



# Equinox Community

## Runtime Technology at Eclipse

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# What is the Equinox Community

- The Equinox community is the face for runtime technologies at Eclipse
- Runtime technology is wide spread at Eclipse, but not always easy to find
- Ⓐ ▪ The new Eclipse RT (Runtime, not Realtime) top level project helps to coordinate the runtime efforts
- Ⓑ ▪ The Equinox Community will foster and promote runtime technologies at Eclipse – independently of their location in a top level project



## Why a new top level project?



- There was no home for runtime technologies
  - Technology is mainly seen as an incubator
  - Equinox is a subproject of the Eclipse project, and further nesting of projects is not in sync with our rules. Also the Eclipse project is mainly known for delivering the Eclipse SDK
- Common PMC eases communication and integration
  - Examples in the tooling space are the Eclipse project and the WebTools project – their integration and out of the box usability is better than integration between arbitrary projects
- Participation is optional, nobody needs to move
  - The new top level project is just the starting point. It is likely that we will end up with multiple top level projects for runtime just as in the tools space (Eclipse project, Tools project, WebTools project ...)

# Runtime projects at Eclipse.org



## Eclipse Runtime projects

Name	Functional area
<ul style="list-style-type: none"><li>• BIRT</li><li>• Equinox</li><li>• RAP</li><li>• eRCP</li><li>• ECF</li></ul>	<ul style="list-style-type: none"><li>• Reporting engine</li><li>• OSGi</li><li>• AJAX platform</li><li>• embedded RCP</li><li>• Communication</li></ul>
<ul style="list-style-type: none"><li>• EclipseLink</li><li>• Swordfish</li><li>• Riena</li></ul>	<ul style="list-style-type: none"><li>• Object persistence</li><li>• SOA Runtime</li><li>• C/S Appl. Platform</li></ul>
<ul style="list-style-type: none"><li>• EILF</li></ul>	<ul style="list-style-type: none"><li>• Enterprise Search</li></ul>

**Mature projects**

**Projects in incubation**

**Proposed**

**Many more Eclipse projects provide runtimes: CDO, EMF, Higgins, Net4j, TPTP, ...**



## A brief history

- Creation of Eclipse RT was community driven
  - Runtime summit in December 2007 with broad participation
  - Adopter feedback:
    - Difficult to find and to gather information
    - Sometimes difficult to contribute back
    - Comprehensive platform – seen as competitor to .NET
  - Concerns
    - Afraid of discontinuation of tool efforts
    - Prefer industry standards to de facto standards
    - Early commoditization

*The Eclipse RT charter and the Equinox community address feedback and concerns*



# Eclipse RT's Mission

- Eclipse RT is designed to **foster, promote and house runtime efforts** in the Eclipse community. These efforts strive towards the common goal of providing a uniform component model across a wide variety of computing environments. The Equinox framework and OSGi form the basis of this infrastructure.
- Eclipse RT projects target "clients" and "servers" across embedded devices, desktops, and enterprise systems, and **provide those intermediate software services** which enable applications to be more easily and concisely constructed across these environments. This supports and extends the Equinox **vision of a consistent programming and component model** where developers create application domain code that runs on a variety of platforms.
- By providing a **consistent symmetric architecture**, Eclipse RT technology enables developers to focus on the business problem at hand and still have many system architecture options available at deployment time.



# Scope of the Eclipse RT project

- Developing and delivering the OSGi framework implementation used for all of Eclipse.
- Implementation of all aspects of the OSGi specification (including but not limited to the Enterprise Expert Group, Mobile Expert Group and Vehicle Expert Group work).
- Investigation and research related to future versions of OSGi specifications and related runtime issues.
- Implementation of key framework services and extensions needed for running Eclipse (e.g., the Eclipse Adaptor, Extension registry) and deemed generally useful to systems using Equinox.
- All implementations must be based on OSGi and run on Equinox.
- The implementation of generally applicable runtime standards (e.g., OASIS, JCP).
- Incidental tooling efforts to enable or facilitate particular runtime functions in conjunction with (e.g., as a component of) a sub-project.

