

ORACLE®
FUSION MIDDLEWARE **11g**

Oracle SOA Suite 11g

Rapid service integration and process automation with a no-coding approach

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AGENDA

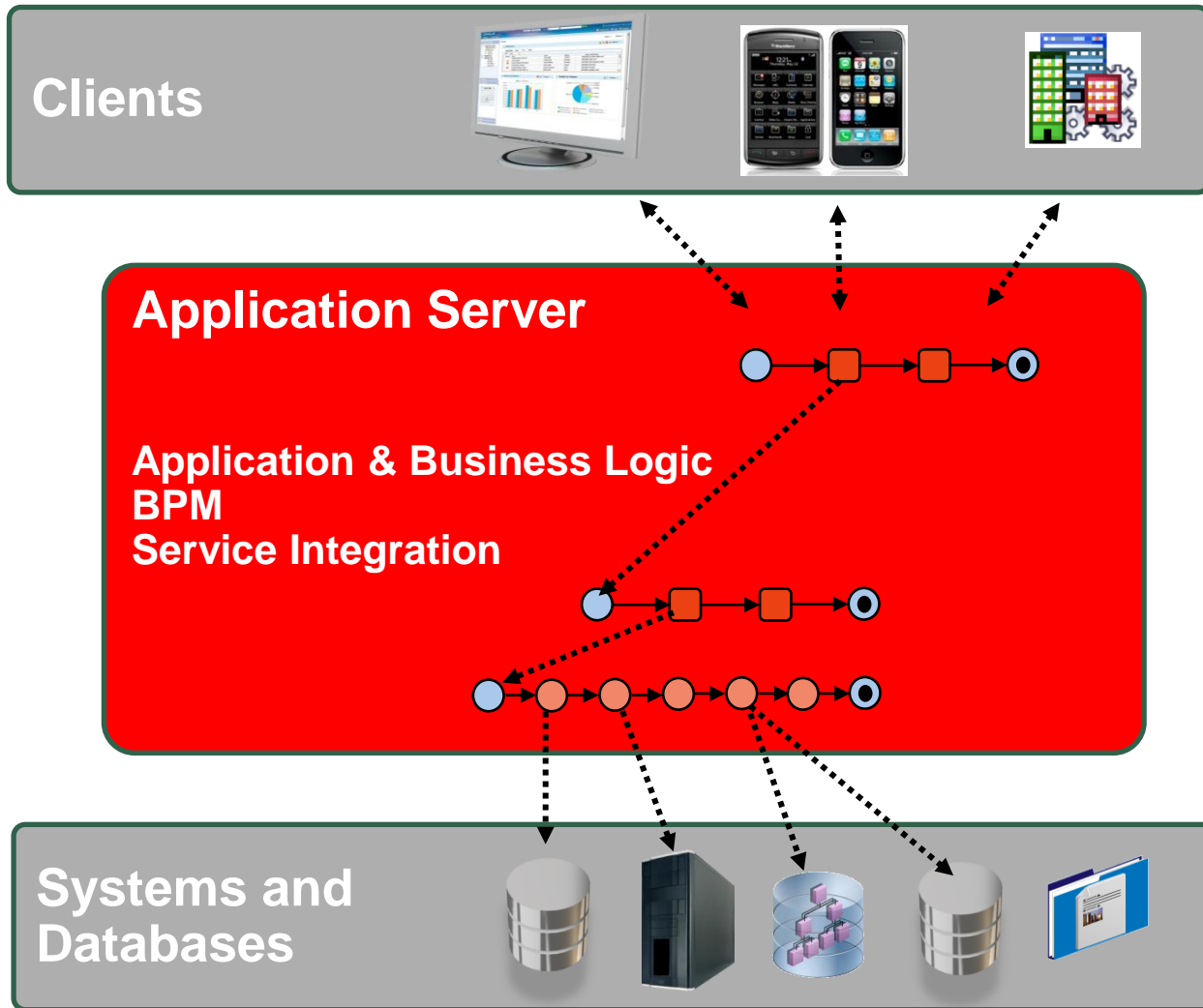
