

D 6.5

Intermediate Plan for Exploitation and Dissemination of Results: PEDR

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

² RE: Report, OT: Other; ORDP: Open Research Data Pilot



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Abbreviations and acronyms

TERMS, ABBREVIATIONS AND ACRONYMS	
ADRA	Artificial Intelligence, Data and Robotics Association
CF2	ConnectedFactories 2
CSA	Coordination and Support Action
BDVA	Big Data Value Association
DEI	Digitizing European Industry
DIH	Digital Innovation Hub
DMP	Digital Manufacturing Platform
DoA	Description of Action
ECSEL	Electronic Components and Systems for European Leadership
EFFRA	European Factories of the Future Research Association
FoF - PPP	Factories of the Future – Public Private Partnership
IA	Innovation Action
I4MS	ICT Innovation for Manufacturing SMEs
EC	European Commission
EU	European Union
KDT	Key Digital Technologies
PEDR	Plan for Exploitation and Dissemination of Results
SAE	Smart Anything Everywhere
SME	Small and Medium Sized Enterprise
SPARC	Partnership for robotics
WP	Work package
ORDP	Open Research Data Pilot



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Executive Summary

The ConnectedFactories2 (CF2) '**Plan for Exploitation and Dissemination of Results**' (PEDR) is a document of strategic nature. It is used to plan, implement, and monitor the project's communication, dissemination, and exploitation activities. The preliminary plan outlined in the Description of Action (DoA) was continuously updated. The document at hand 'Intermediate PEDR' represents the status of project dissemination and exploitation in month 18 (May 2021) and will be further expanded throughout the project lifetime.

The ConnectedFactories 2 '**Intermediate PEDR**' builds on the assessment of activities performed within the first 18 project months and entails a continuation of the most impactful activities as well as new approaches. In this context, the covid-19 pandemic situation led to the challenge of keeping the planning as flexible as possible and the need to shift the focus more towards digital tools and activities.

The key objective of the project is to enhance smart manufacturing through digital platforms, cross-cutting features and skilled workforce. Key aims are to attract relevant stakeholders to the CF2 ecosystem, stimulate knowledge exchange and technology transfer, and ultimately support European manufacturing companies in their digital transformation.

CF2 Dissemination and Exploitation activities have the twofold goal to collect project relevant information from the community (**input side**) as well as to disseminate and discuss the project's results (**output side**). Both sides benefit vastly from the large consortium (19 partners in 16 countries) leveraging from their wide networks as well as the close connection to the European Factories of the Future Research Association (EFFRA) as a multiplier. Moreover, ConnectedFactories 2 can vastly benefit from the activities, tools and community already established in ConnectedFactories1 as well as the experiences gained, and lessons learnt.

To make sure the projects **input side** is well covered and the **integration of new stakeholders** across Europe effective, a whole work package (WP5) is dedicated to conduct **2 European** and **20 national and regional workshops** engaging over 500 stakeholders from over 15 EU countries. Moreover, a close link to the DT-ICT-07 sister projects and related initiatives has been established from the very beginning of the project and mailings lists, working groups and regular focused thematic events have been set up.

Regarding the **output side**, the consortium is constantly analysing and updating the respective target groups and dissemination channels to make sure to address the right recipients. These include the manufacturing industry, especially SMEs, EU/national/regional initiatives, the ecosystems established by the IA sister projects (DMP Cluster), the DEI Initiative and focus area, other related H2020 FoF- and ICT-projects, the ECSEL and I4MS community, DIHs across Europe, investors, policy makers, as well as the general public. In addition, the project will disseminate the results through the digitalisation of manufacturing activities in the Horizon Europe and Digital Europe program including the emerging European DIHs.

The results generated within CF2, its sister projects and related initiatives are broadly **communicated and disseminated** through WP6 via the project website and EFFRA Innovation Portal (including social media), newsletters, videos, events and partner networks providing open access to CF2 documents, workshop reports and project deliverables. In addition to the participation in conferences and fairs, the CF2 workshops involve a large number of stakeholders. They serve to inform and attract new stakeholders, as well as to discuss and disseminate CF2 findings and successful use cases.



1 Introduction and Context

The overall objectives of the PEDR are to effectively and impactfully distribute the information of results and developments achieved by CF2 and to enable an early uptake in the respective community. The PEDR constitutes a strategic plan to conduct dissemination and exploitation activities. On the one hand, the CF2 results are made available to industries currently transiting their digitalisation path as well as to future adopters of these technologies. In the case of the latter, this information is meant to encourage and accelerate the digitalisation of these manufacturers. Moreover, effective distribution of the results and progress is also targeted to researchers and academic staff, since they are the ones involved in the development of the technologies that give shape to the cross-cutting factors and pathways proposed by CF2, but also to create bridges between industry and academia in this regard. On the other hand, CF2 results are made available to strategic stakeholders to help shape the policy development in digital manufacturing, foster digitalisation of the European manufacturers, and inform investors interested in the advantages these technologies might offer. Moreover, the strategy aims at positioning these results such that they can be successfully transformed into recommendations for the corresponding industrial and political bodies, as well as fostering the uptake of digital technologies in the European manufacturing industry. Finally, the PEDR also constitutes a means to obtain feedback from the obtained outputs, challenge and discuss project results, and refine possible recommendations that emerge from the project.

These activities involve a close collaboration of the DT-ICT-07 sister projects (Innovation Actions), the Factories of the Future (FoF) public-private partnership (PPP) / Made in Europe Partnership, the European Factories of the Future Research Association (EFFRA), and other related initiatives. CF2 aims at reinforcing links to other European activities, such as ECSEL/KDT, BDVA/ADRA, SPARC/euRobotics, Cybersecurity, I4MS, SAE and relevant standardisation groups and to initiatives at transnational, national and regional level.

One of the overarching goals of CSA is to share and discuss the project's as well as the programme's results and to deliver useful information, data and knowledge to the European manufacturing industry in order to enhance European competitiveness (including leadership in platforms), as well as open up new business opportunities for individual companies/SMEs.

