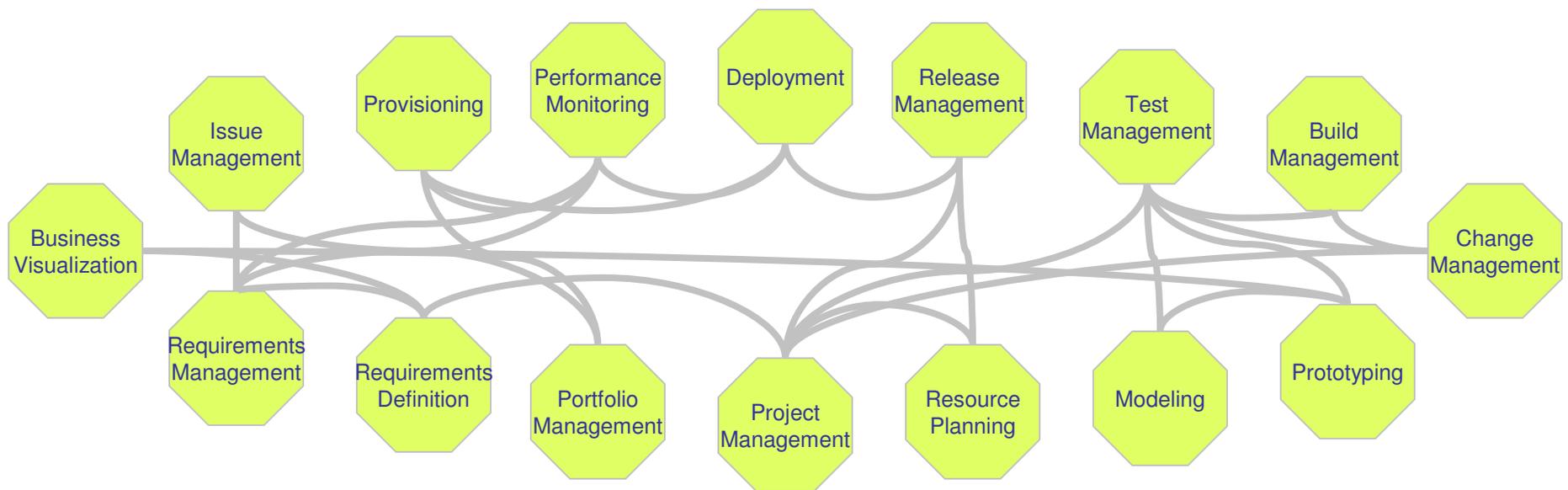




Application Lifecycle Framework (ALF) Creation Review

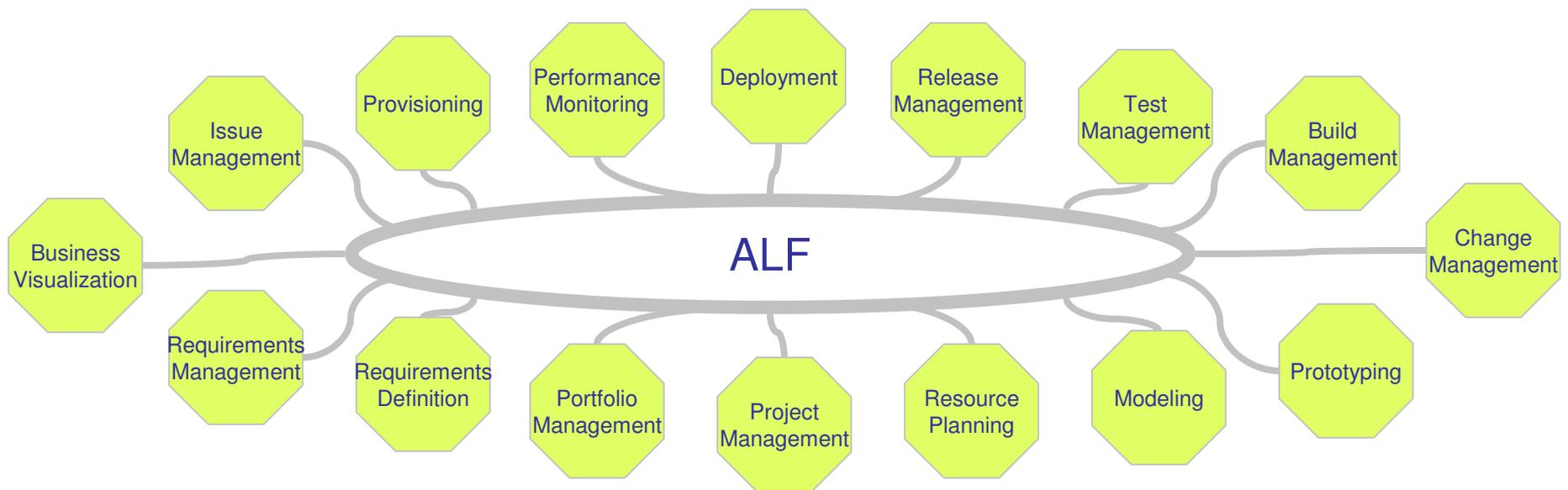
July 15, 2005

What developers are struggling to support



Point-to-point integration of n tools can mean up to $n(n-1)/2$ combinations; This does not scale!

A better approach



Integration of n tools with ALF requires n integrations; linear growth of connections

Project Objectives



1. Provide a SOA-based cross-tool communication infrastructure for ALM solutions
2. Leverage Eclipse, open source components, and industry standards
3. Develop common & extensible domain-specific vocabularies for improved interoperability
4. Provide conformance rules for varying levels of participation through a layered web services extensibility API

Project Approach



1. Define ALF “Events” and “Service Flows” to enable loosely-coupled tools integration leveraging the OASIS WS BPEL proposal
2. Develop Eclipse IDE plug-ins for Software Developers designing and building ALM interoperability solutions
3. Establish specific ALM vocabularies using XML, XSD, and WSDL
4. Provide guidelines and best practices for web services to enhance ALF interoperability

ALF and SOA



- Eclipse ALF can be thought of as “*SOA for Development*”, and as such, incorporates the best features of SOA:
 - Events, Web services and Web Service Orchestration
- Eclipse ALF is all about tool integration
 - This means tool coordination and, if warranted, synchronization
 - For coordination to occur, ALF must be aware of what is happening in the tools
 - Not that “John is editing”, but significant events, such as John has saved his changes or checked in a particular file
 - Tools tell ALF what is happening via *Events*
 - ALF tells tools what to do via ALF Service Flows

ALF Events



- An *Event* is a web service message sent from a tool to the ALF infrastructure
 - Events are lightweight messages in the sense that they only carry the minimum amount of information
 - ALF will provide an extensible set of event types
- Within ALF, an *Event Manager* determines what should happen when an event occurs:
 - Determine which ALF Service Flows should be fired
 - The Event Manager asks the ALF Service Flow Orchestrator to start an instance

