

Frameworks di sviluppo Java EE e SOA I progetti Spago e Spagic



Testimonianza di:
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- **COS'E' UN FRAMEWORK**

Un framework è un'applicazione “semi-completa”,
riutilizzabile che può essere specializzata per produrre
applicazioni specifiche

- **VANTAGGI**

- *Modularità*
- *Riusabilità*
- *Estensibilità*
- *Inversione del Controllo*

- **DEFINIZIONE:**

SPAGO è un framework J2EE, sviluppato secondo il pattern architetturale **MVC** , che fornisce una soluzione per lo sviluppo di applicazioni “multicanale/multiprotocollo” e l’integrazione di servizi.

Consente lo sviluppo di applicazioni Web, l’integrazione con infrastrutture esistenti e la pubblicazione di servizi su canali diversi.

Esistono molti framework Open Source per lo sviluppo di applicazioni Web, alcuni dei quali molto specializzati su determinate fasi dello sviluppo (disegno dell'interfaccia grafica, sviluppo della logica di business, etc).



- ❑ L'evoluzione di Spago è inoltre indotta dai nuovi progetti che ne faranno uso (il primo è SpagoBI, una piattaforma per la Business Intelligence)

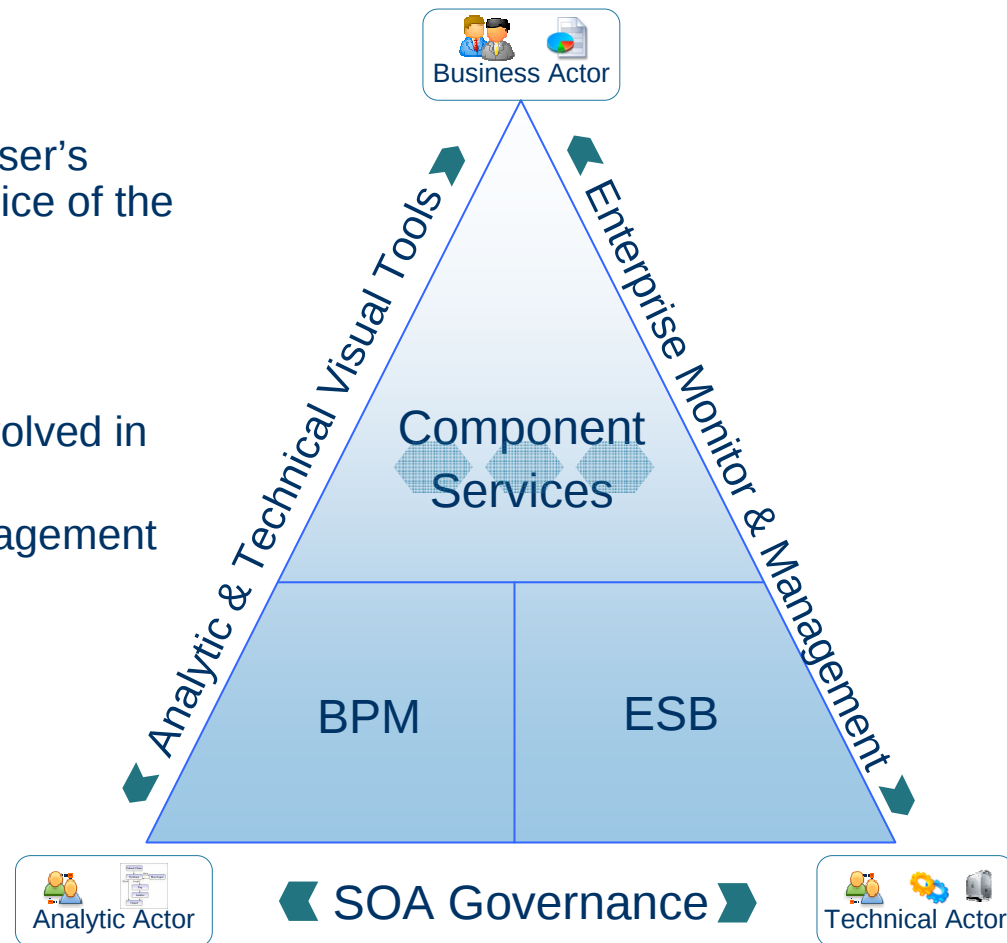


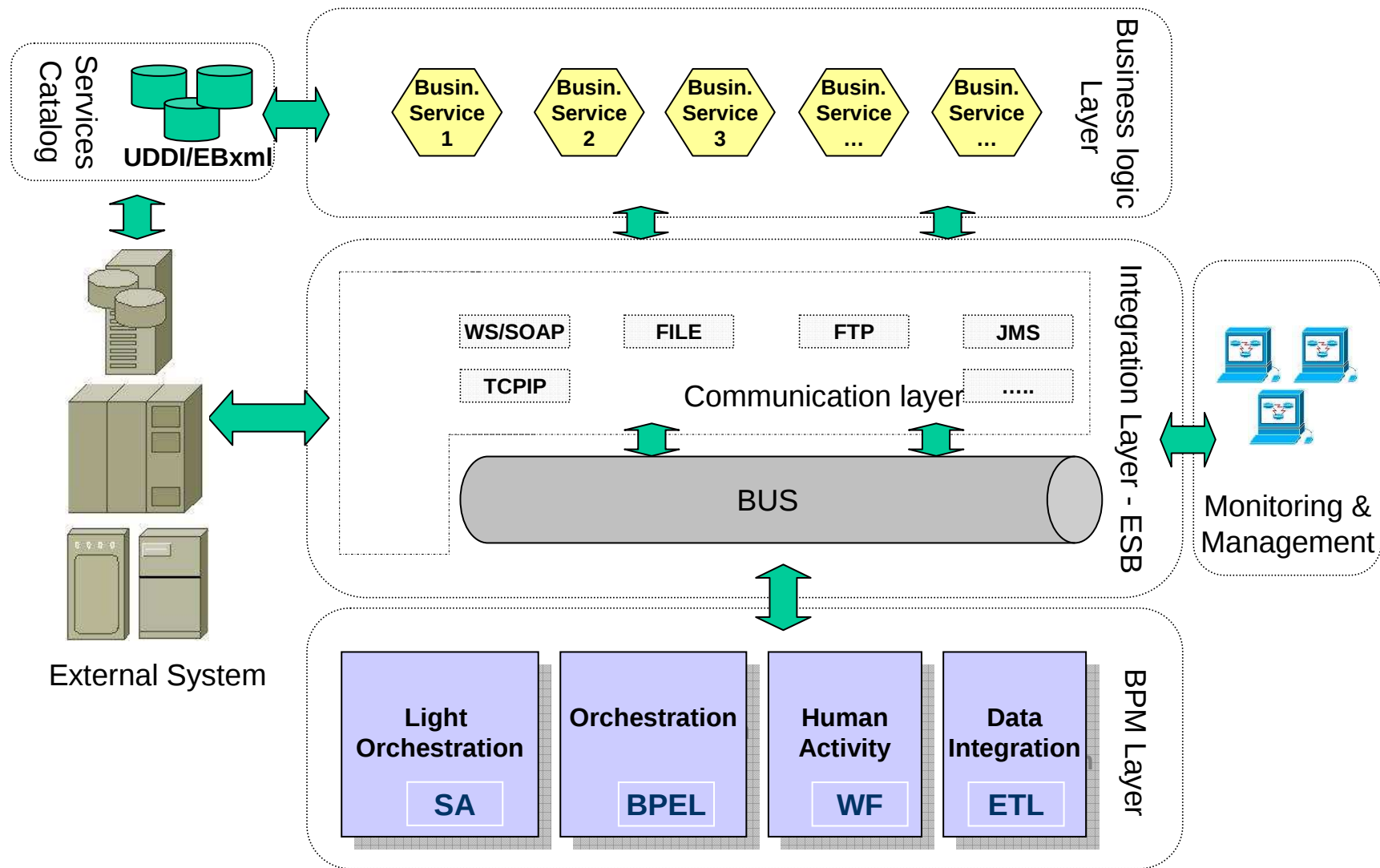
/* the Business Intelligence Free Platform */