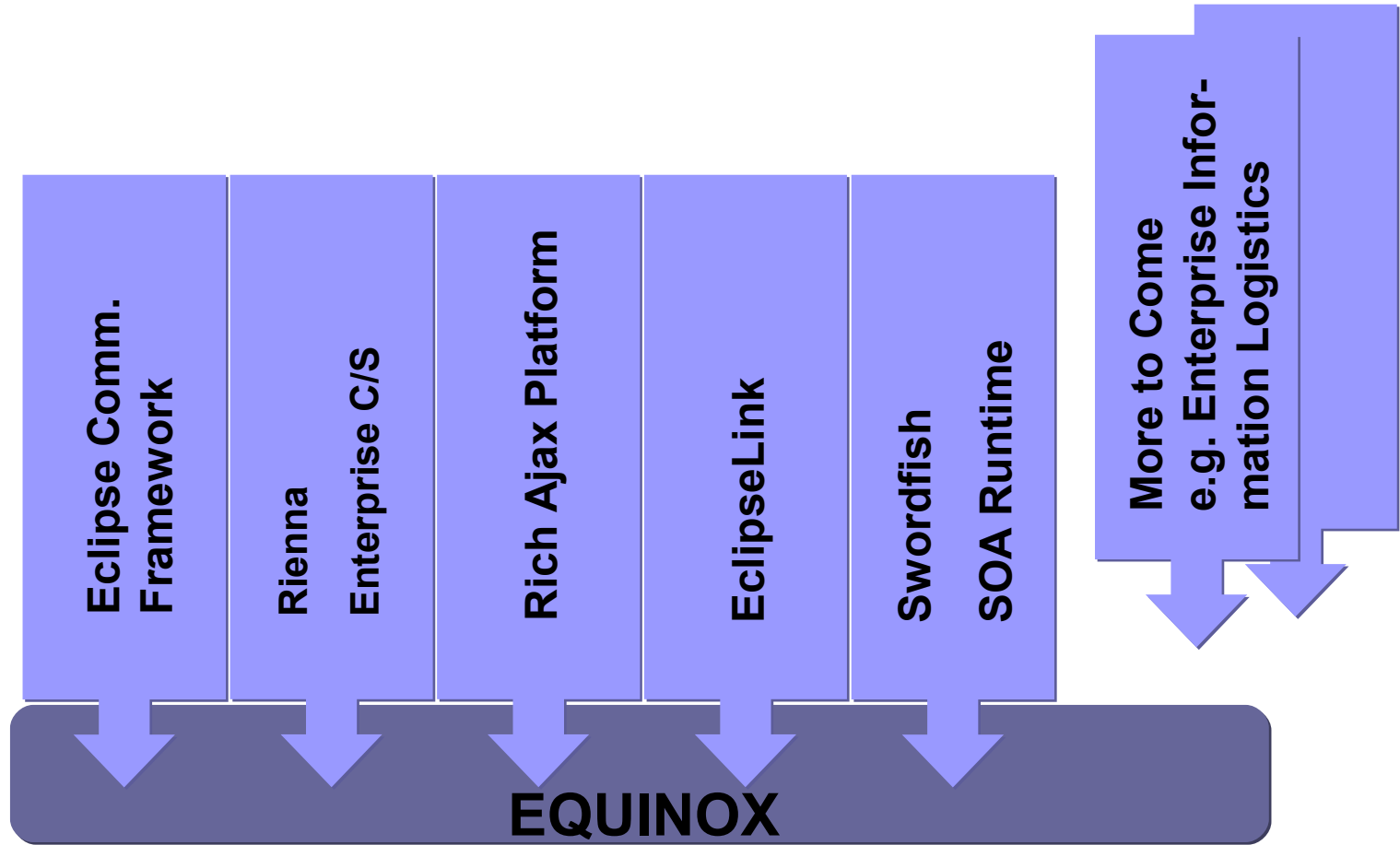
# Key characteristics of today's and future Eclipse Runtime projects



