



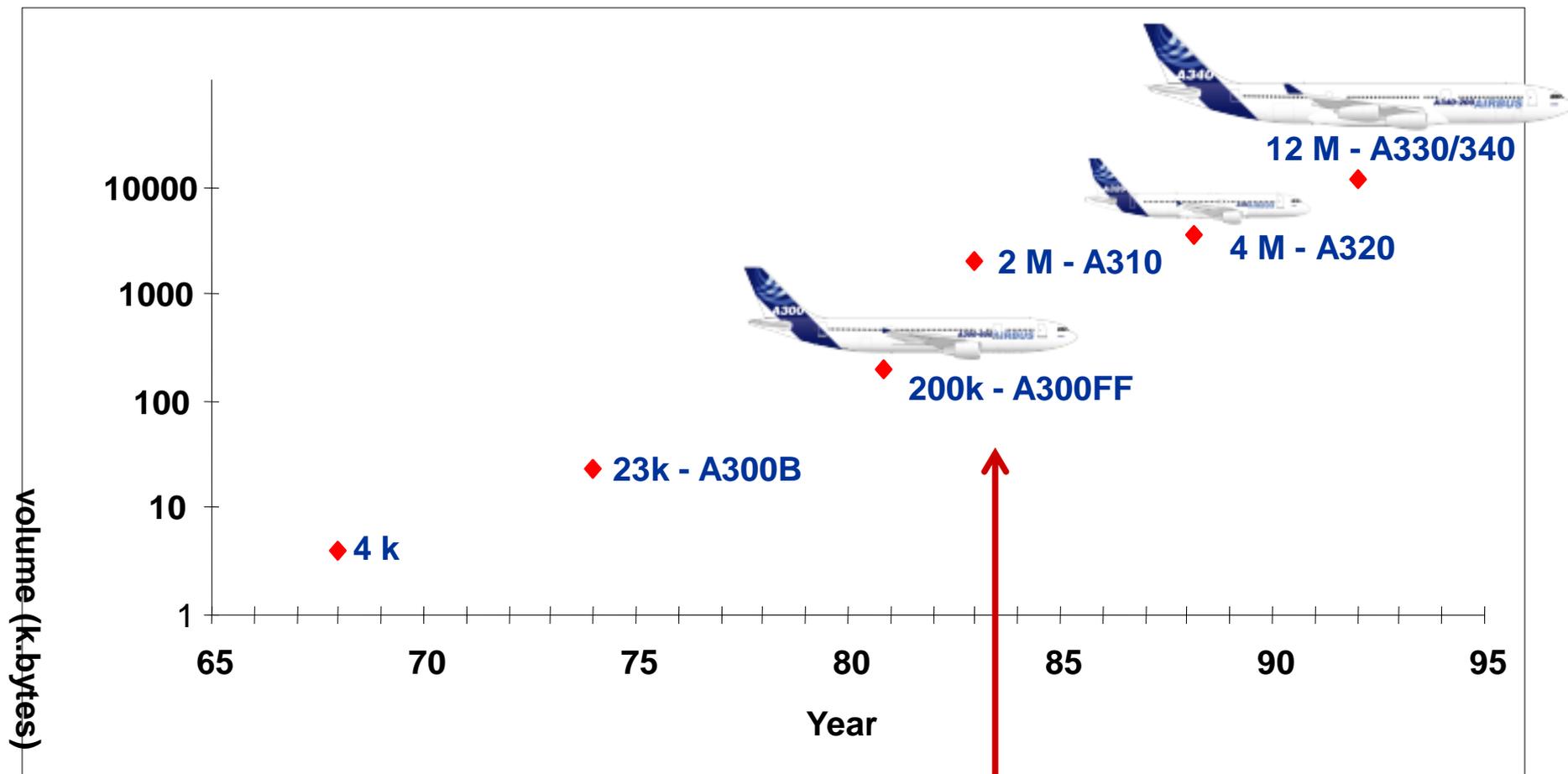
Update about OPEES and Polarsys

Gaël Blondelle
OPEES project leader and Business Developer
Obeo

Eclipse Board of Directors Meeting
November 1st, 2011

The avionics software beginnings

- First significant use of software for avionics : the 80's



Unique issue: Very Long Term Support

Example of AIRBUS A300 Life Cycle

Program began in 1972, production stopped in 2007

2007-1972 = 35 years...

