

# Feedback mechanisms Across the Lifecycle for Customer-driven Optimization of iNnovative product-service design

Acronym: FALCON Project No: 636868

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# **PROJECT DELIVERABLE 9.4:**

# Updated Dissemination and Communication Plan & Results

Content: This deliverable presents (a) an update of the Dissemination Plan as was presented in the original proposal and (b) The results of communication and dissemination activities in the first 18 months of the project.



# Versioning and contribution history

Version	Description	Contributors	
0.01	Wilfred van der Vegte	Added first content adapted from the project proposal	
0.02	Wilfred van der Vegte	Minor changes	
0.03	Wilfred van der Vegte	Added results and plans from all consortium members except EPFL, Ubitech, Philips, Softeco, i-Deal, Mews and Isadeus.	
1	Wilfred van der Vegte	Changed title to reflect actual content, Processed input from reviewer; added results from EPFL and Softeco, added (pictures of) the website and the ResearchGate page, updated the picture of the printed brochure. re-shuffled "press releases" and "online activities by partners".	
1.1	Wilfred van der Vegte	Added results from Ubitech	
1.2	Wilfred van der Vegte	Adapted to correct template; Content description added on ti- tle page	
1.3	Wilfred van der Vegte, Karl Hribernik	Layout revision.	

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# **Acronyms and Abbreviations**

Falcon VOP FALCON Virtual Open Platform



## 1 INTRODUCTION

As one of the envisaged measures to maximise the impact of FALCON, dissemination activities are very important in that they aim to create and increase awareness about the project concepts and tools and their benefits, to attract new potential followers, supporters, users and customers, to increase the academic and industrial opportunities as well as to receive feedback for the service value and acceptance, and to pave the way for new academic and industrial alliances. Thus, a solid dissemination strategy for the project constituting of dissemination policies has been deemed a necessity.

In addition to the dissemination materials, events and publications described above, the consortium carries out a Public Communications Programme to ensure broad awareness of the project across the wider ICT supplier and industrial user community

## 2 UPDATED PLANS

#### 2.1 Dissemination

#### 2.1.1 Focus of dissemination activities

Dissemination activities are performed by all project partners, but they differ according to the nature of the partners. The industrial partners aim to approach relevant industry-sectors, as well as their distributors and client networks, while the academic and research partners focus on disseminating the project results towards research institutes and universities across the enlarged Europe

#### 2.1.2 Dissemination channels

#### Table 2-1. Academic dissemination channels

#### Journals:

- Computers in Industry
- Computer-Aided Design
- Robotics and Computer-Integrated Manufacturing
- Concurrent Engineering: Research and Applications
- Journal of Engineering Design
- International Journal of Product Development
- International Journal of Product Lifecycle Management
- Knowledge-based systems
- CIRP Annals Manufacturing Technology

#### **Conferences**

- DS International Conference on Engineering Design (ICED)
- DS Design Conference
- EPSRC Through-life Engineering Services (TES)
- ASME International Design Engineering Technical Conferences and Computers in Engineering (IDETC-CIE)
- CIRP Design Conference
- CIRP International Product-Service Systems Conference (IPSS)
- International Conference on Concurrent Enterprising (ICE)
- IFIP Product Lifecycle Management Conference (PLM)
- Tools and Methods of Competitive Engineering (TMCE)



There are several different communities that will be highly impacted by the project results, including general communities of practice in product and manufacturing process design, product lifecycle management as well as system and data integration. While industrial dissemination communities will be identified within the activities of WP9 and according to basic requirements of the FALCON architecture (WP1), relevant research communities maintain a large number of international journals and conferences. An indicative and non-exhaustive list of the dissemination channels through which the FALCON partners are trying to deploy its dissemination strategy are summarised below. Apart from these however, the consortium can – if required - represent the Commission at other international events.

