; for example, when you need to reply to a third-party vendor.

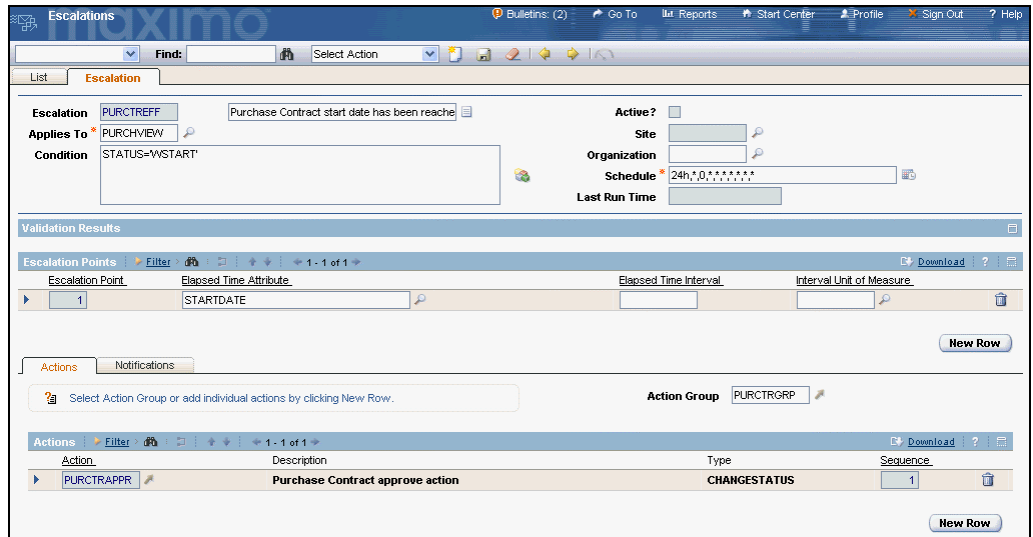
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## Workflow Components continued

### Escalations Application

You use the **Escalations** application to automatically monitor critical processes across your enterprise.

The primary goal of Escalation Management is to ensure that critical tasks are completed on time, such as those defined in Workflow processes and service level agreements.



**Note:** Escalations can be used for other purposes, such as notifying someone before contracts expire, changing the status of a Maximo object (such as for invoices or contracts), or changing the owner of a Maximo object (such as for service requests, incidents, or problems).

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## Workflow Components continued

### Workflow Inbox / Assignments

When added to a user's Start Center, the Workflow **Inbox/Assignments** table performs a number of functions:

- it provides a list of current assignments for the user;
- it allows the user to click on the assignment description to see the underlying record; and
- it allows the user to route assignments to the next point in the Workflow process.

Inbox / Assignments (2)				
Next Assignment Due: 12/1/2004 12:00:00 AM				
Description	Due Date	Priority	Start Date	Route
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM	
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM	

1 to 2 of 2

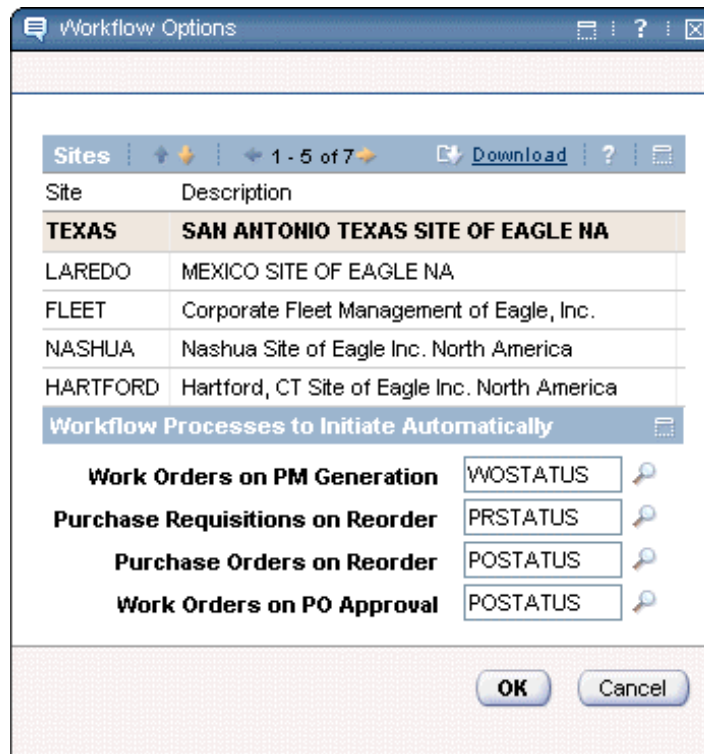
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## Workflow Components continued

### Workflow Options

**Workflow Options** are accessed from the Select Action menu of the Organizations application. An example of the Workflow Options dialog box is shown below.

Note: Workflow Options are organization- and site-specific.



Workflow options allow you to choose a site and indicate a process that is to be auto-initiated for any of four non-manual activities that might occur in the site. The four activities are shown in the graphic above.

### Review



Please work with your instructor and the others in your class to answer and discuss the following questions.

1. What are the components that are related to Workflow?
2. The **Workflow Designer** component is used to do what?
3. The **Inbox/Assignments** component is used to do what?

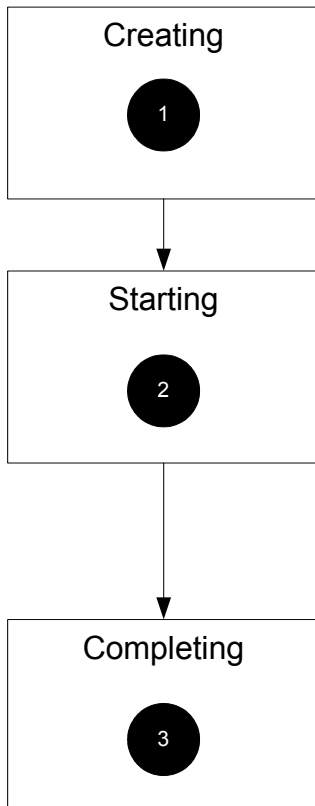
## Workflow Stages

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### Introduction

To better acquaint you with the Workflow solution, a high-level overview of Workflow stages will be explored throughout the remainder of this chapter.

The following chart illustrates the stages.



In the first stage – **Creating** – after extensive design discussions, a Workflow process is created or modified and then enabled and activated using the **Workflow Designer** application.

You can also use this application to modify and manage Workflow processes.

In the second stage – **Starting** – a record is manually or automatically started through a Workflow process.

Manual records are started through a process by clicking on the **Route Workflow** icon in a Workflow-supported Maximo application.

For automatically started records, you can:

- use the Select Action menu in **Workflow Designer** to indicate that certain flows automatically enter a Workflow process when the record is saved or submitted.
- use an escalation to poll the system and start non-initiated processes.
- use the Workflow Options to indicate that certain non-manual processes should auto-initiate when specific actions occur.

In the third stage – **Completing** – you use **Inbox/Assignments** in your Start Center to perform Workflow assignments.

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## Creating Workflow Processes

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### Introduction



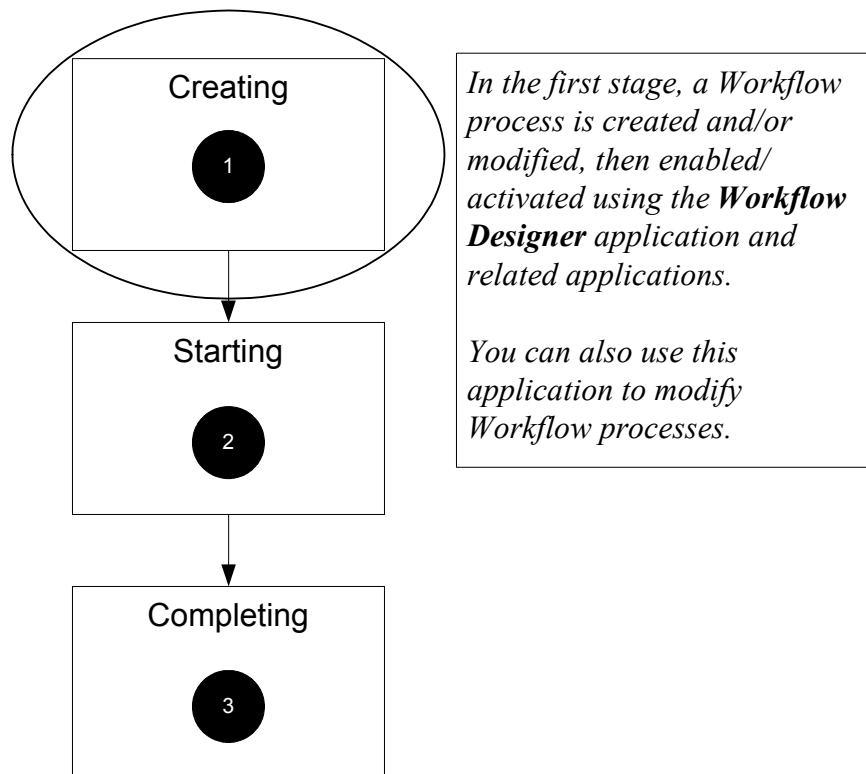
We've learned that Workflow consists of three stages—*Creating*, *Starting*, and *Completing*—each with its own application to meet its requirements.

In this section, we will learn how to navigate the **Workflow Designer** application and to enable and activate a previously created Workflow process.

Note: We will not create a new Workflow process until Unit 2.

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### We Are Here



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## Creating Workflow Processes continued

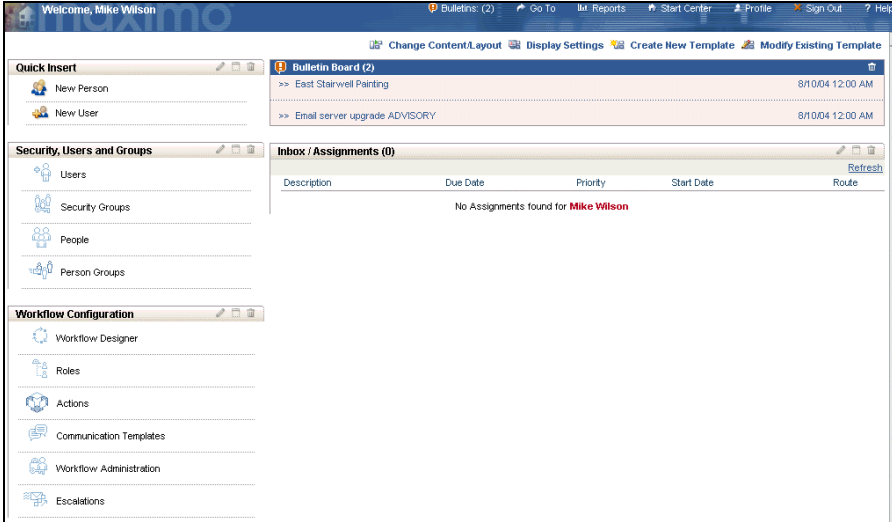
### Opening Workflow Designer



The Workflow Designer application is the key application used to bring all the components of Workflow processes together.

To get acquainted with the application, let's access it and take a brief look.

Note: The Workflow Designer application uses standard Maximo navigation, so we will describe only the functionality and navigation that is specific to Workflow Designer.

Step	Action
1	<p>Sign in to Maximo with the user name and password provided by your instructor.</p> <p><u>Result:</u> The Start Center opens.</p> 

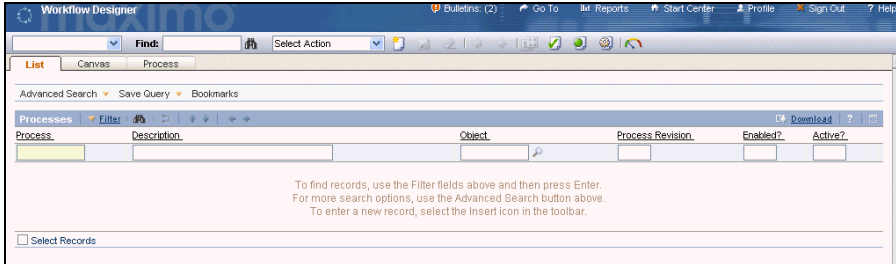
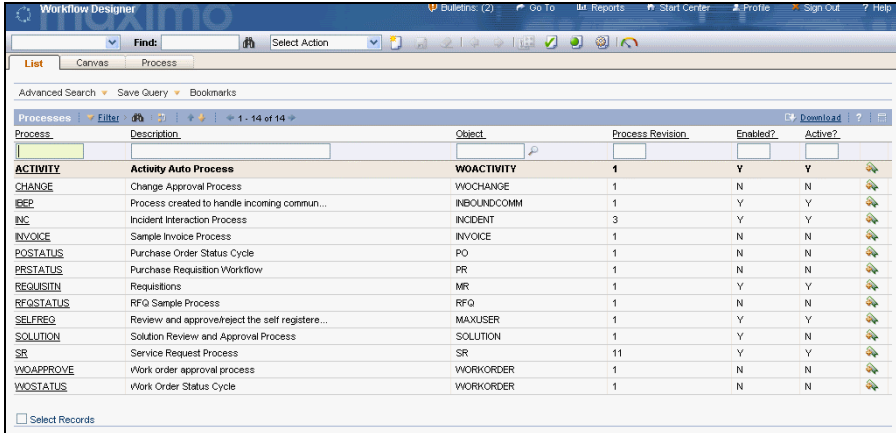
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## Creating Workflow Processes continued

### Opening Workflow Designer

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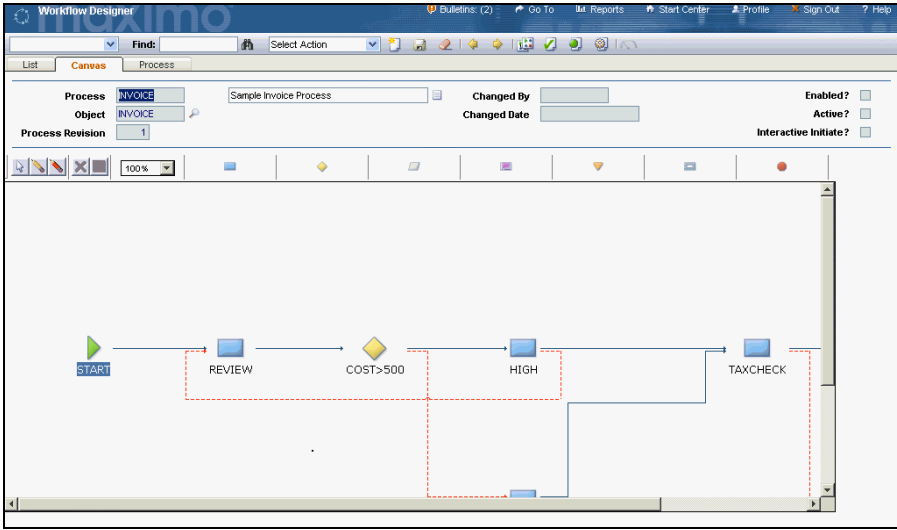
Step	Action
2	<p>From the <b>Go To</b> menu, select:  <b>Configuration ▶ Workflow ▶ Workflow Designer</b></p> <p><u>Result:</u> The List tab for the Workflow Designer application opens.</p> 
3	<p>Click the <b>Filter Table</b> button (binoculars) on the <b>Processes</b> table to view a list of the available processes.</p> 

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## Creating Workflow Processes continued

### Opening Workflow Designer

continued

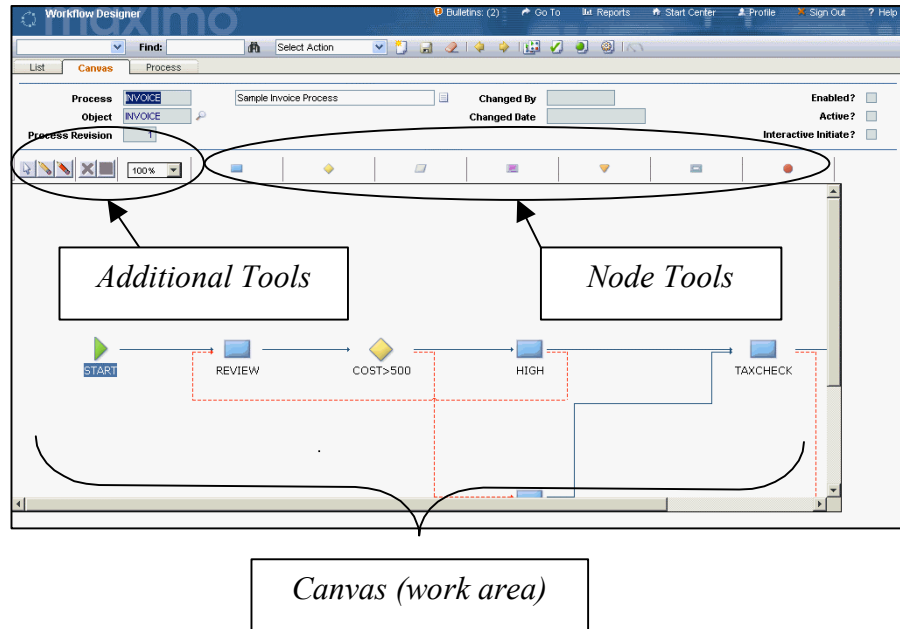
Step	Action
4	<p>Click the <b>INVOICE</b> process to open it.</p> <p><u>Result:</u> The Canvas tab for the process opens.</p>  <p><u>Note:</u> Either zoom in or use the scroll bars to move up and down/left and right to view the entire process.</p>

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## Creating Workflow Processes continued

### Workflow Designer: Canvas Tab

You use the Workflow Designer *canvas* as a place to build and update processes for use with Workflow.



The Workflow Designer canvas has a series of eight node tools on a toolbar or palette that you use to create the Workflow processes.







You drag and drop the necessary nodes onto the canvas, or work area.

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## Creating Workflow Processes continued

### Canvas Tab: Node Tool Descriptions

The following table provides a graphic and a description of each node tool.



Tool Image	Description
	<p>The <b>Start</b> node indicates the beginning of a Workflow process. Workflow places one Start node on the canvas when you create a new process. There can be only one starting point to any process.</p>
	<p><b>Stop</b> nodes mark the point where a Workflow process ends and a record leaves Workflow control. Workflow places one Stop node on the canvas when you create a new process.</p> <p>You can place additional Stop nodes on the canvas as needed.</p>
	<p><b>Task</b> nodes allow you to direct the path of the record. You must have at least one connection coming out of a Task node.</p> <p>You use a Task node when your business rules call for an affirmative or negative user response to an inbox assignment.</p>
	<p><b>Condition</b> nodes are defined to automatically direct records according to information contained within the record. There must be one positive connection and one negative connection coming out of a Condition node.</p> <p>The connection used by a record as it exits a Condition node is dictated by the SQL expression within the node, which resolves to either true (positive connection) or false (negative connection).</p>
	<p><b>Manual Input</b> nodes allow you to direct the path of a record. Use a Manual Input node when you want the user to select the next step from a menu.</p>
	<p>A <b>Subprocess</b> node represents a complete Workflow process nested within another Workflow process. A Subprocess must have a negative line flowing out of it, in addition to the positive.</p> <p>When a Subprocess encounters a Stop node, it returns to the master process along the same line on which it finished. This enables the Subprocess to carry back the logic that caused the termination to the master process.</p>

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## Creating Workflow Processes continued

**Canvas Tab:  
Node Tool  
Descriptions**

continued

Tool Image	Description
	<p>An <b>Interaction</b> node must have one or more action lines entering it, but only one action line can exit.</p> <p>You use an Interaction node to help lead an end user down particular problem resolution paths by offering well-defined choices, which guide the user through a scripted path and manage the relationship with the record in any given session.</p> <p>A Manual Input node usually precedes the interaction node.</p>
	<p>You use a <b>Wait</b> node to create a certain reaction to an action. You can define any action to trigger a specified reaction in a Wait node.</p> <p>When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the specified events occur.</p> <p>When the specified event does occur, it informs the node and the process resumes by exiting the node at the single exit point.</p>

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## Creating Workflow Processes continued

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### Extra Interaction Node Information

The Interaction node is packed with many capabilities. You will use some of those capabilities in this course; for example:

- You can cause a message to pop up on the screen in a dialog box. This message could inform the user about something they need to know or do during the process.
- If a new record type is created from another record type using an action, the new record could be displayed in its application for the user without the user's having to access the new record manually.
- The application for the new record and the specific tab could be indicated in the Application and Tab Name fields.
- A choice from the Select Action list of the indicated application could be indicated in the Action field.

Note: It must be emphasized that, in this case, we are referring to choices available in the *Select Action* menu of the specified application, not choices from the Actions application.

- Another valuable way that an Interaction node can be used is to indicate another Workflow process to be started. The process would be indicated in the Launch Process field.



**Note: This is important information that will help you to develop your diagrams and processes in later chapters.**






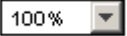
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## Creating Workflow Processes continued

### Canvas Tab: Additional Tools

After dragging and dropping the appropriate nodes to the canvas, you can move, connect, delete, or configure them using the other tools on the toolbar. The following table describes the additional Canvas tools.

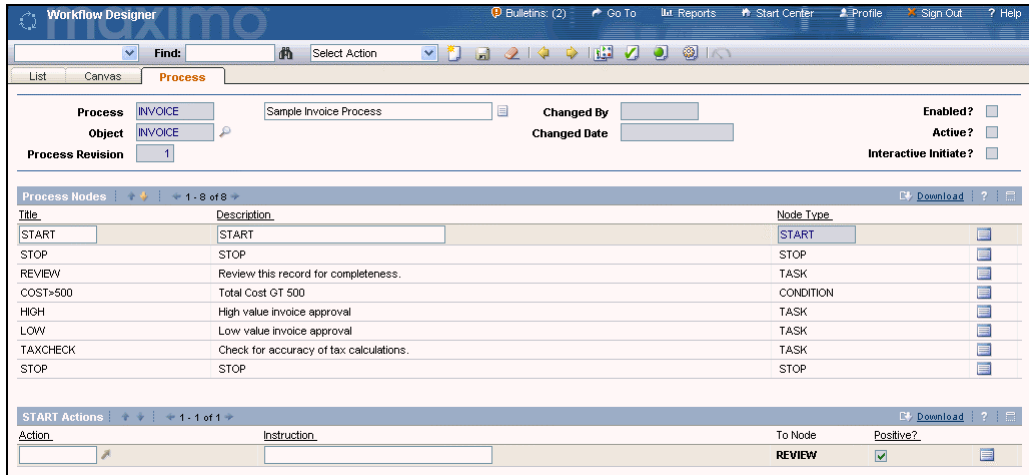
Tool Image	Description
	You use the <b>Move/Add Nodes</b> tool to drag and drop the nodes from the tool bar for placement on the canvas. You also use this tool to position nodes on the canvas.
	You use the <b>Connect Nodes</b> tool, the yellow pencil icon, to create positive connections from one node to another. <u>Note:</u> Positive connection lines also contain properties that allow you to enable an action between nodes when the process runs along its path.
	You use <b>Connect Nodes with a Negative Action</b> , the red pencil icon, to create negative connections from one node to another. <u>Note:</u> Negative positive connection lines also contain properties that allow you to enable an action between nodes when the process runs along its path.
	You use the <b>Delete</b> button to remove a highlighted graphical object.
	You use the <b>Properties</b> tool to enter a node's Properties dialog box to review and edit the attributes associated with that node.
	You use the <b>Zoom</b> tool to increase or decrease the size of the canvas as a percentage of the default (the size that you see when you first enter the canvas).

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## Creating Workflow Processes continued

### Process Tab

While on the INVOICE process, access the **Process** tab from the Workflow Designer application. Your screen will look similar to the graphic below.



The Process tab provides a tabular representation of the nodes on the Canvas tab.

You can edit properties for process nodes by clicking the **Edit Properties** button located to the right of the node.



The **Actions** table shows the contents of any connection/action lines associated with a selected node. You can also edit Actions by clicking the relevant Edit Properties button.

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## Creating Workflow Processes continued

### Action Buttons

From both the Canvas and Process tabs you can access a number of buttons that perform a variety of actions on the selected process.

The table below describes these buttons.

Button	Description
	The <b>Create Process Revision</b> button inserts a new copy of the selected process onto the Canvas for update and editing. The number in the Revision field will be incremented by one. You can then edit your new process.
	You use the <b>Validate Process</b> button to check your process to determine that all elements are set up and working properly.
	The <b>Enable Process</b> button enables your process so that other processes can use it as a <i>subprocess</i> . When you enable a process, it is first <i>validated</i> just as if you clicked the Validate Process button. If validation is not positive, then the process cannot be enabled. When the process is enabled, Maximo creates the relationships and other needed technical setups to run the process against the designated object.
	The <b>Activate Process</b> button activates a process to be used as a top-level process that can use enabled subprocesses in the flows. <b>Note:</b> A process must be <u>both</u> enabled and active to be a top-level process.

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## Creating Workflow Processes continued

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### Review Questions



To use a Workflow process as a main process, what two things have to be done?

1. \_\_\_\_\_
  2. \_\_\_\_\_
- 

### Exercise: Scenarios 1 and 2

To demonstrate the various ways a Workflow process can be started and completed, for the rest of this chapter's exercises we will use the Purchase Order Status Cycle (POSTATUS) and Work Order Approval Process (WOAPPROVE) Workflow processes.

Specifically, we will learn how a Workflow process is:

- enabled and activated using **Workflow Designer**
  - started in a Maximo application
  - completed by accessing the **Inbox/Assignments** table on a user's Start Center
- 



At different stages of the exercises, we will be using the hat icon to indicate that your role is changing, e.g., from *System Administrator* to *Facilities Clerk*, or from *Lou Granger* to *Diane Liberi*.

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## Creating Workflow Processes continued



For this exercise, you should sign in to Maximo as Fred Stanley with the following information:

user name: **stanley** / password: **stanley**

In this chapter's exercises, Fred is our Workflow administrator and will enable and activate several Workflow processes.

### Exercise 1: Enabling and Activating a Workflow Process



In this exercise, we are going to enable and activate the WOAPPROVE Workflow process to demonstrate how Workflow reacts when a process is activated and then used in the workplace.

This will allow us to put records through a Workflow process and then to access the Workflow task in the sections that follow.

Step	Action
1	Access the <b>Workflow Designer</b> application, then access the <b>WOAPPROVE</b> process.
2	<p>Click the <b>Enable Process</b> button.</p> <div style="text-align: center;"> </div> <p><u>Result:</u> A dialog box displays a message indicating that the process has been validated and enabled.</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px auto; width: fit-content;"> <div style="border-bottom: 1px solid gray; padding-bottom: 5px;">MAXIMO</div> <p style="text-align: center;">Process WOAPPROVE, revision 1 was validated. Process WOAPPROVE, revision 1 was enabled.</p> <div style="text-align: right; padding-right: 10px;"> <input type="button" value="Close"/> </div> </div>

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## Creating Workflow Processes continued

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### Exercise 1: Enabling and Activating a Workflow Process

continued


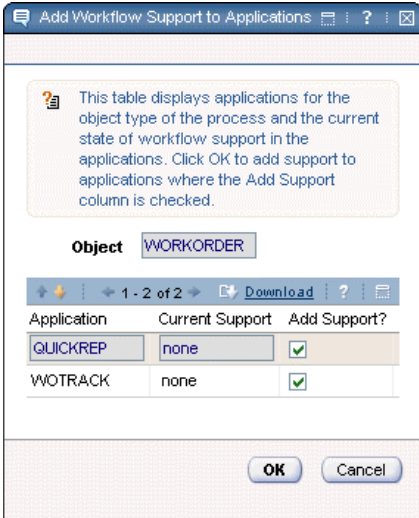
Step	Action
3	<p>Click <b>Close</b> to close the dialog box.</p> <p><u>Result:</u> Maximo checks the process to ensure that it contains valid nodes and accompanying parameters. The <b>Enabled?</b> field is checked.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"><b>Enabled?</b> <input checked="" type="checkbox"/></div>

continued on next page

## Creating Workflow Processes continued

### Exercise 1: Enabling and Activating a Workflow Process

continued

Step	Action
4	<p>Click the <b>Activate Process</b> button.</p>  <p><u>Result:</u> The Add Workflow Support to Applications dialog box displays a list of the applications associated with the Object to which the process is associated.</p>  <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• The Object field in both the dialog box above and on the Workflow Designer screen indicates which MBO is being associated with the process.</li> <li>• Many objects are associated with specific Maximo applications. In this example, the WORKORDER object is associated with the Quick Reporting (QUICKREP) and Work Order Tracking (WOTRACK) applications.</li> </ul>

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## Creating Workflow Processes continued

### Exercise 1: Enabling and Activating a Workflow Process

continued

Step	Action
5	<p>We will allow Maximo to add support for <i>both</i> the Quick Reporting and the Work Order Tracking applications.</p> <p>So, keep the <b>Add Support?</b> check box selected for both applications and click <b>OK</b>.</p> <p><u>Result:</u> Maximo adds all necessary code to allow the selected applications to be supported by Workflow. The <b>Active?</b> field is now selected.</p> <div style="text-align: center;"><b>Active?</b> <input checked="" type="checkbox"/></div> <p><u>Note:</u> Because there is quite a bit going on behind the scenes, the activation process might take several minutes to complete.</p>

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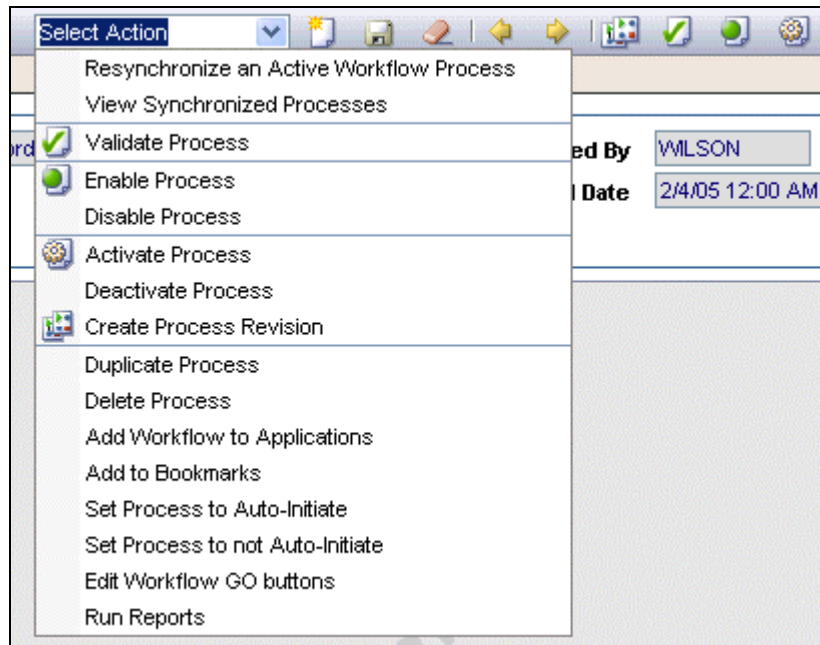
## Creating Workflow Processes continued

### Enabling / Activation: Select Action Menu

Here are a few notes regarding enabling/activation and the **Select Action** menu of the Workflow Designer application:

- You can enable and activate processes by using the **Select Action** menu.
- You can *deactivate* processes by selecting **Deactivate Process**.
- You can *disable* processes by selecting **Disable Process**.
- Applications associated with the object can be manually Workflow-supported by selecting **Add Workflow to Applications**. (Note: You might recall that this is also determined when activating a process.)

The graphic below shows the selections available from the Select Action menu for the Workflow Designer application.

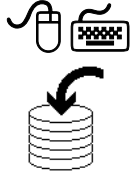


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## Creating Workflow Processes continued

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### Exercise 2



Enable and activate the Purchase Order Status Cycle (POSTATUS) Workflow process, if it is not already enabled and activated.

Note: Apply Workflow support to all applications that are associated with the PO object used by this process.

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## Starting a Record in a Workflow Process

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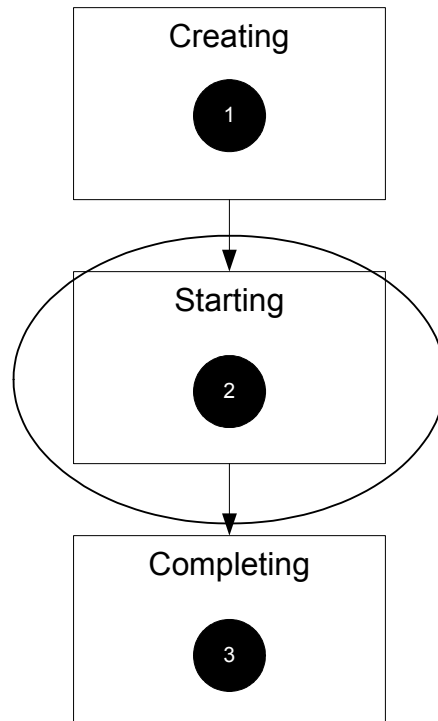
### Introduction

As we saw earlier, Workflow consists of three stages—*Creating*, *Starting*, and *Completing*—each with its own application and requirements.

In this section, our discussion centers on the different methods used to start a record in a Workflow process routine.

---

### We Are Here



*In the second stage, a record is automatically or manually started through a Workflow process.*

*You start records manually by clicking on the **Route Workflow** button in a Workflow-enabled Maximo application, such as **Purchase Orders**.*

*One way to automatically start records is to use the **Set Process to Auto-Initiate** action of Workflow Designer to automatically enter a Workflow process when the record is saved or submitted.*

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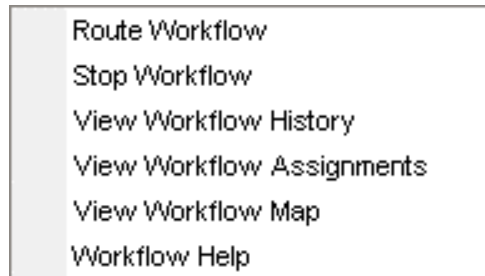
## Starting a Record in a Workflow Process continued

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### Workflow Actions

Once an application is Workflow-supported, a **Workflow** action is added to the **Select Action** menu of the application.

From the Workflow selection in Select Actions of a supported application, there are a number of *sub-actions* available, as shown in the graphic below:



The following sections describe each action.

---

continued on next page

## Starting a Record in a Workflow Process continued

### Manually Routing a Record

Records can be manually moved through a Workflow process by means of *routing*. To manually route records, select the **Route Workflow** action.

Manual routing of records is generally accomplished in three ways:

- A Workflow-supported application will display a Route Workflow button in its toolbar.



- Workflow-supported applications also have a Route Workflow sub-selection in the Workflow selection of the Select Action menu.
- The Route Workflow button also appears on assigned records in the Inbox/Assignments table on the Start Center.

The screenshot shows a window titled "Inbox / Assignments (2)". Below the title bar, it says "Next Assignment Due: 12/1/2004 12:00:00 AM". The table has four columns: "Description", "Due Date", "Priority", and "Start Date". There are two rows of data, both with the description "Move from WAPPR to APPR" and a due date of "12/1/04 12:00 AM". In the right-hand corner of the table, there is a "Refresh" button and a "Route" button. The "Route" button is circled in red. Below the table, it says "1 to 2 of 2".

Description	Due Date	Priority	Start Date
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM
Move from WAPPR to APPR	12/1/04 12:00 AM		12/1/04 12:00 AM

continued on next page

## Starting a Record in a Workflow Process continued

### Stop a Workflow Process

You can stop a Workflow process for a selected record by choosing the **Stop Workflow** sub-action of the Workflow action from Select Action.

When you choose Stop Workflow, Maximo displays a dialog box similar to the one shown below, which allows you to send e-mails indicating that you are stopping the process.

Stop Workflow

You have chosen to stop the active workflow process for this record. Choose one or both of the 'Send e-mail' options below to notify users that this workflow process has been stopped. Optionally enter an e-mail message and transaction memo below. Click OK to stop the workflow process for this record. Click Cancel to return to the record.

Assigned Person Code	Name	Description	Assignment Status
SMITH	Roland Smith	Review this WO for level 1 approval	COMPLETE

**Send e-mail to?**

Communication Template: WFSTOP Default User Stopped Workflow Process mess

Send To:

E-mail Open?

E-mail Complete?

E-mail Subject:

E-mail Message:

Transaction Memo:

OK Cancel

You also can add a note in the **Transaction Memo** field to indicate why the process was stopped.

Note: You can also stop processes for selected records by using the Workflow Administration application, as mentioned on page 2-9.

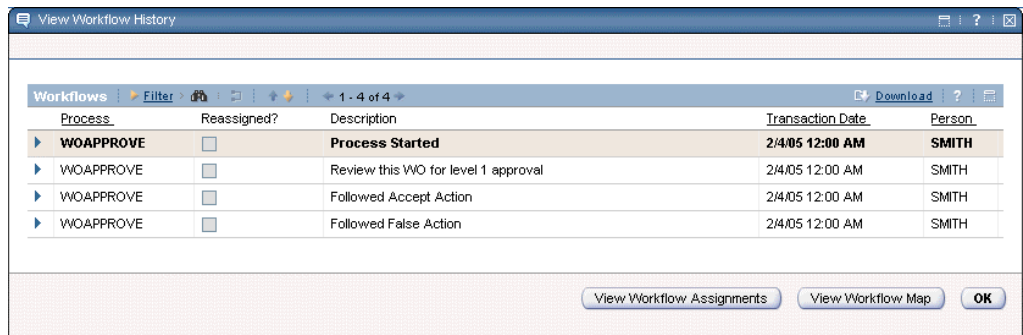
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## Starting a Record in a Workflow Process continued

### Viewing Workflow History

You can view a history of what has happened to the current record in the Workflow process.

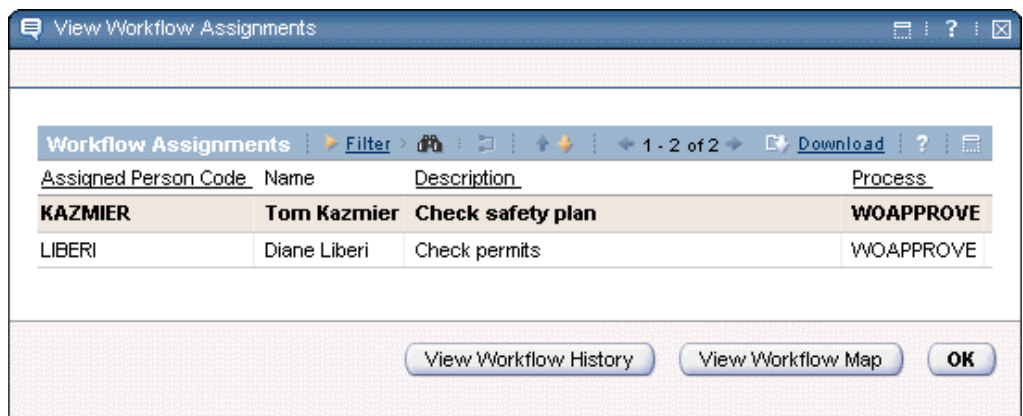
This information is accessed from the **View Workflow History** sub-action of the Workflow action from Select Action.



Note: You can access the Workflow assignments and map from this dialog box by clicking the respective buttons in the lower-right corner of the dialog box.

### Viewing Workflow Assignments

You can view the assignments of the current record in a Workflow process by selecting the **View Workflow Assignments** sub-action of the Workflow action from Select Action.



Note: You can access the Workflow history and map from this dialog box by clicking the respective buttons in the lower-right corner of the dialog box.

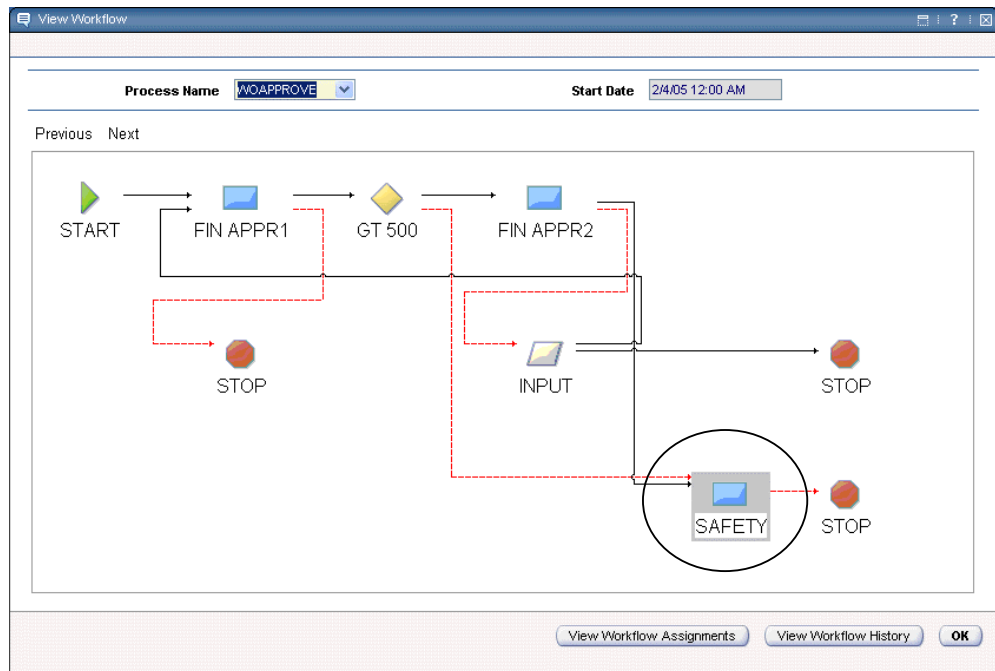
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## Starting a Record in a Workflow Process continued

### Viewing the Workflow Map

You can view a map of the Workflow process and see where the current record resides in the process.

You can access a *Workflow Map* for the current record by selecting the **View Workflow Map** sub-action of the Workflow action from Select Action.



### Notes:

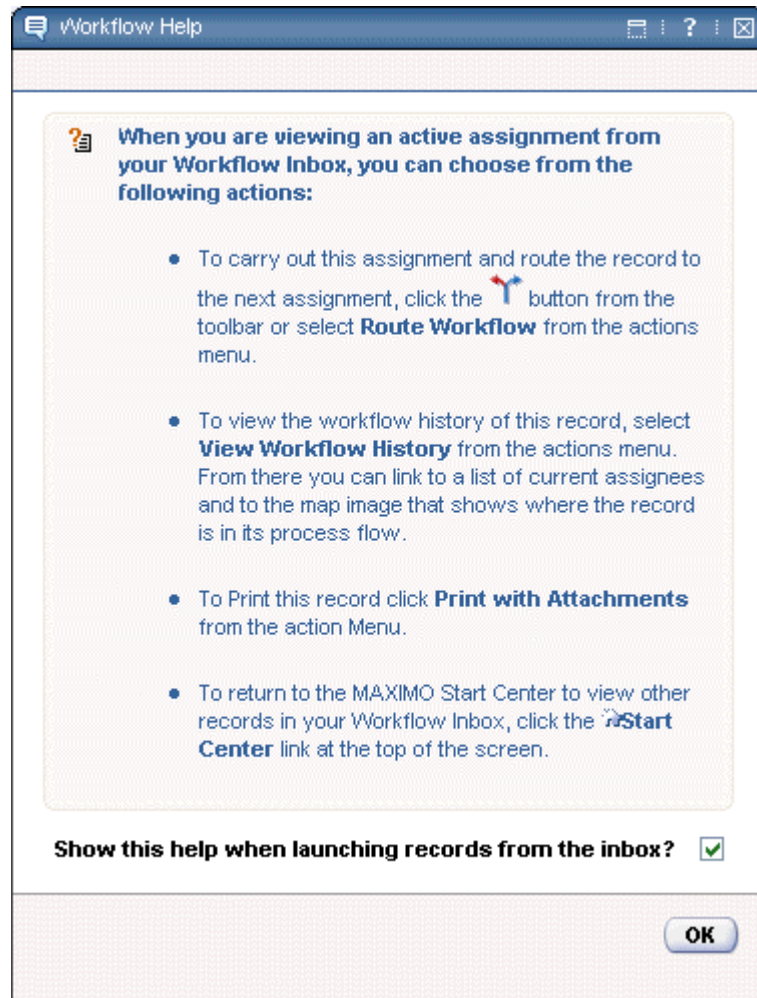
- In the process above, the record is at the SAFETY node, as indicated by a gray square around the node in the map.
- You can access the Workflow assignments and history from this dialog box by clicking the respective buttons in the lower-right corner of the dialog box.

continued on next page

## Starting a Record in a Workflow Process continued

### Accessing Workflow Help

To access some basic, general help about Workflow processes, you can select the **Workflow Help** sub-selection of the Workflow selection from Select Action.



Note: The **Show this help when launching records from the inbox?** check box controls whether you see this help dialog box when you click the Route Workflow button in the Inbox/Assignments table on your Start Center.

continued on next page

## Starting a Record in a Workflow Process continued

### Exercise Scenario 1: Requisition Workflow

In the next exercise we will actually move a record through a Workflow process. But first we need to explain what will be happening.

Step	Action
1	In the POSTATUS process that we will be using, a purchase order (PO) is created in the <b>Purchase Orders</b> application.
2	A new PO is checked to determine whether it has a status of WAPPR (WAPPR?).
3	If the PO has a status of WAPPR, the record goes to a financial condition (COST) to evaluate whether the cost is greater than \$500.
4	If the PO does <i>not</i> have a status of WAPPR, it goes to a node (APPR?) that checks to see if the PO has a status of APPR.
5	If the PO is greater than \$500, then it goes back to the originator of the file for approval (APPROVE).
6	If the PO is <i>not</i> greater than \$500, it is approved and goes to the end of the process (STOP).
7	If the PO > \$500 is approved by the originator, the status of the record is changed to APPR and it goes to the end of the process (STOP).
8	If the PO > \$500 is <i>not</i> approved, the PO is canceled and moves to the end of the process (STOP).

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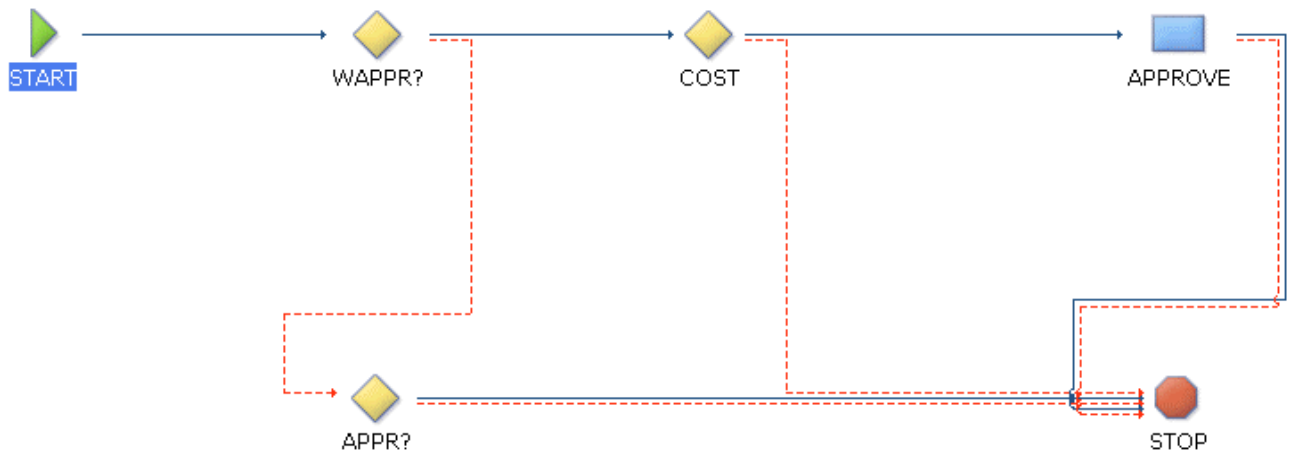


**Starting a Record in a Workflow Process** continued

**Exercise Scenario 1: Requisition Workflow**

continued

The graphic below illustrates how this Workflow process on the previous page might be displayed in the Workflow Designer Canvas.



continued on next page

## Starting a Record in a Workflow Process continued

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### Notes on POSTATUS Process

We need to point out some things about the POSTATUS process:

- The connecting lines in a process (called *Actions*) can be used to generate system actions, such as canceling or approving records. These actions can be viewed in the Properties of the connecting line.

In many cases, these connecting lines do the processing work and you might not see the action in the nodes themselves.

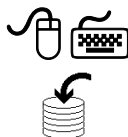
Note: You can more easily see where actions exist by taking a look at the Process tab of the Workflow Designer.

- Processes need to be set to auto-initiate, if this is the desired state. This is not a default. There are several ways to do this, but we will use the Select Action menu in Workflow Designer to do this in the next example.
- 

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## Starting a Record in a Workflow Process continued

### Exercise 1A: Setting a Process to Auto-Initiate



We want purchase order records to *automatically* enter the POSTATUS process when they are first created. So, the first step is to set the process to *auto-initiate*.

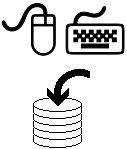
Note: Ensure that you are still logged in as Fred Stanley (User: **stanley** / Password: **Stanley**) and have accessed the Workflow Designer application.

Step	Action
1	Access the <b>Workflow Designer</b> application as Fred Stanley, if you have not already done so in a previous exercise.
2	Access the <b>POSTATUS</b> process. <u>Note</u> : This process should be enabled and active from a previous exercise. If it is not, enable and activate it now.
3	Select <b>Set Process to Auto-Initiate</b> from the <b>Select Action</b> menu. <u>Result</u> : The process will now automatically initiate when a new PO record is saved. The <b>Interactive Initiate?</b> check box is now selected. <div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <b>Interactive Initiate?</b> <input checked="" type="checkbox"/> </div>

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## Starting a Record in a Workflow Process continued

### Exercise 1B: Automatically Starting a Workflow Record



In this exercise, we create a purchase order in the **Purchase Orders** application, which is in the **Purchasing** module.

Then, based on the Workflow process setup from the previous exercise, after a PO record is created, it will *automatically* start in the Workflow approval process journey.

Note: For this exercise, we will sign in to Maximo as the user Frank Jones.

User: **jones** / Password: **jones22**

So, **you will need to sign out** before starting the steps below.

Step	Action						
1	Ensure that you are signed in to Maximo as Frank Jones. <u>Note:</u> There should be nothing in Frank’s Inbox.						
2	Access the <b>Purchase Orders</b> application from the <b>Purchasing</b> module.						
3	Insert a new PO record using this information on the PO tab: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Description</b></td> <td>Office Supplies</td> </tr> <tr> <td><b>Company</b></td> <td>OFFRUS</td> </tr> </tbody> </table> Write the PO number here: _____ <u>Note:</u> The status on the new record is WAPPR. We will leave that status as it is.	<u>Field</u>	<u>Value</u>	<b>Description</b>	Office Supplies	<b>Company</b>	OFFRUS
<u>Field</u>	<u>Value</u>						
<b>Description</b>	Office Supplies						
<b>Company</b>	OFFRUS						

continued on next page

## Starting a Record in a Workflow Process continued

### Exercise 1B: Automatically Starting a Workflow Record

continued

Step	Action																												
4	<p>On the <b>PO Lines</b> tab, add the following line items:</p> <p><b>Line 1:</b></p> <table> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Line Type</td> <td>MATERIAL</td> </tr> <tr> <td>Description</td> <td>CDs</td> </tr> <tr> <td>Quantity</td> <td>8</td> </tr> <tr> <td>Order Unit</td> <td>BOX</td> </tr> <tr> <td>Unit Cost</td> <td>53.00</td> </tr> <tr> <td>GL Debit Account</td> <td>6000-300-200</td> </tr> </tbody> </table> <p><b>Line 2:</b></p> <table> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Line Type</td> <td>MATERIAL</td> </tr> <tr> <td>Description</td> <td>Storage container</td> </tr> <tr> <td>Quantity</td> <td>10</td> </tr> <tr> <td>Order Unit</td> <td>EACH</td> </tr> <tr> <td>Unit Cost</td> <td>14.73</td> </tr> <tr> <td>GL Debit Account</td> <td>6000-300-200</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Line Type	MATERIAL	Description	CDs	Quantity	8	Order Unit	BOX	Unit Cost	53.00	GL Debit Account	6000-300-200	<u>Field</u>	<u>Value</u>	Line Type	MATERIAL	Description	Storage container	Quantity	10	Order Unit	EACH	Unit Cost	14.73	GL Debit Account	6000-300-200
<u>Field</u>	<u>Value</u>																												
Line Type	MATERIAL																												
Description	CDs																												
Quantity	8																												
Order Unit	BOX																												
Unit Cost	53.00																												
GL Debit Account	6000-300-200																												
<u>Field</u>	<u>Value</u>																												
Line Type	MATERIAL																												
Description	Storage container																												
Quantity	10																												
Order Unit	EACH																												
Unit Cost	14.73																												
GL Debit Account	6000-300-200																												
5	<p><b>Save</b> the record.</p> <p><u>Result:</u> A note indicating that the POSTATUS process has been started flashes briefly above the toolbar. The record goes into the process.</p>																												

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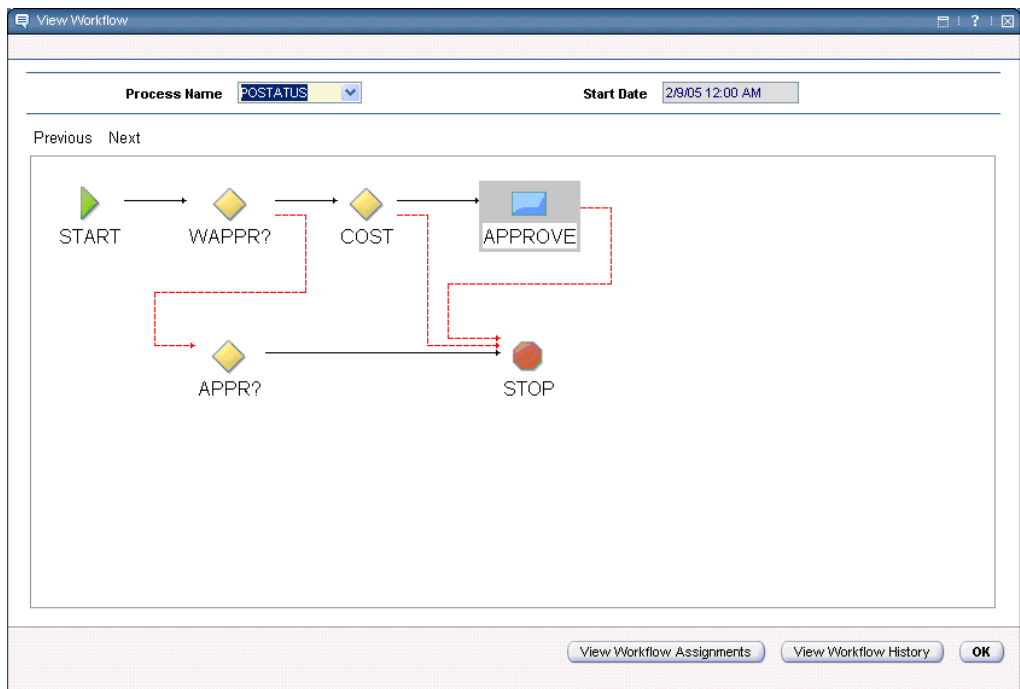
## Starting a Record in a Workflow Process continued

### Check Out the Process

At this point, we've created a PO record and saved it. Because we set the process to auto-initiate, the act of saving the record automatically put the record into the POSTATUS process.

Referring to the scenario on page 2-44, you will note that if the PO is greater than \$500, it must be re-checked Approved by the person who originally created the record.

In the Purchase Orders application, view the Workflow Map for the new PO record to see where it currently resides in the process. Your Workflow map should look similar to the graphic below.



Because the new PO is more than \$500, it is now in the APPROVE node, just as it should be, according to the process described on page 2-44.

We'll finish the process later in this chapter. At this point, let's try out the WOAPPROVE process that we activated earlier.

continued on next page

## Starting a Record in a Workflow Process continued

### Exercise Scenario 2: Work Order Approval Workflow

In the process described below, a work order is created in the **Work Order Tracking** application. The new record will be *manually* put into the WOAPPROVE process.

The table below explains the process shown in the diagram on the following page.

Step	Action
1	The new work order record requires a Level 1 Financial Approval [FIN APPR1] by Roland Smith.
2	After Roland reviews the work order, he can cancel [STOP] it or give it Level 1 Financial Approval. If approved, the record will be sent on to a financial condition [GT 500] in which the estimated cost is evaluated to see if it is greater than \$500.
3	If the estimated labor cost is greater than \$500, the record moves on to Level 2 Financial Approval [FIN APPR2], during which a supervisor can approve the record and send it to the Safety Dept [SAFETY] for review and approval.
4	If the work order is not approved, it is then sent to a manual decision input [INPUT], at which time the work order could be canceled or sent back to Financial Approval 1 [FIN APPR1] for a labor cost review.

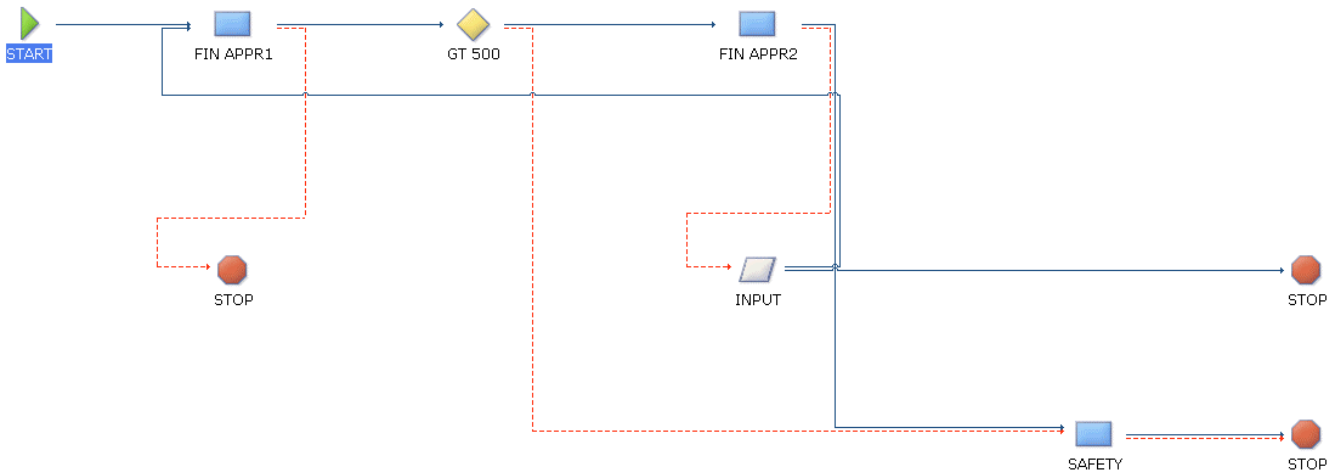
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## Starting a Record in a Workflow Process continued

### Exercise Scenario 2: Work Order Approval Workflow

continued

The graphic below illustrates how the Workflow process on the previous page might be displayed in the Workflow Designer Canvas.



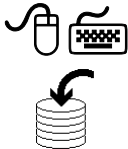
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## Starting a Record in a Workflow Process continued

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### Exercise 2: Manually Starting a Workflow Record



In this exercise, Fred Stanley is going to create a work order record using the **Work Order Tracking** application.

Note: It is assumed that you already know how to create a work order in Maximo.

The WOAPPROVE process has not been set to auto-initiate. So, Fred will need to manually start the record in Workflow by clicking on the **Route Workflow** icon from the Work Order Tracking application.

Step	Action
1	Sign in to Maximo as Fred Stanley.
2	Access the <b>Work Order Tracking</b> application and insert a new work order record. Write your work order # here: _____

continued on next page

**Starting a Record in a Workflow Process** continued

**Exercise 2:  
Manually  
Starting a  
Workflow  
Record**

continued



Step	Action		
3	Enter the following information for the tabs and subtabs indicated below.		
	<u>Tab &gt; Subtab</u>	<u>Field</u>	<u>Value</u>
	<b>Work Order</b>	<b>Description</b>	Fix broken windows and frames
		<b>Work Type</b>	CM
		<b>Location</b>	CONF300
	<b>Plans &gt; Labor</b>	<b>Craft</b>	Carpenter / Secondclass
		<b>Quantity</b>	1
		<b>Regular Hours</b>	4:00
	<b>Plans &gt; Materials</b>	<b>Line Type</b>	MATERIAL
		<b>Description</b>	5x8 window pane and frame
		<b>Quantity</b>	2
		<b>Order Unit</b>	EACH
		<b>Unit Cost</b>	500.00
		<b>Vendor</b>	FSC
		<b>Issue to</b>	Granger

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## Starting a Record in a Workflow Process continued

### Exercise 2: Manually Starting a Workflow Record

continued

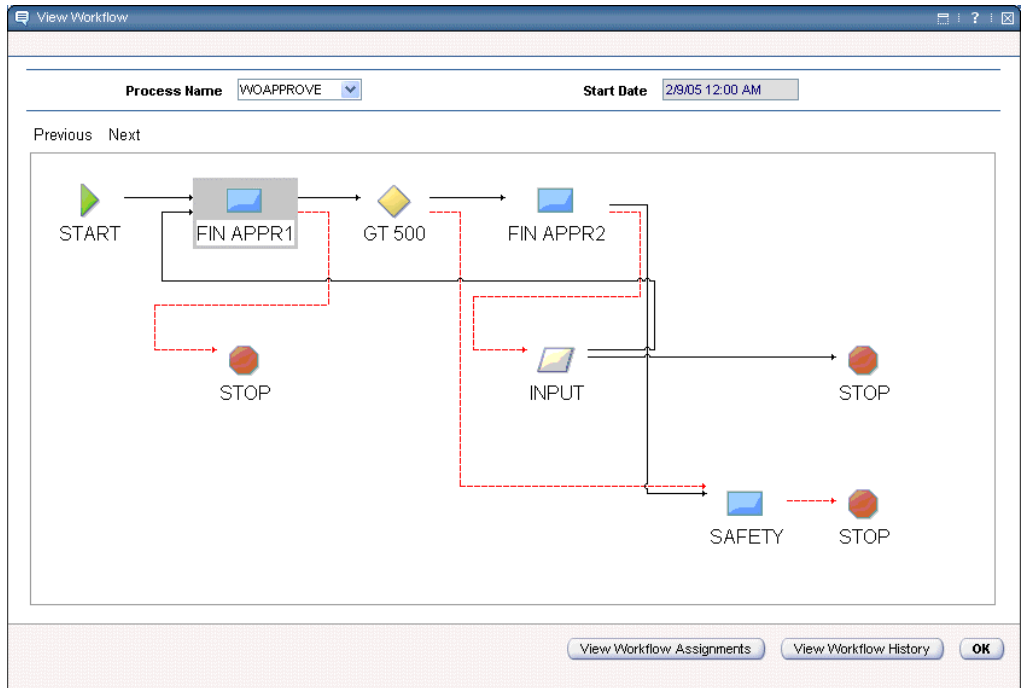
Step	Action
4	<p><b>Save</b> the work order record.</p> <p><u>Note:</u> In this example, the record did not enter the workflow because the underlying process is <i>not</i> set to auto-initiate.</p>
5	<p>Click the <b>Route Workflow</b> icon:</p> <div style="text-align: center;">  </div> <p><u>Result:</u> The record is placed into the Workflow process. The Route Workflow button changes, as shown below, to indicate that the record is now in a Workflow process.</p> <div style="text-align: center;">  </div> <p><u>Note:</u> You might also see a message that briefly flashes just above the tool bar, indicating that the record has been placed into a process.</p>
6	<p>Keep this record open.</p> <p>Take a look on the next page to see where the record is in the process.</p>

continued on next page

## Starting a Record in a Workflow Process continued

### Check Out the Process

Let's take a look at where the current work order record is in the process. View its Workflow Map. The map should look like the graphic below.



Per the scenario on page 2-51, the work order record has been manually entered into the process. The first stage of the process is the Level 1 Financial Approval, where the record now resides.

## Checking the Workflow

### Overview

Maximo enables you to view the present state in the workflow of a currently selected record.

We discussed these previously, but now that we actually have records in the Workflow processes, we will take a look at some of their states.

### Review: Checking the Workflow History

You can view a Workflow history of the current record by selecting **Workflow ► View Workflow History** from the Select Action menu.

An example is shown below.

Process	Reassigned?	Description	Transaction Date	Person
WOAPPROVE	<input type="checkbox"/>	Process Started	2/7/05 12:00 AM	WILSON

Optional: Check the Workflow History for both the purchase order and the work order from the previous exercises.

### Exercise 1: Checking a Workflow Record



What is the last entry in the Workflow History of your purchase order for office supplies?

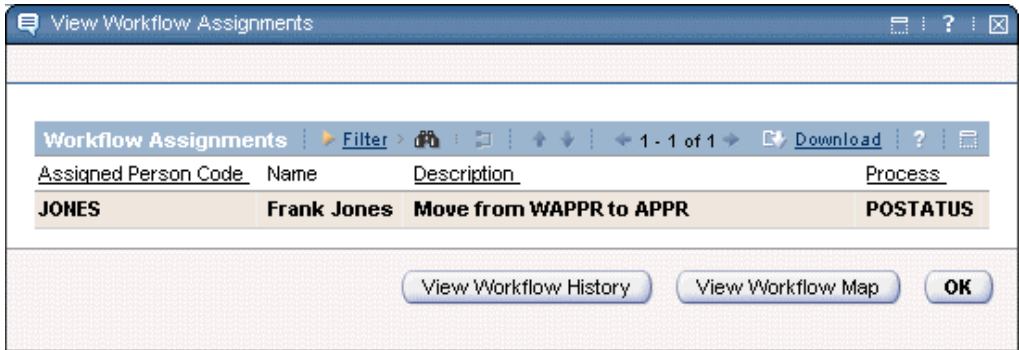
Write your answer here: \_\_\_\_\_

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### Checking the Workflow continued

**Review:**  
**Checking the Current Assignments**

You can view the current assignees for the selected record by selecting **Workflow ▶ View Workflow Assignments** from the Select Action menu. An example is shown below.



**Exercise 2:**  
**Checking a Workflow Record**



Who is the current assignee for Stanley’s Broken Window work order?

Write your answer here: \_\_\_\_\_

## Completing My Workflow Assignments

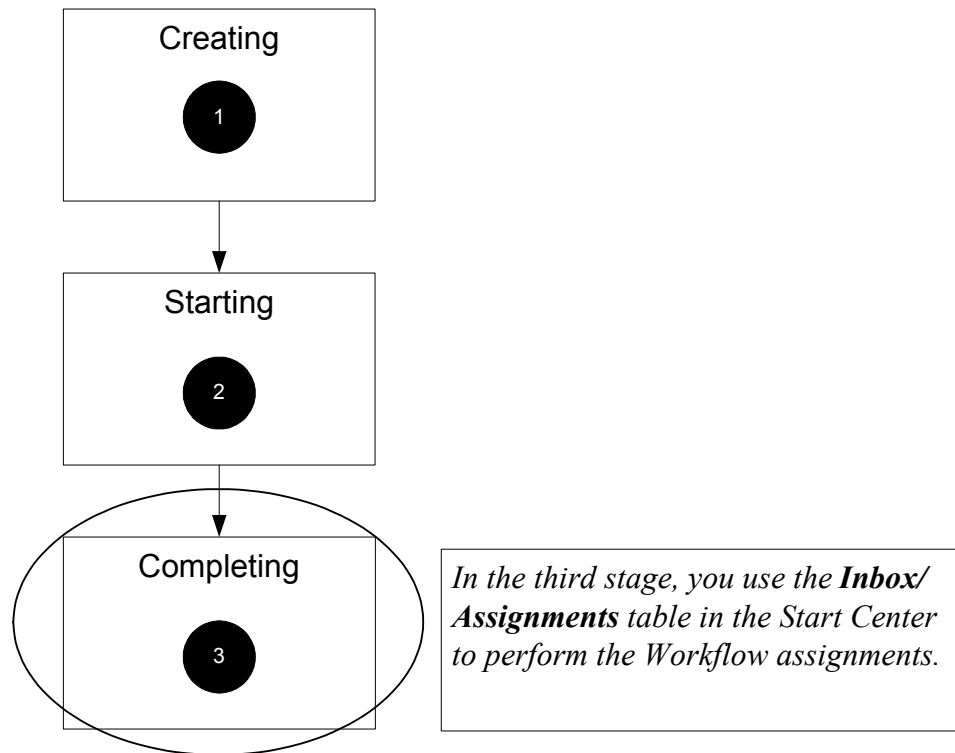
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### Introduction

In this section, we will learn how to navigate the **Inbox/Assignments** table for various users to complete a Workflow process.

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### We Are Here

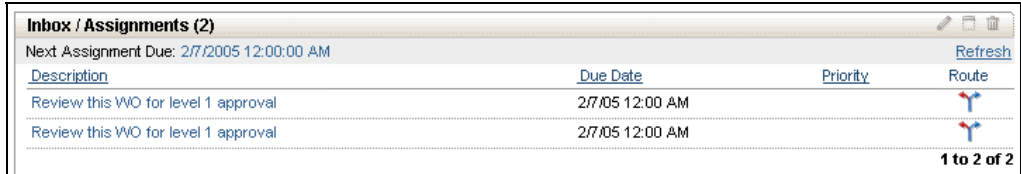




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## Completing My Workflow Assignments continued

### Inbox/ Assignments Table

The **Inbox/Assignments** table provides a handy place from which to review and route tasks that have been assigned to you.



Inbox / Assignments (2)			
Next Assignment Due: 2/7/2005 12:00:00 AM			<a href="#">Refresh</a>
<a href="#">Description</a>	<a href="#">Due Date</a>	<a href="#">Priority</a>	<a href="#">Route</a>
Review this WO for level 1 approval	2/7/05 12:00 AM		
Review this WO for level 1 approval	2/7/05 12:00 AM		

1 to 2 of 2

In the following exercises, we will be using this table to complete the processes we started in the previous exercises.

Note: You can also use the Route Workflow button to move selected records. However, we will focus on the use of the Inbox/Assignments table.

continued on next page



## Completing My Workflow Assignments continued

### Exercise 1: Complete the Workflow



In the following exercise, we will sign in again as Frank Jones and complete the PO process from the Inbox in his Start Center.

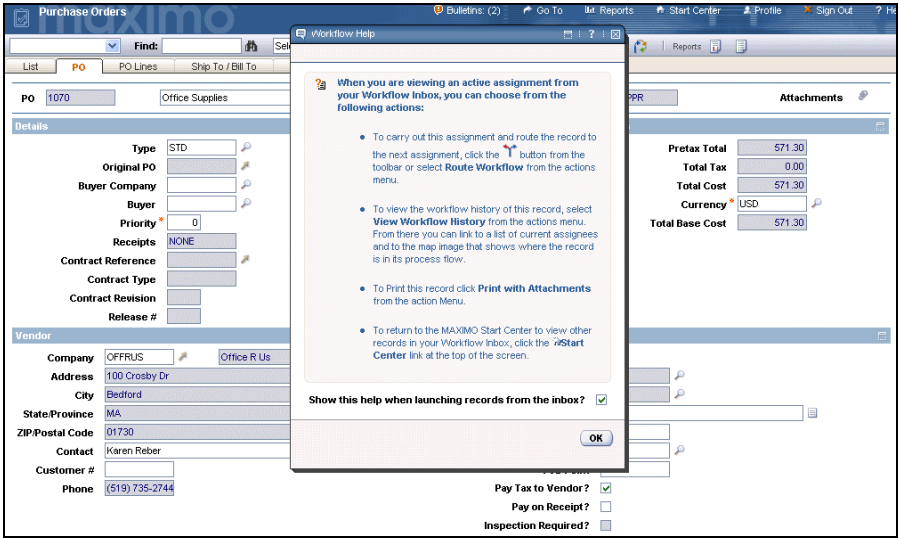
Step	Action
1	<p>Sign in to Maximo as Frank Jones.                      User: <b>jones</b> / Password: <b>jones22</b>  <u>Result:</u> You are taken to Frank’s Start Center, similar to the graphic below.</p> <p><u>Note:</u> Frank actually has two Start Center pages: Maintenance and Purchasing. The Inbox on both pages reflects the current assignment for the PO record of <i>Move from WAPPR to APPR</i>.</p>

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## Completing My Workflow Assignments continued

### Exercise 1: Complete the Workflow

continued

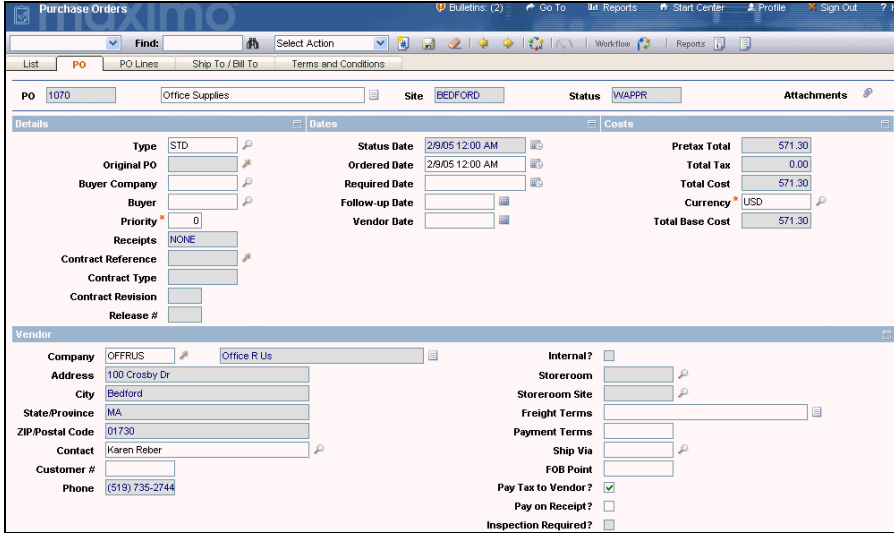
Step	Action
2	<p>Click on the <b>Move from WAPPR to APPR</b> description in either of Frank’s Inboxes.</p> <p><u>Result:</u> The underlying record displays in the Purchase Order application with Workflow Help displayed.</p>  <p><u>Note:</u> You can clear the <b>Show this help when launching records from the inbox?</b> check box if you don’t want help to show each time that you view an underlying record from the Inbox.</p>

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## Completing My Workflow Assignments continued

### Exercise 1: Complete the Workflow

continued

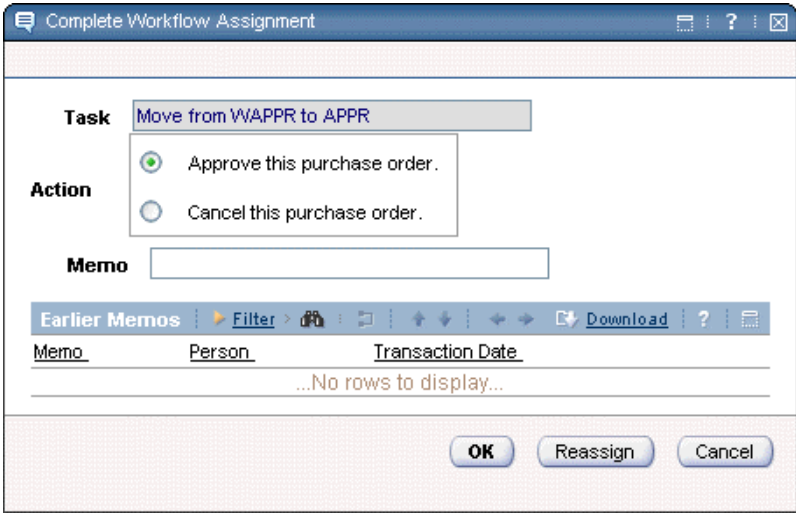
Step	Action
3	<p>Clear the <b>Show this help when launching records from the inbox?</b> check box, then click <b>OK</b> in the <b>Workflow Help</b> dialog box.</p> <p><u>Result:</u> Workflow Help closes and the PO record is fully displayed.</p>  <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• The automatic Workflow Help will no longer display when viewing a record from the Inbox. However, application help is still available.</li> <li>• The status of the PO record is WAPPR at this point.</li> <li>• The last two steps show you how you can access the underlying record from the Inbox. It is not necessary to view the underlying record, as we have done here. However, we wanted to show you how this can be done from the Inbox.</li> </ul>

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## Completing My Workflow Assignments continued

### Exercise 1: Complete the Workflow

continued

Step	Action
4	<p>Now we want to route the record to the next point in the Workflow process.</p> <p>To do so, click the <b>Route Workflow</b> button on the displayed record.</p> <p><u>Result:</u> The Complete Workflow Assignment dialog box opens on top of the underlying record, asking whether the record should be approved.</p>  <p><u>Note:</u></p> <ul style="list-style-type: none"> <li>• The process scenario discussed on page 2-44 indicates that, if the PO is greater than \$500, it must be approved or canceled at this point (APPROVE). This is where we are in the process.</li> <li>• While reviewing the record in the previous steps, you actually could have clicked the Route Workflow button on the record itself. But, for this example, we wanted you to see how the routing can be done from the Inbox.</li> </ul>

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## Completing My Workflow Assignments continued

### Exercise 1: Complete the Workflow

continued

Step	Action
5	<p>Ensure that the <b>Approve this purchase order</b> option is selected, then click <b>OK</b>.</p> <p><u>Result</u>: The process goes to the next step, which is the Stop node.</p> <p><u>Note</u>: The status is now APPR, as indicated in the process on page 2-44.</p>

### Challenge Question: The Workflow Map



Access the Workflow Map of the PO record for Office Supplies.  
The **View Workflow** dialog box opens.

Question: Why doesn't Maximo display the Workflow Map for this record?

continued on next page

## Completing My Workflow Assignments continued

---

### What Happens When a Record Leaves Workflow?

A record has completed its Workflow assignment journey when it reaches a **STOP** node.

If the current process is a subprocess, it returns to its *calling process*.

Note: A *calling process* is the parent (top-level) process of a subprocess.

If it is already in the calling process, it leaves Workflow.

When a record leaves the control of a Workflow process, it becomes a regular Maximo record that retains whatever status it had at the time it left the Workflow.

You can specify that a record will leave Workflow control at any point along the approval process. You do this by:

- choosing **Workflow ► Stop Workflow** from the Select Action menu of the selected record; or
  - stopping the process from the Workflow Administration application.
-

## Chapter Summary

---

### Components of Workflow

Workflow is comprised of a number of applications used to create workflow processes, applications used to create records used by these processes, the Inbox, and Workflow Options.

---

### Workflow Categories

There are several general categories of workflows:

- Process workflow
  - Context-based instructions
  - Hybrids of the two
- 

### Location of Workflow Applications

All directly Workflow-related applications, except for Escalations, are located in the **Workflow** *submodule* of the **Configuration** module.

The Escalations application is located directly within the Configuration module.

---

### Workflow Applications

The main applications involved with Workflow processes are:

- Workflow Administration
  - Workflow Designer
  - Actions
  - Roles
  - Communication Templates
  - Escalations
- 

### Workflow Options

Workflow Options are accessed from the Select Action menu of the Organizations application.

### Three Stages of Workflow Development

The three key stages of workflow development are:

1. Creating
  2. Starting
  3. Completing
- 

continued on next page

## Chapter Summary continued

---

### Canvas Nodes

The nodes on the Workflow Designer Canvas tab are:

- Start
  - Stop
  - Task
  - Condition
  - Manual Input
  - Subprocess
  - Interaction
  - Wait
- 

### Canvas Tools

The additional tools found on the Canvas tab are:

- Move/Add Nodes
  - Connect Nodes
  - Connect Nodes with a Negative Action
  - Delete
  - Properties
  - Zoom
- 

### Action Buttons

The action buttons on both the Canvas and the Process tabs are:

- Insert Process Revision
  - Validate Process
  - Enable Process
  - Activate Process
- 

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## Chapter Summary continued

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**Workflow Action  
Menu**

When an application been Workflow-supported, a Workflow item appears on its Select Action menu. The following choices are available:

- Route Workflow
  - Stop Workflow
  - View Workflow History
  - View Workflow Assignments
  - View Workflow Map
  - Workflow Help
-

## Workshop

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### Exercise 1



What happens when a record enters a Workflow process?

---

### Exercise 2



What is a Workflow process?

---

### Exercise 3



What is a node?

---









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**Workshop** continued

**Exercise 4**



Name and describe each of the nodes shown below.

Node	Description
	
	
	
	
	
	
	
	

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## Workshop continued

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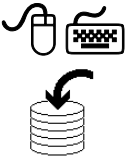
### Exercise 5



To use a Workflow process, what two things have to be done?

- 1.
  - 2.
- 

### Exercise 6: Scenario



Upon initial access to the Maximo Sign-In screen, users can start a self-registration process by clicking the **register now** link.

**Note:** Some companies do not use the self-registration method. Check with your Maximo administrator to see how your company handles this process.

Self-registered users are automatically assigned to a *default* group, which controls the initial *basic* privileges provided to the user.

Note: It is assumed that you are familiar with Maximo security procedures.

When a new user self-registers, the registration activity can trigger a Workflow process—SELFREG—during which the Maximo administrator is assigned to review the registration.

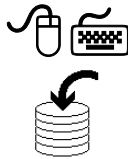
Upon receiving the user review assignment, the Maximo administrator checks the new user record and provides privileges appropriate for the new user.

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**Workshop** continued

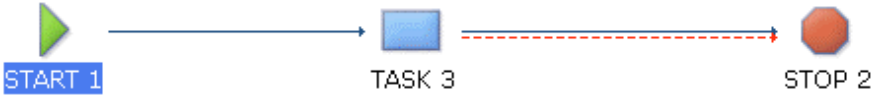
**Exercise 6:  
Make the  
Process  
Available**



The first thing that needs to be done is to make the SELFREG process available to Maximo. This involves:

- Enabling
- Activating
- Auto-initiating

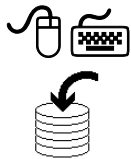
Follow the steps below to do this.

Step	Action
1	Access the <b>Workflow Designer</b> application as Frank Stanley. User: <b>stanley</b> / Password: <b>stanley</b>
2	Access the <b>Canvas</b> tab for the <b>SELFREG</b> process. <u>Result:</u> The SELFREG process nodes look like the graphic below. 
3	Enable and activate the process, if necessary. <u>Result:</u> The process is now ready to be used. The <b>Enabled?</b> and <b>Active?</b> check boxes are selected. <p style="text-align: center;"><b>Enabled?</b> <input checked="" type="checkbox"/> <b>Active?</b> <input checked="" type="checkbox"/></p> <u>Note:</u> Depending on your classroom setup, this process might already be enabled and activated.
4	Set the process to auto-initiate. <u>Hint:</u> Use the Select Action menu. <u>Result:</u> The process will now automatically start when a relevant record is saved. The <b>Interactive Initiate?</b> check box is selected. <p style="text-align: center;"><b>Interactive Initiate?</b> <input checked="" type="checkbox"/></p>

continued on next page

Workshop continued

**Exercise 7:  
Follow the  
Process**



At this point, we've got the process ready to go.

Now let's do a self-registration and follow the process through its steps.

Step	Action
1	Sign out of Maximo. <u>Result:</u> You are at the Sign In page.
2	Click the <b>register now</b> link. <u>Result:</u> The User Self Registration page opens. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> </div>

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## Workshop continued

### Exercise 7: Follow the Process

continued

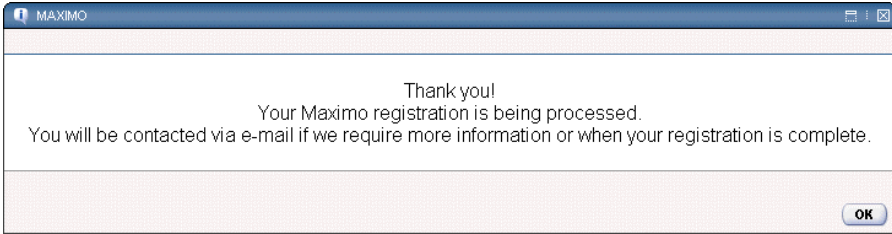
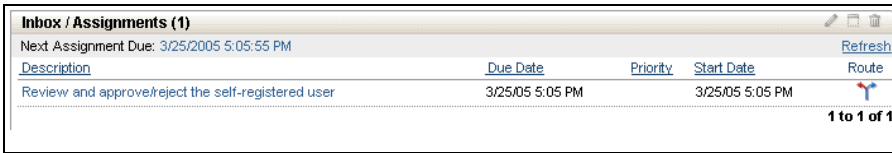
Step	Action
3	<p>Enter the following information in the <b>Required Information</b> section:</p> <p><b>First Name</b>                    [ <i>Your First Name</i> ]</p> <p><b>Last Name</b>                    [ <i>Your Last Name</i> ]</p> <p><b>User ID</b>                        [ <i>Your Last Name</i> ] (<u>Note</u>: Must have eight letters)</p> <p><b>Password</b>                     [ <i>Your Last Name</i> – lowercase]</p> <p><b>Confirm Password</b>        [ <i>Your Last Name</i> – lowercase]</p> <p><b>Primary E-Mail</b>             [ <i>Your E-Mail Address</i> ]</p> <p><u>Note</u>: In the spaces provided below, write down the values in the User ID and Password fields. This information will come in handy for a later optional exercise.</p> <p style="text-align: center;">User ID: _____</p> <p style="text-align: center;">Password: _____</p>
4	<p>Enter the following information in the <b>Personal Information</b> section:</p> <p><b>Supervisor</b>                    WINSTON</p> <p><b>Default Insert Site</b>        BEDFORD</p> <p><b>Default Storeroom</b>        CENTRAL</p> <p><b>Language</b>                     EN</p> <p><b>Additional Information</b>    I am a new Maximo user.</p>

continued on next page

**Workshop** continued

**Exercise 7:  
Follow the  
Process**

continued

Step	Action
5	<p>Click <b>Submit</b>.</p> <p><u>Result:</u> A dialog box similar to the one below opens, indicating that the registration is being processed.</p> 
6	<p>Click <b>OK</b> to close the dialog box.</p> <p><u>Result:</u> You are taken back to the Maximo sign-in screen.</p> <p><u>Note:</u> The Maximo administrator must access the new registration record and determine whether the registration will be accepted. Until the registration is accepted, you cannot access Maximo.</p>
7	<p>Sign in to Maximo as the Maximo administrator using the following information:</p> <p style="text-align: center;">User: <b>maxadmin</b> / Password: <b>maxadmin</b></p> <p><u>Result:</u> You are taken to the Start Center for the Maximo administrator. The new registration is in the administrator's Inbox.</p>  <p><u>Note:</u> The user <i>maxadmin</i> has been assigned the task of reviewing the new registration, so you are signing in as that user to check the Inbox.</p>

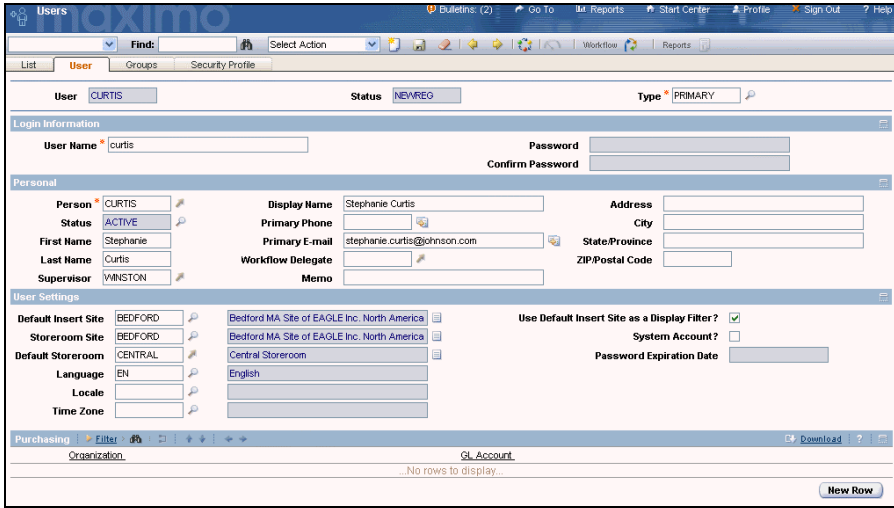
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Workshop continued

Exercise 7:  
Follow the  
Process

continued


Step	Action
8	<p>Click on the <i>Review and approve/reject the self-registered user</i> text in the <b>Description</b> field of the Inbox.</p> <p><u>Result:</u> The new user record displays in the Users application.</p>  <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• If you did not disallow the Workflow Help from automatically displaying, it will display on top of the user record. Click OK to close the help window.</li> <li>• The Route Workflow button shows that the record is already in a workflow. This is because the SELFREG process is auto-initiated.</li> </ul>

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**Workshop** continued

**Exercise 7:  
Follow the  
Process**

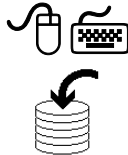
continued

Step	Action
9	<p>Click <b>Route Workflow</b>.</p> <p><u>Result:</u> A task displays for the Maximo administrator with two choices, as shown below.</p> 
10	<p>Ensure that <i>Approve the self-registration</i> is selected, then click <b>OK</b>.</p> <p><u>Result:</u> The new user is now registered in Maximo. The SELFREG process stops.</p> <p><u>Note:</u> The administrator needs to put the new user into a <i>Security Group</i> for the new user to actually access Maximo. We will do this in the next exercise.</p>

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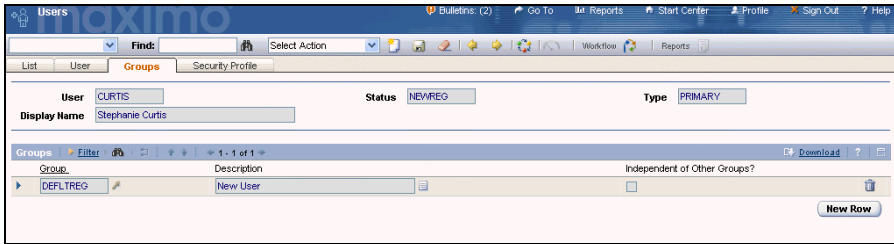
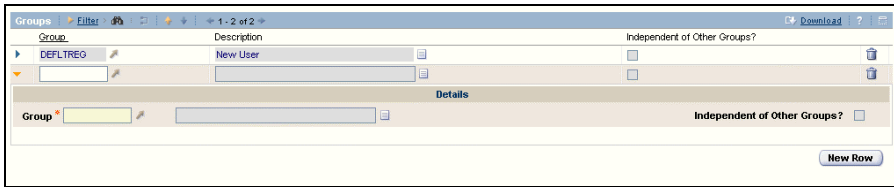
## Workshop continued

### Exercise 8: Put the User into a Security Group



This is kind of jumping ahead of the game, but we want to finish the process of adding the user to a security group. Follow the steps below.

