

# D 6.7

## Final big public dissemination event

Action acronym	ConnectedFactories 2
Action Full Title	Global-leading smart manufacturing through digital platforms, cross-cutting factors and skilled workforce
Grant Agreement Number	873086
Instrument	CSA: Coordination and Support Action
Project coordinator	VTT
Deliverable Number	D6.7
Deliverable Title	Final big public dissemination event
Lead Beneficiary	EFFRA
Work package	6
Work package leader	EFFRA
Dissemination level <sup>1</sup>	Public
Type <sup>2</sup>	OT
Due date according to DoA	31/08/2022
Actual submission date	19/12/2022
Main editors and contributors:	EFFRA (+see table 'Version Management')

<sup>1</sup> PU: Public, CO: Confidential, only for members of the consortium (including the Commission Services)

<sup>2</sup> RE: Report, OT: Other; ORDP: Open Research Data Pilot



VERSION MANAGEMENT			
<b>Author(s):</b>		<b>Name</b>	<b>Beneficiary</b>
		Chris Decubber, Giulia Artibani, Catarina Santos, Carolina Ferreira,	EFFRA
<b>Reviewed by:</b>		Meike Reimann	S2i
<b>Revision No.</b>	<b>Date</b>	<b>Description</b>	<b>Author</b>
1	13/12/2022	First full version	Chris Decubber, Giulia Artibani, Catarina Santos, Carolina Ferreira (EFFRA)
2	14/12/2022	Reviewed version	Meike Reimann, S2i; Riikka Virkkunen, VTTT
3	15/12/2022	Final version	Chris Decubber

## Abbreviations and acronyms

TERMS, ABBREVIATIONS AND ACRONYMS	
<b>DoA</b>	Description of Action
<b>D</b>	Deliverable
<b>WP</b>	Work package



## TABLE OF CONTENT

1	Introduction.....	4
2	Information about the online event on 18 February 2022: ‘ConnectedFactories - Use cases and demonstrators of Digitalisation of manufacturing’.....	5
2.1	The aim of the event .....	5
2.2	Attendance .....	5
2.3	Agenda of the event .....	5
2.4	Presentations and recordings.....	6
3	Information about the final in-presence ConnectedFactories event on 23-24 November.....	7
3.1	The aim of the event .....	7
3.2	Attendance .....	8
3.3	Agenda.....	8
3.4	Summary.....	9
3.5	Presentations and recordings.....	11
4	Dissemination .....	11



## 1 Introduction

The ConnectedFactories 2 final event was organised on 23 and 24 November 2022'. It was an in-presence event organised in Brussels. This deliverable is formally associated to that event. (This final event was organised back to back to the EFPF project final event, one of the projects from the DT-ICT-07-2018-2019 topic to which ConnectedFactories belonged as well.

Earlier in the year, a 'big' ConnectedFactories event with a similar aim and set-up was organised on 18 February 2022. It was titled 'ConnectedFactories - Use cases and demonstrators of Digitalisation of manufacturing'. This was an on-line event (still impacted by Covid-19 constraints).

The first section of this report includes information about the online ConnectedFactories event of 18 February 2022, while the second section focusses on the 'final' event on 23 and 24 November 2022.



## 2 Information about the online event on 18 February 2022: 'ConnectedFactories - Use cases and demonstrators of Digitalisation of manufacturing'.

### 2.1 The aim of the event

As the title implies, the event focused on providing the latest information on use cases and demonstrators from projects that show the path towards the digital transformation of manufacturing.

The agenda did not only include the latest information from the 6 projects running under the DT-ICT-07-2018-2019 cluster ([ZDMP](#), [QU4LITY](#), [EFPE](#), [SHOP4CF](#), [DigiPrime](#), [KYKLOS 4.0](#)), but also featured the state of play of projects and project clusters on cybersecurity, zero-defect manufacturing and AI for manufacturing. The event also reached out to the ECSEL Joint Undertaking by staging the [Arrowhead Tools](#) project.

Considering that many national and regional projects cover similar applications and challenges, three of such projects were presented as well: InterOpera (Germany), FA3D (UK) and Inspection Station demonstrator (Ireland).

The goal was to bring this latest information together - including the recordings of presentations - and make these publicly available after the event.

