Ecosystem for COllaborative Manufacturing PrOceSses – Intra- and Interfactory Integration and AutomaTION

(Grant Agreement No 723145)

D9.3 Dissemination strategy and plan

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Mike Hayes (TNI-UCC)	2016-11-28	Very good document. A bit of repetition. When added up a long list of target dissemination possible activities but will distil down to numbers in line with KPIs

Index:

1 Executive Summary

The ***COMPOSITION*** project will bring together and accumulate innovative approaches and tools to industrial communities in order to take an original and quantified view on integration of information management systems in their own operations and value chains.

The ***key objective*** of the COMPOSITION dissemination strategy is to optimise dissemination of useful innovations, fast transfer of project knowledge and research results to potential users (e.g. commercial exploitations and public dissemination).

The dissemination plan in this deliverable displays the ***four target groups*** that involve the full range of potential users in manufacturing value chains as well as the industrial and ICT research communities. Dissemination activities will be custom made individually for the targeted groups (e.g. industry, technology domain, public sphere, and policy makers) and the message will be executed.

Specific methods and detailed strategy are going to be used during the run of the COMPOSITION project in order to achieve and accomplish dissemination objectives and aims. Each year of the project's runtime has different objectives and goals to be accomplished and they will be carried out by raising awareness gradually with customised approaches to the different categories of stakeholders. These different activities will target the precise user groups and dissemination will take several forms: online activities, printed material, publications to scientific and industrial conferences and journals, participation to trade fairs and contribution to standardisation activities. The strong social media presence on LinkedIn, Twitter, and YouTube will complement the endeavour.

All partners will promote the action and its results by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner. The plan is to collectively and as a whole disseminate the outcomes of the project, making the best use of each member's strengths. An allocation of activities has been planned via individual dissemination plans which have been prepared by all, in order to spread out the results throughout key events, conferences and workshops journals.

COMPOSITION has also defined a set of **Key Performance Indicators (KPI)** for dissemination and impact creation to help realise the strategic goals. KPIs are related to visibility and knowledge impact on a wide audience e.g. industry, technology domain, public sphere and policy makers and they cover broad concept and various and wide dissemination activities prepared according to the related part of the dissemination plan.

All partners of the project have clear responsibilities and tasks within the project and they will monitor the established KPIs which cover different events, seminars, webinars, tradeshows, demonstrations and clustering/symbiosis and other different dissemination opportunities which will be monitored and shared via the wiki framework. Furthermore, several scientific and technical papers, industrial publications and presentations will be prepared in order to contribute to the knowledge impact of the project and share information and COMPOSITION results. The goal is to follow the dissemination plan and to ensure that it is in line with the evolving business and research interests of the partners and emerging market trends, to accomplish the maximum dissemination of results by the end of the project and to prepare a base for further project exploitation beyond its lifetime.

Every potential user in manufacturing value chains wants to follow and achieve various modern, agile and flexible processes that can ensure faster production cycles, increased productivity, decreased waste and sustained production. **The goal and impact of the project** will lead to development of an integrated information management system (IIMS) which will optimise the internal production processes by exploiting existing data, knowledge and tools to increase productivity and dynamically adapt to changing market

requirements. Thus, the knowledge impact and the overall influence of this ecosystem is anticipated to be high. The developed ecosystem will support the interchange of data and services between factories and their suppliers with the aim to invite new market actors into the supply chain.

The project will contribute to the "**knowledge economy**" and it will influence the way of thinking in industry, the technology domain, the public sphere and for policy makers. All partners and stakeholders will benefit from this research and innovation since it is focused on addressing real challenges and on influencing the way of thinking at the right time.

2 Introduction

According to European Commission Decision C (EC, 2016), the activity to disseminate results from research and innovation projects is an important and integral part and strategic matter of Horizon 2020, coordinated and monitored by the European Commission with the desire to derive benefit and achieve sizeable economic, social and environmental impacts onto society in general. All participants are strongly committed to make the best use of the funding and they are committed to creating a multiplying effect, raising awareness of the technologies and possibilities that COMPOSITION will offer to collaborative manufacturing processes.

Dissemination is the transfer of research-based knowledge to the potential users in manufacturing value chains as well as the industrial and ICT research communities and public in general that can make the best use of it. It provides added value to the research projects, as the impact of research can be potentially wider than the original focus as well as promote the profile of all organisations and strengthen its research capacity (RTD.J5, 2016).

The current document, *D.9.3 Dissemination strategy and plan*, is a report on the dissemination approach, strategy, goals and plan that summarises the main activities that will be performed during the lifetime of the project. It focuses on tools and channels (various media, printed and online material and networks) and the distribution of dissemination efforts among partners that will be used to promote the project research activities and its results. All partners from the COMPOSITION project, research institutes, SMEs and industry companies, have agreed and committed to disseminate the project results, as well as to exploit them (details will be available in *D.9.10 Exploitation planning framework and first draft exploitation plan* and *D.9.11 Final exploitation strategy and business plan*). In this deliverable, the overall dissemination strategy, plan and channels have been presented with a focus on each partner's strengths, in order to complement the exploitation strategy. The members of the consortium are:

Table 1: Members of the COMPOSITION Consortium

Short name	Full name	Type	Country
Fraunhofer	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	Research Institute	Germany
BSL	BOSTON SCIENTIFIC LIMITED	Industrial Company	Ireland
KLE	KLEEMANN HELLAS - INDUSTRIAL COMMERCIAL SOCIETE ANONYME FOR MECHANICAL CONSTRUCTION SA	Industrial Company	Greece
ATL	ATLANTIS ENGINEERING AE	SME	Greece
NXW	NEXTWORKS	SME	Italy
ELDIA	ELLINIKI DIAHEIRISI APPRIMATON ANONYMI ETAIRIA - ELDIA	SME	Greece
TNI-UCC	UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK	Research Institute	Ireland
IN-JET	IN-JET APS	SME	Denmark

CERTH	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	Research Institute	Greece
CNET	CNET SVENSKA AB	SME	Sweden
ISMB	ISTITUTO SUPERIORE MARIO BOELLA SULLE TECNOLOGIE DELL'INFORMAZIONE E DELLE TELECOMUNICAZIONI ASSOCIAZIONE	Research Institute	Italy
ATOS	ATOS SPAIN SA	Industrial Company	Spain

2.1 Purpose, context and scope of this deliverable

The purpose of this deliverable is to present the dissemination strategy and plan for sharing the results of COMPOSITION. This will be done throughout the lifetime of the project, covering scientific publications, trade fair participations, event organisation, networking and demonstrations. Activities are structured around Key Performance Indicators (KPI), aiming to measure the effects of dissemination and communication. The document also establishes the responsibilities and formalities related to the communication and dissemination of the project.

This deliverable is an outcome of task *T9.1 Communication and Dissemination Activities* and is related to other tasks within *WP9 Business Model, Dissemination and Exploitation*, as well as to the list of public and confidential reports of WP9 deliverables, such as *D9.1 Communication Strategy and Plan*, *D9.2 Project website, D9.4 Project advertising material I, D9.5 Project advertising material II, D9.6 Project advertising material III*, *D.9.10 Exploitation planning framework and first draft exploitation plan, D.9.11 Final exploitation strategy and business plan.*

It can also be viewed as complementary to tasks *T2.4 Evolutionary requirements refinement* and *T7.1 Survey of successful elements in external, related initiatives*

Finally, this deliverable will verify the relevant Milestone *MS15 Dissemination plan ready* that will be approved by Dissemination Manager at the project end.

2.2 Content and structure of this deliverable

The structure of this deliverable is as follows. In Chapter 3 Dissemination strategy and target groups are described. Dissemination tools and channels are discussed in detail. Distribution of dissemination efforts, dissemination management as well as communication obligations have been analyzed and presented in detail.

Furthermore, in Chapter 4 Dissemination plan, KPIs are related to visibility and knowledge impact. The overall dissemination plan for the project is described, along with generalised KPI and coordination activities.

3 Dissemination strategy

The COMPOSITION project is strongly focused on creating impact by bringing innovative and scalable methods and tools to industrial and ICT communities, as well as to the general public, in order to take a new, high quality and quantifiable view on integration of information management systems for operations and value chains. A full range of industrial market, companies and organisations share an interest in optimising energy and resource efficiency in manufacturing value chains. A central aim in COMPOSITION is to maximise the impact of the project by being active in communicating and disseminating results in a professional way and by developing a realistic exploitation strategy. The goal is to promote (communication), share (dissemination) and use (exploitation) the COMPOSITION results effectively. The dissemination strategy has been developed with that in mind.

In terms of dissemination of COMPOSITION, the ***aim*** is to optimise the sharing of project knowledge and results to the full range of stakeholders who are interested in optimising internal processes as well as in collaborative processes. The primary targets will be industry and ICT domains, among the already defined target groups. Moreover, there is already close alignment with the communication and exploitation activities, in order to maximise value and impact, as well as to reduce the related personnel and travel costs of the members of the consortium.

The ***key objective*** of the COMPOSITION dissemination strategy is to optimise dissemination of useful innovations, fast transfer of project knowledge and research results to potential users (e.g. commercial exploitations and public dissemination). This is achieved by involving all partners of the project and making use of their individual character, approach and strengths. The consortium comprises what will be referred to from now on as “Companies” (ATL, NXW, IN-JET, CNET, ATOS) “Research organisations” (FIT, TNI-UCC, CERTH, ISMB) and “End users” (BSL, KLE, EDLIA). To achieve the best possible result, the strategy and plan consider the consortium and the project both as a whole as well as individual units, as displayed throughout this deliverable. Moreover, there is already strong coordination and networking with other projects funded under FoF-11 2016 (Digital Automation and Digital Manufacturing Platforms) under the respective CSA, ConnectedFactories. COMPOSITION plays a significant role in the efforts to achieve the objectives under FoF-11-2016 and the concept, progress and achievements will be also continuously disseminated to this direction.

Based on the approach described so far, a dissemination strategy and plan have been developed and introduced. The dissemination will take several forms and it will be continuously pursued. It is noted that in order to support the overall dissemination strategy and plan, a detailed communication plan has been already developed in *D9.1 Communication Strategy and Plan*.

Dissemination objectives and aims are going to be accomplished by detailed methods and strategy for every year of the project. Each year of the project has different objectives and goals to be accomplished and carried out through various strategy and methods. The strategy is to progressively increase dissemination efforts as project results are obtained.

At initial stages, the scope is to create a wide awareness of the COMPOSITION project and progressively create favourable conditions for facilitating exploitation and to guarantee project results after the end of the project. The dissemination strategy is therefore essential and a prerequisite for the project’s exploitation strategy. The initial methods and strategies are to be defined in *D9.10 Exploitation planning framework and first draft exploitation plan* and they will be carried out in a close relation with the dissemination activities, targeting groups and exchanging knowledge and results. The final exploitation report is to be delivered in *D.9.11 Final exploitation strategy and business plan* and it will unite all results and endorsements from the evaluation and dissemination reports.

At latter stages, the activities will focus on integrating and exploiting COMPOSITION technologies, making use of the progress of developments and the ability to disseminate the results from the demonstrators at the COMPOSITION pilots. This respective plan is presented in the following table.

Table 2: Dissemination objectives and methods

Time	Objective	Methods
Year 1	(I) Create awareness about the COMPOSITION project. (II) Dissemination in strategic networks of the Partners. (III) Prepare powerful standing in industrial clusters.	- Publication of marketing material (brochures, flyers, posters, web site). - Press releases and liaison with business stakeholders. - Aligning events with similar EU or national projects. - Attendance in seminars and congresses.
Year 2	(I) Continue to build awareness of the COMPOSITION results in industrial manufacturing networks and within business communities. (II) Verify opportunities to apply the COMPOSITION components in different manufacturing industries and involve other industrial stakeholders. (III) Initiate liaison with early adopters and influential stakeholders in the Factory of the Future community.	- Visit to business communities and web site enrichment. - Articles in international industrial journals. - Conference and workshop papers. - Press coverage in technical/public magazines. - Organise workshop on interoperability of IIMS in value chains and product life-cycle management. - Conduct webinars to stress the innovative aspects of the COMPOSITION technologies - E-newsletters to potential professional users.
Year 3	(I) Prepare to integrate COMPOSITION in manufacturing environments and liaise with prominent clusters for future exploitation. (II) Promote the uptake of specific methods, technologies and tools in selected manufacturing domains. *Take - up of COMPOSITION results in pre-commercial stage.* (III) Prepare for exploitation of all COMPOSITION knowledge components.	- E-newsletters to potential industrial user groups. - Elicit public/societal engagement through TV and newspapers. - Organise a European workshop to demonstrate the platform to the manufacturing community. - Conduct webinars to stress the business aspects of the COMPOSITION platform. - Seek pre-commercial uptake in the form of pilot demonstration projects with industrial partners. - Preparation of a pre-commercial brochure.

3.1 Target groups

The dissemination plan addresses the ***four target groups*** that have been defined in *D9.1 Communication Strategy and Plan* (Table 3), involving the full range of potential users in manufacturing value chains as well as the industrial and ICT research communities. Dissemination activities will be customised towards these four groups; namely industry, technology domain, public sphere and policy makers, and customised messages will be spread out.

The targeted audience, all relevant stakeholders from the industry group, the complete set of possible stakeholders from the technology domain, distinguished public sphere and different kinds of policies, their contributors and influencers, are presented below. More details and definitions regarding the targeted groups are available in *D9.1 Communication Strategy and Plan*.

