



*D71.3 Dissemination and Cluster Plan*  
*(M18)*  
*Including*  
*D71.2 (M6) resubmitted issue*

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## VERSION HISTORY

	DATE	NOTES AND COMMENTS
1.	19/03/2012	VERSION 0.1 (FIRST DOCUMENT)
2.	30/03/2012	VERSION 0.2 (VALIDATION OF THE PLAN)
3.	10/04/2012	VERSION 0.3 (1 <sup>ST</sup> DRAFT FOR INTERNAL REVIEW)
4.	20/04/2012	VERSION 0.4 (2 <sup>ND</sup> DRAFT FOR INTERNAL REVIEW)
5.	27/04/2012	VERSION 0.5 (3 <sup>RD</sup> DRAFT FOR INTERNAL REVIEW)
6.	07/05/2012	VERSION 1.0 (FINAL DRAFT FOR INTERNAL PEER REVIEW)
7.	15/05/2012	1.0 FINAL VERSION
8.	11/03/2013	1.1 CORRECTIONS FURTHER TO THE FIRST REVIEW
9.	18/04/2013	2.0 M18 ISSUE & RESUBMITTED VERSION

## DELIVERABLE PEER REVIEW SUMMARY

ID	Comments	Addressed (✓) Answered (A)
1	Errors in the numbering of the chapters	✓
2	Repetition of the objectives in the introduction and in chapter 2	✓
3	Lack of link to the dissemination material available on the MSEE website	✓
4	Lack of a methodology with explanations on how the plan will be implemented, the mechanisms of control	✓
5	Lack of pictures and diagrams	Addressed in the report due at M12
6	Remarks of the EC first review: <i>Recommendation is to try attracting key manufacturing and ICT industry actors, be present at industry for a etc. The plan needs revision to include a proactive implementation in terms of actively working with key industry players, industry organisations etc. Although the objective is to promote also the economic impact of MSEE, there is no work done to determine the potential economic impact of the project results.</i>	The dissemination strategy has been reinforced towards industry audience. Industrial workshops and conferences have been added in the dissemination plan until the end of the project.

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## APPLICABLE DOCUMENTATION

- AD1. EC Communication Guidelines for Projects  
[http://cordis.europa.eu/fp7/ict/participating/communication-best-practices\\_en.html](http://cordis.europa.eu/fp7/ict/participating/communication-best-practices_en.html)
- AD2. MSEE Description of Work
- AD3. FInES list of recommended International Conferences  
[http://www.fines-cluster.eu/fines/jm/Publications/Download-document/244-FInES\\_Recommended-Conferences\\_ERARankingSorting-v1.html](http://www.fines-cluster.eu/fines/jm/Publications/Download-document/244-FInES_Recommended-Conferences_ERARankingSorting-v1.html)
- AD4. FInES list of recommended International Scientific Journals  
[http://www.fines-cluster.eu/fines/jm/Publications/Download-document/246-FInES\\_Recommended-Journals\\_TitleSorting-v1.html](http://www.fines-cluster.eu/fines/jm/Publications/Download-document/246-FInES_Recommended-Journals_TitleSorting-v1.html)

## Executive Summary

This deliverable is composed by the D71.2 “Dissemination and Cluster Plan” due at M6, rejected at the first review meeting and resubmitted at M18, and by the D71.3 “Dissemination and Cluster Plan” due at M18 as initially planned in the DoW. The main remarks from the reviewers were to increase the dissemination towards industry and to promote the economic impact of MSEE.

The objective of this deliverable is on the one side, to define a strategy and a plan for the dissemination of the MSEE project and on the other side, to elaborate an action plan which describes how MSEE plans to collaborate with the FInES Cluster and with other European initiatives as the FoF PPP initiative (Factories of the Future Public Private Partnership).

The results presented in this deliverable are:

**The MSEE dissemination strategy:** MSEE defined at the beginning of the project the strategy to make the project visible and have the highest impact among the target audience. The first step was to identify the key messages and the target audience for the MSEE scientific and exploitable results, among the academic research world and the industry. The dissemination strategy also includes the internal rules adopted by the partners who will actively contribute to the project advertisement and to the building of the MSEE community.

**The MSEE dissemination plan (M1-M30):** The second step was to draw up the action plan which is used to reach the objectives of the dissemination. A list of events/journals linked to the MSEE domains has been communicated to the partners at M6. A dissemination plan until M30 has been defined by collecting the intention of dissemination among the partners, under the guidance of the Project Coordination (events, conferences, workshops, scientific journals and external communities of high interest for MSEE). Two types of actions have been distinguished: the scientific dissemination plan and the industrial dissemination plan.

**The Collaboration Plan with other EC initiatives:** The impact of the project is increased by the liaisons established with other European initiatives and groups that have been identified at the beginning of the project. An analysis of the topics in common with MSEE has been done. The contribution of MSEE to the EC Policy Action plan is briefly presented in this deliverable but it is thoroughly described in a separate deliverable (D71.9 Report on Policy Action Plan, resubmitted in March 2013).

**The MSEE dissemination material:** MSEE has created different types of dissemination material at the partners disposal when they participate in conferences, workshops and any events to make MSEE more visible towards the scientific and industrial communities. Flyer, general presentation, posters, website, newsletter are updated over the course of the project.

## 1. Introduction

The tasks of WP 7.1 Dissemination are:

- To disseminate the project and its results to the various stakeholders and other interested parties particularly in industry,
- To exchange information with and transfer expertise to target groups,
- To raise the understanding of and the benefit to be gained through the MSEE results to the European community and beyond,
- To organize and participate in conferences, workshops, and seminars in important relevant events throughout Europe,
- To collaborate with other projects and initiatives for dissemination, cooperation in order to increase the impact of the project with:
  - o Future Internet Enterprise Systems cluster (FInES): the MSEE project was under the umbrella of this cluster until July 2012. Since the re-organisation of the European Commission units, the ICT projects under FInES have been spread into the Unit E3 and Unit A3 of the DG CONNECT. MSEE is now managed by the Unit E3. So we will consider the relations of MSEE project with the other projects transferred in UNIT E3 "Net Innovation"
  - o FoF PPP: The "Factories of the Future" is the Public-Private Partnership research programme to support the manufacturing industry in the development of new and sustainable technologies. This initiative coordinates the research theme 7.3 "Virtual factories and enterprises" which oversees the MSEE project.
  - o Other clusters and groupings such as the European Research cluster on the Internet of Things (IERC), NMP, Manufuture, EFFRA, Internet of Services, Open Federated Platforms,...
- To contribute to the EC policies implemented in the flagship actions "Innovation Union" and "Digital Agenda for Europe" and promote the policy of social impact of the project among the European policy makers.

In order to reach these objectives and to coordinate the dissemination activities, a strategy and a plan have been defined and presented in chapter 2. The communication has been adapted to the identified targets and the exploitable results. The dissemination rules to be followed by the partners are also included in this chapter.

The dissemination plan until month 30 of the project is presented in chapter 3. A list of conferences and journals has been drawn up to propose the partners to submit a paper and participate to these events all along the project. The impact of the dissemination is evaluated thanks to Performance Indicators and targets to be reached.

The chapter 4 presents how MSEE collaborates with the FInES Cluster and the other EU initiatives, in particular the Digital Agenda for Europe and to the Innovation Union European initiatives.

Finally the needed dissemination material for advertising the project is presented in the last chapter of the deliverable.

## 2. Dissemination Strategy

Access to knowledge generated by the public research base and its use by business and policy-makers lie at the heart of the European Research Area. The MSEE project is aware that the growth and competitiveness of European industries and SMEs depends on the creation of new models for Manufacturing Innovation. MSEE brings a high contribution and solutions in the services in manufacturing industry. Therefore, the strategy for communication with other stakeholders and the wide dissemination and exploitation of research results is of special importance in this project.

The MSEE dissemination strategy presented in the following pages includes several steps:

- Definition of the key messages
- Identification of target audiences and communities to approach
- Selection of the appropriate modes of communication
- Definition of dissemination rules for the partners
- Analyse and establishment of the MSEE community

### 2.1. Objectives of the dissemination

The initial work consists in the definition of the objectives of the dissemination plan in order to have a common understanding of what we expect from the dissemination and cluster plan.

The following objectives for the dissemination are commonly agreed in research projects:

- To set up and continuously maintain the communication with the partners, the various stakeholders, particularly in industry and the other interested parties, and regularly give a general overview of the project of the recent work progress.
- To establish liaisons with target communities and share expertise and knowledge and implicitly contribute to the defragmentation of the ERA (European Research Area)
- To raise the understanding of and the benefits to be gained through the MSEE results to the European community and beyond (in research, industry, final-users and policy-makers)
- To obtain a continuous feedback to the project expected results with the aim of future exploitation

In order to reach these objectives, a set of parameters must be defined and the first one is the key messages to be delivered.

### 2.2. Definition of key messages

The key messages are defined according to the main Grand Challenges of the MSEE project, which are:

- *Grand Challenge #1:* make SSME (Service Science, Management and Engineering) evolve towards Manufacturing Systems and Factories of the Future
- *Grand Challenge #2:* transform current manufacturing hierarchical supply chains into manufacturing open ecosystems
- The synthesis of the two Grand Challenges above in industrial business scenarios and their full adoption in some European test cases will result in new Virtual Factory Industrial Models.

The key messages have to be adapted to the production of the exploitable results identified along the life cycle of the project (in WP 73).

The communication will be adapted to the type of audience. When addressing research communities, the technical and scientific results will be highlighted whereas when addressing industries and end-users, the message will be focused on the business benefits of using MSEE results and on demonstration of MSEE results.

It is of great importance to identify the target audience and well understand their potential interest in MSEE.

## 2.3. Target audience

According to the MSEE scope, several categories of audience will be targeted depending on the impact and results expected from the target. Four categories (A, B, C, D) emerge among which specific communities are identified and shall be approached:

**A. Research**, including: academia, research projects, research centres, RTD department, research communities having common interests with the MSEE domains (Future Internet, manufacturing, service innovation, business innovation, computer science, automation, modeling, information systems...).

**B. Industry / End-users**, including: manufacturing enterprises and IT enterprises (Chief Information Officers, Business managers, Supply Chain managers, Production managers, Retail managers, Life Cycle managers, Software designers and developers, Solution providers), strategic consultants, investors and venture capitalists, industrial associations and SMEs in textile retail, machine-tools, household appliances, next generation TV sets, and other sectors.

**C. Standardisation bodies** and initiatives, including the international institutions in the domain of standards for interoperability (CEN, ISO, ETSI...).

**D. Policy-makers and lobbies**, including European clusters (FInES, IERC/IoT), EC directorates and units, EC agencies and initiatives (FI and FoF PPP, Digital Agenda, FIA/FISA, EFFRA, NESSI, other ETPs, Manufuture, EFIA, IMS, NEM...), European associations, National Ministries of Research and Industry.

