

Swordfish

The Eclipse SOA Runtime Framework



SOPERA

SOA

Architecture and Features

Usage Scenarios

Past, present, and future

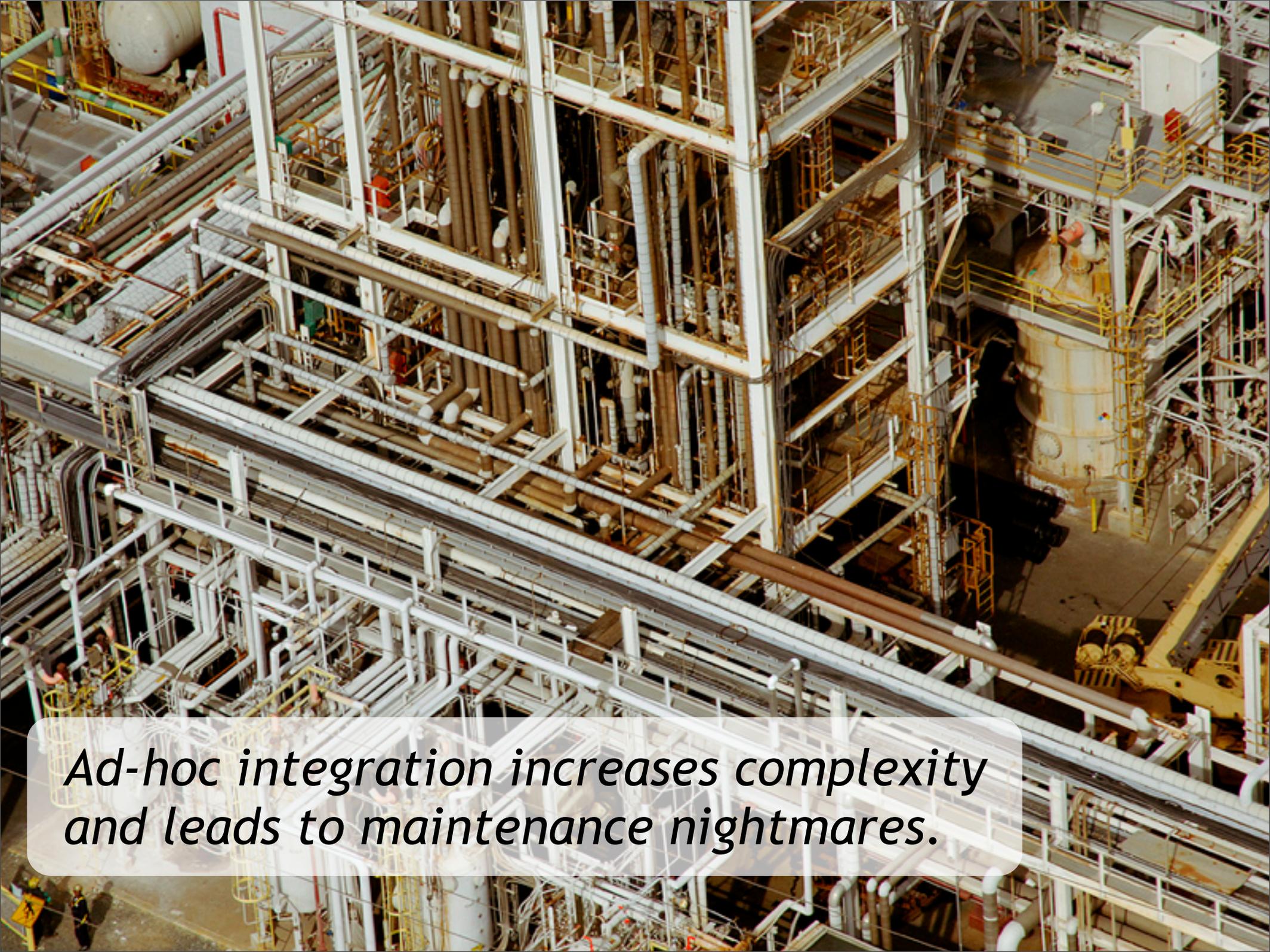
Your questions

SOA

Service Oriented Architecture

*Application landscapes in large enterprises
tend to evolve in uncontrolled ways.*





Ad-hoc integration increases complexity and leads to maintenance nightmares.



*Hub-and-Spoke approaches
often fail to deliver
significant business value.*



EAI = Octopus

SOA is a structured approach to defining a sound Enterprise Architecture.



Services encapsulate business functionality and share common characteristics

Standardized Contract

Common contract design standards within the same service inventory

Loosely coupled

Contracts impose low consumer coupling requirements

Abstract

Information about services is limited to what is published in service contracts

Reusable

Service logic is agnostic and reusable

Autonomous

Services exercise a high level of control over their underlying runtime execution environment.

Stateless

Services defer the management of state information when necessary.