## 2.1.3 Timing of dissemination activities

The dissemination activities differ in intensity based on the evolution of the project. The dissemination activities are carried out in four main phases, spanning throughout the project duration and extend beyond it, with increasing level of intensity, starting from the creation of general awareness and concluding with attracting potential supporters and customers/users of the project results. The dissemination activities of the FALCON project will be carried out in four main phases.

Phase I covered the first 12 months of the project duration. The main purpose of this phase was the creation of general awareness about the project objectives, its approach and expected results (approach-oriented content).

Phase II is being executed during the rest of the project, namely since M13, as the FALCON results are under development. The dissemination activities during this phase aim at attracting potential supporters and users of the FALCON results. The main output to be disseminated consists of the project's concrete results and the pilot demonstrations. The project's results are disseminated via more focused activities which will also assist in the exploitation activities, since it aims at the attraction of new supporters and users. Phases I and II constitute the "Project Phase", illustrated in Figure 1.

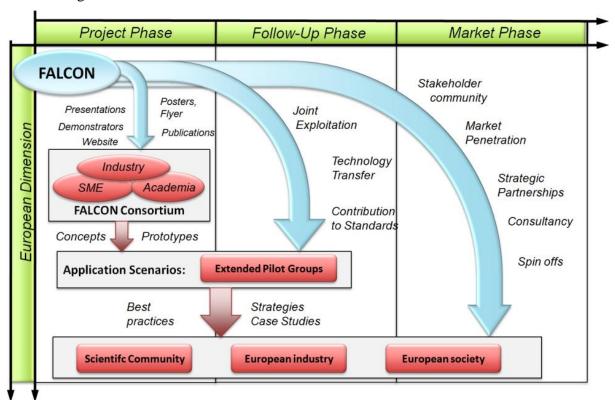


Figure 1: Dissemination and Exploitation Strategy



**Table 2-2: Dissemination phases** 

Phase	Project months	Intensity	Types of information	Main target audi- ences	Key dissemination Channels
Phase I	1-12	Low	Approach-oriented content; project presentation; objectives; expected results.	Academic & Research, Industrial & Technological communities; Potential end-users.	Project Website, Exhibitions, Leaflet & Brochures, Publications in Conferences and Workshops.
Phase II	13-36	Mild	Result-oriented content; project intermediate and final results;	Potential support- ers & end-users, strategic partners.	Exhibitions, Trade fairs, Workshops, Focused publications, Confer- ences.
Phase III	36-48	Strong	Result-oriented content; project fi- nal results; integrated platform, showcases and lessons learnt.	Potential support- ers & end-users, strategic partners	Exhibitions, Trade fairs, Partners leaflets, press releases and publica- tions.
Phase IV	48+	Strong	commercial components; created design approaches, software solu- tion distribution or transferable hardware solutions	Business network, customers, strate- gic partners	Exhibitions, Trade fairs, Partners leaflets, press releases and publica- tions.

Phase III will be executed for a year after the end of the project (M36-M48) and will aim at presenting results-oriented content, targeting commercialization of the "to date" results and developments of semi commercial pilot services at regional level. Phase III further relates to the finalization of the developments concerning the FALCON platform.

Phase IV will be executed after M48 of the project start (M48+) and corresponds to the commercialization of the final FALCON components derived from the previous phases. This can contain consultancy services based on the created design approaches, software solution distribution or transferable hardware solutions.

The aforementioned are summarised in Table 2-2.

All dissemination activities are reported in the plan for the use and dissemination of foreground, including sufficient details/references to enable the Commission to trace the activity. With regard to scientific publications relating to foreground published before or after the final report, such details/references and an abstract of the publication will be provided to the Commission at the latest two months following publication.

#### 2.2 Communication

In addition to the dissemination materials, events and publications described above, the consortium carries out a Public Communications Programme to ensure broad awareness of the project across the wider ICT supplier and industrial user community. The major elements of the public communications plan include online activities, non-electronic activities and interactive activities. Further communications are undertaken in association with specific events where FALCON participates and in collaboration with specific journals where FALCON papers and articles are published.

