



FInest – **F**uture **I**nternet enabled optimisation of **t**ransport and logistics networks



D10.6

Final Report and Phase 2 Plan for Dissemination and Standardization

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Abstract

Work package WP10 covers all activities that are necessary for achieving the impact that is planned for the Finest project. The aim is to present and promote the uptake of the project results by various stakeholders (internal and external to the project) and interest groups. To this end, WP10 will present the project and work results to the broader public and research communities (dissemination), prepare for the usage and industrial uptake of the project results by the consortium partners as well as by other interested parties (exploitation), and prepare for a substantial and long-term impact by promoting the project results for standardization.

This deliverable summarizes the dissemination and standardization activities carried out in the second year of the project and it includes also the phase 2 plan for dissemination and standardization.

Document History

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V1.0	28-03-2013	Final, ready for submission

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Acronyms

Acronym	Explanation
BVL	German Logistics Association
CEN	European Committee for Standardization
DWG	Dissemination Work Group
EIT	European Institute of Innovation and Technology
ERRAC	European Rail Research Advisory Council
ERTRAC	European Road Transport Research Advisory Council
IATA	International Air Transport Association
ICT	Information and Communications Technologies
IoT	Internet of Things
ISI	The Integral Satcom Initiative
ISO	International Organization of Standardization
FI	Future Internet
FIA	Future Internet Assembly
FIATA	International Federation of Freight Forwarders Association
NEM	Networked Electronic Media
NESSI	Networked European Software and Services Initiative
PPP	Public Private Partnership
SME	Small and Medium sized Enterprise
SRII	Service Research and Innovation Institute
V1.0	Version 1.0
VLDB	Very Large Data Bases
WP	Work Package

1. Introduction

The purpose of this document is to report the second year results of dissemination and standardization activities carried out by Finest partners. It also includes the phase 2 plan for the dissemination and standardization which will be used to present and propagate Finest/cSpace project and the project results to the broader public in general, the relevant scientific communities, and to other external parties that are potential adapters of the project results. The whole potential stakeholders to be addressed in dissemination activities can be seen in Figure 1 which are connected to the Collaboration and Integration Platform.

This deliverable will summarize the second year dissemination activities in the following section. It will include phase 2 plan for dissemination and standardization before providing the conclusion of the activities.

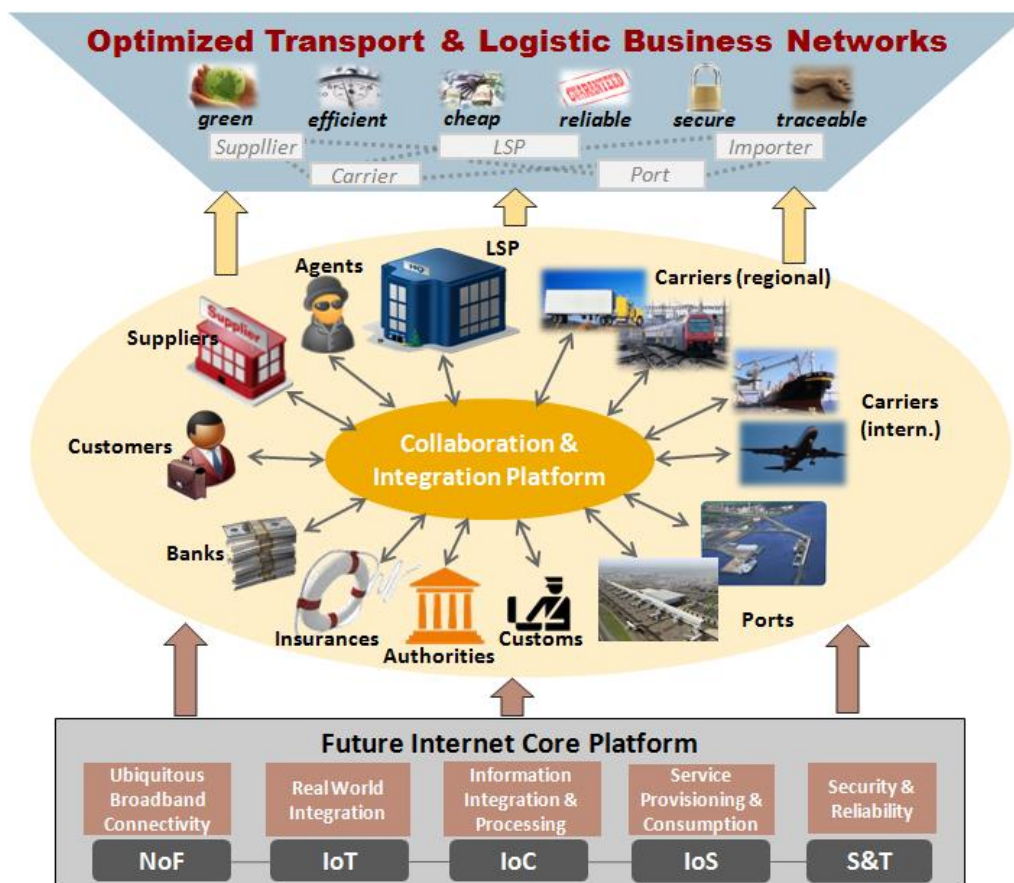


Figure 1 - Future Internet enabled Collaboration & Integration Platform for Transport & Logistics

2. Dissemination and Standardization Report (M13-M24)

This section summarizes the dissemination activities carried out between months 13 to 24.

2.1. Web Site

Available since month 1 of the project, the web site has been continuously updated during the course of the project (see deliverable D10.1 for details). A snapshot of the home page (March 2013) can be seen in Figure 2.



Figure 2 - Finest Web Site

2.2. Events and Conferences

The following meetings have been organized by the Finest team:

- Finest co-organized and participated in the FI PPP Session “Smart city applications and services” at FIA Week in Aalborg.
- Local meetings:
 - Plenary Meeting in Haifa.
 - Plenary Meeting in Glattbrugg/Zürich.
 - Technical Meeting and Demonstration of Finest Proof-of-Concepts in Essen.
- M12 Review Meeting in Brussels.

Finest members have participated in the following events and some of them are highlighted in FI PPP newsletters. Please see respective appendix for details.

- FI-PPP Programme and Cluster meetings: Finest members of FI PPP Workgroups have participated in steering, architecture board, dissemination, exploitation and business modelling work groups meetings during FI Week in Aalborg.
- Finest at the Turkish Eureka Chairmanship Launch Conference, please see Appendix 5.3.
- Finest Wins Best paper Award at Presentation at the SRII Global Conference in Silicon Valley, please see Appendix 5.4
- Finest at the 38th Conference on Very Large Data Bases (VLDB 2012), please see Appendix 5.5.
- Finest at the International Partnering and Collaboration Event in Inclusive, Innovative and Secure Societies, please see Appendix 5.6
- Finest at the NEM Summit 2012 in Istanbul, please see Appendix 5.7.
- Finest at the Instant Mobility Stakeholder Workshop in Vienna, please see Appendix 5.8.
- Finest Presentation to a Japanese Delegation in Amsterdam, please see Appendix 5.10.
- Finest at the X.International Logistics and Supply Chain Congress in Istanbul, please see Appendix 5.11.
- FI-PPP/Finest at the 2012 Africa-EU Cooperation Forum on ICT in Lisbon, please see Appendix 5.12.
- Finest at the Innovation Week in Istanbul, please see Appendix 5.13.
- Finest at the 11th Industry Congress and Innovation Exhibition in Istanbul, please see Appendix 5.14.
- Finest at the ERA-NET Transport Information Day in Ankara, please see Appendix 5.15.

- Successful Exhibition, Demonstration and Presentation of Finest results at Mobile World Congress 2013 in Barcelona, please see Appendix 5.18.
- Finest at the CelticPlus Event in Kayseri, please see Appendix 5.18
- Finest at the ITEA2 PO Days 2013 in Istanbul, please see Appendix 5.19

2.3. Publications

Finest members have published the following papers during the reporting period:

- **A. Metzger, O. Sammodi, and K. Pohl, “Accurate proactive adaptation of service-oriented systems,”** in Assurances for Self-Adaptive Systems, J. Camara, R. de Lemos, C. Ghezzi, and A. Lopes, Eds., vol. LNCS 7740. Springer, 2013.
- **A. Metzger, R. Franklin, and Y. Engel, “Predictive monitoring of heterogeneous service-oriented business networks: The transport and logistics case (best service engineering innovation & quality paper),”** in SRII 2012 Global Conference, ser. Conference Publishing Service (CPS), R. Badinelli, F. Bodendorf, S. Towers, S. Singhal, and M. Gupta, Eds. IEEE Computer Society, 2012.
- **L. Baresi, N. Georgantas, K. Hamann, V. Issarny, W. Lamersdorf, A. Metzger, and B. Pernici, “Emerging research themes in services-oriented systems,”** in SRII 2012 Global Conference, ser. Conference Publishing Service (CPS), R. Badinelli, F. Bodendorf, S. Towers, S. Singhal, and M. Gupta, Eds. IEEE Computer Society, 2012.
- **R. Franklin, Y. Engel, M. Hagaseth, A. Tjora, F. Fournier, R. Fleischhauer, C. Marquezan, A. Metzger, M. Stollberg, and S. Tschapke, “Cloud based collaboration platform for transport & logistics business networks,”** in 6th International Scientific Symposium on Logistics. Bundesvereinigung Logistik (BVL), 2012.
- **A. Barros, M. Allgaier, A. Charfi, M. Heller, U. Kylau, B. Schmeling, M. Stollberg, “Diversified Service Provisioning in Global Business Networks”,** SRII Global Conference (SRII), 2011 pp.716–728, 2011
- **M. Stollberg, J. Hoffmann, D. Fensel: A Caching Technique for Optimizing Automated Service Discovery.** Int. J. Semantic Computing 5(1): 1-31 (2011)

2.4. Press Releases and Media

- Press Release on Future Internet Research and Finest, Published on Tuesday, 06 November 2012, Finest project member UDE, specifically Paluno (The Ruhr Institute for Software Technology), has delivered a press release on Future Internet Research, the role of the FI PPP core platform as well as its application to transport and logistics (i.e., Finest). The full text of the press release can be accessed from: <http://www.sse.uni-due.de/en/news/253-press-release-eu-project-researches-future-interne-technologies> and can be seen at Appendix 5.9 as well.
- The third Finest Brochure showing major findings has been prepared for business people as target area and printed copies were distributed in major events including FIA Aalborg and MWC 2013. It is a refined brochure with a further explanation of the Finest concept. The third brochure can be seen at Appendix 5.2.

2.5. FI-PPP

Finest has contributed FI-PPP Dissemination Work Group activities in this period and the details can be found in the Dissemination WG section of the deliverable D9.3 Report and Phase 2 Plan for FI PPP Alignment.

Finest project information including a link to the project's web site is included in FI-PPP portal.

Finest co-organized and participated in the FI PPP Session “Smart city applications and services” at FIA Week in Aalborg.

In addition to DWG activities Finest has participated in the Exploitation and Business Modelling Working Group (EBM WG) activities to maximise the impact and exploitation potential of the FI-PPP Programme and the individual FI-PPP projects. The meeting details can be found in deliverable D9.3, too.

2.6. Collaborations with Other Projects

The initial assessment has been done with identifying the potential projects which are listed in Section 1.3.5 of Deliverable D10.4 Interim Report and Revised Plan for Dissemination and Standardization. These projects have been contacted either by common partners from Finest consortium or by Finest Dissemination Group Members to determine the potential collaboration areas. Partially organizations involved in the Finest project are also active in those research projects; as a result, they are closely connected which makes alignment for Future Internet ICT solutions more efficient and successful. Those organizations are mainly: SAP, UDE and IBM.

Finest has contacted to the two other FI PPP use case projects, InstantMobility and SmartAgriFood in the first period and first meeting was held in Poznan. Finest and SmartAgriFood partners agreed on 4 action items for aligning the both use case projects which were listed in the Deliverable D10.4 Interim Report and Revised Plan for Dissemination and Standardization.

Finally, direct alignment activities with other FI PPP projects (FI-WARE, INFINITY) can be seen in D9.3.

2.7. Thematic Networks and Associations

The Finest newsletter has been distributed during the ICT Proposers Day (and NESSI Members Day) in Warsaw and at NEM Summit in Istanbul.

Uluslararası Nakliyeciler Derneği (UND, International Transporters Association) in Istanbul were contacted and Finest members, Arçelik and Koç Sistem, have visited UND headquarters in Istanbul and presented the Finest projects to delegates. The UND steering board signalled interest in the Finest solution and offered future collaboration possibilities with UND members. UND has been established in 1974 and has 902 active SME and large industry members covering all modes of international transportation and logistics.

2.8. SME and User Group Activities

The Finest consortium members have developed an SME and user group plan to increase the impact and exploitation possibilities of the Finest project. This plan has initially based on organising sessions with users outside the Finest consortium and getting feedback on the Finest concept and the demonstrators. This has been started in the first period and continued in the second period. Summaries of the some of these activities and/or meetings are included in above and below sections.

To this end, several dissemination meetings have been held in this period with different organisations out of the Transport & Logistics and ICT Domains to discuss the Finest concept.