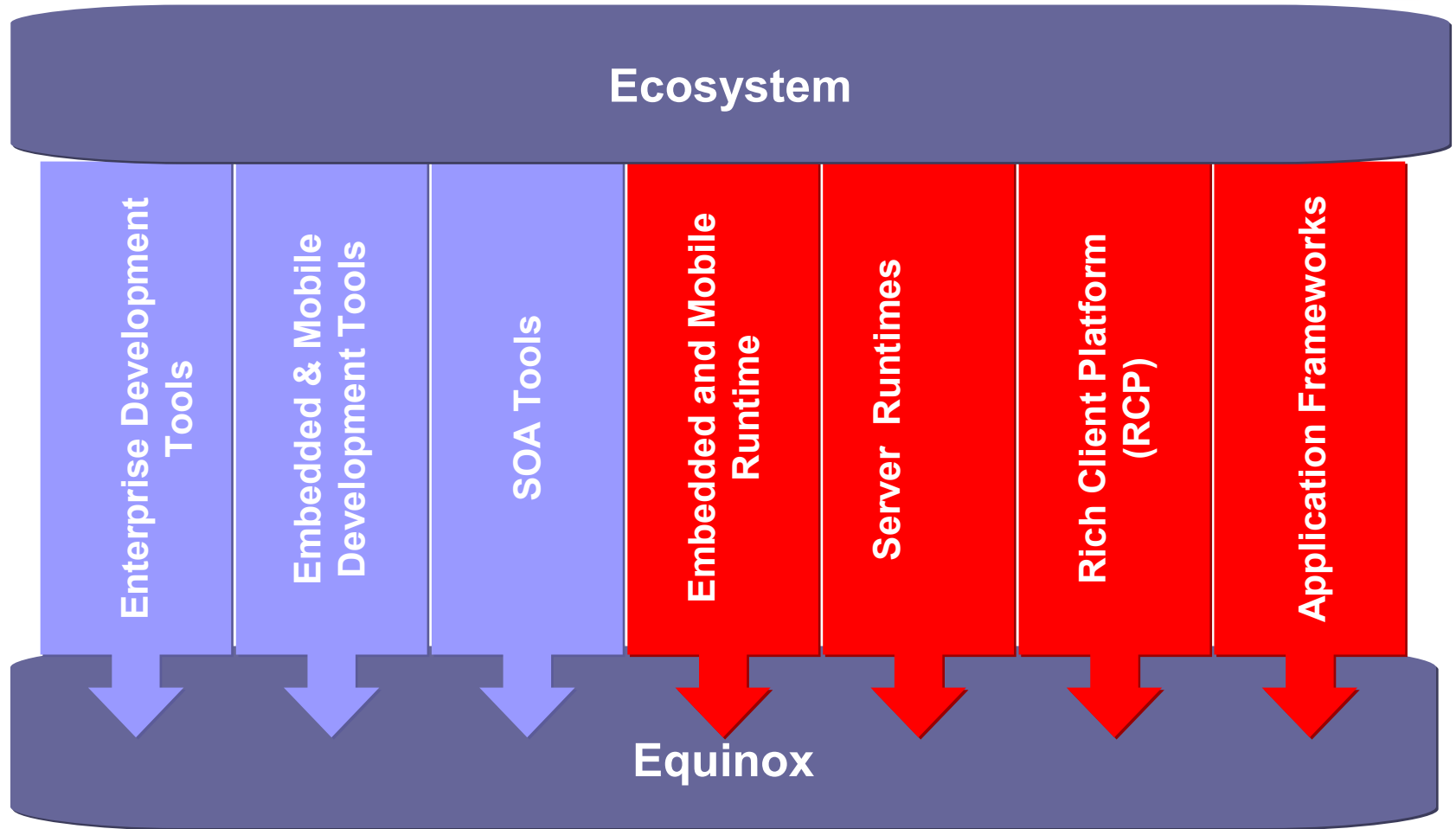
- **Provide a common platform (Equinox OSGi) for different Eclipse Runtime technologies**
- **Provide extensibility through common APIs leveraging existing standards**
- **Facilitate integration between Eclipse Runtime components**
- **Promote integration with Eclipse tooling technologies**



6 Eclipse runtime sub-projects are participating in the new top-level Eclipse RT project from the start



# Pillars of Eclipse – Tools and Runtimes





# Our delivery strategy

- **Integration testing**
  - Making sure the different runtime projects play nicely together
  - Provide infrastructure, allow easy contribution of tests
  - Participation should be possible for any project providing runtime technology
- All in one downloads for SDK, runtime
- A separate release train for runtime technology?

