Enterprise COllaboration & INteroperability

COIN Winter School

The COIN IP Project

Technical and Business Innovation

Ljubljana, Nov 28th 2011
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TXT e-solutions S.p.A.
COIN Coordination Team
**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: 27 partners, 16 countries

Strategic Objective: FP7 ICT-2007.1.3
ICT in support of the networked enterprise

Total Eligible Cost: 16M EURO

EC Contribution: 11M EURO
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)
The COIN DOW 5 Objectives

1. To design and develop a pervasive, adaptive Service Platform to host Baseline and Innovative COIN services for EI and EC and make them available under innovative on-demand, utility-oriented business models (i.e. the SaaS-U model) to European enterprises (and SMEs in particular) for running their business in a secure, reliable and efficient way.

2. To consolidate and stabilize the ICT results of both EC and EI FP6 research into some Baseline Services which constitute the service foundations for COIN.

3. To further enlarge, extend and improve the baseline services, by developing other more Innovative Services in the EC and EI fields, which could take into account the most recent and promising technology challenges (in the field of Web 2.0, semantic web, space computing) and put them at service of EC and EI purposes.

4. To represent a pathway to convergence for these two fundamental research streams: EI and EC, by integrating in the same project the most prominent stakeholders of the two research fields coming both from industry and from universities and research centres.

5. To demonstrate, experiment, trial and assess the project results into realistic industrial scenarios offered by our 6 test cases in Aeronautics (Aeronautic Cluster of Andalusia, Spain), Automotive (the Automotive Cluster of Slovenia), Aerospace (the Lazio Connect virtual enterprise network Italy), Pulp & Paper (the Poyry consultancy service providers), Healthcare (the VEN network in U.K.) and ICT (the Hungarian Association of ICT companies).
COIN Side A: state-of-the-art

- **Provided**
  - Enterprise Models
  - Processes
  - Services
  - Information / Data

- **Model-Driven Interoperability**
  - Collaborative Enterprise Modelling
  - Cross-Organisational Business Processes
  - Flexible Execution and Composition of Services
  - Information Interoperability

- **Required**
  - Ontologies and Semantics
  - Enterprise Models
  - Processes
  - Services
  - Information / Data
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

- EI as part of the Future Internet vision: the Internet as the Universal Business System
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

Management / Governance

CNO creation

Metamorphosis

© The ECOLEAD Integrated Project
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)
COIN Side B: future outlook

• The Innovation 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) integrated into the FI PPP Core Platform
**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)

<table>
<thead>
<tr>
<th>Application Hosting Model</th>
<th>Software as a Service Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer pays on delivery of <strong>software</strong></td>
<td>Customer pays for delivery of <strong>functional services</strong></td>
</tr>
<tr>
<td>Customer responsible for software performance</td>
<td>Provider responsible for software performance</td>
</tr>
<tr>
<td>Customer responsible to <strong>customize</strong> software to business requirements</td>
<td></td>
</tr>
<tr>
<td>Customer pays maintenance to fix software</td>
<td>Customer responsible to <strong>configure</strong> software to business requirements</td>
</tr>
<tr>
<td>Customer buys upgrades to keep current</td>
<td>Provider fixes software or pays penalty for failure to meet service levels</td>
</tr>
<tr>
<td></td>
<td>Provider ensures currency of solution</td>
</tr>
</tbody>
</table>
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 EI/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 Market: starting point (1)

<table>
<thead>
<tr>
<th>EC form / EI challenge</th>
<th>Knowledge i/op</th>
<th>Business i/op</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Chains</td>
<td>Aerospace</td>
<td>Automotive</td>
</tr>
<tr>
<td></td>
<td>DTA Lazio (ITA)</td>
<td>Slovenian Net (SLO) **</td>
</tr>
<tr>
<td>Collaborative Networks</td>
<td>ICT Network (HUN)</td>
<td>Aeronautic Cluster of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Andalusia (SPA)</td>
</tr>
<tr>
<td>Business Ecosystems</td>
<td>Pulp &amp; Paper Poyry (FIN)</td>
<td>Healthcare VEN (UK)</td>
</tr>
</tbody>
</table>

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COIN Market: Business Collaborative Networks

- **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 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 application and platforms.

Research centers

- Increase communication between companies, University and research centers.

