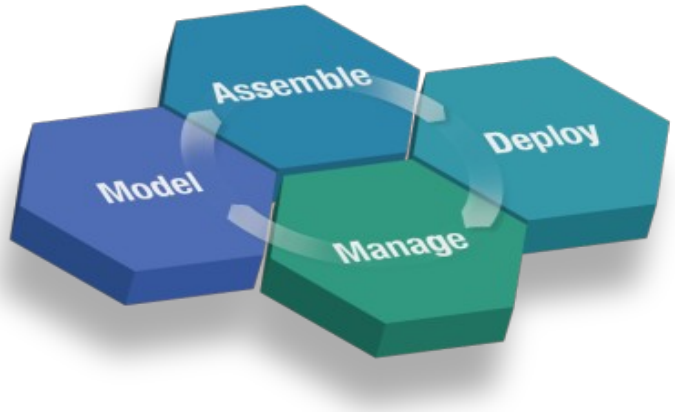
WebSphere Software

SOA Education



Lutz Armbruster
WebSphere Education

lutz_armbruster@de.ibm.com

SOA on your terms and our expertise

ON DEMAND BUSINESS™

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Contents

- Getting started
  (SOA lifecycle, basic education, certification)
- Focus areas of SOA lifecycle
- Business Integration Roles
- Education roadmaps
- Useful links and materials

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Why SOA education ?

- SOA preparation
  - Implement new business models
  - Establish governance
  - Establish / change service infrastructure
  - Service composition, service decomposition
  - Top-down, bottom-up, meet-in-the-middle approach
- SOA Implementation
  - Complex software
  - SOA enabled vs proof of concept
- 30% of all SOA implementation project turn into „critical“

Good education finally helps to sell the product(s)

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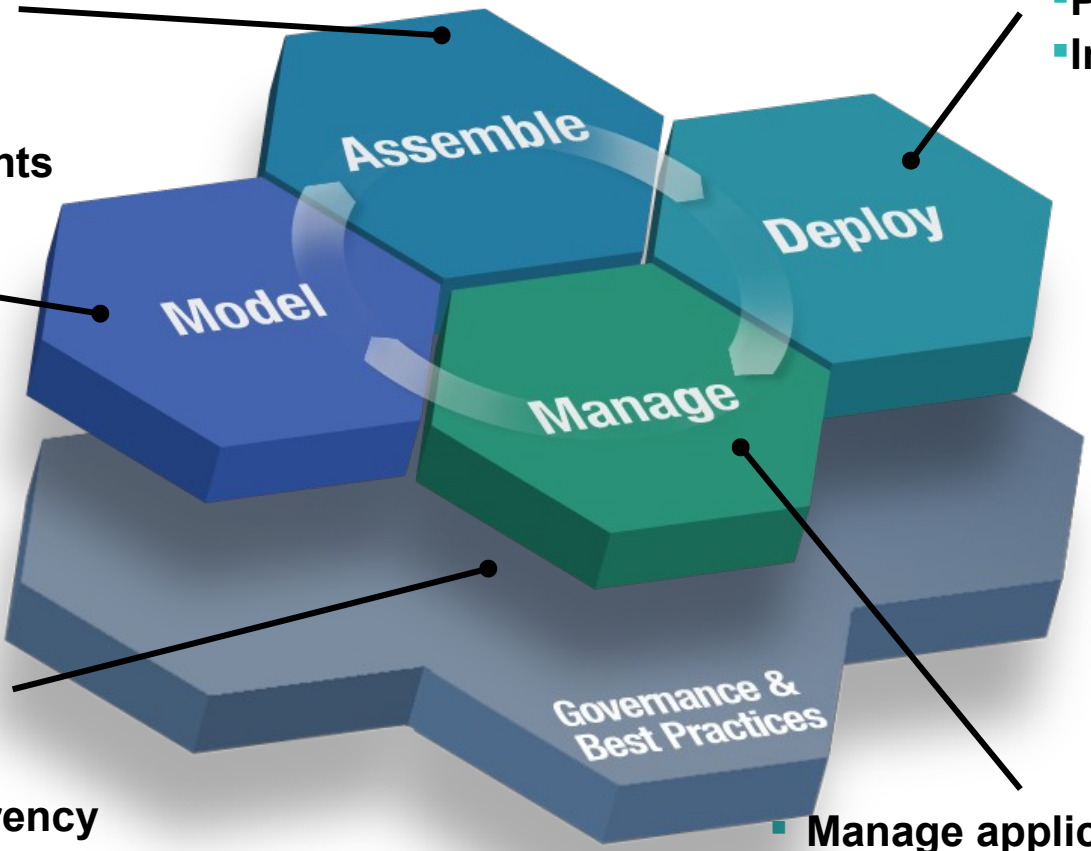
Overview of the Model, Assemble, Deploy and Manage lifecycle

- Discover
- Construct & Test
- Compose

- Integrate
  - People
  - Process
  - Information



- Gather requirements
- Model & Simulate
- Design

- Financial transparency
- Business/IT alignment
- Process control

- Manage applications & services
- Manage identity & compliance
- Monitor business metrics

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IBM SOA governance lifecycle

Establish the governance need
- Document and validate business strategy for SOA and IT
- Assess current IT and SOA capabilities
- Define/Refine SOA vision and strategy
- Review current Governance capabilities and arrangements
- Layout governance plan

Define the governance approach
- Define/modify governance processes
- Design policies and enforcement mechanisms
- Identify success factors, metrics
- Identify owners and funding model
- Charter/refine SOA Center of Excellence
- Design governance IT infrastructure

Monitor and Manage the governance processes
- Monitor compliance with policies
- Monitor compliance with governance arrangements
- Monitor IT effectiveness metrics

Deploy the governance model incrementally
- Deploy governance mechanisms
- Deploy governance IT infrastructure
- Educate and deploy on expected behaviors and practices
- Deploy policies

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Getting started with SOA

Web-based offerings. For more details refer to: http://www.ibm.com/software/sw-training

Public

SW717 Introduction to Value and Governance Model of SOA

→

SW718 Design SOA Solutions and Apply Project, Technical and Operational Governance

→

SW719 Technologies and Standards for SOA Project Implementation

Business Partners Only

SW706 The Value of Service-Oriented Architecture

→

SW707 Assessment Assets for Service-Oriented Architecture

→

SW708 Service-Oriented Architecture Design Patterns

→

SW709 Implementation Technologies for Service-Oriented Designs

Brand new 4.5 days hands-on workshop

SW351 Getting Started With SOA Workshop

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SOA Certification

Test **665**, Architectural Design of SOA Solutions

Availability planned for June 2006

Certifies as **SOA solution designer**

More tests under consideration, e.g. **SOA Architect**

Visit www.ibm.com/certify for more information

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Five focus areas within the SOA lifecycle

- **Business Driven Development**
  Enabling clients to govern the business process of software development.
- **Maximizing People Productivity within an SOA**
  Delivered through a natural, intuitive, adaptive user experience.
- **Business Process Management**
  Understand, improve, and manage your business processes to enable rapid operational change.
- **Information as a Service**
  Achieve new levels of information flexibility, consistency and availability.
- **IT Service Management**
  Manage your IT infrastructure, to more effectively and efficiently deliver IT services.

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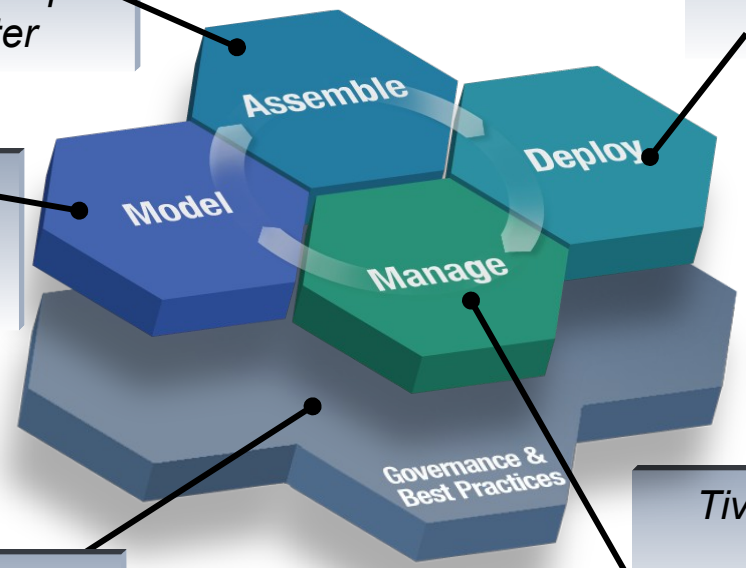
Business driven development

- Enables proper government of the business process of software development.

