



Introduction to Microsoft Windows Workflow Foundation

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Pre-requisites for this presentation:

- 1) Understand Microsoft .NET
 - 2) Understand Visual Studio.NET
- Level: Introductory



Why?

Modern Business Applications Are Easier to Build

Software + Services

“World of small pieces loosely joined”

Ray Ozzie, Chief Software Architect, Microsoft
MIX Keynote

Business Process Not Business Functionality

Process is about the Customer

Function is about the Business

Mortgage Loan : Customer View

Look for a Property

Apply For a Loan

Credit Check

Property Appraisal

Loan Decision

Mortgage Loan : Business View

Mortgage Brokers

Property Appraisers

Credit Scorers

Statisticians

Investment Managers

Portfolio Bundlers

Mortgage Servicers

How do you recognize a Processes?

Process results in a Product or Service

Claim Approval or Denial

Request for Customer Quote

Widgets Delivered to Customer

Functions are skills

No Insurance Agent Process

Mortgage Business Process

Apply For a Loan

Appraise the Property

Get Credit History

Evaluate Borrower Risk

Grant / Deny Loan

Workflow System Requirements

React to Human or Machine Events

Scalable with many multiple instances

Passivation

- Processor cycles not consumed while waiting

- State must survive machine resets

Often require asynchronous control flow

Compensation model

Allow Domain Specific Language / Designer

Analyst's Design into Executable Code

Demo: Mortgage Loan Application

Activities

Loan Request

Request Credit Information

Appraise Property

Evaluate Risk

Approve or Reject Loan

Sequential, Asynchronous Workflow

Workflow Features

Activities

Sequence Activity

Code Activity

Parallel Activity

Call External Method Activity

Handle External Event Activity

Policy / Rules Activity

Features

Data Binding

Custom Services / Persistence Services

Workflow Concepts

Activity

Workflow

Host

Workflow Runtime

Process

Many Human Decisions

Wait Days, Weeks, Months

Wide Ranging Domain
Knowledge Needed

Function

Simple Tasks

Short Time to Accomplish

Straightforward or Minimal
Domain Knowledge Needed

Building Workflows creates a Dilemma

Business Analysts can't build software applications

Developers do not understand the business

Workflow allows for Collaboration

Key WF Principle

Reusable Business Activities

Custom Activities

Separate Workflow from Activity

Demo: Creating “Hello, World”

Designer

Your Code vs. Designer Code

Separation of Workflow from Activity

Host

Debugger

Workflow Patterns

Sequential

State

Rules / Data Driven

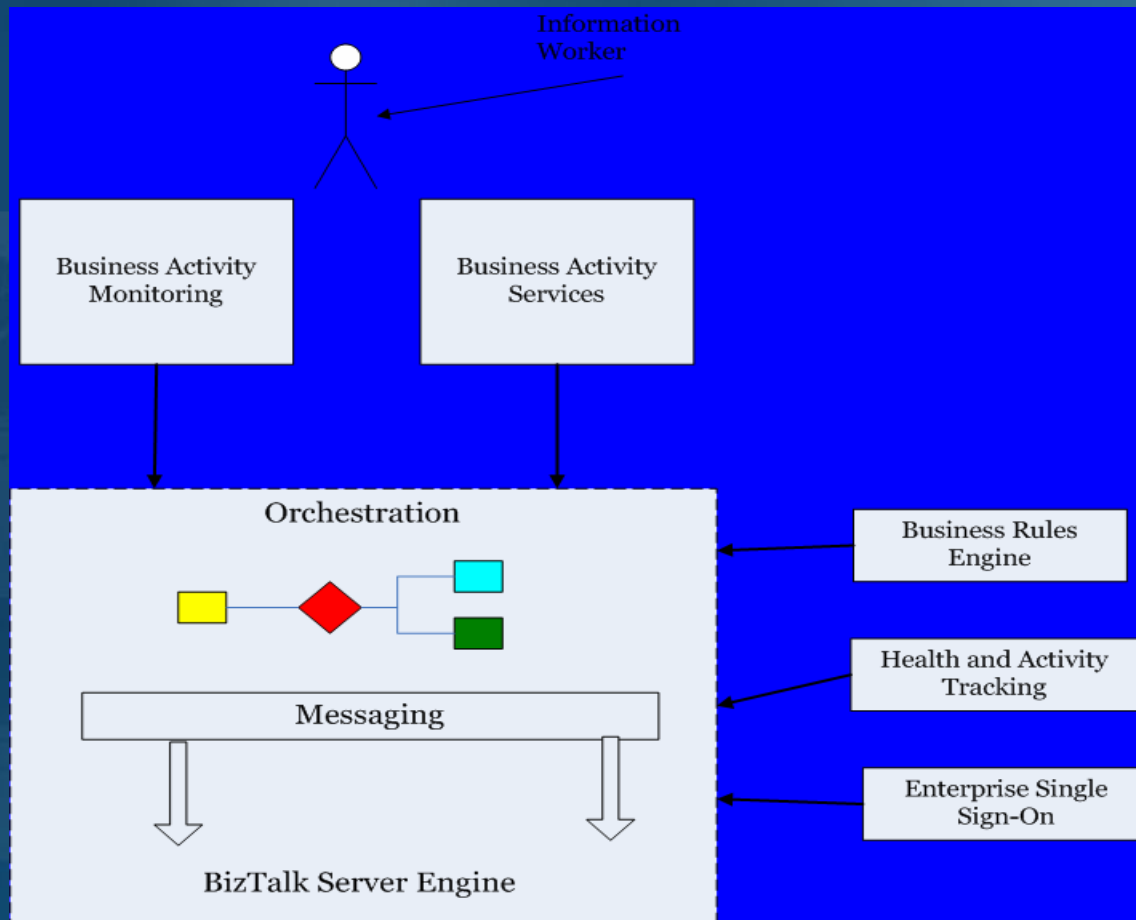
BizTalk and Workflow

Workflow Foundation is used to add Workflow to an application.

BizTalk allows you to automate and manage business applications.

About application integration

BizTalk Architecture



Summary

- Reviewed Concepts
 - Workflow is the automated part of a Business Process
 - Workflow Foundation isolates workflow from activities
- Outlined Workflow Architecture
- Reviewed Simple Workflow and Activities
- Much, much more