

IBM Software Group

WebSphere Fleet: Integration for the On-Demand Enterprise

A View into the WebSphere Business Integration Server Architecture

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Business Integration Architect
Worldwide WebSphere Business Integration Solutions
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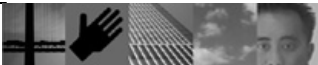
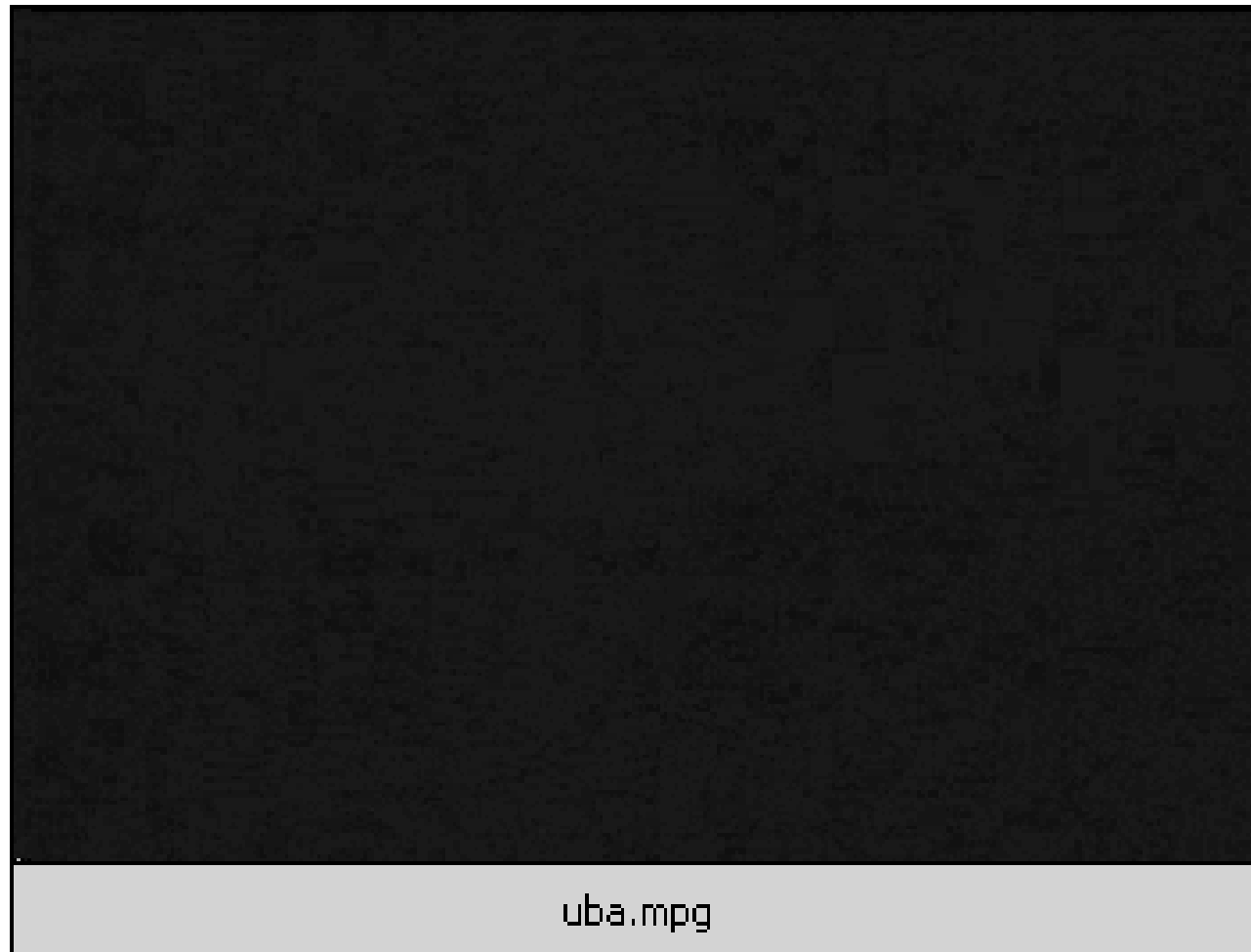
WebSphere software



 e-business software

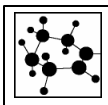
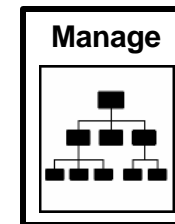
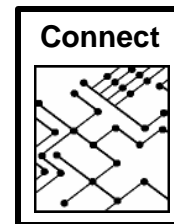
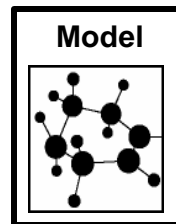
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What does integration mean to you?



E-Business on demand

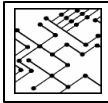
WebSphere Business Integration delivers proven capabilities required for successful integration solutions ...



Model and simulate the business processes.



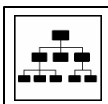
Integrate the islands of processing.



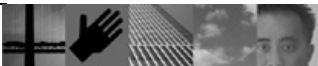
Connect customers and business partners.



Monitor the business processes end to end.

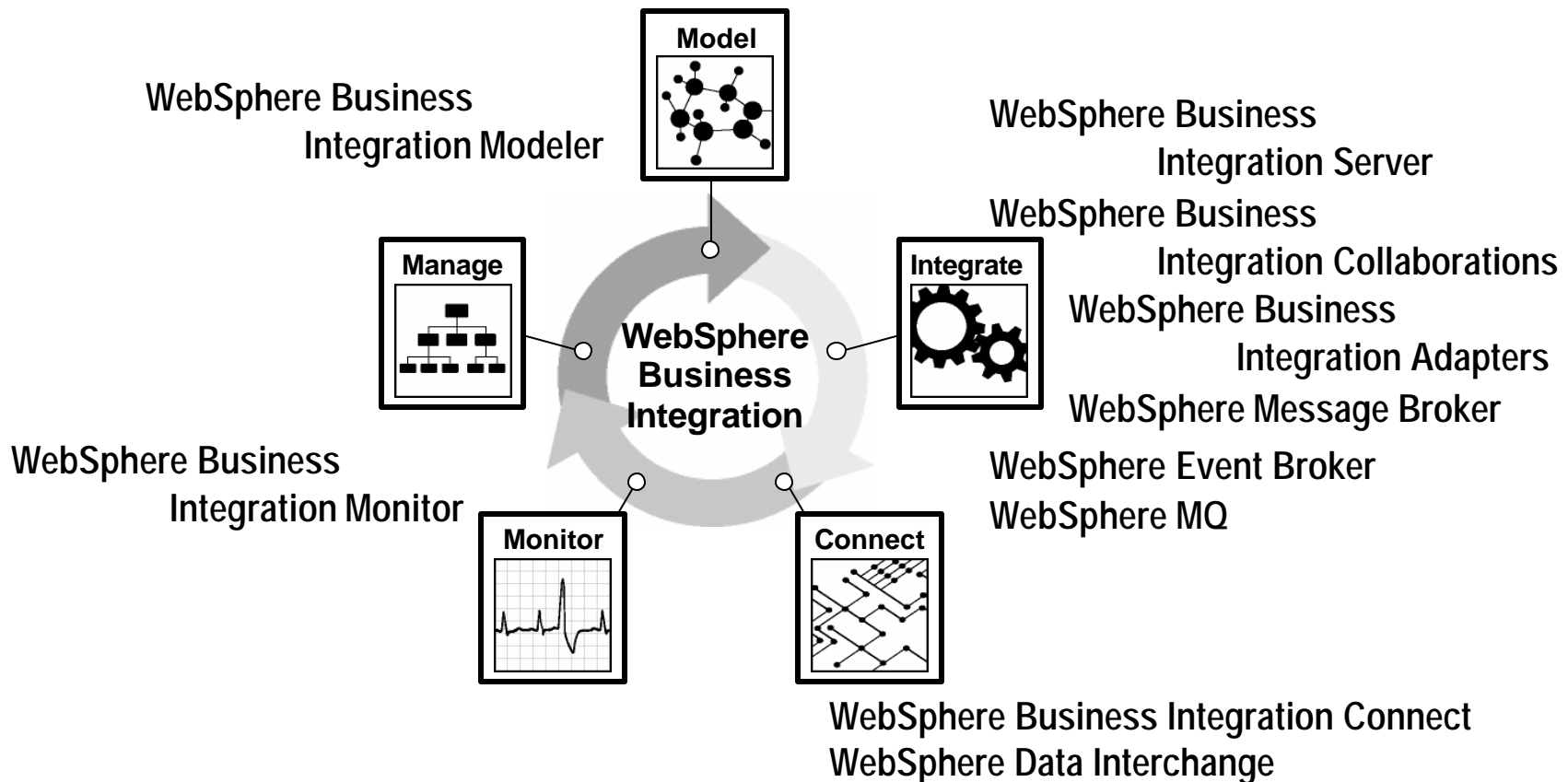


Manage the business effectiveness and improve the processes.

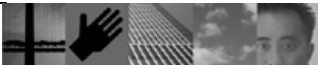


WebSphere Business Integration

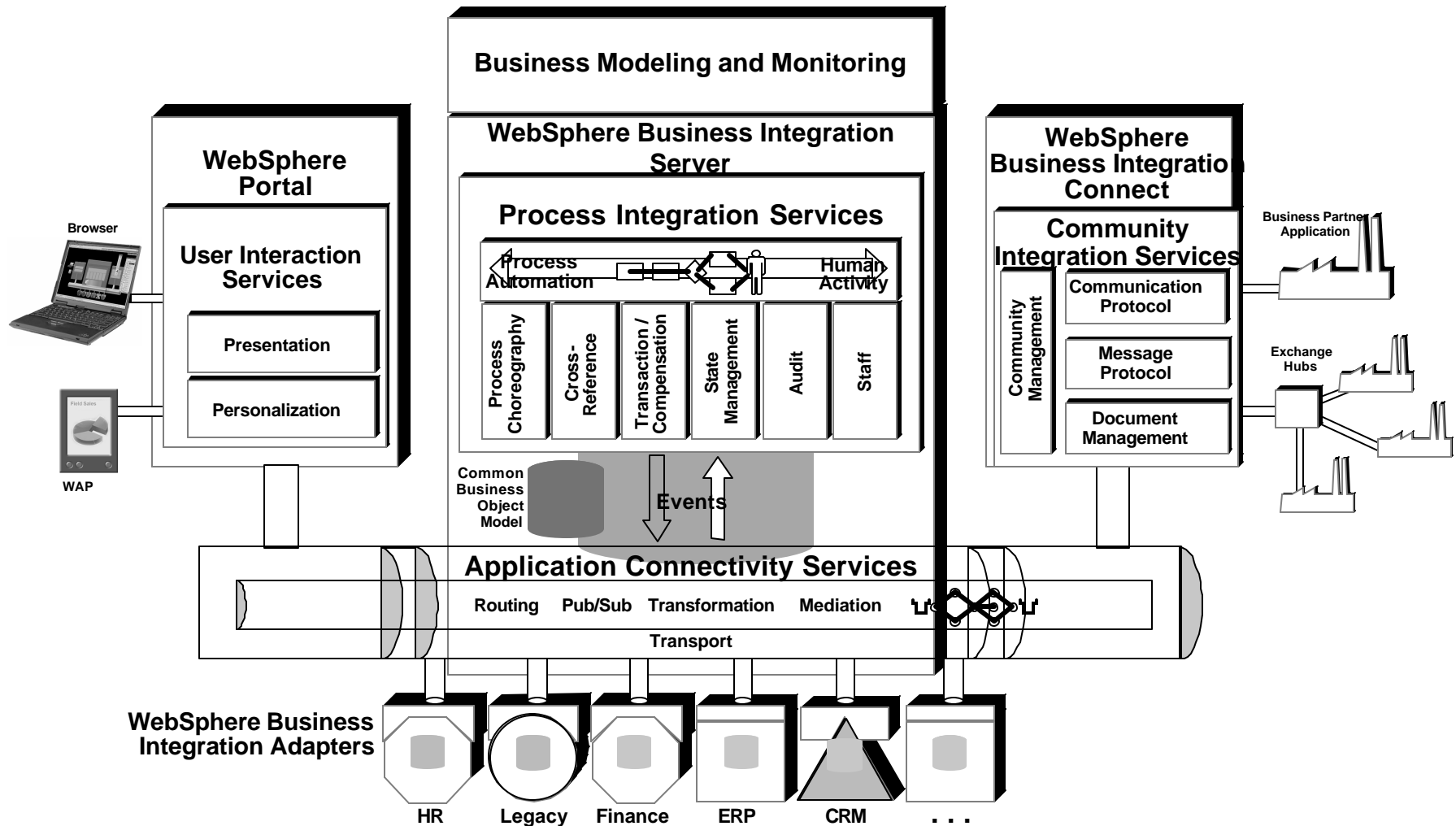
... enabled through a portfolio of component products ...

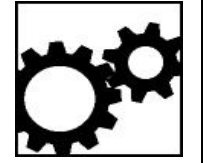


... that implement a comprehensive integration architecture ...

