

# Siebel CRM 8.1.x

## Automation Features of Siebel CRM

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## About me

- ✦ 11 years in IT industry
- ✦ Consultant @ Turkey & Europe
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# Agenda

- ✦ Workflows and Siebel Workflow Architecture
- ✦ Business Services and Prebuilt Business Services
- ✦ Siebel Workflow Processes
- ✦ Building Robust Workflows
- ✦ Siebel Scripting
- ✦ Invoking Methods of Workflow Processes
  - ✦ Custom Controls
  - ✦ Runtime Events
  - ✦ Workflow Policies



## Agenda (Continues)

- ✦ Deploying Workflow Processes
- ✦ Best Practices and Design Principles
- ✦ Questions & Answers



# Business Processes

- ✦ Business process is a collection of related and structured activities to achieve a specific business objective
- ✦ Some improvement areas:
  - ✦ Effectiveness: The outputs expected from the process.
  - ✦ Efficiency: Does is it worth to process it? Ex: Average time.
  - ✦ Internal Control: Controlling for quality.



# Automating Business Processes

- ✦ Ordered and structured tasks can be done manually. We might be successful as long as we establish the tasks in a correct order.
- ✦ But what about:
  - ✦ The risk about a missing step that affects the entire process?
  - ✦ The risk about the effective time? Etc..
- ✦ SOLUTION: Business Process Automation

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# Siebel Automation Features

- ✦ Business Services
- ✦ Workflow Processes
- ✦ Tasks
- ✦ Assignment Manager
- ✦ State Model
- ✦ Smart Scripts
- ✦ Scripting



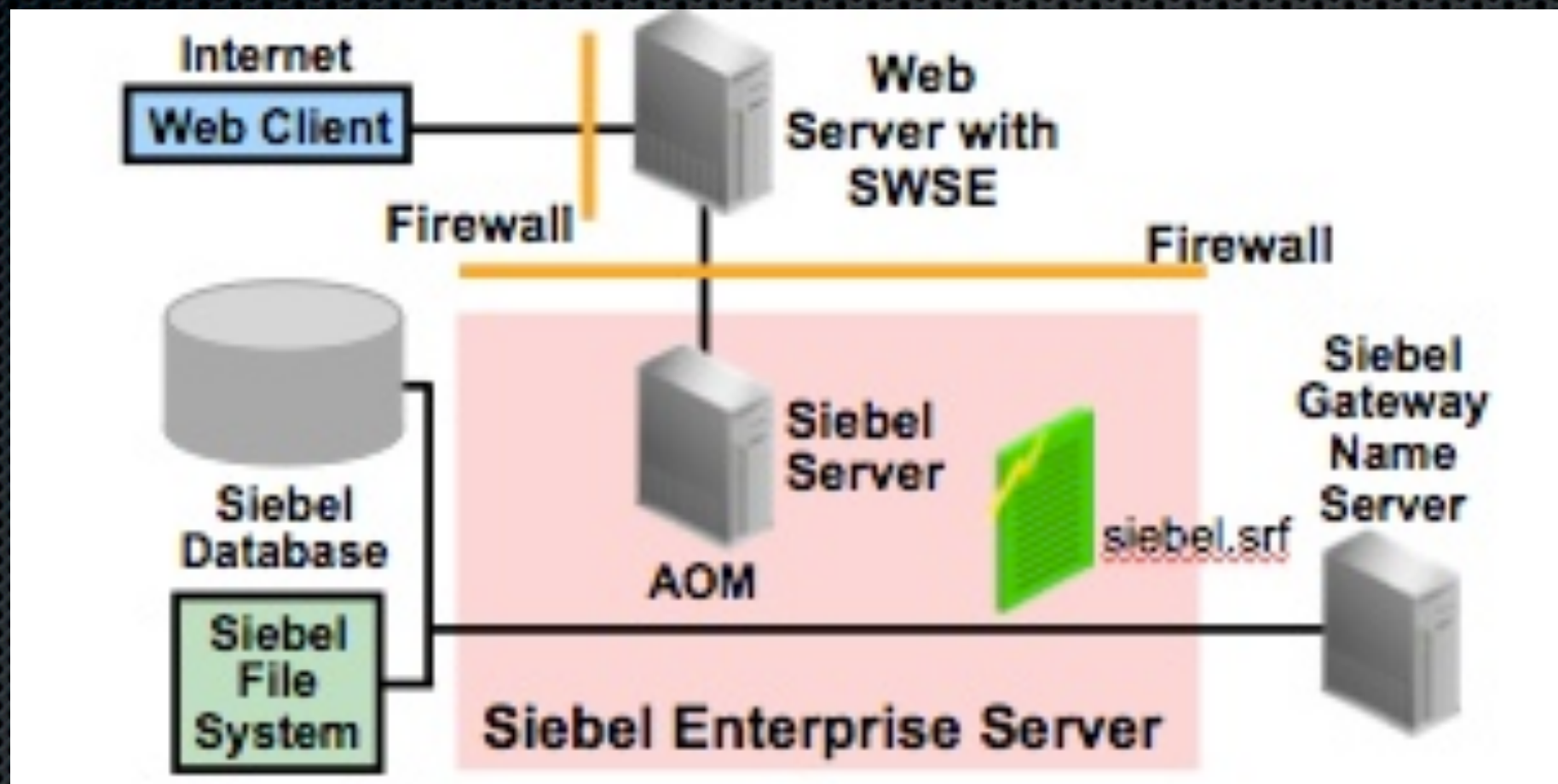
# Siebel Business Services

- ✦ Business services are units of functionality.
- ✦ They are reusable encapsulated objects which are globally accessible.
- ✦ They enable business logic to be executed in different contexts.
- ✦ They are stored in the repository (\*.srf file).
- ✦ So can be modified and and created by using “Siebel Tools”.