ALF Service Flows



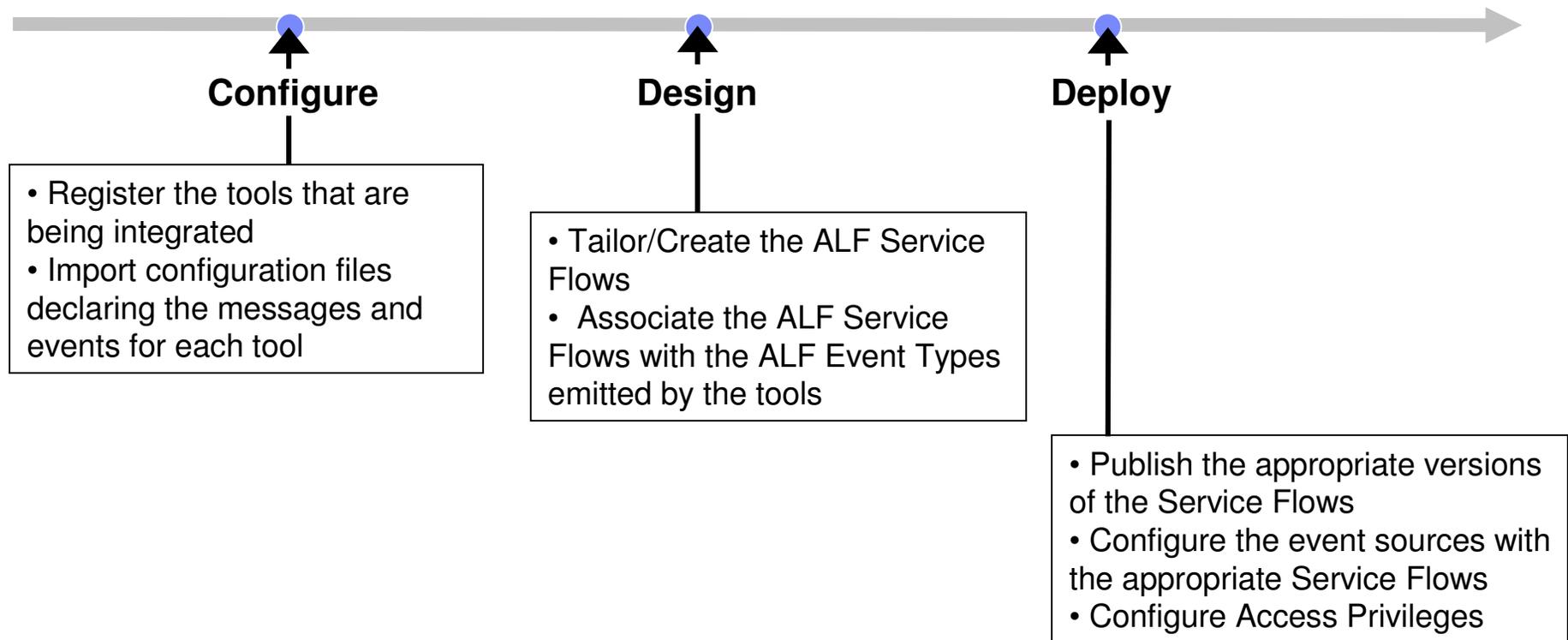
- Service Flows are the ALF “Event Handlers”
 - Service Flows specify actions to take as a result of an event
 - Service Flows run on a WS BPEL engine
 - Tools present their access points to ALF using Web Services
 - Services in ALF Service Flows are used to Query or Take Action
 - Actions require coordination in case of failure
- Web Services and WS BPEL
 - ALF will consolidate best practices as ALF recommendations
 - Using ALF recommendations allows improved Tool participation
 - WS BPEL is used to orchestrate the Web services to produce an ALF Service Flow
 - WS BPEL provides a Compensating Transaction model

Example Use Case



- Using an Eclipse-plug-in for an **issue tracking system**, a user enters an issue
- The user continues to perform some analysis on that issues in that system and he classifies it with a *Type*, *Priority* and *Severity*
- Completion of this classification triggers an event which launches an ALF Service Flow to evaluate the issue and determine if it should be:
 - Added as a new requirement in the **Requirement management system**, or
 - Handled as a task in current projects and added to the **project management system**
- *Note:* In this scenario all human interaction is done within the respective systems; The ALF Service Flow provides the link between these systems

Preparing for tool interoperability



ALF in Action

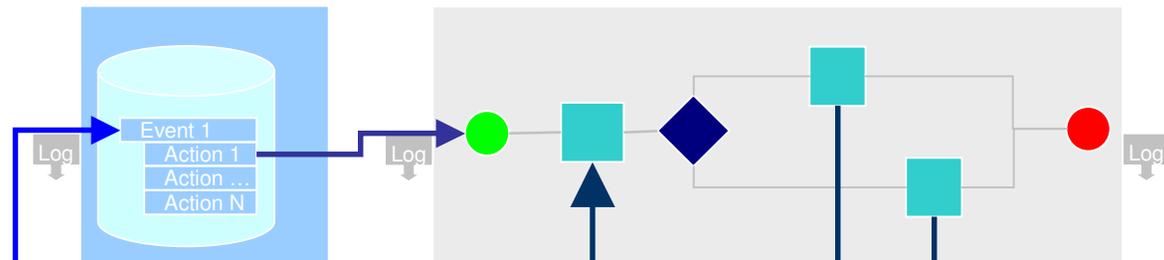


Eclipse

Issue Mgmt. Plug-in

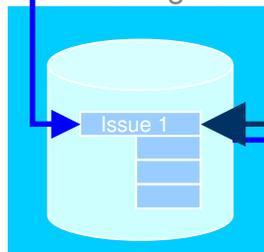
[Blue Box]	Type <input type="text"/>
	Priority <input type="text"/>
	Status <input type="text"/>
	OK