Harvest, create, test and assemble service assets

Rational Application Developer
WebSphere Integration Developer
Rational Functional Tester

WebSphere Process Server
Rational Team Unifying Platform
Tivoli Configuration Manager
WebSphere Portal Server



Integrate processes and deliver across all internal and external elements

Rational Software Architect
WebSphere Business Modeler
Rational RequisitePro

Define requirements, codify business process and enforce standards

Rational Method Composer
Rational Portfolio Manager

Tivoli Composite Application Manager
WebSphere Business Monitor

Monitor composite application performance and adjust accordingly

Exercise authority and responsibility through process measurement

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People productivity within an SOA

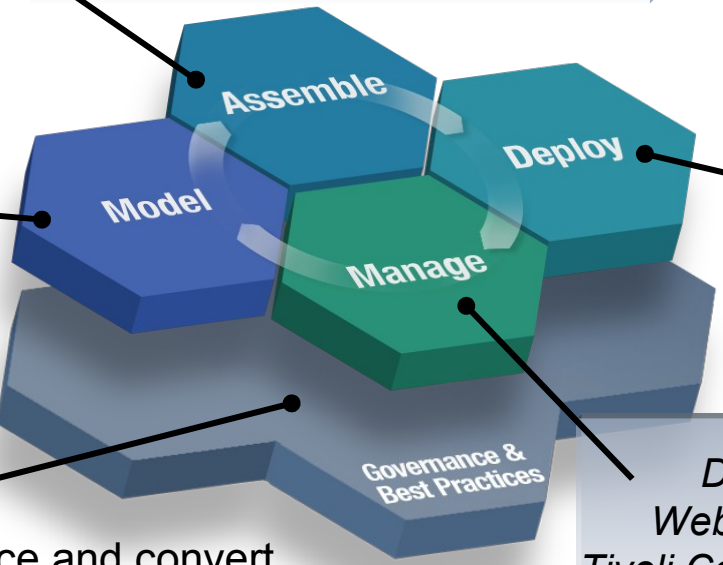
- Delivered through a natural, intuitive, adaptive user experience.

Create and assemble collaborative and composite applications

IBM Workplace Designer
IBM Workplace Forms
Lotus Domino Designer
Rational Application Developer

Delivering secure, modular, extensible role-based workplace environments

Model and simulate business processes and underlying IT assets



IBM Workplace Collaboration Services
WebSphere Portal
IBM Workplace Managed Client
Lotus Notes/Domino

WebSphere Business Modeler
Rational Software Architect

Support corporate governance and convert strategy into concrete objectives

Domino Domain Monitor
WebSphere Business Monitor
Tivoli Composite Application Manager
Tivoli Federated Identity Manager

IBM Workplace for Business Strategy Execution
IBM Workplace for Business Controls & Reporting

Achieve real-time visibility into process performance while ensuring availability and security meet service levels

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Business process management

Create and compose services around process models and business rules

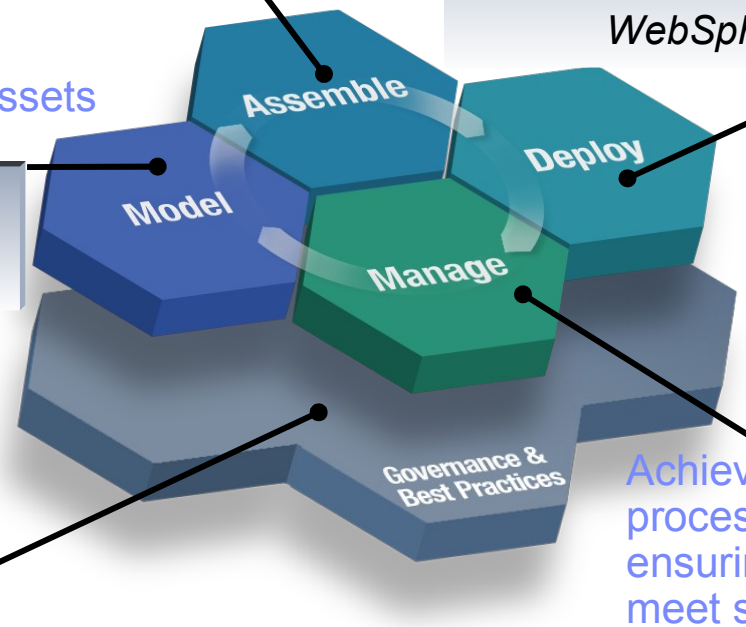
WebSphere Integration Developer
Rational Application Developer

Integrate processes and deliver across all internal and external elements

WebSphere Process Server
WebSphere Partner Gateway
WebSphere ESB
WebSphere Message Broker

Model and simulate business processes and underlying IT assets

WebSphere Business Modeler
Rational Software Architect



Achieve real-time visibility into process performance while ensuring availability & security meet service levels

Define and refine process management rules and priorities

WebSphere Business Monitor

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Information as a service

Compose information services across heterogeneous sources

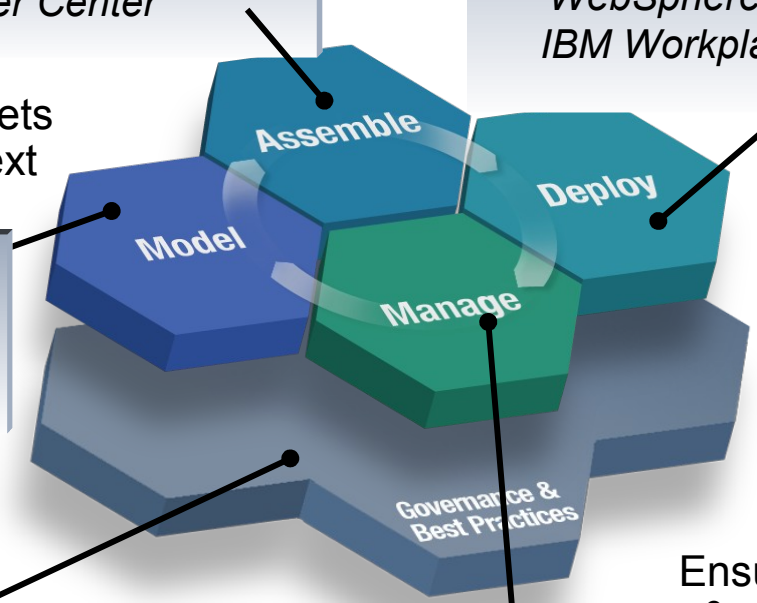
WebSphere Data Integration Platform
WebSphere Product Center
WebSphere Customer Center

Service information requests

DB2 UDB, Informix…
IBM Content Manager
WebSphere Data Integration Platform
IBM Workplace Collaboration Services

Understand information assets and links to business context

WebSphere Data Integration Platform
Rational Data Architect



Define and refine information management rules & priorities

Ensure performance, availability & security meet service levels

IBM Databases and Tools
Tivoli Composite Application Manager
Tivoli Federated Identity Manager

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IT service management

Implement and customize process models through assembly of service components

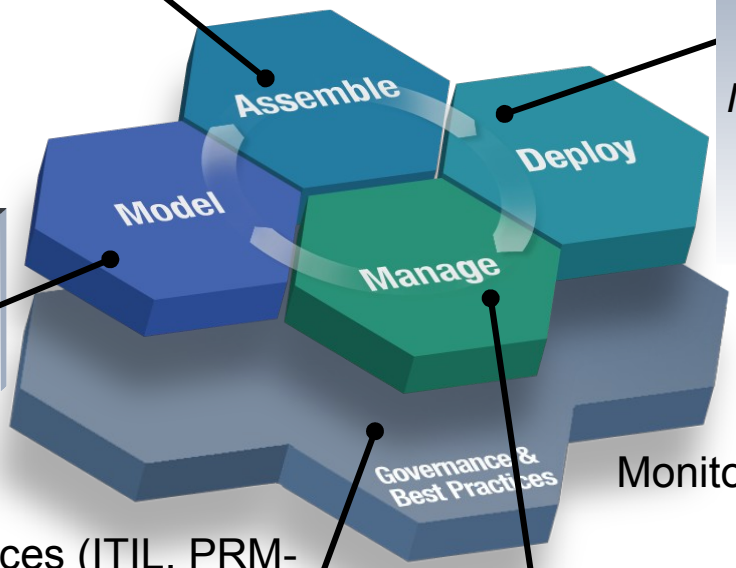
Rational Application Developer
WebSphere Integration Developer