Organisation	Main Feedback (meeting notes are available)
Harbor of Amsterdam	<ul style="list-style-type: none"> • Finest concept is interesting, but relation to existing collaboration hubs should be clarified • Customs is missing as a relevant stakeholder and should be considered for future developments
European Container Terminals	<ul style="list-style-type: none"> • The Finest project appears interesting But clarification on its relationship with Integrity, Comcis and Cassandra projects would be helpful • As a logistic service provider who wants to further increase his network and collaboration, a collaboration platform is definitely interesting.
Schiphol Airport	<ul style="list-style-type: none"> • As a ‘host’ and not directly involved in the Supply Chain, Schiphol Airport currently is not interested in the concept of a collaboration platform
Hogeschool of Amsterdam & TNO	<ul style="list-style-type: none"> • It is perceived that new collaboration platforms will drive changes in current business models. • Similarities between the Finest concept and other European projects, such as Extend single window, Ultimate, Horizon 20-20, Cassandra, I-carg, Contain, and OPTI-CHAIN could be elaborated
CLECAT: European forwarder umbrella organisation	<ul style="list-style-type: none"> • Was not interested in sharing information
UEAPME	<ul style="list-style-type: none"> • European umbrella organisation for SME’s, covering 12 million enterprises. • Signalled interest in working together with the Finest consortium. They see a benefit for SMEs, though the concept should further be developed, getting more mature. • Wants to join user groups
AUTF	<ul style="list-style-type: none"> • Interested in the concept. Finest can be of good benefit for shippers but first it needs to be more mature.
Zer A.S.	<ul style="list-style-type: none"> • Interested in the expected outcomes especially in logistics purchasing and monitoring SLA compliance activities

As a summary:

- Most of the participants were enthusiastic about the Finest concept. They believe a collaboration platform can be necessary for further improvements in the future,
- The organisations saw synergies with current running projects and solutions,
- They are interested to be involved in the future and this will be realized with the trials during phase 2 of the FI PPP program. All potential stakeholders will be involved in phase 3 activities.

The dissemination visits indicated that logistics domain partners are interested in the general idea of Finest, but also that the actual advantages of the concept need to be elaborated. They also expressed that the concept needs to get more mature and concrete. Therefore, it will be instrumental to showcase software and apps developed during the trials in phase 2 of the FI PPP to those interested stakeholders. Finest has received similar response from the editor of the international Supply Chain Management Magazine. They would like to publish a Finest article once the concept is more mature.

2.9. Standardization

The Finest partners tried to identify new opportunities for establishing new standards and contributing to existing standardization activities to ensure the standardization of project results in this period as well. As a result, Finest project started collaboration with eFreight⁽¹⁾ towards the standardization of TEPs data model in this period. The TEP information model is specified in context of the e-Freight project⁽²⁾.

A Transport Execution Plan (TEP) is a model which holds all information related to the execution of a transport service, whereby at least a Logistics Service Client (LSC) and a Logistics Service Provider (LSP) are involved. A Transport Chain Plan (TCP) represents a logistics chain, and is simply a collection of TEPs. Although an implicit sequence of steps exists, the contained TEPs can be executed concurrently.

e-Freight is a research and development project (2010-2013), which aims to support the development of a standardized framework for real-time freight information exchange covering all transport means.

3. Phase 2 Plan for Dissemination and Standardization

The Finest consortium has since the start of the programme has engaged with other use case projects in order to identify collaboration opportunities and synergies. Specifically, discussions with the use case projects SmartAgriFood and InstantMobility have been strengthened as they promised the highest potential collaboration possibilities. As an outcome of those interactions, The two complementary use-case streams from Finest and SmartAgriFood have been combined into one phase 2 project proposal, namely cSpace, which has been accepted as trial project in phase 2. The cSpace proposal has been retained for negotiations and thus our phase 2 plan for dissemination and standardization covers a common strategy for Agri-Food and Transport & Logistics industries.

The aim of cSpace is to pioneer towards fundamental changes on how collaborative business networks will work in the future. cSpace will develop a multi-domain Business Collaboration Space (short: cSpace) that employs Future Internet technologies for enabling seamless collaboration in open, cross-

⁽¹⁾ <http://www.efreightproject.eu/>

⁽²⁾ T. Cane, "Reference Solutions for Next Generation National Single Windows (e-Freight Deliverable D3.2)," 2011.

organizational business networks, establish eight working Experimentation Sites in Europe where Pilot Applications are tested in Early Trials for Agri-Food, Transport & Logistics and prepare for industrial uptake by engaging with players & associations from relevant industry sectors and IT industry.

cSpace will extensively utilize Generic Enablers and the Development Kit from the FI PPP Core Platform, validating its capabilities, openness & versatility for realizing future B2B collaboration solutions. cSpace will be open; other FI PPP projects and external users & solution providers will be able to use, test & exploit it. It supports a future business model where external solution providers, especially SMEs, can provide additional, novel, and disruptive solutions into the cSpace ecosystem. With this, cSpace will prepare for establishment of a future standard for cross-organizational business collaboration leapfrogging pressing challenges arising in industry, exploit FI technologies developed in FI PPP, and lay foundation for industrial uptake & innovation enablement planned for FI PPP Phase 3.

The strategies for dissemination and standardization that will be undertaken in order to properly capitalize on the project results, for which the work plan defines dedicated tasks in WP500 in cSpace project. We depict relevant targets and events for dissemination of project results, outline the strategy for standardization, and define the management of IPR and other innovations that will arise from the project.

3.1. Phase 2 Dissemination Plan

The dissemination plan for phase 2 will continue dissemination activities from phase 1 and thus will be a guide continuously updated with the activities to carry on as the project results are produced. In the following table we present an initial, indicative description of planned activities that will be the first input for the initial plan. Of course, all of these initial guidelines and rules are subject to continuous revisions and refinements.

Activity	M1 to M6	M7 to M12	M13 to M18	M19 to M24
Dissemination and Standardization Plan	Initial Plan (M3)	Interim Report and Revised Plan for Dissemination (M12)		Final report in dissemination activities (M24)
Publication of Papers/Journals	2	4	8	12
Conferences, Events and Trade Shows	FIA Turkey(M1), Korea Eureka Day 2013 (M2), IoT China2013, SRII Europe Leadership Summit(M3)	NEM Summit 2013(M7), NESSI Members Day, ICT 2013 (M8)		
Workshops	FIA Week in Dublin (M2)	FIA Week ICT 2013 (M8)		
Roll-ups, Newsletters, Brochures, Posters	First Brochure (M1), First Roll-up (M1)	First Newsletter (M7)	Second Brochure (M13)	Final Brochure (M19)
Website	Website(M3) www.cspace.eu	Continuously updated		

Table 1: Input for cSpace Initial Dissemination Plan

1.3.1. Web Site

The cSpace project website will be reached at <http://www.cspace.eu/>.

1.3.2. Events, Conferences and Trade Shows

Table 7 and Table 9 in the Appendix shows the major dissemination forums organized along the type of events and the relevant areas of the cSpace project.

Based on this initial list of key events, cSpace will maintain a list about forthcoming and past events, conferences and trade shows considered as potential ground for cSpace dissemination activities. This list will be updated continuously and relevant events that match with the dissemination strategy outlined above will be selected by the cSpace project management board.

1.3.3. Publications

In addition to the dissemination forums identified above, cSpace members strive to publish mature results in conferences, journals and magazines. The Table 8 in Appendix 5.23 includes a list of potential forums as relevant targets for cSpace results.

1.3.4. FI PPP

There will be events and conferences in which programme-level dissemination will be done with FI PPP Community in addition to project level dissemination. These events will be listed by CONCORD project in their web site.

1.3.5. Collaborations with Other Projects

The cSpace team identified several Phase 2 trial projects which are related to various aspects of cSpace, and plans to pursue potential collaboration with them, or leverage results of those of which that are completed. The identified projects can be found at the Table 2 List of related projects in Appendix 5.20.

1.3.6. Future Internet Initiatives, Thematic Networks and Associations

The potential targeted thematic networks and associations for FI, T&L and Agri-Food initiatives are listed in Table 3, Table 4 and Table 5 respectively in Appendix 5.21.

3.2. Standardization Plan

Standardization is an important means for achieving openness of the project results, enabling wide adaption of the results in industry, ensuring a long-term impact, and justifying the public funding of the project.

To ensure the standardization of project results, the cSpace partners are committed to the identification of current and emerging relevant standards and the alignment of project results with such standards, as well as the identification of opportunities for establishing new standards and contributing to existing standardization activities.

The relevant standardization bodies and channels can be seen in Table 6 in Appendix 5.22.

4. Conclusions

To achieve maximal impact of the project, Finest has initiated, planned and executed dedicated and focussed activities for dissemination and standardisation, considering relevant target groups and types of forums. This deliverable reported Finest's dissemination activities in the second year. It shows Finest's ambition and power to spread the word about the project in forums ranging from industry-targeted events to research conferences.

The initial phase 2 plan for dissemination and standardization has also been presented, extending the successful dissemination activities of Finest into the second phase of the FI PPP.

5. Appendices

5.1. Pop-up Poster



www.finest-ppp.eu/

Future Internet enabled optimisation of transport and logistics business networks

- Future Internet-based ICT solutions for sustainable transport & logistics (T&L)
- Increased visibility on T&L processes --> higher business network agility

- Open logistic supply chains --> lower barriers for inter-organizational collaboration and SME access
- Reduced amount of manual and rigid processes --> increased business efficiency
- Economical relevance: T&L responsible for 7% of EU GDP & 5% of EU employment
- Ecological relevance: approx. 15% of global greenhouse gases caused by transportation

Consortium partners:



5.2. Finest 3rd Glossy Brochure



The future of collaboration within the supply chain

Finest and the FI PPP are shaping the future of logistics for a better green world; improving productivity and customer satisfaction for all trading partners. Finest provides the logistics industry with a Future Internet enabled collaboration platform to manage all their transportation activities.

Vision: The Supply Chain in 2020...

Imagine the Cargo Supply Chain in the year 2020 for shipments similar to these:

- Valuable pharmaceutical products need to be transported from Xiamen, China via Amsterdam to Berlin. Before the products can begin their international movement they need to be transported from the production factory to Xiamen.
- Valuable pharmaceutical products need to be transported from Xiamen, China via Amsterdam to Berlin. Before the products can begin their international movement they need to be transported from the production factory to Xiamen.
- At the same time, new laptops need to be shipped from Xiamen, via Amsterdam, to several destinations in Europe.
- The producers of the laptops and the pharmaceutical products ask the same freight forwarder to arrange their shipments, including final distribution.
- The forwarder arranges for a trucking company to pick up the goods and for an airline to transport the goods to Amsterdam.
- In Xiamen all shipments are consolidated for air transport.

Shippers, Consignees and Logistic Service Providers with transport needs like those above, meet each other in a collaboration space similar to LinkedIn or Facebook to find potential logistics partners. Operational performance of the service providers is visible to everybody, and different parties can decide if and how they want to do business with each other.

All the necessary operational shipment information (e.g., time planning, specific handling conditions, contact persons, etc.), as contractually agreed to, is immediately available to all authorized partners at the same time. The freight forwarder and airline also have real time production information available from their suppliers in order to make optimal (asset) plans, and assure a predictable, on time delivery, conforming to the wishes of the customer as stated in the contract.

While trucking to Xiamen a roadblock is encountered. With this new technology, information can automatically be transferred to the planning department of the forwarder and airline, without a need for phone calls and feedback from the person in the field. The forwarder and airline can use the integrated planning services provided through the collaboration space to create a new plan based on this event and optimize their flows while still meeting customer contract obligations.

This is an example of what collaboration could look like in the future. All parties involved benefiting in a "win-win" fashion.

Supply Chain Management today, what are the challenges?

An efficient international transport and logistics network is critical for sustainable growth in global trade.

Current problems, such as limited visibility of transport processes and events, closed supply chains and highly manual processes, cause inefficiency, shipment delays and raise trading costs.

Since transport and logistics activities account for between 10% and 20% of a country's Gross Domestic Product, an efficiency increase in these activities can improve a country's competitiveness.

The transport and logistic industry has made great strides improving its efficiency. However, limitations in technology, transport infrastructure and regulations have created significant barriers to future improvements.

Project Goals & Support

Overcoming these barriers requires further developments in **collaboration between all supply chain partners**. New **information and communication tools are needed** to support the supply chain partners and to rapidly assemble collaborative logistic networks that can efficiently and effectively prepare and execute international trading activities.

Under the European Union's 7th research and development funding program and the Future Internet Public Private Partnership (FI PPP) element of that program, a consortium of supply chain service providers and users have taken up these challenges. **The Finest project has taken as its challenge the design of a next generation collaboration and integration platform for supply chain operations.**

The Collaboration and Integration Platform

The main goal of Finest is to create a platform that supports collaboration between organizations. This platform, with relevant data and collaboration software (e.g., planning software to support all players in a shipment process), will be available via "the cloud" over the Internet. Finest uses collaboration and service models that allow the demand and supply sides of logistic services to determine together which applications they want (and need) to use. By facilitating this type of collaboration, the service providers can build a configuration of collaboration services from cloud based tools that best fits their needs.



The features of the Finest platform are:

- Data and information availability via the collaboration hub, facilitating communication and collaboration between supply chain partners
- Contract Management functionality, which supports service provider selection, contract negotiation & agreements, as well as online operational monitoring of contractual aspects.
- Event Monitoring: Determining critical milestones in the supply chain process, monitoring them via actual status information, and sending signals when deviations occur.
- A transport (re-)planning module that helps to ease and improve the creation of supply chains and the modification of plans when deviations occur (e.g. traffic jams, thunderstorms, etc.)