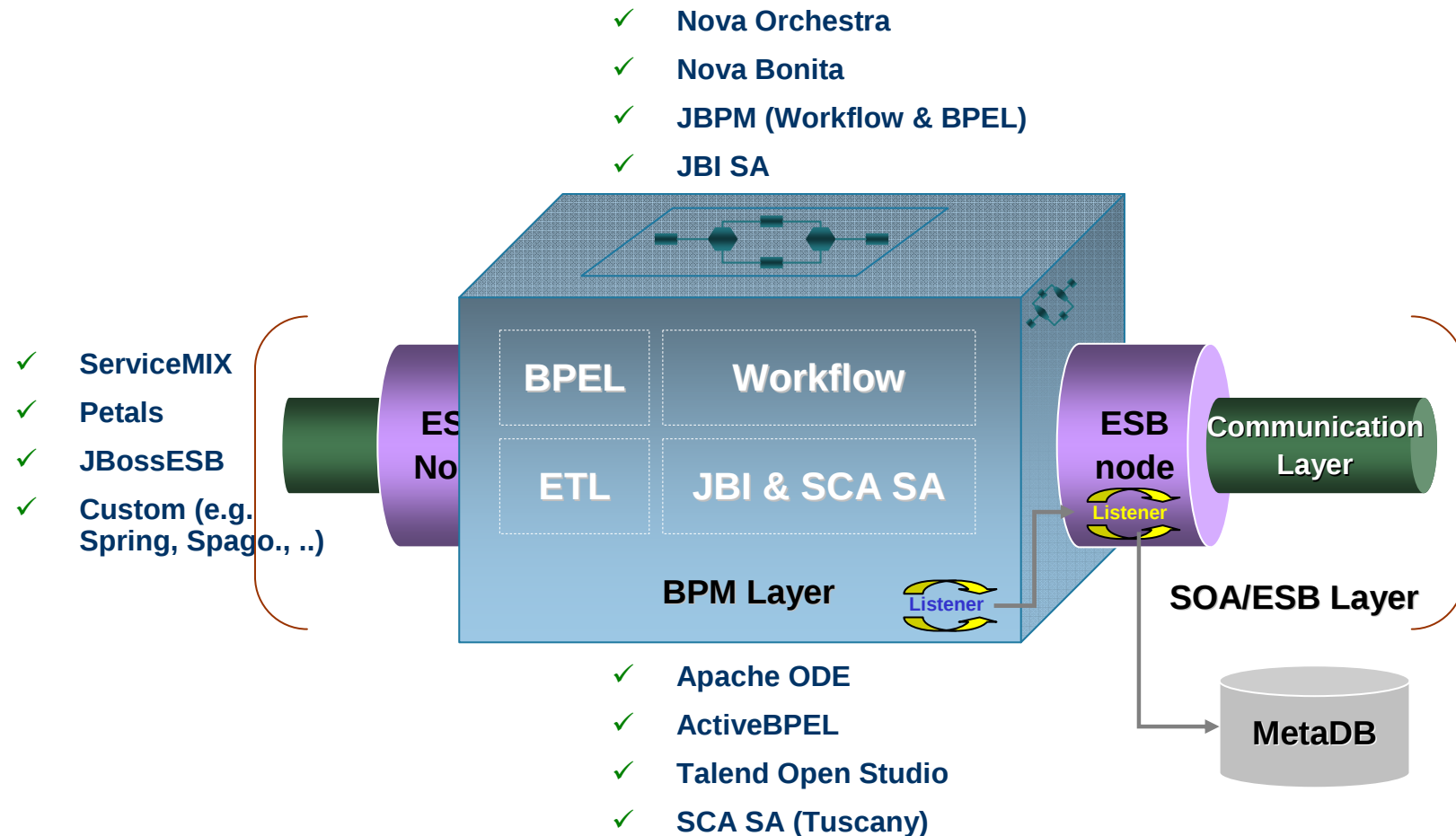
- ❑ Esiste una roadmap evolutiva di Spago sul sito
<http://spago.eng.it>

Spagic: a Free Open Source SOA/BPM Enterprise Integration Platform

- ❑ Key points
 - SOA/BPM Governance
 - Pragmatic approach to end user's projects through the best choice of the single engines/components
- ❑ Capabilities
 - Efficiency of all the actors involved in integration processes
 - Enterprise Monitoring & Management







□ **Pragmatic approach:** different products/technologies available

Business logic implementation

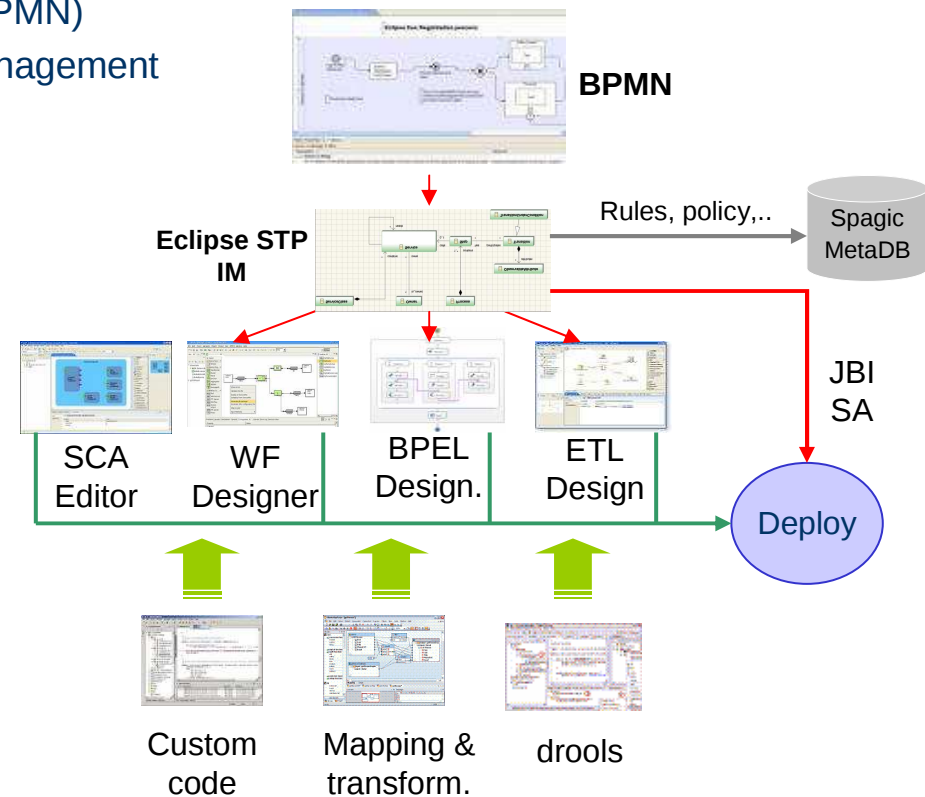
- Business Process Modeling Notation (BPMN)
- Insert information for monitoring and management