- Overview
- Live Demo
- Summary
- Q/A

Oracle's Portfolio

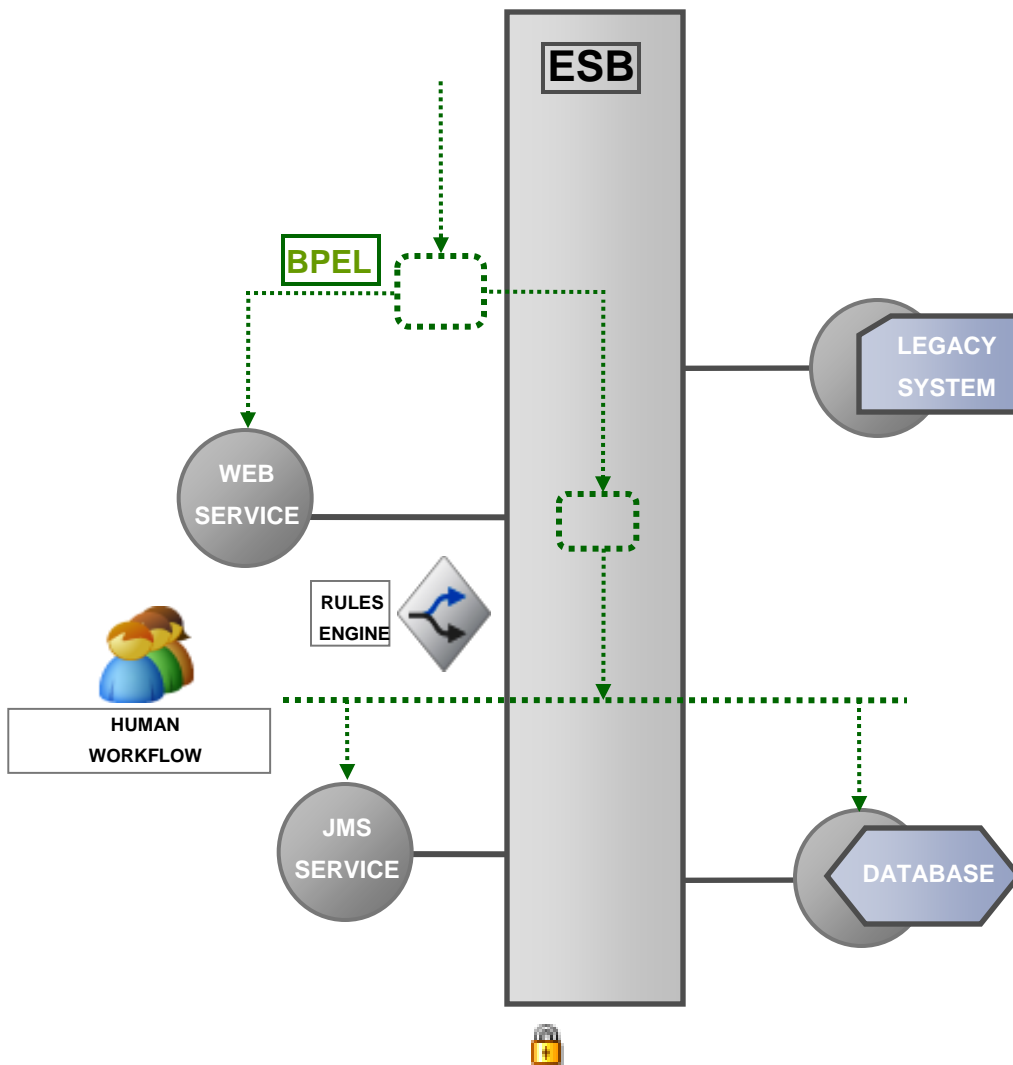
Focus on Middleware



3-Tier Model Conceptual Architecture



Typical Components of a SOA solution