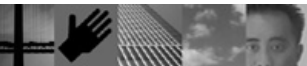
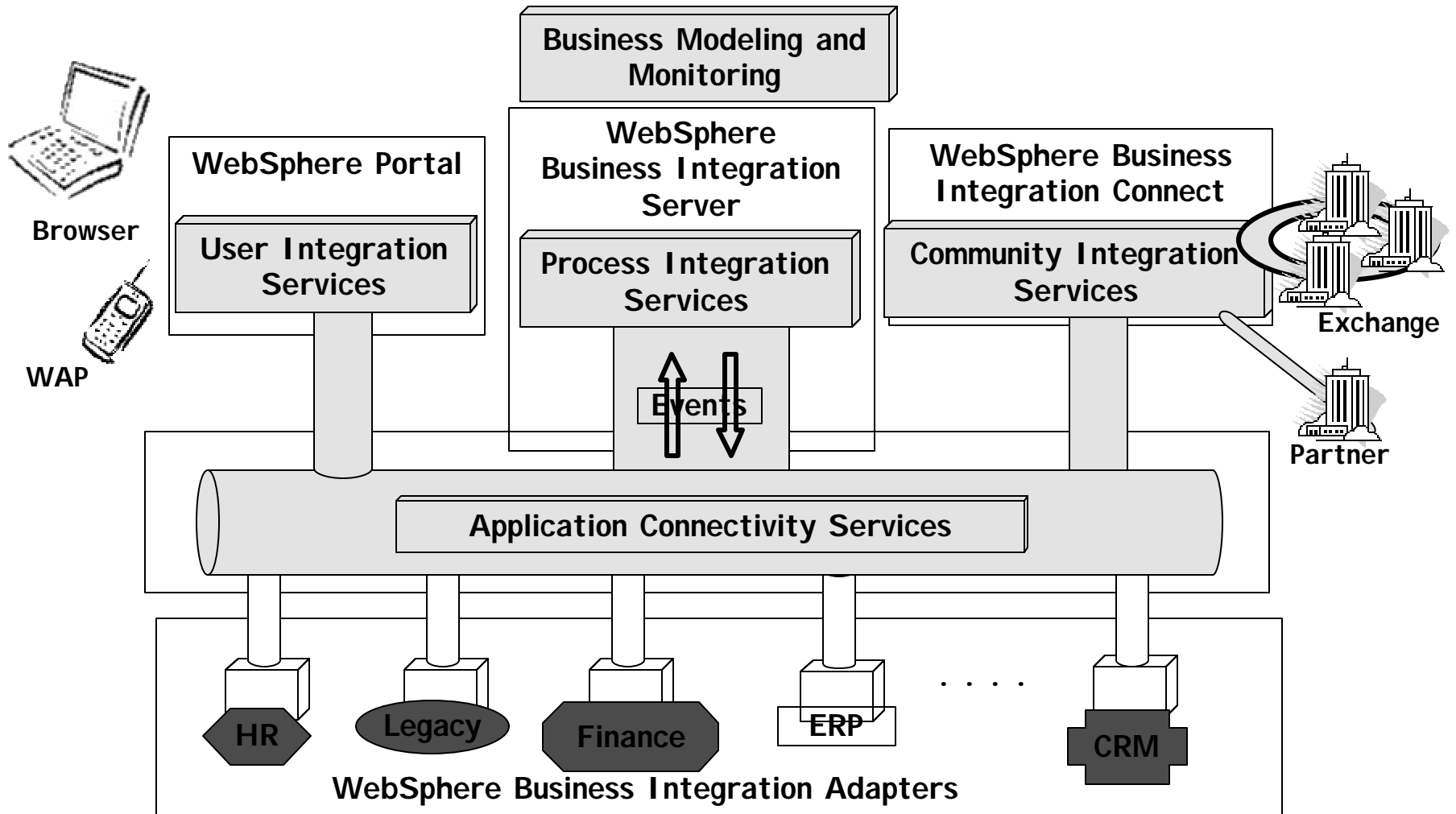


WebSphere Business Integration Reference Architecture



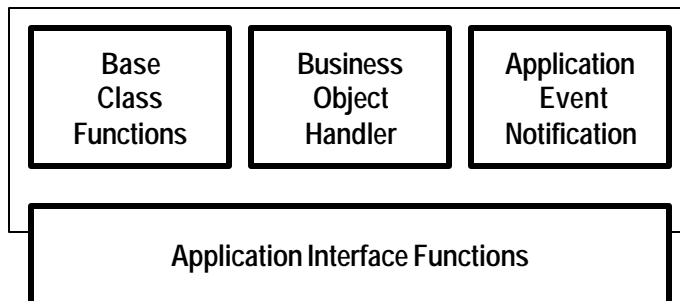
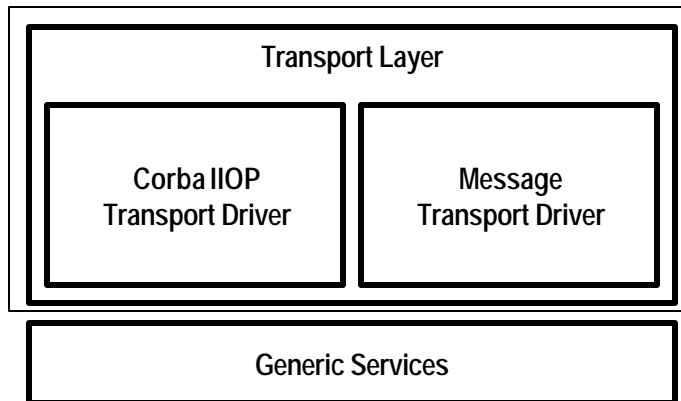


WebSphere Business Integration Adapters



WebSphere BI Adapters

Functional Components



- **Adapter Framework**

Handles the requirements of accessing the Transport

Transport layer – sends and receives BOs

Data Handler – converts BO to XML to transport to broker.

Generic Services – BO definition library, class, subscription manager, logging and tracing

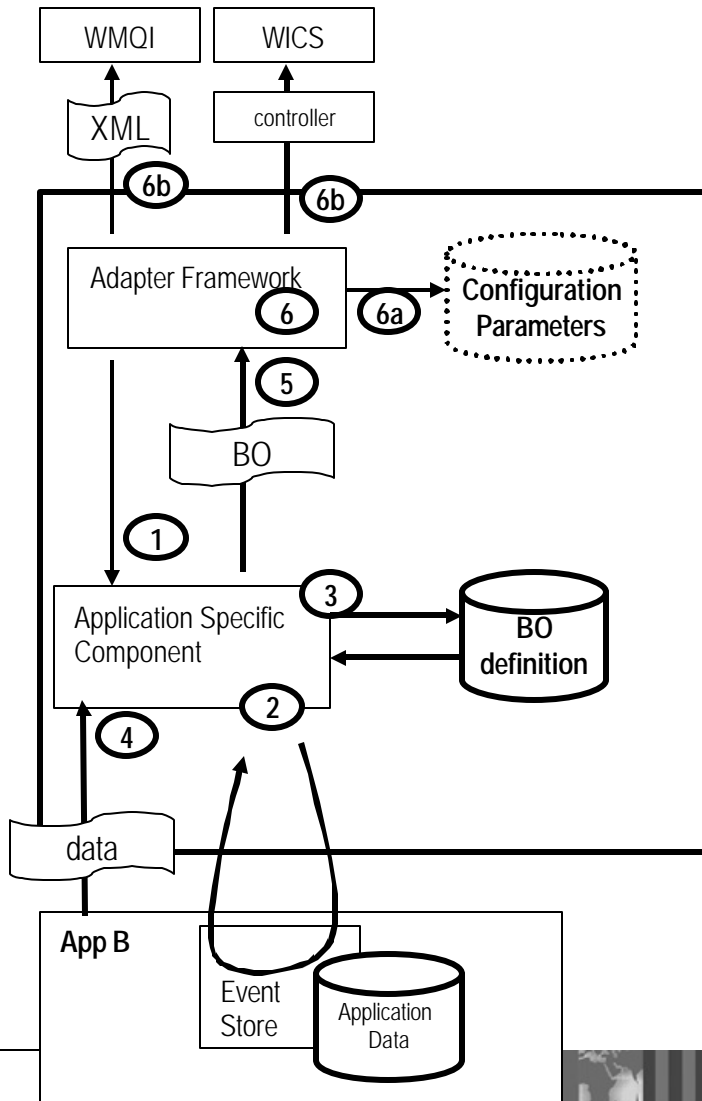
- **Application Specific Component**

Handles the requirements of accessing the application

includes basic initialization and setup methods, business object handling, and event notification.



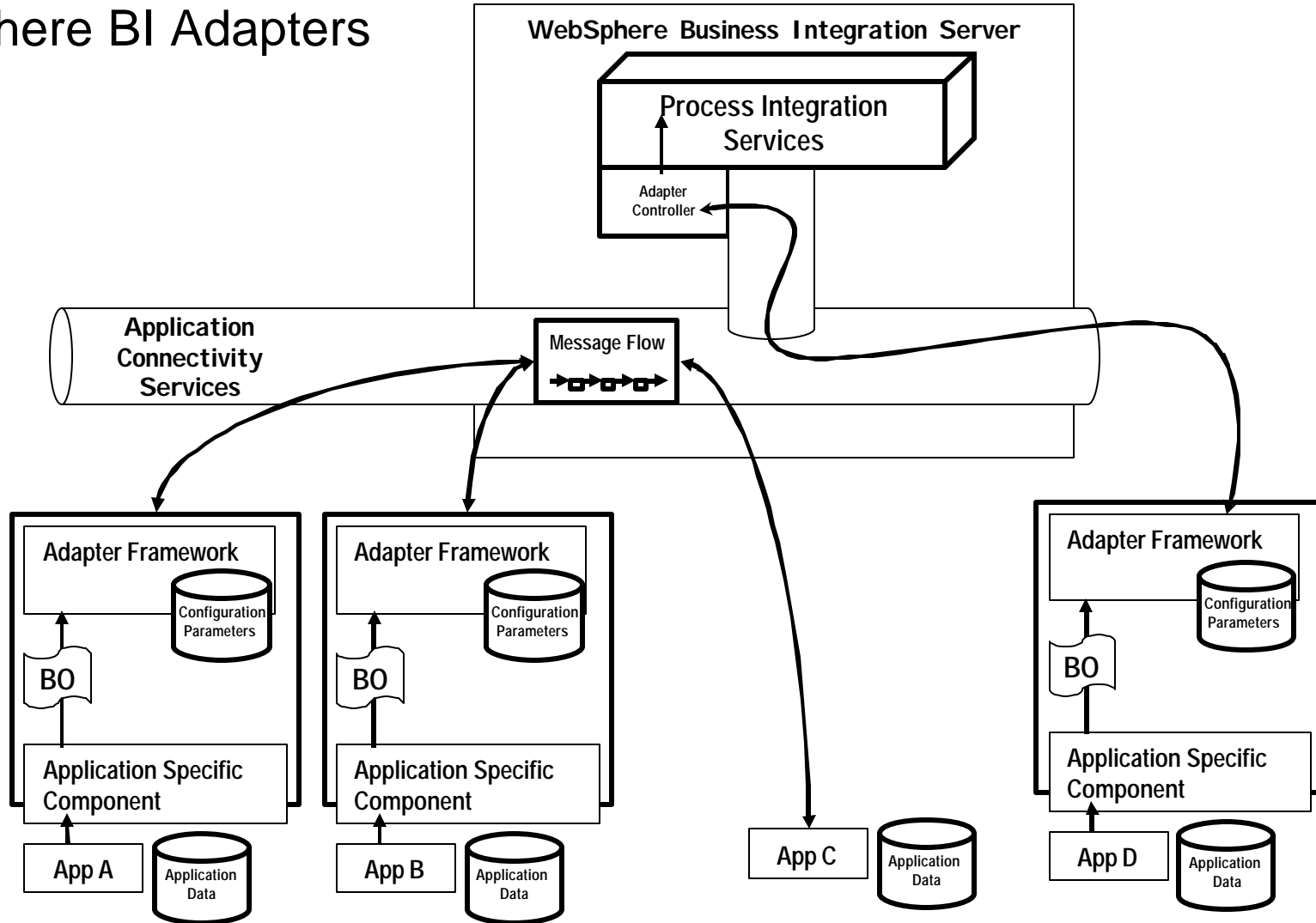
WebSphere BI Adapters



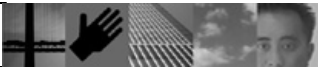
Event notification, BO creation, BO transport to AC Services

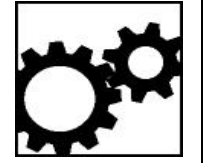
- ① The adapter framework requests the application specific component to check for changes to the applications event store.
- ② The application-specific component polls for changes to the application's event store.
- ③ The application-specific component determines whether the changed data maps to a supported business object definition.
- ④ The application-specific component instantiates a business object and uses it to retrieve the changed data.
- ⑤ The application-specific component initiates an event delivery to transfer the business object to the adapter framework.
- ⑥ The adapter framework Data Handler component converts the BO to XML, and sends it out via the appropriate Transport/Broker, based on configuration parameters (in memory). (broker selected at configuration of the adapter, which determines transport used)
- ⑥a
- ⑥b

