DELIVERABLE 5.3.1

FOOD MICRO SYSTEMS

REPORT ON TRAINING SESSIONS

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Coordinator ACTIA

SEVENTH FRAMEWORK PROGRAMME

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FoodMicroSystems aims at initiating the implementation of microsystems & smart miniaturised systems in the food sector by improving cooperation between suppliers and users of microsystems for food/beverage quality and safety.

The project runs from September 2011 to November 2013, it involves nine partners and is coordinated by ACTIA (Association de Coordination Technique pour l'Industrie Agro Alimentaire, France). More information on the project can be found at http://www.foodmicrosystems.eu.

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1 Introduction

The FoodMicroSystems dissemination activities include a set of actions aimed at increasing the awareness of food industry in microsystems and the interest of the MST community in the food sector. It includes the organization of information campaign (direct emails to a mailing list of 411 contact details) as well as the organization of events designed for both the food community and the MST community. This deliverable covers the **activities targeted at the MST community**.

According to the Description of Work, three events (called “training sessions”) had to be organized within the task 5.3.1: one in France by the CEA, one in Spain by the CSIC and one by Fraunhofer in the Netherlands. The main focus was on the knowledge of food chains and communication of results from industry. The training sessions were open and promoted to participants outside the consortium.

This deliverable presents the activity implemented with details on the preparation of each event, their implementation and their results.

2 In France

In the meantime of the FoodMicroSystems project the CEA-Leti has set-up a program management team now focused on the wide domain of environment health and agriculture and food and beverages application sectors. A group of experts from the different areas of microsytems and microtechnologies within Leti has organized regular meetings to share market information that is transverse to the technological organization of the Leti. Thus several opportunities were given during the second half of 2013 to share roadmaps within the Microsystems community in CEA-Grenoble and ask to the Key Account Managers to spread the information within the different technological Department (micro-optics, microtechnologies and sensors on silicon, microtechnologies on polymer substrates, RFID smart tags and miniaturized antennas, systems based on network of micro-sensors, and so on.

Cea-Leti organizes each year in June the Leti – innovation Days and a introduction of the FM project has been presented on Wednesday the 26th.