# Architecture

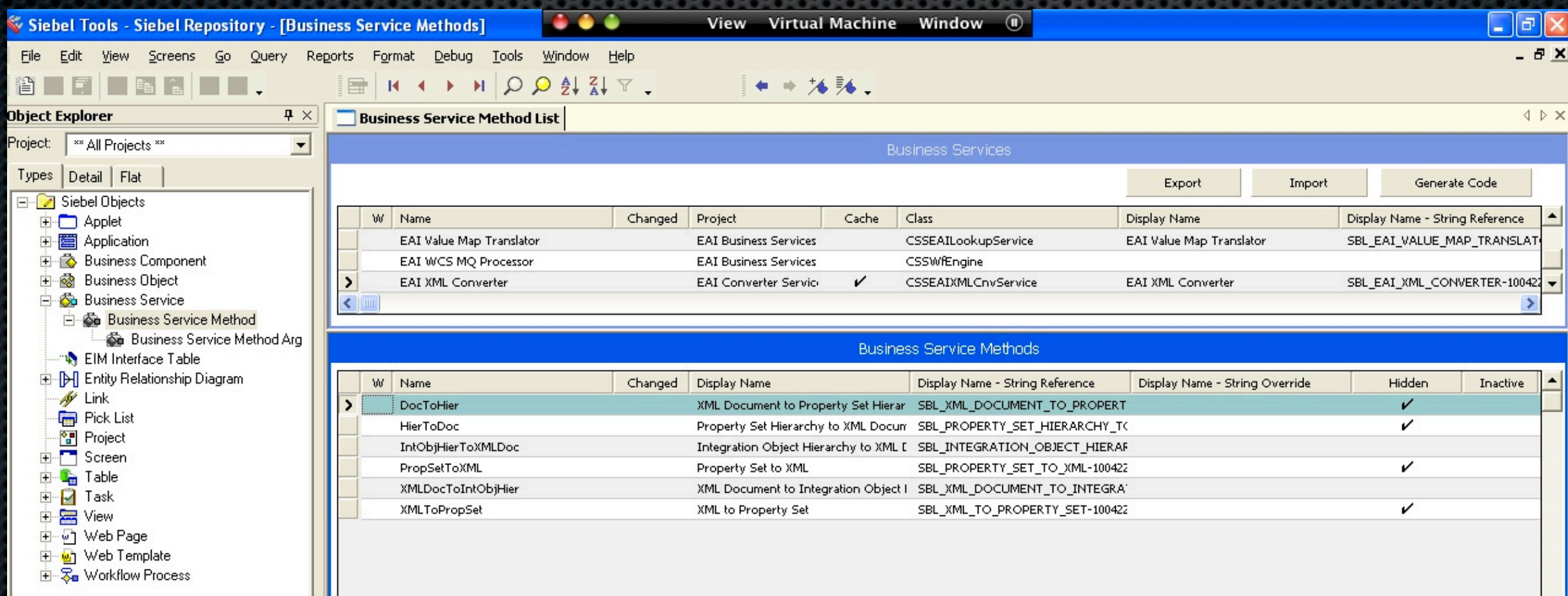
- Siebel Architecture





# Siebel Business Services

- Business Service consists of operations which are called as methods.
- Every method has a set of input and output arguments



The screenshot shows the Siebel Tools interface with the 'Business Service Method List' and 'Business Service Methods' tables.

**Business Service Method List**

W	Name	Changed	Project	Cache	Class	Display Name	Display Name - String Reference
	EAI Value Map Translator		EAI Business Services		CSSEAILookupService	EAI Value Map Translator	SBL_EAI_VALUE_MAP_TRANSLAT
	EAI WCS MQ Processor		EAI Business Services		CSSwfEngine		
	EAI XML Converter		EAI Converter Servic	✓	CSSEAIXMLCnvService	EAI XML Converter	SBL_EAI_XML_CONVERTER-10042

**Business Service Methods**

W	Name	Changed	Display Name	Display Name - String Reference	Display Name - String Override	Hidden	Inactive
	DocToHier		XML Document to Property Set Hierar	SBL_XML_DOCUMENT_TO_PROPERT		✓	
	HierToDoc		Property Set Hierarchy to XML Docur	SBL_PROPERTY_SET_HIERARCHY_TC		✓	
	IntObjHierToXMLDoc		Integration Object Hierarchy to XML I	SBL_INTEGRATION_OBJECT_HIERAF			
	PropSetToXML		Property Set to XML	SBL_PROPERTY_SET_TO_XML-100422		✓	
	XMLDocToIntObjHier		XML Document to Integration Object I	SBL_XML_DOCUMENT_TO_INTEGRA'			
	XMLToPropSet		XML to Property Set	SBL_XML_TO_PROPERTY_SET-100422		✓	



# Siebel Prebuilt Business Services

- ✦ Customer Order Management
  - ✦ ISS Credit Check Service
- ✦ Enterprise Application Integration
  - ✦ EAI Siebel Adapter
- ✦ XML Document Processing
  - ✦ XML Converter
- ✦ Communications Manager
  - ✦ Inbound E-mail Manager

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# Testing Siebel Business Services

- Business Services can be tested by using the simulator before using.