The work performed in ConnectedFactories 2 produces knowledge and results stored in the 'wiki' of the project and shared with the community via the CF2 website and EFFRA Innovation Portal. Knowledge on key enablers and cross-cutting factors such as business models, cybersecurity and standardisation are assessed and made available to the public in a structured and searchable way, enriched with project examples. Core elements of the CF1 and CF2 projects are the 'pathways to digitisation'. They represent a unique means to show the step-by-step maturation in manufacturing towards reaching a fully digitised state in different settings (autonomous factory, hyperconnected factory,...) and towards reaching circular and data based business. The pathways are complemented by use cases and results from running projects. The project results are generated in a very interactive way, engaging a wide variety of stakeholders from the digital manufacturing and related communities in working groups and workshops and thereafter are disseminated and discussed widely.

The project's Communication, Dissemination, and Exploitation approach is structured into two work packages (WPs).



WP5 concentrates on holding European, national and regional workshops on digital manufacturing to collect information as well as to disseminate and discuss CF2 results. It includes the following activities, which partly have individual Deliverables this document will refer to:

- Develop a strategy and information package for digital manufacturing workshops (D5.1)
- Organise 20 national/regional workshops and publish associated reports (D5.3 and D5.4)
- Organise two European workshops and publish associated reports (D5.2 and 5.5)

The objectives of WP5 are to engage with the actors in both European and local manufacturing fora, including manufacturing companies, suppliers and users of digital technologies and platforms. This work package has a key role in giving directions to the enhancement of the ConnectedFactories 2 pathways and the associated set of cases, establishing cross-fertilisation with national/regional actors and initiatives as well as between academia and industry and in disseminating results, experiences, and knowledge out of the CSA.

WP6 focuses on the development of communication and dissemination materials and performing broad outreach, dissemination and exploitation activities. It includes the following activities, which partly have individual Deliverables this document will refer to:

- Develop a corporate identity, website incl. social media and dissemination material (6.1, 6.2)
- Produce newsletters, articles and publications
- Organise or co-organise dissemination and collaboration events and thematic workshops (6.3, 6.7)
- Develop 'animated pictures' illustrating digitalisation in manufacturing (6.4, 6.6)

The overall objective of WP6 is to effectively: 1) disseminate key project information, activities and results, 2) support cross-fertilisation and increase synergies between related activities projects and communities and 3) enhance the exploitation and uptake of innovative technologies.

2 Plan for the Exploitation and Dissemination of Results

The CF2 CSA communication, dissemination and exploitation efforts are designed to maximise the reach and impact of the outcomes of the CSA. This includes providing a structured overview of available and upcoming technological developments and best practices to the European manufacturing industry, academia and policy making to enhance the European competitiveness and opening new business opportunities.

These objectives of communication, dissemination, and exploitation activities include:

- Communication activities aim at giving visibility of the project to a wider, more general audience that might not have technical expertise in the topics addressed in the CF2 CSA
- Dissemination activities aim at sharing CF2 CSA results to a specialised audience with experience and deep knowledge on the topics of digitalisation of the manufacturing industry
- Exploitation activities aim at promoting and enforcing knowledge transfer and fostering the adoption of the results produced by the CF2 CSA, its sister projects and the community

This way, the PEDR structures and guides the communication, dissemination, and exploitation efforts coherently in the desired direction according to the overall project objectives. More importantly, the PEDR



defines the expected exploitable results of CF2 as well as an exploitation strategy that will specify how to translate these results, on the one hand into recommendations for relevant political, manufacturing stakeholders and investors, and on the other hand into concrete success cases for researchers developing and refining these pathways as well as potential users and early adopters of these technologies.

2.1 Sister projects, related initiatives and other target groups

All CF2 activities involve close collaboration with the DT-ICT-07 sister projects (DMP Cluster Innovation Actions), other related projects funded under the Factories of the Future (FoF) public-private partnership (PPP) / Made in Europe Partnership and the European Factories of the Future Research Association (EFFRA). Moreover, CF2 aims at reinforcing links to other European activities, such as ECSEL, BDVA, SPARC/euRobotics, Cybersecurity, I4MS, SAE and relevant standardisation groups, as well as to initiatives at transnational, national and regional level.

In December 2019, the ConnectedFactories 2 project kicked off together with the Innovation Actions (IA) of the DT-ICT-07-2018-2019 call 'Digital Manufacturing Platforms for Connected Smart Factories' (DMP Cluster). Being the CSA associated with this call, CF2 fosters a structured exchange between these projects, enhances close collaboration with and between them and communicates and disseminates the outcomes and results broadly. The following IAs are currently running within this 'Digital Manufacturing Platforms' (DMP) Cluster (see [DT-ICT-07-2018](#), [DT-ICT-07-2019](#)):

- ZDMP - Zero Defect Manufacturing Platform
- QU4LITY - Digital Reality in Zero Defect Manufacturing
- EFPF- European Factory Platform
- SHOP4CF - Smart Human Oriented Platform for Connected Factories
- DigiPrime - Digital Platform for Circular Economy in Cross-sectorial Sustainable Value Networks
- KYKLOS 4.0 - An Advanced Circular and Agile Manufacturing Ecosystem based on rapid reconfigurable manufacturing process and individualised consumer preferences



Figure 1. CF2 sister projects from DT-ICT-07-2018 and 2019 calls

Moreover, the CF2 CSA will address a broad range of stakeholders within the European manufacturing landscape, specifically the scientific community, industry, regional SMEs, DIHs, potential end-users, and technology integrators (with special focus on SMEs) as well as the general public. CF2 partners will engage with their local environment as well as with actors at a European level that are relevant to their specific topic of expertise, e.g. standardisation, cybersecurity, human-machine interaction, etc.