ALF

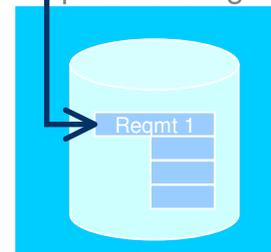


ALM Systems

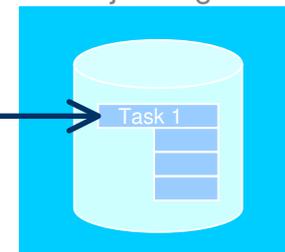
Issue Mgmt.



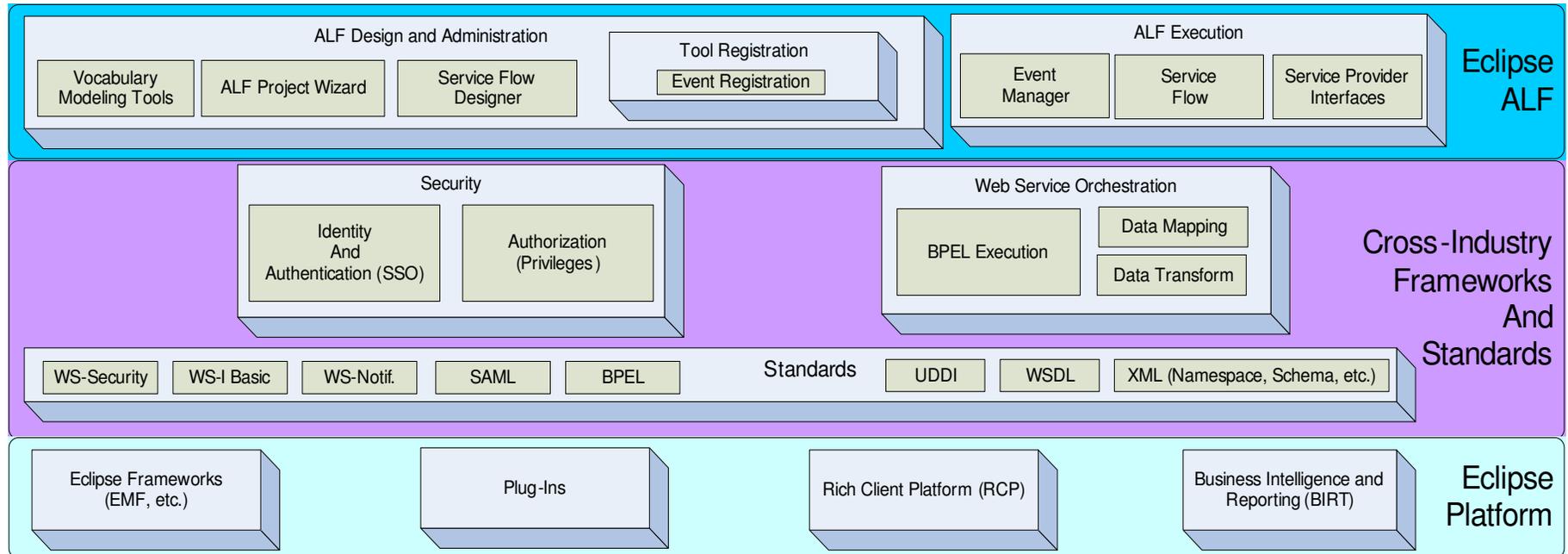
Requirement Mgmt.



Project Mgmt.