Universities of Sevilla and Cádiz

Regional Government
Aerospace DTA Lazio Business Use Case
Aerospace Domain
Regione Lazio’s Aerospace Sector

The Aerospace industry in Lazio:

- **250 prominent sized companies**
- **30,000** employees
- **5 Billion** Euro turnover
- **10 Research Centres**
- **5 Universities**
- **5 Technological Parks**
- **4 Engineering Faculties, 12 Departments, 30 Postgraduate and Graduate courses**
- **3,000 Professors, Researchers and Specialists** involved in R&D activities in aerospace fields
- **Incubators and Support services for technology transfer and start-up creation**

www.lazio-aerospazio.it
Lazio Aerospace Technology Cluster

Areas of expertise

- several major aerospace companies and SMEs operating in space, aeronautics for civil and military customers

- communications and avionics systems

- traditional and advanced materials

- aeronautical fleet maintenance management; airport facilities and logistic services

- design of solid fuel engines and components for the Ariane and Vega rockets as well as manufacture of important parts of complete air-to-air and land-to-air missile launching systems

- design and manufacture of airplane and helicopter subsets and components

- design and manufacture of important aeronautical systems and equipment for civil and military aircraft
Regione Lazio’s Aerospace Sector main EC& EI challenges

- The Aerospace Technological District (DTA) sees a major concentration of large, medium and small enterprises involved in the aerospace supply chain
- DTA actors lack of adoption of innovative EC&EI services
- DTA actors scarcely aggregate to achieve business benefits due to lack of EI&EC software tools

To improve current status, two demonstrator are under development:

1. collaborative production planning of satellite antennas
2. knowledge interoperability (KI) applied to competence and skill management mapping of DTA’s stakeholders
C-PP Satellite Antennas

COIN EC services and COIN system effects:

• Increase production rate with no increase of IT systems costs thanks to SaaS paradigm adoption
• Reduce time and cost of production
• Improve effectiveness and efficiency of communications among supply chain actors
• New business opportunities thanks to access to a wider market picture
KI applied to competence and skill management mapping

COIN KI services and COIN system effects:

- Have an up-to-date picture of the capabilities of the DTA cluster
- Provide crucial business tools to identify DTA strengths, weaknesses and gaps
- Give a clear picture of the DTA business, technological and industrial competence scenario
- Address specific measures, policies and incentives to support DTA actors’ business development and so increase competitiveness and create new business opportunities for DTA cluster actors
- It is expected an increase of business opportunities of 15%
ICT Network Business Use Case
ICT Domain
IVSZ overview

IVSZ – Hungarian Association of IT Companies
• Voice of Hungarian ICT Industry (largest ICT association in HU)
• 300+ Hungarian ICT companies (SMEs, Enterprises)
• Service provision, networking, representation of interest

IVSZ Innovation working group
• Innovative, association member IT companies
  • 40+ members
  – 30+ SMEs
  – 5+ large companies
  – 3 research centers
Business Scenario: Building Cooperations with other industry organizations

• **Argument:** ICT technologies are enabling technologies – they make other sectors more competitive

• **Goal:** turn this statement into practice and increase the ICT penetration in a number of industry sectors

**Methodology/process – for each sector**
- Bringing together clusters from ICT and the other sector
- Understanding each other and challenges
- Exchanging information on experiences and knowledge
- Defining ICT based innovation projects
IVSZ main EC& EI challenges

Challenges

• Difficulty in keeping up-to-date members competencies
• Difficulties in understanding each other
• Problems with trusting each other
• Difficulty in information exchange / communication

Expectations from COIN services

• Systematic and (semi-)automatic competency management
• More flexible collaboration
• More efficient communication and meetings
• Broader information supply from members
IVSZ scenarios

1. Building a project group
2. Create/update ICT ontology and Company semantics profiles
3. Industry-ICT Competencies and Skills semantic gap analysis
4. Project Idea generation workshops
5. Create innovation project team
### COIN Market: starting point (2)

<table>
<thead>
<tr>
<th>Hierarchical Collaboration</th>
<th>Production and manufacturing</th>
<th>Logistic</th>
<th>KTU (LT)</th>
<th>LODER (TR)</th>
</tr>
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<tbody>
<tr>
<td>Collaborative Networks</td>
<td>Civil Engineering UPB (RO)</td>
<td>Marine Shipping</td>
<td>UCY (CY)</td>
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</tr>
<tr>
<td>Living Labs</td>
<td>Media &amp; Digital Technologies</td>
<td>Agri-food</td>
<td>FAVIT (BG)***</td>
<td>WIRELESSINFO (CZ)</td>
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</table>