# Equinox and OSGi – adoption from bottom up

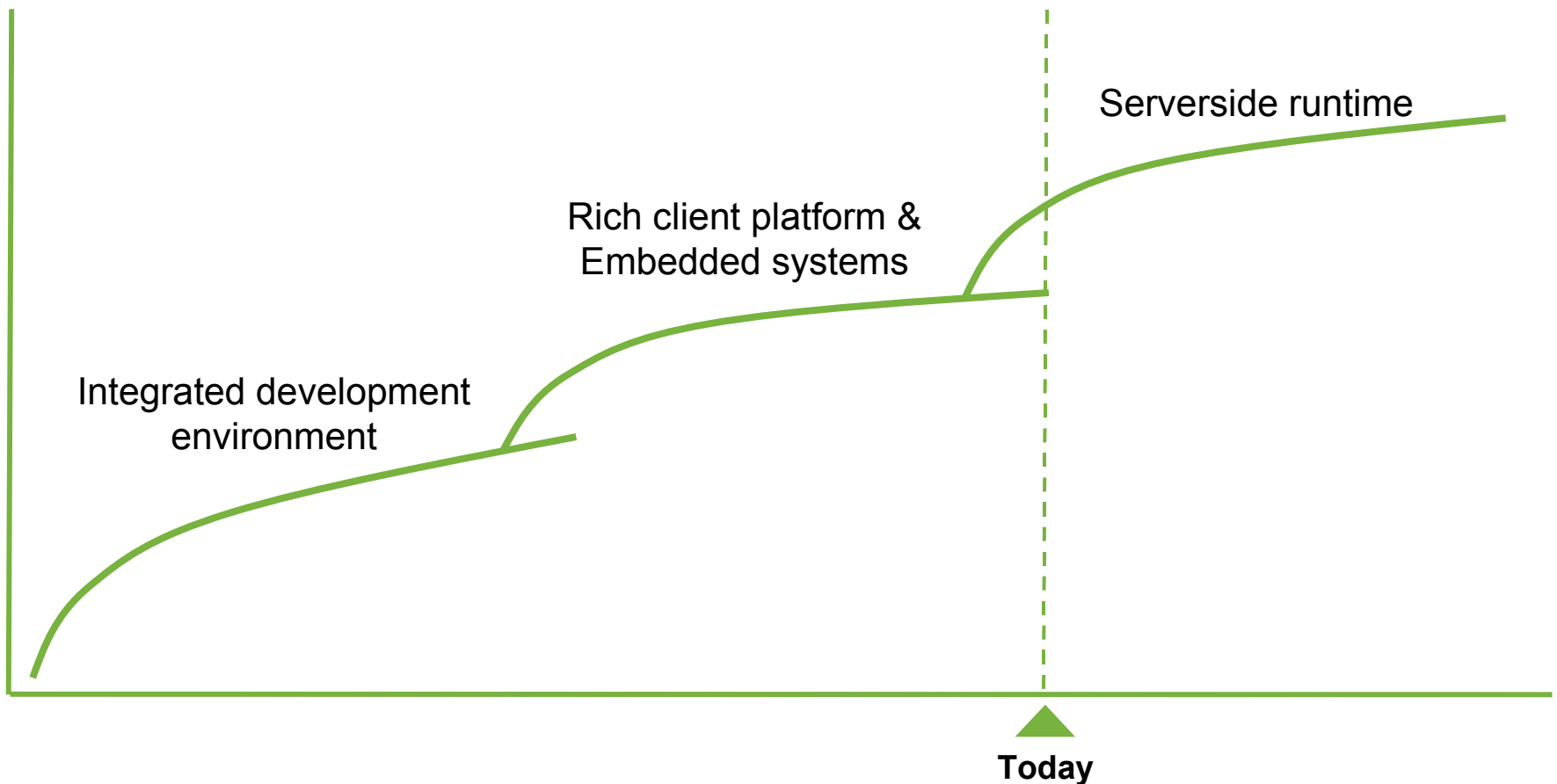


- Equinox is getting adopted inside and outside the Eclipse community
- Component models are not new, but this one is really working
  - Powering desktops (Eclipse and RCP)
  - Powering app servers (IBM, BEA, ...)
  - Available on mobile devices (Nokia, Sprint)

# Eclipse technology moving to all tiers

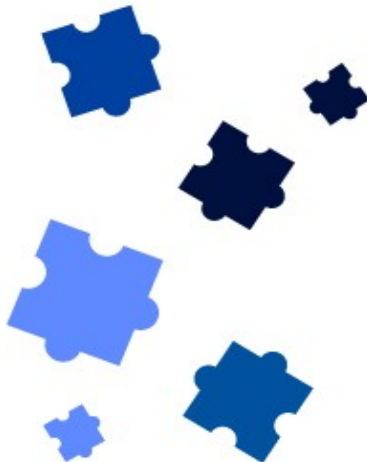


## Value for the Eclipse Ecosystem



# We coined a new term: Component Oriented Development and Assembly

**Multiple  
Component  
Producers**



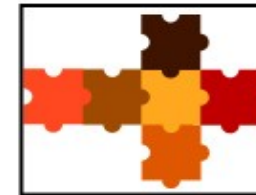
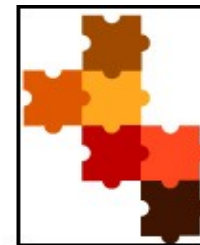
Create

**Customize  
Components**



Extend

**Individual Solutions**



Assemble

**Eclipse Equinox / OSGi**

NOKIA



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# Business drivers for CODA



## Current issues

**No consistent component model across architecture tiers**

**New type of applications**

**Business Agility Demands IT Agility**

**Lack of flexibility in integration of 3<sup>rd</sup> party software**

## Reason

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- MS .Net == MS platforms
- Java ME, SE and Java EE imply different component models on embedded devices, desktops and server
- SaaS, web 2.0, mashups and social networks require new approaches
- One size does not fit all
- Different technology platforms make it difficult to integrate with customers and partners

# The combination of OSGi, Equinox and Eclipse runtime projects form a powerful infrastructure



## Current issues

**No consistent component model across architecture tiers**

**New type of applications**

**Business Agility Demands IT Agility**

**Lack of flexibility in integration of 3<sup>rd</sup> party software**

## Component Oriented Development and Assembly address these issues

• OSGi is a proven component module and available on embedded devices, desktops and servers