The supply chain partners will experience the following benefits:

- Better alignment between partners due to an end-to-end view of the supply chain instead of only a part of it. This reduces cost and improves reliability.
- Better decision making due to better data availability and real time information.
- Higher transport asset utilization by better planning due to more transparency.
- A reduced environmental footprint due to better asset utilization.
- Improved service to all parties in the supply chain by better anticipating deviations.
- Fulfillment of business contracts by better sharing of operational contract information and monitoring.
- Easy access to the data and tools via a cloud solution. Partners do not need to run an IT infrastructure because Finest uses a cloud solution (Software as a Service – SaaS).
- More flexibility and scalability in necessary applications for supply chain partners.

Who is involved?

To assure a solid solution, partners from business as well as from IT are involved.

Kuehne + Nagel, Tyrholm & Farstad, NCL Shipping, AF-KLM Cargo, Arçelik and the Port of Alesund are involved in generating the business requirements for the project and validating the value of the solutions for the industry.

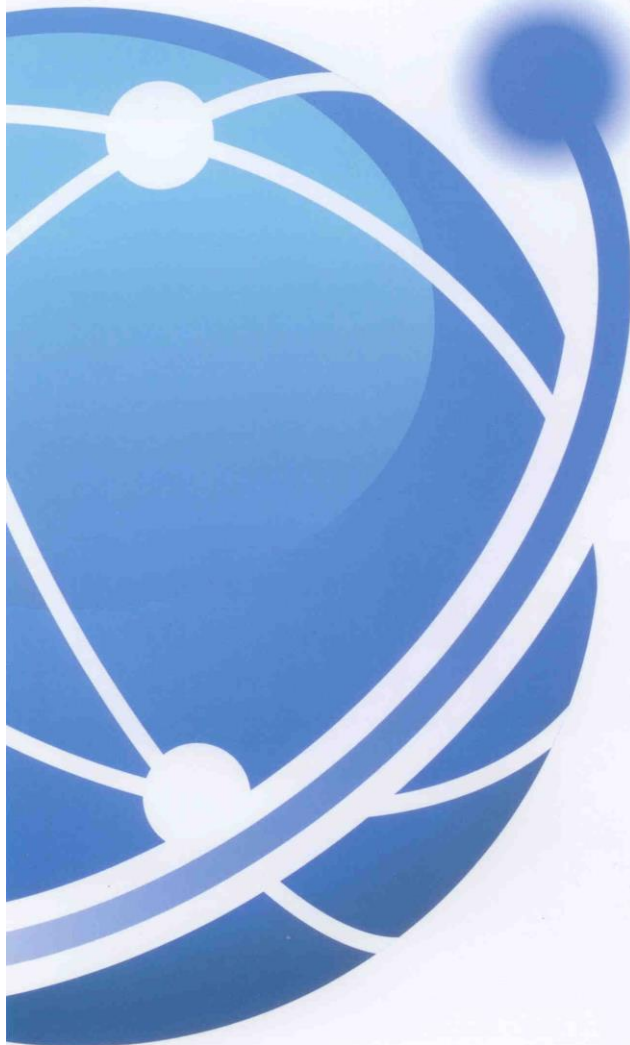
KoçSistem, Marintek, SAP, IBM and the University of Duisburg-Essen are involved in developing the right technological solution.



Adoption of the Finest concept:

We invite you to think with us

Besides creating the technical solutions, the adoption of this concept within the transport and logistics domain is very important. During the entire project ideas and draft solutions will be validated by organizations other than the project partners to create a basis for adoption by the industry.



About Finest

The efficient operation of international transport and logistics networks is a critical success factor for sustainable growth in global trade. Inefficient operation creates barriers to trade by causing shipment delays and raising trading costs. Since transport and logistics activities account for 10% to 20% of a country's Gross Domestic Product, increases in the efficiency of these activities can dramatically improve a country's competitiveness. In addition, environmental impacts resulting from the operation of transport and logistics activities are significant, so any improvement in efficiency within a logistics network positively contributes to sustainability objectives.

While the transport and logistics industry has made great strides in attempting to improve its efficiency, limitations in technology, transport infrastructure and regulatory regime incompatibilities have created significant barriers to future improvements. Overcoming these barriers requires new information and communication technologies and tools that allow organizations to rapidly assemble collaborative logistics networks that can efficiently and effectively execute international trading activities. The Future Internet, with its promise of ubiquitous operation and information access, provides a potential platform for overcoming the limitations of current ICTs.

Building on the proposed capabilities of the Future Internet being developed under the European Union's Future Internet Public Private Partnership program (FI PPP), the Finest Use Case project is designing a collaboration and integration platform for the transport and logistics industry.

We cordially invite you to engage in the shaping of the Finest collaboration space and to share your thoughts and opinions with us.
 Visit the Finest blog at <http://finest-ppp.blogspot.co.uk/>

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MARINTEK

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 **KoçSistem**
"Your imagination is our strength"



Finest is funded by the European Community's Seventh Framework Programme FP7 / 2007 - 2013 under Objective 1.8 'Future Internet PPP'


**SEVENTH FRAMEWORK
PROGRAMME**

www.finest-ppp.eu

5.3. Finest at the Turkish Eureka Chairmanship Launch Conference

The Turkish EUREKA Chairmanship "EUREKA as a Global Platform for Co-opetitive Innovation" launch conference took place in the **Istanbul Congress Center on 13 July 2012**. EUREKA high level representatives, national project coordinators and industry representatives from EUREKA member countries joined the conference.



Arçelik – as platinum sponsor of the event – spread awareness about the Finest project. At the Arçelik stand in the exhibition area, Finest dissemination material has been handed out to participants. Haluk Gökmen from Arçelik and Bulent Erbas from Koç Sistem have participated to the event and were available to answer questions of the stand visitors (B.Erbas is informing visitors, please see left).



5.4. Finest Wins Best paper Award at Presentation at the SRII Global Conference in Silicon Valley

The 2012 SRII Global Conference of the Service Research & Innovation Institute took place from 24-27 July 2012 in San Jose (California), the heart of Silicon Valley. A high number of industry and research leaders have participated to this event and start-ups showcased their innovation in IT-enabled services.



The service innovations that the Finest project brings to the table have been presented by Andreas Metzger (technical coordinator of the project) during a presentation on “Predictive Monitoring of Heterogeneous Service-oriented Business Networks: The Transport and Logistics Case”. The results presented were the outcomes of a joint research paper between Paluno (The Ruhr Institute for Software Technology) of the University of Duisburg-Essen, Kühne + Nagel Management AG, as well as IBM Haifa Research Labs. The paper is published in Proceedings SRII 2012 Global Conference, R. Badinelli, F. Bodendorf, S. Towers, S. Singhal, and M. Gupta, Eds., IEEE Computer Society, Conference Publishing Service (CPS), 2012.

During the closing of the SRII conference, the Finest paper has been awarded "Best Service Engineering Innovation & Quality Paper".

5.5. Finest at the 38th Conference on Very Large Data Bases (VLDB 2012)



The VLDB 2012 conference took place from 28th to 31st August 2012 in Istanbul. Over 850 participants from around the globe joined the conference. Finest consortium members Arçelik, IBM, SAP, and Koç Sistem were co-sponsors of the event.

Arçelik – as platinum sponsor – created awareness about the Finest project. At the Arçelik stand in the exhibition area, Finest dissemination material has been handed out to participants (see below). Haluk Gökmen (right) and Ercan Osmanoglu (left) from Arçelik have participated to the event and were answered questions of many interested stand visitors.



5.6. Finest at the International Partnering and Collaboration Event in Inclusive, Innovative and Secure Societies

The In2Societies 2012 event took place October 5, 2012 at the Radisson Blu Royal Hotel in Brussels. Haluk Gökmen from Arçelik has participated in the event and informed the participants about the outcomes and ambitions of Finest. Finest brochures have been distributed to the visitors such as to provide further information about the project.



5.7. Finest at the NEM Summit 2012 in Istanbul



The 2012 edition of the NEM Summit was successfully held from October 16 to 18 at the Sheraton Ataköy Hotel of Istanbul, Turkey. The theme of NEM 2012 was “Implementing Future Internet towards New Horizons”. It has attracted over 320 delegates and over 20 exhibitors from Europe, Turkey, and other regions of the world, and has been supported by over 25 sponsors. The summit offered plenary and parallel thematic sessions, featuring 40 speakers and authors of peer reviewed papers.

Arçelik was the platinum sponsor of the event and prominently displayed the Finest pop up at the Arçelik stand in the exhibition area. Information about Finest have been disseminated together with brochures. Haluk Gökmen from Arçelik has participated in the event and informed the stand visitors during the event.

5.8. Finest at the Instant Mobility Stakeholder Workshop in Vienna

The Instant Mobility workshop took place on the October 21, 2012 at the NH Hotel Danube City in Vienna. Haluk Gökmen from Arçelik has participated in the event and presented the outcomes and vision of the Finest project.



5.9. Press Release on Future Internet Research and Finest

Integrating Innovative Services

Scientists need to think in visionary ways. While others only see the surface of things, they take a look at the structures lying beneath. This is the case for [FI-WARE](#), an EU project that the Paluno institute at the University of Duisburg-Essen (UDE) takes part in. It aims at making the Future Internet easier, faster, and more reliable and secure. Currently, the very first version of this novel technology is tested.

The three-year project is the core of a mega-program conducted by the EU called the Future Internet Public-Private-Partnership (PPP). This joint initiative of the EU, the industry and various research facilities has been granted a budget of 300 billion Euros and is arranged for a five-year period. It tries to profitably link existing technologies as well as to conform legal, political and regulatory basic conditions to future requirements in the first place.

FI-WARE thus serves as a basis for re-usable and commonly used functions. A technology platform is designed offering innovative and secure services within the Internet. As it is an open architecture, existing components can be integrated in an easier way. “FI-WARE integrates substantial technical developments, is extremely service-orientated, and allows for efficiently designing multi-value services. Thus, achievement, reliability, and – last but not least – production costs of Internet applications can be optimized considerably Europe-wide”, UDE project manager Dr. Andreas Metzger explains.

Whereas, for example, a provider had to run and administrate an own data center, data can now be retrieved from the “cloud”. Even physical objects such as vehicles, environment sensors, or traffic infrastructures can now be easily used via the so-called Internet of Things without further technical installations.

A total of more than 20 research assistants deal with questions related to the Future Internet here at Paluno. The UDE thereby cooperates with notable partners from science and industry. Research is combined with further projects such as the [EU project Finest](#) and the [Ziel2.NRW project LoFIP](#). They aptly illustrate the aid of such technologies when it comes to developing innovative transport and logistics services.

For further information, please contact: [Dr. Andreas Metzger](#), Phone: +49201/183-4650/-4660, andreas.metzger@paluno.uni-due.de.
Editorial office: Katrin Koster, Phone: +49203/379-1488.

5.10. Finest Presentation to a Japanese Delegation in Amsterdam



Evert Jan van Harten, Finest stakeholder manager, has presented outcomes and vision of the Finest project to a Japanese delegation in Amsterdam on the 7th of November.

This delegation, led by Prof. Osamu Sudo, working for the University of

Tokyo, was on a EU research tour to examine the recent trends and future development plans in Smart Towns across Europe. A combination of business and technical Japanese companies were very interested.

After the presentation of the Finest and the Smart Agri Food project (by Sjaak Wolferts), they also presented their projects regarding cloud based services which was very interesting. Hans Schaffers, from Concord, who was also available, gave the invitation to work and share more in the upcoming future. This invitation was accepted very positive.

5.11. Finest at the X. International Logistics and Supply Chain Congress in Istanbul



Istanbul Kemerburgaz University, Logistics Association (LODER) and Duisburg-Essen University, Center for Logistics and Traffic (ZLV) organized “The 10th International Logistics and Supply Chain Congresses - 2012” (LM-SCM2012) under the theme of “Sustainability of International Logistics Systems and Supply Chain in an era of Global Crisis”. The congress was held on 08-09 November 2012 in Istanbul.



The main objective of the congress was to gather academicians and professionals in the same platform to explore sustainability issues in logistics systems and supply chains in an era of global crisis.

The FI-PPP Program and Finest presentation were delivered by Haluk Gökmen at the Logistics Research Panel - Interdisciplinary Networks and Knowledge Exchange for Innovations in Logistics. SAP was one of the sponsors of the event and a Finest pop-up poster was shown during the event and Finest brochures were distributed at the SAP exhibition desk.

5.12. FI-PPP/Finest at the 2012 Africa-EU Cooperation Forum on ICT in Lisbon



The ‘2012 Africa-EU Cooperation Forum on ICT’ was organised by the EuroAfrica-P8 EU/FP7 funded project in the framework of the EuroAfrica-ICT Initiative, and with the support of the National Science Foundation (FCT) of Portugal at Centro Cultural de Belem (CCB) – Lisbon, Portugal between 28-29 November 2012.

Held under the aegis of the EC, the AUC and the Africa-EU Strategic Partnership, the ‘2012 Africa-EU Cooperation Forum on ICT’ was an event filled with discussions and debates, networking opportunities and knowledge sharing among key stakeholders in the field and policymakers coming from all over Europe and Africa.



Haluk Gökmen from Arçelik participated in the event and made FI-PPP Program and Finest presentations at the Future Internet, Internet of Things Session. The Finest pop-up poster was shown during the event at the Future Internet desk and Finest, SmartAgriFood, CONCORD and XIPI brochures have been distributed and info given to the visitors.