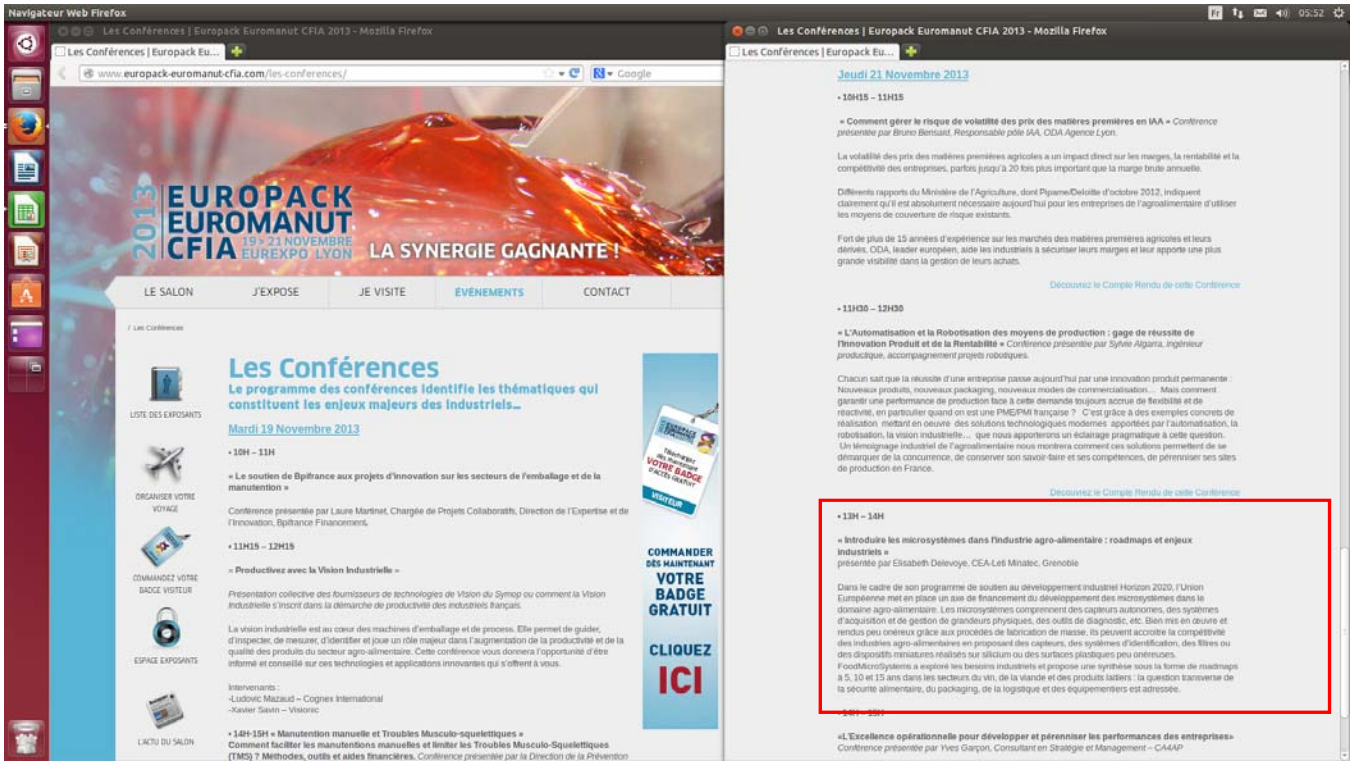
Finally a specific dissemination day at a national scale has been organized with the kind support of the organizers of the Europack-Euromanut-CFIA in Lyon on 2013 November 19-21.

2.1 Preparation of the event

CEA and ADIV joined at the Trade show and did direct dissemination toward exhibitors thanks to the flyers and thanks to the roadmaps reports that could be seen on the project web site. Then a one hour talk has been given at the conference hall of the exhibition according to the agenda that is shown below.

The Europack-Euromanut Trade show and the CFIA exhibition fair were grouped in a unique event for the first time this year. It is the 22nd edition of the “Carrefour des Fournisseurs de l’Industrie Agroalimentaire” which brings together suppliers and parts manufacturers from the food processing. It is the 16th edition of the Europack-Euromanut trade show where professional across all segments of the packing, conditioning, labeling and handling industries can meet. It has been explained in the report D6.4 (section Task 4.3 roadmap for the meat sector) why this sector target is the best one for a dissemination event. Moreover Europack-Euromanut-CFIA is strategically combining two key events in the sector and bring the ideal solution for linking the supply and the demand in the industrial food and beverage world. 425 exhibitors have registered for this event and close to ten thousands visitors came.

Finally the website of the trade show offers the opportunity to leave a short slide show with a free and public access.



2.2 Implementation

Thanks to the above-cited contribution (talks, flyers, internal and external meeting contacts, and so on) it has been easy to widely spread the FM roadmaps. The CFIA dissemination list is shown below. No exhaustive dissemination list can be gathered specifically for the Microsystems world since the experts were registered to a wider event (Leti Innovation Days) or already belong to the wide Microsystems network.