Integrate people (IT roles), IT processes, and systems management resource data across SOA applications

WebSphere Information Integrator
WebSphere Process Server
IBM Workplace Collaboration Services
Tivoli Management Products
IT Lifecycle Management

Model and simulate ITSM processes for process improvement while capturing the requirements and planning aspects of ITSM

WebSphere Business Modeler
Rational Software Architect
Rational RequisitePro



Monitor ITSM processes and SOA applications

WebSphere Business Monitor
Tivoli Composite Application Manager
Tivoli Monitoring
Tivoli Federated Identity Manager

Automate ITSM best practices (ITIL, PRM-IT) and policy based management

Tivoli ITSM
Tivoli Storage Manager
Tivoli Access/Identity Manager
Tivoli Provisioning Manager

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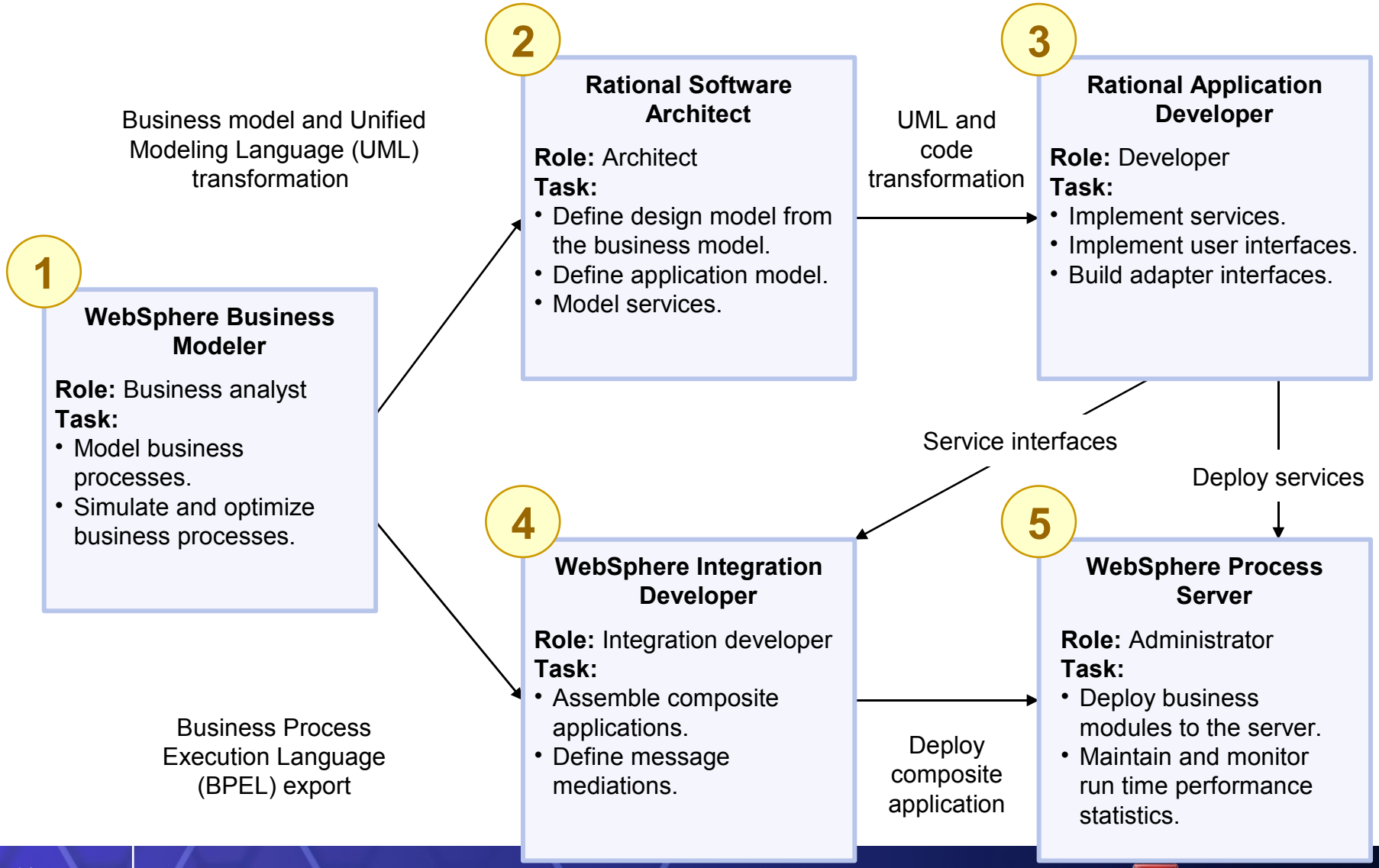
Roles in an SOA development system



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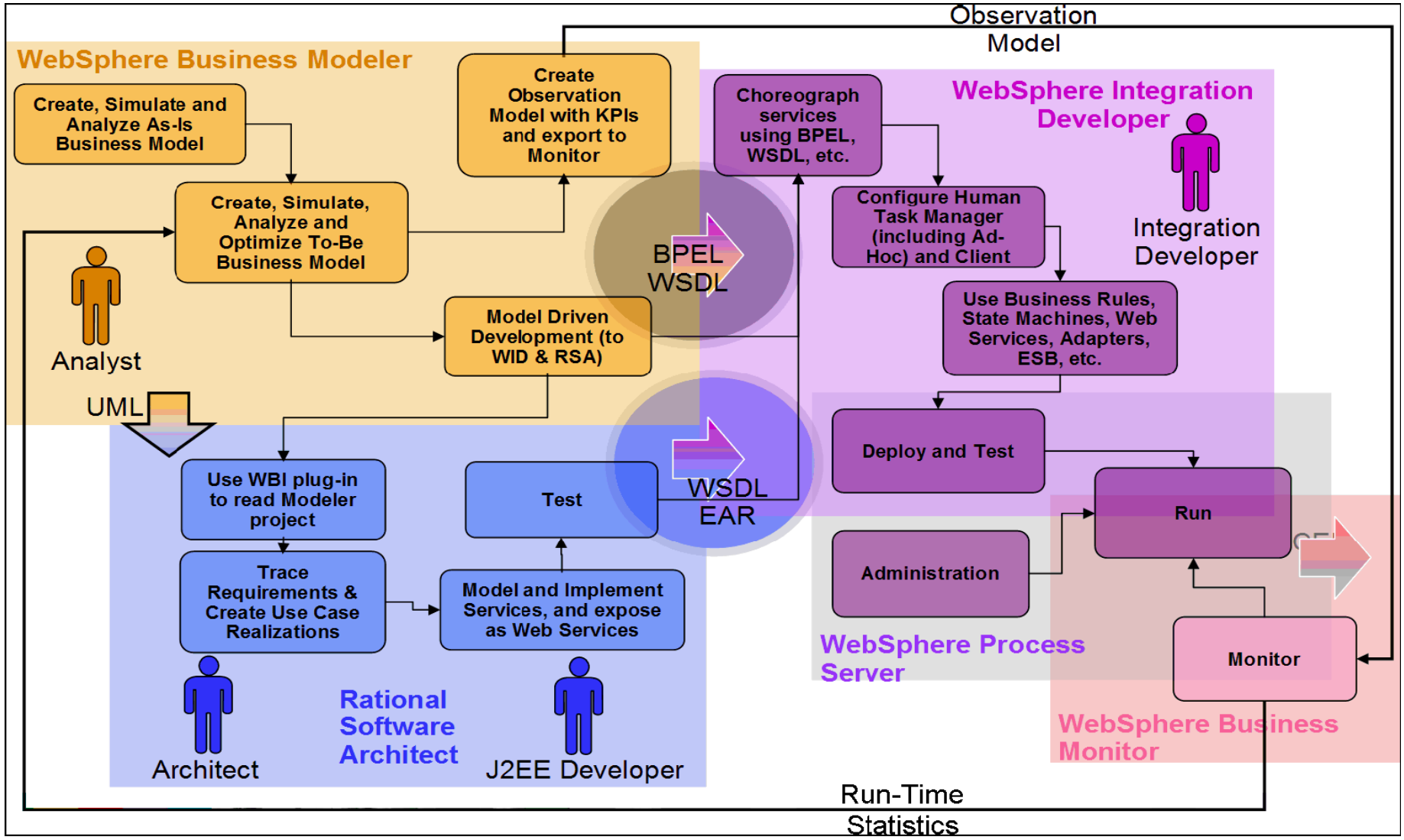
Understand the Business Integration Roles - Developers



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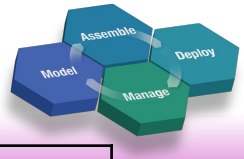
Understand the Business Integration Roles