#### 2.2.1 Online activities

The project public website, http://www.falcon-h2020.eu/, provides a first access point for interested academic and industrial parties, organizations and individuals into the FALCON project. Key results are published on that website, but also added-value services are offered, such as newsletters, mailing lists or synchronous and asynchronous communication with project participants. The project web site is being updated on a quarterly basis with news, public deliverables, articles and material from participation at events. The



website also includes a private area accessible only to the EC and the experts, for revision purposes. The consortium also engages the utilisation of social media for the dissemination of information, and thus has created accounts on LinkedIn, https://www.linkedin.com/groups/8384328, and Twitter, @FalconH2020, from where important public information is being disseminated. Initially, a Facebook page has also been considered – however, there was general agreement among the consortium members that Facebook in its current form is not a medium that is taken serious by the envisaged professional audience for information on FALCON. Whether the Youtube channel and Wikipedia page that were also under consideration in earlier plans will be realized, is still open; this will depend on the type of content that might become available, and on the availability of options to deal with Wikipedia's "no original research" regulations<sup>1</sup>.

#### 2.2.2 Non-electronic activities

Classic means of knowledge transfer such as articles in topic-specific journals, brochures, publications in broadcast media and business papers focus on the dissemination of project results, mainly to experts and professionals. Non-electronic dissemination increases the level of information need and involvement, and invites interactive participation of interested parties. Non-Electronic activities include four major press releases:

- a. Initial international press release announcing the launch of the FALCON project supported by the EC. This was released simultaneously to some major technical press and journals in Europe, USA and Asia.
- b. Interim international press releases announcing first technology results available from the project and first industrial use of FALCON technology being validated in Business Case Demonstrators
- c. International standardisation press release announcing actions towards new standards resulting from the project.
- d. Final international press release announcing the availability of FALCON platform, the evaluation results from Business Case Demonstrators, and how to access the project results.

#### 2.2.3 Interactive activities

This specific channel offers a chance for personal interaction in academic, commercial and socio-economic conferences and workshops, EU organised events, trade fairs and exhibitions. This channel is intended for target groups with a high level of information need and involvement and it therefore provides information tailored to highly targeted audiences. The interactive channel will be the most efficient means for community building and has the highest impact on dissemination. Interactive dissemination activities include also all the concentration activities with related European R&D projects in the domain that will take place within the context of the project. The project commits to timely establish contact with selected running EU-funded projects (which could take the form of a common workshop), so as to ensure a useful know-how exchange.

Further communications will be undertaken in association with specific events where FALCON will participate and in collaboration with specific journals where FALCON papers and articles will be published.

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 $<sup>^1\</sup> https://en.wikipedia.org/wiki/Wikipedia:No\_original\_research$ 