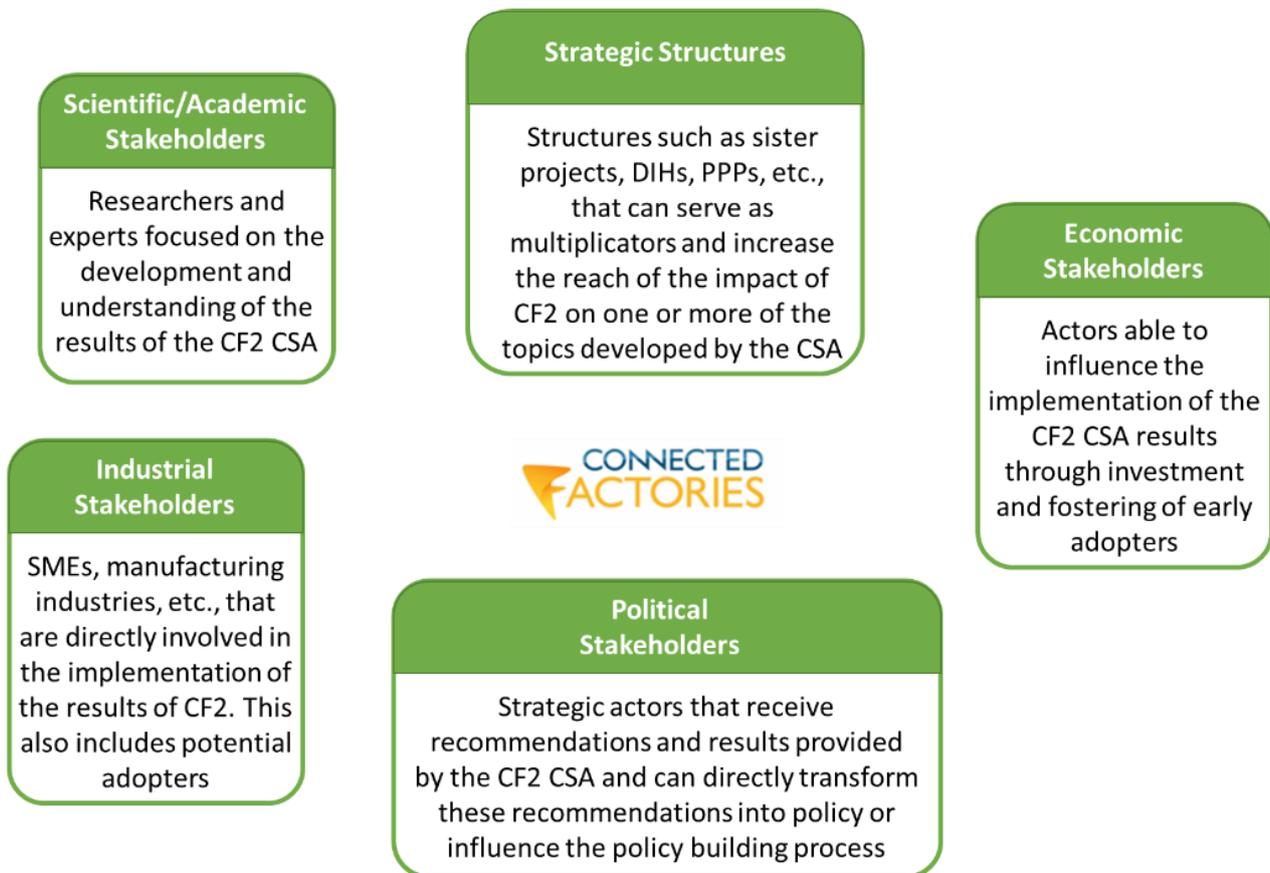


Figure 1. Target groups of CF2 CSA

The main target audience can be segmented into five groups: scientific, economical, industrial, political, strategic structures (Figure 1). For the PEDR strategy, this implies that specific channels have to be implemented to reach stakeholders with different levels of expertise on the specific pathways and cross-cutting factors, but consistent interest in the different topics addressed in CF2.

The CF2 CSA builds on the community built under CF1 and expands it through new related projects from FoF / Made in Europe, DPM Cluster, and other related initiatives to increase its reach and thus, update its database with actors of the European manufacturing landscape relevant to the CF2 PEDR strategy.

CF2 brings these projects and structures together and fosters collaboration among them. This is achieved by the participation and organisation of common activities and events, as well as by establishing working groups to systematically develop and refine the concepts and results produced by CF2.

2.2 Roadmap and Timeline of the CF2 PEDR

Figure 2 shows the adapted CF2 Communication and Dissemination Plan according to the activities performed until M18. A perspective of the future activities to be organised in the remaining 18 months are also presented. A detailed update of the timing and planning of activities is presented in the Annex Section of this deliverable. The updated version of this plan will be provided in Deliverable 6.8 Final Plan for Exploitation and Dissemination of Results: PEDR in month 36 of project.