### 2.2 Attendance

The online event counted 289 registrants of which 183 attended the event

### 2.3 µAgenda of the event



- |               |  |
|---------------|--|
| 09:00 – 09:05 | Participants connecting to the meeting   |
| 09:05 – 09:15 | Welcome and Introduction   |
| 09:15 – 10:00 | <b>Key results, Use cases &amp; demonstrators from the DT-ICT-07-2018 projects</b> <ul style="list-style-type: none"> <li>• <a href="#">ZDMP</a> - Zero Defect Manufacturing Platform + Industry 4 factory<br/>Solutions: <b>João Sousa, Uninova and Tonny Velin, i4FS</b></li> <li>• <a href="#">QU4LITY</a> - Digital Reality in Zero Defect Manufacturing: <b>Jorge Rodriguez Edroso, Atos</b></li> <li>• <a href="#">EFPE</a> - European Connected Factory Platform for Agile Manufacturing + European Factory Foundation: <b>Ingo Martens, Hanse-Aerospace</b></li> </ul> |

- 10:00 – 10:30 **Key results, Use cases & demonstrators from the ICT-08 projects on Cybersecurity in Manufacturing:**
- [SeCoIIA](#) - Secure Collaborative Intelligent Industrial Asset: **Isabel Praça, ISEP**
  - [Collabs](#) - A Comprehensive cyber-intelligence framework for resilient collaborative manufacturing Systems: **Erwan Le-Disez, CEA**
- 10:30 – 10:45
- [Arrowhead Tools](#) - Arrowhead Tools for Engineering of Digitalisation Solutions: **Jerker Delsing, Lulea University of Technology**
- 10:45 – 11:30 **Update on results, Use cases & demonstrators from the DT-ICT-07-2019 projects**
- [SHOP4CF](#) - Smart Human Oriented Platform for Connected Factories: **Aske Bach Lassen, Danish Technological Institute**
  - [DigiPrime](#) - Digital Platform For Circular Economy In Cross-Sectorial Sustainable Value Networks: **Marcello Colledani, Politecnico di Milano**
  - [KYKLOS 4.0](#) - An Advanced Circular and Agile Manufacturing Ecosystem based on rapid reconfigurable manufacturing process and individualized consumer preferences: **Jason Mansell Rementeria, Tecnalía**
- 11:30 – 12:00 **Updates from:**
- 4ZDM Project Cluster: **Juanan Arrieta, Ideko**
  - AI4Manufacturing (ICT-38-2020) Project Cluster: **Ioannis Soldatos, Intrasoft**
- 12:00 - 12:45 **Key results, Use cases & demonstrators from strategic national/regional projects**
- InterOpera: Digital interoperability in value-creation networks of Industrie 4.0: **Olga Meyer, Fraunhofer IPA**
  - FA3D: Future automated aerospace manufacturing enabled by digitalization: **David Sanderson, University of Nottingham.**
  - Inspection Station demonstrator: Using AAS for flexible systems integration: **Daugirdas Stirbys, IMR**
- 12:45 – 13:00 **Outlook and Conclusion**

## 2.4 Presentations and recordings

The publicly available presentations and recordings are available via the following public links:

- [Presentations](#)
- [Recordings](#)

These are also publicly available via the events web page: <https://www.connectedfactories.eu/events/use-cases-and-demonstrators-digitalisation-manufacturing-presentations-recordings>



### 3 Information about the final in-presence ConnectedFactories 2 final event on 23-24 November.

#### 3.1 The aim of the event

The final ConnectedFactories 2 final event on 23 November focussed on

- Providing an overview of the pathways to advanced and digital manufacturing by the ConnectedFactories 1 & 2 projects will be presented, with a particular focus on the data space pathway and the circular manufacturing pathway.
- Explaining the essentials of the exploitable results and demonstrators from the six DT-ICT-07-2018-2019 Innovation Actions, where the finished or finishing projects will focus on achievements and lessons learned.
- In addition, main take-aways and key observations were shared regarding key cross-cutting aspects: interoperability, standardisation, business, legal aspects, cybersecurity and human aspects
- Include a paragraph about promoting the digital transformation catalogue and the relevance and value of national/regional activities.



On the 24th, the morning was dedicated to the final [EFPF](#) event, showcasing the results of the EFPF three pilots and the business and sustainability models implemented in the EFPF project.

Also on 24 November in the afternoon, the combined ConnectedFactories-EFPF event was concluded with a panel discussions on exploitation aspects, lessons learned and remaining challenges.

### 3.2 Attendance

The ConnectedFactories 2 final event counted 156 registrants of which about 100 attended the event.