## 3 Results

#### 3.1 Dissemination

#### 3.1.1 Academic research papers

#### Accepted and published:

- S. Wellsandt, K. Hribernik, K.-D. Thoben, Sources and characteristics of information about product use", In: Moshe, S.; Fischer, A.; Molcho, G. (Eds.): Innovative Product Creation; Proceedings of the 25th CIRP Design Conference, Haifa, Israel, March 2015
- S. Wellsandt, K. Hribernik, K.-D. Thoben, Content analysis of product usage information from embedded sensors and web 2.0 sources, Engineering Solutions for Societal Challenges; Proceedings of the 21st International Conference on Concurrent Enterprising (ICE) & IEEE TMC Europe Conference, June 2015, Belfast, Northern Ireland
- S. Wellsandt, T. Wuest, K. Hribernik, K.-D. Thoben, Information Quality in PLM: A product design perspective, Proceedings of the International Conference of Advances in Production Management Systems (APMS), 5. 9. September 2015, Tokyo, Japan.
- Wuest, T., Wellsandt, S. & Thoben, K.-D. (2015). Information Quality in PLM: A production process perspective. 12th International Conference on Product Lifecycle Management (PLM). 19.-21. October 2015, Doha, Qatar.
- Ghatak, A., Challenges in Context and Insight Acquisition from Data Generated by Connected Products", 4th International Conference on 'Computing, Communication and Sensor Network', 24th December 2015, Kolkata, India.
- K. A. Hribernik, J. Lützenberger, E. Coscia, K.-D. Thoben, Feedback Mechanisms across the Lifecycle for Customer-driven Optimisation of Innovative Product-Service Design, Proceedings of the I-ESA Conference 2016, 29th March 1st April 2016, Guimarães, Portugal.
- S. Beheshti-Kashi, K. Hribernik, J. Lützenberger, K.-D. Thoben, Fashion Supply Chains and Social Media: Examining the Potential of Social Media Text Data Analysis for Decision Making Processes in Fashion Supply Chains", IT4Fashion Scientific Conference Proceedings, 20th 22nd April 2016, Florence, Italy
- J. Lützenberger, P. Klein, Karl Hribernik, K.-D. Thoben, Improving Product-Service Systems by Exploiting Information From The Usage Phase. A Case Study, Proceedings of the 8th CIRP IPSS 2016, Bergamo, Italy

#### Accepted, to be published:

- Hribernik, K.A., Van der Vegte, W.F., Kiritsis, D., Thoben, K.-D., Towards a Methodology for Selecting Product Usage Information Sources for the (Re-)Design of Product Service Systems, ICE/IEEE International Technology management Conference, 13th 15th June 2016, Trondheim (Full paper accepted)
- Van der Vegte, W.F., Taking Advantage Of Data Generated By Products: Trends, Opportunities And Challenges, ASME Computers in Engineering, 21st-24th August 2016, Charlotte NC, USA (Full paper accepted)
- J. Lützenberger, C. Melchiorre, K.-D. Thoben, Towards a Platform for Applying Throughlife Engineering Service Knowledge from Embedded Intelligence and Social Media to Product-Service Systems, TESConf 2016 - The 5th International Conference on Through-life Engineering Services, 1st – 2nd November 2016, Cranfield, United Kingdom (Abstract accepted)
- P. Klein, J. Lützenberger, K.D. Thoben, Exploiting the increasing amount of Product Usage Information to support the development of Through-life Engineering Services, TESConf



2016 – The 5th International Conference on Through-life Engineering Services, 1st – 2nd November 2016, Cranfield, United Kingdom (Abstract accepted)

#### 3.1.2 Press releases

- Netherlands, 11th December 2014, Announcement in the Newsletter of the Faculty of Industrial Design Engineering of TU Delft, December 2014;
- Netherlands, 12th December 2014, Dutch intro on project on the ClickNL Design Platform, http://www.clicknl.nl/design/2014/12/12/falcon
- Germany, 19th March 2015, idw Informationsdienst Wissenschaft, "Künftig auch mit direkten Nutzerinformationen aus dem Internet zu besseren Produkten", http://idw-online.de/de/news627738,
- Germany, 19th March 2015, iBusiness, "Erweiterte Produkte": Internet soll beim Produktdesign helfen", http://www.ibusiness.de/aktuell/db/752670grollmann.html,
- Germany, 19th March 2015, JuraForum, "Künftig auch mit direkten Nutzerinformationen aus dem Internet zu besseren Produkten", http://www.juraforum.de/wissenschaft/kuenftigauch-mit-direkten-nutzerinformationen-aus-dem-internet-zu-besseren-produkten-511113,
- Germany, 19th March 2015, Business News, "Künftig auch mit direkten Nutzerinformationen aus dem Internet zu besseren Produkten", http://business.newzs.de/2015/03/19/kuenftig-auch-mit-direkten-nutzerinformationen-aus-dem-internet-zu-besseren-produkten/
- Germany, 19th March 2015, i2b-Express, "EU-Forschungsprojekt beschäftigt sich mit der Gestaltung von Produkt-Service-Systemen", http://www.i2b.de/news/artikel/article/eu-for-schungsprojekt-am-biba-beschaeftigt-sich-mit-der-gestaltung-von-produkt-service-systemen/
- Germany, April 2015, Newsletter Wissenschaftliche Gesellschaft für Produktentwicklung WiGeP, "Optimierungspotenziale bei Design von "Extended Products" nutzen, http://www.wigep.de/fileadmin/download/wigep/WiGeP\_News\_1\_2015\_Homepage.pdf
- Germany, November 2015, LogDynamics Newsletter, "New European Research Project at BIBA deals with Product-Service-System Design, http://www.logdynamics.de/up-loads/media/NewsletterNov2015\_01.pdf
- Greece, 19th January 2015, news item posted by Ubitech, http://www.ubitech.eu/?q=node/125#