WebSphere BI Adapters

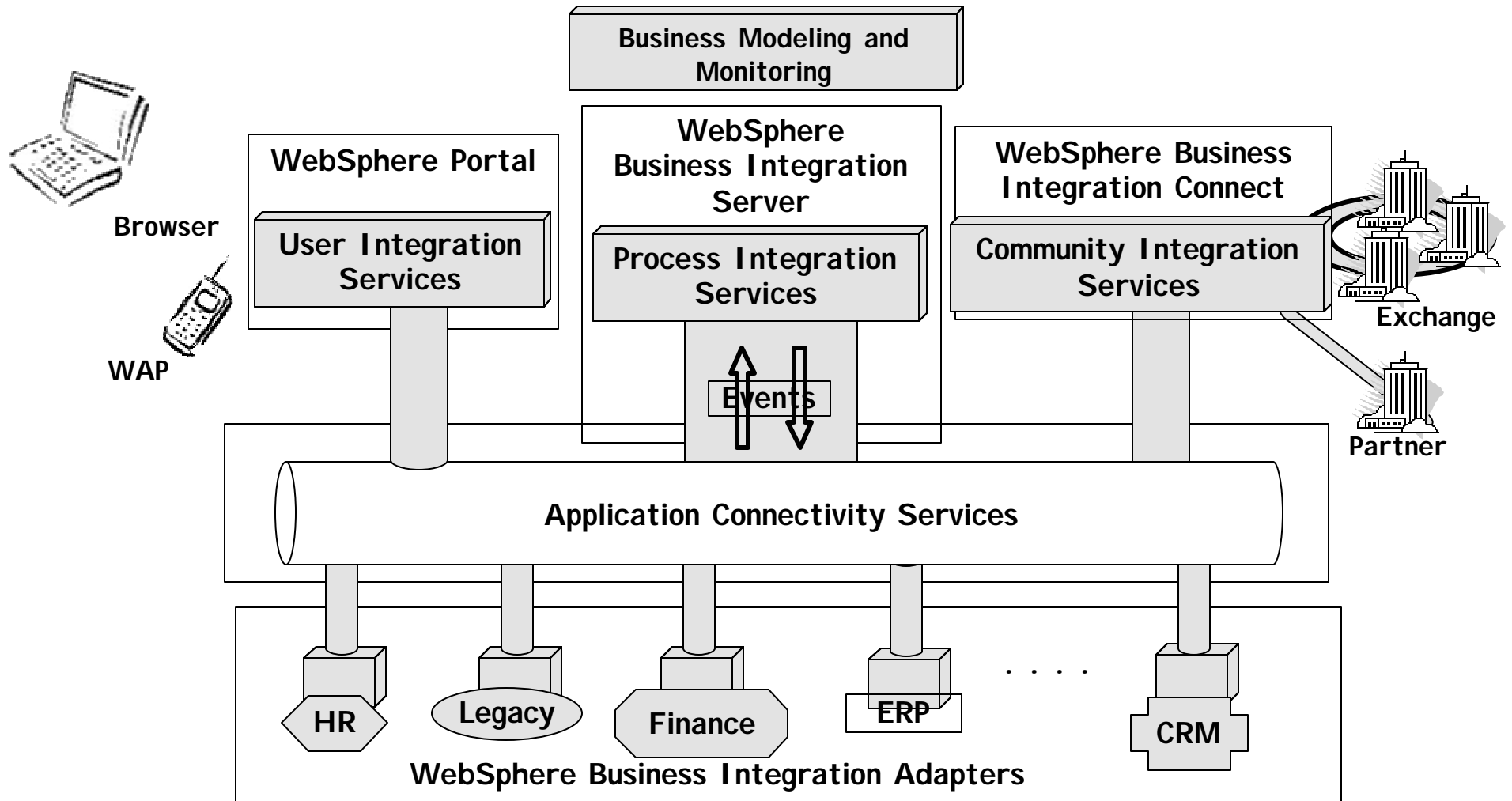


Single Framework for Adapters

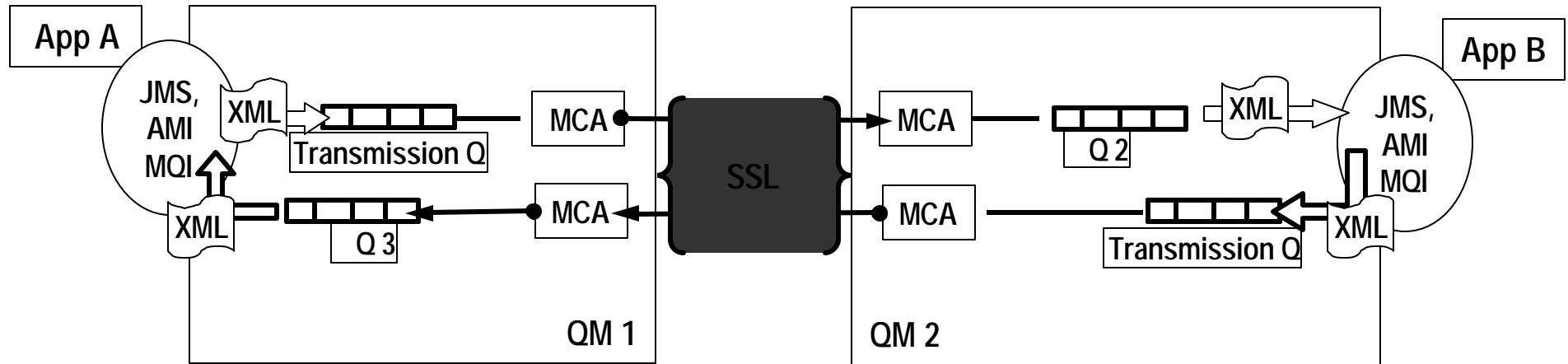




Application Connectivity Services



Application Connectivity Basic Connectivity



WebSphere MQ

Basic Messaging

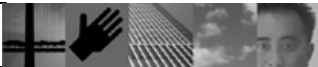
- ✓ Assured Delivery
- ✓ Once Only Delivery
- ✓ Asynchronous Delivery

Transmitted Data

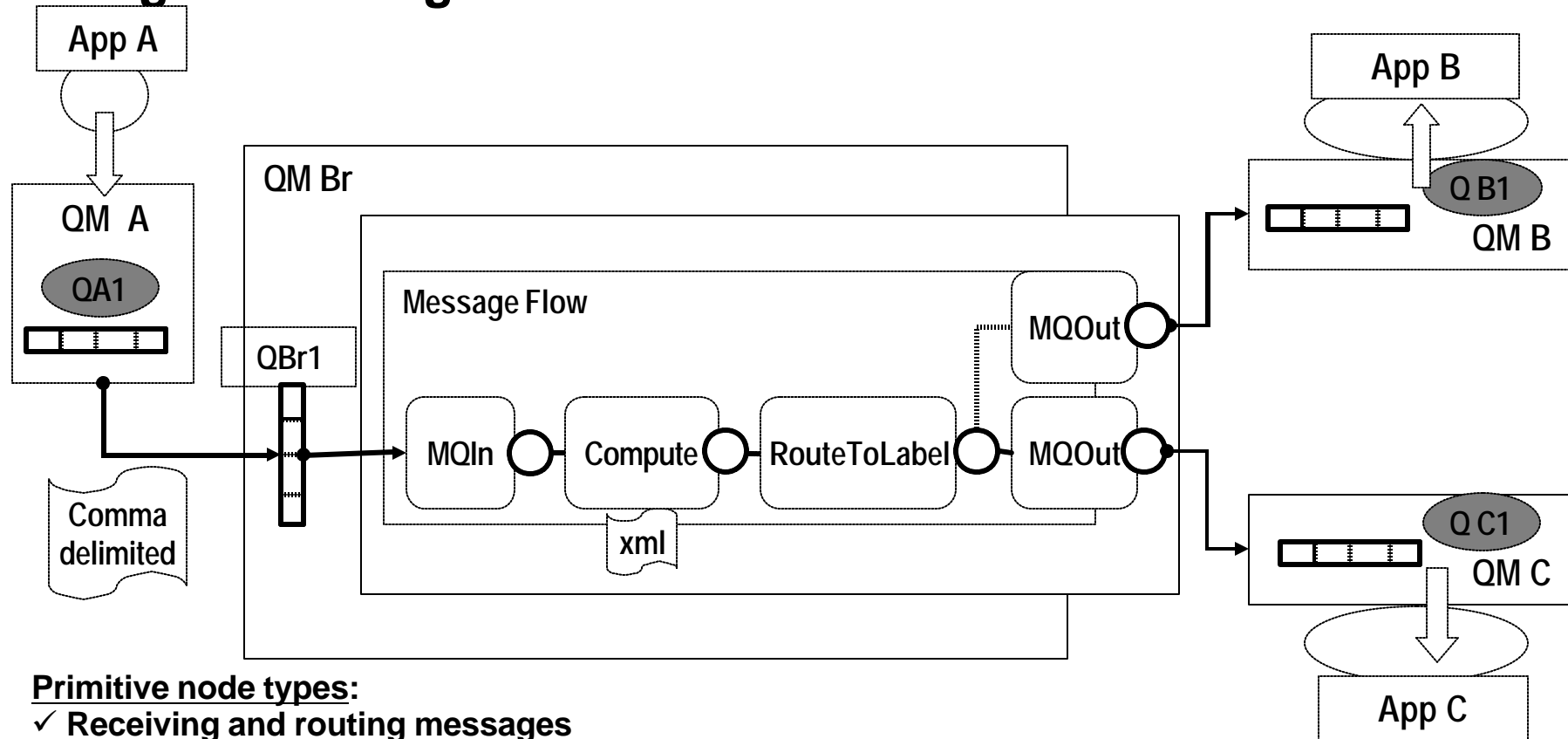
- ✓ XML
- ✓ SOAP / XML
- ✓ Proprietary

Security (QM-to-QM SSL)

- ✓ Mutual Authentication
- ✓ Encryption
- ✓ Modification Detection

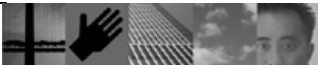


Application Connectivity Message Brokering



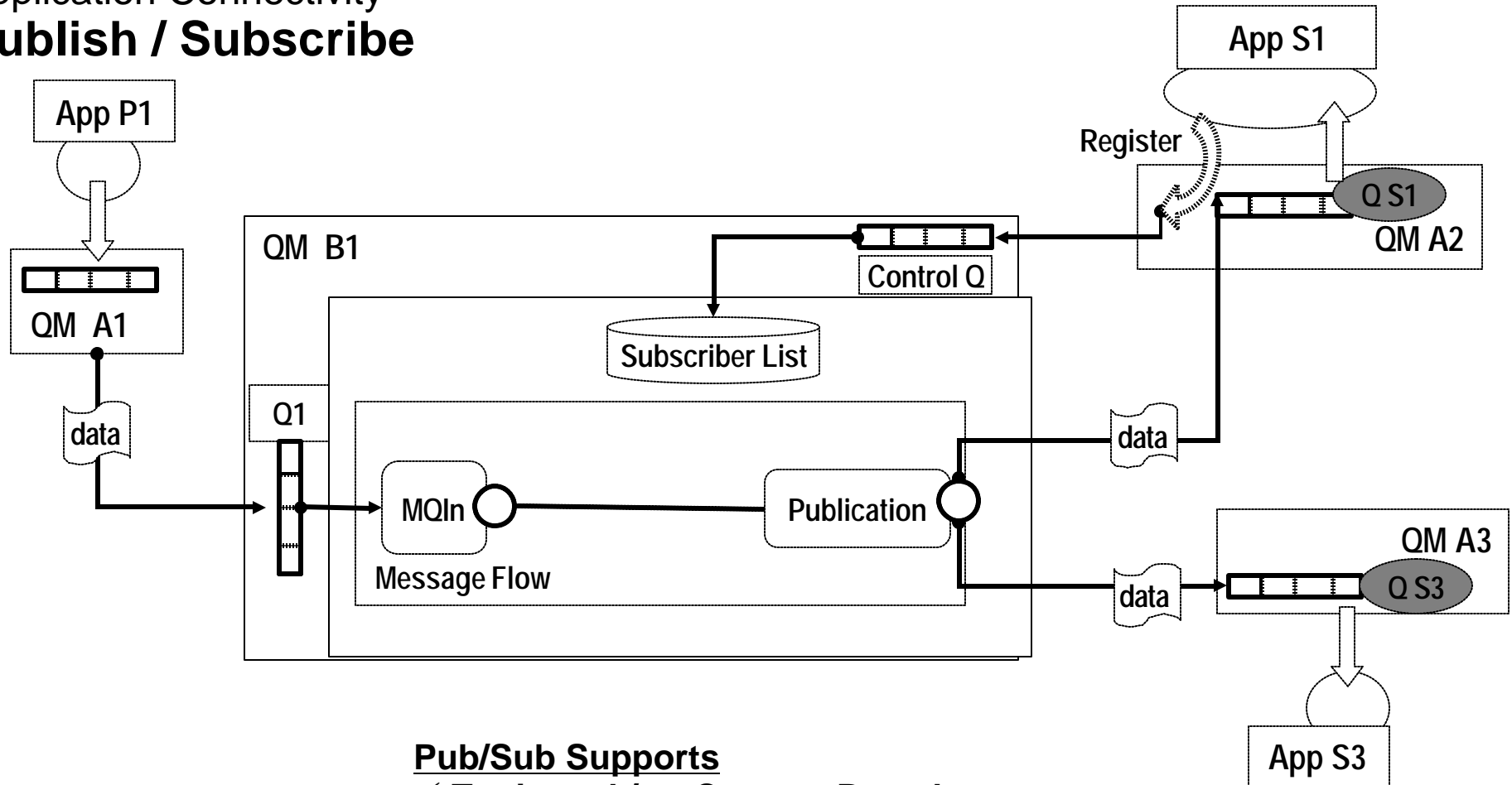
Primitive node types:

- ✓ Receiving and routing messages
- ✓ Transforming a message to an alternative representation
- ✓ Selecting a message for further processing based upon the message's content
- ✓ Interacting with an external repository to augment a message or store the whole or part of a message
- ✓ Responding to events and errors