### 3.3 Agenda

12:30 – 13:30	<b>Welcome Lunch</b>
13:30 – 14:00	Opening <ul style="list-style-type: none"> <li>o Malgorzata Nikowska, DG Connect</li> <li>o Riikka Virkkunen, VTT &amp; EFFRA, Željko Pazin, Chris Decubber</li> </ul>
14:00 – 14:15	ConnectedFactories Pathways – evolution from CF1 to CF2 The Data Space for Manufacturing Pathway – Sergio Gusmeroli, Politecnico di Milano
14:15 – 14:30	The Circular economy for manufacturing Pathway - Katri Valkokari, VTT
14:30 – 15:15	Short presentation of 3 DT-ICT-07 IA projects with the focus on Exploitable results and demonstrators <ul style="list-style-type: none"> <li>o <a href="#">Qu4lity</a></li> <li>o <a href="#">ZDMP</a></li> <li>o <a href="#">FFPE</a></li> </ul>
15:15 – 15:35	<b>Coffee Break</b>
15:35 – 16:20	Short presentation of 3 DT-ICT-07 IA Projects. State of play regarding expected exploitable results and demonstrators <ul style="list-style-type: none"> <li>o <a href="#">KYKLOS 4.0</a></li> <li>o <a href="#">Digiprime</a></li> <li>o <a href="#">SHOP4CF</a></li> </ul>
16:20 – 17:05	Crosscutting aspects – main take-aways & observations <ul style="list-style-type: none"> <li>o Interoperability – Luis Usatorre, Tecnalía</li> <li>o Standardisation – Olga Meyer, Fraunhofer IPA</li> <li>o Business aspects – Katri Valkokari, VTT</li> </ul>
17:05 – 17:25	<b>Coffee Break</b>
17:25 – 18:10	Crosscutting aspects – main take-aways & observations <ul style="list-style-type: none"> <li>o Legal aspects – Iliana Georgieva, TNO</li> <li>o Cybersecurity – Ulrich Seldeslachts, LSEC</li> <li>o Skills and human aspects – Kosmas Alexopoulos, LMS</li> </ul>
18:10 – 18:30	Digital transformation use cases catalogue – National-regional perspective – outlook Chris Decubber, EFFRA & Meike Reimann, S2i
18:30	<b>Networking Dinner</b>





### 3.4 Summary

Around one hundred attendees were present in this in-person knowledge sharing and networking event taking place in Brussels' Bluepoint Building, during which the topics discussed under the banner of the manufacturing's digital transformation ranged from cutting-edge topics such as circular economy and artificial intelligence to crosscutting themes such as interoperability, standardisation and cybersecurity.

The event was opened by DG Connect's Head of Unit Malgorzata Nikowska, who stressed the importance of digitalisation and synergies for both public sector and private companies in terms of future resilience, highlighting that the manufacturing sector's digitalisation rate of 35% is far from the European Commission's goals. For the Head of Unit, the "ConnectedFactories project is a fantastic way to show how we can achieve these ambitious objectives" and [EFFRA's catalogue of use cases and success stories](#) as a tool from which others can draw inspiration. Beyond Horizon Europe, the Head of Unit presented the Digital Europe programme, which seeks to bridge the gap between research and market implementation in AI, high performance computing and cybersecurity, as well as the European Digital Innovation Hubs, a network which will help addressing daily needs while giving companies the opportunity to 'test before investing' while building a bridge between the local and European levels.

EFFRA's executive director Željko Pazin and EFFRA's board member and ConnectedFactories 2 coordinator, Rikka Virkkunen (VTT), provided an overview of the project, in terms of what can be done with digital technologies and the different steps in the scenario as well as providing inspiration for future projects in terms of pathways, crosscutting factors and enablers, which can all be consulted on the [ConnectedFactories website](#).

In the first session, dedicated to pathways, Sergio Gusmeroli (FPM) started by presenting the transition from Connected Factories 1 to Connected Factories 2 pathways anchored in data spaces highlighting that companies are still not sufficiently engaged with data. For the researcher, in order to make data spaces more attractive to the manufacturing sector we should focus on producing fair, high value pools of data, as well as the necessary infrastructure to use and exchange data, and the appropriate governance models and mechanisms, implying an implementation of open data formats. (The pathways generated by the ConnectedFactories projects 1 and 2 can be consulted [here](#)).

Katri Valkokari (VTT) focused on the circular economy pathway, exploring digitalisation as a key enabler and highlighting how the European manufacturing industry has the potential to be a forerunner if there is a commitment to the dissemination of practical cases and knowledge.