#### 3.1.3 Presence at conferences, events, fairs and exhibitions

- March 2015, CIRP 2015 25th CIRP Design Conference, Haifa, Israel.
- June 2015, ICE 2015 21st International Conference on Concurrent Enterprising (ICE) & IEEE TMC Europe Conference, Belfast, Northern Ireland.
- 5th 9th September 2015, International Conference of Advances in Production Management Systems (APMS), Tokyo, Japan.
- 29<sup>th</sup> September 1<sup>st</sup> October 2015, ICCAS 2015 International Conference on Computer Applications in Shipbuilding
- 19th 21st October 2015, International Conference on Product Lifecycle Management (PLM), Doha, Qatar.
- 24th December 2015, 4th International Conference on 'Computing, Communication and Sensor Network', Kolkata, India.
- 23rd 27<sup>th</sup> February 2016, METAV, Düsseldorf, Germany.
- 25th 26th February 2016, Metromeet 2016, Bilbao, Spain.
- 8th 9th March, 2016, Product Innovation 2016, Munich, Germany



- 9th –11th March 2016, Control, Kielce, Poland.
- 29th March 1st April 2016, I-ESA Conference 2016, Guimarães, Portugal.
- 12th 15th April 2016, Expomaq, Estado de Guanajuato, Mexico.
- 20th 22nd April 2016, IT4Fashion Conference, Florence, Italy.
- 26th 29th April 2016, Control Messe, Stuttgart, Germany.
- 9th 13th May 2016, Tools and Methods of Competitive Engineering, Aix-en-Provence, France.
- 16th 19th May 2016, Conference ATINER 2016, Athens, Greece
- 30th May 4th June 2016, BIEMH 2016, Bilbao, Spain.
- June 20th June 21st, 2016, MESA workshop "Shipbuilding of the Future", Papenburg, Germany
- 30th May 1st June 2016, EuroMaintenance 2016, Athens, Greece
- 20th 21st June 2016, 8th CIRP IPSS 2016, Bergamo, Italy.
- 18th 29th July 2016, NEMO summer school, Vienna, AustriaAPMS 2017
- 5th August 2015, FOMI Conference Berlin, Germany
- 21st 24th August 2016, ASME Computers in Engineering, Charlotte NC, USA.
- 3th 7th September 2016, Advances in Production Management Systems 2016, Iguaçu, Brazil
- 14th –15th September 2016, Enova, Paris, France.
- 30th September 1st October 2016, TCT 2016, Birmingham, UK.
- 16th November 17th November, MetalMadrid, Madrid, Spain.
- 23rd November 26th November 2016, EMAF, Oporto, Portugal.