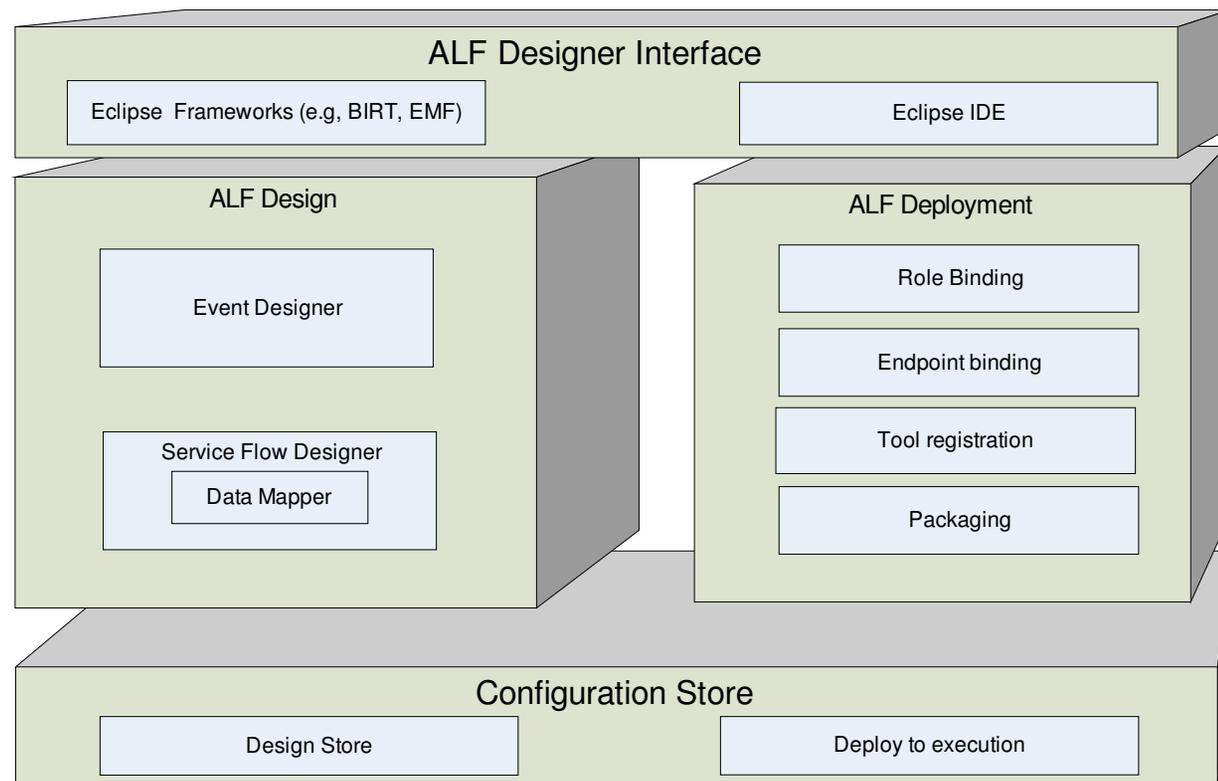
ALF Landscape



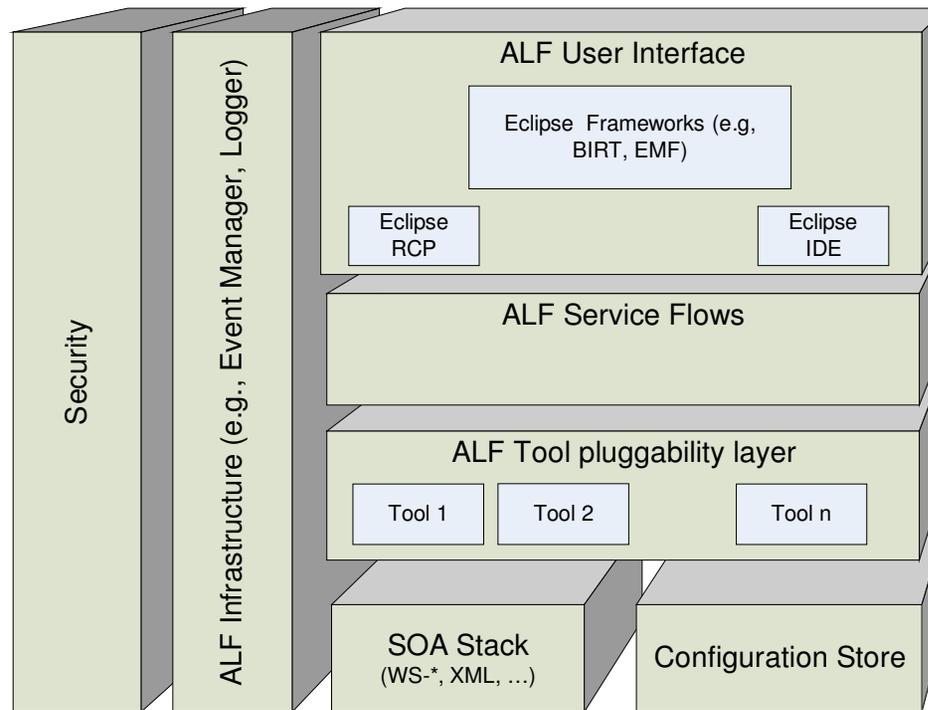
ALF Plans to leverage or coordinate with the following projects or proposals:

- BIRT – For dashboard reporting
- EMF – For textual UIs (initiation of service flows & inspection of results)
- GMF – For graphical UIs (designers)
- MDDI – Possible coordination or use of the model bus (tentative)
- Higgins – Possible use of user identity and credentials for Single Sign-On

ALF Configuration, Design & Deployment



ALF Execution



Committers



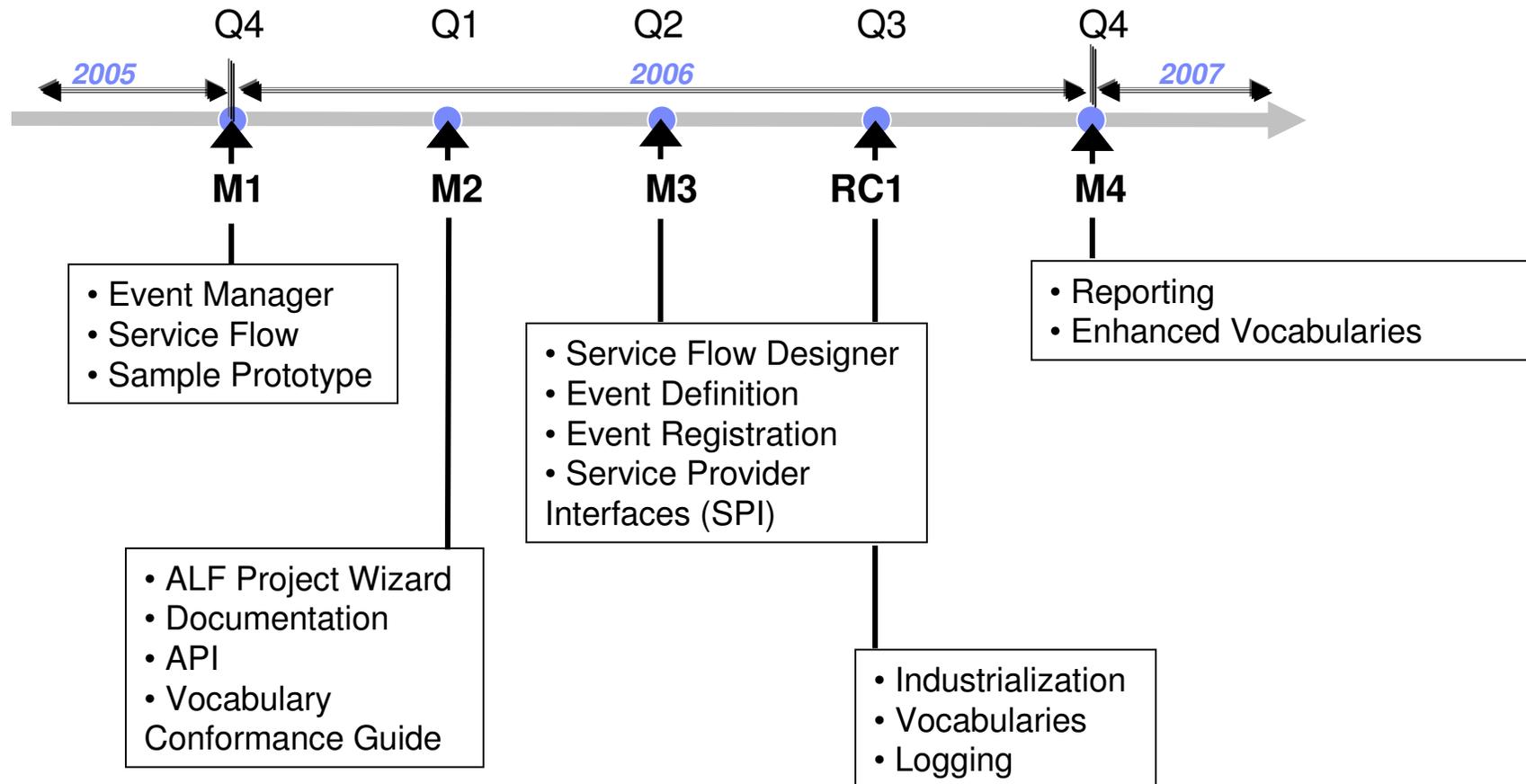
- **BuildForge**
 - Richard Landry
 - Emeka Obianwu
- **Cognizant Technology Solutions**
 - Siva Visweswaran
 - Suresh Venugopal
 - Mohana Krishna
 - Suresh Ganesan
 - Larry Gordon
- **Secure Software**
 - Mark Patterson
 - Tracey Mustacchio
- **Segue**
 - Ernst Ambichl
 - Andre Pino
- **Serena Software**
 - Ali Kheirulomoom
 - Brian Carroll
 - Boris Kapitanski
 - Tim Buss
 - Kevin Parker
 - Dr. Kelly Shaw
 - Kerstin Baird
 - Michael Schumann
 - Tom Clement
 - Arul Paramasivam
 - Anandan Kuzhandai
- **UBS**
 - Walter Berli
 - Aniello Bove