Note: We'll cover security groups in more detail later in the course.

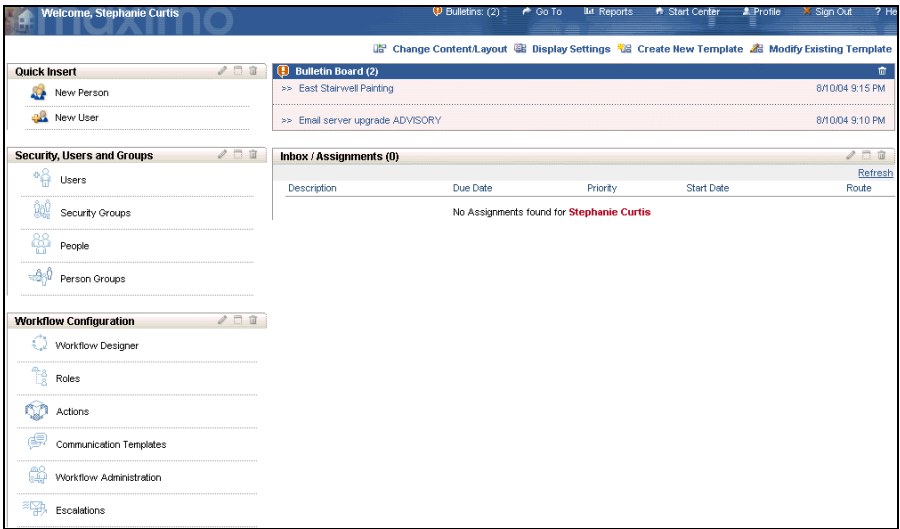
Step	Action
1	Sign in to Maximo as Mike Wilson (wilson/wilson) and access your new user from the <b>Users</b> application in the <b>Security</b> module. <u>Note:</u> The user record would be the value in the User ID field during self-registration. Hopefully you wrote it down!
2	Click the <b>Groups</b> tab to view it.  <u>Note:</u> Self-registered users are automatically put into the DEFLTREG group. However, this group only allows you to enter a new password on first registration. There is no access to applications or a Start Center.
3	Add a new row in the <b>Groups</b> section. 

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Workshop continued

**Exercise 8: Put the User into a Security Group**

continued

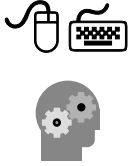
Step	Action
4	<p>In the <b>Group</b> field of the new line, enter <b>MAXADMIN</b>.</p> <p><u>Note:</u> This group will give your new user access to just about everything in Maximo. Normally you'd give access to a security group with fewer privileges.</p>
5	<p><b>Save</b> the record.</p> <p><u>Result:</u> Now your user is fully registered in Maximo and has access to applications and a Start Center.</p>
6	<p>Sign out of Maximo and sign back in with the user name and password that you wrote down on page 2-75 in the previous exercise.</p> <p><u>Note:</u> Depending on your system setup, you might be asked to enter a new password on first sign-in. Follow the steps and sign in.</p> <p style="text-align: center;">New password on first sign-in: _____</p> <p><u>Result:</u> Your user now has access to Maximo with a Start Center and rights to use all applications.</p> 

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## Workshop continued

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### Exercise 9



Using the Fix Broken Window work order record, complete the following exercise:

1. Sign in to Maximo as Roland Smith (user: **smith** / password: **smith1**) and route the work order on to the next approval level, which is a safety and permit check.
2. Sign out of Maximo and sign in as Diane Liberi (user: **liberi** / password: **liberi**). Route the work order from Diane's Inbox. In the WO approval task dialog box, enter **Permits not required** in the **Memo** field. Approve the work order.
3. What is the status of the work order after completing the Workflow process?

\_\_\_\_\_

(Hint: It will not be APPR, because the materials have not yet been ordered and received.)

---

### Exercise 10: Discussion



Can you think of where in your organization the Workflow application could be used?

If so, where?

How would you implement the use of Workflow at your site?

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**NOTES:**

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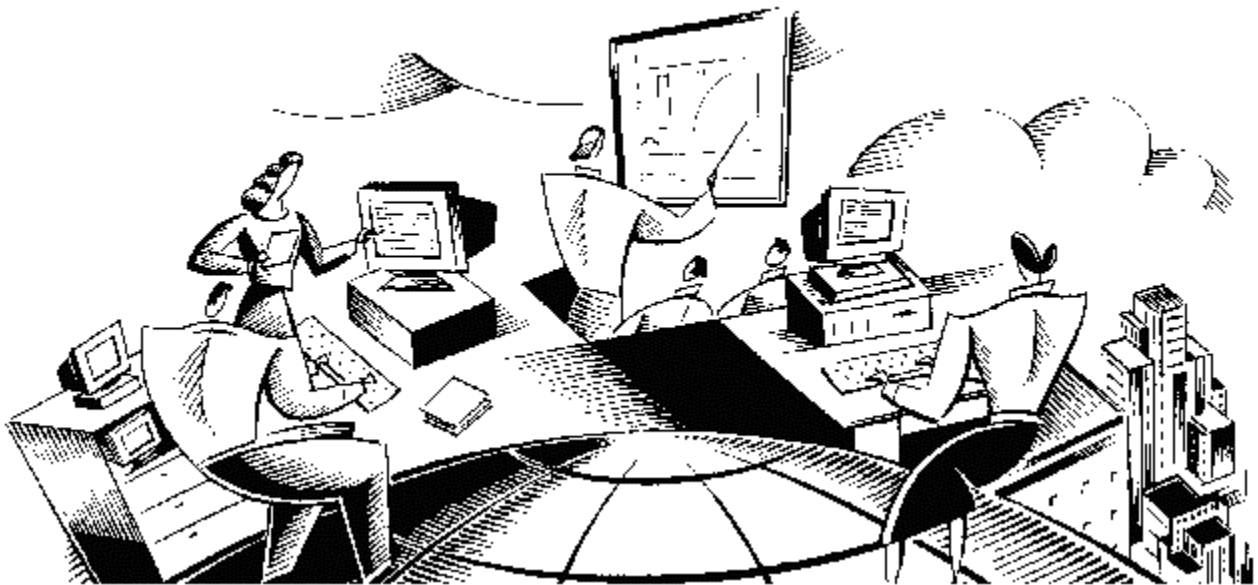
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# Workflow Management Using MXES

## Chapter 3: Implementation Process Overview



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	3-1
Workflow Implementation Process	3-2
Chapter Summary	3-13
Workshop	3-15

---



## Chapter Overview

---

**Chapter Focus**

In this chapter we will discuss the process you use to design, build, test, and deploy a new workflow.

---

**Learning Objectives**

When you have completed this chapter, you should be able to list the phases, tasks, and activities of the Workflow implementation process used throughout this course.

---

## Workflow Implementation Process

---

### Introduction

As with any enterprise-wide software implementation, the more you plan and document, the more successful your implementation of Workflow ultimately will be.

The process will also provide you an opportunity to document and examine your current business processes and determine whether they meet your organizational needs.

If you discover areas that need some improvement, the implementation of Workflow could provide the motivation to streamline those processes.

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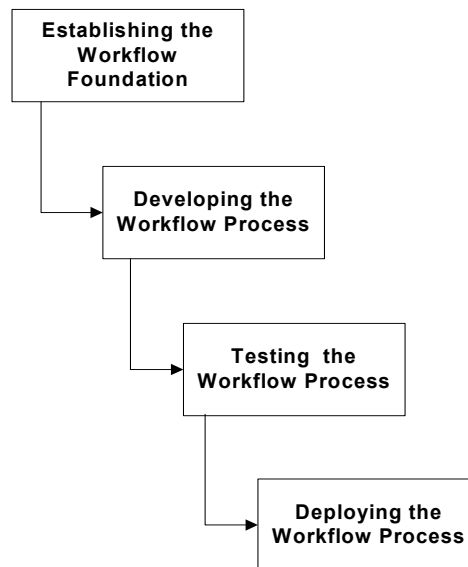
## Workflow Implementation Process continued

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### Workflow Implementation Process

The Workflow implementation process reflects the steps and activities that you could use to implement any new Workflow process into your business environment. These phases are as follows.

1. **Establishment:** Documenting existing business practices and processes by the implementation team.
2. **Development:** Creating an electronic version of the Workflow process.
3. **Testing:** Testing the Workflow process through all possible paths.
4. **Deployment:** Rolling out a Workflow process and gauging its effectiveness.



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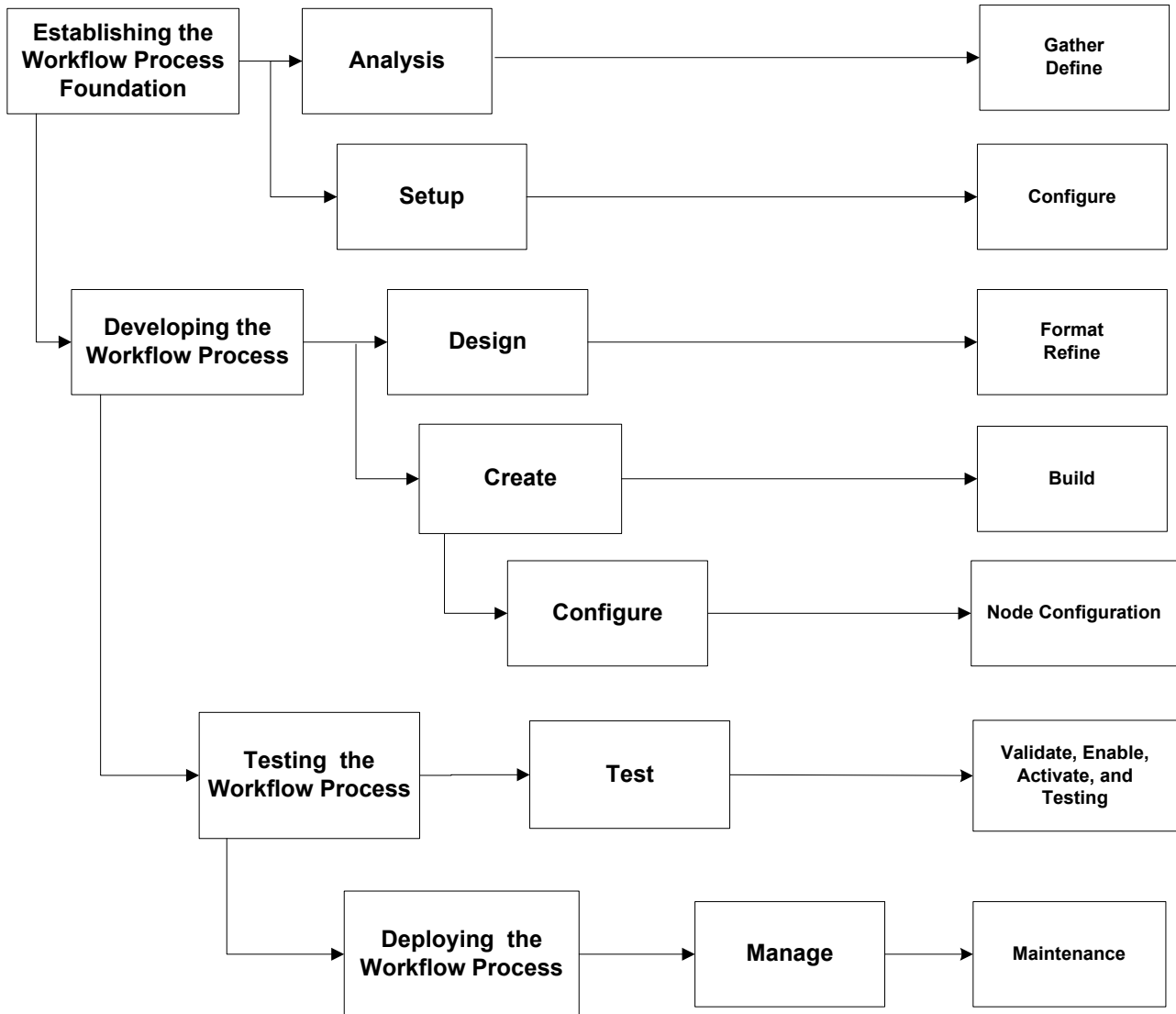
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## Workflow Implementation Process continued

### Phases and Tasks

Each phase can be broken down into several tasks with related activities. This course will follow each phase and its associated tasks.

Your implementation team will have to decide whether to follow some or all of these phases and tasks in your company's Workflow implementation.



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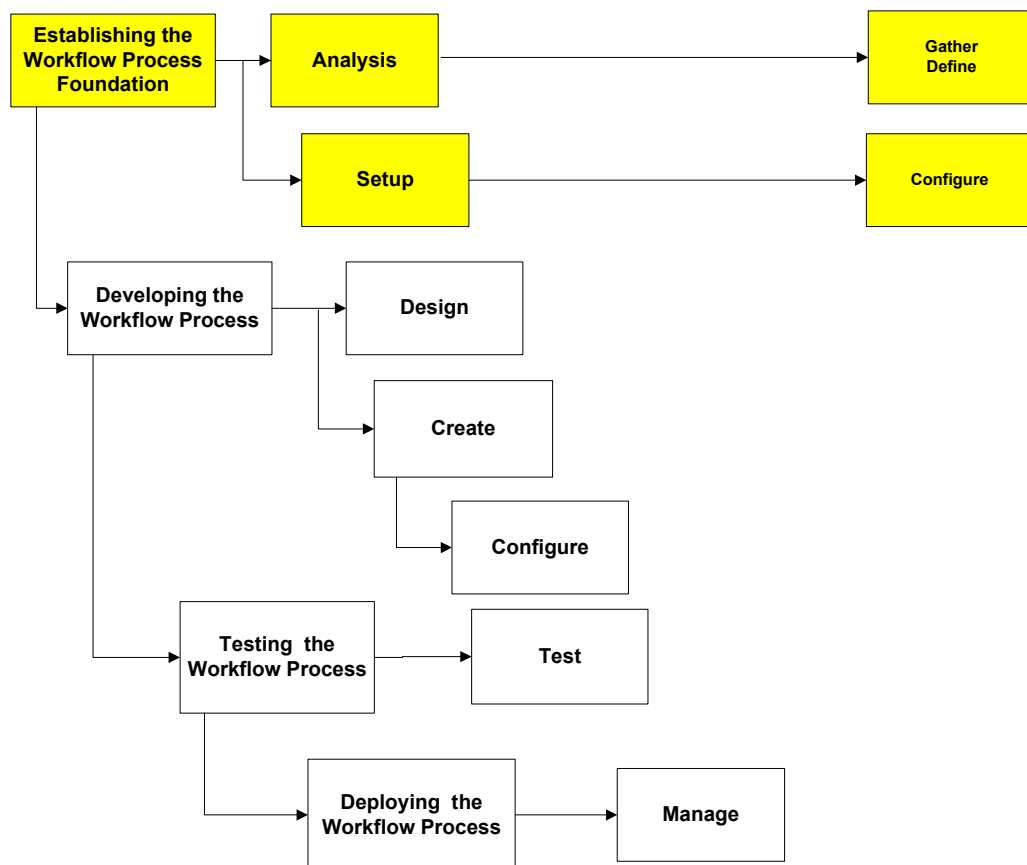
## Workflow Implementation Process continued

### Phase 1: Establishing the Foundation

Each task can have either one activity or several activities associated with it.

- In Phase 1, the implementation team researches and documents existing procedures, analyzes the information, and discusses the business processes that will be automated.
- They also have the opportunity to decide on process changes and take advantage of Workflow features that were not available using a manual process.
- After a determination is made and a Workflow process is designed, certain records must be created to allow a Workflow process to run and certain data must be entered into several Maximo applications.

Detailed discussion of this phase occurs in Unit 2: “Establishing the Workflow Process Foundation.”



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## Workflow Implementation Process continued

### Activities Examples

The following table lists examples of the activities you might perform at each task level of Phase 1.

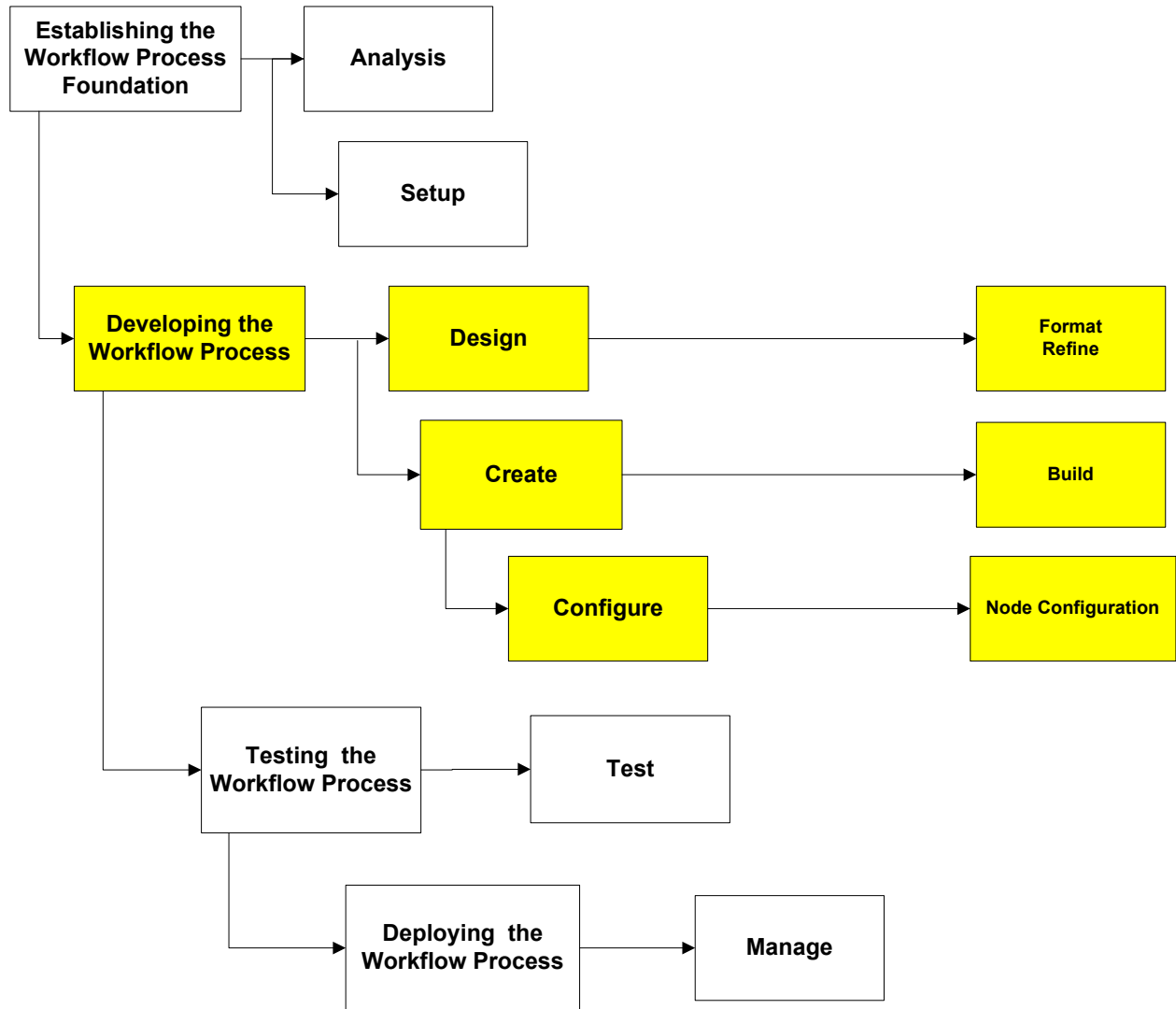
Task	Activity	Actions
<i>Analysis</i>	Gather	<ul style="list-style-type: none"> <li>• Conduct data collection interviews with various people and departments about your organization and the way records move through it</li> <li>• Capture and compile current business procedures and practices</li> <li>• Build who, what, where, when, and how spreadsheets and create work routine flow diagrams</li> </ul>
	Define	<ul style="list-style-type: none"> <li>• Analyze and identify what business situations you want changed</li> <li>• Commit to the implementation scope</li> <li>• Review and refine the list of the job steps of the business process you want incorporated into the Workflow process</li> <li>• Determine and sequence where the decision points are made and who makes them</li> </ul>
<i>Setup</i>	Configure	<ul style="list-style-type: none"> <li>• Set and modify the line settings in the maximo.properties file</li> <li>• Modify Workflow option settings in the Organizations application</li> <li>• Create process flows using the Workflow Designer application</li> <li>• Create appropriate records such as Roles, Actions and Action Groups, People, Person Groups, etc. needed to interact with processes created in Workflow Designer</li> </ul>

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## Workflow Implementation Process continued

**Phase 2:  
Developing the  
Workflow  
Process**

During the Build phase, the process design is converted into an electronic Workflow using Workflow Designer.  
Detailed discussion of this phase occurs in Unit 3: “Developing the Workflow Process.”



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## Workflow Implementation Process continued

### Activities Examples

The following table lists examples of the activities you might perform at the task level of Phase 2.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Design</i>	Format	Document the business process' steps into a flowchart format using Workflow Designer Node conventions
	Refine	Analyze and modify the steps as you work through the flowcharting activity
<i>Create</i>	Build	<ul style="list-style-type: none"> <li>• Use the Workflow Designer application to convert the process flows identified in Phase 1 into an electronic version</li> <li>• Create additional needed records, including Roles, Actions, People, etc. needed to work with nodes</li> </ul>
<i>Configure</i>	Node Configuration	Configure the parameters, conditions, and actions for each node

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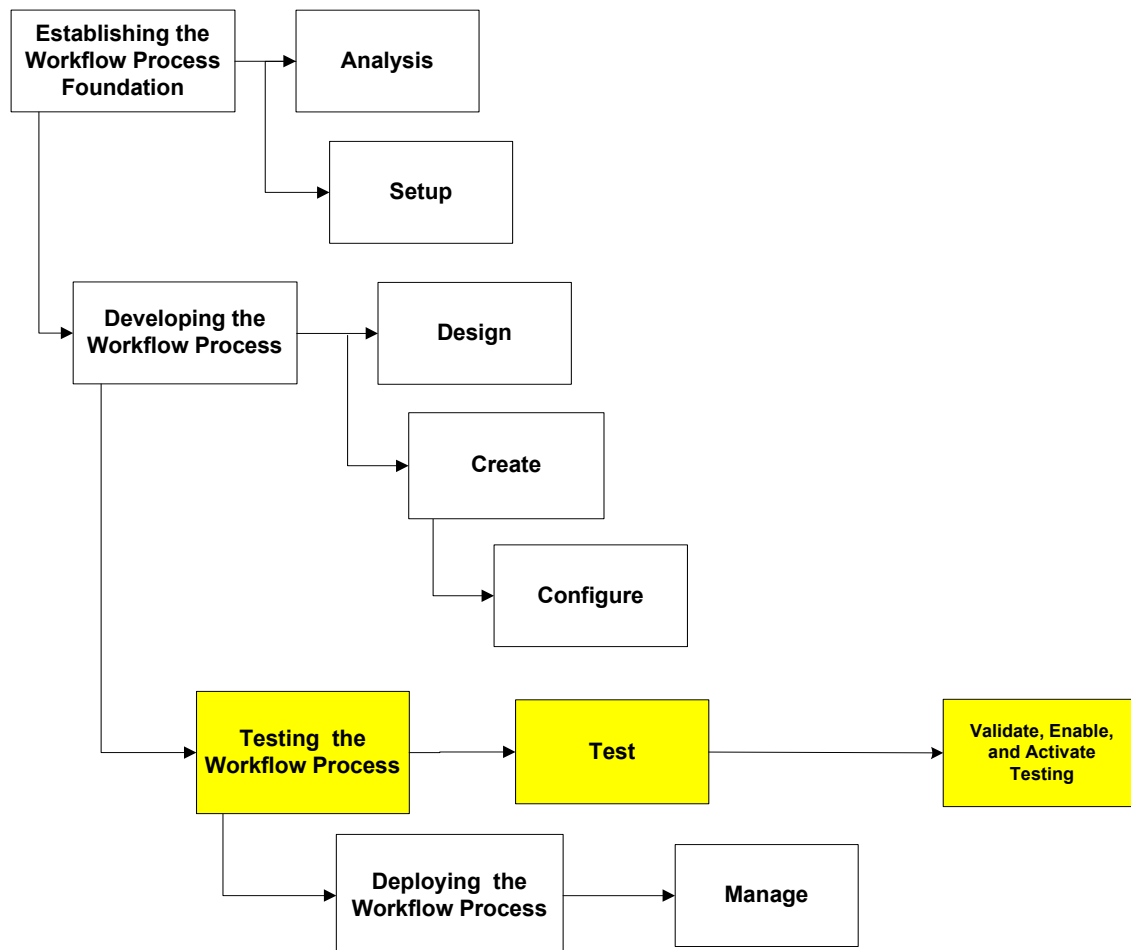
## Workflow Implementation Process continued

### Phase 3: Testing the Workflow Process

In Phase 3: Testing the Workflow Process, you need to test all of the possible paths a record can follow.

- To test that the process meets your needs, activate it and route a record through all of the process paths. At each step in the process, make sure the expected assignments are made and actions taken.
- You can learn a lot from this testing phase. For example, you might discover that the process is missing an aspect of your business rules or that it works differently than expected. You might even find that your business rules themselves work differently than expected.

Detailed discussion of this phase occurs in Unit 4: “Testing the Workflow Process.”



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**Workflow Implementation Process** continued**Activities  
Examples**

The following table lists examples of the activities you might perform at each task level of Phase 3.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Test</i>	Validate, Enable, and Activate	Use the Workflow Designer application to enable, validate, and activate the Workflow process
	Testing	Test the process and all its possible paths by using sample records and test plans

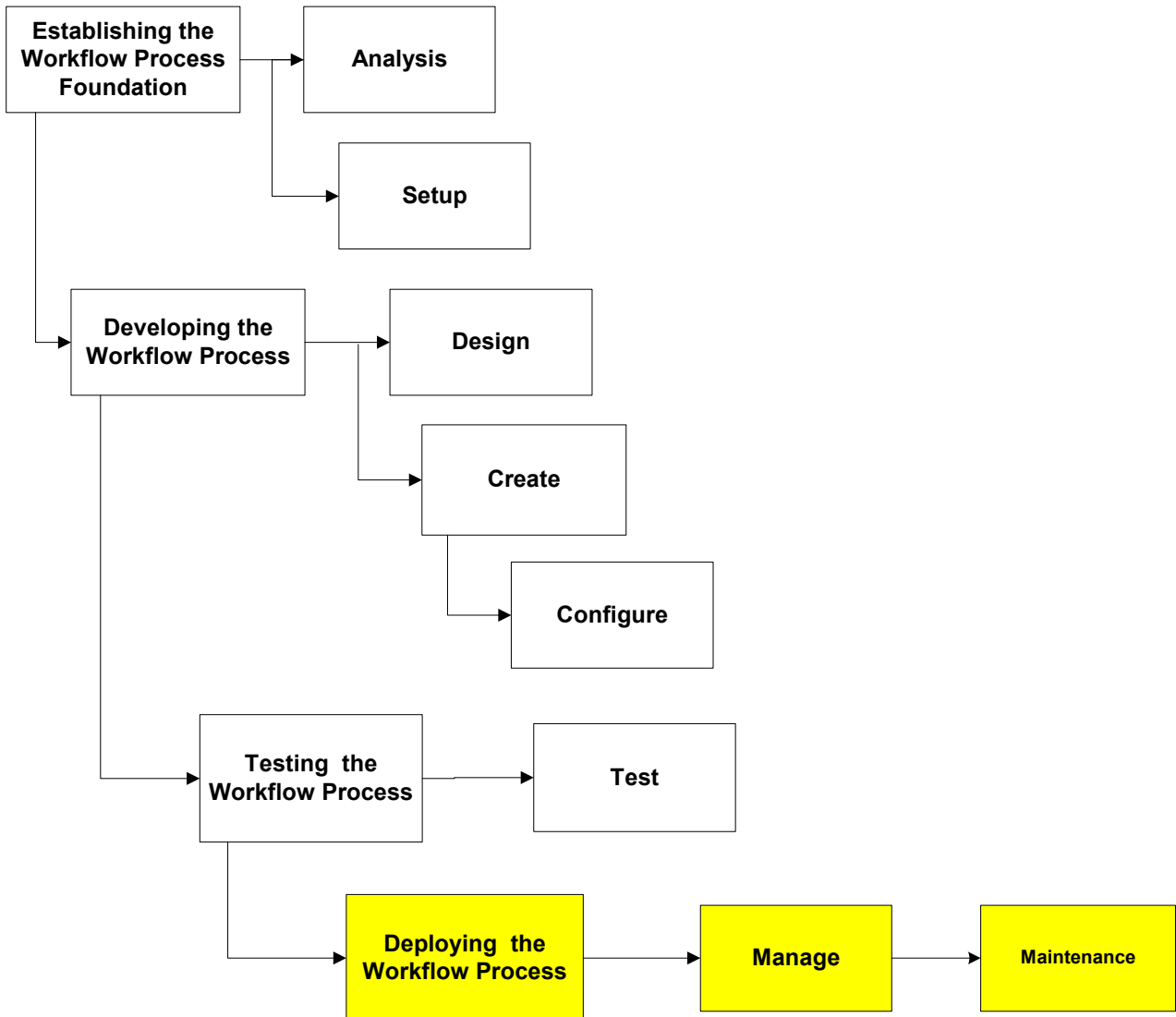
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## Workflow Implementation Process continued

**Phase 4:  
Deploying the  
Workflow  
Process**

When you have tested your process, you can deploy it to the affected business units and gauge its effectiveness.

Detailed discussion of this phase occurs in Unit 5: “Deploying the Workflow Process.”



continued on next page

## Workflow Implementation Process continued

### Activity Examples

The following table lists examples of the activities you might perform at each task level of Phase 4.

Task	Activity	Actions
<i>Manage</i>	Maintenance	Evaluate, revise, and modify Workflow processes on an ongoing basis.



Notes: Some factors to keep in mind when deploying a Workflow process include:

- Deploying a Workflow process means *enforcing a consistent set of business practices* and does not provide the flexibility that a manual system allows.
- You are changing the tools and procedures that end users use to perform their jobs. *Including training sessions in your deployment phase* will help ease the transition to the new procedure.

## Chapter Summary

---

### **Workflow Implementation Process**

The phases of the Workflow implementation process reflect steps and activities that you could use to implement any new Workflow process into your business environment. These phases are as follows:

1. **Establishment:** Documenting of existing business practices and processes by the implementation team.
  2. **Development:** Creating an electronic version of the Workflow process.
  3. **Testing:** Testing the Workflow process through all possible paths.
  4. **Deployment:** Rolling out a Workflow process and gauging its effectiveness.
- 

### **Phase 1: Establishing the Foundation**

Each task can have either one activity or several activities associated with it.

- In Phase 1, the implementation team researches and documents existing procedures, analyzes the information, and discusses the business processes that will be automated.
  - They also have the opportunity to decide on process changes and take advantage of Workflow features that were not available using a manual process.
  - After a determination is made and a Workflow process is designed, certain records must be created to allow a Workflow process to run and certain data must be entered into several Maximo applications.
- 

### **Phase 2: Developing the Workflow Process**

During the Build phase, the process design is converted into an electronic Workflow using Workflow Designer and related applications.

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continued on next page

## Chapter Summary continued

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### Phase 3: Testing the Workflow Process

In Phase 3, you need to test all of the possible paths a record can follow. To test that the process meets your needs, activate it and route a record through all of the process paths.

- At each step in the process, make sure the expected assignments are made and actions taken.
  - You can learn a lot from this testing phase. For example, you might discover that the process is missing an aspect of your business rules or that it works differently than expected. You might even find that your business rules themselves work differently than expected.
- 

### Phase 4: Deploying the Workflow Process

When you have tested your process, you can deploy it to the affected business units and gauge its effectiveness.

Several factors to keep in mind when deploying a Workflow process are:

- Deploying a Workflow process means *enforcing a consistent set of business practices* and does not provide the flexibility that a manual system allows.
  - You are changing the tools and procedures that end users employ to perform their jobs. *Including training sessions in your deployment phase* will help ease the transition to the new procedure.
-

## Workshop

---

### Discussion



What key factors must be considered when implementing Workflow?

What might be some constraints?

In what ways would this information impact your own organization's implementation of Workflow?

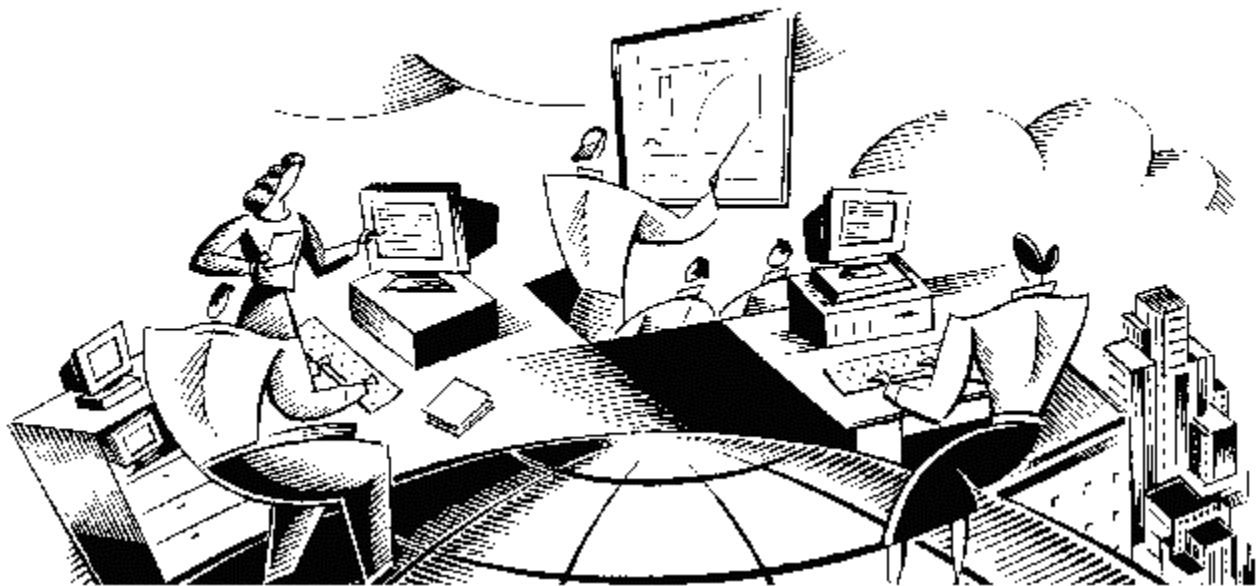
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# Workflow Management Using MXES

## Unit 2: Establishing the Workflow Process Foundation



**In This Unit**

This unit contains the following chapters:

<b>Chapter</b>	<b>Topic</b>
4	Analysis
5	Setup

---

## Unit Overview

---

### Introduction

This unit focuses on ideas and ways to document business practices and rules, as well as how to configure the system in preparation for the Workflow processes' implementation into your business environment.

---

### Learning Objectives

When you have completed this unit, you should be able to:

- analyze your business process and practices;
  - study your business process to identify areas that can be improved;
  - insert new records needed to support Workflow processes into the database;
  - modify security setup to enable Workflow processes and routing;
  - configure a user's profile information; and
  - set and modify parameters in the maximo.properties file for Workflow use.
- 

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## Unit Overview continued

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### **Phase 1: Establishing the Foundation**

Each task can consist of one activity or can have several activities associated with it.

In Phase 1, the implementation team researches and documents existing procedures, analyzes the information, and discusses the business processes that will be automated.

They also have the opportunity to decide on process changes and take advantage of Workflow features that were not available using a manual process.

After a determination is made and a Workflow process is designed, certain applications must be configured to allow a Workflow process to run. In addition, certain data must be entered into several Maximo applications.

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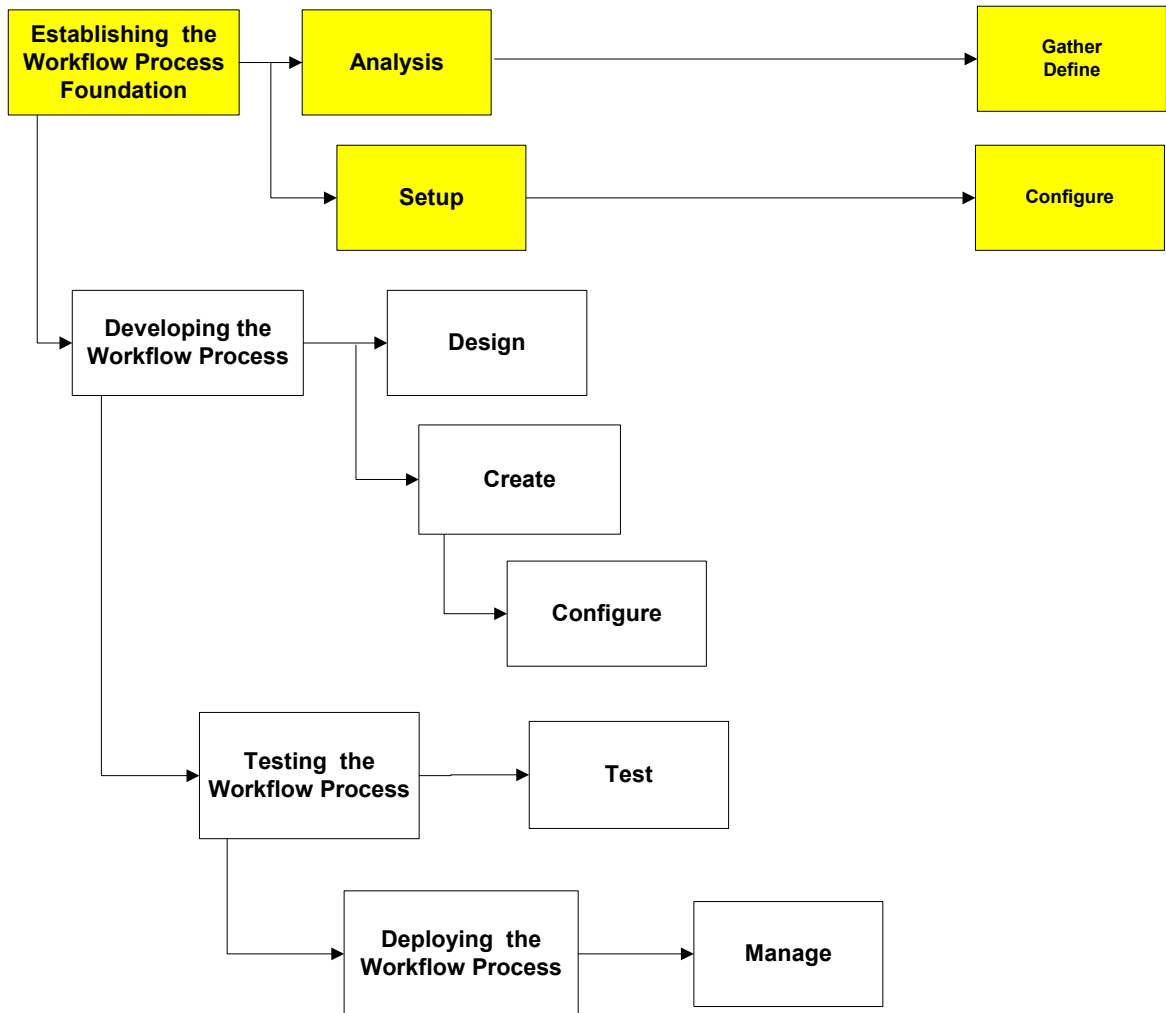
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## Unit Overview continued

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### We Will Cover

In this unit, discussions will focus on *Phase 1, Establishing the Workflow Foundation*, along with its tasks and related activities.



continued on next page

## Unit Overview continued

### Activity Examples

Each step in the Analysis phase requires that you perform specific activities. The following table lists examples of the activities you might perform at each task level of this phase.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Analysis</i>	Gather	<ul style="list-style-type: none"> <li>• Conduct data collection interviews with various people and departments about your organization and the way records move through it</li> <li>• Capture and compile current business procedures and practices</li> <li>• Build who, what, where, when, and how spreadsheets and create work routine flow diagrams</li> </ul>
	Define	<ul style="list-style-type: none"> <li>• Analyze and identify what business situations you want changed</li> <li>• Commit to the implementation scope</li> <li>• Review and refine the list of the job steps of the business process you want incorporated into the Workflow process</li> <li>• Determine and sequence where the decision points are made and who makes them</li> </ul>
<i>Setup</i>	Configure	<ul style="list-style-type: none"> <li>• Set and modify the line settings in the maximo.properties file</li> <li>• Modify Workflow option settings in the Organizations application</li> <li>• Create process flows using the Workflow Designer application</li> <li>• Create appropriate records such as Roles, Actions and Action Groups, People, Person Groups, etc. needed to interact with processes created in Workflow Designer</li> </ul>

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## Unit Overview continued

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### **Applications Used**

To complete the task activities in this unit, we will be using the following applications:

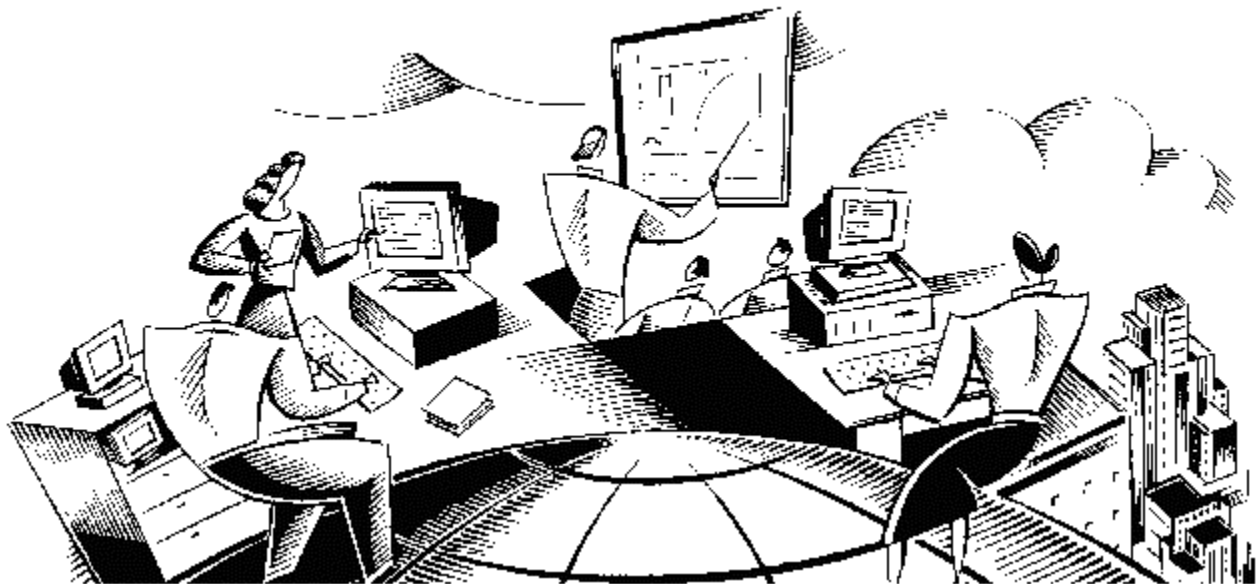
- People
  - People Groups
  - Users
  - Organizations
  - Labor
-





# Workflow Management Using MXES

## Chapter 4: Analysis



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	4-1
Overview of the Analysis Task	4-3
Gathering Information	4-4
Defining	4-8
Case Study 1 Introduction	4-16
Case Study 2 Introduction	4-27
Chapter Summary	4-39
Workshop	4-41

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## Chapter Overview

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### Introduction

In this chapter we identify the steps involved in implementing Workflow at your site. This includes helping you document your current process, as well as helping you identify areas in your processes that could be streamlined.

Specifically, we will focus on:

- analyzing your business process to get the most out of using Workflow, and
  - studying your business process to identify areas for improvement.
- 

### Learning Objectives

When you have completed this chapter, you should be able to:

- capture information on your organization's business processes and practices, and
  - identify areas in your processes that Workflow can help streamline.
- 

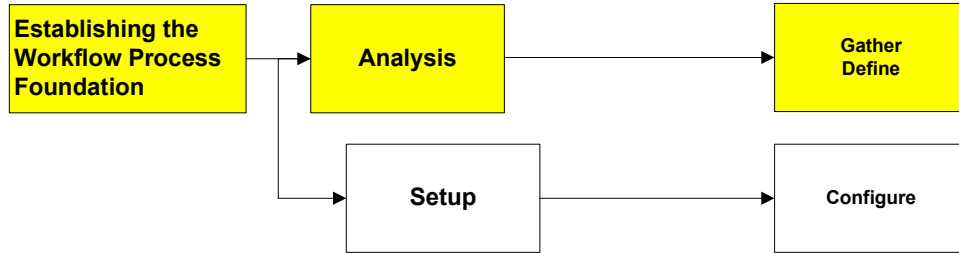
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## Chapter Overview continued

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### We Are Here

The areas we will be covering in this chapter are highlighted below:



## Overview of the Analysis Task

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### Introduction

To effectively integrate Workflow in your implementation, you need to first identify what the scope of the project is going to be.

The first step toward identifying what the scope is going to be is to gather and analyze your current business practices and processes.

---

### Activity Examples

Each step in the Analysis task requires that you perform specific activities.

The following table lists examples of the activities that you might perform for the Analysis task:

Task	Activity	Actions
<i>Analysis</i>	Gather	<ul style="list-style-type: none"> <li>• Conduct data collection interviews with various people and departments about your organization and the way records move through it</li> <li>• Capture and compile current business procedures and practices</li> <li>• Build who, what, where, when, and how spreadsheets and create work routine flow diagrams</li> </ul>
	Define	<ul style="list-style-type: none"> <li>• Analyze and identify what business situations you want changed</li> <li>• Commit to the implementation scope</li> <li>• Review and refine the list of job steps of the business process you want incorporated into the Workflow process</li> <li>• Determine and sequence decision points and who makes the decisions</li> </ul>

---

## Gathering Information

---

### Introduction

One of the first activities in the analysis phase of the implementation process is to gather information about your organization's business practices and process by *interviewing* key players and knowledge holders.

Because Maximo records meet certain needs for your organization as they pass through their lifecycles, the goal of interviewing is to understand how and why records move through your organization as they do.

---

### Leverage Maximo Implementation Knowledge

One source of information is the *site assessment and implementation plan* from your organization's Maximo implementation.

If possible, include on your Workflow team people who were part of the Maximo implementation. By including these people, you can leverage some of the information that you have already gathered as part of implementing Maximo.

These people might have already recorded and diagrammed parts of your business practices and can provide insight on what processes can be streamlined and/or good processes to model and implement into Workflow.

---

### Organization's Standard Operating Procedures

Look at your organization's *standard operating procedures* (SOP). Many times they will contain some of the following information:

- approval cost limits
  - supervisory-level approval requirements
  - departmental hierarchies
  - regulatory procedures
  - industry- or company-driven compliance rules
- 

### Observing

By observing and asking questions about how work gets done, one of the more common discoveries when companies document their business practices is that there are fewer controls in place to direct work than expected.

There might not even be rules in place for conducting business within "well established" parts of your company where you would expect them.

At this point, the current practices should be reevaluated and points should be made of new assignment flows or new business rules to be instituted.

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## Gathering Information continued

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### Questions

When you are researching the process, you need to prepare a list of the questions to ask representatives of the affected areas.

Some examples of questions that you might ask in your questionnaire include the following:

- What functions do the Maximo records serve in your organization?
- What are the site levels?
- What is the organizational structure?
- Are there different practices from one locale to the next?
- What are the different types of approval-driven records used in the organization?
- Is your organization multinational? Are there language or cultural considerations?
- Who requests records, and who actually creates those records?
- What are the most common record characteristics?
- Who comes in contact with records based on current business practices? Are there exceptions to that path?
- What factors are used to decide where the records will go next?
- How does a person find out that a record has been assigned to them?
- What happens if a record is rejected? Does it get another chance to be changed, or does it end permanently?
- Can a person reassign a record to another person?
- How do you want assignments delivered (e-mail/inbox/paging/cell phone)?
- How does a record get canceled? What is the notification process when that happens?
- Can you suggest any changes that would make the process more efficient?
- Does the person vary by shift, location, or promotion?

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## Gathering Information continued

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### Questions

continued

- Are there written policies on financial approval limits and sign-off authority?
- What records would you want manually (vs. automatically) started in a Workflow routine?
- How do you receive your work allocation?
- Do you have business process flows documented for your organization's various business units?
- Are there different process flows for the same organization at different locations?
- Do you use materials from a supply on site and/or off site?
- Do you purchase any materials? If so, who authorizes the purchase and then receives it?
- If you are using any materials from on site, do you maintain a minimum level?
- Who is responsible for budgeting?
- How is emergency work currently done?
- Do you allocate work to staff? If so, how?
- How you plan for the work to be done, including how you will resource personnel, plant, and other associated documents?
- Are contractors involved with the work? If so, how are they managed?
- When a job is complete, what do you expect will be reported?
- Are you concerned with recording of the hours done by your staff?
- What are the account codes that you are responsible for?
- Maximo can use account codes; these can be associated with the work and vendors. How important is it at this stage of the project to have these in Maximo?

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## Gathering Information continued

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### Discussion Exercise



List three of the questions from the previous list that you feel are important to your organization.

1.

2.

3.

List two questions that aren't on the list that you think should be there.

1.

2.

---

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## Defining

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### Introduction

Basically, you are trying to determine who, what, where, when, and how records move through your organization in regard to their appropriate approval routines.

---

### Compile and Document

After you have gathered the right information, compile and document it.

Note: Keep in mind that this is an ongoing and reiterative process.

Considerable time will be spent figuring out and documenting your business practices and routines.

There are several ways to do this:

- Create step/action tables to list routine actions in the order in which they happen.
  - Enter who, what, and where into a spreadsheet.
  - Create diagrams to represent work routines and paths.
- 

### Note



Much of the time involved in Workflow implementation should be spent in understanding the business rules and deciding whether to make any changes in the way they work in the future.

**Business rules are rarely as simple as they might seem at first glance.**

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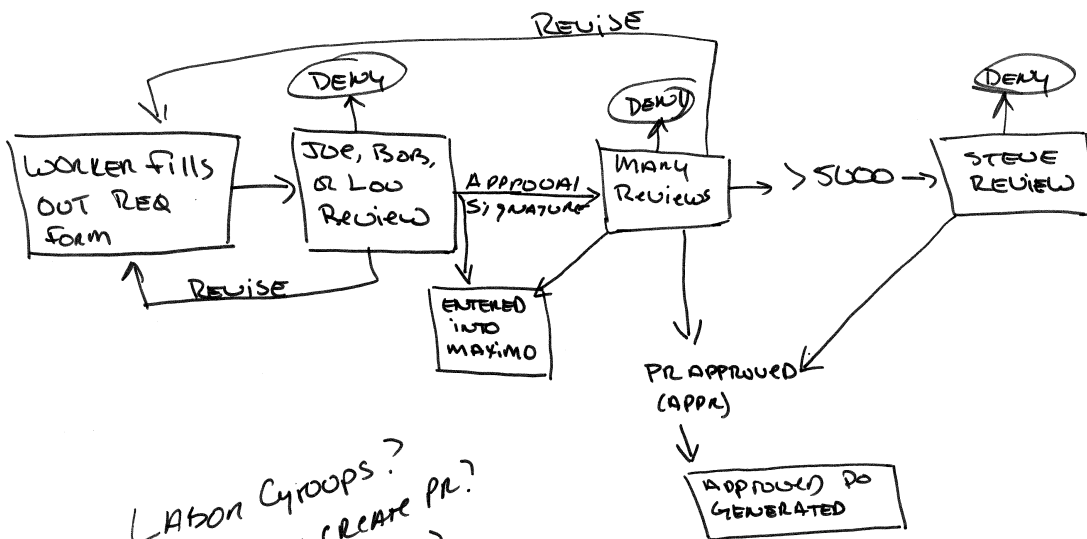
## Defining continued

### Whiteboard Diagrams

Initial diagramming is best done on whiteboards. Whiteboards enable a team to sit in a room and work through business processes, allowing for easy changes and continual refinement of the process.

Keep these tips in mind when you diagram your processes:

- Document the beginning and the end of a record's lifecycle.
- Keep in mind the purpose the record is intended to serve.
- Include steps that contribute to your approval processes, such as safety checks and financial, environmental, or legal approvals.
- Include information about where decision points occur, and what group, role, or employee is responsible for making those decisions.
- As you diagram the way things are currently done, make note of possible trouble spots. Trouble spots can include work assignment bottlenecks, undocumented procedures, multiple ways of completing the same task, and patterns of employees.



*LABOR GROUPS?  
 Why MARY create PR?  
 Why MARY DENY?  
 Why TEAM LEADERS ENTER  
 INTO MAXIMO? → WORKER  
 CAN DO IT*

One iteration of an organization's Purchase Requisition business process diagrammed on a whiteboard.

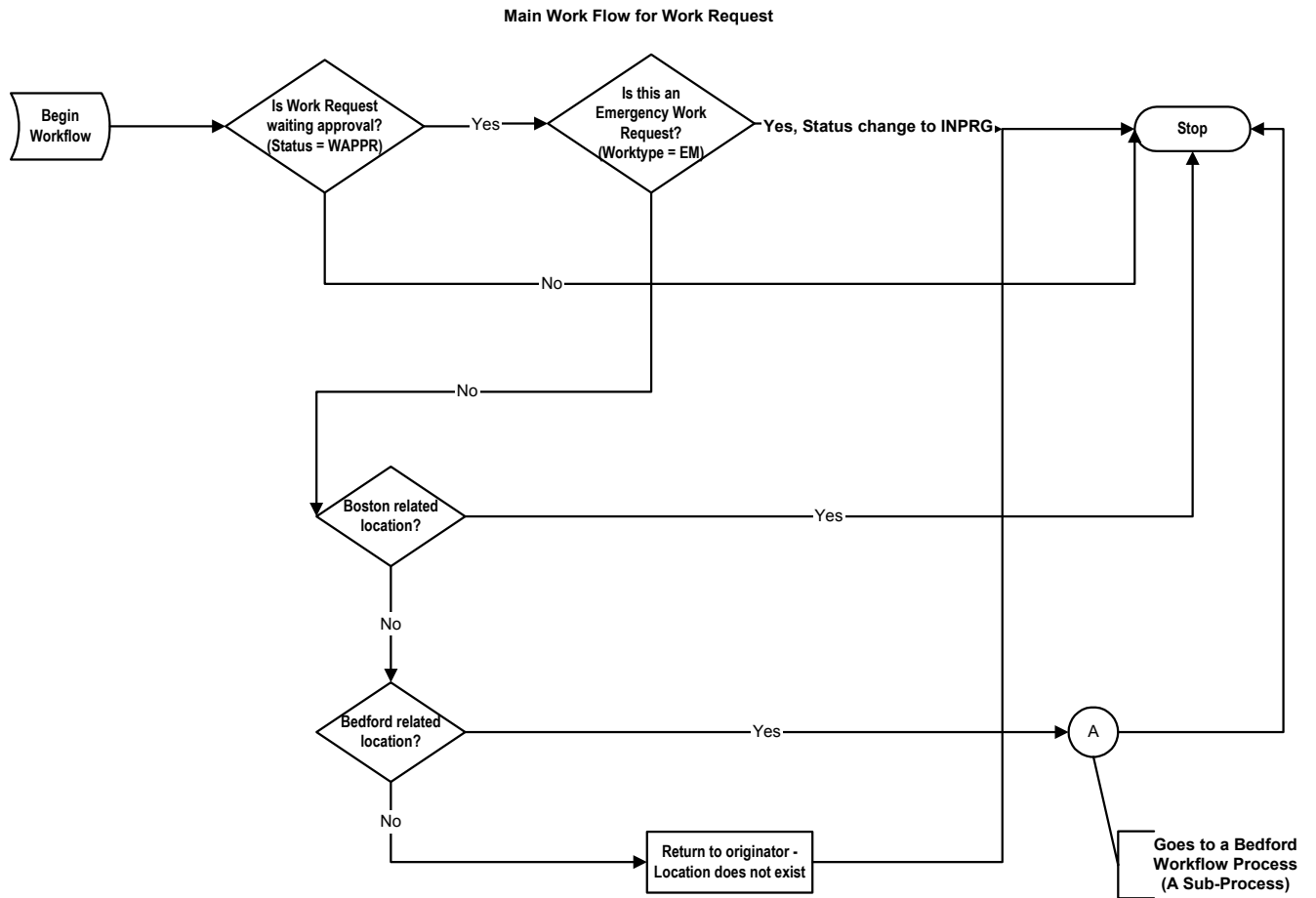
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Defining continued

Diagramming

After you diagram your business flows onto a whiteboard, you can then transfer them into a formalized diagram. Products like Visio® make it easy to create the diagrams.

In Chapter 6 we will take our whiteboard diagrams and format them into more formalized diagrams using Workflow Designer node conventions.



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## Defining continued

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### Keep It Simple

Minimize the amount of design complexity. Too often business process logistics are complex and inconsistent. There are several ways in which to keep the process simple. Try to identify:

- *Patterns of records* that can be evaluated as a group.
- *Patterns of person groups/roles*. Grouping personnel into person groups and roles allows a generic and dynamic “assignment” without naming a specific individual within Workflow.

A major advantage of this is that generic processes need less maintenance.

Reference to person groups and roles instead of individuals allows Workflow processes to remain generic reflections of business processes. By changing the people in the groups/roles (instead of the groups/roles themselves), processes will remain valid as personnel change in the organization.

This means less editing and maintenance of the processes will be required in the future.

- *Patterns of tasks* that can be broken down into subprocesses.
- 

### Note



Keep in mind while diagramming your business processes that they probably will not mirror the hierarchical structure of your organization.

Most likely you will not end up with a one-to-one mapping between the business rules now being organized and how the final Workflow process looks.

However, a Workflow process should function in accordance with your business rules.

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## Defining continued

### Step/Action Table

Creating a step/action table is a good way to record a process and make a team think about the order in which—and the reasons why—business actions happen.

Here is a simple example of a preliminary step/action table for an organization's maintenance shop purchase requisition approval process:

Step	Action
1	A shop floor worker fills out a requisition form with their line items.
2	One of the team leaders—Joe, Bob, or Lou—reviews it.
3	The team leader can approve the requisition, deny it, or send it back to the worker for revision.
4	If the team leader gives his approval signature on a requisition form, he enters the requisition information into Maximo using the Purchase Requisition (PR) application and notes the PR number on the requisition form.
5	The team leader sends it to Mary, the purchasing coordinator, for review.
6	Mary reviews all PRs for accuracy. If the PR's total cost is less than \$5,000, she can approve it, deny it, or send it back to the shop floor person for revision.
7	If the total cost is over \$5,000, she sends the PR to Mike, the purchasing manager, for final approval. He can deny or approve it.
8	When the PR has financial approval (APPR), the system generates a PO with an Approved (APPR) status from the PR data; that is, the system automatically copies the PR data lines over to the Purchase Order table and changes the PR status to CLOSE.

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## Defining continued

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### Creating a Spreadsheet

A spreadsheet can reveal repetitive parts of your business practices or groups of labor.

When you build a spreadsheet, you end up with a table with one set of criteria across the top, such as the people and roles involved, and another running down the side, such as successive routing destinations and departments involved.

---

### Example 1: Person Groups/ Roles

On the next page you will find an example of one type of spreadsheet that you can build.

This spreadsheet lists all of the personnel involved in the Workflow process routine and then identifies patterns of the person groups or roles that they fall under.

*Grouping personnel into groups/roles allows a generic and dynamic “assignment” without naming a specific individual within the Workflow process.*

It is also a good idea to build a spreadsheet that identifies other information, such as e-mail addresses and workers’ supervisors.

This way, when you are setting up your labor records, you can have the information readily available.

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## Defining continued

**Example 1:** continued  
**Person Groups/  
 Roles**

<b>Labor</b>	<b>Position/Craft</b>	<b>Role/Person Group</b>	<b>E-mail</b>	<b>Supervisor</b>	<b>Delegate</b>
Ross Smith	Maintenance Supervisor	Supervisor Group	RSmith@company.com		Diane Liberi
Jay Hampton	Purchasing Assistant	Purchasing Group	JHampton@company.com	Jen Briggs	Diane Liberi
Jen Briggs	Purchasing Supervisor	Supervisor Group	JBriggs@company.com		Diane Liberi
Jim Boudreau	Maintenance Team Leader	Team Leader	JBoudreau@company.com	Ross Smith	Diane Liberi
Marci Green	Maintenance Team Leader	Team Leader	MGreen@company.com	Ross Smith	Diane Liberi
Frank Jones	Planner	Planning Group	FJones@company.com	Ross Smith	Diane Liberi
Kristen Mills	Planner	Planning Group	KMills@company.com	Ross Smith	Diane Liberi
Mark Robins	Buyer	Buying Group	MRobins@company.com	Jen Briggs	Diane Liberi
Lisa Folino	Office Manager	Office Group	LFolino@company.com		Diane Liberi
Sue Green	Office Coordinator	Office Group	SGreen@company.com	Lisa Folino	Diane Liberi
Kelly Dowling	Office Assistant	Office Group	KDowling@company.com	Lisa Folino	Diane Liberi

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## Defining continued

### Example 2: Creating a Spreadsheet

A spreadsheet can also reveal aspects of your business practices that repeat themselves.

What Condition?	\$0 - \$5,000	\$0 - \$5,000	\$5,001 - \$10,000	\$10,001 - \$25,000	
Approval Level	1		2	3	
Person Group	Team Leader	Delegate	Supervisor	Director	
Department					
Facility Maintenance	Nielsen	Workman	Doug Sigler	Fred Turnier	<b>Labor</b>
Engineering	Pai	Starman	Wayne Fisher	Fred Turnier	<b>Labor</b>
Pretreatment	Paulson	Schoengold	Wayne Fisher	Fred Turnier	<b>Labor</b>
Customer Service	Sul	Routsong	Gloria Routsong	Fred Turnier	<b>Labor</b>
Business Services	Routsong	Karafa	Gloria Routsong	Fred Turnier	<b>Labor</b>
Information Technology	Cartron	Fisher	Wayne Fisher	Fred Turnier	<b>Labor</b>
Finance	Tobin	PJ	Gloria Routsong	Fred Turnier	<b>Labor</b>
Support Services	Karafa	Turnier	Doug Karafa	Fred Turnier	<b>Labor</b>
General Administration	Turnier	Turnier	Fred Turnier	Fred Turnier	<b>Labor</b>
Operations	Smith, Taylor, Gray, Roche	Christmas	Dez Christmas	Fred Turnier	<b>Labor</b>

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## Case Study 1 Introduction

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### Introduction

As we go through this course, we will use several case studies to help us practice what we learn.

In the first case study, we will assist Massachusetts University (Mass U) to implement a Workflow process that automates their Work Request approval-to-completion routine.

---

### History and Scope

Mass U has been a user of Maximo since release 4.0.1 and recently upgraded to MXES.

Mass U currently uses Maximo only for Work Management, that is, the Work Orders module. However, the next phase of their upgrade implementation requires them to start using Workflow processes to improve the flow of work through their system.

They have decided that for their first use of Workflow they will keep the scope relatively simple. They will begin by automating the work order approval and notification processes for the work orders entered or called in by the students and faculty.

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## Case Study 1 Introduction continued

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**Current Scenario** In Mass U's current work order approval process, the student phones in the problem to the facilities front office staff:

- Mark Ellison
- Fabiola Panzano
- Nick Craddock

If the problem is a viable work request, the front office staff enters the work order into the Work Order Tracking application and completes the following tasks:

- Change the status to Approved (APPR).
- Assign a work type: Emergency Maintenance (EM) or Corrective Maintenance (CM).
- Specify a maintenance supervisor: Kelly Ordway, Ted Bateman, or Julio Coronado.
- Print the work order and put it into the supervisor's mailbox. However, for emergency work they page the supervisor.

After picking up the work order, the supervisor does the following:

- Assigns a laborer or laborers to the job, who will then record their actual labor in Maximo and send the work order back to the supervisor
  - Opens the Work Order Tracking application and changes the work order status to Complete (COMP)
- 

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## Case Study 1 Introduction continued

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### Determination

The implementation team has determined that, for their initial phase of Mass U's Workflow implementation, they will do the following:

- They will focus solely on the Corrective and Emergency service requests called in to the front office staff or entered into the system by students and faculty.
  - They will notify people of assignments using the Inbox/Assignments table and e-mail.
  - They will notify students and faculty of the progress of their service request via e-mail notification and through Workflow's history view.
- 

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## Case Study 1 Introduction continued

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**Initial Scenario:  
Computer-Based  
Service Request**

After much discussion, it was initially determined that the following process would be followed for *computer-based* service requests:

1. Students and faculty will be encouraged to complete a one-time self-registration in order to use Maximo.
2. After self-registration, a user will be able to enter requests for service into Maximo using the Create Service Request application. If they can't enter their request(s) via computer, they can call in the issue to the facilities office staff. However, students and faculty will be strongly encouraged to use a computer.
3. If work is entered using the Create Service Request application, the record will automatically go into a Workflow routine when submitted.
4. The office staff will determine whether the service request is valid. If it is valid, a work order with status WAPPR will be created from the request. If it is not valid, then the request will be canceled.
5. When a valid request is converted into a work order, the staff person will automatically be taken to the work order to complete basic information in the work order, including the following:
  - Requestor's name in the On Behalf Of field
  - Location
  - Supervisor
  - Craft/labor
  - Work Type (CM or EM)
6. After adding needed work order information, the staff person will route the work order to the supervisor, who will add resources and schedule.
7. Labor will report to the supervisor when the work is done.
8. The supervisor will change the work order status to COMP.

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## Case Study 1 Introduction continued

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**Initial Scenario:  
Telephone-  
Based Service  
Request**

It was also determined that the following process would be followed for *telephone-based* service requests:

1. If the request is called in by telephone, the facilities office will use the Service Requests application to enter the call. The following information will be added:
  - Name of caller in Reported By field
  - Caller's name in the Affected Person field, unless otherwise indicated by caller
  - Location
  - Summary
  - Details
  - Status to In Progress
2. After adding needed work order information, the staff person will change the status of the request to INPRG and create a work order.
3. The work order will go to the supervisor, who will add resources and schedule.
4. Labor will report to the supervisor when the work is done.
5. The supervisor will change the work order status to COMP.

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## Case Study 1 Introduction continued

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### Initial Scenario: Additional Information

- In either situation, a service request will be created.
  - The supervisor will enter resources, approve the work, and then print the work order and distribute it to the crafts person.
  - After the crafts person has entered the actual labor time and reports on work status, the next action for the supervisor would be to either route the record to a Completed (COMP) status, or enter a status of Waiting for Materials (WMATL) if the work is not complete.
  - If the work is WMATL, it is then routed back to the supervisor's inbox for a Work Completion status.
  - At each status change, Mass U would like an e-mail notification to go out to the person who requested the work order, informing them of the record's current status.
  - Finally, the supervisor will also receive an e-mail notification on a work order's approval.
- 

### Person Group/ Role Table

The following table illustrates Mass U's Person Group/Role table:

Person	Position/Craft	Role/Person Group	Supervisor	E-mail
Kelly Ordway	Maintenance Supervisor	Supervisor Group	Diane Liberi	kordway@ massu.edu
Ted Bateman	Maintenance Supervisor	Supervisor Group	Diane Liberi	tbateman@ massu.edu
Julio Coronado	Maintenance Supervisor	Supervisor Group	Diane Liberi	jcoronado@massu.edu
Mark Ellison	Office Manager	Facilities Office Group	Diane Liberi	mellison@massu.edu
Fabiola Panzano	Office Coordinator	Facilities Office Group	Kelly Ordway	fpanzano@ massu.edu
Nick Craddock	Office Coordinator	Facilities Office Group	Kelly Ordway	ncraddock@ massu.edu

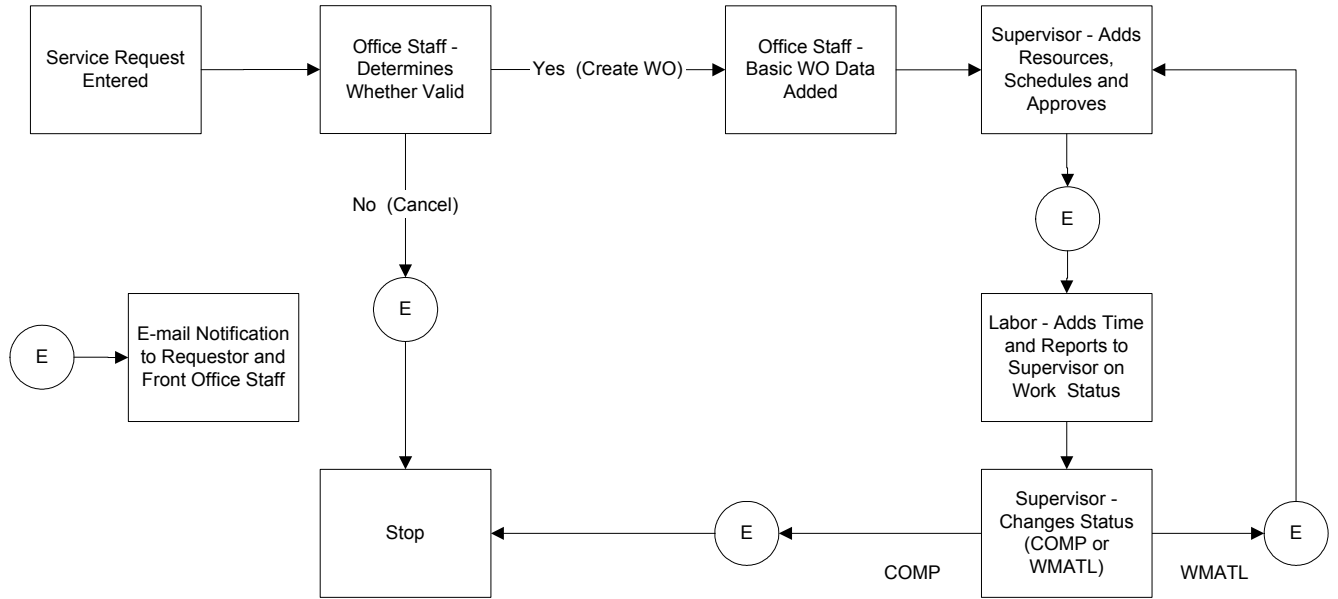
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### Case Study 1 Introduction continued

#### Whiteboard Diagram

Mass U's initial whiteboard diagram looks like this:



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## Case Study 1 Introduction continued

### Step/Action Table

Mass U's Workflow process can be broken down into the following steps:

Step	Action
1	A service request is entered into the Create Service Requests application (online) or the Work Order Tracking application (telephone).
2	If a service request is created, the office staff determines the validity of the request. If valid, a work order record is created and presented to the staffer who validated the request. If it is not valid, the request is canceled.
3	For valid work requests, the staff adds information to the work order record. Then the work order is forwarded to the supervisor.
4	On cancellation of a service request, an e-mail notification will go to the originator and the supervisor. Then the Workflow process is stopped.
5	The supervisor will add resources, then assign and approve the work order. An e-mail notification will be sent to the requestor.
6	A hard copy of the work order will be given to the assigned labor, who will report labor time and let the supervisor know the status of the work.
7	If the work is not completed, then the supervisor will set it to a status of Waiting for Materials (WMATL) and an e-mail notification will be sent to the person requesting the service. The record is then routed back to the supervisor for an eventual Completed status.
8	When work is done, the supervisor changes the status on the record to COMP and routes the record to the end of the process. If the work order is completed (COMP), it finishes the Workflow process and an e-mail notification goes to the person requesting the work.

continued on next page

## Case Study 1 Introduction continued

### Reevaluation of the Process

After further discussion, Mass U decided that they wanted to make some “tweaks” to the process:

- Ensure that the Work Type field has been completed on resulting work orders.
- E-mail notifications will go only to the requestor of the service.
- Work order status changes would be done by the Workflow process, not manually.
- The assigned labor receives the work order and reports on the work, and the Workflow process changes status to COMP, CAN, or WMATL.
- If the work is waiting for material, the supervisor receives the work order again for further planning.

Their revised step/action table looks like this:

Step	Action
1	A service request is entered into the Create Service Requests application (online) or the Work Order Tracking application (telephone).
2	If a service request is created, the office staff determines the validity of the request. If it is valid, a work order record is created and presented to the staffer who validated the request. If it is not valid, the request is canceled.
3	For valid work requests, the staff adds information to the work order record. Then the work order is forwarded to the supervisor.
4	The Work Type field <i>must</i> be completed before getting to the supervisor. If it is not, the work order is routed back to the office staff for completion of this field.
5	On cancellation of a service request, an e-mail notification will go to the originator and the supervisor. Then the Workflow process is stopped.
6	The supervisor will add resources, then assign and approve the work order. An e-mail notification will be sent to the requestor.
7	The work order will be routed to the assigned labor, who will report labor time and will indicate what is going on with the work using the work log.

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## Case Study 1 Introduction continued

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### Reevaluation of the Process continued

Step	Action
8	When routing the work order record from the Inbox, the labor will be asked by the process whether the work is: <ul style="list-style-type: none"> <li>• completed,</li> <li>• waiting for materials, or</li> <li>• canceled.</li> </ul> Workflow will change the status of the work order, depending on the selection.
9	If the work is not completed, the process will set it to a status of Waiting for Materials (WMATL) and an e-mail notification will be sent to the person requesting the service. The record is then routed back to the supervisor for further planning.
10	When work is completed, the process changes the status on the record to COMP and routes the record to the end of the process. An e-mail notification goes to the person requesting the work.
11	If the work is canceled, the status is set to CAN and an e-mail notification is sent to the requestor. The process is stopped.

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### Case Study 1 Introduction continued

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**Exercise 1:**  
**Mass U's**  
**Revised Diagram**

Using the space below, diagram Mass U's revised Workflow process using the step action table that starts on page 4-24.



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## Case Study 2 Introduction

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### Introduction

In the second case study, we will be assisting a company called Opus in implementing Workflow to automate their work order approval process based on the work order's cost.

---

### History

Opus has used Maximo for several years and has successfully implemented maintenance procedures that allow scheduled and unscheduled work to be done on their equipment.

By using Maximo, the company estimates that it has saved several hundred thousand dollars in maintenance costs annually.

The Purchasing and Inventory modules allow them to maintain a just-in-time purchasing procedure that keeps the stock levels at the correct level, while saving the company money on parts and materials that are rarely used.

---

### Next Phase

The next phase of Opus' Maximo implementation is to include the Workflow module to automate the multilevel approval process for work orders.

---

### Work Order Approvals

In Opus' current work order approval process, the maintenance clerk who receives the work order from the help desk must determine what approvals are required on each work order based on the work order type.

He or she must create the appropriate notifications and track each work order through the approval process.

When all of the appropriate groups have signed off on the work order, the clerk marks the document as approved and it can move on to the scheduler.

The scheduler schedules the appropriate maintenance personnel to perform the work order based on their availability.

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## Case Study 2 Introduction continued

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### Opus' Implementation

With the initial implementation of Workflow at Opus, the implementation team has been asked to focus only on the approval process for work orders. They will expand this to include the entire work order process in Phase 2 of the implementation. In Phase 3, they will focus on automating the process for purchase orders.

---

### Case Study Update

The implementation team has asked members of the help desk and maintenance departments how they receive and monitor work requests. The team has focused on learning about each different type of work order to help determine what areas to focus on during the initial phase of the implementation.

---

### Work Order Types

The work orders at Opus fall into the following categories:

- capital projects
  - emergency maintenance
  - corrective maintenance
  - preventive maintenance
- 

### Capital Project Work Orders

Capital projects at Opus are approved before adding any information into Maximo.

A steering committee meets to decide on the projects that will be completed throughout the year based on products and required upgrades to existing equipment.

Because these projects are decided upon at the beginning of the fiscal year, Opus does not require an approval process on this type of work order.

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## Case Study 2 Introduction continued

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### Emergency Work Orders

At Opus, a technician is not required to get work order approval before beginning work on an emergency work order.

The technician can perform the work necessary to resolve the emergency.

They are required to record information for this type of work order only if the work took longer than 30 minutes, or if they used more than \$300 in tools and materials.

---

### Corrective Maintenance Work Orders

Corrective maintenance is the most common type of work performed by the maintenance department.

- These work orders normally start with a work request that comes in to the help desk from all parts of the organization.
  - The help desk operator then enters information about the problem into Maximo.
  - He or she then turns the work request over to maintenance supervisors John Hunter, Diane Liberi, or Mike Wilson for review and approval (they can also cancel the work request).
  - If a maintenance supervisor approves the work, he or she decides which department—Engineering or Environmental—to send the work order to, depending on the area affected.
  - The assigned representative from the engineering or environmental department approves or cancels the work order and sends the work order to Safety Representatives Alan Ball or Tom Kazmier in the safety group for approval.
  - The safety rep can approve or cancel the work order. If the rep approves it, the work order is routed to the finance department for financial approval.
  - If the total cost is less than \$5,000, then the accounts payable clerk, Cindy Lou, can approve or reject the work order.
  - If the total cost is between \$5,000 and \$50,000, the AP supervisor, Frank Jones, can approve or reject the work order.
  - If the total cost is over \$50,000, the accounting manager, Lou Granger, can approve or reject the work order.
  - When the work order has financial approval, the order status is changed to Approved and work can start.
- 

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## Case Study 2 Introduction continued

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### **Preventive Maintenance Work Orders**

Preventive maintenance work orders are automatically system-generated based on the frequency criteria set up in the Preventive Maintenance application with a Waiting to be Scheduled status (WSCH).

- A member of the safety department reviews and then approves or cancels the work order.
  - If he or she gives initial approval, the work order is sent to the accounts payable department.
  - If the total cost is less than \$5,000, the accounts payable clerk, Cindy Lou, can approve or reject the work order.
  - If the total cost is over \$5,000, the AP supervisor, Frank Jones, can approve or reject the work order.
  - When the work order has financial approval, work can start.
- 

### **Determination**

For now, the implementation team has determined the following points for the initial phase of Opus's Workflow implementation:

- They will focus on the Corrective Maintenance and Preventive Maintenance Work Order Approval business processes.
  - People in the organization can enter their own work requests using the Work Order Tracking application.
- 

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## Case Study 2 Introduction continued

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### Starting Opus' Workflow Design: The Step/Action Table

In our case study, Opus will be automating corrective and preventive maintenance work orders.

The following table is Opus' initial step/action table for work type determination:

Step	Action
1	Is the Work Type Corrective Maintenance (CM)? If yes, route to the maintenance team leader to review and validate the work order. If no, route to the Preventive action.
2	If the Work Type is Preventive Maintenance (PM), route to the PM subprocess Workflow.
3	If it is not a PM work type, cancel the work order.

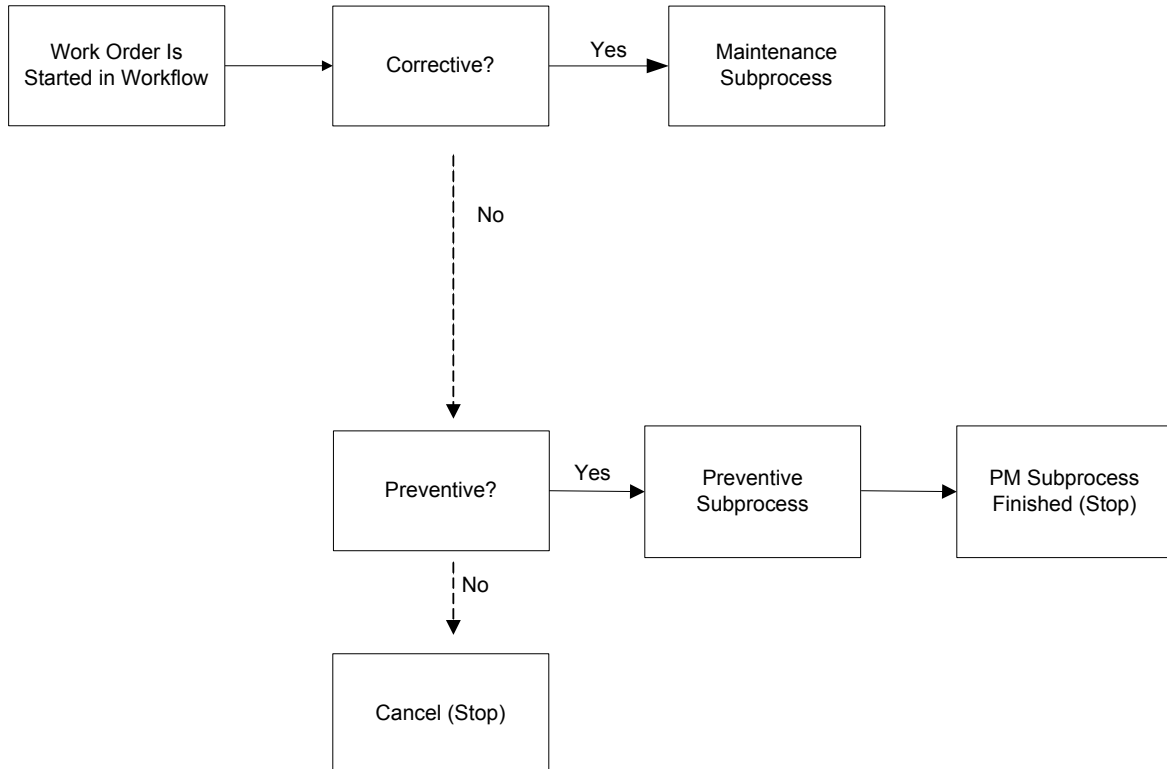
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## Case Study 2 Introduction continued

**Starting Opus'  
Workflow  
Design: Diagram**

The following diagram reflects the initial route determination based on a work order's work type (further on in the course, we will be refining their Workflow processes).



continued on next page

**Case Study 2 Introduction** continued

**Exercise 2:  
Opus' CM  
Step/Action  
Table**



Based on the case scenario, create a step/action table for the Corrective Maintenance Work Orders.  
There is no exact number of steps. Each person or group could have a different number.

Step	Action

continued on next page

## Case Study 2 Introduction continued

---

### Exercise 3: Opus' CM Diagram

Based on the case scenario, diagram the Corrective Maintenance Work Order Routine.



## Case Study 2 Introduction continued

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### Spreadsheet

If need be, you can use the spreadsheet in the “Defining” section of this chapter as a guide to determine the labor and person group setup information.


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**Case Study 2 Introduction** continued

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**Exercise 4:  
Opus' PM  
Step/Action  
Table**

Based on the case scenario, create a step/action table for the Preventive Maintenance Work Orders.

There is no exact number of steps. Each person or group could have a different number.



Step	Action

---

continued on next page

## Case Study 2 Introduction continued

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### Exercise 5: Opus' PM Diagram

Based on the case scenario, diagram the Preventive Maintenance Work Order routine.



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continued on next page

## Case Study 2 Introduction continued

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### Exercise 6: Opus' Q&A



Based on the information you have gathered, answer the following questions about the work order process at Opus.

1. What types of work orders will initially use the Workflow process for approvals?
2. How many approval levels are required for the PM and CM work order types?
3. Who or what starts the process for corrective maintenance work orders?
4. Who or what starts the process for preventive maintenance work orders?
5. List the different groups involved in the corrective and PM work routines.

### Exercise 7



Can you think of additional areas that Opus could implement to streamline their processes even further?



## Chapter Summary

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### **Gathering Information**

One of the first activities in the analysis phase of the implementation process is to gather information about your organization's business practices and process.

Because Maximo records meet certain needs for your organization as they pass through their lifecycle, the goal of interviewing is to understand how and why records move through your organization as they do.

---

### **Leverage Maximo Implementation Knowledge**

One source of information is the site assessment and implementation plan from your organization's Maximo implementation.

If possible, include on your Workflow team people who were part of the Maximo implementation. By including these people, you can leverage some of the information that you have already gathered.

These people might already have recorded and diagrammed parts of your business practices and can provide insight on what processes can be streamlined and/or good processes to model and implement into Workflow.

---

### **Organization's Standard Operating Procedures**

Look at your organization's standard operating procedures (SOP).

Many times this will contain approval cost limits, supervisory level approval requirements, departmental hierarchies, regulatory procedures, and industry- or company-driven compliance rules.

---

### **Observing**

By observing and asking questions about how work gets done, one of the more common discoveries when companies document their business practices is that there are fewer controls in place to direct work than expected.

There might be no set rules in place for conducting business, even in "well established" parts of your company where expected.

At this point, the current practices should be reevaluated and points at which new flows of assignments or new business rules are to be instituted should be decided on.

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## Chapter Summary continued

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**Questions**

When you are researching the process, you need to prepare a list of the questions to ask representatives of the affected areas.

---

**Compile and Document**

After you have gathered your information, you need to compile and document it.

Keep in mind that this is an ongoing and reiterative process. Considerable time will be spent figuring out and documenting your business practices and routines.

There are several ways to do this:

- Create step/action tables to list routine actions in the order in which they happen.
  - Enter the who, what, and where into a spreadsheet.
  - Create diagrams to represent work routines and paths.
-

## Workshop

---

### Exercise Scenario

Use this scenario for the exercises that follow.

When asked about a company's requisition process, the following information was determined by interviewing the people in the shop and their managers:

- Currently, multiple people can fill out a material requisition (MR) form for parts they need.
  - Workers on the shop floor fill out a paper requisition form when they need a part.
  - They hand the form to their team leader, who approves it, cancels it, or sends it back to the requestor for revision.
  - The team leader is responsible for entering the requisition into the Maximo Purchase Requisitions (PR) application.
  - There are three teams on the shop floor. Each team is made up of 3 to 5 people who report to the same team leader. John Hunter, Diane Liberi, and Ted Klien are the team leaders. Mike Wilson is the maintenance supervisor for all three team leaders.
  - If the record is over \$1,000.00, the supervisor must review it.
  - The supervisor, Mike Wilson, can approve the PR, send it back to the requestor for revision, or cancel it.
  - After a PR is approved, Accounting creates an approved (APPR) PO and the parts are ordered.
- 

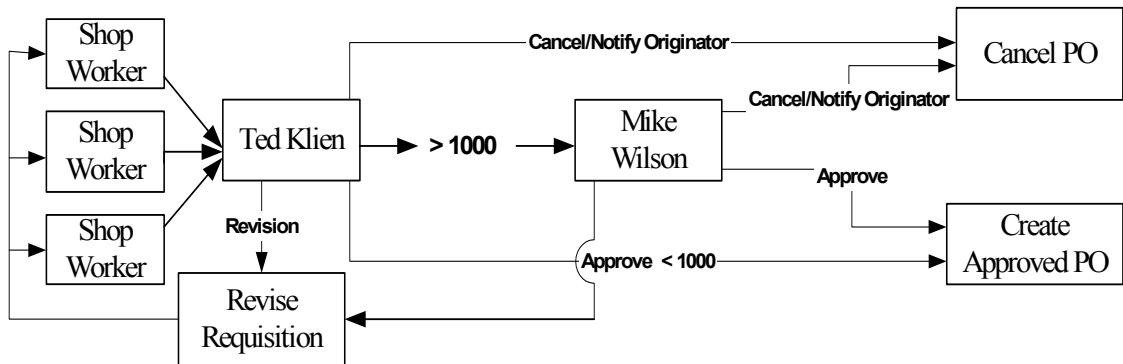
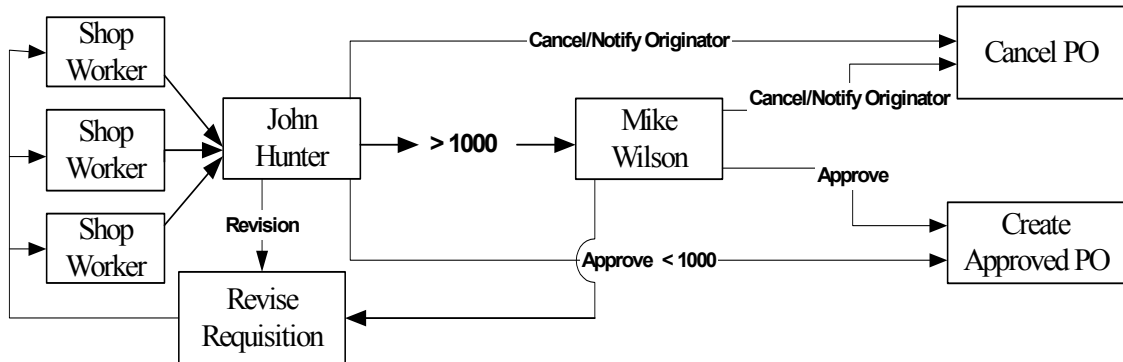
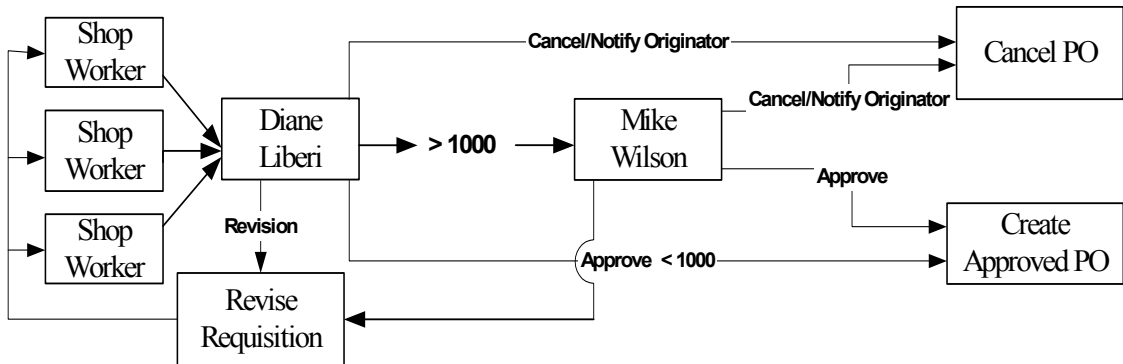
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Workshop continued

Exercise Scenario

continued

The requisition process looks like this when diagrammed:



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## Workshop continued

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### Exercise 1



What might be a few areas in which you could streamline this process?

Hint: Think of Maximo applications and how they can be used to aid in this process.