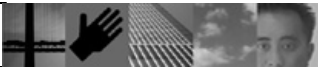
Application Connectivity

Publish / Subscribe

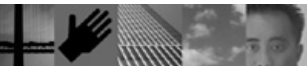
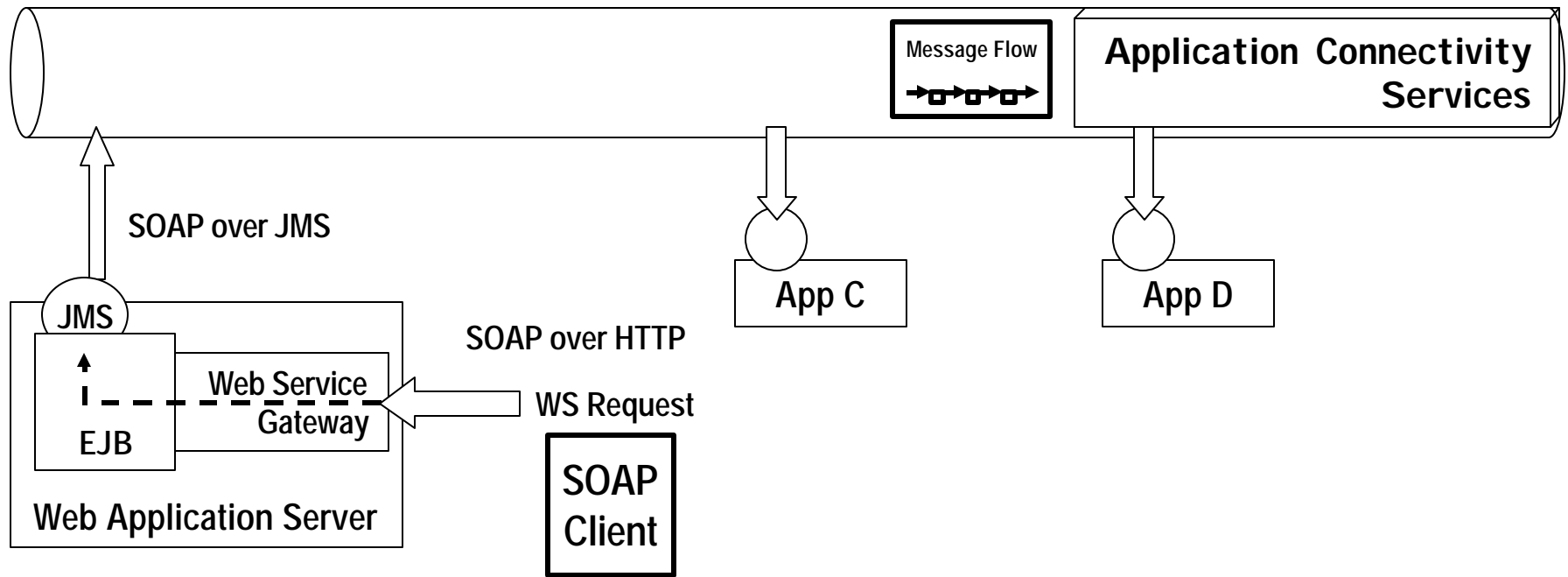


Pub/Sub Supports

- ✓ Topic and / or Content Based
- ✓ Automatic or On-Demand Delivery
- ✓ Multicast support



Application Connectivity Web Services Support



Application Connectivity - Summary

Application Connectivity functions allow customers to:

Re-use existing applications and systems

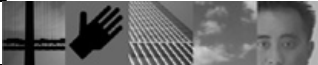
Leverage a common framework for inter-connecting disparate applications and systems

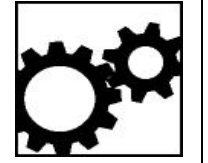
Ensure data is synchronized across the heterogeneous enterprise

Isolate routing and transformation logic from the inter-connected applications, centralizing it for enhanced flexibility and ability to manage change

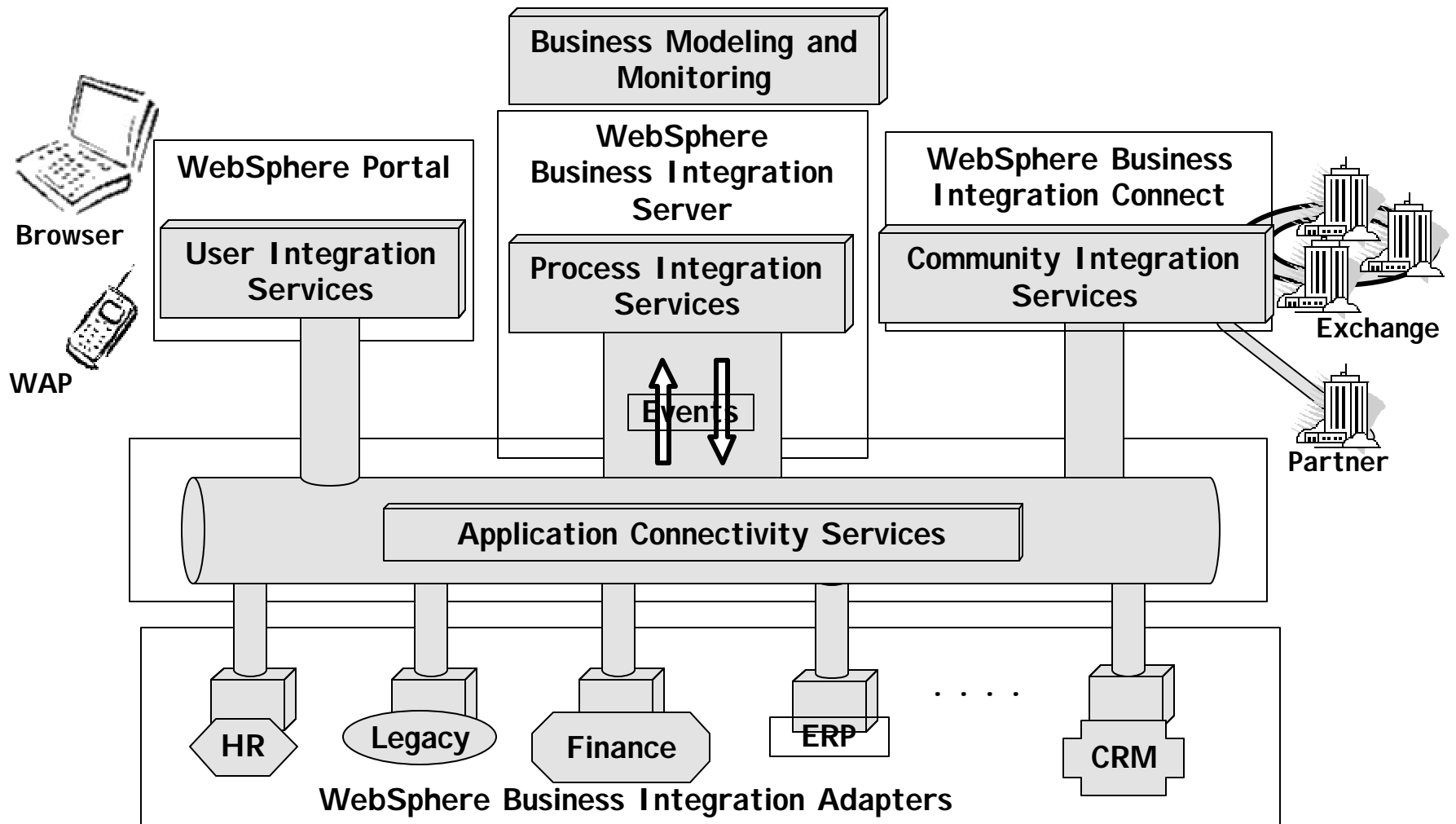
Implement high volume, reliable connectivity

