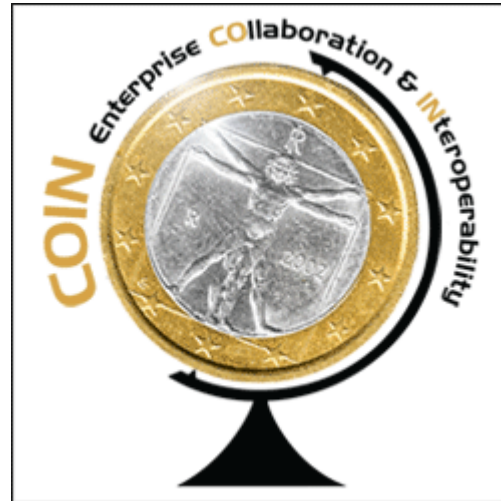# Enterprise COllaboration & INteroperability

COIN TCC at General Meeting

COIN Technical Progress
Budapest, May 6th 2009

Sergio Gusmeroli
TXT e-solutions SPA

The COIN Vision & Motto

COIN VISION: *"By 2020 enterprise collaboration and interoperability services will become an invisible, pervasive and self-adaptive knowledge and business utility at disposal of the European networked enterprises from any industrial sector and domain in order to rapidly set-up, efficiently manage and effectively operate different forms of business collaborations, from the most traditional supply chains to the most advanced and dynamic business ecosystems."*

COIN MOTTO: *"Enterprise Interoperability and Enterprise Collaboration are the two sides of the same COIN"*

The COIN Integrated Project

Project No:	216256
Project Full Name:	Collaboration & Interoperability for Networked Enterprises
Duration:	48 months
Start date:	January 1st 2008
Partnership:	21 partners, 9 countries
Strategic Objective:	FP7 ICT-2007.1.3 ICT in support of the networked enterprise
Total Eligible Cost:	14.383.834 EURO
EC Contribution:	9.996.480 EURO

The COIN Consortium & Funnel Model

Industrial Partners

Academic & Research Partners

User Partners

The COIN Metaphore
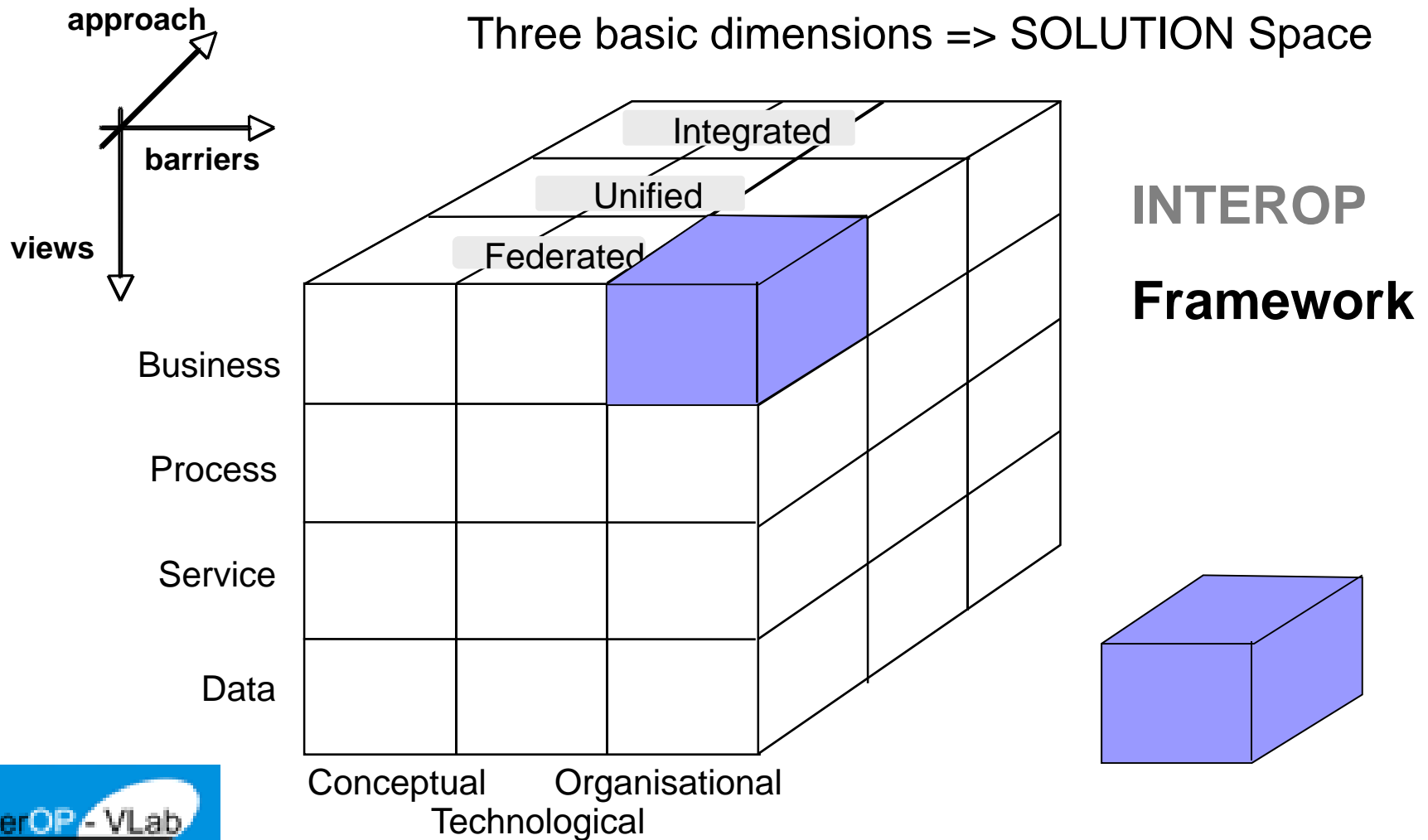
COIN MOTTO: "Enterprise Interoperability and Enterprise Collaboration are the two sides of the same COIN"