Support will last until 2050

2050-1972 = 78 years !!

**On board software development
for very long lifecycle products**



Other domains of application



Product life-cycle of more than 20 years

Safety and certification constraints

- Space
 - Railway
 - Automotive
 - Energy
 - Health care
-

Opees mission



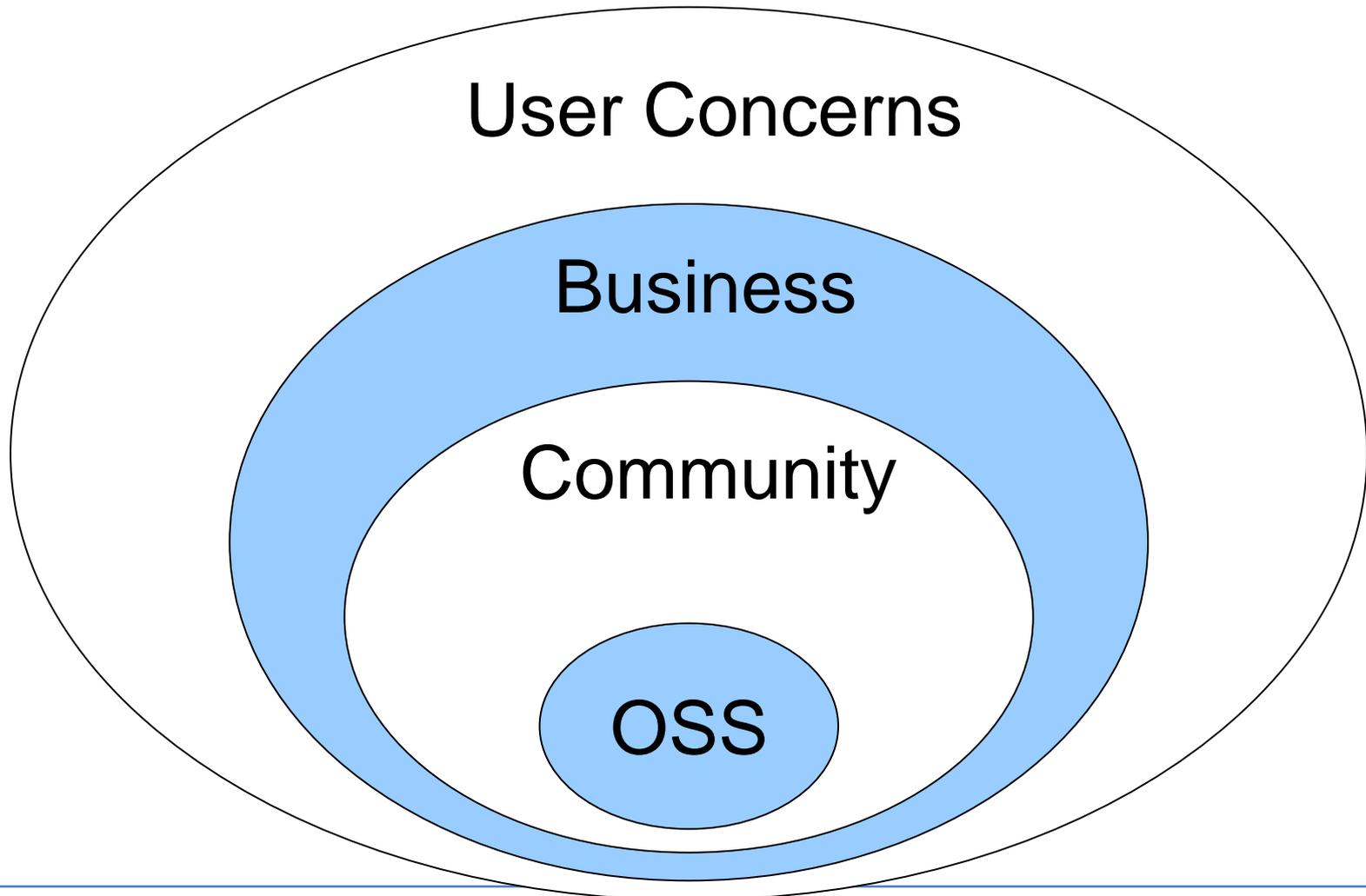
**Ensure long-term availability of
critical / embedded systems
engineering technologies**