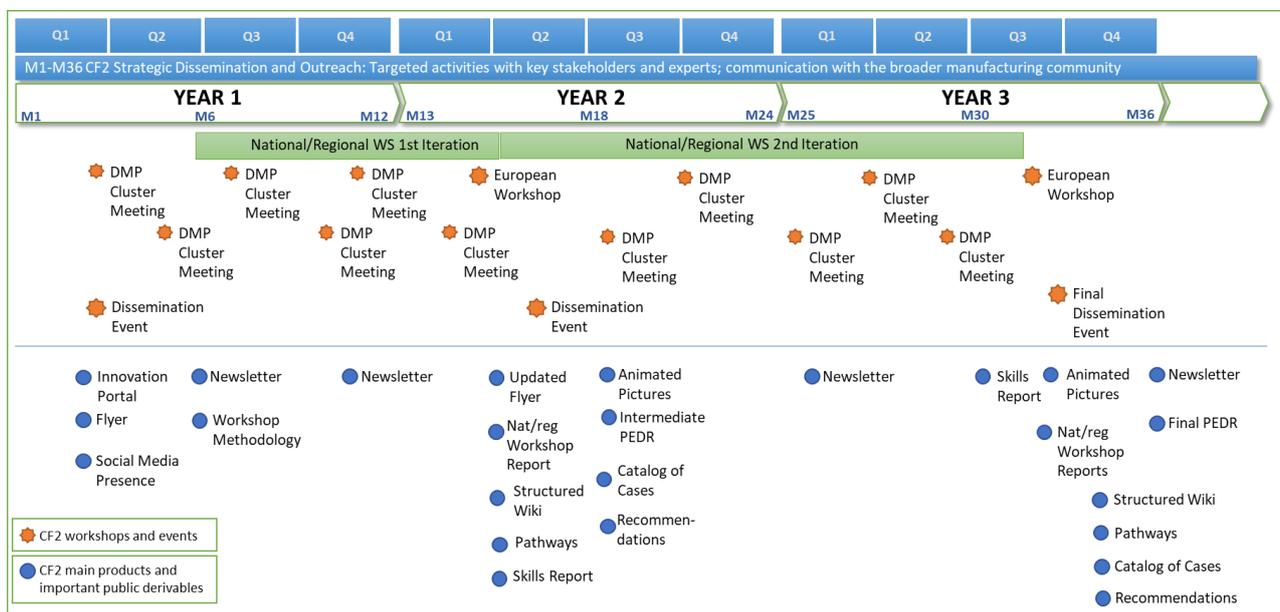


Figure 2. Organised and planned dissemination and communication activities for the CF2 CSA

2.3 Covid-19 Related Risks and Measures of Mitigation

Even in M18, it is quite clear that face-to-face interactions will be very limited due to the pandemic of covid-19. The CF2 CSA consortium as a whole has taken measures and adapted its activities to achieve its proposed objectives fully. Nevertheless, challenges remain and have acquired different dimensions.

Although smaller and more intimate activities can easily take place virtually and achieve comparable results, the organisation and execution of other types of activities become a real challenge under a virtual format. The organisation of national/regional workshops (*Task 5.2 – Organise 20 national/regional workshops*) needed to be adapted. Although these are local in nature, most of 2020 and currently during 2021, even regional meetings are not possible. To address this challenge systematically, *D5.1 – Workshop methodology and common information package* proposed a set of tools and techniques to perform a digital workshop, including tools to extract information and facilitate feedback and interaction. Moreover, dedicated

consultation was provided to CF2 partners to guide them in the usage and implementation of techniques to manage and moderate virtual meetings. Finally, *D5.3 Organisation of national/regional sessions and associated reports – First iteration* included a section of "Lessons learnt and experiences" to facilitate the exchange of knowledge regarding the organisation of virtual workshops.

Larger and more complex event involved tools that provided break-out rooms to facilitate interactions between participants further. In such cases, organisation and scheduling were rather demanding, and organising teams fully depended on technical tools to emulate face-to-face events as closely as possible.

In general, it can be said that these challenges also present opportunities. The imposition of performing only online activities forces organisers to pursue more concrete and quantifiable objectives. This is especially applicable in the case of national/regional workshops, where interaction is not only desirable but necessary. In this sense, online tools can serve a purpose and help CF2 in refining its current pathways and factors, producing new pathways and factors, and generating relevant recommendations.

From an overall perspective, it can be recognised that:

- Although a limiting factor, virtual events may also allow reaching out to participants unwilling/unable to travel
- On the other hand, busy high level speakers may be easier to attract to virtual meetings than f2f
- Although there is an interest in participation, there is higher competition for attendees due to the increased number of online activities
- The number of participants also may vary greatly between events and during events.
- Peer-to-peer interaction is also challenging, even with the help of specialised tools. This can be explained by the lack of familiarity with such alternatives. Moreover, the etiquette for the interaction and the approach strategy to stakeholders is completely different to face-to-face interactions
- Facilitate two-way communication is essential to maintain engagement with audiences. This can be initiated before the event (questionnaire with key insights), implemented at the beginning of the event and continuously performed during the event (asking for input via several online tools such as Mentimeter, Mural etc.), as well as at the end (feedback on how participants liked the event, if it was useful, what to improve, etc.).

3 Communication Strategy of CF2

Communication activities add a public value to the achievements of the project by presenting the sometimes-complex results into accessible and understandable formats prioritising the impacts and relevance for end-users and society.

The CF2 communication approach focuses on giving visibility and positioning the CSA to a broader audience in the European industrial landscape. The specific communication channels for each target group will vary according to the expected interest and expertise of stakeholders within these groups. Specifically, communication activities fully exploit the broadcasting capabilities of several state-of-the-art social media tools and the CF2 network and ecosystem.

3.1 Means of Communication

Several channels are being utilised by CF2 as a whole and by its partners to the communication objectives of the CSA and reach the target audience identified. Table 2 and Table 3 give an overview of the communication channels and activities that are used during the project. It also lists the Key Performance Indicators (KPIs) for each activity and shows the progress towards them.

Type	Communication channels and activities	Key performance indicator	Progress by M18
Corporate Identity	The CF2-Innovation Portal (website)	Operational, active by M3, and under permanent update	Achieved (D6.1) 120 visitors/ months
	CF2 builds and makes use of the social media channels established in CF1, particularly its Twitter channel , to broadcast information to the wider public	Operational and active at the start of the project	Achieved (D6.1) 200 followers

Table 2. CF2-corporate identity tasks within the Communication Activities

Type	Communication channels and activities	Key performance indicator	Progress by M18
Reach out to Broader Community	CF2 will produce four electronic newsletters containing the main information about the project and related FoF PPP activities.	4 newsletters	1 Newsletter 6 EFFRA newsletter contributions
	Brochures, flyers, and other communication material	1 st Flyer Updated Flyer	Achieved (D6.1)
	CF2 will produce a set of informative videos or Animated Pictures . This material will have two purposes: on the one hand, explain CF2 and its outputs to the wider audience, and on the other hand, engage experts with targeted information.	First iteration M18 Second iteration M33	Achieved (D6.4)
	EFFRA communication channels, including e-mail list, website, newsletter, and social media channels will be actively exploited	Channels active M03	Achieved and extensively used