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## Workshop continued

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### Scenario Update

After reviewing and discussing the process, the team would like to make some changes in the process and has decided to do the following:

- Set up computer terminals in the shop, where people can enter requisitions directly into the Maximo Purchase Requisitions application.
  - Use labor groups/roles identified in the spreadsheet.
  - Modify the process so that all requisitions under \$250.00 are to be approved automatically. PRs between \$250.00 and \$1000.00 are to go to a team leader for approval, and PRs over \$1000.00 need the approval of the maintenance supervisor.
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## Workshop continued

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### Exercise 2

Use the space below to diagram the modified process.

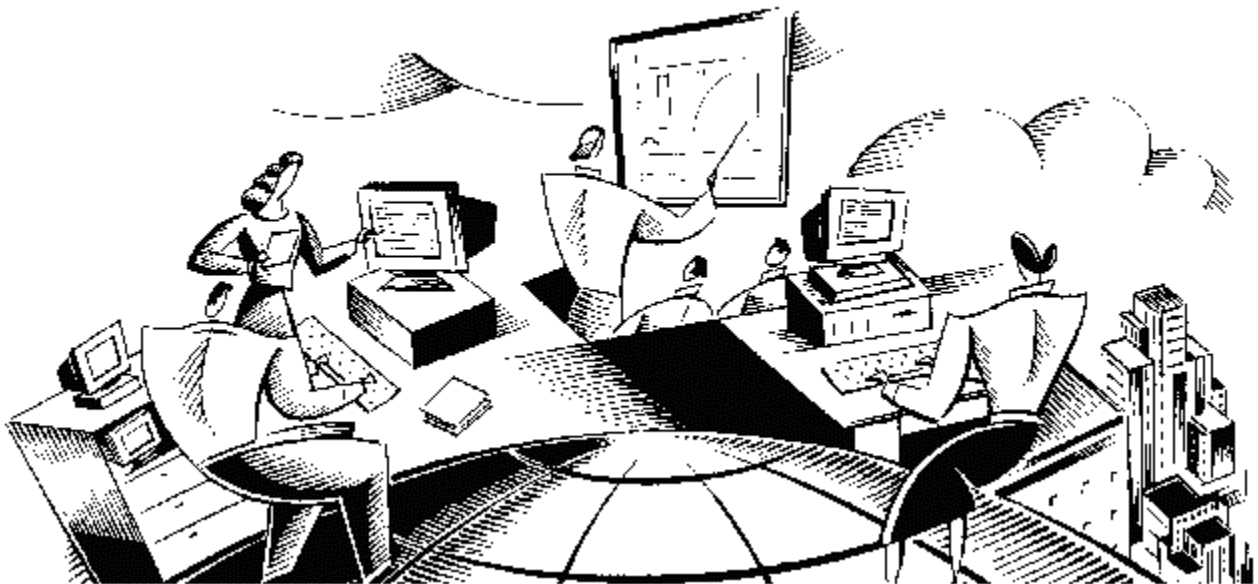






# Workflow Management Using MXES

## Chapter 5: Setup



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	5-1
Overview of the Setup Task	5-2
The Maximo.Properties File	5-3
Person-Related Records	5-4
Adding Person-Related Records	5-8
Configuring Person Groups	5-19
Security Groups	5-23
Chapter Summary	5-32

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## Chapter Overview

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### Chapter Focus

In this chapter, we will learn about the different settings that a system administrator or a workflow administrator can configure for their Workflow implementation.

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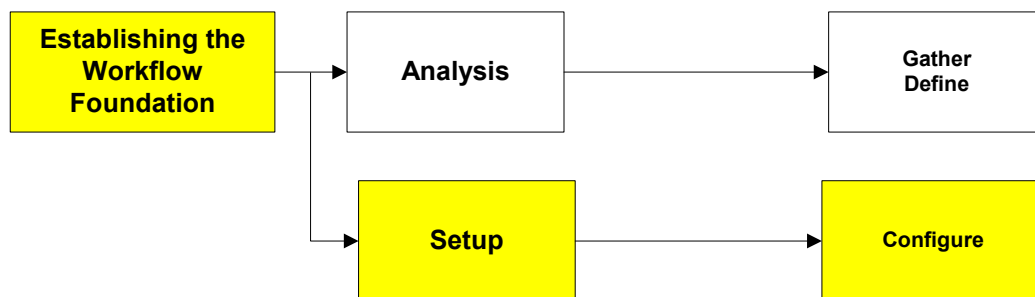
### Learning Objectives

When you have completed this chapter, you should be able to:

- configure people and people group records;
  - configure labor and user records;
  - create security groups;
  - configure organization Workflow options; and
  - describe appropriate line settings in the maximo.properties file.
- 

### We Are Here

The areas that we will cover in this chapter are highlighted below:



## Overview of the Setup Task

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### Introduction

To enable a Workflow process to perform as designed, certain records and files must be configured. This section provides an overview of this setup functionality.

The *System Administration for MXES* course provides more detailed information regarding these functions.

---

### Activity Examples

Each step in the Setup task requires you to perform specific activities.

The following table lists examples of the activities you might perform for the Setup task.

Note: Some of these tasks will be covered in this section. Some will be discussed as we create the necessary data while we develop a Workflow process.

Task	Activity	Actions
<i>Setup</i>	Configure	<ul style="list-style-type: none"> <li>• set and modify the line settings in the <i>maximo.properties</i> file</li> <li>• create and modify people, labor, and user data</li> <li>• create security group records and add required rights for the group</li> <li>• add people records into various security groups and person groups</li> <li>• create roles and actions</li> <li>• create Communication Templates for notifications</li> <li>• modify Workflow option settings in the <b>Organizations</b> application</li> </ul>

---

## The Maximo.Properties File

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### Overview

The *maximo.properties* file is a key file used by Maximo that holds many configuration properties, such as the connect string to the database, the owner of the database, and so forth.

In this file, you might discover a number of properties that need to be set to make processes function as designed. We will briefly cover this file and the properties that you should be aware of.

---

### Location

The *maximo.properties* file is in the following location:

**[Root Directory of Maximo]\ applications\maximo\properties**

Note: This file can be opened with any text editor.

---

### Important Properties

The following table describes important properties that might affect how Workflow processes perform.

Note: You can open *maximo.properties* and do a search for these properties.

Property	Description
mxe.adminuserid	This person record is considered to be the Maximo administrator.  There is a role that comes with Maximo that points to the administrator. The person record indicated as the administrator in <i>maximo.properties</i> will receive notifications and assignments made to the administrator role.
mxe.workflow.admin	This is the e-mail address of the designated workflow administrator in your system. Any notifications designated for the administrator will be sent to this e-mail address.
mail.smtp.host	This is the URL of the e-mail server that Maximo uses to send notifications and other e-mail notes. You should consult with your network administrator to determine the URL of the e-mail server and to configure the server appropriately.

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## Person-Related Records

---

### Overview

Various people are assigned to work or notified of work in Workflow processes. These people need to be added to Maximo.

In this section, we talk about which types of people must be included in Maximo, as they relate to Workflow. We also show you briefly how they are added.

Note: For more detailed information on person-related records, please attend the *System Administration for MXES* or the *MXES for EAM – New Features* courses.

---

### Types of People

There are three types of people records in Maximo, as they relate to Workflow processes.

The following table lists and describes these types of people records.

Person Type	Description
User	A user record represents someone who actually has to access Maximo to do their job. This might include persons creating or approving records, adding information to records, routing records, and so forth. These records are maintained in the <b>User</b> application in the Security module.
Labor	A labor record represents someone whose work is tracked in Maximo. Persons represented by labor records do not necessarily need to access Maximo to do their job. These records are maintained in the <b>Labor</b> application of the Resources module.
General	General person records represent anybody who has a relationship with Maximo: a labor, a user, a person being notified, and so forth. These records are maintained in the <b>People</b> application of the Resources module. A general person record does not have to be associated with a labor, user, and so forth.

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## Person-Related Records continued

### Person Records

The **People** application in the Resources module contains a list of all persons who have a relationship (direct or indirect) with Maximo.

The screenshot displays the 'People' application interface for a person record. The record is for 'Joe Murthy' with the following details:

- Person:** MURTHY, Joe, Murthy, Joe Murthy, 781-335-4334, joe.murthy@mro.com
- Address:** 780 Winer Ave, Winchester, MA, 01890, USA
- Employee Information:** Title, Job Code, Department, Supervisor (AMAN Aman White), Person's Site (BEDFORD Bedford MA Site of EAGLE Inc. North America)
- Workplace Information:** Ship to Address, Drop Point, Bill to Address, Language, Locale, Time Zone
- Workflow and Work Order:** Default Location to Service Request (checked), Default WO Priority, Notice of E-commerce Exceptions (NEVER), Workflow E-mail Notification (PROCESS), Workflow Delegate, Delegate From, Delegate To
- Dates:** Date of Birth, Hire Date, Termination Date, Next Evaluation, Last Evaluation
- Procurement Card:** Card #, Card Type, Verification Value, Expiration Date

This *Person* record contains workflow-related information:

- **Workflow E-mail Notification** indicates when an e-mail notification can be sent to the person from a process.
- **Primary E-mail** is the e-mail address to which notifications will be sent.
- **Workflow Delegate** is the person who will receive assignments if the original person (or people in his or her group) is not available for work.
- **Supervisor** is the person who oversees this person's function. Sometimes supervisors will receive notification that their person has been assigned to do something by a process.
- **Delegate From / Delegate To** are date fields indicating that the person is not available during a specified time period and that assignments should immediately be delegated to the person in the Workflow Delegate field.  
*If there are no dates in these fields, the delegate always receives assignments for the indicated person.*

**Note:** All labor and user records must have an underlying person record. The personal and workflow information of each labor and user record actually comes from the person record that underlies it.

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## Person-Related Records continued

### Labor Records

The **Labor** application in the Resources module is used to maintain all records for people whose labor is tracked by Maximo.

The screenshot displays the Maximo Labor application interface. The top navigation bar includes 'Labor', 'Crafts', and 'Qualifications' tabs. The main form is divided into several sections:

- Labor Header:** Labor (BENETTI), Person (BENETTI), Organization (EAGLENA), Status (ACTIVE), Attachments.
- Work Site Information:** Work Site, Work Location, Labor Inventory Site, Labor Inventory Location.
- Personal Information:** First Name (John), Last Name (Benetti), Display Name (John Benetti), Address (900 Juan Questa), City (LAREDO), State/Province (TX), ZIP/Postal Code (78040), Primary Phone (602-336-7897), Primary E-mail.
- Workflow Information:** Workflow E-mail Notification (PROCESS), Notice of E-commerce Exceptions (NEVER), Workflow Delegate, Default Location to Service Request? (checked), Calendar, Shift, Language, Locale, Time Zone.
- Default Information:** Craft (PIPE), Skill Level, Vendor, Regular Hours (0:00), Premium Hours (0:00), Overtime Refused (0:00), Card #, Card Type, Verification Value, Expiration Date.

Labor records *must* have an underlying person record. The personal and workflow-related information on a labor record is actually maintained in the People application. However, changes to this type of information on a labor record will update the underlying person record.

Note: A labor record can share a person record with a user record if the labor person is also someone who needs to access Maximo.

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## Person-Related Records continued

### User Records

User records are created for people who will be using Maximo applications in some way to work with records, to access assignments from the Inbox, and so forth.

You create and maintain user records with the **Users** application in the Security module.

The screenshot shows the Maximo 'Users' application interface. At the top, there's a navigation bar with 'Users' and various utility icons. Below that is a search and action bar. The main content area is divided into several sections:

- User Summary:** User: GANESH, Status: ACTIVE, Type: PRIMARY.
- Login Information:** User Name: ganesh, Password and Confirm Password fields.
- Personal:**
  - Person: GANESH, Status: ACTIVE, Supervisor: AMAN.
  - Display Name: Ganesh Venka, Primary Phone: 781-335-6655, Primary E-mail: ganeshv@hotmail.com.
  - Address: 6734 Chesterton Drive, City: Burlington, State/Province: MA, ZIP/Postal Code: 01803.
- User Settings:**
  - Default Insert Site: BEDFORD (selected), Bedford MA Site of EAGLE Inc. North America.
  - Storeroom Site, Default Storeroom, Language, Locale, Time Zone fields.
  - Use Default Insert Site as a Display Filter?  System Account?  Password Expiration Date field.

At the bottom, there's a table with columns for 'Purchasing' and 'GL Account'. The table is currently empty, showing '...No rows to display...'. A 'New Row' button is visible at the bottom right of the table area.

User records *must* have an underlying person record. The personal and workflow-related information on a user record is actually maintained in the People application. However, changes to this type of information on a user record will update the underlying person record.

**Note:** A user record can share a person record with a labor record if the user is also someone whose work is tracked by Maximo.

## Adding Person-Related Records

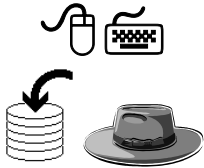
### Overview

It is important that you identify people involved in your processes and get them into Maximo before developing your process in the Workflow Designer application.

Maximo provides an intuitive interface for adding people, users, and labor records.

Note: You might find it necessary to add some records “on the fly” as you develop and test your process. However, any advance planning is a good thing!

### Create a User for Mass U



The Mass U Person Group/Role table in Chapter 4 indicated a number of people who must be added to Maximo.

None of these people are labor to be applied to work records, but they *do* need to access Maximo records to modify and/or route them. So, they are users.

Follow the steps below to create the first user, Mark Ellison.

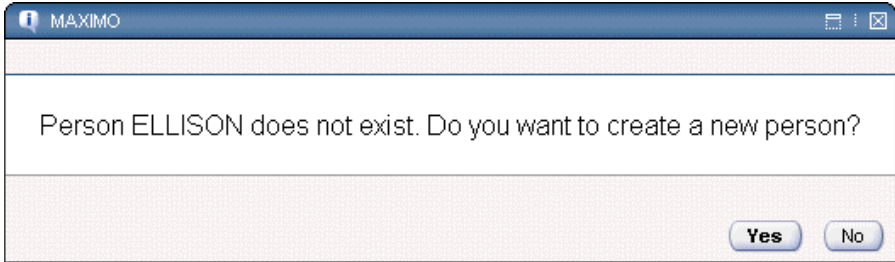
Note: In actual practice, a great deal of personal information would be added to user and corresponding person records. However, for this course we will add only information required by Maximo or for our process.

Step	Action
1	Sign in as Fred Stanley (user name: <b>stanley</b> / password: <b>stanley</b> ).
2	We do not want the Maximo administrator to approve these new person records, so <b>stop the auto-initiation of the SELFREG process.</b>
3	Access the <b>Users</b> application from the <b>Security</b> module.
4	Insert a new user record.

continued on next page

## Adding Person-Related Records continued

### Create a User for Mass U continued

Step	Action
5	<p>In the <b>User</b> field, enter ELLISON, then tab out of the field.</p> <p><u>Result:</u> Maximo displays a dialog box indicating that this person does not exist in Maximo.</p> 
6	<p>Click <b>Yes</b>.</p> <p><u>Result:</u> The corresponding person record is created and the Person field is populated. The User Name field is populated with the name of your new record.</p> <p><u>Note:</u> The User Name field can be changed manually, but we will accept the default for this exercise.</p>
7	<p>Enter the <b>Password</b> and <b>Confirm Password</b> for your new user. To keep things simple, make the password ellison (lowercase).</p> <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• The Password and Confirm Password values must match.</li> <li>• Passwords are case-sensitive.</li> </ul>

continued on next page

## Adding Person-Related Records continued

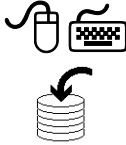
### Create a User for Mass U continued

Step	Action												
8	<p>Enter the following information into the new user record:</p> <table> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>First Name</b></td> <td>Mark</td> </tr> <tr> <td><b>Last Name</b></td> <td>Ellison</td> </tr> <tr> <td><b>Supervisor</b></td> <td>LIBERI</td> </tr> <tr> <td><b>Primary E-mail</b></td> <td>mellison@MASSU.edu</td> </tr> <tr> <td><b>Default Insert Site</b></td> <td>BEDFORD</td> </tr> </tbody> </table> <p><u>Note</u>: The Workflow Delegate field is not completed, because we want assignments to go directly to the user being added. If the person becomes unavailable, a delegate can be indicated.</p>	<u>Field</u>	<u>Value</u>	<b>First Name</b>	Mark	<b>Last Name</b>	Ellison	<b>Supervisor</b>	LIBERI	<b>Primary E-mail</b>	mellison@MASSU.edu	<b>Default Insert Site</b>	BEDFORD
<u>Field</u>	<u>Value</u>												
<b>First Name</b>	Mark												
<b>Last Name</b>	Ellison												
<b>Supervisor</b>	LIBERI												
<b>Primary E-mail</b>	mellison@MASSU.edu												
<b>Default Insert Site</b>	BEDFORD												
9	<p><b>Save</b> the record.</p> <p><u>Result</u>: Your new user is created with limited rights found in the DEFLTREG security group.</p> <p><u>Note</u>: Later, we will create a security group with appropriate rights and add Mark Ellison to it.</p>												

continued on next page

## Adding Person-Related Records continued

**Exercise 1:  
Create Other  
Mass U Users**



Use the steps starting on page 5-8 to create user records for the other people who will be involved in the Mass U Workflow processes.  
Refer to the information in the Mass U Person Group/Role table below.

Note: All these users **must** have **BEDFORD** as their Default Insert Site.

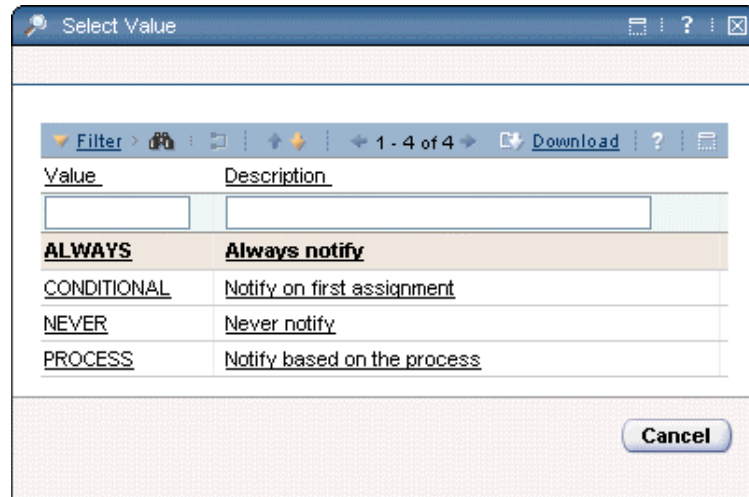
Person	Position/Craft	Role/Person Group	Supervisor	E-mail
Kelly Ordway	Maintenance Supervisor	Supervisor Group	Diane Liberi	kordway@ massu.edu
Ted Bateman	Maintenance Supervisor	Supervisor Group	Diane Liberi	tbateman@ massu.edu
Julio Coronado	Maintenance Supervisor	Supervisor Group	Diane Liberi	jcoronado@massu.edu
Mark Ellison	Office Manager	Facilities Office Group	Diane Liberi	mellison@massu.edu
Fabiola Panzano	Office Coordinator	Facilities Office Group	Kelly Ordway	fpanzano@ massu.edu
Nick Craddock	Office Coordinator	Facilities Office Group	Kelly Ordway	ncraddock@ massu.edu

continued on next page

## Adding Person-Related Records continued

### Workflow E-mail Notification

The **Workflow E-mail Notification** field, found in both the People *and* the Labor applications, is a value list defining the circumstances in which the user will receive e-mail notifications when included on a notification in a process.



Value	Description
ALWAYS	Always notify the person by e-mail if indicated in a Workflow process.
NEVER	Never notify the person by e-mail.
CONDITIONAL	Only notify the person the first time that they have received an assignment from a Workflow process.
PROCESS	Send e-mails to the person based on notifications determined in Workflow processes.

In most cases, if you are using e-mail notifications, the PROCESS type is usually what is selected, as most organizations want people to receive e-mails based on a Workflow process.

Note: If you are adding people records automatically when creating user records—as we did for the exercises—the Workflow E-mail Notification field defaults to PROCESS, which is what we want for our setup.

continued on next page

## Adding Person-Related Records continued

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### Workflow Delegates

A *workflow delegate* receives work assignments for a person when that person cannot perform the work.

If a person will not be available to perform work, the laborer, user, supervisor, or system administrator must define a delegate based on your business rules.

When the Workflow resolves to a person record, if that person has a valid delegate, the delegate receives all the labor code's assignments and notifications.

The delegate remains in effect until the laborer, supervisor, or administrator deletes the entry for the laborer.



Note: Unless there are dates in the **Delegate To** and **Delegate From** fields on the underlying person record, the assignment will *always* go to the indicated delegate. Therefore, unless you are using these fields to designate a specific time period, the Delegate field should be cleared for that person's people record.

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### The Supervisor Role

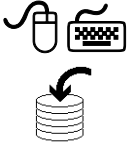
Workflow processes often use the *Supervisor* role to:

- route e-mail notifications,
  - assign a Task or Manual Input node, and
  - escalate an assignment if the assigned user exceeds his or her time limit.
- 

continued on next page

## Adding Person-Related Records continued

### Configuring an Opus Labor Record



In this exercise, Mike Wilson, the Opus Workflow administrator, will modify the labor record for Safety Representative Tom Kazmier to reflect current information.

As it happens, Tom is on vacation for two weeks, so Mike will also enter a delegate for Tom and indicate the time during which the delegate should be active.

Note: The personal information that we are changing on Tom's labor record is also reflected in his underlying person record.

Step	Action
1	Sign in to Maximo as: <b>User Name</b> wilson <b>Password</b> wilson <u>Result:</u> Maximo displays Mike Wilson's Start Center.
2	Access the <b>Labor</b> application from the <b>Resources</b> module. <u>Result:</u> The Labor application opens to the List tab.
3	Search for the <b>KAZMIER</b> record and display its <b>Labor</b> tab.
4	Replace the existing data in the <b>Primary E-mail</b> field of the <b>Details</b> group box with tkazmier@opus.com. <u>Result:</u> Tom Kazmier will now receive e-mail notifications at the new address.
5	Enter DANIELS in the <b>Workflow Delegate</b> field. <u>Note:</u> Until the delegate entry is deleted, Julie Daniels will receive Tom Kazmier's Workflow assignments and e-mail notifications.

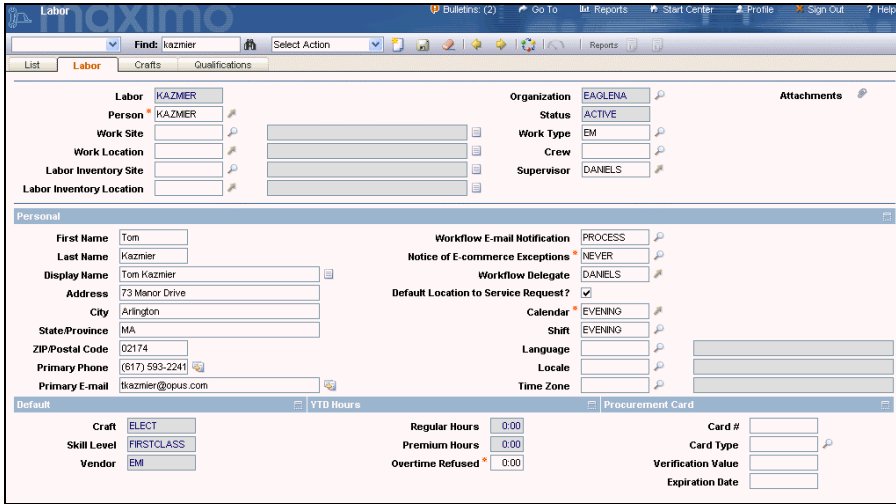
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## Adding Person-Related Records continued

### Configuring an Opus Labor Record

continued

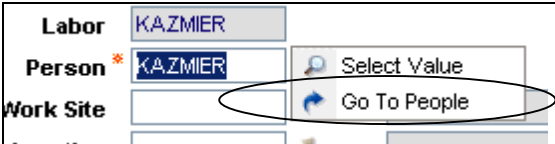
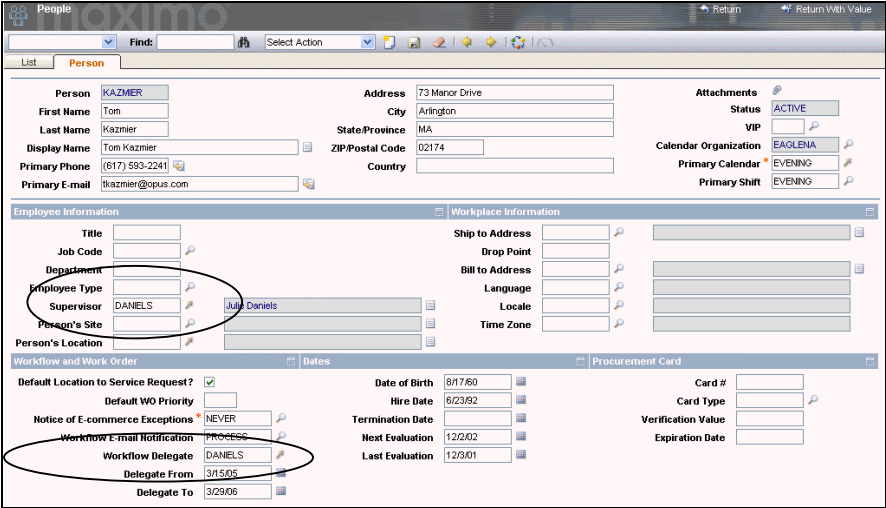
Step	Action
6	<p>Enter DANIELS in the <b>Supervisor</b> field.</p> <p><u>Result:</u> Your screen should look like the one below.</p>  <p>The screenshot shows the 'Labor' record configuration page in Maximo. The 'Person' field is 'KAZMER' and the 'Supervisor' field is 'DANIELS'. The 'Personal' section includes fields for First Name (Tom), Last Name (Kazmier), Display Name (Tom Kazmier), Address (73 Manor Drive, Arlington, MA 02174), Primary Phone ((617) 593-2241), and Primary E-mail (tkazmier@opus.com). The 'Workflow E-mail Notification' is set to 'PROCESS', 'Notice of E-commerce Exceptions' is 'NEVER', and 'Workflow Delegate' is 'DANIELS'. The 'Default Location to Service Request?' checkbox is checked. The 'Calendar' is 'EVENING', 'Shift' is 'EVENING', and 'Language' is 'ENGLISH'. The 'VTD Hours' section shows 'Regular Hours' (0.00), 'Premium Hours' (0.00), and 'Overtime Refused' (0.00). The 'Procurement Card' section includes fields for Card #, Card Type, Verification Value, and Expiration Date.</p>
7	Save the labor record.

continued on next page

## Adding Person-Related Records continued

### Configuring an Opus Labor Record

continued

Step	Action
8	<p>Use the <b>Go to People</b> selection on the <b>Detail Menu</b> button on the <b>Person</b> field to hyperlink to the <b>People</b> application.</p>  <p><b>Result:</b> You are taken to the underlying person record for Kazmier's labor record.</p>  <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• The personal information changes that we made to the labor record (supervisor and delegate) are also reflected in the underlying person record.</li> <li>• The Workflow-related information is located in the lower-left corner of the person record.</li> </ul>

continued on next page

## Adding Person-Related Records continued

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### Configuring an Opus Labor Record

continued

Step	Action
9	Use the <b>Select Date</b> button of the <b>Delegate From</b> field to enter today's date. <u>Result:</u> The delegation is active for Kazmier starting today.
10	Use the <b>Select Date</b> button of the <b>Delegate To</b> field to enter a date two weeks from today. <u>Result:</u> For the next two weeks, Daniels will be delegated Workflow assignments meant for Kazmier.
11	<b>Save</b> the person record, then click the <b>Return</b> link in the upper-right corner of the screen. <u>Result:</u> You are taken back to Kazmier's labor record. <u>Note:</u> Because there are dates in the date fields, the delegation will take place <i>only</i> during the specified time period.

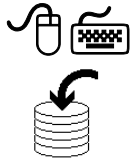
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## Adding Person-Related Records continued

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### Exercise 2: Modifying the Shift Information of a Mass U Person Record



Under some circumstances, the ability of a Workflow process to assign a task will be affected by the person's calendar and shift.

In this exercise, we want to show you where this information is set, if needed.

Access Fabiola Panzano's person record and make changes to indicate the information presented below:

<u>Field</u>	<u>Value</u>
<b>Calendar Organization</b>	Night Shift Calendar for the EAGLENA organization
<b>Primary Calendar</b>	NIGHT
<b>Primary Shift</b>	NIGHT

#### Notes:

- You must set the calendar before setting the shift.
  - We will be using the **Broadcast** setting for roles in our exercises, so shifts will have no effect on assignments.
-

## Configuring Person Groups

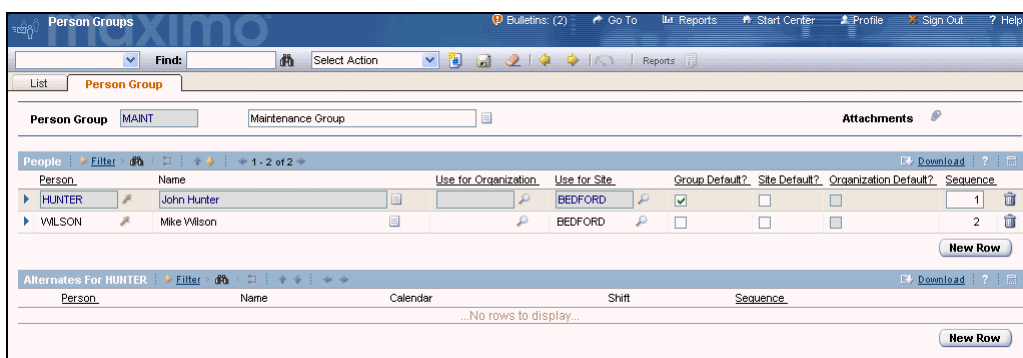
### Overview

Previously we saw that we can create person records in Maximo that reflect people who have some relationship with Maximo. People records can also be combined into groups called *person groups*.

By creating and referring to groups in your Workflow processes, various activities in Workflow can pertain to lists of people instead of just individuals.

### Person Groups Application

Person group records are put together using the **Person Groups** application in the Resources module.



Person groups contain lists of people who have some function in common. Workflow can refer to this list of people by referencing the underlying groups to which people belong.



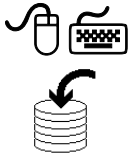
#### Notes:

- A person can be in any number of groups.
- *Using group references in Workflow processes is strongly recommended.* In this way, as personnel changes occur, you can change the makeup of groups without having to change the underlying references in your processes.

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## Configuring Person Groups continued

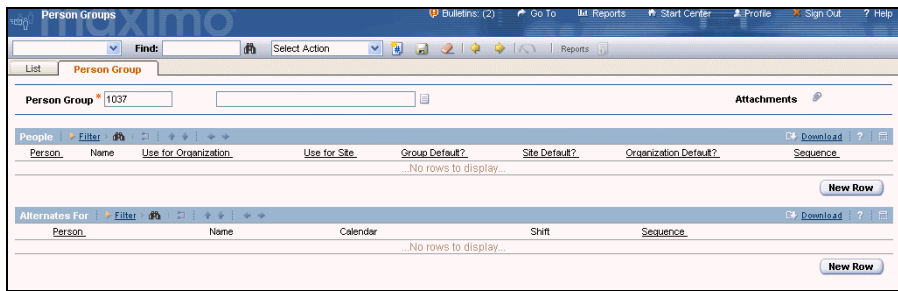
### Creating Mass U's Person Groups



Person groups can be used create roles that involve a list of people. In later exercises, we will create a role that calls the group of people who work in Mass U.

In the following exercise, we will create a person group for Mass U front office staff. This group will later be used to create roles that will be called for assignments in Workflow processes.

Step	Action
1	Sign in to Maximo as Fred Stanley: <b>User Name</b> stanley <b>Password</b> stanley <u>Result:</u> Fred's Start Center is displayed.
2	Access the <b>Person Groups</b> application from the <b>Resources</b> module.
3	Insert a new person group record. <u>Result:</u> Maximo displays a new automatically numbered person group record.
4	Change the <b>Person Group</b> field to MUFRONT.
5	Enter Mass U Front Office Staff in the <b>Description</b> field.



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## Configuring Person Groups continued

### Creating Mass U's Person Groups

continued

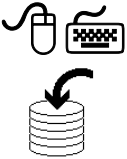
Step	Action									
6	In the <b>People</b> table, add a new row using the following information: <table> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Person</b></td> <td>ELLISON</td> </tr> <tr> <td><b>Use for Organization</b></td> <td>EAGLENA</td> </tr> <tr> <td><b>Sequence</b></td> <td>1</td> </tr> </tbody> </table> <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• The Sequence field indicates to Workflow the assignment sequence for this person when the group is referenced in a process.</li> <li>• Mark Ellison will be the <i>default</i> person for the group.</li> </ul>	<u>Field</u>	<u>Value</u>	<b>Person</b>	ELLISON	<b>Use for Organization</b>	EAGLENA	<b>Sequence</b>	1	
<u>Field</u>	<u>Value</u>									
<b>Person</b>	ELLISON									
<b>Use for Organization</b>	EAGLENA									
<b>Sequence</b>	1									
7	Add the other people listed below: <table> <thead> <tr> <th><u>Person</u></th> <th><u>Organization</u></th> <th><u>Sequence</u></th> </tr> </thead> <tbody> <tr> <td>Fabiola Panzano</td> <td>EAGLENA</td> <td>2</td> </tr> <tr> <td>Nick Craddock</td> <td>EAGLENA</td> <td>3</td> </tr> </tbody> </table>	<u>Person</u>	<u>Organization</u>	<u>Sequence</u>	Fabiola Panzano	EAGLENA	2	Nick Craddock	EAGLENA	3
<u>Person</u>	<u>Organization</u>	<u>Sequence</u>								
Fabiola Panzano	EAGLENA	2								
Nick Craddock	EAGLENA	3								
8	<b>Save</b> the person group record.									

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## Configuring Person Groups continued

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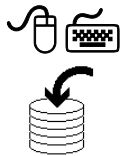
### Exercise 3: Create Mass U Person Group for Maintenance



Create a person group in the EAGLENA organization called MUMAINT with a description of Mass U Maintenance Supervisors.

- Add Kelly Ordway as the first person in the sequence. Kelly is the default person in the group.
  - Add Ted Bateman as the second person in the sequence.
  - Add Julio Coronado as the third person in the sequence.
- 

### Exercise 4: Create Opus Person Group for Safety



Create a person group in the EAGLENA organization called OPSAFETY with a description of Opus Safety Team.

Add Hank Adams to this group with sequence 1. He will be the default person for the group.

---



## Security Groups

---

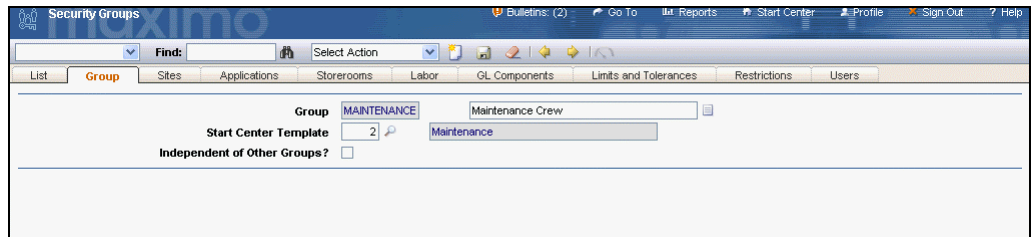
### Overview

We need to give various people access to the applications they need to do their work. In this section, you will learn how this is done.

---

### Security Groups

The **Security Groups** application in the Security module allows you to create groups of people who have rights to various applications and actions within them.



The screenshot shows the 'Security Groups' application interface. The title bar reads 'Security Groups' and includes navigation options like 'Bullitins: (2)', 'Go To', 'Reports', 'Start Center', 'Profile', 'Sign Out', and 'Help'. Below the title bar is a search bar with 'Find:' and a 'Select Action' dropdown. A menu bar contains 'List', 'Group', 'Sites', 'Applications', 'Storerooms', 'Labor', 'GL Components', 'Limits and Tolerances', 'Restrictions', and 'Users'. The main form area is titled 'Group' and contains the following fields: 'Group' with the value 'MAINTENANCE', 'Start Center Template' with the value '2', and 'Independent of Other Groups?' with an unchecked checkbox. A 'Maintenance Crew' button is also visible.

We need to set up some security groups to allow the Mass U folks access to the applications and other settings needed to do their work.

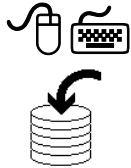
The following activities will show you how.

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## Security Groups continued

### Create Mass U Front Staff Security Group



The folks who work in the Mass U front office will need access to a number of applications to do their work.

According to Case Study 1 in Chapter 4, it appears that these people need access to the following applications:

- Service Requests
- Work Order Tracking

Note: Because this group deals with service requests, we will also allow them full access to the Create Service Request and View Service Requests applications.

The system administrator, Mike Wilson, will be setting up the access.

Follow the steps below to see how to do this.

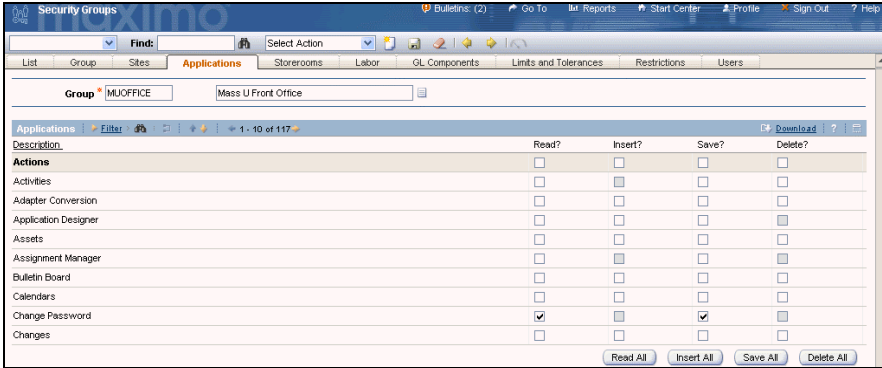
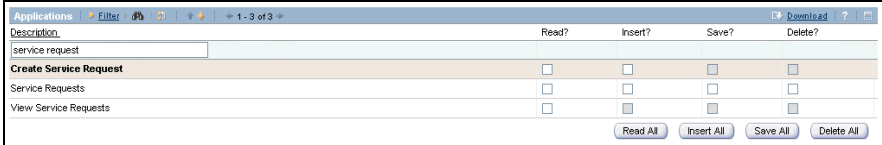
Step	Action								
1	Sign in to Maximo as Mike Wilson (wilson/wilson).								
2	Access the <b>Security Groups</b> application from the <b>Security</b> module.								
3	Insert a new record with the following information: <table style="margin-left: 20px; border: none;"> <thead> <tr> <th style="text-align: left;"><u>Field</u></th> <th style="text-align: left;"><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Group</b></td> <td>MUOFFICE</td> </tr> <tr> <td><b>Description</b></td> <td>Mass U Front Office</td> </tr> <tr> <td><b>Start Center Template</b></td> <td>5</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Group</b>	MUOFFICE	<b>Description</b>	Mass U Front Office	<b>Start Center Template</b>	5
<u>Field</u>	<u>Value</u>								
<b>Group</b>	MUOFFICE								
<b>Description</b>	Mass U Front Office								
<b>Start Center Template</b>	5								
4	On the <b>Sites</b> tab, select the <b>Authorize Group for All Sites?</b> check box.  <u>Note:</u> Checking this box will give this group access to all site information in applications that are accessible. So, in this case, you do not have to enter individual sites.								
5	<b>Save</b> the record.  <u>Note:</u> You will not be able to specify application rights in the next step unless you save the record.								

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## Security Groups continued

### Create Mass U Front Staff Security Group

continued

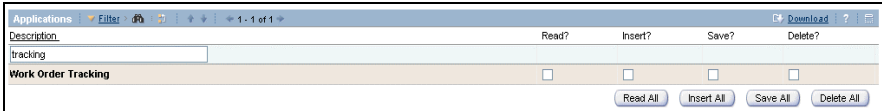
Step	Action
6	<p>Access the <b>Applications</b> tab.</p>  <p><b>Note:</b> From this tab, you can select various levels of access for applications and their related actions.</p>
7	<p>To easily find the request-related applications, filter on the <b>Description</b> field for the phrase <b>service request</b>.</p> <p><b>Result:</b> Maximo displays all applications with the words “service request” in their descriptions, similar to the screen below.</p>  <p><b>Note:</b> You’ll see that three of the applications to which the group needs access are displayed.</p>

continued on next page

**Security Groups** continued

**Create Mass U  
Front Staff  
Security Group**

continued

Step	Action															
8	<p>With all three applications displayed, click the following buttons:</p> <ul style="list-style-type: none"> <li>• <b>Read All</b></li> <li>• <b>Insert All</b></li> <li>• <b>Save All</b></li> <li>• <b>Delete All</b></li> </ul> <p><u>Result:</u> Appropriate check boxes in these columns are selected for <i>all</i> the applications in the list. Users in this group can read, insert, and save records in these applications.</p> <p><u>Note:</u> Records are always read-only from View Service Requests.</p>															
9	<p>Select the <b>Service Requests</b> application line, then click the <b>Grant All</b> button in the <b>Options for Service Requests</b> table.</p> <p><u>Result:</u> Access is provided for all actions, etc. in the Service Requests application.</p>															
10	<p>Following the example in the previous step, grant all options for the <b>View Service Requests</b> application.</p>															
11	<p><b>Save</b> the record.</p>															
12	<p>Change your filter setup to find the line for the Work Order Tracking application.</p> <p><u>Result:</u> Maximo displays the Work Order Tracking line in the Application table, similar to this example.</p>  <p>The screenshot shows a table with the following structure:</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Read?</th> <th>Insert?</th> <th>Save?</th> <th>Delete?</th> </tr> </thead> <tbody> <tr> <td>tracking</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Work Order Tracking</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> <p>Buttons at the bottom of the table: Read All, Insert All, Save All, Delete All.</p>	Description	Read?	Insert?	Save?	Delete?	tracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work Order Tracking	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Description	Read?	Insert?	Save?	Delete?												
tracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
Work Order Tracking	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												

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**Security Groups** continued**Create Mass U  
Front Staff  
Security Group**

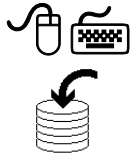
continued

Step	Action
13	Provide the following full access to this group for the <b>Work Order Tracking</b> application: <ul style="list-style-type: none"><li>• <b>Read All</b></li><li>• <b>Insert All</b></li><li>• <b>Save All</b></li><li>• <b>Delete All</b></li></ul>
14	Grant all options for the <b>Work Order Tracking</b> application.
15	<b>Save</b> the security group record. <u>Result:</u> Now the Mass U front office security group can provide access to the applications and other rights needed to do the front office work in Maximo.

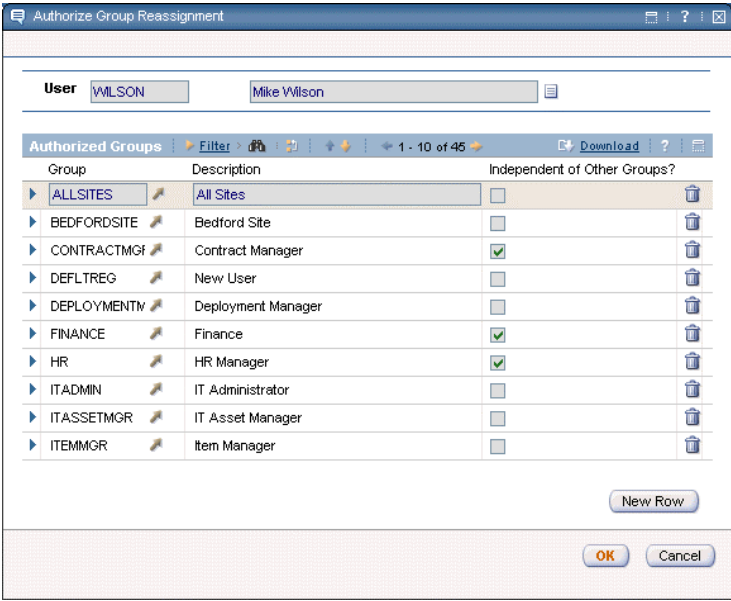
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## Security Groups continued

### Authorize Group Manager



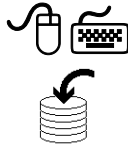
After creating a new security group, you need to tell Maximo which users are authorized to make assignments and reassignments of users to the group. For our exercise, we will give the user Mike Wilson this right. Follow the steps below to see how this is done.

Step	Action																																	
1	Ensure that you are signed in to Maximo as Mike Wilson.																																	
2	Access the <b>Users</b> application from the <b>Security</b> module.																																	
3	Find the <b>WILSON</b> user.																																	
4	<p>Choose <b>Authorize Group Reassignment</b> from the <b>Select Action</b> menu.</p> <p><u>Result:</u> The Authorize Group Reassignment dialog box opens.</p>  <table border="1"> <thead> <tr> <th>Group</th> <th>Description</th> <th>Independent of Other Groups?</th> </tr> </thead> <tbody> <tr> <td>ALLSITES</td> <td>All Sites</td> <td><input type="checkbox"/></td> </tr> <tr> <td>BEDFORDSITE</td> <td>Bedford Site</td> <td><input type="checkbox"/></td> </tr> <tr> <td>CONTRACTMGR</td> <td>Contract Manager</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>DEFLTREG</td> <td>New User</td> <td><input type="checkbox"/></td> </tr> <tr> <td>DEPLOYMENTM</td> <td>Deployment Manager</td> <td><input type="checkbox"/></td> </tr> <tr> <td>FINANCE</td> <td>Finance</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>HR</td> <td>HR Manager</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>ITADMIN</td> <td>IT Administrator</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ITASSETMGR</td> <td>IT Asset Manager</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ITEMMGR</td> <td>Item Manager</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Group	Description	Independent of Other Groups?	ALLSITES	All Sites	<input type="checkbox"/>	BEDFORDSITE	Bedford Site	<input type="checkbox"/>	CONTRACTMGR	Contract Manager	<input checked="" type="checkbox"/>	DEFLTREG	New User	<input type="checkbox"/>	DEPLOYMENTM	Deployment Manager	<input type="checkbox"/>	FINANCE	Finance	<input checked="" type="checkbox"/>	HR	HR Manager	<input checked="" type="checkbox"/>	ITADMIN	IT Administrator	<input type="checkbox"/>	ITASSETMGR	IT Asset Manager	<input type="checkbox"/>	ITEMMGR	Item Manager	<input type="checkbox"/>
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ITADMIN	IT Administrator	<input type="checkbox"/>																																
ITASSETMGR	IT Asset Manager	<input type="checkbox"/>																																
ITEMMGR	Item Manager	<input type="checkbox"/>																																
5	<p>Add a new row to this dialog box, then enter the MUOFFICE group into the <b>Group</b> field and click <b>OK</b>.</p> <p><u>Result:</u> The Authorize Group Reassignment dialog box closes. WILSON is now authorized to make changes to the list of users assigned to the new MUOFFICE group.</p>																																	

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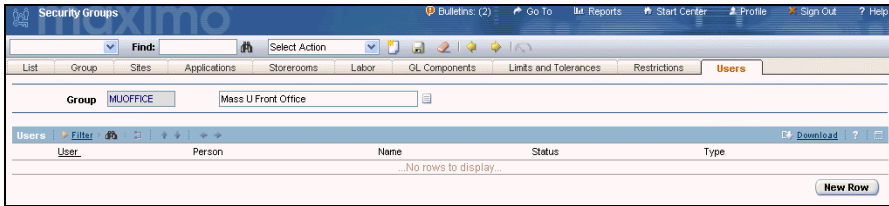
## Security Groups continued

### Add Users to the New Security Group



Now that we have created a security group that provides appropriate application access and have given Mike Wilson the authority to add users, we need to add users to the group.

To add users to the MUOFFICE group, follow the steps below.

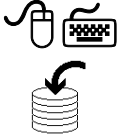
Step	Action
1	Access the <b>Security Groups</b> application and find the <b>MUOFFICE</b> security group record from the previous exercise.
2	Access the <b>Users</b> tab. <u>Result:</u> This tab allows you to add users to the group. 
3	Using the <b>New Row</b> button, add the following people to the MUOFFICE group: <ul style="list-style-type: none"> <li>• Mark Ellison</li> <li>• Fabiola Panzano</li> <li>• Nick Craddock</li> <li>• Diane Liberi</li> </ul> <u>Note:</u> This is standard Maximo Security functionality, so we won't go into details for this step.
4	<b>Save</b> the security group record. <u>Result:</u> We have now created a security group with the desired rights and assigned users to the group.

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## Security Groups continued

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### Exercise 5: Create OPUS Security Group



The processes for the OPUS organization contain nodes that send tasks to a wide variety of groups and individuals. All the people in these groups, as well as the individuals, must be given access to the applications they need to do their jobs in Maximo.

So, you need to create a security group called *OPUS* with the description of *Opus Security Group* that provides the access indicated below.

Note: Authorize Wilson to add the users and give the group access to Start Center 5.

#### Sites

All sites (use the **Authorize Group for All Sites?** quick pick check box)

#### Applications

- Work Order Tracking (read, insert, save, delete)
- Purchase Requisitions (read, insert, save)

#### Options

All options for all applications listed above

#### Users

- KAZMIER
- DANIELS
- STANLEY
- SCHAFER
- LOU
- MILLER
- GRANGER
- JLEGO
- JONES

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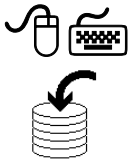
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## Security Groups continued

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### Exercise 6: Create Mass U Supervisors Group



The supervisors from Mass U must access the Work Order Tracking and Assignment Manager applications to do their jobs.

So, in this exercise, we need to do the following tasks:

- Create a security group called *MUSUPV* with a description of *Mass U Supervisors*
- Provide access to Start Center Template 5
- Provide full access to the Work Order Tracking application and all its options for all sites
- Provide full access to the Assignment Manager application and all its options for all sites
- Labor Tab – select **Authorize Group for all Labor?**
- Add the following users:
  - Kelly Ordway
  - Julio Coronado
  - Ted Bateman
  - Diane Liberi

Note: Authorize Wilson to add the users.

---

## Chapter Summary

---

### Setup

To enable Workflow processes to perform as designed, certain records and files must be configured. This section has provided an overview of this setup functionality.

The *System Administration for MXES* course provides more detailed information regarding these functions.

---

### The Maximo. Properties File

The *maximo.properties* file is a key file used by Maximo that holds many configuration properties, such as the connect string to the database, the owner of the database, and so forth.

---

### Person-Related Records

A number of person-related records need to be set up:

- People
  - Labor
  - Users
  - People groups
- 

### Security

After people records are added to Maximo, security must be set up to enable various people and groups access to the applications and options needed to do their jobs.

The Security Groups application is used to determine privileges for a group and to add users to the group.

---

### Workflow Delegates

A *workflow delegate* is a user to whom Workflow assignments are delegated when the regular user is not available.

The delegate is indicated on the underlying person record for the user, as well as on the labor record.

Assignments will automatically go to the indicated delegate unless start and end dates are designated for the delegation.

You can also end delegation by clearing the Workflow Delegate field.

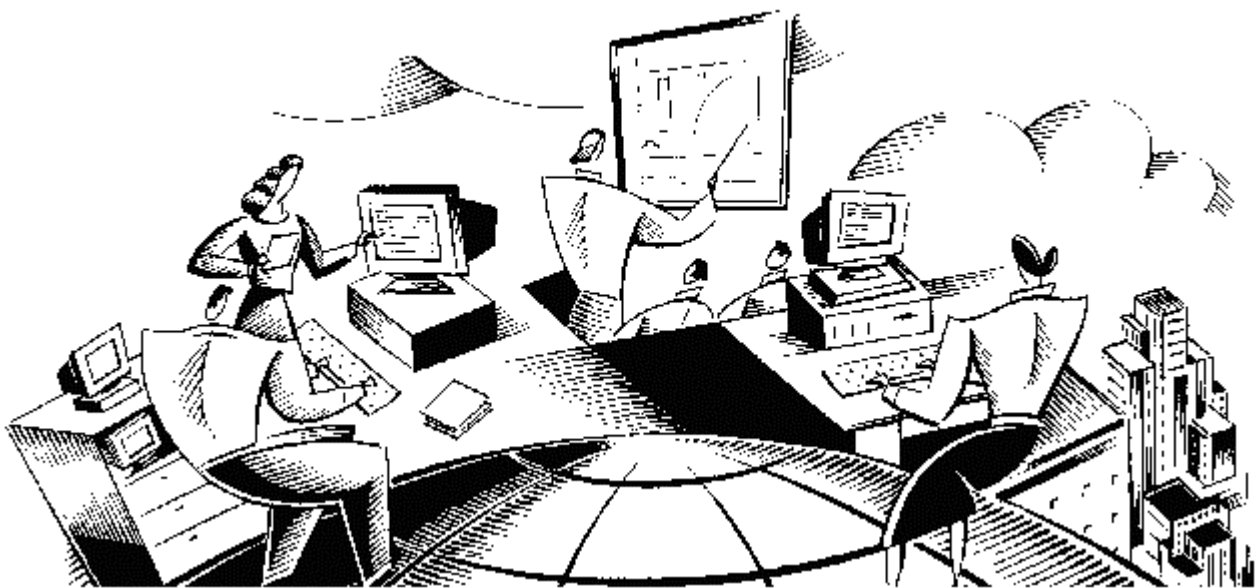
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# Workflow Management Using MXES

## Unit 3: Developing the Workflow Process



**In This Unit**

This unit contains the following chapters:

<b>Chapter</b>	<b>Topic</b>
6	Design
7	Create
8	Node Configuration

---

## Unit Overview

---

### Introduction

In this unit we will look at the steps to build a Workflow process using Workflow Designer.

This unit focuses on using Workflow Designer to create a Workflow process that matches the design that you sketched out in Unit 1: “Analyzing Your Business Processes.”

---

### Learning Objectives

When you have completed this unit, you should be able to:

- create a new Workflow process in Workflow Designer by adding nodes and connecting them;
  - describe the different node types and give examples of why you would use each in your Workflow process;
  - configure the required elements for each of the node types; and
  - validate your Workflow processes.
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## Unit Overview continued

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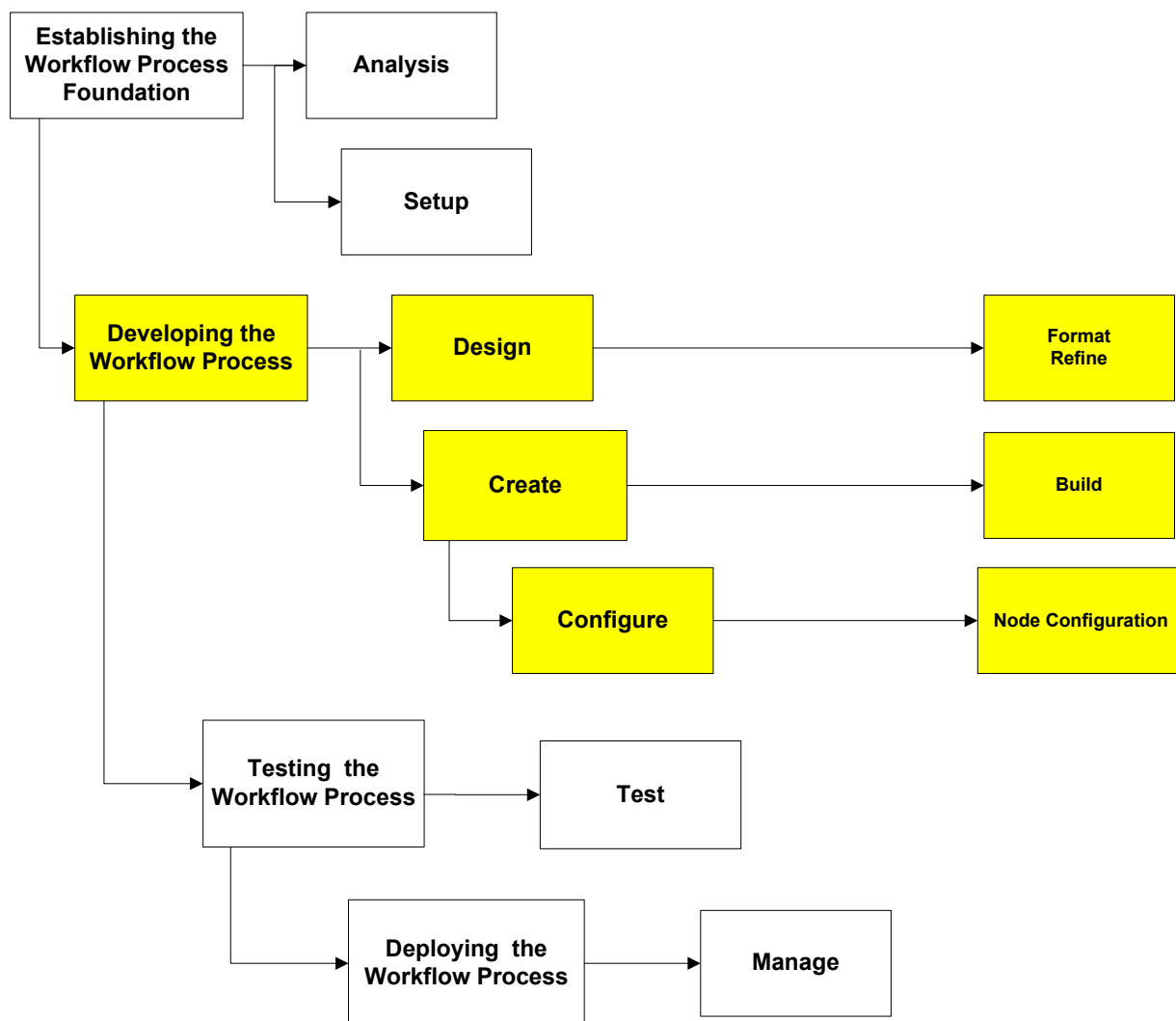
### Phase 2: Developing the Workflow Process

During the Development phase, the process design is converted into an electronic workflow using the Workflow Designer application.

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### We Will Cover

In this unit, discussions will focus on *Phase 2, Developing the Workflow Process*, along with its tasks and related activities.



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## Unit Overview continued

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### Activity Examples

The following table lists examples of the activities you might perform at each task level of Phase 2.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Design</i>	Format	Document the business process' steps into a flowchart using Workflow Designer node conventions
	Refine	Analyze and modify the steps as you work through the flowcharting activity
<i>Create</i>	Build	<ul style="list-style-type: none"> <li>• Use the Workflow Designer application to convert the process flows identified in Phase 1 into an electronic version</li> <li>• Create additional needed records, including Roles, Actions, People, etc. needed to work with nodes</li> </ul>
<i>Configure</i>	Node Configuration	Configure the parameters, conditions, and actions for each node

---

## Review: The Workflow Designer Application

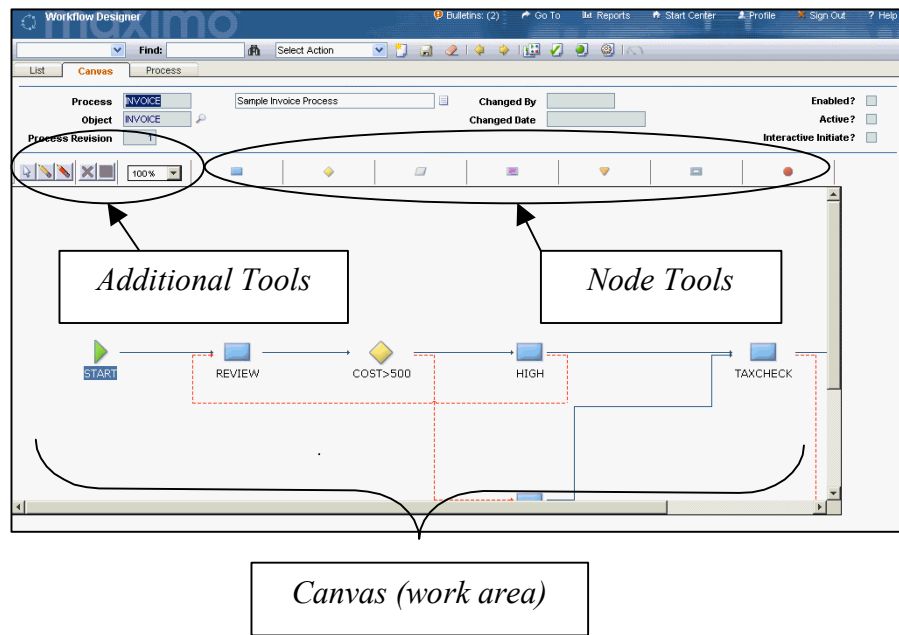
### Introduction

In Chapters 7 and 8, we will be using the Workflow Designer application to create and configure the paper-based Workflow processes that we created in Unit 2.

This section is a review of the Workflow Designer application and its functionality.

### Workflow Designer: Canvas Tab

You use the Workflow Designer **Canvas** as a place to build and update processes for use with Workflow.



The Workflow Designer Canvas has a series of eight node tools on a toolbar or palette that you use to create the Workflow processes.







You drag and drop the necessary nodes onto the canvas, or work area.

continued on next page

## Review: The Workflow Designer Application continued

### Canvas Tab: Node Tool Descriptions

The table below provides a graphic and a description of each note tool.



Tool Image	Description
	The <b>Start</b> node indicates the beginning of a Workflow process. Workflow places one Start node on the canvas when you create a new process. There can be only one starting point to any process.
	<b>Stop</b> nodes mark the point where a Workflow process ends and a record leaves Workflow control. Workflow places one Stop node on the canvas when you create a new process. You can place additional Stop nodes on the canvas as needed.
	<b>Task</b> nodes allow you to direct the path of the record. You must have at least one connection coming out of a Task node. You use a Task node when your business rules call for an affirmative or negative user response to an inbox assignment.
	<b>Condition</b> nodes are defined to automatically direct records according to information contained within the record. There must be one positive connection and one negative connection coming out of a Condition node. The connection used by a record as it exits a Condition node is dictated by the SQL expression within the node, which resolves to either true (positive connection) or false (negative connection).
	<b>Manual Input</b> nodes allow you to direct the path of a record. Use a Manual Input node when you want the user to select the next step from a menu.
	A <b>Subprocess</b> node represents a complete Workflow process nested within another Workflow process. A Subprocess can have a negative line flowing out of it, in addition to the positive. When a Subprocess encounters a Stop node, it returns to the master process along the same line on which it finished. This enables the Subprocess to carry back the logic that caused the termination to the master process.

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## Review: The Workflow Designer Application continued

### Canvas Tab: Node Tool Descriptions

continued

Tool Image	Description
	<p>An <b>Interaction</b> node must have one or more action lines entering it, but only one action line can exit. You use an Interaction node to help lead an end user down particular problem resolution paths by offering well-defined choices, which guide the user through a scripted path and manage the relationship with the record in any given session. A Manual Input node usually precedes the Interaction node.</p>
	<p>You use a <b>Wait</b> node to create a certain reaction to an action. You can define any action to trigger a specified reaction in a Wait node. When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the specified events occur. When the specified event does occur, it informs the node and the process resumes by exiting the node at the single exit point.</p>

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## Review: The Workflow Designer Application continued

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### Extra Interaction Node Information



The Interaction node is packed with many capabilities. You will use some of those capabilities in this course; for example:

- You can cause a message to pop up on the screen in a dialog box. This message could inform the user about something they need to know or do during the process.
- If a new record type is created from another record type using an action, the new record could be displayed in its application for the user without the user's having to access the new record manually.
- The application for the new record and the specific tab could be indicated in the Application and Tab Name fields.
- A choice from the Select Action list of the indicated application could be indicated in the Action field.

Note: It must be emphasized that, in this case, we are referring to choices available in the *Select Action* menu of the specified application, not choices from the Actions application.

- Another valuable way that an Interaction node can be used is to indicate another Workflow process to be started. The process would be indicated in the Launch Process field.






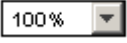
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## Review: The Workflow Designer Application continued

### Canvas Tab: Additional Tools

After dragging and dropping the appropriate nodes to the canvas, you can move, connect, delete, or configure them using the other tools on the toolbar. The table below describes the additional Canvas tools.

Tool Image	Description
	You use the <b>Move/Add Nodes</b> tool to drag and drop the nodes from the tool bar for placement on the canvas. You also use this tool to position nodes on the canvas.
	You use the <b>Connect Nodes</b> tool, the yellow pencil icon, to create positive connections from one node to another. <u>Note:</u> Positive connection lines also contain properties that allow you to enable an action between nodes when the process runs along its path.
	You use <b>Connect Nodes with a Negative Action</b> , the red pencil icon, to create negative connections from one node to another. <u>Note:</u> Negative positive connection lines also contain properties that allow you to enable an action between nodes when the process runs along its path.
	You use the <b>Delete</b> button to remove a highlighted graphical object.
	You use the <b>Properties</b> tool to enter a node's Properties dialog box to review and edit the attributes associated with that node.
	The <b>Zoom</b> tool allows you to increase or decrease the size of the canvas as a percentage of the default (the size that you see when you first enter the canvas).

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## Review: The Workflow Designer Application continued

### Process Tab

While on the INVOICE process, access the **Process** tab from the Workflow Designer tool. Your screen will look similar to the graphic below.

Title	Description	Node Type
START	START	START
STOP	STOP	STOP
REVIEW	Review this record for completeness.	TASK
COST>500	Total Cost GT 500	CONDITION
HIGH	High value invoice approval	TASK
LOW	Low value invoice approval	TASK
TAXCHECK	Check for accuracy of tax calculations.	TASK
STOP	STOP	STOP

Action	Instruction	To Node	Positive?
		REVIEW	<input checked="" type="checkbox"/>

The Process tab provides a tabular representation of the nodes on the Canvas tab.

You can edit properties for process nodes by clicking the **Edit Properties** button, located to the right of the node.



The **Actions** table shows any actions associated with a selected node. You can also edit actions by clicking the relevant Edit Properties button.





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## Review: The Workflow Designer Application continued

### Action Buttons

From both the Canvas and Process tabs you can access a number of buttons that perform a variety of actions on the selected process.

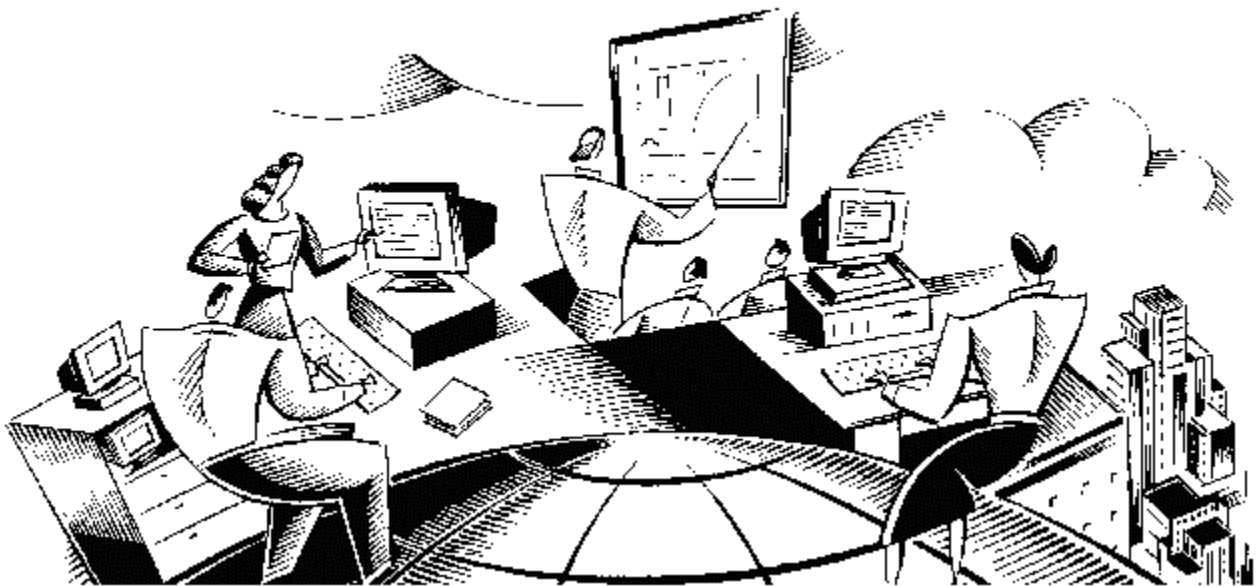
The table below describes these buttons.

Button	Description
	The <b>Insert Process Revision</b> button inserts a new copy of the selected process onto the canvas for update and editing. The number in the Revision field will be incremented by one. You can then edit your new process.
	The <b>Validate Process</b> button checks the setup of your process to determine that all elements are set up and working properly.
	The <b>Enable Process</b> button enables your process so that other processes can use it as a <i>subprocess</i> . When you enable a process, it is first <i>validated</i> just as if you clicked the Validate Process button. If validation is not positive, then the process cannot be enabled. When the process is enabled, Maximo creates the relationships and other needed technical setups to run the process against the designated object.
	The <b>Activate Process</b> button activates a process to be used as a top-level process that can use enabled subprocesses in the flows. <b>Note:</b> A process must be <i>both</i> enabled and active to be a top-level process.



# Workflow Management Using MXES

## Chapter 6: Design



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	6-1
Overview of the Design Task	6-2
Formatting	6-3
Refining the Process	6-18
Chapter Summary	6-20
Workshop	6-23

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## Chapter Overview

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### Introduction

In this chapter, we will focus on converting whiteboard diagrams into Workflow Designer node conventions.

We will begin to design our Workflow processes.

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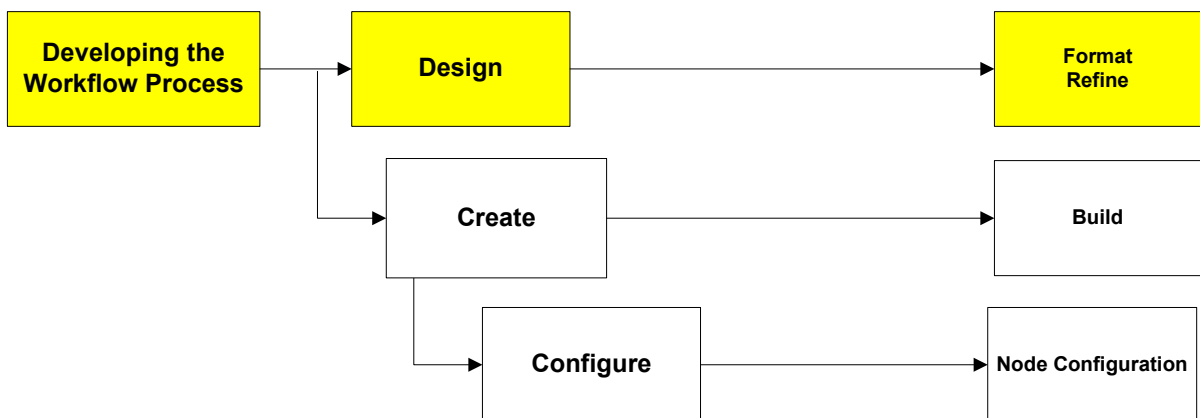
### Learning Objectives

When you have completed this chapter, you should be able to document business process steps in a format using Workflow Designer node conventions.

---

### We Are Here

The areas that we will be covering in this chapter are highlighted below.



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## Overview of the Design Task

---

### Introduction

After the implementation team has gathered and defined their business processes, the next task is to document and format those business processes into flowcharts.

---

### Activity Examples

Each step in the design task requires that you perform specific activities. The following table lists examples of the activities that you might perform for the Design task.

Task	Activity	Actions
<i>Design</i>	Format	Document the business process steps into a flowchart format using Workflow Designer node conventions
	Refine	Analyze and modify the steps as you work through the flowcharting activity

---

### Design Considerations for Sites and Organizations

Workflow processes are built at the *system level* and apply globally to all organizations and sites in the database.

The implementer simply applies the appropriate business logic to the process designs to accommodate any conditional branching that might occur by site and/or organization.

---

## Formatting

---

### Introduction

After you have researched the components of the approval process at your site and have preliminary diagrams sketched out, the next step is to take these diagrams and convert them into diagrams that use Workflow Designer node conventions.

---

### Standard Symbols

Sketch the flow of information in your process using standard symbols found in the **Workflow Designer** application.

These symbols will allow you to easily convert the compiled answers and whiteboard diagrams into Workflow Designer.

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



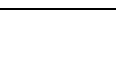
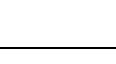


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## Formatting continued

### Workflow Designer Symbols

When you format your flowchart, use standard symbols to demonstrate actions a user must perform, such as decision points, conditions, and endpoints.

The following table lists the symbols in Workflow.

Symbol	Name	Description
	<i>Start</i>	Determines the starting point for the process
	<i>Stop</i>	Determines the stopping point for the process
	<i>Task</i>	Allows a user to perform an assignment, e.g., approve or reject a record
	<i>Manual Input</i>	Allows a user to direct the path of a record in the process
	<i>Condition</i>	Allows the system to determine the next step in the process based on a condition
	<i>Subprocess</i>	Allows the process to branch to a subprocess
	<i>Positive Connection (Action)</i>	Determines the next step and action when a condition is evaluated as true or its process path is selected
	<i>Negative Connection (Action)</i>	Determines the next step in the process when a condition is evaluated as false or its process path is selected
	<i>Interaction</i>	Leads an end user down particular problem resolution paths by offering well-defined choices, which guide the user through a scripted path
	<i>Wait</i>	Causes the process to pause indefinitely until any of the specified events occur

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## Formatting continued

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### Flowcharting Your Process

Using the information that you gathered during the *Analysis* task along with the flowchart symbols, we will now convert our case studies into a flowchart using Workflow Designer node conventions.

In the development phase, we will use these exercise flowcharts to create the Workflow process in the Workflow Designer application.

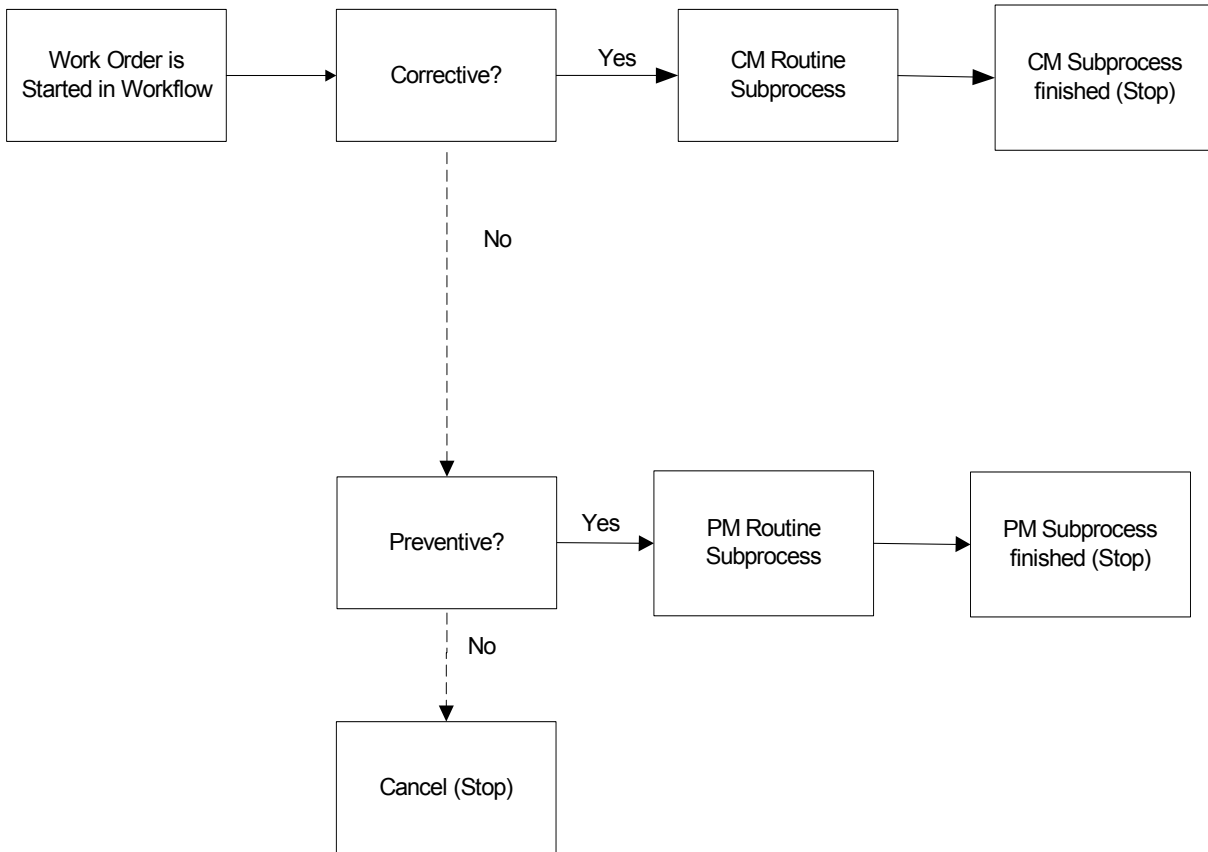
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### Formatting continued

**Example**

Using the Opus initial work type determination flowchart, shown below, we can convert the step/action table into Workflow Designer nodes.


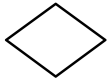
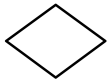

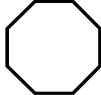


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**Formatting** continued**Converted  
Step/Actions**

The table below shows the conversion:

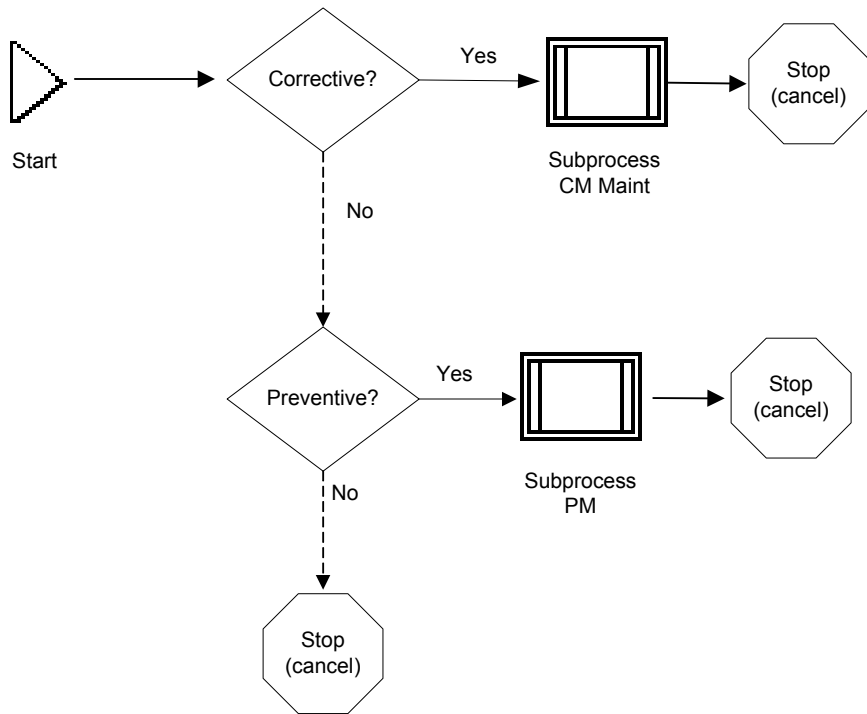
<b>Node</b>	<b>Action</b>
	A work order record is started in a Workflow process routine.
	Is the Work Type Corrective Maintenance (CM)? If yes, route to the Maintenance Team Leader to review and validate the work order. If no, route to the Preventive action.
	Is the Work Type Preventive Maintenance (PM)? If yes, route to the Subprocess action. If no, route to the Stop action.
	If the Work Type is Preventive Maintenance (PM), route to the PM subprocess Workflow.
	Stop the process.

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### Formatting continued

#### Starting the Design

The following flowchart reflects this information when diagrammed.



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## Formatting continued

### Exercise 1: Opus' Case Scenario—Node Conventions



Using Workflow Designer conventions, indicate which nodes would be used in the Opus Corrective Maintenance process to accomplish the following steps.

Node	Action
	A work order record is determined to be a CM type and enters the Corrective Maintenance (CM) Workflow process.
	The work order is sent to a maintenance supervisor for review and approval.
	If the maintenance supervisor approves the work, then he or she decides, depending on the area affected, which department—Engineering or Environmental—to send the work order to.
	If the supervisor does not accept the work order, it is rejected.
	If accepted, the assigned representative from either the engineering or environmental department approves the work order and sends the work order to the safety group for a safety rep's approval.
	If not accepted, the assigned representative from either the engineering or environmental department cancels the work order.
	A member of the safety group reviews and approves or cancels the work order.
	If the work order is given preliminary approval, it is then sent to the finance department and enters a financial subprocess.
	If Safety does not give approval, the work order is canceled.

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## Formatting continued

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**Exercise 2:**  
**Opus Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**



Convert the nodes into a flowchart.

Hint: Verify your work using the Answer Key.

---

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## Formatting continued

### Exercise 3: Opus Case Scenario—Node Conventions



Using Workflow Designer conventions, convert the Opus Finance process steps into nodes.

Node	Action
	A work order record enters the Finance Workflow process.
	If the total cost is less than \$5,000 it is sent to the accounts payable clerk.
	The accounts payable clerk can approve or reject the work order.
	If the total cost is between \$5,000 and \$50,000 it is sent to the AP supervisor.
	The AP supervisor approves or rejects the work order.
	If the total cost is over \$50,000, it is sent to the accounting manager.
	The AP manager approves or rejects the work order. When the work order has financial approval, work can start.

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## Formatting continued

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**Exercise 4:**  
**Opus Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**



Convert the nodes into a flowchart.

Hint: Verify your work using the Answer Key.

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## Formatting continued

**Exercise 5:  
Opus Case  
Scenario—Node  
Conventions**



Using Workflow Designer conventions, convert the Opus Preventive Maintenance process steps into nodes.

Node	Action
	The work order is determined to be a PM work type and goes into the PM work routine.
	A member of the safety department reviews the work order. If he or she approves the work order, then it is sent to the finance department. Otherwise, it is rejected.
	Is the cost greater than \$5,000?
	If the total cost is less than \$5,000, then an accounts payable clerk can approve or reject the work order.
	If the total cost is over \$5,000, then a supervisor can approve or reject the work order.

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**Formatting** continued

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**Exercise 6:  
Opus Case  
Scenario—  
Converting  
Nodes into a  
Diagram**

Convert the nodes into a flowchart.

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## Formatting continued

### Exercise 7: Mass U's Case Scenario—Node Conventions



Using Workflow Designer conventions, indicate which nodes would be used in the Mass U process to accomplish the following steps.

Node	Action
	A service request is entered into the Create Service Requests application (online) or the Work Order Tracking application (telephone).
	If a service request is created, the office staff determines the validity of the request. If it is not valid, the request is canceled. If it is valid, a work order record is created and presented to the staffer who validated the request.
	For valid work requests, the staff adds information to the work order record. Then the work order is forwarded to the supervisor.
	The Work Type field <i>must</i> be completed before getting to the supervisor. If it is not, the work order is routed back to the office staff for completion of this field.
	Upon cancellation of a service request, an e-mail notification will go the originator and the supervisor. Then the workflow process is stopped.
	The supervisor will add resources, and assign and approve the work order. An e-mail notification will be sent to the requestor.
	The work order will be assigned by the process to the indicated labor, who will report labor time and let the supervisor know the status of the work.

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## Formatting continued

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**Exercise 7:** continued  
**Mass U's Case**  
**Scenario—Node**  
**Conventions**

Node	Action
	<p>When the labor routes the work order record from his Inbox, he will be asked by the process whether the work is:</p> <ul style="list-style-type: none"> <li>• completed,</li> <li>• waiting for materials, or</li> <li>• canceled.</li> </ul> <p>Workflow will change the status of the work order, depending on the selection.</p>
	<p>If the work is not completed, then the process will set it to a status of Waiting for Materials (WMATL) and send an e-mail notification to the person requesting the service. The record is then routed back to the supervisor for review.</p>
	<p>When work is completed, the process changes the status on the record to COMP (completed) and routes the record to the end of the process. If the work order is completed, it finishes the Workflow process and an e-mail notification goes to the person requesting the work.</p>
	<p>If the work is canceled, the process sets the status to CAN and an e-mail notification is sent to the requestor.</p>

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## Formatting continued

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**Exercise 8:**  
**Mass U's Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**



Convert the nodes into a flowchart.

Hint: Verify your work using the Answer Key.

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## Refining the Process

---

### Introduction

When you have documented the current process, the next step is to decide where the process needs to change, if at all.

---

### Identifying Required Changes

Researching the process generates a great deal of information. It provides information on how things are done today; it also provides you with insight into how to improve the process.

To get the most complete information and acceptance of the changes, consider using a multidisciplinary team or task force to document current processes, recommend changes, and identify bottlenecks.

---

### Steps to Change the Process

Here is an example of the steps you can use to change a process in a logical manner:

1. Identify where to make changes.
  2. Develop alternative solutions.
  3. Determine the new solution.
  4. Implement the changes and redraw the flow diagram.
- 

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## Refining the Process continued

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### Challenge



Can you think of an area in the Opus work order approval process that will change because they are automating the process using Workflow?

## Chapter Summary

### Standard Symbols







You can sketch the flow of information in your process using standard symbols found in the **Workflow Designer** application.

These symbols will allow you to easily convert the compiled answers and whiteboard diagram into Workflow Designer nodes.

### Workflow Designer Symbols

When you format your flowchart, you use standard symbols to demonstrate actions a user must perform, such as decision points, conditions, and endpoints.

The following table lists the symbols in Workflow.





Symbol	Name	Description
	<i>Start</i>	Determines the starting point for the process
	<i>Stop</i>	Determines the stopping point for the process
	<i>Task</i>	Allows a user to perform an assignment, e.g., approve or reject a record
	<i>Manual Input</i>	Allows a user to direct the path of a record in the process
	<i>Condition</i>	Allows the system to determine the next step in the process based on a condition
	<i>Subprocess</i>	Allows the process to branch to a subprocess

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## Chapter Summary continued

### Workflow Designer Symbols

continued

Symbol	Name	Description
	<i>Positive Connection (Action)</i>	Determines the next step and actions when a value is evaluated as true or accepted
	<i>Negative Connection (Action)</i>	Determines the next step and actions when a value is evaluated as false or rejected
	<i>Interaction</i>	Leads an end user down particular problem resolution paths by offering well-defined choices, which guide the user through a scripted path
	<i>Wait</i>	Causes the process to pause indefinitely until any of the specified events occur

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## Chapter Summary continued

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### **Documenting Your Process**

When you have identified all of the steps of the process, you can document it by drawing a flowchart of the steps.

Be sure to include information about what decisions are made along the way, who makes the decisions, and who does the work.

---

### **Refining the Process**

The research phase of this process provides information on how things are done today and insight into how to improve the process.

Use the following steps to change a process in a logical manner:

1. Identify where to make changes.
  2. Develop alternative solutions.
  3. Determine the new solution.
  4. Implement the change and redraw the flowchart.
-



# Workshop

## Exercise

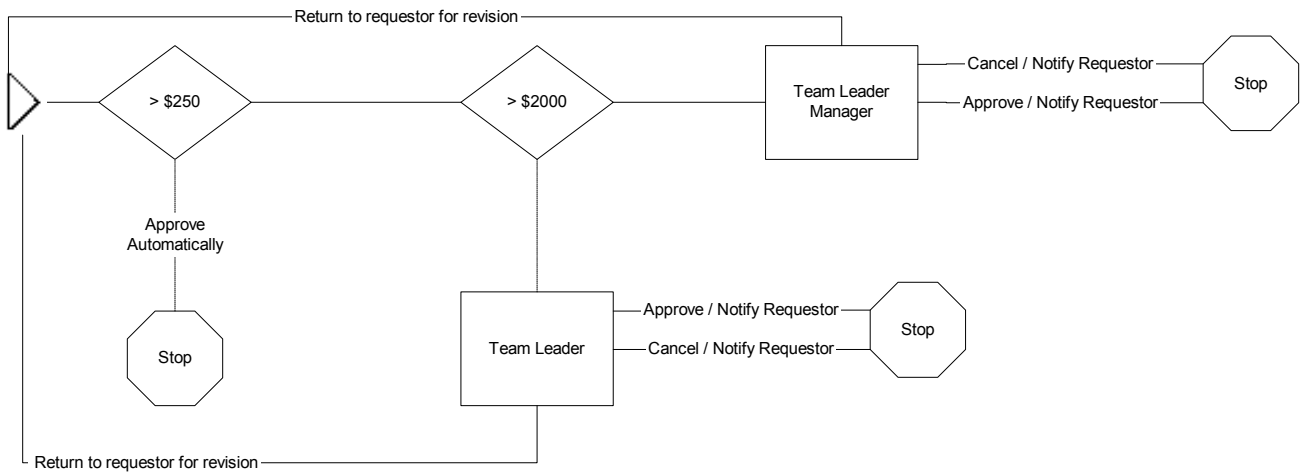


Convert the generic flowchart diagram below into a diagram using Workflow Designer nodes.

Note: This process is for purchase requests.



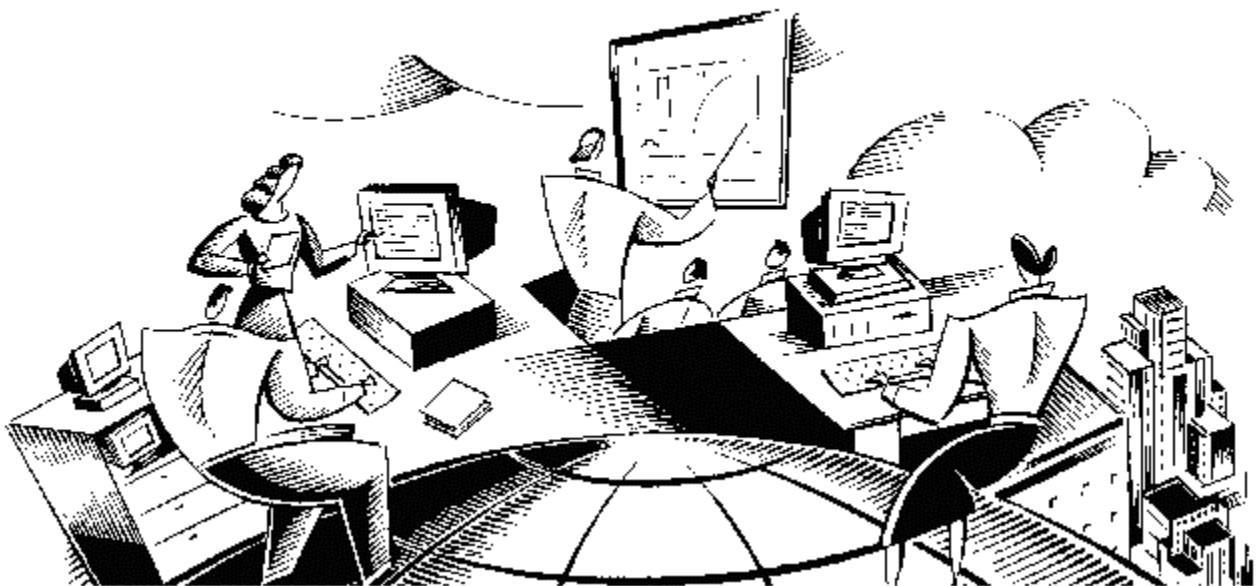
Hint: Creating a step/action table can help you determine nodes.





