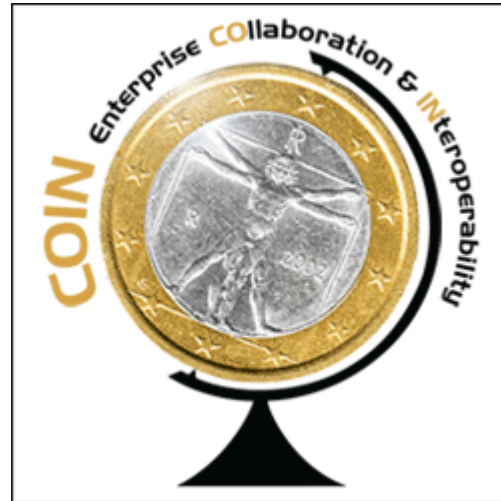


Enterprise **CO**llaboration & **IN**teroperability



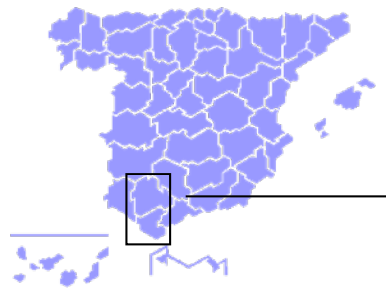
Business Cases for Enterprise Interoperability **The Andalusian Aeronautics Business Case**