Table 3: COMPOSITION target audiences

Industry	Technology domain	Public sphere	Policy makers
Manufacturing and process companies	ICT research communities	General public/society at large	Politicians
Subassembly suppliers	Suppliers of Enterprise and Manufacturing Execution Systems	Environmental agencies, associations and companies	CSR-responsible personnel in companies
System integrators	Standardisation bodies for interoperability of manufacturing systems	Academic communities	Business decision makers
Industrial research communities		Press	

3.2 Dissemination tools and channels

The following sections outline the tools and channels used for dissemination, i.e. activities involving publicising papers, attending conferences, networking, organising events and demonstrations. These activities target the precise user groups and stakeholders, as dissemination follows several routes and uses a variety of media. A combination of online and physical presence, digital and printed marketing material will be used (Hughes, 2012). Details can be found in *D9.4 Project advertising material I, D6.5 Project advertising material II & D9.6 Project advertising material III*, respectively.

3.2.1 Printed marketing material

According to a study by Hughes, 2012, when advertising services and promoting products offered by a company, industry, etc., printed marketing material, as well as online material are used to carefully present them (the services and products). Both ways of advertising are marketing tools for dissemination and communication. The adoption of a combined approach, using online and printed marketing material is more effective, compared to the use of only one of these methods. Thus, it was decided to use this combined approach and to make use of printed material, which can also serve as a conversation starter or a reminder to facilitate the interaction of project's partners with stakeholders.

When using printed material, the objective is to create general awareness of the project's results, especially to achieve the impact of creating awareness of the need for energy and resource efficiency in manufacturing processes across the value chain. Details can be found in deliverables *D9.4 - D9.6 Project advertising material I, II, III*, respectively.

In order to disseminate the objectives, expected results and project impact, during the first 3 months of the project a preliminary leaflet will be presented, followed by two posters created for use in trade fairs and workshops. At the beginning of the project's third year the methods and components of COMPOSITION will be known and a pre-commercial brochure will be developed. This activity will help partners prepare for the exploitation stage.

Table 4: Time schedule for printed marketing material

Marketing material	Month
Preliminary leaflet	M03
1st poster	M15-M18
2nd poster	M27-M30
Pre-commercial brochure	M25-M27

Any dissemination of results in any form (e.g., printed, electronic, etc.) must display the EU emblem (Figure 1), unless the Commission requests or agrees otherwise or unless it is impossible, and must include the following text: “This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 723145”. When displayed together with other logos (Figure 2), the EU emblem must have appropriate prominence. The project beneficiaries may use the EU emblem without first obtaining approval from the Commission, however this does not give them the right to exclusive use and additionally they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means. All dissemination of results must indicate the author's view only. The Commission is not responsible for any use that may be made of the information it contains. For more details please refer to the sections 3.5.3 *and* 3.5.4.

Figure 1 EU emblem

Figure 2 Partner logos to be used for printed materials

3.2.2 Online activities

At the beginning of the project a powerful website (*D9.2 Project Website*) has been established as a tool for communication and dissemination in order to upload public deliverables, different project videos and online demonstrators as well as enabling downloads of material in general. The online presence of COMPOSITION is complemented with the establishment of strong representation on relevant social media (LinkedIn, Twitter and YouTube). As described in *D9.2*, Industrial innovators, integrated information management system suppliers, manufacturing corporations and supply chain consultants will raise dialogue and knowledge

sharing through involvement in webinars. All these events will be webcasted live and available on-demand using a webcasting platform provided and hosted by IN-JET (Figure 3). The suite of the online activities of COMPOSITION is completed with targeted press releases and newsletters.

Figure 3 Webinar (live and on-demand)

Press releases

Project news will be released ad-hoc in relevant languages in order to inform selected media. Correspondingly, press releases will also be used by individual partners to make announcements of project events. The objective is to emphasise societal relevant news of COMPOSITION impact, e.g. European world competitiveness or green manufacturing. The content of the press releases will be diversified according to the progress of the project. The consortium has planned to issue 5 press releases (Table 5) throughout the project lifetime. The first one has already been published (http://www.composition-project.eu/2016/09/16/the-launch-of-composition/) to spread the word about the launch of the project. A key press release will be made by CERTH in M04 to disseminate the project results and ensure that scientific and technological developments will become accessible to wider audiences (users, industrial stakeholders, researchers).

Newsletters

Results and planned activities will be described in electronic newsletters prepared according to partner input. The 8 newsletters will be distributed to the relevant audiences by the individual partners as well as via the project's website. COMPOSITION will capitalise also on the partners' dissemination channels aiming at different segments of industry audiences and technology domains. Also, specific actions may be taken to approach certain important players whose engagement has the potential of a multiplying effect or whose involvement may aid in the successful implementation of the project. The content will vary and it will be adapted according to the feedback received from each newsletter so that the impact can be increased.

More information on tools and channels concerning web communication and marketing material can be found in *D9.1 Communication Strategy and Plan*.

Table 5: Time schedule for press release and news letters

	Press Release		Newsletters	
Year	**No.**	**Month**	**No.**	**Month**
1st	2	M03, M04	2	M04, ad-hoc
2nd	1	ad-hoc	3	ad-hoc
3rd	2	ad-hoc	3	ad-hoc

3.2.3 Publications (journals, conferences and more)

It is important to spread the word about the advancements that will be achieved within COMPOSITION in terms of improving collaborative processes using the ecosystem, which is under development at this point. It is necessary to reach out to a large number of stakeholders, thus the publications strategy needs to account for quantity and quality parameters. To this end, the consortium has selected 3 paths to follow: a) industrial and scientific conferences, b) journals with significant impact factor covering all scientific and business aspects to be addressed by the project, c) publication to technical journals and/or magazines, targeted to specific business sectors or professionals.

Several scientific and technical articles will be prepared with the contribution of technical partners. Other papers will be synthesized with the end users, to share information on the obstacles encountered, the lessons learnt, but more importantly, the real value of the COMPOSITION results. Papers will be submitted to leading industrial and technical journals and conferences. Furthermore, dissemination actions will be pursued mainly from the beginning of 2017 at conferences in the field of computer science, manufacturing and engineering, industrial and distributed computing, scalable processing etc.

Each partner has selected conferences, journals, workshops and tradeshows close to their activities and within the scope of COMPOSITION in order to spread out the project outcomes. Targeted events for each partner are presented in subsection 3.3.1 Individual Dissemination Plan.

After careful exploration and consideration, the following indicative but not exhaustive list of targeted conferences has been drafted for 2017, which will be considered by all partners. This list is available to the consortium via the wiki framework which has been established for implementation and execution of the project's dissemination plans. It should be noted that it contains information on all 3 types of publication opportunities and will be updated every year. The main events for 2017 are:

- Research and Innovation 2017, Conference and Exhibition event will build upon the success of that event and will bring together over 1000 leaders in research and innovation from the leading industries in Ireland as well as key government bodies, research bodies and researchers that are instrumental in creating cutting edge research and bringing that research to the market (url http://www.innovateireland.ie/).
- WERC Annual Conference 2017 offers continues education and networking in the fields of warehousing, supply chain, distribution and logistics industries (url http://www.werc.org/2017/).
- 5th International Conference on Sustainable Solid Waste Management addresses the significant issue of sustainable solid waste management through the promotion of safe practices & effective technologies (url www.athens2017.uest.gr).
- IEEE International Conference on Emerging Technologies and Factory Automation 2017 is dedicated to industrial and factory automation - presenting new research results at the cutting edge of emerging technologies in applications in diverse areas of industrial automation, as well as providing a discussion forum for professionals from academia and industry alike (url http://www.etfa2017.org/).
- World Congress of the International Federation of Automatic Control 2017 is the forum of excellence for the exploration of the frontiers in control science and technology, attended by a worldwide audience of scientists and engineers from academy and industry. It offers the most up to date and complete view of control techniques, with the widest coverage of application fields (url https://www.ifac2017.org/).
- Big Data Value Association PPP summit is a key occasion to meet and engage attendees from Industry, Academia, Public Administration, data owners and users in Europe, and to influence the development of the European Big Data Ecosystem (url http://www.bdva.eu/).

- EuroVis conference objective is to create and strengthen connections between visualization researchers and practitioners, to foster collaborations, and to draw more researchers in Europe to enter this rapidly growing area of research. EuroVis has an expanded scope to include all areas of visualization, and a steadily more wide-spread visibility that allows to achieve a more wide-spread impact (url http://eurovis2017.virvig.es/).
- ISMIS, International Symposium on Methodologies for Intelligent Systems is conference for exchanging the latest research results in building intelligent systems. Held twice every three years, the conference provides a medium for exchanging scientific research and technological achievements accomplished by the international community (url http://ismis2017.ii.pw.edu.pl/).

3.2.4 Events and networks

The vision of COMPOSITION and its results will be disseminated via a number of events and networks. They have been categorised by the consortium to actions related to: a) a workshop, b) tradeshows, c) demonstrations and d) clustering/symbiosis. As discussed on the previous section, a list of dissemination opportunities is available via the wiki framework and it includes these types too. Further details on the four (4) categories as well other dissemination activities and their time schedule can be found at table 12 at section 4.2.

Workshop

A European Workshop on interoperability of Integrated Information Management System (IIMS) in manufacturing value chains and product lifecycle management will be organised by COMPOSITION in the third year of the project. Special focus will be placed on disseminating to industrial manufacturing fora and on the involvement of European Factory of the Future research organisation (EFFRA) members, as well as contributions from other FoF projects identified as being synergistic with COMPOSITION.

Tradeshows

One more way of dissemination is through participation in industrial exhibitions and tradeshows. Each year partners will prepare presentations and disseminate COMPOSITION results and outcomes at trade fairs that are related to the project's technologies, business sectors and pilots. The consortium will decide on the most value adding events to participate in. Examples considered for the trade fairs are also available on the wiki framework and indicative ones are:

- CeBIT provides a broad range of conferences, forums and special events offering the chance to learn more about the latest market trends (url http://www.cebit.de/home).
- Embedded World is a leading international world fair with the focus exclusively on embedded technologies. The fair reflects the trends in the sector and exhibitors are presenting state-of-the-art covering all aspects of embedded systems. (url https://www.embedded-world.de/en).
- Hannover fair covers all key technologies and core areas of industry – from research and development, industrial automation, IT, industrial supply, production technologies and services to energy and mobility technologies (url http://www.hannovermesse.de/home).
- Productronica is the most important industry gathering in the world. It is Up to date, innovative and featuring the technologies of the future for every aspect of the production process (url http://www.productronica.com/).
- Meet the World: Interlift 2017 is the trade fair that shows the global market and presents elevator technology, where the solutions planned for the intra-and inter-factory pilots can be presented (url http://www.interlift.de/en/home.html).
- Euromaintenance Congress 2018: one of the most important conferences European-wide (and not

only) for those involved in the maintenance and asset management sectors, since maintenance is of high importance for trade and commerce, for the environment, and for general health and safety (url http://www.euromaintenance2016.org/ for the 2016 event).

- 1st International Recycling Exhibition is organising a fair promoting Energy, Environmental Technologies, Innovations & Start-ups (url www.verde-tec.gr).
- Russian Elevator Week is an international exhibition of elevators and elevator equipment which is the largest B2B project in Russia, aimed at advancing innovative goods and solutions of the vertical transport industry, was held in Moscow (url http://lift.vdnh.ru/en/).
- 15th International Lift Exhibition reaches out to exciting and new markets in the Eurasian region and it is one of the world's top three trade fairs for the professional lifts and elevator industries (url http://www.asansoristanbul.com/index_en.php).

Demonstrations

Use case demonstrations will be used to disseminate experiences, lessons learnt and best practices to the manufacturing, IT professionals and academic communities through the partners' networks and channels. The project will realise two pilots, a "supply chain" mainly at BSL with a smaller scale at KLE and a "value chain" with KLE as the central partner.

Pilots will be implemented within *WP8* and the results used to demonstrate the COMPOSITION technologies and concepts in order to engage the European manufacturing community as well as ICT Enterprise System companies. The scope is to entice such stakeholders to show interest in the project and in participating and evaluating the demonstrators. The first iteration of the demonstrators will be completed by M24, while the second and last one by M36, the end of the project.

The project will pursue cooperation with the European Research Cluster on the Internet of Things ($IERC_a$) to ensure that key enabling technologies and semantic models are also in line with relevant Internet of Things (IoT) strategies and applications in the factory domain. Such a link is ensured by ISMB who coordinates the $IERC_a$ activity chain on "IoT innovation and pilots". Moreover, the involvement of TNI-UCC will facilitate the engagement of the International Energy Research Centre ($IERC_b$) in areas such as hardware platforms for wireless sensor networks and energy efficiency monitoring of equipment and systems in commercial buildings and factories.

Clustering/symbiosis

The objectives of the COMPOSITION project are fully in line with the "Factories of the Future 2020: Roadmap 2014-2020" developed by the European Factories of the Future Research Association (EFFRA), the research, and in particular with the enablers (ICT) and the societal challenges specific objectives (human involvement).

The project will continuously refer to road-mapping activities carried on in EFFRA. Currently, COMPOSITION foresees a direct engagement with their activities. IN-JET has been cooperating with EFFRA through is position as co-chair of FInES, the Future Internet Enterprise Systems cluster and will feed the results of COMPOSITION into EFFRA for creating impact in the FoF world, supported by all industrial partners. Moreover, ISMB and ATL are EFFRA members, thus enabling a more direct role in interacting with the association.

Other opportunities for interactions with clusters active in ICT, energy management etc. are also available via the channels of the partners (sections 3.3 and 3.3.1).