The expected benefits to approach these audiences are:

- to create **awareness** for the use and adoption of MSEE results
- to **inform** and share knowledge with anyone interested in the MSEE activities and results
- to **engage** external persons and receive feedbacks, advices from potential users and stakeholders
- to **promote** MSEE and increase the visibility and impact of the project

## 2.4. Types of dissemination

The table below lists the different means of dissemination that MSEE will use all along the project life:

Timing	Dissemination Method	Purpose	Description
Every 6 months (M6-M36)	Project newsletter	Awareness Inform	The newsletter will be used to announce the project, give regular updates, focus attention on the latest developments to the partners, conference attendees (who opt in), website visitors (who opt in), and other perceived stakeholders and interested parties.
M2-M36	Project website	Awareness Inform Engage Promote	Project web site will be developed at the beginning of the project. It will be used as a key tool to raise the image of the project and to put plenty of information for different audiences. The project



			website will be linked to the websites of the project participants and partners.
On demand	Press releases or Project fact sheet	Awareness	Press releases and fact sheet will be used as formal announcement of big events, news of the project, to the EU Policy press and to the specialist press.
M3 + updates	Flyers / brochure/ slideshow	Awareness Promote	Though much communication will be electronic, it is still often useful to create a flyer that can be circulated in printed form by the partners attending conferences, scientific workshops, cluster meetings... Electronic version will also be circulated.
At least 5 by year	Participation to Conference	Engage Promote	Relevant national and international conferences will be identified to share the project achievements with experts in the field.
On demand	Conference posters	Engage Promote	The posters will be designed to provide an eye-catching and thought-provoking presentation of the project and opportunities for collaboration, and will include contact and website details giving ready access to further information.
15 WS (M18-M36)	Industrial Workshops	Awareness Engage	Workshops will consist of interactive events held to achieve a specific objective. They will be used also to get feedback from users on a demo or to get feedback from experts and trigger discussions.
M21-M36	Public Demonstrations	Engage Promote	Demonstrations will allow to show what the project have developed and get feedback. They will be organized as early as possible in the project (year 2 and 3) and especially for stakeholders to keep them informed.
M1-M36 Update each 3 months	Online discussion lists using the social media	Awareness Inform Engage	On-line communities such as LinkedIn and Twitter will be useful for discussing new developments, problems, issues. They are an opportunity to be proactive and reactive, make announcements, develop a profile for the project.
M6-M36 At least 10 papers/year	Papers in scientific international journals	Inform Promote	The achieved research results will be described in scientific papers that will be presented and published at various relevant scientific events – conferences, workshops, seminars, doctoral symposiums, etc.

**Table 1: types of dissemination action**

The dissemination is performed by the project coordinators and partners. MSEE uses INTEROP-VLab as a spread dissemination channel. In fact, the specificity of I-VLab is to put together academia, industry, research centres, SMEs, who have a common interest in the results of MSEE project, representing 250 researchers and 60 organizations.

The following chapter defines some guidelines to provide all partners with a shared context and clear mainstream towards successful dissemination of project results.

## 2.5. Dissemination Rules

The dissemination rules aim to provide the partners some guidelines about the content, responsibilities and conditions for any dissemination action done by a partner such as:

- Scientific paper presentation
- Presentation of the project or public demonstration at local event, conference
- Organization of workshop or invited special session targeting industry representatives,

The criteria for selecting MSEE's presence to an event are the following:

- Expected audience (see the typologies described in chapter 2.3) and aligned to the results to be presented
- Relevance of the event in terms of expected impact and common synergies

In order to keep track of the events where MSEE dissemination activities are carried out, a form for dissemination report is to be filled out by the partner who will perform the dissemination activity. This form contains information about type of event, targeted audience, industrial sectors and number of participants. This provides the opportunity to appraise the effect of the dissemination activities.

### **2.5.1. Scientific paper presentation**

It consists in a scientific paper related to MSEE topics, presented at relevant conferences, workshops, and possibility published in an international scientific journal.

For publication and presentations, the rules of the Consortium Agreement Article 8.3 Dissemination should apply, in particular the items 8.3.1 "Publication", 8.3.2 "Publication of another Party's Foreground or Background".

#### **Content**

- The paper must present a result obtained in the frame of a task of the project or a result partially supported by MSEE and should contain a sentence like: "this work is (partially) supported by the EC funded MSEE project (FP7- 284860)"
- The paper should come from at least two partners involved in the development of the result in order to demonstrate the cooperation
- The paper must be presented by a partner of the project

#### **Responsibilities**

- Preparation: the author(s) of the paper must inform the MSEE coordination at least 30 days before the submission of the paper
- Approval of the abstract by the MSEE TCC/SCC (Technical/Scientific Coordination Committee)
- Report: the author(s) must send a report on the general impact of the dissemination activity performed to the coordination, contacts with participants, by using the dissemination form

#### **Conditions**

MSEE may support fully or partially the travel and accommodation costs and the registration fee if applicable. A budget must be submitted for the coordinator approval, indicating the various fundings.

### **2.5.2. Presentation of the project or public demonstration at local event, conference**

The partners are encouraged to advertise the project by giving a general presentation or demonstration of MSEE at renowned international conference or local event. A list of events related to MSEE domains is drawn up under section 3.1 but the partners can also proposed to participate to an event not selected by the coordination.

#### **Content**

- Presentation of the MSEE project to give an overview of the activities and the benefits of the project
- Demonstration by presenting the implementation in use-cases

## Responsibilities

- If it is upon a partner proposition: approval of the participation by the SCC/TCC
- The partner must inform the coordination at least 30 days before the event
- If it is an event that the TCC/SCC deems relevant for MSEE, a partner will be appointed to participate to the event
- Report: the partner must send a report on the general impact of the dissemination activity performed to the coordination, by using the dissemination form

## Conditions

MSEE may support fully or partially the travel and accommodation costs and the registration fee if applicable. A budget must be submitted for the coordination's approval.

### 2.5.3. Organization of specific MSEE industrial workshop or invited special session

The partners are encouraged to organize or co-organize open industrial workshop on specific topics issued from MSEE in the frame of international conference. Such events must be also the opportunity to invite speakers, in the same domain than MSEE.

## Content

- Presentation of advanced knowledge in the domain of MSEE by external expert
- Presentations of MSEE results by the specialists of the project
- Possibility to organize the session in the knowledge café style to foster debates and discussions
- The workshop/session will be labelled “supported by MSEE project”

## Responsibilities

- The partners must submit a draft programme for the TCC/SCC approval at least 2 months prior to the event
- The invited external speakers must be approved by the TCC/SCC. The organizer must send a short CV of the experts, the title of the keynote presentation and a short abstract.
- The organizer is responsible for the preparation and coordination of the workshop/session (call for papers, invitations, liaison with the conference organizer...), with the support of the MSEE dissemination.
- Report: the partner must send a report on the general impact of the dissemination activity performed to the coordination, by using the dissemination form one month after the event.

## Conditions

MSEE may support part of the organisation of the event. In case the organizer requests a financial support, a budget must be established and the financial support must be duly justified.

## 2.6. MSEE Community building

The objective to create an active MSEE community is to gather all stakeholders that would have an interest to receive MSEE information, share knowledge, support, react and provide a feedback on the project results.

The MSEE community will be composed of the MSEE partners, external invited experts, the target audience identified in chapter 2.3, and the communities that will be contacted to establish collaborations (see chapter 3.4).

A mailing list will be created by the coordination. The existence of MSEE Community will be advertised through various channels, so as to involve as many persons as possible: First, direct contacts by the consortium partners with people of companies with which these have commercial or other kind of relations will be exploited, directly inviting people that might be have some interest in the project. Then, during the various dissemination events organized by the consortium, the attendees will be informed of the possibility to subscribe to the MSEE Community. Moreover, a specific area in the project website allows online subscription from anyone interested in the MSEE domains.

Once subscribed, Community members will be:

- Periodically informed about the projects' advancements and results, focusing, for each of the stakeholders' categories, on the aspects and themes that might interest them most, through e-mail based MSEE newsletters and other kinds of publications.
- They will be invited to new dissemination events that the consortium is going to organize during the project life-cycle.
- Feedback, ideas and opinions from Community members will be elicited and taken into consideration to support the project's work, for instance through the distribution of questionnaires, brainstorm discussions after the events they take part to, or specific meetings at which they will be invited.

The MSEE Community is meant to be one of the major dissemination channels for the project.

### 3. Dissemination Plan M1- M30

This section aims to present the dissemination plan of the project, elaborated on the basis on the strategy presented in chapter 2, an analysis of events, conferences, scientific journal of high interest for MSEE. As previously mentioned, MSEE has established liaisons with external communities linked to the MSEE domains such as Manufacturing, Business and Service Innovation, Future Internet, Enterprise Interoperability.

The dissemination plan is presented hereafter and will be updated all along the project life.

#### 3.1. Methodology used for the elaboration of the dissemination action plan

At the beginning of the project, an initial list of conferences, events, scientific journals and external communities of interest for MSEE has been drawn up and communicated to the partners. The main sources were the FInES recommendations for international conferences<sup>1</sup> and international scientific journals<sup>2</sup>, to which other data have been gathered thanks to the experience and a deep watch of the scientific events and news in the MSEE domains.

Then all the partners have been requested to complete these lists with the events, conferences, journals, scientific communities they know and which are related to MSEE, and to detail their intentions in terms of dissemination actions until M30. An online table has been created on Google Spreadsheet<sup>3</sup> in order to collect the partners 'inputs.

The project coordination has analysed the schedule of the upcoming conferences in order to identify where MSEE can submit a paper and to see which partners can participate in these conferences. The criteria of selection are the relevance of the topics with MSEE, the sustainability of the event, the organizer reliability which warranties the quality of the event, the number of participants at previous issues and the level of influence of the event to reach external communities. The main targets for scientific dissemination are recognized and international scientific journals and conferences to present research findings and practice experience from MSEE. A plan and schedule for the release of papers is defined in the dissemination plan. The papers mainly report:

- specific scientific and technological achievements in MSEE
- application and experience of MSEE results in industrial environments
- innovation, achievements and results
- foresights on future development and development needs

The results of the collected data are presented in the dissemination plan over M1-M30, in the chapter 3.3.

The partners have been requested to follow the internal rules presented in chapter 2.5 when they intend to make a dissemination action. They have to provide report to the TCC/SCC on the action performed. WP71 performs the evaluation of these actions. The follow-up of the performance indicators presented in chapter 3.7 enables the project to measure the impact of the dissemination action plan and to take corrective actions when necessary.

A yearly report of the dissemination actions performed has to be produced at the end of each period.

<sup>1</sup> [http://www.fines-cluster.eu/fines/jm/Publications/Download-document/244-FInES\\_Recommended-Conferences\\_ERARankingSorting-v1.html](http://www.fines-cluster.eu/fines/jm/Publications/Download-document/244-FInES_Recommended-Conferences_ERARankingSorting-v1.html)

<sup>2</sup> [http://www.fines-cluster.eu/fines/jm/Publications/Download-document/246-FInES\\_Recommended-Journals\\_TitleSorting-v1.html](http://www.fines-cluster.eu/fines/jm/Publications/Download-document/246-FInES_Recommended-Journals_TitleSorting-v1.html)

<sup>3</sup> <https://docs.google.com/spreadsheet/ccc?key=0Am22oF2ENTpOdGRUT0xIS3dXYzhMbFVuOC1qY2FMY3c&usp=sharing>

### 3.2. Identification of synergies with relevant initiatives

A number of initiatives which are relevant to MSEE scope and objectives have been identified and listed below. Synergies will cover scientific and industrial aspects of the MSEE dissemination.

The objective is to set up a database of initiatives suitable for exchanging information or setting up joint initiatives so that to maximize the impact potential of the MSEE Project and all related initiatives.