5.13. Finest at the Innovation Week in Istanbul

Finest was present at the Arçelik stand in the exhibition area of the Innovation Week organized by the Turkish Exporters Assembly (TEA) from 6-8 December at the Istanbul Congress Centre. The programme featured distinguished national and international speakers, including Sir Tim Berners Lee and Kenneth P. Morse.



Arçelik A.Ş., the strategic partner of the Innovation Week, has been awarded as “The Most Innovative Company” by the Turkish Exporters Assembly. Levent Çakıroğlu, President of Koç Holding Durable Goods Group and General



Manager of Arçelik A.Ş., received the award from Prime Minister Recep Tayyip Erdoğan. Speaking at the opening of the Innovation Week, Mr. Çakıroğlu expressed his pleasure for receiving this award and stated that “The Most Innovative Company” award was also a concrete indication of the appreciation towards the innovations realized by Arçelik.

Information about the FI-PPP program and specifically the Finest project have been disseminated together with marketing brochures. Evrim Özgül from Arçelik has participated in the event and was available at the stand to inform visitors during the event.

5.14. Finest at the 11th Industry Congress and Innovation Exhibition in Istanbul



Finest was present at the Arçelik stand as part of the innovation exhibition of the 11th Industry Congress in Istanbul. Arçelik was one of the main sponsors of the event and Finest project brochures have been distributed to visitors of the event.

5.15. Finest at the ERA-NET Transport Information Day

The Finest project and the FI-PPP programme were presented at the ERA-NET Transport Information Day in Ankara on January 11, 2013.

The ERA-NET TRANSPORT (ENT) pre-dominantly serves to the owners and managers of transport research programmes.



By facilitating cooperation among publicly financed transport research programmes it is ENT's goal to improve the outcome and quality of transport research in Europe. The main mechanism is seen in the structuring of the European Research Area (ERA) for Transport. <http://www.transport-era.net/about-ent.html>

Mr. Ahmet İhsan CEYLAN, Supply Chain Director of Arçelik, was invited to the event and presented the Finest project and its outcomes. He has announced the successful continuation



of Finest in phase 2 of the FI-PPP programme, and sketched the aims of the successor project cSpace. Mr. Oğuzhan ÖZTÜRK, Arçelik's Deputy General Manager responsible for Purchasing and

Supply Chain, also participated in the event, together with Mr. Bülent ERBAŞ, from Koç Sistem.

Information about the Finest project has also been disseminated in the form of brochures and hand-outs. Mr. Öztürk, Mr. Ceylan from Arçelik and Mr. Erbaş from Koç Sistem have been available to answer questions during the presentation session and informed the participants during the networking session at the information day.

5.16. Demonstration of Finest Proof-of-Concepts



During the FInest project meeting that took place January 28-30, 2013 in Essen, the FInest technical team demonstrated the first stable versions of their proof-of-concept prototypes to domain experts from transport and logistics. The meeting was organized and hosted by Paluno (The Ruhr Institute for Software Technology) of the University of Duisburg-Essen.



5.17. Successful Exhibition, Demonstration and Presentation of Finest results at Mobile World Congress 2013

As part of the Future Internet PPP Event at the Mobile World Congress 2013, Finest successfully exhibited the project outcomes, as well as demonstrated and presented the results to interested stakeholders. In addition, the continuation of Finest -- as part of the phase 2 project “cSpace” -- has been announced. The cSpace project (currently under negotiation with the EC) constitutes a collaborative effort with the SmartAgriFood project. Finest has been represented by the project’s dissemination manager Haluk Gökmen from Arçelik.

Photos and videos from the event are accessible from <http://www.fi-ppp.eu/future-internet-ppp-event-and-the-mobile-world-congress-2013-media-files/>

The Finest presentation can be watched at: <http://youtu.be/ISPkyeU26iA?t=1h43m>



5.18. Finest at the CelticPlus Event in Kayseri,

Haluk Gökmen from Arçelik and Bülent Erbaş, Ömer Özgür Çetinoğlu from Koç Sistem have participated in the event. The Finest pop-up poster and demonstrators were shown during the event at the Finest booth and Finest, SmartAgriFood, cSpace, CONCORD and XIPI brochures have been distributed and info given to the visitors. Haluk Gökmen presented cSpace project at the Panel Session “Smart Connected Cities, 'Celtic-Plus Use-Case Factory' and FI-PPP”.



Celtic-Plus Event 2013 Programme

Select day of Event:

>6th March

Wednesday 6 March 2013

>7th March

Celtic Event Sessions

Opening Speech

Okan Kara, EUREKA Chairman

[Turkcell's commitment to R&D through national and international co-operations - general perspectives and strategies](#)

Verda EMIROGLU , R&D Director , Turkcell

[Business and Strategic View from a high level perspective](#)
Mustafa Aykut (International Relations Coordinator/ Türk Telekom

Digital Society

Roland Airiau, Orange

[Celtic status, achievements, and future directions](#)

Jacques Magen, Celtic-Plus Chair

[GreenTouch vision, Targets and Research activities](#)

Jaafar Elmoghani, Leeds University/ UK

Panel session – Theme: Smart Connected Cities, 'Celtic-Plus Use-Case Factory' and FI-PPP

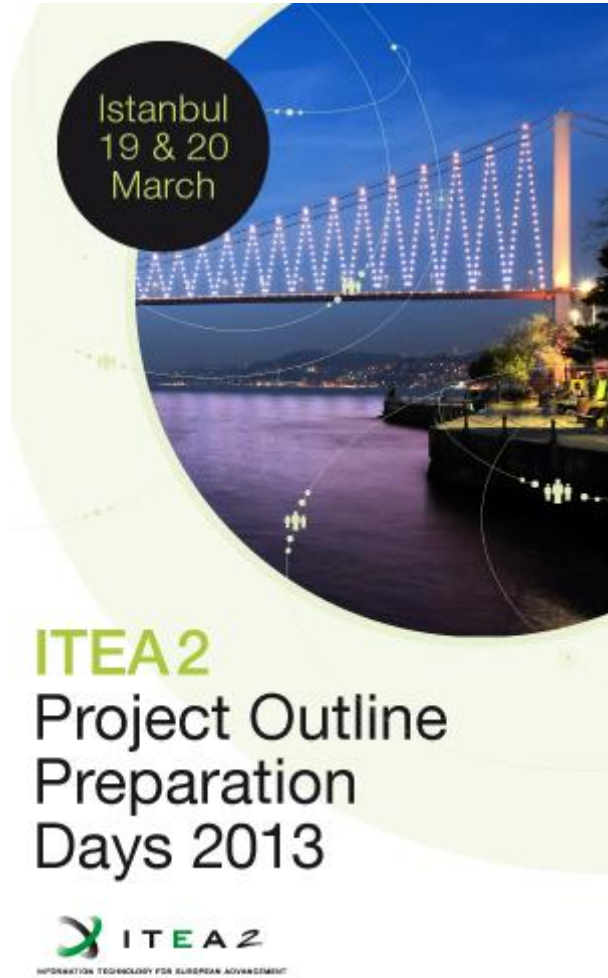
Panelists: [Jean-Pierre Tual/ Gemalto](#), France; [Digital Society](#), Roland Airiau, Orange, France; [Haluk Gökmen/ Arçelik](#), Turkey ; [FI-PPP+Celtic use-case factory](#), Arian Zwegers/ EU Commission

5.19. Finest at the ITEA2 PO Preparation Days Event in Istanbul

Koç Sistem was sponsor of ITEA2 PO Preparation Days Event in Istanbul.

The Finest pop-up poster was shown in the project ideas exhibition area and Finest, SmartAgriFood and cSpace brochures have been distributed during the event.

Haluk Gökmen, Evrim Özgül from Arçelik and Bülent Erbaş, Ömer Özgür Çetinoğlu and team members from Koç Sistem have participated in the event and informed interested participants about Finest project as well as the phase 2 and phase 3 collaboration possibilities with cSpace project.



5.20. List of related projects

Table 2: List of related projects.

Relevant project	Relevant results
List of related EU and national projects on ICT for Agri-food	
AgriXchange	AgriXchange is a coordination and support action to setup a net-work for common data exchange in the agricultural sector. The network includes local standards such as the German AgroXML and the Dutch AgroConnect, as well as international standardisation bodies in particular UN-CEFACT.
Ami@Netfood	Development of a long-term shared vision on Ambient Intelligent technologies for a networked agri-food sector.
AMI-4-SME	An innovative methodology for improving an organisation's operation based on Ambient Intelligent technologies was developed, providing procedures and reference models. This is complemented by an SOA and middleware for RFID usage in the integrated enterprise.
BI in Flower Supply Chains	Pilot Business Intelligence (BI) in Dutch flower supply chain, operational supply chain BI is in a preliminary stage of development, among others because of integration issues
C@R - Collaboration at Rural	User involvement is a mandatory requirement for successful implementation, deployment and operation of services and TIC infrastructures at rural environments. SOA deployed for rural areas should be adapted to the lack of communication infrastructures, the specific user interfaces of the rural users, and the integration of sensors and actuators
CuteLoop	Research on how to effectively realise business interactions e.g. in the fruit chain by using a highly decentralised ICT support. Aiming at the usage of a "networked devices enabled intelligence" taking into account e.g. RFID-based systems and Global Navigation Satellite Systems for realising and using intelligent system functionalities, directly disburdening the actors with respect to an efficient information access, event-driven workflow control and decentralised access/authentication structures.
Digital Horticulture	Dutch horticulture is active in ICT innovation, but emphasis on inter-enterprise projects, focus on data exchange and operational perspective.
FARM2FORK	The project will showcase the ability of RFID technologies to make a return on investment for SMEs in the food industry. The active participation of the food sector SHs (i.e. food associations, technology platforms, regional and national level representing bodies, society, industry, regulators, consumers association) could provide a natural platform for dissemination of the project results as well as pave the basis for the future uptake of the technologies.
Florilog	Development of logistics orchestration concepts in the ornamental plant supply chain network
Future Farm	Future Farm analyse the demands and principles for standardized information management in agriculture. It aims to provide principles of modern, internet-based Farm-Management-Information-Systems to support real-time management decisions and compliance to standards. It includes the integration of farm and field (precision farming, geo information, etc.).
IBIS	Realising a peer to peer based system for the harvest, transport and weighing of agri-food products from the field to subsequent processors. Using a decentralised and partly

Relevant project	Relevant results
	decoupled infrastructure in the rural environment.
iGreen	Syntax and protocol standardization alone rather hamper interoperability more than simplifying it, as there are a number of non-orthogonal standards with different design goals. Integration between these different standards can be achieved by semantic technologies using networked vocabularies and ontologies.
ISAFruit	WP Innochain: exchange of information and Tracking and tracing through quality management system are among the identified critical success factors of innovativeness in fruit supply chains
IT FoodTrace	Large stakeholder numbers and the resulting variety of demands on functionalities existing in the agrifood sector disallow the use of non-scalable technologies like RPC-based services implemented using e. g. technologies like SOAP. A resource-oriented design allows for a much more flexible design.
ITCHAIN	Main goal is to generate a SOA infrastructure to compose services related to mobility and context aware with the objective to ease interoperability of legacy systems in supply chains and facilitate the support to collaborative decision systems
KodA	Knowledge-based production and flexibility is hampered by a poor level of information-integration in Dutch arable farming
Mobility@forest	Realising a new approach for the mobile worker in rural areas, lacking permanent Internet access, requiring multi-modal user interfaces and location based support based on interactive usage of geographic information systems. Using GNSS and RFID (active & passive) based navigation in rural settings.
MoniQA	Impact assessment of integrating new technology in food safety analysis
Netgrow	Collaboration among SMEs for improving competitiveness within the global food chains
PETER	It provides an international forum for focusing and disseminating the results of European Commission investment in research on food traceability.
Plant-to-Customer	Pilot on RFID-enabled trolleys in Dutch horticultural supply chains to identify/demonstrate benefits
Practique	Enhancements of pest risk analysis techniques, among others with decision support systems and standardising pest risk assessments.
Pre Agro II	Design principles allowing for integration of datatypes and elements in XML data schema structures to facilitate inclusion of geographic data via the Geography Markup Language into systems using other document and data structure definitions.
Precision Farming	Tools for innovative Controlled Traffic Farming, Fertilization and Crop Protection.
Q-PorkChains	The aim is to develop high quality pork products in sustainable production systems with low environmental impact.
SEAMLESS	Component-based Framework for Integrated Assessment of agricultural systems
SALSA	On integrating future sustainability characteristics in food production (covering the whole chain) into trade relationships.
TAC	TAC (Traceability for Agriculture Competitiveness) will improve international competitiveness of the Agriculture sector in Egypt by applying traceability research results (tailored traceability system according to Egypt context)
Transparent Food	Requirements analysis on tracking and tracing in the food sector showed up a number of characteristic attributes and properties of the sector as a whole, of the products being tackled and of systems already in place.