3.2.5 Standardisation activities

COMPOSITION results of the ecosystem (new vocabulary, semantic and data models, etc.) will be spread out among relevant standardization bodies dealing with the modelling, automation and integration of systems in the industrial domain (ISO, CEN, etc.). The relevant partners will pursue connections to transfer knowledge between the project and Working Groups in ISO (i.e. ISO/TC 184, in particular ongoing efforts in SC 04 “Industrial data” and SC 05 “Interoperability, integration, and architecture for enterprise systems and automation applications”, ETSI M2M (ongoing standards for Internet of Things, Cyber-Physical Systems, etc.).

Furthermore, COMPOSITION will examine ongoing efforts in relevant European standardization bodies, (e.g., CENELEC, CEN, ETSI) and may submit a mandate towards the end of the project covering emerging topics such as the semantic and syntactic interoperability of future factories Integrated Information Managements systems (i.e. Working Group on Semantic Support for ETSI M2M standard). In this context, CERTH, which is already participating in ongoing activities of ETSI regarding semantics (i.e. DG Connect and ETSI Workshop series on Semantics and Smart Appliances), will, together with the Innovation Manager, be the core partners to follow up the pre-normative and standardization efforts.

The COMPOSITION project will host four Vocabulary Camps that have been proven to be successful tools for fostering agreement and support for interoperability standards in the Energy Efficiency in Buildings. The workshop will involve stakeholders from industry, previous and ongoing FoF projects and results will be made available to the Manufacturing community on a dedicated page such as the eeSemantics Wiki but also to a wider group of stakeholders.

3.3 Distribution of dissemination efforts at partner level

All partners are engaged in dissemination at consortium and partner level, in combination with the other work package activities. The strategy and plan is to make optimal use of the partners’ strengths and channels and to continuously promote the vision of COMPOSITION. In order to achieve this, pursuit of dissemination effort has been distributed among the partners. Each partner has their own dissemination responsibilities to reach and fulfil. The consortium covers a vast area of expertise and experience and it will be able to target specific audience through the various channels described in *D9.1 Communication Strategy and Plan*.

The goal is to spread the word on COMPOSITION results and ensure that the direction and outcomes are valuable to the target groups. The strategic approach is to have partners working together in locating and organising relevant activities and cooperating with stakeholders and other projects. Partners are also encouraged to welcome the press, offering interviews, visits and demonstrations. However, each member of the consortium has different strengths, audiences and channels. To this end, in addition to the common approach, everyone will play a different role, based on their expertise and capabilities.

The following table summarises the partners’ specific areas of expertise in COMPOSITION, and the main ways they will pursue dissemination activities. More information on the individual dissemination plans, in terms of effort distribution among the partners can be found in section 3.3.1.

Table 6: Dissemination efforts distribution per partner

Partner	Area of dissemination responsibility
Fraunhofer	Focus on stakeholders from both, industrial and scientific community. Disseminate project results on trade fairs such as CeBIT or Hanover Fair.

	Disseminate project results through the EU channels. Administer the BSCW and Confluence collaborative tools for dissemination coordination. Publish scientific papers to relevant conferences and Journals. Take part in clustering activities, for collaboration among all FoF-11-2016 projects.
BSL	Focus on proving the concepts of COMPOSITION in their manufacturing facilities. Share the results via demonstrating the solutions that will be developed to other factories within the group, as well as to collaborators, stakeholders and policy makers. Closely work with scientists, ICT professionals, manufacturers, suppliers and the community.
KLE	Promote the results of COMPOSITION at both pilots. Participate in various exhibitions, seminars, trainings that will take place in KLE's plant or in the customers' premises. Contribution on use-case requirements and functional requirements in COMPOSITION. Co-ordinate the industrial pilot studies and the evaluation of the overall framework.
ATL	Focus mainly on stakeholders from the Industry and Technology domains. Participate in B2B brokerage events and presentations to key stakeholders. Present COMPOSITION at national and international conferences, workshops and forums, EFNMS (European Federation of National Maintenance Societies) and HMS (Hellenic Maintenance Society). Regarding the aspect of Clustering and Industrial Symbiosis, contact EFFRA (European Factories of the Future Research Association) and Chorus, the Green Energy cluster.
NXW	Disseminate results through different channels. Submit papers to conferences, magazines and journals. Participate in workshops and industrial events. Presence in social networks to promote COMPOSITION scientific and technical outcomes to large communities in the academic and industrial arenas.
ELDIA	Promote the results of the value chain COMPOSITION pilot. Present COMPOSITION at national and international trade and exhibition shows. Participate in the development of an automated operating system that will enable a more efficient connection between the industries and suppliers.
TNI-UCC	Disseminate the outcomes of the project. Support the partners in exploring commercial opportunities.

	Target manufacturing companies – engineering, process and automation, system integrators, software suppliers, ICT community, relevant research and funding bodies, media, relevant research working groups, etc. Support technical papers/publications in Journal and conferences areas (manufacturing science and technology, control engineering, machine intelligence, security and privacy, wireless sensor networks and communications protocols, etc.).
IN-JET	Disseminate COMPOSITION results on user scenarios, use cases, applications, innovations and business models, targeting and influencing industry stakeholders and decision makers. Plan webinars and share knowledge, attracting manufacturing experts, supply chain managers and system architects as well as business managers and developers. Direct engagement within EFFRA (European Factories of the Future Research Association) activities. Participate in the general planning and production of dissemination material and content as well as host and webcast the project website and social media platforms.
CERTH	Disseminate COMPOSITION results to the academic and scientific communities, as well as to its network of Enterprises, mostly partners from other EC projects. Disseminate results at international conferences, peer-reviewed scientific journals. Disseminate material (posters, flyers, etc.) at relevant events and workshops. Develop, integrate and demonstrate project results in various demonstrators. Promote interoperability of solutions between the EU projects in which it is involved. Present COMPOSITION to national and international organizations dealing with Recycling industry (Hellenic Recovery and Recycling Organization, HSWMA, etc.).
CNET	Promote the COMPOSITION ecosystem as Software as a Service solution for factory optimisation in the Scandinavian market together with IN-JET. Act as Integrated Information Management System integration service provider. Promote the results of the Real-time Event Broker in COMPOSITION. Raise awareness on the blockchain technology for secure and trusted data exchange.
ISMB	Disseminate COMPOSITION results to the academic and scientific communities, as well as to its network of local, national and European enterprises. Disseminate results regarding deep learning and agent-based market place solutions at international conferences and on peer-reviewed journals. Disseminate technical comments and blog entries among technical communities. Organize webinars as well as presentations at industrial workshops. Contribute to the clustering activities within EFFRA.
ATOS	Disseminate COMPOSITION at international conferences.

	Pursue involvement of stakeholders who design the European Innovation Agenda. Use extensive contact network and social networks to spread the word on COMPOSITION. Disseminate internally (to ease a smooth adoption of the project results and to include them in the company´s value chain). Periodically organise internal seminars and webinars.

3.3.1 Individual Dissemination Plan

Each partner has prepared in detail a plan on the effort they will allocate to the dissemination of the project's vision and results. The distribution has been agreed among all as well as the objective to achieve optimal use of resources and maximise the effect on all stakeholders.

3.3.1.1 Fraunhofer

Fraunhofer FIT is the leading organisation of institutes of applied research and development in Europe. FIT is the project coordinator of COMPOSITION and will drive a user-centred design process for developing applications (FIT-UC^2). Furthermore, FIT will be involved in the economical evaluation of business models, led by the Project Group Business & Information Systems Engineering (FIT-WI). Moreover, to facilitate collaboration, FIT will administer the BSCW and Confluence collaborative tools for dissemination coordination.

Different ways of result dissemination will be involved, e.g., focus on stakeholders from both, industrial and scientific community, visiting potential fairs such as CeBIT or Hanover Fair and in particular dissemination through the EU channels.

Furthermore, FIT will attend events organized by the EC or business contacts, representing COMPOSITION and will disseminate the vision and the technologies, as for example at the IoT for Business conference in Stockholm (October 2016). Also, as technology provider, FIT will participate in developing, integrating and demonstrating project results in demonstrators as well as taking part in clustering activities (first of all in the workshop series for collaboration among all FoF-11-2016 projects).

Besides contribution to the common COMPOSITION project means of dissemination, FIT will produce individual website entries, brochures, flyers and press releases, which focus on FIT contributions for individual dissemination use.

One of the more important aspects that FIT can contribute with, is with their presence in scientific conferences and journals. Some main events that will be considered and potentially targeted as conferences presentations or scientific publication in journals, are presented at the following non-limiting and non-exhaustive list:

- IEEE International Conference on Emerging Technologies and Factory Automation http://www.etfa2017.org/
- ACM CHI Conference on Human Factors in Computing Systems https://chi2017.acm.org/
- IEEE Transactions on Knowledge and Data Engineering https://www.computer.org/web/tkde
- CIRP Annals - Manufacturing Technology http://www.journals.elsevier.com/cirp-annals-manufacturing-technology
- ACM Transactions on Computer-Human Interaction (TOCHI) https://tochi.acm.org/

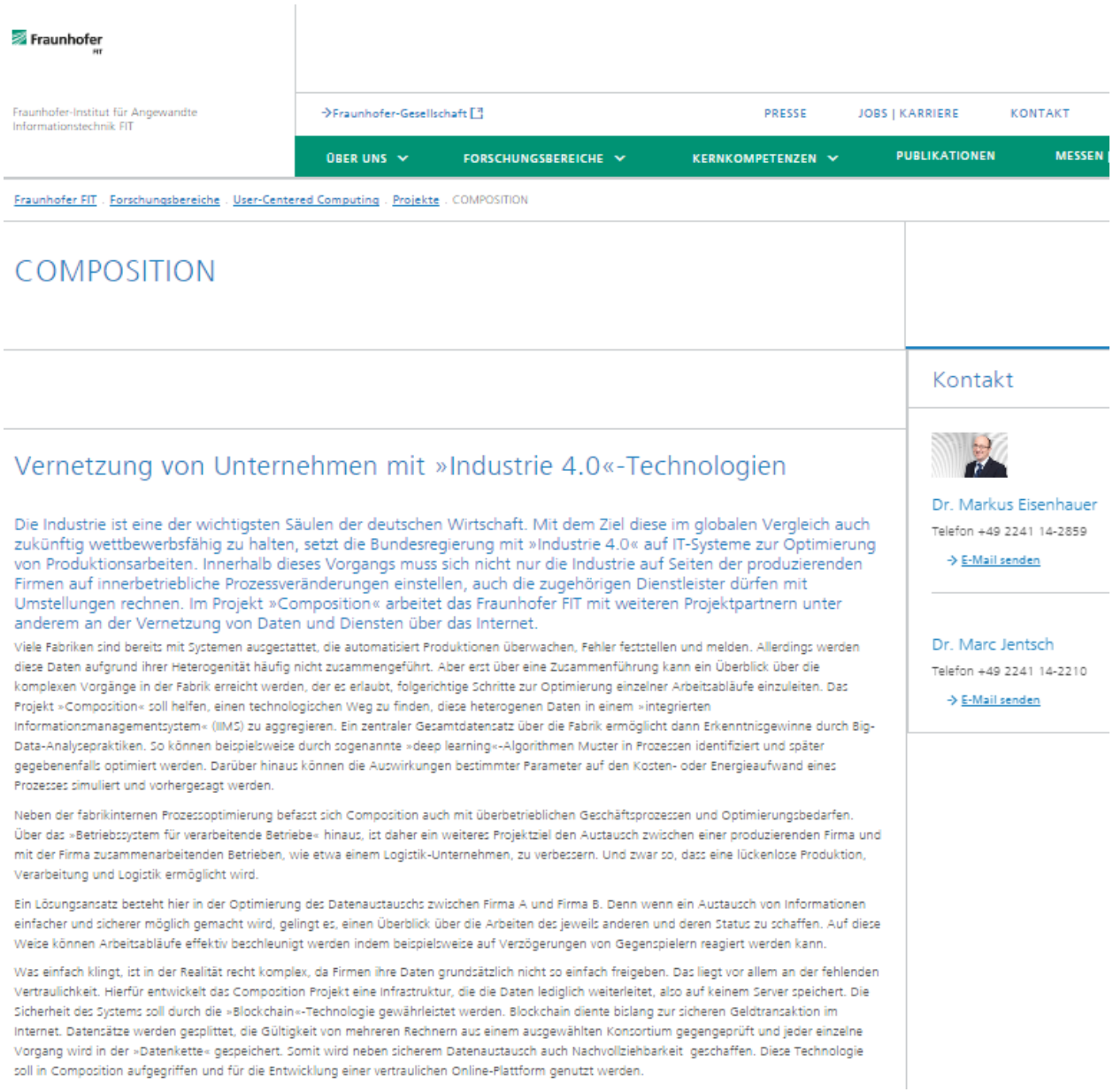


Figure 4 Fraunhofer's website

3.3.1.2 Boston Scientific Limited

Boston Scientific Limited (BSL) is a leading medical device company and the manufacturing plant in Clonmel is one of the pilot sites in COMPOSITION. It will lead the development of the intra-factory industrial pilot and, as such, they will be involved in the engineering of requirements, business analysis and evaluation.