## 3.1.4 Activities at conferences, events, fairs and exhibitions

- 18<sup>th</sup> 19<sup>th</sup> February 2105, OBE Workshop, London, UK
- 12th March 2015, German-Turkish Year of Research Closing Ceremony, Ankara, Turkey. Distribution of FALCON flyers by Arçelik.
- 19th 20th March 2015, Izmir Innovation Week, Izmir, Turkey. Distribution of FALCON flyers by Arçelik.
- 25th 28th August 2015, Open Living Lab Days 2015, Istanbul, Turkey. OpenLivingLab Days is the annual summit of the worldwide Living Lab community integrated with the popular ENoLL Summer School. The annual 4-day event includes interactive sessions, workshops, lively discussion panels with excursions and off-site visits with the aim of giving the participants a wider insight about models, theories and technologies related to Living Labs. FALCON brochures were distributed by Arçelik during the event.
- 3rd 5th December 2015, Istanbul Innovation Week, Istanbul, Turkey. The biggest innovation Event in Turkey over 60 thousand participants mainly from Turkey but including many international speakers and partner countries from Europe. Arçelik was the main sponsor of the event and FALCON flyers were distributed at Arçelik stands in exhibition areas during the event.
- 29th January 1st February 2016, HOMI lifestyle trade fair, Milano, Italy. Dena explained about the FALCON project to the fashion exhibitors.
- 27th 29th February, SUPER exhibition dedicated to accessories and women's prêt-à-porter, Milano, Italy. Dena explained about the FALCON project to the fashion exhibitors.
- 27th 29th February, MIPAP International Fashion Trade Show, Milano, Italy. Dena explained about the FALCON project to the fashion exhibitors.
- 17th 18th March 2016, Izmir Innovation Week, Izmir, Turkey. Distribution of FALCON flyers by Arçelik.



- 13<sup>th</sup> 15<sup>th</sup> April 2016, Sea Japan, Tokyo. BIBA held a keynote speech about Industry 4.0 in the maritime industry, including content about PUI feedback loops. Flyers distributed.
- 25th 29th April 2016, Hannover Messe, Hannover, Germany. Holonix had a booth within the digital factory area presenting the main research activities including FALCON.
- 4th 5th May 2016, Innovation Week Ankara, Ankara, Turkey, Arçelik was the main sponsor of the event and FALCON flyers were distributed at Arcelik stands in exhibition areas during the event.
- 9th May 2016, Symposium "Tools and Methods of Competitive Engineering", Aix-en-Provence, France. Workshop "Simulation and forecasting with data generated during the use of products: opportunities and solutions" held by TU Delft with 26 participants from academia and industry.
- 20th 23rd May 2016, CHIBIMART International Fashion Accessories and Bijoux Exhibition, Milano, Italy. Dena explained about FALCON project to the fashion exhibitors.
- 25th May 2016, Global Supplier Summit 2016, Istanbul, Turkey: Arçelik's supplier summit in Istanbul. FALCON poster and flyers were available at the exhibition area and participants were informed about FALCON outcomes during the summit.

## 3.1.5 EU Community Channels/Collaboration with external projects

#### PSS Cluster:

- 23rd June 2016, H2020-FoF.5 Cluster Meeting, Belfast, Ireland
- 3rd December 2015, Joint Meeting with Manutelligence Project, Bremen, Germany
- 22nd June 2016, H2020-FoF.5 Cluster Meeting, Bergamo, Italy

#### Projects:

- Manutelligence, H2020-FoF.05-2014, http://www.manutelligence.eu/
- Diversity, H2020-FoF.05-2014, https://www.diversity-project.eu/
- ICP4Life, H2020-FoF.05-2014, http://www.icp4life.eu/
- PSYMBIOSIS, H2020-F0F.5-2104, http://www.psymbiosys.eu/