Model

N Y
Green-light from business and IT decision makers

Roles Involved
- Business Analyst
- Line of Business Manager

WebSphere Business Modeler

Assemble

N Y
Solution meets design specifications

Roles Involved
- Integration Developer
- Application Developer

WebSphere Integration Developer

Deploy

Roles Involved
- Integration Developer
- Application Developer
- Solution Administrator
- Solution Deployer

Manage

Roles Involved
- Server Administrator
- Solution Administrator

Modify business rules to adapt quickly to market

Roles Involved
- Business Analyst
- Solution Administrator

WebSphere Business Monitor

WebSphere Process Server

WebSphere ESB

WebSphere Partner GW

WebSphere Adapters

WebSphere Application Server

WebSphere Message Broker

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Recommended Education Roadmaps

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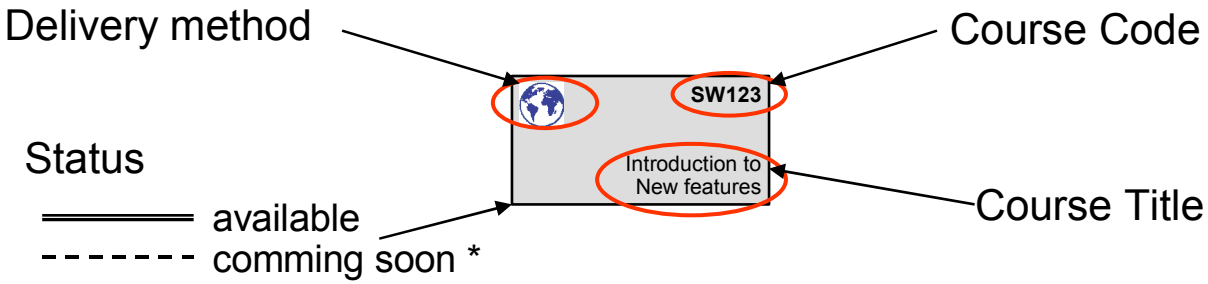
Flexible Education Options

- Classroom:
  Classroom courses are taught by IBM and its partners in classrooms around the world
- Instructor led online:
  A virtual classroom with hands-on labs and live instruction
- Web – Based:
  Web-based training courses are self-directed and self-paced. Each course is divided into modules so you can select and customize your course to your own educational requirements.



*: At availability the titles of these courses may slightly differ from what is printed on the charts

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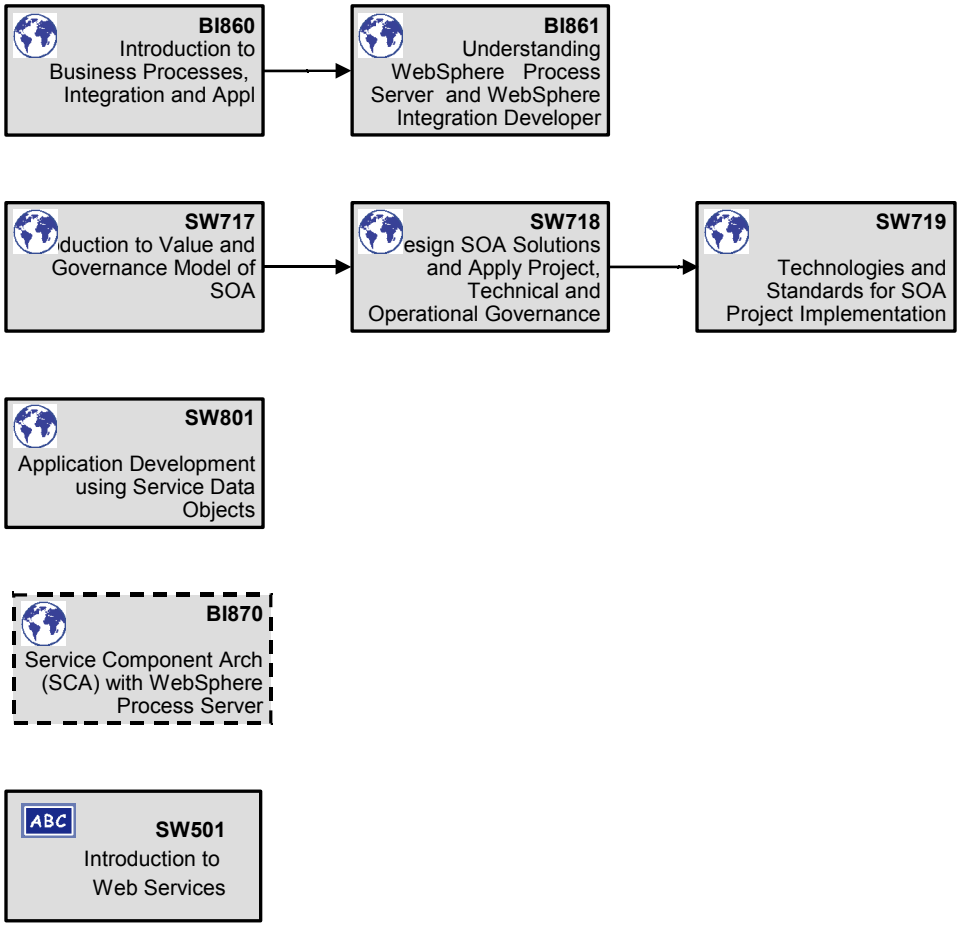
Before You Start . . . Understanding concepts:

WebSphere Process Server 6.0 is based on service-oriented architecture (SOA) using J2EE standards for implementation and Web Services for access and integration.
To reduce the complexity of J2EE, WPS uses Service Data Object (SDO) as a universal model for business data.
Service Component Architecture (SCA) defines the universal model for business services that provide or operate on business data.

To get a better understanding of the functions and features of WPS it is **highly recommended that you become familiar with these concepts**.
Here is a list of (mainly web based) courses that address these topics.



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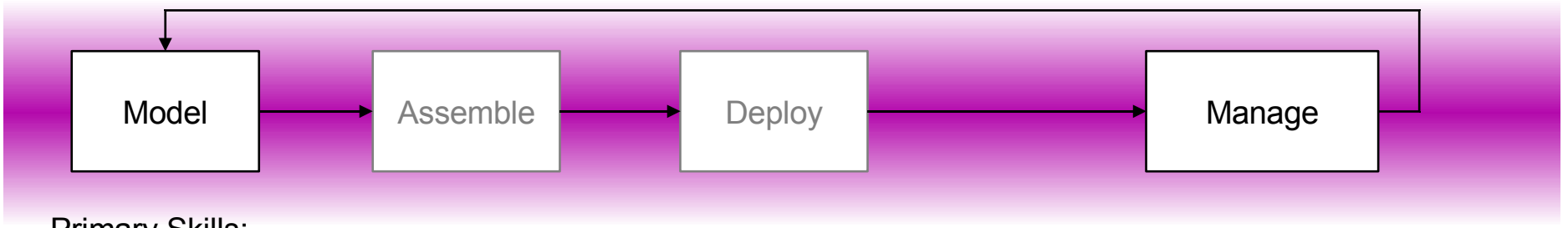
Business Analyst



Primary Skills:

BI818 Introduction to WebSphere Business Modeler + **BI819** dvanced Functions of IBM WebSphere Business Modeler v6 (self paced

or

BI184 IBM WebSphere Business Modeler for BPM (v6

BI187 WebSphere Business Monitor – OME Using Monitor v6.0

or

BI817 WebSphere Business Monitor – OME Using Monitor v6 (BI187 self-paced)

Secondary Skills:

BI111 Integrating using WebSphere Integration Developer and Process Server

or

BI863 Integrating using WebSphere Integration Developer and Process Server

A **Business Analyst**
- Models business processes
- Encodes business policies as business rules