1. Build/re-use Services
Standard-based or Legacy Services

2. Connect
WSDL, Adapters

3. Route & Transform
ESB

4. Externalize business rules
Rules engine

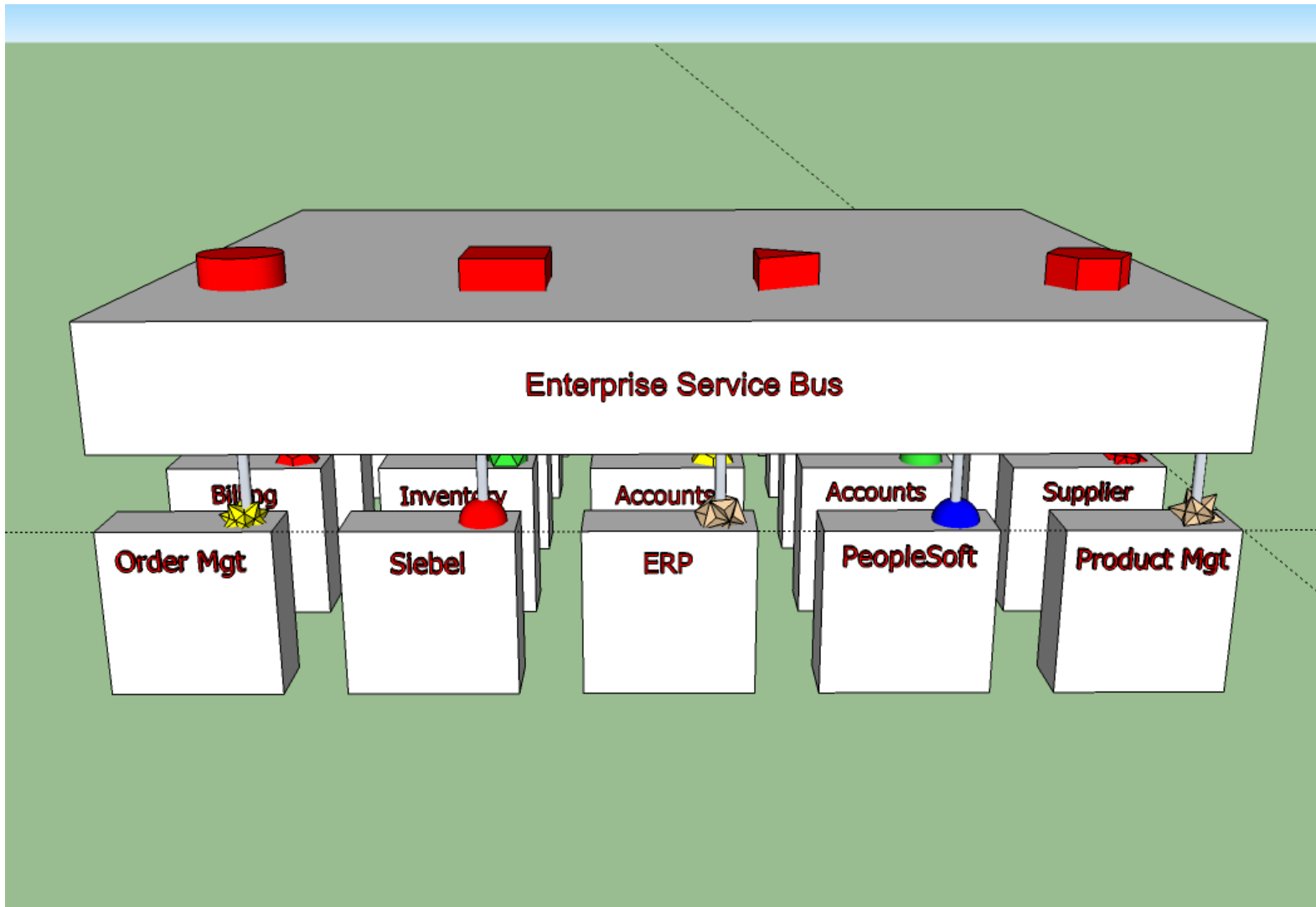
5. Orchestrate
BPEL