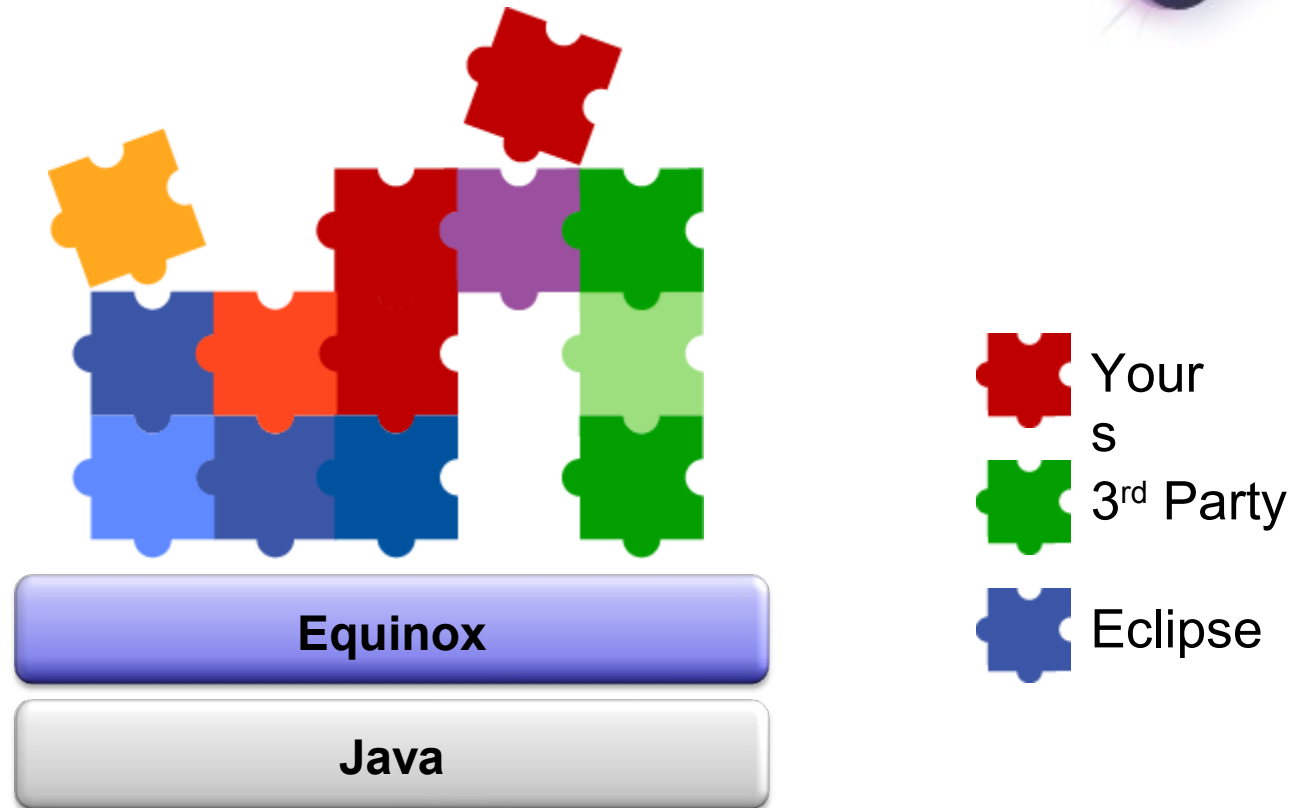
• Flexible to support SOA, AJAX, etc.