Table 3. Tasks to extend the CF2-community within the Communication Activities



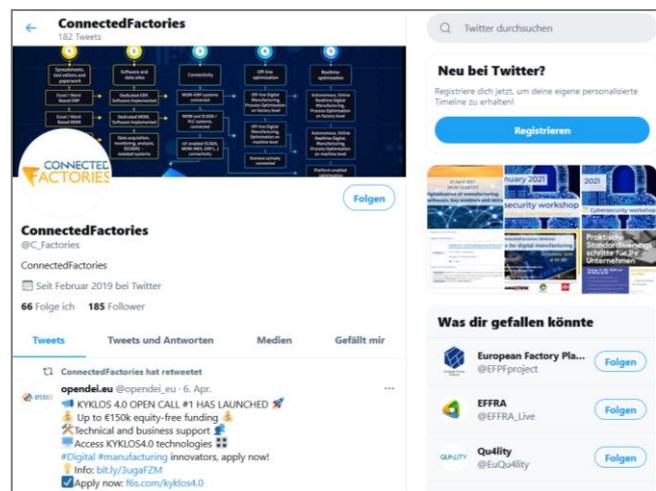
3.2 Detailed Communication Activities by M18

3.2.1.1 Corporate Identity: CF2-Website and Twitter Account

The CF2 website is the main entrance of CF2 CSA to learn about the pathways to digitalisation and cross-cutting factors, showcase success cases, discover specialised activities, and obtain overall information on the project. From this perspective, the CF2 website is considered part of communication activities to bring information to the overall community and landscape of stakeholders with additional access to specialised technical information. The CF2 website is a standalone dedicated website strongly synchronised with the EFFRA communication channels and under permanent update. Similarly, the CF2 Twitter account solidifies the presence of the project in social media and facilitates the broadcasting of relevant information to the general public as a means to engage with wider community.



CF2-Innovation Portal



CF2-Twitter account

Figure 3 and 5. Screenshots of the CF-Innovation Portal and Twitter account

3.2.2 Reach out to Broader Community

3.2.2.1 Electronic Newsletters

CF2 produces four electronic newsletters containing the main information about the project and related FoF PPP activities. Newsletters are distributed and published through the CF2 networks and website and additional platforms associated with ICT/CPS in manufacturing as well as through and social networks. The newsletter and further news are shared on the ConnectedFactories website: [News | Connected factories](#)

3.2.2.2 Physical and Digital Communication Material

Printed brochures, flyers and similar material were originally planned to be produced for distribution at events, workshops and through physical mail. These plans were adapted due to the restrictions imposed by covid-19 (Section 2.3), and consequentially, **e-brochures, e-flyers** and other **digital material** specifically designed to exploit the digital environment were prioritised. Such material was also heavily utilised for online distribution and information purposes. The focus on such ‘greener ways’ to disseminate even allowed the reach of a wider audience. Moreover, CF2 shares all open Deliverables on it’s website: [WPs & Deliverables | Connected factories](#). Figure 4 shows the updated flyer to be utilised in a digital format.





Figure 4. CF2 redesigned flyer

3.2.2.3 Audio-visual Communication Material

Following the experience from CF1, CF2 has and will produce a set of informative videos, or 'Animated Pictures'. Key messages concerning digitisation of manufacturing and the core points of the project will be selected. A clear narrative for each key issue, result and scenario will be developed. The sets of 'Animated Pictures' will be targeted to wider audiences as well as the manufacturing, digital and related communities. The first iteration of 'Animated Pictures' provides a concise and engaging overview of the pathways to digitalisation of the manufacturing industry proposed by CF2.

3.2.2.4 EFFRA communication channels

The EFFRA communication channels, including e-mail list, website, newsletter, and social media channels, i.e. [Twitter](#) and [LinkedIn](#) (Figure 5), are actively utilised as a multiplier to reach both specialised, and a wider community within the European manufacturing landscape, including political and economic stakeholders as well as strategic structures focused on the digitalisation of manufacturing, e.g. DIHs

EFFRA Portal as an efficient multiplier of CF2

- EFFRA web-site – Average (monthly) views: 290, 6 CF2 news promoted
- EFFRA Twitter Channel: Followers: 3335, Average (monthly) tweet impressions: 5450, Average (monthly) profile visits: 920, Average (monthly) mentions: 42 – CF2 Tweets: 14 – CF2 re-tweets: 25
- EFFRA LinkedIn - Followers: 1180, Average (monthly) visits: 149 CF News: 10
- EFFRA newsletter – Subscribers: 1016, 6 CF2 articles



(a) EFFRA-LinkedIn account



(b) EFFRA-Twitter account

Figure 5. EFFRA channels increasing the reach of CF2 activities

4 Dissemination Strategy of CF2

Dissemination activities under CF2 aim at sharing the results and progress of the CSA to a specialised audience, to the purpose of refining and improving the knowledge on the digitalisation pathways, cross-cutting factors, success cases, trends and challenges, etc., related to digitalisation of the manufacturing industry. These activities are designed to produce a strong impact on the corresponding target audience regarding the importance and priority of these topics for the competitiveness of the European industry. Moreover, the dissemination strategy sets the foundation for later exploitation of the results of CF2. Hence, through these activities, the CF2 CSA expects that the dissemination materials, workshops, publications and training materials, will also contribute and guide the experts in the target audience, such as researchers, SMEs, regulatory bodies, etc., to the implementation or adoption of the proposed developments, helping the further exploitation of the project's results.

4.1 Means of Dissemination

To achieve the position and consolidation of CF2 in the specialised community, achieving the targeted impact, the CF2 partners and the CSA as a whole perform a series of dissemination actions making use of several dissemination channels. Table 4 provides an overview of these activities, including proposed KPI and progress by M18.