During the second bloc, the event gave the floor to six projects - [Qu4lity](#), [Zero Defect Manufacturing Platform \(ZDPM\)](#), the [European Factory Platform \(EFPF\)](#), [Kyklos 4.0](#), [Digiprime](#), and [SHOP4CF](#) – to present their demonstrators as well as key findings and challenges.

Qu4lity's Oscar Lazaro presented the project's vision and highlighted the importance of moving at the speed of business, balancing flexibility and quality. ZDPM's Stuart Campbell too stressed how the project aims at building up companies to respond to business reality, presenting their digital platform, i4FS, for connected smart factories aiming at excellence in manufacturing through zero defect processes and products. EFPF's Usman Wajid also focused on the importance of collaborations, presenting the project as a platform developed with the goal of connecting different stakeholders of digital manufacturing under a federated smart factory ecosystem.



Responding to manufacturing's high consumption of energy and natural resources, Kyklos 4.0's Jason Mansell stressed the importance of monitoring to achieve real circularity, highlighting how the project is working to optimize processes of sustainability. Digiprime's Marcello Colledani presented the wide implementation of circular value chains in different manufacturing sectors, identifying how the information asymmetries in the stakeholders involved in such processes lead to a large set of inefficiencies, as well as how the lack of understanding from the side of the consumer is blocking the boost of the demand of such products. SHOP4CF's Pieter Becue dedicated his presentation to the human aspect of smart factories and digitalization, stressing that the role of technology is not to replace workers but rather to provide them with improved conditions which allow for increased well-being and newfound relevance.

The last bloc of the agenda was dedicated to crosscutting aspects, namely interoperability, standardization, business aspects, cybersecurity, and skills and human aspects.

Luis Usatorre (Tecnalia) described how ConnectedFactories 2 has embedded circularity in the concept of interoperability, concluding that although there is no single solution for interoperability in manufacturing it remains important to address trust, safety and resilience in data and move from the automation pyramid towards the cyber-physical system concept.

Olga Meyer (Fraunhofer IPA) discussed the importance of not only developing strategies and standards but also communicating the results and providing help to projects who wished to transfer their results, wrapping up the discussion by introducing the starting project [Stand4EU](#).

Katri Valkokari (VTT) discussed the business aspects and continuation of the marketplaces and platforms developed by the projects, focusing on the added-value for customer clients and the business reality in the manufacturing industry under an outcome-based economy; mentioning the hype around the metaverse and what that would mean for manufacturing in terms of benefits and new roles, Valkokari advises a balance between disruptive and incremental changes.

Ulrich Seldeslachts (LSEC) highlighted that for the past year, manufacturing has been the industry with the largest incidence of cybersecurity attacks, namely ransomware, extortion and cryptocurrency, proposing that companies try to build on already existing assets to create visibility, harden brownfield operations, control peripheral ports, conduct regular cybersecurity testing, and include vendors in the process. In addition, Ulrich brought attention to the different legal frameworks and directives on the matter, with a focus on the Cyber Resilience act, which indicates the specific obligations of the manufacturing sector before bringing products to the market.

Finally, addressing skills and the human aspects, Kosmas Alexopoulos (LMS/University of Patras) highlighted the needs for reskilling in manufacturing vis-a-vis digitalisation and different pathways identified by the ConnectedFactories project, as well as relevant soft skills, characterizing the different worker profiles and the training necessary.

The event was closed with the presentation of the [Digital Transformation use cases catalogue](#) by Meike Reimann (S2i), who also detailed the work done and step-by-step approach of the ConnectedFactories 2 national and regional workshops. Reimann highlighted how pathways are valuable for both industry and academia and crosscutting factors should be considered along with digitalisation, drawing attention to understanding each company's optimal level of digitalization, trends, and key barriers, with use cases providing practical and comprehensive examples.



### 3.5 Presentations and recordings

The [recordings of the sessions are available on this YouTube playlist](#). The respective [presentations are also available via this link](#).

## 4 Dissemination

The event has been promoted (prior, during and after the event) via the ConnectedFactories2 and EFFRA dissemination channels:

- Social media (LinkedIN & Twitter)
- Email marketing - EFFRA monthly newsletter (for 3 months)
- Websites (ConnectedFactories, EFFRA and other partners' websites) – 1 news banner per website

For the post-communication 1 news article published on the EFFRA and [ConnectedFactories website](#). EFFRA will use social media channels as an amplification strategy.

Please find the final ConnectedFactories Newsletter here:

<https://www.connectedfactories.eu/news/connected-factories-final-newsletter>