• Allow for the assembly of components to create solutions

• Modular architecture easy to extend and integrate



# RCP deployment

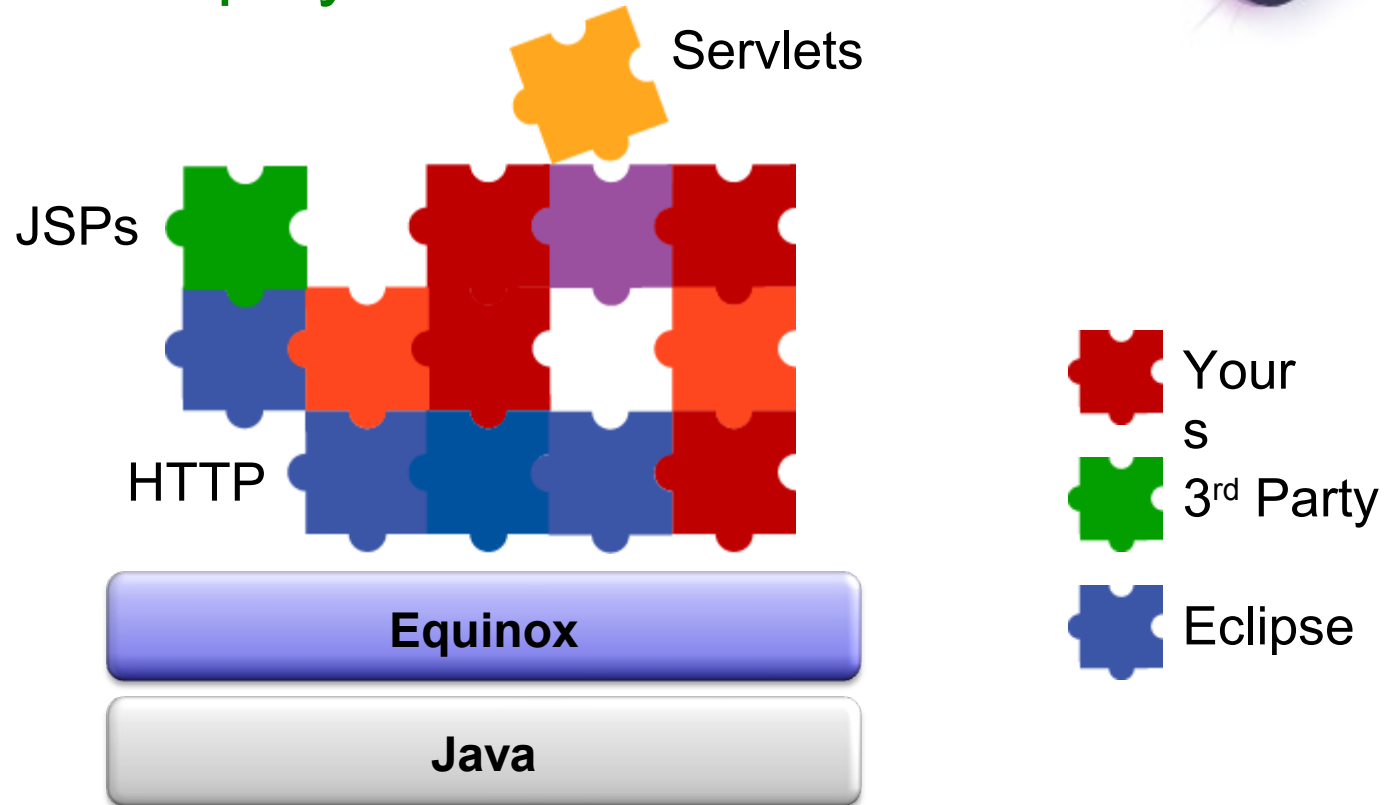


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# Equinox Server Deployment

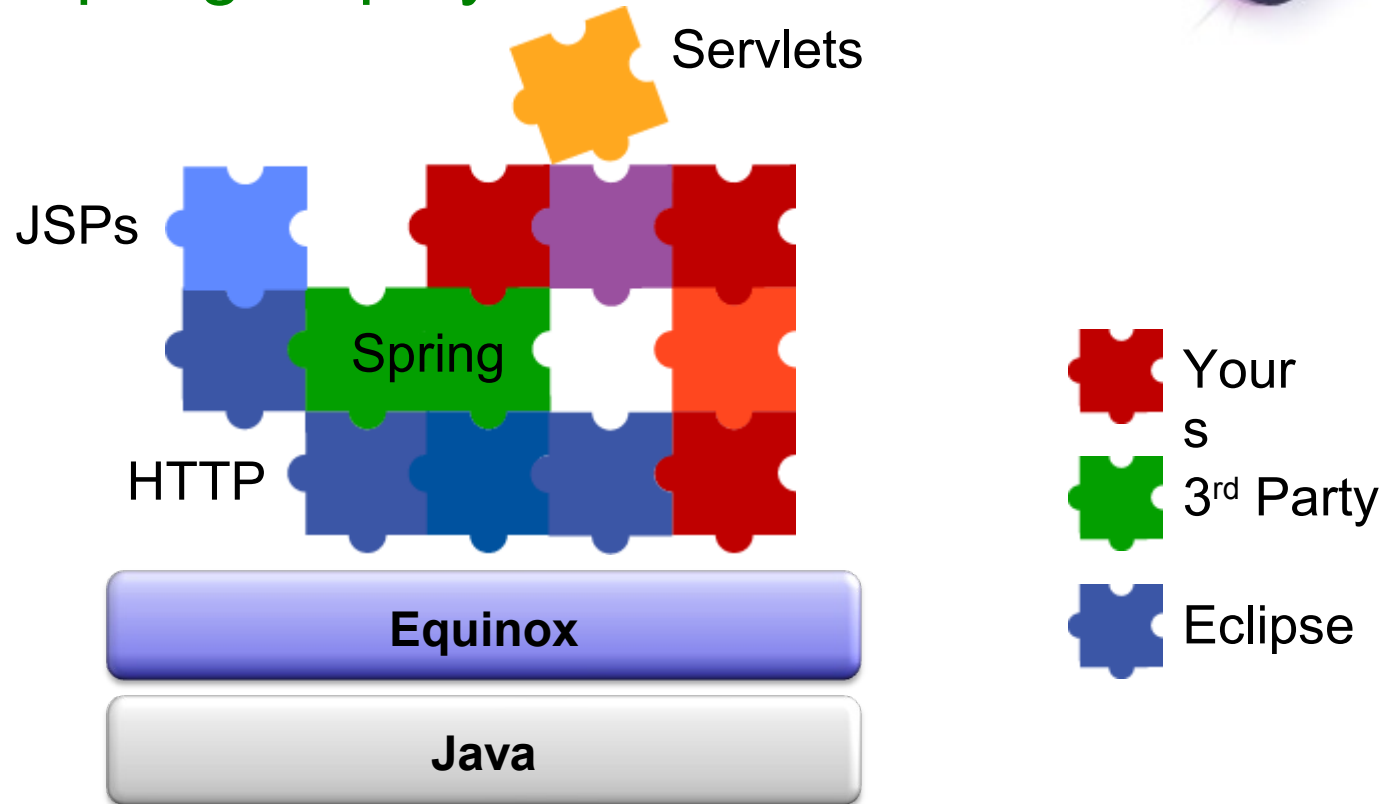


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# Equinox and Spring Deployment