# Workflows and Siebel Workflow Architecture

- ✦ A workflow consists of a sequence of ordered tasks and used to automate the business processes in order to improve the efficiency.
- ✦ In Siebel CRM, these set of tasks are created in “Workflow Processes” by using “Siebel Tools”.
- ✦ Reusable objects like “Business Services” can be used inside the Workflow Processes.
- ✦ Once they’re created, they must be deployed.
- ✦ Each workflow process is versioned automatically.



# Siebel Workflow Processes

- They are created from inside the Siebel Tools.

The screenshot displays the Siebel Tools interface for creating a workflow process. The main canvas shows a workflow diagram with the following steps:

```

    graph LR
      Start([Start]) -- "New Branch  
14.DECISION" --> CreateNewOrder[Create New Order]
      CreateNewOrder --> GotoOrderView[Goto Order View]
      GotoOrderView --> End([End])
  
```

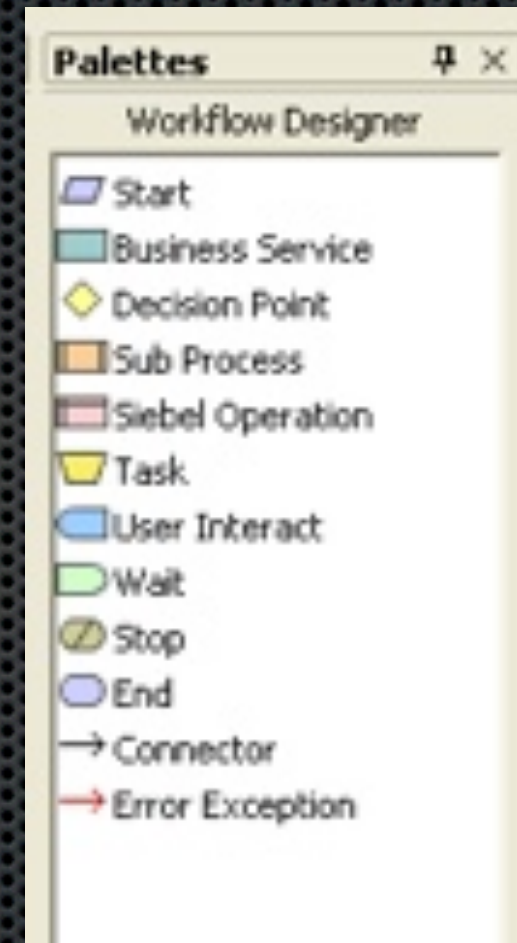
The 'Multi Value Property Window' at the bottom shows the following data:

Name	Display Name	In/Out	Changed	Business Object	Business Component	Virtual Field	Default String
Error Code	Error Code	In/Out	FALSE	Account			
Error Message	Error Message	In/Out	FALSE	Account			
Object Id	Object Id	In/Out	FALSE	Account			
Process Instance Id	Process Instance Id	In/Out	FALSE	Account			
Siebel Operation Object Id	Siebel Operation Object Id	In/Out	FALSE	Account			



# Common Workflow Steps

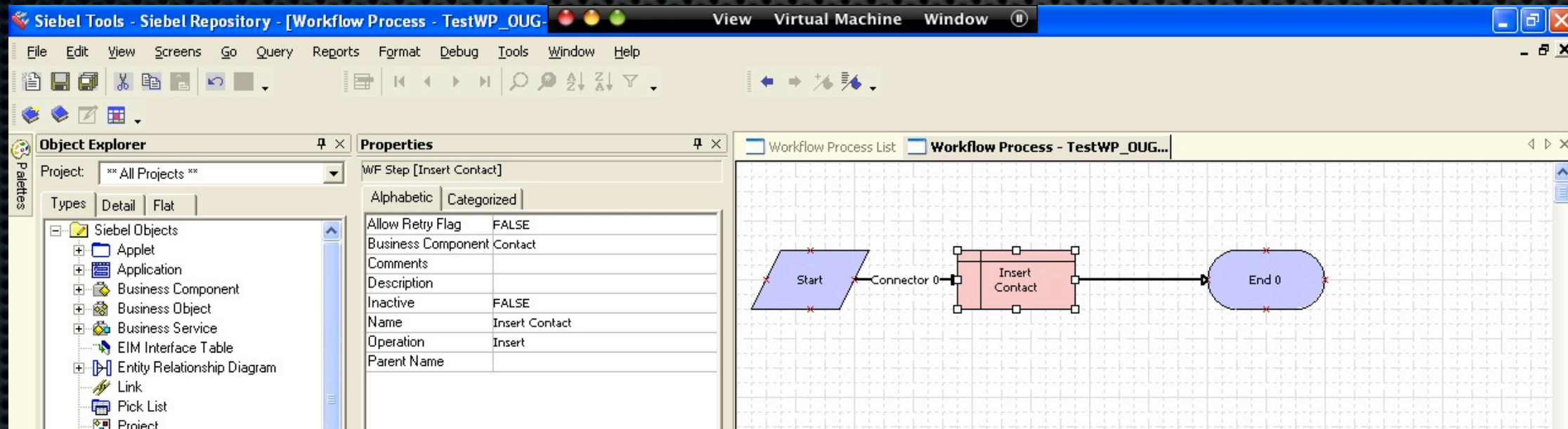
- ✦ Start - End Steps
- ✦ Business Service Step
- ✦ Siebel Operation Step
- ✦ Decision Point Step
- ✦ Connector Links