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## COIN SP7 Use Cases

<table>
<thead>
<tr>
<th>Pilot/Topic</th>
<th>Sector Domain</th>
<th>COIN Platforms</th>
<th>COIN Services</th>
<th>New Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPB, RM</td>
<td>Civil Construction</td>
<td>Yes</td>
<td>WP4.2-4-5 WP5.3</td>
<td>C-PD C-HIMS Project</td>
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<tr>
<td>UCY, CY</td>
<td>Marine Shipping</td>
<td>Yes</td>
<td>WP4.1-5 WP5.2</td>
<td>UBL i/op DA-DESK</td>
</tr>
<tr>
<td>FAVIT, BG</td>
<td>Media &amp; Content</td>
<td>Own CMS FAVIT</td>
<td>WP4.5 WP5.2</td>
<td>Cyrillic, Ont FAVIT-CP</td>
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<tr>
<td>Loder, TK</td>
<td>Transport &amp; Logistics</td>
<td>Yes</td>
<td>WP4.4 WP5.1-2</td>
<td>UBL Turkish axapta lams</td>
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<tr>
<td>KTU, LT</td>
<td>Discrete Manufact.</td>
<td>Yes</td>
<td>WP4.1-3 WP5.2</td>
<td>UBL i/op centas rivile</td>
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<tr>
<td>Wireless info, CZ</td>
<td>Agriculture &amp; Food</td>
<td>Own DSS Pre-Farm</td>
<td>WP4.2-5 WP5.1</td>
<td>Ontology Geospatial</td>
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</table>
COIN Eastern Europe
Turkish Business Use Case
Transport and Logistic Domain
Big Potential: Logistics Sector in Turkey

- Total Logistics Sector Business Volume in Turkey is €70 Billion and Total Logistics & Transportation Companies Business Value is €40 Billion.

- According to the Gross Domestic Product values in 2009, transport, storage and communication sub-sectors constitute 13% of total GDP value.
Scenario

Sector: Chemical/Paint
Subject: “Collaborative Transportation of paints from paint manufacturer to its customers”
Case SME: Dinçer Lojistik
Selected Clients: Polisan and Kayalar
Objective: Increasing the customer services to the highest level by decreasing the logistics costs
Factors Effecting The Objective: vehicle occupancy, route optimization, delivery time, resource optimization, transportation damage rate, defective shipping rate
Business Specification:
- Dinçer Lojistik provides the transportation of paints for 225,000 Ton/Year where the total paint industry production value in Turkey is 800,000 Ton/Year. Total Logistics Sector Business Volume in Turkey is € 70 Billion and Total Logistics & Transportation Companies Business Value is € 40 Billion
- The total number of course is 28,695 per year where Dinçer Lojistik revenue is € 12,820,513 per year and total distance is 12,510,000 km/year
Collaborative Transportation of paints from paint manufacturer to its customers is an SME, member of LODER.

**Dinçer Lojistik** is focused on:
- Domestic and inner-city transportation,
- Domestic and inner-city distribution,
- Complete and partial transport,
- Fleet Transport services,
- Storage services,
- Round transport

Mainly in the Chemical Sector

**Dinçer Lojistik** is located in İstanbul and provides logistics services in all over Turkey (3 zones: 1=1 day, 2=2 days, 3=3 days distribution zones)
Collaborative Transportation of paints from paint manufacturer to its customers is an SME, member of LODER.

**Dinçer Lojistik**

- Domestic and inner-city transportation,
- Domestic and inner-city distribution,
- Complete and partial transport,
- Fleet Transport services,
- Storage services,
- Round transport services

Mainly in the Chemical Sector

**Dinçer Lojistik** is located in İstanbul and provides logistics services in all over Turkey (3 zones: 1=1 day, 2=2 days, 3=3 days distribution zones)

**Services**

- Transportation and Logistics
- Project Management
- Storage and Distribution Services
- Inventory Management
- Domestic Distribution Service
- Added Value Services
Collaborative Transportation of paints from paint manufacturer to its customers

Dinçer Lojistik transports paints of the paint producers (Polisan and Kayalar) to the paint producers’ clients: distributors, construction market chains, hardware dealers and construction yards by making agreements with carriers and plans the transportation service in collaboration with the clients of the client.