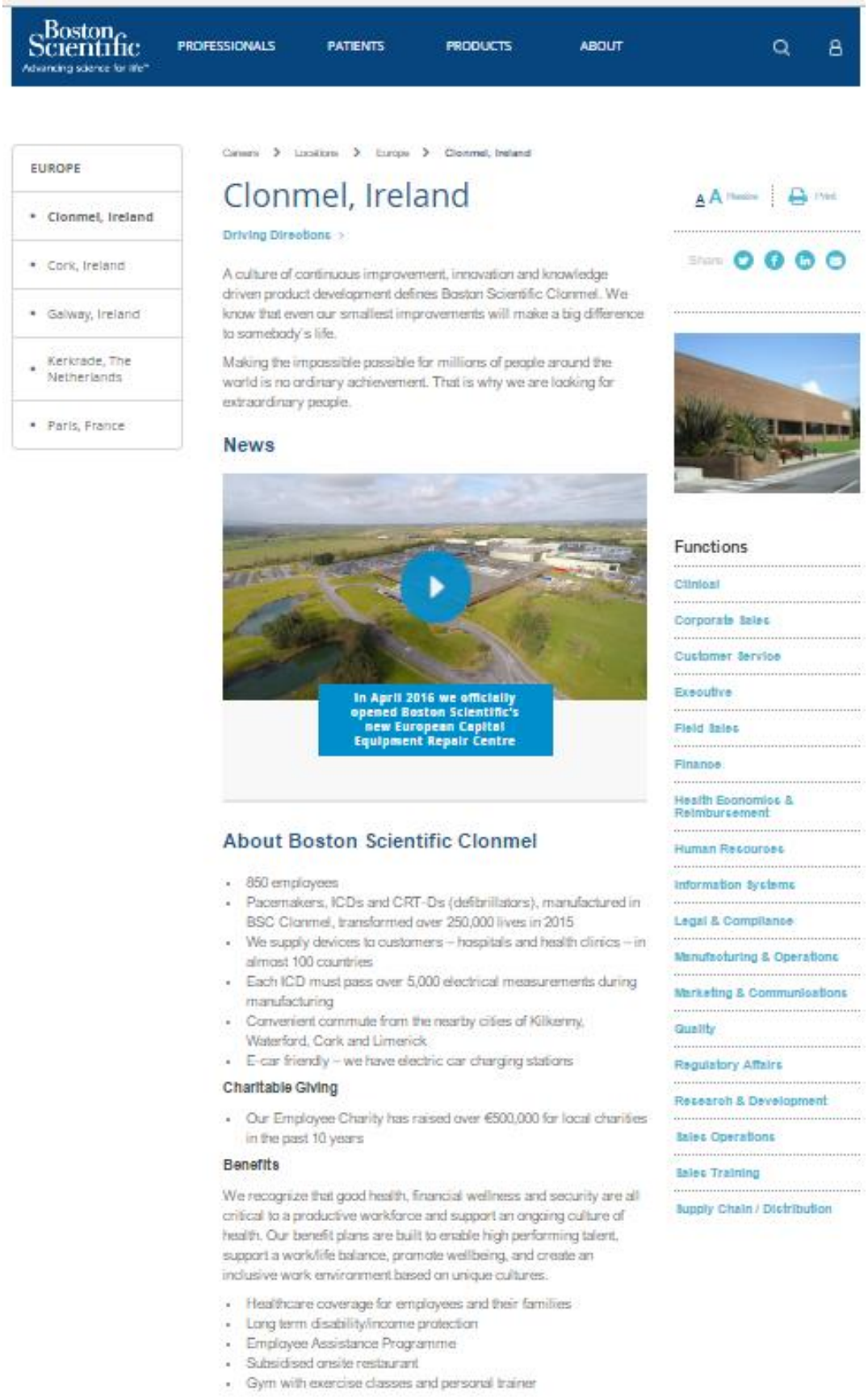


Figure 5 BSL website

BSL is interested in leveraging from COMPOSITION project tools and technologies to address real Knowledge Gaps within the business and they will promote the outcomes of the project, along with the methodology followed to reach them. A disruption of their current method of Manufacturing is anticipated, which will enable the company to continue to be the prime manufacturer of Pacemakers and ICDs (Implantable Cardioverter Defibrillators) within the network and sustain and grow the business in Europe. With its leading position in their field, they will raise awareness on the COMPOSITION vision and they will exploit the demonstrators to share the generated knowledge among stakeholders.

The individual dissemination efforts of BSL will be focused on proving the concepts of COMPOSITION in their manufacturing facilities and sharing the results via demonstrating the solutions that will be developed to other factories within the group, as well as to collaborators, stakeholders and policy makers. Given the nature of their products, BSL works closely with scientists, ICT professionals, manufacturers, suppliers and the community.

BSL is proud to be recognized for their innovations that impact patients' lives, their performance as a company, their workplace culture and their contributions to the community. Multiple awards (https://www.bostonscientific.com/en-US/about-us/awards.html) prove the company's commitment to leadership and service to global stakeholders, leadership in environmental, social and governance commitments. This network of contacts is an excellent set of channels to disseminate the COMPOSITION ecosystem.

As one of the end users, it is the intention of BSL to disseminate the COMPOSITION results in relevant conferences and exhibitions and to make the optimum use of the demonstrators that will take place at Clonmel. Since they are part of a larger group, the events to be considered are going to be aligned to the overall company's dissemination and sales strategy, in order to optimise the use of resources of the involved departments.

3.3.1.3 KLEEMAN

KLEEMAN (KLE) operates in the manufacturing and the trading of complete lift systems. Apart from the contribution on use-case requirements and functional requirements in COMPOSITION, KLE will co-ordinate the industrial pilot and evaluation of the overall framework in WP8.

As an end user, KLE intends to highlight the results of COMPOSITION in many ways, through their participation in industrial exhibitions that are relevant to their activities. Various seminars and involvement in different training sessions will be pursued to take place in KLE premises or at their customer sites.

Moreover, KLE will serve as a knowledge sharing ambassador, offering the results from both pilots that they will participate in. The company is considered as a worldwide leader and they are active in sharing events. They are recognised to achieve excellence in sectors such a lean manufacturing, health and safety and they will promote via those channels the testimonials from the use of the technologies that the project will adopt. KLE applies a mentality similar to what is attempted in this project and they are strong supporters of technological excellence and collaboration with stakeholders.

Some of the international exhibitions and world tradeshows that can be considered to disseminate the results of COMPOSITION are:

- 15th International Lift Exhibition http://www.asansoristanbul.com/index_en.php
- Russian Elevator Week, International Exhibition of Elevators and Elevator Equipment http://lift.vdnh.ru/en/
- Meet the World: Interlift http://www.interlift.de/en/home.html

Figure 6 KLEEMAN's website

3.3.1.4 ATLANTIS Engineering

ATLANTIS Engineering (ATL) is an ICT SME, offering software (CMMS, DSS), consulting and training solutions for Maintenance and Asset Management, aiming at the support of daily production activities in factories. In the project, they act as technology providers (DSS) end users (inter-factory pilot) and lead the dissemination management. They will focus mainly on stakeholders from Industry and Technology domains. The goal is to raise the awareness of manufacturing and ICT experts, who are considered as a highly specialised target group. This group will be familiarised with COMPOSITION outcomes through articles and publications in specialised and general press.

Furthermore, COMPOSITION will be presented at national and international conferences, workshops and forums, raising awareness of European factories' decision makers on the COMPOSITION innovations and the impact they could expect for their businesses. Examples of such events as well as magazine are:

- MaintWorld- magazine http://www.maintworld.com/
- Maintenance Forum http://www.maintenance-forum.eu/
- Euromaintenance Congress in 2018 (url http://www.euromaintenance2016.org/ is for the event 2016)
- IFAC_AMEST (url http://ifac-amest16.com/ is for the event 2016)

In addition, a fundamental channel for achieving the maximum impact in terms of dissemination will be the contacts and networks where the partners of the COMPOSITION consortium are represented.

In this context, ATLANTIS Engineering is expected to contribute significantly, through EFNMS (European Federation of National Maintenance Societies) and HMS (Hellenic Maintenance Society). EFNMS has about 20 members from 20 different European countries, which makes it a very good dissemination network. ATLANTIS Engineering is represented in EFNMS BoD as the CEO has been elected Chairman of EFNMS for 10.2016-10.2019. Moreover, a presentation of the current status of achievements of COMPOSITION will

be made during the Euromaintenance Congress in 2018. It is also noted that ATLANTIS is a founding member of HMS and is vigorously involved having one of their executives is in in the Board of Directors and the Chief Sales Officer acting as the Chairman of HMS.

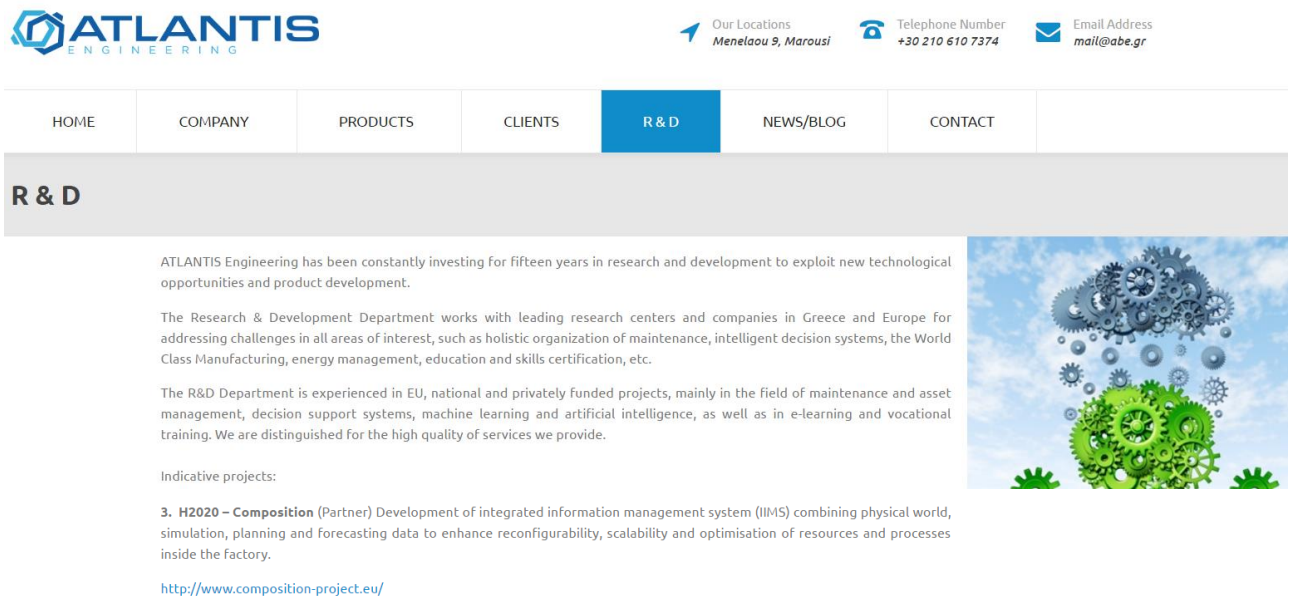


Figure 7 ATLANTIS website

Aligned to this, the company is a member of the European Factories of the Future Research Association (EFFRA), which is an industry-driven association promoting the development of new and innovative production technologies. The company has already participated in events organised by EFFRA, gaining insight on how to promote pre-competitive results based on Factories of the Future technologies by engaging with public-private partners.

ATLANTIS will make use of opportunities for dissemination activities in B2B brokerage events and presentations to key stakeholders. Furthermore, they are members of SEPVE, the Association for ICT companies in Northern Greece, which in turn participates in the Technology Forum, an initiative of 14 Greek bodies/organisations with international presence to promote state-of-the-art in the ICT sector, boost collaborations and affect policy makers. Being an active member of the community, they will participate in Industrial Days that act as a linkage between today's students to tomorrow's stakeholders who will be the decision-makers and operators in the actual Factories of the Future.

Regarding the aspect of Clustering and Industrial Symbiosis, they will initiate contacts with Chorus, the Green Energy cluster in which they are members and with partners active in FOCUS, a Factory of the Future Cluster.

3.3.1.5 Nextworks

Nextworks (NXW) is a SME based in Pisa (IT) which has operated in ICT since 2002. The team boasts skills in the areas of IoT, Embedded Systems, Big Data, Networks, Digital video, Control and Automation systems. The plan of NXW for COMPOSITION is to activate a variety of dissemination channels, to contribute to publications in conferences, magazines and journals, as well as to participate in workshops and industrial events. Moreover, NXW intends to build a strong presence online and in social networks, to

promote COMPOSITION's scientific and technical outcomes to large communities in the academic and industrial arenas.