Relevant project	Relevant results
TransFOP	Transparency of Food Pricing: transparency in pricing along the chain related to future quality characteristics
WEB-2-SME	Realising a Web 2.0 based approach for enabling SMEs to develop and maintain internet based extensions of their core products not requiring a fundamental redesign of their systems.
List of related EU and national projects on ICT for Transport & Logistics	
ADVANCE	Advanced predictive-analysis-based decision-support engine for logistics will develop an innovative predictive-analysis-based decision support platform for novel competitive strategies in logistics operations. The Advance software will be capable of both analyzing massive data sets for long term planning, and rapidly processing huge amounts of new data in real time. Moreover, it will provide a dual perspective on transport requirements and decision making dependent on the best higher-level intelligence and the latest snapshot information.
CASSANDRA	The CASSANDRA project aims to make container security more efficient and effective. The project addresses the visibility needs of both business and government in the international flow of containerised cargo by developing a data sharing concept that allows an extended assessment of risks by both business and government. The CASSANDRA concept aims to improve supply chain visibility, efficiency of trade compliance and effectiveness of border control and supervision by combining E-Freight and E-Customs.
CVIS	Co-operative vehicle-infrastructure systems can bring new intelligence for vehicles, roadside systems, operators and individuals, by creating a universally understood communications "language" allowing vehicles and infrastructure to share information and cooperate in an unlimited range of new applications and services. CVIS will develop and integrate the essential basic and enabling technologies such as a multi-channel communications and network platform readily adaptable for both vehicle and roadside, a highly accurate positioning and local map module, and an open software environment for applications.
CONNECT	Cooperative Networking for High Capacity Transport Architectures proposes a holistic network design approach that drastically enhances performance in wireless networks by unlocking the hidden potential of the broadcast wireless medium. Information and communication theory, and protocol design engineering are used as the foundations for developing provably optimal cooperative information forwarding strategies, from multi-signal fusion to packet relay and node reciprocation.
D2D	The project D2D created a Transport Chain Management System (TCMS). With the exception of traffic information (congestion, etc) the TCMS covered a wide range of information and information exchange between all stakeholders involved in a d2d transport chain through a web based user interface as well as through a service bus for information exchange between proprietary information systems. http://www.d2d.no/d2d/index.jsp
E-THEMATIC	Thematic Network on e-logistics/e-fulfillment the area of e-Logistics and, especially e-Fulfillment. The objectives of the e-Thematic network are to cluster existing European RTD projects, to identify emerging applications and technologies, to enhance the exchange of data and information on a European level, incl. good practices, to formulate views on common European RTD-approaches and to create synergy and added value for European research related to e-Logistics and e-Fulfillment.
ECOMOVE	Cooperative Mobility Systems and Services for Energy Efficiency will create an integrated solution for road transport energy efficiency by developing systems and tools to help drivers sustainably eliminate unnecessary fuel consumption (and thus CO2 emissions), and to help road operators manage traffic in the most energy-efficient way. By applying this combination of cooperative systems using vehicle-infrastructure

Relevant project	Relevant results
	communication, the project aims to reduce fuel consumption by 20% overall, e.g. by saving unnecessary kilometers driven (optimizing routes), helping drivers to save fuel (optimizing driver behavior) and managing traffic more efficiently (optimizing network management).
eFreight	<p>The e-Freight project is aimed at supporting , from a transport perspective, the three pillars of European Policy namely:</p> <p>Strengthening of the internal market and competitiveness; Improving regulation to create a more dynamic business environment; Promoting sustainable development.</p> <p>Specifically e-Freight will contribute to the goals of the Freight transport Logistics Action Plan (Oct 2007), and ITS Action Plan (Oct 2008) pertaining to the development of:</p> <p>A standard framework for freight information exchange covering all transport modes and all stakeholders.</p> <p>A European Single Transport Document for carriage of goods with all the necessary legislative support, irrespective of mode.</p> <p>A Single Window (single access point) for administrative procedures in all modes.</p> <p>Simple, harmonized border crossings procedures for all modes of transport for all EU member states.</p> <p>Simple procedures and the necessary infrastructure for establishing secure and efficient transport corridors between Europe, USA, and Asia.</p>
ELLIOT	Experiential Living Lab for the Internet Of Things aims to develop an Internet Of Things (IoT) experiential platform where users/citizens are directly involved in co-creating, exploring and experimenting new ideas, concepts and technological artefacts related to IOT applications and services. Elliot will allow studying the potential impact of IOT and the Future Internet in the context of the Open User Centered Innovation paradigm and of the Living Lab approach.
ELOGMAR-M	Web-based and Mobile Solutions for Collaborative Work Environment with Logistics and Maritime Applications pursues the major aim of the proposed activity is to gather and co-ordinate activities in the field of IT- and Communication solutions (Web-services, GPRS and WAP/WML mobile services, simulation, technologies for information systems design, virtual reality) with logistics and maritime applications.
ELVIRE	ELectric Vehicle communication to Infrastructure, Road services and Electricity supply follows the objective to develop an on-board electric energy communication & service platform for realistic use-cases including the relevant external communication and services by selecting representative use-cases according to realistic scenarios and business-models, by identifying and developing those off-board ICT & services needed to comply with the use cases, by developing Prototypes for the on-board Communication and E-energy service unit and by verifying all integrated sub-systems on prototype level and demonstrate the proof of concept.
EURIDICE	European Inter-Disciplinary research on Intelligent Cargo for Efficient, safe and environment-friendly logistics is an Integrated Project funded by EU's Seventh Framework Programme ICT for Transport Area that will create the necessary concepts, technological solutions and business models to establish information services platform centered on the context of individual cargo items and their interaction with the surrounding environment and the types of users. The basic concept of Euridice is to build an information services platform centered on the individual cargo item and on its interaction with the surrounding environment and the user.
FREIGHWISE	FreightWise focused on facilitating information exchange between proprietary information systems through a common framework. The framework contained a set of standardized information objects to be used by a set of standardized roles in transport planning and re-planning, covering all involved stakeholders in a d2d transport chain. The work in FreightWise is continued through several research initiatives such as E-

Relevant project	Relevant results
	Maritime and E-Freight.
GEONET	Geo-addressing and geo-routing for vehicular communications will significantly contribute to the goals of both increasing the road safety in Europe while traffic and driver's concentration demand also rises and halving the life loss by 2010 by implementing a reference implementation of a geographic addressing and routing protocol with support for IPv6 to be used to deliver safety messages between cars but also between cars and the roadside infrastructure within a designated destination area.
GOODROUTE	Dangerous Goods Transportation Routing, Monitoring and Enforcement is a EU co-funded specific targeted research project which aims to develop a cooperative system for dangerous goods vehicles through route monitoring, re-routing (in case of need) enforcement and driver support, based upon dynamic, real time data, in order to minimize the societal risks related to their movements, whereas still generating the most cost efficient solution for all actors involved in their logistic chain.
HAVE-IT	Highly automated vehicles for intelligent transport aims at the long-term vision of highly automated driving. Within this proposal important intermediate steps will be developed, validated and demonstrated. These intermediate results on the one hand offer high potential for exploitation within 3-5 years after HAVE-IT and on the other hand form the ideal basis to integrate further next generation ADAS (highly automated functionalities) by adding software modules.
MIS	<p>The MIS project is aimed at creating a requirement specification for a Norwegian Maritime Information Centre. Such a centre will contribute to increased interaction and simpler report routines between the actors in the maritime transport sector, and thus increase the competitiveness of the sector.</p> <p>The main approach is the use of the Single Window concept. Because reporting to private parties has many of the same challenges as reporting to the authorities, and because the information needs of public authorities and private parties overlap, the traditional Single Window is expanded, so that not only information exchange with the authorities, but also with private actors is done through the system.</p> <p>http://www.sintef.no/mis (in Norwegian)</p>
P-MOB	Integrated Enabling Technologies for Efficient Electrical Personal Mobility aims at breaking the link between the growth in transport capacity and increased fatalities, congestion and pollution. P-MOB addresses the above challenges proposing: a novel concept of fully electrical personal mobility, reduction of system complexity concentrating on the essentials, advanced systems integration including solar cells, e-motor and magnetic torque control of the wheel, power-energy management, distributed pack of accumulators, technologies to sell-buy electricity by adaptable vehicle to grid connections.
PLANTCOCKPIT	Production Logistics and Sustainability Cockpit pursues the vision to offer to manufacturing communities the PLANTCockpit system as the central environment for monitoring and control of all intra-logistical processes. It will be able to give production supervisors, foremen, and line managers the desired and needed visibility to make well-informed and effective decisions for optimizing plant processes, including the holistic visibility of the plan, the current status, deviations and exceptions, and bottlenecks.
SECURESCM	Secure supply chain management pursues the general objective of reducing overall costs by collaborative supply chain management and planning and therefore proposes to use secure computation to overcome the evident data sharing problem existing in supply chain management and to enable the secure collaboration and interoperability of supply chain partners to gain the advantages of knowledge-based collaborative supply chain planning, forecasting, benchmarking and management.
SELECT	Smart and Efficient Location, Identification, and Cooperation Techniques focuses on studying innovative solutions enabling high-accuracy detection, identification, and

Relevant project	Relevant results
	location of objects/persons equipped with small ultra-low power tags using a network of intelligent self-configuring radio devices. Network functionalities will be enhanced to include the detection and tracking of moving objects/persons without tags eventually present in the same area.
SMART	Intelligent integration of supply chain processes and consumer services based on unique product identification in a networked business Environment aims to support intelligent business networking and consumer services based on effective and efficient information/knowledge sharing and collaboration across supply chain partners, capitalizing on the fact that products are uniquely identified with the use of smart tagging technology. Smart will be based on a distributed-software-architecture and innovative electronic services, capitalizing on existing infrastructures and standards, in order to support real time information sharing, decision making and collaboration among supply chain partners, as well as information services to educated customers.
SMARTFREIGHT	Smart freight transport in urban areas wants to make urban freight transport more efficient, environmentally friendly and safe by answering to challenges related to traffic management, freight distribution management, and a better coordination between the two. The main aim of SmartFreight is therefore to specify, implement and evaluate ICT solutions that integrate urban traffic management systems with the management of freight and logistics in urban areas. The actual transport operations carried out by the freight distribution vehicles will be controlled and supported by means of wireless communication infrastructure and on-board and on-cargo equipment.
STOLPAN	Store Logistics and payment with NFC intends to turn NFC enabled mobile handsets into multifunction terminals with bi-directional interaction between the NFC chip and wireless communication channels and to demonstrate the use of this generally applicable new technology in mobile micro payment transactions and in the retail logistical value chain. Secure management of the NFC chip is realized by the extension of existing and development of new APIs, standards. The new technical architecture will be deployed into devices like smart shopping carts, smart security gates and payment terminals.
List of related EU and national projects on ICT RTD (FI, IoS, IoT)	
4CaaS	The 4CaaS project aims to create a PaaS Cloud platform which supports the optimized and elastic hosting of Internet-scale multi-tier applications. 4CaaS embeds features that ease programming of rich applications and enable the creation of a business ecosystem where applications from different providers can be tailored to different users, mashed up and traded together.
ACSI	ACSI will serve to significantly reduce the effort and lead-time of designing, deploying, maintaining, and joining environments that support service collaborations. This will be achieved by developing a rich framework around the novel notions of dynamic artifacts and interoperation hubs, enabling a substantial simplification in the establishment and maintenance of service collaborations. The ACSI project implements an artifact-centric approach for the interoperations hub which is also the basis for the collaborations in cSpace.
ADiWa	Allianz Digitaler Warenfluss (ADiWa) is a German Research project which tries to provide technical solutions to bridge the IoT with the IoS based on technology components such as complex event processing (CEP), business rules management systems (BRMS), and process execution systems.
ALETHEIA	Aletheia is a leading innovation project, sponsored by the Federal Ministry of Education and Research that aims at obtaining comprehensive access to product information through the use of semantic technologies.
ASPIRE	ASPIRE Project (Advanced Sensors and lightweight Programmable middleware for Innovative Rfid Enterprise applications) will change the current RFID deployment

Relevant project	Relevant results
	paradigm, through introducing and boosting a shift towards royalty-free RFID middleware, while also placing the middleware at the heart of RFID infrastructures. In this paradigm a great deal of an RFID's solution intelligence is placed on the middleware, which is freely offered to end-users (particularly SMEs).
BREIN	Developing and orchestrating semantically enhanced goal-driven services for inter-enterprise systems.
CASAGRAS	CASAGRAS will provide a framework of foundation studies to assist the European Commission and the global community in defining and accommodating international issues and developments concerning radio frequency identification (RFID) with particular reference to the emerging 'Internet of Things'.
CHOReOS	The CHOReOS objective is to sustain decentralized service choreographies in the Future Internet. It revisits the concept of choreography-centric service-oriented systems to introduce a dynamic development process and associated methods, tools, and middleware – referred to as CHOReOS Integrated Development and Runtime Environment (IDRE) – for the software systems that implement and coordinate the services in the Ultra Large Scale Future Internet.
Cloud4SOA	Cloud4SOA focuses on resolving the semantic interoperability issues that exist in current Clouds infrastructures and on introducing a user-centric approach for applications which are built upon and deployed using Cloud resources. To this end, Cloud4SOA aims to combine three fundamental and complementary computing paradigms, namely Cloud computing, Service Oriented Architectures (SOA) and lightweight semantics, to propose a reference architecture and deploy fully operational prototypes.
COBIS	The CoBIs project will develop a new approach to business processes involving physical entities such as goods and tools in enterprise environments. The intention is to apply advances in networked systems to embed business logic in the physical entities.
COIN	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 traditionally supply chains to the most advanced and dynamic business ecosystems. The mission of the Coin IP is to study, design, develop and prototype an open, self-adaptive, generic ICT integrated solution to support the above 2020 vision, starting from notable existing research results in the field of Enterprise Interoperability and Enterprise Collaboration.
CoMiFin	CoMiFin (Communication Middleware for Monitoring Financial Critical Infra-structure). The research area is Critical Infrastructure Protection (CIP), focussing on the Critical Financial Infrastructure (CFI). A key objective of CoMiFin was to prove the advantages of having a cooperative approach in the rapid detection of threats, by having member institutions interconnected to the CoMiFin Cloud. The infrastructure used for interconnecting the stakeholders in CoMiFin is one of the bases for the development of the Operations Environment that we propose in cSpace.
COMMIUS	Commus main objective is to support the SMEs with a zero, or very low-cost, entry into interoperability, based on non-proprietary protocols.
COMPOSE	COMPOSE: Collaborative Open Market to Place Objects at your Service is an IoT project that just started. It aims at enabling new services that can seamlessly integrate real and virtual worlds through the convergence of the Internet of Services with the Internet of Things.
CUTELOOP	The strategic objective of CuteLoop is to explore how Intelligent Networked Devices