- *The SIDE A of the COIN: Enterprise Interoperability*

- *The SIDE B of the COIN: Enterprise Collaboration*

- *The Substrate of the COIN: Service Platform*

- *The Value of the COIN: Software as a Service-Utility SaaS-U*

- *The Market of the COIN: Enterprise Networks (mainly SMEs)*

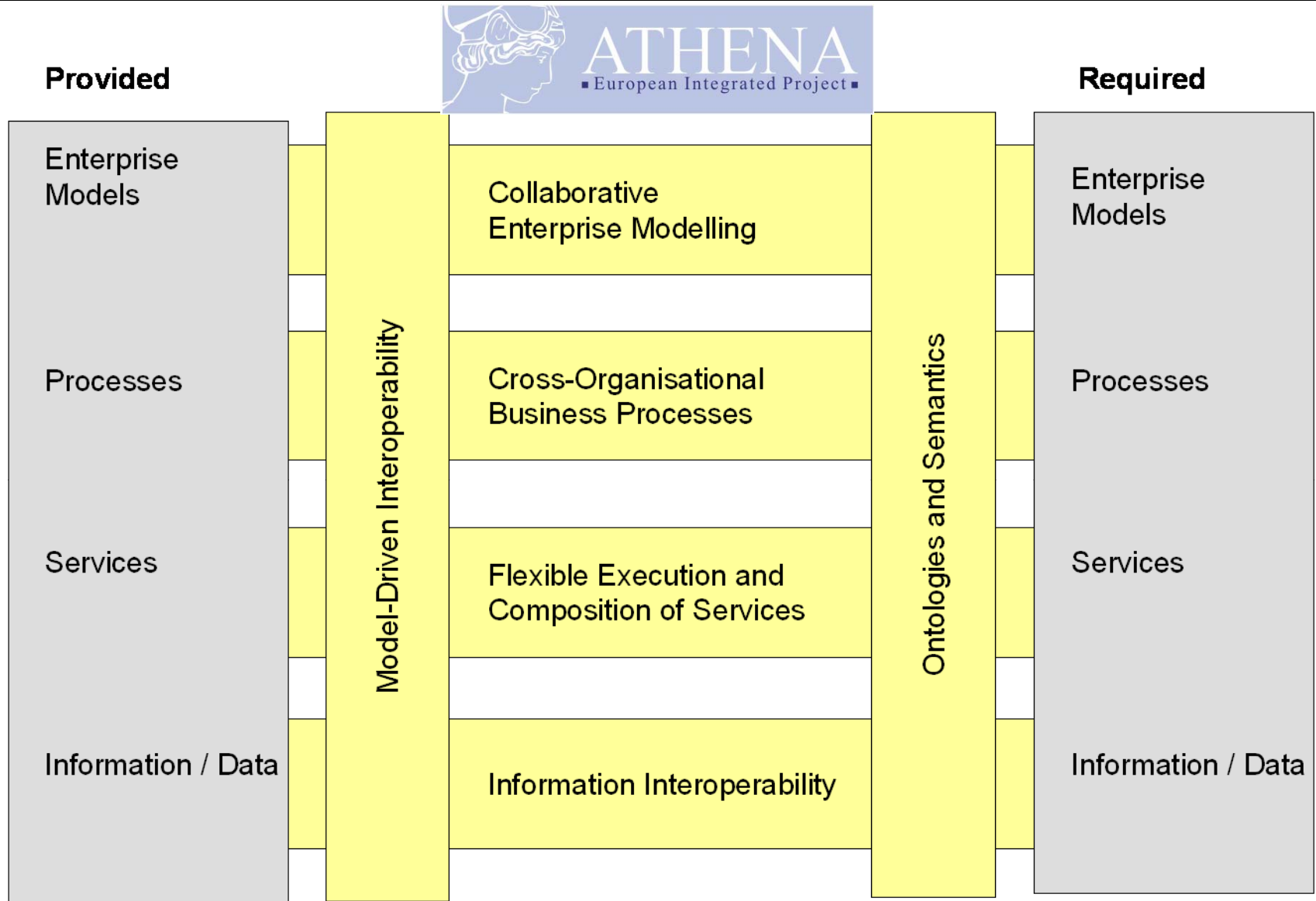# COIN Side A: state-of-the-art (I)