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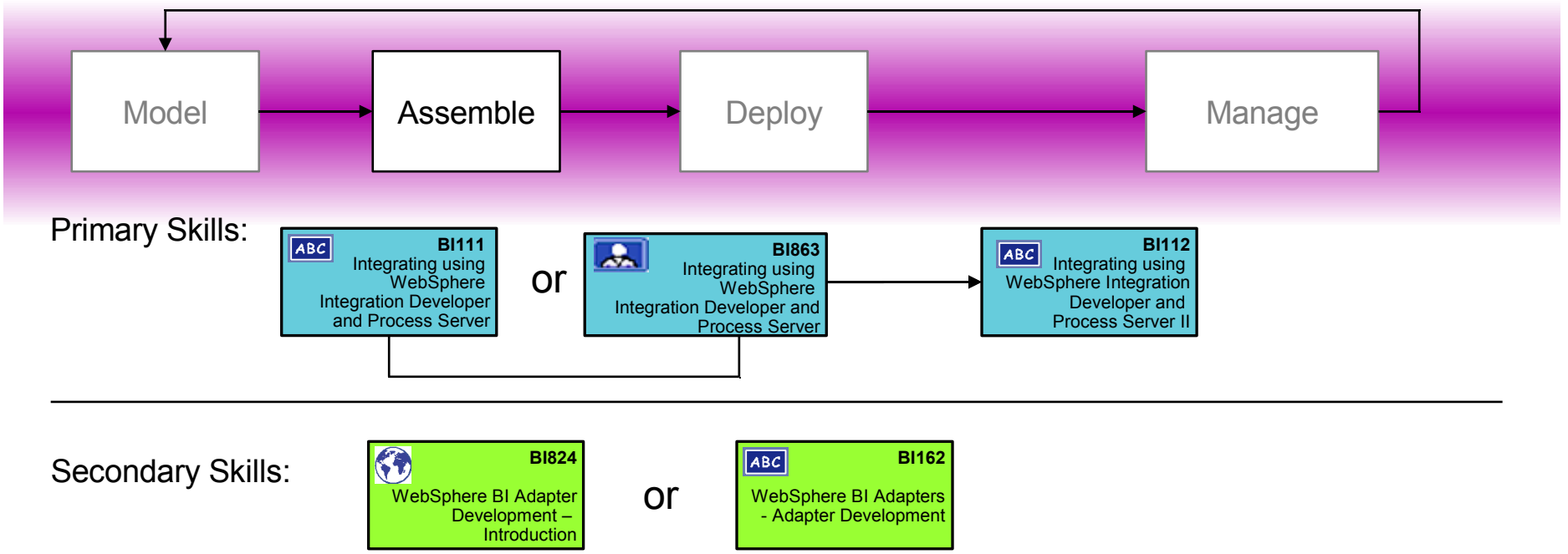
Integration Developer (WID + WPS)



An **Integration Developer**
- Creates interfaces and interface maps
- Creates business objects, data maps and models data relationships
- Creates business rules
- Models and creates automated business processes
- Create points for human interaction
- Models and create service-oriented view of a solution
- Builds solutions either top-down, bottom-up or meet-in-the-middle

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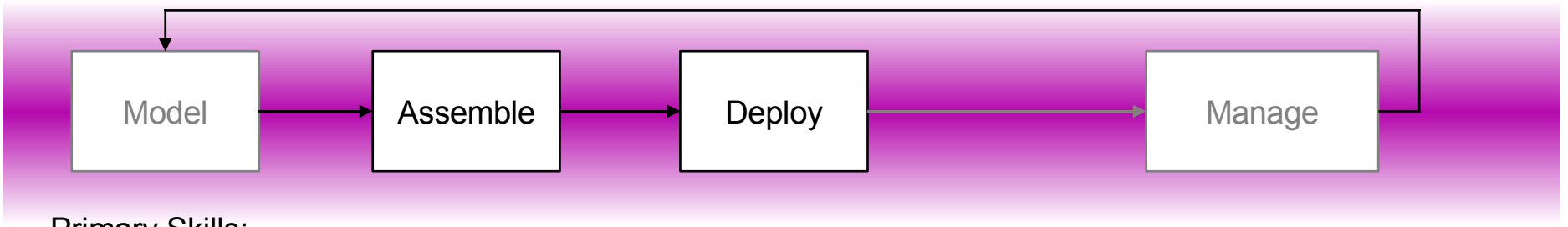
Integration Developer (WID + WESB)



Primary Skills:

BI131
WESB – Implementing and ESB

or

SA-M601
Getting Started with WebSphere ESB

or

SW861
WESB Introduction and Overview

SW343
WESB Mediation Development

Secondary Skills:

BI824
WebSphere BI Adapter Development – Introduction

or

BI162
WebSphere BI Adapters - Adapter Development

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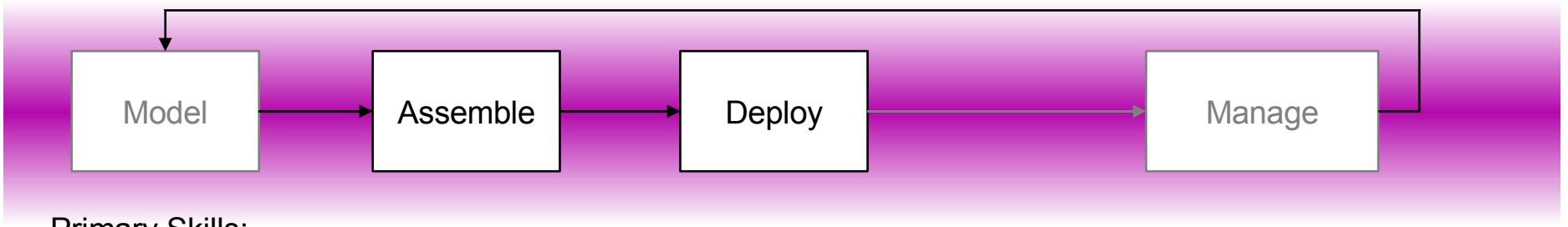
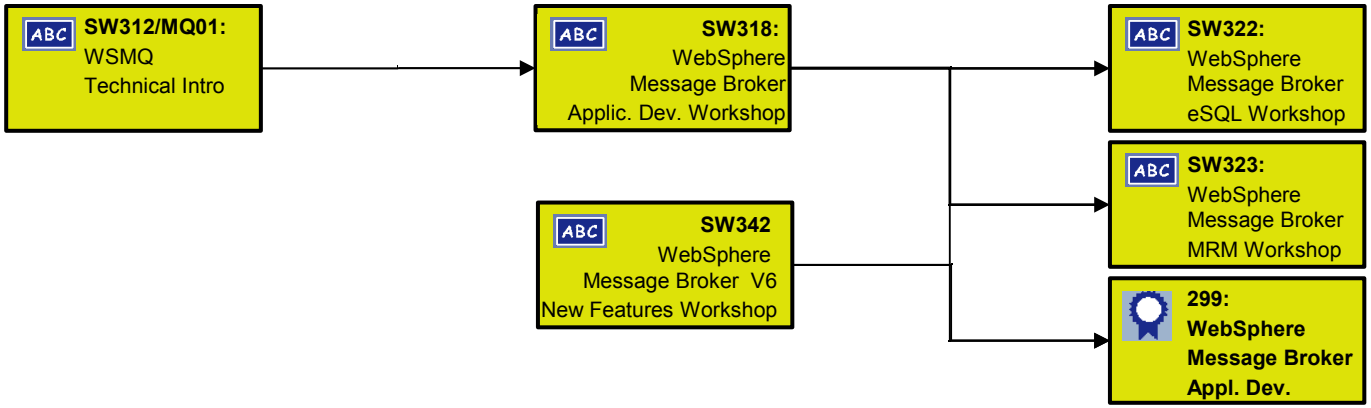
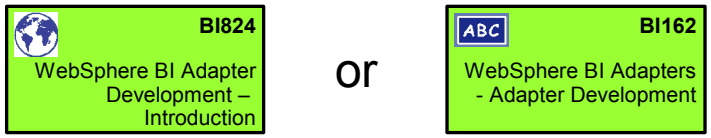
Integration Developer (WebSphere Message Broker)



Primary Skills:



Secondary Skills:



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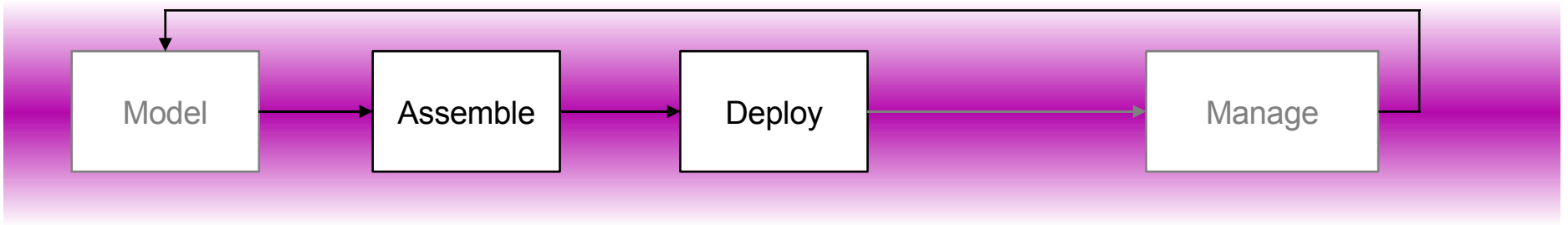
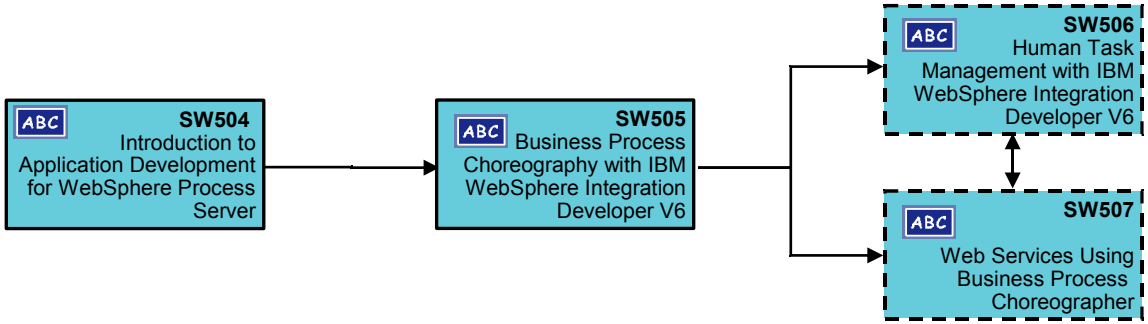
Application Developer



Primary Skills:



Secondary Skills:

An **Application Developer**
- Implements specific segments of business logic.
- Writes underlying application logic
- Exposes application logic as a service

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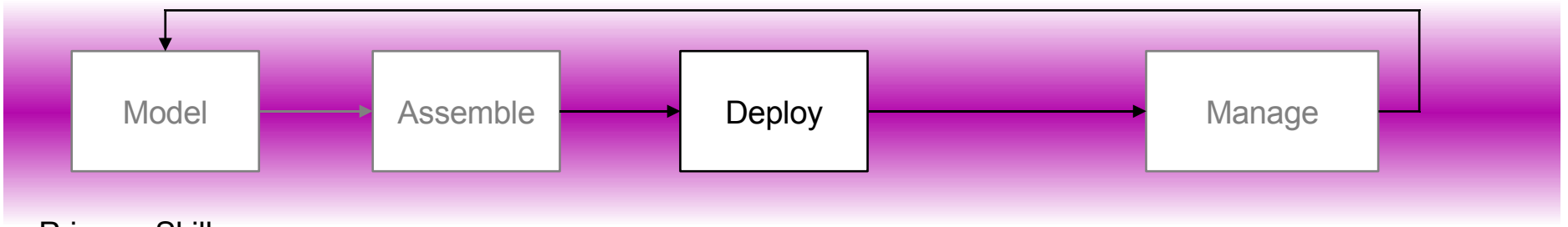
Solution Deployer



Primary Skills:

BI111 Integrating using WebSphere Integration Developer and Process Server

or

BI863 Integrating using WebSphere Integration Developer and Process Server

SW246 WebSphere Application Server Administration → **SW428** Installation & Admin. of WebSphere Process Server

SW341 From J2EE Applications To Business Processes WebSphere Admin.

This course is a combined offering of SW246 and SW428

Secondary Skills:

BI830 WebSphere Partner Gateway Introduction

A **Solution Deployer**
- Is responsible for deployment of the application
- Packages artifacts for deployment
- Deploys solutions onto server
- Configures solution for various environments

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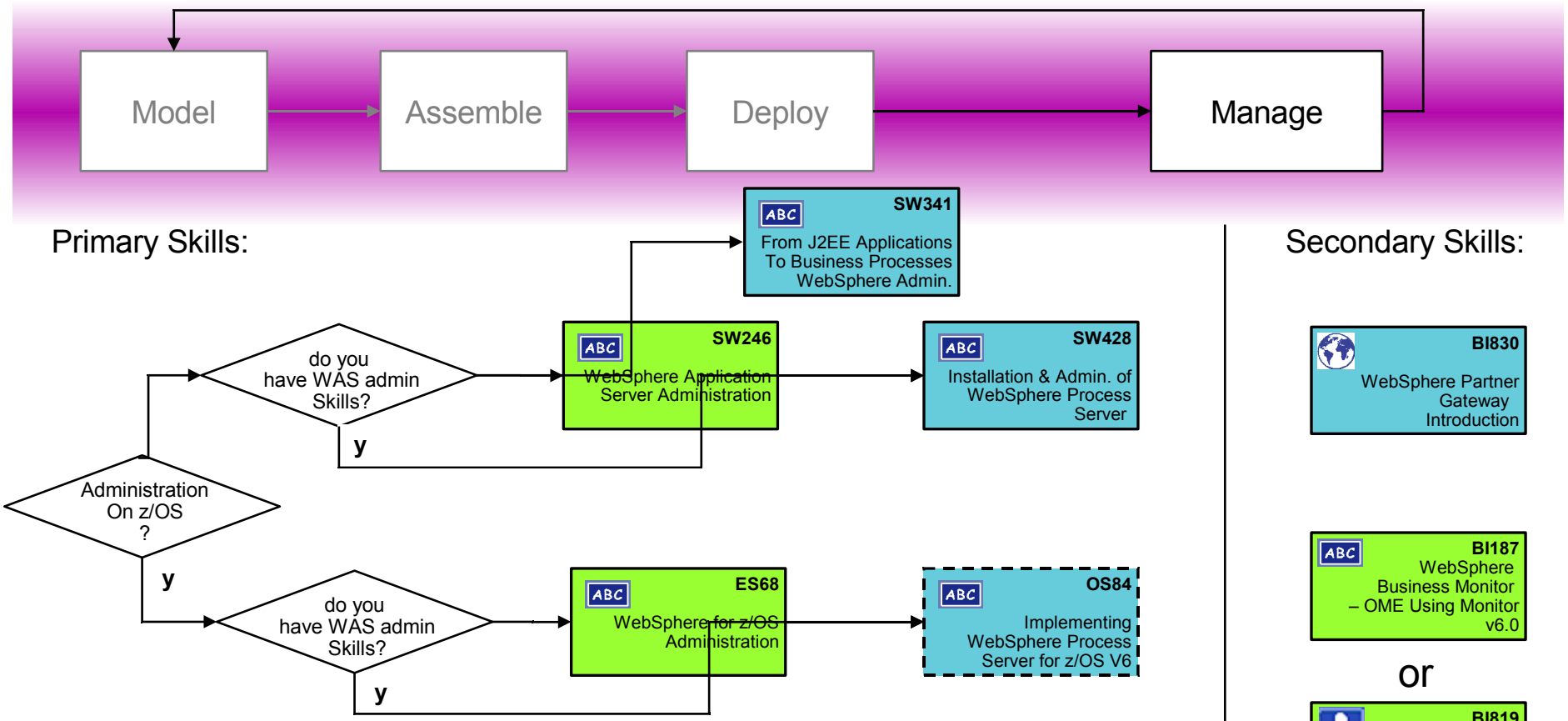
Solution Administrator (WPS)



A **Solution Administrator**

- Is responsible for the administration of the deployed application
- Monitors & analyzes the solution for server performance issues
- Diagnoses errors at the service implementation / binding level