#### Other EU events:

- H2020 Industry Working Day TUBITAK: 20th February 2015, H2020 Workshop, Ankara, Turkey. FALCON mentioned during Arçelik success story presentation at TUBITAK.
- Turkish Industry in Horizon 2020 Forum: 6th May 2015, Ankara, Turkey. FALCON mentioned in the success story presentation of Arçelik and FALCON brochures were distributed to the participants.
- 25th 26th March 2015, Net Futures 2015m Brussels, Belgium. Distribution of FALCON flyers by Arçelik.
- 24th June, 2015, EU Brokerage Event Advanced Manufacturing 2015, Nantes, France
- 5th 6th October 2015, Horizon 2020 Workshop, Bursa, Turkey. FALCON was mentioned in the success story presentation of Arçelik and FALCON brochures were distributed among the participants.
- 8th –9th October 2015, Conference on Turkish Universities in the European Research Area (ERA), Ankara, Turkey. Arçelik was the main sponsor of the event and FALCON project poster were shown at Arçelik stand in the exhibition area and FALCON brochures were distributed to the participants during the event.
- 16th October 2015, FoF Info Day, Brussels, Belgium.



- 12th 13th October 2015, Horizon 2020 Bridging Days, Izmir, Turkey. FALCON was mentioned in the success story presentation of Arçelik and FALCON brochures were distributed to the participants during the event.
- 20th 22th October 2015, ICT Event 2015 Lisbon, Portugal: the biggest Information and Communication Technologies event (ICT) in Europe. FALCON project info is shared and flyers were distributed to the participants during the event at the related sessions and workshops.
- 4 7 November 2015, ECFI 2015 3rd European Conference on the Future Interne, Hamburg, Germany. The biggest event for the Future Internet technologies covering cloud, big data, IoT, M2M and other active research topics. Participants from start-ups to large industry, regional and local stakeholders, researchers, municipalities, government representatives and FI-PPP accelerator projects. FALCON flyers were distributed by Arçelik to the participants during the event.

#### 3.1.6 In-house company events

- July, 2015: Softeco's R&I department presented the FALCON project in the context of a series of internal dissemination meetings periodically organized inside Softeco to present activities and results of Softeco's R&I to the company's other departments, with the goal of disseminating knowledge and exploring possible new channels of exploitation for R&I results.
- February 24<sup>th</sup> 2016, IoT Workshop on Industrial Applications at the IOTFablab at BIBA, Bremen, Germany. The IoT Workshop addressed industrial users, researchers, doctoral candidates and students to discuss potentials of industrial IoT applications and apply latest technologies to prototype solutions. Current results from FALCON were incorporated into the workshop. 33 participants from industry and academia took part.

#### 3.2 Communication

#### 3.2.1 Joint online activities

#### Website

A dedicated joint FALCON website was created at the URL <a href="http://www.falcon-h2020.eu/">http://www.falcon-h2020.eu/</a>. A screenshot of the homepage is shown in Figure 2 on page 13. Among other things, the website provides brief descriptions of the project as a whole and the business scenarios, and it provides links to the Twitter feed and the LinkedIn group page.





Restricted Area

#### Welcome to FALCON

The project FALCON aims to deploy user experiences and user data collected via the Internet of Things (IoT) and social media for improvement of product-service systems (PSS). Customers play no longer a passive role in the product and service development process as they express their product and service experiences and opinions through social media. In addition, sensor systems in combination with products incorporated in the IoT, are becoming increasingly common. The potential endless amounts of available information offer a rich ground for value creation in the product-service innovation chain. Accordingly, FALCON will develop a Virtual Open Platform to seamlessly connect product-service usage information to design and development processes.

The results of the FALCON project are facilitated within four Business Scenarios:





Figure 2. FALCON homepage, http://www.falcon-h2020.eu



#### **Twitter**

A Twitter account @FalconH2020 was established. Figure 3 gives an impression of the FALCON feed. On 28th June 2016, the feed had 41 followers and 7 tweets had been published.

#### LinkedIn

A LinkedIn group dedicated to FALCON was founded, https://www.linkedin.com/groups/8384328. On 28th

June 2016, it had 28 members, all employees of consortium members.