approach

barriers

views

Three basic dimensions => SOLUTION Space

Integrated

Unified

Federated

INTEROP

Framework

Business

Process

Service

Data

Conceptual   Organisational
Technological

COIN Side A: main innovations

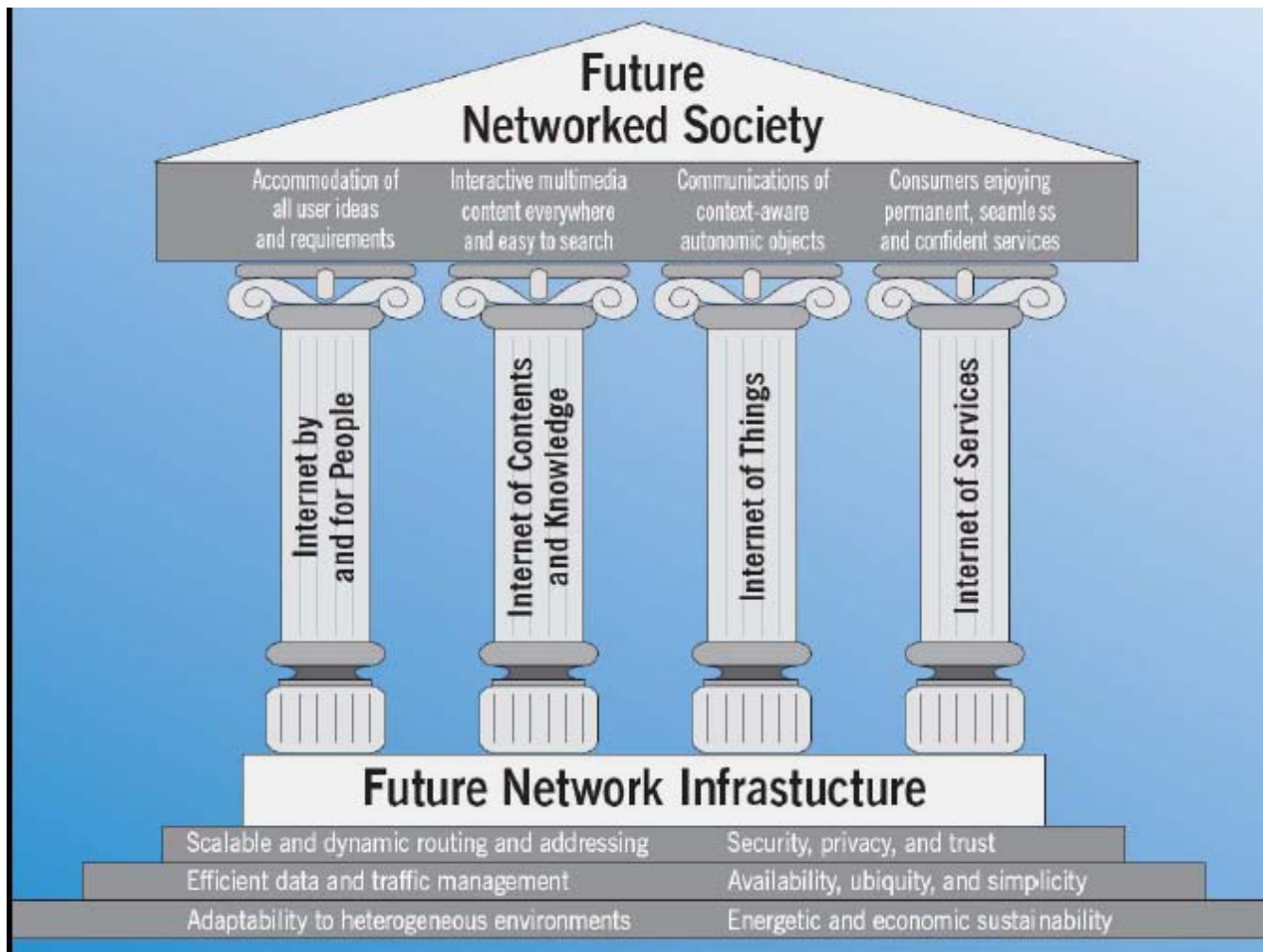- ## The COIN Interoperability Space

  - ➤ To address **Information, Knowledge and Business** interoperability

  - ➤ To support the **Federated** interoperability approach

  - ➤ To integrate **Model- and Semantic- driven** interoperability methods

  - ➤ To enable **Knowledge Profiles** semantic mediation

  - ➤ To synchronize and optimize **collaboration Business Processes**

  - ➤ To go beyond state-of-the-art 1:1 transactions:

    - ✓ Supporting **1:1 negotiations** (e.g. supplier-customer)

    - ✓ Enabling **1:n relations** (e.g. tender-bidders)

    - ✓ Allowing **n:m agreements** (e.g. sellers-buyers)

COIN Side A: future outlook

- **The FInES** (**F**uture **In**ternet **E**nterprise **S**ystems)

COIN Side B: state-of-the-art

Business Opportunity

Market turbulence

Short window of opportunity

Fast configuration of a _temporary_ consortium well suited to the needs

Preparedness

Breeding Environments { VBE PVC }

CNO creation

Metamorphosis

CNO

Successful & Effective collaboration

Management / Governance

© The ECOLEAD Integrated Project

Digital Business Ecosystem

ECOLEAD
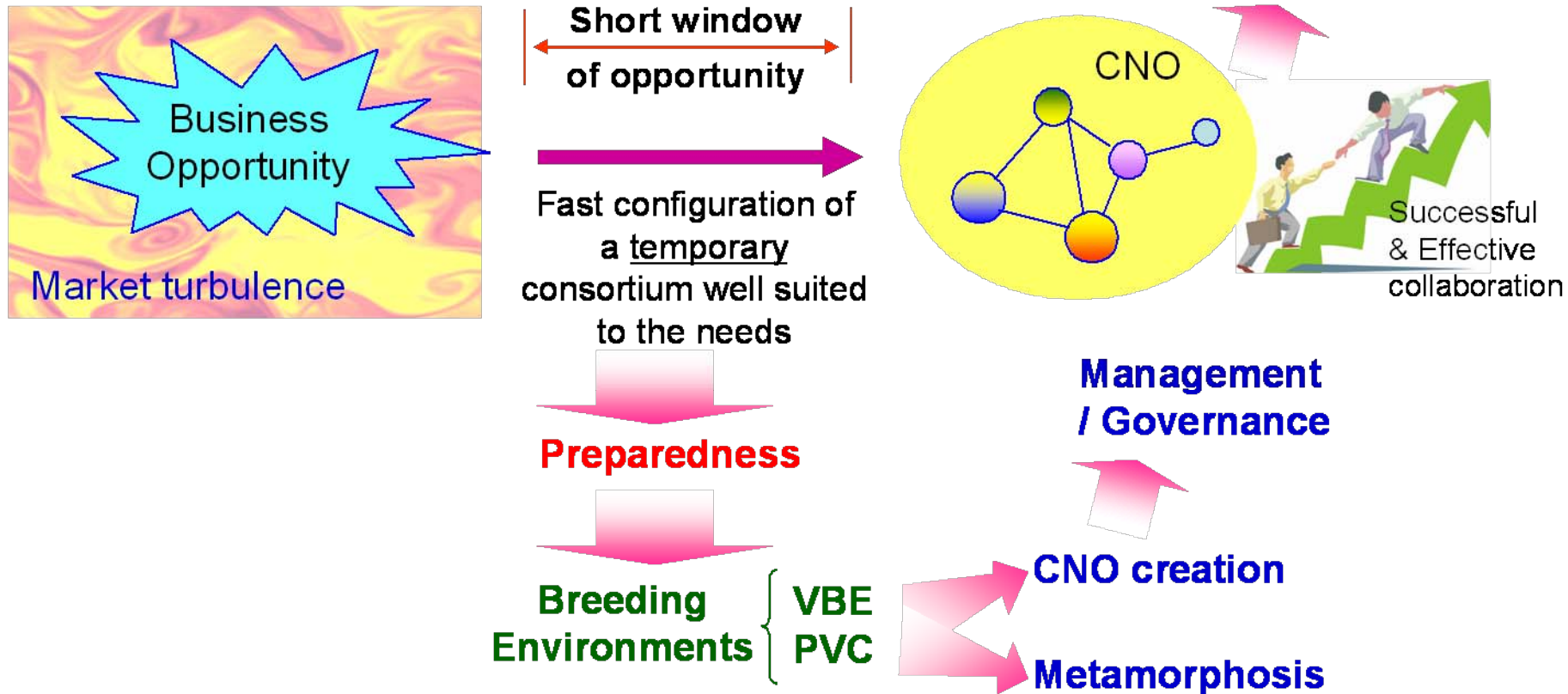
COIN Side B: main innovations

- ## The COIN Collaboration Space

 - ➤ To allow **Endogenous** generation of Business Opportunities (LivingLabs & Open Innovation)