Discoverable

Services are supplemented with meta data by which they can be discovered and interpreted.

Composable

Services can be composed into more complex services



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Architecture and Features

OSGi services alone are not sufficient for enterprise-scale SOA

Four tenets of SOA*

OSGi/Equinox

SOA

Service boundaries are explicit

functionality can only be accessed through the service boundary



Services are autonomous

no hard dependencies on other services



Services expose schema and contract, not class and type

interface is defined in a platform and language neutral way



Services negotiate using policy

capabilities and requirements must match, negotiation is dynamic



Swordfish is based on all three relevant standards in the SOA space

SCA

*Programming model
Assembly description format*

JB1

*Messaging abstraction
Message routing*

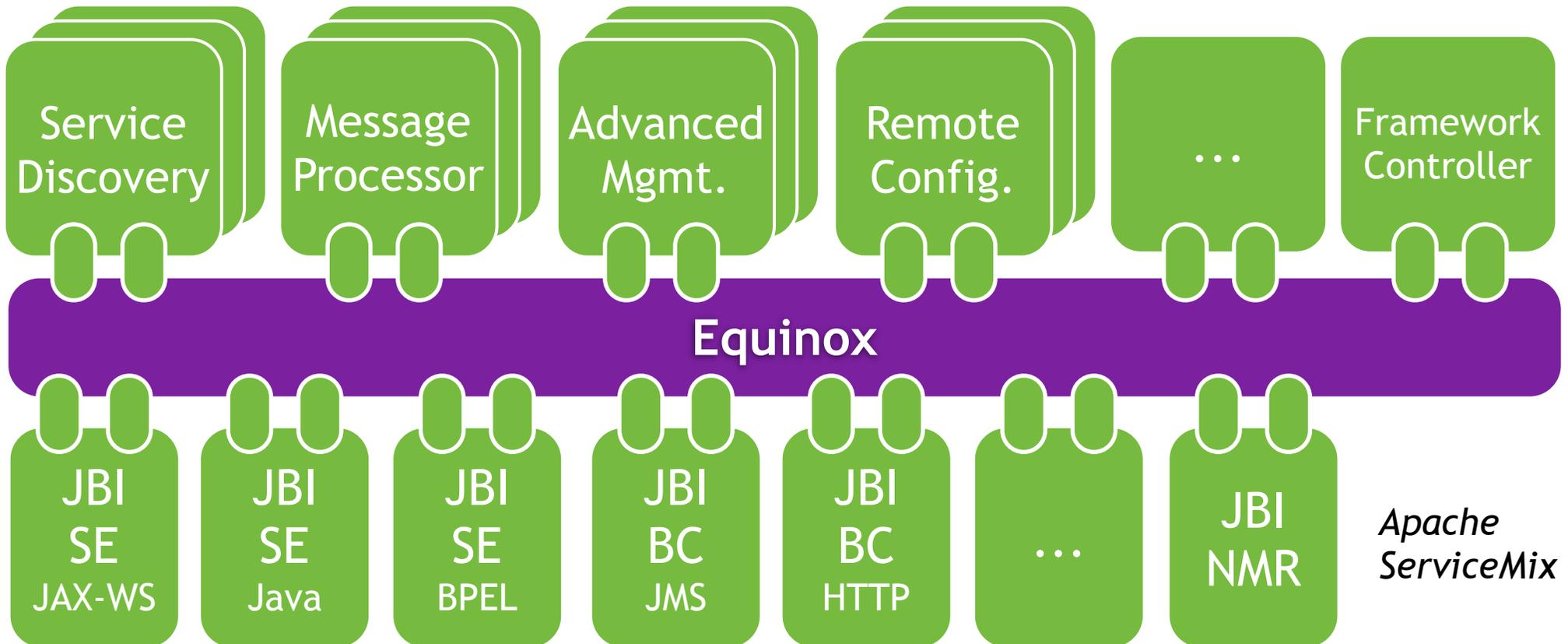
OSGi

*Component model
Module deployment mechanism
Classloading*

Swordfish is built on top of a bundled JBI runtime environment

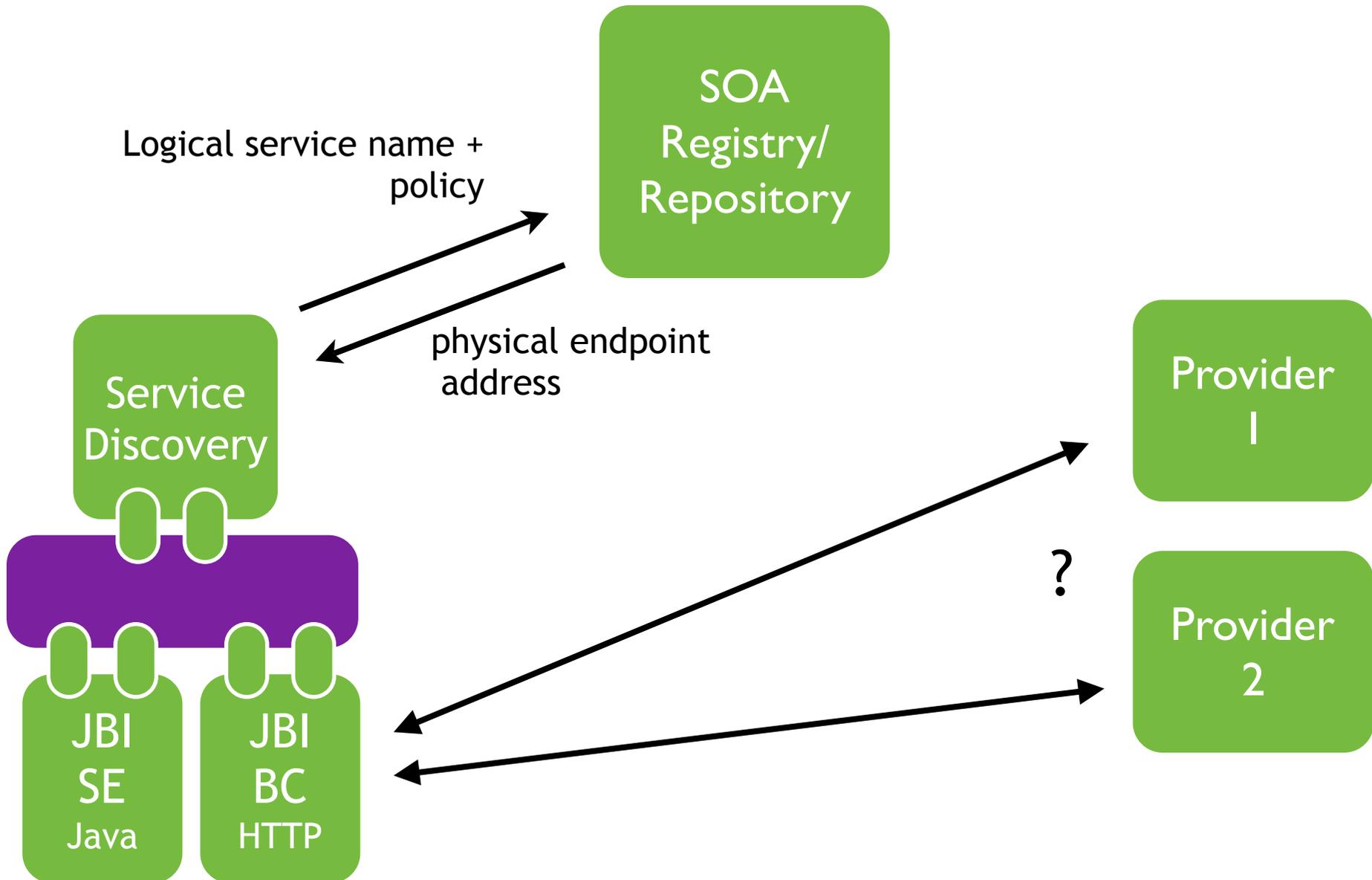
Framework plug-ins

Framework core

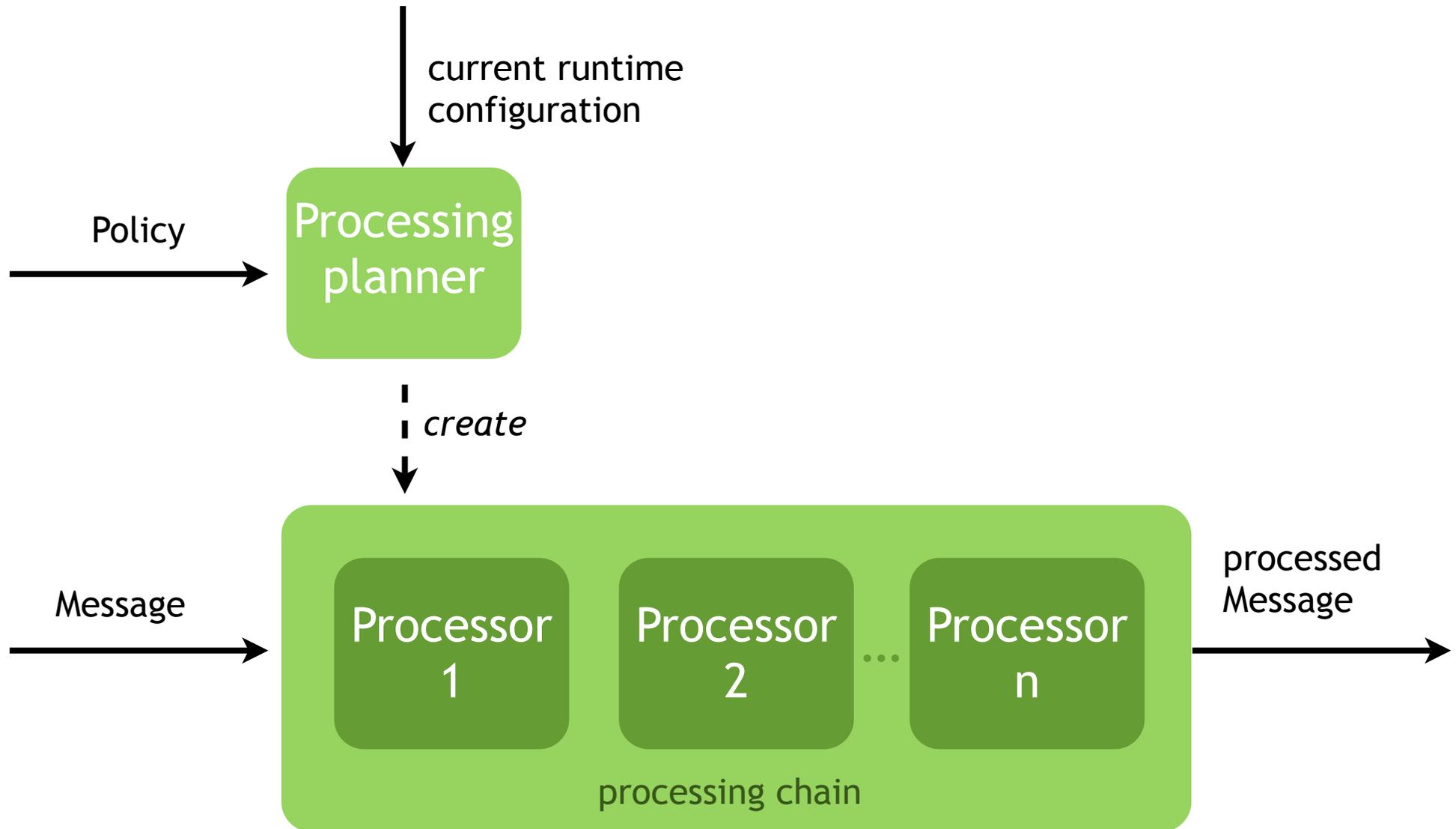