6. Involve human beings
Human Workflow

7. Secure
Global Security

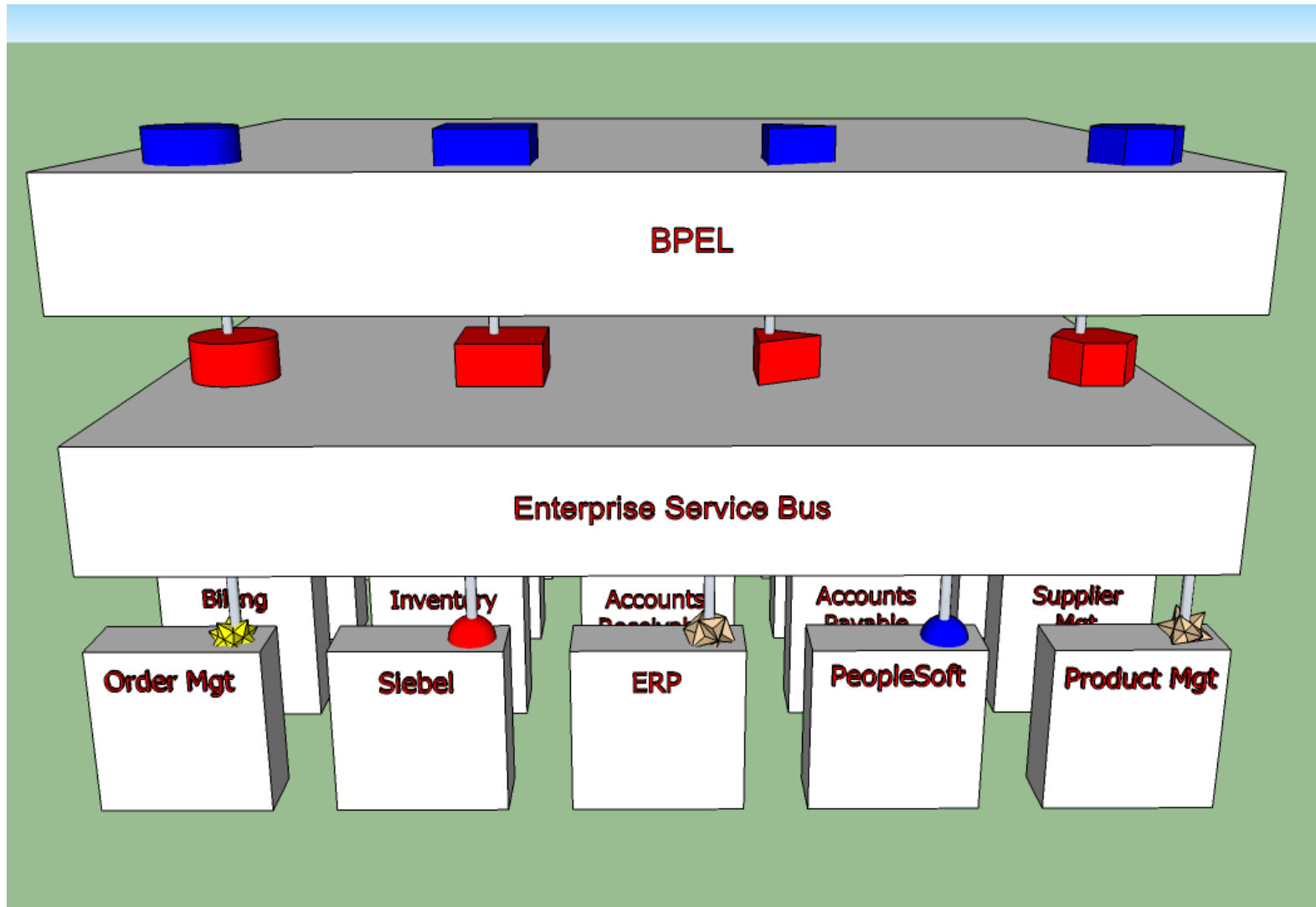
SOA Patterns

Aggregation and Abstraction



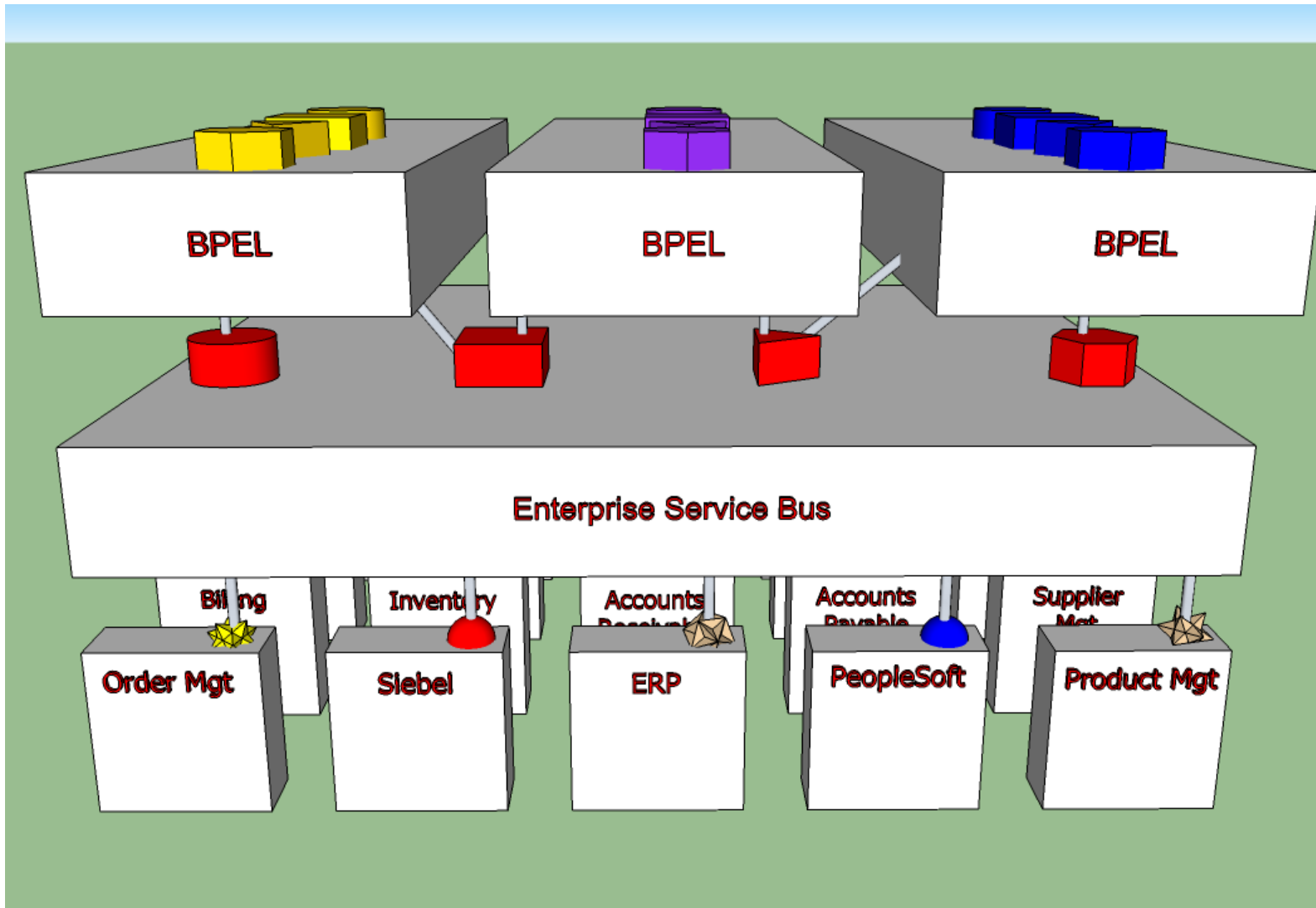
SOA Patterns

BPEL over ESB