Relevant project	Relevant results
	such as enhanced RFID-based systems and Global Navigation Satellite Systems, can be used to effectively "integrate customers within an Integrated Enterprise" and with this to provide an important step towards a highly Integrated Real Time Enterprise.
DBE project	Digital Business Eco-system (DBE project) as a self-organising digital infrastructure aimed at creating a digital environment for networked organisations that supports the cooperation, the knowledge sharing, the development of open and adaptive technologies and evolutionary business models is an example of the complexity and versatility of current and future integrated enterprises.
DIVA	DiVA will provide a new tool-supported methodology with an integrated framework for managing dynamic variability in adaptive systems. This goal will be addressed by combining aspect-oriented and model-driven techniques in an innovative way.
EBBITS	Enabling businesses to semantically integrate the IoT into mainstream enterprise systems and support interoperable end-to-end business applications.
ECOLEAD project	Dynamic Virtual Organizations & Professional Virtual Communities .
E-MULT	Developing a distributed decision support system for virtual organisations to support trade relations of SMEs. Monitoring agents were used to supervise the content of web sites and legacy systems.
E-trust	Integration of electronic commerce in trading environments
EX-FI	In order to use the funding for R&D activities on Future Internet in an efficient way and to ensure that reasonable results will correspond to the investments, it is necessary to establish tight and coordinated partnership among all relevant European stakeholder in the sector.
EzWeb	The EzWeb project develops key technologies to be employed in building the front end layer of a new generation SOA architecture.
FastFix	The overall goal of the FastFix project is to provide software developers with a maintenance environment that combines time efficiency with low cost and high precision. FastFix will develop a platform and a set of tools that will continuously monitor customer environments, while collecting information on application execution and user interaction. The overall objective is to identify symptoms of execution errors, performance degradation, or changes in user behavior. By using correlation techniques, the platform will also support failure replication in order to identify incorrect execution patterns and, in particular cases, automatically generate and deploy remedial patches.
FI-WARE	The goal of the FI-WARE project is to advance the global competitiveness of the EU economy by introducing an innovative infrastructure for cost-effective creation and delivery of services, providing high QoS and security guarantees. The key deliverables of FI-WARE will be an open architecture and a reference implementation of a novel service infrastructure, building upon generic and reusable building blocks developed in earlier research projects. cSpace will build upon FI-WARE generic building blocks.
GALAXY	Development of an open SOA platform enabling agility using dynamic architectures
G-Eclipse	Platform-independent application workflow authoring and management tools supporting deployment on Grids and Clouds.
GRIFS	The Global RFID Interoperability Forum for Standards (GRIFS) is a Support Action Project funded by the European Commission with the aim to improve collaboration and thereby to maximize the global interoperability of RFID standards.
HOLA!	HOLA! aims at supporting the research community in the creation of a critical mass of stakeholders belonging to the Internet of Services constituency (IoS) working together in building concepts for services in the Future Internet. It will be achieved by

Relevant project	Relevant results
	implementing successful mechanisms for community-building and long-term collaboration and knowledge management.
iSURF	The iSURF project (“An Interoperability Service Utility for Collaborative Supply Chain Planning across Multiple Domains Supported by RFID Devices”) provides a knowledge-oriented inter-enterprise collaboration environment to SMEs to share information on the supply chain visibility, individual sales and order forecast of companies, current status of the products in the manufacturing and distribution process, and the exceptional events that may affect the forecasts in a secure and controlled way.
INFINITY	INFINITY’s goal is to capture and communicate information about available infrastructures and any interoperability requirements and issues. INFINITY documents any usage-related operational constraints and seeks to identify and foster federation opportunities that could facilitate large scale experimentation and testing. A dynamic innovative repository based on a set of community-driven Web tools has been realized to promote the evolving vision of available infrastructures “as a living organism”. This is supported by a methodology that will promote a consistent categorisation of the infrastructure resources, thereby facilitating a mapping between Use Case requirements and infrastructure offerings. cSpace will leverage INFINITY’s recognized sites for its use case trials.
K-NET	The objective of K-NET is to explore the fundamental problem: how different services to manage social interactions in a networked enterprise can be used to enhance knowledge and knowledge management (KM) services.
MASTER	MASTER aims at providing methodologies and infrastructures that facilitate the monitoring, enforcement, and audit of quantifiable indicators on the security of highly dynamic service-oriented systems.
MOMOCS	MOMOCS aims at studying a methodology and related tools for fast reengineering of complex systems.
NEXOF-RA	The mission of NEXOF-RA is to address comprehensive service-oriented software system architectures and specifications. It is the first step in the process of building a generic open platform for creating and delivering applications enabling the creation of service based ecosystems where service providers and third parties easily collaborate. NEXOF-RA develops a reference framework for an open global service delivery platform. NEXOF-RA focuses on components and methods to cover the service-based system lifecycle including discovery and composition.
NEXTMEDIA	The objective of nextMEDIA is to enhance the coordination of the efforts in Europe towards producing a clear situation of the Future Media Internet, create common pillars (e.g. the Future Media Internet reference architecture for Europe) and support the results of the developments of the European projects
P2P	Developing a methodological approach, software and a trace XML protocol supporting data collection from the traceability systems in companies belonging to the agri-food sector with a specific focus on the swine value chain.
PABADIS’ PROMISE	The project extends the idea of distributed control to an innovative architecture which incorporates both resource and product.
PLAY	The PLAY project will develop and validate an elastic and reliable architecture for dynamic and complex, event-driven interaction in large highly distributed and heterogeneous service systems. Such architecture will enable ubiquitous exchange of information between heterogeneous services, providing the possibilities to adapt and personalize their execution, resulting in the so-called situational-driven process adaptivity.
QImpress	The project aims to bring service orientation to critical application domains, such as industrial production control, telecommunication and critical enterprise applications,

Relevant project	Relevant results
	<p>where guaranteed end-to-end quality of service is particularly important.</p> <p>All these domains share a need for guaranteed end-to-end quality of service, but also a need to evolve over their long lifetimes. QImPrESS targets this challenge by providing a method to allow developers, users and maintainers to foresee the impact of design decisions and evolutionary changes to the system not only on its overall quality of service, but also on its internal quality properties such as maintainability. A new service architecture meta-model is developed which is accompanied by tool-supported model-driven quality of service prediction approaches and automated quality assessment.</p>
RESERVOIR	Reservoir is addressing the virtualization of infrastructure resources in an Infrastructure-as-a-Service (IaaS) environment.
ROLL	Low power and Lossy networks (LLNs) are made up of many embedded devices with limited power, memory, and processing resources. They are interconnected by a variety of links, such as IEEE 802.15.4, Bluetooth, Low Power WiFi, wired or other low power PLC (Powerline Communication) links. LLNs are transitioning to an end-to-end IP-based solution to avoid the problem of non-interoperable networks interconnected by protocol translation gateways and proxies.
S-Cube	The European Network of Excellence “S-Cube” (http://www.s-cube-network.eu) has analyzed the adaptation of service-based systems across the SOA technology layers and has produced a generic monitoring and adaptation framework, which frames the various monitoring and adaptation techniques and provides a basis for developing novel, integrated techniques. For what concerns adaptation, S-Cube members have identified the need for “human-in-the-loop” / mixed initiative adaptations, which provide a semi-automated way for system adaptation. However, the current focus of the project has been on self-adaptation, based on quality prediction and automated negotiation.
SecSE	<p>SeCSE offers new methods, tools and techniques addressing these changes in business paradigms toward Service Centric Systems.</p> <p>SeCSE aims at supporting service integrators and service providers by supplying innovative processes, methods, and tools for delivering and maintaining services, including the a) monitoring the compliance of service behavior and performance against system requirements, b) supporting system reconfiguration in response to service failure or divergence from QoS requirements. SeCSE supports both loose and strict monitoring. Fault tolerance is achieved through the use of defensive programming or by means of suitable reaction strategies. Defensive programming is up to the system integrator who conceives the composition, while as for the capability of reacting, SeCSE provides a customizable mechanism to integrate user-defined reaction strategies with the execution of designed compositions.</p> <p>In the pure SOA technology perspective, SeCSE outcomes are of high importance to realize a SOA monitoring and adaptation infrastructure integrated within the execution of business process enacted as service compositions.</p>
SELFNET Future Internet Research and Experimentation project	Self-management in FI, cognitive decision making, Situation awareness, data clustering.
SEMPROM	SEMPROM develops key technologies for the IoT. By the use of integrated sensors, relations in the production process become transparent and supply chains as well as environmental influences retraceable.
SENSEI	SENSEI creates an open, business driven architecture that fundamentally addresses the scalability problems for a large number of globally distributed, heterogeneous wireless sensor and actuator devices. It provides necessary network and information management services to enable reliable and accurate context information retrieval and

Relevant project	Relevant results
	interaction with the physical environment.
Serenoa	Serenoa is aimed at developing a novel, open platform for enabling the creation of context-sensitive service front-ends (SFEs). A context-sensitive SFE provides a user interface (UI) that exhibits some capability to be aware of the context and to react to changes of this context in a continuous way. As a result such a UI will be adapted to a person's devices, tasks, preferences, and abilities, thus improving people's satisfaction and performance compared to traditional SFEs based on manually designed UIs.
SERSCIS	Semantic modeling and management of ICT interdependence and dependability in critical infrastructures.
SERVFACE	The project aims at creating a model-driven service engineering methodology for an integrated development process for developing user interface descriptions user interfaces for a composition of services.
Service Finder	Service-Finder aims at developing a platform for service discovery in which Web Services are embedded in a Web 2.0 environment.
SHAPE	SHAPE is active in the standardization of SOAML. The mission of SHAPE is to support the development and implementation of business systems. It does so by suggesting a service architecture that is semantic-driven and allows for combination of heterogeneous service architectures.
SLA@SOI	Addressing the problem of service level agreements description and the management of service levels at runtime. The tools and methods developed for defining and manipulating SLAs can be valuable contributions towards enhancing applications definitions and supporting further SLA-aware adaptation.
SOA4ALL	SOA4All aims at realizing a world where billions of parties are exposing and consuming services via advanced Web technology. The main objective is to provide a comprehensive framework that integrates complementary and evolutionary technical advances into a coherent and domain-independent service delivery platform. Specifically, the SOA4All monitoring platform provides advanced monitoring and management mechanisms able to propagate and derive detailed information about the execution of services as well as offering the means for controlling or adapting the runtime infrastructure to better deal with on-going situations. . SOA4All provides another self-adaptive monitored infrastructure for business-driven service compositions, as evolution of SeCSE and Super projects that could be considered by enacting self-adaptive business processes.
SOCRADES	The project's primary objective is to develop a design, execution and management platform for next-generation industrial automation systems, exploiting the Service Oriented Architecture paradigm both at the device and at the application level.
SOFI	The goal of SOFI is to complement EU R&D projects in the area of Internet of Services, Software and Virtualization (Objective 1.2) through specific support activities. SOFI aims to ensure the position of European research as a leader in the definition and realization of the theoretical and technological foundations of the Future Internet of Services, as well as European industry's competitive advantage in the creation of value and new opportunities from its use. SOFI will build upon and complement the current efforts around the Future Internet Assembly, and particularly the service related working groups, most specifically the Future Internet Service Offer WG (FISO).
SPES2020	SPES2020 is one of the largest projects dealing with the systematic engineering of software-intensive embedded systems, therefore providing a direct link into the IoT.
SPRERS	The overall aim of the SPRERS project is to improve the participation in European collaborative research activities of research teams involved in software services from new member states. This aim will be addressed by identifying the strengths of these teams and facilitate their collaboration through thematic workshops, expert meetings, a

Relevant project	Relevant results
	training event, an awarding program, and white papers.
SPIKE	The aim of SPIKE is to research and implement a system that will bring flexibility to the collaboration between networked enterprises. Using SPIKE, enterprises can gain business opportunities with previously inaccessible customers and partnering organizations.
SRT-15	The objective of SRT-15 is to bridge the gap between cloud infrastructures and enterprise services by building a distributed service platform. For that purpose SRT-15 relies on four key enabling technologies: content-based routing, complex event processing, dependability and data privacy. The unique combination of these concepts allows SRT-15 platform to scale across public and private clouds allowing for reliable and dynamic interaction between various enterprises applications.
SUPER	The major objective of SUPER is to raise Business Process Management (BPM) to the business level, where it belongs, from the IT level where it mostly resides now.
SYNERGY	<p>The SYNERGY project envisages the delivery of Collaboration Knowledge services through trusted third parties offering web-based, pay on demand services, exploitable through interoperability service utilities (ISUs).</p> <p>The overall aim of SYNERGY is to enhance support of the networked enterprise in the successful, timely creation of, and participation in collaborative VOs by providing an infrastructure and services to discover, capture, deliver and apply knowledge relevant to collaboration creation and operation.</p>
THESEUS / TEXO	TEXO is the major lighthouse project in Germany on the IoS including service marketplaces, the supporting service engineering and their effective consumption.
WAX	The WAX project will define and deliver an Open Source Platform and software components for the Future Internet in the form of web runtime extensions, to enable web applications and services to be used and shared consistently and securely over a broad spectrum of converged and connected devices, including mobile, PC, home media (TV) and in-car units.