Utilize Web Services support

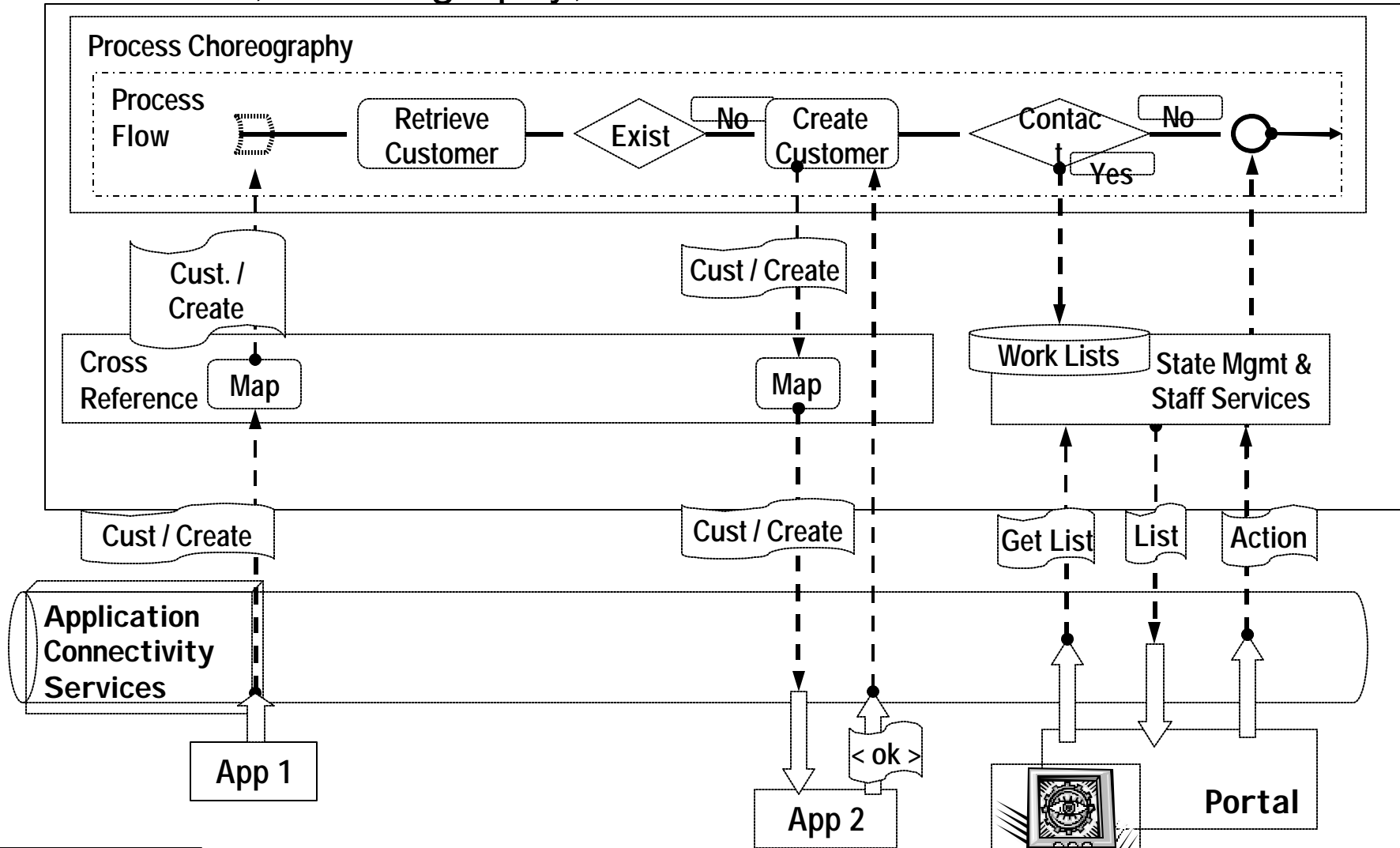




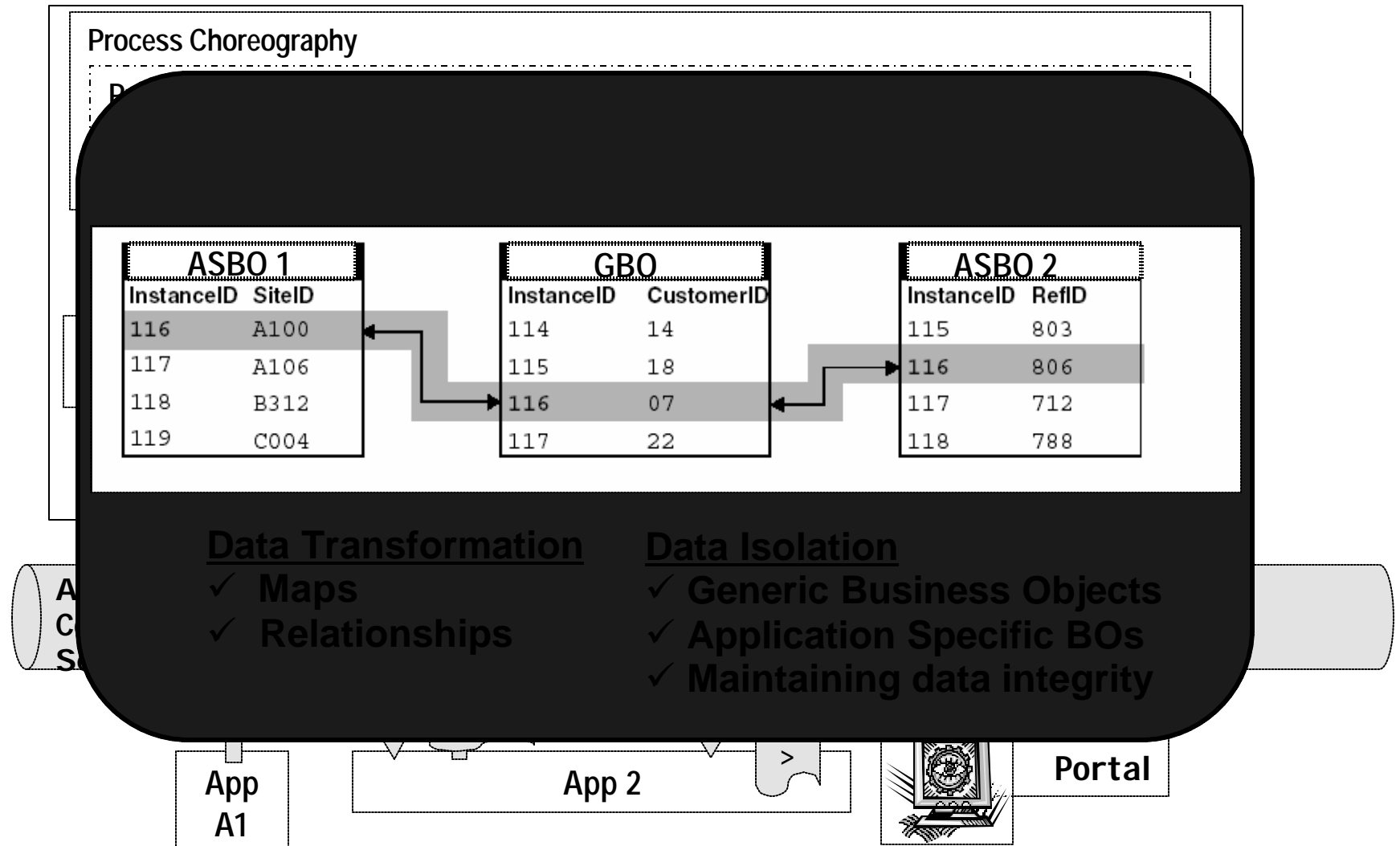
Process Integration Services



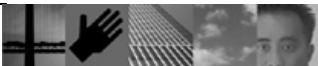
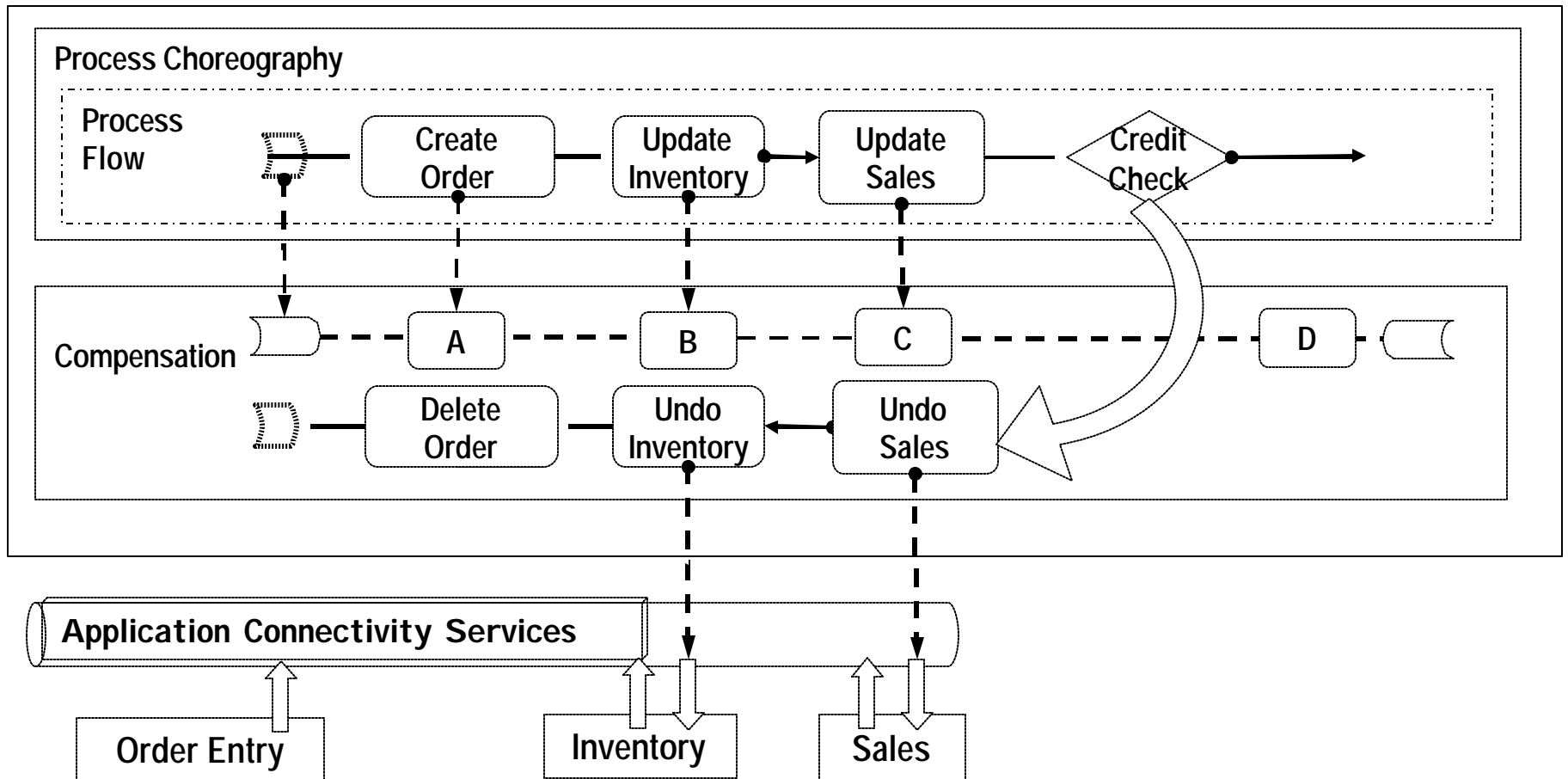
Process Integration Process Flow, Choreography, & Staff Services



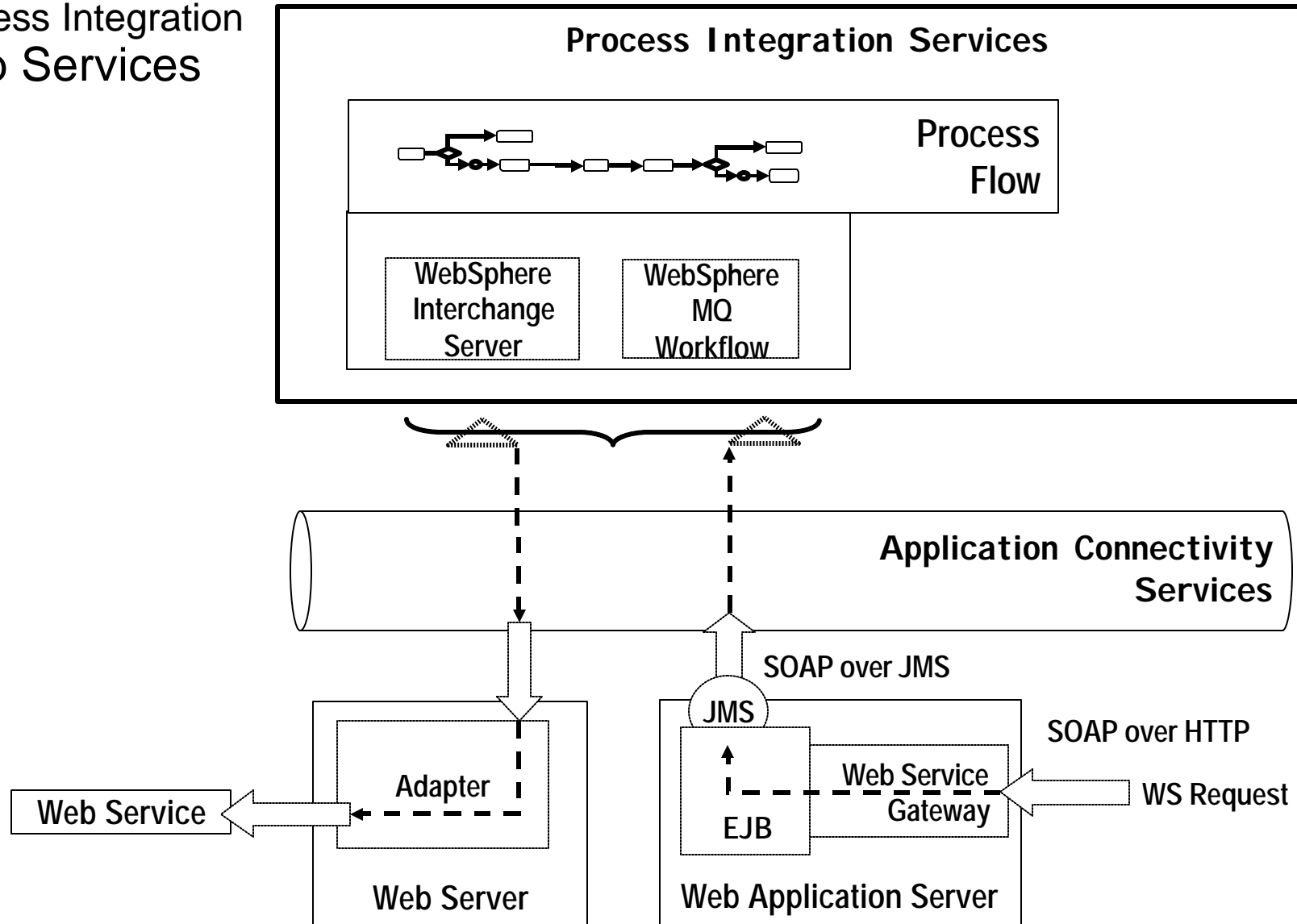
Process Integration Cross Reference



Process Integration Transaction / Compensation



Process Integration Web Services



Process Integration - Summary

Process Integration functions allow customers to:

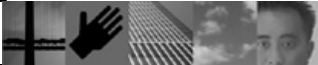
Drive horizontal business processes across vertical applications and across systems

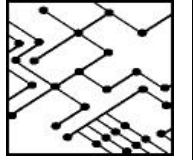
Isolate cross application control flow from the participating applications, centralizing it for enhanced flexibility and ability to manage change at business process levels

Fully integrate human and automated activities across heterogeneous enterprises

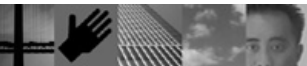
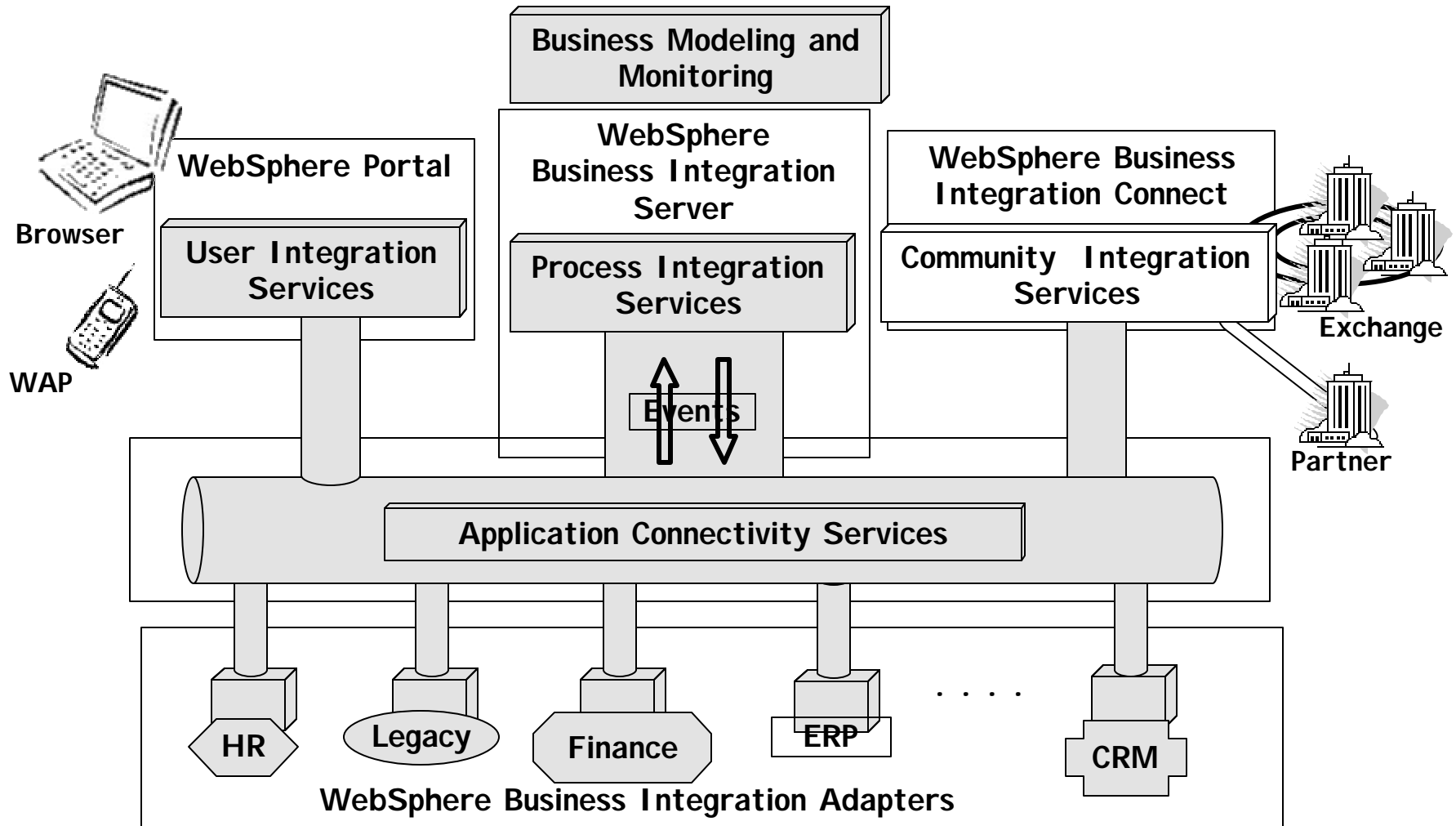
Manage long-running business transactions