Technical Processes Definition & Deploy

- JBI
- SCA
- BPEL
- Workflow
- ETL

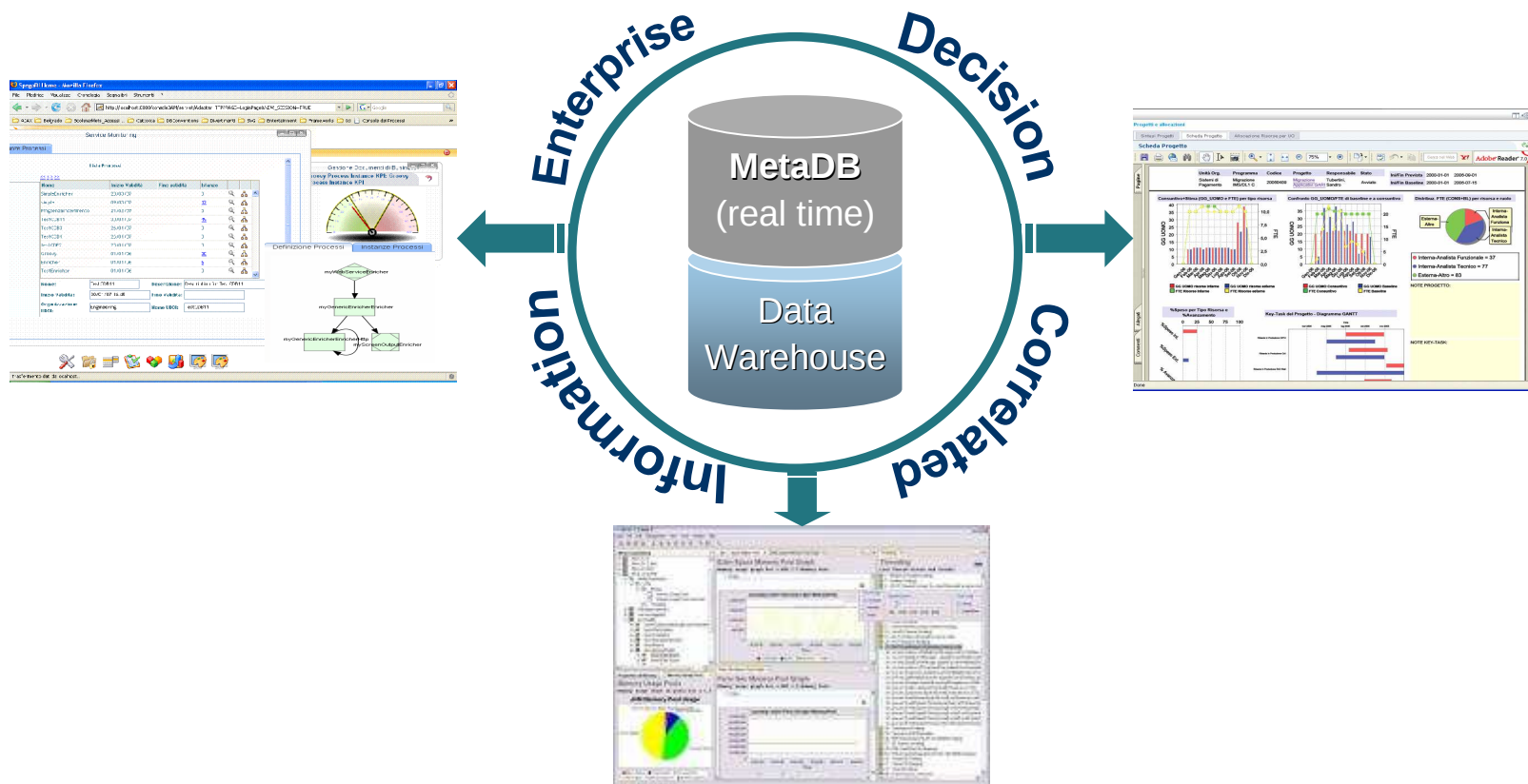
Developer Implementation

- Custom code
- Scripting - rules definition (rules engine)
- Mapping & transformation



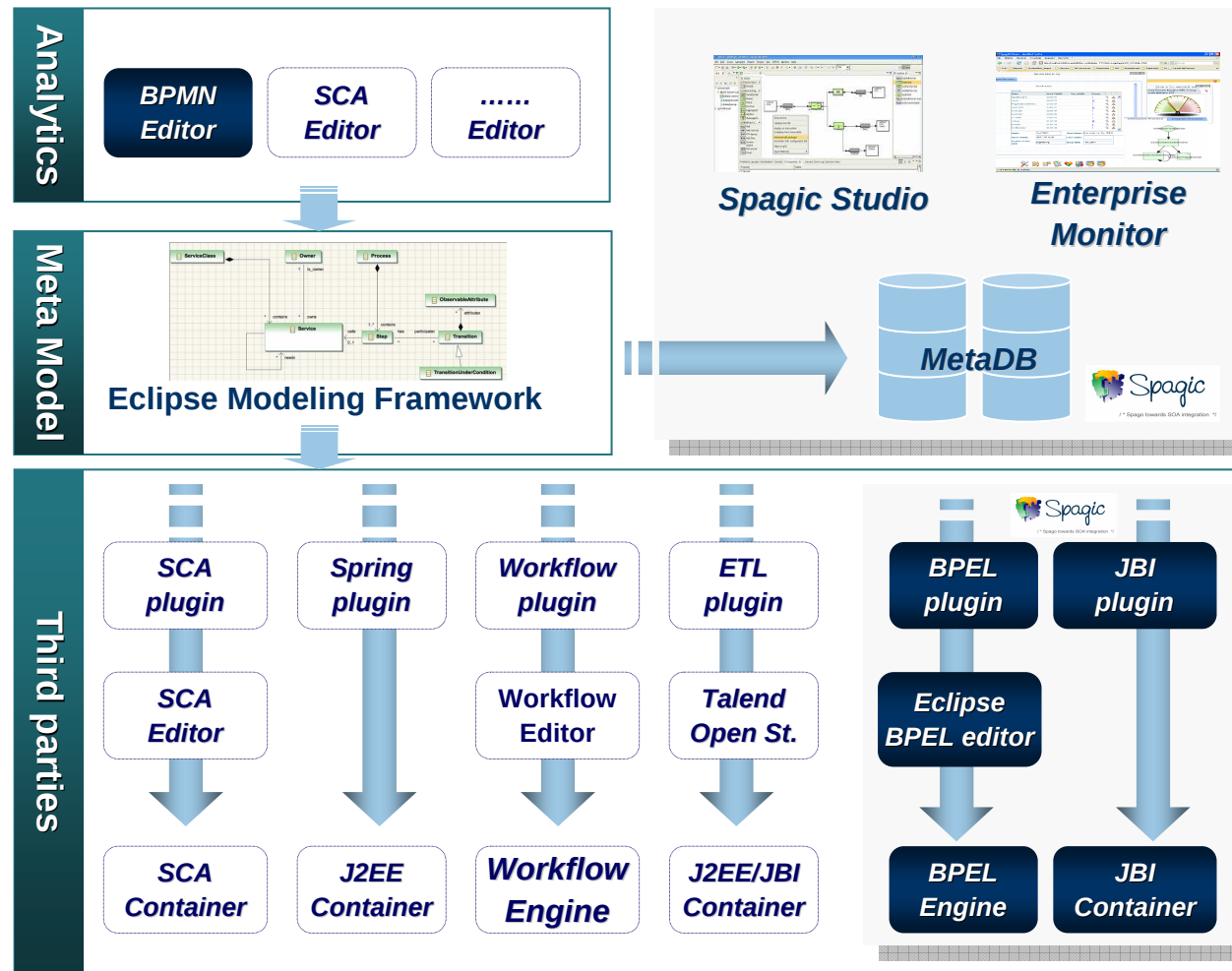
- ❑ **SOA/BPM Governance:** Support Collaborative Activities
- ❑ **Pragmatic approach:** bridge from BPMN to different and alternative engines

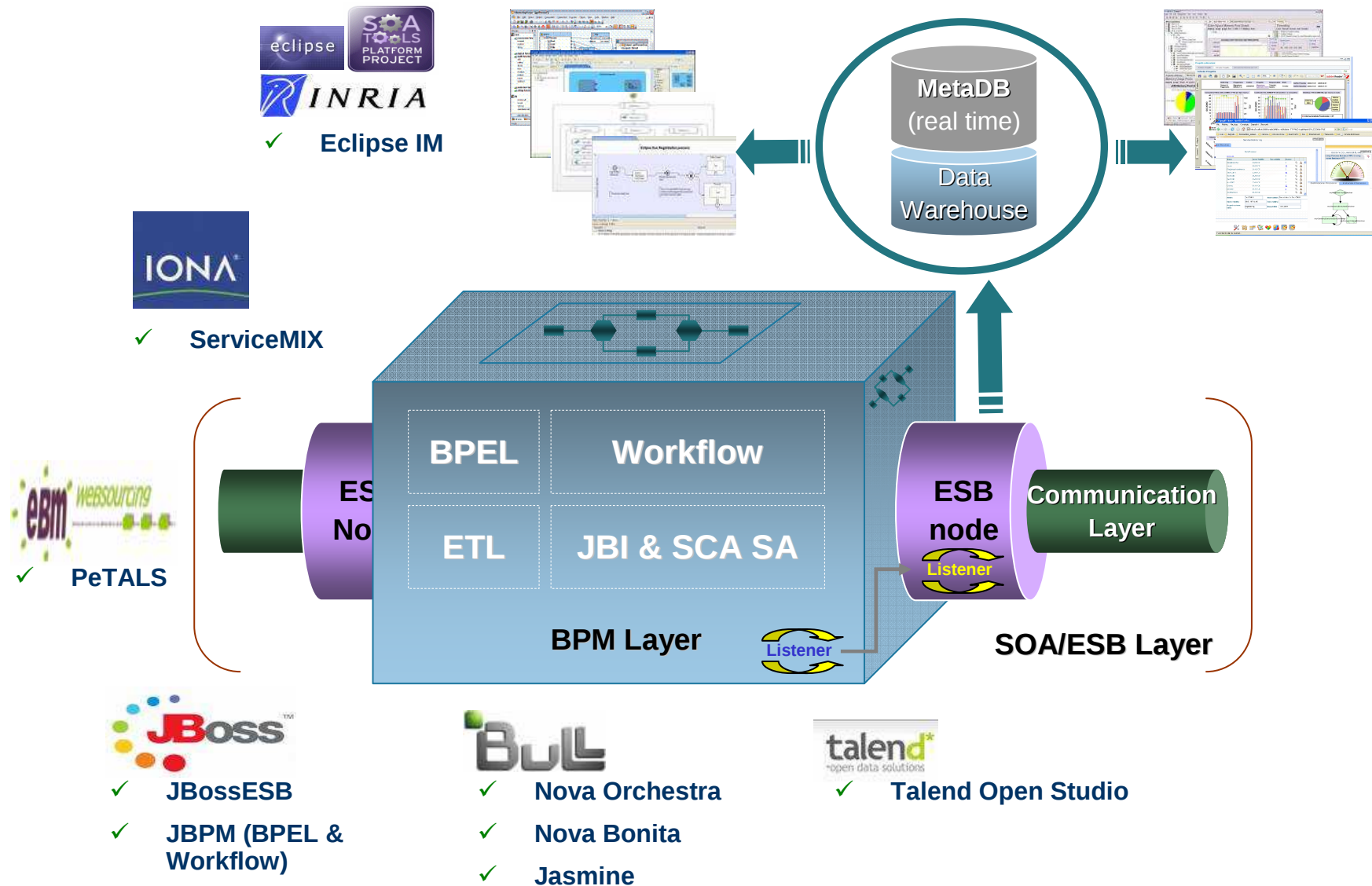
- ❑ Real Time SOA/BPM Management and Runtime Governance
- ❑ SLA Monitoring: SLA correlates system, process and business