#### **Initiatives in Manufacturing**

- EFFRA <http://www.effra.eu/>: EFFRA was established by the MANUFUTURE Technology Platform to shape, promote and support the implementation of the ‘Factories of the Future’ public-private partnership. EFFRA is a non-for-profit industry driven association, promoting the development of new and innovative production technologies. MSEE project descriptions have been submitted to EFFRA’s publication office for the release of the Volume “DEVELOPING TECHNOLOGIES FOR ‘FACTORIES OF THE FUTURE’“, related to the first two calls of the FoF PPP.
- Factories of the Future PPP [http://ec.europa.eu/research/industrial\\_technologies/factories-of-the-future\\_en.html](http://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html): The "Factories of the Future" is one of the three Public-Private Partnership included in the Commission's recovery package. MSEE project belongs to the “Virtual Factory” priority of the “ICT for Manufacturing” Grand Challenge (see FoF Multi-annual Research Roadmap)<sup>4</sup>.
- IMS (Intelligent Manufacturing Systems initiative) <http://www.ims.org/>, aiming at multi-lateral international collaboration for R&D in manufacturing. MSEE is present, mostly through the Polimi beneficiary, to the most important events of IMS including the WMF (World Manufacturing Forum, <http://www.worldmanufacturingforum.org/>).
- PROSUMER.NET (EU consumer goods research initiative) <http://prosumernet.eu/> is a coordination action under the Theme 4 of FP7 (NMP) aiming at integrating research activities which are currently running in several ETPs about consumer goods, namely textile, clothing, footwear, sportswear and wood-furniture. MSEE attended some events organised by this initiative<sup>5</sup> mostly driven by the Bivolino test case and TXT-DITF beneficiaries.

#### **Initiatives in Interoperability, Future Internet, IoT, Computing, Automation, Information systems...**

- EFIA (European Future Internet Alliance) <http://initiative.future-internet.eu/> : EFIA is an ad-hoc assembly of leading European ICT organisations, called the EFIA Consultation group, who want to stimulate the development of advanced internet technologies, services and content and encourage their deployment into the fabric of European society and industry.
- FIA (Future Internet Assembly) <http://www.future-internet.eu/home.html>: The European Future Internet Assembly also known as FIA, is a collaboration between projects that have recognised the need to strengthen European activities on the Future Internet to maintain European competitiveness in the global marketplace.
- FInES Cluster (Future Internet Enterprise Systems) <http://www.fines-cluster.eu/fines/jm/> is in a transitional period since the re-organisation of the EC units. MSEE is one of the 2 IPs funded during the second call of the FoF PPP, now managed by the DG Connect unit

<sup>4</sup> <http://www.effra.eu/attachments/article/72/Report%20of%20the%20Ad-hoc%20Advisory%20Group.pdf>

<sup>5</sup> e.g. PROsumer.NET Validation Workshop, 16 Feb. 2012, Milan



E3. Beyond the participation to the cluster Task Forces (see below), MSEE is running cross-project collaborations especially with the projects under the research area 7.3 Virtual Factories: COMVANTAGE, VENIS, EPES, IMAGINE, EXTREMEFACTORIES, ADVENTURE, GLONET, PREMANUS and BIVÉE.

- IERC Cluster (Cluster on the Internet of Things) <http://www.internet-of-things-research.eu/> is the second DG INFSO D4 cluster, which is organised by Activity Chains. MSEE is not an official member of this cluster<sup>6</sup>, but it already contributed to the ACs about Interoperability, Test cases and exploitation.
- SSAI Projects (Software & Service Architectures and Infrastructures) [http://cordis.europa.eu/fp7/ict/ssai/projects-call1\\_en.html](http://cordis.europa.eu/fp7/ict/ssai/projects-call1_en.html) where the challenges of Cloud Computing, Internet of Services and Software Engineering are addressed. In particular, the topics related to the IoS vision (service platforms) are important for MSEE.
- NMP DG Research and Innovation (Nanotechnologies, Materials and Production Technologies) [http://ec.europa.eu/research/fp7/index\\_en.cfm?pg=nano](http://ec.europa.eu/research/fp7/index_en.cfm?pg=nano). Beyond the FoF initiative, we are also in liaison with the NMP Theme and in particular with the P (processes) section of it, mostly related to Cloud Manufacturing, Augmented Reality and our industrial use cases.
- IEEE (Institute of Electrical and Electronics Engineers) [www.ieee.org](http://www.ieee.org). IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. IEEE and its members inspire a global community through IEEE's highly cited publications, conferences, technology standards, and professional and educational activities. MSEE plan to participate in selected IEEE international conferences (see **Error! Reference source not found.**) and to submit papers in relevant IEEE journals (see **Error! Reference source not found.**).
- IFAC (International Federation of Automatic Control) <http://www.ifac-control.org/>, is a multinational federation of National Member Organizations (NMOs), each one representing the engineering and scientific societies concerned with automatic control in its own country. MSEE plans to participate in some IFAC international conferences.
- IFIP (International Federation for Information Processing) <http://www.ifip.or.at/>, is the leading multinational, apolitical organization in Information & Communications Technologies and Sciences. IFIP represents [IT Societies](#) from 56 countries or regions, covering all 5 continents with a total membership of over half a million. MSEE plans to participate in some international conferences sponsored by IFIP, for exemple the APMS Conference on Advances in Production Management Systems<sup>7</sup> (IFIP Working Group 5.7).

### **Initiatives in Innovation:**

- INNOVATION UNION flagship EC initiative [http://ec.europa.eu/research/innovation-union/index\\_en.cfm](http://ec.europa.eu/research/innovation-union/index_en.cfm)  
The Innovation Union is one of the seven flagship initiatives of the Europe 2020 strategy<sup>8</sup> for a smart, sustainable and inclusive economy.
- EUROPA-INNOVA <http://www.europe-innova.eu>

<sup>6</sup> We are not running IoT research activities, but we are applying IoT mostly to our test cases and in a business environment of servitization

<sup>7</sup> <http://www.apms-conference.org/>

<sup>8</sup> [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)

DG Enterprise initiative which includes a number of networks that seek to improve the conditions of access to finance for innovative ventures that want to bring new business ideas into new, untapped markets.

- Open Living Labs <http://www.openlivinglabs.eu/>  
The European Network of Living Labs mission is to develop and offer a gradually growing set of networked services to support the “Innovation Lifecycle” for all the actors in the ecosystem.
- Open Innovation Strategy and Policy Group (OISPG<sup>9</sup>) and in particular the Service Innovation Yearbook<sup>10</sup> which provides the European interpretation of the SSME (Service science Management and Engineering) concepts

### **ETPs (European Technology Platform)**

- EPoSS (European Platform on smart systems Integration) <http://www.smart-systems-integration.org/public>
- EuMat (European Technology Platforms on Advanced Engineering Materials and Technologies) <http://eumat.eu/>
- EUROP (European Robotics Technology Platform) <http://www.robotics-platform.eu/cms/index.php>
- FTC (Future Textiles and Clothing) <http://www.textile-platform.eu/>
- MANUFUTURE <http://www.manufuture.org/manufacturing/>
- NESSI (Networked European Software and services Initiative) <http://www.nessi-europe.com/default.aspx?page=home>

### **Standards Organisation**

- CEN <http://www.cen.eu/cen/pages/default.aspx>
- ETSI <http://www.etsi.org/WebSite/homepage.aspx>
- ISO <http://www.iso.org/iso/home.html>
- ITU <http://www.itu.int/en/Pages/default.aspx>
- OMG <http://www.omg.org/index.htm>

### **FoF and other projects in manufacturing:**

- Adventure <http://www.fp7-adventure.eu/>
- BIVÉE <http://www.bivee.eu/>
- ComVantage <http://www.comvantage.eu/>
- EPES <http://www.epes-project.eu/>
- Extreme Factories <http://www.extremefactories.eu/>
- Glonet <https://sites.google.com/site/glonetproject/>
- IMAGINE <http://www.imagine-futurefactory.eu>
- PREMANUS <http://www.premanus.eu/>
- VENIS <http://www.venis-project.eu/>
- ActionPlanT <http://www.actionplant-projec.eu/>
- IMS2020 <http://www.ims2020.net/>
- MANUNET (ERA-NET project), <http://www.manunet.net/>
- SPRINT <http://www.sprint-iot.eu/>
- Virtual Factory Framework <http://www.vff-project.eu/>

The strategy to approach these communities is defined on a case by case basis, comprising actions such as co-organization of workshops, invitations to give a keynote presentation at an

<sup>9</sup> <https://sites.google.com/site/openinnovationplatform/oispg-objectives>

<sup>10</sup> [http://files.openinnovation-platform.eu/yearbook/service\\_innovation\\_yearbook\\_2010\\_2011.pdf](http://files.openinnovation-platform.eu/yearbook/service_innovation_yearbook_2010_2011.pdf)



MSEE event, elaboration of actions of cooperation (for example to have a mutual link among organizations/projects websites, write a short article on MSEE results in their newsletter and similar actions). As an example, MSEE has been invited to participate in the workshop “Impact of the Factories of the Future PPP”, organized by the European Commission (Brussels, March 2013). This workshop aims to assess the achievement of the expected impacts and of potential benefits of clustering between the FoF PPP projects.

### 3.3. Dissemination plan scheduled for M1-M30

This chapter presents the dissemination actions to perform until M30. It includes the actions of high-priority to support the communication, the actions to be done by the partners (submission of papers, participation to the selected conferences/workshops), and the actions to liaise with the external communities.

The list below is not exhaustive and is updated online based on the instructions of the coordination and the partners’ inputs collected through the online Google Spreadsheet available at:

<https://docs.google.com/spreadsheet/ccc?key=0Am22oF2ENTpOdGRUT0xIS3dXYzhMbFVuOC1qY2FMY3c#gid=0>

The events are classified in two different tables:

- Table 2: Scientific Dissemination Plan over M1-M30, which gather the events where the audience is mainly “academic research-oriented”. These type of events are usually organized by universities and public research centres.
- Table 3: Industrial Dissemination Plan over M1-M30, which correspond to events where industry audience has a significant participation.

Some events are both oriented to Scientific and Industry and appear in the two tables.