Dissemination list at Europack-Euromanut-CFIA trade show:

1. AELP Automatisation et Equipements de Ligne de Production www.aelp.fr **Luc Ciron** 21130 Les Maillys

2. Consultiaa - **François Pecquerie** fpecquerie@wanadoo.fr

3. Electrifil – **Olivier Andrieu** Innovation Cell Manager 01708 Miribel

4. ABB Autmation and Power Technologies **Guy Brun** Sales Manager 95310 Saint-Ouen l'Aumône

5. Tronic's Microsystems – **Vincent Gaff** – Advanced MEMS Business Unit Manager

6. EPFL – **Adrian Ionescu** – Nanolab Director

7. ARDI Rhone-Alpes – Systèmes electroniques – **Jean-Jacques Lamboley** - project manager

8. Meito – Mission pour l'electronique l'informatique et les telecoms de l'Ouest – **Tiphaine Leduc** - Pgm AgrETIC – 35700 Rennes

9. Agence regionale Pays de Loire Territoire d'innovation – **Viviane Kerlidou** – 44202 Nantes

10. Valorial – Agrocampus Ouest – **Valérie Beauvois** – http://www.pole-valorial.fr 44202 Nantes

11. Cea-Tech en region – Pays de Loire – **Jean-Yves Benaiteau** – jybenaiteau@free.fr

12. Cea-Tech en region – Midi Pyrénées – **Nicolas Silllon** – Nicolas.sillon@cea.fr

13. Cea-Tech en region – Aquitaine – **Patrick Chaton** – Patrick.chaton@cea.fr

14. Brioche Pasquier group **Carel Stam** 49360 Les Cergueux

15. MS3D In line 3D dimensional inspection www.ms3d.eu

16. ASC instrument, spécialiste du contrôle d'étanchéité non destructif – **Johanna Guibout** – 95015 Cergy Pontoise

17. CEISTA international – Compagnie Electrique d'Intégration de Sous-Traitance en Asie – **Régis Huber** – General Manager

18. Polytec France – Optical systems, Measurement and Control – **Damien Callet** – Technico-commercial

19. Bertocchi – Patented turbo extractor – Fabio Tedeschi – Parma, Italia

20. Mecatherm group – Gouet Baking systems – Ligne Pain plat – Pizza – **Olivier Sergent** – General Director – 67130 Barembach

21. MAJA – Machines de traitement de la viande et du poisson – **Didier Cailhol** – Technico-commercial – 67960 Entzheim

22. CEIA INTERNATIONAL www.ceia.net **Laurent Gros-Désirs** Technico-commercial 95912 Roissy CDG

23. COGNEX www.cognex.com **Daniel von Rookhuijzen**

24. HOEGGER ALPINA FRANCE www.alpinafrance.com **Christophe Lalique** - 68160 Sainte-Marie aux Mines

25. IFM ELECTRONIC www.ifm.com/fr **Thierry Delplanque** - Ingenieur technico-commercial

26. LE MANS PROCESS AGRO www.processagro.fr **Eric Foucherot** - 38200 Seyssuel

27. MECASONIC www.mecasonic.com **Philippe Ginot** – Conseiller technico-commercial 74105 Annemasse

28. OPTO www.troublebox.eu **Patrick Trannois** Directeur France www.opto-france.com - 74000 Annecy

29. ROLLON www.rollon.fr **Cyrille Boissezon** - Technico commercial sédentaire - 69760 Limonest

30. SICK www.sick.fr **Steven Haffa** Product Manager Registration sensors Waldkirch

31. SYMOP www.symop.com **Gilles Gaubert** – Trade groups and international manager – 92400 Courbevoie

32. TREIF www.treif.com **Frédéric Haag** – chef de region – 67460 Souffelweihersheim

33. VISIONIC www.visionic.fr **Nicolas Balin** – Responsable commercial

34. KALLFASS www.kallfass.fr **Dominique Stor**ck – Directeur technique

35. SFERE BM www.sferebm.fr **Christophe Maynadier** – Systèmes et Consommables d'emballage - Président

36. STOPPIL www.stoppil.fr **François Butaeye** – Export sales 77602 Marne-La-Vallée Matériel de comptage, dosage et conditionnement des liquides

37. INOTEC France www.inotec.fr Barcode security / **Bernard Pagnon** - 91967 Les Ulis

38. MAVIFLEX www.maviflex.com **Romain Simon** – Directeur Général - 69150 Décines

2.3 Results

The FM roadmaps are considered interesting tools because they raise discussion inside food supply chains by bringing novel information to be debated between supply chain contributors who usually do not interact at such a level of integration.