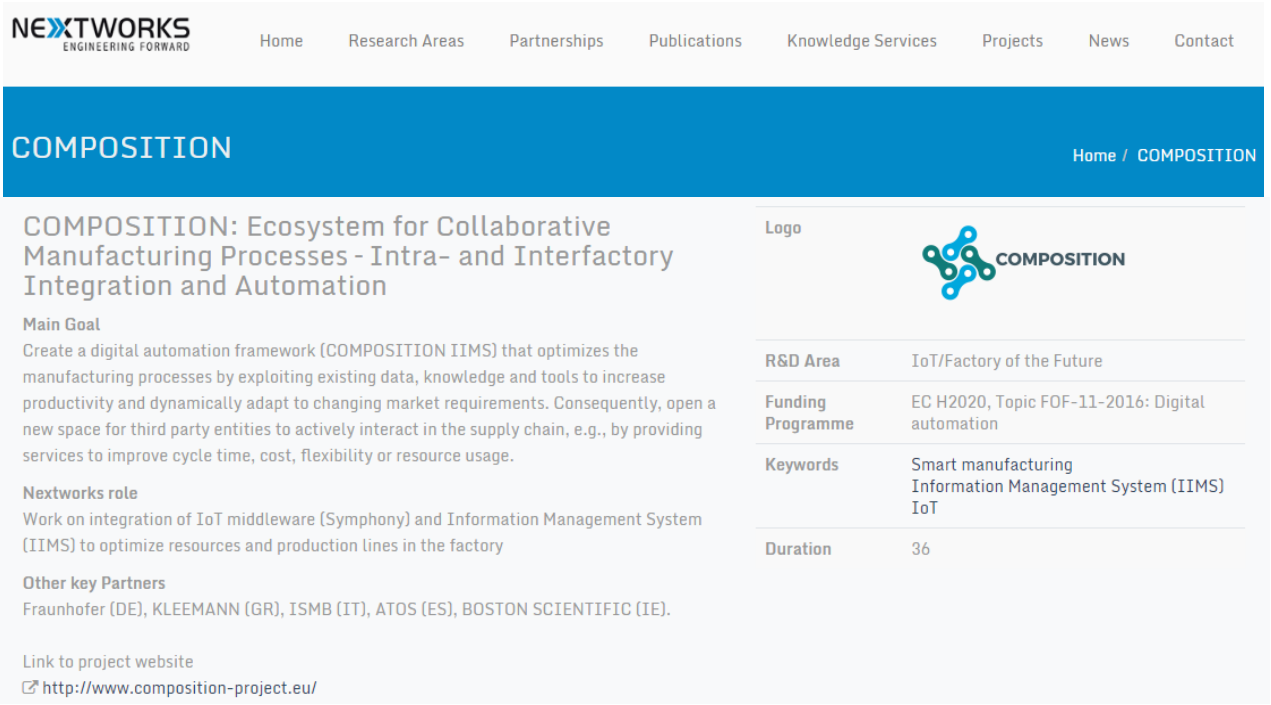


Figure 8 Nextworks's website

Capitalising on internal collaborations within these IoT innovation environments, COMPOSITION will be presented in order to describe the Factory of the Future aim, vision and outcomes. NXW will try to leverage knowledge on user preferences, market needs and opportunities and therefore to adapt the exploitation plan and increase the business potential.

The company will also disseminate the project outcomes through publications in international conferences and participation in industrial events, both at the international level (e.g. at IoT Solutions World Congress, IoT World Forum or Smart City Expo World Congress) and in local and national events focused on smart cities and smart factories. Inside of the COMPOSITION context, NXW will contribute to joint papers to conferences and journals together with other consortium partners on the specific aspects of both the intra-factory and the inter-factory.

The membership of NXW in various IoT clusters is particularly relevant to foster synergies with other projects, in particular:

- Big Data Value Association PPP http://www.bdva.eu/
- Member of 5G Infrastructure Association PPP https://5g-ppp.eu/
- Member of Alliance for Internet of Things Innovation http://www.aioti.eu/
- Member of Steering Board of Networld2020 European Technology Platform http://www.networld2020.org/

3.3.1.6 ELDIA

ELDIA is the largest waste management company in Northern Greece, handling waste and recycling of material from a large number and variety of companies and organisations. They are KLE's collaborators in the inter-factory pilot and they will be involved in the industrial pilots' demonstrators and evaluation.

They aim to present COMPOSITION at the largest Waste Management and Recycling Trade Show taking place every May in Munich, Germany, www.ifat.de. At a tradeshow of this size, ELDIA meets with representatives of the largest European firms in the recycling and waste management field. They will make them aware of the targets set by the project, as well as of its progress as it moves on. Likewise, COMPOSITION will be considered for presentation at the one of the largest world shows, Waste Expo in May 2017 in New Orleans, LA, www.wasteexpo.com.

In addition, ELDIA is strongly committed to promote the vision and results of COMPOSITION to Greek Trade Fairs in the fields of Environment, Recycling and Waste Management throughout the project's lifetime. Moreover, ELDIA's involvement in the COMPOSITION pilots will be presented to domestic and international organizations dealing with the Recycling industry, such as the Hellenic Recovery and Recycling Organization and the Hellenic Solid Waste Management Association (HSWMA).

Figure 9 ELDIA's website

The following events are being considered by ELDIA for participation and dissemination of the project:

- The World's Leading Trade Fair for Water, Sewage, Waste and Raw Materials Management www.ifat.de
- Waste Expo www.wasteexpo.com.
- 82nd International Trade Fair http://tif.helexpo.gr/el
- 5th International Conference on Sustainable Solid Waste Management www.athens2017.uest.gr
- 1st International Recycling Fair www.verde-tec.gr
- 3rd City of Thessaloniki Recycling Festival (http://events.thessaloniki.gr/en/event/2-recycle-fest/ url for the event in 2016)

ELDIA is planning to include information in their participation in their individual dissemination tools (website, the 20th anniversary letterhead, brochures in English, etc.).

3.3.1.7 Tyndall National Institute

Tyndall National Institute (TNI-UCC) is a leading European Research Centre in ICT based in Ireland. Their role in the COMPOSITION project is to provide: coordination, deployments and integration guidance.

As an applied research facility Tyndall will work with their fellow partners during this project to help disseminate the outcomes of the project, both those directly delivered by Tyndall and also by the fellow partners. Tyndall will also support the partners in exploiting commercial opportunities in technology/ factory improvements developed during the project. This could involve working directly with the industrial partners to achieve tangible gains during the project duration in areas such as energy reductions, work in progress (WIP) improvements, better factory operation visualizations, reduction in waste/scrap, productivity improvements, improvements in lean manufacturing, improvements in environmental conditions for factory operators, etc. Target audiences for these disseminations shall include but not limited to manufacturing companies – engineering, process and automation, system integrators, software suppliers, ICT community, relevant research and funding bodies, media, relevant research working groups etc.

Tyndall will also support the development and dissemination of project posters and brochures at relevant events that they will host or attend during the lifetime of the project. This work has commenced with Tyndall introducing the project concept and expected outcomes at the both the Tyndall Technology Days Conference 2016 (annual event) and also at Data Interoperability workshop for another H2020 CSA project (SWIMING) that was held in London in October 2016.

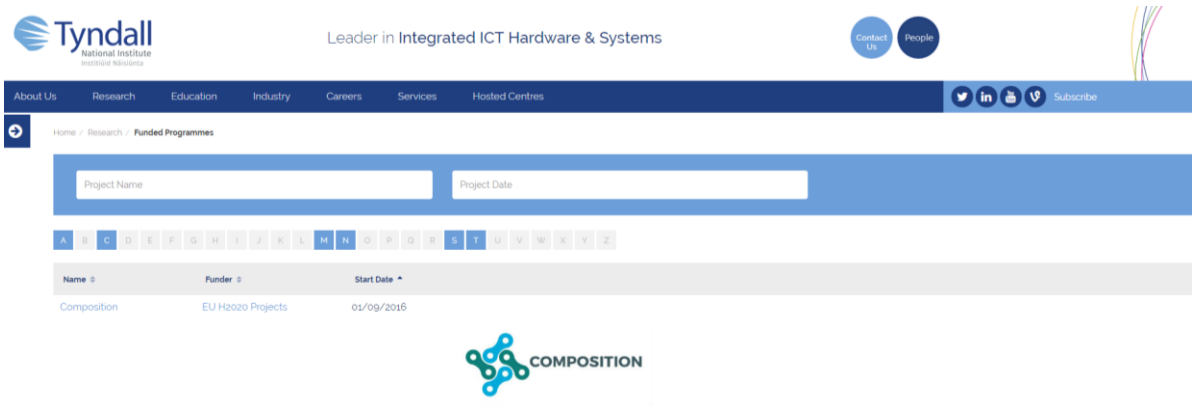


Figure 10 Tyndall's web site

Tyndall will also support with inputs to any project generated technical papers/publications – both Journal and conference levels in the targeted areas such manufacturing science and technology, control engineering, machine intelligence, security and privacy, wireless sensor networks and communications protocols etc. Targeted events to be considered are presented in the following indicative, non-exhaustive list:

- EuroVis an annual visualization gathering organized by the Eurographics Working Group on Data Visualization and supported by the IEEE Visualization and Graphics Technical Committee (IEEE VGTC). The IEEE Conference on Visual Analytics Science and Technology (IEEE VAST) is the leading international conference dedicated to advances in Visual Analytics Science and Technology http://eurovis2017.virvig.es/
- The IEEE Conference on Visual Analytics Science and Technology is the leading international conference dedicated to advances in Visual Analytics Science and Technology. http://ieeevis.org/year/2016/info/call-participation/vast-papers (url for the event in 2016)
- IEEE International Conference on Emerging Technologies and Factory Automation is an academic conference with a focus of embedded systems for factory monitoring and control, focusing as well on management in factories and integration into the smart grid http://www.etfa2017.org/
- The ACM Transactions on Sensor Networks (TOSN) publishes research and applications of distributed, wireless or wireline sensor and actuator networks, drawing upon many disciplines including signal processing, networking and protocols, embedded systems, information management, and distributed algorithms. https://tosn.acm.org/
- CIRP Conference on Manufacturing Systems is an annual industrial conference covering topics relevant to COMPOSITION such as supply chain management, intelligent, adaptive manufacturing, agile manufacturing, energy efficient process and systems and life cycle management http://www.cirp-cms2017.org/
- IEEE Transactions on Sensor Networks publishes high-quality manuscripts on advances in the state-of-the-art of wireless communications. http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=7693

COMPOSITION will organize/attend and Tyndall will support workshops/tradeshows/Vo Camps relevant to the project and dissemination. An example will be a European Workshop on interoperability of IIMS in manufacturing value chains and product life-cycle management. There will be special focus on disseminating to industrial manufacturing fora and the involvement of EFFRA members and contributions from other FoF projects identified as being synergistic with COMPOSITION. Tradeshow attendance will most probably include the Embedded World and Productronica.

Experiences and best practices will be disseminated in the form of the use case demonstrations to the manufacturing community and academic practitioners through membership networks in accordance with the pilot applications performed in WP8. The aim of the demonstrations is to engage with the European manufacturing community as well as ICT Enterprise System companies operating in this area and secure their early participation in the demonstrators and their evaluation. Tyndall has direct experience in developing WSN hardware platforms, tools and models for their industry partners to assist with the retrofit of self-powered devices for conditional and energy efficiency monitoring of equipment and systems in commercial buildings and factories.

The Tyndall dissemination plan aims to support the project's stated dissemination strategy towards maximizing impact and is augmented by a comprehensive communication plan. The activities under consideration will be evaluated to ensure that they are in line with the evolving business and research interests of the partners and emerging market trends.

3.3.1.8 In-JeT ApS

In-JeT ApS (IN-JET) is a research and innovation company in the field of technology development and exploitation. In COMPOSITION, IN-JET will be involved in user scenarios, cases and requirements as well as in impact creation, dissemination and exploitation. Hence, they are responsible for dissemination related to user scenarios, use cases, applications, innovations, and business models, targeting and influencing industry stakeholders and decision makers. They will plan webinars attracting manufacturing experts, supply chain managers and system architects, as well as business managers and developers to share knowledge and best practises.

COMPOSITION foresees a direct engagement within EFFRA (European Factories of the Future Research Association) activities: IN-JET has been cooperating with EFFRA through is position as co-chair of FinES, the Future Internet Enterprise Systems cluster and will feed the results of COMPOSITION into EFFRA with the aim to create impact in the FoF world and to demonstrate the huge potential for increased European innovation capacity and competitiveness from smart integration of ICT. These activities are supported by all industrial partners in COMPOSITION.

IN-JET is also involved in the general planning and production of dissemination material and content and is webmaster of the project website and social media platforms, thus communicating the project's visions, objectives and results to all identified target groups.