# Workflow Management Using MXES

## Chapter 7: Create



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	7-1
Overview of the Create Task	7-2
Creating a Workflow Process	7-3
Chapter Summary	7-25
Workshop	7-27

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## Chapter Overview

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### Introduction

Adding a new Workflow process to the system involves creating the flow using Workflow Designer.

In this chapter, the main focus will be to create Workflow processes based on the graphical depiction of the paper-based flow that you designed in Unit 2: “Establishing the Workflow Process Foundation.”

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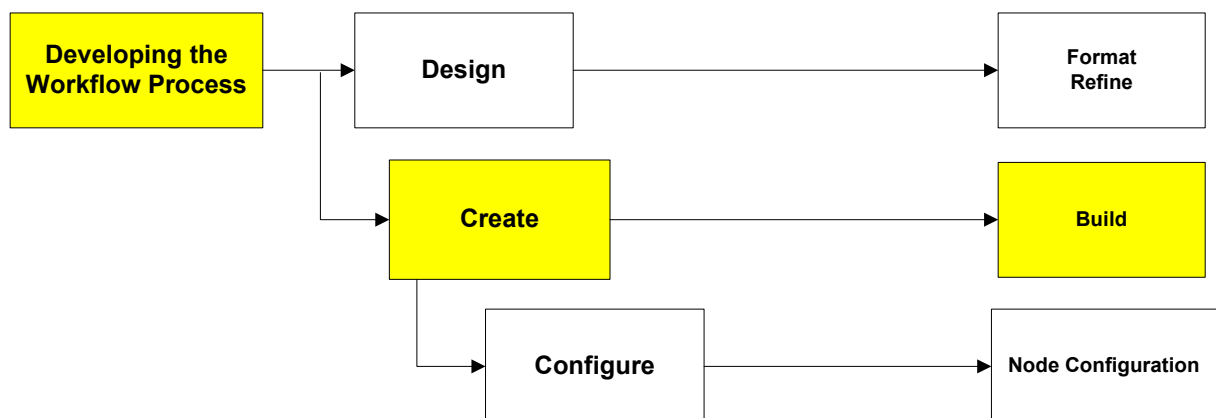
### Learning Objectives

When you have completed this chapter, you should be able to:

- add a new Workflow process using Workflow Designer;
  - describe the different node types and give examples of why you would use each in your Workflow process;
  - connect nodes to determine the flow for the source record; and
  - save your Workflow processes.
- 

### We Are Here

The areas that we will be covering in this chapter are highlighted below:



## Overview of the Create Task

---

### Introduction

After Workflow processes are initially designed on paper and the system is configured, the next phase is to convert these Workflow processes into an electronic format using Workflow Designer.

---

### Activity Examples

Each step in the Create task requires that you perform specific activities. The following table lists examples of the activities that you might perform for the Create task.

<b>Task</b>	<b>Activity</b>	<b>Action</b>
<i>Create</i>	Build	<ul style="list-style-type: none"><li>• Use the Workflow Designer application to convert the process flows identified in Phase 1 into an electronic version</li><li>• Create additional needed records, including Roles, Actions, People, etc. needed to work with nodes</li></ul>

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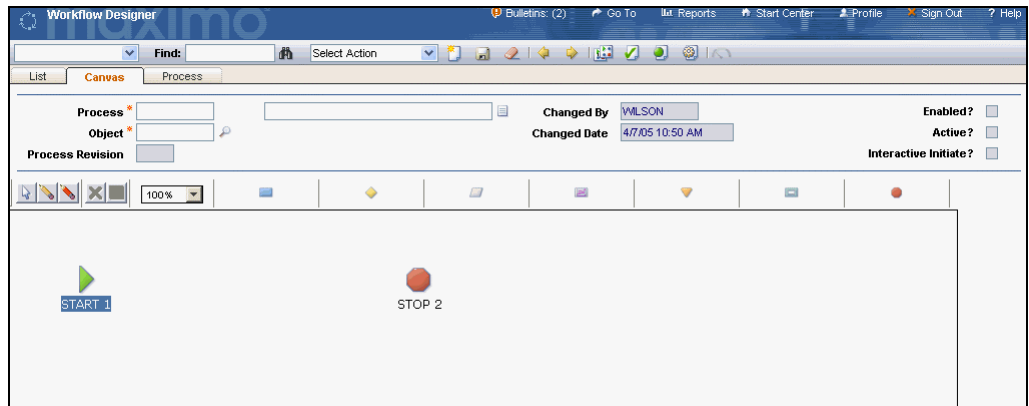
## Creating a Workflow Process

### Introduction

Use Workflow Designer to create or modify workflow processes.

### Create the Process

When you insert a new Workflow process record into Maximo, the flow automatically includes one *Start* and one *Stop* node, similar to the graphic below.



In between these nodes, you must add nodes to the Workflow process to reflect the required work on the selected record type.

You will use positive and negative connections to determine the order in which work will be performed on the record traveling through the Workflow process.

Note: Connection lines also provide the ability to carry out actions defined in the Actions application.



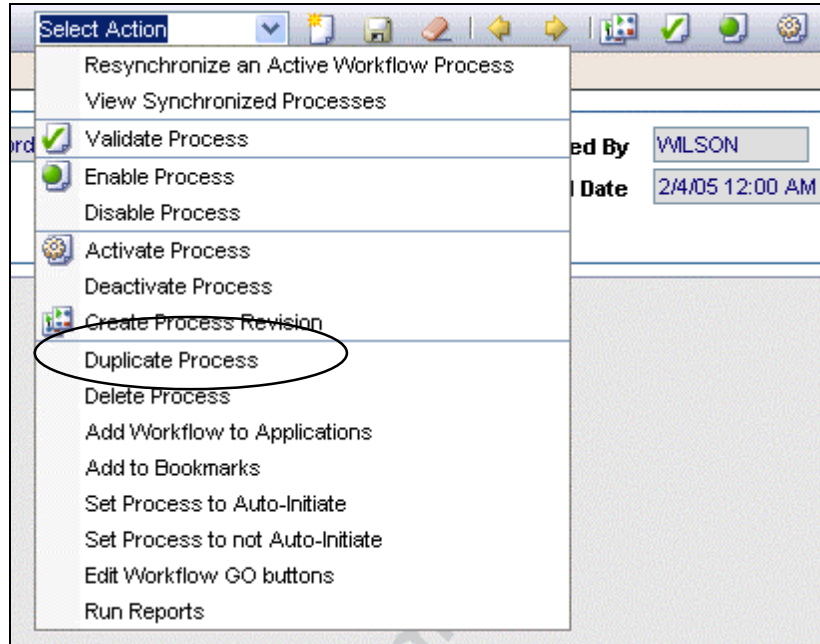
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## Creating a Workflow Process continued

### Process Duplication

One of the ways that you can use an existing process to create a new process is by *duplication*.

You duplicate a process by selecting the desired original process in Workflow Designer, then choosing **Duplicate Process** from the Select Action menu.



A new process record that matches the original is created. You can enter a new process name and make changes as needed.

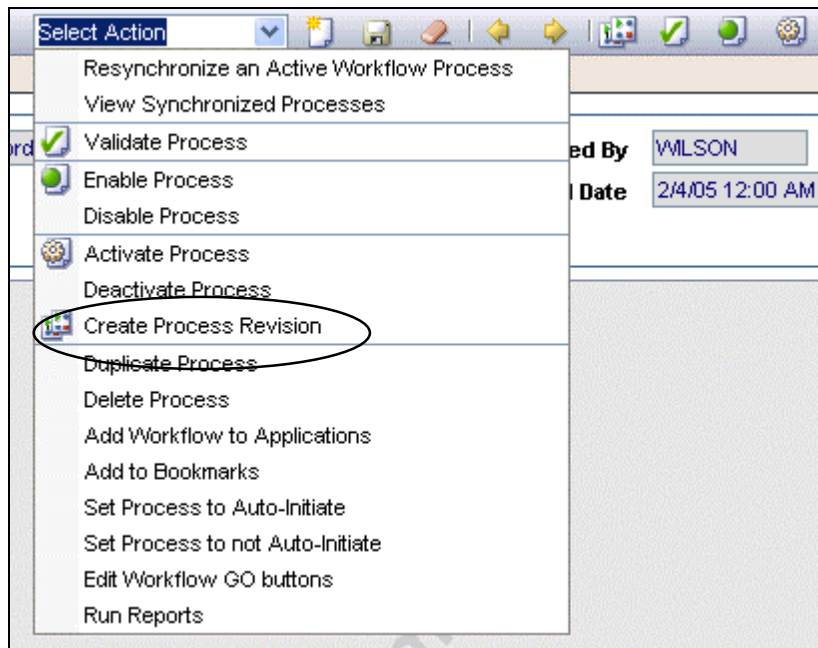
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## Creating a Workflow Process continued

### Process Revisions

You can also revise existing processes by choosing **Create Process Revision** from the Select Action menu in Workflow Designer.



You can also create revisions by selecting the desired process, then clicking the **Create Process Revision** button on the toolbar.



When a process revision is created, the number in the **Process Revision** field of the process is incremented.

A screenshot of the process configuration form. The form has three main fields: 'Process' with the value 'RFQSTATUS', 'Object' with the value 'RFQ', and 'Process Revision' with the value '2'. The 'Process Revision' field is highlighted with a red oval. To the right of the 'Process' field is a dropdown menu showing 'RFQ Sample Process'.

Note: When the current revision is activated, the previous revision is deactivated but not disabled.

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## Creating a Workflow Process continued

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### Design Considerations

Workflow processes are at the system level and *apply globally to all organizations and sites in the database.*

If you require special handling of records based on organization and site, apply the appropriate business logic to process designs to accommodate any conditional branching that might need to occur.

---

### Process Objects

The following information is related to Workflow processes and Maximo Business Objects (object):

- All processes *must* be associated with an object.
- All objects can have processes created against them.
- Objects can have more than one process running against them at any one time.
- Through Workflow Designer there can be only one *auto-initiated* process running against an object at any time. However, escalations can be used to auto-initiate more than one process per object.
- The object association determines which applications and record types the process can support.
- Some related records, such as actions and roles, are also supported according to the object associated with the process.
- The object association also makes using the Expression Builder easier, because it will show you a list of the available applications, fields, and so forth.

Note: The *System Administration* for *MXES* course or the *MXES Core Consultant* course can provide further information on Maximo Business Objects.

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## Creating a Workflow Process continued

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### Node Naming

As you place new nodes on the canvas, Workflow creates a name that indicates the node type and assigns a number, similar to the graphic below.



Note: As you add nodes, the numbers in the node names will increment.

After adding nodes, you would change the naming property of each to more accurately reflect the purpose or function of the node.

---

### Guideline for Node Placement

Although some paper-based Workflow processes might look simple and easy to create in Workflow Designer, there are a few things to know about node placement:

- A Workflow process has only one *Start* node.
  - All nodes except the *Start* node must have at least one line entering them.
  - The Workflow process can have any number of *Stop* nodes.
  - *Manual Input* nodes cannot be first in a Workflow process.
  - A *Condition* node cannot be followed by a *Manual Input* node.
- 

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## Creating a Workflow Process continued

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### Guidelines for Connecting Nodes

Depending on their type, positive and negative connections are used to connect the nodes to one another.

Positive and negative connections determine the order in which work will be performed on the record traveling through the Workflow process.

Remember the following guidelines when you are connecting nodes to determine the flow of information:

- *Condition* nodes have one positive (+) connection AND one negative (–) connection to another node.
- *Task* nodes must have one positive (+) connection AND/OR one negative (–) connection to another node.
- *Subprocess* nodes must have one positive (+) connection AND one negative (–) connection to another node.
- *Manual Input* nodes have MULTIPLE positive (+) connections to determine the list of action choices for the assigned user. They *cannot* have a negative (–) connection.
- An *Interaction* node can have only one line exiting it. This line must be positive.

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### Deleting Nodes and Connections

You can delete nodes or connections from the canvas at any time.

Simply select what is to be deleted and press the **Delete** key on your keyboard.

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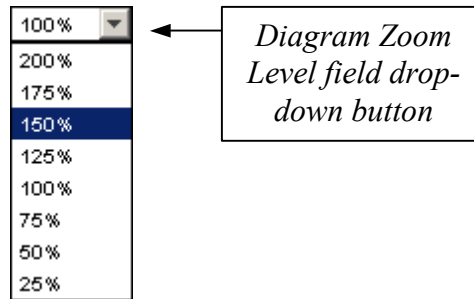
## Creating a Workflow Process continued

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### Increasing Viewable Space

If you run out of working space on the canvas while creating processes, use the **Diagram Zoom Level** field on the toolbar.

Click the drop-down button in the field to choose from the different canvas sizes.



Note: You can also use the scroll bars on the bottom and right side of the canvas to move to nodes that are not visible.

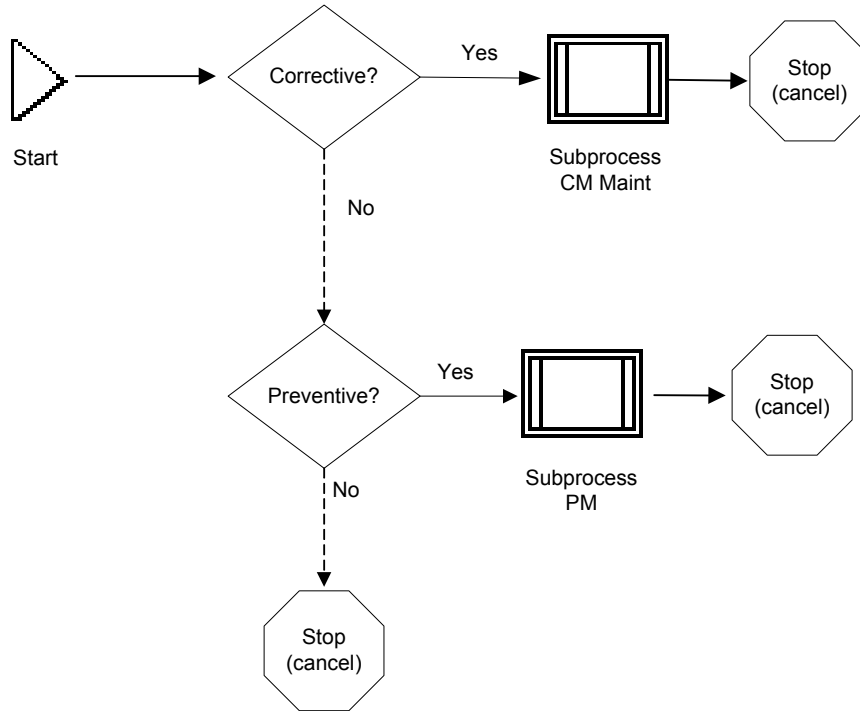
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### Creating a Workflow Process continued

#### Opus Paper-Based Workflow

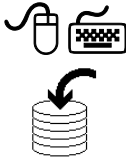
In Chapter 6, we completed a paper-based workflow diagram for Opus' main process for work orders. For the following exercises—1, 2, and 3—we will use this diagram to create a workflow.



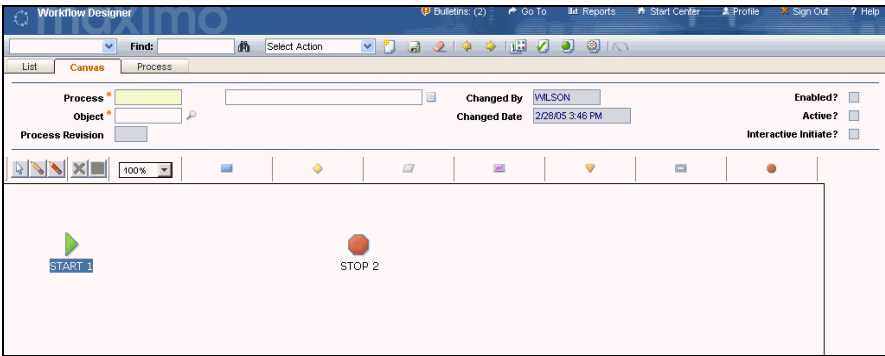
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## Creating a Workflow Process continued

### Exercise 1: Creating the Workflow Process



Follow the steps below to create a Workflow process using the Workflow Designer application.

Step	Action						
1	Sign in to Maximo as Mike Wilson (wilson / wilson) and access the <b>Workflow Designer</b> application.						
2	Insert a new Workflow process record. <u>Result:</u> A new record is added with a Start and Stop node, similar to this example. 						
3	Enter the following information: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b><u>Field</u></b></td> <td style="width: 50%;"><b><u>Value</u></b></td> </tr> <tr> <td><b>Process</b></td> <td>OPUSMAIN</td> </tr> <tr> <td><b>Description</b></td> <td>Main Flow for Work Orders</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Process</b>	OPUSMAIN	<b>Description</b>	Main Flow for Work Orders
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Process</b>	OPUSMAIN						
<b>Description</b>	Main Flow for Work Orders						

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## Creating a Workflow Process continued

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### Exercise 1: Creating the Workflow Process

continued

Step	Action
4	Indicate that the new process uses the <b>WORKORDER</b> object. <u>Note</u> : The designated object determines which table and which applications can be involved with this workflow.
5	<b>Save</b> the record. <u>Result</u> : The Process Revision field indicates that revision 1 of this process has been saved.

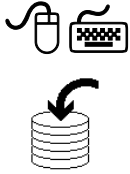
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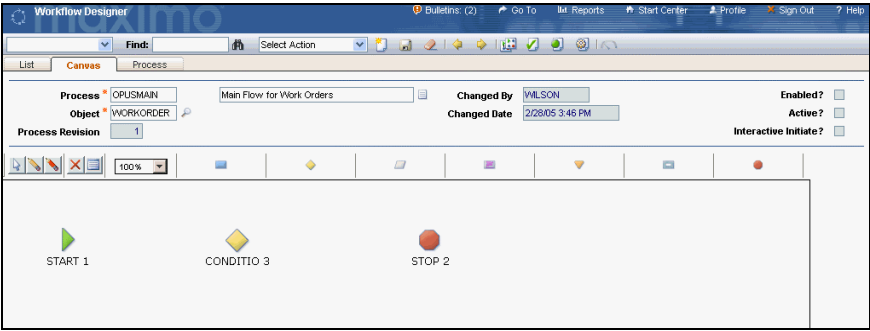


## Creating a Workflow Process continued

### Exercise 2: Adding Nodes



On the OPUSMAIN canvas, place two *Condition* nodes, a *Task* node, and two *Subprocess* nodes on the Workflow Designer canvas using the following steps.

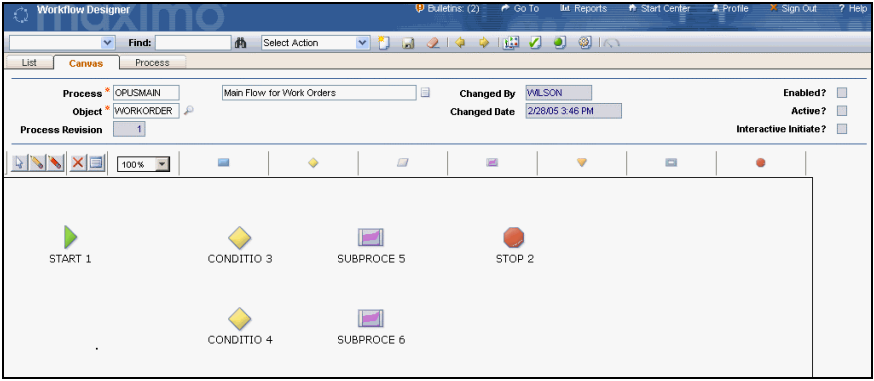
Step	Action
1	<p>On the Workflow Designer canvas, click and drag a <b>Condition</b> node to the canvas between the Start and Stop icons.</p> <p><u>Result:</u> Your canvas should look similar to the graphic below.</p> 
2	<p>Drag another Condition node onto the canvas under the first Condition node.</p>

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## Creating a Workflow Process continued

### Exercise 2: Adding Nodes

continued

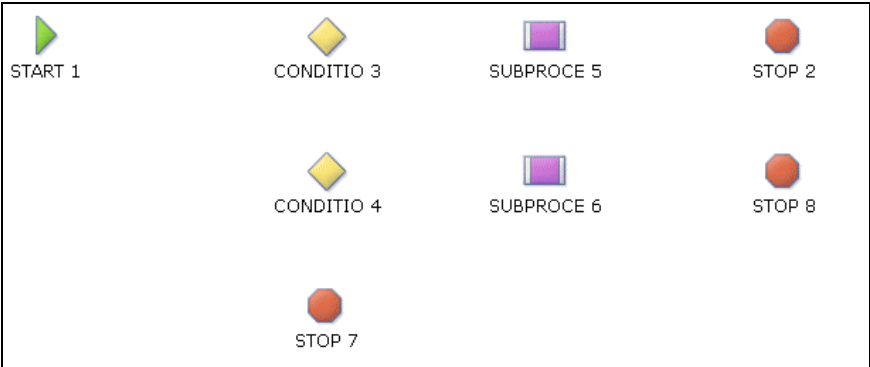
Step	Action
3	<p>Add two <b>Subprocess</b> nodes to the canvas to the right of the Condition nodes.</p> <p><u>Result:</u> Your canvas should look similar to the graphic below.</p>  <p>The screenshot shows the 'Workflow Designer' application window. The 'Canvas' tab is active, displaying a workflow diagram. The diagram includes a 'START 1' node (green triangle), two 'CONDITIO' nodes (yellow diamonds labeled 3 and 4), two 'SUBPROCE' nodes (purple rectangles labeled 5 and 6), and a 'STOP 2' node (red circle). The interface also shows a search bar, a toolbar, and a metadata section with fields for Process (OPUSMAIN), Object (WORKORDER), Process Revision (1), Changed By (WILSON), and Changed Date (2/28/05 3:46 PM).</p>

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## Creating a Workflow Process continued

### Exercise 2: Adding Nodes

continued

Step	Action
4	<p>Add two <b>Stop</b> nodes to the canvas: one underneath the second Condition node and one to the right of the second Subprocess node.</p> <p><u>Result:</u> Your canvas should look similar to the graphic below.</p> 
5	<p><b>Save</b> the process record.</p> <p><u>Note:</u> A Workflow process does not need to be complete for you to save it. It is good practice to save records during development.</p>

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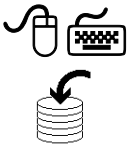
## Creating a Workflow Process continued

### Connecting Nodes




When you have added several nodes to the canvas, the next step is to connect the nodes.

Connecting the nodes determines the path that a record follows when you start the Workflow process.

### Exercise 3: Connecting Nodes



Use the following steps to connect two nodes.


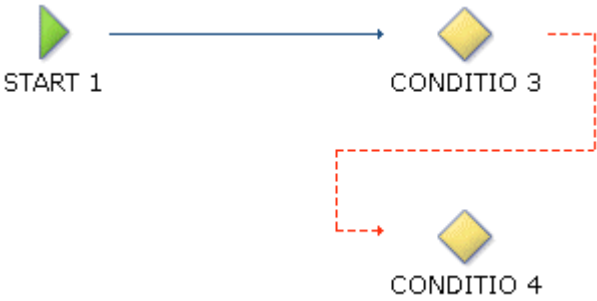
Step	Action
1	<p>On the <b>Canvas</b> tab, click the <b>Connect Nodes</b> button.</p> <div style="text-align: center;">  </div> <p><u>Result:</u> The cursor changes to a light-colored pencil, similar to the graphic below.</p> <div style="text-align: center;">  </div>
2	<p>Click and drag from the Start node to the Condition node on its right.</p> <p><u>Result:</u> A solid connection line should go from the Start node to the Condition node, similar to the graphic below.</p> <div style="text-align: center;">  </div>

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## Creating a Workflow Process continued

### Exercise 3: Connecting Nodes

continued

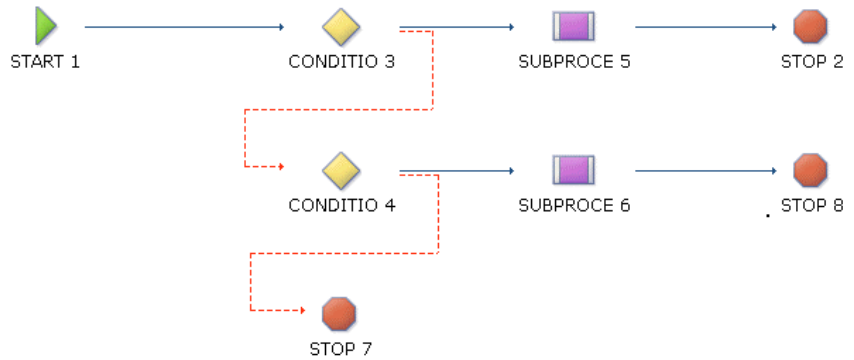
Step	Action
3	<p>On the <b>Canvas</b> tab, click the <b>Connect Nodes With a Negative Action</b> button.</p> <div style="text-align: center;">  </div> <p><u>Result:</u> The cursor changes to a dark-colored pencil</p>
4	<p>Click and drag from the first Condition node to the second Condition node.</p> <p><u>Result:</u> The two Condition nodes are connected with a dotted line, similar to the graphic below.</p> <div style="text-align: center;">  </div>

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## Creating a Workflow Process continued

### Exercise 3: Connecting Nodes

continued

Step	Action
5	<p>Use the map on page 7-10 to finish adding and connecting the nodes.  <u>Result:</u> Your canvas should look like the following graphic.</p> 
6	Save the Workflow process record.

### Note



This process and the others created throughout this chapter will be validated in Chapter 9: “Testing.”

Learning to validate your Workflow processes is crucial to successful implementation at your own company.

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## Creating a Workflow Process continued

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### Subprocesses

The *Subprocess* node allows you to streamline your process diagrams and makes it easier to maintain your Workflow processes.



For example, in a complex process you can create a subprocess that serves as a branch used only for a specific set of records.

---

### Negative Exits from Subprocesses



Note: Although your process will validate without one, it is a best practice for a Subprocess node in a calling process design *to have a negative line* as well as a positive line flowing out of it.

At run time, when the subprocess encounters a stop node and returns to the calling process, it continues along the same type of line that the subprocess finished on.

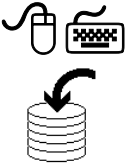
In this way, the branching logic that caused the termination of the subprocess to occur can be brought directly back to the calling process.

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## Creating a Workflow Process continued

### Opus: Exercise 1



In the Opus Workflow routine, if the work order is a Corrective Maintenance (CM) type work order, it will go into a Corrective Maintenance subprocess routine. Use the diagram below to complete the following tasks.

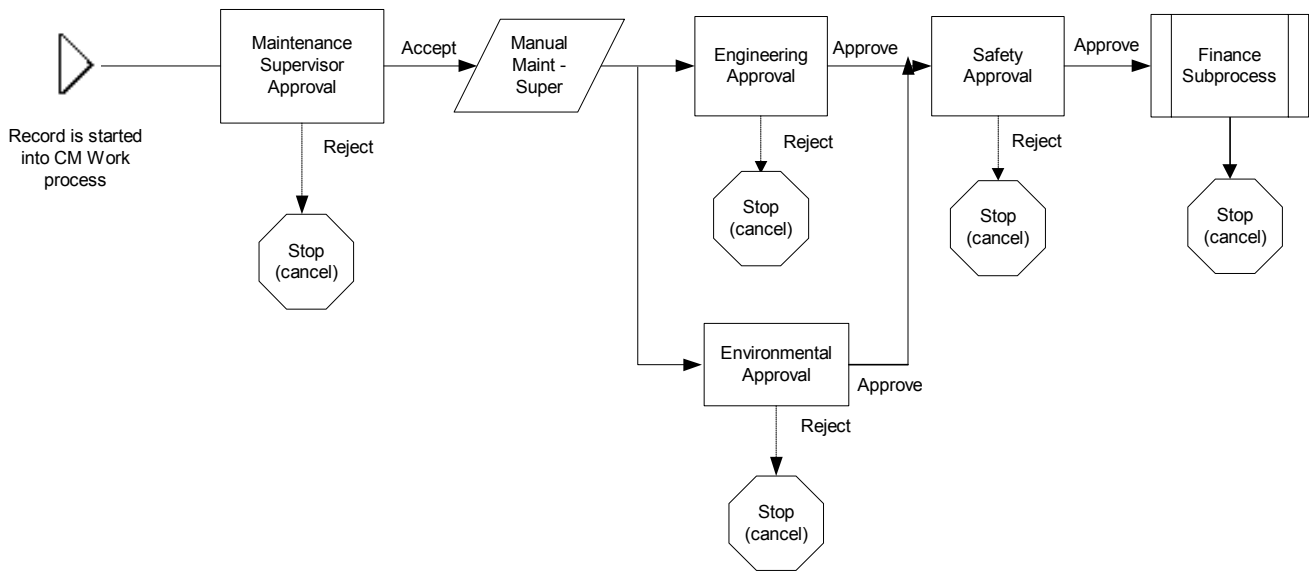
1. Create the process using the following information:

<b>Name</b>	OPCMMAIN
<b>Description</b>	Flow for CM Work Order Process
<b>Object</b>	WORKORDER

2. Add the required nodes.
3. Make the connections between nodes.
4. Save the Workflow process.



Note: Remember, on process creation a Start and Stop node will automatically be added to the canvas.

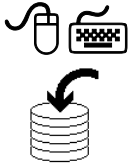


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## Creating a Workflow Process continued

### Opus: Exercise 2



In the Opus Workflow routine, if the work order is a Corrective Maintenance (CM) type work order and is given preliminary approval, it will go into a Financial Approval subprocess routine. Use the diagram below to complete the following tasks.

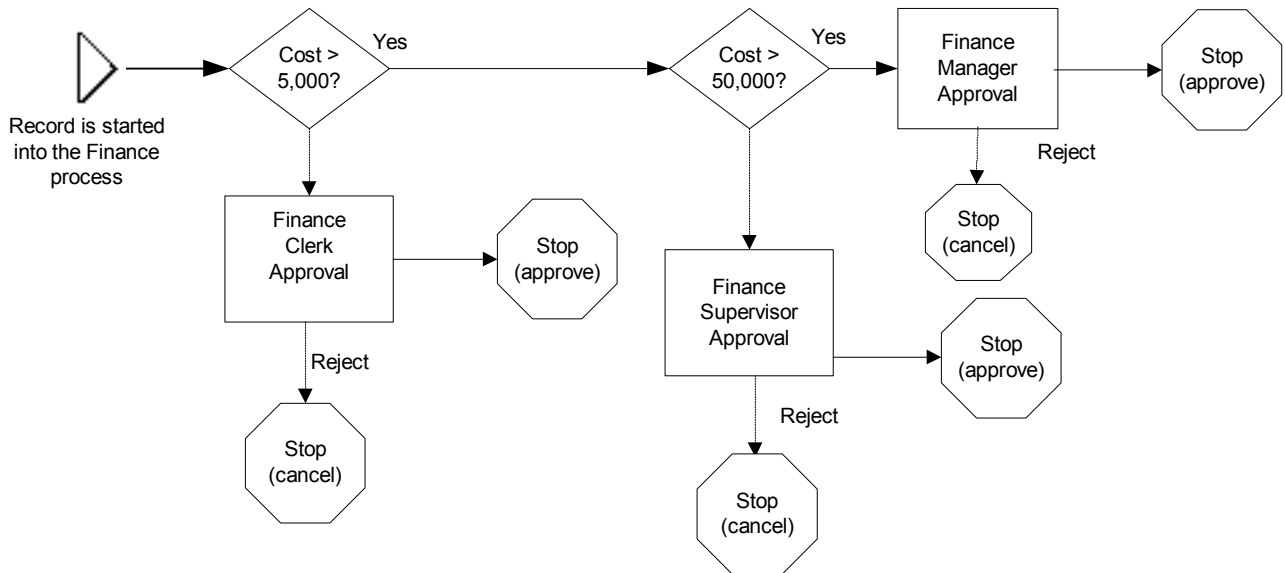
1. Create the process using the following information:

<b>Name</b>	OPFIN
<b>Description</b>	Flow for Financial Approval Process
<b>Object</b>	WORKORDER

2. Add the required nodes.
3. Make the connections between nodes.
4. Save the Workflow process.



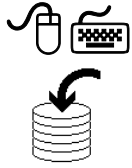
**Note:** Remember, on process creation a Start and Stop node will automatically be added to the canvas.



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## Creating a Workflow Process continued

### Opus: Exercise 3

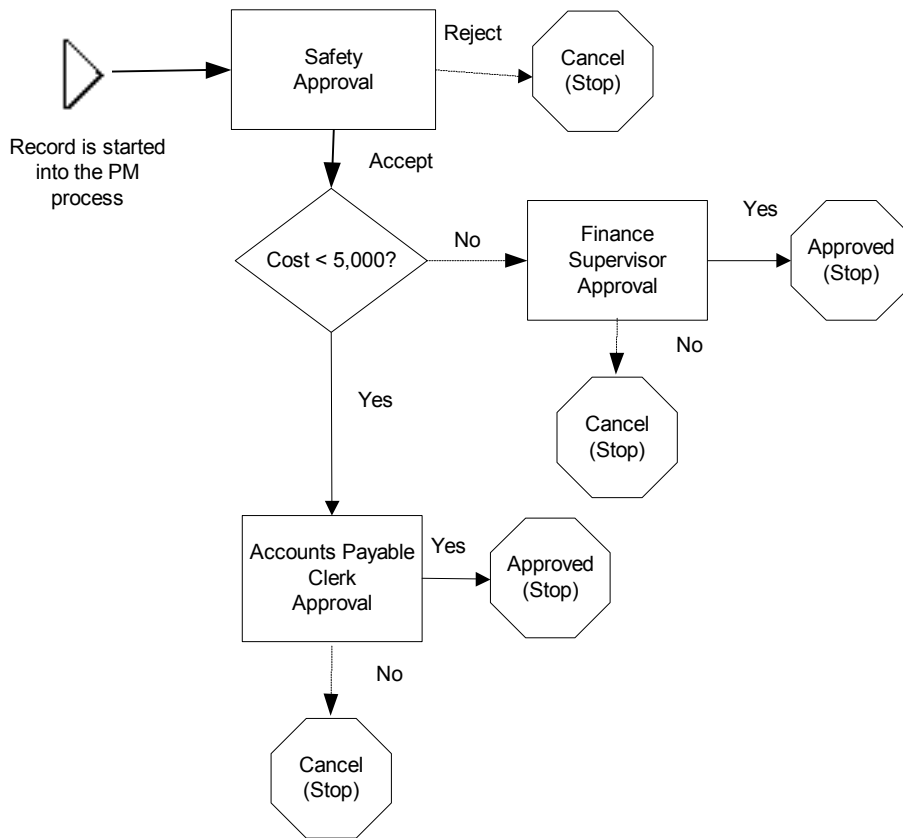


In the Opus Workflow routine, if the work order is not a Corrective Maintenance (CM) type work order and is a PM type, it will instead go into a PM subprocess. Using the diagram below to complete the following tasks.

1. The PM process is similar to the Financial process, so follow the instructions on page 7-4 to duplicate the Financial process and edit the duplicate process. Use the process properties below for this new Workflow process.

**Name** OPPMMAIN  
**Description** Flow for PM Work Order Process  
**Object** WORKORDER

2. When finished, your process should look like the one below. Save this process.

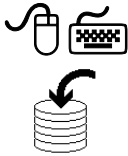


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## Creating a Workflow Process continued

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### Mass U: Exercise 1



The Mass U process will start out with a service request, then will create a work order from that service request. From the point of work order creation, the work order will be the record used in the process to plan and record work. Because a Workflow process can support only one type of record, you will need to create *two* processes.

Use the information and the diagram on the next page for node and connection placement in the processes.

Hint: The Work Order process will start at the *Office Staff: Basic Work Order Data Added* node.

#### Service Requests

<b>Process</b>	MASSUSR
<b>Description</b>	Mass U Service Requests
<b>Object</b>	SR

#### Work Orders

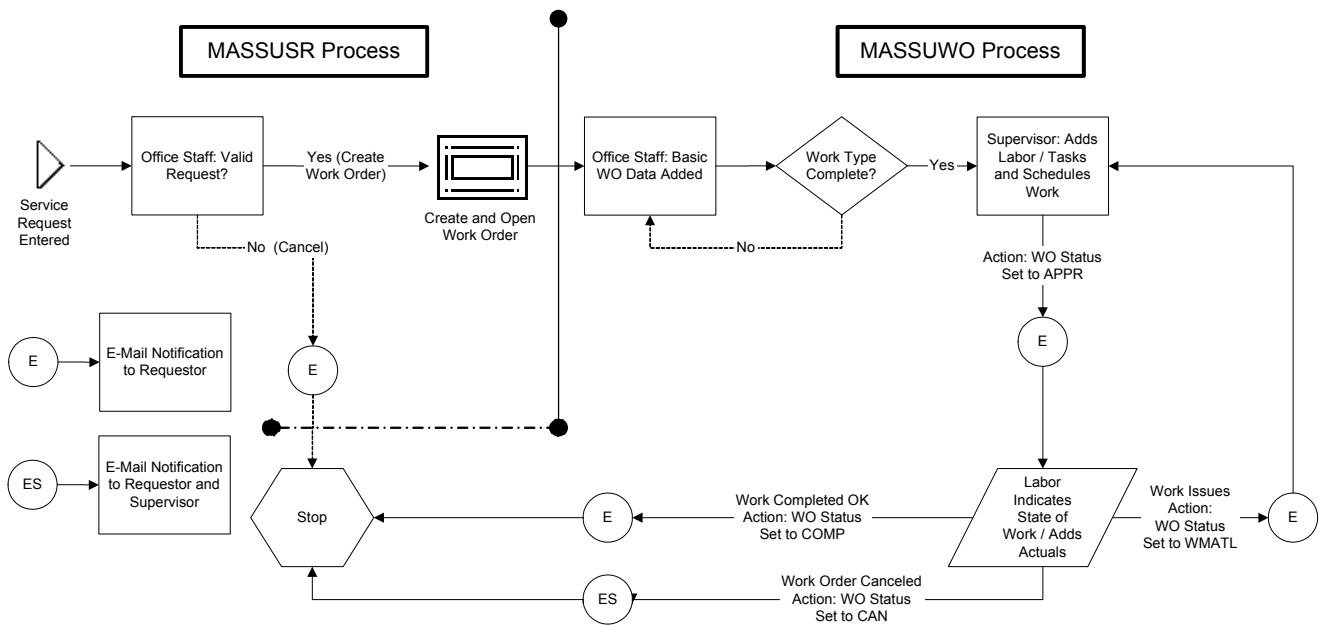
<b>Process</b>	MASSUWO
<b>Description</b>	Mass U Service Request Work Orders
<b>Object</b>	WORKORDER

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continued on next page

# Creating a Workflow Process continued

## Mass U: continued Exercise 1



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## Chapter Summary

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### Creating the Workflow

After Workflow processes are initially designed on paper and the system is configured, the next phase is to convert these Workflow processes into an electronic format using Workflow Designer.

---

### Process Duplication

One of the ways that you can use an existing process to create a new process is by *duplication*.

You duplicate a process by selecting the desired original process in Workflow Designer, then choosing **Duplicate Process** from the Select Action menu.

---

### Process Revisions

You can revise existing processes by choosing **Create Process Revision** from the Select Action menu in Workflow Designer.

You can also create revisions by selecting the desired process, then clicking the **Create Procession Revision** button on the toolbar.

When a process revision is created, the number in the **Process Revision** field of the process is incremented.

---

### Node Naming

As you place new nodes on the canvas, Workflow creates a name that indicates the node type and assigns a number.

As you add nodes, the numbers in the node names will increment.

After adding nodes, you would change the naming property of each to more accurately reflect the purpose or function of the node.

---

continued on next page

## Chapter Summary continued

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### Guidelines for Connecting Nodes

Remember the following guidelines when you are connecting nodes to determine the flow of information:

- *Condition* nodes have one positive (+) connection AND one negative (–) connection to another node.
  - *Task* nodes must have one positive (+) connection AND/OR one negative (–) connection to another node.
  - *Subprocess* nodes must have one positive (+) connection AND one negative (–) connection to another node.
  - *Manual Input* nodes have MULTIPLE positive (+) connections to determine the list of action choices for the assigned user. They *cannot* have a negative (–) connection.
- 

### Increase Viewable Space

If you run out of working space on the canvas while creating processes, use the **Zoom** field on the toolbar.

Click the drop-down button in the field to choose from the different canvas sizes.

You can also use the scroll bars on the bottom and right side of the canvas to move to nodes that are not visible.

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## Workshop

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### **Opus Case Scenario: Emergency Work Order Workflow Routine**

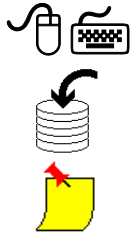
After they do some analysis and gain a better understanding of Maximo Workflow, Opus has further defined their emergency work order Workflow process. They have decided to use negative logic in their Workflow routine.

- Initially, a work order record is entered into the system as an EM work type. The condition check is to test that the work order type is *not* EM work.
  - If it is not an EM work type, it goes out on the positive connection and the work order stops its Workflow routine.
  - If it is an EM type work order, it then follows the negative connection and goes to the supervisor, who has 5 minutes to validate that it is EM work.
  - If it is not EM work, then the supervisor chooses the Work Type to Corrective Maintenance (CM) action and the work order stops its Workflow routine.
  - If it is EM work, it is sent to the maintenance department. A technician from the maintenance department is then dispatched to do the work.
  - If the technician finds that the work is not emergency work, she or he chooses the work type to be changed to the CM action and the work order stops its Workflow routine.
  - If the technician finds that the work is emergency work, she or he then chooses the work order in progress action (WO INPRG) and the work order stops its Workflow routine.
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### Workshop continued

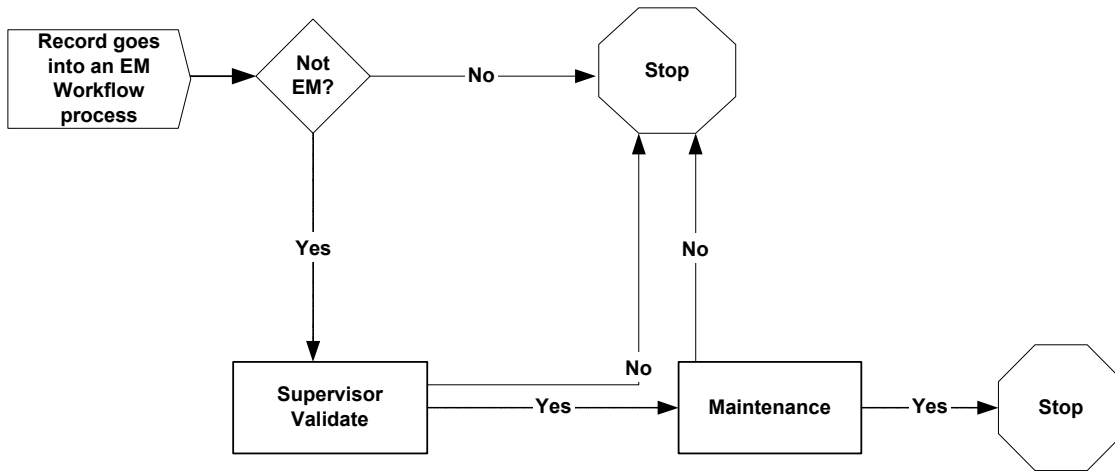
#### Workshop: Exercise 1



Use the diagram below for node and connection placement and the following information to create an emergency work process for this Workflow routine.

**Name** EMWORK  
**Description** Process for Emergency Work  
**Object** WORKORDER

Note: Remember, on process creation a Start and Stop node will automatically be added to the canvas.

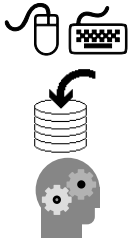


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## Workshop continued

### Workshop: Exercise 2



#### Scenario:

Shop people enter requisitions directly into the Maximo Purchase Requisitions application.

- All requisitions up to \$250.00 are to be approved automatically.
- PRs greater than \$250.00 up to \$2000.00 are to go to a team leader for approval. The team leader can approve, cancel, or send it back to the requestor for revision.
- PRs of greater than \$2000.00 need the approval of the team leader's manager. The manager can approve, cancel, or send it back to the requestor for revision.

Use the diagram below for node and connection placement, and the following information to create a process for this Workflow routine:

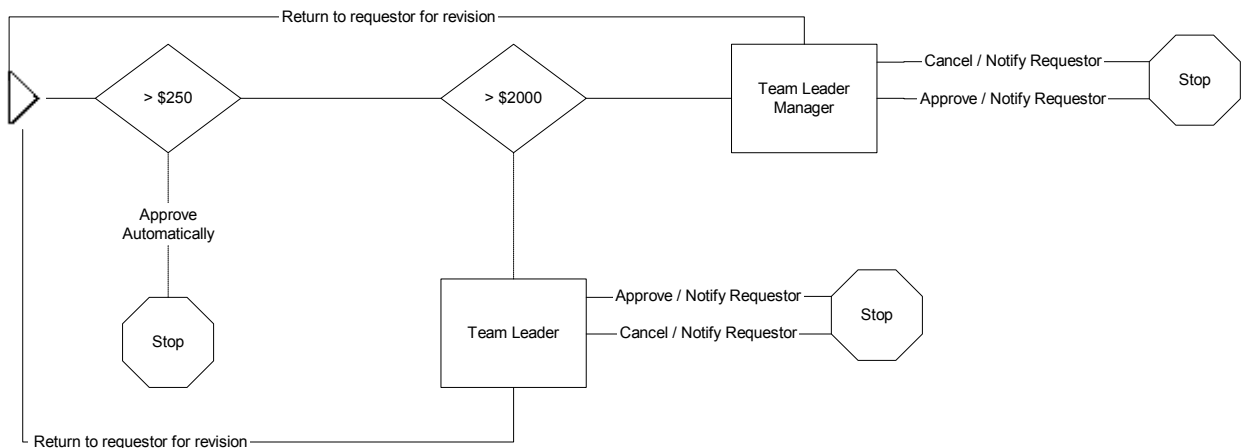
<b>Name</b>	PURCHREQ
<b>Description</b>	Flow for Purchase Requisitions
<b>Object</b>	PR

Thinking about the guidelines for nodes and their connections on the canvas, how will this diagram be revised when created in the Workflow Designer?

Try to revise this process on the Canvas tab so that the nodes connect to one another. Don't configure the nodes, just lay them out and connect them.



Note: Don't worry if your workflow layout differs somewhat from the one found in the Answer Key.



**NOTES:**

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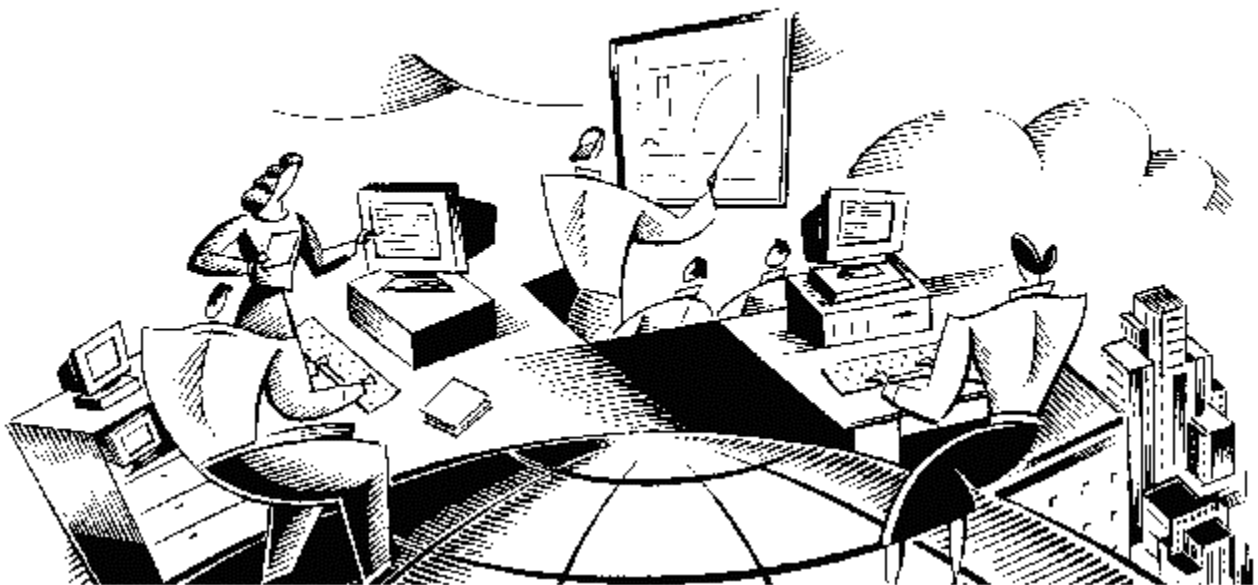
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# Workflow Management Using MXES

## Chapter 8: Node Configuration



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	8-1
Node Configuration Overview	8-3
Configuring Condition Nodes	8-13
Configuring Connector/Action Lines	8-21
Using Conditions and Actions Together	8-24
Configuring Subprocess Nodes	8-42
Configuring Task Nodes	8-46
Configuring Manual Input Nodes	8-84
Configuring Interaction Nodes	8-90
Configuring Wait Nodes	8-92
Chapter Summary	8-93
Workshop	8-95

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## Chapter Overview

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### Introduction

Each Workflow process consists of nodes and directional connections. Each node has *properties* that you use to customize the node to match your requirements. The directional connections are actually *actions* that have their own properties.

In this chapter we will take a detailed look at each node type and the action lines and their properties.

---

### Learning Objectives

When you have completed this chapter, you should be able to:

- configure actions for a Task node,
  - define an *expression* for a Condition node that tests a database value,
  - configure a Manual Input node,
  - define the Workflow process that will be used by a Subprocess node, and
  - create *custom roles and actions*.
- 

### Chapter Prerequisites

To complete the exercises in this chapter, you must have completed the exercises and workshop in Chapter 7: “Create.”

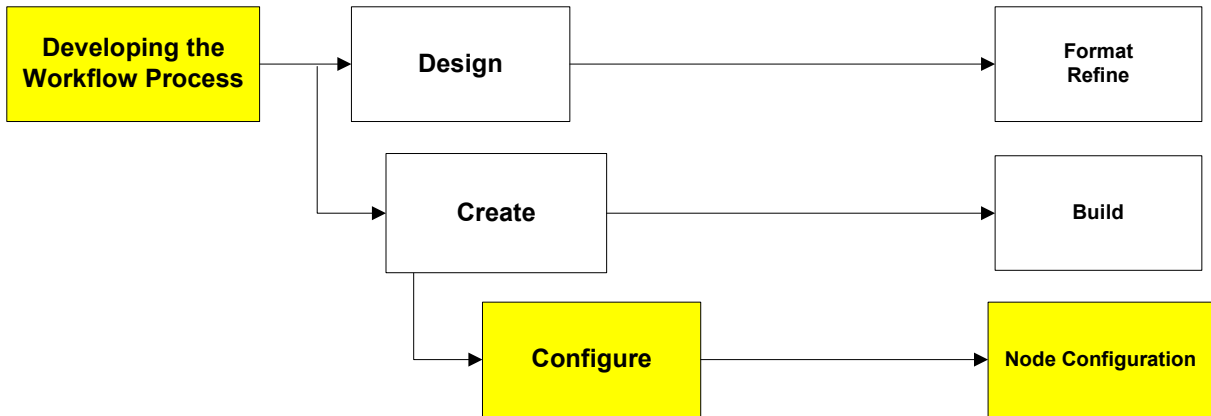
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## Chapter Overview continued

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**We Are Here**      The areas that we will be covering in this chapter are highlighted below:



## Node Configuration Overview

---

### Introduction

Each node and connection action in a Workflow process must be configured individually.

The type of information contained in the properties of each will vary, depending on the canvas component that you have selected.

Use the Properties dialog box to define node behavior.

---

### Activity Examples

The following table provides examples of the activities you might perform for the Configure task.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Configure</i>	Node Configuration	Configure the parameters, conditions, and actions for each Node and action line




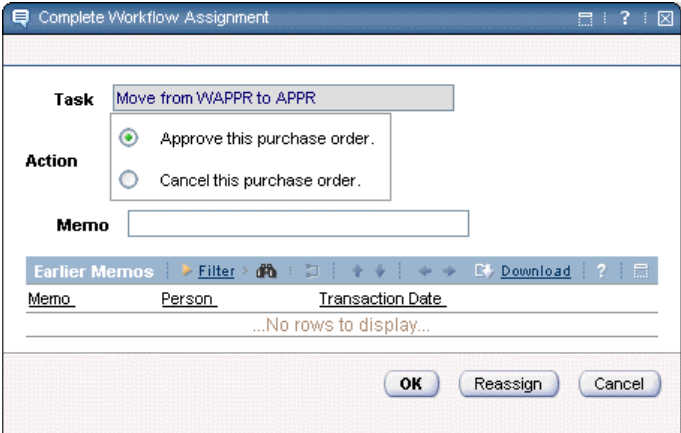
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## Node Configuration Overview continued

### Review: Node Description

The following table reviews the node descriptions.


Tool Image	Description	When processing the assignment, the user sees...
	<p>The <b>Start</b> node indicates the beginning of a Workflow process.</p> <p>Workflow places one Start node on the canvas when you create a new process. There can be only one starting point to any process.</p>	<p>Not applicable. Start nodes work behind the scenes with no user interaction.</p>
	<p><b>Stop</b> nodes mark the point where a Workflow process ends and a record leaves Workflow control. Workflow places one Stop node on the canvas when you create a new process. You can place additional Stop nodes on the canvas as needed.</p>	<p>Not applicable. Stop nodes work behind the scenes with no user interaction.</p>
	<p><b>Task</b> nodes allow you to direct the path of the record. You must have at least one connection coming out of a Task node. You use a Task node when your business rules call for an affirmative or negative user response to an Inbox assignment.</p>	<div>  </div> <p><u>Note:</u> Tasks can be configured to have up to two choices.</p>

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## Node Configuration Overview continued


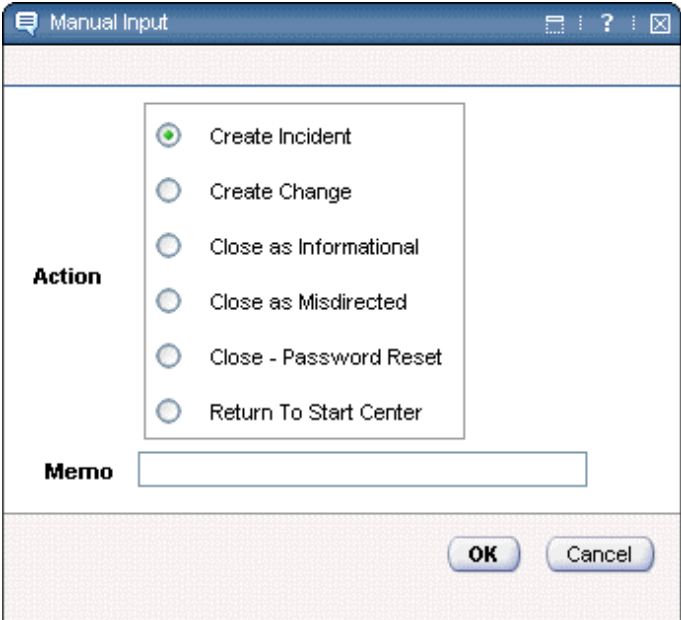
**Review: Node Description** continued

Tool Image	Description	When processing the assignment, the user sees...
	<p><b>Condition</b> nodes are defined to automatically direct records according to information contained in the record. There must be one positive connection and one negative connection coming out of a Condition node. The connection used by a record as it exits a Condition node is dictated by the SQL expression within the node, which resolves to either true (positive connection) or false (negative connection).</p>	<p>Not applicable. The system processes Condition nodes behind the scenes with no user interaction.</p>

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## Node Configuration Overview continued



**Review: Node Description** continued

Tool Image	Description	When processing the assignment, the user sees...
	<p><b>Manual Input</b> nodes allow you to direct the path of a record. Use a Manual Input node when you want the user to select the next step from a menu.</p>	 <p><u>Note:</u> The available choices depend on the configuration of the Manual Input node. Each choice leads to a positive connection action node.</p>

continued on next page

## Node Configuration Overview continued


**Review: Node Description** continued

Tool Image	Description	When processing the assignment, the user sees...
	<p>A <b>Subprocess</b> node represents a complete Workflow process nested within another Workflow process. A Subprocess can have a negative line flowing out of it, in addition to the positive. When a Subprocess encounters a Stop node it returns to the master process along the same line on which it finished. This enables the Subprocess to carry back the logic that caused the termination to the master process.</p>	<p>Not applicable. The system processes Subprocess nodes behind the scenes with no user interaction.</p>
	<p>An <b>Interaction</b> node must have one or more action lines entering it, but only one action line can exit. You use an Interaction node to help lead an end user down particular problem resolution paths by offering well-defined choices, which guide the user through a scripted path and manage the relationship with the record in any given session. A Manual Input node usually precedes the Interaction node.</p>	<p>The results of an Interaction node depend on the configuration.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> <li>• Interaction nodes can be used to bring a user to a specific record within the application to allow the user to make changes or otherwise process the record.</li> <li>• Interaction nodes can be used to enact a specific application action with no user intervention.</li> </ul>

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## Node Configuration Overview continued

**Review: Node Description** continued

Tool Image	Description	When processing the assignment, the user sees...
	<p>You use a <b>Wait</b> node to create a certain reaction to an action. You can define any action to trigger a specified reaction in a Wait node. When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the specified events occur. When the specified event does occur, it informs the node and the process resumes by exiting the node at the single exit point.</p>	<p>Not applicable. The system processes Wait nodes behind the scenes with no user interaction.</p>

### Viewing Properties

You can view properties for nodes and lines in four ways:

- Right-click the node/line on the canvas and select **Properties** from the resulting drop-down list.



- Double-click the node/line on the canvas.
- Click the node/line on the canvas and click the **Properties** button.



- Click the **Properties** button on the desired node listed on the Process tab.

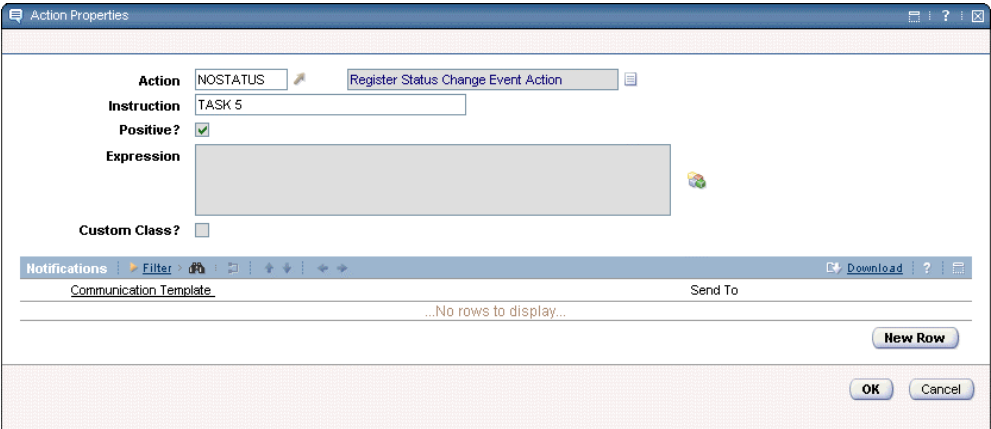

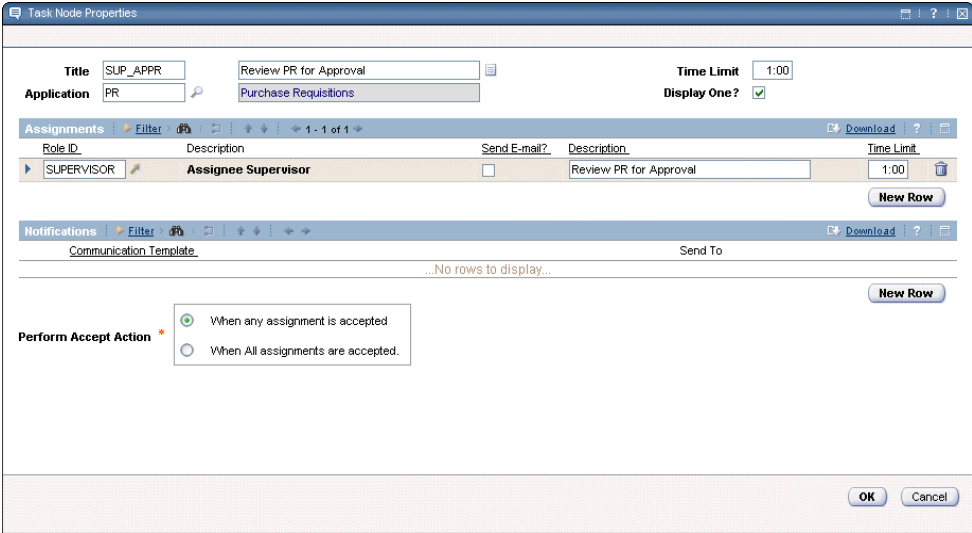


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## Node Configuration Overview continued

### Node Properties


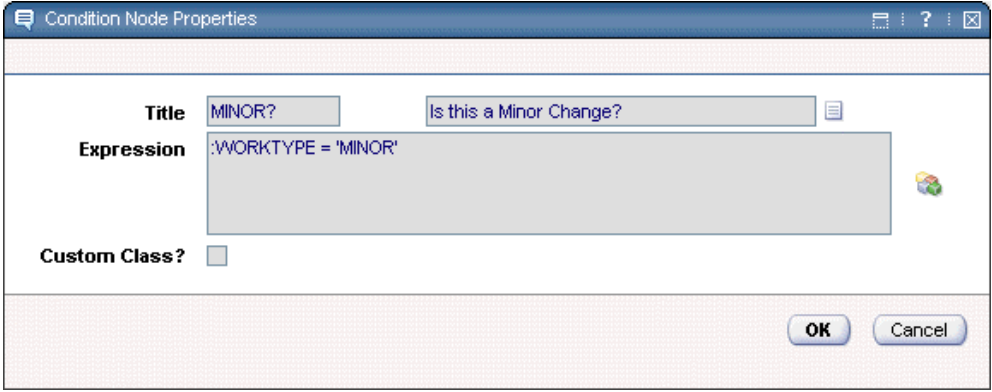

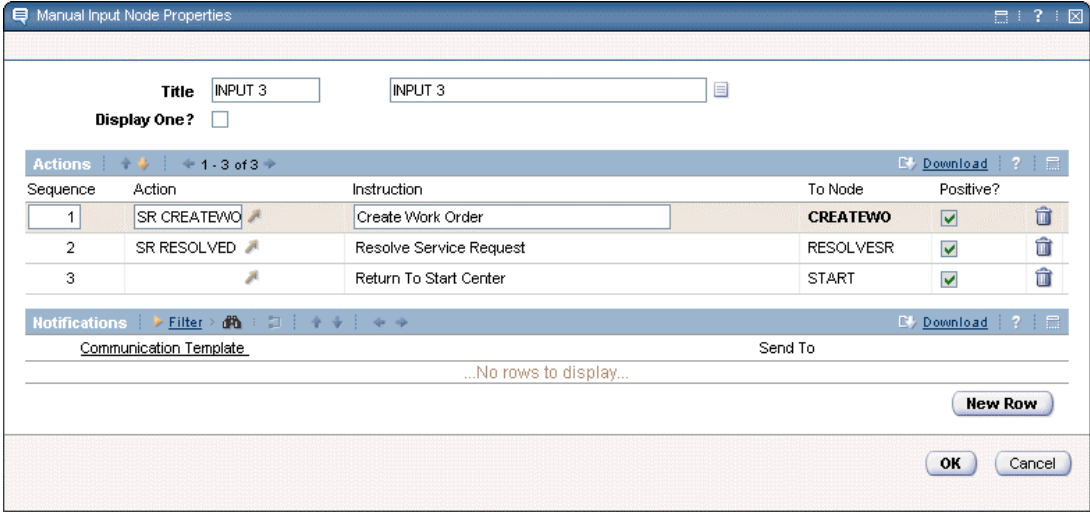
All nodes, except for the Start and Stop nodes, have properties. These properties are set in the corresponding Properties dialog boxes of the nodes. All connecting action lines have properties in which you can set the actions that occur when the process moves along the line. The following table shows you what the Properties dialog boxes look like.

Tool Image	Properties
<p>_____</p> <p>-----</p>	<p>The <b>Connection/Action</b> lines have a Properties dialog box that looks similar to the graphic below.</p> 
	<p><b>Task</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 

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## Node Configuration Overview continued


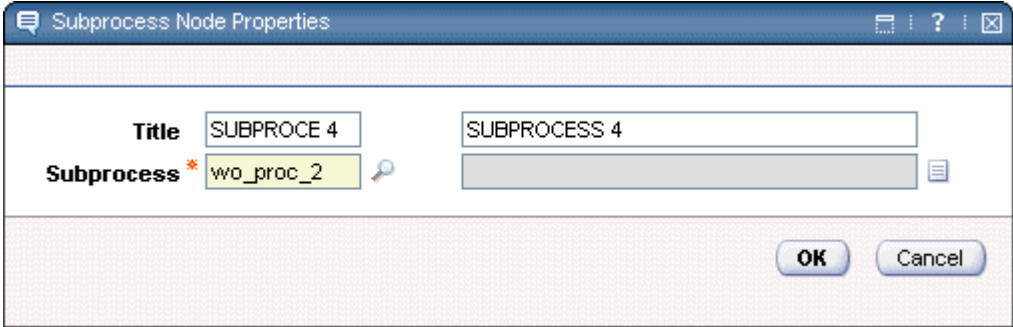

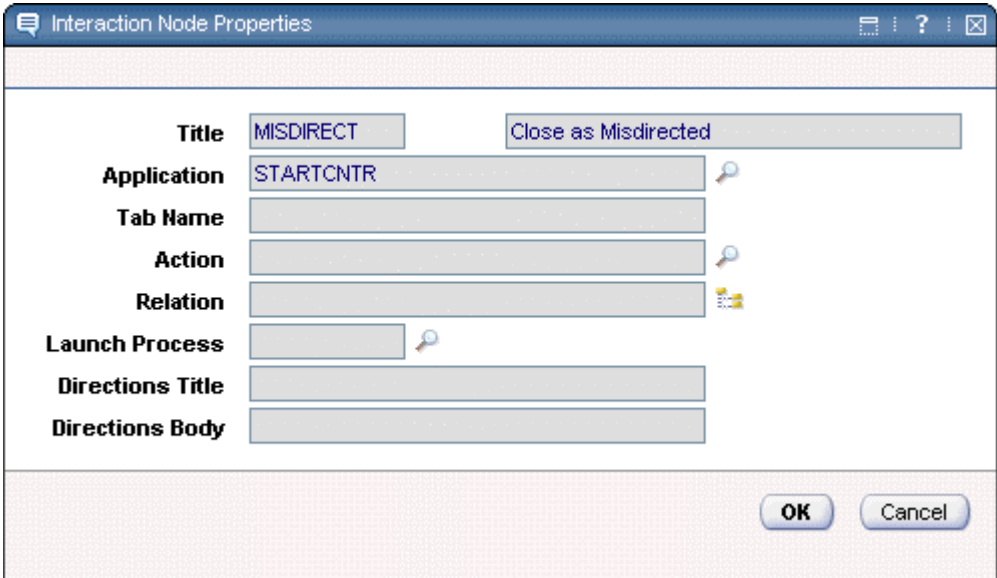
### Node Properties continued

Tool Image	Properties
	<p><b>Condition</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 
	<p><b>Manual Input</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 

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## Node Configuration Overview continued


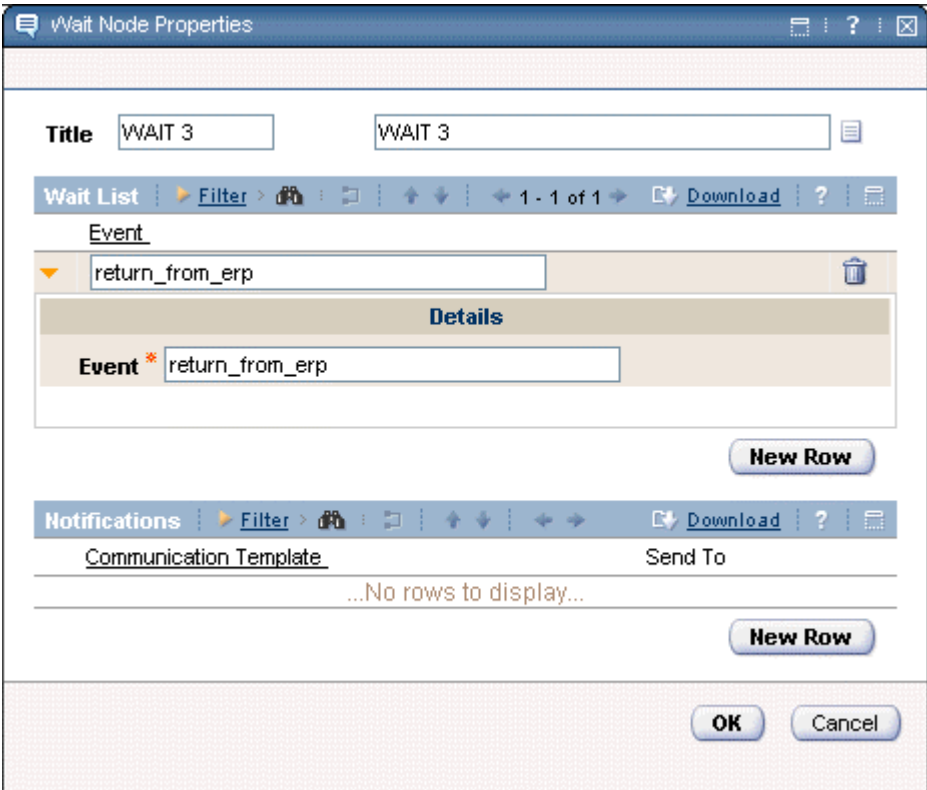
### Node Properties continued

Tool Image	Properties
	<p><b>Subprocess</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 
	<p><b>Interaction</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 

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## Node Configuration Overview continued

### Node Properties continued

Tool Image	Properties
	<p><b>Wait</b> nodes have a Properties dialog box that looks similar to the graphic below.</p> 

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## Configuring Condition Nodes

---

### Introduction

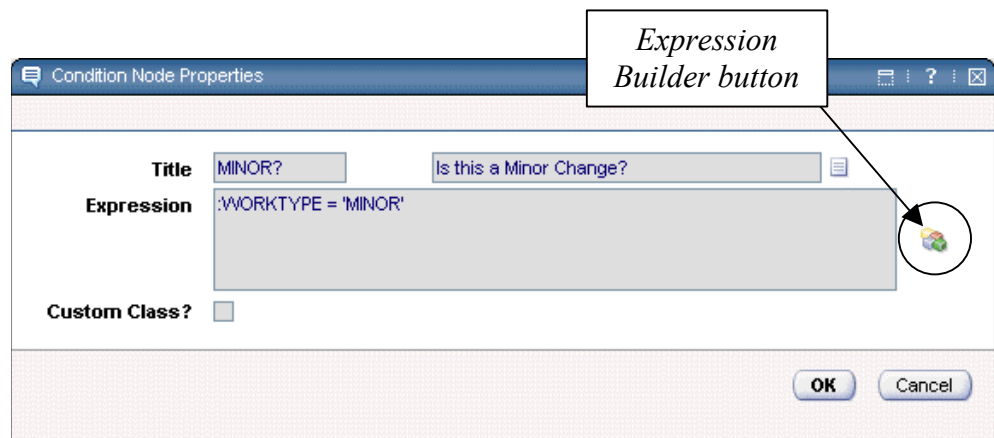
You include Condition nodes in your process when you want the next step in the process to be determined based on a data value.



### Condition Elements

The Condition node consists of the following elements:

- **title** and description;
- an SQL **Expression** that tests a value in the database;
- an **Expression Builder** that can help you build SQL expressions, if desired; and
- an indicator of whether a **Custom Class** is being used for the test.



Note: Positive and negative connector lines are used to indicate the direction followed by the process after evaluating the expression.

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## Configuring Condition Nodes continued

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### WHERE Clause



Note: When writing the “where clause” to be used in a Condition node, or as a conditional assignment, be very careful to capture the fact that the condition being tested *might* be testing a 'NULL' value in the database, especially in the case of a *negative logic* type of condition where you want to use the negative exit as an indication that the condition was met.

For example, in the case of `":siteid <> 'BEDFORD'"` this would cause all but the Bedford site to exit on the node on the positive connection. In Maximo, of course, you should never see a 'NULL' value for a siteid.

However, consider this case: `":worktype <> 'MI'"` MI is being used to determine that this is a Mission Type work order, but if the work order that was created did not have a specified work type, that is, worktype is 'null', it would also exit on the negative condition.

Because Maximo cannot resolve the “where clause” as true, it must therefore be *False*. The record would inappropriately be processed on the 'MI' portion of the Workflow.

To correct this, capture the information in your Condition nodes by adding the following statement(s) as appropriate to what you are trying to accomplish. `":worktype <> 'MI' and :worktype is not null"`.

Additional checking can be performed to be more specific in a Multisite scenario by fully qualifying everything in the Condition node as follows: `":worktype <> 'MI' and :worktype is not null and :siteid = [ siteid ]"`.

---

### SQL



The condition clause is based on SQL but allows substitution variables. This means that it substitutes the column information from the current record's application for the variable. It allows variables to be tested against the current record's field values as well.

Note: Although the Expression Builder helps make the process easier, it is assumed that the person designing the conditions is proficient in SQL and in Maximo data relationships.

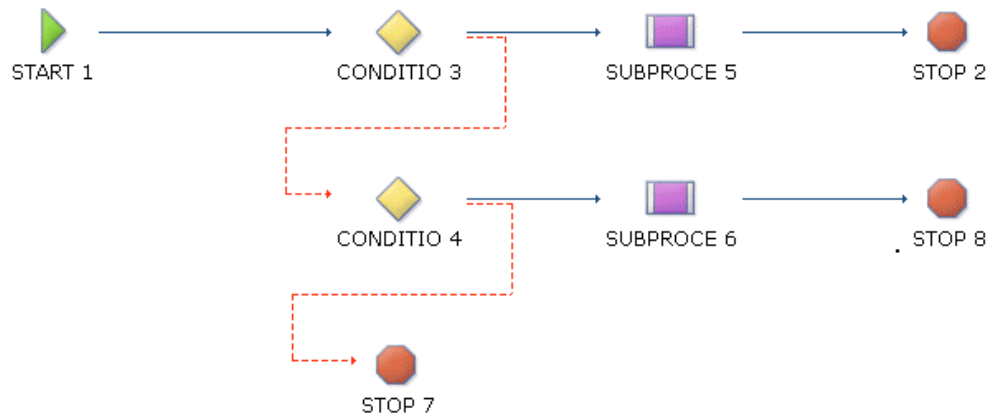
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### Configuring Condition Nodes continued

**OPUS:  
OPUSMAIN**

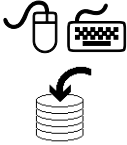
Use this diagram in this section to complete the following exercises for the OPUSMAIN process.



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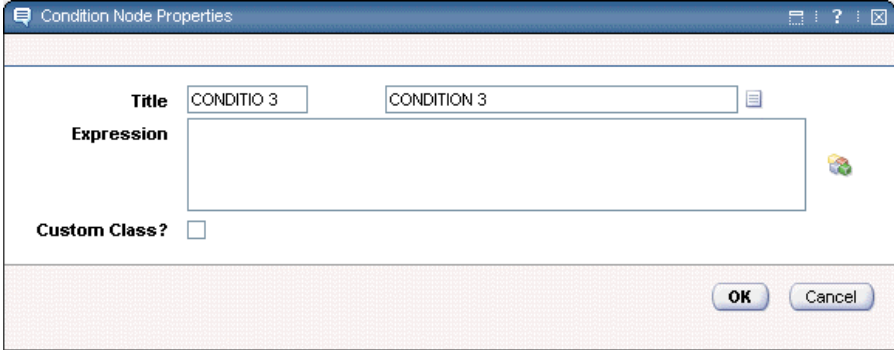
## Configuring Condition Nodes continued

### OPUSMAIN: Defining the Condition Node



The expression that you define for your Condition nodes can be very complex, depending on your requirements.

Use the following steps to configure an expression that tests the work order type to determine the approval path for the work order.


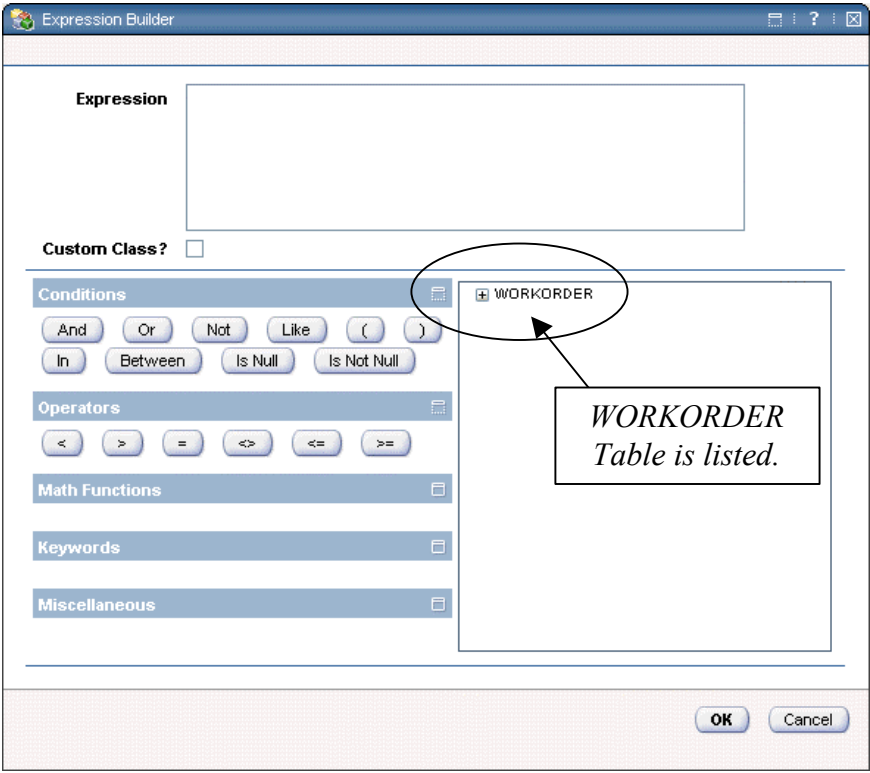
Step	Action						
1	<p>Display the properties of the first <b>Condition</b> node in the OPUSMAIN process.</p> <p><u>Result:</u> The Condition Node Properties dialog box opens.</p> 						
2	<p>Complete the following fields to give the node a label and description:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Title</b></td> <td>WOTYPECM</td> </tr> <tr> <td><b>Description</b></td> <td>Work Order type is Corrective Maintenance?</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Title</b>	WOTYPECM	<b>Description</b>	Work Order type is Corrective Maintenance?
<u>Field</u>	<u>Value</u>						
<b>Title</b>	WOTYPECM						
<b>Description</b>	Work Order type is Corrective Maintenance?						

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## Configuring Condition Nodes continued

**OPUSMAIN:  
Defining the  
Condition Node**

continued

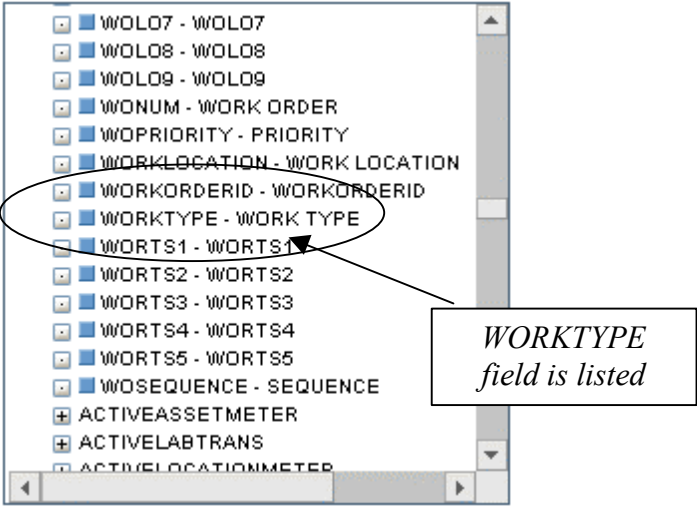

Step	Action
3	<p>We want to build the Expression with the Expression Builder, so click the <b>Expression Builder</b> icon to open it.</p>  <p><u>Result:</u> The Expression Builder window opens.</p>  <p><u>Note:</u> The WORKORDER table is available in this dialog box because the WORKORDER object is associated with this process.</p>

continued on next page

## Configuring Condition Nodes continued

**OPUSMAIN:  
Defining the  
Condition Node**

continued

Step	Action
4	<p>Drill down in the WORKORDER table by clicking the “+” and find the <b>WORKTYPE</b> field.</p> 
5	<p>Click to select the blue button to the left of the <b>WORKTYPE</b> field. <u>Result:</u> The <b>WORKTYPE</b> field is displayed in the Expression field using proper SQL formatting.</p> 

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## Configuring Condition Nodes continued

**OPUSMAIN:  
Defining the  
Condition Node**

continued

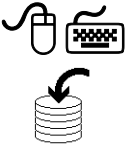
Step	Action
6	<p>Click the “=” button, then type in a space and ‘CM’.</p> <p><u>Note:</u> Oracle requires you to enter single quotes around text strings in expressions. If you are using a different database, the syntax might be different.</p> <p><u>Result:</u> The Expression field contains the full statement, as shown below.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Expression</b> :WORKTYPE = 'CM'</p> </div> <p><u>Note:</u> You can directly enter SQL statements into the Expression field, if you want.</p>
7	<p>Click <b>OK</b> in the <b>Expression Builder</b>.</p> <p><u>Result:</u> The Expression Builder closes and the Condition Node Properties reflect the new properties.</p> <div style="border: 1px solid gray; padding: 5px;"> <p>Condition Node Properties</p> <p><b>Title</b> WOTYPECM Work Order type is Corrective is Corrective Ma</p> <p><b>Expression</b> :WORKTYPE = 'CM'</p> <p><b>Custom Class?</b> <input type="checkbox"/></p> <p style="text-align: right;"><b>OK</b> <b>Cancel</b></p> </div>
8	<p>Click <b>OK</b> in the <b>Condition Nodes Properties</b> dialog box.</p> <p><u>Result:</u> The dialog box closes and the new properties are added to the process.</p>
9	<p><b>Save</b> the process.</p>

continued on next page

## Configuring Condition Nodes continued

---

**OPUSMAIN:  
Define the  
Second  
Condition Node**



Practice configuring a Condition node by defining the following information for the second Condition node in the OPUSMAIN process:

1. Name the second Condition node WOTYPEPM.
2. Configure the Condition to test if the Work Order Type is PM (Preventive Maintenance).

Note: Be sure to save your process after completing this exercise.

---



## Configuring Connector/Action Lines

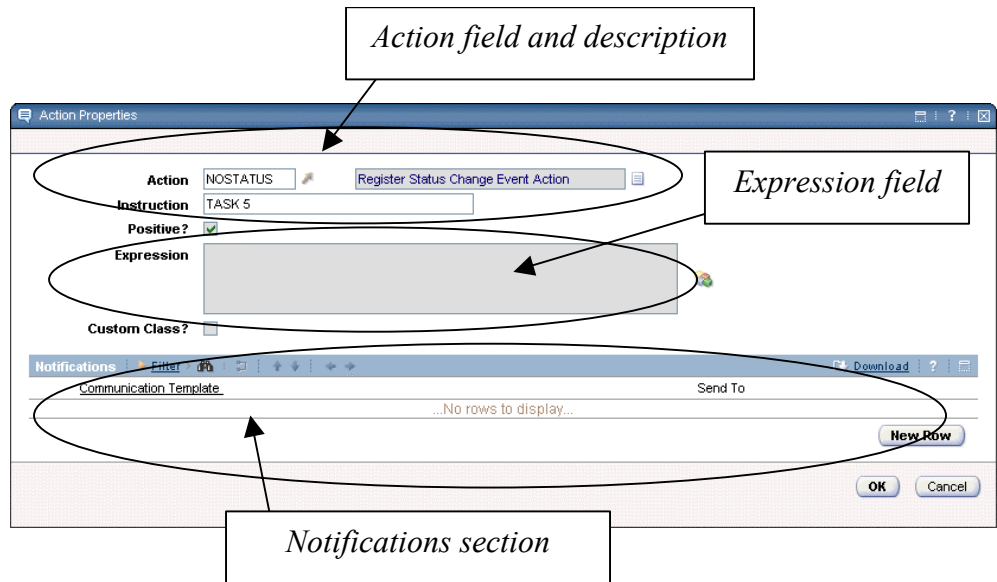
### Overview

The lines that connect nodes also have the ability to cause system actions to occur. They also can be used to identify who receives notifications when the action takes place.

In this section we will show you how these are used in your Workflow processes.

### Actions Properties Detailed

The graphic below points out the **Action** and **Notifications** sections of the Action properties (the properties of the connector lines).



continued on next page

## Configuring Connector/Action Lines continued

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### Actions Properties Detailed

continued

- The **Action** field is populated from records created in the Actions application. These actions tell Maximo what to do when it moves across the connector line.

Note: The connector line might do nothing but go to the next node. In this case, there would be no action indicated.

- The **Expression** field allows you to enter a SQL expression to fine-tune when the action occurs.

- The **Notifications** section is populated from records in the Communication Templates application.

Note: You can also directly enter notifications in this section. Directly entered notifications become auto-generated Communication Template records.

---

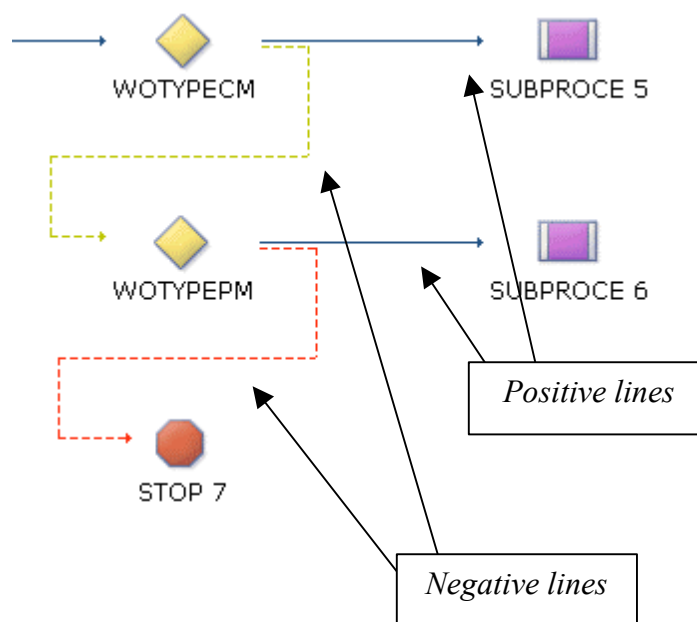
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## Configuring Connector/Action Lines continued

### Actions: Positive and Negative

There are two types of connection lines:

- **Positive** (solid line) – A solid line coming from a Condition node indicates that this is the line that is followed when the expressed condition has been met.
- **Negative** (dotted line) – A dotted line coming from a Condition node indicates that the expression has not been met.



## Using Conditions and Actions Together

### Using Conditions and Actions Together: An Example

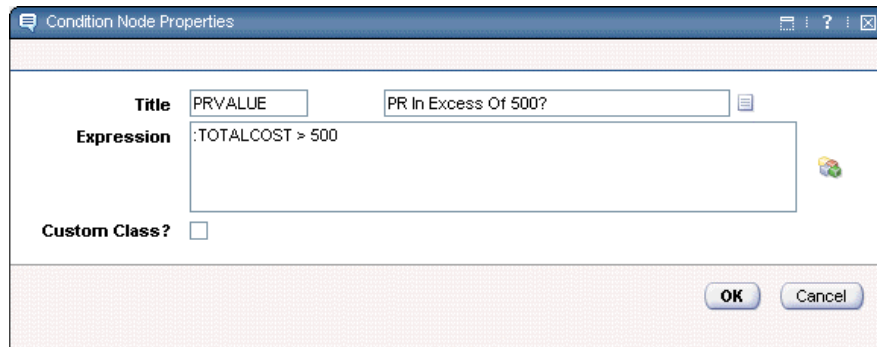
An example of an action that can be performed on a record is a change in status.

Let's say that the process calls for the status of the record to be changed to Approved (APPR) if a purchase requisition is over \$500.

If the PR is under \$500, the status is to be changed to Canceled (CANCEL).

You'd create the following three process elements:

- Condition node to test for the value of the PR being greater than \$500.



- A positive connection line with an action to change the status to APPR.  
Note: The Positive? check box is selected in the Properties dialog box.



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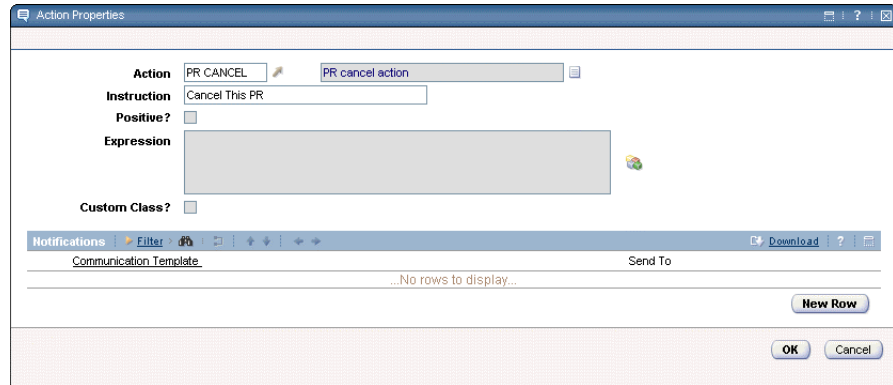
## Using Conditions and Actions Together continued

### Using Conditions and Actions Together

continued

- A negative connect line with an action to change the status to CAN.