  - ➤ To support **Product Design, Production Planning, Project Mgmt**

  - ➤ To enable **Co-operativity** of Enterprise Applications (groups as users)

  - ➤ To support **Web 2.0** and participative services (Enterprise 2.0)

  - ➤ To involve also the Customers in the whole life-cycle of **Virtual Organizations** (VOs):

    - ✓ **VO preparation** (get the enterprises prepared to form VOs)

    - ✓ **VO creation** (select partners and competencies)

    - ✓ **VO operations & mgmt** (performance indicators definition-governance)

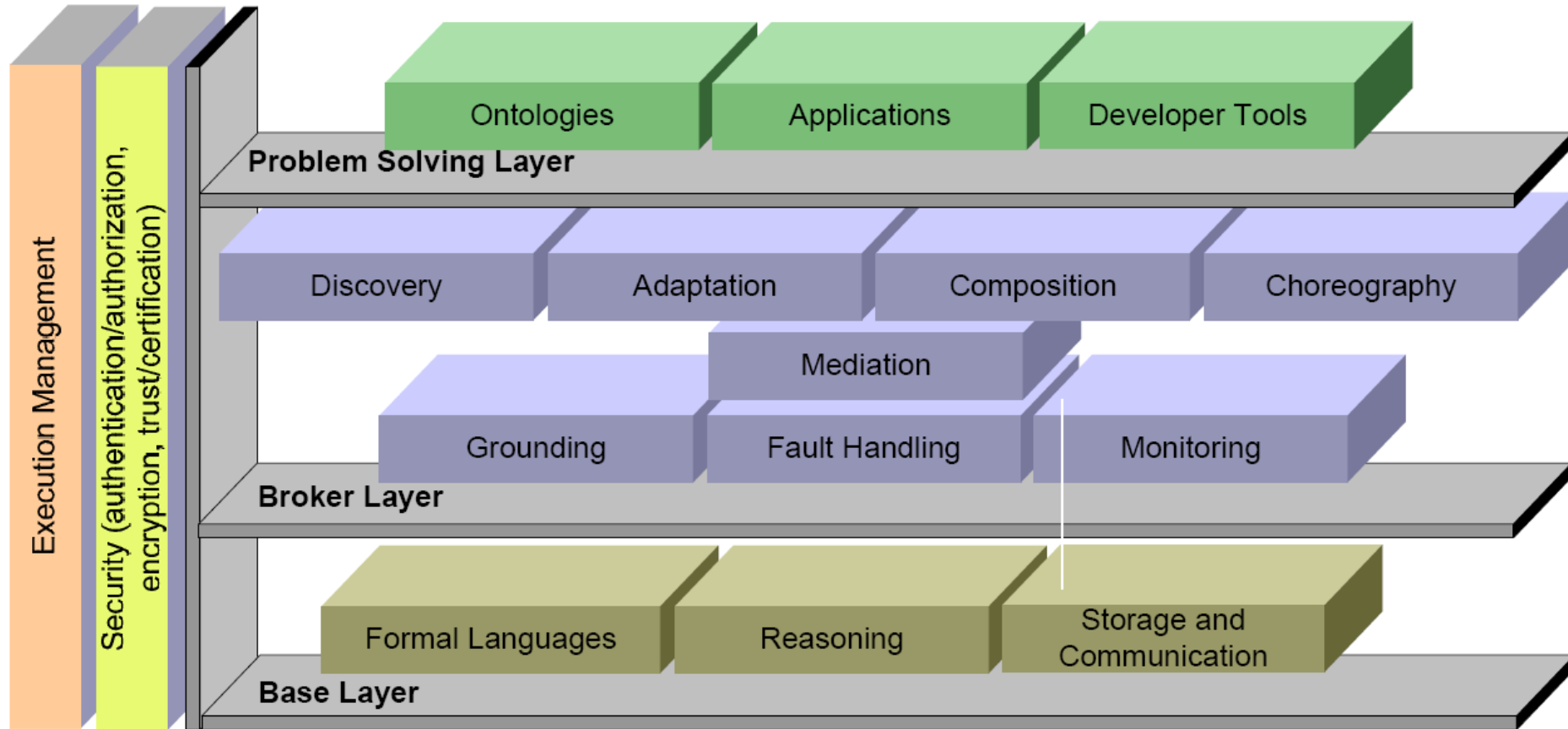   - ✓ **VO dissolution** (inheritance and knowledge transfer)