JBI components deployed as OSGi bundles

Dynamic service discovery



Policy-driven message processing



The SOA Tools Platform Project (STP) will provide extensive tool support for Swordfish



Create Service definitions following a contract-first (WSDL-first) approach



Create Services based on annotated Java code (JAX-WS)



Create WS-Policy documents to specify non-functional requirements and capabilities of a service



Deploy Service implementations into Swordfish runtime



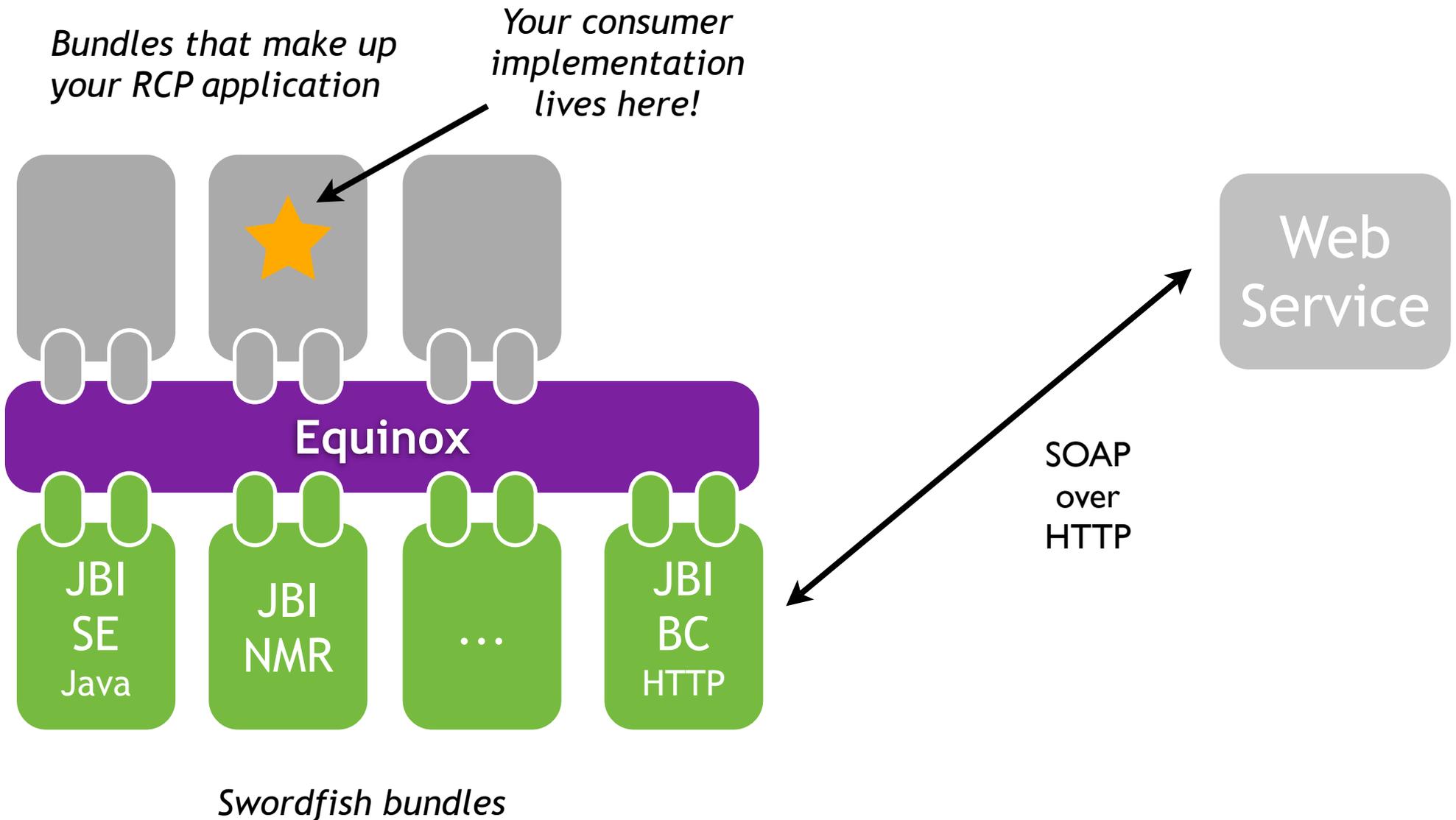
Create SCA composite applications both top-down and bottom-up