Figure 11 In-JeT's website

3.3.1.9 Centre for Research & Technology

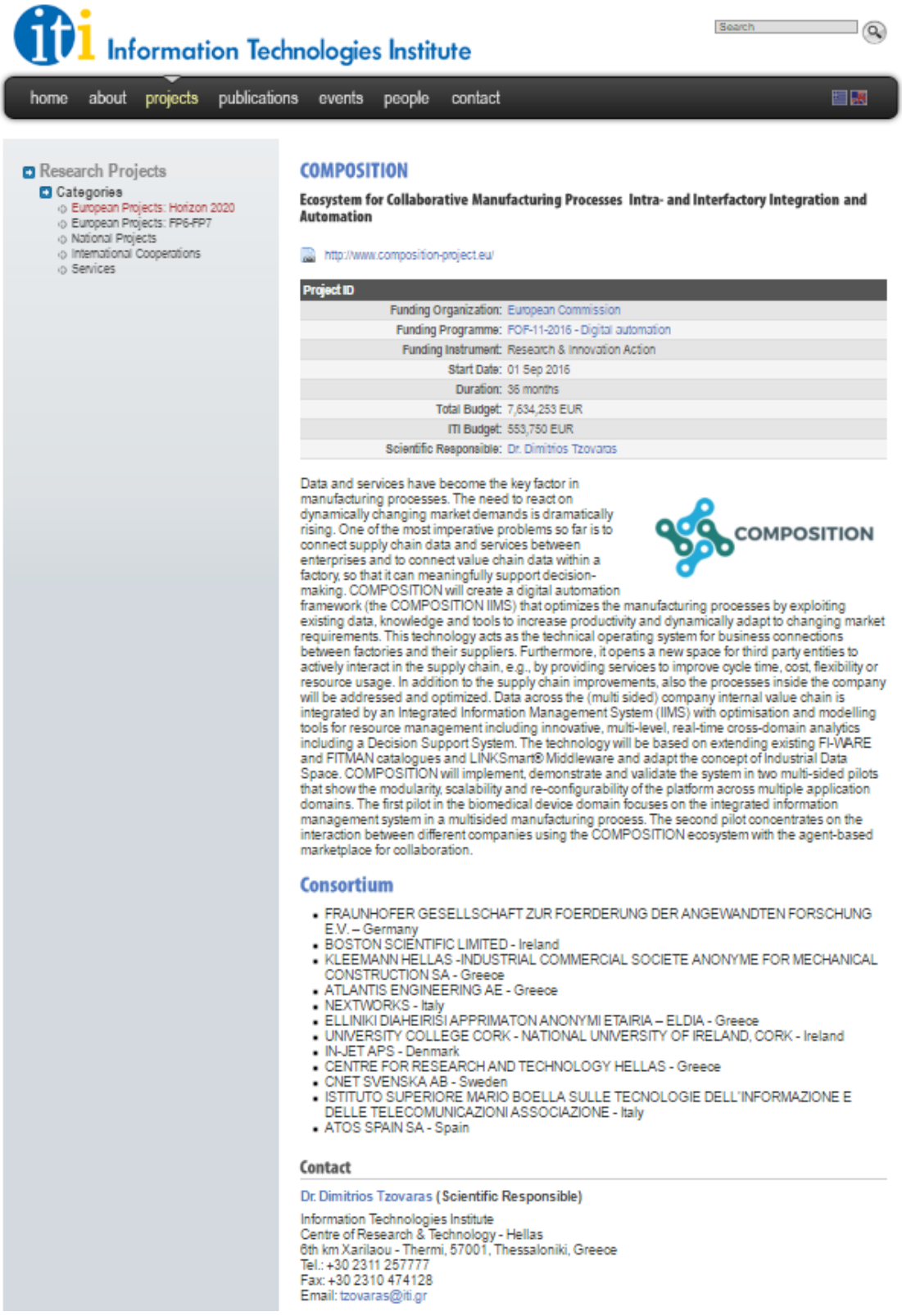
CERTH is one of the largest research centres in Greece. The Information Technologies Institute (CERTH-ITI) specialises in the area of informatics and telecommunications and is staffed with renowned scientists. CERTH-ITI will lead the manufacturing modelling, the simulation and the collaborative manufacturing services ontology. As a research institute, CERTH will mainly focus mainly on disseminating COMPOSITION results to academic and scientific communities, as well as to its network of Enterprises, mostly partners from other EC projects. Results from the project, particularly those concerned with modelling, simulation, semantic reasoning, matchmaking and visual analytics will be disseminated at international conferences, peer-reviewed scientific journals as well as in relative workshops and forums.

Among the foreseen publications, the following indicative list of conferences to be considered as well as scientific journals to be targeted includes but is not limited to:

- IEEE Conference on Emerging Technologies and Factory Automation http://www.etfa2017.org/
- European Conference on Product and Process Modelling http://www.ecppm.org/
- International Semantic Web Conference http://swsa.semanticweb.org/content/iswc-2017-will-be-held-vienna
- International Conference on Simulation and Modeling Methodologies, Technologies and Applications http://www.simultech.org/
- International Conference on Simulation Tools and Techniques http://simutools.org/2016/show/home (url for the event in 2016)
- IEEE Transactions on Industrial Informatics http://tii.ieee-ies.org/
- Service Oriented Computer and Applications http://link.springer.com/journal/11761
- International Journal of Metadata, Semantics and Ontologies http://www.inderscience.com/jhome.php?jcode=ijmso
- Journal on Data Semantics, Springer http://link.springer.com/journal/13740
- International Journal of Data Science and Analytics http://link.springer.com/journal/41060

CERTH will also contribute to the development and sharing of COMPOSITION dissemination material (posters, flyers, etc.) at relevant events and workshops by also making use of opportunities for dissemination activities in B2B brokerage events and presentations to key stakeholders. Moreover, as a technology provider, CERTH will be involved in developing, integrating and demonstrating project results in various demonstrators.

CERTH will also exploit its participation in several H2020 projects in different areas, to support cross-fertilization of ideas and to promote interoperability of solutions between the EU projects in which it is involved. Additionally, CERTH will also promote the results of COMPOSITION through its participation in various standardisation bodies, working groups and initiatives.



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COMPOSITION

Ecosystem for Collaborative Manufacturing Processes Intra- and Interfactory Integration and Automation

http://www.composition-project.eu/

Project ID	
Funding Organization:	European Commission
Funding Programme:	FOF-11-2016 - Digital automation
Funding Instrument:	Research & Innovation Action
Start Date:	01 Sep 2016
Duration:	36 months
Total Budget:	7,634,253 EUR
ITI Budget:	553,750 EUR
Scientific Responsible:	Dr. Dimitrios Tzovaras

COMPOSITION

Data and services have become the key factor in manufacturing processes. The need to react on dynamically changing market demands is dramatically rising. One of the most imperative problems so far is to connect supply chain data and services between enterprises and to connect value chain data within a factory, so that it can meaningfully support decision-making. COMPOSITION will create a digital automation framework (the COMPOSITION IIMS) that optimizes the manufacturing processes by exploiting existing data, knowledge and tools to increase productivity and dynamically adapt to changing market requirements. This technology acts as the technical operating system for business connections between factories and their suppliers. Furthermore, it opens a new space for third party entities to actively interact in the supply chain, e.g., by providing services to improve cycle time, cost, flexibility or resource usage. In addition to the supply chain improvements, also the processes inside the company will be addressed and optimized. Data across the (multi sided) company internal value chain is integrated by an Integrated Information Management System (IIMS) with optimisation and modelling tools for resource management including innovative, multi-level, real-time cross-domain analytics including a Decision Support System. The technology will be based on extending existing FI-WARE and FITMAN catalogues and LINKSmart® Middleware and adapt the concept of Industrial Data Space. COMPOSITION will implement, demonstrate and validate the system in two multi-sided pilots that show the modularity, scalability and re-configurability of the platform across multiple application domains. The first pilot in the biomedical device domain focuses on the integrated information management system in a multisided manufacturing process. The second pilot concentrates on the interaction between different companies using the COMPOSITION ecosystem with the agent-based marketplace for collaboration.

Consortium

- FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. – Germany
- BOSTON SCIENTIFIC LIMITED - Ireland
- KLEEMANN HELLAS -INDUSTRIAL COMMERCIAL SOCIETE ANONYME FOR MECHANICAL CONSTRUCTION SA - Greece
- ATLANTIS ENGINEERING AE - Greece
- NEXTWORKS - Italy
- ELLINIKI DIAHEIRISI APPRIMATON ANONYMI ETAIRIA – ELDIA - Greece
- UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK - Ireland
- IN-JET APS - Denmark
- CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS - Greece
- CNET SVENSKA AB - Sweden
- ISTITUTO SUPERIORE MARIO BOELLA SULLE TECNOLOGIE DELL'INFORMAZIONE E DELLE TELECOMUNICAZIONI ASSOCIAZIONE - Italy
- ATOS SPAIN SA - Spain

Contact

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Email: tzovaras@iti.gr

Figure 12 CERTH's website

3.3.1.10 Cnet Svenska AB

Cnet Svenska AB (CNET) is a leading-edge software house specialising in research and innovation for Internet of Things, Services and People. CNET is the technical coordinator of COMPOSITION, leading the development of the architecture and design of the system including data security. Thus, they will focus on stakeholders from industrial community and they will disseminate project results on trade fairs such as CeBIT or Hanover Fair, in collaboration with other partners.

Publishing scientific papers to relevant conferences and presenting results at these conferences is part of strategy to disseminate COMPOSITION results. Indicative examples are:

- IEEE International Conference on Emerging Technologies and Factory Automation http://icet2016.pieas.edu.pk/html/ (url for the event in 2016)
- ACM CHI Conference on Human Factors in Computing Systems https://chi2016.acm.org/wp/ (url for the event in 2016)

CNET also plans to attend events organized by the EC or business contacts representing COMPOSITION, giving talks and disseminating the results. As a technology provider, CNET will participate in developing, integrating and demonstrating project results in demonstrators as well as take part in clustering activities, first of all in the workshop series for collaboration among all FoF-11-2016 projects.

Together with Swedish Computer Society they will organise IoT-related training courses and conferences where COMPOSITION will be presented. A first event organised by CNET and the Swedish Computer Society was the IoT for Business conference on October 2016 in Stockholm, where COMPOSITION was presented by Dr. Marc Jentsch from Fraunhofer.

Besides contribution to the common COMPOSITION project means of dissemination, CNET will produce individual website entries, brochures, flyers and press releases, which will focus on their own contributions for individual dissemination use. Furthermore, during CNET's regular business meetings with existing and prospective customers they will also introduce COMPOSITION and its results. That will give early feedback on market interest of various functionalities being developed in the project.

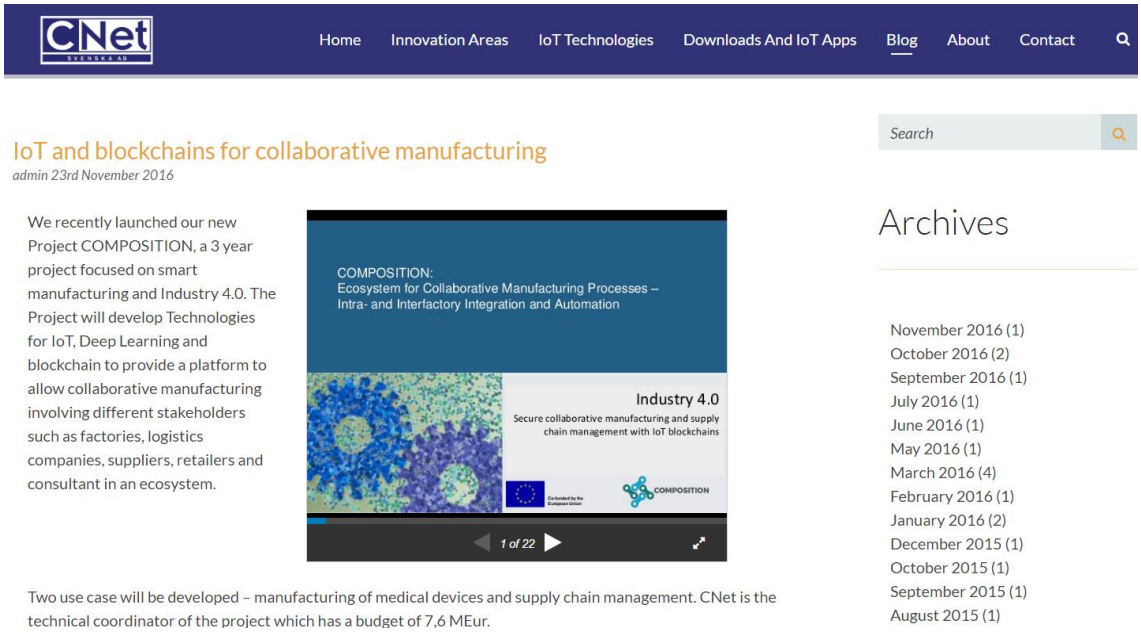

Figure 13 CNET's website

3.3.1.11 Istituto Superiore Mario Boella

Istituto Superiore Mario Boella (ISMB) is a research and innovation centre located in Turin, operating in the ICT domain. ISMB works in close cooperation with companies, academia and public administration, thus playing an active role in devising innovative solutions and their implementation.

As an applied research institute, ISMB will mainly focus on dissemination of COMPOSITION results to the academic and scientific communities, as well as to its network of local, national and European enterprises. Results from the project, particularly those concerned with deep learning and agent-based market place solutions, will be disseminated at international conferences and on peer-reviewed journals. Moreover, technical comments and blog entries are also foreseen to spread among technical communities the lessons learned and concepts developed in COMPOSITION.

Among the foreseen publications, ISMB is considering the following conferences and journals:

- International Joint Conference on Artificial Intelligence http://ijcai-17.org/
- IEEE International Conference on Self-Adaptive and Self-Organizing Systems http://www.saso-conference.org/
- International Conference on Agents and Artificial Intelligence http://www.icaart.org/PartnerEvent.aspx?y=2017
- International Conference on Autonomous Agents and Multiagent Systems http://www.aamas2017.org/call-for-papers_aamas2017.php
- International Conference on Industrial Applications of Holonic and Multi-Agent Systems https://www.ciirc.cvut.cz/miscellaneous/holomas2015/ (url for the event in 2015)
- International Conference, Industry 4.0 In Practice http://www.tallinn.ee/eng/Uudis-International-Conference-Industry-4.0-in-Practice
- International Conference on Flexible Automation and Intelligent Manufacturing http://www.faim2017.org/
- ICANN, International Conference on Artificial Neural Networks http://icann2016.org/ (url for the event in 2016)
- VLDB, International Conference on Very Large Data Bases http://www.vldb.org/2017/
- KDD, Conference on Knowledge Discovery and Data Mining http://www.kdd.org/kdd2016/ (url for the event in 2016)

ISMB will consider the organisation of webinars, after the evaluation of the results of the project, as well as presentations at industrial workshops. Acknowledging that the objectives of the COMPOSITION project are fully in line with the “Factories of the Future 2020: Roadmap 2014-2020” developed by the European Factory of the Future research organisation (EFFRA), ISMB will contribute to the clustering activities within EFFRA, being a research member of this organization.