5.21. List of Related International & National Initiatives

21.5.1. European Future Internet Initiatives

Table 3: List of European Future Internet Initiatives.

Initiative	Description
ARTEMIS (European Technology Platform for Embedded Systems)	The ARTEMIS JU is implementing a Strategic Research Agenda co-funded by industry, research organisations, participating Member States and the Commission's own ICT programme. With the expansion of the Internet-of-Things the field of embedded systems is important since the Things at the edge of the Internet are very often embedded systems. A key goal of ARTEMIS is to make European industry a world-leader in the field of embedded systems. Many of the technology research and development projects funded by the ARTEMIS JU are targeting devices and technologies for the Future Internet.
EFFECTS+ (SA for Security and Trust)	The EFFECTS+ initiative aims to cluster projects in the field of Security and Trust for the Future Internet and thereby enabling collaboration and information exchange in this research area. In addition to that, it coordinates the contribution of this subtopic to the overall Future Internet research in terms of FIA and other initiatives. By integrating and reviewing the intermediate results, the EFFECTS+ initiative is able to feed them into an ongoing roadmap for the agenda of future FI research.
EIT ICT Labs	The European Institute of Innovation and Technology (EIT) is a new EU instrument for promoting innovation in Europe that has established 5 innovation centers in Berlin, Eindhoven, Helsinki, Paris and Stockholm. The aim is to turn Europe into the global leader in ICT Innovation and improve quality of life through service based applications for the citizens of Europe and beyond by building joint European innovation clusters among the ICT industry and academic research. The thematic areas have a high overlap with those of the FI PPP
FIA (Future Internet Assembly)	FIA constitutes the collaboration between projects to strengthen European activities on the Future Internet, in order to ensure Europe maintains its competitiveness in the global marketplace. FIA brings together around 150 research projects (as part of FP7 Challenge 1).
FIRESTATION (SA for Experimental Facilities / FIRE)	The FIRE initiative aims to promote experimentally-driven long-term, visionary research on new paradigms and networking concepts and networking architectures for the Future Internet. FIRE integrates several projects involved in establishing a network of federated service testbeds enabling experimental research for the Future Internet. It is embedded in the FIRESTATION project, which acts as a mediator and communication driver between the research projects and potential customers of the testbeds, aiming to trigger intense collaboration between the involved parties.
IoT-i (SA on Real World Internet)	Internet of Things communities in Europe are very fragmented. The Internet of Things Initiative follows the goal to represent the first comprehensive community for IoT with members of diverse technology sectors. IoT-i aims to connect the relevant key actors to work for a common understanding and vision of the Internet of Things to strengthen the European efforts in the field of IoT in the world.
MANA	This initiative supports research in the area of Management and Service-aware Networking Architectures and aims to create a core platform as the basis for the Future Internet. By completely redesigning the current concepts of network architecture and thereby enabling services to be context-aware and self-aware, MANA is heading towards service infrastructures automatically taking care of their operational state.
NESSI (The Networked European Software and Services Initiative)	The Networked European Software and Services Initiative is the European Technology Platform dedicated to Software and Services. It unites 434 member organizations split equally between industry and academia, and includes 30% of SMEs. 6 NESSI Strategic Research projects are currently in operation, involving over 120 organizations and 4 additional projects are joining in 2010. NESSI also operates a concerted research coordination strategy whose goal is to enable each project to position itself with respect to other projects within a coherent approach to services architectures. To further contribute to the coherence of European research and avoid

Initiative	Description
	fragmentation of efforts, NESSI has also set up the network of National and Regional Initiatives.
SOFI (SA on Services)	SOFI aims to complement EU R&D projects focused on IoS, Software and Virtualization by supporting them efficiently. SOFI follows the goal to strengthen the position of European research as a leader in the Future Internet of Services. The initiative will build upon and complement current efforts around the Future Internet Assembly.

21.5.2. European Transport and Logistics Initiatives

Table 4: List of European Transport and Logistics Initiatives

Initiative	Description
Alliance for European Logistics	The industrial alliance brings together both the major providers of logistics services in Europe as well as global companies that rely on efficient logistics for the successful execution of their business operations. By adopting existing and future transport technologies, the alliance envisions a step-change in the business and environmental efficiency of Europe's industrial base. This innovation would be characterized by integrated supply chain networks providing transparency across different modes and encouraging information exchange among different players in the supply network.
ARUS – Logistics (Advanced Research on Urban Systems)	The University of Duisburg-Essen decided to concentrate on the field “Urban Systems” as one of several focuses. ARUS, founded in 2010, is the related doctoral program that follows the aim to explore the changes in urban areas from a specific view as well as with an interdisciplinary background and offers doctoral students diverse possibilities for national and international research.
ASIM (Work Group Simulation)	ASIM is a working group especially for simulation and modeling. It aims are to enhance the connection between theoretical approaches and practical implementations as well as to advance existing concepts. ASIM consists of different sections that concentrate on specific parts of the diverse fields of simulation and modeling.
BME (German Association Materials Management, Purchasing and Logistics)	The BME associates about 7,500 members from single persons to SMCs and top German enterprises related to the topics of materials management, procurement and logistics. BME aims to offer a network for these participants to communicate and exchange their experiences. This involves diverse services e.g. meetings and conferences to connect its members.
BVL (German Logistics Association)	The BVL associates more than 10,000 members from every logistics-related sector in Germany. It is a neutral platform for managers to link up and exchange with others in the field of logistics and across borders of companies and organizations. The German Logistics Association stands for efforts in forward-looking concepts and gives impulses to the German and international logistics-sector. BVL is a platform for exchanging ideas and experiences among executive managers and offers diverse services around the logistics-sector.
Initiativkreis Ruhr (Interest group of the metropolitan Ruhr area)	The Initiativkreis Ruhr is an association of about 60 leading companies in the German metropolitan area called “Ruhrgebiet”. The initiative aims on the concentration of economical know-how to create forward-looking strategies and business concepts to strengthen the region around the river Ruhr.
Logistics Cluster NRW	The Logistics Cluster NRW is an initiative of the German federal state of North-Rhine Westphalia involving a great diversity of partners from the logistics business. By driving an intense collaboration and information exchange between the various companies and research facilities, the initiative aims to make the state NRW Europe's most successful area in logistics services. The Logistics Cluster NRW therefore supports the formation of a logistics community, drives political, technological and economic strategies and aims to enhance the logistic business' image of the federal state.
LogistikRuhr	This logistics initiative of the German federal state of North-Rhine Westphalia aims to develop the collaboration between the logistics research and business parties by identifying pressing

Initiative	Description
	challenges in the logistics business, transforming them into research questions and finally conducting a fast implementation of the results. By applying this strategy, the initiative wants to preserve the local firm's competitiveness and thus ensure business growth and job safety. It focuses on topics such as logistics-as-a-service, urban logistics and sustainability.
SUPPORT	The SUPPORT project aims to tackle the challenges of an efficient and safe handling on ports, considering both potential threats on passenger life and economic damage due to unlawful attacks on port facilities. The current challenges existing due to the complexity of operational modalities of sea and hinterland traffic and the lack of efficient organizational and technological interfaces are faced by engaging representative stakeholders to guide the development of next generation solutions for upgraded preventive and remedial security capabilities in European ports. SUPPORT will deliver public formal specifications and open standards based tools that will aid security upgrade in EU ports and will be complementary to and usable by other EU projects and initiatives in this area.
VDI – Working Group SCM (Association of German Engineers)	The working group discusses current trends in Supply Chain Management and related sectors. By involving students from various logistic-related disciplines, the group tackles the challenges evolving from the high interaction of different companies and especially focuses on the support by IT systems.
VDMA (German Engineering Federation)	The trade association for materials handling and logistics systems of the VDMA subsumes about 200 companies and hence is Europe's biggest association in this business area. It offers several services to their member companies, including information exchange, business marketing and market analysis in the field of intralogistics. Additionally, they hold international contacts by contributing to the European Federation of Materials.
WGTL (German Scientific Society for Logistics Engineering)	The German association WGTL aims to drive technological innovation in the logistics sector by conducting a cooperative research and development for supporting the logistic companies in meeting their customer's requirements. The association is a cooperation of various German professors, each holding a professorship for logistic-related research areas and hence represents a multidisciplinary and academic initiative supporting innovation in the logistics area.

21.5.3. European Agri-Food Initiatives

Table 5: List of European Agri-Food Initiatives

Initiative	Description
AEF – Agricultural Industry Electronics Association	The AEF was founded in 2008 by seven agricultural equipment manufacturers, among which the largest three; John Deere, CNH and Agco and European based companies; Kverneland, Krone, Pöttinger and Claas. In the meantime around 120 manufacturers and organizations participate. The AEF will provide the consistent sponsorship and support needed to implement electronic standards in agriculture, after they've been developed and accepted through the International Standards Organization (ISO) process.
AFITA - Asian Federation of Information Technology in Agriculture	Asian (incl. Australia) association for the promotion of IT in agriculture and the food sector
agriXchange	agriXchange is a EU-funded coordination and support action to setup a network for developing a system for common data exchange in the agricultural sector.
CIGR - International Commission of Agricultural Engineering	International engineering association that acts as umbrella to regional associations from Europe and all over the globe
EAAE - European Association of Agricultural Economists	The European association that integrates scientists that are engaged in all economic aspects around agriculture, food chains and policy
Edi-Teelt Plus Standaard	EDI-Teelt is a Dutch-language XML schema. Its modelling methodology is message-based and based on legacy formats.

Initiative	Description
EFITA - European Federation for Information Technologies in Agriculture, Food and the Environment	European association for the promotion of IT in agriculture and the food sector. It represents the major meeting point for scientists and business stakeholders with national member associations all over Europe
Ernährung.NRW – Cluster on collaboration in regional food chains in Northrhine-Westphalia, Germany	An initiative by the ministry in the state of NRW/Germany with support of the EU which brings together all stakeholders in the food industry to promote innovation and competitiveness.
European Platform Transparent Food	An internet platform that evolved from the European project Transparent_Food (FP7) and integrates different European transparency initiatives.
European Technology Platform (ETP) 'Food4Life'	The European meeting place for industry and research to identify challenges and needs for action and research. Managed by the European association of the food and drinks industry.
FIAB- (Spanish Federation of Industries Food and Drink)	FIAB is composed of more than 50 industry associations that group over 8,000 companies. They work at national, Community and international areas like internationalization, R & D + i, legislation and food safety, agricultural policy, environment, nutrition, education, taxation and communication, always in the interest of promoting the improvement of the competitiveness of this industry.
FoodNetCenter	International Center for Food Chain and Network Research, University of Bonn
FoodNetCenter - International Center for Food Chain and Network Research, University of Bonn	An international center that coordinates many food chain initiatives in Germany and on a European scale building on joint engagements by research and industry
Freshfel Europe	The European Fresh Produce Association, is the forum for the fresh fruit and vegetables supply chain in Europe and beyond. It has about 200 members who represent all segments of the fresh produce trade: import, export, wholesale, distribution and retail. (www.freshfel.org)
GIL - German Association for Informatics in Agriculture	Meeting place for scientists and business stakeholders engaged in the promotion of IT in agriculture and the food sector.
Greenport Digital Community	Within the Greenport Digital Community (Dutch: Tuinbouw Digitaal) the Dutch sector eBusiness organisations Florecom, Frug I Com and Edibulb are working together with the Dutch Ministry of Economic Affairs, Agriculture and Innovation (EL&I), the Wageningen UR and the Product Board of Horticulture to: connect the knowledge present in the sectors and that of all projects currently running; accelerate the use of information standards at companies within the sectors; disseminate knowledge to all stakeholders, i.e. horticulture companies, trading companies, service providers, and knowledge and educational centres, etc. (www.tuinbouwdigitaal.net)
IFAMA - International Food and Agribusiness Management Association	The global association of stakeholders in the food chain with leading engagement of industry from around the globe and close relationships with Harvard Business School
INFITA - International Network for Information Technology in Agriculture	The International Network of associations engaged in the promotion of IT for agriculture and the food sector with European participation (EFITA)
International Forum on System Dynamics and Innovation in Food Networks (fooddynamics)	Annual international and European scientific conference on food sector management and policy issues.
ISO/TC23/SC19	ISO/TC23/SC19 is responsible for standardization of data exchange with and between farm equipment. Their Working Group 1 (WG1) concerns mobile farm equipment, i.e tractors and implements and developed a standards ISO11783, also known as ISOBUS. WG5 has as task the standardization of all wireless communication in agriculture, ranging from wireless sensors implanted in animals to fleet management of farm machinery.
PANAFITA - Pan-American Federation for Information	PanAmerican (North and South) association for the promotion of IT in agriculture and

Initiative	Description
Technology in Agriculture	the food sector
SCALE – Step Change in Agro-food Logistics Ecosystems	SCALE aims at increasing North West European (NEW) economic competitiveness and improving environmental sustainability of food and drink supply chain logistics in the context of rising food demands, increasing energy prices and the need to reduce environmentally damaging emissions. Moreover, SCALE aims at developing a collaborative framework that will enable companies in food supply networks to work together on logistic strategy and operations in a way that they holistically embrace the concept of sustainability.
Spanish Technology Platform Food For Life Spain	Spanish Technology Platform Food for Life Spain operates in Spanish food sector and aims to collaborate with public authorities to prioritize research needs framed in aid policies applicable to the sector and on the other, fostering collaboration among its members on projects R & D + i through public-private partnerships, both nationally and internationally, in addition to helping the commercialization of its results.
Union Fleurs	International Flower Trade Association. Full member countries: Austria, Belgium, Colombia, Denmark, Germany, Israel, Italy, Kenya, Morocco, The Netherlands (VGB, see Florecom), Norway, Spain, Sweden, Switzerland, Turkey. Additional associate member countries: Japan, USA. (www.unionfleurs.org)
WCCA - World Conference on Computers in Agriculture	An initiative of leading European and International associations with engagement in IT for agriculture and the food sector coordinated by the network organization INFITA including EFITA (Europe), AFITA (Asia), PanAFITA (America), CIGR (Engineers), IAALD (information specialists), FAO (United Nations)

5.22. List of Relevant Standardization Bodies

Table 6: List of relevant standardisation bodies and channels.