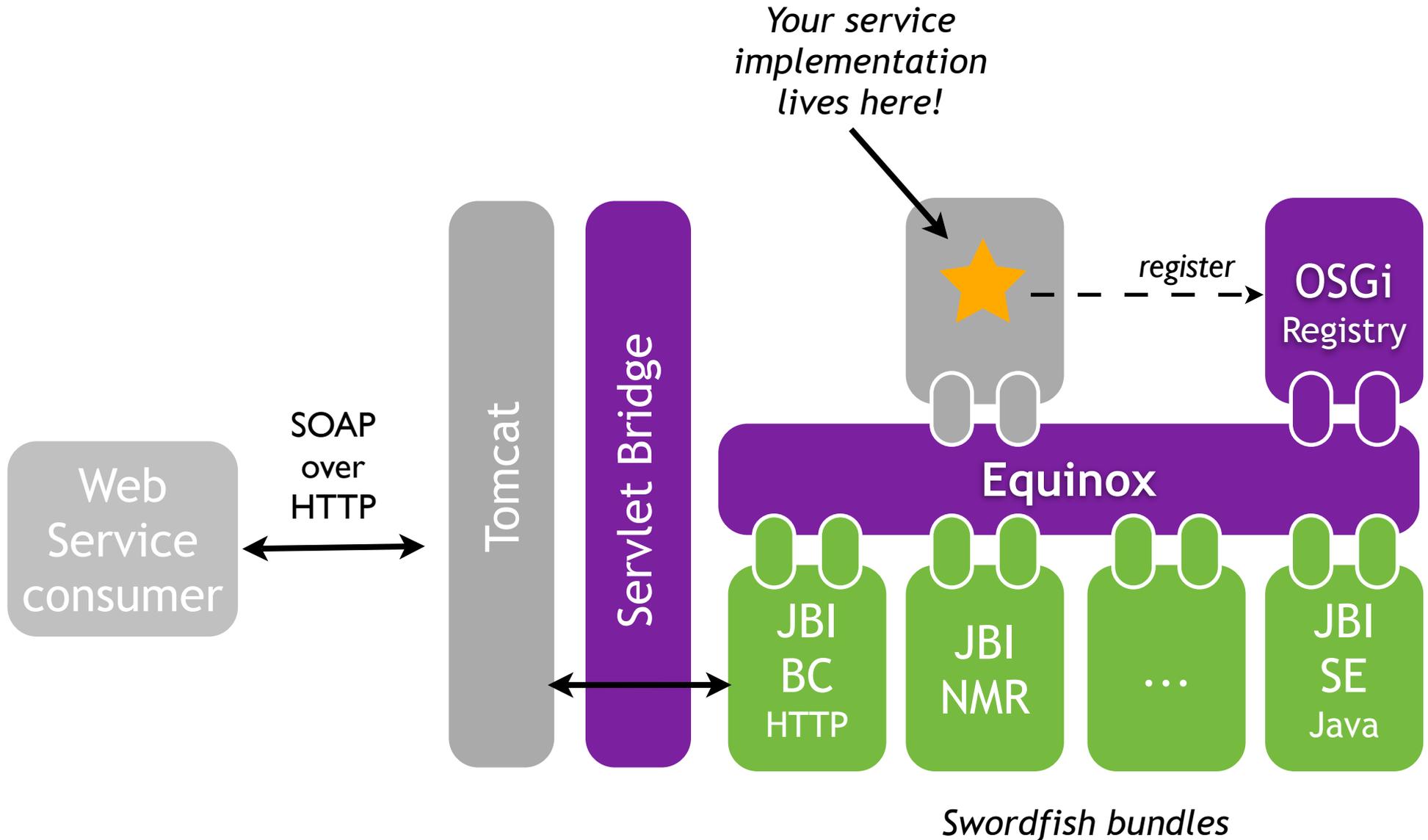
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Usage scenarios