- **The Innovation Knowledge Ecosystem**
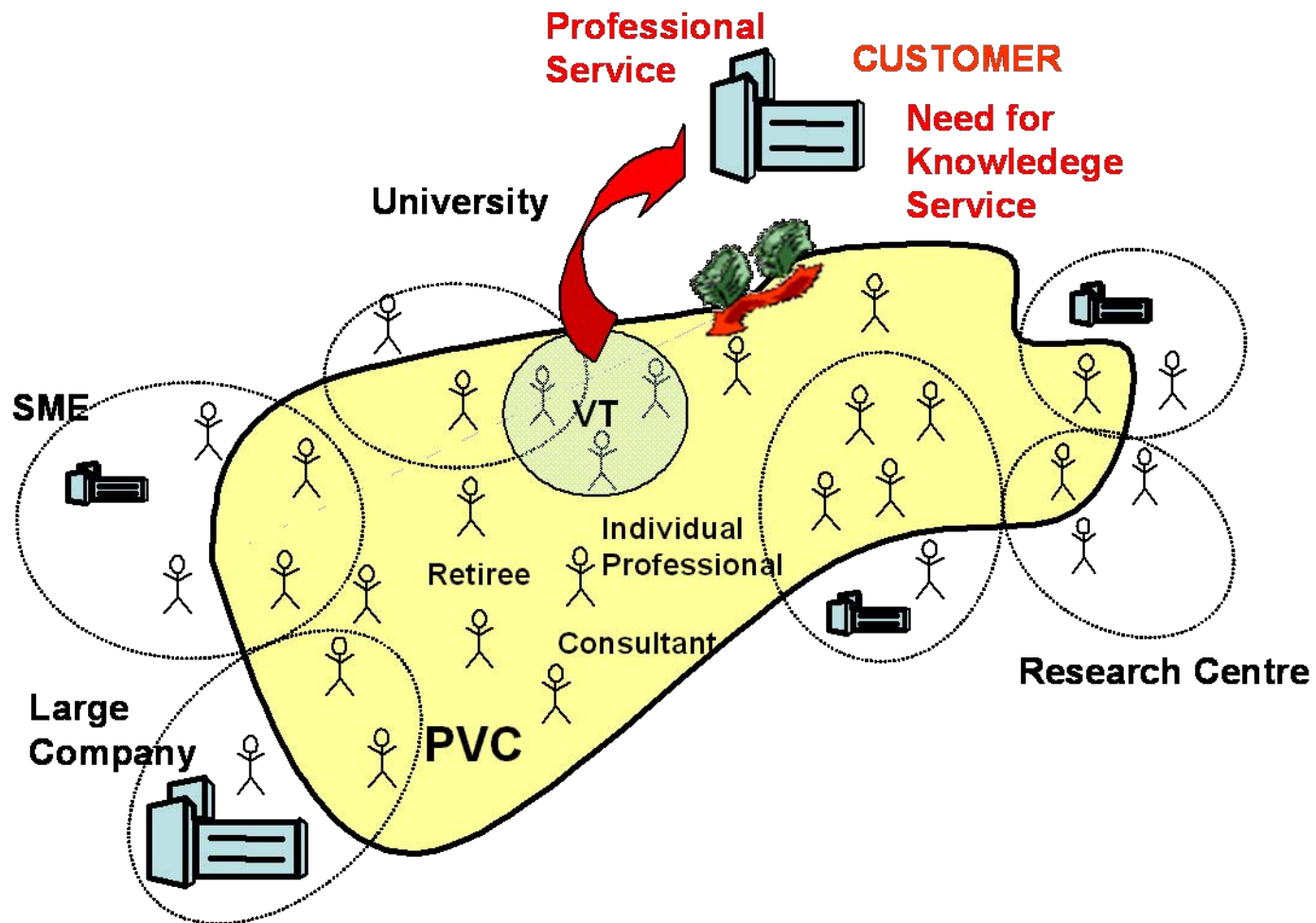
COIN Metal: state-of-the-art

COIN Metal: main innovations

- **The COIN Generic Service Platform**

  ➤ An implementation of a **SESA** (Semantically Enabled Service Architecture)

  ➤ To support dynamic **Search-Discovery-Composition-Execution**

  ➤ To enable **Intelligent Reasoning** capabilities (Negotiation, Agents)

  ➤ To support **Scalability & Pervasiveness** (P2P registries-repositories)

  ➤ To enable **AAA Security** properties :

    ✓ **Authentication** (including identity management)

    ✓ **Authorization** (including access rights and single sign-on)

    ✓ **Accounting** (including monitoring, charging & billing)

    ✓ **Privacy & Data Protection** (including cryptography)