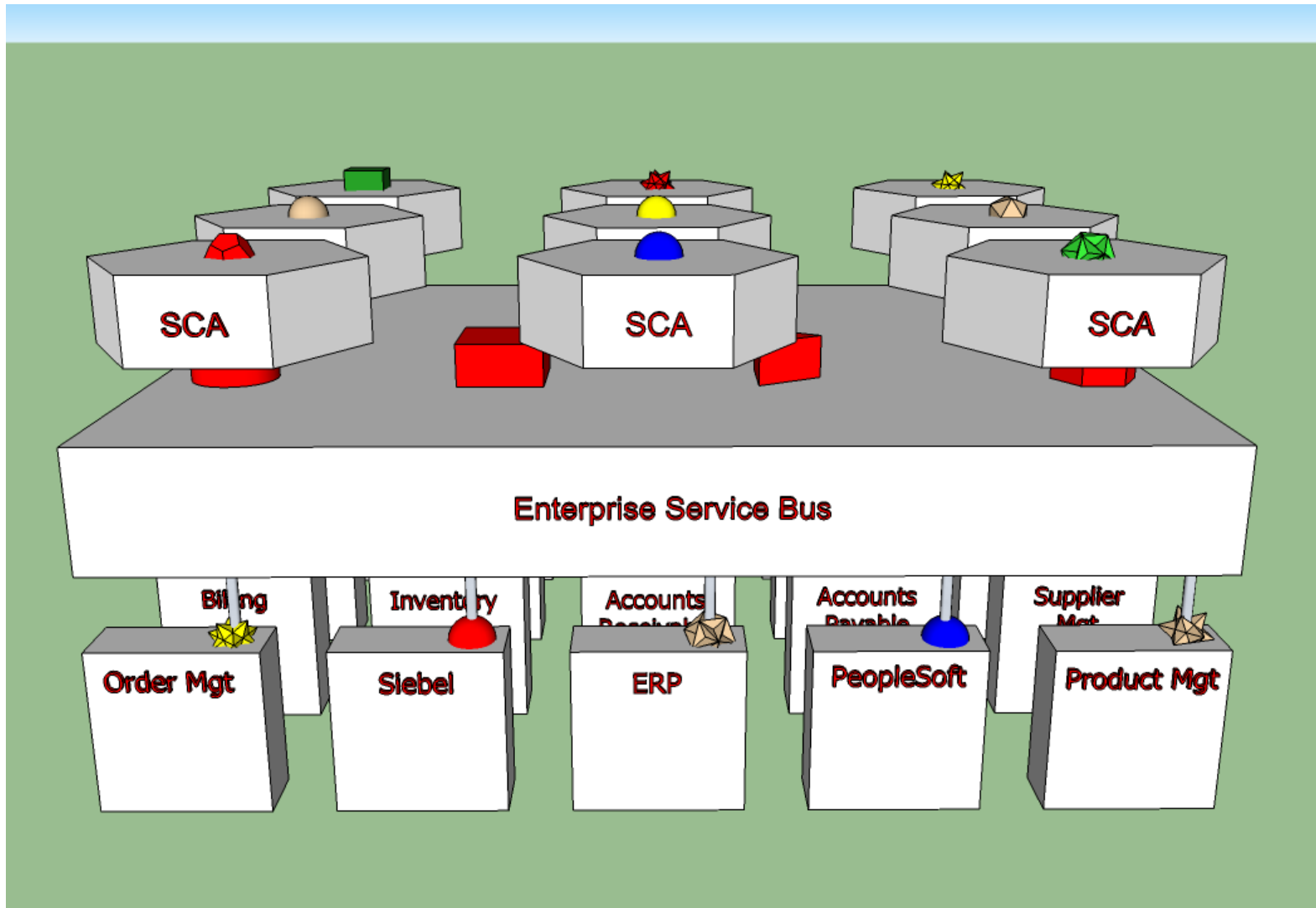
SOA Patterns

Real-World BPEL over ESB

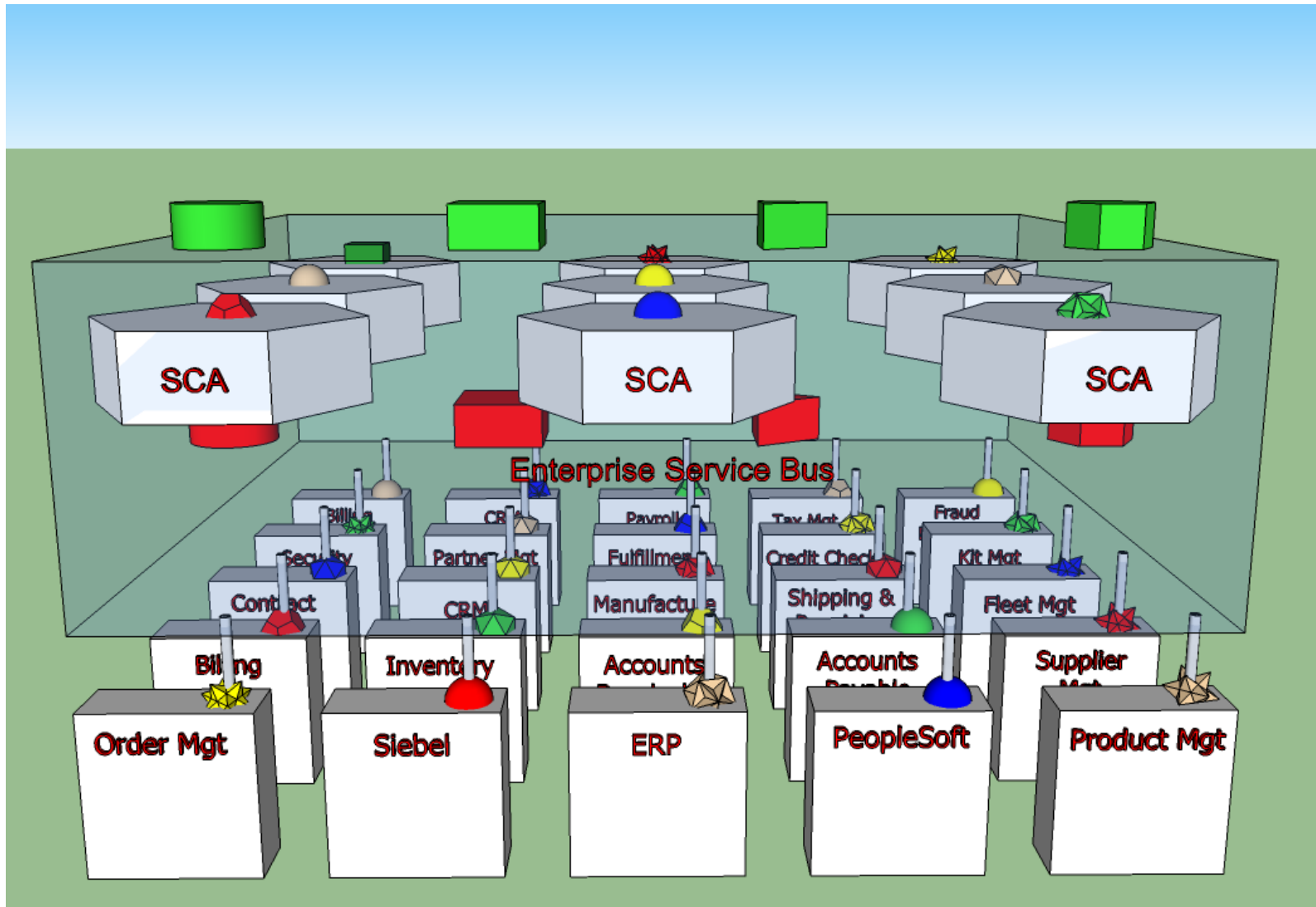


SOA Patterns

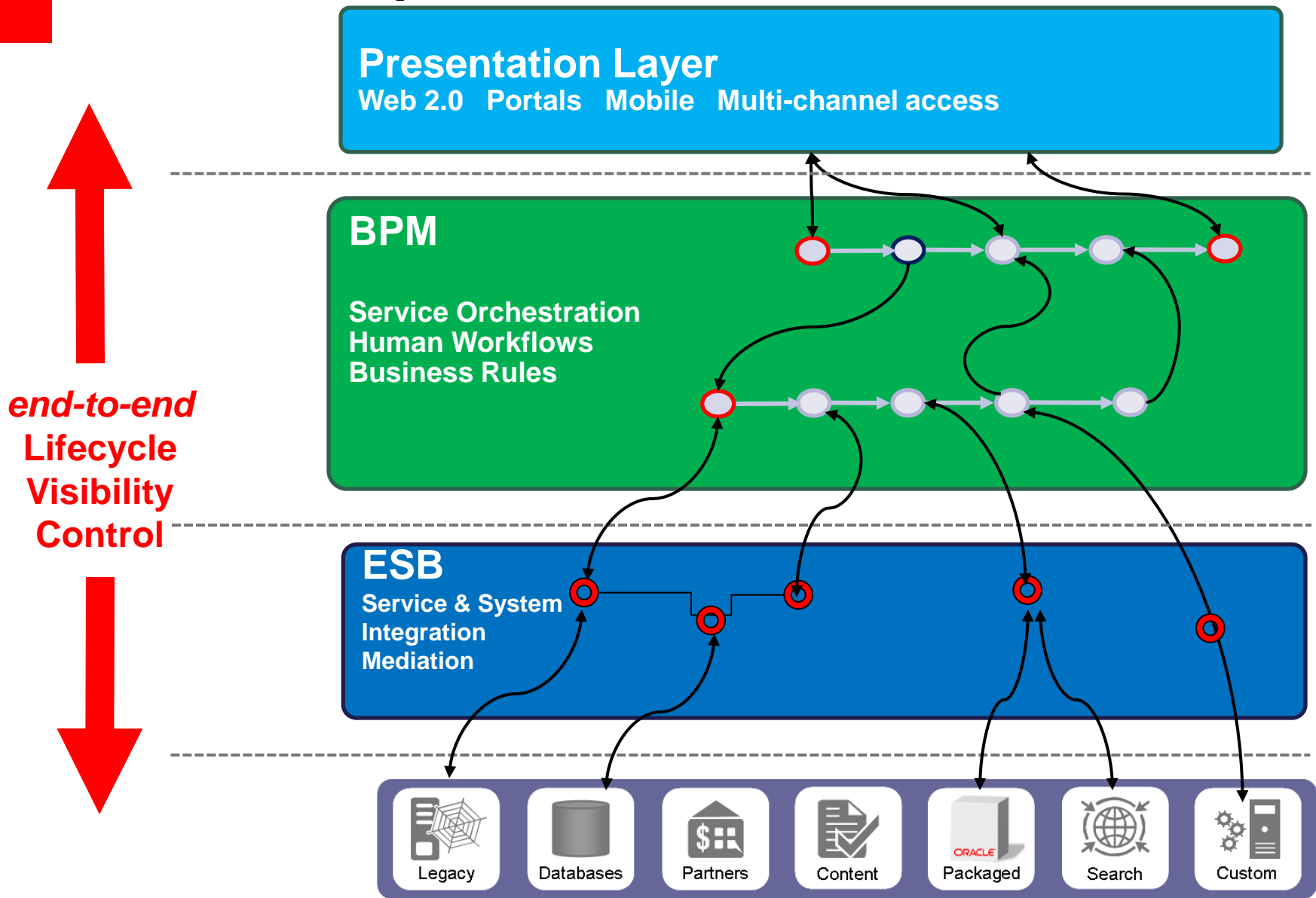
SCA – composite of BPEL, Rules, Human Tasks ...