Note: The Positive? check box is *not* selected in the Properties dialog box.



### Creating Custom Actions



Note: You can also create your own custom actions to meet your process requirements.

Later in the course we will discuss further how this is done.

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## Using Conditions and Actions Together continued

### Status Change Actions

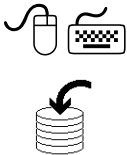
By default, Workflow processes allow users to change status on records. This capability can be problematic in many cases. Therefore, three actions of the type “custom” were created to control this capability.

The table below lists and describes these actions.

Action	Description
NOSTATUS	Do not permit status changes.
OKSTATUS	Allow status changes.
PVSTATUS	Prevent a toggle between NOSTATUS and OKSTATUS in processes.

### OPUSMAIN: Defining Actions

Use the following steps to configure the actions for the false evaluation of the expression in the WOTYPEPM Condition node:

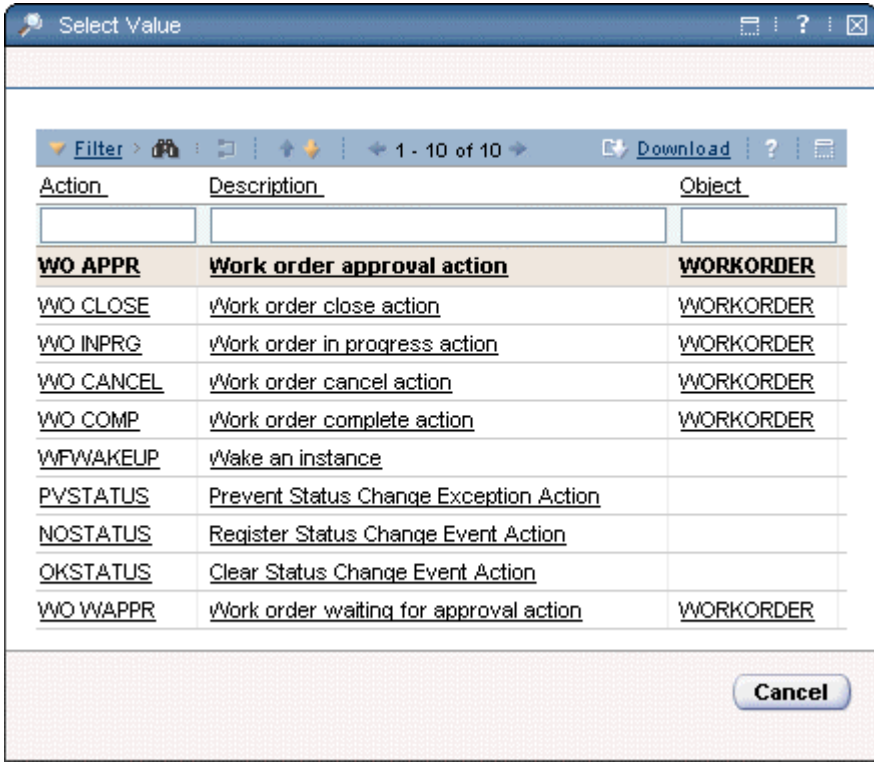
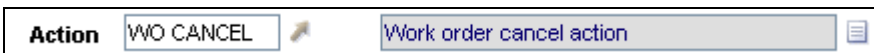


Step	Action
1	<p>View the properties for the negative line (dotted line) coming from the WOTYPEPM node.</p> <p><b>Result:</b> The properties should look similar to those shown in the graphic below.</p>

continued on next page

## Using Conditions and Actions Together continued

**OPUSMAIN:** continued  
**Defining Actions**

Step	Action																																	
2	<p>Click the <b>Detail Menu</b> button on the <b>Action</b> field, then choose <b>Select Value</b> from the resulting drop-down list.</p> <p><u>Result:</u> Maximo displays a list of actions pertaining to the WORKORDER object.</p>  <table border="1"> <thead> <tr> <th>Action</th> <th>Description</th> <th>Object</th> </tr> </thead> <tbody> <tr> <td><b>WO APPR</b></td> <td><b>Work order approval action</b></td> <td><b>WORKORDER</b></td> </tr> <tr> <td>WO CLOSE</td> <td>Work order close action</td> <td>WORKORDER</td> </tr> <tr> <td>WO INPRG</td> <td>Work order in progress action</td> <td>WORKORDER</td> </tr> <tr> <td>WO CANCEL</td> <td>Work order cancel action</td> <td>WORKORDER</td> </tr> <tr> <td>WO COMP</td> <td>Work order complete action</td> <td>WORKORDER</td> </tr> <tr> <td>WFWAKEUP</td> <td>Wake an instance</td> <td></td> </tr> <tr> <td>PVSTATUS</td> <td>Prevent Status Change Exception Action</td> <td></td> </tr> <tr> <td>NOSTATUS</td> <td>Register Status Change Event Action</td> <td></td> </tr> <tr> <td>OKSTATUS</td> <td>Clear Status Change Event Action</td> <td></td> </tr> <tr> <td>WO WAPPR</td> <td>Work order waiting for approval action</td> <td>WORKORDER</td> </tr> </tbody> </table>	Action	Description	Object	<b>WO APPR</b>	<b>Work order approval action</b>	<b>WORKORDER</b>	WO CLOSE	Work order close action	WORKORDER	WO INPRG	Work order in progress action	WORKORDER	WO CANCEL	Work order cancel action	WORKORDER	WO COMP	Work order complete action	WORKORDER	WFWAKEUP	Wake an instance		PVSTATUS	Prevent Status Change Exception Action		NOSTATUS	Register Status Change Event Action		OKSTATUS	Clear Status Change Event Action		WO WAPPR	Work order waiting for approval action	WORKORDER
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OKSTATUS	Clear Status Change Event Action																																	
WO WAPPR	Work order waiting for approval action	WORKORDER																																
3	<p>Click <b>WO CANCEL</b>.</p> <p><u>Result:</u> The Select Value dialog box closes and Maximo displays the selected action in the Action field.</p> 																																	

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## Using Conditions and Actions Together continued

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**OPUSMAIN:** continued  
**Defining Actions**

Step	Action
4	In the <b>Instruction</b> field, enter the following text: Cancel This Work Order
5	Click <b>OK</b> . <u>Result:</u> The property dialog box closes and the changes are added to the process.
6	<b>Save</b> the process.

---

### Challenge Question



Thinking about the business rules, why would it be poor logic to have a WO Cancel action on the WOTYPEPEM Condition?

Why would you not want to do this?

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continued on next page



## Using Conditions and Actions Together continued

### Notifications

*Notifications* are e-mail messages that can be sent to notify individuals and groups about a record's progress through the Workflow cycle.

The Notification process allows Workflow to push information to the right people at the right time.

- The details for notifications are found in Communication Template records.
- Communication Template records are maintained in the Communication Templates application of the Administration module.

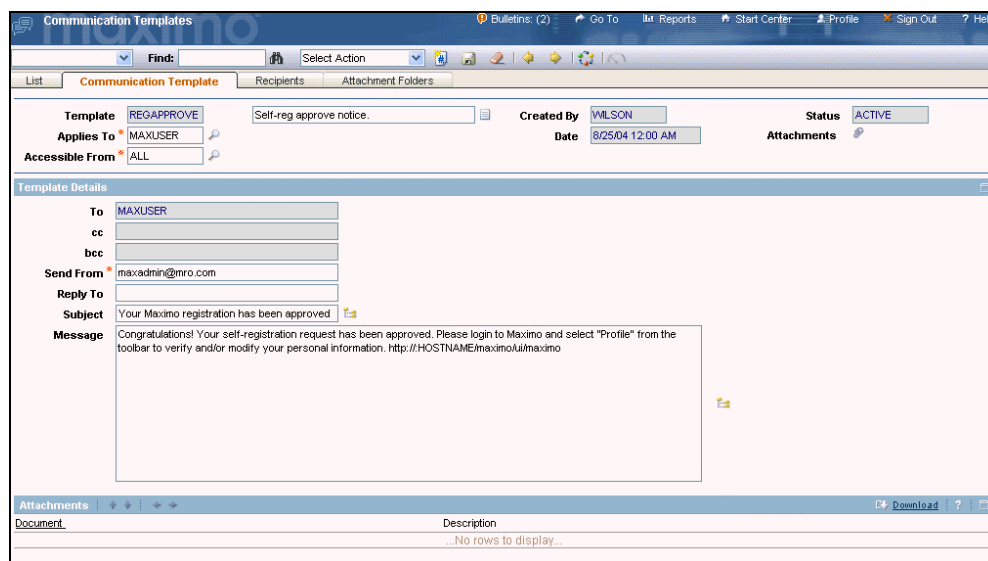
Note: Communication Templates are specific to an object, so they can be used only with processes that use the same object.

### Communication Templates Application: Communication Template Tab

The Communication Template tab of the Communication Templates application contains overall information for the notification, including:

- Who the notification is coming from
- The subject of the notification
- The message in the notification

The Communication Template tab looks similar to the graphic below.



Note: The recipient information is read-only on this tab and is maintained on the Recipients tab.

continued on next page

## Using Conditions and Actions Together continued

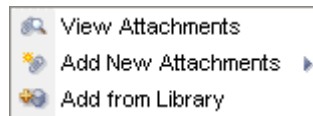
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### Attachments

You can make attachments to Communication Templates by clicking the Attachments button.



When you click the Attachments button, Maximo displays the following menu:



This feature can be used to send directions, instructions, and other types of files along with the e-mail note produced by the notification.

Note: For more detailed information on this procedure, please check Communication Templates Help.

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## Using Conditions and Actions Together continued

### Substitution Variables in Messages

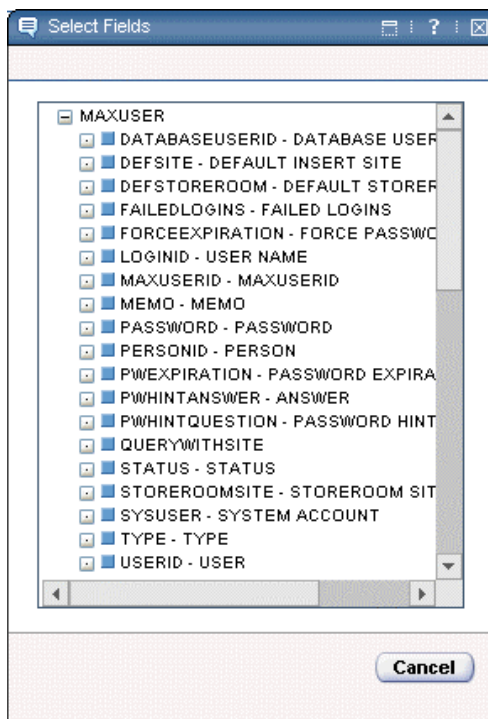
*Substitution variables* can be added to the Message and Subject fields of Communication Templates. These variables might include such information as a record number or supervisor name.

When the notification is sent, it will include the “hard-coded” message text interspersed with the variable information that relates to the current record and process to which it pertains.

You add variables to messages by clicking the Detail Menu button to the right of the Messages field.



Clicking this button displays a dialog box from which you select variable information that relates to the process associated with the Communication Template.



From the variable dialog box, you can drill down to the desired table field, similar to the way it is done in the Expression Builder.

continued on next page

## Using Conditions and Actions Together continued

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### Example of Substitution Variables

Substitution variables allow you to substitute the column information (data) from the current record's application for the variables entered into either the subject or the message of Notification Templates.

Type *dot notations* (:) followed by the column name to specify the data fields to be substituted with values.

An example is given below.

#### Substitution Variable:

- Typing “:WONUM” will put the work order number in the message.
- Typing “:EQUIPMENT.ASSETNUM” will put the work order's equipment asset number in the message.

#### Subject or Message:

If you type:

Work Order :WONUM, Desc :DESCRIPTION for Equipment #  
:EQUIPMENT.ASSETNUM is scheduled to start on :SCHEDSTART

Then the message to the assignee reads as follows (substitution variable data is in bold):

Work Order **85856**, **Oil Leak** for Equipment # **9999** is scheduled to start on **June 7, 2005**.

---

continued on next page

## Using Conditions and Actions Together continued

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### Using Variables in Task Descriptions



You can also include variables in task descriptions to add a bit of customization to the tasks showing up in the Inboxes of assignees.

There is no Expression Builder on this field, so you'll need to know which variables and the correct syntax.

Hint: You could use the Expression Builder in Communication Templates to determine the variables, then copy and paste the variables into your task descriptions.

---

### Adding Links Containing Variables



You can place entire links to Maximo records within Communication Templates. A link can be a combination of static and variable elements.

The NEWSSELFREG Communication Template in *maxdemo* contains an excellent example of this capability. The link contained in this record is shown below.

<http://:HOSTNAME/maximo/ui/maximo.jsp?event=loadapp&value=user&uniqueid=:MAXUSERID>

Notice how the variable elements have a colon ( : ) before them.

Hint: Take a look at this record to see how it is used in a Communication Template record.

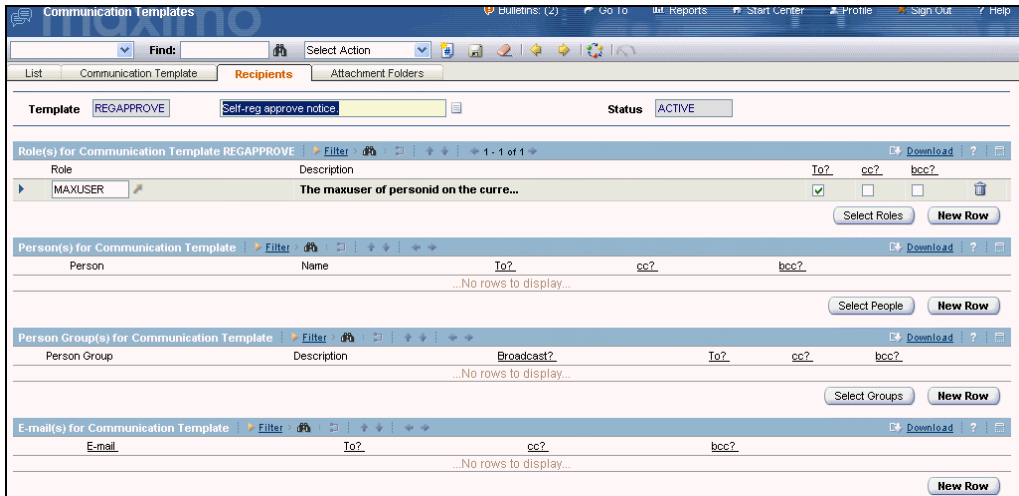
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## Using Conditions and Actions Together continued

### Communication Template Application: The Recipients Tab

The Recipients tab of the Communication Templates application is used to add people and groups who will be sent this notification. The Recipients tab looks similar to the graphic below.



There are four types of recipients for Communication Templates. They are listed in the table below.

Note: There is a separate table section on this tab for each type of recipient.

Recipient Type	Description
Roles	Defined in the Roles application
Persons in Maximo	Defined in the People application
Person Groups in Maximo	Defined in the Person Groups application
Persons not in Maximo	General e-mail addresses outside of Maximo

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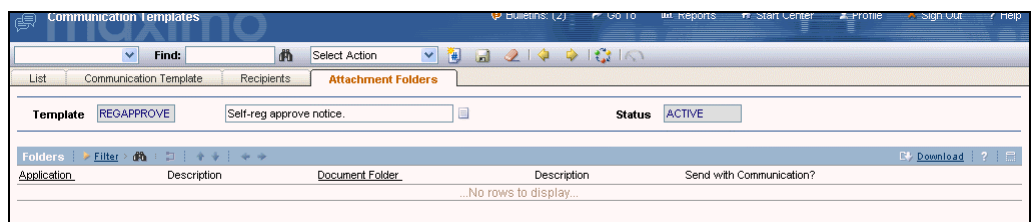
## Using Conditions and Actions Together continued

### Communication Templates Application: Attachment Folders Tab

You use the Attachment Folders tab in the Communication Templates application to associate the document folders from which Maximo should retrieve files to attach to the communication when it is sent.

Maximo will search the attachment folders associated with a template each time an e-mail notification based on this template is sent, and the files that exist in those folders at that moment are attached. Therefore, the set of files that are attached might not be static.

The Attachment Folders tab looks similar to the graphic below.



### Elements That Use Notifications

Notifications can be indicated by the following canvas elements:

- Task node
- Manual Input node
- Wait node
- Connection/Action lines

### Notifications and Conditions

Condition nodes are not able to initiate notifications directly.

The positive and negative connection lines that come out from the Condition node indicate which notifications and actions are taken based on the evaluation made in the Conditions node.

### Notifications “On the Fly”

Communication Templates are used to *formally* set up notifications that can be reused in the same process or in a number of processes.

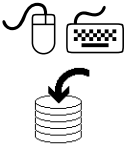
However, notifications can also be created more *informally* “on the fly” in process nodes.

The next exercise will use this “on the fly” notification methodology.

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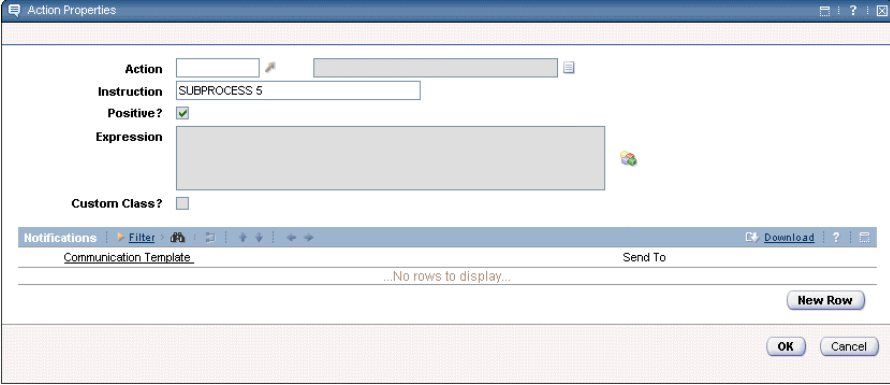
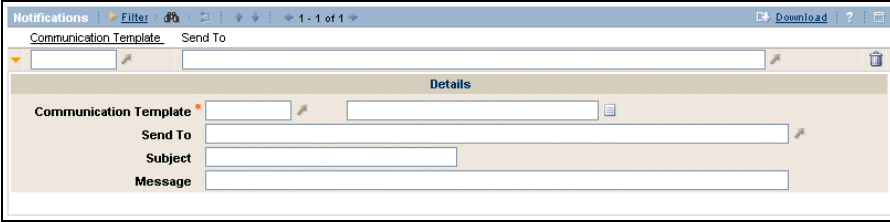
## Using Conditions and Actions Together continued

### OPUSMAIN: Configuring Condition Node Notifications



Use the following steps to configure e-mail notifications to the Workflow process originator based on the results found in the WOTYPECM Condition node in the OPUSMAIN Workflow process.

Reminder: Condition nodes do not generate notifications. The action lines coming from the Condition node are used for this task.

Step	Action
1	<p>Access the <b>OPUSMAIN</b> process in the <b>Workflow Designer</b>.</p> <p>2</p> <p>Access the properties for the positive connection line coming from the <b>WOTYPECM</b> node.</p> <p><u>Result:</u> The properties should look similar to those shown below.</p> 
3	<p>In the <b>Notifications</b> section, click <b>New Row</b>.</p> <p><u>Result:</u> A new row is added, allowing you to enter information needed for the notification.</p> 

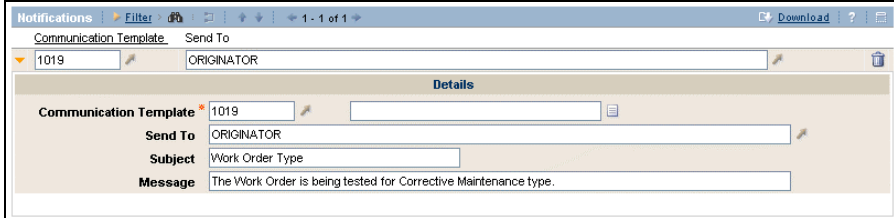
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Using Conditions and Actions Together continued

**OPUSMAIN:  
Configuring  
Condition Node  
Notifications**

continued

Step	Action								
4	<p>Enter the following information:</p> <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Send To</b></td> <td>ORIGINATOR</td> </tr> <tr> <td><b>Subject</b></td> <td>Work Order Type</td> </tr> <tr> <td><b>Message</b></td> <td>The Work Order is being tested for Corrective Maintenance type</td> </tr> </table> <p><u>Result:</u> The Communication Template field is automatically numbered because a new Communication Template record is being created “on the fly.” Your screen should look similar to the one shown in the graphic below.</p> 	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Send To</b>	ORIGINATOR	<b>Subject</b>	Work Order Type	<b>Message</b>	The Work Order is being tested for Corrective Maintenance type
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Send To</b>	ORIGINATOR								
<b>Subject</b>	Work Order Type								
<b>Message</b>	The Work Order is being tested for Corrective Maintenance type								
5	<p>In the <b>description</b> field to the right of the <b>Communication Template</b> field, enter the following description:</p> <p style="text-align: center;">WO Tested For CM Type</p> <p><u>Result:</u> This is the description that will be placed on the new Communication Template record.</p>								
6	<p>Click <b>OK</b>.</p> <p><u>Result:</u> The properties dialog box closes and the notification is now in the process.</p>								
7	<p><b>Save</b> the process.</p>								

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## Using Conditions and Actions Together continued

### Multiple Notifications

Multiple lines can be added in the Notifications section to send a variety of notifications to a variety of recipients.

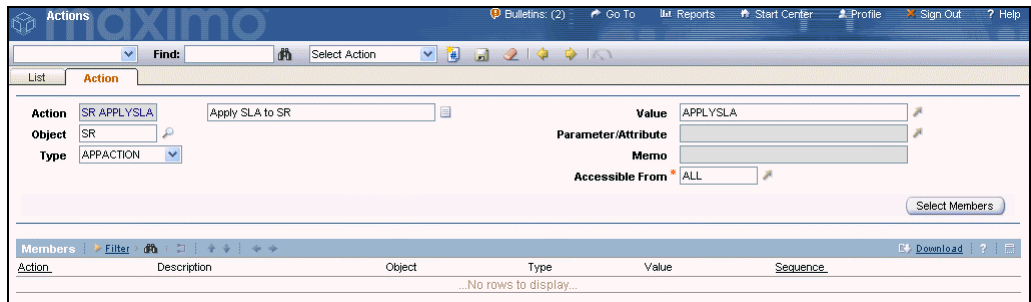
### Using Actions

You add actions to processes by indicating a desired action in the properties of connecting lines in a Workflow process.

Action records are created and modified in the **Actions** application:

**Go To ► Configuration ► Workflow ► Actions**

The graphic below shows an example of an action record:



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## Using Conditions and Actions Together continued

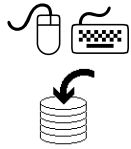
**Action Types**      Actions have a number of types. The table below lists the action types and their purposes.

Action Type	Purpose
Application Action	Enacts an action indicated in the Value field from the application pertaining to the underlying Action object. Same as using Select Action menu in the specified application.
Change Status	Allows a change of status of the record in the process to a value specified in the Value field.
Custom Class	Executes a custom class as indicated in the Value field, which can use additional values in the Parameter/Attribute field.
Command Line Executable	<p>Allows you to designate a specific application to run with parameters such as file name, connect string, etc. Designed mostly for running SQL reports, but can be used to run other applications. The designated application runs on the server only, so is generally limited to advanced usage by administrators. An example of syntax is shown below:</p> <pre>REPWRITER.EXE 'c:\reports\ROLLUP.REP' maximo/maximo@beq-local '@c:\reports\params.txt'</pre>
Action Group	The action becomes a parent to a group of actions. The child actions are added in the Members section. This type allows the calling of a single action from a process to enact a group of actions.
Set Value	Allows the process to set the value of a field specified in the Value field.

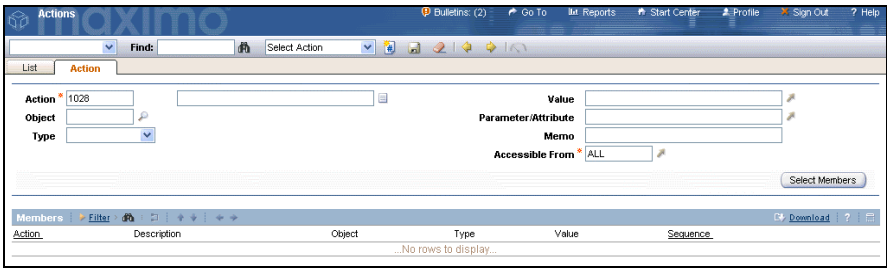
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## Using Conditions and Actions Together continued

### Creating a New Action



So that you can see how an action is created, we will now create an action that will set the value of the Work Type field in a work order to the value 'CM'.

Step	Action								
1	<p>Access the <b>Actions</b> application and insert a new action record.  <b>Result:</b> Your screen should look similar to the one shown below.</p>  <p><b>Note:</b> The new action is automatically numbered. However, you can change this field before saving.</p>								
2	<p>Enter the following information:</p> <table border="1"> <thead> <tr> <th><b>Field</b></th> <th><b>Value</b></th> </tr> </thead> <tbody> <tr> <td><b>Action</b></td> <td>CSCM</td> </tr> <tr> <td><b>Description</b></td> <td>Change Work Type To CM</td> </tr> <tr> <td><b>Object</b></td> <td>WORKORDER</td> </tr> </tbody> </table>	<b>Field</b>	<b>Value</b>	<b>Action</b>	CSCM	<b>Description</b>	Change Work Type To CM	<b>Object</b>	WORKORDER
<b>Field</b>	<b>Value</b>								
<b>Action</b>	CSCM								
<b>Description</b>	Change Work Type To CM								
<b>Object</b>	WORKORDER								

continued on next page

## Using Conditions and Actions Together continued

### Creating a New Action continued

Step	Action						
3	<p>Display the <b>Type</b> drop-down menu.  <u>Result:</u> The menu should look like the graphic below.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <ul style="list-style-type: none"> <li>Application Action</li> <li>Change Status</li> <li>Custom Class</li> <li>Command Line Executable</li> <li>Action Group</li> <li>Set Value</li> </ul> </div> <p><u>Note:</u> You can enter the action type manually if you want to.</p>						
4	<p>Select <b>Set Value</b> from the <b>Type</b> drop-down menu.  <u>Result:</u> The Type field indicates that this is a Set Value action.</p>						
5	<p>Enter the following additional information:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b><u>Field</u></b></td> <td style="width: 50%;"><b><u>Value</u></b></td> </tr> <tr> <td><b>Value</b></td> <td>'CM'</td> </tr> <tr> <td><b>Parameter/Attribute</b></td> <td>WORKTYPE</td> </tr> </table> <p><u>Result:</u> When this action is called in a process, it will enter the value <i>CM</i> into the Work Type field of the work order in the process.  <u>Note:</u> You can access an Expression Builder by clicking the Detail Menu button on the Value field. For this example, however, we will manually enter values and parameters.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Value</b>	'CM'	<b>Parameter/Attribute</b>	WORKTYPE
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Value</b>	'CM'						
<b>Parameter/Attribute</b>	WORKTYPE						
6	<p><b>Save</b> the action record.  <u>Result:</u> The action is now available for use by Workflow processes that use the WORKORDER object.  <u>Note:</u> When choosing actions from a process, you will only be able to see a list of actions that are associated with the object that is associated with the process.</p>						

## Configuring Subprocess Nodes

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### Introduction

The Subprocess node allows you to streamline your process diagrams. It allows you to break a specific branch of your process into a separate process. When the subprocess is finished, control of the record will be returned to the main process.



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### Defining a Subprocess Node

To define a Subprocess node, you must define the name of the subprocess you want the system to use.

The subprocess must already exist in the process list for you to fully configure the Subprocess node.

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### Example

In our case study, we chose to create a subprocess for the Corrective and Preventive Maintenance work orders. For clarity, we chose this approach rather than including all of these steps in one Workflow process.

You can view the main Workflow process, OPUSMAIN, to view all of the work required to approve corrective work orders.

You can view the subprocess to see all of the work required to approve corrective and preventive work orders.

---

### Using a Subprocess

Note: A Subprocess must be *enabled* for it to function; however, it cannot be active, because that is the role of its calling process!



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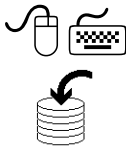
## Configuring Subprocess Nodes continued

### OPUSMAIN Subprocesses

In Chapter 7, we created the OPCMMAIN and OPPMMAIN processes that will be used as subprocesses within the OPUSMAIN process.

### OPUSMAIN: Defining the Subprocess

Use the following steps to configure the names and descriptions for the two Subprocess nodes.



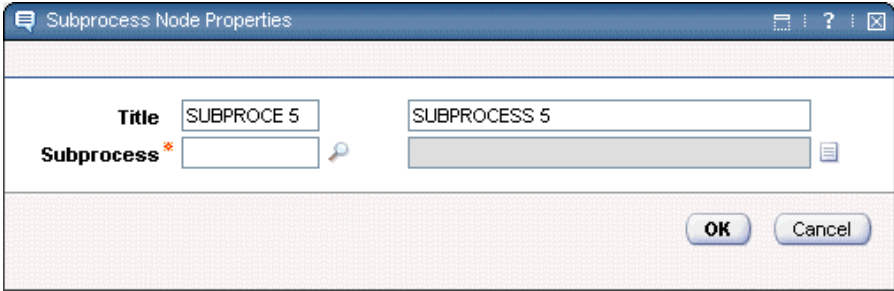
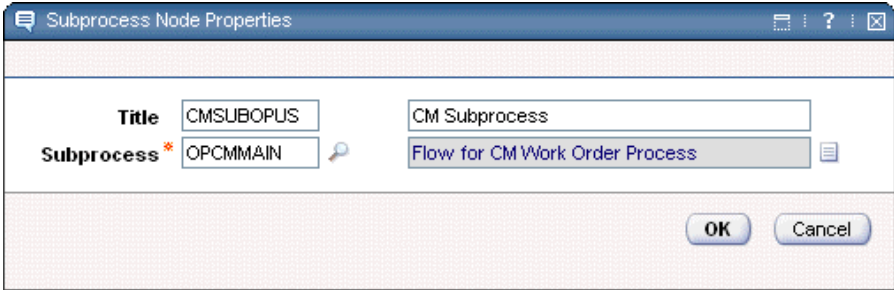
Step	Action
1	<p>Access the <b>OPUSMAIN</b> process from the <b>Workflow Designer</b>.</p> <pre>                     graph LR                         START1[START 1] --&gt; WOTYPECM{WOTYPECM}                         WOTYPECM --&gt; SUBPROCE5[SUBPROCE 5]                         WOTYPECM --&gt; WOTYPEPM{WOTYPEPM}                         SUBPROCE5 --&gt; STOP2[STOP 2]                         WOTYPEPM --&gt; SUBPROCE6[SUBPROCE 6]                         SUBPROCE6 --&gt; STOP8[STOP 8]                         WOTYPECM -.-&gt; STOP7[STOP 7]                     </pre>

continued on next page

## Configuring Subprocess Nodes continued

**OPUSMAIN:  
Defining the  
Subprocess**

continued

Step	Action						
2	<p>Access the properties for the first subprocess (shown as SUBPROCE 5 in the graphic in the previous step).</p> <p><u>Result:</u> The properties for this node should look similar to these:</p> 						
3	<p>In the <b>Properties</b> dialog box, enter the following data to create a label and description for the node.</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Title</b></td> <td>CMSUBOPUS</td> </tr> <tr> <td><b>Description</b></td> <td>CM Subprocess</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Title</b>	CMSUBOPUS	<b>Description</b>	CM Subprocess
<u>Field</u>	<u>Value</u>						
<b>Title</b>	CMSUBOPUS						
<b>Description</b>	CM Subprocess						
4	<p>To identify which subprocess will be called at this point in the process, click the <b>Select Value</b> button on the <b>Subprocess</b> field to view a list of available processes, then choose OPCMMAIN.</p> <p><u>Result:</u> The Properties dialog box should look like the one below.</p> 						

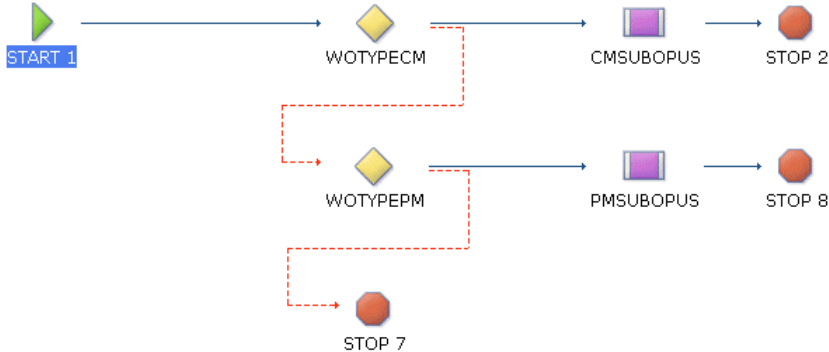
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## Configuring Subprocess Nodes continued

### OPUSMAIN: Defining the Subprocess

continued

Step	Action								
5	Click <b>OK</b> to accept the properties. <u>Result:</u> The Properties dialog box closes.								
6	Using the information below, repeat steps 2 through 5 for the second Subprocess node:  <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>PMSUBOPUS</td> </tr> <tr> <td><b>Description</b></td> <td>PM Subprocess</td> </tr> <tr> <td><b>Subprocess</b></td> <td>OPPMMAIN</td> </tr> </table> <p><u>Result:</u> The OPUSMAIN canvas should look similar to this:</p> 	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	PMSUBOPUS	<b>Description</b>	PM Subprocess	<b>Subprocess</b>	OPPMMAIN
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	PMSUBOPUS								
<b>Description</b>	PM Subprocess								
<b>Subprocess</b>	OPPMMAIN								
7	<b>Save</b> the OPUSMAIN process.								

## Configuring Task Nodes

### Introduction

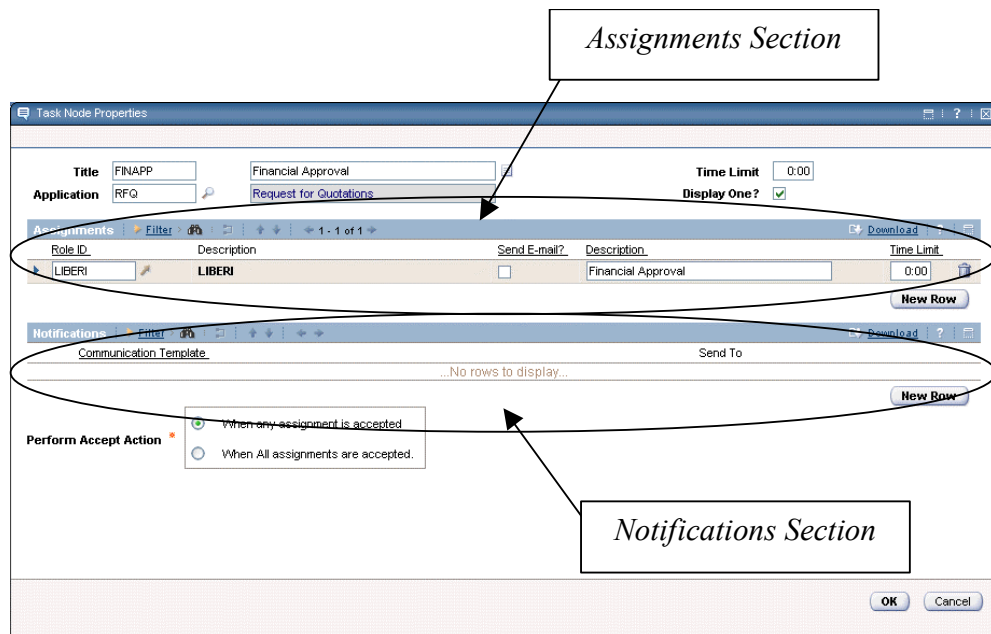
You can use the *Task* node to configure an *action* or an *approval* in the Workflow process.

A process can have one or multiple Task nodes based on the number of actions that are required at your site.



### Task Node Properties Dialog Box

The following example shows the Task Node Properties dialog box.



- The **Assignments** section indicates who needs to perform the next step in the process.
- The **Notifications** section indicates who gets information e-mailed to them when the task is carried out.

continued on next page

## Configuring Task Nodes continued

**Other Elements** There are several other elements in the Task properties dialog box that need to be considered. The following table describes them.

Task Property Element	Purpose
Application	The application in which the record in the process will be brought up when accessed from the Inbox by clicking the instruction on the assignment.
Time Limit field	The amount of time within which a task must be performed before it is escalated.
Display One? field	This check box is used to determine whether the task automatically goes in one direction through the task without requiring any user intervention, or whether the Task dialog box is displayed, providing the option to cancel the process as well as the listed task itself.
Application field	This represents the application to which the task pertains. The application must be one supported by the object associated with the process.
Perform Accept Action frame	Allows the process designer to determine whether the process can continue after one or all of the assignments have been accepted by the assignees.

continued on next page

## Configuring Task Nodes continued

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### Answer the Questions

When configuring a Task node, consider the following questions:

- What application will the process be created for?
  - Who will perform this task?
  - Who should receive e-mail about the task assignment, and what should the e-mail message include?
  - How much time does the user have to complete this task?
  - What happens if the user does not complete the task within the allotted time?
  - What options does the assignee have for the task (for example, accept, reject)?
- 

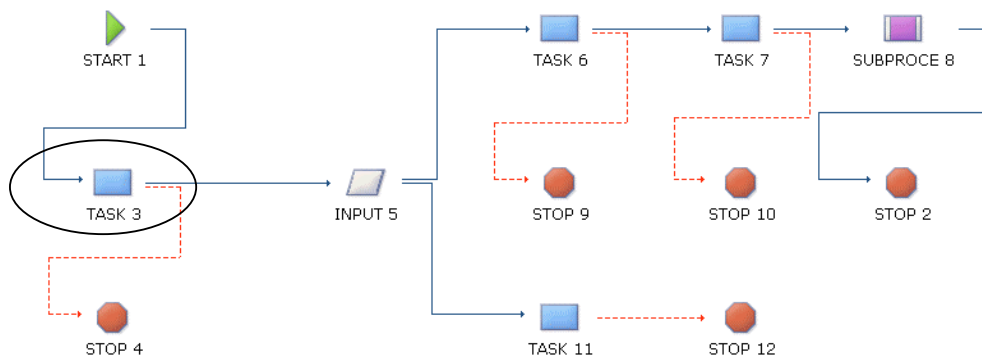
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## Configuring Task Nodes continued

### OPCMMAIN Process

In the next exercise we are going to configure the first task in the OPCMMAIN process.

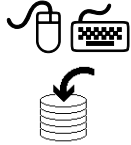
Use the diagram below as a reference point for which node is being configured.



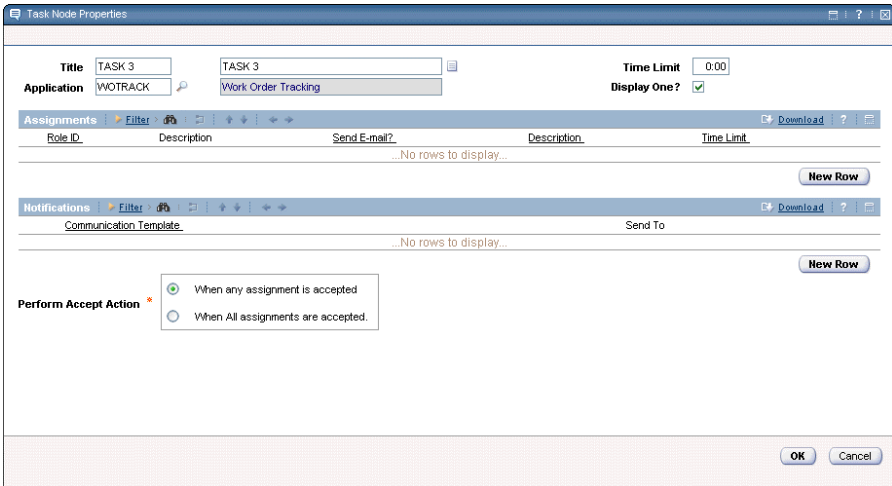
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## Configuring Task Nodes continued

### OPUSMAIN: Configuring the Task Tab



To configure the first Task node, use the following steps.

Step	Action
1	Access the canvas of the <b>OPCMMAIN</b> process in the <b>Workflow Designer</b> .
2	<p>Double-click on the first Task node in the process.  <u>Result:</u> Maximo displays the properties for the Task node.</p>  <p><u>Note:</u> The Application field defaults to the object of the associated process.</p>

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**Configuring Task Nodes** continued

**OPUSMAIN:  
Configuring the  
Task Tab**

continued

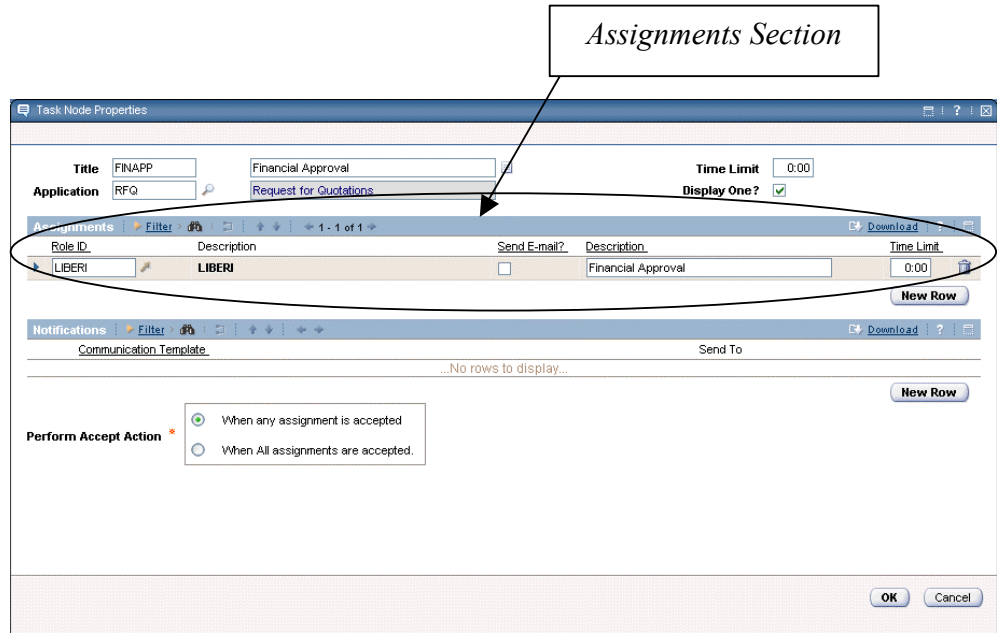
Step	Action								
3	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>MAINT</td> </tr> <tr> <td><b>Description</b></td> <td>Maintenance Supervisor Approval</td> </tr> <tr> <td><b>Application</b></td> <td>WOTRACK</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	MAINT	<b>Description</b>	Maintenance Supervisor Approval	<b>Application</b>	WOTRACK
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	MAINT								
<b>Description</b>	Maintenance Supervisor Approval								
<b>Application</b>	WOTRACK								
4	In the <b>Time Limit</b> field, enter 1:00. <u>Result:</u> The maintenance supervisor now has a one-hour time limit to complete the approval of this record. <u>Note:</u> In the next exercise, we will configure what will happen if the supervisor does not respond within the time limit.								
5	Click <b>OK</b> to accept the properties.								
6	<b>Save</b> the process record.								

continued on next page

## Configuring Task Nodes continued

### Making Assignments

Assignments are indicated in the **Assignments** section of the Task Node Properties dialog box.



- Assignments are made to roles.
- Roles are created in the **Roles** application.

continued on next page



## Configuring Task Nodes continued

### Assignment Details

Each assignment contains a number of details that tell the process how to handle the assignment.

A sample of assignment details is shown below.

The screenshot shows a software interface for configuring task assignments. At the top, there's a header with 'Assignments', a filter icon, and a 'Download' button. Below this is a table with columns: Role ID, Description, Send E-mail?, Description, and Time Limit. The first row shows 'SAFETY' for Role ID, 'Safety Group' for Description, an unchecked 'Send E-mail?' checkbox, 'TASK 10' for Description, and '0:00' for Time Limit. Below the table is a 'Details' section with several fields: Role ID (SAFETY), Application (WOTRACK), Task Description (TASK 10), Escalation Role (empty), Communication Template (WFASIGN), Expression (empty), Time Limit (0:00), Priority (empty), Send E-mail? (unchecked), Calendar Based? (unchecked), and Custom Class? (unchecked).

Some key fields in the Assignment details are described in the table below.

Key Field	Description
<b>Escalation Role</b>	The task is “escalated” to the next level if it is not completed within the time specified in the Time Limit field. The Escalation Role field indicates where the task is escalated.
<b>Communication Template</b>	The Communication Template used to generate the e-mail notification to the Assignee if the Send E-mail? check box is selected.
<b>Expression</b>	Allows Workflow designers to use various database criteria to more specifically determine under which circumstances the task is assigned.
<b>Time Limit</b>	The time within which the task must be completed before it is escalated to the person listed in the Escalation Role field.
<b>Priority</b>	Places a priority on the task to allow Service Management personnel and applications to prioritize tasks in their queue. This assures that high-priority tasks are completed in a timely fashion.
<b>Send E-mail?</b>	Indicates whether the assignee(s) should receive an e-mail message apprising them of their assignment.

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## Configuring Task Nodes continued

### Assignment Details

continued

Key Field	Description
<b>Calendar Based?</b>	When this is checked, the calendar information on the person records that resolve from the role is used to determine the true due date of the assignment. <u>Example:</u> If a person works from 8AM to 5PM and receives an assignment at 4PM with a due time of 4 hours, the actual due time will be 11AM the following day before being escalated.
<b>Custom Class?</b>	Is checked when there is a callout to a Java program in the MXServer library being used to add processing capability not included in base Maximo.

### Roles Application

The Roles application is used to create and manage roles within Maximo. Roles can be called on from Workflow processes to define assignments. Roles are managed in a central administrative application because they are used in multiple applications.

You can access the Roles application by using the following path:

**Configuration ▶ Workflow ▶ Roles**

The graphic below shows an example of a role record.

The screenshot shows the Maximo Roles application interface. At the top, there is a navigation bar with 'Roles' and 'maximo' logos, and a search bar. Below the navigation bar, there are tabs for 'List' and 'Role'. The 'Role' tab is active, displaying a form for a role record. The form fields are: Role (CTRBUYER), Object (INVOICE), Type (DATASET), and Value (CONTRACTREF.PURCHASEAGENT). There are also checkboxes for 'E-mail?' and 'Broadcast?'.



Note: When you are creating assignments and corresponding roles, note that it is often more efficient to hyperlink to the Roles application from the Role ID field on the assignment, create the role, and bring back the value.

continued on next page

## Configuring Task Nodes continued

### Role Types

Roles have a number of types. The specified value of each type is contained in the **Value** field.

The following table lists the roles types and their purposes.

Role Type	Purpose
Custom Class	Refers to a custom class that resolves to one or more people
A set of data related to the record	Refers to the data in a specific field of the record in the process
E-mail address	Provides one or more literal strings of e-mail addresses that can be used on notifications but not on assignments
Person	Indicates a specific person record from the Person application
Person Group	Indicates a group of people as specified in a person group record.
A set of data related to the login user	Refers to some piece of data that pertains to the user that is currently signed in to Maximo.

### Role Options

Roles records have two additional options that affect how the role reacts within assignments. These options are described in the table below.

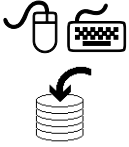
Note: Both options are selected in check boxes below the Parameter field.

Role Option	Description
E-mail?	Refers only to Communication Templates. Indicates that roles indicated on Communication Templates should be used to send out an e-mail notification.
Broadcast?	Indicates that assignments should be made to all persons defined in the role. Calendars and shifts are ignored.

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## Configuring Task Nodes continued

### OPCMMAIN: Configuring Assignments

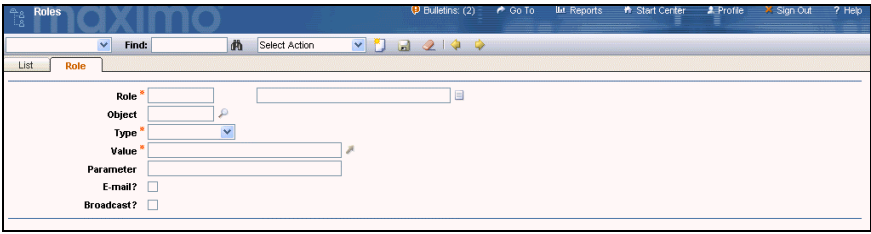


Use the following steps to assign the Maintenance Supervisor Approval task to the Opus Maintenance Supervisor: Fred Stanley.

Here are the tasks that we will accomplish in the steps below:

- Create a person type role for Opus maintenance supervisor.
- Indicate that Fred is the indicated person in the role record.
- Assign the task to the Opus maintenance supervisor (Fred).

Note: You can actually create the assignment in the process and hyperlink to the Roles application, then bring back the role to the assignment. But in this exercise, we want you to become familiar with directly accessing the Roles application.

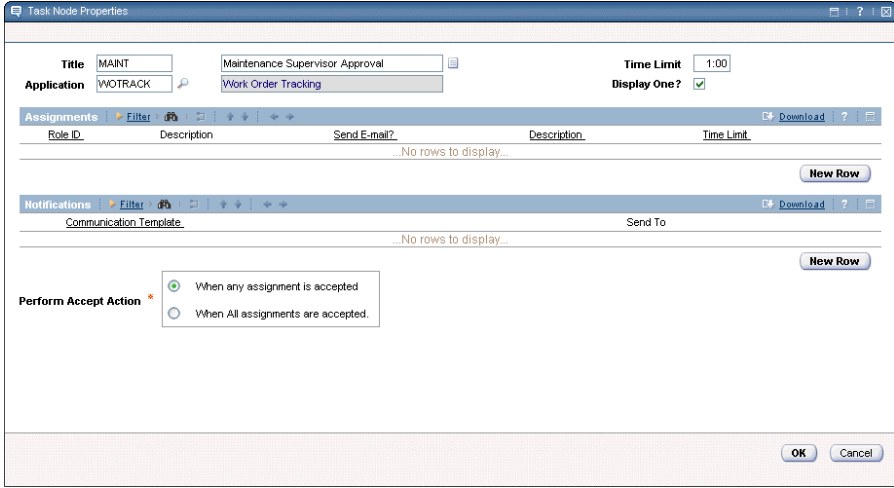
Step	Action												
1	<p>Access the <b>Roles</b> application and insert a new record.</p> <p><u>Result:</u> A blank record opens on your screen.</p> 												
2	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><b><u>Field</u></b></th> <th><b><u>Value</u></b></th> </tr> </thead> <tbody> <tr> <td><b>Role</b></td> <td>OPMNTSUPV</td> </tr> <tr> <td><b>Description</b></td> <td>Opus Maintenance Supervisor</td> </tr> <tr> <td><b>Object</b></td> <td>WORKORDER</td> </tr> <tr> <td><b>Type</b></td> <td>Person</td> </tr> <tr> <td><b>Value</b></td> <td>Stanley</td> </tr> </tbody> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Role</b>	OPMNTSUPV	<b>Description</b>	Opus Maintenance Supervisor	<b>Object</b>	WORKORDER	<b>Type</b>	Person	<b>Value</b>	Stanley
<b><u>Field</u></b>	<b><u>Value</u></b>												
<b>Role</b>	OPMNTSUPV												
<b>Description</b>	Opus Maintenance Supervisor												
<b>Object</b>	WORKORDER												
<b>Type</b>	Person												
<b>Value</b>	Stanley												

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## Configuring Task Nodes continued

### OPCMMAIN: Configuring Assignments

continued

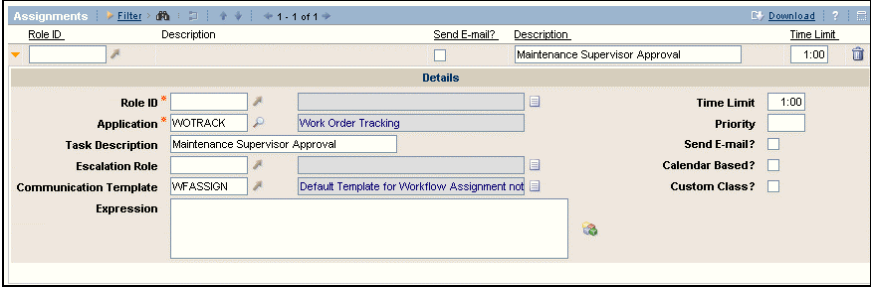

Step	Action
3	Save the role record.
4	Access the <b>OPCMMAIN</b> process in the <b>Workflow Designer</b> .
5	<p>Display the properties for the <b>MAINT</b> task node.</p> <p><u>Result:</u> The properties should look similar to these:</p> 

continued on next page

## Configuring Task Nodes continued

### OPCMMAIN: Configuring Assignments

continued

Step	Action
<p>6</p>	<p>Add a new row to the <b>Assignments</b> section.</p> <p><u>Result:</u> Maximo displays the new row details.</p>  <p><u>Note:</u> The assignment details automatically include the Communication Template <i>WFASSIGN</i> because this template record indicates that it should be added to Workflow assignments. Another Communication Template can be used, if you want. We will use the default for this example.</p>
<p>7</p>	<p>Enter OPMNTSUPV in the <b>Role ID</b> field.</p> <p><u>Result:</u> The description for the Role ID field indicates the title of the assigned role.</p> 

continued on next page

## Configuring Task Nodes continued

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### OPCMMAIN: Configuring Assignments

continued

Step	Action
8	Select the <b>Send E-mail?</b> check box. <u>Result:</u> An e-mail note containing the assignment information specified in the indicated Communication Template will be sent to the assignee.
9	Enter WILSON in the <b>Escalation Role</b> field. <u>Note:</u> If your system is set up properly, Mike Wilson will be delegated with the task if it is not completed in the time specified in the Time Limit field.
10	Click <b>OK</b> in the <b>Properties</b> dialog box. <u>Result:</u> The new property is accepted and the dialog box closes.
11	<b>Save</b> the process record. <u>Note:</u> Leave this process record open. You will be using it in the next exercise.

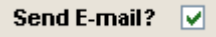
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## Configuring Task Nodes continued

### E-mails

We want Fred Stanley to receive e-mail notes as he is given assignments through the process, instead of having to monitor his Inbox for assignments. So we selected the **Send E-mail?** check box in the Assignments details section.



Selecting this check box will cause the Workflow process to send Fred a note based on the indicated Communication Template record.

Note: Fred will also get his assignments in his Inbox. The e-mail notification is additional.

### Person E-mail Specification vs. Node Specification

The **Workflow E-mail Notification** field on each person record contains default information regarding how each person's e-mail is handled in Workflow processes.



Note: This setting takes precedence over the setting in the node.

The possible settings for the Workflow E-mail Notification field and their purposes are listed in the table below.

Field Setting	Purpose
Always	Always send e-mail, regardless of the process setting.
Conditional	Notify only on first assignment.
Never	Never send e-mail.
Process	Use the setting in the process.

Note: Fred's person record indicates *Process*, so the Workflow process determines whether he gets e-mail about assignments. In our exercise, we indicated in the process that Fred should get an e-mail notification of each assignment.

### Note



When using a person or person group type role, the relevant person records must all contain e-mail addresses for those persons to receive notifications.

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## Configuring Task Nodes continued

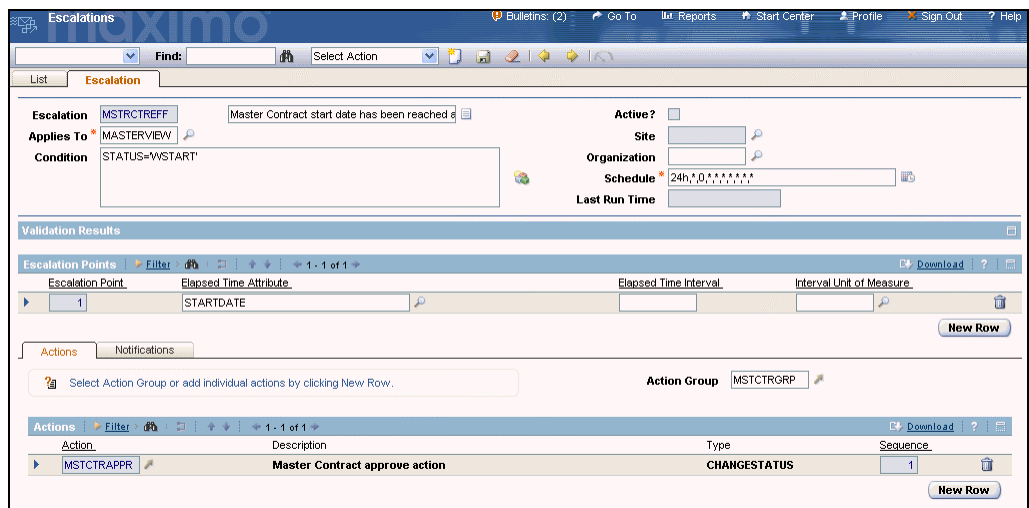
### Using an Escalation to Reassign Overdue Tasks

Time limits can be set for an assigned task to be completed. When the allotted time is exceeded, the work can be reassigned and a notification can be sent. This process is called an *escalation*.

Escalations are defined in the Escalations application, which is accessed from the Go To menu along the following path:

#### Configuration ► Escalations

An example of an Escalation file is shown below.



We will be using some parts of the Escalations application in the next exercise. Those sections are described in the table on the next page.

Note: You can make escalations organization- and site-specific.

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## Configuring Task Nodes continued

### Escalations

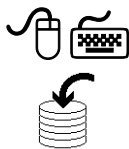
continued

<b>Escalation Part</b>	<b>Description</b>
Applies To field	Indicates the application or other functionality to which the escalation is associated.
Condition field	Allows database criteria to be used to more finely determine when escalations occur.
Schedule field	Indicates how often the escalation polls the system to see if there are items meeting the criteria in the Escalation Points section.
Last Run Time field	Shows the last time that the escalation polled the system.
Escalation Points section	Used to set up criteria by which the escalation knows to perform actions and notifications
Actions/Notifications tabs	Area where associated actions and notifications are listed. These are associated with a single escalation point.

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## Configuring Task Nodes continued

### OPCMMAIN: Configuring the Escalation Procedure



The next step is to configure what happens when the maintenance supervisor exceeds the time limit for the task—in other words, what the escalation is.

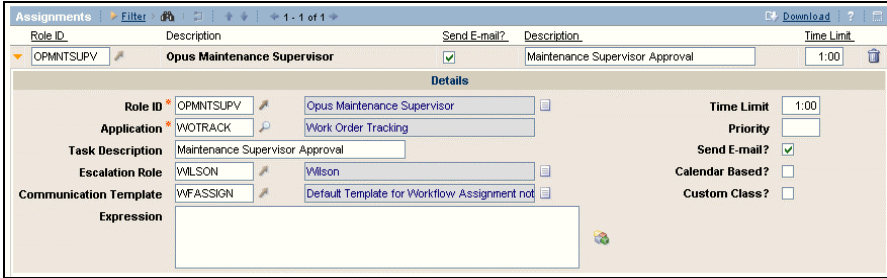
For our example, the escalation will be that the task is reassigned to another person.

To create the escalation in the Workflow process, there are several overall steps:

1. In the assignment on the Task node, indicate in the Escalation Role field to whom the reassignment is to be made.
2. Create and configure an escalation to poll the system and “fire off” an action to escalate (reassign) the task when certain criteria are met.
3. Create and configure an action to cause the escalation reassignment at a time determined by the escalation.

The exercise below will be broken down into the overall steps listed above.

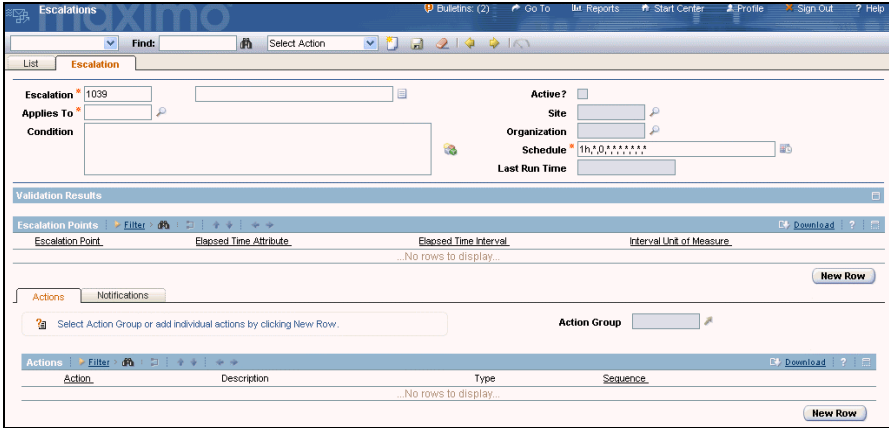
#### 1. Indicate to whom the reassignment is to be made.

Step	Action
1	<p>Access the <b>Assignment</b> details in the <b>Properties</b> dialog box of the <b>MAINT</b> Task node of the <b>OPCMMAIN</b> process.</p> <p>The assignment details should look similar to these:</p>  <p><u>Note:</u> The Escalation Role field indicates a role containing the name of the person who should receive the reassignment. We entered this role in the previous exercise.</p>
2	Ensure that <b>WILSON</b> is indicated in the <b>Escalation Role</b> field.
3	Click <b>OK</b> to accept the change.
4	<b>Save</b> the process.

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## Configuring Task Nodes continued

2. Create and configure an Escalation to poll the system and “fire off” an action to reassign (escalate) the task when certain criteria are met.


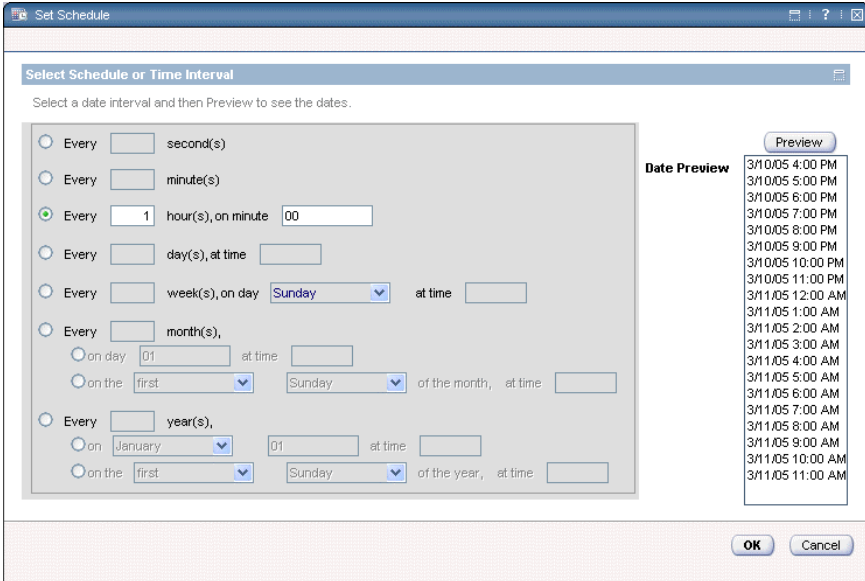
Step	Action								
1	<p>Access the <b>Escalations</b> application from the <b>Configuration</b> module and insert a new record.</p> <p><u>Result:</u> Your screen should look similar to this:</p>  <p><u>Note:</u> Escalation records are inserted with an automatically generated number, but this <i>alphanumeric</i> field can be changed before saving the record.</p>								
2	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Escalation</b></td> <td>ESCWFTASK</td> </tr> <tr> <td><b>Description</b></td> <td>Escalate Workflow Task</td> </tr> <tr> <td><b>Applies To</b></td> <td>WFASSIGNMENT</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Escalation</b>	ESCWFTASK	<b>Description</b>	Escalate Workflow Task	<b>Applies To</b>	WFASSIGNMENT
<u>Field</u>	<u>Value</u>								
<b>Escalation</b>	ESCWFTASK								
<b>Description</b>	Escalate Workflow Task								
<b>Applies To</b>	WFASSIGNMENT								
3	<p><b>Save</b> the escalation record.</p>								

continued on next page

## Configuring Task Nodes continued

**OPCMMAIN:  
Configuring the  
Escalation  
Procedure**

continued


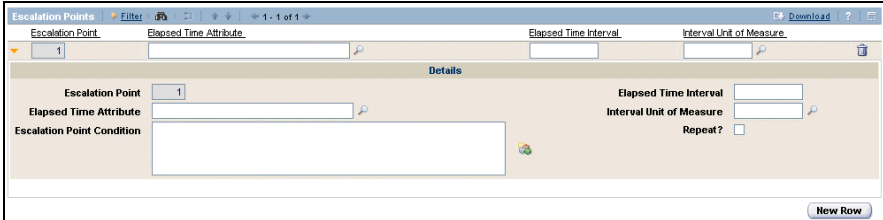
Step	Action
4	<p>Click the <b>Set Schedule</b> button on the <b>Schedule</b> field.</p>  <p><u>Result:</u> The Set Schedule dialog box opens.</p>  <p><u>Note:</u> You don't have to play around with the value of the Schedule field on the Escalations tab. The Set Schedule dialog box sets the value for you.</p>
5	<p>Click the option on the line that indicates</p> <p style="text-align: center;"><b>Every [ ] minute(s)</b></p> <p>then enter the number 1 in the field on that line.</p> <p><u>Note:</u> The schedule is set according to the desired business process. For this example, we have decided to cause the escalation to poll the system every <i>minute</i>.</p>

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**Configuring Task Nodes** continued

**OPCMMAIN:  
Configuring the  
Escalation  
Procedure**

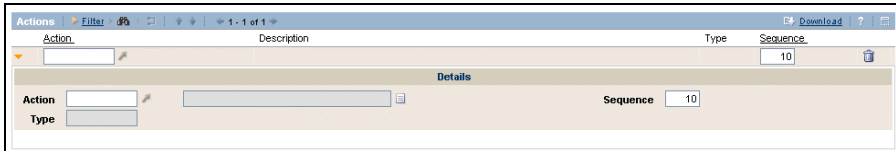
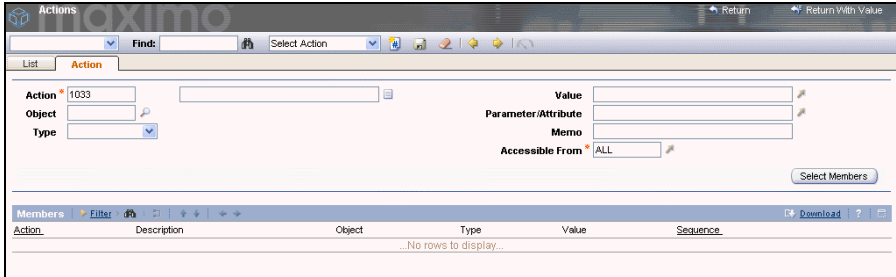
continued

Step	Action								
6	<p>Click <b>OK</b> to accept the schedule.</p> <p><u>Result:</u> The Set Schedule dialog box closes and the Schedule field shows the correct values to indicate 1 minute.</p> 								
7	<p>Add a new row to the <b>Escalation Points</b> section.</p> <p><u>Result:</u> Maximo displays the blank Escalation Point details.</p> 								
8	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Elapsed Time Attribute</b></td> <td><b>DUEDATE</b></td> </tr> <tr> <td><b>Elapsed Time Interval</b></td> <td><b>-1</b></td> </tr> <tr> <td><b>Interval Unit of Measure</b></td> <td><b>MINUTES</b></td> </tr> </tbody> </table> <p><u>Note:</u> These settings will cause an associated action or notification to occur if the time of a work order task in a process is one minute beyond its allotted time.</p>	<u>Field</u>	<u>Value</u>	<b>Elapsed Time Attribute</b>	<b>DUEDATE</b>	<b>Elapsed Time Interval</b>	<b>-1</b>	<b>Interval Unit of Measure</b>	<b>MINUTES</b>
<u>Field</u>	<u>Value</u>								
<b>Elapsed Time Attribute</b>	<b>DUEDATE</b>								
<b>Elapsed Time Interval</b>	<b>-1</b>								
<b>Interval Unit of Measure</b>	<b>MINUTES</b>								
9	<p><b>Save</b> the record.</p> <p><u>Note:</u> Keep the record open at this point. We will now use the Actions tab to hyperlink to the Actions application, create an action, and bring back the values.</p>								

continued on next page

## Configuring Task Nodes continued

### 3. Create and configure an action to cause the reassignment at a time determined by the escalation.

Step	Action
1	<p>Add a new row to the <b>Actions</b> tab.</p> <p><u>Result:</u> A blank Action row opens.</p> 
2	<p>In the <b>Action</b> field, click the <b>Detail Menu</b> button and select <b>Go To Actions</b>.</p> <p><u>Result:</u> You are hyperlinked to the List tab of the Actions application.</p>
3	<p>Insert a new action record.</p> <p><u>Result:</u> A new blank action record opens.</p>  <p><u>Note:</u> Maximo automatically numbers action records upon insertion, but you can change this field before saving the record. For this exercise, we will accept the default number.</p>

continued on next page

**Configuring Task Nodes** continued

**OPCMMAIN:  
Configuring the  
Escalation  
Procedure**

continued

Step	Action								
4	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Description</b></td> <td>Escalate Work Flow Task</td> </tr> <tr> <td><b>Object</b></td> <td>WFASSIGNMENT</td> </tr> <tr> <td><b>Type</b></td> <td>APPACTION</td> </tr> </table> <p><u>Note:</u> These settings indicate that when a Workflow assignment is waiting in Maximo, an application action is called that will enact the escalation in Workflow. The escalation record determines when this action is called.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Description</b>	Escalate Work Flow Task	<b>Object</b>	WFASSIGNMENT	<b>Type</b>	APPACTION
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Description</b>	Escalate Work Flow Task								
<b>Object</b>	WFASSIGNMENT								
<b>Type</b>	APPACTION								
5	Use the <b>Detail Menu</b> button on the <b>Value</b> field to select <b>WFESCALATE</b> .								
6	<b>Save</b> the action record.								
7	Click the <b>Return with Value</b> link in the upper-right corner of the screen.  <u>Result:</u> You are returned to the Escalations application with the new action applied. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>The screenshot shows a table with columns: Action, Description, Type, and Sequence. The first row contains: 1033, Reassign Work Order Task, APPACTION, and 10. Below the table is a 'Details' section with fields for Action (1033), Description (Reassign Work Order Task), Type (APPACTION), and Sequence (10).</p> </div>								
8	<b>Save</b> the escalation record.  <u>Note:</u> The escalation needs to be activated before it will start polling the system. We will do this later to see its effects on a Workflow process.								

continued on next page



## Configuring Task Nodes continued

### Activating Escalations



After creating escalation records, you must activate them by using **Activate/Deactivate Escalation** on the Select Action menu.

We have not activated this escalation during the exercise, so reassignments will not be made automatically.

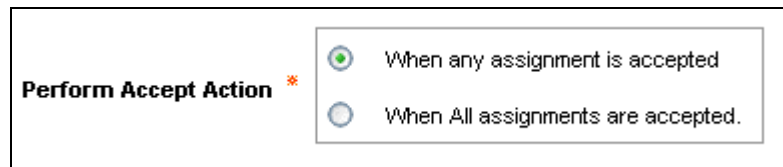
In a later chapter, we will activate this escalation and see its effects on a Workflow process.

Note: During development, you might want to activate an escalation to test it. However, you should deactivate escalations after testing so that system resources are not being used during the escalation's polling process.

### Forwarding Tasks with Multiple Assignments

If you apply multiple assignments to a single Task node, then you must configure the node properties to determine when the process can forward the record to the next node.

You use the **Perform Accept Action** pane on the Assignment details to indicate this determination.



The table below explains how to use this pane.

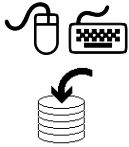
Choose this option...	If...
<b>When any assignment is accepted</b>	only one of the assigned users determines when to continue the Workflow process
<b>When all assignments are accepted</b>	all of the assigned users must complete this task to continue the Workflow process

Note: If any of the assigned users rejects the record, then the Workflow process moves to the node connected with a negative line in the Workflow process.

continued on next page

## Configuring Task Nodes continued

### OPCMMAIN: Configuring Originator Notifications



Notifications can be used to help various people monitor records as they move through the process.

Example: You might want to notify the Workflow process originator about the record's progress.

Use the following steps to configure an “on the fly” e-mail notification to the Workflow process originator on the MAINT Task node.

Step	Action
1	Access the <b>OPCMMAIN</b> process in the <b>Workflow Designer</b> .
2	View the properties for the <b>MAINT</b> Task node.
3	Insert a new row in the <b>Notifications</b> section. <u>Result:</u> The new blank notification line should look similar to the graphic below. <div> </div>
4	Enter <b>ORIGINATOR</b> in the <b>Send To</b> field, then tab out of the field. <u>Result:</u> The <b>ORIGINATOR</b> role is added to the notification. An “on the fly” number is added to the Communication Template field. <div> </div>

continued on next page

**Configuring Task Nodes** continued

**OPCMMAIN:  
Configuring  
Originator  
Notifications**

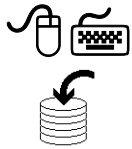
continued

Step	Action						
5	Enter Maintenance Supervisor Review as the <b>description</b> in the <b>Communication Template</b> field.						
6	Now enter the following additional information: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Subject</b></td> <td>Maintenance Supervisor Review</td> </tr> <tr> <td><b>Message</b></td> <td>The Maintenance Supervisor is currently reviewing your work order. You will be notified via e-mail when the action is taken.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Subject</b>	Maintenance Supervisor Review	<b>Message</b>	The Maintenance Supervisor is currently reviewing your work order. You will be notified via e-mail when the action is taken.
<u>Field</u>	<u>Value</u>						
<b>Subject</b>	Maintenance Supervisor Review						
<b>Message</b>	The Maintenance Supervisor is currently reviewing your work order. You will be notified via e-mail when the action is taken.						
7	Click <b>OK</b> . <u>Result:</u> The Properties dialog box closes and the notification is accepted.						
8	<b>Save</b> the process.						

continued on next page

## Configuring Task Nodes continued

### Creating Reusable Communication Templates



We might want to send out similar notifications in a variety of Workflow processes, so “on the fly” notifications are not efficient.

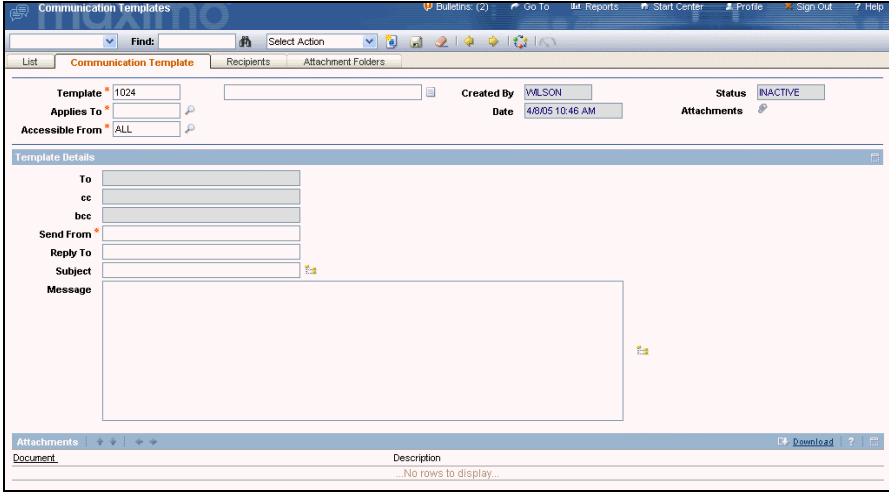
So that we can more easily set up multiple similar notifications, we will create reusable Communication Templates that can be called into notifications in processes.

The two Communication Templates that we will create are:

- Work Order Canceled
- Work Order Approved

Follow the steps below.

#### • Work Order Canceled

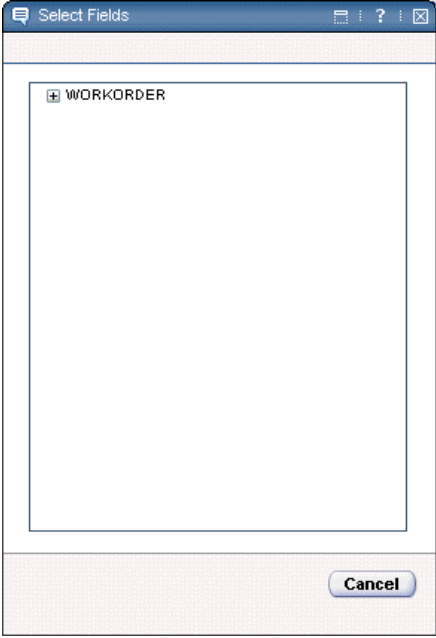
Step	Action
1	Access the <b>Communication Templates</b> application. <u>Hint:</u> This application is located in the same place as Workflow Designer.
2	Insert a new Communication Template record. <u>Result:</u> The new record should look similar to this: 

continued on next page

## Configuring Task Nodes continued

**Creating  
Reusable  
Communication  
Templates**

continued



Step	Action										
3	Enter the following information: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Template</b></td> <td>WOCANCEL</td> </tr> <tr> <td><b>Description</b></td> <td>Work Order Cancelled</td> </tr> <tr> <td><b>Applies To</b></td> <td>WORKORDER</td> </tr> <tr> <td><b>Send From</b></td> <td>maxadmin@opus.com</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Template</b>	WOCANCEL	<b>Description</b>	Work Order Cancelled	<b>Applies To</b>	WORKORDER	<b>Send From</b>	maxadmin@opus.com
<u>Field</u>	<u>Value</u>										
<b>Template</b>	WOCANCEL										
<b>Description</b>	Work Order Cancelled										
<b>Applies To</b>	WORKORDER										
<b>Send From</b>	maxadmin@opus.com										
4	Enter Work Order in the <b>Subject</b> field, then add a space.										
5	Click the <b>Detail Menu</b> to the right of the <b>Subject</b> field. <u>Result:</u> Maximo displays a drill-down list with the table that is related to the Applies To field. <div style="text-align: center;">  </div>										

continued on next page

**Configuring Task Nodes** continued

**Creating Reusable Communication Templates**

continued

Step	Action
6	<p>Drill down to the <b>WONUM</b> field and click its blue box to select it.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <ul style="list-style-type: none"> <li><input type="checkbox"/> WOLO7 - WOLO7</li> <li><input type="checkbox"/> WOLO8 - WOLO8</li> <li><input type="checkbox"/> WOLO9 - WOLO9</li> <li><input checked="" type="checkbox"/> WONUM - WORK ORDER</li> <li><input type="checkbox"/> WOPRIORITY - PRIORITY</li> <li><input type="checkbox"/> WORKLOCATION - WORK LOCATION</li> <li><input type="checkbox"/> WORKORDERID - WORKORDERID</li> <li><input type="checkbox"/> WORKTYPE - WORK TYPE</li> <li><input type="checkbox"/> WORTS1 - WORTS1</li> <li><input type="checkbox"/> WORTS2 - WORTS2</li> </ul> </div> <p><u>Result:</u> Your Subject line will have a variable added. It should now look similar to this:</p> <p style="text-align: center;"><b>Subject</b> <input type="text" value="Work Order :WONUM"/> </p>
7	<p>After <b>:WONUM</b>, add a space, then enter the rest of the Subject line: <b>Has Been Cancelled</b></p> <p><u>Result:</u> Your Subject line should look similar to this:</p> <p style="text-align: center;"><b>Subject</b> <input type="text" value="Work Order :WONUM Has Been Cancelled"/> </p>

continued on next page

## Configuring Task Nodes continued

**Creating Reusable Communication Templates**

continued

Step	Action
8	In the <b>Message</b> field, enter the following text: Your Work Order :WONUM -- :DESCRIPTION has been cancelled. Please contact Maintenance if you have questions. <u>Note:</u> For some good practice, try using the drill-down list to add the WONUM and DESCRIPTION variables.
9	Change the status of the Communication Template to <b>Active</b> . <u>Result:</u> The record is saved and activated.

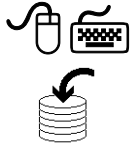
- **Work Order Approved**

Step	Action
1	Duplicate the <b>WOCANCEL</b> Communication Template from the previous exercise.
2	Enter/modify the following information: <b>Field</b> <b>Value</b> <b>Template</b> WOAPPR <b>Description</b> Work Order Approved
3	Modify the <b>Subject</b> field as follows: Work Order :WONUM Has Been Approved
4	Modify the <b>Message</b> field as follows: Your Work Order :WONUM -- :DESCRIPTION has been approved. Please contact Maintenance if you have questions.
5	Activate the Communication Template record.

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## Configuring Task Nodes continued

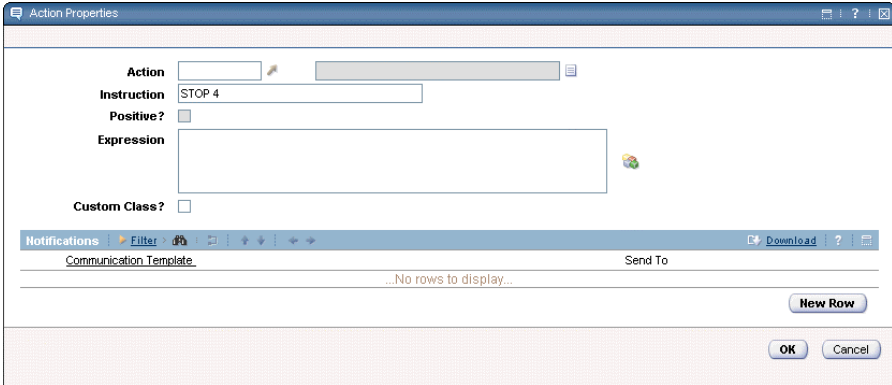
### OPCMMAIN: Configuring the Negative Connection Line from MAINT



If the maintenance supervisor decides not to approve a work order in the OPCMMAIN process, the work order needs to be canceled.

The cancellation will be enacted by means of an action on the negative connection line connected to the MAINT Task node.

We will also send a notification to the originator of the work order that the record has been canceled. This notification will contain variables containing work order information.

Step	Action
1	Access the <b>OPCMMAIN</b> process in the <b>Workflow Designer</b> .
2	<p>Display the properties for the <i>negative</i> connection line coming from the <b>MAINT</b> process.</p> <p><u>Result:</u> The Action Properties dialog box should look similar to the graphic below.</p> 

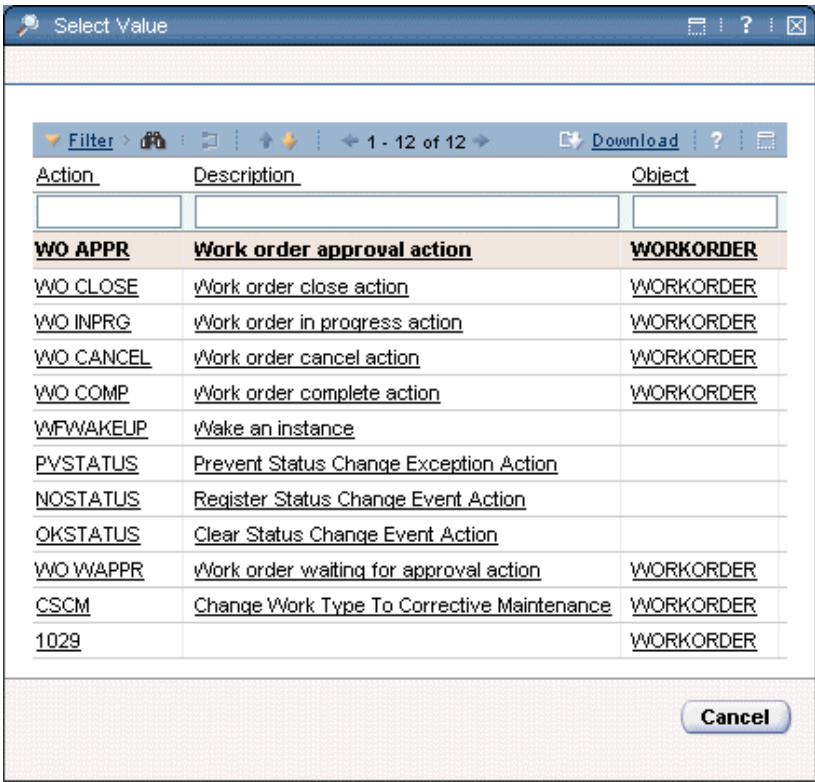
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## Configuring Task Nodes continued

**OPCMMAIN:  
Configuring the  
Negative  
Connection Line  
from MAINT**

continued


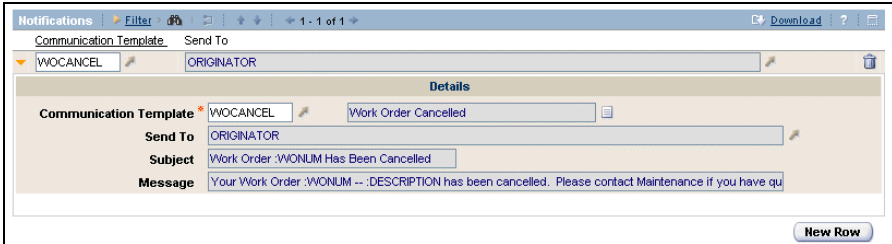
Step	Action
3	<p>Click the <b>Detail Menu</b> button in the <b>Action</b> field and choose <b>Select Value</b> from the resulting menu.</p> <p><u>Result:</u> Maximo displays a list of actions.</p>  <p><u>Note:</u> This list shows only actions that have the same object as the process or that have no associated object.</p>

continued on next page

**Configuring Task Nodes** continued

**OPCMMAIN:  
Configuring the  
Negative  
Connection Line  
from MAINT**

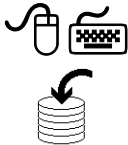
continued

Step	Action
4	<p>Select the <b>WO CANCEL</b> action from the list.</p> <p><u>Result:</u> The list closes and the selected action is shown in the Action field along with its description.</p> 
5	<p>In the <b>Instruction</b> field, enter the following text:</p> <p style="text-align: center;"><b>Cancel This Work Order</b></p> <p><u>Note:</u> This is the text that will show up for the negative line in the Task when run in the process.</p>
6	<p>Insert a notification line.</p>
7	<p>Enter <b>ORIGINATOR</b> in the <b>Send To</b> field.</p> <p><u>Result:</u> The <b>ORIGINATOR</b> role is added to the field. The originator of the work order will receive the notification indicated in the Communication Template.</p>
8	<p>Enter <b>WOCANCEL</b> in the <b>Communication Template</b> field.</p> <p><u>Result:</u> The previously created Communication Template populates the rest of the notification fields.</p> 
9	<p>Click <b>OK</b> in the Action properties dialog box.</p>
10	<p><b>Save</b> the process record.</p>

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## Configuring Task Nodes continued

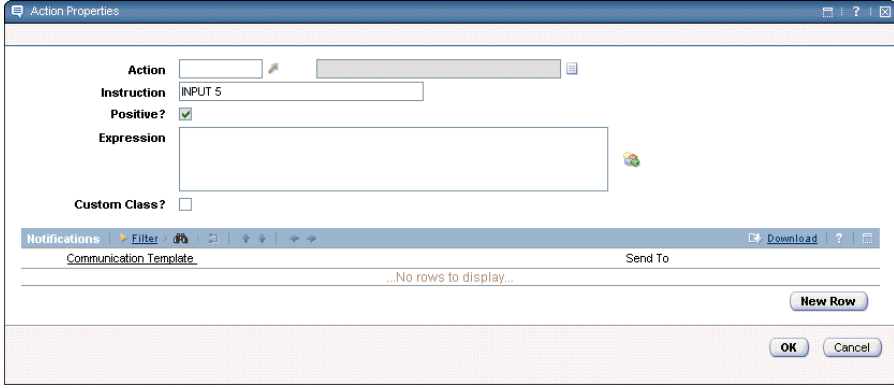
**OPCMMAIN:  
Configure the  
Positive  
Connection Line  
from MAINT**



The positive connection line only connects the MAINT Task node to the next point. It does not perform any actions.

However, the **Instruction** field on this node will contain the positive task text that shows up on the MAINT Task node when the process is run, so we need to modify it.

In addition, we want to send a notice to the originator indicating that the work order has been accepted.


Step	Action
1	<p>Access the properties for the <b>positive</b> line coming from the <b>MAINT</b> Task node.</p> <p><u>Result:</u> The properties should look similar to these:</p> 
2	<p>Enter the following text in the <b>Instruction</b> field: Accept This Work Order</p>

continued on next page

**Configuring Task Nodes** continued

**OPCMMAIN:  
Configure the  
Positive  
Connection Line  
from MAINT**

continued

Step	Action						
3	Insert a notification using the following information: <table border="0"> <tr> <td style="padding-right: 20px;"><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Communication Template</b></td> <td>WOAPPR</td> </tr> <tr> <td><b>Send To</b></td> <td>ORIGINATOR</td> </tr> </table> <u>Result:</u> The notification should look similar to this: 	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Communication Template</b>	WOAPPR	<b>Send To</b>	ORIGINATOR
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Communication Template</b>	WOAPPR						
<b>Send To</b>	ORIGINATOR						
4	Click <b>OK</b> in the properties dialog box. <u>Result:</u> The dialog box closes.						
5	<b>Save</b> the process.						

**Additional  
Notifications**

For our example, we are simply notifying the originator of the work order regarding its movement through the process.