It is suggested that the actual graphics may be used as entry point and methodology guide to invite companies in the food sector to apply it to their own needs with the help of the Microsystems experts. Microsystems world could provide numerous solution providing the needs are first expressed and then reformulated thanks to a common definition effort. The companies could let their own high level demands be gathered thus contributing to a future improvement and upgrading of the roadmaps.

3 In the Netherlands

3.1 Preparation of the event

Fraunhofer participated with a talk at the COMS 2013 conference in Enschede, Netherlands. COMS 2013 is the 18th edition of the annual international conference on commercializing micro- and nanotechnology and brings together leaders from all over the world and relevant sectors of industry. COMS focuses primarily on entrepreneurship and marketable solutions, but also science and technology. More than 200 participants from all over the world, among them approx. 150 from Europe, participated at the COMS conference, mainly with an MST background. We decided to participate with a talk on "Current and future sensor technologies – towards a roadmap for dairy processing" at this conference to reach a high number of MST researchers to transfer our knowledge of food chains and communicate the results of the FoodMicroSystems project.

3.2 Implementation

The conference was held from August 25-28, 2013. On August 26th, two sessions were dedicated to the implementation of MST in the food sector. Fraunhofer IPM gave a talk in session "B1 – Industry needs and a microsystems roadmap for food processing", chaired by Christophe Cotillon (ACTIA) and Patric Salomon (enablingMNT). The full conference programme can be found at: http://www.coms2013.com/programme/full-programme

List of participants at the COMS conference:

Family name	First name	University/company
Aasvang	Roar	Jarlsberg Partners AS
Ambrosius	Huub	NanoLabNl
America	Kim	EDC Europe
Amundsen	Snorre	OSWO AS
Andreski	Alexander	Saxion Univerity of Applied Sciences
Ayres	Lee	Encapson
Aziezie	Aryan	Saxion, University of Applied Sciences
Baar	Andreas	Oost NV
Bakker	Wouter	Saxion University of Applied Sciences
Barnhoorn	Jacqueline	MicroTech Innovation AS
Baumann	Reinhard R:	Technische Universität Chemnitz
Bebion	Tamara	University of Twente

Becker	Conrad	Global Media-Foreign Affairs
Beernink	Jaap	Golden Egg Check
Benschop	Jos	ASML
Berendsen	Marja	NanoNextNl
Bergslien	Helge	NCE Culinology
Bernsen	Ruud	Phenom-World
Birx	Donald	Penn State Erie, The Behrend College
Blank	Dave	University of Twente
Broen	Stian	Broentech AS
Brosvik	Berit	SensoCure AS
Buijs	Paul	Bruco Integrated Circuits
Buss	Felix	Karlsruhe Institute of Technology
Byrne	Edward	Micronarc
Carpenter	Everett	Virginia Commonwealth University
Chisholm	Lily	Monash University, Australia
Cornelissen	Tom	Oost NV
Costa	António Braz	CeNTI - Centre for Nanotechnology and Smart Materials
COTILLON	CHRISTOPHE	ACTIA
Curran	Seamus	University of Houston
Curtis	Susan	IOP Publishing
Dalseg	Roger	NCE Micro- and Nanotechnology
Davenport	Clive	MANCEF
De Boer	Meint	University of Twente
de Jong	A. Frank	FEI
de Moor	Bram	Characell
de Rooij	Nico	EPFL & CSEM
DELMAS	Dominique	Futurs Health Products
Dickerhof	Markus	KIT
Diewitz	Marte-Marie	Germany Trade & Invest
Dillingh	Pieter	Kennispark Twente
Dirne	Frank	Delft University of Technology
Dobay	Kata	University of PÃ©cs, Hungary
Drent	Peter	Nikon Instruments Europe BV
Durfee	Marisa	University of New Mexico
Eijkel	Kees	Kennispark Twente
Eiroma	Kim	VTT Technical Research Centre of Finland
Elders	Job	Greenfield Foundation
Esteves	Telma C.	University of Twente