Opes ITEA2 project

~30 members from 5 European countries



OSS Communities for Industry



OPEES Technological Domains

Polarsys Scope

BUSINESS DOMAINS LEVEL

Requirement Engineering

Architecture & design

HW / SW Development

Verification & Validation

Quality & Conf mgt

[TBD]

ENGINEERING DOMAINS

Verification on models

Verification on code

.....

Model Edit

Transformat
Technology

Model to m

Model to te
code

Model Transforma

Model Me

Reverse Engin

Generatio

Refactorin

Simulatio

Model simula

Co-simulat

Model Anima

Interoperab

Verification

Resource Management

Communication Support

Conf & Change Mgt

Component Catalogue

Release Engineering

INFRASTRUCTURE LEVEL

Organize the Open Source ecosystem



Long Term Support program

Labelling components and service providers

Detailed catalog of components

Managing Intellectual Property

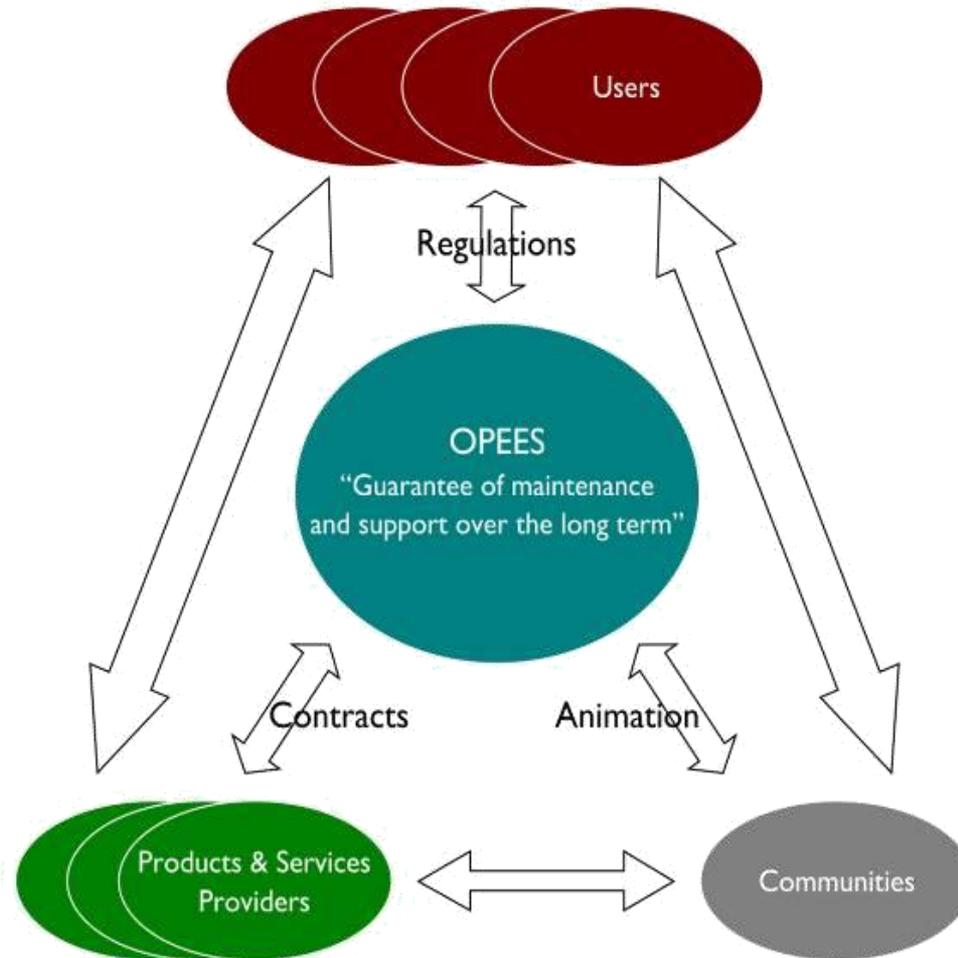
Change Control Boards

Working group for technology roadmap

Working group for standardization



Provide services to enable a new ecosystem



OPEES coordinates the actions of users, suppliers and communities in order to ensure the maintenance and support over the long term



Polarsys

Industrial Working Group

inside



My ambition for Polarsys



Establish the new standard
for **Open Source**
in **Embedded Software**

Model Based System Engineering

(then) Embedded Middleware

(then) Open Hardware

The Polarsys Opportunity for OPEES

Boost the OPEES implementation

Define the OPEES continuation entity in a sustainable foundation

Don't reinvent the wheel

Get international visibility

Share the LTS Build and Test infrastructure with other Eclipse members

The Polarsys opportunity for Eclipse



- Get New members
 - Members like EADS, Atos, CEA, ... already upgraded their membership level to prepare to be Polarsys members
 - Develop the activity on industry specific domains
 - Take a unique position in Embedded Software development
-

OPEES members who will join Polarsys

- Academics
 - IRIT, K.U. Leuven
 - ~80%
 - XIPP, Combitech, INRIA, CS, ATOS, Tecnalía, Astrium, CNES
 - 95% to 100%
 - Obeo, Ericsson, Airbus, Thales
-

Polarsys services



Long Term Support Infrastructure

- Operated by the Eclipse Foundation