SOA Patterns - SOA Oxygen



SOA Conceptual Architecture



Oracle SOA Suite Conceptual Architecture

Presentation Layer
Web 2.0 Portals Mobile Multi-channel access

SOA Suite OTTB web apps

BPM

Service Orchestration
Human Workflows
Business Rules

OSB

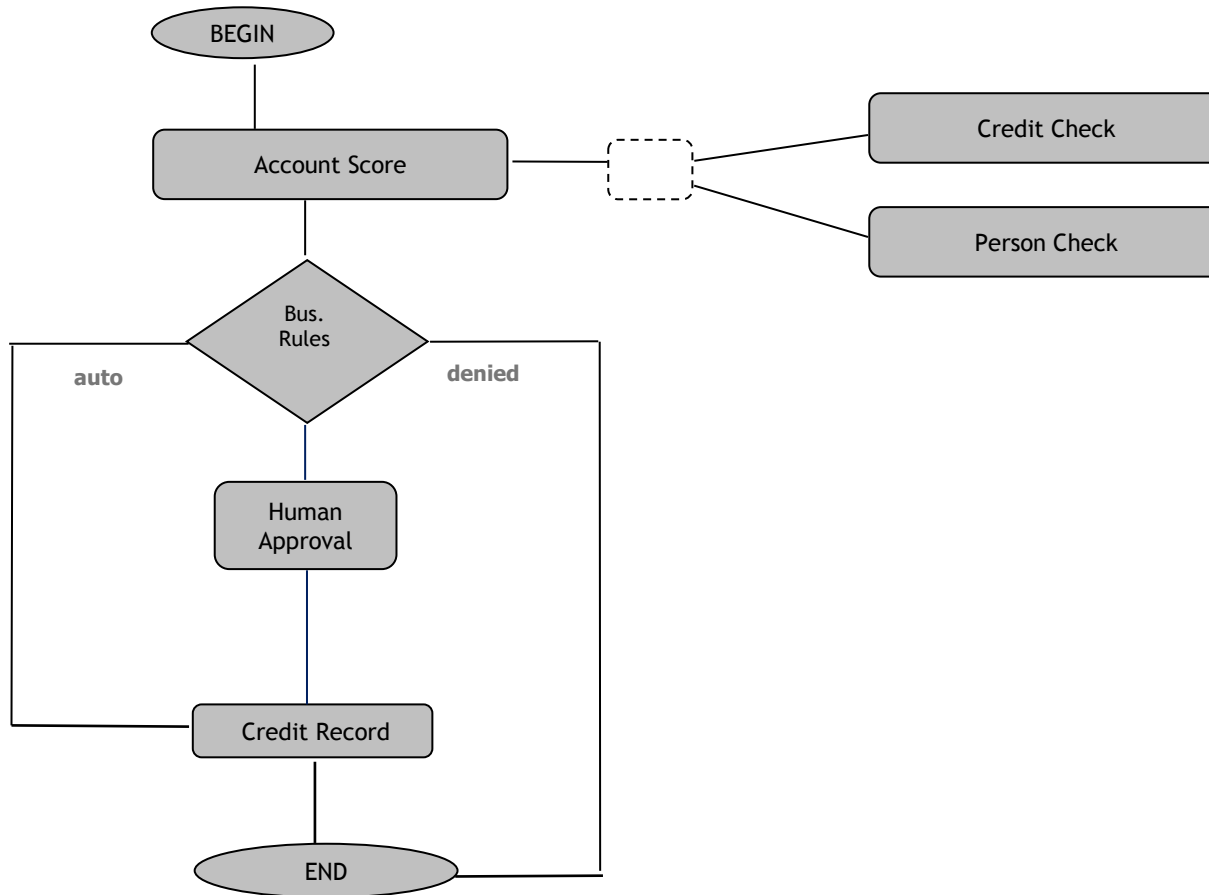
Service & System
Integration
Mediation

Legacy Databases Partners Content Packaged Search Custom

end-to-end
Lifecycle
Visibility
Control

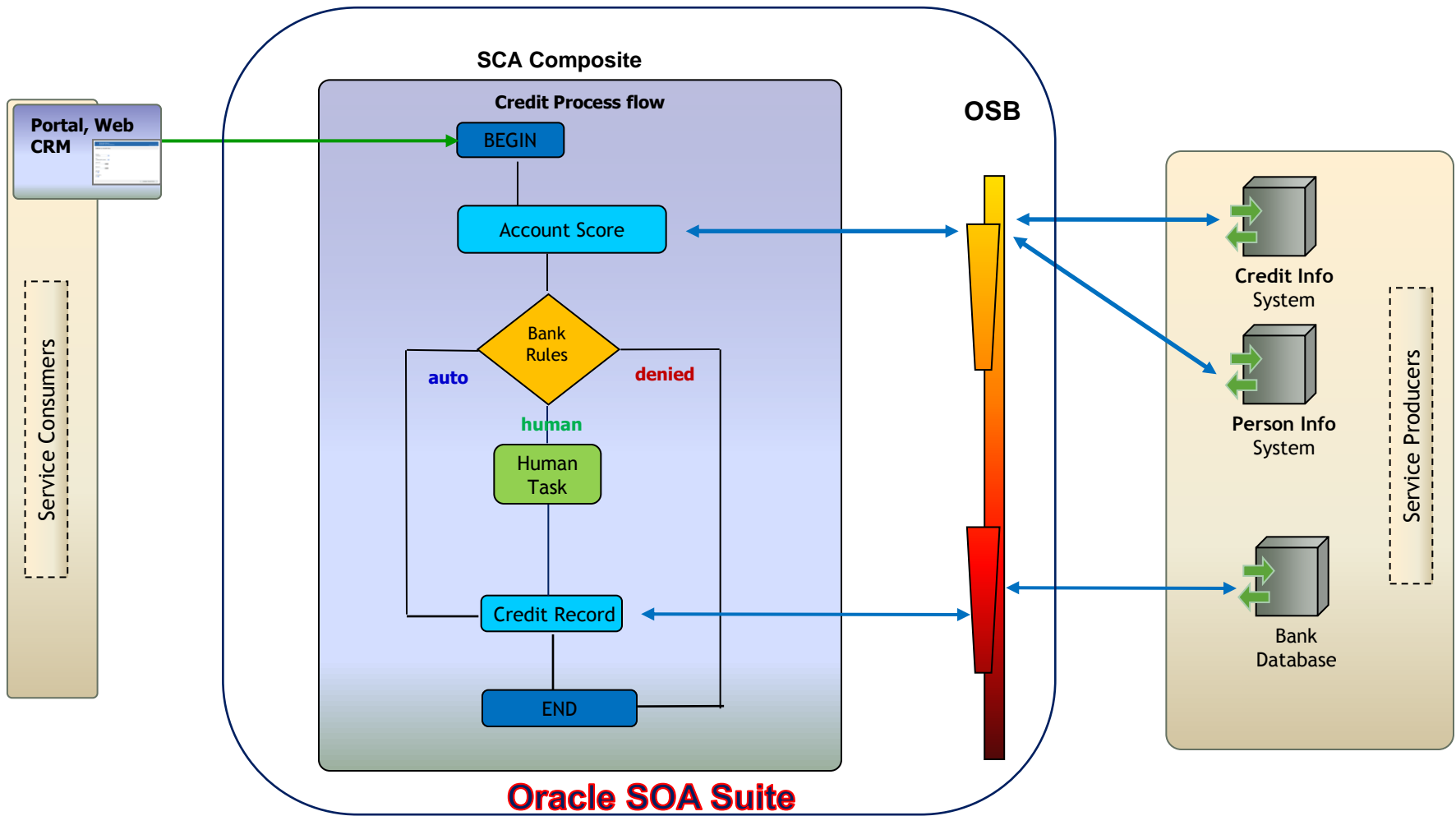
Bank Credit Process

Demo scenario



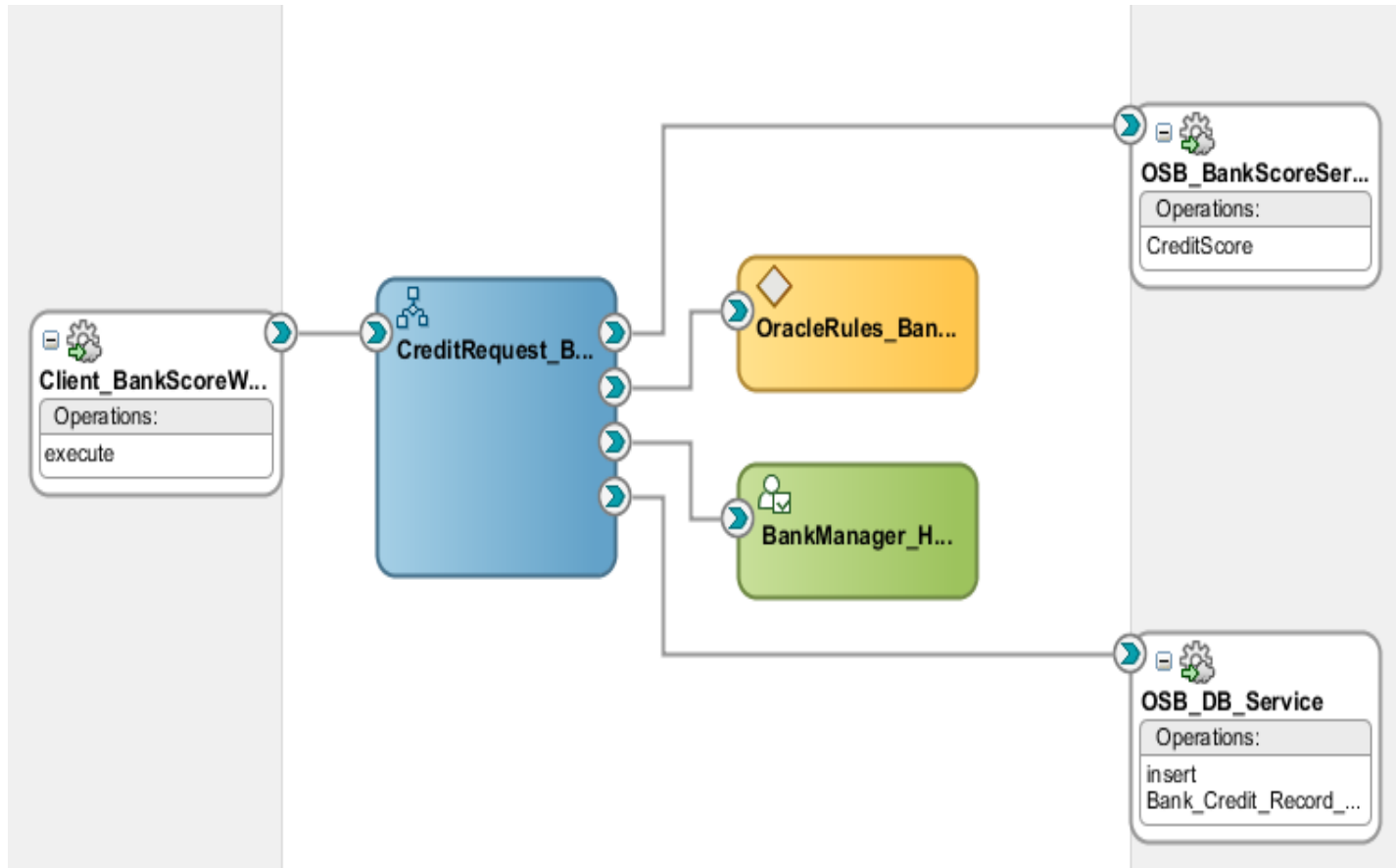
Bank Credit Process

Realized via Oracle SOA Suite



Bank Credit Process

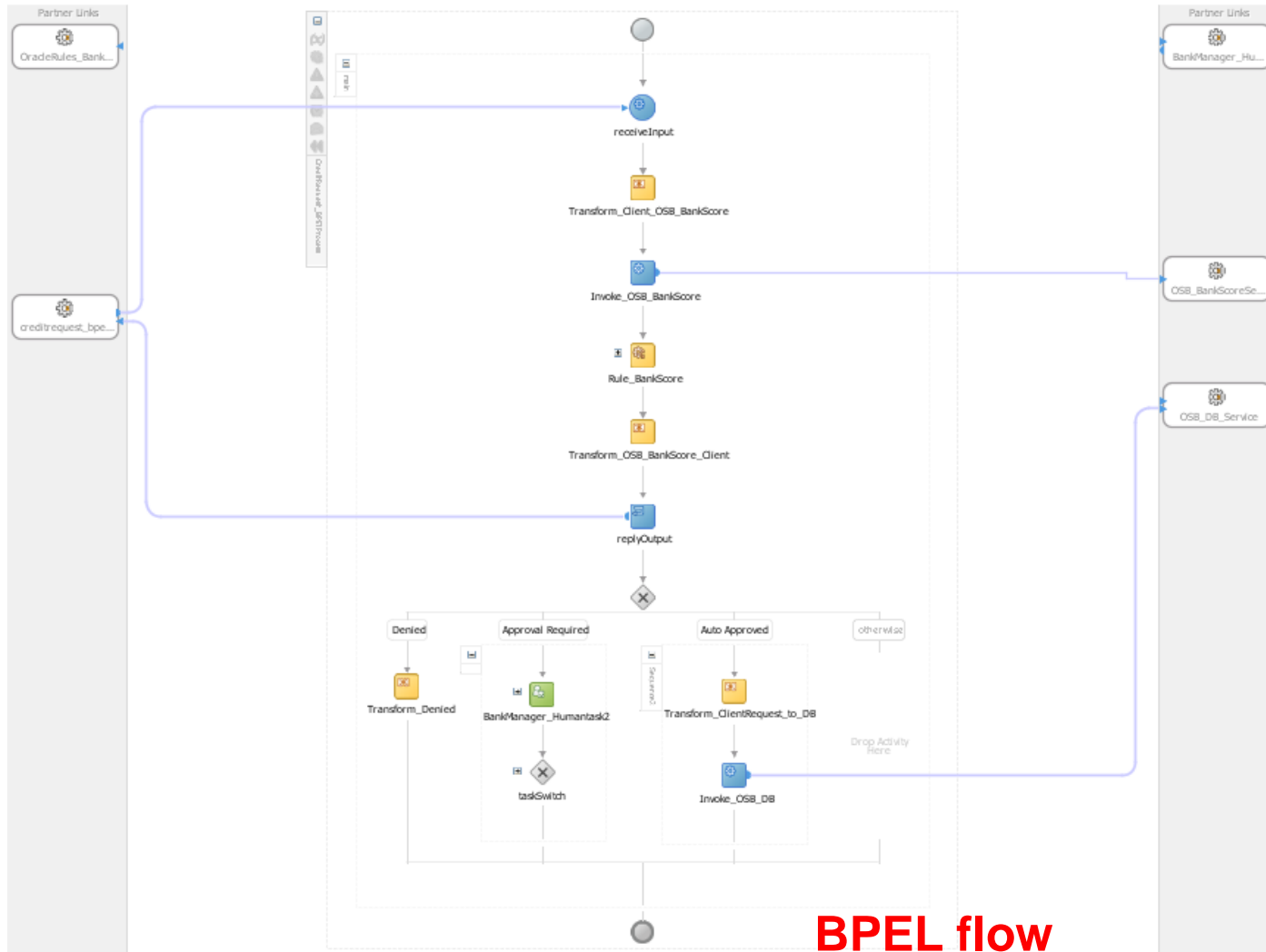
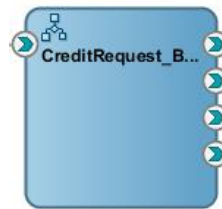
Realized via Oracle SOA Suite with *No-coding*



SCA composite

Bank Credit Process Flow

Realized via Oracle SOA Suite with *No-coding*



BPEL flow

Bank Business Rules

Standard **IF THEN ELSE** statements

An example of the business rules logic could be:

IF the account doesn't exist

THEN never mind the person status the request is denied

ELSE

IF the account exist

THEN

IF the person is criminal

THEN the request is denied

ELSE the person is OK

IF the account is not golden

THEN

IF the amount is less than 10 000

THEN the request is auto approved