There might be cases in which several people or groups need to be notified of an action. In that case, there are two main options:

- Add an extra notification line and send it to an existing role.
- Create a Communication Template with the desired text and add roles, groups, person groups, and so forth to it. Then, associate that Communication Template with the action.

continued on next page

## Configuring Task Nodes continued

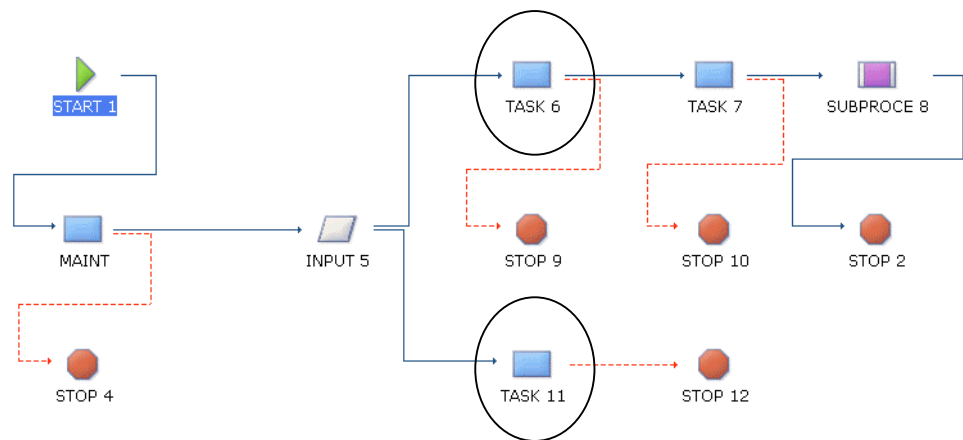
### OPCMMAIN Process



In the following exercise, we will configure your equivalent to TASK 6 and TASK 11 (circled in the diagram below) for the OPCMMAIN process.

As a reference point for which nodes are being configured, use the diagram below.

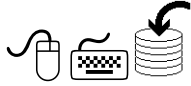
Note: Your Task numbers might differ from this example. If they do, simply configure the Tasks in your Workflow process that correspond with TASK 6 and TASK 11 in the diagram below.



continued on next page

## Configuring Task Nodes continued

### OPCMMAIN: Configuring Task Nodes



Using the diagram on the previous page along with the steps below, configure the *Engineering Acceptance* (corresponds to TASK 6) and *Environmental Acceptance* (corresponds to TASK 11) Task nodes that follow the MAINT task node in the OPCMMAIN process.

#### • Engineering Acceptance Node (corresponds to Task 6 in diagram)

Step	Action
1	Give the task a name and description that indicate what the task does.
2	Assign this task to the existing <b>Engineering</b> person group. <u>Hint:</u> You will have to create a new role.
3	Configure an escalation procedure for the Engineering task. <u>Note:</u> This task should be reassigned to the supervisor if the assigned user does not complete the task within <i>30 minutes</i> . The supervisor for the engineering department is Bob Caldone. <u>Hint:</u> You will have to create a new role for the Escalation Role field; however, the escalation/action combination that you previously created should serve to enact the reassignment process.
4	Configure the positive connection line coming <i>from</i> this node to indicate a proper acceptance instruction to be viewed in the task when the process is run. Also send a notification to the originator that this group has accepted the work order. <u>Note:</u> There will be no action on this line.
5	Configure the negative connection line coming <i>from</i> this node with an action to <i>cancel</i> the work order. Also send a notification to the originator that this group has canceled the work order. <u>Notes:</u> <ul style="list-style-type: none"> <li>• You can use the work order cancellation template that you previously created.</li> <li>• Be sure to include an appropriate task instruction that will be clearly understandable to the user when the process is run.</li> </ul>

continued on next page

## Configuring Task Nodes continued

**OPCMMAIN:  
Configuring  
Task Nodes**

continued

- **Environmental Acceptance Node (corresponds to Task 11 in diagram)**

Step	Action
1	Give the task a name and description that indicate what the task does.
2	Assign this task to the existing <b>Environmental</b> person group. <u>Hint:</u> You will have to create a new role.
3	Configure an escalation procedure for the Environmental Task node. <u>Note:</u> The assignment should be completed within <i>five minutes</i> . If it is not completed on time, the work order should be reassigned to Julie Daniels, the supervisor for the environmental department. <u>Hint:</u> You will have to create a new role for the Escalation Role field; however, the escalation/action combination that you previously created should serve to carry out the escalation.
4	Configure the negative connection line coming <i>from</i> this node with an action to <i>cancel</i> the work order. Also send a notification to the originator that this group has canceled the work order. <u>Note:</u> Be sure to include an appropriate task instruction that will be clearly understandable to the user when the process is run.

## Configuring Manual Input Nodes

### Introduction

*Manual Input* nodes offer a list of options that allow a person to choose what should happen next in the process.

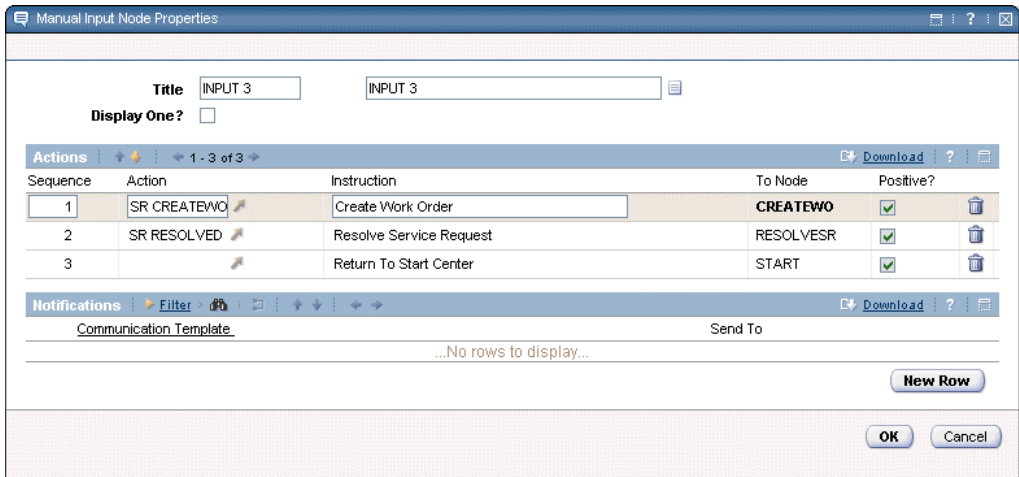


Use the Manual Input node when you reach a point in your process where a person, not the system, must make a decision about what should happen next at runtime.

### Defining the Manual Choice List

The Manual Input node allows a user to make a single selection from a list of choices. The number of possible choices is determined by the number of connections *from* the node directly to processes further on in the process.

An example of a **Manual Input Node Properties** dialog box is shown below. The dialog box displays the list of choices and other related information.



Notifications can be made from this node. Notifications correspond to the Choice List items and are sent out when the choice is made. Each choice must have its own set of notifications.

The table on the next page describes some of the key fields in the Manual Input Node Properties dialog box.

continued on next page



## Configuring Manual Input Nodes continued

---

### Defining the Manual Choice List

continued

<b>Field</b>	<b>Description</b>
<b>Sequence</b>	Indicates the order of the choices when the process is run.
<b>Action</b>	Indicates the action that will occur when the choice is made.
<b>Instruction</b>	Provides the text of the choice as it will appear when the process is run.

---

continued on next page

## Configuring Manual Input Nodes continued

### Example

Here is an example of what a Manual Input might look like while running in a Workflow process.

The number and naming of the choices is set up in the Manual Input node properties.

You would select an option that corresponds to the desired choice, then click **OK** to enact the choice.

You can also enter a **Memo**, which is stored to the Workflow history.

### Negative Connections to/from the Manual Input Node



You *cannot* use a negative connection to connect *from* the Manual Input node to other nodes on the canvas.

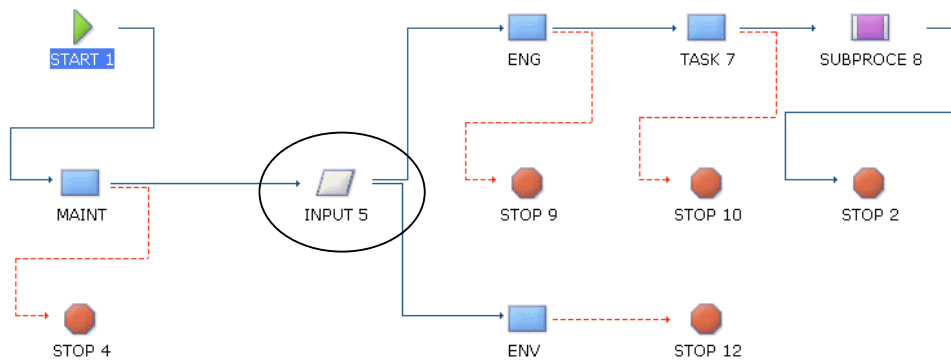
However, you can have a negative node connection *to* the Manual Input node.

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## Configuring Manual Input Nodes continued

**OPCMMAIN  
Process:  
Manual Node  
Configuration**

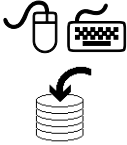
In the following exercise we will configure the single Manual Input node (corresponds to INPUT 5 in the graphic below) in the OPCMMAIN process.



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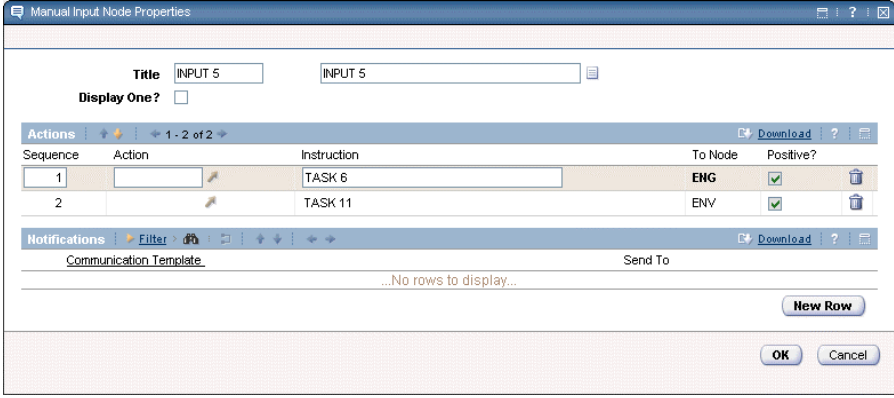
## Configuring Manual Input Nodes continued

### OPCMMAIN: Configuring the Choice List



The Manual Input node in the OPCMMAIN process allows the maintenance supervisor to decide whether to send the work order to the engineering group or to the environmental group.

Note: This node provides for a simple decision. Therefore, no actions are taken other than routing the work order to the appropriate group.

Step	Action						
1	<p>Display the properties for the <b>Manual Input</b> node in the <b>OPCMMAIN</b> process.</p> <p><u>Result:</u> The Properties dialog box will look similar to this:</p> 						
2	<p>Enter the following information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Title</b></td> <td>SUPDEC</td> </tr> <tr> <td><b>Description</b></td> <td>Supervisor Determines Department</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Title</b>	SUPDEC	<b>Description</b>	Supervisor Determines Department
<u>Field</u>	<u>Value</u>						
<b>Title</b>	SUPDEC						
<b>Description</b>	Supervisor Determines Department						

continued on next page

**Configuring Manual Input Nodes** continued

**OPCMMAIN:  
Configuring the  
Choice List**

continued

Step	Action						
3	Enter the following information in the <b>Instruction</b> field for the choices:  <table border="0"> <thead> <tr> <th><u>Sequence</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Send to Engineering Department for Approval</td> </tr> <tr> <td>2</td> <td>Send to Environmental Department for Approval</td> </tr> </tbody> </table> <p><u>Note:</u> The text in the Instruction field is the text that the user will see in the Manual Input decision dialog box when the process is running.</p>	<u>Sequence</u>	<u>Value</u>	1	Send to Engineering Department for Approval	2	Send to Environmental Department for Approval
<u>Sequence</u>	<u>Value</u>						
1	Send to Engineering Department for Approval						
2	Send to Environmental Department for Approval						
4	Click <b>OK</b> .  <u>Result:</u> The property changes are accepted and the dialog box closes. <u>Note:</u> Some of the property changes made in the Manual Input node are also reflected in the properties of the connection lines coming from the node.						
5	<b>Save</b> the process.						

## Configuring Interaction Nodes

### Overview

An *Interaction* node is used to help lead an end user down particular problem resolution paths by offering well-defined choices that guide the user through a scripted path and manage the relationship with the record in any given session.

<b>Title</b>	SHOWWO	Show the newly created work order
<b>Application</b>	WOTRACK	
<b>Tab Name</b>	Work Orders	
<b>Action</b>		
<b>Relation</b>	NEWWORKORDER	
<b>Launch Process</b>	MASSUWO	
<b>Directions Title</b>		
<b>Directions Body</b>		

### Examples:

- You can cause a message to pop up on the screen in a dialog box. This message could inform users about something that they need to know or do during the process.
- If a new record type is created from another record type using an action, the new record could be displayed in its application for the user without the user's having to access the new record manually.

The application for the new record and the specific tab could be indicated in the **Application** and **Tab Name** fields.

continued on next page

## Configuring Interaction Nodes continued

---

### Overview

continued

- A choice from the Select Action list of the indicated application could be indicated in the Action field.

Note: It must be emphasized that, in this case, we are referring to choices available in the *Select Action* menu of the specified application, not choices from the Actions application.

- Another valuable way that an Interaction node can be used is to indicate another Workflow process to be started. The process would be indicated in the **Launch Process** field.
- 

### Will Use for Mass U Processes

The Interaction node is not used in the OPUS processes, so we will not go into detail here on its use.

However, Interaction nodes will be used in the Mass U processes.

We will go into more detail when building the Mass U processes. In these processes, you will have a chance to use the Interaction node in a variety of ways.

---

## Configuring Wait Nodes

### Overview

When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the events indicated in the Wait List occur.

Example: A Workflow process dealing with equipment moves might wait until a piece of equipment is disabled, down, or taken out of service before it assigns and notifies a technician to the job.

Note: The event that unpauses the wait could be internal or externally generated.

The Wait node is an advanced feature. To configure this node you should be familiar with Maximo internal operations.

The following example of a Wait Node Event trigger indicates that the Workflow process is waiting for the work order in the process to change to a status of WMATL (Waiting for Material):

**maximo.workorder.statuschange.wmatl**



## Chapter Summary

---

### Configuring Nodes

Each node and connection action in a Workflow process must be configured individually.

The type of information contained in the properties of each will vary, depending on the canvas component that you have selected.

Use the Properties dialog box to define node behavior.

---

### Viewing Properties

Properties for nodes and lines can be viewed in four ways:

- Right-click the node/line on the canvas and select **Properties** from the resulting drop-down list.
  - Double-click the node/line on the canvas.
  - Click the node/line on the canvas and click the **Properties** button.
  - Click the **Properties** button on the desired node listed on the Process tab.
- 

### Condition Elements

The Condition node consists of the following elements:

- **Title** and description
- An SQL **Expression** that tests a value in the database
- An **Expression Builder** that can help you to build SQL expressions, if desired
- An indicator of whether a **Custom Class** is being used for the test

Note: Positive and negative connector lines are used to indicate the direction followed by the process after evaluating the expression.

---

### Condition Nodes

You include Condition nodes in your process when you want the next step in the process to be determined based on a data value.

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## Chapter Summary continued

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**Connector/  
Action Lines**

The lines that connect nodes also have the ability to cause system actions to occur. They also can be used to identify who receives notifications when the action takes place.

---

**Subprocess  
Nodes**

The Subprocess node allows you to streamline your process diagrams. It allows you to break a specific branch of your process into a separate process. When the subprocess ends, control of the record is returned to the main process.

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**Task Nodes**

You can use the Task node to configure an *action* or an *approval* in the Workflow process.

A process can have one or multiple Task nodes based on the number of actions that are required at your site.

---

**Manual Input  
Nodes**

Manual Input nodes offer a list of options from which you can choose what should happen next in the process.

Use the Manual Input node when you reach a point in your process where a person, not the system, must make a decision about what should happen next at runtime.

---

**Interaction  
Nodes**

An Interaction node helps lead an end user down particular problem resolution paths by offering well-defined choices that guide the user through a scripted path and manage the relationship with the record in any given session.

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## Workshop

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### Introduction

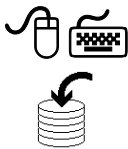
Throughout this chapter you have configured several nodes in the several different processes.

This workshop exercise will have you finish configuring several Workflow processes.

You can use the flowchart answers for Chapter 7 to better follow the process.

---

### Creating Roles



Use the following information in the table to create new roles for the WORKORDER object.

These roles will be used in some of the following workshops.

Role	RPTBYSUP	WOREPBY	WOSUPER
Description	Reported By Supervisor	Work Order Reported By	Work Order Supervisor
Type	DATASET	DATASET	DATASET
Value	:REPORTEDBY.SUPERVISOR	:REPORTEDBY.PERSONID	:SUPERVISOR

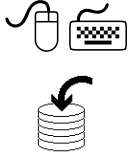
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**Workshop** continued

**Creating Actions**

Use the information in the following table to create new actions for the WORKORDER object:

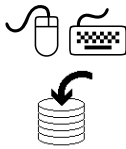


Action	WO WMATL	WOTYPECM
<b>Description</b>	Change Work Order Status To WMATL	Change Work Order Type To CM
<b>Type</b>	CHANGESTATUS	SETVALUE
<b>Value</b>	WMATL	WORKTYPE
<b>Parameter</b>	-----	CM

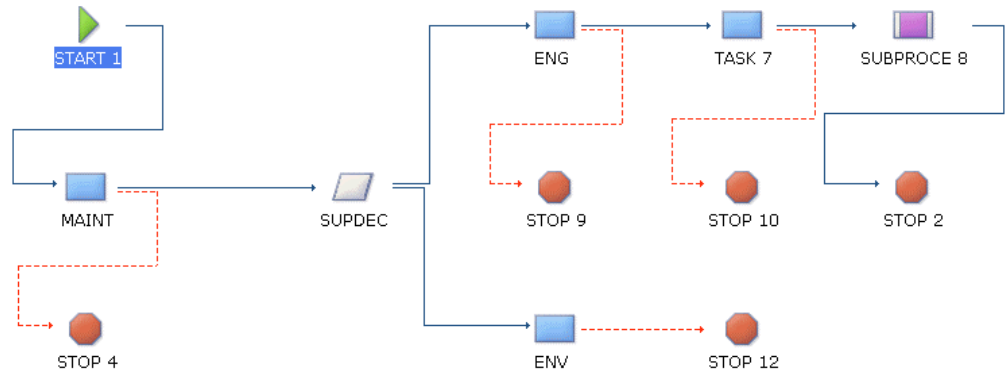
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**Workshop** continued

**Workshop1:  
OPUS:  
OPCMMAIN**



In this section we will complete the OPCMMAIN process. The graphic below represents what the process should look like at this point.



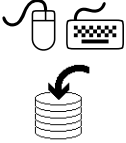
Note: The nodes that have not been configured might have different numbers in the graphic than what you are seeing in your process, depending on the order in which you added them. This is okay.

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## Workshop continued

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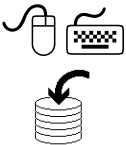
### OPCMMAIN: Safety Task Node



In the OPCMMAIN process, use the following information to configure the *Safety Approval* task node (TASK 7 in the diagram):

- Locate the last Task node to be configured (the one after the Engineering and Environmental acceptances). Name the node **SAFETY** and enter an appropriate description.
  - Assign the task to the existing Safety Person Group.
  - Enter instructions on the positive and negative connection lines coming *from* this node that will display in the Task when the process runs.
  - Configure the negative line coming *from* this node to cancel the record if the safety department rejects the work order. Send a notification to the originator that the work order has been canceled.
  - Do not configure an action in the positive connection line coming *from* this node.
- 

### OPCMMAIN: Financial Subprocess Node



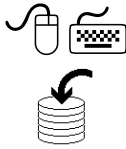
In the OPCMMAIN process, use the following information to configure the Cost Approval Subprocess node (SUBPROCE 8 in the diagram).

- Locate the Subprocess node, name it SUBCOST, and enter the description “Cost Approval Subprocess.”
  - Use the flow for financial approval process – OPFIN.
- 

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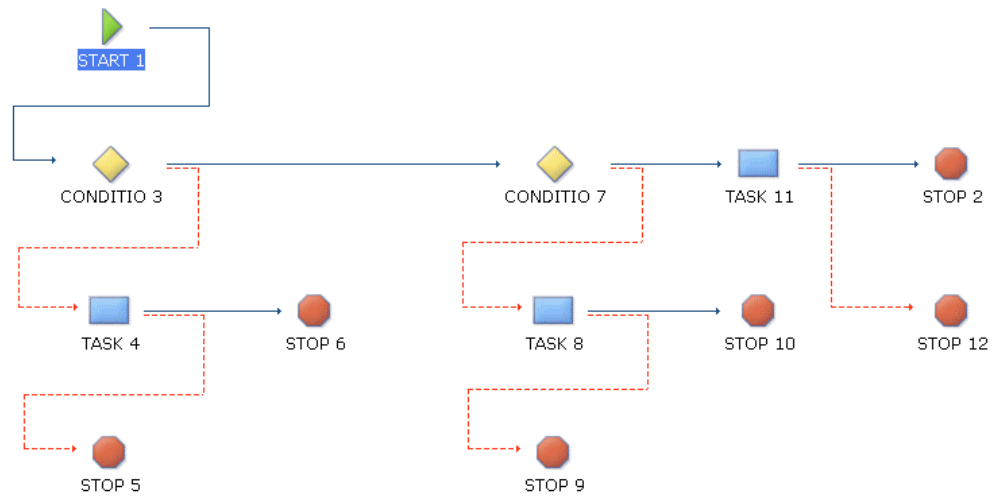
**Workshop** continued

**Workshop 2**  
**OPUS: OPFIN**

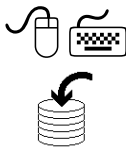


In this section you will complete the configuration of the OPFIN process that we started earlier. Use the provided information to configure the nodes.

At this point, the OPFIN process should look similar to the graphic below.



**OPFIN: COST1**  
**Condition Node**



Locate the first Condition node (CONDITIO 3 in the diagram) and name it *COST1*. Configure the node to test whether the estimated total cost of the work order is greater than \$5,000.

*Total cost* is defined as the sum of Estimated Labor Cost, Estimated Material Cost, Estimated Service Cost, and Estimated Tool Cost.

Notes:

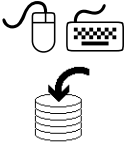
- Use the plus sign (+) on your keyboard or the Math functions of the Expression Builder to build the calculation.
- Write the value 5000 *without* the \$ sign or any additional punctuation.

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## Workshop continued

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### OPFIN: FINAPPR1 Task Node



Locate the first Task node (TASK 4 in the diagram) – negatively connected to the Condition node you just configured.

Use the following information to configure the node as the *Financial Approval – Level 1* task.

- Name the task FINAPPR1 and enter an appropriate task description.
  - Assign the task to the existing Finance Person Group.
  - Enter positive and negative connection instructions that will display in the task when running in the process.
  - Configure the process to approve the record if the finance department approves the work order.
  - Configure the process to cancel the record if the finance department rejects the work order.
- 

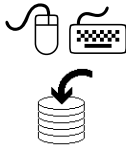
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## Workshop continued

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### OPFIN: COST2 Condition Node



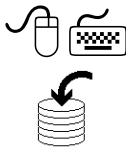
Locate the second condition node (CONDITIO 7 in the diagram) after COST1 and name it COST2.

Configure the Condition node to test whether the total cost of the work order is greater than \$50,000.

#### Notes:

- *Total cost* is defined as the sum of Estimated Labor Cost, Estimated Material Cost, Estimated Service Cost, and Estimated Tool Cost.
  - Use the plus sign (+) on your keyboard or the Math functions of the Expression Builder to build the calculation.
  - Write the value 50000 *without* the \$ sign or any additional punctuation.
- 

### OPFIN: FINAPPR2 Task Node



Use the following information to configure the *Financial Approval - Level 2* task (TASK 8 in the diagram) – the task *negatively* connected to COST2.

- Name the task FINAPPR2 and enter a task description.
- Assign the task to the finance supervisor, Frank Jones.

Note: You will need to create a role.

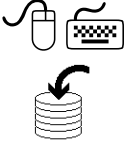
- Add appropriate instructions on the connecting lines that will display in the task when the process is running.
  - Configure the process to approve the record if the finance supervisor approves the work order.
  - Configure the process to cancel the record if the finance supervisor rejects the work order.
- 

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## Workshop continued

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### OPFIN: FINAPPR3 Task Node



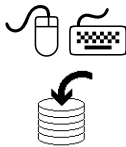
Use the following information to configure the *Financial Approval – Level 3* task (TASK 11 in the diagram) – the remaining unconfigured task.

- Name the task **FINAPPR3** and enter a task description.
  - Assign the task to the finance manager, Lou Granger. *You will need to create a role to complete this step.*
  - Enter instructions that will display on the task when running in a process.
  - Configure the process to approve the record if the finance manager approves the work order.
  - Configure the process to cancel the record if the finance manager rejects the work order.
- 

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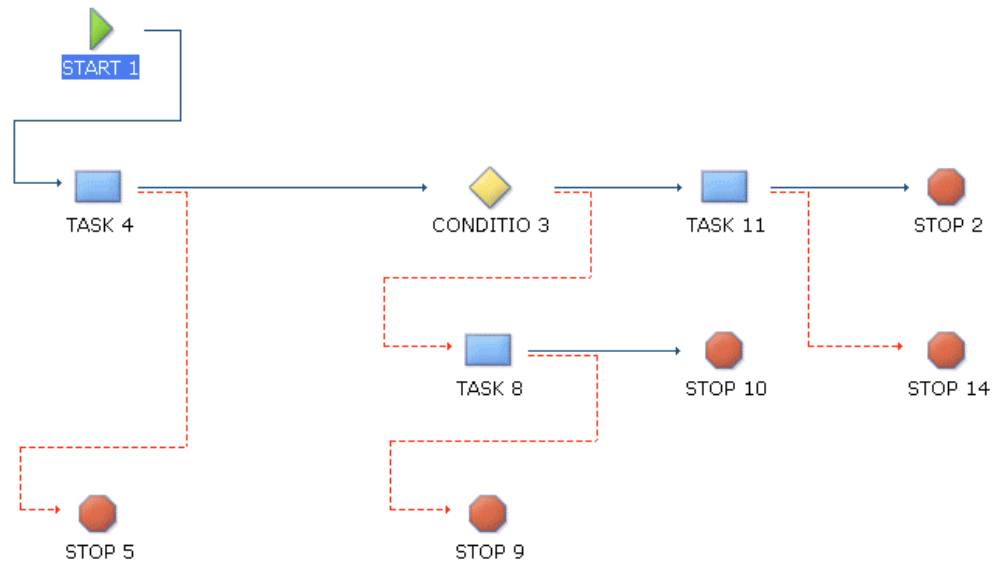
**Workshop** continued

**Workshop 3:  
OPUS:  
OPPMMAIN**

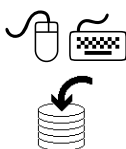


In this workshop, you will use the instructions and the diagram below to configure the OPPMMAIN process.

At this point the OPPMMAIN process should look similar to the graphic below.



**OPPMMAIN:  
SAFETY Task  
Node**



For the first Task node (TASK 4 in the diagram), use the following information to configure the *Safety Approval* task.

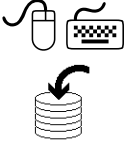
- Name the node **SAFETY** and provide a description.
- Assign the task to the existing Safety Person Group.
- Enter appropriate instructions that will display the tasks when running in the process.
- Configure the process to cancel the record if the safety department rejects the work order.
- Do not configure an action for the positive connector line.

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## Workshop continued

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### OPPMMAIN: Cost Condition Node

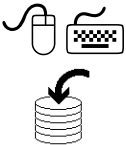


Configure the Cost Condition node (CONDITIO 3 in the diagram) to test whether the total cost of the work order is greater than \$5,000.

#### Notes:

- *Total cost* is defined as the sum of Estimated Labor Cost, Estimated Material Cost, Estimated Service Cost, and Estimated Tool Cost.
  - Use the plus sign (+) on your keyboard to build the calculation.
- 

### OPPMMAIN: FINAPPR1 Task Node



For the Finance Task node (TASK 8 in the diagram) that is assigned because the cost is *less than \$5,000*:

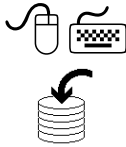
- Name the node FINAPPR1 and add a description.
  - Assign the task to the existing Financial group.
  - Enter instructions that will display on the task when running in a process.
  - Configure the process to approve the record if the finance department approves the work order.
  - Configure the process to cancel the record if the finance department rejects the work order.
- 

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## Workshop continued

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### OPMMAIN: FINAPPR2 Task Node



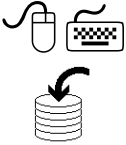
For the Finance Task node (TASK 11 in the diagram) that is assigned because the cost is *greater than \$5,000*:

- Name the task FINAPPR2 and enter a task description.
  - Assign the task to the finance supervisor, Frank Jones.
  - Enter instructions that will display in the task.
  - Configure the process to approve the record if the finance supervisor approves the work order.
  - Configure the process to cancel the record if the finance supervisor rejects the work order.
- 

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## Workshop continued

### Workshop 4A: Mass U MASSUWO

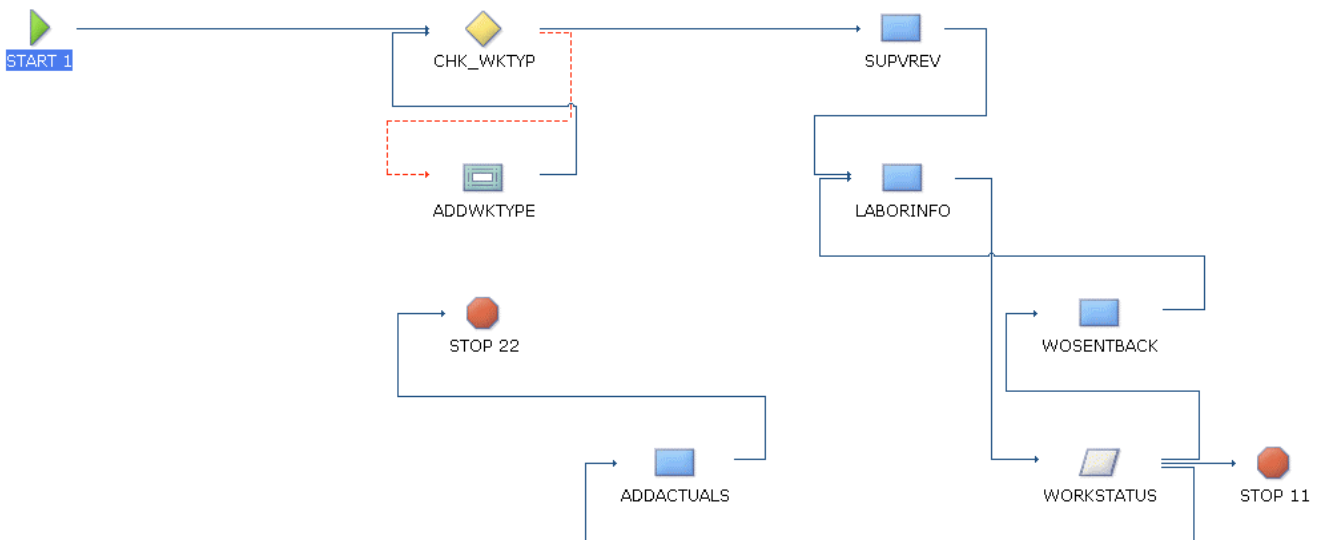


In this workshop you will configure the MASSUWO process. The workshop will lead you step-by-step to configure nodes and connection lines.

When you have configured all of the nodes, your process should look similar to the diagram below.

#### Notes:

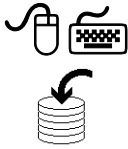
- Throughout this exercise you will see node names in parentheses that correspond to the graphic below.
- Although the MASSUSR process comes first in the series of events, it refers to the MASSUWO process in one of its nodes. Therefore, we will configure and enable the MASSUWO process first.



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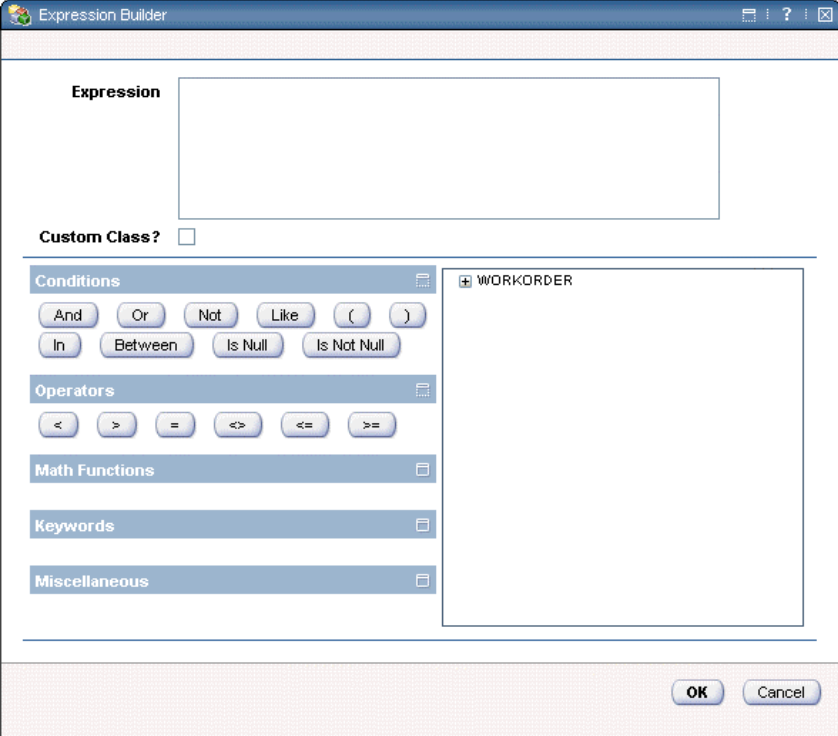
**Workshop** continued

**MASSUWO:  
Condition Node**



Follow the instructions below to configure the Condition node (CHK\_WKTYP).

Note: This node checks whether the Work Type field has been completed in the work order.

Step	Action						
1	Access the properties for the <b>Condition</b> node.						
2	Enter the following information: <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>CHK_WKTYP</td> </tr> <tr> <td><b>Description</b></td> <td>Is Work Type Complete?</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	CHK_WKTYP	<b>Description</b>	Is Work Type Complete?
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Title</b>	CHK_WKTYP						
<b>Description</b>	Is Work Type Complete?						
3	Click the <b>Expression Builder</b> icon to display the <b>Expression Builder</b> dialog box. 						

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**Workshop** continued

**MASSUWO:** continued  
**Condition Node**

Step	Action
4	Using the <b>Expression Builder</b> drill-down and buttons, build the following expression: <p style="text-align: center;">:WORKTYPE is not null</p> <u>Note:</u> You could manually enter the expression, as well. However, we want to give you some exposure to the Expression Builder.
5	Click <b>OK</b> to accept the node properties.
6	<b>Save</b> the process.

**MASSUWO:**  
**Interaction Node**



Follow the instructions below to configure the Interaction node (ADDWKTYPE).

Note: This node will display a dialog box informing the user that the work type has not been completed.

Step	Action										
1	Access the properties of the Interaction node ( <b>ADDWKTYPE</b> ).										
2	Enter the following information: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Field</u></th> <th style="text-align: left;"><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Title</b></td> <td>ADDWKTYPE</td> </tr> <tr> <td><b>Description</b></td> <td>Notice: Need To Add Work Type</td> </tr> <tr> <td><b>Directions Title</b></td> <td>Work Type Needed</td> </tr> <tr> <td><b>Directions Body</b></td> <td>Be sure to complete the work type on the work order.</td> </tr> </tbody> </table> <p><u>Note:</u> The text in the Directions Body field will be the message that displays to the user.</p>	<u>Field</u>	<u>Value</u>	<b>Title</b>	ADDWKTYPE	<b>Description</b>	Notice: Need To Add Work Type	<b>Directions Title</b>	Work Type Needed	<b>Directions Body</b>	Be sure to complete the work type on the work order.
<u>Field</u>	<u>Value</u>										
<b>Title</b>	ADDWKTYPE										
<b>Description</b>	Notice: Need To Add Work Type										
<b>Directions Title</b>	Work Type Needed										
<b>Directions Body</b>	Be sure to complete the work type on the work order.										
3	Click <b>OK</b> to accept the node properties.										
4	<b>Save</b> the process.										

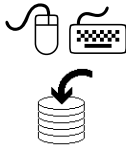
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**Workshop** continued

**MASSUWO: First Task Node**

Follow the instructions below to configure the first Task node (SUPVREV).



Step	Action								
1	Access the properties of the first Task node in the process (SUPVREV).								
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>SUPVREV</td> </tr> <tr> <td><b>Description</b></td> <td>Supervisor Reviews and Schedules Work</td> </tr> <tr> <td><b>Time Limit</b></td> <td>1:00</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	SUPVREV	<b>Description</b>	Supervisor Reviews and Schedules Work	<b>Time Limit</b>	1:00
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	SUPVREV								
<b>Description</b>	Supervisor Reviews and Schedules Work								
<b>Time Limit</b>	1:00								
3	Insert a new Assignment row.								
4	Hyperlink from the <b>Role ID</b> field to the <b>Roles</b> application.								
5	Create a PERSONGROUP role named <b>MASSUFOSUP</b> and associate it to the MUMAIN Person Group that you created in a previous exercise. <u>Notes:</u> <ul style="list-style-type: none"> <li>• This is a role for Mass U supervisors.</li> <li>• Associate the role with the WORKORDER object.</li> <li>• Ensure that this role is configured as <i>broadcast</i>, so all persons in the role will get the assignment.</li> </ul>								
6	Return from the <b>Roles</b> application with the new Role ID value.								
7	Click <b>OK</b> to accept the node properties.								
8	<b>Save</b> the process.								

continued on next page

**Workshop** continued

**MASSUWO: Line Connecting SUPVREV Task Node with LABORINFO Task**

Follow the instructions below to configure the positive connection line that connects the SUPREV Task node with the next Task node in the process (LABORINFO).



Step	Action												
1	Access the properties from the positive line that connects the SUPREV Task node with the next Task node in the process ( <b>LABORINFO</b> )												
2	Enter the following information <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>WO APPR</td> </tr> <tr> <td><b>Instruction</b></td> <td>Send Work Order To Labor</td> </tr> </table> <p><u>Note</u>: The action on this line causes the work order status to change to APPR. This action has already been created in the database.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	WO APPR	<b>Instruction</b>	Send Work Order To Labor						
<b><u>Field</u></b>	<b><u>Value</u></b>												
<b>Action</b>	WO APPR												
<b>Instruction</b>	Send Work Order To Labor												
3	Add a notification line.												
4	From the new notification line, hyperlink from the <b>Send To</b> field to the <b>Roles</b> application and create a role with the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Role</b></td> <td>WOREPORTBY</td> </tr> <tr> <td><b>Description</b></td> <td>Reported By On Work Order</td> </tr> <tr> <td><b>Object</b></td> <td>WORKORDER</td> </tr> <tr> <td><b>Type</b></td> <td>DATASET</td> </tr> <tr> <td><b>Value</b></td> <td>:REPORTEDBY</td> </tr> </table> <p><u>Note</u>: This role will create an association with the person listed in the Reported By field on the work order. This is the field that contains the information about the person who initially entered the service request that was transformed into the work order.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Role</b>	WOREPORTBY	<b>Description</b>	Reported By On Work Order	<b>Object</b>	WORKORDER	<b>Type</b>	DATASET	<b>Value</b>	:REPORTEDBY
<b><u>Field</u></b>	<b><u>Value</u></b>												
<b>Role</b>	WOREPORTBY												
<b>Description</b>	Reported By On Work Order												
<b>Object</b>	WORKORDER												
<b>Type</b>	DATASET												
<b>Value</b>	:REPORTEDBY												

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**Workshop** continued

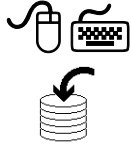
**MASSUWO: Line** continued  
**Connecting**  
**SUPVREV Task**  
**Node with**  
**LABORINFO**  
**Task**

Step	Action								
5	Save the new role record and return to the notification with value.								
6	Enter the following information in the notification: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Description</b></td> <td>Assignment Note To Requestor</td> </tr> <tr> <td><b>Subject</b></td> <td>Work Order :WONUM Has Been Assigned</td> </tr> <tr> <td><b>Message</b></td> <td>Work Order :WONUM has been assigned by the Maintenance Supervisor. You will receive an additional notification when the work has been completed.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Description</b>	Assignment Note To Requestor	<b>Subject</b>	Work Order :WONUM Has Been Assigned	<b>Message</b>	Work Order :WONUM has been assigned by the Maintenance Supervisor. You will receive an additional notification when the work has been completed.
<u>Field</u>	<u>Value</u>								
<b>Description</b>	Assignment Note To Requestor								
<b>Subject</b>	Work Order :WONUM Has Been Assigned								
<b>Message</b>	Work Order :WONUM has been assigned by the Maintenance Supervisor. You will receive an additional notification when the work has been completed.								
7	Click <b>OK</b> to accept the node properties.								
8	Save the process.								

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**Workshop** continued

**MASSUWO:  
Second Task  
Node**



The instructions below will show you how to configure the second Task node in the process (LABORINFO).

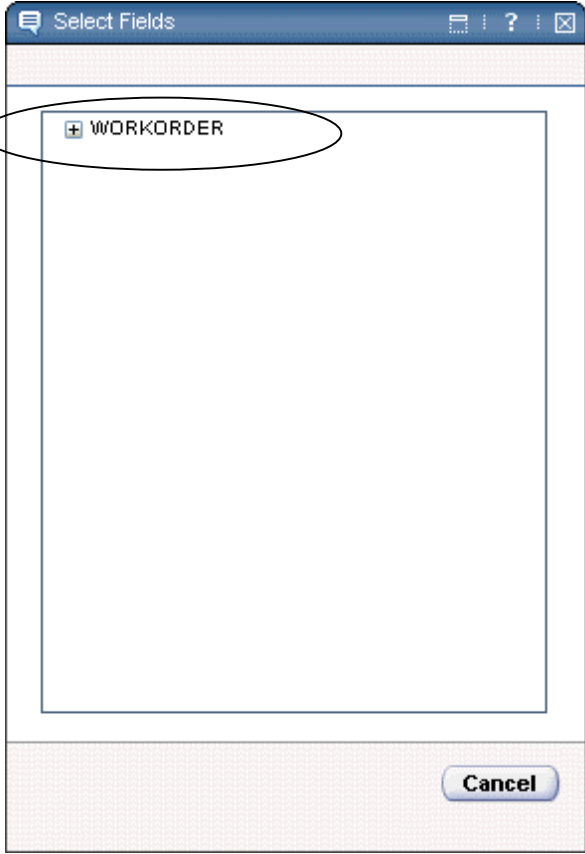
Step	Action								
1	Access the properties of the second Task node in the process ( <b>LABORINFO</b> ).								
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>LABORINFO</td> </tr> <tr> <td><b>Description</b></td> <td>Labor Indicates Work Situation</td> </tr> <tr> <td><b>Time Limit</b></td> <td>:30</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	LABORINFO	<b>Description</b>	Labor Indicates Work Situation	<b>Time Limit</b>	:30
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	LABORINFO								
<b>Description</b>	Labor Indicates Work Situation								
<b>Time Limit</b>	:30								
3	Insert a new Assignment row.								
4	Hyperlink from the <b>Role ID</b> field to the <b>Roles</b> application.								
5	Create a new role named <b>WOLABOR</b> using this information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Description</b></td> <td>Work Order Labor</td> </tr> <tr> <td><b>Object</b></td> <td>WORKORDER</td> </tr> <tr> <td><b>Type</b></td> <td>DATASET</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Description</b>	Work Order Labor	<b>Object</b>	WORKORDER	<b>Type</b>	DATASET
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Description</b>	Work Order Labor								
<b>Object</b>	WORKORDER								
<b>Type</b>	DATASET								

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**Workshop** continued

**MASSUWO:  
Second Task  
Node**

continued

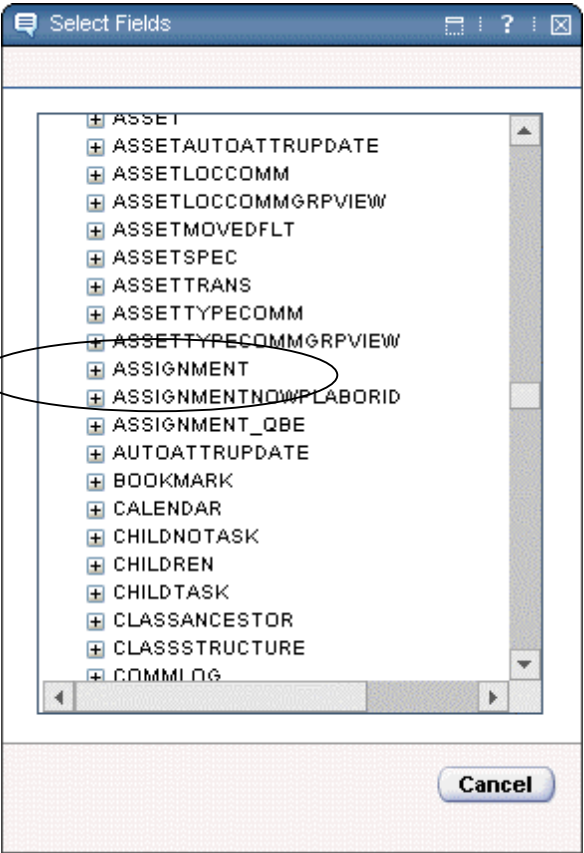
Step	Action
6	<p>Click the <b>Detail Menu</b> button for the <b>Value</b> field.</p> <p><u>Result:</u> The Select Field dialog box displays the table associated with the role's object. In this case, it is the WORKORDER table.</p>  <p><u>Note:</u> This dialog box allows you to drill down to the data that you want to associate with this role.</p>

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### Workshop continued

**MASSUWO:  
Second Task  
Node**

continued

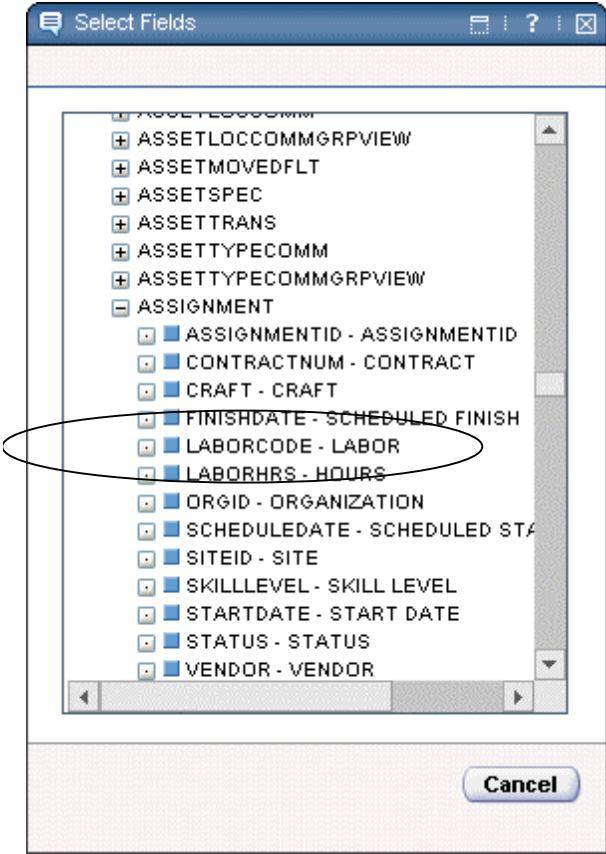
Step	Action
7	<p>Drill down in the WORKORDER table until you get to the <b>ASSIGNMENT</b> relationship line, as shown below.</p> <div><p>The screenshot shows a 'Select Fields' dialog box with a list of database tables. The tables listed are: ASSET, ASSETAUTOATTRUPDATE, ASSETLOCCOMM, ASSETLOCCOMMGRPVIEW, ASSETMOVEDFLT, ASSETSPEC, ASSETTRANS, ASSETTYPECOMM, ASSETTYPECOMMGRPVIEW, ASSIGNMENT, ASSIGNMENTNOWLABORID, ASSIGNMENT_QBE, AUTOATTRUPDATE, BOOKMARK, CALENDAR, CHILDNOTASK, CHILDREN, CHILDTASK, CLASSANCESTOR, CLASSSTRUCTURE, and COMMLOG. The 'ASSIGNMENT' table is circled in red.</p></div> <p><u>Hint:</u> Relationships are listed below the drilldown section that contains the actual table fields.</p>

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**Workshop** continued

**MASSUWO:  
Second Task  
Node**

continued

Step	Action
8	<p>Drill down in the Assignment relationship and find the <b>LABORCODE</b> line.</p> <p><u>Result:</u> Your screen should look similar to the graphic below.</p>  <p>The screenshot shows a 'Select Fields' dialog box with a tree view of fields. The 'ASSIGNMENT' folder is expanded, and the 'LABORCODE - LABOR' field is circled. Other fields include ASSETLOCCOMMGRPVIEW, ASSETMOVEDFLT, ASSETSPEC, ASSETTRANS, ASSETTYPECOMM, ASSETTYPECOMMGRPVIEW, ASSIGNMENTID - ASSIGNMENTID, CONTRACTNUM - CONTRACT, CRAFT - CRAFT, FINISHDATE - SCHEDULED FINISH, LABORHRS - HOURS, ORGID - ORGANIZATION, SCHEDULEDATE - SCHEDULED STA, SITEID - SITE, SKILLEVEL - SKILL LEVEL, STARTDATE - START DATE, STATUS - STATUS, and VENDOR - VENDOR. A 'Cancel' button is visible at the bottom right of the dialog box.</p>

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**Workshop** continued

**MASSUWO:  
Second Task  
Node**

continued

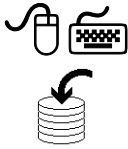
Step	Action
9	<p>Select the <b>LABORCODE</b> line.</p> <p><u>Result:</u> The Value field should look similar to the graphic below. The value should be :ASSIGNMENT.LABORCODE</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The screenshot shows a configuration window with four rows: 'Object' with 'WORKORDER', 'Type' with 'DATASET', 'Value' with ':ASSIGNMENT.LABORCODE', and 'Parameter' which is empty. The 'Value' field is circled in red.</p> </div> <p><u>Note:</u> You could try entering the value directly, but using the drill-down ensures proper syntax for the desired value.</p>
10	Ensure that the <b>Broadcast</b> field is checked.
11	<b>Save</b> the role, then return from the <b>Roles</b> application with the new Role ID value.
12	Enter MASSUFOSUP in the <b>Escalation Role</b> field. <u>Note:</u> We created this role in a previous exercise.
13	Click <b>OK</b> to accept the node properties.
14	<b>Save</b> the process.

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**Workshop** continued

**MASSUWO:  
Third Task Node**



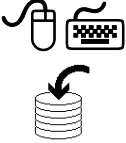
The instructions below will show you how to configure the third Task node in the process (WOSENTBACK).

Step	Action								
1	Access the properties of the third Task node in the process (WOSENTBACK).								
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>WOSENTBACK</td> </tr> <tr> <td><b>Description</b></td> <td>Work Sent Back By Labor</td> </tr> <tr> <td><b>Time Limit</b></td> <td>:30</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	WOSENTBACK	<b>Description</b>	Work Sent Back By Labor	<b>Time Limit</b>	:30
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	WOSENTBACK								
<b>Description</b>	Work Sent Back By Labor								
<b>Time Limit</b>	:30								
3	Insert a new Assignment row.								
4	Enter the following information in the new assignment row. <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Role ID</b></td> <td>MASSUFOSUP</td> </tr> <tr> <td><b>Description</b></td> <td>WO Sent Back By Labor - Review</td> </tr> <tr> <td><b>Time Limit</b></td> <td>:30</td> </tr> </table> <u>Note:</u> The MASSUFOSUP role was previously created.	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Role ID</b>	MASSUFOSUP	<b>Description</b>	WO Sent Back By Labor - Review	<b>Time Limit</b>	:30
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Role ID</b>	MASSUFOSUP								
<b>Description</b>	WO Sent Back By Labor - Review								
<b>Time Limit</b>	:30								
5	Click <b>OK</b> to accept the node properties.								
6	<b>Save</b> the process.								

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## Workshop continued

### MASSUWO: Fourth Task Node



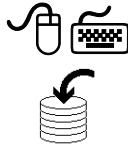
The instructions below will show you how to configure the fourth task node in the process (ADDACTUALS).

Step	Action								
1	Access the properties of the fourth Task node in the process (ADDACTUALS).								
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>ADDACTUALS</td> </tr> <tr> <td><b>Description</b></td> <td>Add The Actuals For The Work Order</td> </tr> <tr> <td><b>Time Limit</b></td> <td>1:00</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	ADDACTUALS	<b>Description</b>	Add The Actuals For The Work Order	<b>Time Limit</b>	1:00
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Title</b>	ADDACTUALS								
<b>Description</b>	Add The Actuals For The Work Order								
<b>Time Limit</b>	1:00								
3	Insert a new Assignment row.								
4	Enter the following information in the new assignment row. <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Role ID</b></td> <td>WOLABOR</td> </tr> <tr> <td><b>Description</b></td> <td>Add The Actuals For The Work Order</td> </tr> <tr> <td><b>Time Limit</b></td> <td>1:00</td> </tr> </table> <u>Note</u> : The WOLABOR role was previously created.	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Role ID</b>	WOLABOR	<b>Description</b>	Add The Actuals For The Work Order	<b>Time Limit</b>	1:00
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Role ID</b>	WOLABOR								
<b>Description</b>	Add The Actuals For The Work Order								
<b>Time Limit</b>	1:00								
5	Click <b>OK</b> to accept the node properties.								
6	<b>Save</b> the process.								

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**Workshop** continued

**MASSUWO:  
Manual Input  
Node**



The instructions below will show you how to configure the Manual Input node (WORKSTATUS).

Step	Action										
1	Access the properties of the Manual Input node ( <b>WORKSTATUS</b> ).										
2	Enter the following main properties for the Manual Input node: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Title</b></td> <td>WORKSTATUS</td> </tr> <tr> <td><b>Description</b></td> <td>Determine Work Status</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	WORKSTATUS	<b>Description</b>	Determine Work Status				
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Title</b>	WORKSTATUS										
<b>Description</b>	Determine Work Status										
3	Enter the following information for the line going to the ADDACTUALS node: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>[no action on this line]</td> </tr> <tr> <td><b>Instruction</b></td> <td>Work Has Been Done</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	[no action on this line]	<b>Instruction</b>	Work Has Been Done				
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Action</b>	[no action on this line]										
<b>Instruction</b>	Work Has Been Done										
4	With the ADDACTUALS row selected, add a notification line with the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Description</b></td> <td>Completion Note To Requestor</td> </tr> <tr> <td><b>Send To</b></td> <td>WOREPORTBY (<i>created in a previous exercise</i>)</td> </tr> <tr> <td><b>Subject</b></td> <td>Work Order :WONUM Has Been Done</td> </tr> <tr> <td><b>Message</b></td> <td>Work Order :WONUM has been finished. Please call Maintenance if there are any problems or questions.</td> </tr> </table> <p><u>Note:</u> Each row in the Manual Input node has its own set of notifications. The information in the node and the notifications also shows in the properties of the relevant connection line coming <i>from</i> the node.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Description</b>	Completion Note To Requestor	<b>Send To</b>	WOREPORTBY ( <i>created in a previous exercise</i> )	<b>Subject</b>	Work Order :WONUM Has Been Done	<b>Message</b>	Work Order :WONUM has been finished. Please call Maintenance if there are any problems or questions.
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Description</b>	Completion Note To Requestor										
<b>Send To</b>	WOREPORTBY ( <i>created in a previous exercise</i> )										
<b>Subject</b>	Work Order :WONUM Has Been Done										
<b>Message</b>	Work Order :WONUM has been finished. Please call Maintenance if there are any problems or questions.										

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**Workshop** continued

**MASSUWO:  
Manual Input  
Node**

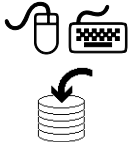
continued

Step	Action										
5	Enter the following information for the line going to the WOSENTBACK node:  <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>WO WMATL (<u>Note</u>: This action must be created; see hint below.)</td> </tr> <tr> <td><b>Instruction</b></td> <td>Issues With Work - Send Back To Supv</td> </tr> </table> <p><u>Hint</u>: The WO WMATL action must be created. Hyperlink to the Actions application and create a CHANGESTATUS type action record, then bring back the value. Use the Detail Menu button on the Value field to choose the desired status.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	WO WMATL ( <u>Note</u> : This action must be created; see hint below.)	<b>Instruction</b>	Issues With Work - Send Back To Supv				
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Action</b>	WO WMATL ( <u>Note</u> : This action must be created; see hint below.)										
<b>Instruction</b>	Issues With Work - Send Back To Supv										
6	Enter the following information for the line going to the <b>STOP</b> node:  <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>WO CANCEL</td> </tr> <tr> <td><b>Instruction</b></td> <td>Work Canceled</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	WO CANCEL	<b>Instruction</b>	Work Canceled				
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Action</b>	WO CANCEL										
<b>Instruction</b>	Work Canceled										
7	For the STOP row, add a notification line with the following information:  <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Description</b></td> <td>Cancellation Note To Requestor</td> </tr> <tr> <td><b>Send To</b></td> <td>WOREPORTBY</td> </tr> <tr> <td><b>Subject</b></td> <td>Work Order :WONUM Has Been Canceled</td> </tr> <tr> <td><b>Message</b></td> <td>Work Order :WONUM has been canceled. Please call Maintenance for further details.</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Description</b>	Cancellation Note To Requestor	<b>Send To</b>	WOREPORTBY	<b>Subject</b>	Work Order :WONUM Has Been Canceled	<b>Message</b>	Work Order :WONUM has been canceled. Please call Maintenance for further details.
<b><u>Field</u></b>	<b><u>Value</u></b>										
<b>Description</b>	Cancellation Note To Requestor										
<b>Send To</b>	WOREPORTBY										
<b>Subject</b>	Work Order :WONUM Has Been Canceled										
<b>Message</b>	Work Order :WONUM has been canceled. Please call Maintenance for further details.										
8	Click <b>OK</b> to accept the node properties.										
9	<b>Save</b> the process.										

continued on next page

**Workshop** continued

**MASSUWO: Line Connecting WOSENTBACK Task Node with LABORINFO Task Node**



When the labor “kicks back” the work orders to the supervisor, they are in a status of WMATL. When the supervisor sends the work order back to the labor, the status must be changed to APPR.

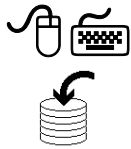
Follow the steps below to carry out this part of the process.

Step	Action						
1	Access the properties from the positive line that connects the WOSENTBACK Task node with the LABORINFO Task node.						
2	Enter the following information <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>WO APPR</td> </tr> <tr> <td><b>Instruction</b></td> <td>Send Work Order Back To Labor</td> </tr> </table> <p><u>Note:</u> The action on this line causes the work order status to be changed to APPR. This action has already been created in the database.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	WO APPR	<b>Instruction</b>	Send Work Order Back To Labor
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Action</b>	WO APPR						
<b>Instruction</b>	Send Work Order Back To Labor						
3	Click <b>OK</b> to accept the node properties.						
4	<b>Save</b> the process.						

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**Workshop** continued

**MASSUWO: Line Connecting LABORINFO Task Node with WORKSTATUS Manual Input Node**



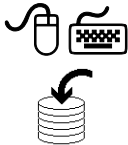
When the labor receives the task, he or she should be told what is happening next. The steps below simply add that notation to the option on the previous Task node that is seen when the process runs.

Step	Action				
1	Access the properties from the positive line that connects the LABORINFO Task node with the WORKSTATUS Manual Input node.				
2	Enter the following information <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Instruction</b></td> <td>Go To List Of Choices</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Instruction</b>	Go To List Of Choices
<b><u>Field</u></b>	<b><u>Value</u></b>				
<b>Instruction</b>	Go To List Of Choices				
3	Click <b>OK</b> to accept the node properties.				
4	<b>Save</b> the process.				

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**Workshop** continued

**MASSUWO: Line Connecting ADDACTUALS Task Node with Stop Node**



After the labor has entered actuals data and acknowledged that the final task – ADDACTUALS – has been completed, the work order should have its status changed to COMP.

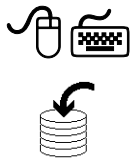
The steps below show you how to set that up.

Step	Action						
1	Access the properties from the positive line that connects the ADDACTUALS Task node with the Stop node.						
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>WO COMP</td> </tr> <tr> <td><b>Instruction</b></td> <td>Complete The Work Order</td> </tr> </table> <p><u>Note:</u> The action on this line causes the work order status to be changed to COMP. This action has already been created in the database.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	WO COMP	<b>Instruction</b>	Complete The Work Order
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Action</b>	WO COMP						
<b>Instruction</b>	Complete The Work Order						
3	Click <b>OK</b> to accept the node properties.						
4	<b>Save</b> the process.						


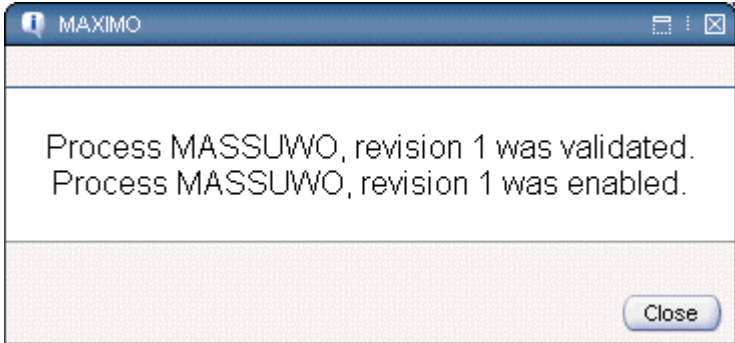

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**Workshop** continued

**Workshop 4B:  
Enable and  
Activate  
MASSUWO**



The MASSUSR process refers to the MASSUWO process in an Interaction icon. To allow this to happen, MASSUWO must first be enabled and activated.

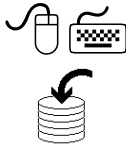
Step	Action
1	<p>While in the MASSUWO record, click the <b>Enable Process</b> button.</p>  <p><u>Result:</u> Maximo validates and enables the process. A confirmation dialog box opens.</p> 
2	<p>Click the <b>Activate Process</b> button.</p>  <p><u>Result:</u> The process is now activated.</p>

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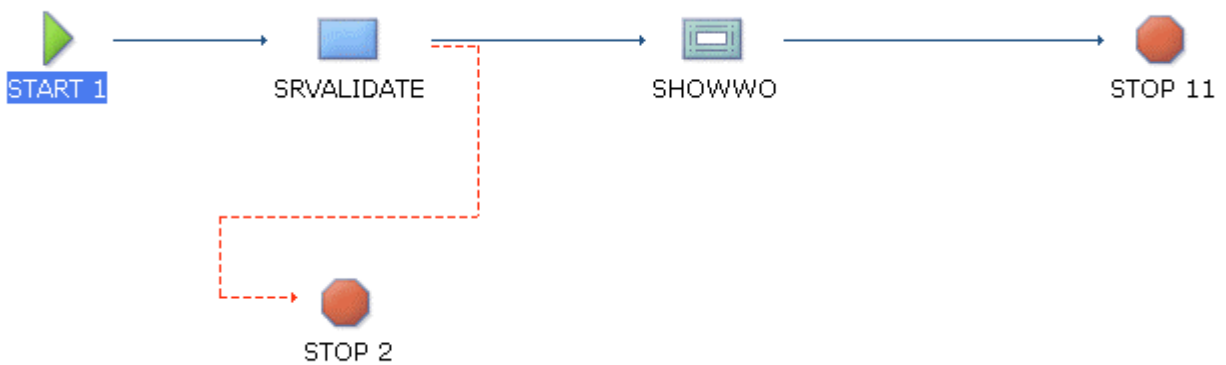
**Workshop** continued

**Workshop 4C:**  
**Mass U**  
**MASSUSR**



In this workshop you will configure the MASSUSR process. The workshop will lead you step-by-step to configure nodes and connection lines. When you have configured all of the nodes, your process should look similar to the diagram below.

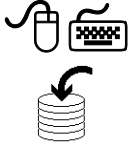
Note: Throughout this exercise you will see node names in parentheses that correspond to the graphic below.



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## Workshop continued

### MASSUSR: Task Node



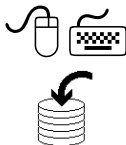
Follow the instructions below to configure the Task node (SRVALIDATE in the diagram).

Step	Action
1	Access the canvas for the <b>MASSUSR</b> record.
2	Access the properties of the single Task node.
3	Name the node <b>SRVALIDATE</b> , then give it a description of <b>Accept SR As Valid</b> and a time limit of 1:00 hour.
4	Insert a new Assignment row.
5	Hyperlink from the <b>Role ID</b> field to the <b>Roles</b> application.
6	Create a PERSONGROUP role named <b>MASSUOFFIC</b> and associate it to the MUFROnt Person Group that you created in a previous exercise.
7	Save the new role, then return from the <b>Roles</b> application with the new Role ID value.
8	Hyperlink from the <b>Escalation Role</b> field to the <b>Roles</b> application.
9	Create a PERSON role named MUOFFSUPV and associate it to the Person ELLISON that you created in a previous exercise. <u>Note:</u> Provide a description of your choice.
10	Return from the <b>Roles</b> application with the new Escalation Role value.
11	Click <b>OK</b> to accept the new task properties.
12	<b>Save</b> the process record.

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**Workshop** continued

**MASSUSR:  
Negative  
Connector from  
SRVALIDATE to  
STOP**



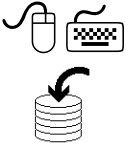
Follow the instructions below to configure the negative connector line that goes from the task node (SRVALIDATE) to the STOP (STOP 2).

Step	Action										
1	Access the properties of the negative connector line that goes from the task node (SRVALIDATE) to the STOP (STOP 2 in the diagram).										
2	Enter SR CLOSED in the <b>Action</b> field. <i>Note:</i> This is the action that will close a service request record. It was created for you in Maximo.										
3	Enter <b>Reject SR</b> in the <b>Instruction</b> field.										
4	Add a notification with the following information: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Description</b></td> <td>SR Not Valid</td> </tr> <tr> <td><b>Send To</b></td> <td>ORIGINATOR</td> </tr> <tr> <td><b>Subject</b></td> <td>SR :TICKETID Is Not Valid</td> </tr> <tr> <td><b>Message</b></td> <td>The SR number :TICKETID that you submitted is not valid. It has been closed by the Front Office Staff.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Description</b>	SR Not Valid	<b>Send To</b>	ORIGINATOR	<b>Subject</b>	SR :TICKETID Is Not Valid	<b>Message</b>	The SR number :TICKETID that you submitted is not valid. It has been closed by the Front Office Staff.
<u>Field</u>	<u>Value</u>										
<b>Description</b>	SR Not Valid										
<b>Send To</b>	ORIGINATOR										
<b>Subject</b>	SR :TICKETID Is Not Valid										
<b>Message</b>	The SR number :TICKETID that you submitted is not valid. It has been closed by the Front Office Staff.										
5	Click <b>OK</b> to accept the new properties.										
6	<b>Save</b> the process record.										

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## Workshop continued

### MASSUSR: Positive Connector from SRVALIDATE to SHOWWO



Follow the instructions below to configure the positive connector line that goes from the task node (SRVALIDATE) to the Interaction node (SHOWWO in the diagram).

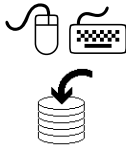
Step	Action								
1	Access the properties of the positive connector line that goes from the task node (SRVALIDATE) to the Interaction node (SHOWWO).								
2	Enter the following information: <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Action</b></td> <td>SR CREATEWO</td> </tr> <tr> <td><b>Description</b></td> <td>Create Work Order</td> </tr> <tr> <td><b>Instruction</b></td> <td>Accept SR</td> </tr> </table> <p><u>Note</u>: The action on this connector line will cause a new work order to be created from the service request. This action has already been created in Maximo</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Action</b>	SR CREATEWO	<b>Description</b>	Create Work Order	<b>Instruction</b>	Accept SR
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Action</b>	SR CREATEWO								
<b>Description</b>	Create Work Order								
<b>Instruction</b>	Accept SR								
3	Click <b>OK</b> to accept the node properties.								
4	<b>Save</b> the process.								

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**Workshop** continued

**MASSUSR:  
Interaction Node**

Follow the instructions below to configure the Interaction node (SHOWWO in the diagram).

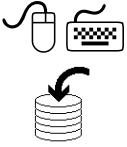


Step	Action														
1	Access the properties for the Interaction node ( <b>SHOWWO</b> in the diagram).														
2	Enter the following information: <table border="0"> <thead> <tr> <th><b><u>Field</u></b></th> <th><b><u>Value</u></b></th> </tr> </thead> <tbody> <tr> <td><b>Title</b></td> <td>SHOWWO</td> </tr> <tr> <td><b>Description</b></td> <td>Show the newly created work order</td> </tr> <tr> <td><b>Application</b></td> <td>WOTRACK</td> </tr> <tr> <td><b>Tab Name</b></td> <td>Work Orders</td> </tr> <tr> <td><b>Relationship</b></td> <td>NEWWORKORDER</td> </tr> <tr> <td><b>Launch Process</b></td> <td>MASSUWO</td> </tr> </tbody> </table> <p><u>Note</u>: These settings will open the work order created on the connection line in the Work Order Tracking application. The application will be opened to the Work Orders tab. It will then initiate the MASSUWO process.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Title</b>	SHOWWO	<b>Description</b>	Show the newly created work order	<b>Application</b>	WOTRACK	<b>Tab Name</b>	Work Orders	<b>Relationship</b>	NEWWORKORDER	<b>Launch Process</b>	MASSUWO
<b><u>Field</u></b>	<b><u>Value</u></b>														
<b>Title</b>	SHOWWO														
<b>Description</b>	Show the newly created work order														
<b>Application</b>	WOTRACK														
<b>Tab Name</b>	Work Orders														
<b>Relationship</b>	NEWWORKORDER														
<b>Launch Process</b>	MASSUWO														
3	Click <b>OK</b> to accept the properties.														
4	<b>Save</b> the process.														

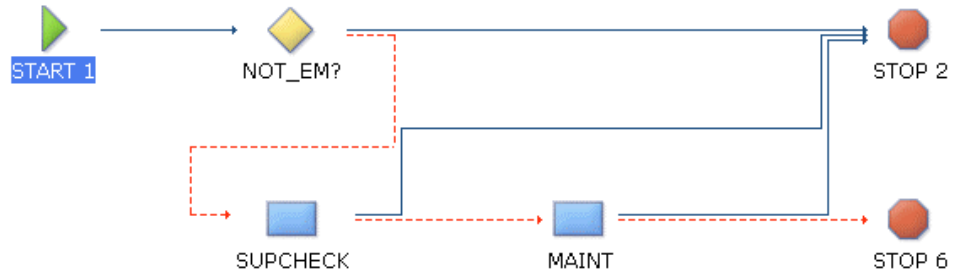
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## Workshop continued

### Workshop 5: Emergency Work (EMWORK)



In this workshop you will configure the EMWORK process.  
When you have configured the nodes, the canvas will look similar to the graphic below.

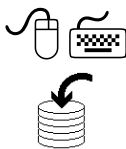


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## Workshop continued

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### EMWORK: Emergency Work Condition Node

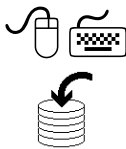


Use the following information to configure the Condition node.

Note: This condition uses *reverse* logic, so we want to check whether the work type of the record is *not* equal to EM.

- Name the node NOT\_EM?
  - In the description field, enter Is this work order NOT work type EM?
  - In the Expression, test for the work type *not* being equal to EM.
  - It is not necessary to configure the connection lines coming from this node.
- 

### EMWORK: Supervisor Validate Task Node



Use the following information to configure the first Task node.

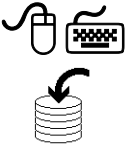
- Name the node SUPCHECK with a description of Supervisor validates if EM work.
  - Time limit for the task is 5 minutes.
  - The application is WOTRACK.
  - The Assignment is to the RPTBYSUP (Reported by Supervisor) role.
  - The Escalation Role is to the WOSUPER role.
  - The Assignment time limit is 5 minutes.
  - Indicate that a notification on the task will go the RPTBYSUP role.
    - Subject: Work Order :WONUM is EM
    - Message: Validate :DESCRIPTION is EM work.
  - For the Instruction on the positive connection line coming from SUPCHECK, enter This is not emergency work.
  - Configure the process to indicate that the positive line action is to change the work order to corrective maintenance – WOTYPECM.
  - On the positive connection line, add a notification to WOREPBY.
    - Subject: Work Order :WONUM changed to CM
    - Message: Your supervisor has changed this work order to CM.
  - For the negative line coming from SUPCHECK, add the instruction This is emergency work. Send to Maintenance.
- 

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## Workshop continued

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### MAINT: Maintenance Handles Task Node



Use the following information to configure the second Task node:

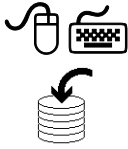
- Name it MAINT.
  - In the description field, enter Maintenance handles EM work.
  - The application is WOTRACK.
  - The Assignment is a broadcast to the existing Maintenance Person Group.  
*You will need to create a role for this.*
  - For the Instructions in the positive line from this node, enter This is NOT EM work.
  - Configure the positive connector coming from MAINT to indicate that the action is to change the work order to corrective maintenance: WOTYPECM.
  - For the notification on the positive connector, send a note to WOREPBY.  
Subject: Work Order :WONUM is not EM  
Message: Technician checked, this was not EM work.
  - For the negative connector Instructions, enter This is EM work.
  - Configure the negative connection action coming from MAINT to indicate that the work order is in progress (WO INPRG).
  - For Notification on the negative connector, send a note to WOREPBY.  
Subject: Work Order :WONUM was EM  
Message: Technician is working on this work order.
- 

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## Workshop continued

### Workshop 6

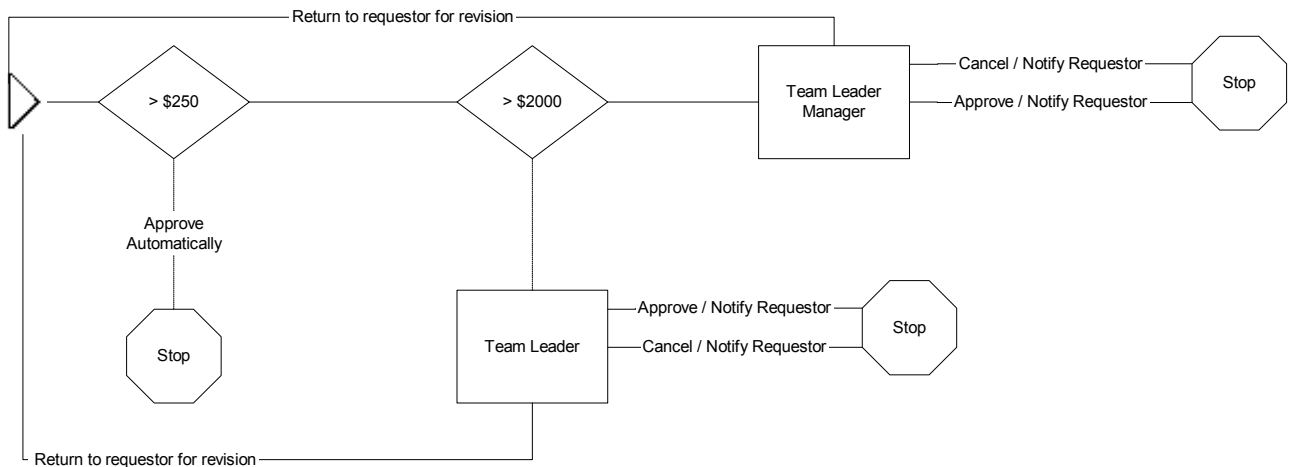


Using the following flowchart and canvas setup, configure the PURCHREQ process.

The flowchart on this page illustrates process *configuration* (the actions and/or checks to be performed during the Workflow process).

The image on the next page illustrates *potential node placement*. Feel free to try your own way of setting up the canvas.

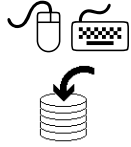
Note: These images are meant to be used *only as guides*. Your Workflow process might look different at the end of the exercise.



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Workshop continued

Workshop 6

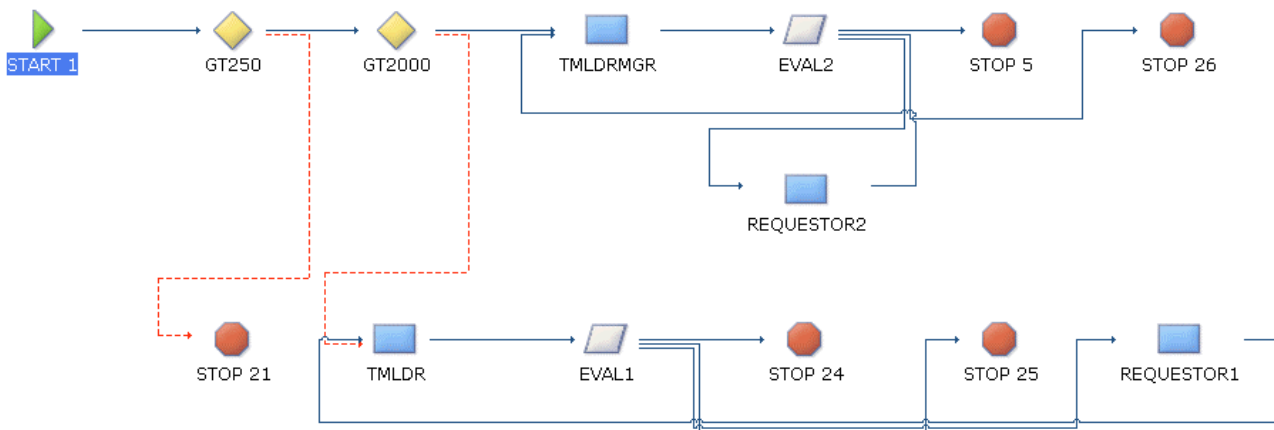


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Remember our earlier scenario:

- Shop people enter purchase requisitions directly into the Maximo Purchase Requisitions application.
- All requisitions up to \$250.00 are to be approved automatically.
- PRs greater than \$250.00 up to \$2000.00 are to go to a team leader for approval. The team leader can approve, cancel, or send it back to the requestor for revision. Frank Jones is the team leader.
- PRs of greater than \$2000.00 need the approval of the team leader’s manager. The manager can approve, cancel, or send it back to the requestor for revision. Jennifer Lego is the team leader manager.

Note: You will have to set up roles for the team leader and the team leader manager using the people specified above.



**NOTES:**

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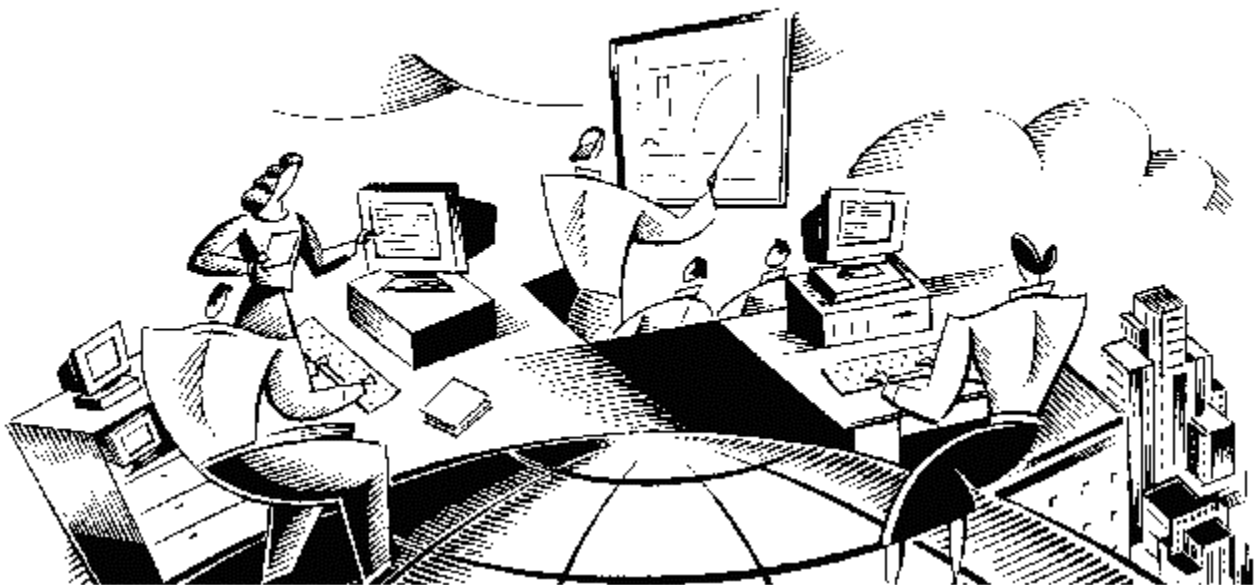
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# Workflow Management Using MXES

## Unit 4: Testing the Workflow Process



**In This Unit**

This unit contains the following chapter:

Chapter	Topic
9	Testing

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## Unit Overview

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### Introduction

After building a Workflow process that reflects your business flow, you need to test the process.

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### Learning Objectives

When you have completed this unit, you should be able to:

- validate, enable, and activate a process on a Workflow-enabled record, and
  - complete assignments.
- 

### Unit Prerequisites

To complete the exercises and workshops in this unit, you must have completed the exercises and workshops in Unit 2: “Establishing the Workflow Process Foundation” and Unit 3: “Developing the Workflow Process.”

This course has been designed to simulate how you might interact with Workflow in your own company setting. Because testing and validation are a crucial part of any successful Workflow design, the exercises and workshops in previous chapters have been designed to help you develop that skill.

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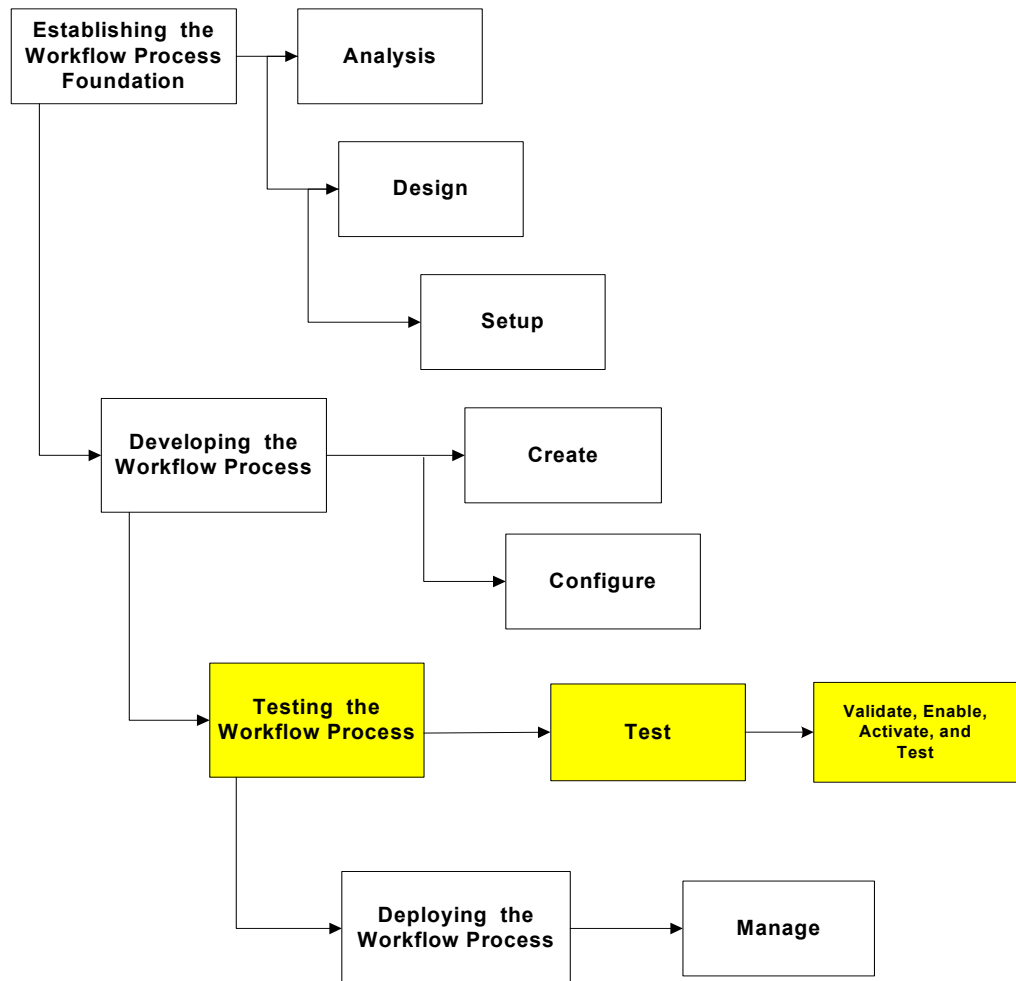
## Unit Overview continued

### Phase 3: Testing the Workflow Process

In *Phase 3: Testing the Workflow Process*, you need to test all the possible paths a record can follow. To test that the process meets your needs, activate it and route a record through all of the process paths. At each step in the process, make sure the expected assignments are made and actions taken. What you can learn from this testing phase is considerable. For example, you might discover the process is missing an aspect of your business rules or that it works differently than expected. You may even find your business rules themselves work differently than expected.

### We Will Cover

In this unit, discussions will focus on *Phase 3: Testing the Workflow Process* and its tasks and related activities.



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## Unit Overview continued

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### Activities Examples

The following table lists examples of the activities you might perform at each task level of Phase 3:

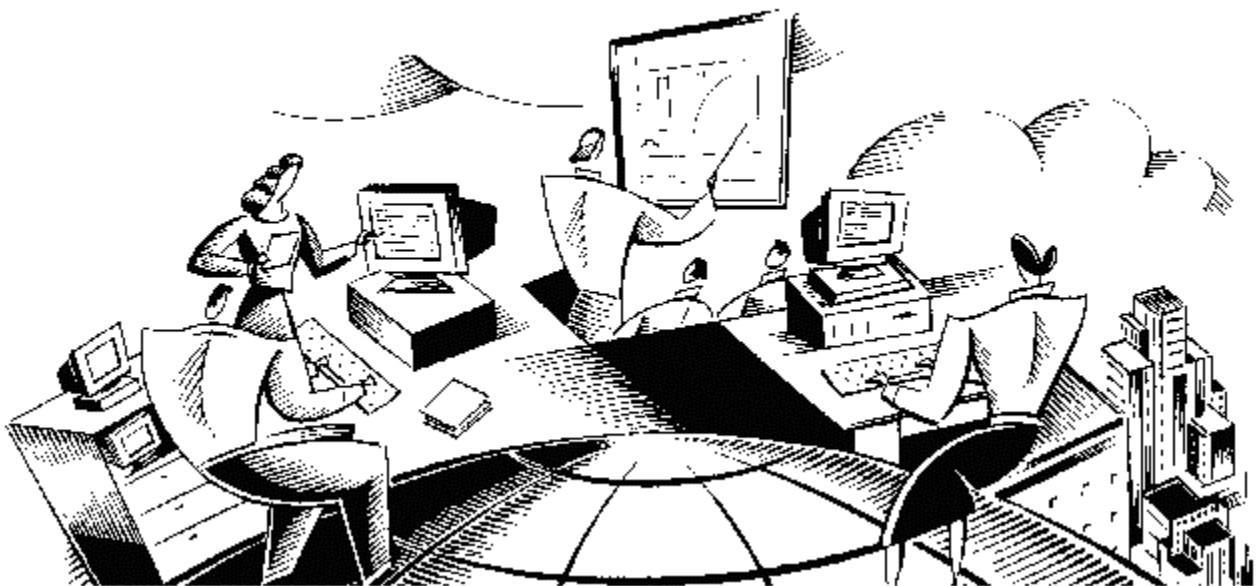
<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Test</i>	Validate, Enable, and Activate	Use the Workflow Designer tool to enable and activate the Workflow process
	Test	Test the process and all possible paths by using sample records

---



# Workflow Management Using MXES

## Chapter 9: Testing



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	9-1
Overview of Testing	9-2
Validating, Enabling, and Activating a Workflow Process	9-3
Testing Workflow Processes	9-12
Chapter Summary	9-20

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## Chapter Overview

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**Chapter Focus**

In this chapter, in order to test our Workflow process, we will discuss how to start a process and then run a process through all of its possible paths.

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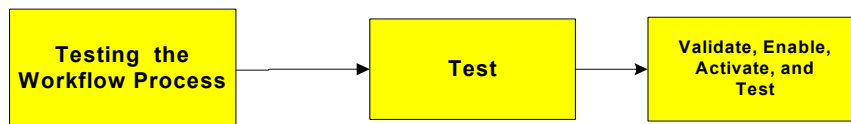
**Learning Objectives**

When you have completed this chapter, you should be able to:

- start a process manually with a Workflow-enabled application,
  - view an in-progress Workflow process,
  - view the process history information, and
  - complete a Workflow process.
- 

**We Are Here**

The topics we will be covering in this chapter are highlighted below:



## Overview of Testing

---

### Introduction

After you have built a Workflow process, you should test all the possible paths a record can follow.

Although the validation process checks that internal Workflow rules were followed, it does not check to see that your business rules will work in the way you expect.

To test that the process meets your needs, activate it and route a record through all of the process paths. At each step in the process, make sure the expected assignments are made and actions taken.

You might even find that your business rules themselves work differently than expected. As you use Workflow and discover such areas, you can edit the process as necessary.

---

### Activities Examples

The following table lists examples of the activities you might perform at each task level of Phase 3.

<b>Task</b>	<b>Activity</b>	<b>Actions</b>
<i>Test</i>	Validate, Enable, and Activate	Use the Workflow Designer tool to enable, validate, and activate the Workflow process
	Testing	Test the process and all its possible paths by using sample records

---

## Validating, Enabling, and Activating a Workflow Process

---

### Introduction

When you have built the Workflow process, you must test all of the possible paths the record can follow.

In order to test the Workflow process, you need to validate, enable, and activate it, and then route a record through all of its possible paths.

---

### Validate

Workflow processes must go through a validation before they are enabled. The validation check makes sure all of the necessary Workflow components are present and the process has paths that travel through its entire length without interruption.

Validation also checks the SQL syntax of any conditions or conditional assignments. This happens automatically when you enable a Workflow process, or you can perform this check manually.

You might want to validate a process without enabling it.