# Siebel Operation Task

- Use this task to interact with Business Components





# Business Service Task

- This task is used to call the existing business services.

**Properties**

WF Step [GenerateQuoteLineProductList]

Alphabetic | Categorized

Allow Retry Flag	FALSE
Business Service Method	GenerateList
Business Service Name	FS Verify Entitlement
Comments	
Description	
Inactive	FALSE
Name	GenerateQuoteLineProductList
Parent Name	FS - Verify Entitlement Quote Best P

Workflow Process List | Workflow Process - FS - Verify En...

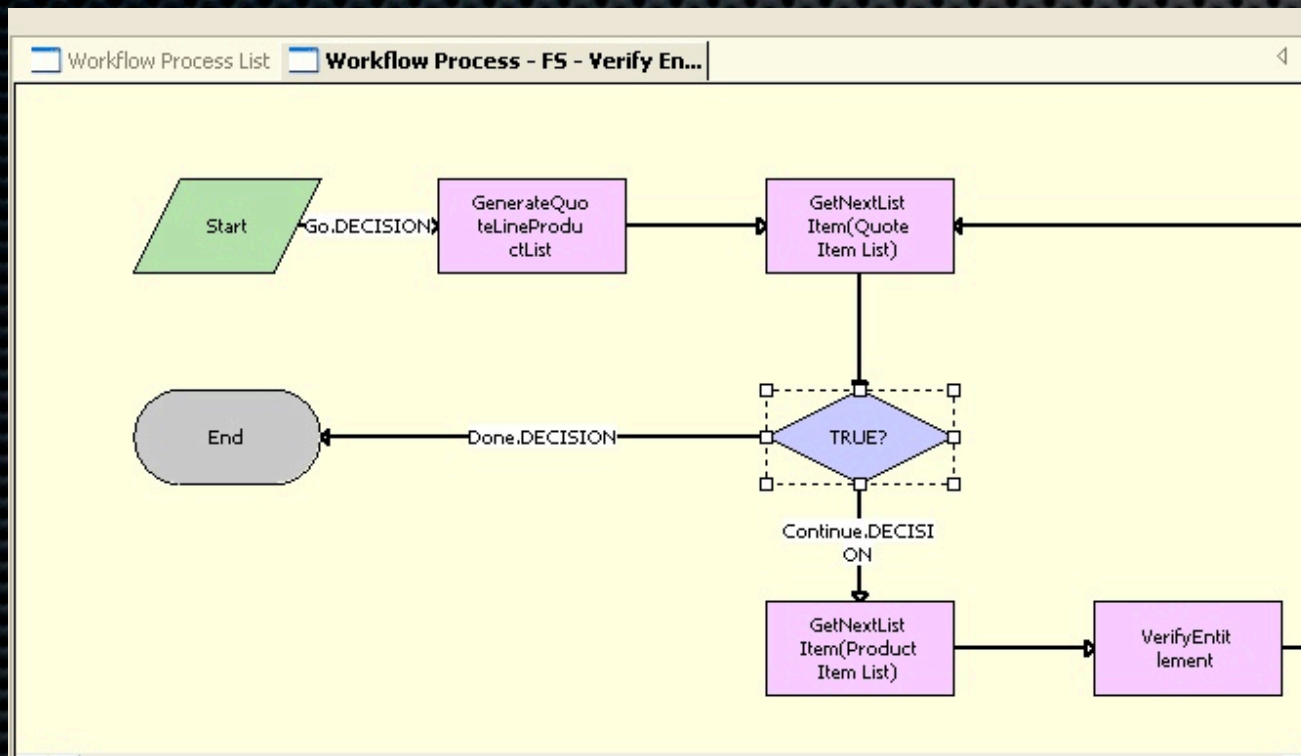
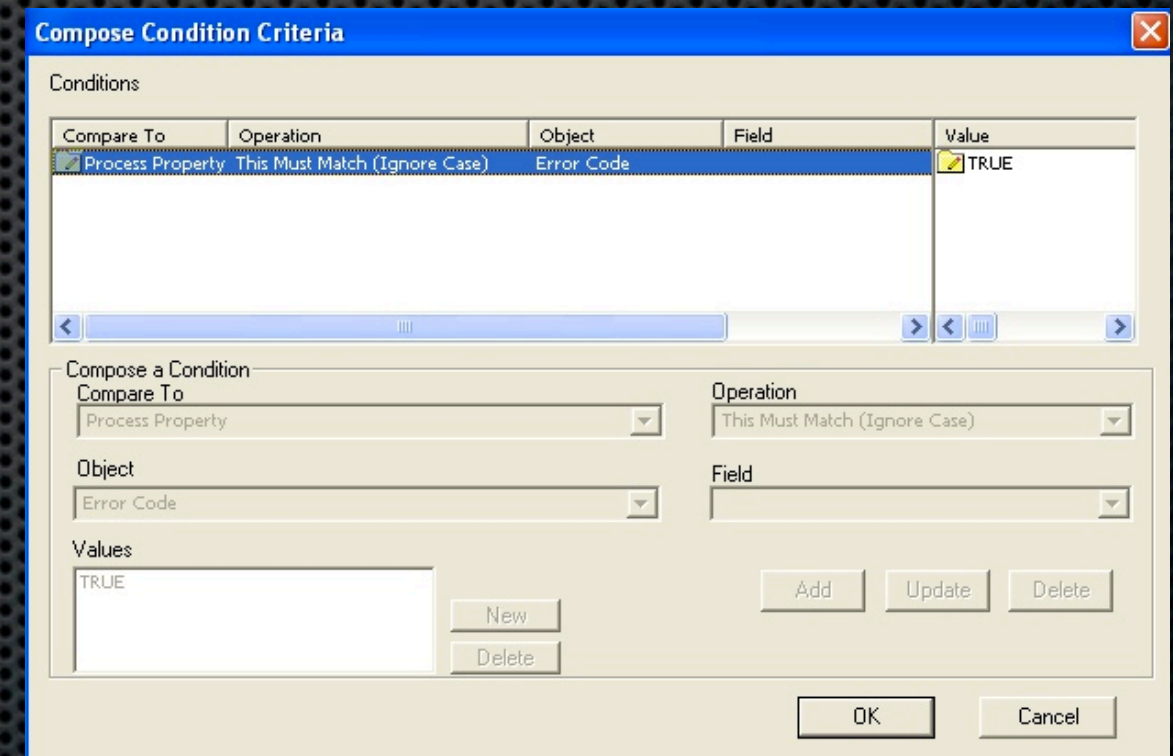
```

graph LR
    Start[/Start/] -- Go.DECISION --> Task1[GenerateQuoteLineProductList]
    Task1 --> Task2[GetNextListItem(QuoteItem List)]
    Task2 --> Decision{TRUE?}
    Decision -- Done.DECISION --> End([End])
    
```