Moreover, ISMB will exploit its participation in several H2020 proposals in different areas, to support cross-fertilization of ideas and to promote interoperability of solutions between the EU projects in which they are involved. This activity also exploits the active participation of ISMB in AIOTI and IERC$_a$ Clusters.

Figure 14 ISMB's website

3.3.1.12 Atos

ATOS is a leading provider of digital services such as Consulting and Systems Integration services, Managed Services and BPO, Cloud operations, Big Data and Cyber-security solutions. In COMPOSITION, Atos Research and Innovation will participate in several activities, especially related to the security and reliability of the platform.

ATOS dissemination activities will aim at maximizing the visibility and diffusion of the project results both externally and internally. Starting with external dissemination, ATOS will present at international conferences the results of its research activities carried out within the project. The aim of attending events and making presentations is drawing the attention of the actors that will boost the optimal exploitation of the project results. ATOS will pursue involving the stakeholders who are designing the European Innovation Agenda. Their engagement is paramount to push forward the outcomes of the project. As a large IT company operating worldwide, ATOS will make the most of their extensive contact network to spread the word of COMPOSITION.

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Cybersecurity

Addressing security, trust and privacy from a technological perspective, in an effort to ensure the security of citizens and organizations

Rodrigo Diaz Rodriguez
Head of Lab

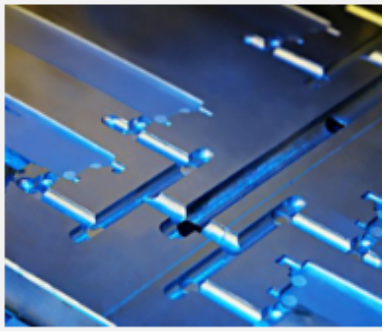
Description:

Trustworthy, secure and reliable ICT systems are crucial for a wide take up of converging digital services and a global requirement for the reliable and undisturbed functioning of our information society. In this scenario, the Cybersecurity (CS) lab is an interdisciplinary group that conducts research in the trust, security and privacy domains for the improvement of information technology security, as well as the increase of trust and dependability in systems and services.

Goals:

Our ambition is to coherently address security, trust and privacy from a technological perspective, in an effort to ensure innovation in the field of secure software development, secure service composition, and secure service delivery. The goal is to find solutions for ensuring the security of citizens and organizations from threats such as terrorism, natural disasters and crime, while respecting fundamental rights, such as privacy.

Our research areas include, among others: cyber security, compliance & policy management, secure software engineering, security in virtualized environments, automated reconfiguration of security and high performance Security Information and Event Management (SIEM) systems.



Main Activities:

The lab performs technical activities related to the implementation of:

- Innovative security mechanisms (e.g. dynamic or adaptive features).
- Compliance & Policy Management.
- Security event and information management infrastructure (e.g. evidence-based policy enforcement, including security/privacy event monitoring, collection and assessment).
- Security methodologies and frameworks (e.g. risk assessment and secure software development).
- CyberSecurity: fight against malware and botnets, improved resilience against cyber threats.

Challenges:

The lab addresses the following challenges:

- Security in shared service applications and infrastructures such as Cloud.
- Security & Privacy in Social Networks.
- Security of ICT in large distributed IT systems (sensor networks, interconnected critical infrastructures).
- Information exchange, interoperability and data fusion for situational awareness.
- Context-aware security and context-aware privacy protection.
- Digital forensics (e.g. forensics in Cloud).

Current Research Topics and Findings:

- Trust (establishment of trust relations, management of trust).
- High Performance Security Information and Event Management (SIEM).
- High Performance Compliance Management, including: Evidence Collection, Compliance Assessments and Accountability.
- Privacy by Design, Context-aware privacy enhancement and privacy preservation.
- Security for Virtualized environments.
- Secure Software Engineering.
- Automated Reconfiguration of Security.
- Risk and cost-driven security decision making.
- Prevention of crime and efficient collaboration of police forces.
- Data protection technologies and applications.
- Botnets detection and mitigation.

Projects

ACDC *ACDC - the Advanced Cyber Defence Centre* http://www.botfree.eu/		Bringing together organizations from 14 European countries, including public administrations, private sector and academia, in order to achieve a sustainable victory over a powerful cyber threat commonly known as botnet.
COMPOSITION *Ecosystem for Collaborative Manufacturing Processes - Intra-and Interfactory Integration and Automation* http://www.composition-project.eu/	H2020	COMPOSITION will create a digital automation framework (the COMPOSITION IIMS) that optimizes the manufacturing processes by exploiting existing data, knowledge and tools to increase productivity and dynamically adapt to changing market requirements.

Figure 15 Atos's website

The company will leverage its consolidated dissemination channels such as:

- ATOS communication department, which will feed the media (radio, newspaper, television) with relevant contents generated by the project. Such press releases are meant to be generated coinciding with major milestones of the project;

- "axia": "axia" is Atos Spain´s corporate magazine (only edited in Spanish). The aim of "axia" is to reinforce Atos corporate image and effectively communicate the company´s knowledge and success stories in the Information Technology market. "axia" targets first management level of the biggest Spanish companies (clients, prospects, Public Sector, partners, Media, business schools and professional associations).
- ATOS Ascent initiatives (http://ascent.atos.net) are designed to share, with ATOS´ customers, partners and employees, thought leadership and innovative thinking on emerging trends in many areas;
- Scientific Community: publically launched by Thierry Breton, Chairman and CEO of ATOS, and sponsored by Hubert Tardieu, the Scientific Community has 110 members from all geographies where ATOS operates, representing a rich mix of skills and backgrounds. Its aim is to help ATOS anticipate and craft its vision of upcoming technology disruptions and the future business challenges that will be faced by the markets it serves. By making this vision available to its clients and investing areas related to the COMPOSITION findings, ATOS intends to help its clients make informed decisions regarding the future of their business technology solutions.

Moreover, ATOS will continuously leverage various social networks to inform about COMPOSITION. As for internal dissemination, ATOS will give paramount importance to this with a view to ease a smooth adoption of the project results and inclusion in the company´s value chain, in coordination with the exploitation activities. This is a major challenge in a company composed of more than 86000 technologists. With this purposes, periodic internal seminars and webinars will be organized when relevant achievements are accomplished. Specific groups of interest will be invited to these actions and their feedback will be leveraged to steer correctly the work on the project.

In terms of considering events to disseminate the COMPOSITION results, ATOS is looking into the following indicative list:

- Trust in Digital World 2017, organized by Trust in Digital Life (TDL). Pending of announcement of date/ location. https://www.eema.org/event/trust-digital-world-2016/ (url for the event in 2016)
- Cybercamp 2017. Pending of announcement of date/ location. https://cybercamp.es/en (url for the event in 2016)
- Infosecurity Europe 2017, Olympia, London, United Kingdom, 6-8 June, http://www.infosecurityeurope.com/
- FT Cyber Security Summit Europe 2017. Pending of announcement of date/ location. https://live.ft.com/Events/2016/FT-Cyber-Security-Summit-Europe (url for the event in 2016)
- Cyber Intelligence Europe conference 2017. Pending of announcement of date/ location. http://www.intelligence-sec.com/events/cyber-intelligence-europe-2016 (url for the event in 2016)
- The 12th International Conference on Critical Information Infrastructures Security (CRITIS 2017). Pending of announcement of date/ location. http://critis2016.org/ (url for the event in 2016)
- 2017 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe 207), Torino, Italy, 26-29 September 2017 http://sites.ieee.org/isgt-europe-2017/
- 8th Annual International Cybersecurity conference DSS IT SEC 2017. Pending of announcement of date/ location. https://cybersecuritymonth.eu/ecsm-countries/latvia/7th-international-annual-conference-dss-itsec-2016 (url for the event in 2016)
- IFIP Networking 2017, Stockholm, Sweden, June 13-15. http://networking.ifip.org/2017/ (url for the event in 2016)
- 50th CIRP Conference on Manufacturing Systems, Taichung city, Taiwan, 3rd-5th May 2017 http://www.cirp-cms2017.org/

3.4 Dissemination management

The Dissemination Manager (DM), Dr. Ifigeneia Metaxa is responsible for coordinating the dissemination activities and for this purpose a wiki and a shared workspace system have been established for partners to record their activities. She will continuously invest effort in: a) disseminating the project results, b) coordinating partners and tasks, c) making sure that the partners cooperate harmonically, and d) preventing misunderstandings.

On the wiki, all partners are requested to enter information about activities originating from COMPOSITION funded work such as events organised or attended and publications submitted and presented. In the workspace system, partners will add any press coverage, publications or material produced as well as access general presentation material. The wiki will be used also to better plan and monitor activities. The purpose is to ensure that the dissemination goals are met, all activities are tracked and all relevant information is available and disseminated through the channels.

All partners are involved in the dissemination process, with the five managers (PM, TM, IM, QM, DM) playing key roles. Combination of dissemination and exploitation activities is considered of high importance to maximise the effectiveness of use of resources. Actions are continuously planned and they will be evaluated in Project Meetings. Online meetings will complement the process. The members of the consortium strongly believe in the COMPOSITION vision and they are committed to spread the word about the achievements of the project. Thus, each partner has already appointed a person as the contact point for the communication and dissemination issues.

3.5 Dissemination and communication obligations

The dissemination plan implements the project's stated dissemination strategy in order to maximise impact and is structured by a broad communication plan. The partners must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner. The plan and report process for dissemination actions will be continuously monitored to ensure that it is in line with the evolving business and research interests of the partners and emerging market trends in the wiki framework. Thus, for *WP9 Business Models, Dissemination and Exploitation* special pages have been created, *Events Calendar* and *Indicative conferences, trade fairs and events to consider*.

Other than those results that should be protected and not disseminated and exploited, each partner must present its results to the public by appropriate means and dissemination channels.

Where applicable, before dissemination takes place, all partners need to formally notify the European Commission regarding their intentions to protect their results or not (*Article 26.4.1 of the Grant Agreement*).

3.5.1 Advance notice

Each partner that intends to disseminate their results must inform in advance the other project participants (unless it is agreed otherwise) at least 45 days in advance, together with all sufficient information on the results that will be disseminated. Unless it is decided otherwise, any other partner may object within 30 days of receiving notification, in case that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests. The advance notice is required when disseminating project results that involve and/or affect multiple partners.

3.5.2 Open access to scientific publications

The “green access” model will be used by the Consortium and a self-archived version of any article published in any journal for free public use is will be created. For this purpose, CERTH will provide a repository that will be available and accessible within 6 months of publication. Additionally, the publications will be also published on the project website.

All partners must ensure open access to all peer-reviewed scientific publications relating to their results. In particular, all partners must as soon as possible provide a readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications. Also, at the same time the partner(s) must provide the research data in order to validate the presented results in the prepared scientific publications. Correspondingly, open access repository of prepared publication should be available for free via the publisher in an electronic version within six months of publication and to the bibliographic metadata that identify the prepared and deposited publication. (*Article 29.2 of the GA*).

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

3.5.3 Acknowledgment of funding

Acknowledgment of EU funding is obligatory in all communication and dissemination material within the framework of COMPOSITION. The EU emblem (EU flag) must be displayed together with the programme. The EU logo must be at least 1 cm high and not smaller than other logos displayed next to it:

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 723145.

Figure 16 COMPOSITION Logo

In terms of the project logo, IN-JET suggested several options and the partners have chosen the following COMPOSITION logo which will be used in all communication and dissemination material.

3.5.4 Disclaimer

A disclaimer excluding Commission responsibility needs also to be added to any dissemination of results. Example:

The content reflects only the author’s view. The Commission is not responsible for any use that may be

made of the information that it contains.

A legal notice can be added to project material. Example:

This [document, presentation] is intended for information about the COMPOSITION project only. The COMPOSITION Consortium makes no warranties, express, implied or statutory as to the information provided in this material. Neither the European Union nor the COMPOSITION Consortium are liable to any use that may be made of the information therein. All rights reserved. Copyright: the COMPOSITION Project.

3.6 Public deliverables

All deliverables that have been approved by the Commission and marked as public will be available on the project site for download and usage. All other deliverables that are classified and defined as either confidential or restricted, need to be approved by the consortium or the involved partners before any release, dissemination, communication, and exploitation of results.

4 Dissemination plan

The dissemination plan is prepared in order to ensure that the project results will be shared, delivered and integrated within the targeted groups and community in general. The objectives of the COMPOSITION dissemination strategy have been defined and the idea and aim is to optimise dissemination of useful innovations and to lift the transfer of project knowledge and research results to potential users. Furthermore, the dissemination plan, prepared with the collaborative work of the partners, is in line with the dissemination strategy.

Different individuals, groups, and organisations have been targeted and COMPOSITION results will be presented and delivered throughout the project's lifetime. The dissemination plan provides and ensures: i) the successful implementation and impact of the project, ii) awareness raising of potential users in manufacturing value chains, as well as the industrial and ICT research communities and iii) that the community in general will be informed and engaged.

A wide variety of dissemination methods have been defined e.g., printed marketing materials, online activities, publications in journals and conferences, different events and networks as tools and channels used to disseminate COMPOSITION results.

The following section outlines a set of quantitative and well-defined values, the Key Performance Indicators (KPIs), to measure the impact of efforts at programme and project level. The project has established these measurable values for dissemination and their timing in order to maximise its impact and to achieve the objectives defined in section 3 Dissemination Strategy.

The time schedule for some of the activities has been presented at tables 4 and 5 in sections 3.2.1 and 3.2.2, respectively. The overall time schedule (Table 12) for the set of the planned activities is presented below in section 4.2 coordination of activities.