Noordwijk, June 23rd 2009

Alberto Olmo
ISOIN

The AS-IS scenario. Cluster Introduction

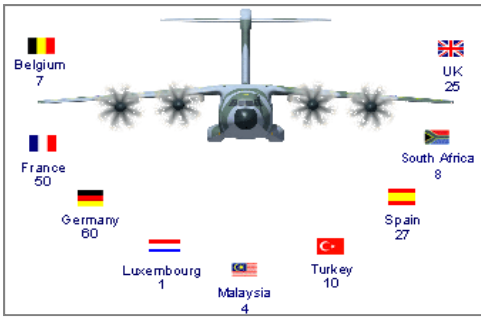
CN-235



A380



A400M



C-295



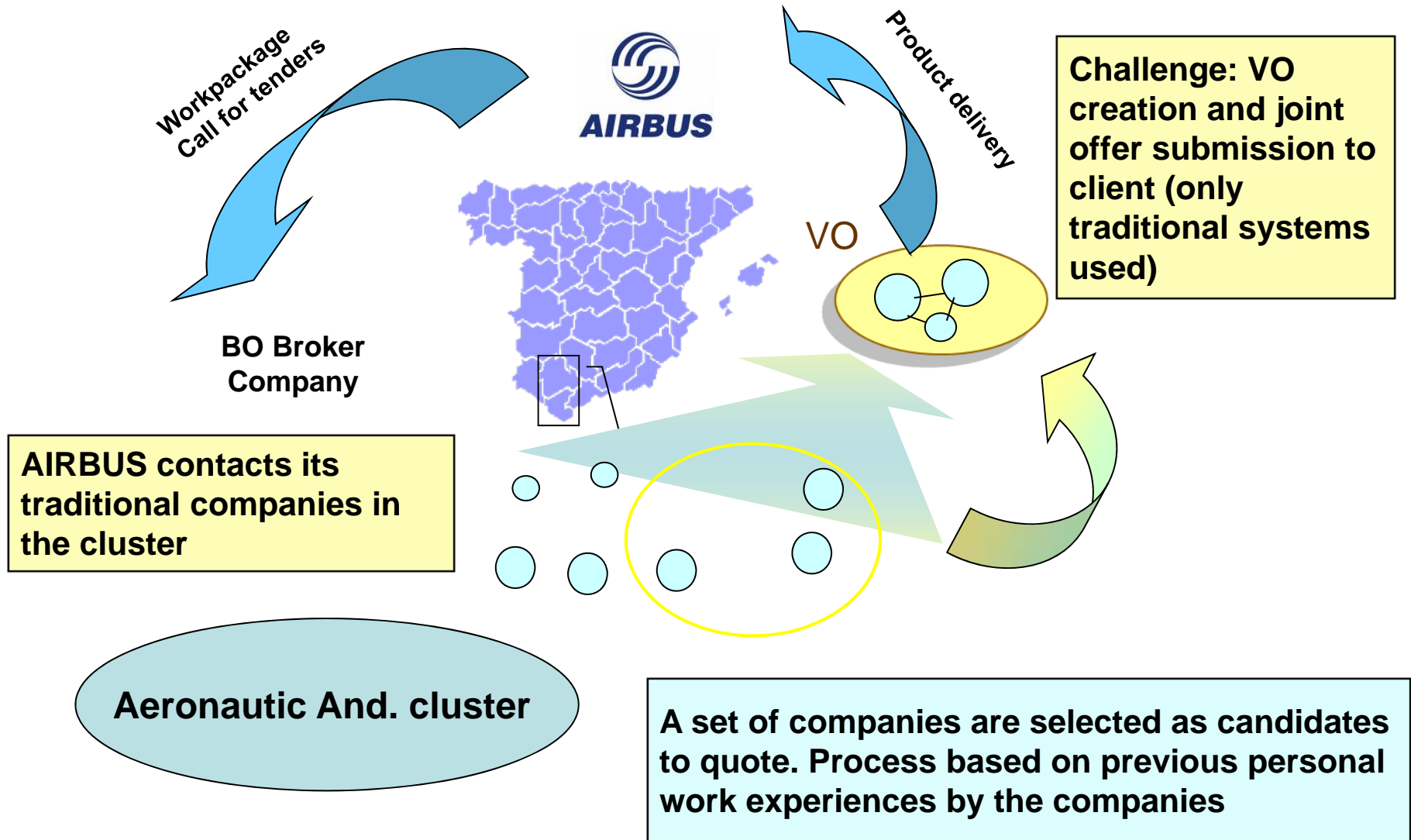
A350

The AS-IS scenario. Cluster Introduction





The AS-IS scenario. VO formation phase





The AS-IS scenario. VO operation phase

AIRBUS needs a first design stage for large projects where engineers of different companies need to **share a common place** to work. A huge amount of money is spent on this phase

AIRBUS has standardized **CATIA** and **ENOVIA** for collaborative product development, so auxiliary companies must adapt to these systems



Collaboration with Universities, Research centres (CATEC) and professionals of the aeronautical sector is usually performed through **traditional** ways such as telephone or emails for communication activities or documentation exchange. Communication is nowadays poor among institutions

<http://www.dassaultfalcon.com>



The AS-IS scenario. VO operation phase

ENGINEERING

- BOM,s
- Data master/material synchronization
- Warnings due to product structure changes
- Documentation: standards, 3D models, Tch Instructions DTS
- Process Routings

LONG TERM PLANNING

- Production plans information
- Publication of forecast
- Cargo/capacity indicators / Work in progress evolution

PURCHASING

- Master material catalog
- Purchase order inquiries
- Purchase order → transformed into sales order
- Purchase order printing
- Purchase order confirmation
- Supplier evaluation
- e-Sourcing: RFI, RFQ

PRODUCTION CONTROL

- Information interchange of work in progress

WAREHOUSE

- Stock supplied to subcontractor (not warehouse transfer)
- Visibility of subcontracted stock for main contractor

QUALITY

- Management of non conformity sheets (HNC,s)
- As built configuration
- Discrepancy report management (ID,s)
- Conformance certificates
- Documentation:
 - Quality indices
 - Subcontractor improvement plans
 - Audits and corrective actions
- Catalogs
 - Certified components
 - Authorized suppliers
 - Certified processes / supplier