Type	Dissemination channels and activities	Key performance indicator	Progress by M18
Strengthening the Community and Knowledge Transfer	Joint publication of cross-thematic peer-reviewed scientific/industrial articles in international journals	No KPI set as CF2 is a CSA	Joint publication in planning
	CF2-partners will organise 20 national and regional workshops where researchers, developers, solution providers and end-users share experiences and challenges regarding the development and deployment of digital manufacturing platforms for connected smart factories.	10 workshops organised by M15 and 20 by M32	9 by M15 and 10 by M18
	A key process in the organisation of the workshops is the development of a strategy and an information package for their proper execution and documentation.	Info package available in M06 (continuously updated)	Achieved (D5.1)
	Organising two big CF2 Dissemination Events	1 st event by M18 2 nd event by M32	Achieved (D6.3)
	Participation in info-days, brokerage events, trade-fairs, national events, collaboration meetings with other communities, participation with IA meetings	Participate in 20 events	Over 10 in M18
	Collaboration with other DT-ICT-07-2018-2019 projects: Organise DMP cluster events	6 cluster events	5 by M18
	Organise two European workshops	1st WS by M18 2 nd WS by M32	Achieved (D5.2)

	<p>The most direct means to inform and access the target audience in CF2 is its e-mail list. In this case, CF2 builds upon the database developed during CF1 and is updated in concordance with the new results, project news and latest progress on the pathways, cross-cutting factors, and success cases being developed in CF2.</p>	<p>Cluster and thematic mailing lists: All cluster projects reached</p>	<p>Achieved 105 subscribers All cluster projects covered</p>
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Table 4. Dissemination channels, activities, KPI and progress by M18

4.2 Detailed Dissemination Activities and Highlights by M18

4.2.1 Main publications

Joint publications and conference contributions are planned for the second period of the project.

4.2.2 Organisation of events and workshops

The main instrument to access the dissemination target audience is through the participation, organisation, and co-organisation of thematic activities to discuss the results of CF2 and obtain feedback to refine these results. In this context, the organisation of European workshops and topic-specific workshops have been essential to engage with specialists from the academic and industrial landscape. As mentioned previously (see Section 2.3), these activities had to be restructured to fit a virtual format. Moreover, other larger events in which relevant participation was envisioned were either cancelled or postponed for 2021 to take place also in a virtual format.

In the following, we highlight the most relevant activities (co-)organised by CF2 and those of relevance in which the CF2 CSA participated.

4.2.2.1 Connected Factories Dissemination Events

The first big Dissemination Event took place on the 10th, 11th and 12th of March 2020, with the name *digitalisation and digital platform Webinar*. The activity enables the presentation of the CF2 CSA objectives, explains the thread between CF2 and CF1, introduces partners of the consortium and the corresponding Innovation Actions. Due to the restrictions imposed by covid-19 (see Section 2.3), the activity was held virtually as well as face-to-face since a large number of the participants had restrictions to travel. The pictures below show some of the slides of the presentations, while the recording of the event can be found in the [CF2-Innovation Portal](#).

According to schedule, the second CF2-Dissemination Event took place the 22nd of April, 2020 (see D6.3).

ConnectedFactories 2 General Targets

- Supporting a common and structured **understanding of key enablers and cross-cutting factors** with regard to digital technologies and platforms for manufacturing
- Identifying **pathways to the industrial take-up** of digital technologies & platforms
- Situating **state-of-the-art cases**, key enablers and cross-cutting factors on pathways
- Stimulating the matching of **skills transfer** offering with skills demand across Europe
- Engaging with research and industrial actors** in EU and local ecosystems of manufacturing
- Generating a **broad awareness** about key enablers, cross-cutting factors, pathways and cases
- Increase **collaboration and synergy between Industrial Platform projects**, especially Digital Manufacturing Platforms for Connected Smart Factories (DT-ICT-07-2018-2019)

11.4.2020 Supported by the European Commission through the Factories of the Future PPP (Grant Agreement Number 873086)

(a) Introduction of the CF2 targets

Big Picture

30 Partners, 10 EU Countries, 13 SMEs, 14 Users, 7 Research Centres & Universities, 1 Standards Association

Zero Defect Technology (Process Systems & Services), **Software Applications** (Process Apps & Solutions), **System Integrators** (Hardware), **Manufacturing Infrastructure** (Process Apps)

4 Years
18M€ Cost
16.5M€ Funding
3.2M€ For Calls – Start 2021-March
30 Partners + 1 Linked Third Party
4 Domain and 1 Cross Domain demonstrator
DT-ICT-07-2018-2019

www.zdmp.eu
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PM: stuart.campbell@informationcatalyst.com

(b) Screenshot of the ZDM presentation



(c) Screenshot of the QU4LITY project presentation

(d) Consortium of the SHOP4CF project

Figure 6. Screenshot of the CF2 CSA Dissemination Event

4.2.2.2 National/Regional Workshops

A total of 20 workshops organised by the different CF2 partners grouped into two iterations are planned to refine the digitalisation pathways and cross-cutting factors further, as well as to identify and define additional pathways and factors to the digitalisation of the manufacturing industry. The workshops aim at creating a detailed picture of the needs, challenges, developments, real-world use-cases, solutions, and gaps that exist in terms of digital manufacturing and related digital platforms. Moreover, national/regional workshops enable the CF2 CSA to connect with national/regional initiatives effectively and impactfully. Within the workshops, availability and deployment of existing solutions on the supply side are compared and matched with the requirements of different sectors and end-user groups. This enables the identification of current gaps in the proposed pathways and cross-cutting factors and possible approaches to overcome them.