Fagerberg	Linn	MicroTech Innovation AS
Falke	Floris	Saxion Univerity of Applied Sciences
Feenstra	Janinka	Kennispark Twente
Feenstra	Frits	TNO
Fernandez Rivas	David	University of Twente
Ford	Ralph	Penn State Erie, The Behrend College
Franken	Michel	Demcon
Frenken	Joost	Leiden University
Fretz	Marjan	NanoNextNl
Fretz	Marjan	NanoNextNl
Galvin	Gregory	Kionix, Inc.
Garcia Espallargas	Santiago	Novel Aerospace Materials
Gastinger	Kay	NTNU
Gerards	Henk	Business Cluster Semiconductors Netherlands
Germann	Roland	IBM Research - Zurich
Gielgens	Léon	NanoNextNl
Griffin	Hugh	IceMOS Technology
Groenewegen	Ramona	NanoLabNL
Gusland	Ole Henrik	Memscap AS
Gyllenberg	Ulrika	VTT
Gyselinckx	Bert	Stichting imec Nederland
Haak	Robert	Michigan Technological Univ.
Hackney	Paige	Michigan Technology University
Haneveld	Jeroen	Micronit Microfluidics
Hansen	Stein Ivar	MicroTech Innovation AS
Harms	Rainer	Twente
Haugseth	Sissel	MicroTech Innovation AS
Heesink	Annerie	University of Twente
Heideman	René	Saxion Univerity of Applied Sciences
Herrera	Gilbert	Sandia National Laboratories
Hildenbrand	Nicolas	SolMates BV
Hinke	Jens	Saxion University of Applied Sciences
Hirschman-Hemmink	Mandy	Oost NV
Hoedemaekers	Janneke	AgentschapNL
Hoefman	Remi	Saxion University of Applied Sciences
Hojerback	Peter	Serstech AB
Hoogeveen	Albert	Oost NV
Houwelingen	Jeroen	NanoNextNl
Huijben	Marc	University of Twente

Hutchins	Jamie	IOP Pubishing
Joppe	Jan Leendert	TNO
Jost	Edward	IOP Pubishing
Kane	John B.	C-Voltaics
Karlsen	Einar	Elektronikkforlaget AS
Kassicieh	Sul	U of New Mexico
Kessels	Erwin	Eindhoven University of Technology
Kirk	Dwayne	Melbourne Centre for Nanofabrication
Klaue	Daniel	Technische Universität Dresden
Koetse	Marc	Holst Centre / TNO
Kogan	V.	Dannalab BV
Kolkman	Roy	High Tech Factory
Komen	Job	University of Twente
Korthorst	Twan	PhoeniX Software
Korting	Jos	Axxicon
Koster	Dick	NanoNextNL
Kromwijk Smits	Jelto	Prime Ventures
Lambrechts	Marc	Capricorn Venture Partners
Land	Elderd	Gimv
Langerak	Casper	Agentschap NL
Langkamp	Martin	WWINN Group
Lawes	Ron	MiniFAB
Liao	Kang-Shyang	C-Voltaics
Linton	Jonathan	University of Ottawa
Lourette	Natacha	DSM Resolve
Luizink	Miriam	MESA+
Lukas	Michelle	Saxion University of Applied Sciences
Luthe	Gregor	Saxion University of Applied Sciences
maas	jan	incas3
Mädler	Lutz	University of Bremen
Mark	Daniel	HSG-IMIT
Mauer	Ralf	InnovationLab GmbH
Mauer	Rene	RWTH Aachen University / Effectuation Intelligence
May	Paul	Imperial Innovations
Mechau	Norman	Karlsruhe Institute of Technology
Mehalso	Robert	Microtec Associates
Mohr	Juergen	Karlsruhe Institute of Technology
Mottet	Aurélie	Lyncée Tec
Müller	Josef	Fraunhofer IME
Neuen	Sue	Michigan Technological Univ.