Utilize Web Services support



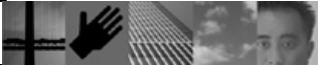
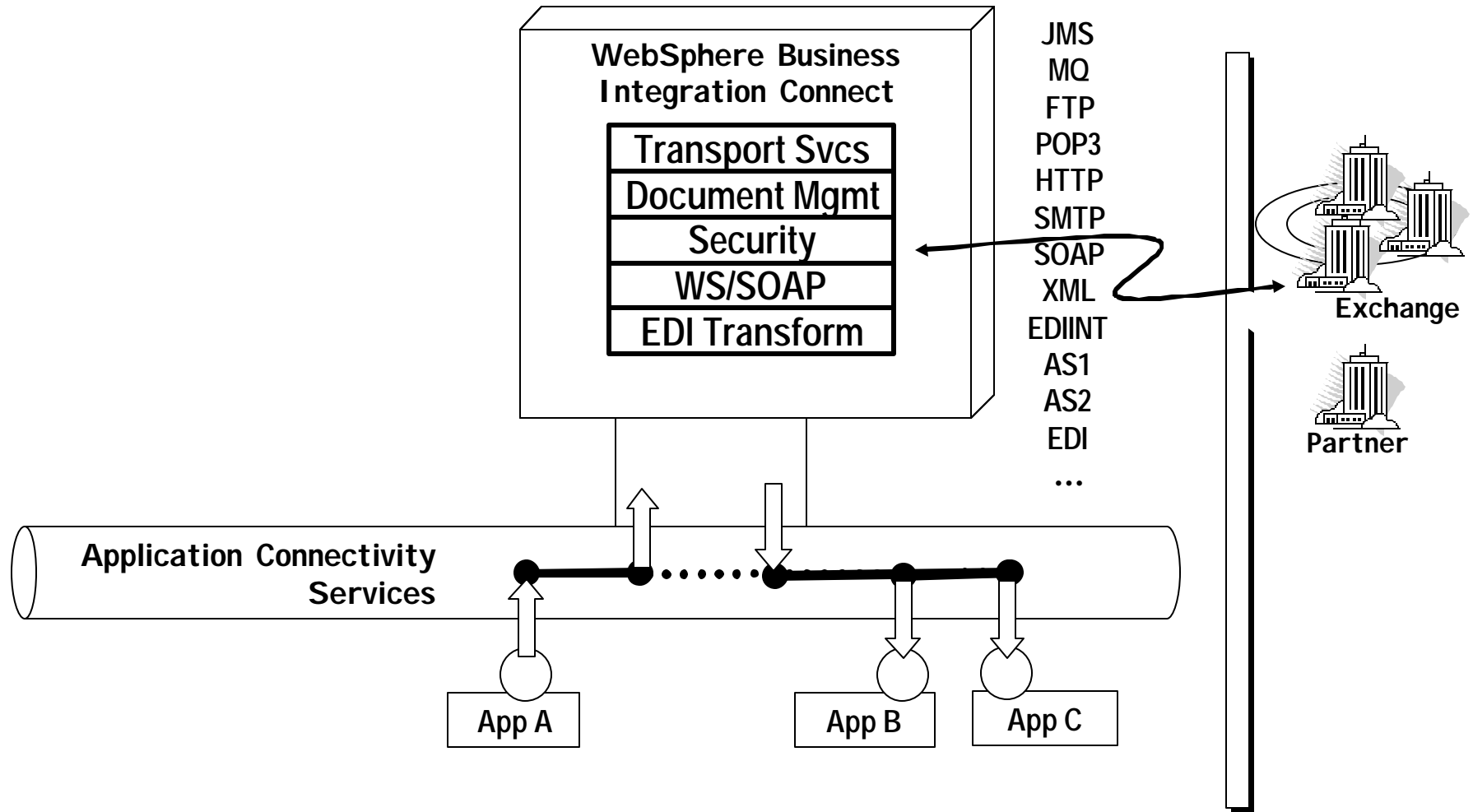


WebSphere Business Integration - Connect

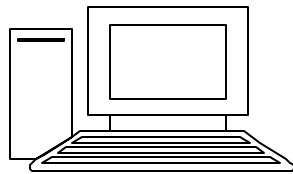


WebSphere Business Integration Connect

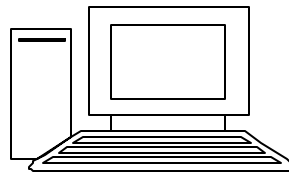
Components



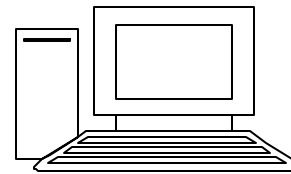
WebSphere Business Integration Connect



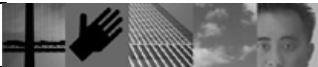
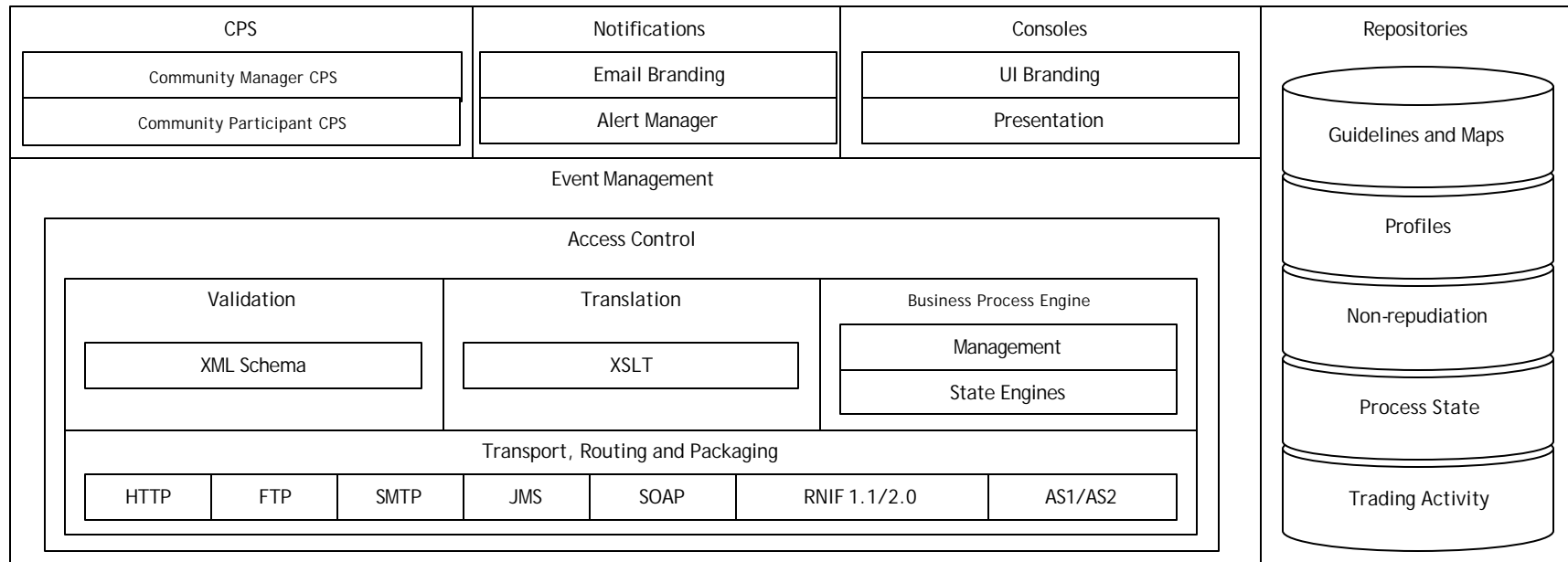
Community Participant Console



Community Manager Console



Community Operator Console



WebSphere Business Integration Connect - Summary

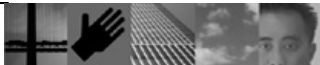
WebSphere Business Integration Connect functions allow customers to:

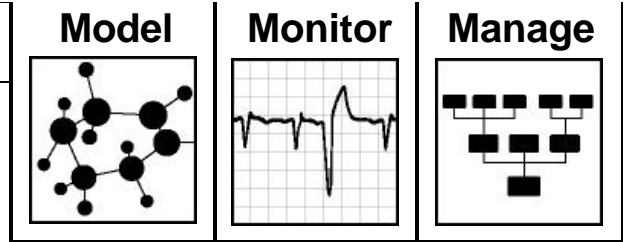
Enable community integration

Extend internal integration to partners and suppliers beyond the firewall

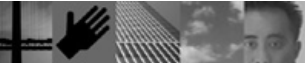
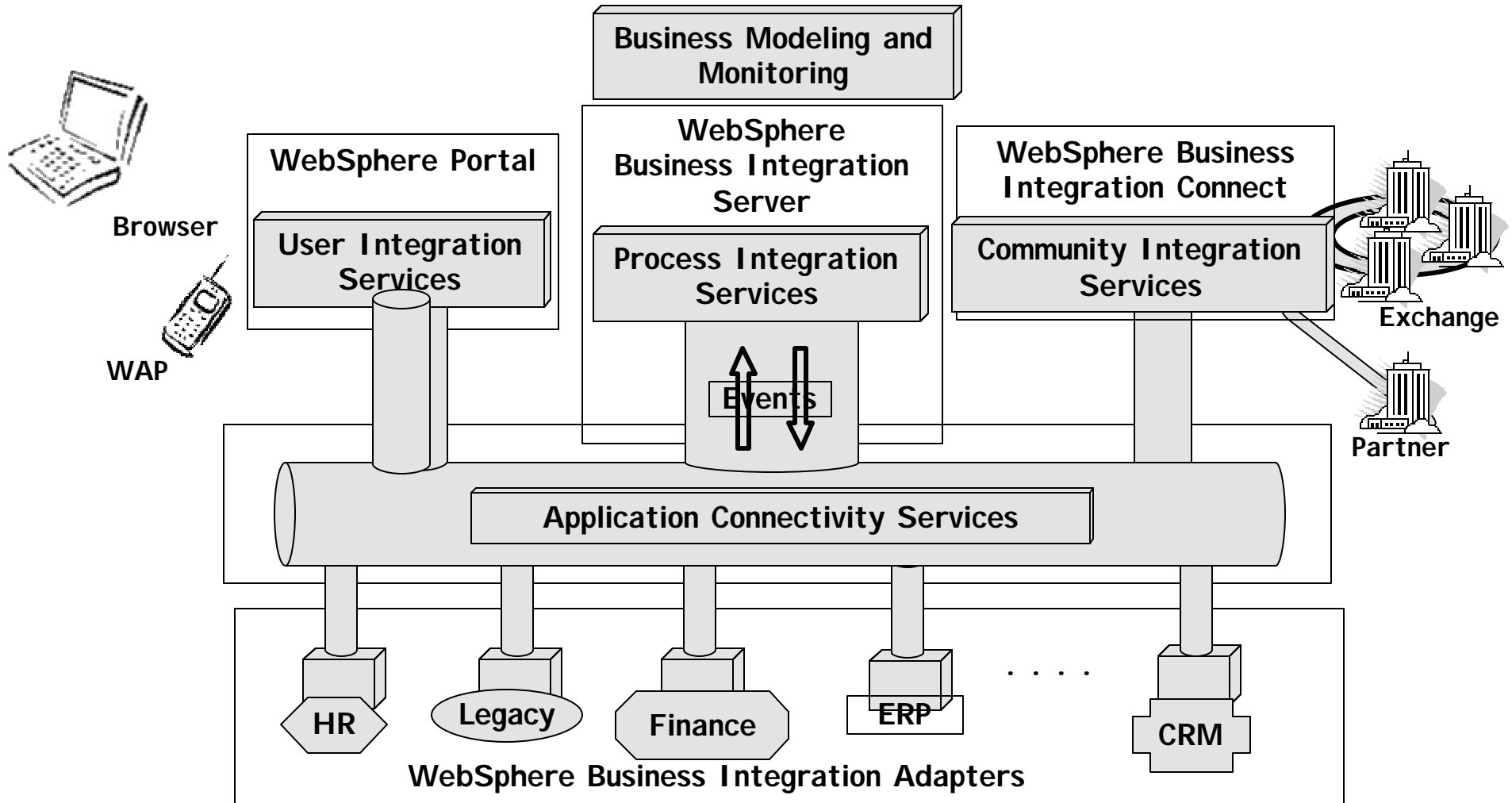
Streamline processes with partners and suppliers

Use industry interchange standards





WebSphere Business Integration Modeler and Monitor



WebSphere Business Integration Modeler and Monitor

Overview

- Allows business process analysis to determine if the processes are within the boundaries of specified business goals and objectives

Provides Visualization

Filters Raw Data for Meaningful Results

Monitors and Measures

Generates Alerts and Notifications

Diagnoses Root-cause

Optimizes Process Flows

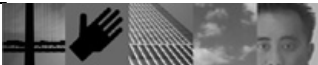
Identifies Healing Paths

Fine-Tunes and Optimizes

Provides Graphical Display / Dashboard

Provides Access to Real-time Process Data

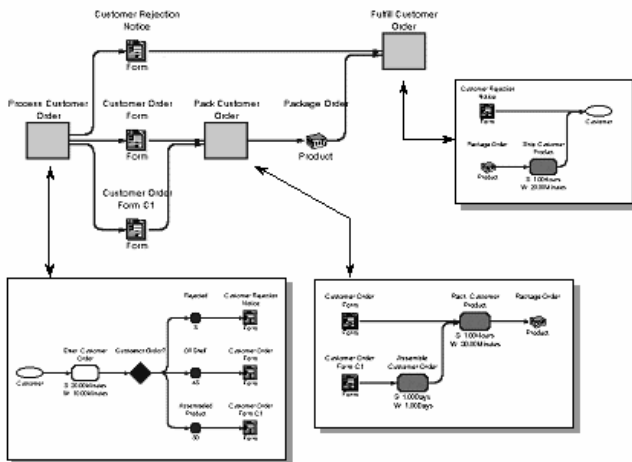
Provides Application Level Queries



WebSphere Business Integration Modeler and Monitor

Monitoring

Modeling



HOLOSOFX BPM Monitor

Workflow Dashboard

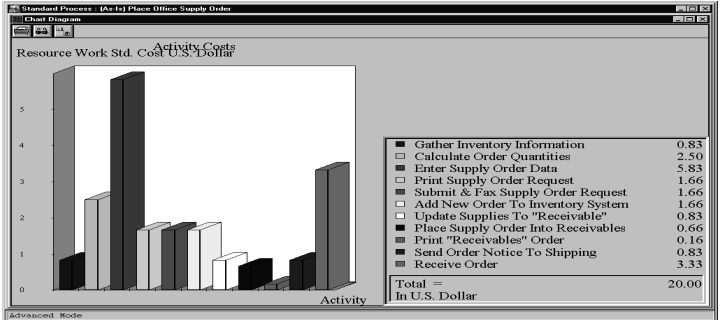
Randomize by % Randomize Views Save as Default