# Decision Points

- It's used to create branching options. Multiple paths based on the condition criteria.

Compare To	Operation	Object	Field	Value
<input checked="" type="checkbox"/> Process Property	This Must Match (Ignore Case)	Error Code		<input checked="" type="checkbox"/> TRUE

Compose a Condition

Compare To:

Operation:

Object:

Field:

Values:

Buttons: Add, Update, Delete, New, Delete

Buttons: OK, Cancel



## Building Robust Workflows

- ✦ Use existing “Business Services”.
- ✦ Package workflow steps for reuse and access the other workflow by using the sub-process step.
- ✦ Errors should be handled. There are 2 error handling mechanisms in Siebel WF.
  - ✦ Error Process
  - ✦ Error Exception Connector
- ✦ Validate the workflow process.
- ✦ Run WF Simulator in order to test the logic.



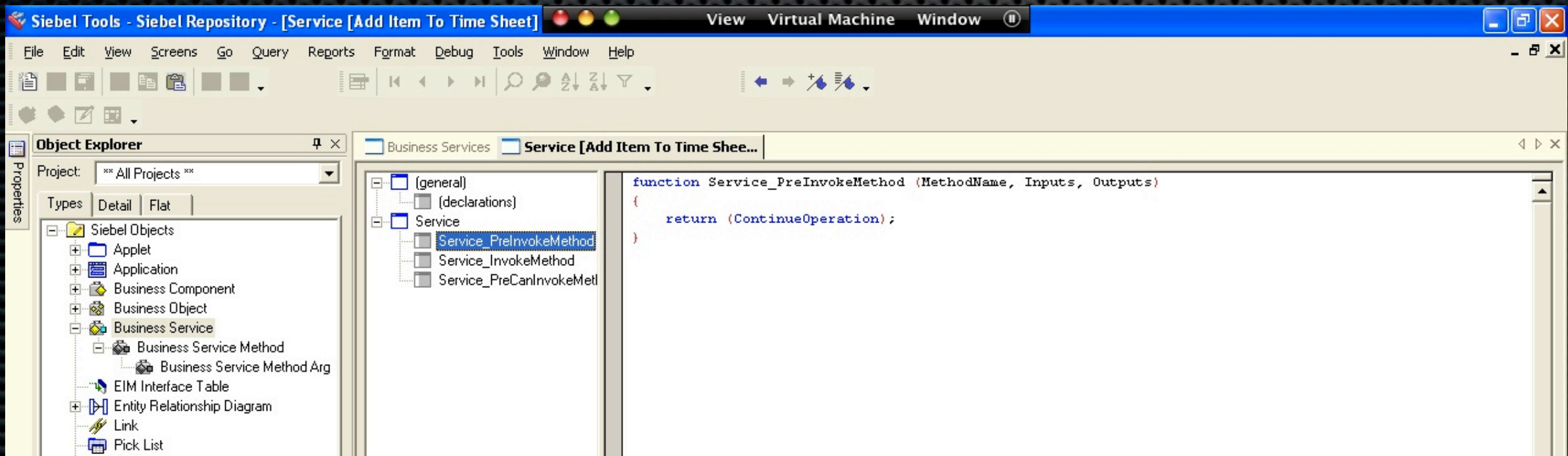
# Siebel Scripting

- ✦ Siebel scripting allows to extend the out-of-box functionality.
- ✦ There are 2 kinds of scriptings:
  - ✦ Browser Scripts: Interpreted and executed by the web browsers during runtime, are written in JavaScript.
  - ✦ Server Scripts: Interpreted and executed by Application Object Manager (AOM), are written in Siebel Visual Basic (Supported on Windows platforms and Siebel eScript based on ECMAScript (Supported on both Unix and Windows platforms.
- ✦ Use as a last resort.



# Siebel Scripting

- Siebel Tool includes an integrated development environment.





## Reasons to Avoid Scripting

- ✦ Slow processing.
- ✦ Requires maintenance.
- ✦ Brings complexity.
- ✦ Complicates upgrade process.
- ✦ Mostly reproduces the existing functionality.



## Scripting Alternatives

- ✦ Siebel Workflow
- ✦ Task UI
- ✦ State Model
- ✦ Assignment Manager
- ✦ Data Validation Manager
- ✦ Declarative Properties: Validation, Requires, Predefault value, Postdefault value, Readonly and etc..



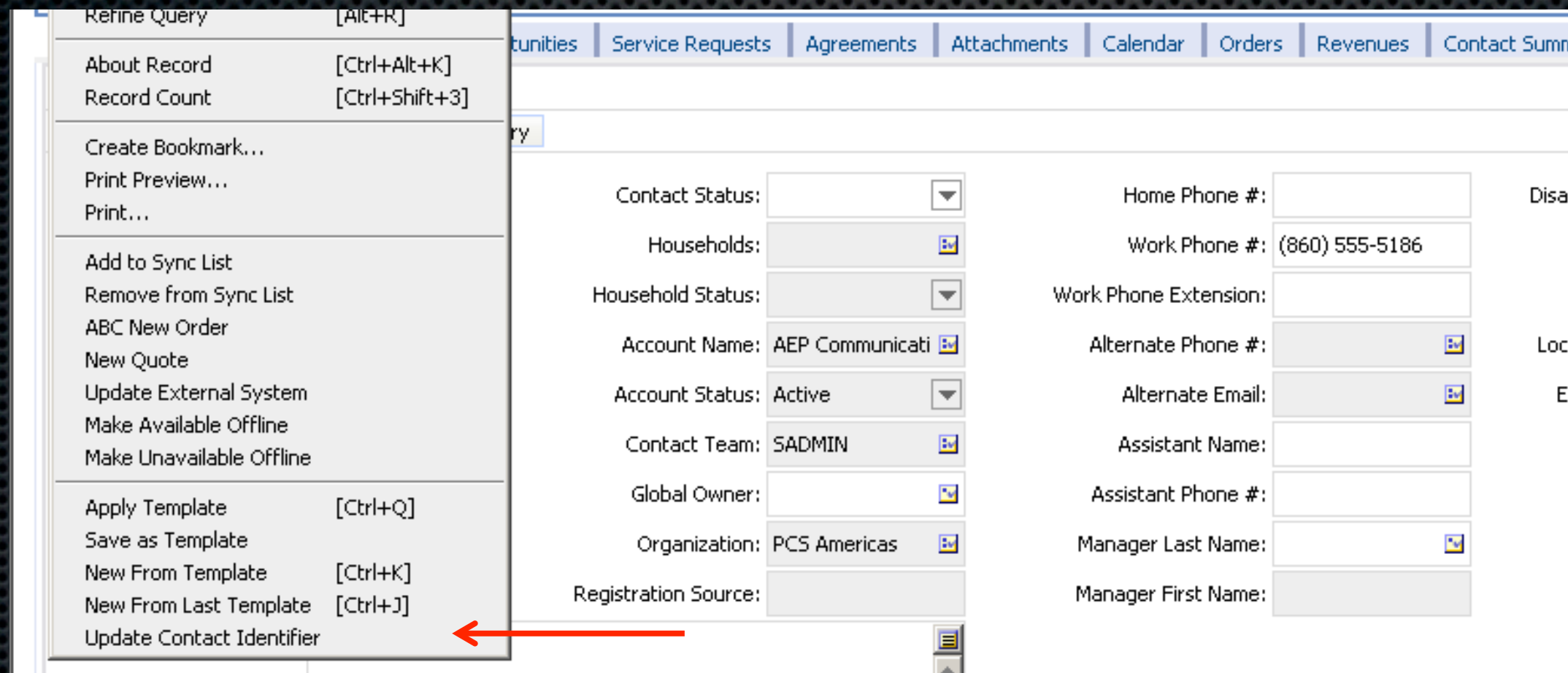
# The Methods of How To Invoke Workflow Processes

- ✦ There are 4 different kinds of invoking methods:
  - ✦ Run-Time Events
  - ✦ Custom Controls (Buttons or Menu Items)
  - ✦ Workflow Policies
  - ✦ Programmatically (Scripting)



# Invoking Workflow Processes Custom Controls

- User should click a button or menu item to invoke the workflow.