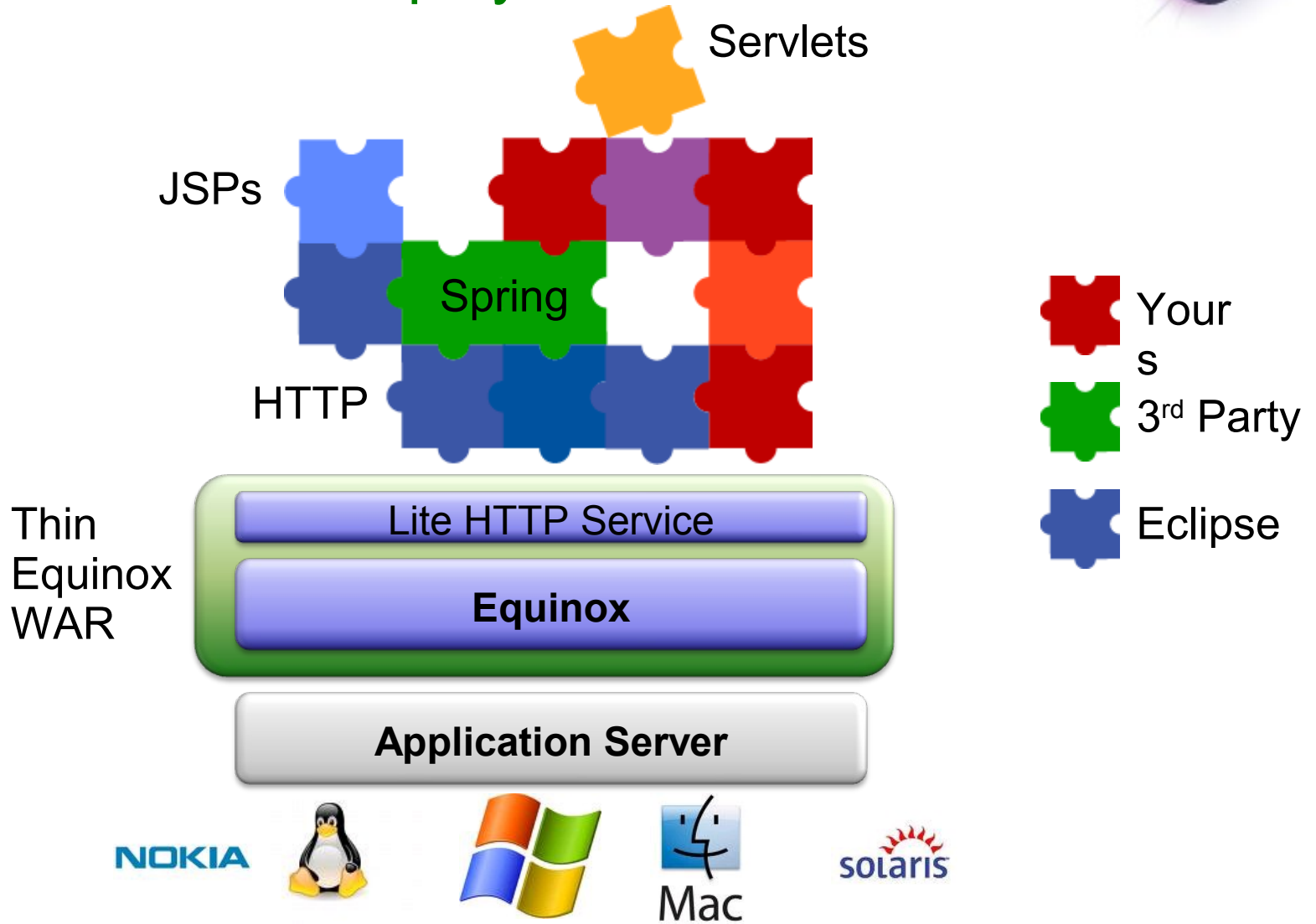


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# Application Server Deployment





# DEMO



# Growing the community – we want you

- **Getting started is complicated**
  - Ease the first steps with tools
  - Provide end to end examples
  - Provide integrated tool / runtime environments
- **One name, one place - Equinox**
  - Identify runtime technology at Eclipse
  - Website to support, educate and facilitate runtime technology at Eclipse
  - A common newsgroup?
- **Enable installed base to try runtime technologies**
  - Intro Pages, EPP packages
- **Clear messaging**
  - ... that we are NOT running a development tool on servers



# The new Equinox community portal



The screenshot shows the Eclipse Equinox community portal homepage. At the top left is the Eclipse logo. Below it is a navigation menu with links: HOME, COMMUNITY, MEMBERSHIP, COMMITTERS, DOWNLOADS, RESOURCES, PROJECTS, and ABOUT US. On the right of the menu is a Google Custom Search box. A left sidebar contains a dropdown menu for 'Equinox' with options: Discover the Possible, Get Started, Become an Expert, and Join the Community. The main content area features three large puzzle-piece icons. The first is blue and labeled 'Create'. The second is green and labeled 'Extend'. The third is orange and labeled 'Assemble'. Below these icons is a paragraph: 'The Equinox community is building new and interesting technology that makes it easier to **create**, **extend** and **assemble** innovative software.' At the bottom, there are four icons with corresponding text: a magnifying glass for 'Discover the Possible', a play button for 'Get Started', a red seal for 'Become an Expert', and three people icons for 'Join the Community'.

# People are talking about it



**“OSGi and The Rise of The Stackless Stack: Just in Time”**

James Governor, Redmonk



## JAVALOBBY

**“JBoss is working on OSGi too”**

***“Towards a mainstream Open Source OSGi application server?”***

**“Spring Dynamic Modules for OSGi: simplified development of OSGi applications”**



**“Keeping an eye on the OSGi”**

Alex Fletcher, Entiva Group