Select Business Measures Set Filter Process: ProcessACSDocument Process Diagram

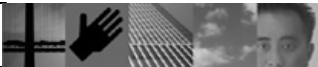
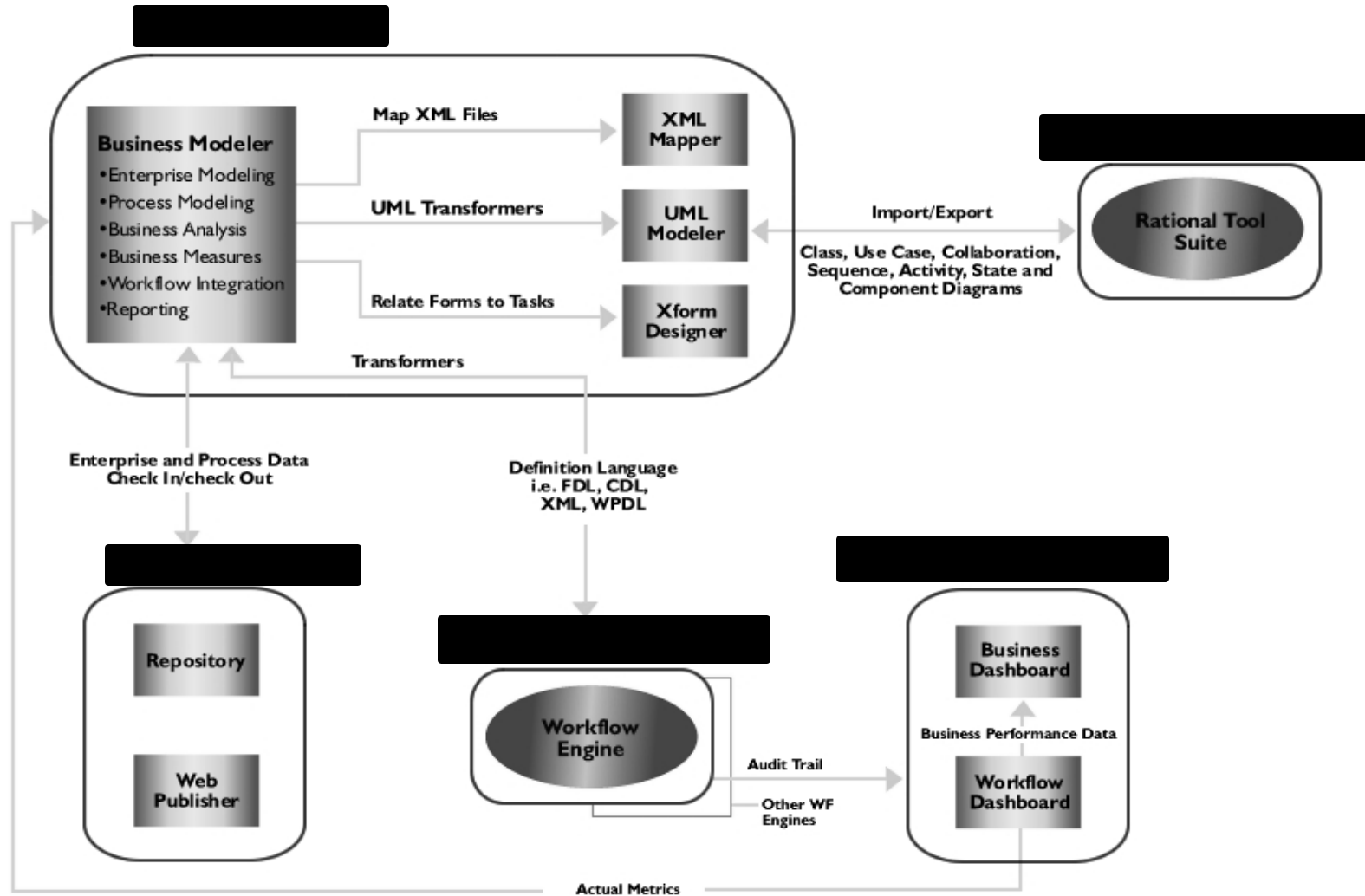
1-5 of 5 Jump to # Go

Activity Instance	Admin Action	PI Diagram	State	Starting Time	Working Duration	Elapsed Duration	Cost	Is Delayed	Account ID	Customer ID
			Running	2002-06-26 12:04 PM	2.82 h	50.50 h	\$0		1234	DOE
			Running	2002-06-26 02:39 PM	5.5 s	47.92 h	\$0		45435	SMITH
			Running	2002-06-26 02:39 PM	0.26 s	47.91 h	\$0		2147483647	BASRAI
			Running	2002-06-26 02:40 PM	0.24 s	47.89 h	\$0		3454353	WEAVER
			Running	2002-06-26 05:43 PM	0.26 s	44.85 h	\$0		0	MARIA11

Managing



WebSphere Business Integration Modeler and Monitor



Business Modeling and Monitoring - Summary

Business Modeling and Monitoring functions allow customers to:

Graphically build business processes requiring no Java coding

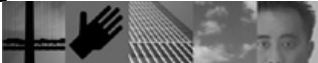
Simulate processes and determine ROI prior to deployment

Enhance flexibility and ability to manage change at business levels

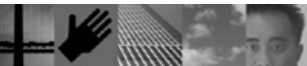
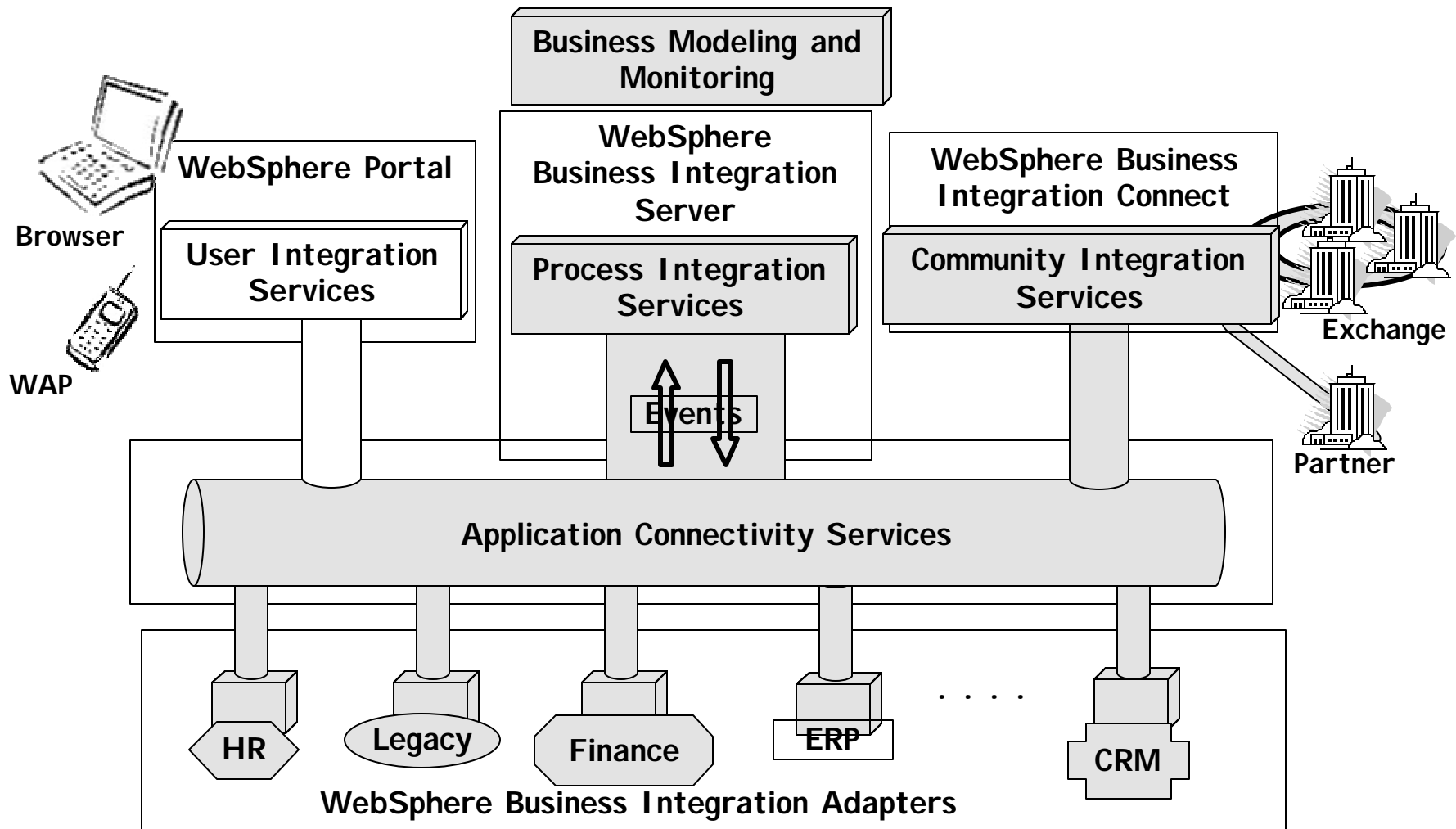
Use role based dashboards to see process execution and to handle out-of-line conditions

Track and manage business events through to completion

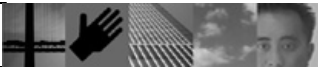
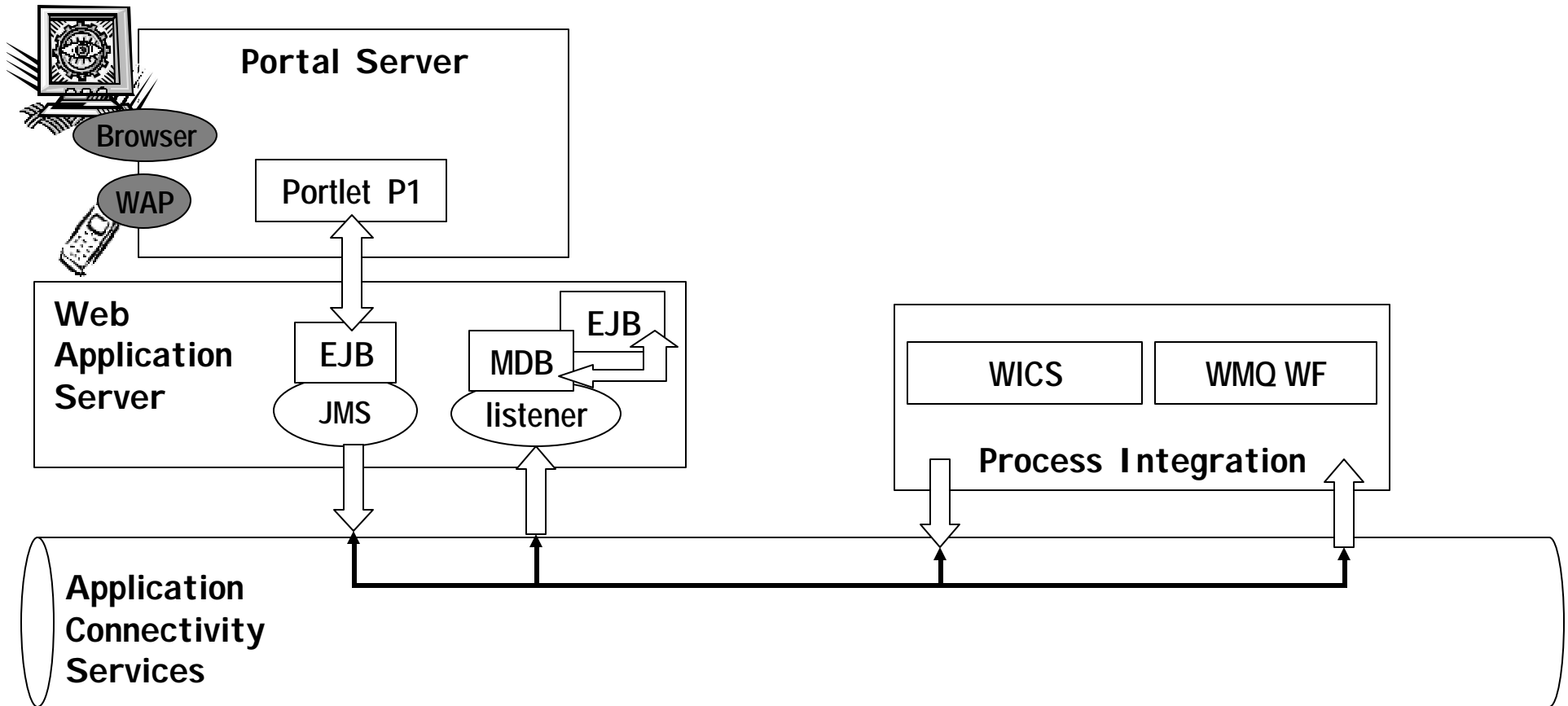
Analyze trends and metrics for continuous process improvement



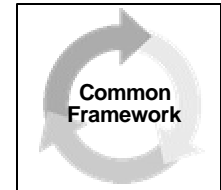
WAS/Portal Integration with WebSphere BI



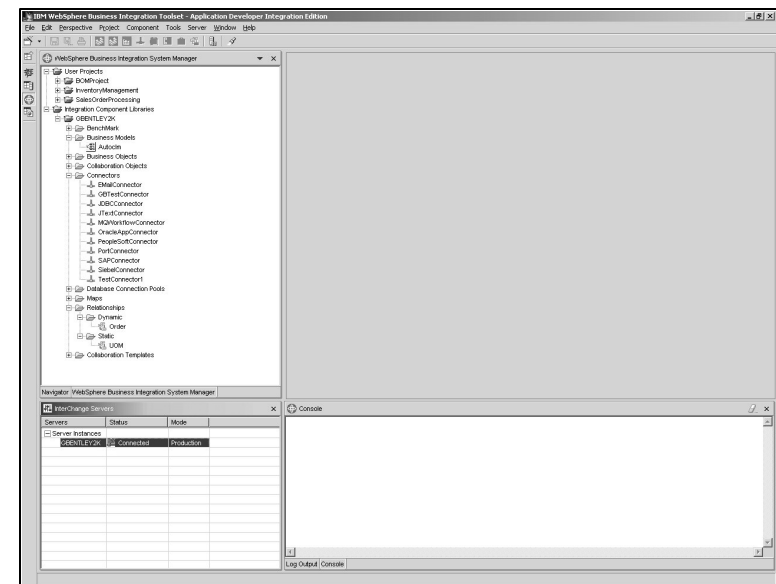
User Integration WebSphere Portal (& WAS)



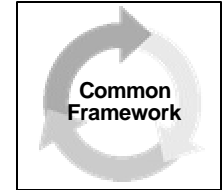
WebSphere BI Tooling on Eclipse



- Built on Eclipse foundation (www.eclipse.org)
- Unified interface across full suite of WebSphere Business Integration Server tools
- Server deployment wizards
- Provides ability to share business objects and artifacts across WebSphere Business Integration
- Integration with Eclipse plug-ins:
 - Source Code Control (Rational, Merant)
 - Java IDE and extended tools
 - Web development tools
 - Mainframe integration solutions
 - Design tools (Rational XDE)



Eclipse - Broad Industry Participation



- Altoweb
- Asist
- Bowstreet
- Borland
- BrowserSoft
- CollabNet
- CommerceQuest
- Computer Assoc.
- Compuware
- Crystal Decisions
- Embarcadero
- Instantiations
- Interwoven
- LegacyJ
- LogicLibrary
- Macromedia
- Merant
- Mercury Interactive
- Midcomp Intl.
- MKS
- NeuVis
- Peregrine
- QSSL
- Rational (IBM)
- Red Hat
- Serena
- Sitraka
- Skyva
- Starbase
- SuSE
- Telelogic
- Versant
- Versata
- WebGain
- Wily Technology

“Rational Software has been an early adopter of the Eclipse platform because we believe it delivers high value to software teams. We’ve been working closely with IBM to integrate our products into Eclipse....”