The workshops serve as platforms to:

- foster open and mutual sharing of knowledge and experiences,
- identify industrial needs and requirements, trends, existing practices, and obstacles,
- present the most relevant developments and outcomes of related EU projects, to facilitate and foster the uptake of results,
- evaluate the implementation of current solutions, validate the CF 2 results (such as the pathways) and present further use cases, and
- involve developers, suppliers and users of digital technologies and digital platforms for manufacturing in the CF2 workflow.

Figure 7 shows the topics addressed in the first iteration workshops, such as pathways and cross-cutting factors, while Figure 8 shows the roadmap of the workshops during the first iteration. The first iteration concentrates during the last quartal of 2020 and January 2021 and comprises eight workshops. The second has been kicked off in April 2021 with two workshops.

	VTT	TECNALIA	IPA/S2i	LSEC	CEA	MTC	UNOTT	INESC TEC	EIL	I4A
Workshop date	03.12.2020	01.12.2020	16.10.2020	20.01.2021	01.04.2021	19.11.2020	Jul 21	24.11.2020 03.12.2020	29.10.2020	15.04.2021
Cross-cutting Factors					X				X	
Added Value and Business Models					X					
Interoperability and Standardisation		X	X		X					
Cybersecurity				X	X					
Industrial Agreement and Legal Aspects										
Humans in Manufacturing										
Pathways										
Circular Economy	X	X						X		
Human Factors										X
Autonomous Smart Factories							X			
Hyperconnected Factories							X	X		
Collaborative Product-Service Factories										
Data Spaces	X									
Skills						X		X		
Successful use-cases			X		X					
Trends, needs, challenges and barriers			X		X				X	

Figure 7. Summary of the topics and dates of the workshops planned for the first 18 months of the CF2 CSA. Entries in green are to be hosted after the submission of this deliverable³.

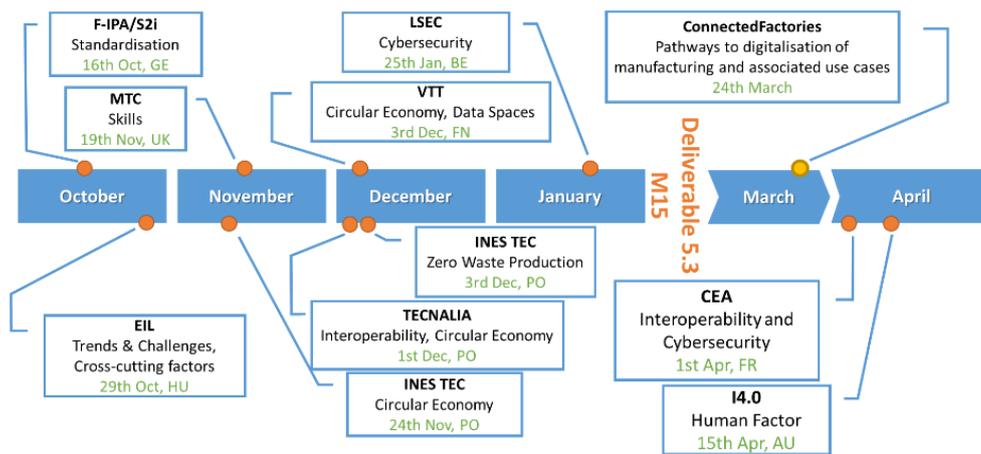


Figure 8. Timeline of the workshops to be organised during the first 18 months of the CF2 CSA.

Screenshots, promoting material, and highlights of the national/regional workshops can be observed in Figure 9

³ The CF2-partner INES TEC has hosted two workshops during the first 18 months. Moreover, CEA and I4.0 correspond to workshops from the second iteration of workshops.

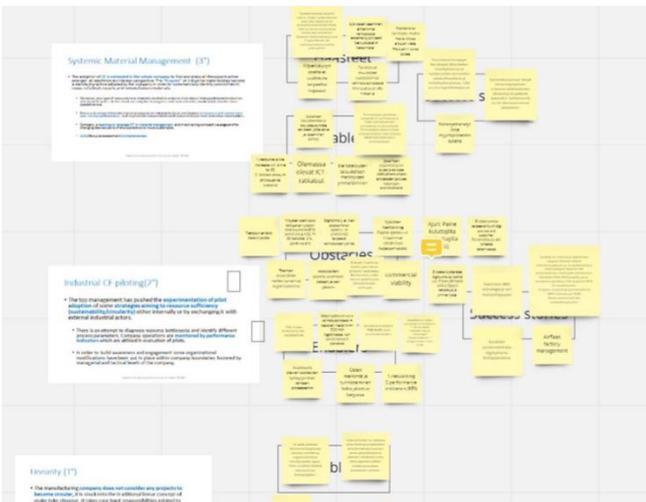


(a) Promotional poster

1.1: STANDARDISIERUNGSWORKSHOP „Praktische Standardisierungsschritte für Ihr Unternehmen“ Normungsbereiche für Industrie 4.0 - Referat				
Systeme/Eigenschaften	Interoperabilität	Sicherheit	Künstliche Intelligenz	Mensch und Arbeit
Beispiel ISO 13374 Zustands-Überwachung und -Diagnostik von Maschinen - Verarbeitung, Austausch und Darstellung von Daten 80/100 (2) BEWERTEN	Beispiel IEC 63278-1 ED1 „Asset administration shell for industrial applications - Part 1: Administration shell structure“ 65/100 (2) BEWERTEN	Beispiel Grundnorm für die Funktionale Sicherheit (IEC 61508) 95/100 (2) BEWERTEN	Beispiel DIN SPEC 92001-Reihe Künstliche Intelligenz - Life Cycle Prozesse und Qualitätsanforderungen 100/100 (1) BEWERTEN	Beispiel DIN EN ISO 10075-2 „Ergonomische Grundlagen bezüglich psychischer Arbeitsbelastung“ 91/100 (3) BEWERTEN
Wichtigkeit 89/100 (7) BEWERTEN	Wichtigkeit 92/100 (6) BEWERTEN	Wichtigkeit 79/100 (6) BEWERTEN	Wichtigkeit 88/100 (6) BEWERTEN	Wichtigkeit 74/100 (5) BEWERTEN
Geschätzter Reifegrad allgemein 43/100 (5) BEWERTEN	Geschätzter Reifegrad allgemein 38/100 (5) BEWERTEN	Geschätzter Reifegrad allgemein 54/100 (5) BEWERTEN	Geschätzter Reifegrad allgemein 32/100 (5) BEWERTEN	Geschätzter Reifegrad allgemein 67/100 (5) BEWERTEN
Geschätzter Reifegrad in meinem Unternehmen 43/100 (5) BEWERTEN	Geschätzter Reifegrad in meinem Unternehmen 28/100 (4) BEWERTEN	Geschätzter Reifegrad in meinem Unternehmen 62/100 (4) BEWERTEN	Geschätzter Reifegrad in meinem Unternehmen 40/100 (4) BEWERTEN	Geschätzter Reifegrad in meinem Unternehmen 58/100 (4) BEWERTEN