***“Top Five Java Technologies to Learn in 2008”***

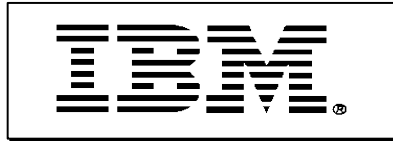
***∴ Manageability ∴***



# Organizations Using and Supporting Equinox



## Company



- 
- Lotus, Websphere, Rational, DB2, Tivoli



- Actuate iServer



- Mars Rover Control Systems



- BEA Event Server



- SOPERA ASF Platform



- Eclipse Swordfish is the core of Deutsche Post SOA platform SOPERA
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# Organizations Using and Supporting Equinox



## Company

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font.

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- Leading EclipseLink project

The Webtide logo, featuring the word "webtide" in a red, lowercase, sans-serif font with a blue swoosh above the "i".

- Jetty support on Equinox

The InnooPract logo, with "INNOOPRACT" in a blue, sans-serif font and three colored dots (blue, orange, blue) above the "O"s.

- Equinox RAP and Yoxos

The ProSyst logo, featuring a blue circular icon with a white swoosh and the text "ProSyst" in a blue, sans-serif font.

- Contributions to Equinox project

The Code logo, with the word "Code" in a blue, sans-serif font and a cluster of blue dots to its right.

- Lead Equinox product and offer consulting services for Equinox

The MicroDoc logo, featuring a red square with a white swoosh and the text "MICRODOC" in a white, sans-serif font.

- Consulting services for Equinox
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# Summary



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- Eclipse is starting a runtime initiative.
  - A new top-level projects aims to foster, promote and house runtime projects based on Equinox as the uniform component model.
  - The top-level project is led by Code 9, IBM, Innoopract, Oracle, and SOPER.A.
  - Eclipse is launching an Equinox Community portal to foster adoption of Equinox and runtime technology at Eclipse.
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