ELSE the amount > 10 000, the request must be approved by a human being

ELSE the account is GOLDEN and the request is auto approved

...

etc.

Many logics are possible, but **IF ELSE THEN** statements are huge and complex.

Any best approach?

Bank Business Rules

Via OBR Decision Table



Conditions	Rules			
<i>Account status</i>	OK	OK	GOLDEN	Never mind
<i>Person status</i>	OK	OK	OK	CRIMINAL
<i>Credit Amount</i>	< 10 000	> = 10 000	Never mind	Never mind
Actions	AUTO APPROVED	APPROVAL REQUIRED	AUTO APPROVED	DENIED

Bank Business Rules

Via OBR Decision Table



Ruleset_BankScore View: DecisionTable_BankScore

DecisionTable_BankScore

Conditions	R1	R2	R3	R4	R5
C1 ScoreType.ACNScore	"NONE"	"OK"	"OK"	"OK","GOLDEN"	"GOLDEN"
C2 ScoreType.PIDscore	"OK","CRIMINAL"	"OK"	"OK"	"CRIMINAL"	"OK"
C3 ScoreType.creditAmount	[0.0..10000.0),>=10...	[0.0..10000.0)	>=10000.0	[0.0..10000.0),>=10...	[0.0..10000.0),>=10...
Conflict Resolution					
Actions					
A1 assert new ScoreSelec... scoreRet:ScoreValu...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	ScoreValue.DENIED	ScoreValue.AUTO_AP...	ScoreValue.APPROVA...	ScoreValue.DENIED	ScoreValue.AUTO_AP...



DEMO

Bank Credit Process

Built and Monitored thru Oracle SOA Suite

Live Demo - Done In class!

SOA today introduces new requirements