Scenario 1: RCP application acting as a web service consumer



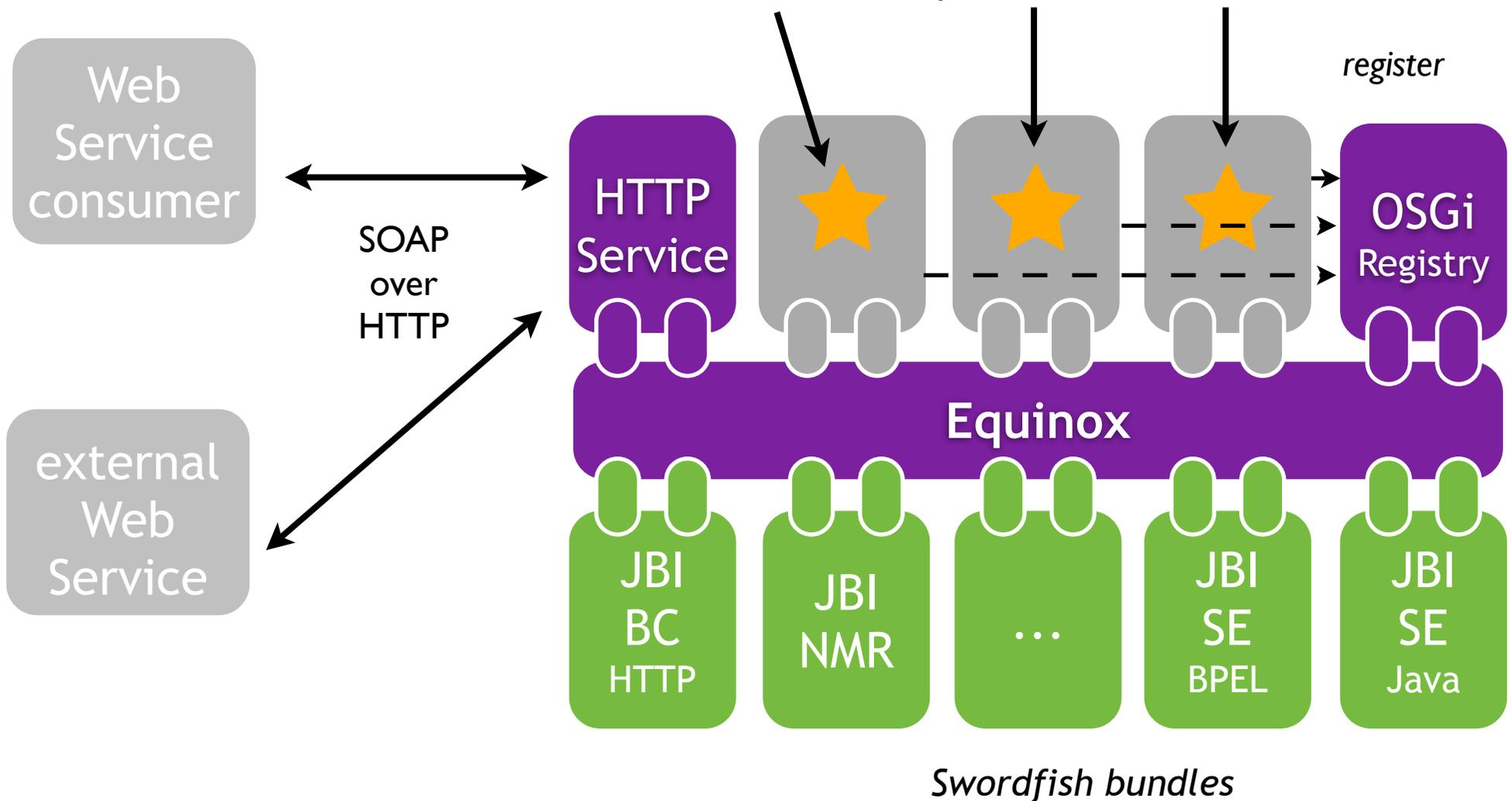
Scenario 2: Swordfish as a server-side runtime hosting a service



Scenario 3: Swordfish as a server-side runtime hosting a composite service

Your BPEL process lives here!