- ❑ **SOA/BPM Governance:** Support Collaborative Activities
- ❑ **Pragmatic approach:** Enterprise Monitor with support of different engines/technologies

- ❑ Bridges different SOA Platforms
- ❑ Facilitates interoperability between editors

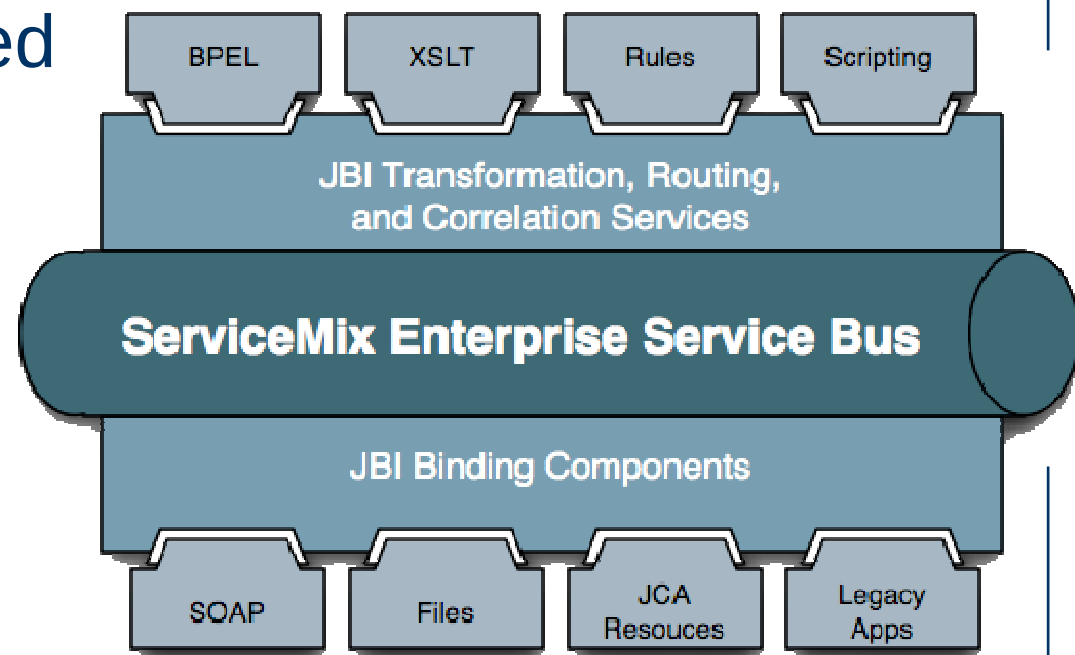




Standards Based
Flexible
Reliable
Breadth of
connectivity

The Agile ESB

- × Standards based
- × Flexible
- × Reliable
- × Breadth of Connectivity



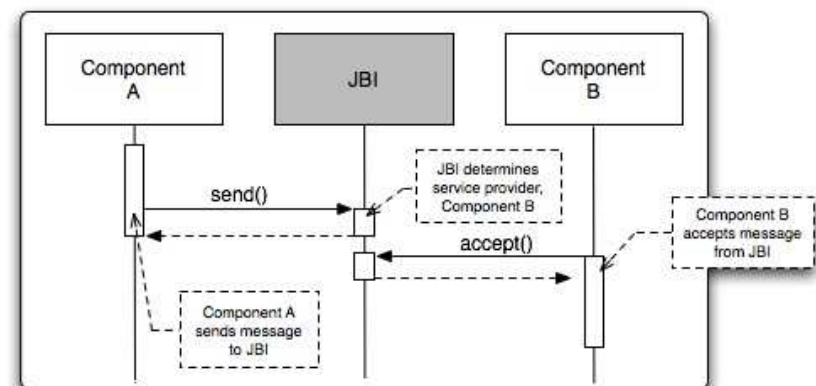
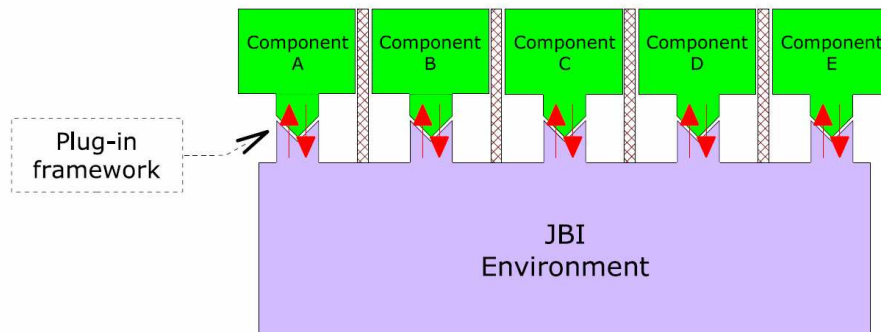
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► Standards Based