Domestic transport, packaged goods (IBS) and a process without storage
Business Processes
(6 Use Cases Selected)

Projects:
project1, project2, project3

Order-Delivery Process

1. Receive the order of the client
2. Group the orders by date and by location
3. Plan the freight & routing (own properties and rental vehicles)
4. Send the vehicles to the Client’s loading place
5. Load the vehicles and receive the deliveries
6. Vehicles depart from the Client
7. Track and trace the vehicle
8. Unloading the vehicles in the delivery place
9. Take the return and Empty containers
10. Unloading return and empties
11. Reporting to the client
12. Prepare and send the invoice
13. Receive the payment (collection)

Yes

Are there any return and Empty container?

No

1. Contract management between Logistics Company & Supplier
2. Contract management between Logistics Company & Vehicle Owners and Client’s clients
3. End of Agreement
4. Performance Measurement Controls
5. Reports according to the Performance Indicators

Order

Projects:

Each Project

Supplier Agreement

Contract Documents

Contract Document
Work Plan
Supplier’s Clients Address List

negotiations
Business Processes
(6 Use Cases Selected)

1. Contract management between Logistics Company & Supplier
   - Receive the order of the client
   - Group the orders by date and by location
   - Plan the freight & routing (own properties and rental vehicles)
   - Send the vehicles to the Client’s loading place
   - Take the return and Empty containers
   - Load the vehicles and receive the deliveries
   - Unloading return and empties
   - Vehicles depart from the Client

2. Contract management between Logistics Company & Vehicle Owners and Client’s clients
   - Are there any return and Empty container?
   - Yes: Group the orders by date and by location
   - No: 8-Unloading the vehicles in the delivery place
   - 4-Send the vehicles to the Client’s loading place
   - 6-Vehicles depart from the Client
   - 12-Prepare and send the invoice
   - 13-Receive the payment (collection)

3. Performance Measurements Controls
   - Reports according to the Performance Indicators

Projects:
- project1, project2, project3

Supplier Agreement:
- Contract Document
- Work Plan
- Supplier’s Clients Address List
- Negotiations

Each Project:
- End of Agreement
- Supplier Agreement
Business Processes
(6 Use Cases Selected)

1. Contract management between Logistics Company & Supplier
   - Negotiations
   - Contract Documents
   - Work Plan
   - Supplier’s Clients Address List

2. Contract management between Logistics Company & Vehicle Owners and Client’s clients
   - Negotiations
   - Contract Documents

3. Performance Measurement Controls
   - Reports according to the Performance Indicators

Order-Delivery Process:
- EI
- EC

Each Project
- Receive the order of the client
- Group the orders by date and by location
- Plan the freight & routing (own properties and rental vehicles)
- Send the vehicles to the Client’s loading place
- Take the return and Empty containers
- Load the vehicles and receive the deliveries
- Unloading return and empties
- Vehicles depart from the Client
- Track and trace the vehicle
- Unloading the vehicles in the delivery place
- Reporting to the client
- Prepare and send the invoice
- Receive the payment (collection)

End of Agreement
- Yes
- No

Are there any return and Empty container?
COIN Eastern Europe
Lithuanian Business Use Case
Production and Manufacturing Domain

University of Kaunas
JSC “VAE Legetechea”

- VAE Legetechea was founded in 1995 as turnout producer
- VAE Legetechea supplies “Lithuanian railways” with fully assembled turnouts, switch blades, frogs, insulated rail joints and all enterprises of VAE Group with baseplates
- Today Enterprise is exporting its products to more than 10 countries: Latvia, Estonia, Austria, Spain, Italy, USA, Australia, Holland
Example of relations with Legetecha’s suppliers and customers

Suppliers
- Steel supplier: JSC Jogmetis
- Service supplier: JSC Rinanda

Railway parts manufacturer JSC VAE Legetecha
- Manufacturing of parts
- Assembling of semimanufactures
- Assembling of final products

Customers
- Buyer of semimanufactures: JSC Alkesta
- Buyer of final product: JSC Gelmagis

Suppliers of VAE Legetecha:
- VAE GmbH
- VAE Riga
- VAE SOFIA
- Lithuanian railways
- UAB “Hidrostatyba”
- VolkerRail Lietuva
- AB “Panevėžio keliai”
Bottlenecks