---

### Validation Criteria

The system checks the following rules when validating your Workflow process:

- Every node must have at least one line entering it, unless it is the Start node.
  - The Start node can have only one positive connection exiting it.
  - Every node must have at least one line exiting it, unless it is a Stop node.
  - Every Task node must have at least one line exiting it. It can have a positive and negative line exiting it.
  - Every Task node must have one assignment; however, actions are not required. It can have multiple assignments.
  - Every Condition node must have a positive and negative line exiting it. Each Condition node must also have a valid class or “SQL where” clause.
  - Every Manual Input node must have one or more positive lines exiting it. It cannot have a negative line exiting it.
  - Every Subprocess node must have a positive and negative line exiting it.
  - There must be at least one Task node.
- 

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## Validating, Enabling, and Activating a Workflow Process continued

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### Validate and Enable a Workflow Process

Before you use a Workflow process, it must be validated. You can either directly validate the process or indirectly validate it when enabling the process.

The methods below will show you how.

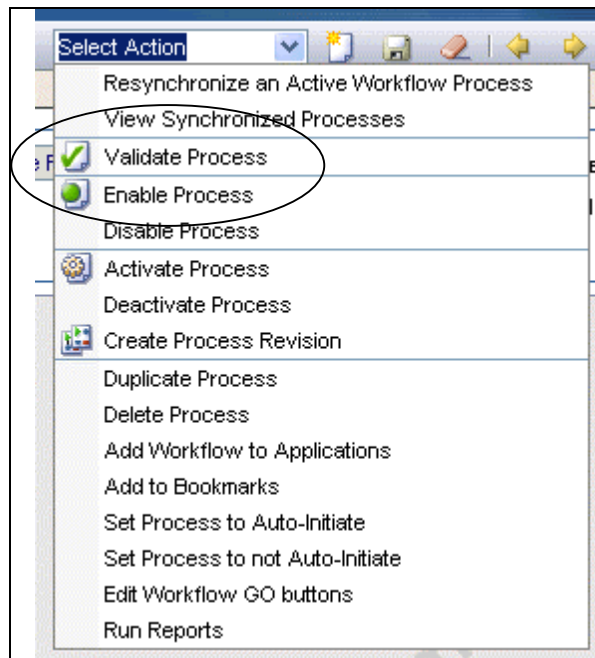
- Click the **Validate Process** button.



- Click the **Enable Process** button (will first validate, then will enable, if validation completes with no errors).



- Choose **Validate Process** or **Enable Process** from the Select Action menu.



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## Validating, Enabling, and Activating a Workflow Process continued

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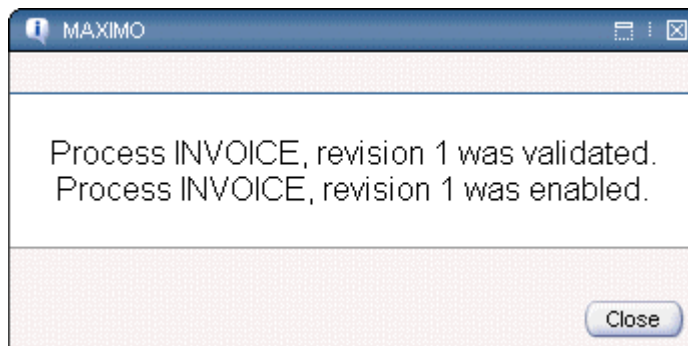
### Validate and Enable a Workflow Process

continued

The Enable procedure runs process validation and sets a flag that indicates a process has passed validation and can now be used in Workflow.



When a process is enabled without errors, Maximo displays a dialog box indicating that the validation and enablement were successful.



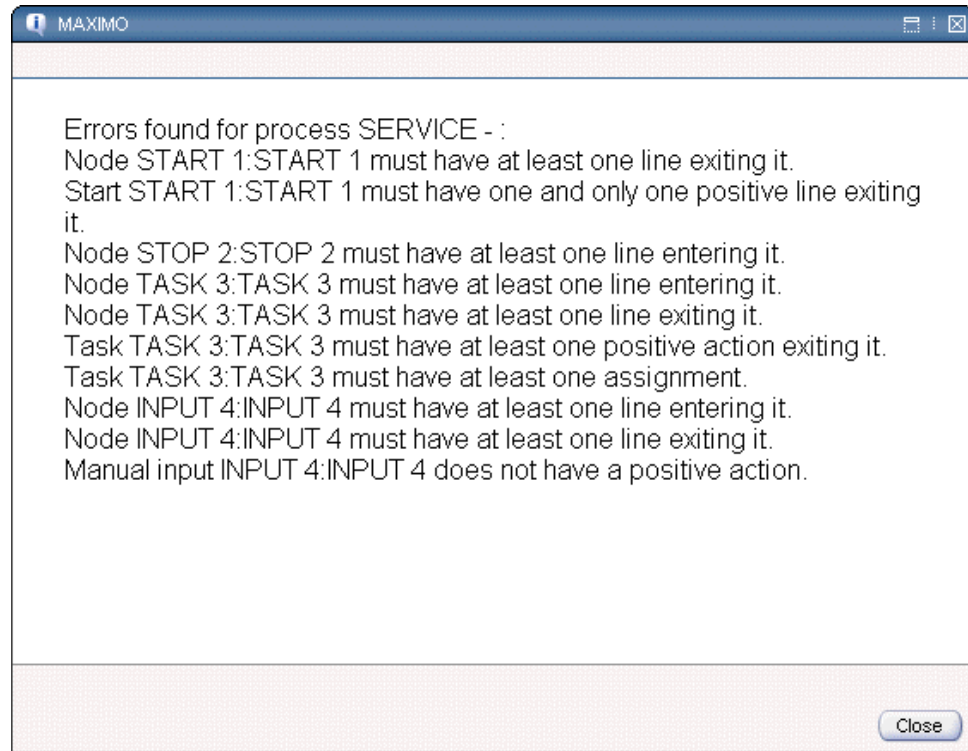
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## Validating, Enabling, and Activating a Workflow Process continued

---

**Validation Errors** Errors encountered during the validation process will be displayed in a dialog box similar to the one shown below.



### Validating a Subprocess



An easier and more organized way to validate a process' subprocesses is to start the validation with the last subprocess and move up to the validation of the main process.

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## Validating, Enabling, and Activating a Workflow Process continued

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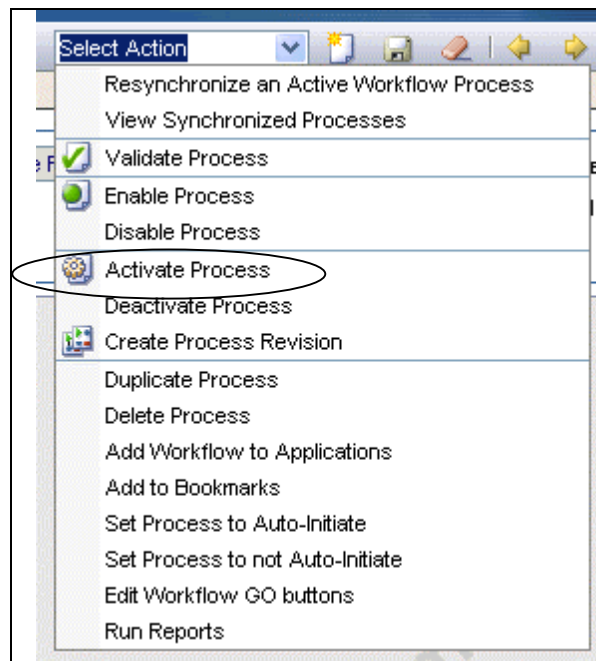
### Activate a Process

Processes can be activated in two ways:

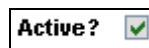
- Click the **Activate Process** button.



- Choose **Activate Process** from the Select Action menu.



When a process has been activated, a flag is set. The **Active?** check box is selected.



Note: You can have any number of active processes against any object.

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## Validating, Enabling, and Activating a Workflow Process continued

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### Activate a Two-Step Procedure



To route a record in a Workflow process, you must *activate* the Workflow process. Activating the Workflow process requires two steps:

1. You must first enable the Workflow process. When you enable the Workflow process, the system validates it.
2. After the system determines that the Workflow process is error free, you can activate the process.

Note: Maximo can perform both steps simultaneously.

---

### Subprocess Enable vs. Active

A subprocess must be enabled for it to work and be called from its top-level process.

The subprocess cannot be active, however, because the top-level process is already activated.

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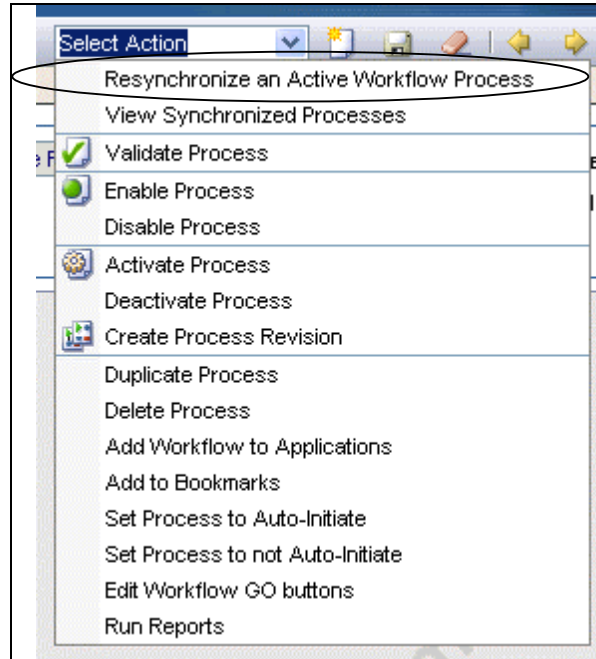
## Validating, Enabling, and Activating a Workflow Process continued

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### Synchronization

Any time a subprocess is modified, the process using the subprocess must be synched up, so that the most recent process is the process that a record in a Workflow follows.

The subprocess is synched by selecting **Resynchronize an Active Workflow Process** from the Select Action menu.

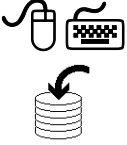


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## Validating, Enabling, and Activating a Workflow Process continued

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### Exercise 1: Validate and Enable



Validate and enable the processes listed below.

- OPFIN
- OPCMMAIN
- OPPMMAIN
- OPUSMAIN
- MASSUSR
- MASSUWO (should have been enabled and activated previously)
- EMWORK
- PURCHREQ

---

### Validation Errors

Some of the Workflow processes were designed to have validation errors. This was done so that you could learn how to read the validation report.

If you receive any error messages when the system validates the Workflow process, work with your instructor to correct these errors before continuing.

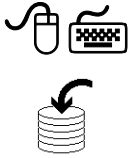
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## Validating, Enabling, and Activating a Workflow Process continued

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### Exercise 2: Activate the Processes



Activate the processes listed below.

- OPFIN
- OPUSMAIN
- MASSUSR (also set this process to auto-initiate)
- MASSUWO (should have been enabled and activated previously)
- EMWORK
- PURCHREQ

#### Notes:

- Because they are subprocesses of OPUSMAIN, OPCMMAIN and OPPMMAIN do not need to be activated.
  - Allow support for all applications, if requested.
-

## Testing Workflow Processes

---

### Introduction

When you have enabled and activated your Workflow process, the next step in implementing Workflow at your site is to test the process by using sample records.

When you test your process, you must perform the following functions:

- Start a process.
  - Perform all work assignments.
  - Follow all possible paths.
- 

### Testing Your Process

As part of your testing step, include usability testing. This type of testing will help you determine if this is a usable process.

You can then make changes where required and provide your users with a comfort level with the process.

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## Testing Workflow Processes continued

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### User Names and Passwords

For the testing exercises, you will have to sign in and out of Maximo as a variety of users as they are given assignments in the various processes.

In addition to the users that you created, there might be others used in processes. Refer to the table below for the user names and passwords of these others.

User Name	Password
kazmier	kazmier
daniels	daniels
stanley	stanley
schafer	schafer
lou	lou%lou
jlego	jlego77

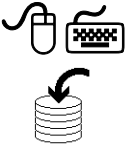
User Name	Password
jones	jones22
granger	granger
stanley	stanley
wilson	wilson
millar	millar
liberi	liberi

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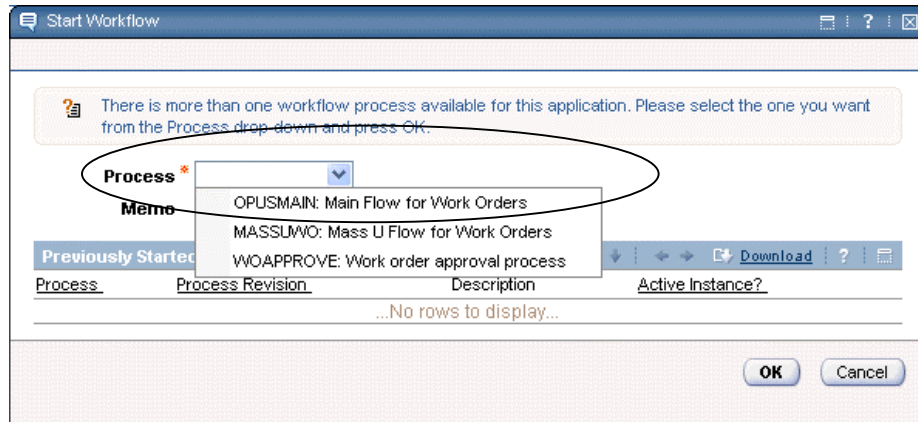
## Testing Workflow Processes continued

### Opus: Testing the Process



Sign in to Maximo as *Mike Wilson* to start all the activities listed below.

Note: Because there can be more than one active process against work orders, upon initially routing a work order you will be asked which process to use. Select OPUSMAIN from the **Process** drop-down list.



Open the Work Order Tracking application and complete the following tasks:

- **Retrieve** work order 1006 and start it in the Workflow process. After completing each step in the process, view the next assignee to determine who has the next task.

Note: You will need to sign in as the next assignee to complete the next task in the process.

Route this work order record through the entire Workflow process.

Note: Do not follow the Cancel paths. You will encounter a problem. Why?

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## Testing Workflow Processes continued

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### Opus: Testing the Process

continued

- **Retrieve** work order 1002 and start it in the Workflow process. After completing each task, determine the next assignee and route this work order record through the entire Workflow process.

Note: Do not follow the Cancel paths.

- **Retrieve** work order 1008 and start it in the Workflow process. At each point, determine who has the next assignment and where the record resides in the process.

When the maintenance supervisor (MAINT) has received the work order record, click on the task description to select the record from his Inbox. View the details of the work order.

Click on the **Plans** tab and then click on the **Materials** subtab. Insert a new row.

In the **Item** field of the new row, enter PUMP100. In the **Storeroom** field, enter CENTRAL. (The **Quantity** field will default to 1.)

Note: Adding the PUMP100 item will cause the work order to be moved through the second level of financial approval, which was not tested in the previous two parts of this exercise.

Save the record, then route the work order on to the *Engineering Department*.

Note: Do not follow the Cancel paths.

Continue to view the Workflow assignments to determine who the next assignees are. Route this work order record through the entire Workflow process.

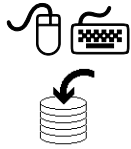
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## Testing Workflow Processes continued

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### Mass U: Testing the Process



Let’s assume that Marc Brady calls the Mass U front office with a problem. The front office person will enter the information into the Service Requests application.

Sign in to Maximo as one of the Mass U front office people that you previously created in Maximo (Nick Craddock, Mark Ellison, or Fabiola Panzano).

Note: Your system might be set up to require a new password when the user first enters Maximo. If so, follow the instructions on the screen and write new passwords onto this page.

After signing in, access the Service Requests application from the Service Desk module.

Insert a new service request record with the following information, then save the record:

<u>Field</u>	<u>Value</u>
<b>Reported By</b>	MARCUS
<b>Summary</b>	Electrical outlet not working
<b>Details</b>	On the third floor of the dormitory, there is an electrical outlet that is not working. Room 123.

Follow the process and view Workflow assignments at each step in the process. Sign in as the various assignees to see their Inboxes and to move the process along.

Notes:

- The MASSUSR process should be set to *auto-initiate*, so when you save the service request, the process should start up automatically.
- The supervisor should assign LIBERI as the labor.
- When reporting labor actuals, use 6200-300-000 as the GL Debit Account number in the Labor details on the Actuals tab.
- **Be sure to test the path involved in MASSUWO when the work order is “kicked back” to the supervisor by the labor.**

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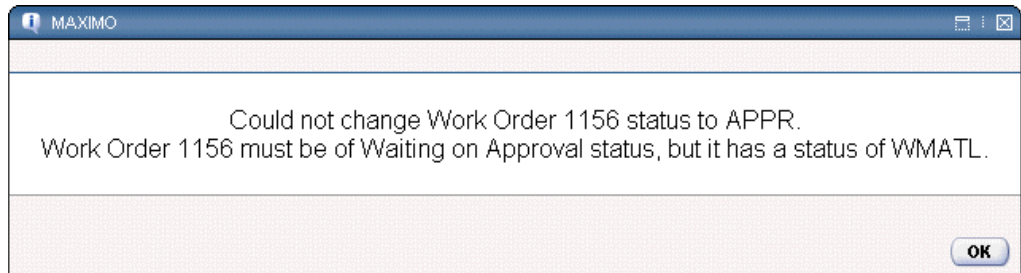
## Testing Workflow Processes continued

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### Challenge Question



The Workflow process allows the labor to “kick back” the work order to the supervisor if there are any problems with the work. When the supervisor tries to send it back to the labor, Maximo displays an error message similar to the one shown below.



Why is this happening?

What can be done about it?

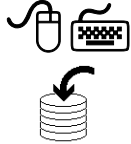
Work with your instructor to make the change to your Workflow process so that no errors occur.

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**Testing Workflow Processes** continued

**PURCHREQ:  
Testing the  
Process**



Sign in to Maximo as *Lou Granger*. Open the Purchase Requisitions application, and insert a new purchase requisition record that contains the following data.

**PR Tab:**

<u>Field</u>	<u>Value</u>
Description	Parts for Carton Machine
Company	BEX

**PR Lines Tab:**

<u>Line #</u>	<u>Item</u>	<u>Storeroom</u>	<u>Quantity</u>	<u>Conversion Factor</u>
1	0-7205	CENTRAL	2	1
2	217213	CENTRAL	2	1
3	231177	CENTRAL	2	1
4	335029	CENTRAL	2	1

Start this purchase requisition in the Workflow process.  
Using the Workflow History and Map, determine who the assignees are.

**Challenge  
Question**



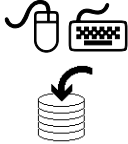
Why are there no current assignees?

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## Testing Workflow Processes continued

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### **PURCHREQ:** Testing the Process



Sign in to Maximo as Granger. Open the Purchase Requisitions application and insert a new PR record that contains the following data.

#### **PM Tab:**

<u>Field</u>	<u>Value</u>
Description	Purchase Engine For Cat Tractor
Company	BEX

#### **PR Lines Tab:**

<u>Field</u>	<u>Value</u>
Line	1
Item	3512DITA
Quantity	1
Order Unit	EACH
Conversion Factor	1
Unit Cost	8000.00
Storeroom	CENTRAL

Start this purchase requisition in the Workflow process.

Using the Workflow Map and Assignments, determine who the assignees are and route this purchase requisition record through the entire Workflow process.

Note: Remember that you will have to sign in and out of Maximo as various users.

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## Chapter Summary

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### Testing the Workflow Process

After you have built a Workflow process, you should test all the possible paths a record can follow.

Although the validation process checks that internal Workflow rules were followed, it does not check to see that your business rules will work in the way you expect.

---

### Validate and Enable a Workflow Process

Before you use a Workflow process, it must be validated. You can either directly validate the process or indirectly validate it when enabling the process.

You can use one of the following methods to validate a Workflow process:

- Click the **Validate Process** button.
  - Click the **Enable Process** button (will first validate, then will enable, if validation completes with no errors).
  - Choose **Validate Process** or **Enable Process** from the Select Action menu.
- 

### Validation Errors

Errors encountered during the validation process are displayed in a dialog box.

---

### Activating a Workflow Process

Processes can be activated in two ways:

- Select the **Activate Process** button.
- Choose **Activate Process** from the **Select Action** menu.

When a process has been activated, a flag is set. The **Active?** check box is selected.

---

### Synchronization

Any time a subprocess is modified, the process using the subprocess must be synched up, so that the most recent process is the process that a record in a Workflow follows.

The subprocess is synched by selecting **Resynchronize an Active Workflow Process** from the Select Action menu.

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**NOTES:**

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**NOTES:**

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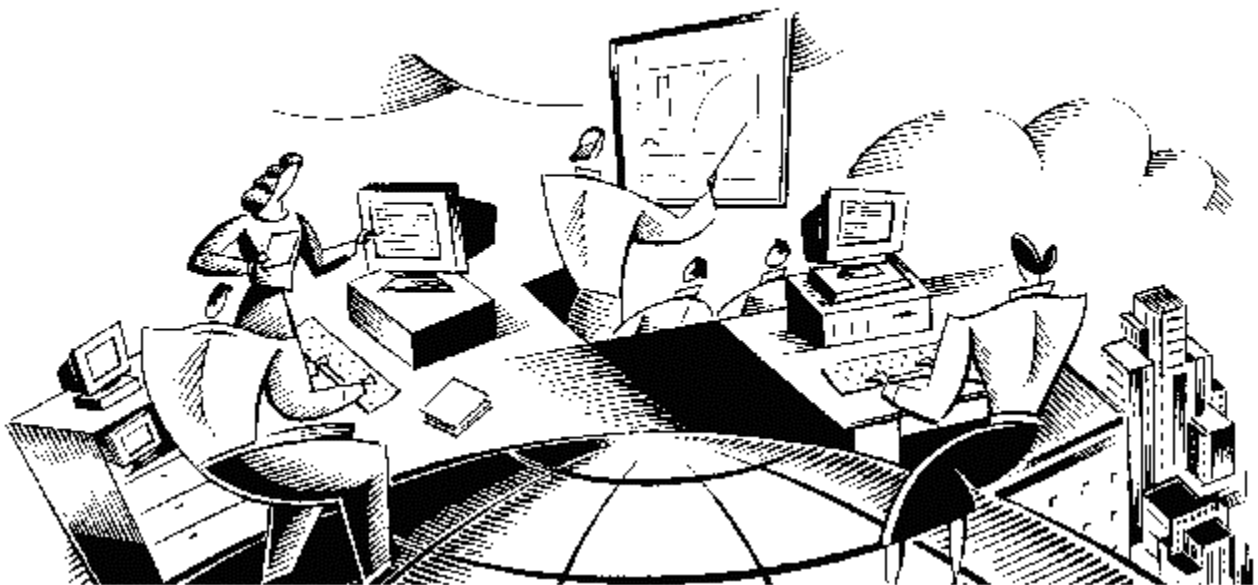
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# Workflow Management Using MXES

## Unit 5: Deploying the Workflow Process



**In This Unit**

This unit contains the following chapter:

<b>Chapter</b>	<b>Topic</b>
10	Maintenance

---

## Unit Overview

---

**Introduction**

After your Workflow processes have been tested, the next step in the implementation process is to deploy and manage the processes.

---

**Learning Objectives**

When you have completed this unit, you should be able to:

- view all current Workflow assignments, and
  - update all Workflow processes when personnel change at your site.
- 

**Unit Prerequisites**

For you to complete the exercises and workshops in this unit, you must have completed the exercises and workshops in Unit 2: “Establishing the Workflow Process Foundation,” Unit 3: “Developing the Workflow Process,” and Unit 4: “Testing the Workflow Process.”

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## Unit Overview continued

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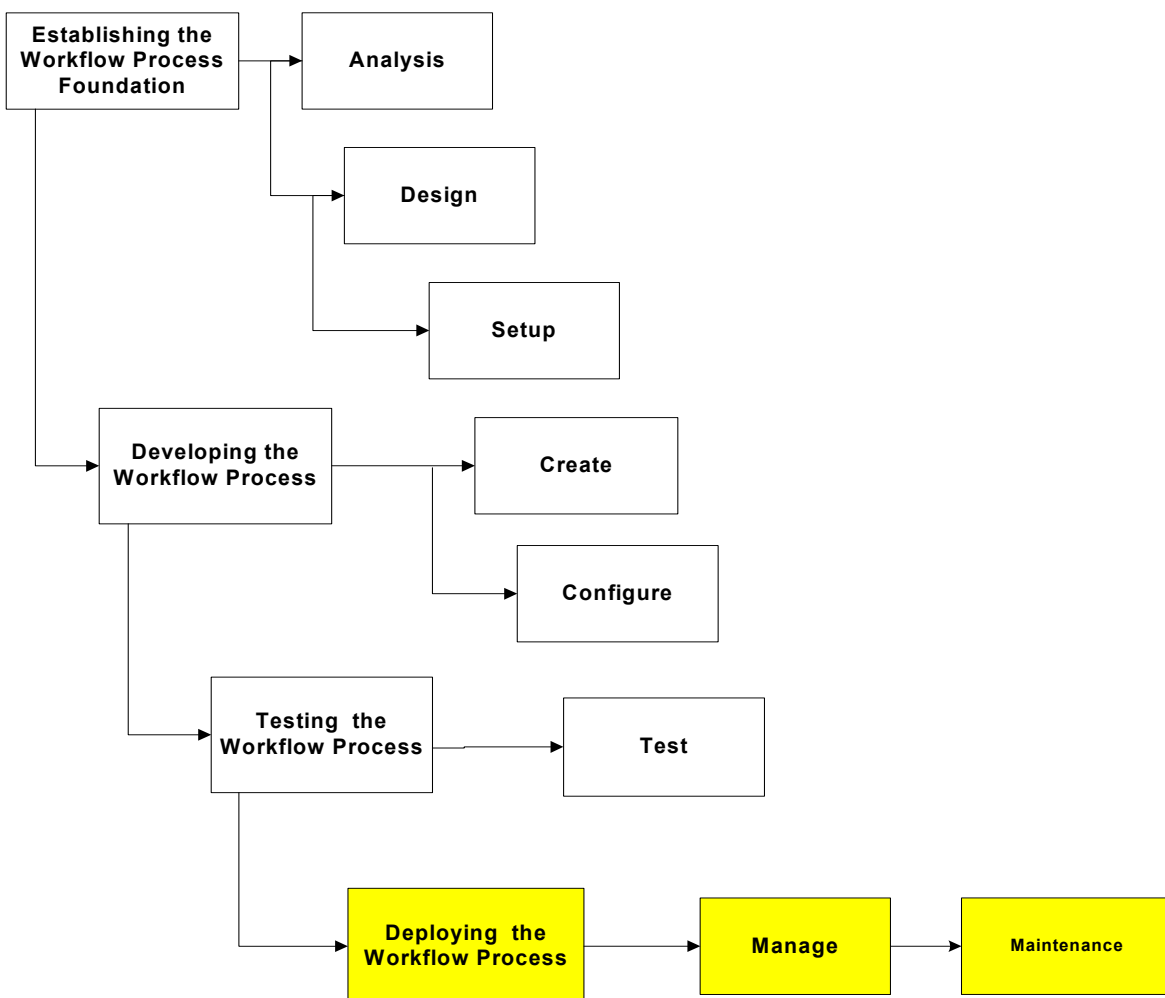
### Phase 4: Deploying the Workflow Process

When you have tested your process, you can deploy it to the affected business units and gauge its effectiveness.

---

### We Will Cover

In this unit, discussions will focus on *Phase 4: Deploying the Workflow Process* and its tasks and related activities.



continued on next page

## Unit Overview continued

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### Activity Examples

The following table lists examples of the activities you might perform at each task level of Phase 4.

Task	Activity	Actions
<i>Manage</i>	Maintenance	Evaluate, revise, and modify Workflow processes on an ongoing basis

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### Notes



Keep these factors in mind when deploying a Workflow process:

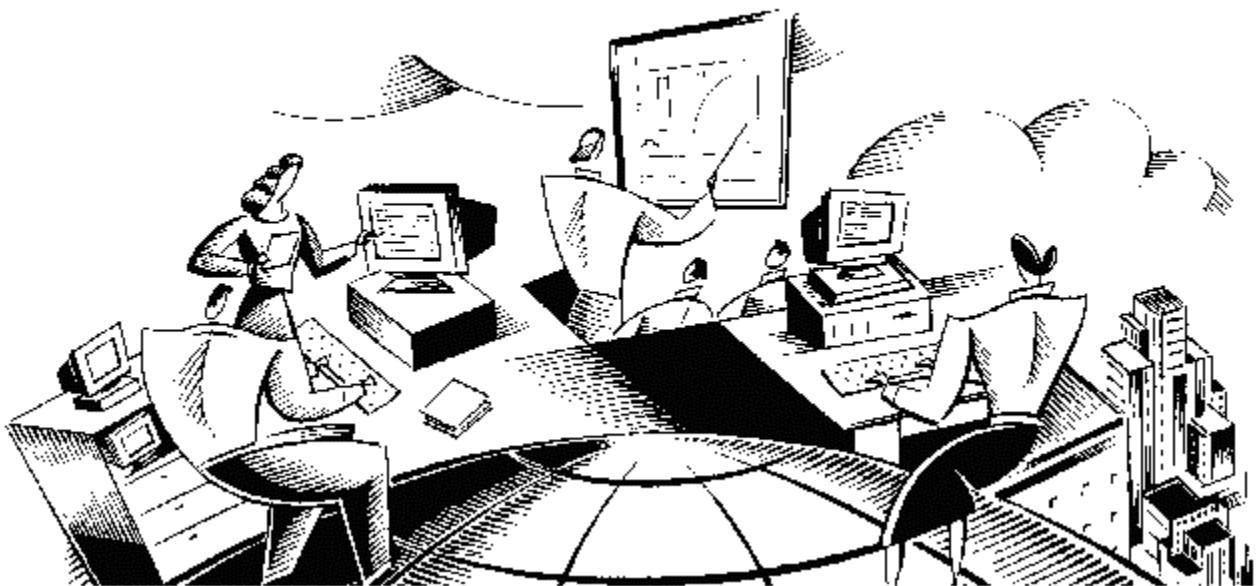
- Deploying a Workflow process means enforcing a consistent set of business practices and does not account for the flexibility that a manual system allows.
  - You are changing the tools and procedures that end users employ to perform their jobs. Including training sessions in your deployment phase will help ease the transition to the new procedure.
-





# Workflow Management Using MXES

## Chapter 10: Maintenance



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter Overview	10-1
The Workflow Administration Application	10-2
Reassignment Escalation	10-8
Escalation to Auto-Initiate	10-11
Process-Specific Toolbar Buttons	10-22
Chapter Summary	10-29

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## Chapter Overview

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**Chapter Focus**

In this chapter, we will focus on the functions that you can use to manage and fine-tune the use of Workflow processes.

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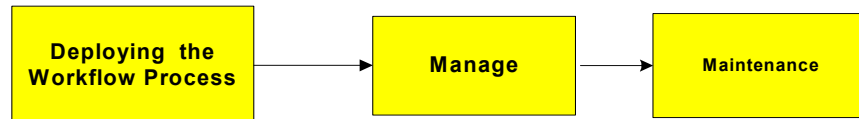
**Learning Objectives**

When you have completed this chapter, you should know how to:

- use the Workflow Administration application to stop a process and reassign a task;
  - use an escalation to cause a Workflow process to reassign a task;
  - use an escalation to automatically initiate a Workflow process;
  - import/export a Workflow process; and
  - add process-specific toolbar buttons to records to a Workflow-support application.
- 

**We Are Here**

The topics we will be covering in this chapter are highlighted below:

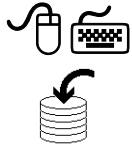


## The Workflow Administration Application

### Overview

The Workflow Administration application is used to reassign and stop Workflow processes. In this section you will have a chance to do both.

### Reassign a Task



It is possible for an assignee to reassign a task to another person from the Task node dialog when the process is running. However, there might be times when an administrator who is not in the process would like to reassign a task.

For this purpose, the person would use the Workflow Administration tool.

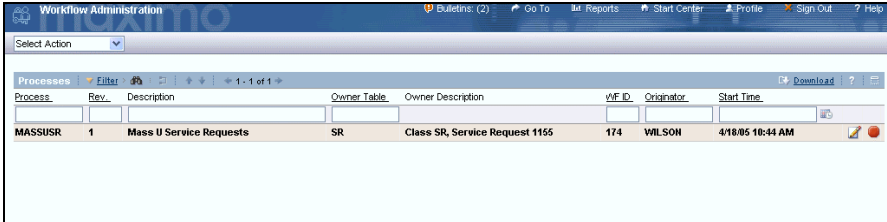

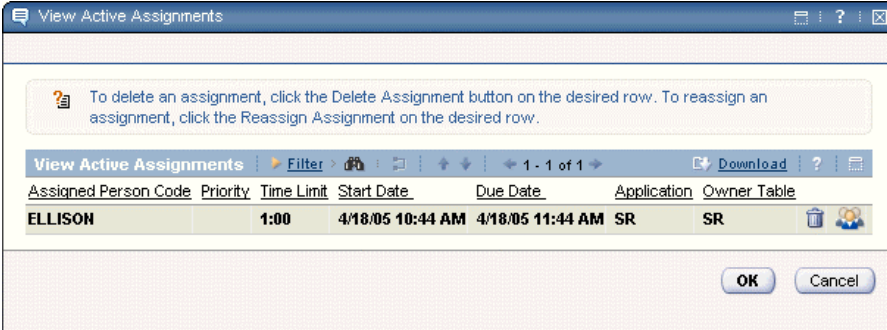
In the activity below, we will first add a record, then we will use the Workflow Administration application to reassign and stop the record.

Step	Action								
1	Sign in as Mike Wilson, then access the <b>Service Requests</b> application.								
2	Insert a new service request with the following information: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Reported By</b></td> <td>WILSON</td> </tr> <tr> <td><b>Summary</b></td> <td>Test of Reassignment</td> </tr> <tr> <td><b>Details</b></td> <td>Reassignment Test</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Reported By</b>	WILSON	<b>Summary</b>	Test of Reassignment	<b>Details</b>	Reassignment Test
<u>Field</u>	<u>Value</u>								
<b>Reported By</b>	WILSON								
<b>Summary</b>	Test of Reassignment								
<b>Details</b>	Reassignment Test								
3	<b>Save</b> the record. <u>Result:</u> The record is automatically entered into the MASSUSR process.								

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## The Workflow Administration Application continued

### Reassign a Task continued

Step	Action
4	<p>Access the <b>Workflow Administration</b> application.</p> <p><u>Hint:</u> It is in the same location as the Workflow Designer application.</p> <p><u>Result:</u> The Workflow Administration application lists your new Service Desk record, similar to the example below.</p>  <p><u>Note:</u> In practice, any other records in processes would also be listed.</p>
5	<p>Click the <b>View/Modify Active Assignments</b> button.</p>  <p><u>Result:</u> The View Active Assignments dialog box displays the current assignee.</p> 

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The Workflow Administration Application continued

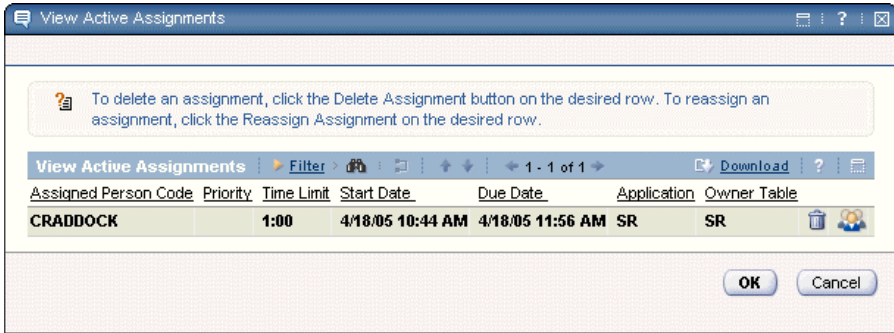
Reassign a Task continued

Step	Action
6	<p>Click the <b>Reassign Assignment</b> button.</p>  <p><u>Result:</u> The Reassign dialog box opens.</p> 

continued on next page

The Workflow Administration Application continued

Reassign a Task continued

Step	Action						
7	<p>Enter the following information into the <b>Reassign</b> dialog box, then click <b>OK</b>.</p> <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Person</b></td> <td>CRADDOCK</td> </tr> <tr> <td><b>Memo</b></td> <td>Testing reassignment for class.</td> </tr> </table> <p><u>Result</u>: The View Active Assignments dialog box now displays the new assignee: CRADDOCK.</p>  <p><u>Note</u>: It is a good practice to enter a memo when reassigning work. This way, the workflow history will have a record of why the reassignment was performed.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Person</b>	CRADDOCK	<b>Memo</b>	Testing reassignment for class.
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Person</b>	CRADDOCK						
<b>Memo</b>	Testing reassignment for class.						
8	Click <b>OK</b> to close the <b>View Active Assignments</b> dialog box.						

continued on next page

## The Workflow Administration Application continued


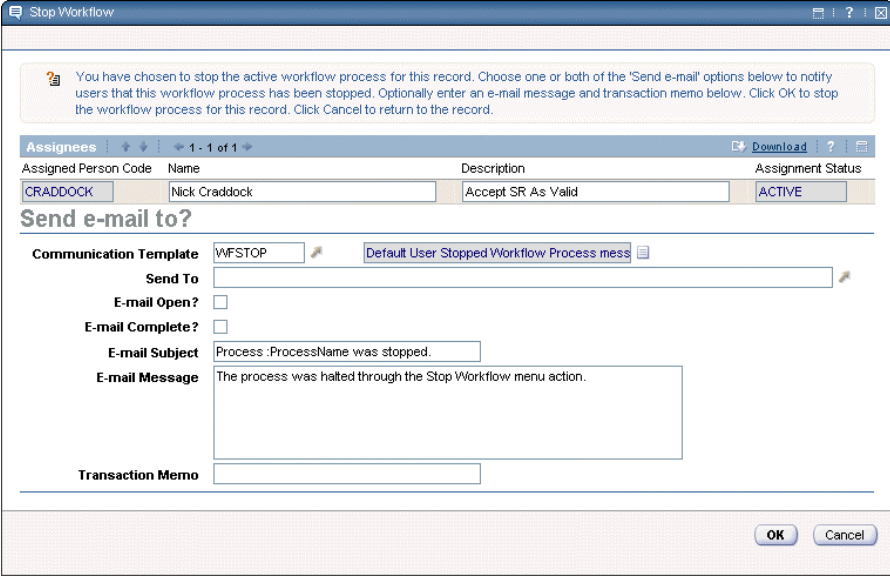
### Stop a Record in a Process



You can stop records in processes by selecting the specific record, then selecting Stop Workflow from the Select Action menu. However, there might be times that an administrator wants to stop the record without having to go to the specific application.

In this case, you can use the Workflow Administration application to find the record and stop the process.

The steps below show you how.

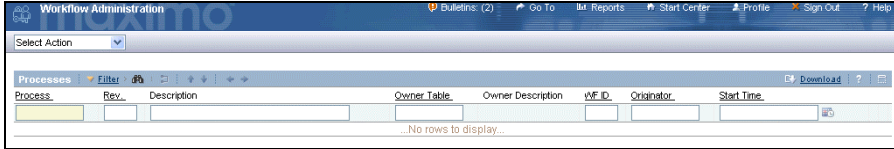
Step	Action
1	In the <b>Workflow Administration</b> application, find the record from the previous exercise.
2	<p>Click the <b>Stop Process</b> button.</p>  <p><u>Result:</u> The Stop Workflow dialog box opens.</p>  <p><u>Note:</u> From this dialog box, you could send a notification and add a memo to the workflow history.</p>

continued on next page



## The Workflow Administration Application continued

### Stop a Record in a Process continued

Step	Action
3	<p>Click <b>OK</b>.</p> <p><u>Result:</u> The process is stopped and the process in the list is no longer displayed.</p>  <p><u>Note:</u> You might need to refresh the screen for the process to stop displaying.</p>

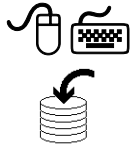
## Reassignment Escalation

### Overview

When a role is entered in the Escalation Role field on the Task node properties, Workflow knows the person to whom you want to reassign the task if it is not completed in the designated amount of time. However, an escalation must be set up to cause this to happen.

You might recall that we previously set up this escalation, but did not enable it. In this section we will do so.

### Enable the Reassignment Escalation



In this activity you will access and enable an escalation—created in a previous exercise—that will search for all open tasks that have exceeded their time limits and reassign (that is, escalate) the task to the person or people associated with the role listed in the Escalation Role field.

Follow the steps below.

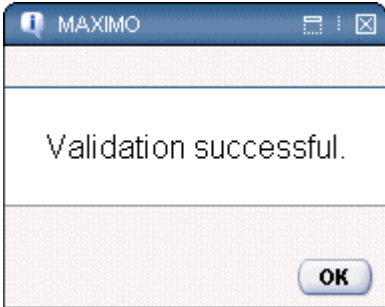
Step	Action																
1	Access the <b>Escalations</b> application from the <b>Configuration</b> module.																
2	Access the ESCWFTASK record that we created in Chapter 8. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>The screenshot shows the 'Escalations' application interface. At the top, there's a navigation bar with 'Escalations' and 'maximo'. Below that, a search bar and 'Select Action' dropdown are visible. The main area is divided into sections: 'Escalation' (with fields for 'Escalation' set to 'ESCWFTASK' and 'Escalate Workflow Task'), 'Applies To' (set to 'WFASSIGNMER'), 'Condition', 'Active?' (checkbox), 'Site', 'Organization', 'Schedule' (set to '1m,* * * * *'), and 'Last Run Time'. Below this is a 'Validation Results' section with a table for 'Escalation Points':</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Escalation Point</th> <th>Elapsed Time Attribute</th> <th>Elapsed Time Interval</th> <th>Interval Unit of Measure</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DUEDATE</td> <td>-1.00</td> <td>MINUTES</td> </tr> </tbody> </table> <p>Below the table are 'Actions' and 'Notifications' tabs. The 'Actions' section shows an 'Action Group' set to '1028' and a table of actions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Action</th> <th>Description</th> <th>Type</th> <th>Sequence</th> </tr> </thead> <tbody> <tr> <td>1029</td> <td>Escalate Workflow Task</td> <td>APPACCTION</td> <td>10</td> </tr> </tbody> </table> </div>	Escalation Point	Elapsed Time Attribute	Elapsed Time Interval	Interval Unit of Measure	1	DUEDATE	-1.00	MINUTES	Action	Description	Type	Sequence	1029	Escalate Workflow Task	APPACCTION	10
Escalation Point	Elapsed Time Attribute	Elapsed Time Interval	Interval Unit of Measure														
1	DUEDATE	-1.00	MINUTES														
Action	Description	Type	Sequence														
1029	Escalate Workflow Task	APPACCTION	10														

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## Reassignment Escalation continued

### Enable the Reassignment Escalation

continued

Step	Action
3	<p>Choose <b>Validate</b> from the <b>Select Action</b> menu.</p> <p><u>Result:</u> Maximo checks the syntax and SQL in the escalation record and indicates that the escalation is valid.</p> 
4	<p>Click <b>OK</b> to close the validation dialog box.</p>
5	<p>Choose <b>Active/Deactivate Escalation</b> from the <b>Select Action</b> menu.</p> <p><u>Result:</u> The escalation is now activated. The escalation record is read-only and the Active? check box is selected.</p> <p style="text-align: center;"><b>Active?</b> <input checked="" type="checkbox"/></p> <p><u>Note:</u> The escalation will now poll the system every minute (per the Schedule field) and will escalate all active tasks that are more than a minute beyond their due time (Elapsed Time Interval field).</p>

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## Reassignment Escalation continued

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### Testing the Reassignment Escalation



Now that the reassignment escalation is activated, you need to test it to be sure that it's working.

Here are some basic instructions to follow for testing purposes. Work through these steps with your instructor:

1. Create and activate a simple one-task WORKORDER process that makes an assignment to the ORIGINATOR role and escalates it to the existing LIBERI role after one minute.
  2. Insert a new work order as Mike Wilson, then save it and route it into your new process.
  3. Check the initial assignment and wait a couple of minutes to ensure that the reassignment is automatically made.
-

---

## Escalation to Auto-Initiate

---

### Overview

Previously, you saw how you could use Workflow Designer to auto-initiate processes when a new record is saved. This method limits you to only one auto-initiated process per object.

Another method is to create an escalation that will search for non-initiated records and will place them into a specific Workflow process.

Bypassing the auto-initiate function in Workflow Designer with this method, you can actually make a large number of processes auto-initiate.

---

### Natural Functionality and Auto-Initiate

As soon as a record is placed into a Workflow process, the process takes over and some natural Maximo functionality might be lost. This is the case with the Create Service Request application when an SR process is auto-initiated through Workflow Designer.

If an escalation is built to bring an SR record into a specified process some time after the manual submission of the SR, then the natural functionality of the Create Service Request application is not lost.

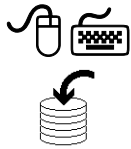
The next activities will demonstrate this.

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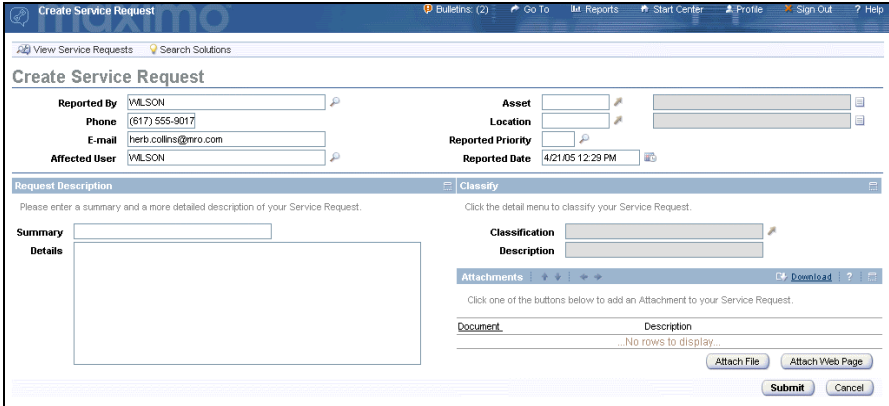
## Escalation to Auto-Initiate continued

### Create Service Request and Auto-Initiate Processes



In our previous work, we created an auto-initiated process called MASSUSR, which takes newly saved SR records and puts them into the process.

In this example, we will run an SR with the MASSUSR process auto-initiated and see what happens.

Step	Action						
1	<p>Access the <b>Create Service Request</b> application:  <b>Self Service ▶ Service Request ▶ Create Service Request</b>  <u>Result:</u> Maximo displays a blank service request form, ready for input.</p> 						
2	<p>Enter the following information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Summary</b></td> <td>Test with Auto-Initiate</td> </tr> <tr> <td><b>Details</b></td> <td>This will test how this app works when auto-initiated.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Summary</b>	Test with Auto-Initiate	<b>Details</b>	This will test how this app works when auto-initiated.
<u>Field</u>	<u>Value</u>						
<b>Summary</b>	Test with Auto-Initiate						
<b>Details</b>	This will test how this app works when auto-initiated.						
3	<p>Click <b>Submit</b>.  <u>Result:</u> The new SR is created and the MASSUSR workflow auto-initiates, but not much else.</p>						

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## Escalation to Auto-Initiate continued

### Challenge Questions



How would the user enter a new SR after submitting the first one?

How does the user know what the new SR number is after submitting it?

How does the user know what happened?

### Natural Functionality of the Create Service Request Application



Because the SR is automatically put into the MASSUSR process, some of the natural functionality in the Create Service Request application is lost.

In this activity, you will see how it works naturally.

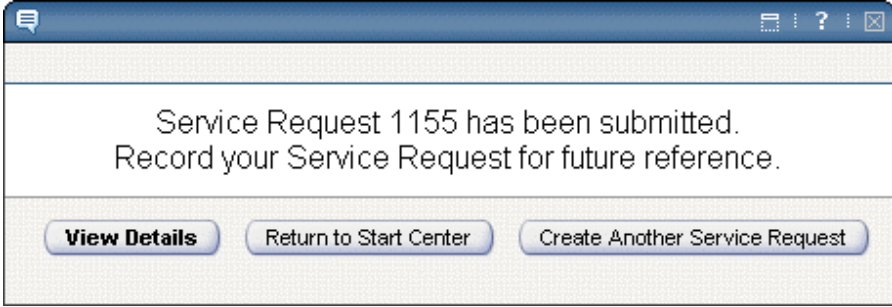
Step	Action
1	Access the <b>MASSUSR</b> process from the <b>Workflow Designer</b> application.
2	Set the process to <i>not</i> auto-initiate. <u>Hint</u> : Use the Select Action menu.

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**Escalation to Auto-Initiate** continued

**Natural  
Functionality of  
the Create  
Service Request  
Application**

continued

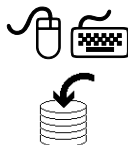
Step	Action						
3	<p>Access the <b>Create Service Requests</b> application and <b>Submit</b> a new application with the following information.</p> <table border="0"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Summary</b></td> <td>Test with Auto-Initiate Turned Off</td> </tr> <tr> <td><b>Details</b></td> <td>This will test how this app works when it is not auto-initiated.</td> </tr> </table> <p><b>Result:</b> A dialog box shows the user the new SR number and provides other options, including the ability to create a new service request.</p>  <p><b>Note:</b> This functionality was lost when the SR was auto-initiated from Workflow Designer.</p>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Summary</b>	Test with Auto-Initiate Turned Off	<b>Details</b>	This will test how this app works when it is not auto-initiated.
<b><u>Field</u></b>	<b><u>Value</u></b>						
<b>Summary</b>	Test with Auto-Initiate Turned Off						
<b>Details</b>	This will test how this app works when it is not auto-initiated.						
4	<p>Click <b>Return to Start Center</b>.</p> <p><b>Result:</b> You are brought back to your Start Center.</p>						

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## Escalation to Auto-Initiate continued

### Set Up the Auto-Initiate Escalation

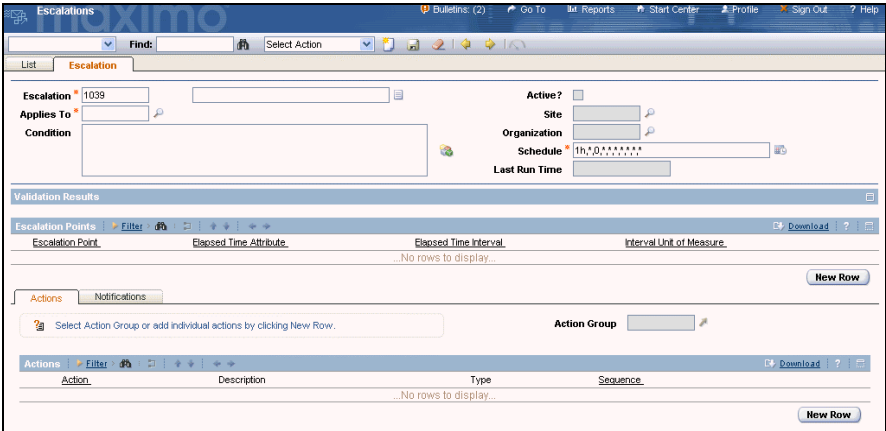


If we set up an escalation that puts SRs into a specified Workflow process at a designated later time, we can achieve two goals:

- maintain the natural functionality of the Create Service Request application
- allow for the auto-initiation of other SR processes

Note: Remember that through the Workflow Designer only one process can be auto-initiated per object. Using Escalations, we can auto-initiate more than one.

The steps below show you how to set up this escalation.

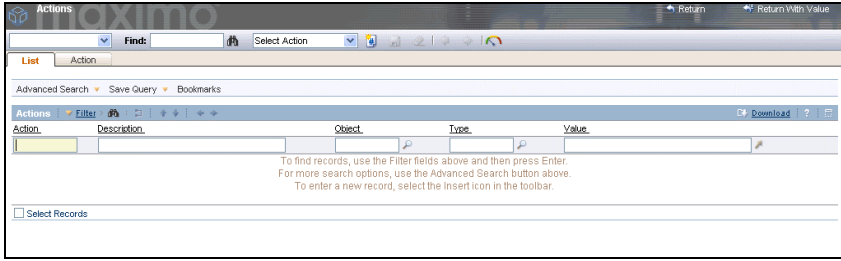
Step	Action										
1	Access the <b>Escalations</b> application from the <b>Configuration</b> module.										
2	Insert a new application record.  										
3	Enter the following information: <table border="0" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;"><u>Field</u></th> <th style="text-align: left;"><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Escalation</b></td> <td>SRINITIATE</td> </tr> <tr> <td><b>Description</b></td> <td>Initiate SR Workflows</td> </tr> <tr> <td><b>Applies To</b></td> <td>SR</td> </tr> <tr> <td><b>Schedule</b></td> <td><i>[Use the <b>Set Schedule</b> function to set the escalation to run every two minutes.]</i></td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Escalation</b>	SRINITIATE	<b>Description</b>	Initiate SR Workflows	<b>Applies To</b>	SR	<b>Schedule</b>	<i>[Use the <b>Set Schedule</b> function to set the escalation to run every two minutes.]</i>
<u>Field</u>	<u>Value</u>										
<b>Escalation</b>	SRINITIATE										
<b>Description</b>	Initiate SR Workflows										
<b>Applies To</b>	SR										
<b>Schedule</b>	<i>[Use the <b>Set Schedule</b> function to set the escalation to run every two minutes.]</i>										

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## Escalation to Auto-Initiate continued

### Set Up the Auto-Initiate Escalation

continued

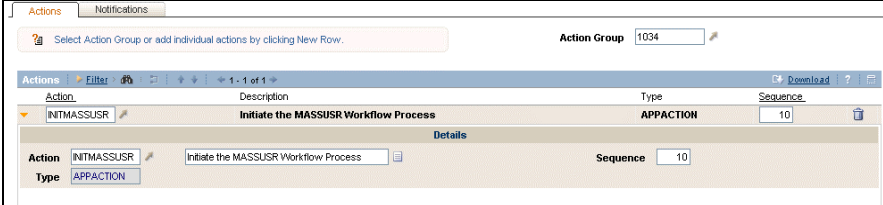
Step	Action				
4	<b>Save</b> the escalation record.				
5	<p>Using the following information, add a new row to the <b>Escalation Points</b> table:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Escalation Point Condition</b></td> <td>LOCATION ='NEEDHAM'</td> </tr> </tbody> </table> <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• You can manually enter the condition or use the SQL Expression Builder.</li> <li>• This condition is set so that only SRs with a location of NEEDHAM will be picked up by this escalation point. In practice, more complex SQL can be used to get more specific about which types of records will be picked up by the designated process.</li> </ul>	<u>Field</u>	<u>Value</u>	<b>Escalation Point Condition</b>	LOCATION ='NEEDHAM'
<u>Field</u>	<u>Value</u>				
<b>Escalation Point Condition</b>	LOCATION ='NEEDHAM'				
6	<b>Save</b> the escalation record.				
7	<p>Add a new row to the Actions table, then hyperlink from the <b>Actions</b> field to the <b>Actions</b> application.</p> <p><u>Result:</u> You are in the Actions application, as shown in the example below.</p> 				

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## Escalation to Auto-Initiate continued

### Set Up the Auto-Initiate Escalation

continued

Step	Action														
8	<p>Insert a new Action record with the following information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Action</b></td> <td>INITMASSUSR</td> </tr> <tr> <td><b>Description</b></td> <td>Initiate the MASSUSR Workflow Process</td> </tr> <tr> <td><b>Object</b></td> <td>SR</td> </tr> <tr> <td><b>Type</b></td> <td>APPACTION</td> </tr> <tr> <td><b>Value</b></td> <td>WFINITATE</td> </tr> <tr> <td><b>Parameter/Attribute</b></td> <td>MASSUSR</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Action</b>	INITMASSUSR	<b>Description</b>	Initiate the MASSUSR Workflow Process	<b>Object</b>	SR	<b>Type</b>	APPACTION	<b>Value</b>	WFINITATE	<b>Parameter/Attribute</b>	MASSUSR
<u>Field</u>	<u>Value</u>														
<b>Action</b>	INITMASSUSR														
<b>Description</b>	Initiate the MASSUSR Workflow Process														
<b>Object</b>	SR														
<b>Type</b>	APPACTION														
<b>Value</b>	WFINITATE														
<b>Parameter/Attribute</b>	MASSUSR														
9	<p>Save the new Action record, then return to the <b>Escalations</b> application with the Action record value.</p> <p><u>Result:</u> The Actions line on the Escalation is now populated, as shown in the example below.</p> 														

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## Escalation to Auto-Initiate continued

### Set Up the Auto-Initiate Escalation

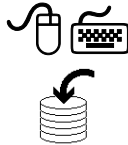
continued

Step	Action								
10	Insert a new line on the <b>Notifications</b> tab that contains the following information: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Role/Recipient</b></td> <td>MASSUOFFIC</td> </tr> <tr> <td><b>Subject</b></td> <td>SR # :TICKETID Has Been Submitted</td> </tr> <tr> <td><b>Message</b></td> <td>SR # :TICKETID - :DESCRIPTION has been submitted to your inbox.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	<b>Role/Recipient</b>	MASSUOFFIC	<b>Subject</b>	SR # :TICKETID Has Been Submitted	<b>Message</b>	SR # :TICKETID - :DESCRIPTION has been submitted to your inbox.
<u>Field</u>	<u>Value</u>								
<b>Role/Recipient</b>	MASSUOFFIC								
<b>Subject</b>	SR # :TICKETID Has Been Submitted								
<b>Message</b>	SR # :TICKETID - :DESCRIPTION has been submitted to your inbox.								
11	<b>Save</b> the escalation record.								
12	Select <b>Activate/Deactivate Escalation</b> from the <b>Select Action</b> menu. <u>Result:</u> The Escalation is now activated and starts polling the system according to the timeframe established in the Schedule field.								

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## Escalation to Auto-Initiate continued

### Test the Auto-Initiate Escalation



Now that we have set up an escalation to automatically enter specific types of SR records into the MASSUSR process, we need to test it.

We will go into the Create Service Request application and add a record with a location of NEEDHAM.

Note: You might recall that we set up our escalation point to look only for SR records for the NEEDHAM location.

Follow the steps below.

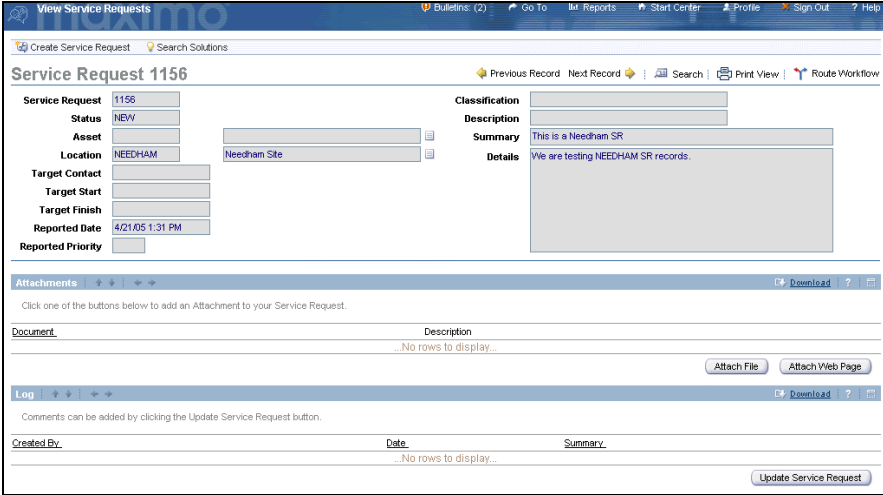
Step	Action								
1	Access the <b>Create Service Request</b> application.								
2	Submit a new SR with the following information: <table border="0" style="margin-left: 20px;"> <tr> <td><b><u>Field</u></b></td> <td><b><u>Value</u></b></td> </tr> <tr> <td><b>Location</b></td> <td>NEEDHAM</td> </tr> <tr> <td><b>Summary</b></td> <td>This is a Needham SR</td> </tr> <tr> <td><b>Details</b></td> <td>We are testing NEEDHAM SR records.</td> </tr> </table> <p><u>Result</u>: Because the request is not immediately entered into a Workflow process, the natural functionality of the Create Service Request application is maintained.</p> <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> </div>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Location</b>	NEEDHAM	<b>Summary</b>	This is a Needham SR	<b>Details</b>	We are testing NEEDHAM SR records.
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Location</b>	NEEDHAM								
<b>Summary</b>	This is a Needham SR								
<b>Details</b>	We are testing NEEDHAM SR records.								

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## Escalation to Auto-Initiate continued

**Test the Auto-Initiate Escalation**

continued

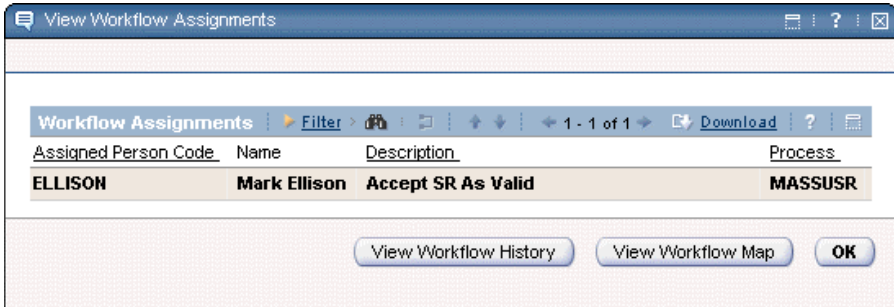
Step	Action
3	<p>Click the <b>View Details</b> button.</p> <p><u>Result:</u> Your new SR record is displayed in the View Service Requests application.</p> 
4	<p>On the line below, write down the number of your new SR record.</p> <p style="text-align: center;">SR # _____</p>
5	<p>Wait a few minutes for the escalation to run, then access your new SR from the Service Requests application.</p> <p><u>Note:</u> Because we set the escalation to run every two minutes, we need to wait a bit.</p>

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## Escalation to Auto-Initiate continued

**Test the Auto-Initiate Escalation**

continued

Step	Action
6	<p>View the <b>Workflow Assignments</b> for the record.</p> <p><u>Result:</u> The workflow assignments appear as shown in the example below, just as they would with a process auto-initiated from Workflow Designer.</p>  <p><u>Note:</u> This demonstrates that the record was entered into the MASSUSR process by the escalation and should work as before. If you want to test the rest of the process, go ahead.</p>
7	Click <b>OK</b> to close the <b>View Workflow Assignments</b> dialog box.

## Process-Specific Toolbar Buttons

---

### Overview

The Workflow Designer application enables you to add process-specific routing icons to the toolbar of records in a workflow.

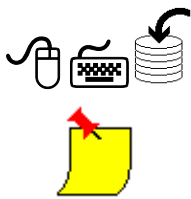
This feature is valuable for allowing users to click a specific button to start a specific workflow. Otherwise, the generic route button is used.

If there is more than one process set up against a specific record type, upon clicking the generic route button, the user will be presented with a list of available processes from which to choose.

Use of the process-specific icon avoids the need for the user to choose from this list.

---

### Adding a Process-Specific Icon



In the following exercise, we will add a process-specific icon for the POSTATUS process. Actually, we will be adding two icons:

- one to indicate that the workflow needs to be started, and
- one to indicate that the record is already in a workflow process.

Note: For training purposes, existing icons will be used. However, you can also create and use your own icons.

Follow the steps below.

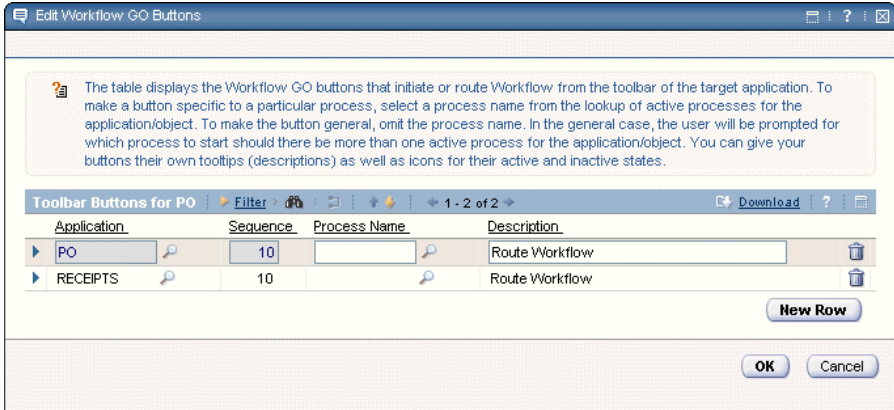
Step	Action
1	Access the <b>POSTATUS</b> process from the <b>Workflow Designer</b> application.
2	Set the process to <i>not</i> auto-initiate.

continued on next page



## Process-Specific Toolbar Buttons continued

### Adding a Process-Specific Icon continued

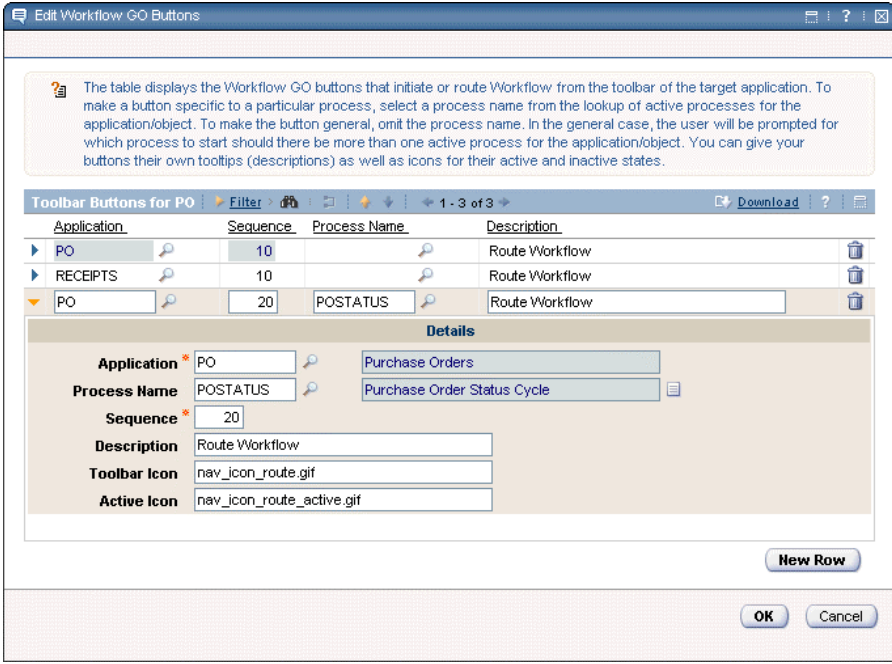
Step	Action
3	<p>Choose <b>Edit Workflow GO buttons</b> from the <b>Select Action</b> menu.</p> <p><u>Result:</u> The Edit Workflow GO Buttons dialog box opens, as shown in the example below.</p> 

continued on next page

Process-Specific Toolbar Buttons continued

Adding a Process-Specific Icon

continued

Step	Action
4	<p>Insert a new line into the dialog box.</p> <p><u>Result:</u> The new line is added with the default icons and the selected process listed.</p> 

continued on next page

## Process-Specific Toolbar Buttons continued

### Adding a Process-Specific Icon

continued

Step	Action								
5	<p>We want to indicate which icons need to show on the process, so enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td><b>Description</b></td> <td>Route POSTATUS</td> </tr> <tr> <td><b>Toolbar Icon</b></td> <td>nav_icon_assetmove.gif</td> </tr> <tr> <td><b>Active Icon</b></td> <td>nav_icon_assetswap.gif</td> </tr> </tbody> </table> <p><u>Note:</u> For this course, we are using existing icons. In practice, you can create your own for this purpose.</p>	<u>Field</u>	<u>Value</u>	<b>Description</b>	Route POSTATUS	<b>Toolbar Icon</b>	nav_icon_assetmove.gif	<b>Active Icon</b>	nav_icon_assetswap.gif
<u>Field</u>	<u>Value</u>								
<b>Description</b>	Route POSTATUS								
<b>Toolbar Icon</b>	nav_icon_assetmove.gif								
<b>Active Icon</b>	nav_icon_assetswap.gif								
6	<p>We want the new icon to show up on the toolbar before the default icon, so change the <b>Sequence</b> field to 5.</p> <p><u>Note:</u> The default icon has a higher sequence number. Therefore, it will be located to the right of the new icon.</p>								
7	Click <b>OK</b> to accept your changes.								

### Location of Process-Specific Icons

The source images for your icons must be located in the root Maximo directory along the following path:

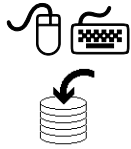


[root]\applications\maximo\maximouiweb\webmodule\webclient\images

continued on next page

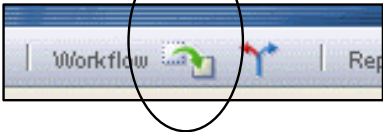
**Process-Specific Toolbar Buttons** continued

**Testing the New Icons**



The new icons were associated with the POSTATUS application, which is part of the PO object. Therefore, the new icons will show up on purchase orders.

We will now create a PO and test our new icons. Follow the steps below.

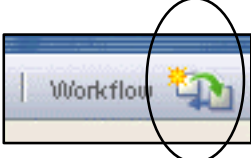
Step	Action								
1	Access the <b>Purchase Orders</b> application from the <b>Purchasing</b> module.								
2	Insert a new PO record with the following information on the <b>PO</b> tab: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b><u>Field</u></b></td> <td style="width: 50%;"><b><u>Value</u></b></td> </tr> <tr> <td><b>Description</b></td> <td>Purchase of Tires</td> </tr> <tr> <td><b>Company</b></td> <td>FSC</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Description</b>	Purchase of Tires	<b>Company</b>	FSC		
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Description</b>	Purchase of Tires								
<b>Company</b>	FSC								
3	On the <b>PO Lines</b> tab, enter a single line with the following information: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b><u>Field</u></b></td> <td style="width: 50%;"><b><u>Value</u></b></td> </tr> <tr> <td><b>Item</b></td> <td>43992 (Tire, Forklift - TR-70)</td> </tr> <tr> <td><b>Quantity</b></td> <td>10</td> </tr> <tr> <td><b>Conversion Factor</b></td> <td>1</td> </tr> </table>	<b><u>Field</u></b>	<b><u>Value</u></b>	<b>Item</b>	43992 (Tire, Forklift - TR-70)	<b>Quantity</b>	10	<b>Conversion Factor</b>	1
<b><u>Field</u></b>	<b><u>Value</u></b>								
<b>Item</b>	43992 (Tire, Forklift - TR-70)								
<b>Quantity</b>	10								
<b>Conversion Factor</b>	1								
4	<b>Save</b> the PO record.								
5	Look at the toolbar to view the new process-specific icon. <div style="text-align: center;">  </div> <p><u>Note:</u> The relative location of the new button on the toolbar was indicated in the <b>Sequence</b> field when setting up the new icon for the POSTATUS process.</p>								

continued on next page

**Process-Specific Toolbar Buttons** continued

**Testing the New Icons**

continued

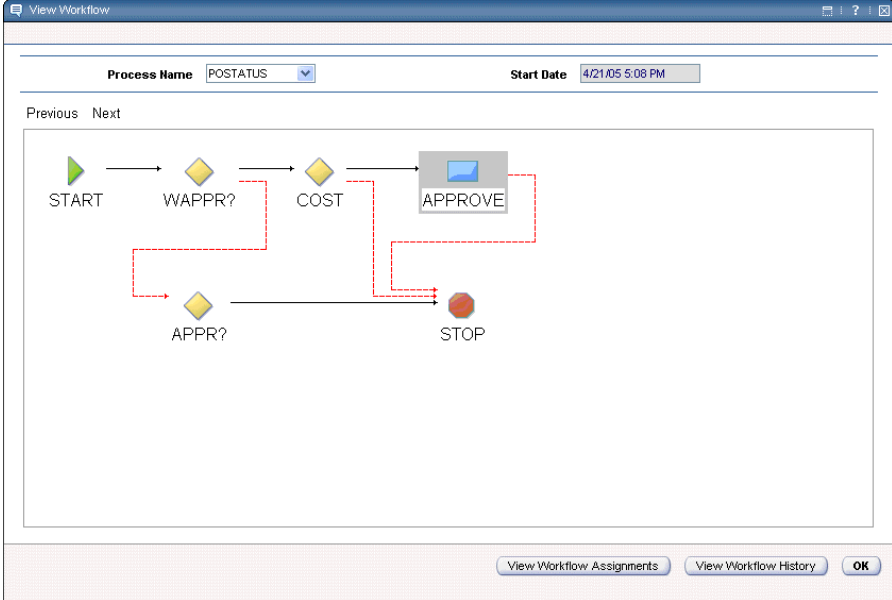
Step	Action
6	Move your mouse over the new icon. <u>Result:</u> The tool tip reflects what you put into the Description field when setting up the new icon: <p style="text-align: center;"><b>Route POSTATUS</b></p>
7	Click the <b>Route POSTATUS</b> button. <u>Result:</u> Because the record is now in a Workflow process, the icon shows the graphic indicated in the <b>Active Icon</b> field when setting up the icon. <div style="text-align: center;">  </div>

continued on next page

Process-Specific Toolbar Buttons continued

Testing the New Icons

continued

Step	Action
8	<p>Check the <b>Workflow Map</b> to verify that the record truly is in the POSTATUS process.</p> <p><u>Result:</u> The record should be in the APPROVE node of the designated process, as shown below. If so, then you know that your process-specific toolbar button is set up correctly.</p> 

## Chapter Summary

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**Workflow Administration**

The Workflow Administration tool allows you to see which records are in Workflow processes. It also provides a central location from which to reassign current tasks and to stop processes.

---

**Reassignment Escalation**

In Workflow processes, you can designate an automatic reassignment of a task by placing a role in the Escalation Role field. However, an escalation record and accompanying action must be set up to cause this to happen. The created escalation must be valid and active.

---

**Escalation to Auto-Initiate Processes**

In addition to using the auto-initiate feature in Workflow Designer, you can create one or more escalations that will search for records with designated characteristics and automatically place them into specified active Workflow processes.

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**NOTES:**

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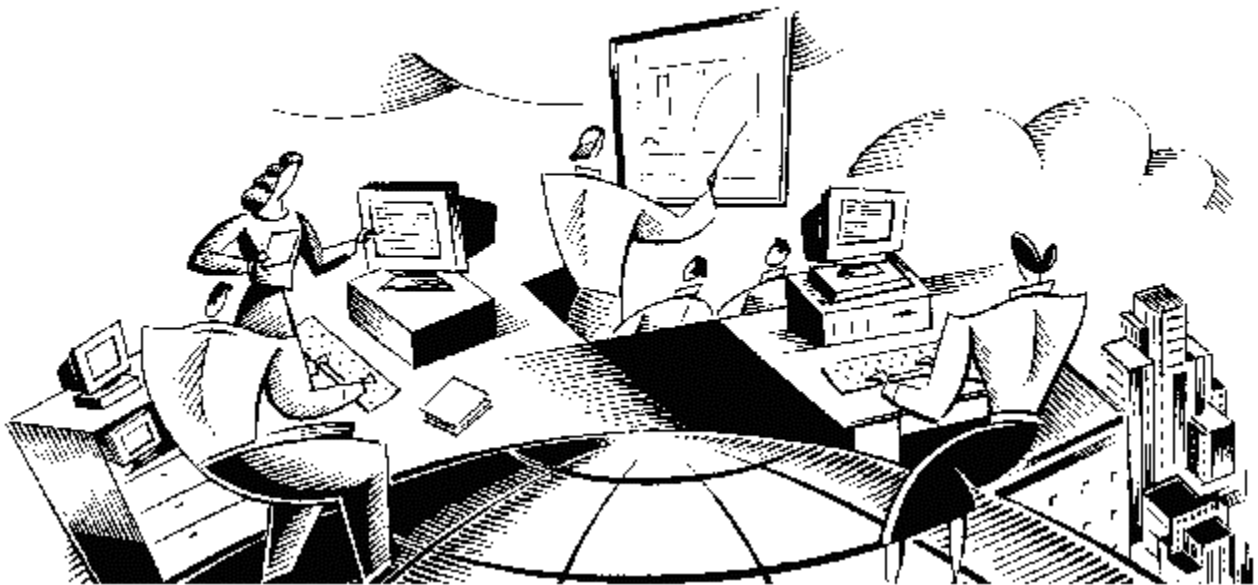
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# Workflow Management Using MXES

## Appendix A: Import and Export of Process Elements



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Appendix Overview	A-1
Export a Workflow Process	A-2
Import a Workflow Process	A-7

---

## Appendix Overview

---

### Overview

Maximo allows you to export and import Workflow processes and certain related supporting data, including:

- Actions
- Roles
- Communication Templates

These records are exported and imported in an XML format via the External Systems application located in the Integration module.

An exported XML file can be *manipulated* for importation into another Maximo system or to the same system from which it was exported.

Note: In this appendix, you will learn how to export and import a Workflow process only.

Please refer to Workflow Help and documentation for more details on the export/import procedure for the additional elements.

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### The Maximo Enterprise Adapter



To export and import Workflow processes and related data, the Maximo Enterprise Adapter (MEA) must be installed and functioning.

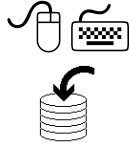
For further information on this procedure, please refer to the *Maximo Enterprise Adapter System Administrator's Guide*.

Note: The file locations indicated in this appendix will be different, depending on your MEA installation.

---

## Export a Workflow Process

### Export a Workflow Process



After you create and test your Workflow processes, you will need to migrate them to a production Maximo system from the test and development environment.

Exportation of processes and related records allows you to export these records rather than having to re-create them from scratch.

The process below shows you how to export a Workflow process.

**Note:** For this example, we will export a preexisting process. We will manipulate the data to import the process under a different name.


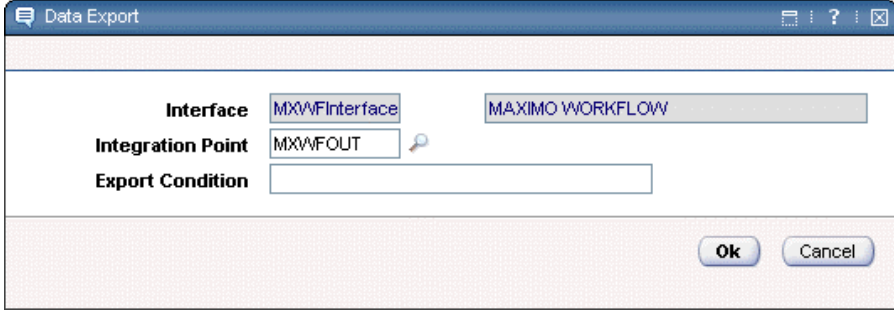
Step	Action																																	
1	Access the <b>External Systems</b> application from the <b>Integration</b> module.																																	
2	Access the <b>EXTSYS1</b> record. <div style="border: 1px solid black; padding: 5px;"> </div>																																	
3	Display the <b>Outbound Interfaces</b> tab. <div style="border: 1px solid black; padding: 5px;"> <table border="1"> <thead> <tr> <th>Interface</th> <th>Description</th> <th>Enabled?</th> </tr> </thead> <tbody> <tr><td>MKACTIONInterf</td><td>MAXIMO ACTIONS</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKASSETInterf</td><td>MAXIMO ASSETS</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKCRAFTInterf</td><td>MAXIMO CRAFT</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKCTEMPLATE</td><td>MAXIMO COMMUNICATION TEMPLATES</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKDOMAINInterf</td><td>MAXIMO DOMAINS</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKEMPACTInterf</td><td>MAXIMO LABOR PAY</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKENDPOINTInterf</td><td>MAXIMO ENDPOINT</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKEXTSYSInterf</td><td>MAXIMO EXTERNAL SYSTEM</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKGLTXInterf</td><td>MAXIMO JOURNALS</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>MKINTIFACEInterf</td><td>MAXIMO INTEGRATION INTERFACE</td><td><input checked="" type="checkbox"/></td></tr> </tbody> </table> </div>	Interface	Description	Enabled?	MKACTIONInterf	MAXIMO ACTIONS	<input checked="" type="checkbox"/>	MKASSETInterf	MAXIMO ASSETS	<input checked="" type="checkbox"/>	MKCRAFTInterf	MAXIMO CRAFT	<input checked="" type="checkbox"/>	MKCTEMPLATE	MAXIMO COMMUNICATION TEMPLATES	<input checked="" type="checkbox"/>	MKDOMAINInterf	MAXIMO DOMAINS	<input checked="" type="checkbox"/>	MKEMPACTInterf	MAXIMO LABOR PAY	<input checked="" type="checkbox"/>	MKENDPOINTInterf	MAXIMO ENDPOINT	<input checked="" type="checkbox"/>	MKEXTSYSInterf	MAXIMO EXTERNAL SYSTEM	<input checked="" type="checkbox"/>	MKGLTXInterf	MAXIMO JOURNALS	<input checked="" type="checkbox"/>	MKINTIFACEInterf	MAXIMO INTEGRATION INTERFACE	<input checked="" type="checkbox"/>
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## Export a Workflow Process continued

### Export a Workflow Process

continued

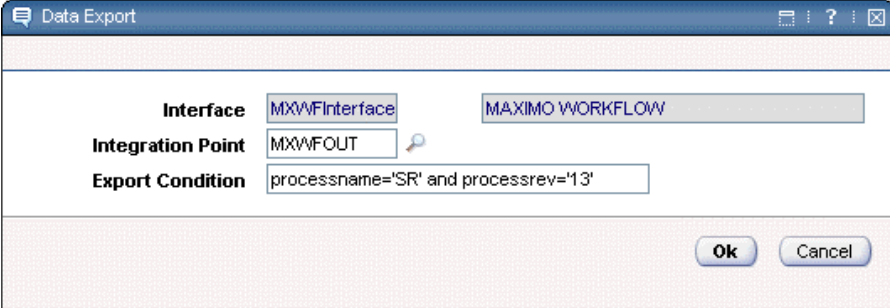
Step	Action
4	<p>Click the <b>MXWFInterface</b> line to select it.</p>  <p><b>Note:</b> You can filter for this interface or page through until you see it in the list.</p>
5	<p>Click the <b>Data Export</b> button.</p> <p><b>Result:</b> The Data Export dialog box opens.</p> 

continued on next page

**Export a Workflow Process** continued

**Export a Workflow Process**

continued

Step	Action
6	<p>In the <b>Export Condition</b> field, enter the following SQL statement:                      processname='SR' and processrev='13'</p>  <p><u>Note:</u> This SQL allows you to specify precisely the name of the process and which revision of the process you want.</p>
7	<p>Click <b>OK</b>.</p> <p><u>Result:</u> An XML file containing the indicated record is exported to the following location:</p> <p style="text-align: center;"><i>C:\bea\jmsstore\xmlfiles</i></p> <p><u>Note:</u> The filename will look similar to the one below (with different numbers).</p> <p style="text-align: center;">EXTSYS1_MXWFInterface_11138516088431130.XML</p>

continued on next page

## Export a Workflow Process continued

### Exported Data

The exported process data comes in a typical XML format. If you are familiar with XML, you will easily see the major components of the exported process in the file.

The graphic below shows a piece of the SR process export XML.

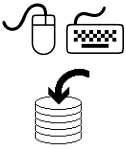
```
<?xml version="1.0" encoding="UTF-8"?>
<MXWFInterface xmlns="http://www.mro.com/mx/integration" language="EN">
  <Header operation="Notify" event="0">
    <SenderID type="MAXIMO" majorversion="6" minorversion="0" build="140"
dbbuild="v600-01">MX</SenderID>
    <CreationDateTime>2005-04-18T15:13:28-05:00</CreationDateTime>
    <RecipientID>EXTSYS1</RecipientID>
    <MessageID>11138516088431130</MessageID>
  </Header>
  <Content>
    <MXWF>
      <WFPROCESS>
        <PROCESSNAME>SR</PROCESSNAME>
        <DESCRIPTION>Service Request Process</DESCRIPTION>
        <ENABLED>1</ENABLED>
        <PROCESSREV>13</PROCESSREV>
        <CHANGEBY>WILSON</CHANGEBY>
        <CHANGEDATE>2005-02-18T13:54:29-05:00</CHANGEDATE>
        <MIGRATED>0</MIGRATED>
        <OBJECTNAME>SR</OBJECTNAME>
        <ACTIVE>1</ACTIVE>
        <WFPROCESSID>50</WFPROCESSID>
        <SENDERSYSID>MX</SENDERSYSID>
        <SOURCESYSID />
        <OWNERSYSID />
        <EXTERNALREFID />
        <AUTOINITIATE>0</AUTOINITIATE>
      <WFNODE>
        <NODEID>1</NODEID>
        <NODETYPE maxValue="WFSTART">START</NODETYPE>
        <XCOORDINATE>1</XCOORDINATE>
        <YCOORDINATE>3</YCOORDINATE>
      </WFNODE>
    </MXWF>
  </Content>
</MXWFInterface>
```

Note: In the next exercise, we will be changing some of this data to reverse the process—importing.

continued on next page

## Export a Workflow Process continued

### Manipulate Exported Data



After exporting processes and related records, you must manipulate some of the XML code to prepare it for import. In addition, the manipulated data needs to be put into a different location for import.

Note: *Back up this file before doing anything to it!*

The steps below show you how to make the needed changes to prepare the file for importing into Maximo.

Step	Action
1	<b>Back up the XML file that was created during the export process.</b>
2	Open the file using Notepad or any other convenient text tool.
3	Locate the tag <SenderID>. Modify the data in this tag to read: <code>&lt;SenderID&gt;EXTSYS1&lt;/SenderID&gt;</code>
4	Locate the tag <RecipientID>. Modify the data in this tag to read: <code>&lt;RecipientID&gt;MX&lt;/RecipientID&gt;</code>
5	Locate the opening for the <WFPROCESS> tag. Replace the existing tag with the following: <code>&lt;WFPROCESS action=""&gt;</code> <u>Note:</u> Be sure to use two double quotes in this step.
6	Change the data between the opening and closing of the PROCESSNAME tag to the following: <code>IMPORTTEST</code> <u>Note:</u> This is the name of the process record that will be imported.
7	Change the data between the opening and closing of the PROCESSREV tag to the number 1. <u>Notes:</u> <ul style="list-style-type: none"> <li>• This is the revision number of the process record that will be imported.</li> <li>• The import process is “smart” enough to automatically increment the revision number if you are importing an existing process name.</li> </ul>
8	Save and close the file.



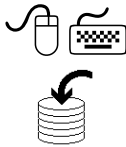
## Import a Workflow Process

### Overview

Workflow processes and elements can be imported using exported and manipulated XML files from other Maximo systems. This section provides an overview of how to do this.

**Note:** We cover the import of a process only. For details on how to perform this procedure for other Workflow elements, please consult the technical documentation on this product.

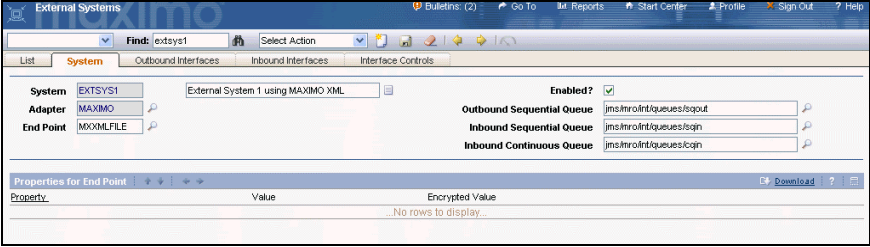
### Import a Workflow Process



Now that you have exported and manipulated the process data, you can import it. This exercise will show you how.

**Note:** In practice, you'd probably use this to back up or transfer Workflow process records. However, for our example we will import the altered data back into the same system.

Follow the steps below.