Flexible
Reliable
Breadth of
connectivity

Java Business Integration

- × Integration Systems
- × Plug-In Components
- × WSDL
- × Decoupling

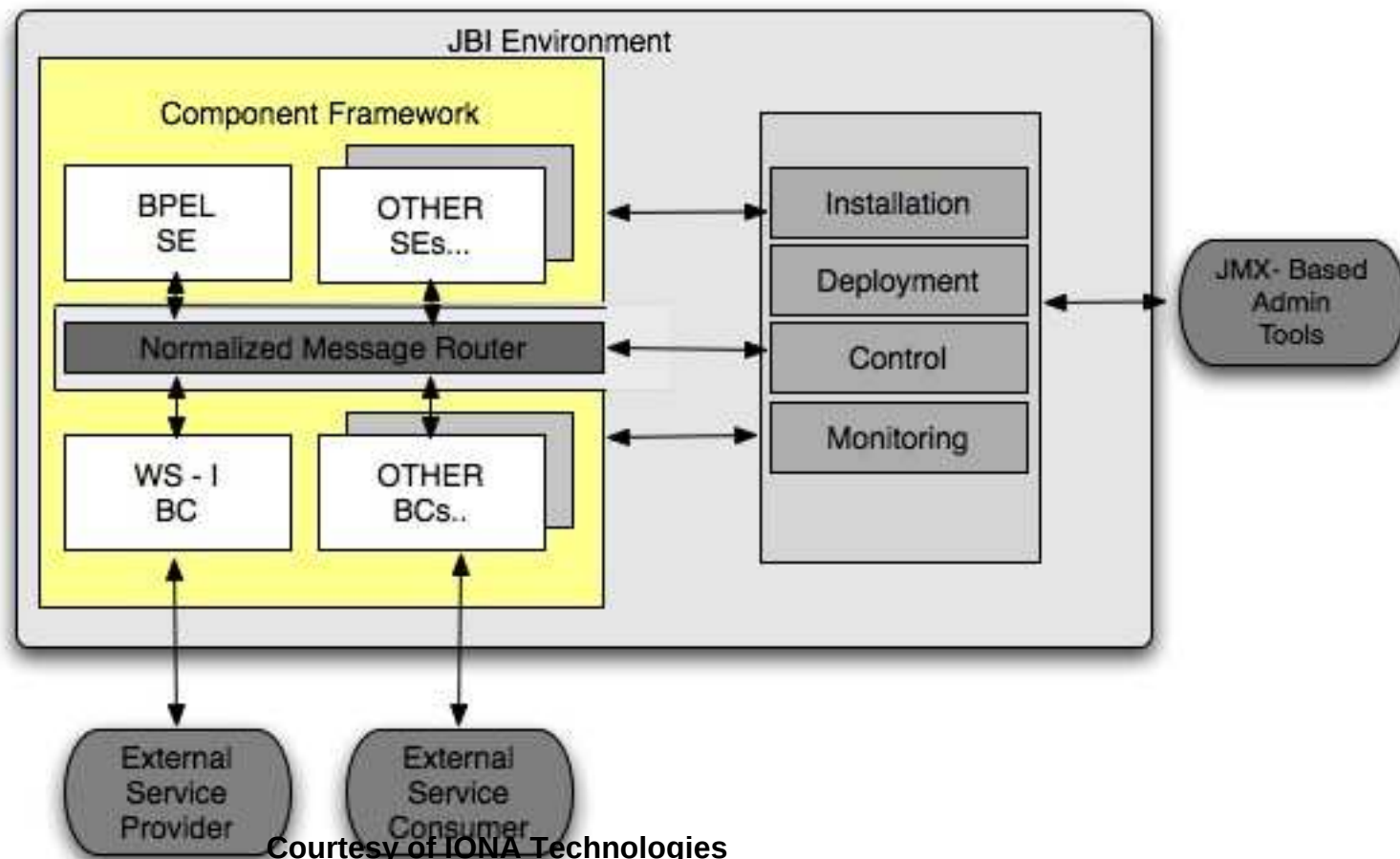


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► Standards Based

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JB1 1.0: architecture



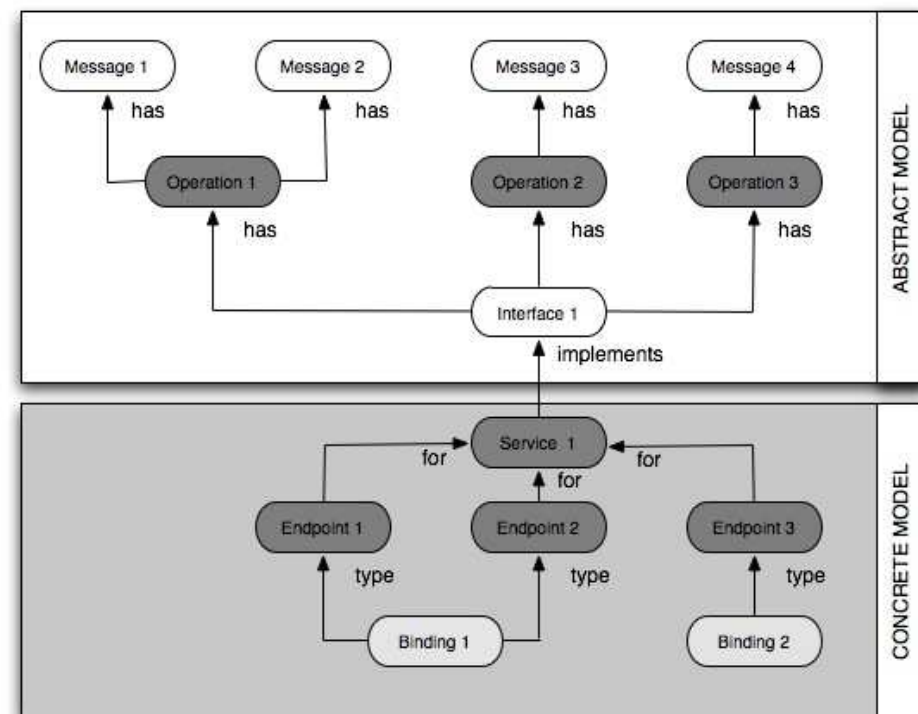
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Breadth of
connectivity

JB1 1.0: WSDL messaging model

- × Abstract model
- × Concrete model
- × Service providers
- × Service Consumers



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► Standards Based

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JBI 1.0: Normalized Message Router

- × Normalized Message
- × Runtime Endpoint Activation
- × Delivery Channel
- × Service Invocation using MEPs
- × Addressing Endpoints

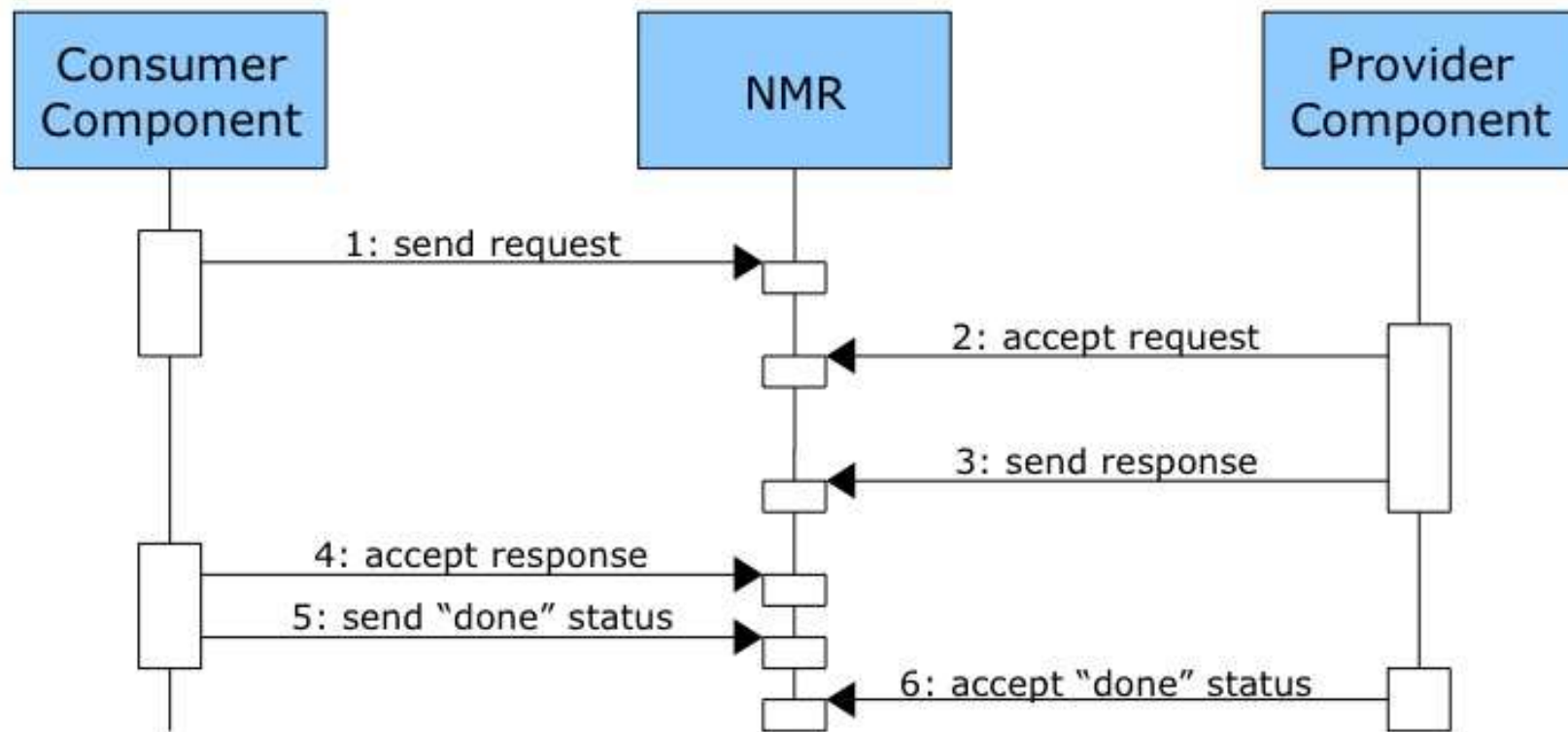
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► Standards Based