Neuen	Sue	Science@OC
Neuy	Christine	MicroTEC Südwest c/o MST BW e.V.
Nijhuis	José	University of Twente
Nordve	Helene	Techni AS
Nothofer	Heinz-Georg	NMW Management GmbH
of	Guest	High Tech Factory
of	Guest	High Tech Factory
Ohlckers	Per	Vestfold University College/NCE Micro- and Nanotechnology
Olijve	Jos	Vion-Ingredients
Ortloff	Dirk	Process Relations GmbH
Paauw	Floor	NanoNextNl
Paauw	Floor	NanoNextNl
Peet	Barry	Oost NV
Petersen	Christian	Techni AS
Pleging	Bas	PPM Oost
Pluimers	Diane	Oost NV
Pot	Marleen	Powered by Twente
Ramirez	Janine	Global Media-Foreign Affairs
Ray	Sikha	Karlsruhe Institute of Technology (KIT)
Reinhold	Martijn	MinacNed
Rentrop	Corne	TNO NL
Revenberg	Kees	MASER Engineering BV
Rideg	Orsolya	University of Pecs
Robillard	Marc	TagWorks Pharmaceuticals
Robitzer	Karl	Saxion University of Applied Sciences
Rode	Bjorg	BjR International AS
Roelofs	Gerard	University Twente
Rossbach	Daniel	HSG-IMIT
Russo	Peter R.	Boston University School of Management
Sadeghian	Hamed	TNO
Saile	Volker	Karlsruhe Institute of Technology
Salomon	Patric	enablingMNT GmbH
Savage	Paul	Arrayware
Schaft	Peter	NanoPress
Schierning	Gabi	University of Duisburg-Essen
Schmitt	Katrin	Fraunhofer IPM
Schoen	Peter	University of Twente
Schoenfelder	Sven	INSION GmbH
Scholten	Kevin	Saxion university of

		applied sciences
Schoo	Jonathan	Germany Trade and Invest GmbH
Schroen	Karin	Wageningen University
Schuurbiers	Daan	De Proeffabriek
Senf	Freya	NanoNextNl
Senf	Freya	NanoNextNl
Shrestha	Binod	Saxion University of Applied Sciences
Siebelder	Ortwin	Saxion University of Applied Sciences
Sleczkowski	Piotr	University of Twente
Sleutel	Pascal	University of Twente
Slijkhuis	Addo	Saxion
Slycke	Per	Xsens
Smallegange	Martin	Stork Prints Group
Smith	Eric	Trustfood Stichting
Snippers	Monique	High Tech Factory
Spiering	Vincent	Qmicro
Staal	Steven	Medimate BV
Staal	Steven	Medimate BV
Steenwelle	Ruud	MESA+ / University of Twente
Stensaa	Frode	7Sense Technologies AS
Stinnett	Regan	Sandia National Laboratories
Strauss	Jason	Lobo Energy, Incorporated (UNM)
Swaak	Myrthe	University of Twente, MESA+
ten Thije	Niels	Saxion
Tennant	Don	Cornell University
Tolfree	David	MANCEF
Tønnessen	Tor Inge	University of Oslo/Sensocure AS
Trip	Nancy	Powered by Twente
Tyrrell	James	nanotechweb.org (Institute of Physics Publishing)
Van Attekum	Paul	ASML The Netherlands BV
Van Campenhout	Steven	Flanders FOOD
Van de Voorde	Kris	imec
van den Berg	Albert	University of Twente
Van den Berg	Bart	NanoHouse
van den Broek	Ben	Oost NV
van den Vlekkert	Hans	LIONIX B.V.
van der Wiel	Wilfred G.	University of Twente
van Dongen	Maarten	InnoTact Consulting BV
van Heeren	Henne	enablingMNT