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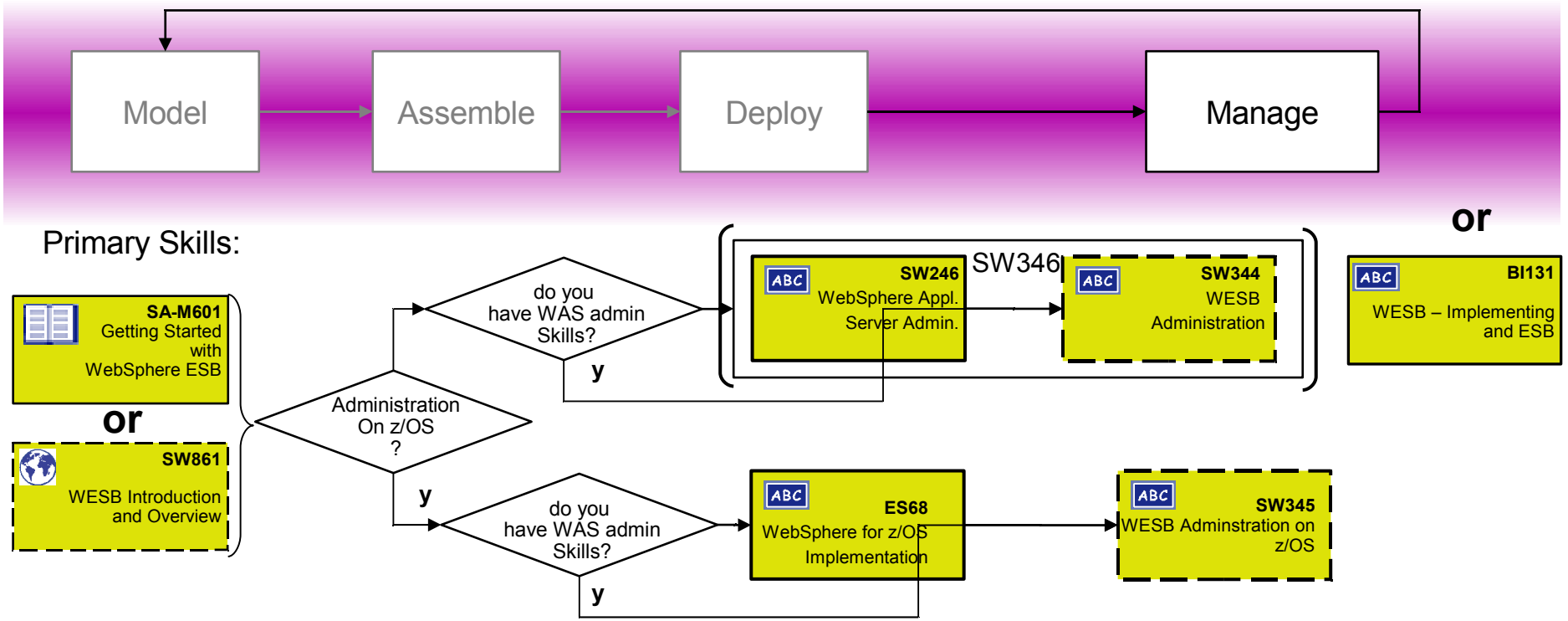
Solution Administrator (WESB)



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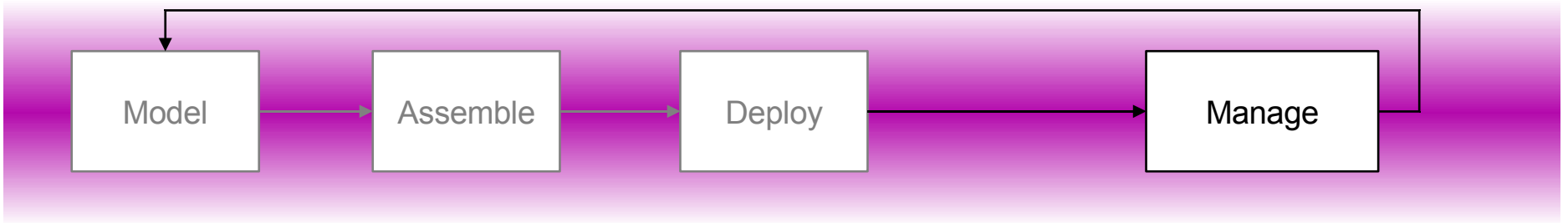
Solution Administrator (WMB)



Primary Skills:

SW312/MQ01: WSMQ Technical Intro

Administration On z/OS ?

y

SW317/MQ20: WSMQ System Admin I On zSeries

SW325/MQ69: WebSphere Message Broker Admin on zSeries

SW342 WebSphere Message Broker V6 New Features Workshop

SW311 WebSphere Message Broker Administration

298: WebSphere Message Broker Implementation

Additional learning Opportunities:

Additional learning Opportunities:

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Tailored Education Offerings

- Business Partner Technical Enablement programme
- Private / onsite education offerings, tailored to customers‘ needs
- Education as part of service offering
- . . .

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No block building without „building blocks“

- In theory, SOA does not depend on the implementation of the underlying services, as long as these are *exposed* according to SOA standards

BUT

- SOA is tailor-made for the use of Java and J2EE!

→ A good Java/J2EE background is essential!

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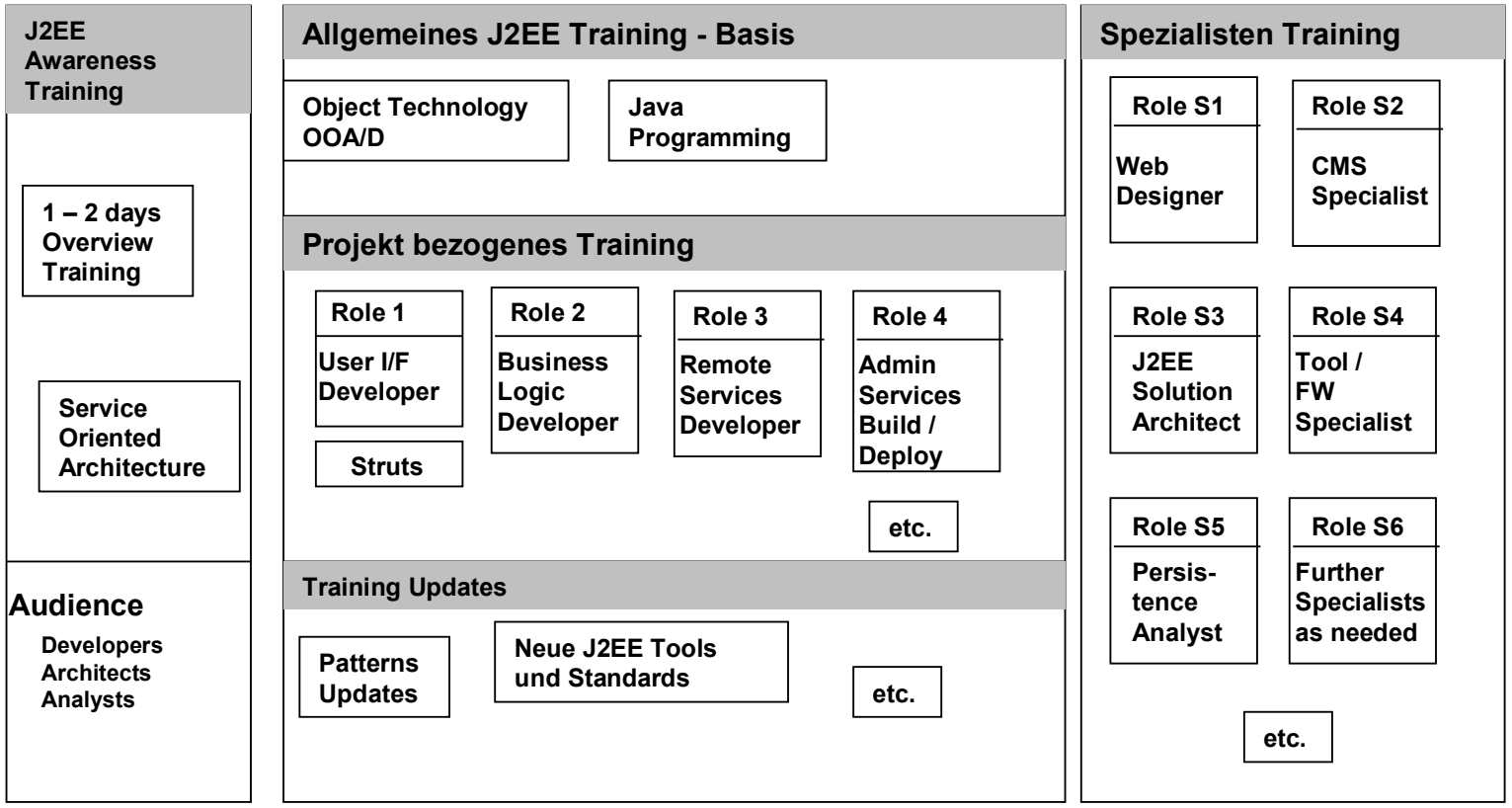
J2EE Development Blueprint