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JBI 1.0: Invocation example



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► Standards Based

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connectivity

JBI 1.0: Packaging

- × META-INF/jbi.xml
- × Components
- × Shared Libraries
- × Service Units
- × Service Assemblies

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Standards Based

Flexible

► **Reliable**

Breadth of
connectivity

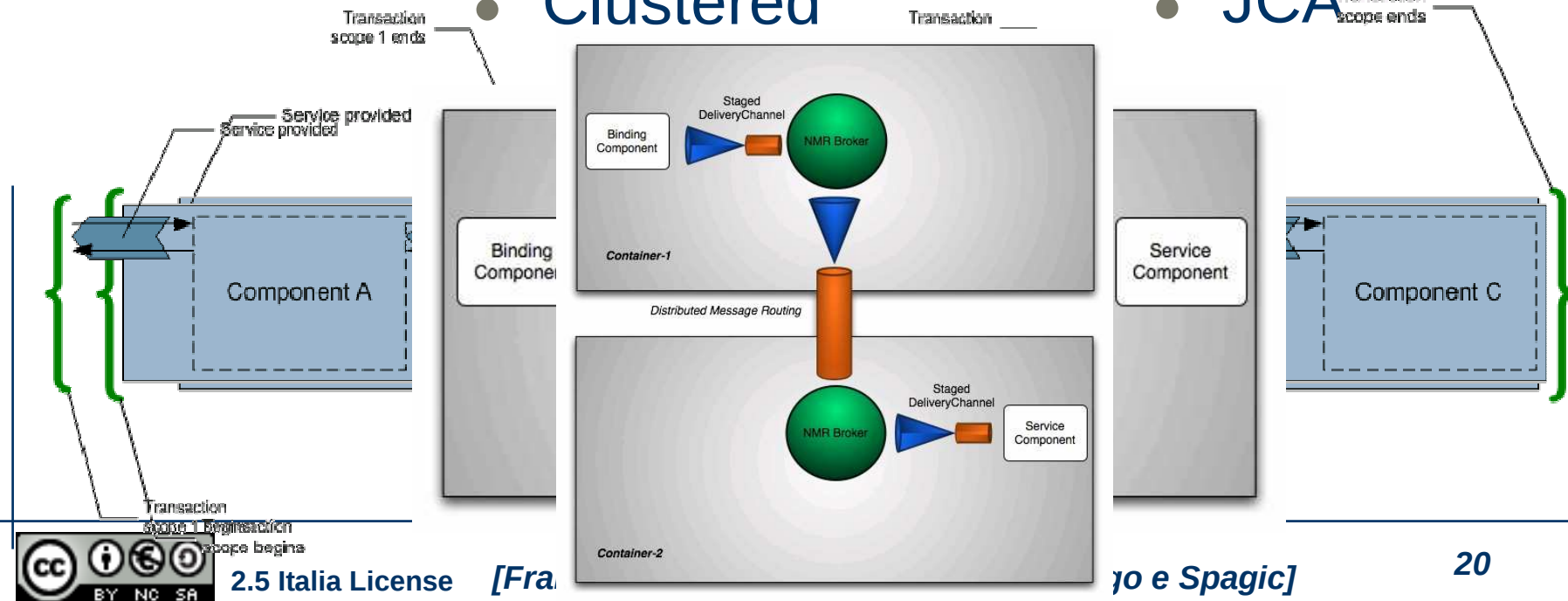
Reliable

× QoS attributes

- Sync / Async
- Persistent
- Transactional
- Clustered

× Flows

- ST
- SEDA
- JMS
- JCA



Standards Based

Flexible

Reliable

► Breadth of
connectivity

Breadth of Connectivity

- × Binding Components
 - http (http/soap), jms (jms/soap)
 - file, ftp, xmpp
 - Email, RSS, Jabber...
- × Service Engines
 - Bean, EIP, Camel, JAX-WS, Drools, Quartz, Saxon, Script, WS-Notification
- × Third Party Components
 - ODE, CICS, Corba

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► Context

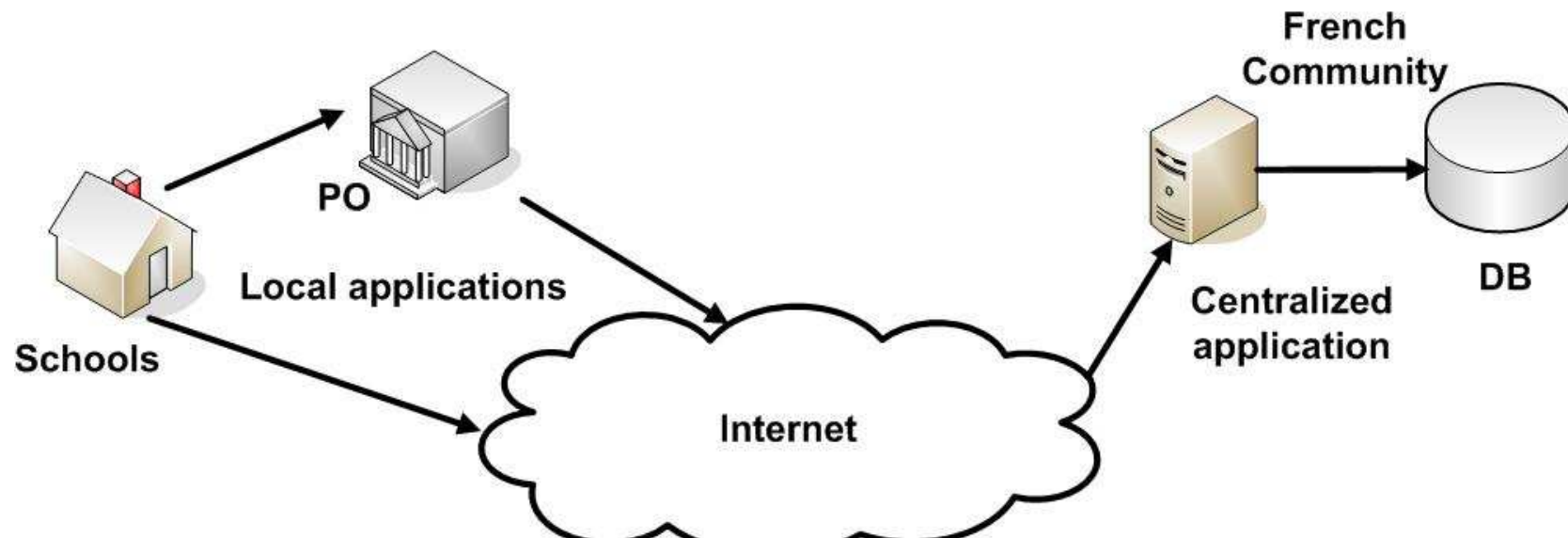
Architecture
Development
Administration
Stress Tests

✕ Goals

- Improve communication between Belgium's French Community and other actors
- Implement SOA

✕ Use Case : pupils registration

✕ Before : various communication ways
(paper documents, mails, excel sheets, ...)