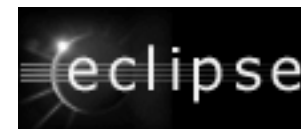
—Dave Bernstein, Sr VP of Products, Rational Software

“The Eclipse community will allow developers to collaborate on enhancements to the Workbench technology and more rapidly integrate it within their own applications.”

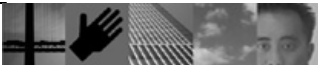
—Brian Behlendorf, co-founder and CTO, CollabNet

“This has long been a dream of developers, and now IBM is providing the integration framework to make it possible.”

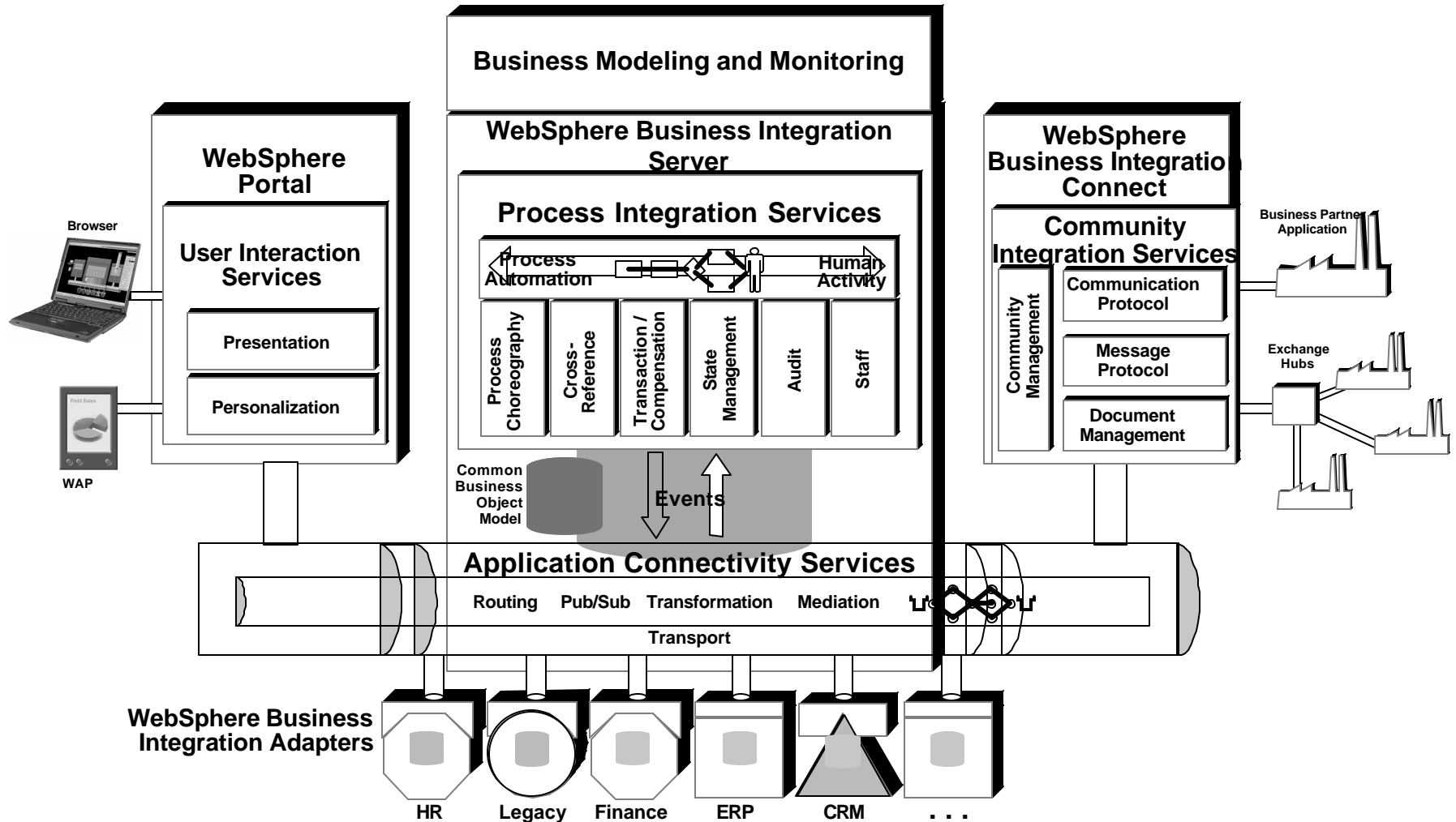
—Arun Gupta, CTO, NeuVis Software



www.eclipse.org

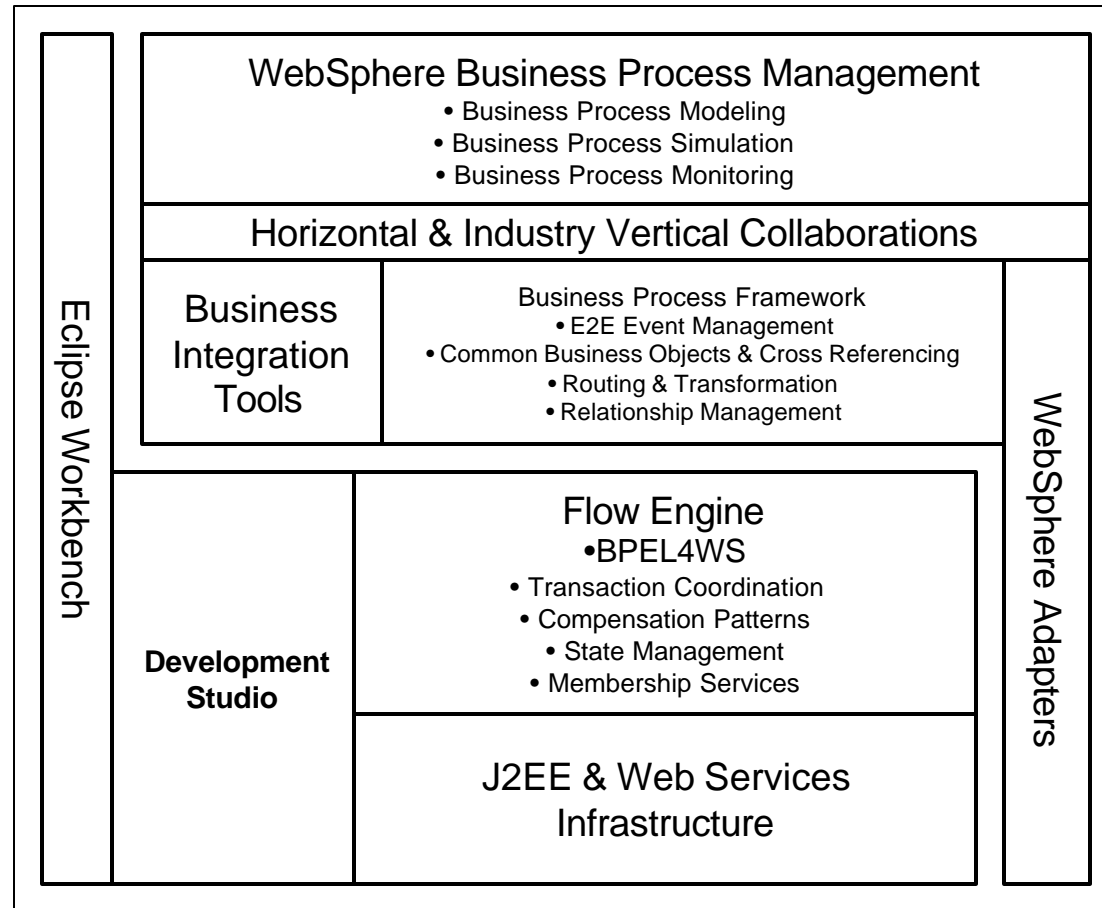


WebSphere Business Integration Reference Architecture



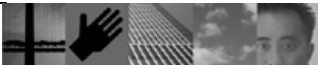
WebSphere

...the Platform for **e-business on demand**

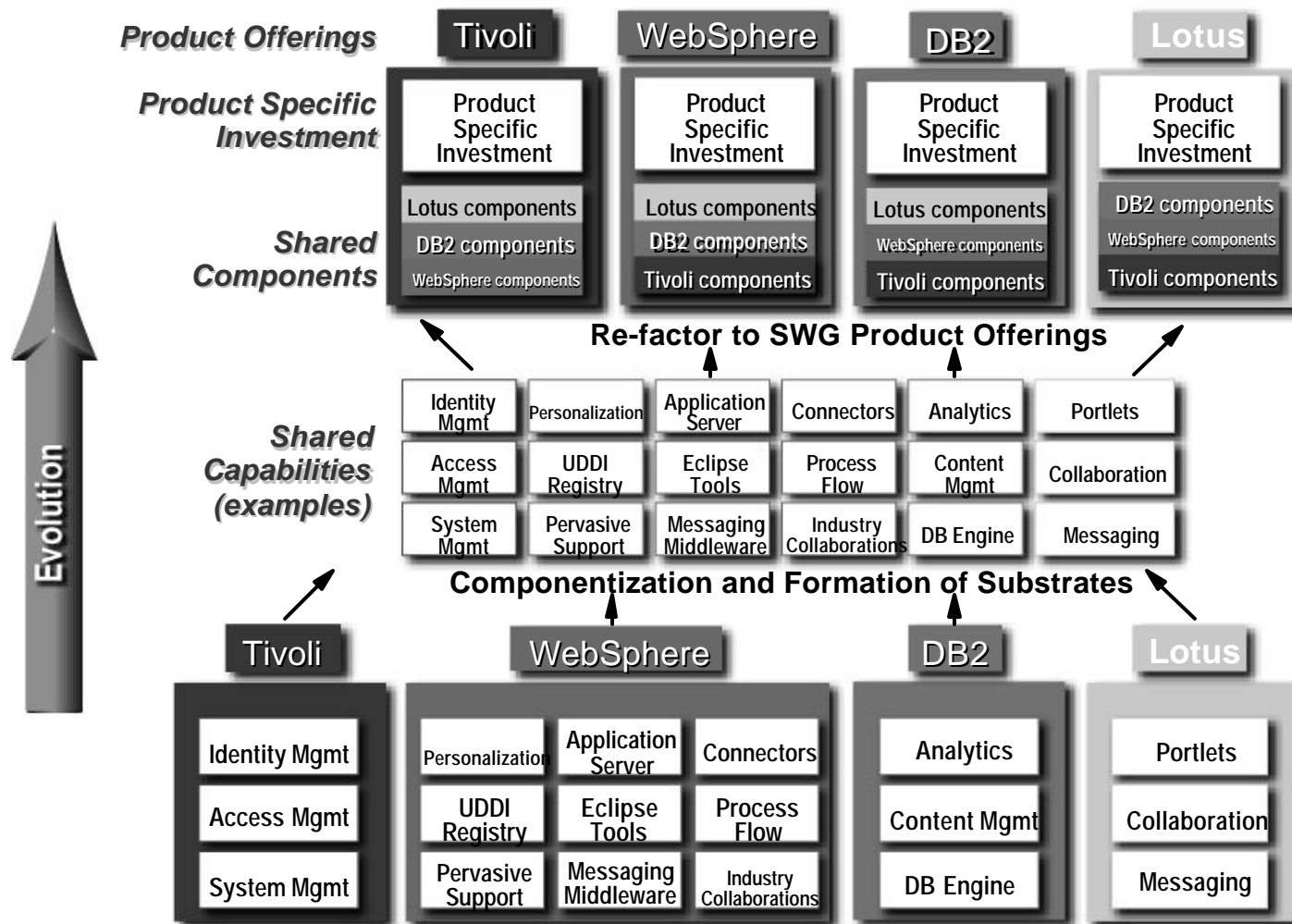


WebSphere
Business
Integration

WebSphere
Foundation

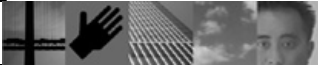


Shared Capabilities of IBM's Software Portfolio



Summary

- **Integration consists of multiple required functions**
 - Application Connectivity
 - Process Integration
 - Trading Partner Community Management
 - User Integration
- **The WebSphere Business Integration solution provides**
 - A common runtime and development foundation
 - A rich set of tools to enable a complete integration approach
 - Compliments the WebSphere Data Interchange solution directly



How to improve customer satisfaction



References

WebSphere Business Integration website

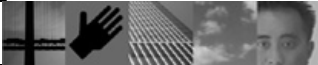
<http://www.ibm.com/software/integration>

WebSphere Developer Domain

<http://www7b.software.ibm.com/wsdd/>

Redbooks

<http://publib-b.boulder.ibm.com/Redbooks.nsf/redbooks/>



Questions



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