Your Java service implementations live here!



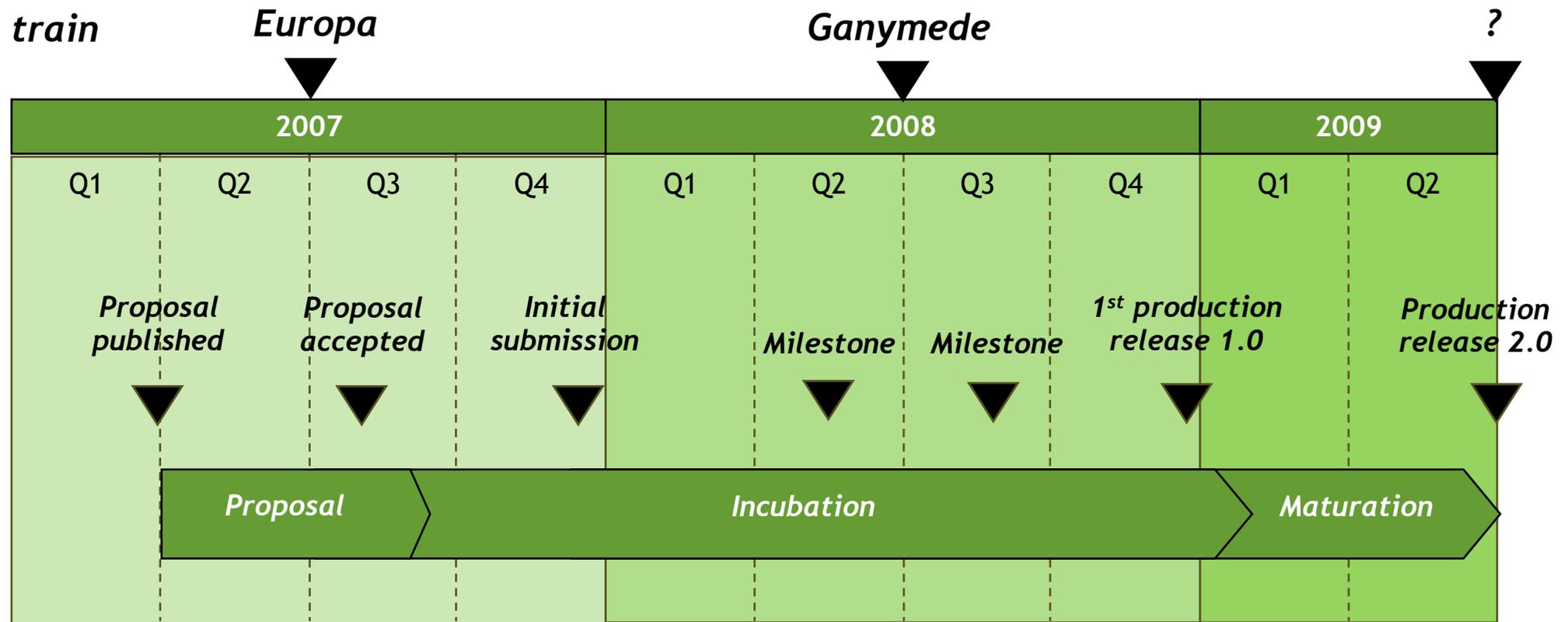


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Past, present, and future

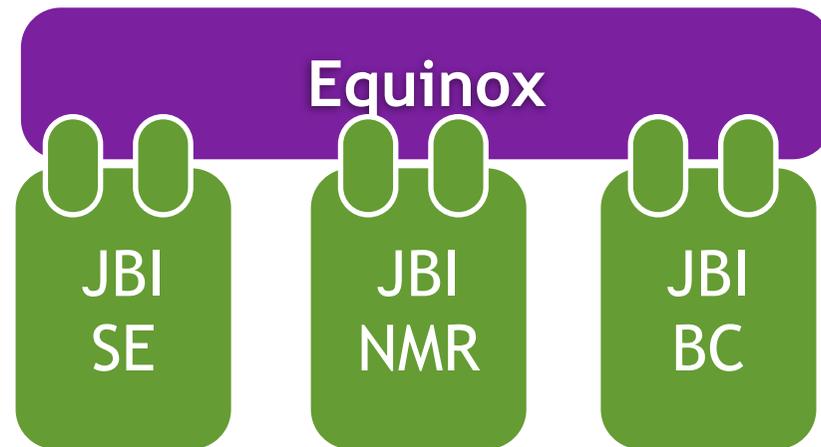
Swordfish timeline

*Eclipse
release
train*



Bottom line: We won't make it for Ganymede, but we'll be part of the simultaneous release in 2009.