Courtesy of IONA Technologies

Context

► Architecture

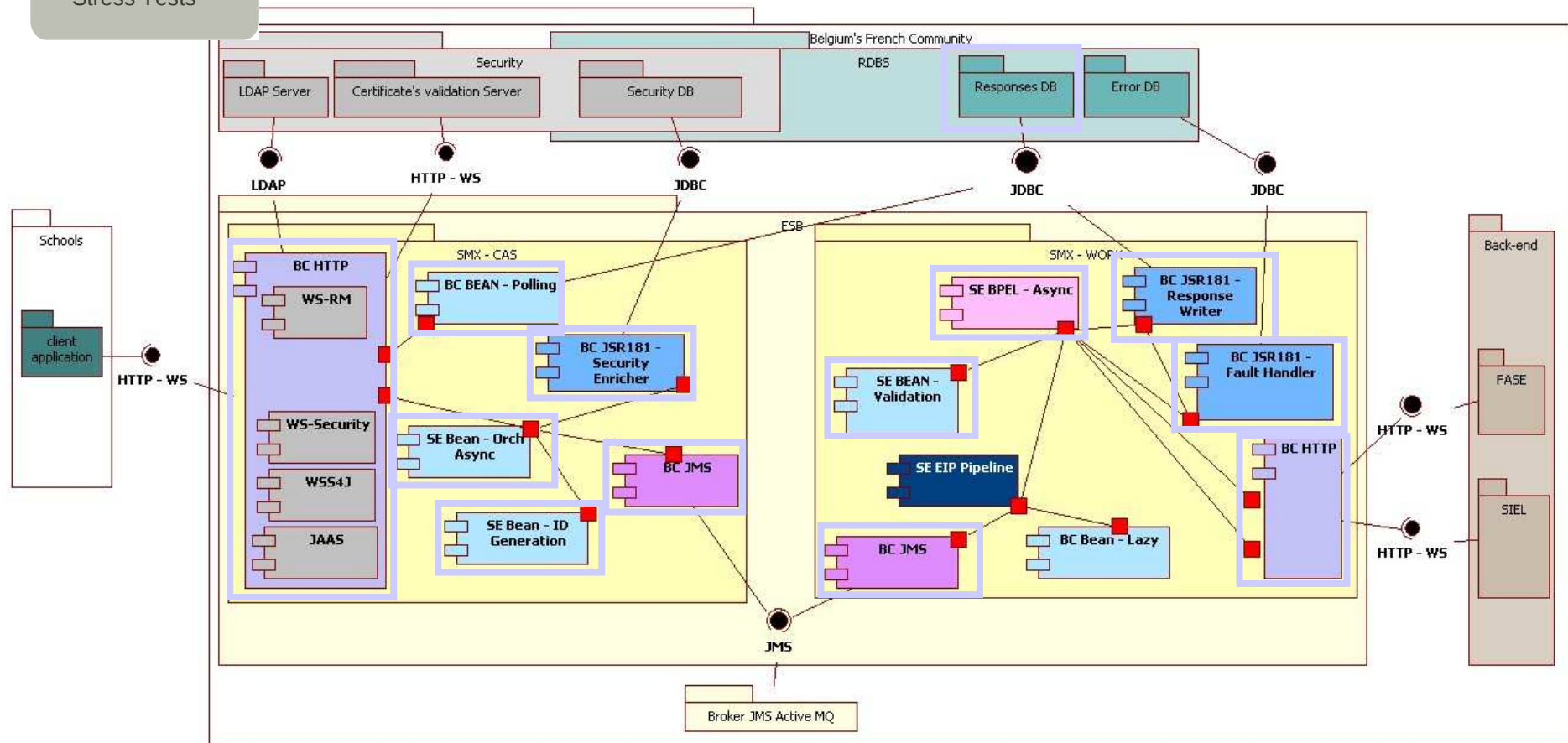
Development

Administration

Stress Tests

✕ Asynchronous communication

- JMS between SMX-CAS and SMX-WORK
- polling to retrieve responses



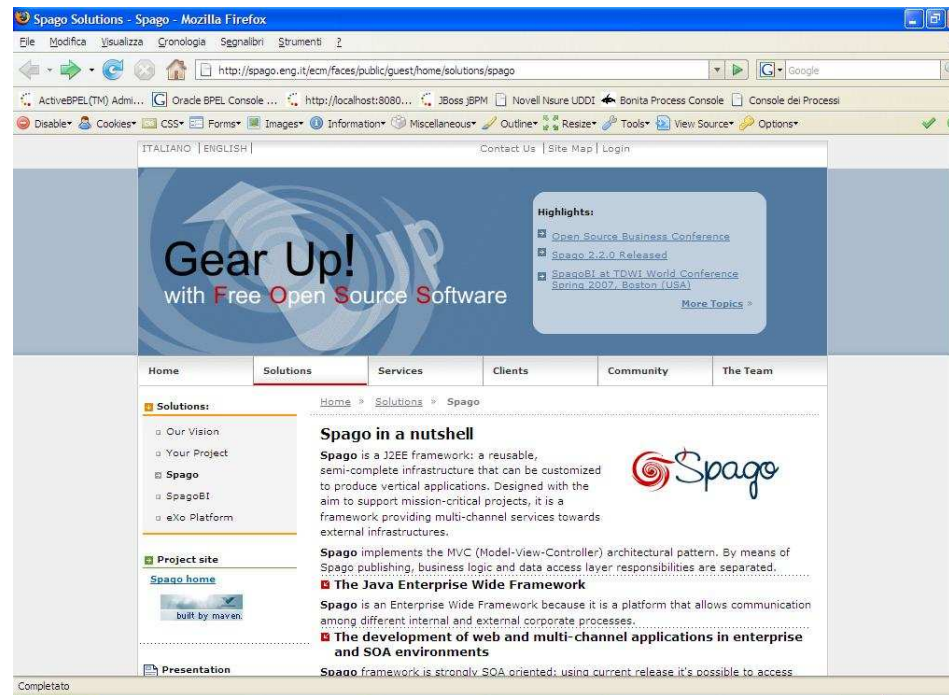
Courtesy of IONA Technologies





- <http://spago.ow2.org>
- <http://spagic.org>
- Mailing list: spago-dev@ow2.org
- Mailing list: spagic-dev@ow2.org
- My address: gianfranco.boccalon@eng.it

Le esercitazioni consistono nel contribuire, tramite invio di codice, a estensioni di Spago o correzioni di errori conosciuti. Tutte le richieste di miglioramento e di correzione sono censite nel tracking system (JIRA) di Spagic, a cui si accede previa registrazione (libera).



Il tracking system di Spagic è accessibile all'URL <http://spagoworld.org/ecm/faces/public/guest/>, sotto la voce Tracker.

Il sito è accessibile dopo aver effettuato il login.



Nel tracking system sono censite tutte le richieste di miglioramento o di correzione. Non tutte le richieste sono oggetto delle esercitazioni.

The screenshot shows the Spago World JIRA interface. The browser window title is "Browse Project - Spago World JIRA - Mozilla Firefox". The address bar shows "https://spago.eng.it/jira/browse/SPAGO". The page features a navigation bar with links: HOME, BROWSE PROJECT, FIND ISSUES, CREATE NEW ISSUE, and ADMINISTRATION. Below this, the "All Projects : Spago (Key: SPAGO)" section is visible. The "Project Lead: Gianfranco Boccalon" is listed. There are links for "Create a new issue in project Spago", "Administer Project", and "Release Notes". The "Select:" section includes tabs for "Open Issues", "Road Map", "Change Log", and "Popular Issues". The "Components" table lists components with open issues: axis (1), core (4), elb (1), portlet (1), and web (1). The "Versions" table lists versions with open issues: 2.2.0 (1) and Unscheduled (5). The "Reports" section includes "Single Level Group By Report" and "Preset Filters". The "Project Summary" section shows a bar chart for "Open" (6, 22%) and "Closed" (21, 78%) issues. The "Open Issues" section shows a bar chart for "By Priority": Major (1, 17%), Minor (3, 50%), and Trivial (2, 33%). The "By Assignee" section shows a bar chart for "Gianfranco Boccalon" (1, 17%) and "Unassigned" (5, 83%). The footer of the page states: "This site is running on Atlassian JIRA, the Professional Issue Tracker with a free Open Source Project / Non-profit License. Download and evaluate JIRA for your organisation." The URL "spago.eng.it" is visible in the bottom right corner.

Component	Open Issues
axis	1
core	4
elb	1
portlet	1
web	1

Version	Open Issues
2.2.0	1
Unscheduled	5

Issue Status	Count	Percentage
Open	6	22%
Closed	21	78%

Priority	Count	Percentage
Major	1	17%
Minor	3	50%
Trivial	2	33%

Assignee	Count	Percentage
Gianfranco Boccalon	1	17%
Unassigned	5	83%

Le possibili esercitazioni sono censite sotto la voce Project Summary->Open, il che significa che sono chiari i requisiti ma non è ancora stata assegnata l'attività.