	<b>Scientific dissemination plan M1-M30</b>	<b>Person in charge</b>	<b>Date</b>
1.	Participation in the FInES meeting (Brussels, BE)	TXT / I-VLab	12 October 2011
2.	Participation in the FInES meeting and working sessions (Brussels, BE)	TXT / I-VLab / Softeco	19-20 December 2011
3.	CIRP (Tokyo, JP) Paper submitted at the Conference on Industrial Product Service Systems (if the paper is selected)	BIBA/TXT	8-9 Nov. 2012
4.	Participation in the PROsumer.NET Innovation Policy Workshop (Brussels, BE)	Bivolino / DITF	28 Feb. 2012
5.	Presentation at the CeBIT ICT FoF session (Hannover, DE)	TXT	6 March 2012
6.	Participation in Workshop on the Impact of the Factories of the Future PPP (Brussels, BE)	TXT	15 March 2012
7.	Participation in the FInES meeting and working sessions (Brussels, BE)	TXT / Uninova/ I-VLab	14-15 March 2012
8.	Organization of a workshop at I-ESA'12 (Valencia, ES)	TXT/ I-VLab	21 March 2012
9.	Keynote presentation at I-ESA'12 (Valencia, ES)	TXT	22 March 2012
10.	Participation in the IoT Interoperability Workshop (Paris, FR)	TXT/ I-VLab	26 March 2012
11.	CAISE'12 / NGEBS (Gdansk, PL) 2 papers submitted at the NGEBS workshop	UB1/BIBA/IAO SAP/ENG/BIBA	25-29 June 2012
12.	Participation in the FInES workshop (Aalborg, DK)	TXT / I-VLab / BIBA	9 May 2012
13.	Participation in the FIA Aalborg	TXT / I-VLab / BIBA	10-11 May 2012
14.	Participation in the EPISIS Conference (Helsinki, FI), “Positive impacts of service innovation - from intangible investments to emerging industries and ecosystems”	IAO / POLIMI	4-5 June 2012
15.	Invitation to be Industrial Chair at ESOCC (Bertinoro, IT) European Conf. on Service-Oriented and Cloud Computing	SAP/ ENG / Softeco/ Singular	19-21 Sept. 2012
16.	APMS (Rhodes Island, GR) IFIP conf. Advances in Production Management Systems; Special session “Service Manufacturing System” 2 selected papers	BIBA / POLIMI	24-26 Sept. 2012
17.	14th MITIP 2012 (Modern Information in the Innovation Processes of Industrial Enterprises) (Budapest, HU) 1 selected paper	BIBA (Paper presentation by Stefan Wiesner)	24-26 October 2012
18.	4th CIRP Conference on Industrial Product Service Systems	BIBA (Paper presentation by Stefan	8-9 Nov. 2012

	1 selected paper	Wiesner)	
19.	1 <sup>st</sup> MSEE Newsletter	TXT/I-VLab	Dec. 2012
20.	5th CIRP Conference on Industrial Product Service Systems 1 selected paper	BIBA (Paper presentation by Stefan Wiesner)	13-15 March 2013
21.	INNOROBO, European Robotics event	Distribution of MSEE leaflet at the TECNALIA stand + link MSEE project website in the pre-event dissemination	19-21 March 2013
22.	Conference "SMEs and Standardisation"		28 May 2013
23.	Extended Semantic Web Conference		26-30 May 2013
24.	International Conference on Knowledge Management and Knowledge Computing	DITF plans a contribution	10 June 2013
25.	25th International Conference on Advanced Information Systems Engineering NGEBS 2013 - 2nd International Workshop on New Generation Enterprise and Business Innovation Systems		17-21 June 2013
26.	2013 IEEE International Technology Management Conference & 19th ICE Conference	Paper submission by Polimi Paper submission by DITF	24-26 June 2013
27.	MSEE Workshop on the 2013 IEEE International Technology Management Conference & 19th ICE Conference	Paper submission by Polimi, contribution of DITF	24-26 June 2013
28.	18th EURAS Annual Standardisation Conference – Standards : Boosting European Competitiveness		24-26 June 2013
29.	ICEIS - 15th International Conference on Enterprise Information Systems		3-7 July 2013
30.	IFIP WG5.1 10th International Conference on Product Lifecycle Management		6-10 July 2013
31.	International Conference Information Systems	DITF plans a contribution	22.-24.07.2013
32.	European Conference on Product and Process Modelling		July 2013 (tbc)
33.	CENT 2013 - International Symposium on Collaborative Enterprises		July 2013 (tbc)
34.	BPM 2013 - International Conference in Business Process Management		26-30 Aug. 2013
35.	APMS - IFIP International Conference Advances in Production Management Systems	Paper submissions planned by Stefan Wiesner (BIBA) and by Polimi	9-12 Sept. 2013
36.	Journal of Service Management		
37.	IEEE Conference on e-Business Engineering		11-13 Sept. 2013
38.	OnTheMove Federated Conferences and Workshops		9-13 Sept. 2013
39.	The 11th International Conference on Manufacturing Research 2013 (ICMR2013)		19-20 September 2013

	Incorporating the 28th National Conference on Manufacturing Research		
40.	23rd International RESER Conference Finding growth through service activities in barren times	Paper submission planned by IAO Fraunhofer (Mike Freitag)	19-21 September 2013
41.	PRO-VE 2013 - IFIP Working Conferences on Virtual Enterprises; Collaborative Systems for Reindustrialization		30 Sept.-2 Oct. 2013
42.	International Semantic Web Conference		21-25 October 2013
43.	ICT 2013 event		6-8 November 2013
44.	ASME Congress "Advanced Manufacturing"	Paper submission planned by UNINOVA	November 2013
45.	IEEE International Conference on Industrial Engineering and Engineering Management		10-13 December 2013
46.	I-ESA 2014 – International Conference on Enterprise Applications and Systems		25-28 March 2014
47.	24th International RESER Conference	Paper submission planned by IAO Fraunhofer (Mike Freitag)	September 2014
48.	Frontiers in Service Conference	IAO Fraunhofer will visit them to submit a paper	

**Table 2: Scientific Dissemination Plan over M1-M30**

	<b>Industrial Dissemination Plan</b>	<b>Person in charge</b>	<b>Date</b>
1.	Participation in the FInES meeting (Brussels, BE)	TXT / I-VLab	12 October 2011
2.	Participation in the FInES meeting and working sessions (Brussels, BE)	TXT / I-VLab / Softeco	19-20 December 2011
3.	Participation in the PROsumer.NET Innovation Policy Workshop (Brussels, BE)	Bivolino / DITF	28 Feb. 2012
4.	CeBIT / ICT FoF stand (Hannover, DE)	TXT/BIBA/I-VLab	6-10 March 2012
5.	Presentation at the CeBIT ICT FoF session (Hannover, DE)	TXT	6 March 2012
6.	Participation in Workshop on the Impact of the Factories of the Future PPP (Brussels, BE)	TXT	15 March 2012
7.	Participation in the FInES meeting and working sessions (Brussels, BE)	TXT / Uninova/ I-VLab	14-15 March 2012
8.	Organization of a workshop at I-ESA'12 (Valencia, ES)	TXT/ I-VLab	21 March 2012
9.	Keynote presentation at I-ESA'12 (Valencia, ES)	TXT	22 March 2012
10.	Participation in the IoT Interoperability Workshop (Paris, FR)	TXT/ I-VLab	26 March 2012
11.	Participation in the FInES workshop (Aalborg, DK)	TXT / I-VLab / BIBA	9 May 2012
12.	Participation in the FIA Aalborg	TXT / I-VLab / BIBA	10-11 May 2012
13.	Industrial Technologies 2012 (Aarhus, DK) Tecnalia stand “Integrating nano, materials and production”	Tecnalia	19-21 June 2012
14.	Invitation to be Industrial Chair at ESOC (Bertinoro, IT) European Conference on Service-Oriented and Cloud Computing	SAP/ ENG / Softeco/ Singular	19-21 Sept. 2012
15.	World Manufacturing Forum 2012 (Stuttgart, DE)	IAO/DITF	16-17 Oct. 2012
16.	FInES Cluster meeting	TXT / I-VLab	12 Oct. 2012
17.	World Manufacturing Forum 2012	Bivolino	16-18 Oct. 2012
18.	1st issue of the MSEE Newsletter		12 Dec. 2012
19.	CeBIT 2013	BIBA (booth)	5-9 March 2013
20.	3rd Workshop on “Impact of the FoF PPP”	TXT	11-12 March 2013
21.	1st FI PPP Workshop on Policy Challenges organized by the FI PPP working group on Policy & Regulation	TXT	13 Mar. 2013
22.	3D FASHION Seminar, Virtual product development, marketing and sales	Bivolino	13 Mar. 2013
23.	8th Annual Public Conference of the European Technology Platform for the Future of Textiles and Clothing	Presentation by Bivolino Poster & Newsletter distribution by D. Stellmach (DITF)	20-21 March 2013
24.	IFIP International Working conference on Enterprise Interoperability - Information, Services and Processes for the Interoperable Economy and	I-VLab, FhG-IAO, Bivolino, UB1, Uninova, Hardis	27-28 Mar. 2013

	Society Organisation of two MSEE workshops		
25.	2nd issue of the MSEE Newsletter	TXT / I-VLab	April 2013
26.	Dissemination in the Smart Factory Cluster (excellence district in Lombardia, Italia)	TXT	ongoing activity from 13th of March onward
27.	Future Internet Assembly, Dublin, Ireland	TXT	8-10 May 2013
28.	ServLAB Workshop	WS organized by IAO Fraunhofer to industrial users	8 May 2013
29.	Product2Service Event	TXT	28 May 2013
30.	TechTextil	Dissemination of MSEE information material at DITF Booth (Manuel Hirsch, Dieter Stellmach)	11-13. June 2013
31.	Factories of the Future towards Horizon 2020 Conference & exhibitions	TXT	12-13 June 2013
32.	IoT week 2013	TXT	16-20 June 2013
33.	Industrial Technology 2013		June 2013 (tbc)
34.	INTEROP-VLab week	I-VLab	2-5 July 2013
35.	Manufuture 2013 conference / ManuFuture View on Horizon 2020	Polimi	6-8 October 2013
36.	Conference of the Textile Flagships for Europe	Possibility foreseen to present MSEE to the textile and clothing industry (TCI) and their partners (Dieter Stellmach DITF, Michel Byvoet Bivolino)	23-25 Oct. 2013 (tbc)
37.	ICT 2013, Vilnius, Lithuania	TXT	6-8 November 2013
38.	ESoCE-NET Industrial Forum 2013, The Concurrent Enterprising Knowledge Community	TXT	Dec. 2013
39.	ServLAB Workshop	WS organized by IAO Fraunhofer to industrial users	2013 (Q4)
40.	ServLAB Workshop	WS organized by IAO Fraunhofer to industrial users	2014 (Q1)
	<b>Industrial workshops organized in the INTEROP-VLab Pole members:</b>		
41.	PGSO France	I-VLab	16-17 May 2013
42.	German Pole DFI e.V	I-VLab	June 2013
43.	Grande Region Pole (Lorraine, Belgium, Lux.)	I-VLab	Sept. 2013
44.	Spanish Pole INTERVAL	I-VLab	Oct. 2013

45.	Italian Pole VLab.IT	I-VLab	Nov. 2013
46.	UK Pole	I-VLab	Jan. 2014
47.	North Pole (Norway, Finland, Sweden)	I-VLab	Feb. 2014
48.	Portuguese Pole PtRP	I-VLab	Mar. 2014
49.	China Pole	I-VLab	Apr. 2014
50.	Industrial workshops organized by the MSEE partners	IAO, DITF, BIBA, POLIMI, UIBK, Technalia, SAP, Hardis, Singular, Softeco, TP Vision, Indesit, Bivolino, Uninova	From M18 to M36 (detailed planning available at M24)

**Table 3: Industrial Dissemination Plan over M1-M30**

### 3.4. Performance indicators for the dissemination

The quantitative measurement of achievement with regard to the objectives can be captured in performance indicators defined for dissemination. The indicators agreed are shown in the table below:

Indicators	Target at M36
Number of participations in International conference	20
Number of scientific papers submitted in International Journals	10
Number of workshops organized by MSEE or by a partner (local event)	12
Workshops organized by MSEE or a MSEE partner: Percentage of industrial audience participating in the workshop	40%
Number of participations in general meetings, events (EC clusters, Standardization meeting, InfoDay...)	10
Number of newsletters	3
Size of the MSEE community	1500 email addresses in the dissemination mailing lists

**Table 4: Dissemination Performance Indicators and targets M36**

## 4. FInES Cluster Plan and cooperation with other initiatives

According to the DOW, the objective of this task is:

*“to collaborate with the FInES cluster and other projects and initiatives where applicable for dissemination, cooperation in order to increase the impact of the project (NMP, Manufuture, EFFRA, Internet of Services, FI Open Federated Platforms and PPP)”.*

This section gives an overview of the initial plan on how MSEE will cooperate with the FInES cluster (Future Internet Enterprise System) in order to cross fertilize its results with the other FInES projects and to contribute to the scientific development of the cluster.