SHIPMENTS

- Integration of shipment to contractor reception
- Shipment follow-up

INVOICING AND PAYMENT

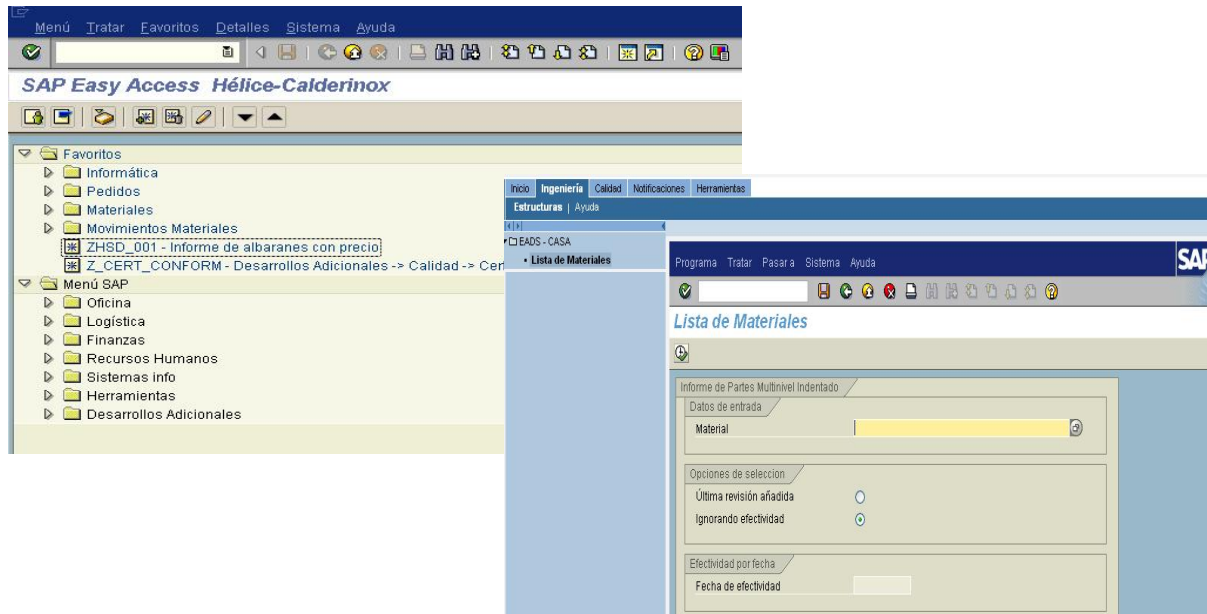
- Invoice issuing
- Invoice status consultation
- Payments status consultation

COMMUNICATION & PRODUCTIVE TOOLS

- News and events - Suggestions mailbox
- Chat, discussions meeting rooms - Aeronautic observatory
- Partners Corporate Inform. - E-Learning
- Quality certifications Inform. - Job mailbox