Standardisation Body	Description
CEN	The European Committee for Standardization (CEN) provides a platform for the development of European Standards and other technical specifications. CEN TC320 has several published standards related to transport logistics and services, as well as standards related to food safety, packaging, and many others. (www.cen.eu)
ETSI	ETSI produces globally-applicable standards for ICT including fixed, mobile, radio, converged, broadcast and internet technologies. ETSI standards related to Intelligent Transport Systems, RFID and other technologies are utilised in the Transport and Logistics and Food Distribution sectors. (www.etsi.org)
FIATA	International Federation of Freight Forwarders Association. FIATA, a non-governmental organization, represents today an industry covering approximately 40,000 forwarding and logistics firms, also known as the "Architects of Transport", employing around 8 - 10 million people in 150 countries. (www.fiata.com)
GS1	GS1 is an international not-for-profit association with Member Organizations in over 100 countries. GS1 is dedicated to the design and implementation of global standards and solutions to improve the efficiency and visibility of supply and demand chains globally and across sectors. The GS1 system of standards is the most widely used supply chain standards system in the world. (www.gs1.org)
IATA	International Air Transport Association. IATA's mission is to represent, lead and serve the airline industry (www.iata.org)
IETF	The mission of the IETF is to make the Internet work better by producing high quality, relevant technical standards that influence the way people design, use, and manage the Internet. (www.ietf.org)
IFPS	IFPS is the International Federation for Produce Standards (IFPS) is composed of national produce associations from around the globe. The long term objective of the federation is to improve the supply chain efficiency of the fresh produce industry through developing, implementing and managing harmonized international standards. The following national produce associations are IFPS members: <ul style="list-style-type: none"> • Asociacion de Exportadores de Chile • Canadian Horticultural Council • Canadian Produce Marketing Association • Freshfel Europe • Fresh Produce Consortium (UK) • Frug I Com (Netherlands) • Fruit South Africa • Horticulture Australia Ltd • Norges Frukt-og Gronnsaksgrossisters Forbund (Norway) • Produce Marketing Association (US) • Shaffe (Belgium) • United Fresh (New Zealand) • United Fresh Produce Association (US) (www.ifpsglobal.com)
IMO FAL	The International Maritime Organization's Facilitation committee deals with IMO's work in eliminating unnecessary formalities and "red tape" in international shipping. (www.imo.org)
ISO	The International Organization of Standardization is the world's largest developer and publisher of international standards. (www.iso.org)

Standardisation Body	Description
OASIS (Universal Business Language (UBL))	A not-for-profit consortium that drives the development, convergence and adoption of open standards for the global information society. (www.oasis-open.org)
OGC	The Open Geospatial Consortium (OGC) is an international industry consortium of 474 companies, government agencies and universities participating in a consensus process to develop publicly available interface standards. OGC® Standards support interoperable solutions that "geo-enable" the Web, wireless and location-based services and mainstream IT. The standards empower technology developers to make complex spatial information and services accessible and useful with all kinds of applications. (www.opengeospatial.org)
OMG	An international, open membership, not-for-profit computer industry consortium. It develops enterprise integration standards for technologies, and a range of industries. (www.omg.org)
Open Group	The Open Group is a vendor-neutral and technology-neutral industry consortium that develops open standards and addresses global interoperability of enterprise systems. (www.opengroup.org)
UN/CEFACT	<p>Within the United Nations framework of the Economic and Social Council, the United Nations Economic Commission for Europe (UNECE) serves as the focal point for trade facilitation recommendations and electronic business standards, covering both commercial and government business processes that can foster growth in international trade and related services. In this context, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) was established, as a subsidiary, intergovernmental body of the UNECE Committee on Trade, mandated to develop a programme of work of global relevance to achieve improved worldwide coordination and cooperation in these areas.</p> <p>UN/CEFACT supports activities dedicated to improving the ability of business, trade and administrative organizations, from developed, developing and transition economies, to exchange products and relevant services effectively. Its principal focus is on facilitating national and international transactions, through the simplification and harmonization of processes, procedures and information flows, and so contributing to the growth of global commerce. (www.unece.org/cefact)</p>
W3C	W3C is an international consortium, which primarily pursues the creation of Web standards and guidelines. (www.w3.org)
WCO	The World Customs Organization. The WCO's mission is to enhance the efficiency and effectiveness of Customs administrations by harmonizing and simplifying Customs procedures. (www.wcoomd.org)

5.23. List of Target Conferences, Events, and Journals

Table 7: List of relevant Conferences for Dissemination

Name of Event	Brief Description	Target audience / communities
BPM	Business Process Management Conference	Service engineering, Business engineering
CAiSE	Int'l Conference on Advanced Information Systems Engineering	Software engineering, Service engineering, Information systems
CITY LOGISTICS	International Conference on City Logistics	Transportation & Logistics
DEBS	ACM Distributed Event-based Systems	Software engineering, Complex Event Management
ECITL	European Conference on ICT for Transport Logistics	Transportation & Logistics
ECPA	European Conference on precision agriculture	Precision Agriculture
EFITA	European Conferences on IT in Agriculture, Food and the Environment	Stakeholders in agriculture and food
EMSOFT	ACM & IEEE Conference on Embedded Software	Internet of Things
ESEC	European Software Engineering Conference	Software engineering
EuroSSC	European Conference on Smart Sensing and Context	Sensing and Context Acquisition
FIS	Future Internet Symposium (under the umbrella of several EU projects)	Future Internet, Software and services engineering, Semantic technologies
FNMS	Future Network and Mobile Summit	Future Internet Technologies, Integrated Satellite Communications, Internet of Things and Machine to Machine
fooddynamics	International Forum on System Dynamics and Innovation in Food Networks	Agriculture & Food Production (Domain & IT Experts)
ICSE	International Conference on Software Engineering	Software engineering
ICSOC	International Conference on Service Oriented Computing	Service-oriented computing
ICTLE	International Conference on Traffic and Logistic Engineering	Transportation & Logistics
ICWS	IEEE International Conference on Web Services	Service-oriented computing
IECS	International Conference on Enterprise Information Systems	Decision Support, Systems Integration, Enterprise Architecture, Human Factors
LEITS	International Conference on Logistics Engineering and Intelligent Transportation Systems	Transportation & Logistics
LISS	International Conference on Logistics, Informatics and Service Science	Transportation & Logistics
LM-SCM	International Logistics and Supply Chain Congress	Transportation & Logistics
MCPC	International Conference on Mobile Communications and Pervasive Computing	Internet of Things

Name of Event	Brief Description	Target audience / communities
MobiCom	International Conference on Mobile Computing and Networking	Internet of Things
RE	Requirements Engineering Conference	Software engineering
SERP	International Conference on Software Engineering Research and Practice	Software engineering
ServiceWave	European conference under the umbrella of the NESSI, eMobility, EPoSS, ISI and NEM.	Service engineering, Software engineering, Grid computing, Business engineering
TRANSLOG	Conference for transportation and logistics leaders from academia, government and the private sector featuring noteworthy domestic and international participants	Transportation & Logistics
UbiComp	ACM International Conference on Ubiquitous Computing	Pervasive, wireless, embedded, wearable, and/or mobile technologies that bridge digital and physical worlds

Table 8: List of relevant journals for scientific dissemination

Journal
Software engineering
Journal of Systems and Software
Journal of Automated Software Engineering
Software Engineering Journal
European Journal of Information Systems
Business Process Management
Elsevier Information Systems Journal
Supply Chain Management: An International Journal
ACM Transactions on Information Systems
Service-based computing
Journal of Systems and Software
International Journal of Web and Grid Services
Journal of Computing and Information Technology
ACM Transactions on the Web
Internet of Things
IEEE Transactions on Mobile Computing
International Journal of Mobile and Wireless Computing
Application Areas

Journal
IEEE Transactions on Intelligent Transportation Systems
Computers and Electronics in Agriculture
Computers in Industry
Future Generation Computer Systems

Table 9: List of relevant Industrial Events and Trade Fairs for Dissemination.

Name of Event	Brief Description	Target Audience / Communities
AgriTechnica	World's largest exhibition on farm machinery, with a lot of attention to precision farming technology.	Farmers, traders, machinery manufacturers (incl. R&D staff)
ANUGA	International fair for the food industry in Cologne	Production, Management
CeBIT	World's largest trade fair and exhibition on ICT.	ICT in general addressing industry and academia
CeMAT	The world's leading fair for intralogistics	Intralogistics
CILF	China International Logistics and Transportation Fair	Logistics, Transportation
Cool Chain Europe	Conference for professionals meeting to talk about problems and solutions for cooled transport chains	Transport
DLK	German Logistics Congress (<i>ger. Deutscher Logistik-Kongress</i>)	Logistics
Dortmunder Gespräche	German Congress on IT for the logistics domain	Logistics, Traffic, Retail, IT, Telematics, Manufacturing
Fruit Logistica	International annual fair for the Fruit and vegetable industry	Production, Management and Marketing
Holland Transport & Logistics Show	The show updates on developments in logistic service providing, logistic infrastructure, logistic real estate, logistic information technology and equipment as well as sustainability issues in the logistics chain	Logistics, ICT, Sustainability
Hortifair, Amsterdam	International trade fair for Technology, Innovation and Inspiration in Horticulture. The Horti Fair has about 25.000 visitors from 65 countries and 600 exhibitors from 32 countries. www.hortifair.com	Floricultural Industry and Solution Providers
IAME	International Association of Maritime Economists	Maritime logistics
Intermodal South America	Leading integrated exhibition and conference event for international trade, logistics, transport and cargo handling in Latin America	International trade, Logistics, Transport, Cargo handling
International Freight Week	International Freight Week is the only event in the Middle East that covers the entire transport and logistics industry	Transport and Logistics
ITS World Congress	The World Congress on Intelligent Transport Systems for world's leading transportation policy makers, technology, and business professionals.	Transport systems
LDIC	International Conference on Dynamics in Logistics	Identification, analysis, and description of the dynamics of logistic processes and networks
LDK	Logistics Service Congress of St. Gallen (<i>ger. St.Galler Logistikdienstleistungs-Kongress</i>)	Logistics

Name of Event	Brief Description	Target Audience / Communities
Log	EHI/GS1 Germany Retail Logistics Congress for Retail, Manufacturing and Service (<i>ger. Handelslogistik Kongress</i>)	Logistics, SCM
LOGICON	Retail and FMCG Global Logistics & Supply Chain Conference	Logistics, SCM
LogiMAT	German trade fair for distribution, material and information flow	Intralogistics
Logitrans	Transport Logistics Fair	Transport, Logistics
LOGITRANS	Madrid Logistics and Transport Forum	Transport, Logistics
SAP Sapphire	SAP's educational and networking customer event.	ICT in general, addressing senior executives and business managers
SAP TechEd	SAP's technical education customer conference.	ICT education, addressing IT managers, developers, administrators & business experts
SCL Europe	European Supply Chain and Logistics Summit	SCM, Logistics, RFID, SOA
SCMLogistics	Asia's most established logistics & supply chain conference	Logistics, SCM
SIL	International Logistics and Material Handling Exhibition	Logistics, Material handling
SITL	Trade show for Logistics Solutions	Transport, Warehousing, Logistics platforms, Technologies and Information Systems
SOLE	Annual International Logistics Conference and Exhibition (Global Logistics Sustainability)	Sustainability, Logistics
Supply Chain Technology Forum	The leading forum for Supply Chain Technology decision makers	SCM
Systems	A professional business-to-business exhibition for the ICT market.	ICT in general, addressing industry professionals
transport logistic	The most important exhibition for logistics, mobility, IT and supply-chain management in the world.	Logistics, Mobility, IT, SCM
Urban Transport World	Urban Transport World Australia focuses on policy, strategy and innovation for urban transport planning and delivery.	Urban Transport