A detailed plan on the collaborations with the other projects and organizations has been proposed in the deliverable at D71.5 (M12).

Due to the very advanced topics of MSEE project and the fact that it is one of the main IP projects, the role of MSEE project in the FInES cluster has an important impact.

The objectives of the FInES Cluster are recalled below:

- To stimulate the interaction between the projects/initiatives in the Cluster with a view to fostering synergy and complementarity in their work, encouraging comparison of their results, and defining comprehensive conclusions that transcend the outputs of the individual activities;
- To disseminate the RTD achievements of Cluster projects and initiatives and support the dissemination efforts of individual projects;



- To represent the Cluster projects in other appropriate settings including standardization organisations, relevant research initiatives and policy forums, and support the efforts of individual projects in these areas;
- To act as a catalyst between the different stakeholders of the FInES research with an emphasis on the multi- and inter- disciplinary approach to FInES research and the cross-cutting nature of the research;
- To continuously broaden the critical mass of the Cluster by engaging with a wide spectrum of stakeholders.

To determine the plan of cooperation, MSEE has analysed first the various activities of the FInES Cluster with the Strategic Research axes in MSEE. The Action plan will ensue from the matching of the FInES and MSEE axes.

This section has been written at M6 (April 2012) of the project. Since July 2012, the FInES cluster is in a transitional period since the re-organisation of the EC units and the results of FP7 call10 objective 1.3. MSEE is one of the 10 FoF PPP projects funded under the Virtual factory chapter of the Factories of the Future ICT programme:

COMVANTAGE, VENIS, EPES, IMAGINE, EXTREMEFACTORIES, ADVENTURE, GLONET, PREMANUS, BIVEE and MSEE.

Two of them, MSEE and COMVANTAGE are currently in charge of Unit E3, while the other 8 of Unit A3. MSEE is therefore pursuing the possibility to implement collaborations and joint dissemination actions both in the DG CNECT E3 FInES cluster to be re-structured after call10 new projects and in the DG CNECT A3 Unit which is currently following the ICT part of the Factories of the Future PPP.

#### 4.1. The various Research activities of the FInES Cluster

The FInES Cluster currently supports collaboration and liaison activities developed by researchers and projects through 14 Task Forces. Reference:

(<http://www.fines-cluster.eu/fines/jm/FiNES-Public-Information/cluster-task-forces.html>).

Among these 14 task forces, some have an activity of support to the development of the FInES cluster, some aim to contribute to the EC policy, whereas others have a technical orientation or a scientific orientation.

MSEE is currently listed as interested to contribute to the following FInES task forces:

- [Business Values, Business Scenarios and Business Models](#)
- [FInES Architectural Design Principles](#)
- [The Internet as a Universal Business System and ISU](#) (led by TXT e-Solutions SpA)
- [Inter-relation between FInES Research and Standards and Standardisation](#) (led by INTEROP-VLab)
- [Communication](#) (led by INTEROP-VLab)

Among the research activities of the FInES cluster, 8 task forces are identified as relevant for MSEE, including one describing the Standards needs:

##### 1. Business Values, Business Scenarios and Business Models (re-visited) Task Force

Extract from the FInES website: “The FInES Research Roadmap (2010) identifies a number of key drivers for enterprise transformation and future enterprise environments. Specifically,

for business-economic drivers, the Roadmap argues that our present system of business values is no longer adequate in supporting the full range of business goals that future enterprises would consider as relevant and important. It provides a tentative listing of business values for future enterprises.

## **2. Collaborative Networks Task Force**

Extract from the FInES website:

“The FInES Task Force on "Collaborative Networks" aims at contributing to the establishment of a sound scientific / technological and engineering basis for Collaborative Networks.

Along the last 15 years Europe has established a clear lead in this area, supported by a large number of projects and practical implementations on different forms of collaborative networks, including virtual enterprises, virtual organizations, extended enterprises and dynamic supply chains, business ecosystems and other forms of virtual organizations breeding environments, professional virtual communities, etc. Consolidating those results and pursuing a sounder foundation that provides a common basis for further sustainable developments is a critical need.”

## **3. Inter-relation between FInES Research and Standards & Standardisation Task Force**

Extract from the FInES website: “The overall goal is to create ideas, recommendations and proposals to develop usable interoperability standards in the area of Future Internet Enterprise System (FInES)”.

## **4. FInES Architectural Design Principles**

Extract from the FInES website: “The Task Force will provide recommendations on architectural design for next generation enterprise systems and input to the Future Internet Reference Architecture (FIArch) Group, who are preparing a white paper on FI design principles”.

## **5. FInES Research Roadmap Task Force**

Extract from the FInES website: “This Task Force has the objective to produce the new FInES Research Roadmap that follows the one published in 2010 (that we will refer to as FInES RR 2010).

Currently (also in view of the upcoming FP8) there are several initiatives and groups working on sectorial Research Roadmaps, lookout papers, perspective investigations, etc. The activities of this Task Force will start by considering the relevant literature, such as the above mentioned reports and, in particular, the FInES RR 2010, to elaborate the original vision and research roadmap of the FInES Cluster”.

## **6. Manufacture and Industry Task Force**

Extract from the FInES website: “The overall strategy of the taskforce is to involve a broad range of industrial and other enterprises in the work and the results obtained in the various research projects in the FInES cluster, and beyond. The scope of involvement will range from building on the already planned dissemination activities in the projects, to consultations and participatory workshops”.

## **7. SMEs in the Future Internet Task Force**

Extract from the FInES website: “Future Internet (FI) is a “means” and not an “end” for SME business operation. FI should leverage a competitive advantage for SMEs. However, a clear formulation of what is @ FI for SMEs to take is not yet ready. The issue is not “TO BE” or “NOT TO BE” a FI-SME but how and why “TO BECOME” a FI-SME.

What a competitive advantage means for SMEs? What are the technological and business ingredients to build a competitive advantage for an SME?  
Where can the Future Internet technology make a difference in terms of SME business activities and organization?  
How should a competitive advantage be built for SMEs?  
Will FI technology enable mass-customization of SME Enterprise (collaboration) services?"

### **8. The Internet as a Universal Business System and ISU Re-visited Task Force**

Extract from the FInES website: "This task force aims at studying and discussing the inter-relations between the Interoperability Service Utility (ISU) concept introduced in 2006 by the EI Cluster and the Internet of the Future research stream and in particular the FI Assembly and the FI Public Private Partnership PPP. The final aim of the TF is to build a conceptual model and a FI-based reference architecture for FInES which will enable the vision of FI as the Universal Business System for Enterprises and SMEs."

These 8 task forces are followed with particular attention by MSEE and eventually our research outcomes on the above subjects above will be bi-directionally shared with the other cluster members.

## **4.2. The research activities of MSEE project**

Starting from the DOW, chapter B1.2 "Progress beyond the state-of-the-art", 10 topics which represent the scientific activities of MSEE have been defined:

### **1. Service Enterprise Modelling and Modeling Languages**

Starting from currently in use Enterprise Modeling concepts, languages, methodologies adopted in the product-oriented manufacturing industries, MSEE will enhance them by focusing on service-orientation, collaboration ecosystems in order to propose a set of Service Modelling concepts, language and methodology including an architecture to implement them. Starting from existing formalisms addressing services mostly from the IT viewpoint or from a generic business perspective (e.g. Unified Service Description Language USDL), MSEE will extend them to encompass all the services potentially provided by a virtual manufacturing enterprise.

### **2. Service Science Management and Engineering (SSME) for manufacturing industry**

Starting from existing SSME methodologies and service life-cycle models, MSEE will customize them for EU virtual factories and enterprises, with the final aim to design and implement a virtuous circle between product and service life cycles in industry, each characterized by original phases, times, stakeholders, but united together by a flexible and adaptive interoperability model.

This approach will include, starting from extended product examples and development methodologies, the implementation of product+service and product2service models and apply them to virtual factories including both large OEMs and SMEs.

### **3. Service Innovation in Virtual Manufacturing Enterprises**

Starting from current service innovation methodologies mostly applied to public administrations and tertiary sector, MSEE will build a solid scientific base and a change roadmap to drive European virtual manufacturing enterprises towards the provision of service-enriched products.

This scientific base and the associated change roadmap will use enterprise collaboration forms, like collaborative networks, breeding environments and business ecosystems, MSEE will set the foundations for a new organizational form, the manufacturing ecosystem, where collaboration is finalized to new manufacturing industrial and business models.

#### **4. Business Innovation for Virtual Factories and Enterprises**

Starting from user-centric technology business-social innovation models, like open innovation and Living Labs, MSEE will synthesize and customize them for European manufacturing industry, SMEs in particular. The ActionPlanT research roadmap for ICT for manufacturing identifies a 2020 Vision for EU Manufacturing Industry (the so-called Manufacturing 2020) and 5 main research priorities towards it: i) agile manufacturing systems and processes (in MSEE, Manufacturing as a service for tangible and intangible assets); ii) Seamless factory life cycle management (in MSEE linking product and service life cycles); iii) People at the forefront (in MSEE human-centric manufacturing); iv) Fostering collaborative supply networks (in MSEE Manufacturing Service Ecosystems); v) Customer centric design and manufacturing (in MSEE value co-creation and service innovation in ecosystems).

#### **5. Performance and Governance of Manufacturing Ecosystems**

Starting from existing performance indicators and governance models applied to single enterprises or static domain-specific supply chains, MSEE will extend them to dynamic heterogeneous business ecosystems, like those originated by a new service-orientation in all the product life cycle phases.

#### **6. Tangible and Intangible Assets Management in Manufacturing Ecosystems**

Starting from current local, domain-specific and limited examples of virtualization and dynamic orchestration of manufacturing tangible assets (e.g. virtual machine tools, garment manufacturing micro-plants), MSEE will extend them into a systemic cross-domain ecosystem, the Manufacturing as a Service ecosystem.

In the same approach, starting from existing definitions, management methods and IT tools for managing knowledge, IPR and human capital in the virtual manufacturing factory, MSEE will implement a generic methodology and a FI-based set of tools to support business innovation and creativity in manufacturing ecosystems.

#### **7. Future Internet (FI) to support next generation Enterprise System (FInES) and Virtual Manufacturing Enterprises**

Starting from on-going research about new architectures for FInES (e.g. cloud computing IaaS/PaaS/SaaS levels, global service delivery/development platforms, interoperability service utility), MSEE will develop a new FI-oriented architecture for FInES and will apply them to some enterprise software and applications brought by some MSEE partners.

In the frame of FInES recommendations, MSEE will implement New Qualities of Being for Enterprises Manufacturing Service Ecosystems, by means of new industrial models and FI-based platforms and services.

#### **8. Service Development Platforms for manufacturing industry**

Starting from existing web environments for developing and deploying easy-to-use IT services (e.g. integrated development environments, service development kits, mash-up platforms, user-generated service front-ends and desktop generators), MSEE will integrate and customize them for any kind of Manufacturing Enterprise services, enabling non-IT people to develop and publish them in the ecosystem.

#### **9. Semantically enabled Service Delivery Infrastructure**

Starting from existing examples of semantically enabled Global Service Delivery Platforms, mostly applied to IT Web Services, REST services and Linked Data sources, MSEE will integrate them into a unique environment for search-discovery-composition-orchestration-execution of any kind of service, related to the Manufacturing Enterprise ecosystem concept.