1. VAE Legetecha’s actions to find suitable suppliers
2. VAE Legetecha’s and potential customer working groups’ actions to prepare initial manufacturing specification and high level work plan
3. VAE Legetecha’s and potential customer’s consideration to make business agreement
4. VAE Legetecha’s actions to negotiate with suppliers
Business use case overview

1. Preliminary order analysis and evaluation

2. Initial production plan preparation and cost estimation

3. Search for manufacturing partners

4. Final order preparation and agreement signing
ERP system “IMI2005”

- Specialized cost accounting and planning system
- Client server architecture
- Hosted on local server
- Borland Interbase DBMS
- Full version available, realistic data available for testing
- JDBC, BDE, or ODBC interface
ERP system “Centas”

- Commercial ERP system
- GUI + DB
- Hosted on local server
- Database: Paradox DB tables
- Demo version available, realistic data for testing
- BDE or ODBC interface
ERP system “Rivilė“

- Commercial ERP system
- GUI + DB
- Hosted on local server
- Database: standard FoxPro DBF files
- Demo version available, realistic data for testing
- Custom interface for import/export based on XML
COIN Eastern Europe
Cyprus Business Use Case
Marine Shipping Domain

University of Cyprus
Shipping sector in Cyprus

• Shipping is a hugely important sector in Cyprus and the wider region
  – The Cyprus Registry is classified as the 10th largest merchant fleet globally and the 3rd largest fleet in the European Union,
  – Contribution to the Cyprus economy is as high as 5.5% GDP (Gross Domestic Product),
  – European merchant fleet capacity was significantly increased upon Cyprus accession (++ ~20%).
• ~87% ship-owning/management companies in Cyprus are controlled by EU (including Cypriot) interests.
• ~4,500 persons are employed ashore and ~40,000 seafarers of different nationalities employed onboard vessels controlled/managed from Cyprus.
• Shipping industry hugely successful over last 20 years. Further growth expected with the continued introduction/development of modern infrastructure and ICT
  – A successful pilot of COIN services will contribute to this success
Introduction to use case scenario

- The selected use case scenario describes the process of accomplishing a shipping voyage.
- Donnelly Tanker Management (DTM) is the responsible party for the overall organization of a successful voyage and has to ensure communication between all involved parties are well maintained and correct communications channels are followed.
- The process for voyage establishment includes direct communication between DTM and the other parties and or the monitoring of the communication between the parties in order to receive the acknowledgment and to continue to the next step of the process until the voyage is completed.
- Actors:
  - DTM, United Product Tankers (UPT), charterers, brokers, load port agents, discharge port agents and United Fuel Services (UFS).
Introduction to use case scenario

- **Establishment of communication between UPT and Brokers by DTM**
- **Communication via email**
- **Time consuming**
- **Negotiation of the agency fee**
- **Identification of requirements**
- **Discharge**
- **Payment**
- **Da-desk system**
- **Ship**
- **On arrival, the vessel sends documents to DTM**
- **Not an automatic procedure**
- **Communication via e-mail**
- **UFS (United Fuel Services)**
Process Maker Screen Shots
Process Maker Screen Shots

- e.g., dynaform for voyage setup step in workflow in process maker
COIN Communities

• COIN Members
• COIN Testimonials
• COIN Angels
  ➢ Prof. Guy Doumeingts (Interop VLab) for ICE 2009
  ➢ Prof. Marc Pallot (Nottingham Univ.) for Esoce 2009
  ➢ Dr. Wolfgang Prinz (FhG FIT) for ICE 2010
  ➢ Dr. Piero De Sabbata (ENEA) for IWEI 2011 Prof. Roberto Zicari (OMG))
  ➢ Prof. Yannis Charalabidis (NTUA) for SAMOS 2011
  ➢ Prof. Xiaofei Xu (HIT) for FIS2011

• 6 new Pilots-Multipliers from COIN-EEU call5 project:
  ➢ Civil Engineering (Romania)
  ➢ Agriculture & Rural Areas LL (Czech Republic)
  ➢ Supply Chain Management & Logistics (Turkey)
  ➢ Marine shipping (Cyprus)
  ➢ Railways Infrastructure Components (Lithuania)
  ➢ Digital Media Living Lab (Bulgaria)

Seed and multiply the COIN!
http://www.coin-ip.eu/
Enterprise **COllaboration & INteroperability**

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