The AS-IS scenario. VO operation phase

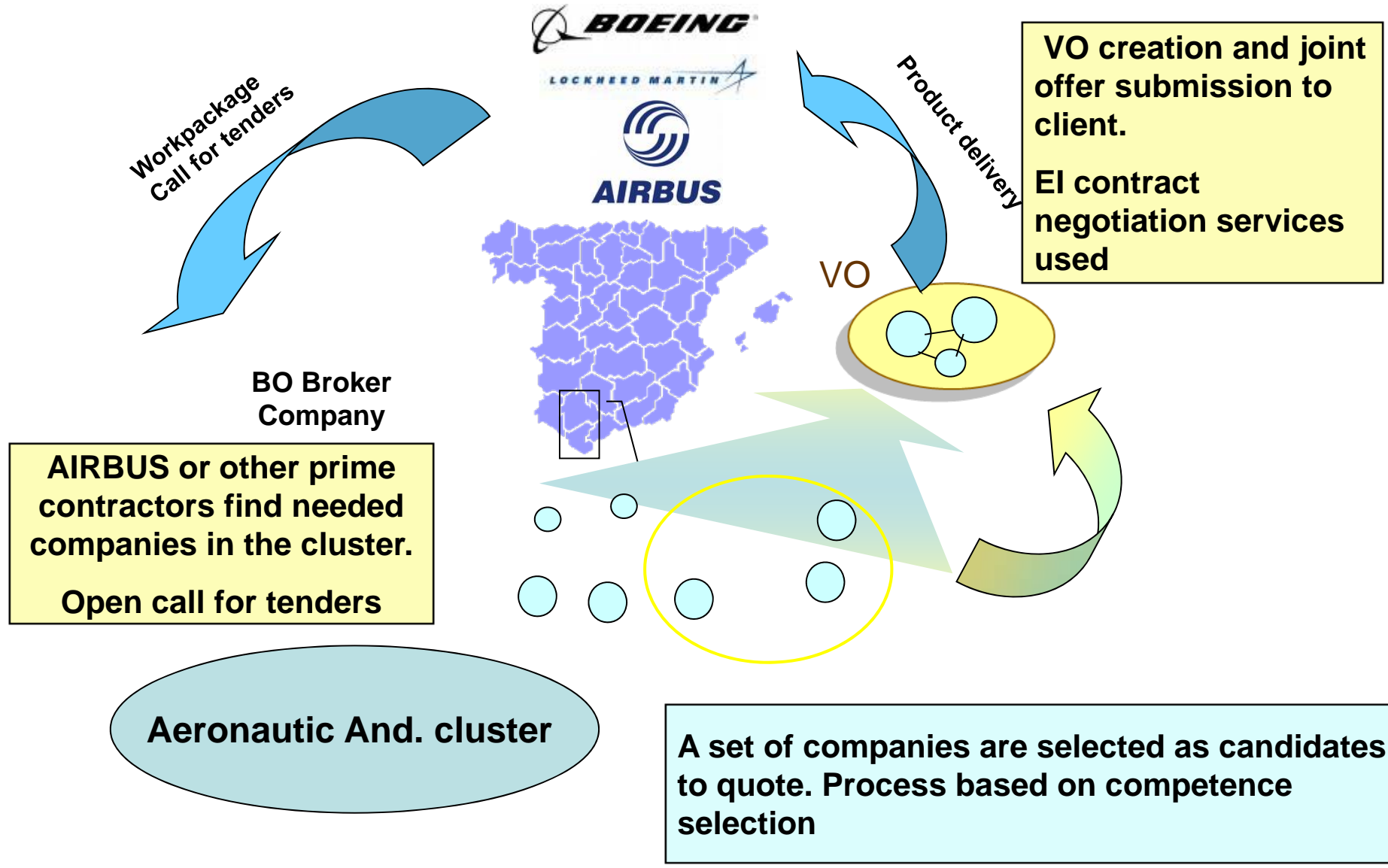


General **low acceptance** in the companies, due to:

- Companies find it difficult to change its traditional internal systems (similar problem found in the majority of ERPs)
- Training needs with elevated costs to the companies
- Not enough support from Prime Contractors



The To-BE scenario. VO formation phase





The To-BE scenario. VO operation phase

EC / EI services are used in the operation phase, with the **SaaS** Business model to reduce costs and time to companies

Auxiliary companies can now make use of a **broader range of services** to collaborate, being also able to **interoperate** with AIRBUS proprietary systems.

A screenshot of the ISOIN website. The header features the text 'ISOIN Semantic Search Engine for Collaborative Product Development'. Below the header is a navigation menu with links for 'Home', 'About', 'Services', 'Solutions', and 'Contact'. The main content area is titled 'Semantic Search Engine for Collaborative Product Development' and contains a search box with a 'GO!' button. To the left of the search box is a graphic of four puzzle pieces labeled 'COMPANY', 'SERVICE', 'COMPETENCE', and 'PRODUCT'. Below the puzzle pieces is a paragraph of text describing the tool's purpose and a 'Read more...' link. To the right of the search box is a 'Highlights' section with a date 'May 5, 2009' and a short paragraph of text.