Status



- Architecture Blueprint Proposed
- Many expressions of interest and support
- Supporting technology selection in progress
- Conducted 2-day planning meeting with committers (July 6th & 7th)
- Next 45-Days Deliverable:
 - Formation of Requirement, Planning, and Architecture sub-committees → July 29
 - Produce the project plan for the initial Milestone (M1: Prototype) → July 29
 - Document the use case to be built for Prototype → August 31
 - Final selection of BPEL engine for Prototype → August 31

ALF Preliminary Roadmap



Questions?



ALF Proposal:

- <http://www.eclipse.org/proposals/eclipse-almiff/index.html>

ALF Newsgroup:

- <News://news.eclipse.org/eclipse.technology.almiif>



Supplementary Slides

July 15, 2005

Gathering Support



- Over 200 Enterprise customers approached in last 3 months
- Customers who received a detailed presentation of the project at their request
 - Bank of Montreal
 - Ecolab*
 - Financial Engines
 - Financial regulator (name withheld)
 - Förening Sparbanken
 - Franklin Templeton
 - GE Capital
 - Intuit*
 - SBC
 - Sears Canada
 - State Farm Insurance*
 - TOSTA*
 - UBS*
- Customers who are scheduled to receive a detailed presentation of the project at their request
 - Camelot
 - Fidelity Investments
 - France Telecom
 - Legal & General
 - Prescription Pricing Authority (PPA)
 - Royal Bank of Scotland
 - Syntegra
- Analysts approached
 - Teresa Jones, Butler Group
 - Mike Blechar₁, Gartner
 - Jim Duggan, Gartner
 - Mark Driver₂, Gartner
 - Carl Zetie₃, Forrester

1: Supportive
2: Supportive and will act as reference
3: Supportive and will write into next ALM tools briefing

*Will give support to the project in terms of input to requirements, oversight of documents review of designs etc.