# Invoking Workflow Processes

## Runtime Events

- ✦ Workflow processes can be triggered based on the user activity.
- ✦ There are 3 types of Run-Time events.
  - ✦ Application: Login, logout
  - ✦ Applet: Displaying an applet, displaying the record
  - ✦ Business Component: Querying a record, updating a field value.



# Invoking Workflow Processes Runtime Events

- Run-Time events can be added as a condition on the connector out of a: Start Step, Wait Step and User Interact Step.

**Properties**

WF Step Branch [Connector 0]

Alphabetic | Categorized

Comments	
Event	PreDeleteRecord
Event Cancel Flag	FALSE
Event Object	Action Contact
Event Object Type	BusComp
Event Visibility	Enterprise
Inactive	FALSE
Name	Connector 0
Parent Name	Start
Subevent	
Type	Default
User Event Name	
User Event Storage	
User Event Timeout 0	

Workflow Process List | Workflow Process - TestWP\_OUG...

**Workflow Process - TestWP\_OUG- 0**

```

graph LR
    Start[/Start/] -- Connector 0 --> InsertContact[Insert Contact]
    InsertContact --> End0([End 0])
    
```



# Invoking Workflow Processes

## Workflow Policies

- ✦ When you need to run the WF Process asynchronously, you'll need to use "Workflow Policies".
- ✦ A workflow policy contains information about the:
  - ✦ One or more policy conditions
  - ✦ A policy action
- ✦ The policy action is going to be executed when all conditions are TRUE



# Invoking Workflow Processes

## Workflow Policies

- ✦ There are some requirements in order to gain benefit of asynchronous workflow processes.
- ✦ Workflow policies use the “Workflow Process Manager” server component.
- ✦ “Generate Triggers” component should be executed to create the database triggers based on the policy conditions.
- ✦ Workflow monitor agent checks for fired trigger.
- ✦ Workflow Process Manager executes the WF Process.