Collaboration with Universities, Research centres (CATEC) and professionals of the aeronautical sector is now enhanced with the use of **COIN communication services**



The COIN EI/EC Solutions

Collaborative Platform

Search... GO

Community Knowledge management Business Process

ISOIN Aeronautical Cluster

ISOIN is the core technological partner of the Aeronautic Cluster of Andalusia, promoting and coordinating research initiatives, and experimentation and technology transfer activities for the adoption of technological pillars towards the collaborative enterprise paradigm within the Aeronautical Value Network .

Polls Display

What do you expect from Collaborative Platform?

96	Votes	
50%	1	a. Improve my knowledge
50%	1	b. Improve my business

Total Votes: 2

Basic collaborative services adapted to the necessities of the cluster:

- Shared agenda
- Collaborative blogs
- Basic document management services
- Business Processes Design and Management



The COIN EI/EC Solutions

Baseline Services



EC/EI services from other EU projects available in COIN to fulfill the end user specific requirements

Preparation Phase

- COIN massive**
(Member Data Mapping)
- EIM Assessment**
(Questionnaire for members EI performance)
- ATHOS**
(Document Ontology Management)
- ASTAR**
(Document Semantic Annotation)
- ARGOS**
(Semantic Transformation Rules Building)

Formation Phase

- COIN transactional**
(Negotiation Document exchange- network extern)
- Semantic Business Process Modelling**
(Obtain common format between members)
- POP2JPD**
(Business Conceptual Model → Workflow Model)

Management & Operation Phase

ARES
(Reconciliation Service – network intern)

Model transformation Engine
(Support implementation of additional services)