4.1 Key Performance Indicators

COMPOSITION has defined a set of KPIs for dissemination and impact creation to help realise the strategic goals. KPIs are related to visibility and knowledge impact and cover publications, events, downloads, webinars and other activities as outlined in the following sections.

COMPOSITION has defined a set of relevant KPIs for dissemination, distribution, impact creation and effective influence to pursue, implement and realise the strategic goals and targets. KPIs outlined in sections 4.1.1 and 4.1.2, are related to visibility of the project and knowledge impact on a wide audience e.g. industry, technology domain, public sphere and policy makers. Additionally, a set of generalised KPIs for impact creation has been established and presented in section 4.1.3 (Tables 9 – 11).

All partners of the project have clear responsibilities and tasks within the project and they will monitor the established KPIs which cover publications, events, seminars, webinars and other activities defined at chapter 3.2. The goal is to accomplish the maximum dissemination of results by the end of the project and to prepare the base for further project exploitation beyond its lifetime. The members of the consortium are committed to follow the dissemination plan in order to meet the values set for the established KPIs.

Furthermore, the progress of the realisation of the KPIs will be monitored by the Project Board. The Dissemination Manager will be responsible for the coordination of this activity. The scope is to ensure that the dissemination plan is followed and that the set goals at the end of every project year are met.

4.1.1 Visibility of the project

The sharing of project results and dissemination activities that include press releases, newsletters, brochures, leaflets, promotional videos, workshops, seminars, etc., are going to be prepared according to the related part of the dissemination plan. The overall plan has been designed to implement the project's dissemination strategy in order to maximise its effect and result exploitation. The efforts are measured through the use of KPIs and respective to the timeline (*Tables 4 and 5,* sections 3.2.1 Printed marketing material*,* 3.2.2 Online activities*,* 3.2.3 Publications (journals, conferences and more)*,* 3.2.4 Events and networks) in order to ensure that it is in line with the evolving business and research interests of the partners and emerging market trends.

The following KPIs have been identified to maximise the visibility of the project to the public, general press and professional actors. The KPI values are for the full duration of the project, except for the downloads of material, which correspond to a mean value for each project year:

Table 7: KPIs for visibility of the project

KPIs	Number:
Downloads of material from the website per year	1.500
Press releases issued	5
Newsletters issued	8
Brochures, leaflets, posters and promotional videos	6
Domain exhibitions attended	3
External workshops, seminars, etc. attended	16

A preliminary leaflet will be presented during the first 3 months of the project. Two posters will be created for use in trade fairs and workshops. A pre-commercial brochure will be prepared at the beginning of the third year of the project. Also, the preliminary leaflet may be issued ad-hoc in relevant languages to inform selected media about project news and three webinars will be conducted targeting different stakeholders.

Results and planned activities will be described as well by 8 electronic newsletters, which will be distributed to the relevant targeted groups by the individual partners, as well as via the project's website. In order to increase impact and effect, the content of each newsletter will vary and it will be adapted and improved according to the feedback from the stakeholders.

Moreover, the COMPOSITION results will be disseminated via a number of events and networks e.g. workshops and seminars, tradeshows, demonstrations, and clustering/symbiosis, as well through a different dissemination opportunities which will be monitored and shared via the wiki framework.

4.1.2 Knowledge impact

The project will contribute to the "knowledge economy" and it will influence the way of thinking of industry, technology domain, public sphere and policy makers. All partners and stakeholders will benefit from this research and innovation, since it is focussed on addressing real challenges and the way of thinking is influenced at the right time.

Every potential user in manufacturing value chains wants to follow and achieve various modern, agile and

flexible processes that can ensure faster production cycles, increase productivity, decrease waste and sustain production. The goal and impact of the project will lead to development of an integrated information management system (IIMS) which will optimise the internal production processes by exploiting existing data, knowledge and tools to increase productivity and dynamically adapt to changing market requirements. Thus, the knowledge impact and the overall influence of this ecosystem is anticipated to be high. The developed ecosystem will support the interchange of data and services between factories and their suppliers with the aim to invite new market actors into the supply chain.

The important and significant impact that the dissemination of knowledge generates for the project depends on a high level of activity in industrial and scientific circles and on engaging stakeholders. The role of each partner, both as parts of the consortium and their individual dissemination and exploitation efforts, are of high importance for knowledge impact towards targeted groups. The target groups have been presented in chapter 3.1 of this document, as well as in more details in *D9.1 Communication Strategy and Plan.*

Several scientific and technical papers, industrial publications and presentations will be prepared in order to contribute to the knowledge impact of the project and share information and real value of the COMPOSITION results. This dissemination actions will be pursued in the field of computer science, manufacturing and engineering, industrial and distributed computing, scalable processing, etc.

Furthermore, knowledge economy will be influenced as well through participation in industrial exhibitions and tradeshows. Each year partners will demonstrate and present COMPOSITION results at trade fairs that are related to the project's technologies, business sectors and pilots.

The following KPIs have been established with relevant, quantitative and measurable impacts for all partners that will contribute according to their own individual dissemination plans.

Table 8: KPIs for knowledge impact creation

KPIs	Number of:
Industrial publications	7
Conference papers and presentations	10
Relevant events attended	16
Contributions to pre-normative work	5

4.1.2.1 Collaboration

In order to maximise knowledge impact, further actions will be pursued in terms of reaching out to clustering structures and to achieve symbiosis with initiatives related to factories of the future.

Clustering/Symbiosis

The COMPOSITION objectives are fully in alignment with the "Factories of the Future 2020: Roadmap 2014-2020" developed by the European Factory of the Future research organisation (EFFRA), the research, and in particular with the enablers (ICT) and the societal challenges specific objectives (human involvement). Throughout the project the consortium will continuously refer to road-mapping activities carried on by EFFRA. At the current stage, the following EFFRA key technologies and research domains have been

identified as primarily relevant for COMPOSITION:

- ICT (key technology 6.4);
- modelling, simulation and forecasting method and tools (key technology 6.5);
- dynamic production systems and shop floors (sub-domain 2.2);
- collaborative and Mobile Enterprises (domain 4);
- customer-focused manufacturing (domain 6).

COMPOSITION foresees a direct engagement within EFFRA activities: IN-JET has been cooperating with EFFRA through is position as co-chair of FinES, the Future Internet Enterprise Systems cluster and will feed the results of COMPOSITION into EFFRA for creating impact in the FoF world, supported by all industrial partners. Moreover, CNET and FIT will take part in clustering activities, first of all in the workshop series for collaboration among all FoF-11-2016 projects as well as ISMB in AIOTI and IERC$_a$ Clusters. Likewise, regarding the aspect of Clustering and Industrial Symbiosis, ATL will initiate contacts with Chorus, the Green Energy cluster in which they are members and with partners active in FOCUS, a Factory of the Future Cluster. Furthermore, ISMB and ATL are members of EFFRA and could thus facilitate contacts with them.

Standardisation

The consortium foresees that the ecosystem's new vocabulary, semantic, data models, etc., within COMPOSITION will be of interest for distribution in relevant standardization bodies, e.g. ISO, CEN, CENELEC, CEN, ETSI etc. As discussed in section 3.2.5 the goal is to encourage interoperability and communication with relevant Working Groups in ISO (i.e. ISO/TC 184, in particular ongoing efforts in SC 04 "Industrial data" and SC 05 "Interoperability, integration, and architecture for enterprise systems and automation applications"), ETSI M2M (ongoing standards for Internet of Things, Cyber-Physical Systems, etc.) will be considered for transferring knowledge between the project and relevant standardization working groups. Moreover, COMPOSITION may submit a mandate covering emerging topics such as the semantic and syntactic interoperability of the future factories Integrated Information Managements systems (i.e. Working Group on Semantic Support for ETSI M2M standard).

The project will seek to obtain pre-normative support for the proposed standardisation activities through a series of dedicated workshops. The concept of "Vocabulary Camps" has proven to be successful tool for fostering agreement and support for interoperability standards in the Energy Efficiency in Buildings. The COMPOSITION project will duplicate this success by hosting 4 Vocabulary Camps involving stakeholders (industry, researchers in previous and ongoing FoF projects). The project will identify 4-5 key topics around Syntactic and Semantic Interoperability in the Manufacturing Sector covering different lifecycles and the workshops participants will identify gaps and contribute to the ecosystem of COMPOSITION. Results of these Vocabulary Camps will be made available to the Manufacturing community on a dedicated page like eeSemantics Wiki but also to the wider group of stakeholders.

4.1.3 Other activities

The KPIs presented in sections 4.1.1 and 4.1.2 are directly related to dissemination activities and they will be closely monitored in order to evaluate the dissemination progress and success. The KPIs presented in the following tables 9, 10, and 11, are also of importance to dissemination, because they describe the desired targets and goals to be achieved in the project. They connect the dissemination, as well as the exploitation strategy with the technical part of COMPOSITION. Thus, they allow the making of a stronger case and attract stakeholder's interest by describing the important impact of the project.

In order to handle and prosper in today's market industry, beside financial indicators, companies must include and track others as well, e.g. response time and product quality, customer satisfaction, maintenance and successful planning, etc. Key Performance Indicators in this section have been established by the consortium to evaluate and to boost improvement of future performance.

Three sets of generalised KPIs to assess the deducted impact have been established, namely for: a) the project's impact to productivity increase, b) new innovative services and models, c) reductions in the effort for integration or reconfiguration (Tables 9 - 11).

Table 9: Generalised KPIs for the project's impact to productivity increase

KPIs	Result in percent (%):
Overall reduction in down-time from failures & bottlenecks	15
Cost savings for process monitoring	25
Reduction of amount of non-critical spare parts availability	10
Reduction in cycle-times from process monitoring & behaviour	10
Better interaction with suppliers, recycling companies	10
Cost improvements from improved process monitoring	25
Improvement in manufacturing quality	5
Reduction of order-to-delivery time and shipping costs	10
Reduction in scrap and repair costs	50

Table 10: Generalised KPIs for new innovative services and models

KPIs	Number:
New, sustainable business models developed in the project	5
User acceptance ratio of validated ICT security/trust measures	> 95 %

Table 11: Generalised KPIs for reductions in the effort for integration or reconfiguration

KPIs	Result in percent (%):
Total reduction in efforts for integration or reconfiguration	30
Improvement of non-effective procedures with decentralisation	20
Reduction in time for optimisation of products/services	10

4.2 Coordination of activities

All activities are coordinated internally on a dedicated wiki page to ensure fulfilment of set goals and alignment with emerging results. Status is given through internal reporting focusing on the KPIs and the effects and impact of dissemination (i.e. evidence of press coverage, feedback from audience etc.).

In order to facilitate the coordination of dissemination activities and to allow for optimal planning and coordination with other tasks and work packages of the project, the following time schedule (Table 12) has been proposed. In case a specific time has been defined at the moment of the publication of the current deliverable, the month of the project is given in brackets. Otherwise, the timing of the action will be decided ad-hoc, for example according to which external events will be selected and when these will take place. It is pointed out that the part of dissemination activities related to *Clustering/Symbiosis* and *Contribution to normative work* are not included in this time table, since these activities are going to be continuously pursued throughout the project.

Table 12: Time schedule for dissemination activities

Dissemination tools and channels	Year 1	Year 2	Year 3
Preliminary leaflet (1)	1 (M03)	-	-
Poster (2)	-	1 (M15-M18)	1 (M27-M30)
Pre-commercial brochure (1)	-	-	1 (M25-M27)
Videos (2)	-	1	1
Press releases (5)	2 (M03, M04)	1	2
Newsletters (8)	2(M08, ad hoc)	3	3
Webinars (3)	-	2	1
Workshop (1)	-	-	1 (ad hoc or M29-M32)
External workshops, seminars, etc. attended (16)	5	6	5
Industrial publications (7)	2	2	3
Conference papers and presentations (10)	2	4	4
Tradeshows (3)	1	1	1
Demonstrations (2)	-	1 (M24)	1 (M36)

5 List of figures and tables

5.1 Figures

5.2 Tables

5.3 Abbreviations

Abbreviation	
AIOTI	The Alliance for Internet of Things Innovation
B2B	Business to Business
BoD	Board of Directors
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CEO	Chief Executive Officer
CMMS	Computerized Maintenance Management System
CSA	Coordination and Support Action
CSR	Corporate Social Responsibility
D	Deliverable
DM	Dissemination Manager
DG	Directorate General
DSS	Decision Support System
EC	European Commission
EFFRA	European Factory of the Future research organisation
EFNMS	European Federation of National Maintenance Societies
ETSI	European Telecommunications Standards Institute
EU	European Union
FinES	Future Internet Enterprise Systems
FoF	Factories of the Future
HMS	Hellenic Maintenance Society
HSWMA	Hellenic Solid Waste Management Association
ICD	Implantable Cardioverter Defibrillator
ICT	Information and Communication Technologies
$IERC_a$	European Research Cluster on the Internet of Things
$IERC_b$	International Energy Research Centre
IIMS	Integrated Information Management System
IM	Innovation Manager
IoT	Internet of Things
ISO	International Organization for Standardization
IT	Information Technologies
KPI	Key Performance Indicators
M	Month

M2M	Machine-to-Machine
PM	Project Manager
QM	Quality Manager
R&D	Research and Development
SME	Small and medium-sized enterprise
TC	Technical Committees
TM	Technical Manager
WIP	Work in progress
WP	Work Package
WSN	Wireless Sensor Network

6 References

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