Issue Navigator - Spago World JIRA - Mozilla Firefox

Current view: ☐ Bulk Change: all 6 issue(s) ☐ Configure your Issue Navigator

T	Key	Summary	Assignee	Reporter	Pr	Status	Res	Created	Updated	Due
	SPAGO-31	The method toXML of the SourceBean doesn't handle properly multivalued attributes	Unassigned	Gianfranco Boccalon		Open	UNRESOLVED	04/May/07	04/May/07	
	SPAGO-28	SourceBean should use JAXP to discover a SAX parser	Unassigned	Ken Gels		Open	UNRESOLVED	02/Apr/07	02/Apr/07	
	SPAGO-22	Extend the usage of renderers to AdapterPortlet, AdapterAxis and AdapterSOAP	Gianfranco Boccalon	Gianfranco Boccalon		Open	UNRESOLVED	15/Feb/07	04/May/07	
	SPAGO-21	Add Exception Handling to SpagoEJB	Unassigned	Nicola Busc		Open	UNRESOLVED	14/Feb/07	14/Feb/07	
	SPAGO-16	Connection Pool definition: optional driver-version parameter	Unassigned	Luca Piscato		Open	UNRESOLVED	26/Jan/07	26/Jan/07	
	SPAGO-15	Default Sql Mapper Class	Unassigned	Luca Piscato		Open	UNRESOLVED	26/Jan/07	26/Jan/07	

Le possibili esercitazioni sono le seguenti:

- SPAGIC-131: Optimize the creation of the queue connection in the class `AuditingExchangeASyncListener`: it should be performed only once, since it supports concurrent use (abbastanza semplice)
- SPAGIC-106: Add to the process instance properties the server location where the instance is executing (mediamente complessa)
- SPAGIC-102: If the database is not available, the ODE listener doesn't allow the process execution (molto semplice)
- SPAGIC-77: Implement Synchronizer as Servicemix-bean component (molto complessa)

The screenshot shows a web browser window displaying the Spago World JIRA issue page for SPAGIC-131. The browser's address bar shows the URL <https://spago.eng.it/jira/browse/SPAGIC-131>. The page title is "[#SPAGIC-131] Optimize the creation of the queue connection in the class AuditingExchangeASyncListener: it should performed only once, since it ...". The Spago World logo is visible in the top left. The navigation bar includes links for HOME, BROWSE PROJECT, FIND ISSUES, CREATE NEW ISSUE, and ADMINISTRATION. The issue details on the left show: Key: SPAGIC-131, Type: Improvement, Status: Open, Priority: Major, Assignee: Gianfranco Boccalon, Reporter: Gianfranco Boccalon, Votes: 0, and Watchers: 0. The main content area displays the issue title, a description, and metadata like Component/s (ServiceMix Listener), Affects Version/s (2.0.0), and Fix Version/s (2.1.0). There are tabs for All, Comments, and Change History, with a message stating "There are no comments yet on this issue." The bottom of the page features a search bar with the text "Trova: spagic" and a status bar with "Completato" and the URL "spago.eng.it".



The screenshot shows a Mozilla Firefox browser window displaying the SpagoWorld JIRA issue page for SPAGIC-106. The browser's address bar shows the URL <https://spago.eng.it/jira/browse/SPAGIC-106>. The page title is "[#SPAGIC-106] Add to the process instance properties the server location where the instance is executing - Spago World JIRA - Mozilla Firefox".

The JIRA interface includes a navigation bar with links: HOME, BROWSE PROJECT, FIND ISSUES, CREATE NEW ISSUE, and ADMINISTRATION. A "QUICK SEARCH:" field is also present. The user is identified as "Gianfranco Boccalon" with links for History, Filters, Profile, and Log Out.

The issue details for SPAGIC-106 are as follows:

- Key:** SPAGIC-106
- Type:** Improvement
- Status:** Open
- Priority:** Minor
- Assignee:** Gianfranco Boccalon
- Reporter:** Gianfranco Boccalon
- Votes:** 0 (View)
- Watchers:** 0 (View)

The "Available Workflow Actions" section includes:

- ☐ Start Progress
- ☐ Resolve Issue
- ☐ Close Issue

The "Operations" section includes:

- ☐ Assign this issue
- ☐ Clone this issue
- ☐ Comment on this issue
- ☐ Delete this issue
- ☐ Edit this issue
- ☐ Move this issue
- ☐ Voting: You cannot vote for an issue you have reported.
- ☐ Watching: You are not watching this issue.

The issue description is: "Add to the process instance properties the server location where the instance is executing". It was created on 18/Jan/08 05:55 PM and updated on 24/Jan/08 05:16 PM. The component is "Console, ServiceMix Listener", and it affects version 2.1.0.

The description field contains the text: "And show it somewhere in the console." There are no comments yet on this issue.

The footer of the browser window shows a search bar with the text "Trova: spagic", a status bar with "Completato", and a footer with the URL "spago.eng.it".

The screenshot shows a Mozilla Firefox browser window displaying the SpagoWorld JIRA issue page for SPAGIC-102. The browser's address bar shows the URL <https://spago.eng.it/jira/browse/SPAGIC-102>. The page title is "[#SPAGIC-102] If the database is not available, the ODE listener doesn't allow the process execution - Spago World JIRA - Mozilla Firefox".

The JIRA interface includes a navigation bar with links: HOME, BROWSE PROJECT, FIND ISSUES, CREATE NEW ISSUE, and ADMINISTRATION. A user profile bar at the top right shows "User: Gianfranco Boccalon" with links for History, Filters, Profile, and Log Out. A "QUICK SEARCH:" bar is also present.

The issue details for SPAGIC-102 are as follows:

- Key:** SPAGIC-102
- Type:** Bug
- Status:** Open
- Priority:** Minor
- Assignee:** Gianfranco Boccalon
- Reporter:** Gianfranco Boccalon
- Votes:** 0 (View)
- Watchers:** 0 (View)

The issue title is "Spagic: If the database is not available, the ODE listener doesn't allow the process execution". It was created on 17/Jan/08 08:16 PM and updated on 24/Jan/08 05:02 PM. The component is "ODE listener", it affects version "2.0.0", and the fix version is "2.1.0".

The description states: "This because it produces some exceptions." There are no comments yet on this issue.

Available Workflow Actions include: Start Progress, Resolve Issue, Close Issue, Assign this issue, Clone this issue, Comment on this issue, Delete this issue, Edit this issue, Move this issue, Voting (You cannot vote for an issue you have reported), and Watching (You are not watching this issue).

The search bar at the bottom shows "Trova: spagic" and "Successivo", "Precedente", "Evidenzia", "Majuscole/minuscole", and "Testo non trovato". The status is "Completato".



The screenshot displays the SpagoWorld JIRA web application in a Mozilla Firefox browser window. The browser's address bar shows the URL <https://spago.eng.it/jira/browse/SPAGIC-77>. The page features the SpagoWorld logo and a navigation menu with links: HOME, BROWSE PROJECT, FIND ISSUES, CREATE NEW ISSUE, and ADMINISTRATION. A 'QUICK SEARCH' bar is also present. The main content area displays the details for issue SPAGIC-77, titled 'Implement Synchronizer as Servicemix-bean component'. The issue is categorized as 'Improvement' with a status of 'Open' and a priority of 'Major'. It was created on 11/Jan/08 at 05:14 PM and last updated on 24/Jan/08 at 05:34 PM. The component is 'Service Manager', and it affects versions 2.0.0 and 2.1.0. The reporter is Gianfranco Boccalon. On the left sidebar, there are links for 'Issue Details' (XML, Word), 'Available Workflow Actions' (Resolve Issue, Close Issue), and 'Operations' (Assign, Clone, Comment, Delete, Edit, Move, Voting, Watching). The description of the issue states: 'Now it's a lightweight component'. The comments section is empty, and the change history is also empty. The bottom of the page shows a search bar with the term 'spagic' and a status message 'Testo non trovato'.



Il codice può essere scaricato dal forge di OW2:

<http://forge.objectweb.org/projects/spagic>

o direttamente dall'SVN di OW2:

<svn://svn.forge.objectweb.org/svnroot/spagic>

Il codice presente sull'SVN di Eclipse non è necessario per le esercitazioni:

<svn://dev.eclipse.org/stp/org.eclipse.stp.model>



Deve essere inviata la patch contenente il codice della contribuzione: la patch è un file di testo creato automaticamente che contiene le differenze tra il codice “ufficiale” e il codice contenente la contribuzione.

Viene creata con gli strumenti dell’ambiente di sviluppo.

I commenti nella contribuzione devono essere in inglese.

Se possibile deve essere mantenuta la retrocompatibilità della contribuzione con il codice esistente sviluppato con Spagic.