## 10. ESA SME-orientation and mobile business support

Starting from existing studies and methodologies about access simplification, mobile business support and SMEs orientation of existing Enterprise Software and Applications (ESA), MSEE will develop a set of guidelines and requirements for FInES back- and front- ends development, in order to make them pervasive and ubiquitous, simple-to-use, accessible by business nomadic experts, affordable by SMEs.

### 4.3. FInES Cluster plan of cooperation

By matching the Research activities developed in MSEE project and the Research activities of the FInES Cluster, the 8 scientific domains in which MSEE project could actively contribute are:

- a. **Business Values, Business Scenarios and Business Models:** MSEE will bring a vision of new service-oriented Industrial and Business Models in the Manufacturing domain. Product-related service engineering, i.e. value co-creation beyond manufacturing and selling just the physical good, encompasses the early involvement of customers and users in the strategic decisions of the manufacturing enterprise (including product development processes) and implies the consideration of different business values (e.g. the so-called new Qualities of Being), the set-up of new business scenarios (e.g. the ecosystems collaboration) and the development of new business models (e.g. dematerialisation of products).
- b. **Collaborative Networks Task Force:** the concepts of Ecosystem will be used in MSEE with an orientation toward Manufacturing Services and the service innovation process, which could be an original approach in this task force.
- c. **Inter-relation between FInES Research and Standards & Standardisation Task Force:** Martin Zelm (INTEROP-VLab) is already the coordinator of the task force, so there is a natural link with this activity of the FInES cluster.
- d. **FInES Architectural Design Principles:** Sergio Gusmeroli (TxT) is already cooperating with the Task Force, so there is already a link. MSEE SP3 will contribute to this Task Force regarding reference architectures and service delivery frameworks for enterprise systems inspired by the FI PPP architecture
- e. **FInES Research Roadmap Task Force:** all the projects must cooperate with the Roadmap Task Force, some members of MSEE will contribute both at organisational, business and technical level.
- f. **Manufacture and Industry Task Force:** the linkage between the FInES world and the Manufacturing initiatives (FoF, Manufuture, NMP, IMS) is at the center of MSEE dissemination strategy. A first outcome of this collaboration is the participation of MSEE (and other FInES projects) to the CEBIT Hannover exhibition.



- g. **SMEs in the Future Internet Task Force:** two MSEE Use Cases (Bivolino and Ibarria) are run by directly SMEs, but all the MSEE project is considering SMEs ecosystems as valid service providers also for big, multinational manufacturing companies such as Philips and Indesit.
- h. **The Internet as a Universal Business System and ISU Re-visited Task Force:** Sergio Gusmeroli (TXT) is already coordinator of this Task Force. While previous projects (FP7 call1 typically, COIN iSURF COMMIUS and successively NISB) have addressed the ISU Grand Challenge, now the key point is how on the one side extend the ISU concept (born in the field of EI) to other utility-like services enterprises would need to run their business collaboratively, on the other side to link such a concept to the FI Core Platform Generic-Specific Enablers, this way allowing FI to become the Universal Business System for enterprises and SMEs

At this list, we must add the Communication Task Force which is led by Cathy Lieu (INTEROP-VLab).

### **How to develop the cooperation between the FInES Cluster and the MSEE project?**

MSEE will follow the traditional way of cooperation:

- Participation to the cluster meetings,
- Sending contribution to the coordinator of the Task Forces listed previously,
- Contribution to the writing of “white papers or “position papers”,
- Cooperation with other projects of the FInES cluster (see the list at: <http://www.fines-cluster.eu/fines/jm/>)

## **4.4. The Policy and Social Impact Plan**

In order to assess the dimension of expected policy and societal impact, and the viability of the project in view of expected acceptance of such impact, MSEE should identify the policy priorities or pillars that it will support by its activities, notably under the umbrella of the Commission's ICT Programme Challenge 1 priorities or external assemblies such as the Future Internet Assembly. The Commission "Innovation Union" and the "Digital Agenda for Europe" Communications are reference documents to be carefully considered by the project.

MSEE will follow the activities Innovation Union and Digital Agenda:

- Eventually if necessary SME representative could participate to some meetings,
- Information issued from Innovation Union and Digital Agenda will be disseminated inside MSEE
- MSEE project will analyse the results of the project which could influence Innovation Union and Digital Agenda. Specific attention shall be paid to the identification of societal stakeholders, groups and policy makers that will be relevant to the adoption of project results, in order to support the development of special actions to acquire their motivation and to sustain the deployment of the project results. This task addresses as well any standardization initiatives. This will lead to the development of a yearly report on Policy Action Plan containing recommendations for European policy makers.

This action will be reported in a specific report at M12, 24 and 36, in the deliverable “Report on Policy Action Plan”.

## 5. MSEE Dissemination material

The section explains the strategies and the process to collect and update dissemination material.

### 5.1. MSEE leaflet / poster

The MSEE leaflet's main purpose is to have a document that provides a quick overview of the project in a compressed easy-to-follow format that can be used as an introductory to parties previously not aware of the project.

The leaflet provides the following information:

- Project title, acronym and logo
- Project vision and mission
- Project summary
- Main objectives of the project
- List of project partners
- Contact information for the project coordinator and link to the project website for further information
- Project results when available

The PDF version of the poster and leaflet are available on MSEE document repository at:

<http://www.msee-ip.eu/publications/marketing>

(see in annex).

MSEE leaflet and posters have been designed and printed for the participation in the CeBIT 2012 (Hannover, 6-10 March 2012). MSEE was one of the FoF projects selected to show its vision, mission and first results. MSEE also participated to the FoF workshop held on March 6<sup>th</sup> afternoon, with a presentation by Sergio Gusmeroli on "MSEE project: Service innovation in EU Manufacturing Industry".

### 5.2. MSEE project presentation

A standard MSEE PowerPoint slide presentation is maintained on the MSEE document repository at: <http://www.msee-ip.eu/publications/marketing>

The maintained version will be comprehensive and sufficiently detailed. Partners wishing to use the presentation can then modify and tune the preparation according to specific needs and highlight special aspects to suit the target audience, for example; industrial, academic, research, time constraints, etc.

### 5.3. MSEE Newsletter

MSEE newsletter aims to give more timely information of the advancement of the project to the stakeholders. It will be published every 6 months since M15. The format is a two-sided A4 in PDF format, circulated through e-mail lists to the interest parties, and also available on the website to be downloaded. The MSEE website will include a feature for interested website visitors to subscribe to the newsletter.

The first issue is available at: <http://www.msee-ip.eu/publications/newsletter> (see in annex)

## 5.4. MSEE website

D71.1 Project website was delivered at M2. The MSEE website is available at the address [www.msee-ip.eu](http://www.msee-ip.eu).

The website is structured in two parts:

- A public part to provide general information about the project (description, consortium, research activities in MSEE, News & events, publications)
- An intranet accessible only by the MSEE partners containing the WPs spaces for uploading files, shared pages (for collaborative writing)

The partners provide updates about the project objectives, results, dissemination documents, and other related material through the MSEE website. The website is meant to represent the main informational portal for the audience interested in following up the MSEE research vision statement and how it is being translated into operational and policy results throughout the project development phases.

The website has been designed in order to be flexible in following the project evolution from a project oriented web portal to a results and community oriented portal.

It is planned to use social media like LinkedIn<sup>11</sup> to create space for discussion inside the MSEE community and beyond. The use of other social media such as Twitter<sup>12</sup> will be analysed for specific use only (announcement of events, results, promotional material...).

All the informational material available as outcome of MSEE is available on the MSEE portal and updated regularly, according to a distribution of tasks among the MSEE WP71 members.

In addition to the basic dissemination tools previously described, MSEE dissemination team will consider utilising other communication tools to support the implementation of its dissemination strategy, according to the MSEE purpose and financial resources availability.

<sup>11</sup> <http://www.linkedin.com/>

<sup>12</sup> <http://twitter.com>



## 6. Conclusion

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The dissemination strategy and action plan presented in this deliverable will be adapted all along the project according to the assessment of the impact creation and the identified interests.

At M24 the report on the dissemination and cluster activity will be done in the deliverable D71.6. This will enable to take corrective actions and improve what had been done.

As advised by the EC and the project reviewers, MSEE will focus its communication towards industry until the end of the project, through the organization of industrial workshops by I-VLab and some MSEE partners.

The communication will be refined according to the exploitable results identified by WP 7.3 and a strong analysis of the upcoming events in the MSEE domains.

Based on the comments received at the first review, we have strongly oriented the dissemination towards the Industry by using our partners well connected with industry and also the INTEROP-VLab poles which involve several industrial partners. This strategy is now possible because MSEE has produced several applied results which can be presented to industry. The relations with FOF partners have been developed and also with the existing projects in the unit E3.

The progress on the creation of synergies with external initiatives and communities will highly impact the action plan which will be updated accordingly.

## 7. Annexes

### Project leaflet (A4 front side):

**INDUSTRY PARTNERS**



**RESEARCH PARTNERS**



**USE CASES**



**Project coordinator contact**  
Sergio Gusmeroli  
TXT e-Solutions Research Labs  
Via Frigia 27,  
20126 Milano (Italy)  
Phone: +39 02 25771310 - Fax: +39 02 2578994  
E-mail: [sergio.gusmeroli@txtgroup.com](mailto:sergio.gusmeroli@txtgroup.com)  
Project website: [www.msee-ip.eu](http://www.msee-ip.eu)

Starting Date: 1 October 2011  
Duration: 36 months  
Total costs: 15,206,520 €  
EC Funding: 9,870,000 €



**Manufacturing Service Ecosystem**

*Factories of the Future evolving towards collaborative, service-oriented, innovation-driven Manufacturing Systems*

[www.msee-ip.eu](http://www.msee-ip.eu)



European Integrated project (FP7 264860)

### Project leaflet (A4 back side):

**MSEE VISION**

By 2015, novel service-oriented management methodologies and the Future Internet universal business infrastructure will enable European virtual factories and enterprises to self-organize in distributed, autonomous, interoperable, non-hierarchical innovation ecosystems of tangible and intangible manufacturing assets, to be virtually described, on-the-fly composed and dynamically delivered as a Service, end-to-end along the globalised value chain.

The first Grand Challenge for MSEE is to make SSME (Service Science, Management and Engineering) evolve towards Manufacturing Systems and Factories of the Future, i.e.:

- from a methodological viewpoint to adapt, modify, extend SSME concepts so that they could be applicable to traditionally product-oriented enterprises;
- from an implementation viewpoint to instantiate Future Internet service oriented architectures and platforms for global manufacturing service systems.


The second Grand Challenge is to transform current manufacturing hierarchical supply chains into manufacturing open ecosystems, i.e.:

- to define and implement business processes and policies to support collaborative innovation in a secure industrial environment;
- to define a new collaborative architecture for ESA (Enterprise Software and Applications), to support business-IT interaction and distributed decision making in virtual factories and enterprises.


The synthesis of the two Grand Challenges in industrial business scenarios and their full adoption in some European test cases will result in new Virtual Factory Industrial Models, where service orientation and collaborative innovation will support a new renaissance of Europe in the global manufacturing context.