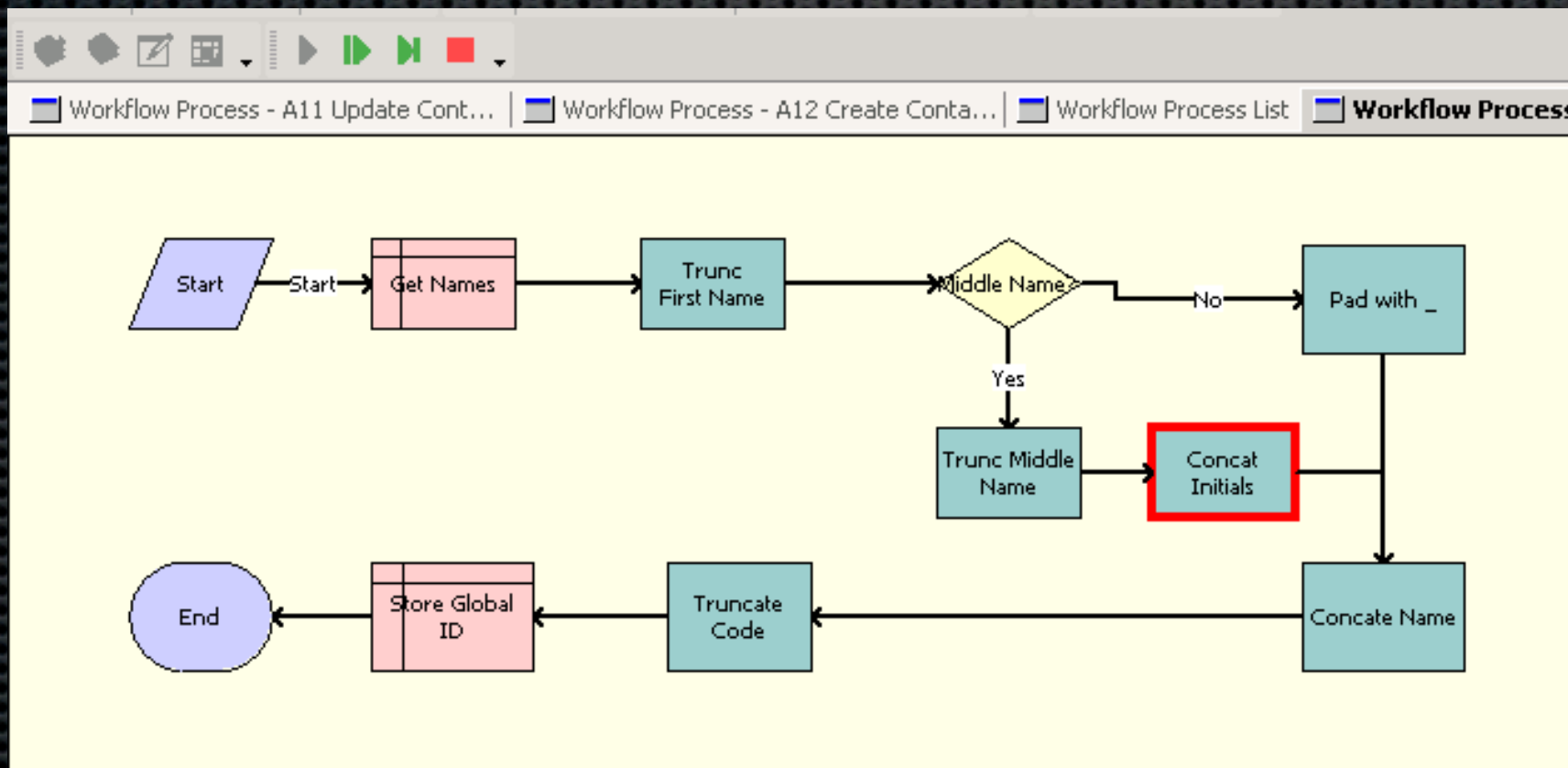
# Deploying Workflow Processes

- ✦ Workflow Processes should be validated in order to check if there's an error.
- ✦ WF Simulator should be used to check the logic.
- ✦ Then last step will be about deployment. Every workflow process should be published and activated.
- ✦ Every workflow has a version number so when it's the WF process is modified, you should republish the latest version.



# WF Simulator -1-

- ✦ Always test and validate your workflow process.
- ✦ Check each step.





# WF Simulator -2-

- You can access the details in each step (like property values).

Workflow Process Data	
Simulator Status	Step Completed
Process Properties	
ContactCode	S
Error Code	
Error Message	
FirstName	Shashi
LastName	Aamot
MiddleInit	T
MiddleName	T.
Object Id	12-WFJ4D
Process Instance Id	6-48ZKB
Siebel Operation O	12-WFJ4D
BusComp	Contact

```

graph LR
    Start[/Start/] -- Start --> GetNames[Get Names]
    GetNames --> TruncFirst[Trunc First Name]
    TruncFirst --> MiddleName{Middle Name?}
    MiddleName -- Yes --> TruncMiddle[Trunc Middle Name]
    MiddleName -- No --> Pad[Pad with _]
    TruncMiddle --> ConcatInitials[Concat Initials]
    Pad --> ConcatName[Concat Name]
    ConcatInitials --> ConcatName
    ConcatName --> TruncateCode[Truncate Code]
    TruncateCode --> StoreGlobal[Store Global ID]
    StoreGlobal --> End([End])
    
```



# Deploying Workflow Processes

- ✦ Publishing and activating can be done by using Siebel Tools.

The screenshot displays the Siebel Tools interface with three main panes:

- Object Explorer:** Shows a tree view of Siebel Objects, including Applet, Application, Business Component, Business Object, Business Service, EIM Interface Table, Entity Relationship Diagram, Link, Pick List, Project, Screen, Table, Task, View, Web Page, Web Template, and Workflow Process (with sub-items WF Process Prop and WF Step).
- Properties:** Shows the properties for a selected Workflow Process [TestWP\_OUG: 0]. The properties include:
 

Property	Value
Business Object	Contact
Cache Locale	
Comments	
Description	