van Hoesel	Roger	Food Valley NL
van Hoeve	Wim	Tide Microfluidics
Van Hoof	Chris	Imec vzw
van Liere	Arjan	Present Media
van Rossum	Maarten	Saxion University of Applied Sciences
van t Oever	Ronny	Micronit Microfluidics
van Weerd	Jasper	NanoNextNl
Vandeberg	Rens	NanoLabNL
Verhaagen	Bram	University of Twente
Vishnevskiy	Konstantin	National Research University Higher School of Economics
Visser	Jan	SolMateS
Voskamp	Nico	NanoNextNL
Vulto	Paul	MIMETAS
Walker	Russell	Deakin University
Warrington	Robert	Michigan Technological University
Weekhout	Marjan	Kennispark Twente
weelden van	ton	Boschman Technologies/APC
Wetzer	Thomas	Saxion Univerity of Applied Sciences
Whan	Bruce	Swinburne University
Wiegerink	Remco	University of Twente
Winters	Jan	PSN
Wisniewska	Aleksandra	Rapid News Communications Group
Woord	Erwin	NanoNextNl
YMETI	AUREL	OSTENDUM
Zhou	Guofu	South China Normal University

3.3 Results

Our presentation could be discussed within the scope of the conference. Basically the feedback was that we presented interesting technologies for the dairy supply chain, some of which are already implemented while others are still in the development phase. The implementation of new technologies, not only MST-related, is sometimes difficult in the dairy chain since the price margins are very low and the consumer wants to have a high quality product, but is reluctant to pay a higher price. Here miniaturization and energy efficiency of the technologies can be a solution. But regardless of the technology, consumers must be convinced that their implementation must not negatively affect the products.

4 In Spain

4.1 Preparation of the event

A training session on Sensor and microsystems potentialities in the food sector was held as part of the Spanish Conference on Electronic Devices, 2013. Despite the conference had a majority of Spanish attendees, it is part of the IEEE activities in the South European region, and also had international presence coming from research groups that collaborate with Spanish teams. The number of attendees was about 120 people.

The conference was held in Valladolid (Spain) in February , 12-15,2013. CSIC was part of the scientific committee and thanks to this fact, a session for the presentation of FoodMicrosystems objectives, and specific training material was prepared of the Spanish MST community.

4.2 Implementation

The complete agenda of the conference can be seen in www.cde2013.es.

The implementation consisted on an invited oral presentation followed by face to face meetings with researchers that show interest in the subject. A clear emphasys was put on the aspects coming from the Food sector that could drive the main MST areas of research. Information obtained in the meetings held with the food industry during the whole durarion of the FoodMicrosystems project was disseminated and used for the discussions with the MST community.

The main objectives of the presentation to the MST audience were:

- To highlight the potentialities of the MST technologies in a field of application that in general up to now has not been seen as a main target
- To increase the knowledge on the application of MNBS solutions not only to health and environment but also in the food sector.
- To discuss on the main requirements coming from the application.
- To inform on already existing solutions at research level
- To help on finding new applications and research gaps not yet covered and that could drive the research in the MST for the future.

4.3 Results

The outcome of the discussions with the participants did show that there was a noticeable interest in the audience in addressing the food sector application in the future, for those who already worked in the MNBS field. In fact, some of the groups were already working in related areas, being the main ones the beverage and the meat sectors.