- **Simplify the SOA Design time**
 - Standards, Support different schemes, Productivity
- **Unified Service Platform to address all Patterns**
 - Common services infrastructure, Simple deployment/architecture
- **Unified Management, Monitoring, Governance**
 - End-to-end visibility/security, Monitor, Govern
- **Extreme Scalability**
 - Unified platform to easily & transparently scale-out

Oracle SOA Suite 11g addresses new needs through a new Services Infrastructure

Oracle Unified SOA Platform

Efficiency, Visibility, Agility

Rich Web Interaction



BAM Web Application



BPM Workspace



EM Web Application

BAM



BUSINESS
VISIBILITY



SOA
DESIGN

ORCHESTRATE
BPM

BPEL
HUMAN WORKFLOW
BUSINESS RULES



INTEGRATE

SERVICE BUS



WSSM

SECURE

EM



MANAGE
MONITOR

WebLogic Server

(Performance, Scalability, High Availability)

For More Information ...

Get Started with Oracle SOA

- SOA Suite Technical: Downloads, Docs, Samples etc.:

<http://www.oracle.com/technetwork/middleware/soasuite/overview/index.html>

<http://soasamples.samplecode.oracle.com>

- SOA Suite Business:

<http://www.oracle.com/us/technologies/soa/soa-suite/index.html>

- SOA forums and blogs:

<http://forums.oracle.com/forums/forum.jspa?forumID=320>

<http://blogs.oracle.com/soa>