 - Produces VLTS maintenance builds
 - Acts as a third party responsible for
 - Long Term Availability
 - Ensure shared best practices
 - No vendor lock-in on build processes
 - Not an intermediary between Providers and Users
 - Foster the Long Term Support Ecosystem
-

Polarsys services Labeling Process



- Structures the Providers eco-system
 - Labeling process identifies
 - Committed service providers
 - Skilled service providers
 - Lowers “Free riders” effect
 - Label necessitate a proven expertise and investment in the technology
 - Complements the OSS meritocracy
-

Other Polarsys services



- Infrastructure services
 - Collaboration infrastructure operated by Eclipse
 - OPEES Catalog of Components
 - Project Governance
 - Change Control Board
 - Users prioritize new developments and fixes
 - Component life-cycle & Maturity Assessment
 - Quality & Qualification kits
 - Qualification Kits are OPEES private documents
-

Other Polarsys services



- Legal Support
 - Ensure IPR clearance on OPEES projects
 - Take care of Licenses compatibilities
 - Working groups
 - Medium to Long Term road mapping
 - Links to standardization
 - Identify new user needs
-

The value of Polarsys for users

- Access to the long term support infrastructure
- Share Qualification kits for the software
 - Costly documents, but necessary in certification processes like
 - DO 178 for aerospace
 - ISO 26262
- Participate to change control boards and coordinate development activities

The specificities of Polarsys



- Support new licenses in the Polarsys IP process, including LGPL, and possibly GPL in the future
 - Host LGPL project in a Polarsys specific area
- In the medium term:
Creation of a formal European chapter
 - an Eclipse legal entity in Europe
 - servers in Europe

Next Polarsys steps



- Announcement at Eclipse Con Europe
 - Gathering Letters of Intent
 - Will start operating at the beginning of 2012
 - OPEES will put new projects inside Polarsys in 2012
 - Topcased family projects
 - Frama-C
 - GPM
 - OPEES will implement the services during 2012
 - Organize a dissemination event at Eclipse Con 2012
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Thank you for your attention



Any question