From bilateral discussions held with the attendees during the event, it was seen that some of them were already working in the field and this was fruitful in the sense that we could corroborate our preliminary findings during the work done in other events of the project in the sense that the main demands of food sector in terms of MST solutions were not only devoted to the topics of food safety and quality but mainly in the process control, and also in the agro part in the field. In nearly all cases the demand could be summarised in:

- Maximum process control with minimal sample preparation
- Minimum operator training
- Fast response for screening systems
- Need of multi-parametric sensing platforms
- Solutions are necessary at system level and with minimum cost (approximately a maximum of 3000 Euros) for medium complexity systems.
- Portability is also an advantage in many cases
- Connectivity in the land with WSN is also a wish in the agro sector.
- Logistics and packaging may be the an early adopter application for part of the MST technology as far as power consumption issues are solved.
- Simple Biosensing solutions is still a dream for the future in many applications
- Regulations are also important in the food sector and may prevent the application of new MST based systems at this early stage, if nothing is made for demonstrating that new regulations could be applied

Thanks to these contacts, another dissemination activity was also agreed with the representatives of the IBERNAM Spanish Network of Researchers on Micro and Nanosystems. Such action was prepared to be a presentation during the annual assembly of the Spanish network to be held at the end of 2013.

5 MNBS 2013 "Innovation and Technology Implementation for European Competitiveness and Better Citizen's Life" on 24-25 September 2013

5.1 Preparation of the event

ACTIA, EQY, WU, CSIC-CNM, Enabling MNT, CEA and TBPA participated in the 7th MNBS annual workshop that has been organised by the European Commission in collaboration with the Irish Tyndall National Institute on the 24-25th of September 2013 in Cork (Ireland).

The main purposes were to improve the sharing of information between stakeholders, to identify the possible synergies and collaborations in the field of micro and nano-systems and to gather the demand and the offer. In the frame of this workshop, the results of MST-food related, EC-funded projects such as FoodMicroSystems have been disseminated to a large informed public.

5.2 Implementation

For the first time, this event was held in conjunction with the EPoSS (the European Technology Platform on Smart Systems Integration) General Assembly and Annual Forum which lasted from the 25th to the 26th of September 2013. Several essential European actors in the fields of micro and nano-systems have attended to this workshop: industries, research centres, consumers.

On the 24th of September 2013, a session gathering industrial key actors of the food & health sectors and micro/nanotechnologies was organised in order to support the commercial exploitation of the EU-funded projects. Christophe Cotillon (ACTIA), together with the coordinator of COWIN project, has led the interactive discussion of the industry session.

The panelists were:

- ***Shane Moynihan**, Biosensia, Head of Engineering*
- ***Alexandra Donny**, Resah-IDG, Deputy Director*
- ***Iñaki Gutiérrez-Ibarluzea**, OSTEBA, Knowledge Manager*
- ***Federico Morais**, FIAB, Manager of Innovation & Technology*
- ***Remigio Berruto**, FoodforLife European platform*
- ***Manus Rogan**, Fountain Healthcare Partners*
- ***Guillaume Lhermite**, Primadiag*
- ***Francisco Bonal**, DG CONNECT, European Commission*

The European Commission has also introduced the perspective provided by the Horizon 2020 program in terms of SME instruments and Pre-Commercial-Procurement. Patric Salomon (enablingMNT) has presented the FoodMicroSystems roadmaps and results, and introduced the opportunities in the food sector. The day after, a second presentation related to FoodMicroSystems was given by Patric Salomon within the working group meeting of the combined MNBS/EPoSS event. The purpose was to generate interest within EPoSS community to address food as an application area of future EPoSS activities, and possibly to include this in their Strategic Research Agenda. The opportunities and constraints of the food industry, and in a wider sense of the supply chain "from the agricultural field to the consumer's plate", were discussed and this was seen as a significant and very relevant application field for Smart Systems

5.3 Results

The audience, mainly from the health sector, was very interested in the innovations proposed by *Foodmicrosystems* project in the food sector. Even if the innovation level of the food industry seems lower than in other industries such as in the health sector, certain innovations are very promising for the future.. Both sectors have common challenges such as bio-production, well-being, prevention and safety thus the food sector was shown as an interesting source of innovation for the health sector. The importance to have mutual strategies, especially in terms of logistics has been underlined.