*Where we are now:
The groundwork is done*



What's next: Designing the framework

Milestone 1, mid of Q2 2008

First draft of message processing framework

Hosting of JAX-WS services

Milestone 2, mid of Q3 2008

Message processing done

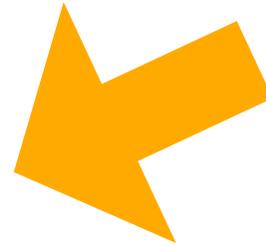
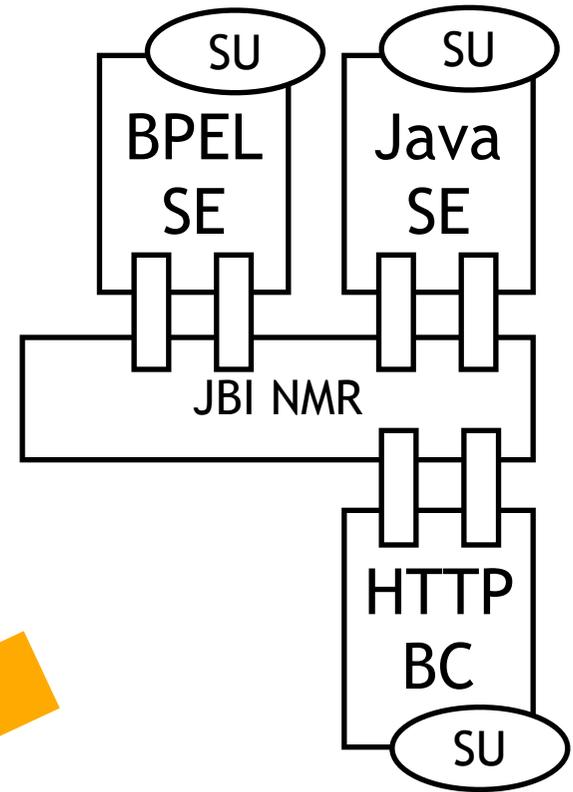
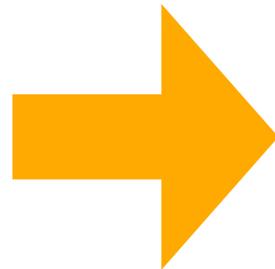
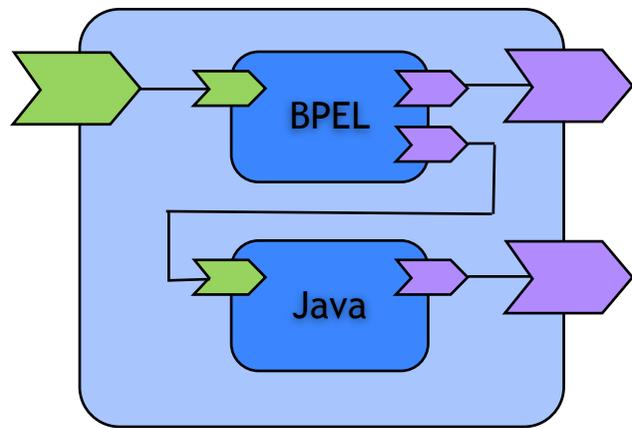
Draft of other framework aspects (Service Discovery, Management Integration, Remote Configuration)

Release 1.0, end of Q4 2008

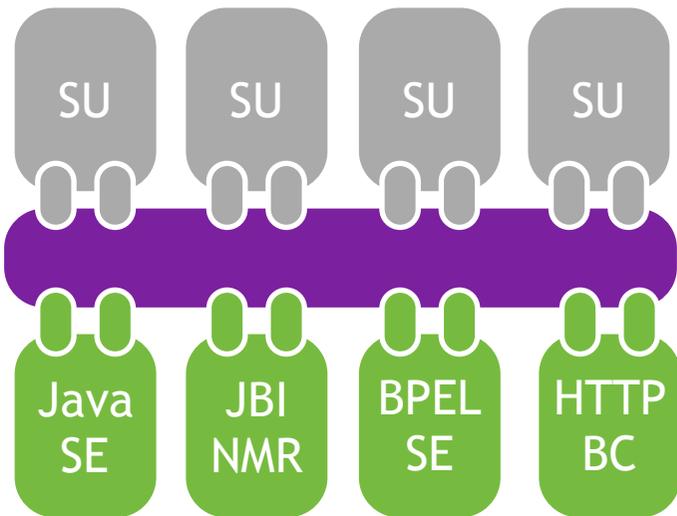
Framework and exemplary implementation done

Support for deployment from STP/WTP

What's on the horizon: Adding the SCA layer on top



Service Units deployed as bundles



STP Intermediary Model?

Swordfish has a diverse community of committers and (future) contributors

Committers

Oliver Wolf
Dietmar Wolz
Gerald Preissler



Klaus Kiehne



James Strachan
Guillaume Nodet
Jonas Lim
Adrian Co



Contributors

Andrey Kopachevsky



Future Contributors

Heiko Seeberger



Maybe you???



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Your questions

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