**COLLABORATIVE SERVICE INNOVATION**

**SERVICE ORIENTATION**



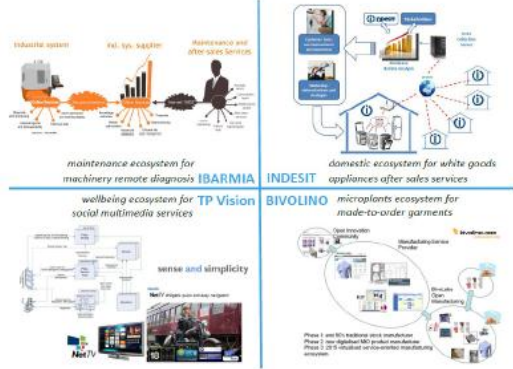
**BUSINESS COLLABORATION**






**MSEE OUTCOMES**


- A complete set of **Service Lifecycle Management** Templates to be configured for any kind of Domain and Sector
- An innovative **Service Lifecycle Management** Model for driving EU Manufacturing Enterprise towards advanced forms of servitization
- A **Service Lifecycle Management** Toolbox to model the various aspects of an enterprise during its servitization
- A collaborative **Innovation Ecosystem Platform** to stimulate creativity and co-create service innovation through collaboration
- An innovative set of **Enterprise Applications** as a Service to support the operation of advanced product-related services in an ecosystem
- A FI-inspired IT system architecture to link the FoF ICT vision of Smart-Digital-Virtual factory with the Future Internet Core Platform
- Four distinct but interlinked **Pilots and Experimentations** of the Manufacturing Service Ecosystem concept and IT infrastructure

**MSEE USE CASES**



## MSEE general poster :








**MSEE**  
Manufacturing Service Ecosystem





Factories of the Future Public Private Partnership

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### MSEE Manufacturing Service Ecosystem

**VISION:** By 2015, novel service-oriented management methodologies and the Future Internet universal business infrastructure will enable European virtual factories and enterprises to self-organize in distributed, autonomous, interoperable, non-hierarchical innovation ecosystems of tangible and intangible manufacturing assets, to be virtually described, on-the-fly composed and dynamically delivered as a Service, end-to-end along the globalised value chain.

K.D. Thoben 2001

**MISSION:** Merging concrete needs and short-term requirements from European Manufacturing industry (Manufuture, EFFRA, FoF Strategic Roadmap) with a long-term vision of Future Internet Enterprises / Enterprise Systems (FInES Cluster, FI Assembly & Enterprise, PPP core platform)



**Service Innovation Lifecycle**

#### CHALLENGES

- #1 Service and Product lifecycle phases and structures interaction
- #2 Impact onto the product portfolio and product characteristics of embracing the most advanced servitization levels

#### TWO PARADIGM CASES



1. Service Lifecycle shorter than Product Lifecycle
2. Service Lifecycle longer than Product Lifecycle



#### ARCHITECTURE

4 MSEE Industrial Test cases






FI Platforms Services	Channeling Multimodal Interaction	MOBILE PLATFORM	Apps Services Store	ESA Value-Added Services
	Search Discovery Execution Monitor	DELIVERY PLATFORM	Composition Orchestration SLAs	
	Business Processes MDA	DEVELOPMENT PLATFORM	Tangible Intangible Assets	
Infrastructure & Utility Services				




#### INDUSTRY








#### RESEARCH

#### USE CASES

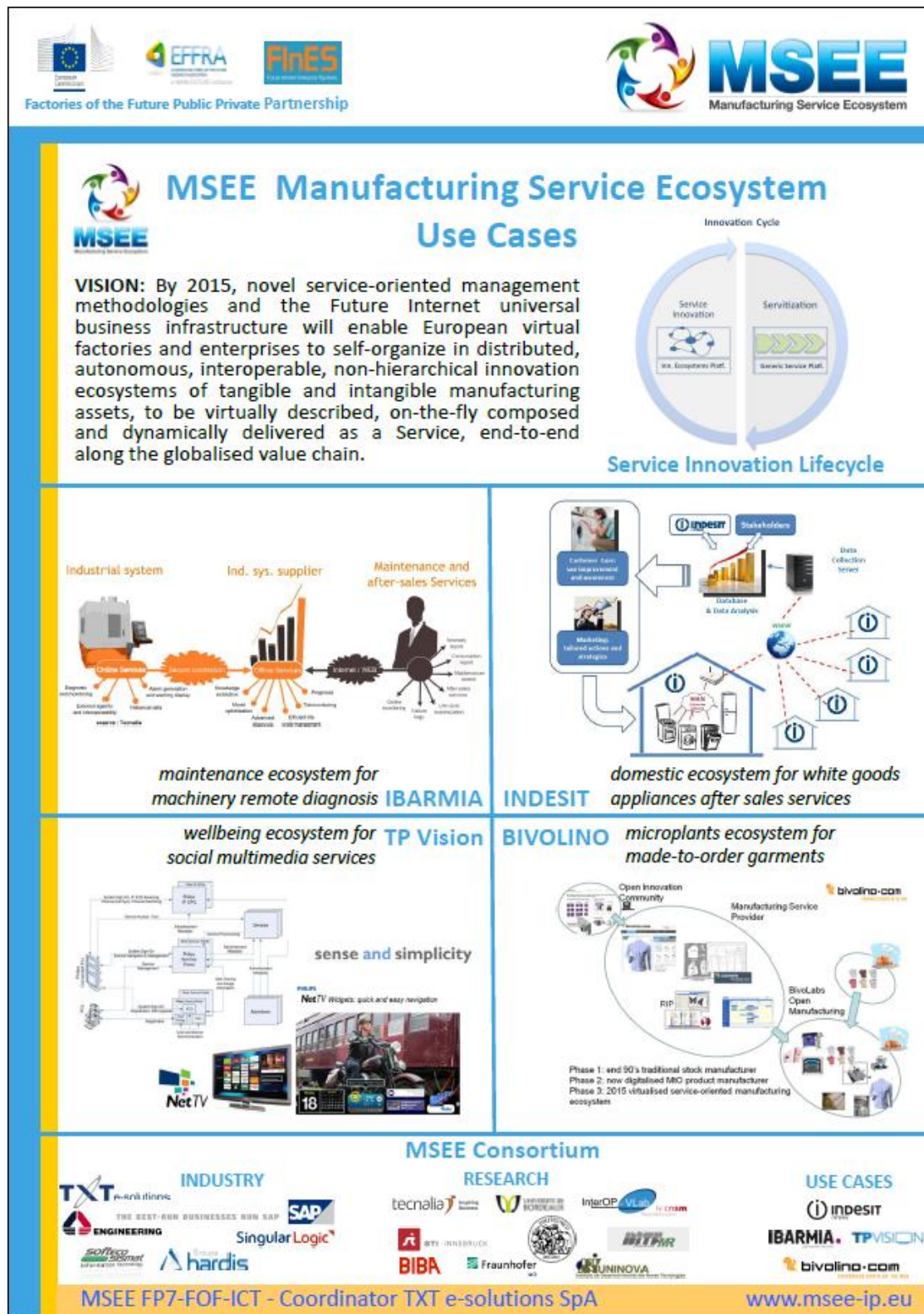


MSEE FP7-FOF-ICT - Coordinator TXT e-solutions SpA

www.msee-ip.eu



## MSEE Use Cases poster:



## MSEE newsletter (6 pages):

European Integrated Project under the 7<sup>th</sup> Framework Programme

# Newsletter MSEE project

Manufacturing Service Ecosystem

## What is MSEE project about ?

The MSEE project (Manufacturing Service Ecosystem) aims to create a new **Virtual Factory Industrial Models**, where **service orientation** and **collaborative innovation** will support a new renaissance of Europe in the global manufacturing context.

**MSEE vision:** By 2015, service-oriented management methodologies and the Future Internet business infrastructure will enable European virtual factories/enterprises to self-organize in distributed, autonomous, interoperable innovation ecosystems of tangible and intangible manufacturing assets, to be virtually described, on-the-fly composed and dynamically delivered as a Service, end-to-end along the globalised value chain.

The first Grand Challenge for MSEE project is to make SSME (Service Science, Management and Engineering) evolve towards Manufacturing Systems and Factories of the Future, i.e.:

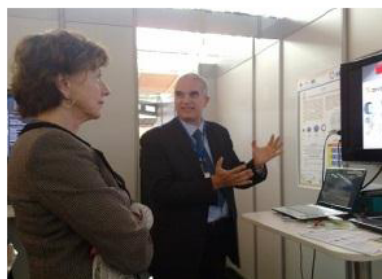
- from a methodological viewpoint to adapt, modify, extend SSME concepts so that they could be applicable to traditionally product-oriented enterprises;
- from an implementation viewpoint to instantiate Future Internet service oriented architectures and platforms for global manufacturing service systems.

The second Grand Challenge for MSEE project is to transform current manufacturing hierarchical supply chains into manufacturing open ecosystems, i.e.:

- to define and implement business processes and policies to support collaborative innovation in a secure industrial environment;
- to define a new collaborative architecture for ESA, to support business-IT interaction and distributed decision making in virtual factories and enterprises.

The synthesis of the two Grand Challenges in industrial business scenarios and their full adoption in some European test cases will result in new Virtual Factory Industrial Models, where service orientation and collaborative innovation will support a new renaissance of Europe in the global manufacturing context.

*Presentation of the MSEE project to the European Commission Vice-President Neelie Kroes, by Sergio Gusmeroli (TXT) at the MSEE stand in the "ICT for Factories of the Future" area of the CeBIT fair (Hannover, 6-10 March 2012).*



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[www.msee-ip.eu](http://www.msee-ip.eu)



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## Key figures in MSEE

Project Coordinator:  
TXT E-SOLUTIONS SPA Italy

Project number: 284860  
Duration: 36 months  
Start date : 01 Oct. 2011  
Consortium: 19 partners, 9 countries

Total budget: 15,2 M€ of which  
9,8 M€ EC funding  
EC objective: 7.3 Virtual  
Factories and Enterprises

## The MSEE Consortium

### MSEE TEST CASES



The four MSEE Test Cases are the service ecosystems from which specific requirements, management and methodology for Virtual Factories and Enterprises are being defined.

The **TP VISION** test case is centered upon the next generation TV sets enriched with multimedia services provided by an ecosystem of providers, sharing the same service development platform, embedded in the physical product. (... [more](#))

The **BIVOLINO** test case will demonstrate how service-oriented supply chain automation and interoperability within an apparel manufacturing ecosystem could enable new business and industrial models

oriented towards a dynamic made-to-order micro-plants ecosystem. (... [more](#))

The **INDESIT** test case is centered upon the availability and diffusion of appliances ready to be connected to external environment. Appliances will work as a permanent observatory for user habits and behaviors, providing data at two levels: Statistic approach and User specific approach. (... [more](#))

The **IBARMIA** test case focuses on a new maintenance and after-sales service oriented business models for Machinery Manufactures. Companies will be able to offer service levels, guaranteeing an almost continuous availability of the machines (... [more](#))

*The MSEE consortium consists of 4 Test Cases, 6 Industry Partners and 9 Universities and Research Centers from all over Europe.*

### MSEE INDUSTRY PARTNERS



TXT E-Solutions Spa  
ITALY



Engineering Ingegneria Informatica  
S.p.A - ITALY



Etairia Pliroforiakon Systimaton  
and Efarmogon Pliroforkis - GREECE



SAP AG - GERMANY



Softeco Sismat SRL - ITALY



HARDIS - FRANCE

### MSEE RESEARCH PARTNERS



Fundacion Tecnalia  
Research and  
Innovation - SPAIN



University Bordeaux 1  
FRANCE



INTEROP-VLab BELGIUM in association with  
CNAM Pays de la Loire - FRANCE



Fraunhofer IAO -  
GERMANY



Innsbruck University -  
AUSTRIA



University Politecnico di Milano -  
ITALY



Bremer Institut für  
production und logistik -  
GERMANY



Deutsche Institute für Textil -  
und Faserforschung Denkendorf  
GERMANY



UNINOVA - PORTUGAL

## MSEE OUTCOMES

3

The MSEE Work Breakdown Structure is directly linked to the main objectives of the project. The Work Packages (WP) are conceptually grouped in Sub-Projects (SP) as follows:

- **Objective 1**, to establish scientific and methodological foundations for service-oriented virtual factories and enterprises (SP1)
- **Objective 2**, to develop a collaborative industrial model for Manufacturing Innovation Ecosystems (SP2)
- **Objective 3**, to adopt Future Internet architectures and platforms to next generation software applications for virtual factories and enterprises (SP3)
- **Objective 4**, to align Business with IT by collaborative development and delivery platforms (SP4)
- **Objective 5**, to build service-oriented, collaborative industrial models for European manufacturing industry (SP5)
- **Objective 6**, to experiment Service Orientation and Innovation Ecosystem as a viable exit strategy from the crisis and an opportunity for sustainable healthy growth (SP6)
- **Objective 7**, to create, nurture and implement a self-sustainable Manufacturing Service Ecosystem impact and policy action plan in the EU manufacturing industry and society, via the dissemination of results, training, standardization and exploitation activities (SP7)

### Main results obtained after one year

#### In SP1: Service Orientation in Virtual Factories and Enterprises

SP1

Service  
Orientation in  
Virtual Factories  
and Enterprises

- **A methodology for the modeling** of service and service systems is being developed for the purpose of service engineering and implementation in virtual enterprise environment. A MDSE (Model Driven Service Engineering) Architecture which is adapted from MDA/MDI approaches is proposed with three levels: BSM (Business System Model), TIM (Technology Independent Model) TSM (Technology Specific Model). Model transformation method allows to transform service model from BSM level to the implementation.
- **A method to define KPIs and SLAs** has been defined, as far as servitization process, Ecosystem governance and innovation in Ecosystems are concerned.
- **A methodology for service engineering, simulation & service lifecycle** which provides a set of concepts, principles and rules to design, simulate and manage services following service life cycle phases. The defined concepts will be represented with the modeling service tool.
- **A Service Lifecycle Management Toolbox** which is provided as an integrated modeling environment for the modeling of services, services systems and the various phases of the SLM. The Toolbox provides modeling facilities and offers the transformation of support facilities.

A first draft of all the concepts, models, methods has been supplied at M12 including the Toolbox.

SP2

Manufacturing  
Virtual  
Enterprises  
Innovation  
Ecosystems

#### In SP2: Manufacturing Virtual Enterprises Innovation Ecosystems

- **A Reference Framework for Service Innovation** within a MSE (Manufacturing Service Ecosystem) has been defined. The framework is characterized by guidelines for manufacturing enterprises approaching innovation processes related to servitization.
- **A Method, Ontology, Framework for Virtualization of Intangible Assets:** a classification method and a virtualization process for intangible assets have been defined.



### SP3

#### ICT service Clouds for Manufacturing Virtual Enterprises

USDL (Unified Service Description Language) has been used as the reference language to describe and to effectively use Intangible Assets as a Service (IAaaS).

- ✳ **A Method, Taxonomy, Framework for Virtualization of tangible assets:** the method will cover means for identifying, capturing, and virtualizing tangible assets in manufacturing ecosystems. A Virtualization Method consisting of a virtualization process, adequate guidelines, basic rules and constraints is proposed.
- ✳ **A Maturity Model for MSE:** Maturity models have been analysed in order to position the servitization process within a MSE. The final goal is the identification and tailoring of a maturity model to assess maturity of companies in the servitization process.
- ✳ **A Change Management Approach for MSE:** the objective is to support servitization process for MSE with guidelines and procedure. For this first phase a State of the Art has been performed in order to prepare the change management method.
- ✳ **A Methodology for Management and Governance of MSE:** this outcome includes a set of formal steps and guidelines to conceptually help (manufacturing) companies and other third-party stakeholders interested in facing business opportunities in a collaborative manner.
- ✳ **An IT Platform for Collaboration & Innovation in a MSE:** the platform enables the execution and management of the business processes that characterize a MSE. IT provides a complete set of tools that are seamlessly integrated in a web-portal and that provide the following features: modeling, design, execution, monitoring and analysis of business processes for MSE.

A first draft of all the concepts, models, methods has been supplied including for IT platform at M12.

#### In SP3: ICT service Clouds for Manufacturing Virtual Enterprises

- ✳ **A Reference Architecture for FinES (Future Internet Enterprise System)** which provides the architecture, specifications and development of the Future Internet Platforms federation which will provide generic enablers to Internet of Services, Internet of Things, Internet of Contents-Knowledge and Internet by and for People.
- ✳ **Utility Services for MSE** which can be used by service and application developers as complementary non-functional components. The set of provided utility services are in the domains of Enterprise Interoperability, Enterprise Collaboration, Privacy and Security, Trust Management, Data Management and Product-related services.
- ✳ **Smart Enterprise Applications and value-added services** which provide architectures and specifications for building collaborative, generic smart enterprise apps for enterprise applications based on open specifications and the notion of value-added services for service innovation and service consumption phases.

First Draft of Specifications is available at M12 for these three ICT services.

### SP4

#### Architecture, Service-System Integration and Technical Assessment

#### In SP4: Architecture, Service-System Integration and Technical Assessment

- ✳ **A Component-based Architecture for MSE IT Systems** which provides guidelines and functional patterns to be adopted in the realization of an IT System that supports the whole life cycle of a Manufacturing Service Ecosystem, including the servitization process, and specifically aiming at developing, operating and governing the target service ecosystem.
- ✳ **A Component-based Architecture for MSEE Development Platform** which includes all the models and tools necessary for a business user to model, simulate, test and execute business innovation artifacts such as product/service specifications, skills and competencies, decisional and business processes, legacy data and enterprise systems.
- ✳ **The MSEE Service Delivery Platform** which contains a set of components provided as services, such as discovery, ranking, invocation and registration of Web Services. Each of



<div>SP5</div> <div>User Requirements, Assessment and Validation</div>	<p>these components can be exploited individually or in combination. It can be exploited by service to customize the Service Delivery Platform according to the specific requirements and characteristics of the MSE.</p> <ul style="list-style-type: none"> <li>  <b>The MSEE Mobile Business Platform</b> which provides a set of modules, representing different exploitation assets, according to the goals of the MSEE project and the requirements coming from the MSEE end-users. The modules are: Mobile Delivery, Mobile Collaboration, Mobile Development, Ambient Intelligence and Multimodal.         </li> <li>  <b>The MSEE Generic Integrated IT System</b> which is composed of the three Platforms developed in SP4 (Development Platform, Delivery Platform and Mobile Business Platform) plus the Ecosystem Innovation Platform developed in SP2. Each of such Platforms has its own exploitation strategy. The integrated System could be customized by a System Integrators according to the specific requirements and characteristics of the MSE.         </li> </ul> <p>First Draft of Specifications is available at M12 for the component-based Architecture and for the platform.</p>
	<p><b>In SP5: User Requirements, Assessment and Validation</b></p> <ul style="list-style-type: none"> <li>  <b>A Methodology for Requirements Engineering:</b> The specification of requirements in an MSE environment needs a new methodology, to guide the end-user through the iterative identification and to detail the requirements. The methodology developed is applicable in an ecosystem context and use the concepts of Serious Games.         </li> <li>  <b>A Methodology for Business Evaluation</b> which has been developed to measure the business benefits of the MSE for the end-user in order to achieve an improvement of process performance. Measures for the improvement of business process performance help to align the strategic goals, services, products, customers and legacy systems of the partner with the specific applications and systems provided.         </li> <li>  <b>Industrial and Business Models for MSE</b> which have been developed and evaluated. The main focus is the influence of Servitization on industrial strategies towards supply chain organization, localization of production, target markets and distribution, as well as non-economic factors like environmental and social impacts. Based on the Extended Product paradigm and value innovation, counsels are given, e.g. to the product-service mix and the price.         </li> </ul> <p>A first draft is available at M12 for the three topics.</p>
	<p><b>In SP6: Pilots and Demonstration</b></p> <p>The development of the Pilot Applications in the four use-cases will start at M12 of the project.</p>
<div>SP7</div> <div>Impact Planning and Assessment</div>	<p><b>In SP7: Impact Planning and Assessment</b></p> <p>The dissemination of the first results of the project has started with the participation in various conferences. In addition an E-learning tool is being developed to explain the basic concepts of Servitization, Services and Service Systems and also the methodology to use some applications. A tentative to promote standards in the domain of MSE has been initialized.</p>

6

## MSEE was there



### CeBIT (06-10 March 2012 – Hannover, GE)

MSEE was one of the FoF projects (Factories of the Future) selected to present its vision and mission at the CeBIT tradeshow. Mrs Neelie Kroes, EU-Commissioner for the Digital Agenda, Vice-President of the European Commission, visited the MSEE stand. She was welcomed by the MSEE project coordinator, Sergio Gusmeroli who exposed the objectives of the project.



### I-ESA'12 (20-23 March 2012 – Valencia, SP)

MSEE participated in the 6<sup>th</sup> International Conference on "Interoperability for Enterprise Systems and Applications" (I-ESA'12) organized by INTEROP-VLab. Sergio Gusmeroli and Guy Doumeingts chaired the workshop "Service Innovation in EU Manufacturing Industry: from Products to Services to Solutions" (presentations available [here](#)). UNINOVA presented a paper titled "[Achieving Interoperability via Models Transformation within the MDI](#)".

### CAISE'12

### NGEBIS / CAISE'12 (26 June 2012 – Gdansk, PL)

NGEBIS, the workshop on New Generation Enterprise and Business Innovation Systems, was held in conjunction with CAISE 2012. IAO, BIBA and TXT have presented a paper on "[Service Innovation Life Cycle in a Manufacturing Ecosystem](#)".



### IWEI (6-7 September 2012 – Harbin, CN)

UNINOVA presented a paper on "[MDA-based Interoperability Establishment Using Language Independent Information Models](#)" at the International IFIP Working Conference on Enterprise Interoperability Collaboration, Interoperability and Services for Networked Enterprises (IWEI).



### APMS (24 September 2012 – Rhodes Island, GR)

APMS is the IFIP International Conference on Advances in Production Management Systems. POLIMI has presented a paper on "[Manufacturing Service Innovation Ecosystem](#)", BIBA and DITF on "[Manufacturing Service Ecosystems: towards a new model to support service innovation based on extended products](#)".

### And also:

- EPISIS Conference, 4-6 June 2012, Helsinki (FI) --- [more](#)
- ESOCC 2012, 19-21 June 2012, Bertinoro (IT) --- [more](#)
- Industrial Technologies 2012, 19-21 June 2012, Aarhus (DK) --- [more](#)
- FinES Cluster meeting, 12 October 2012, Brussels (BE) --- [more](#)
- World Manufacturing Forum 2012, 16-18 October 2012, Stuttgart (GE) --- [more](#)
- MITIP 2012, 24-26 October 2012, Budapest (HU) --- [more](#)
- CIRP Industrial Product Service Systems, 8-9 November 2012, Tokyo (JP) --- [more](#)

## Upcoming events

- IWEI 2013, 27-28 March 2013, Enschede (NL) --- [more](#)
- Future Internet Assembly (FIA), 8-10 May 2013, Dublin (EI) --- [more](#)
- ICE Conference, 24-26 June 2013, the Hague (NL) --- [more](#)

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