Curriculum Struktur/Zielgruppe: Entwickler, Analytiker, Architekten



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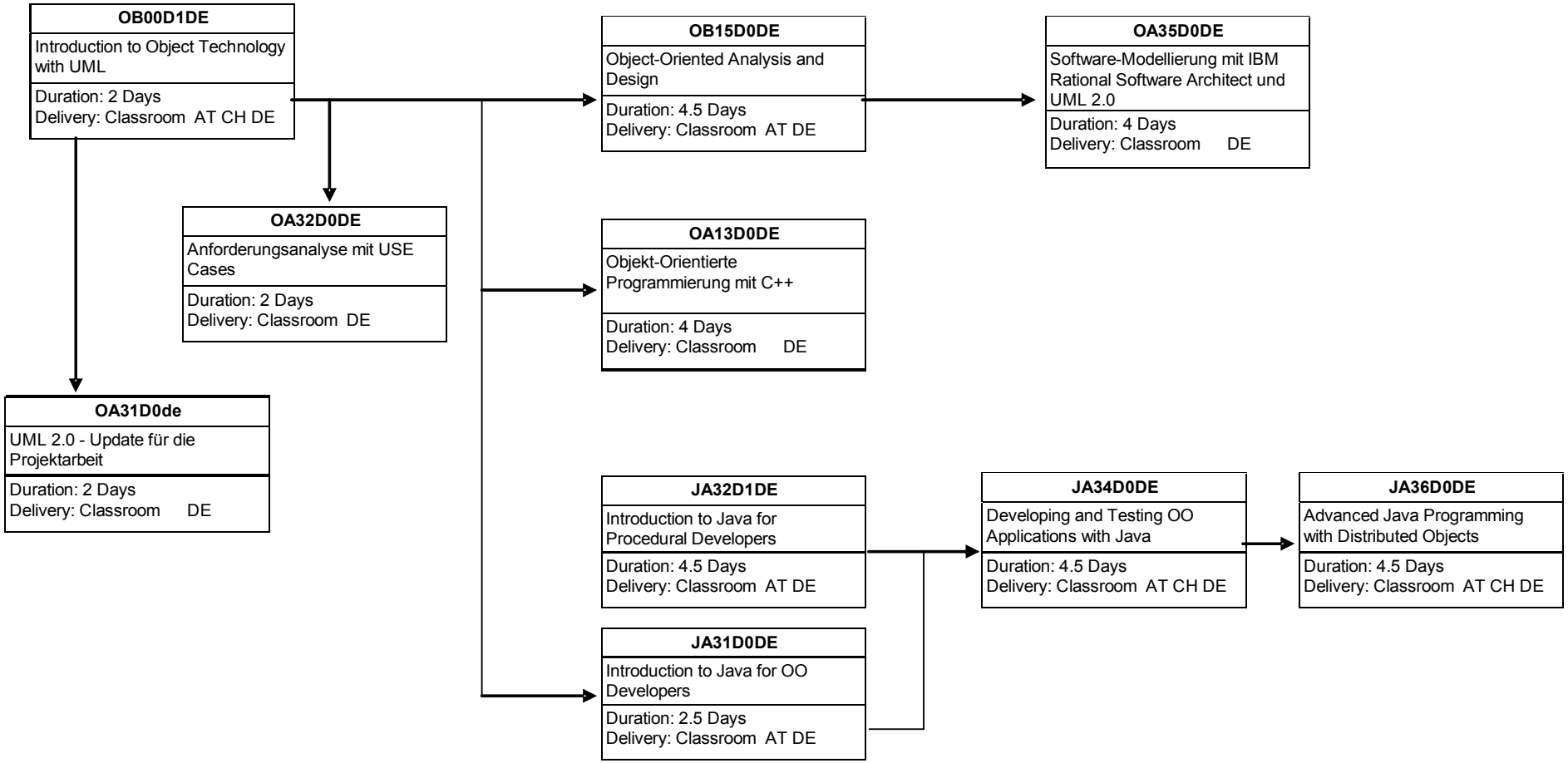
Object-Oriented Technology / Java / C++



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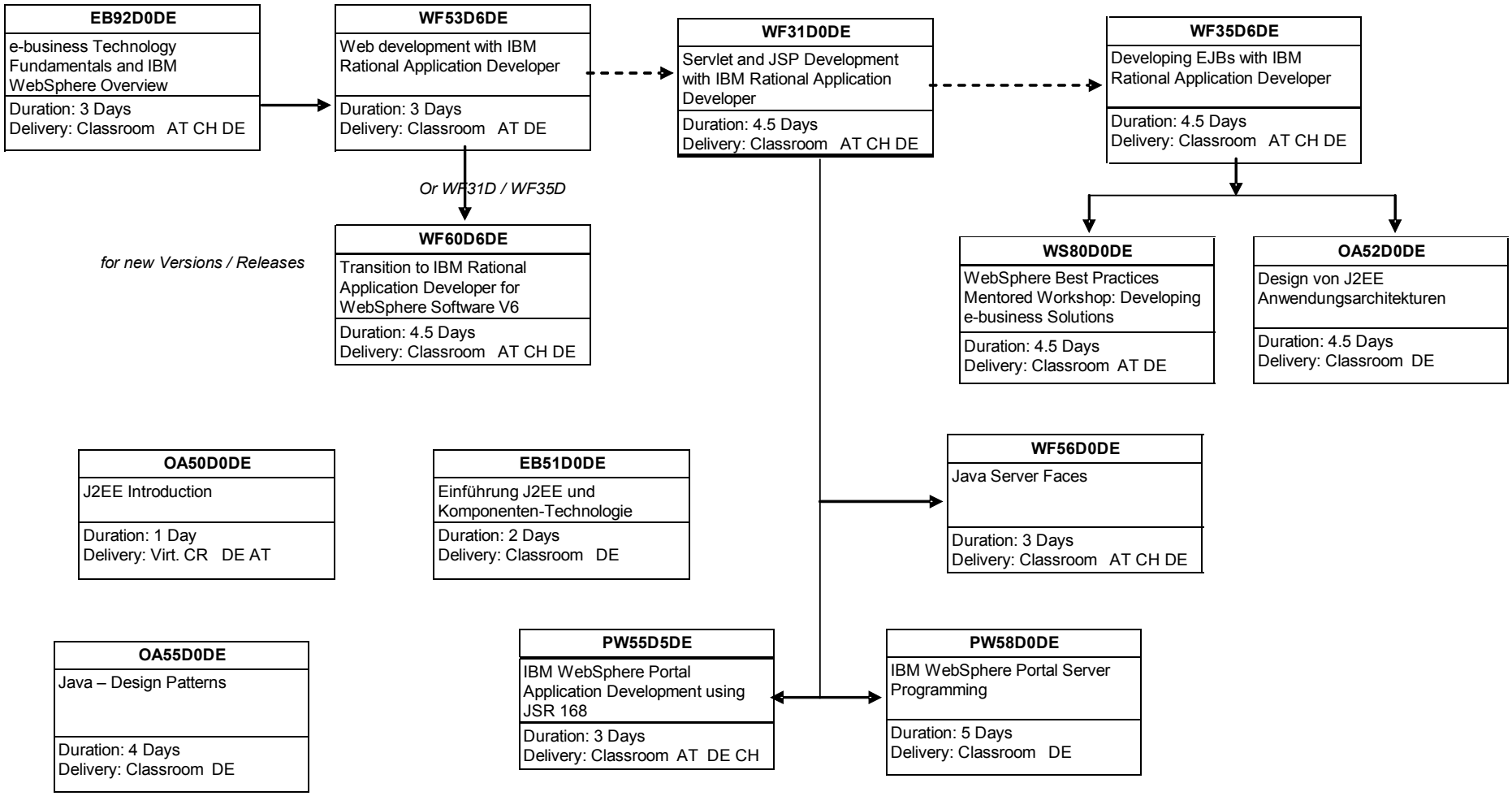
J2EE / WebSphere Development



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Additional Information -- Education

Education catalog

http://www.ibm.com/software/sw-training

Role based skills roadmaps: SOA foundation SOA Architect

More roadmaps can be found here

http://www.ibm.com/developerworks/websphere/education/enablement/roadma

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Additional Information – External SOA links

- **SOA Governance portal**
  http://www.ibm.com/soa/gov
- **Patterns for e-business redbooks site**
  http://www.ibm.com/developerWorks/patterns
- **Where to start with SOA at IBM, IBM SOA Portal**
  http://www.ibm.com/soa
- **developerWorks Web services & SOA zone**
  http://www.ibm.com/developerworks/webservices/
- **Jason Weisser EIS team internet page - SOA Summits**
  http://www.ibm.com/webservices/eis
- **WebSphere ESB FAQ**
  http://www.ibm.com/software/integration/wsesb/v6/faqs.html

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Contacts

- EMEA Brand Advocates
  - Tivoli, Rational, Lotus: Gayle Batty (UK) Pan-IOT
  - IM: Gerhard W. Müller (Germany) IOT NE
    Patrick Olivro (France) IOT SW
  - WebSphere: Lutz Armbruster (Germany) Pan-IOT

- EMEA Business Leads (cross brand)
  - Alexander Ziegler (Germany) IOT NorthEast
  - Roberto Morucci (Italy) IOT SouthWest

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Questions

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