#### ResearchGate

On the ResearchGate scientific community website, a FALCON project page was created in June 2016 (Figure 4), https://www.researchgate.net/project/FAL-CON-Feedback-mechanisms-Across-the-Lifecycle-for-Customer-driven-Optimization-of-iNnovative-product-service-design. The ResearchGate group page has some limitations, since only people who follow each other can be added as collaborators. The consortium strives to add further collaborators to the currently incomplete project information.

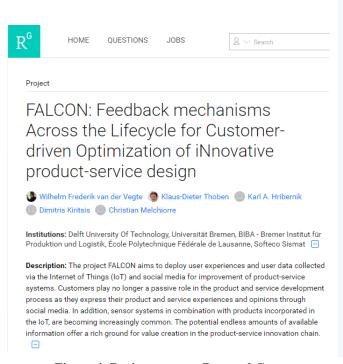


Figure 4: Project page on ResearchGate



Figure 3: FALCON twitter feed



### 3.2.2 Online activities by partners

#### Homepages

- BIBA Homepage: http://www.biba.uni-bremen.de/ikapprojekte.html
- TU Delft homepages: http://www.io.tudelft.nl/en/news/article/detail/eerste-eu-horizon-2020-project-io-gaat-starten-falcon/ (English); http://www.io.tudelft.nl/nl/actueel/artikel/detail/eerste-eu-horizon-2020-project-io-gaat-starten-falcon/ (Dutch)
- Holonix homepage: http://www.holonix.it/innovazione-e-ricerca/#falcon (Italian)
- Ubitech project page: http://www.ubitech.eu/?q=node/53
- Datapixel homepages: http://www.datapixel.com/en/about-us/rd/falcon/ (English); http://www.datapixel.com/conocenos/idi/falcon/ (Spanish).

#### Online announcements

- Netherlands, 12th December 2014, Dutch intro on project on the ClickNL Design Platform, http://www.clicknl.nl/design/2014/12/12/falcon
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- Germany, 19th March 2015, iBusiness, ""Erweiterte Produkte": Internet soll beim Produktdesign helfen", http://www.ibusiness.de/aktuell/db/752670grollmann.html,
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#### 3.2.3 Non-electronic activities

#### Flyers and brochures

Figure 5 shows the latest version (2016) of the printed brochure that is available for distribution at events.





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Feedback mechanisms Across the Lifecycle for Customer-driven Optimization of

iNnovative product-service design



#### Summary

#### **Objectives**

#### Approach

FALCON is a European research project that aims to develop a framework for the realization of new products and value-adding services, based on user experience as well as product and rela-ted services usage, in accordance to the princip-les of sustainability and social responsibility.

In the FALCON vision, customers will no longer play a merely passive role in product and service development processes as they will express their experiences and opinions with products and services through social media.

In addition, information devices embedded into products along with developments in the field of the Internet of Things (IoT), will be leveraged to extract actual product-service usage data. This potentially limitless amount of information offers a rich ground for value creation in the productservice innovation chain.

FALCON will investigate how user experiences and usage data collected via IoT and social media can be deployed for the improvement and design of product-services.

The FALCON project aims to achieve five research and development objectives

- To address product-service information collection through Collaborative Intelligence and Product Embedded Information Devices.
- To enable product-service knowledge representation, exploitation, openness and diffusion.
- 3. To strengthen new, collaborative productservice development processes through new feedback and feedforward mechanisms.
- To support innovative product-service design using manufacturing intelligence.
- To improve product-service lifecycle assessment approaches.

FALCON will develop a Virtual Open Platform (VOP) to seamlessly connect product-service usage information to design and development processes:



The FALCON VOP will facilitate

- Gathering customer feedback though social media
- Collecting usage information through Product Embedded Information Devices (e.g. sensors, embedded systems)
- Comprehensive processing of the collected data and customer feedback
- Deployment of identified information in the product-service development phase

Figure 5: FALCON printed brochure