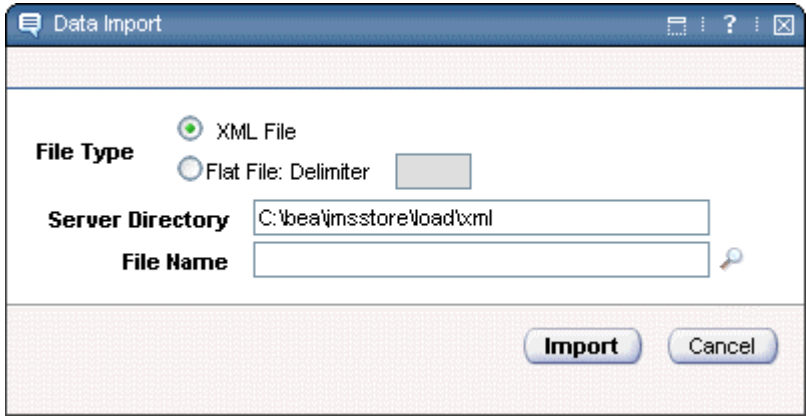
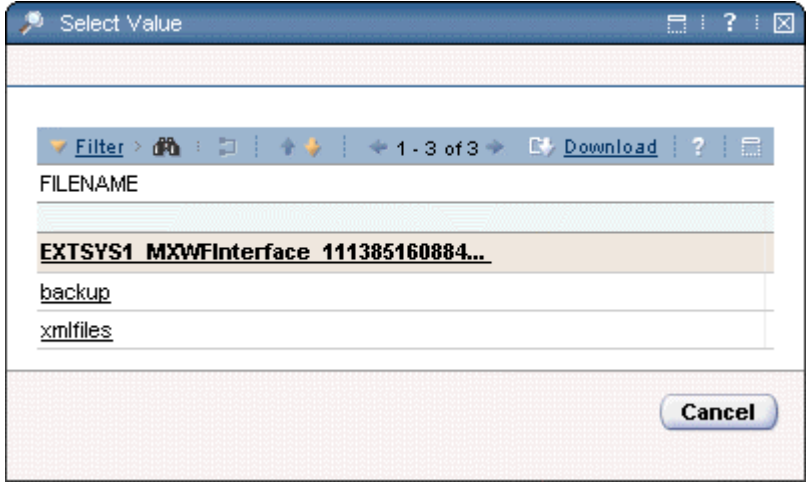
Step	Action
1	Copy the manipulated file to the default import location: C:\bea\jmsstore\load\xml\
2	Access the <b>External Systems</b> application from the <b>Integration</b> module.
3	Access the <b>EXTSYS1</b> record. 

continued on next page

## Import a Workflow Process continued

### Import a Workflow Process

continued

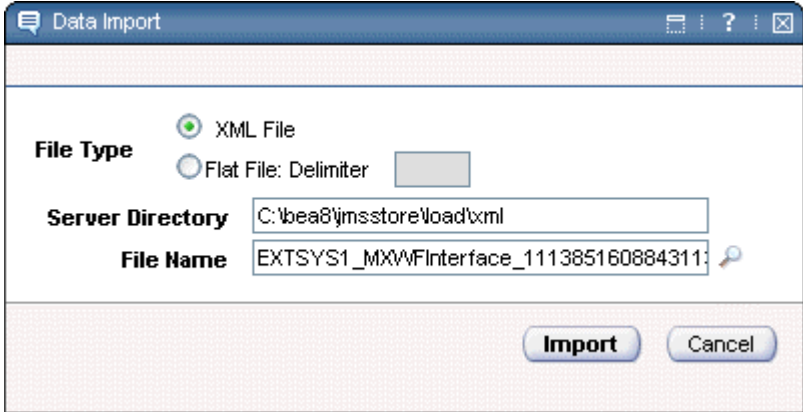
Step	Action
4	<p>Choose <b>Data Import</b> from the <b>Select Action</b> menu.</p> <p><u>Result:</u> The Data Import dialog box opens.</p>  <p><u>Note:</u> The default import directory is displayed.</p>
5	<p>Click the <b>Select Value</b> button to the right of the <b>File Name</b> field.</p> <p><u>Result:</u> Maximo displays a list of available files, similar to the example below.</p> 

continued on next page

## Import a Workflow Process continued

### Import a Workflow Process

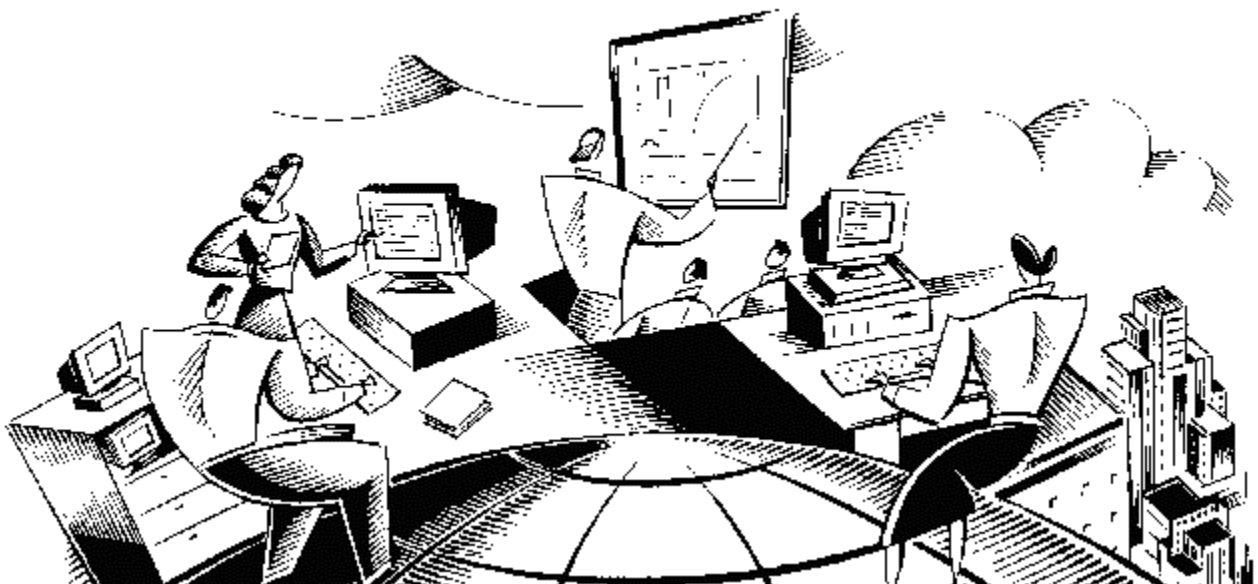
continued

Step	Action
6	<p>Click on your file name in the list.</p> <p><u>Result:</u> The File Name field in the Data Import dialog box is populated.</p> 
7	<p>Click <b>Import</b>.</p> <p><u>Result:</u> Your new process has been imported.</p>
8	<p>Access the <b>Workflow Designer</b> program and find your newly imported IMPORTTEST process.</p> <p><u>Note:</u> In practice, you'd want to go through the process and import the actions, roles, and communication templates needed for the process. You'd also need to be sure other types of data are available, such as for security, people, people groups, and so forth.</p>



# Workflow Management Using MXES

## Answer Key



**In This Chapter**

This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
Chapter 2 Answers	1
Chapter 3 Answers	7
Chapter 4 Answers	9
Chapter 5 Answers	19
Chapter 6 Answers	21
Chapter 7 Answers	33
Chapter 8 Answers	41
Chapter 9 Answers	43
Chapter 10 Answers	47

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## Chapter 2 Answers

---

**PAGE 2-57**  
**Exercise 1:**  
**Checking a**  
**Workflow**  
**Record**

What is the last entry in the Workflow History of your purchase order for office supplies?

Answer: **Followed True Action / Jones**

---

**PAGE 2-58**  
**Exercise 2:**  
**Checking a**  
**Workflow**  
**Record**

Who is the current assignee for Stanley's Broken Window work order?

Answer: Roland Smith

---

**PAGE 2-65**  
**Challenge**  
**Question: The**  
**Workflow Map**

Access the Workflow Map of the PO record for office supplies.  
Why doesn't Maximo display the Workflow Map for this record?

Answer: Because the workflow has come to a STOP node and the process is complete.

---

continued on next page

## Chapter 2 Answers continued

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**PAGE 2-70**  
**Workshop**  
**Exercise 1**

What happens when a record enters a Workflow process?

Answer: Manual Status changes are no longer allowed.

---

**PAGE 2-70**  
**Workshop**  
**Exercise 2**

What is a Workflow process?

Answer: A logical flow of business processes and practices.

---

**PAGE 2-70**  
**Workshop**  
**Exercise 3**

What is a node?

Answer: A graphical representation of the activities and conditions defined at a given point in the Workflow process.

---





continued on next page



## Chapter 2 Answers continued

**PAGE 2-71**  
**Workshop**  
**Exercise 4**

Name and describe each of the nodes shown below.





Node	Description
	<p><b>Manual Input</b> nodes allow you to direct the path of a record. Use a Manual Input node when you want the user to select the next step from a menu.</p>
	<p>An <b>Interaction</b> node must have one or more action lines entering it, but only one action line can exit. You use an interaction node to help lead an end user down particular problem resolution paths by offering well-defined choices that guide the user through a scripted path and manage the relationship with the record in any given session. A manual input node usually precedes the interaction node.</p>
	<p><b>Condition</b> nodes are defined to automatically direct records according to information contained within the record. There must be one positive connection and one negative connection coming out of a Condition node. The connection used by a record as it exits a Condition node is dictated by the SQL expression within the node, which resolves to either true (positive connection) or false (negative connection).</p>
	<p><b>Task</b> nodes allow you to direct the path of the record. You must have at least one connection coming out of a Task node. You use a Task node when your business rules call for an affirmative or negative user response to an Inbox assignment.</p>

continued on next page

## Chapter 2 Answers continued

PAGE 2-71  
Workshop  
Exercise 4

continued

Node	Description
	<p>The <b>Start</b> node indicates the beginning of a Workflow process. Workflow places one Start node on the canvas when you create a new process. There can be only one starting point to any process.</p>
	<p>A <b>Subprocess</b> node represents a complete Workflow process nested within another Workflow process. A Subprocess can have a negative line flowing out of it, in addition to the positive. When a Subprocess encounters a stop node it returns to the master process along the same line on which it finished. This enables the Subprocess to carry back the logic that caused the termination to the master process.</p>
	<p><b>Stop</b> nodes mark the point where a Workflow process ends and a record leaves Workflow control. Workflow places one Stop node on the canvas when you create a new process. You can place additional Stop nodes on the canvas as needed.</p>
	<p>You use a <b>Wait</b> node to create a certain reaction to an action. You can define any action to trigger a specified reaction in a Wait node. When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the specified events occur. When a specified event does occur, it informs the node and the process resumes by exiting the node at the single exit point.</p>

continued on next page

## Chapter 2 Answers continued

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**PAGE 2-72**  
**Workshop**  
**Exercise 5**

To use a Workflow process, what two things have to be done?

Answer:

1. Enable
  2. Activate
- 

**PAGE 2-81**  
**Workshop**  
**Exercise 9**

Using the Fix Broken Window work order record, answer the following question:

What is the status of the work order after completing the Workflow process?

Answer: WMATL

---



## Chapter 3 Answers

---

**PAGE 3-15**  
**Discussion**

What key factors must be considered when implementing Workflow? What might be some constraints?

Answers:

- What Maximo applications are being/will be used
  - What resources are available
  - Willingness of labor/personnel to change
  - Return on investment
-



## Chapter 4 Answers

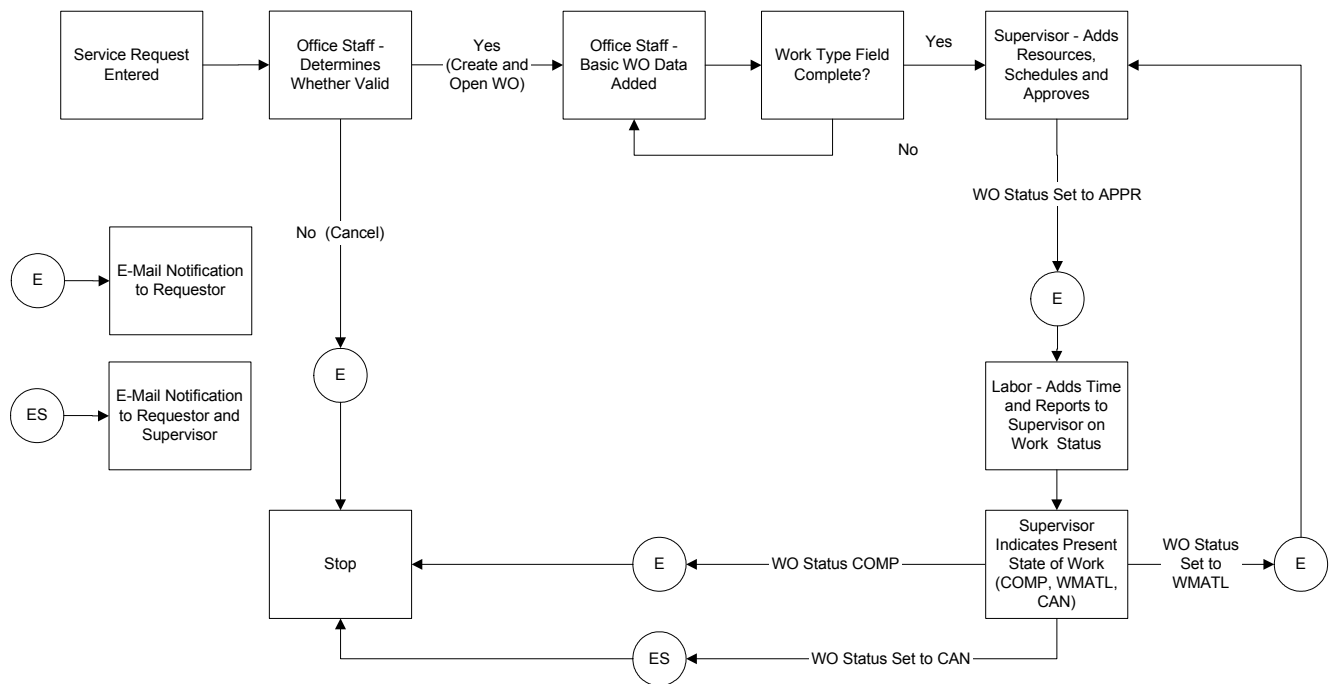
### PAGE 4-26

#### Exercise 1:

#### Mass U's

#### Revised Diagram

Using the space below, diagram Mass U's revised Workflow process using the Step Action table on page 4-24.



continued on next page

## Chapter 4 Answers continued

**PAGE 4-33**  
**Exercise 2:**  
**Opus' CM**  
**Step/Action**  
**Table**

Based on the Case Scenario, create a step/action table for the Corrective Maintenance work orders.

Note: There is no exact number of steps. Each person or group could have a different number.

Step	Action
1	A work order is started in the Workflow process.
2	The work order is determined to be a CM work type.
3	The work order is sent to a Maintenance supervisor for review and approval.
4	If the Maintenance supervisor approves the work, then he or she decides, depending on the area affected, which department—Engineering or Environmental—to send the work order to.
5	If the supervisor does not accept the work order, it is rejected.
6	If accepted, the assigned representative from either the Engineering or Environmental department approves or cancels the work order and then sends the work order to the Safety group for a Safety Rep's approval or rejection.
7	A member of the Safety group reviews and approves the work order. He or she sends it to the Finance department.
8	If the total cost is less than \$5,000, an accounts payable clerk can approve or reject the work order.
9	If the total cost is between \$5,000 and \$50,000, the AP supervisor can approve or reject the work order.
10	If the total cost is over \$50,000, the accounting manager can approve or reject the work order. When the work order has financial approval, work can start.

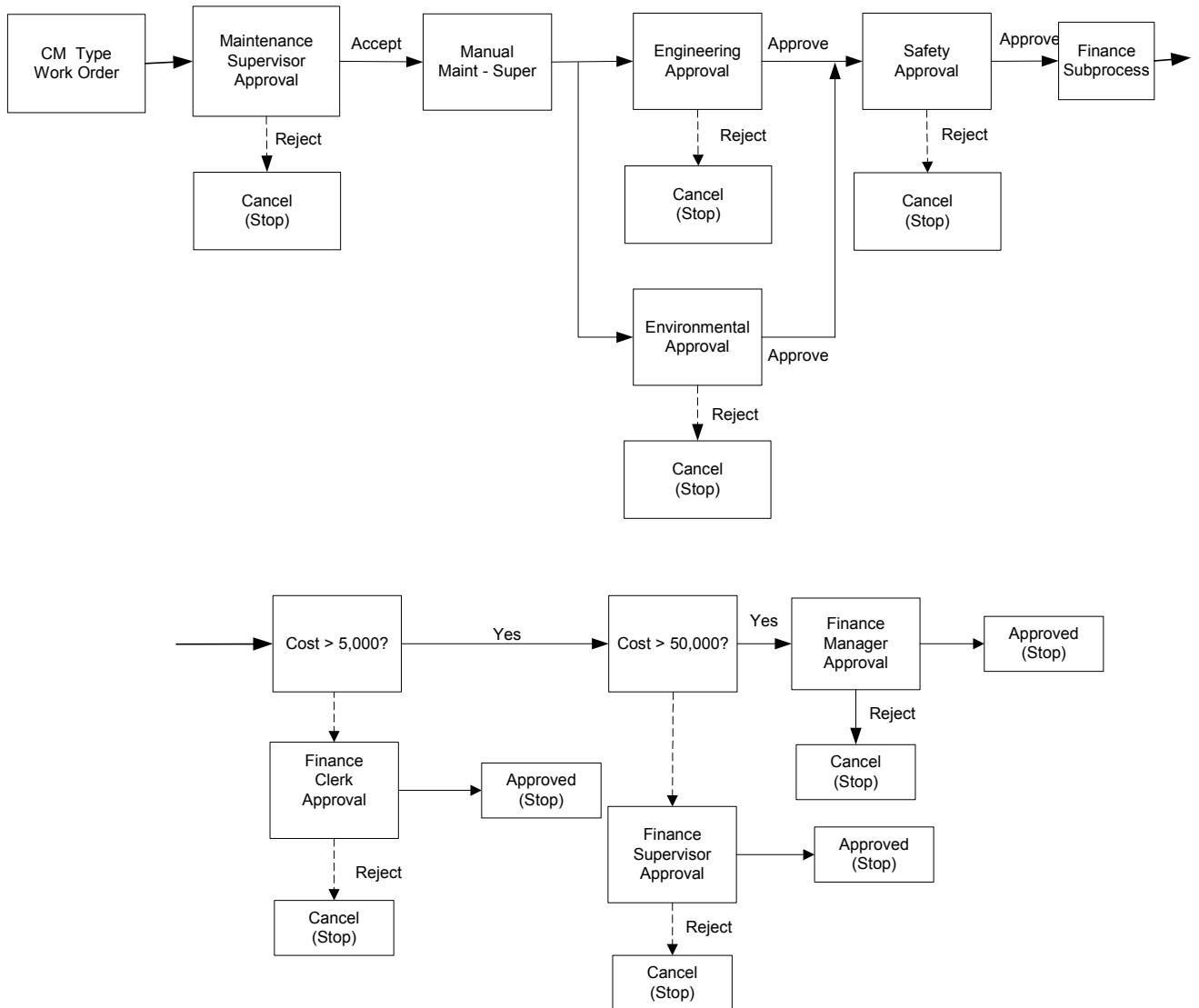
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Chapter 4 Answers continued

**PAGE 4-34**  
**Exercise 3:**  
**Opus' CM**  
**Diagram**

Based on the Case Scenario, diagram the Corrective Maintenance Work Order Routine.



continued on next page

## Chapter 4 Answers continued

**PAGE 4-36**  
**Exercise 4:**  
**Opus' PM**  
**Step/Action**  
**Table**

Based on the Case Scenario, create a step/action table for the Preventive Maintenance work orders.

Note: There is no exact number of steps. Each person or group might have a different number.

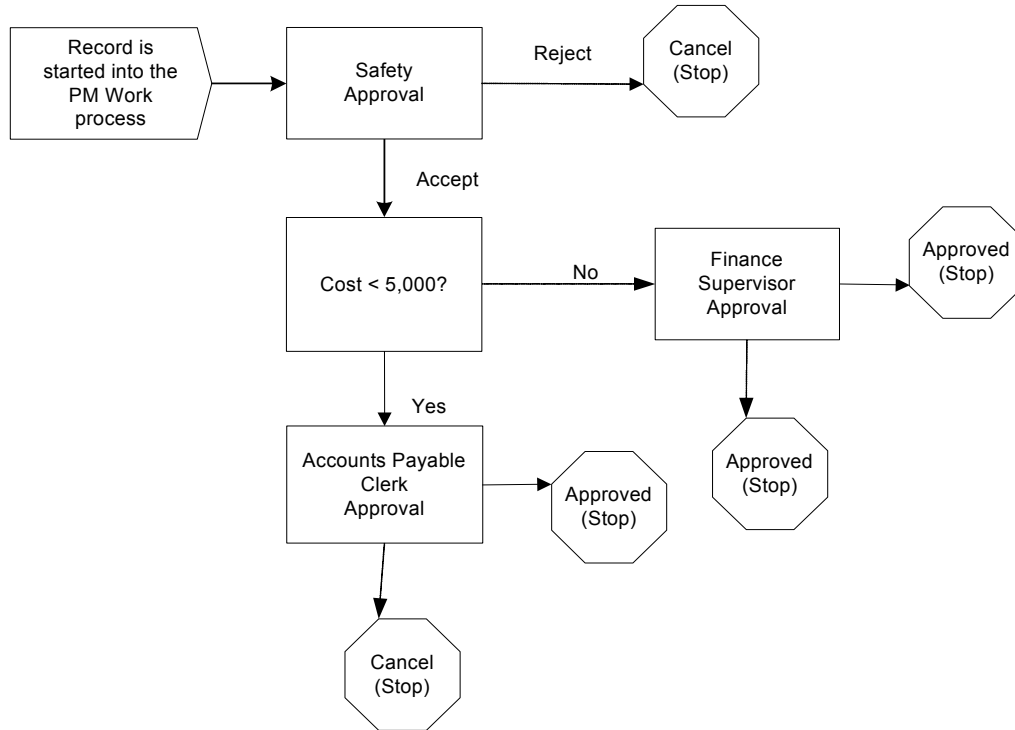
Step	Action
1	The work order is determined to have a PM work type and routed to the PM subprocess routine.
2	A member of the safety department reviews the work order. If he or she approves the work order, then it is sent to the Finance department. If the work order is rejected, it is canceled.
3	Is the cost greater than \$5,000?
4	If the total cost is less than \$5,000, an accounts payable clerk can approve or reject the work order.
5	If the total cost is over \$5,000, an accounting supervisor can approve or reject the work order.

continued on next page

## Chapter 4 Answers continued

**PAGE 4-37**  
**Exercise 5:**  
**Opus' PM**  
**Diagram**

Based on the Case Scenario, diagram the Preventive Maintenance Work Order routine.



continued on next page

## Chapter 4 Answers continued

---

**PAGE 4-38**  
**Exercise 6:**  
**Opus' Q&A**

Based on this information, answer the following questions about the work order process at Opus.

1. What types of work orders will initially use the workflow process for approvals?

Answer: Corrective Maintenance and Preventive Maintenance

2. How many approval levels are required for the PM and CM work order type?

Answer: 5

3. Who or what starts the process for Corrective Maintenance work orders?

Answer: Help Desk

4. Who or what starts the process for Preventive Maintenance work orders?

Answer: The process is automatically started in the system.

5. List the different groups involved in the Corrective and PM work routines.

Answer: Engineering, Maintenance Supervisors, Financial Clerks, Finance Supervisors, Finance Managers, Safety, Environmental

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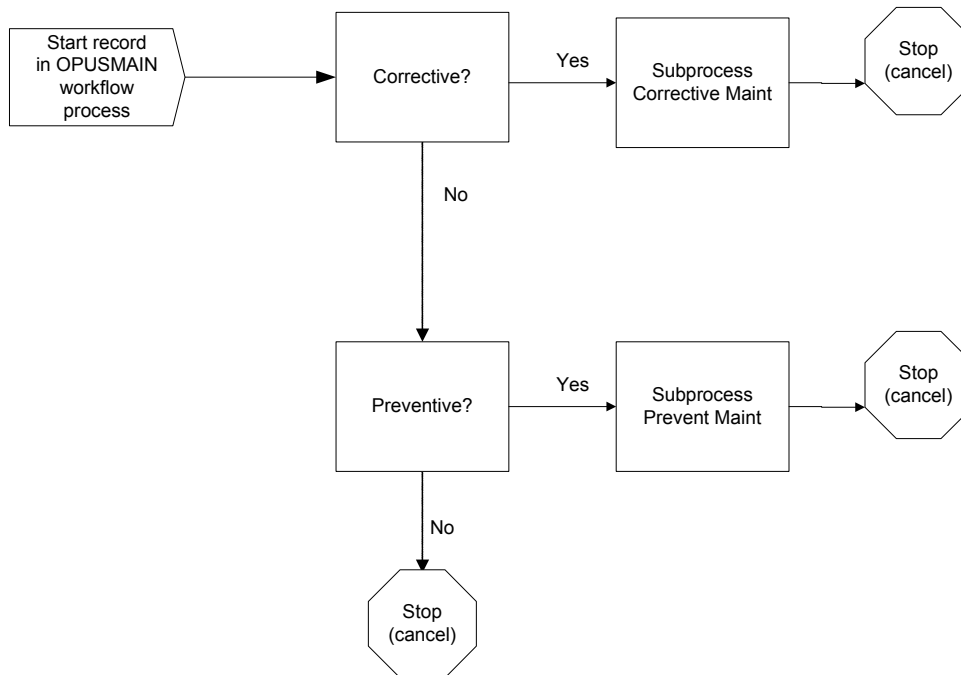
## Chapter 4 Answers continued

**PAGE 4-38**  
**Exercise 7**

Can you think of additional areas that Opus could implement to streamline their processes even further?

Answer:

Subprocess routines for work types and financial approvals

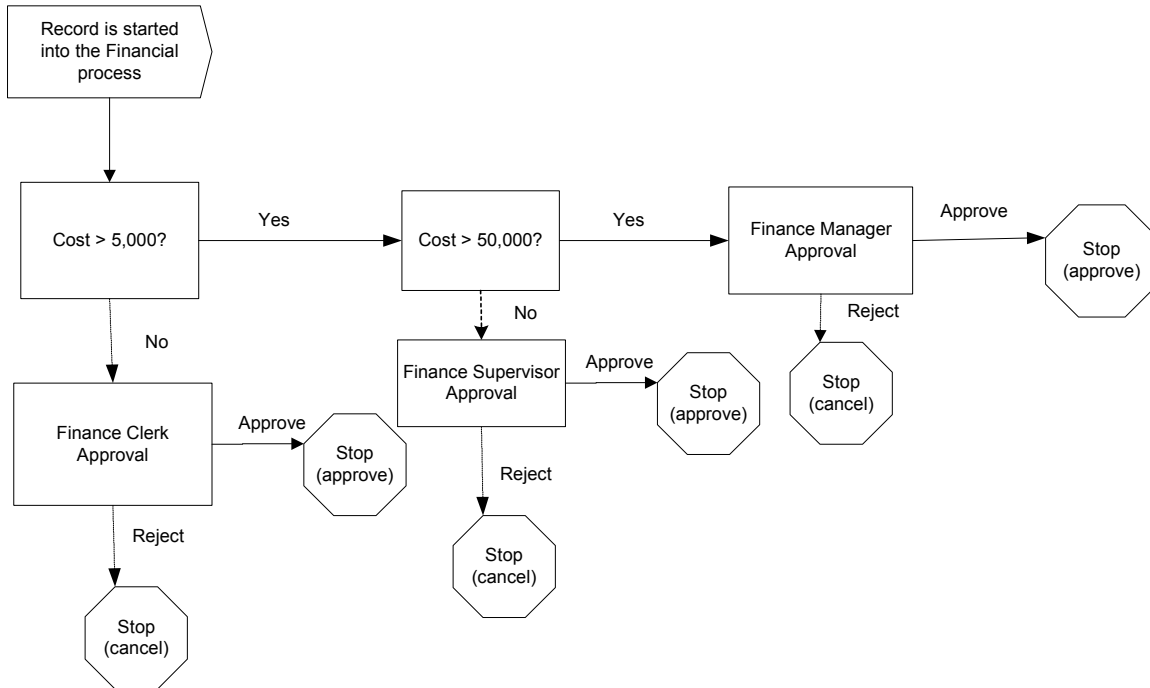
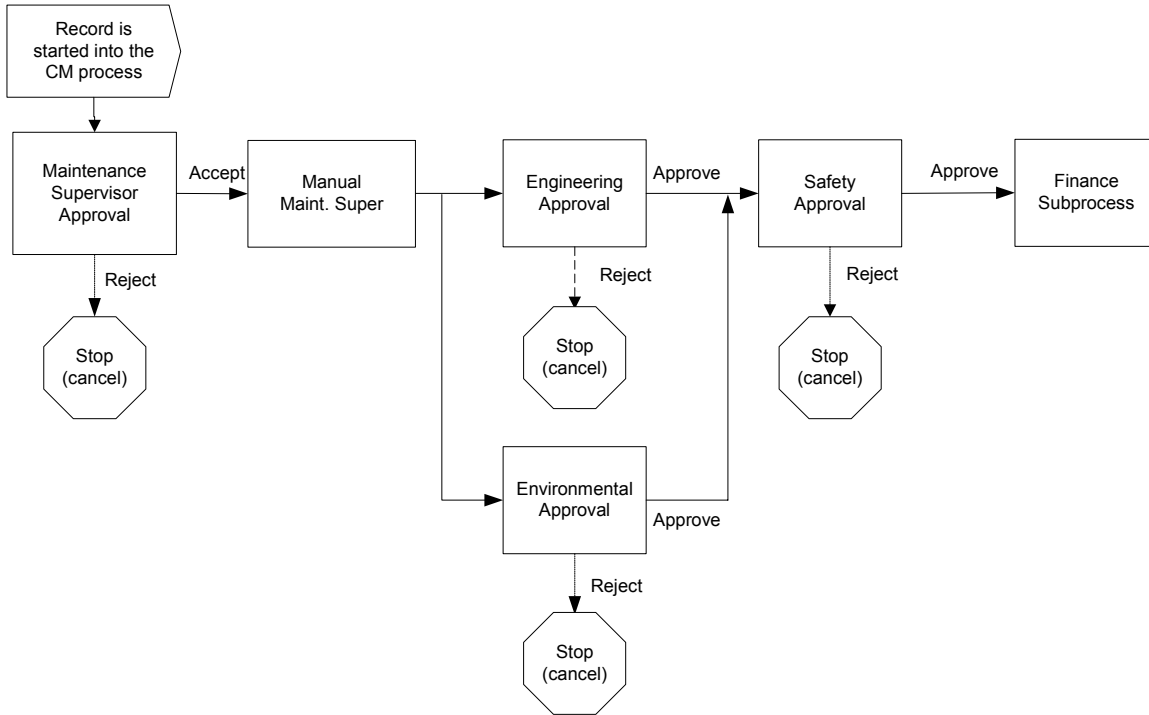


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Chapter 4 Answers continued

**PAGE 4-38**  
**Exercise 7**

continued



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## Chapter 4 Answers continued

### **PAGE 4-43** **Workshop** **Exercise 1**

List a few areas that might streamline this process.

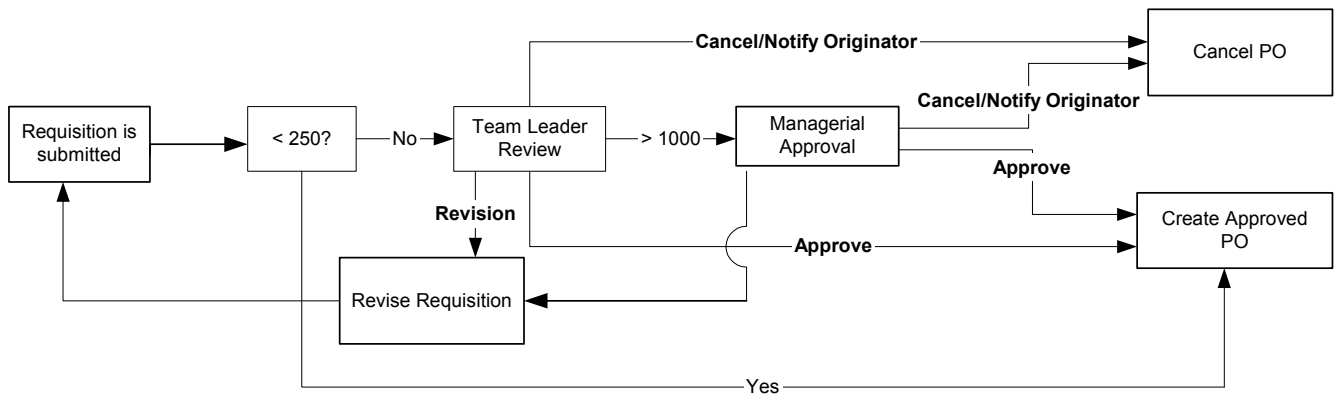
(Hint: Think of Maximo applications and how they can be used in this process.)

Answers:

- Have workers enter their own requisitions into Maximo (PR or DR).
- Use labor groups/roles for team leaders and manager.
- Have Maximo automatically create an approved PO when a PR's status is changed to APPR (approve).
- Build in subprocess routines where possible.

### **PAGE 4-45** **Workshop** **Exercise 2**

Use the space below to diagram the streamlined process.



continued on next page





## Chapter 5 Answers

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**PAGE 5-11**  
**Exercise 1:**  
**Create Other**  
**Mass U Users**

Below is the table from Chapter 4 that should be used as the source for adding the Mass U user records.

Note: Ensure that no delegates have been added to the user records. This will affect the workflow process later on.

<b>Person</b>	<b>Position/Craft</b>	<b>Role/Person Group</b>	<b>Supervisor</b>	<b>E-mail</b>
Kelly Ordway	Maintenance Supervisor	Supervisor Group	Diane Liberi	kordway@ massu.edu
Ted Bateman	Maintenance Supervisor	Supervisor Group	Diane Liberi	tbateman@ massu.edu
Julio Coronado	Maintenance Supervisor	Supervisor Group	Diane Liberi	jcoronado@massu.edu
Mark Ellison	Office Manager	Facilities Office Group	Diane Liberi	mellison@massu.edu
Fabiola Panzano	Office Coordinator	Facilities Office Group	Kelly Ordway	fpanzano@ massu.edu
Nick Craddock	Office Coordinator	Facilities Office Group	Kelly Ordway	ncraddock@ massu.edu

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### Chapter 5 Answers continued

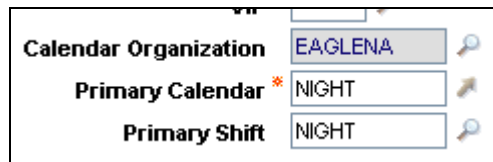
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**PAGE 5-18**  
**Exercise 2:**  
**Modifying the**  
**Shift Information**  
**of a Mass U**  
**Person Record**

Students should access Fabiola Panzano’s Person record and make changes to indicate the information presented below:

- Calendar Organization:** Night Shift Calendar for EAGLENA
- Primary Calendar:** NIGHT
- Primary Shift:** NIGHT

The shift-related section of the record should look like the graphic below.



## Chapter 6 Answers

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**PAGE 6-9**  
**Exercise 1:**  
**Opus' Case**  
**Scenario—Node**  
**Conventions**

Using Workflow Designer conventions, convert the Opus Corrective Maintenance process steps into nodes.

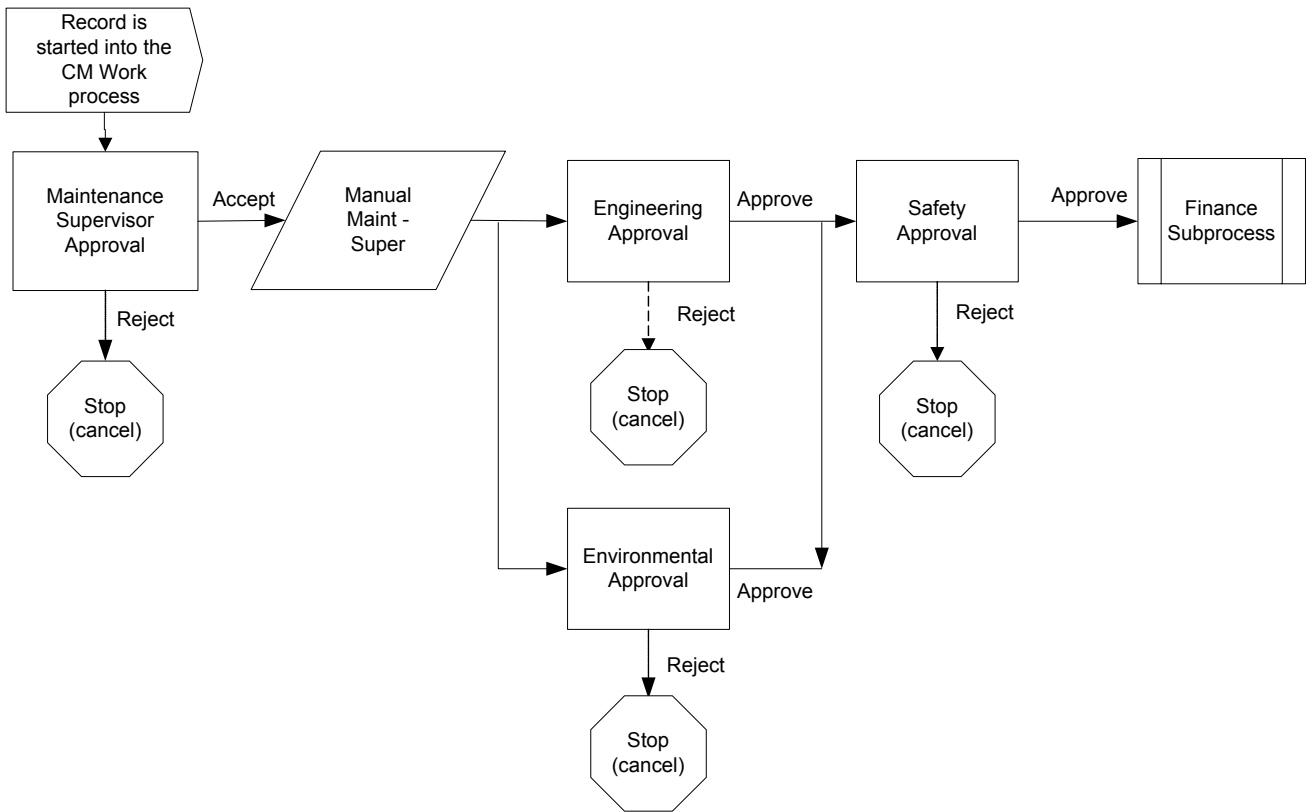
<b>Node</b>	<b>Action</b>
<b>Start</b>	A work order record is determined to be a CM type and enters the Corrective Maintenance (CM) Workflow process.
<b>Task</b>	The work order is sent to a maintenance supervisor for review and approval.
<b>Manual</b>	If the maintenance supervisor approves the work, then he or she decides, depending on the area affected, which department—Engineering or Environmental—to send the work order to.
<b>Stop</b>	If the supervisor does not accept the work order, it is rejected.
<b>Task</b>	If accepted, the assigned representative from either the Engineering or Environmental department approves the work order and sends the work order to the Safety group for a safety rep's approval.
<b>Stop</b>	If not accepted, the assigned representative from either the Engineering or Environmental department cancels the work order
<b>Task</b>	A member of the Safety group reviews and approves the work order. He or she sends it to the Finance department.
<b>Subprocess</b>	If the work order is given preliminary approval, it is then sent to the Finance department and then enters a financial subprocess.
<b>Stop</b>	If Safety does not give approval, the work order is canceled.

continued on next page

### Chapter 6 Answers continued

**PAGE 6-10**  
**Exercise 2:**  
**Opus' Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**

Convert the nodes into a flowchart.



continued on next page

## Chapter 6 Answers continued

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**PAGE 6-11**  
**Exercise 3:**  
**Opus' Case**  
**Scenario—Node**  
**Conventions**

Using Workflow Designer conventions, convert the Opus Finance process steps into nodes.

<b>Node</b>	<b>Action</b>
<b>Start</b>	A work order record enters the Finance Workflow process.
<b>Condition</b>	If the total cost is less than \$5,000 it is sent to the accounts payable clerk.
<b>Task</b>	The accounts payable clerk can approve or reject the work order.
<b>Condition</b>	If the total cost is between \$5,000 and \$50,000 it is sent to the AP supervisor.
<b>Task</b>	The AP supervisor approves or rejects the work order.
<b>Condition</b>	If the total cost is over \$50,000, it is sent to the accounting manager.
<b>Task</b>	The AP manager approves or rejects the work order. When the work order has financial approval, work can start.

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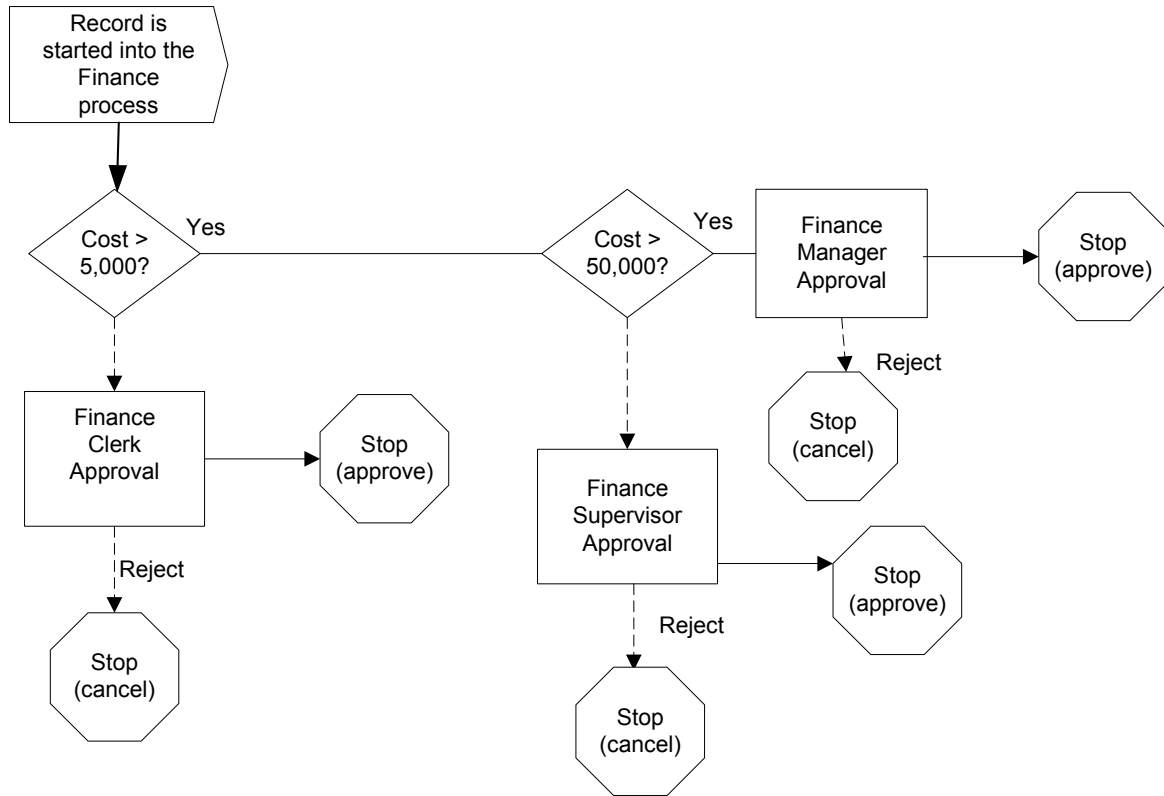
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### Chapter 6 Answers continued

**PAGE 6-12**

Convert the nodes into a flowchart.

**Exercise 4:  
Opus' Case  
Scenario—  
Converting  
Nodes into a  
Diagram**



continued on next page

## Chapter 6 Answers continued

**PAGE 6-13**  
**Exercise 5:**  
**Opus' Case**  
**Scenario—Node**  
**Conventions**

Using Workflow Designer conventions, convert the Opus Preventive Maintenance process steps into nodes.

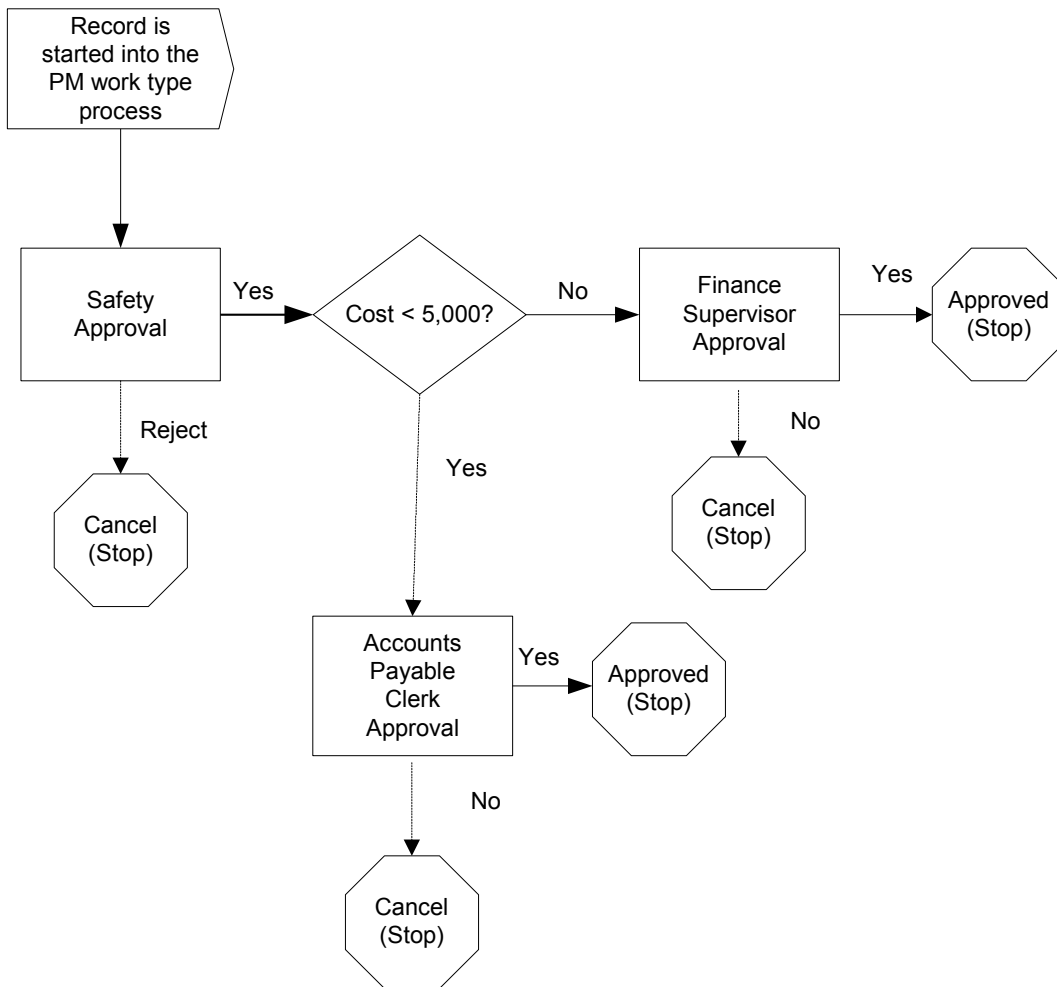
Node	Action
<b>Start</b>	The work order is determined to be a PM work type and goes in the PM work routine.
<b>Task</b>	A member of the Safety Department reviews the work order. If he or she approves the work order, it is sent to the Finance Department. Otherwise, the work order is rejected.
<b>Condition</b>	Is the cost greater than \$5,000?
<b>Task</b>	If the total cost is less than \$5,000, then an accounts payable clerk can approve or reject the work order.
<b>Task</b>	If the total cost is over \$5,000, then a supervisor can approve or reject the work order.

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### Chapter 6 Answers continued

**PAGE 6-14**  
**Exercise 6:**  
**Opus' Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**

Convert the nodes into a flowchart.



continued on next page



## Chapter 6 Answers continued

**PAGE 6-15**  
**Exercise 7:**  
**Mass U's Case**  
**Scenario—Node**  
**Conventions**

Using Workflow Designer conventions, convert Mass U's steps into nodes.

Node(s)	Action
<b>Start</b>	A service request is entered into the Create Service Requests application (online) or the Work Order Tracking application (telephone).
<b>Task</b>	If a Service Request is created, the office staff determines the validity of the request. If it is not valid, the request is canceled.
<b>Interaction</b>	If it is valid, a work order record is created and presented to the staffer who validated the request.
<b>Task</b>	For valid work requests, information is added to work order record by the staff. Then the work order is forwarded to supervisor.
<b>Condition</b>	The Work Type field <i>must</i> be completed before the work order goes to the supervisor. If it is not, the work order is routed back to the office staff for completion of this field.
<b>Stop</b>	On cancellation of a service request, an e-mail notification will go the originator and the supervisor. Then the workflow process is stopped.
<b>Task</b>	The supervisor will add resources, assign and approve the work order. An e-mail notification will be sent to the requestor.
<b>Task</b>	A hard copy of the work order will be given to the assigned labor, who will report labor time and inform the supervisor of the status of the work.

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## Chapter 6 Answers continued

**PAGE 6-15**  
**Exercise 7:**  
**Mass U's Case**  
**Scenario—Node**  
**Conventions**

continued

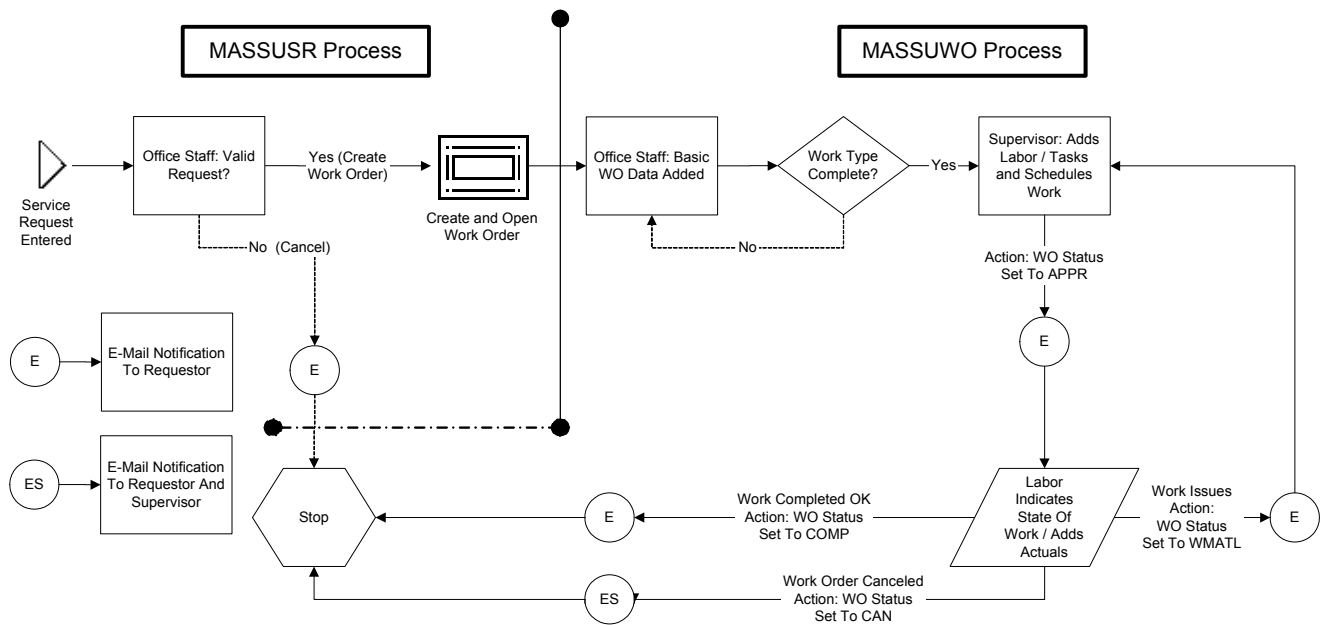
Node(s)	Action
<b>Manual Input</b>	When the labor routes the work order record from his Inbox, he will be asked by the process whether the work is: <ul style="list-style-type: none"> <li>• completed</li> <li>• waiting for materials</li> <li>• canceled</li> </ul> Workflow will change the status of the work order, depending on the selection.
<b>Action (line)</b>	If the work is not completed, then the process will set it to a status of Waiting for Materials (WMATL) and an e-mail notification will be sent to the person requesting the service. The record is then routed back to the supervisor for an eventual Completed status.
<b>Action (line) Stop</b>	When work is completed, the process changes the status on the record to COMP and routes the record to the end of the process. If the work order is completed (COMP), it finishes the Workflow process and an e-mail notification goes to the person requesting the work.
<b>Stop</b>	If the work is canceled, the status is set to CAN by the process and an e-mail notification is sent to the requestor.

continued on next page

Chapter 6 Answers continued

**PAGE 6-17**  
**Exercise 8:**  
**Mass U's Case**  
**Scenario—**  
**Converting**  
**Nodes into a**  
**Diagram**

Convert the nodes into a flowchart.



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**Chapter 6 Answers** continued

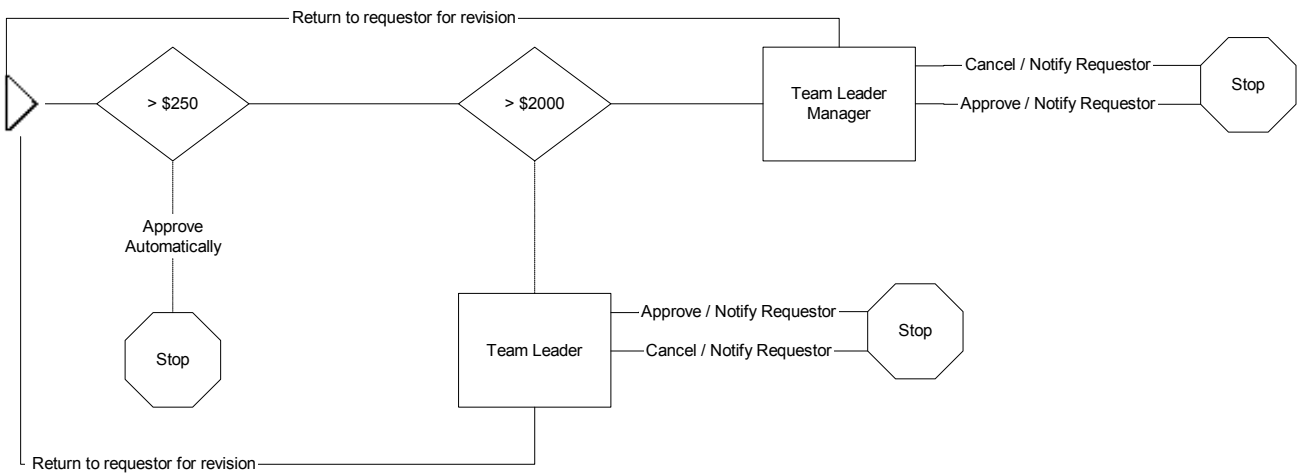
**PAGE 6-23**  
**Workshop**  
**Exercise**

Convert the generic flowchart diagram below into a diagram using Workflow Designer nodes.

Note: This process is for purchase requests.

Hint: Creating a step/action table can help you in determining nodes.

**Original Diagram**



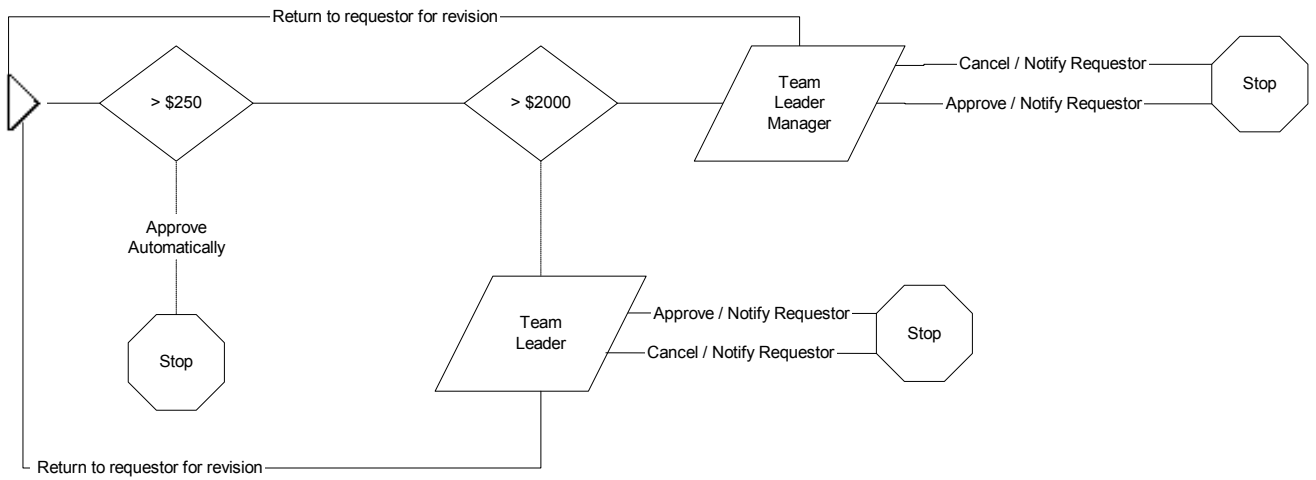
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### Chapter 6 Answers continued

**PAGE 6-23**  
**Workshop**  
**Exercise**

continued

### Answer





## Chapter 7 Answers

### PAGE 7-20

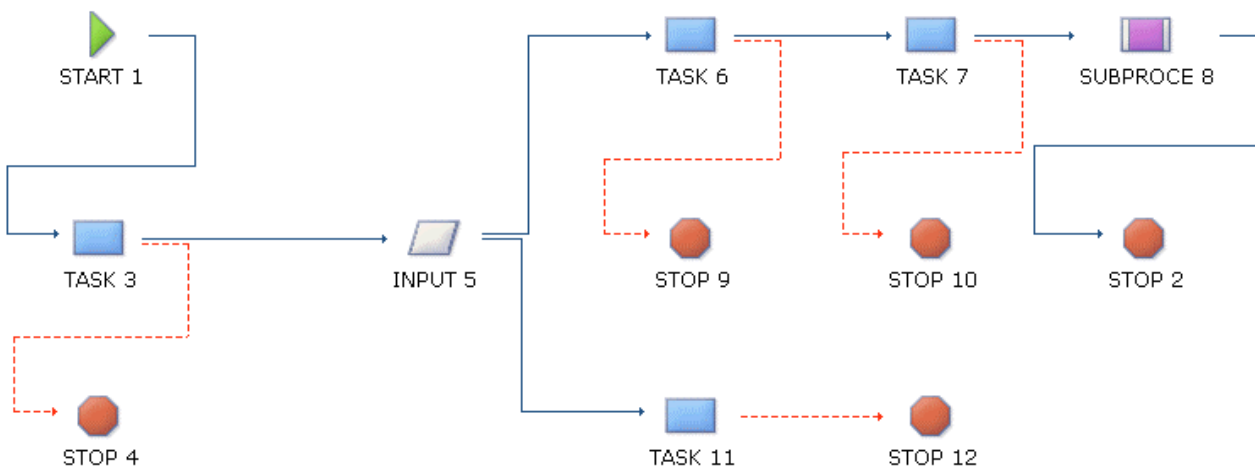
#### Opus: Exercise 1

In the Opus Workflow routine, if the work order is a Corrective Maintenance (CM) type work order, it will go into a Corrective Maintenance subprocess routine. Using the diagram below, complete the following tasks:

- Create the process using the following information:
  - Name:** OPCMMAIN
  - Description:** Flow for CM Work Order Process
  - Object:** WORKORDER
- Add the required nodes.
- Make the connections between nodes.
- Save the Workflow process.

Note: Remember, on process creation, a Start and Stop node will automatically be added to the canvas.

Your canvas should look similar to the graphic below:



continued on next page

Chapter 7 Answers continued

**PAGE 7-21**

**Opus: Exercise 2**

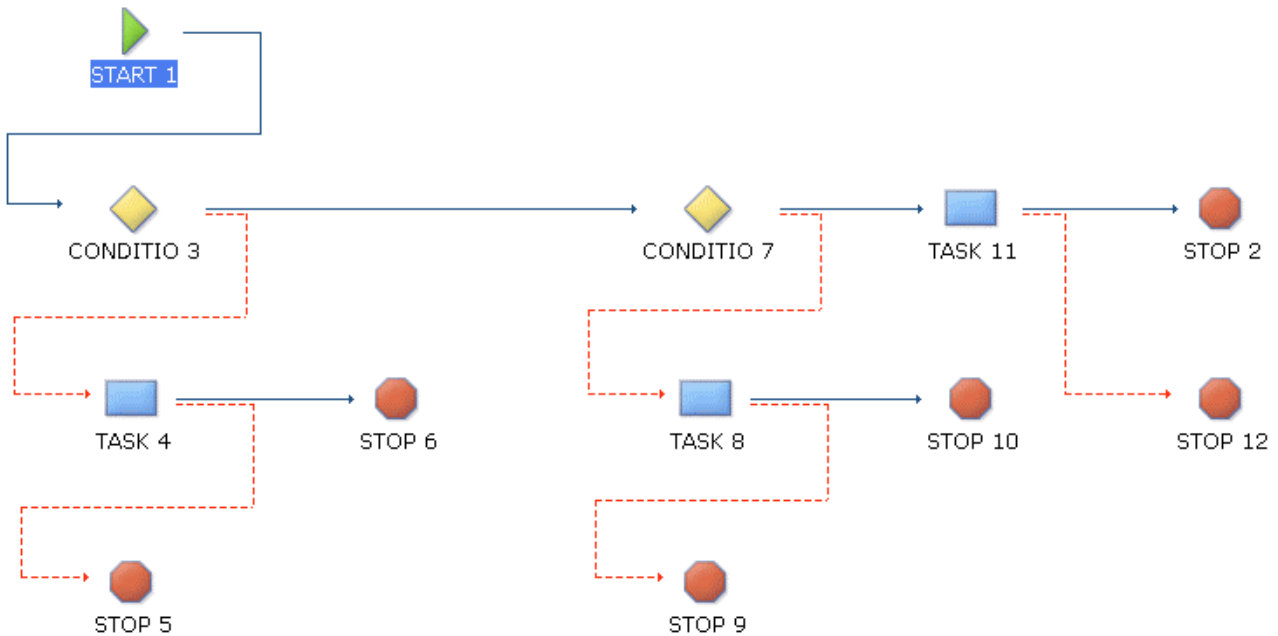
In the Opus Workflow routine, if the work order is a Corrective Maintenance (CM) type work order and is given preliminary approval, it will then go into a Financial Approval subprocess routine.

Using the diagram below, complete the following tasks:

- Create the process using the following information:
  - Name:** OPFIN
  - Description:** Flow for Financial Approval Process
  - Object:** WORKORDER
- Add the required nodes.
- Make the connections between nodes.
- Save the Workflow process.

Note: Remember, on process creation, a Start and Stop node will automatically be added to the canvas.

Your canvas should look similar to the graphic below:



continued on next page



## Chapter 7 Answers continued

### PAGE 7-22

#### Opus: Exercise 3

In the Opus Workflow routine, if the work order is not a Corrective Maintenance (CM) type work order and is a PM type, it will instead go into a PM subprocess.

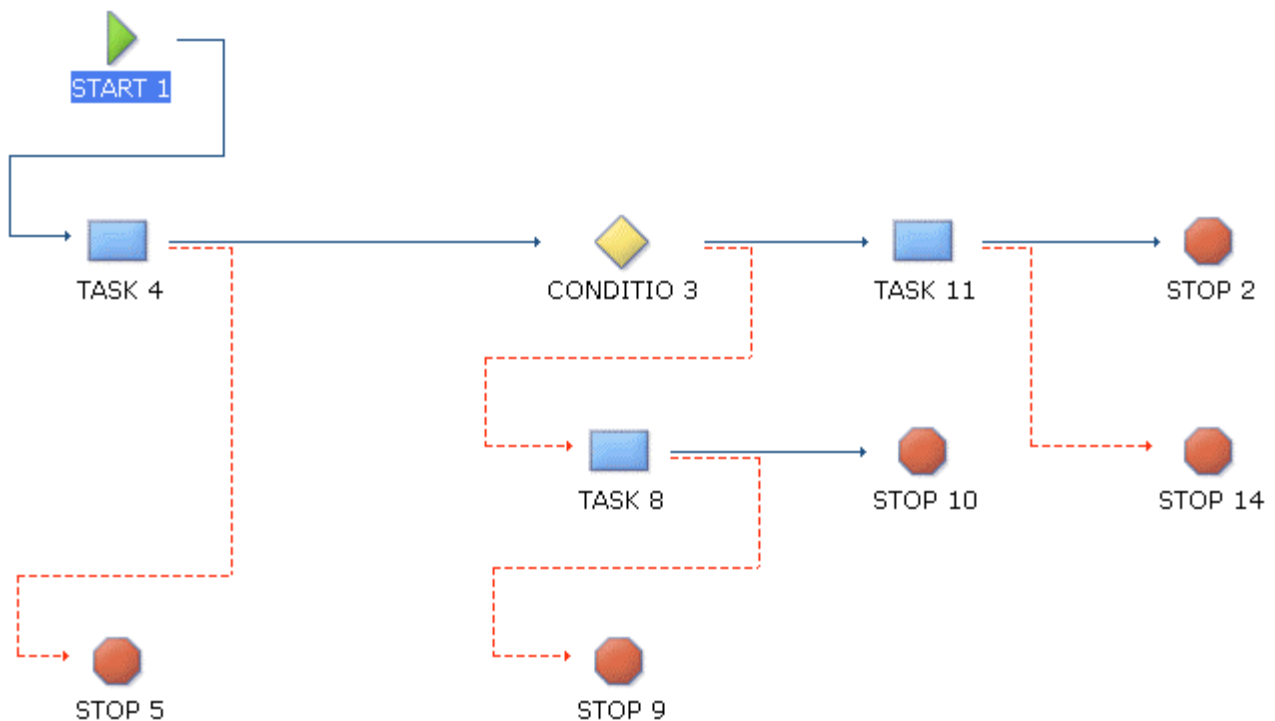
Using the diagram below, complete the following tasks:

- The PM process is similar to the financial process, so you can follow the instructions on page 7-5 to duplicate the financial process and edit the duplicate process. Use the following process properties for this new Workflow process.

**Name:** OPPMMAIN  
**Description:** Flow for PM Work Order Process  
**Object:** WORKORDER

- When finished, your process should look like the one below. Save this process.

Your canvas should look similar to the graphic below:



continued on next page

## Chapter 7 Answers continued

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**PAGE 7-23**  
**Mass U:**  
**Exercise 1**

The Mass U process will start out with a service request, then will create a work order from that service request. From the point of work order creation, the work order will be the record used in the process to plan and record work.

Because a Workflow process can support only one type of record, you will need to create *two* processes.

Use the information and the diagram below for node and connection placement in the processes.

Hint: The work order process will start with the diagram node named *Office Staff: Basic Work Order Data Added*.

### **Service Requests**

**Process:** MASSUSR  
**Description:** Mass U Service Requests  
**Object:** SR

### **Work Orders**

**Process:** MASSUWO  
**Description:** Mass U Service Request Work Orders  
**Object:** WORKORDER

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## Chapter 7 Answers continued

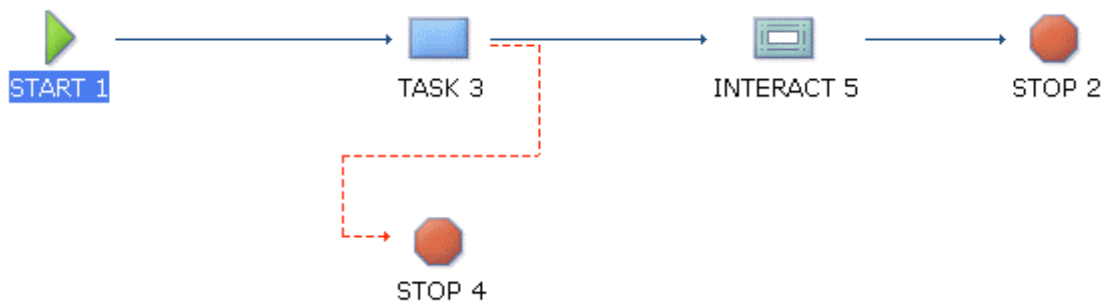
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**PAGE 7-23**

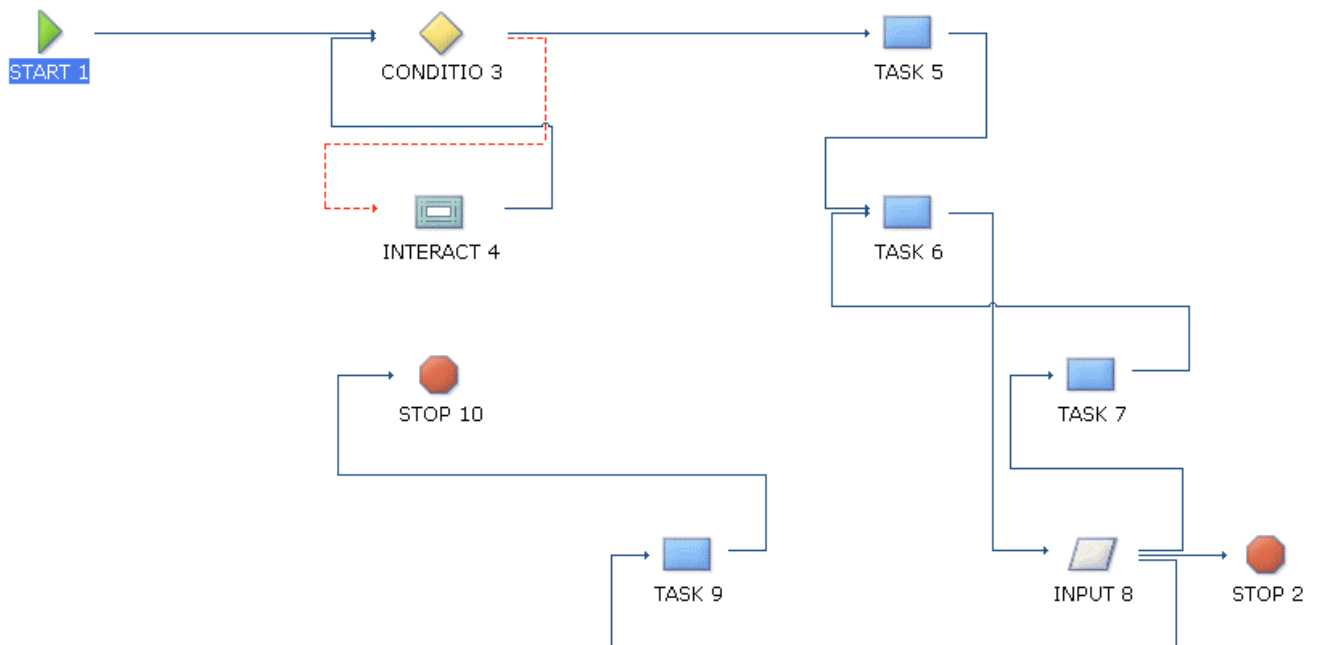
continued

**Mass U:  
Exercise 1**

One possible solution for the *MASSUSR* process might look similar to the graphic below:



One possible solution for the *MASSUWO* process might look similar to the graphic below:



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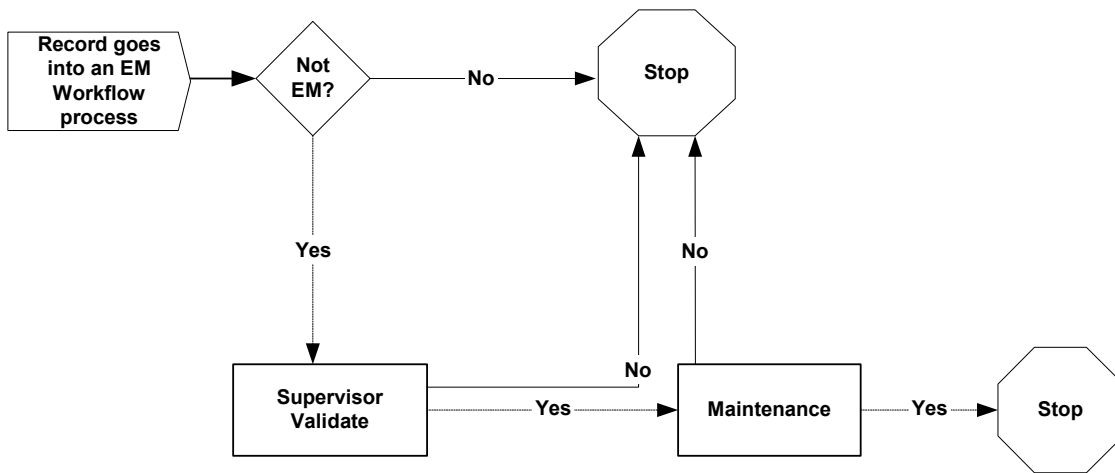
Chapter 7 Answers continued

**PAGE 7-28**  
**Workshop**  
**Exercise 1**

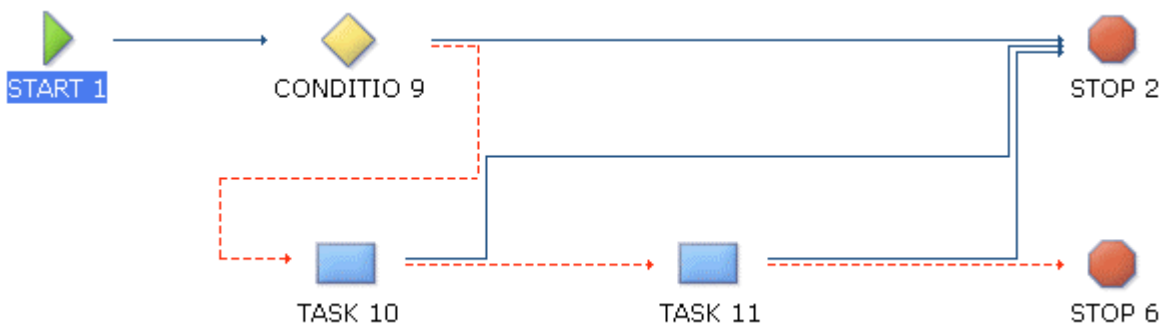
Use the diagram below for node and connection placement and the following information to create a subprocess for this Workflow routine.

**Name:** EMWORK  
**Description:** Process for Emergency work  
**Object:** WORKORDER

Note: Remember, on process creation, a Start and Stop node will automatically be added to the canvas.



One possible solution for the *EMWORK* process might look similar to the graphic below:



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## Chapter 7 Answers continued

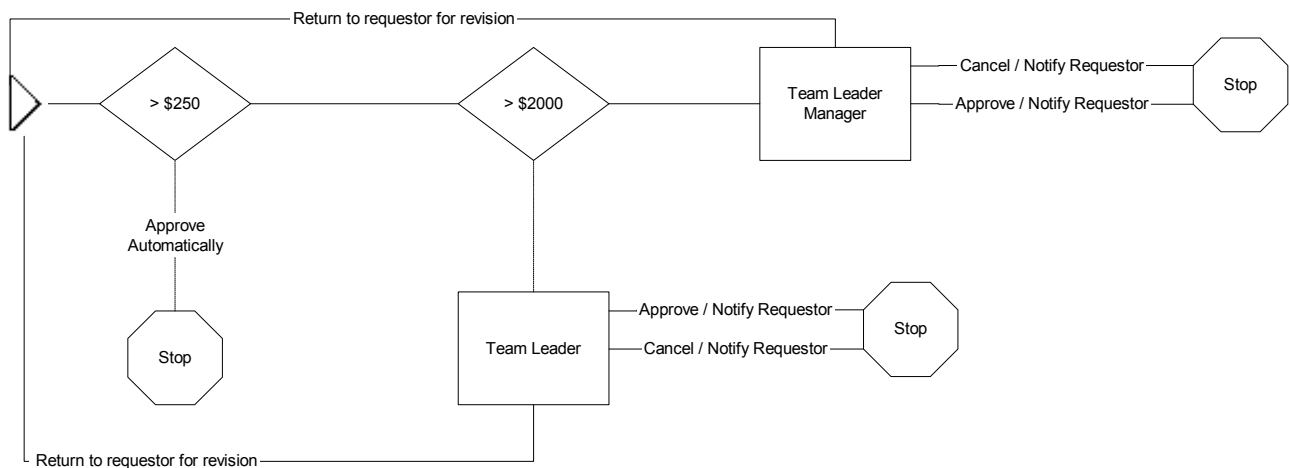
### **PAGE 7-29** **Workshop** **Exercise 2**

Use the diagram below for node and connection placement and the following information to create a process for this Workflow routine.

**Name:** PURCHREQ  
**Description:** Flow for Purchase Requisitions  
**Object:** PR

Thinking about the guidelines for nodes and their connections in the canvas, how will this diagram be revised when created in the Workflow Designer?

Try to revise this process on the Canvas tab so that the nodes connect to one another. Don't configure the nodes, just lay them out and connect them.



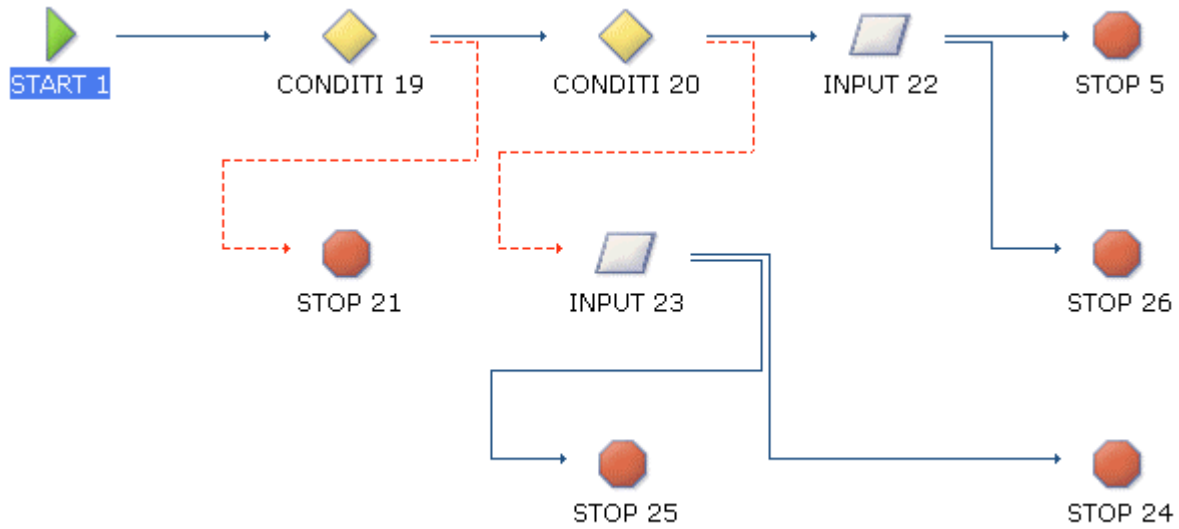
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### Chapter 7 Answers continued

**PAGE 7-29**  
**Workshop**  
**Exercise 2**

continued

One possible solution for the *PURCHREQ* process might look similar to the graphic below:



## Chapter 8 Answers

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### **PAGE 8-28** **Challenge** **Question**

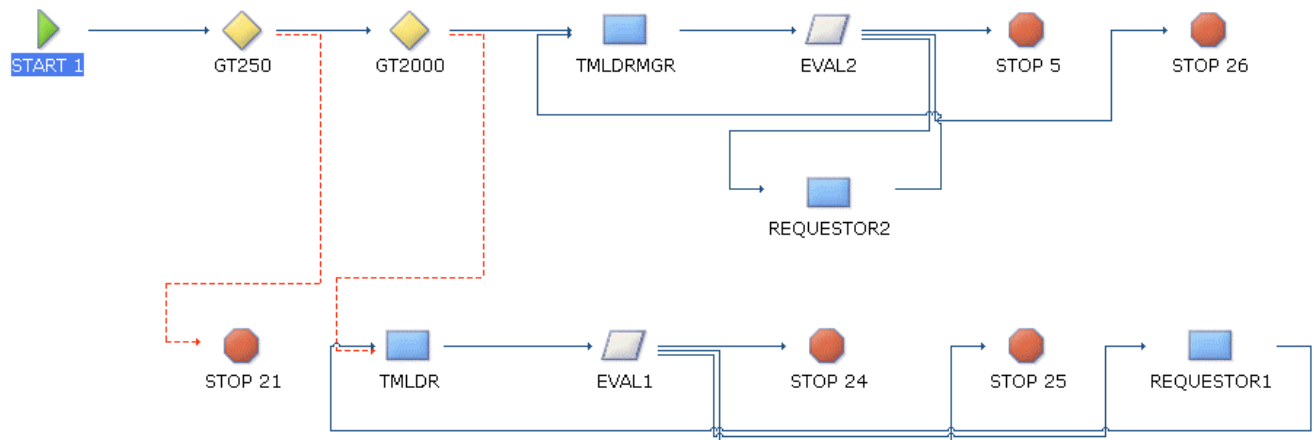
Thinking about the business rules, why would it not be good logic to have a WO Cancel action on the WOTYPEPEM condition? Why would you not want to do this?

Answer: If you had any other type of work order entered into the system, you would not want the work order to be canceled.

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### **PAGE 8-133** **Workshop 6**

The graphic below shows a possible solution to configuring the PURCHREQ process.







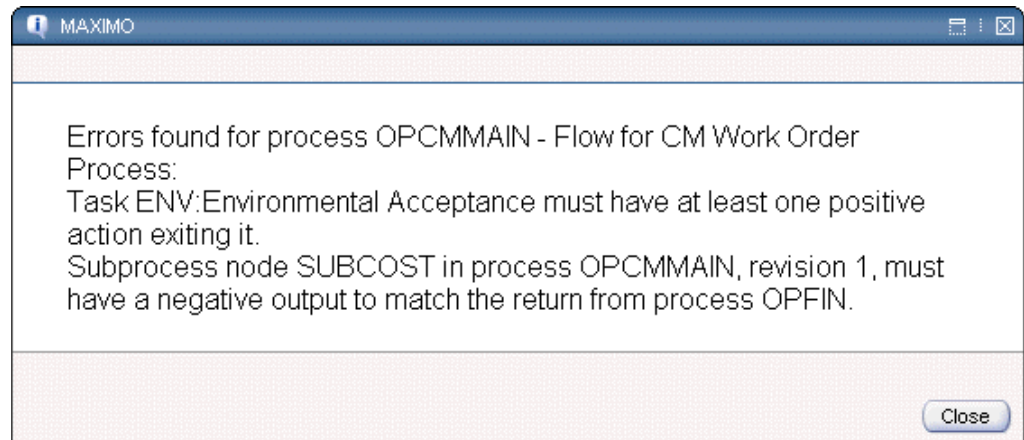
## Chapter 9 Answers

### PAGE 9-10

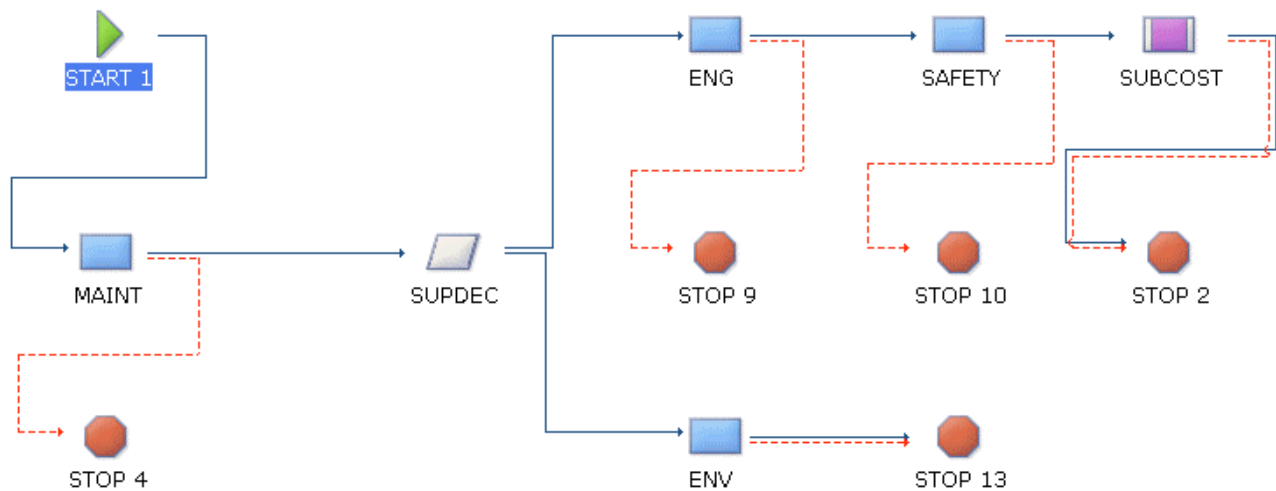
#### Exercise 1: Validate and Enable—Error on OPCMMAIN Node

The errors in OPCMMAIN are that it needs:

- a second positive connection coming out of the ENV task to a STOP node,
- and
- a negative connection coming out of the SUBCOST subprocess.



Working with your instructor, add the necessary elements to validate this process.



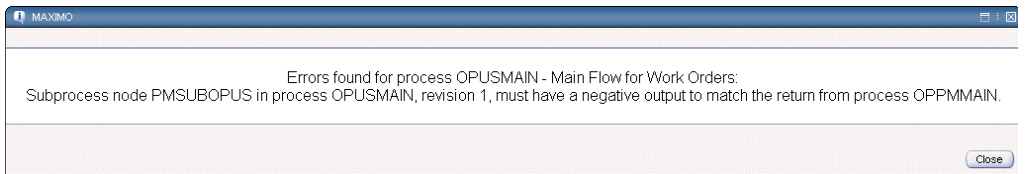
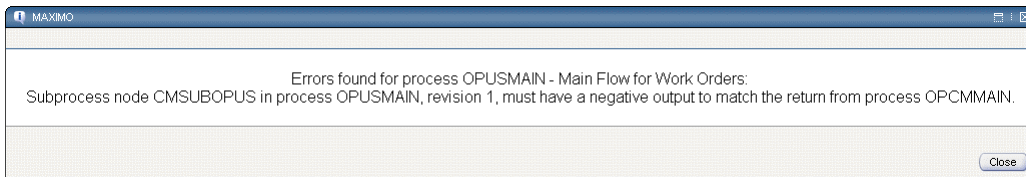
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### Chapter 9 Answers continued

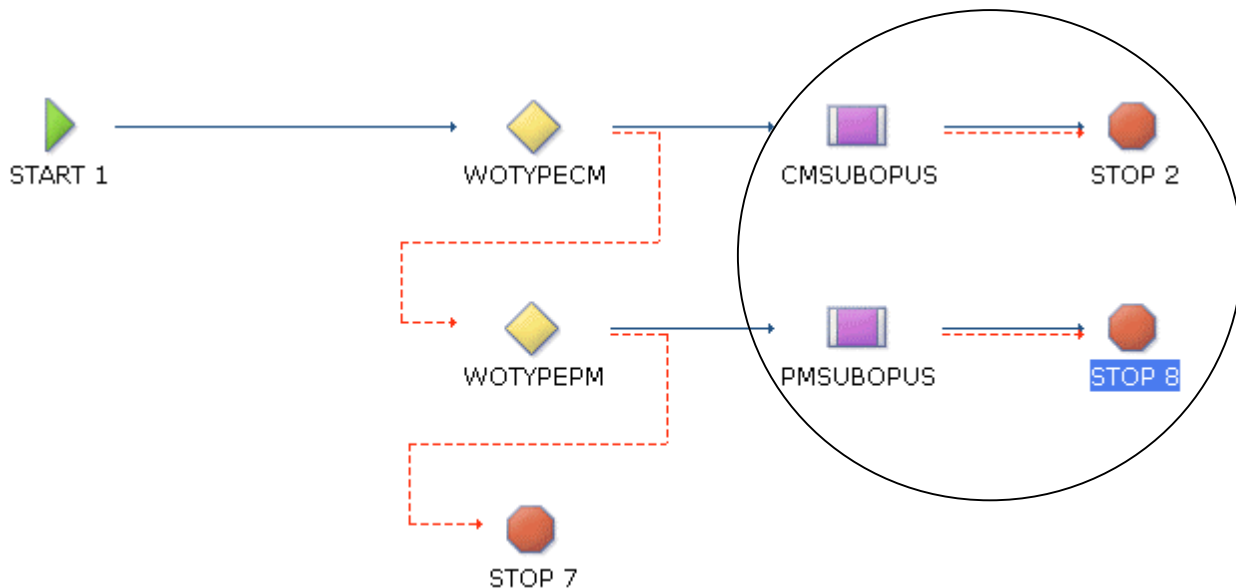
**PAGE 9-10**  
**Exercise 1:**  
**Validate and**  
**Enable—Error**  
**on OPUSMAIN**  
**Node**

The error in OPUSMAIN is that it needs *both* a negative and a positive connection coming out of the CMSUBOPUS and the PMSUBOPUS subprocesses.

Note: You might not get both errors in the same dialog box. After fixing the CMSUBOPUS node, you might get the second error for the PMSUBOPUS node, as shown below.



Working with your instructor, add the necessary elements to validate this process.



continued on next page

## Chapter 9 Answers continued

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**PAGE 9-14****Opus:  
Testing the  
Process**

Retrieve work order **1006** and start it in the Workflow process. Using the Map tab, determine who the assignees are and route this work order record through the entire Workflow process.

Do not follow the Cancel paths. You will encounter a problem. Why?

Answer: The work order already had a status of APPR when it started. It did not need to be approved.

To remove the work order assignment from the Inbox, use the Workflow Administration application.

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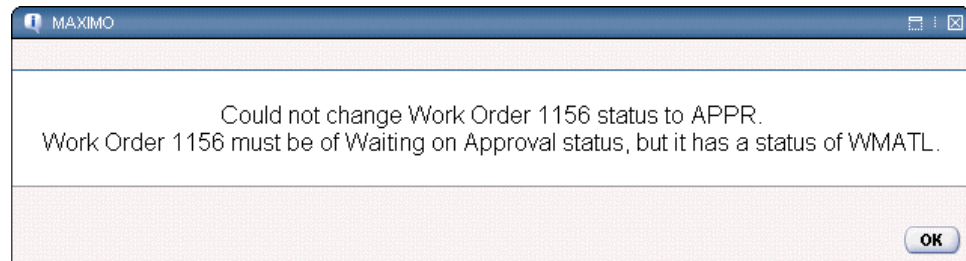
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## Chapter 9 Answers continued

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### **PAGE 9-17** **Challenge** **Question**

The Workflow process allows the labor to “kick back” the work order to the supervisor if there are any problems with the work. When the supervisor tries to send it back to the labor, Maximo displays an error similar to the one shown below.



- Why is this happening?

Answer: Because Maximo does not allow work orders to go from a status of WMATL to APPR. This is a business rule built into the WORKORDER object. You cannot do this even from the work order Tracking application.

- What can be done about it?

Answer: Maximo will allow work orders to go from a status of WAPPR to a status of APPR. So, instead of having a direct action to make the work order go from WMATL to APPR (in the connection line between WOSENTBACK and LABORINFO), you can create a GROUP type action that contains two actions:

- the first to change the work order to status WAPPR, and
- the second to change the status to APPR.

This way, the work order is not moving directly from WMATL to APPR, which violates the Maximo business rules.

Work with your instructor to make the change to your Workflow process so that no errors occur.

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### **PAGE 9-18** **Challenge** **Question**

Why are there no current assignees?

Answer: The cost is low enough so that no further approval is needed after the purchase requisition is routed through Granger.

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## Chapter 10 Answers

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**PAGE 10-13**  
**Challenge**  
**Questions**

How would the user enter a new SR after submitting the first one?

Answer: The user would have to re-access the Create Service Request application from the Go To menu to get a new blank record.

How does the user know what the new SR number is after submitting it?

Answer: The user can go to the View Service Requests application, but on the Create Service Request application there is no indication of the SR number.

How does the user know what happened?

Answer: After submitting the SR, the user gets no confirmation or other indication that anything happened.

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**Name:** \_\_\_\_\_  
**Class:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

	Excel- lent	Very Good	Good	Fair	Poor	Very Poor
1. The course structure and style was:						
2. The course content was:						
3. The workshops as a whole were:						
4. The length of the course was :						
5. Course organization was:						
6. Relevance and usefulness of course content was:						
7. Opportunity for practicing what was learned was:						
8. Amount you learned in the class was:						
9. The instructor's effectiveness in teaching the subject matter was:						
10. Use of class time was:						
11. Instructor's use of examples and illustrations was:						
12. Instructor's ability to answer student questions was:						
13. Instructor's ability to present alternative explanations when needed was:						
14. Tailoring of instruction to varying student skill levels was:						
15. Instructor demonstrations were:						
16. Instructor's ability to solve unexpected problems was:						

17. Which aspects of this course were most effective? \_\_\_\_\_

18. Which aspects of this course detracted from your learning? \_\_\_\_\_

19. What suggestions do you have for improving this course? \_\_\_\_\_