COIN Metal: future outlook

- **The Global Service Delivery Platform (GSDP)**
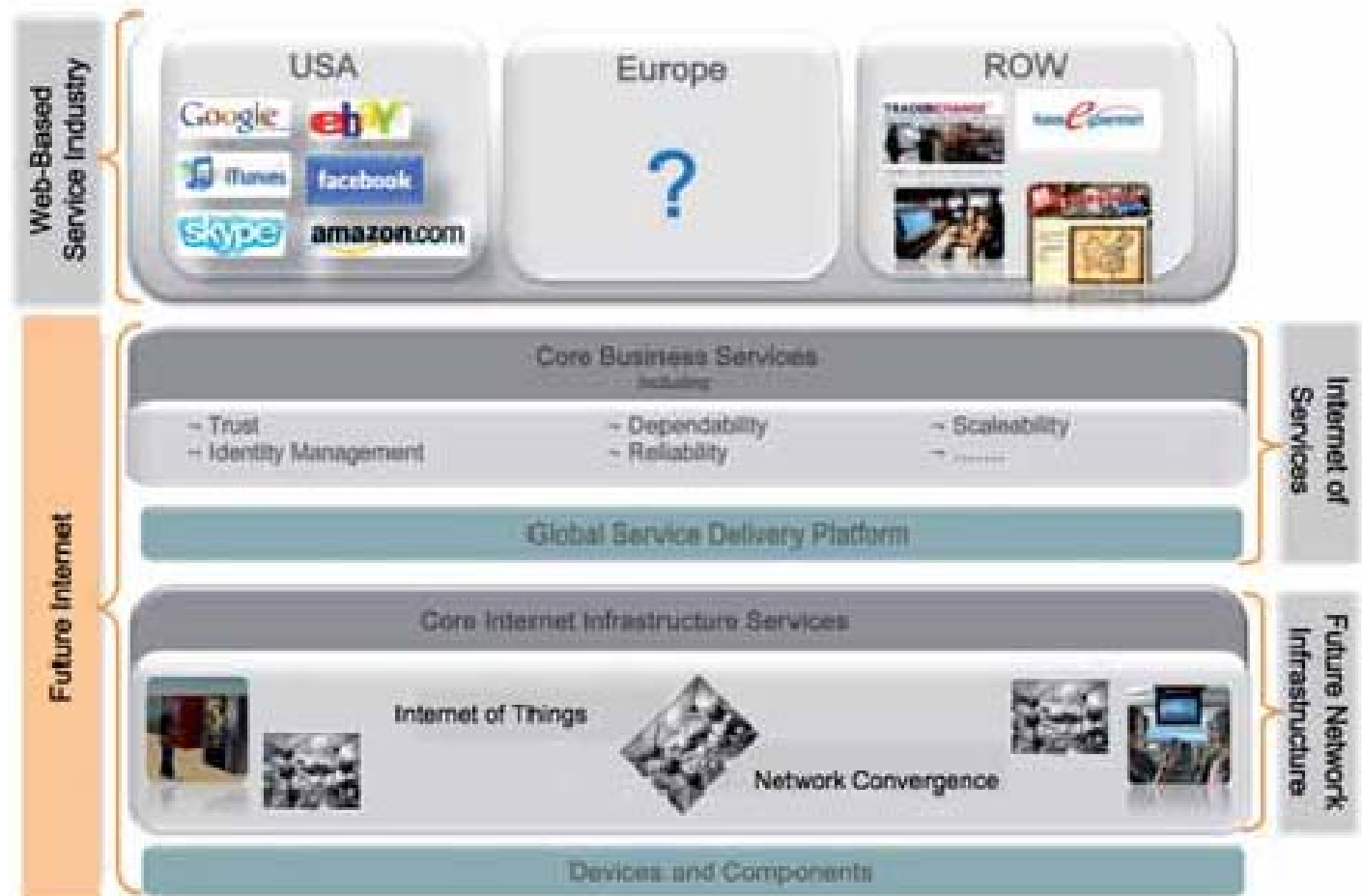
A perspective of the Internet of Services

Prof. dr. Lutz Heuser, Chairman of ISTAG (VP SAP Research)

COIN Value: state-of-the-art

Software as a Service is the delivery of application functionality via a subscription model. The customer does not take ownership of the software but rather 'rents' a total solution that is delivered remotely. (IBM)

Application Hosting Model	Software as a Service Model
Customer pays on delivery of <u>software</u>	Customer pays for delivery of <u>functional services</u>
Customer responsible for software performance	Provider responsible for software performance
Customer responsible to <u>customize</u> software to business requirements	Customer responsible to <u>configure</u> software to business requirements
Customer pays maintenance to fix software	Provider fixes software or pays penalty for failure to meet service levels
Customer buys upgrades to keep current	Provider ensures currency of solution

COIN Value: main innovations

- **The COIN SaaS-Utility model**

  ➢ An **evolution** of SaaS towards commoditized ICT services

  ➢ Study and Design new **Business Models** for SaaS-U

  ➢ Identify and develop a **Value Proposition** for SaaS-U

  ➢ Support the identification of criteria and **Design Principles** for EO/EC services to be provided as utilities