Effective End Date	
Effective Start Date	
Error Process Name	
Group	
Inactive	FALSE
Name	TestWP_OUG: 0
Object Language Locked	
Object Locked	
Object Locked By Name	
Object Locked Date	
Pass By Ref Hierarchy Argument	FALSE
Persistent Frequency	NO
Persistent Level	
Process Name	TestWP_OUG
Replication Level	
Runnable	FALSE
State Management Type	Stateful
Status	In Progress
Version	0
Web Service Enabled	FALSE
Workflow Mode	Service Flow
- Workflow Process List:** Shows a table of workflow processes. The 'TestWP\_OUG' process is highlighted in blue, indicating it is selected.
 

Auto Persist	Process Name	Status	Version
NO	FS - Verify Entitlement Quote Best Pric	Completed	0
NO	FS - Verify Entitlement SR Best Respor	Completed	0
NO	FS - Verify Entitlement SR Helpdesk	Completed	0
NO	FS - Verify Entitlement SR	Completed	0
NO	FS - Verify Entitlement Sales Order Be:	Completed	0
NO	FS Rebate Management - Condition E	Completed	0
NO	FS Rebate Management on Order	Completed	0
NO	FS Verify Entitlement	Completed	0
NO	Generate Source Code	Completed	0
NO	Get Account ASI	Completed	0
NO	Get Config Item Price - Basic	Completed	0
NO	Get Config Item Price - Driver Workfl	Completed	0
NO	Get Config Item Price - Dynamic	Completed	0
NO	TestWP_OUG	In Progress	0
NO	Get Config Item Price	Completed	0
NO	Get Manager Email	Completed	0
NO	Get Order Status ASI	Completed	0
NO	Get Product List Price	Completed	0
NO	Go to My Time Sheets view	Completed	0
NO	Goto_Order	Completed	0
NO	Goto_Quote	Completed	0
YES	Group News Multiple Approver Workl	Completed	0



## Best Practices and Design Principles

- ✦ Use “Business Services” and “Sub Workflow Processes” for reusability. This will positively effect the maintenance.
- ✦ Avoid scripting because of complixity and the impact on upgrade. Try to use existing features.
- ✦ Errors should be handled otherwise unexpected errors will be displayed to the user.
- ✦ Always validate and simulate the workflow processes before publishing and activating them.



# Q & A

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# THANK YOU

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