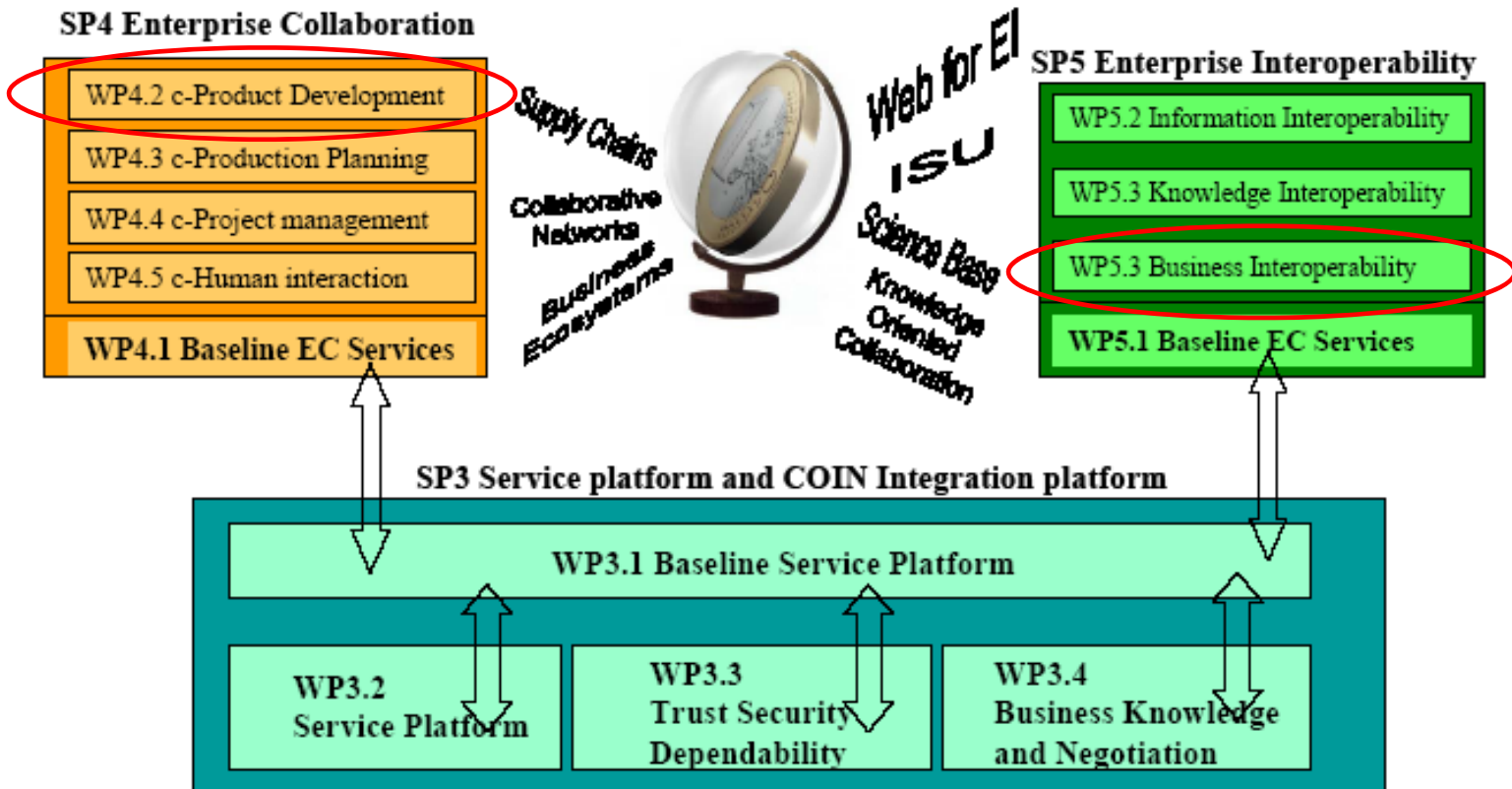
Dissolution Phase

COIN transactional
(Business Document exchange- network extern)



The COIN EI/EC Solutions

Innovative Services





The COIN expected benefits

- **Openness** for the cluster, to other prime contractors and other business opportunities. Relation with other clusters
- **Open call for tender** processes. **Competence selection** of partners.
- **SaaS business models** in software implementation that **reduce costs, time and difficulty** for companies in the use of new services.
- Increase **collaboration** in business opportunities among companies, sharing valuable information without neglecting security.
- Increase **communication** between companies, University and research centres
- Increase **Interoperability** among companies of the cluster and outside the cluster, facilitating the use of these services to the end user. SaaS can use **accepted standards in aeronautics** and by **main software developers**, enabling the integration of applications and platforms.



Overcoming the Capital Sins

COIN Capital Sin relevant for EI:

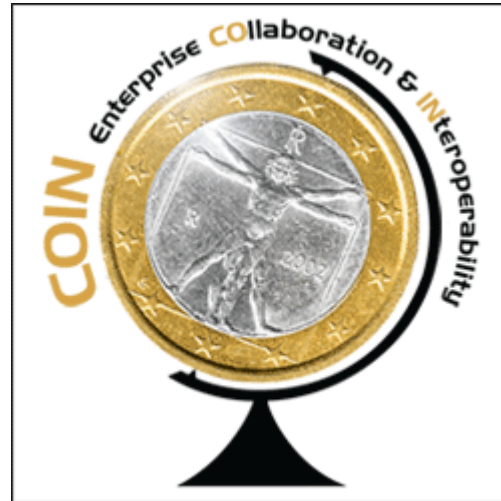
EI solutions are too complex and specific.

The COIN project is trying to develop user-friendly solutions, adaptable to a wide range of clusters and users. COIN services should be able to **adapt to the different companies** of the aeronautical cluster. The **use and maintenance** of these services should be easy to perform by companies.

SaaS involves an external IT company will continuously **assist** the end user company, i.e., the aeronautical company, in the **maintenance and usage** of the services.



Enterprise **C**ollaboration & **I**nteroperability



Thanks for your attention

Noordwijk, June 23rd 2009

**Alberto Olmo
ISOIN**