  ➢ An implementation of the **ISU Grand Challenge** (interoperability service utility)

    ✓ Available at (very) low cost

    ✓ Accessible in principle by all enterprises (universal access)

    ✓ "Guaranteed" to a certain extent & at a certain (set of common rules)

    ✓ Not controlled or owned by any single private entity

COIN Value: future outlook

SaaS-U

SaaS

Subscription

Today's Models (mostly fixed)

Simple Increments (modify CPU/ tiered models)

Hybrid (Fixed & Variable Usage)

Variable Usage (Metered)

Value Driven (based on function commoditisation)

**Fixed costs
Dedicated resources
Product oriented**

**Variable costs
Shared resources
Service oriented**

**Marginal cost > 0.0
Value based dynamic pricing
Service infrastructure as utility
Innovation focused**

IT Plug

IT Switch

IT Tap

COIN Market: starting point

EC form / EI challenge	Knowledge i/op	Business i/op
Supply Chains	Aerospace DTA Lazio (ITA)	Automotive Slovenian Net (SLO)
Collaborative Networks	ICT Network (HUN)	Aeronautic Cluster of Andalusia (SPA)
Business Ecosystems	Pulp & Paper Poyry (FIN)	Healthcare VEN (UK)

COIN Market: a Business Collaborative Network

2 Prime Contr

125 Subcontra

Aeronautic Technological Park

Advanced Aerospatiale Center (CATEC)

Technological Park Bahia de Cadiz

- **Final assembly**
- **Aerostructures assembly**
- **Engine assembly**
- **Subset assembly**
- **Equipment and systems assembly**
- **Mechanical transformations**
- **Tooling**
- **Plating**
- **Final processe**
- **Composite / Pl**
- **Electrical / Ele**
- **Engineering /**
- **Services**
- **Tests and trial**
- **Space**

AIRBUS

JUNTA DE ANDALUCIA

Andalusian Aeronautical Forum PVC

Andalusian Institute of Technology

Universities of Sevilla and Cádiz

COIN Market: future outlook

The **COIN Community** mechanism aims to extend and multiply dissemination and exploitation of COIN concepts and outcomes to the external scientific, technical and industrial world.

COIN Community is structured as a **Professional Virtual Community (PVC)** at three increasing levels of commitment: **Member, Testimonial, Angel**.

COIN Members need to register to the community by filling a simple Registration Form. They will receive periodical COIN Newsletters and participate at the Social life of COIN

COIN Testimonials are members with recognized expertise & competence in COIN topics of interest. They will participate in COIN workshops and increase the Knowledge dimension

COIN Angels are members who are committed to animate the COIN Community and stimulate the adoption of COIN scientific and applicative results in industry. They will involve additional test cases as COIN Multipliers and contribute to the development of the Business dimension of COIN

Seed and multiply the COIN!

http://www.coin-ip.eu/

Conclusions (I)

1. **The side A: interoperability**
   - S-O-A: INTEROP NoE and ATHENA IP
   - COIN: the Interoperability Space
   - Next: the Future Internet Enterprise Systems (FInES)

2. **The side B: collaboration**
   - S-O-A: ECOLEAD and DBE IPs
   - COIN: the Collaboration Space
   - Next: the Innovation Knowledge Ecosystem (IKE)

3. **The Metal: Service Platform**
   - S-O-A: DIP and TrustCom IPs, a SESA
   - COIN: the Generic Service Platform
   - Next: the IOS Global Service Delivery Platform

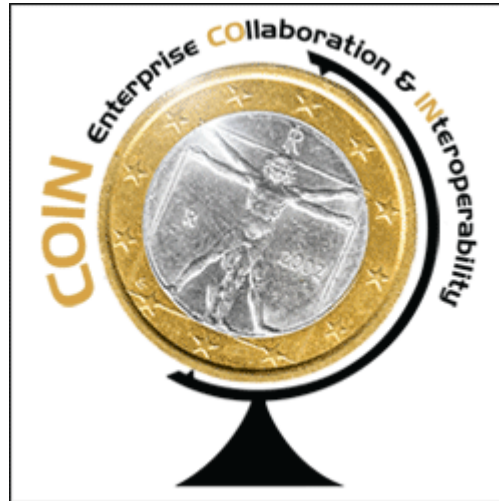# Conclusions (II)

4. **The Value: Business Models**
   - S-O-A: Software as a Service
   - COIN: the SaaS-Utility business model
   - Next: Value-added/Utility services: Tap model

5. **The Market: Enterprise Networks**
   - Starting Point: 6 different Enterprise Networks
   - COIN: knowledge / business pilots & takeups
   - Next: the Multipliers program (seed your COIN)

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