(b) Results of the interactive session: Degree of Maturity

Figure 9. Highlights from the F-IPA/S2i workshop



(a) Results of the Circular Economy description in the VTT workshop



(b) Poster invitation to the CEA workshop

Figure 10. Digital material and results of different national/regional workshops



Figure 11. Results from the question: How do you use digital tools and technologies? at the MTC workshop

4.2.2.3 European Workshops

The European workshop organised the 24th of March titled "Pathways to digitalisation of manufacturing and associated use cases" brought together experts from the industry and researchers to discuss the current progress and developments of CF2. The execution of the workshop was properly documented, and the obtained feedback will be utilised to refine the pathways and cross-cutting factors. These results will be presented in D5.2⁴. The whole event was recorded and can be accessed through the [EFFRA youtube channel](#), and the presentations can be accessed in the [EFFRA cloud service](#). Screenshots of the event can be observed in Figure 12 – 16

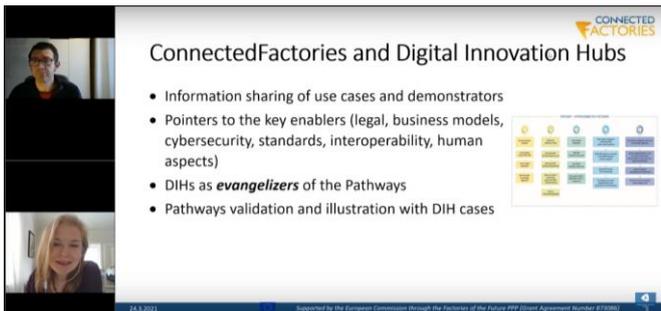


Figure 12. Introductory section to the European workshop.

Dimensions / Levels	Level I No Data Control	Level II Data Silos	Level III Data Bridges	Level IV Data Interoperability	Level V Data Valorization
Data Management			Data stored in ad hoc interconnected databases		
Data Protection				Standard protection mechanisms are used	
Data Processing		From unstructured data (text, social recording) format to semi-structured information (fault interdependencies)			
Data Analytics		Database interconnected but no multi-source analytics pipeline			
Data Visualization			Data from different sources can be extracted and visualized at corporate level		
Data Sharing	No needs for data sharing with customer			Extracted knowledge shared with supplier	

Figure 13. Presentation of the AI Regio project

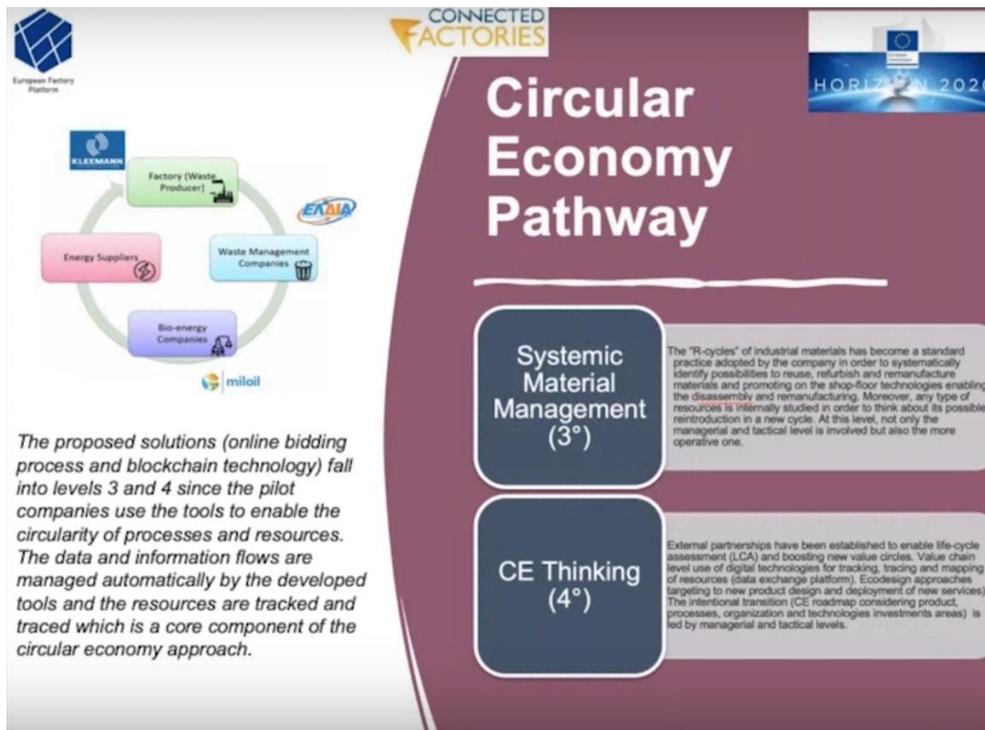


Figure 14. Presentation of a Circular Economy Pilot

⁴ D5.2 - Organisation of 1st European workshop and associated report is scheduled for M18 for submission

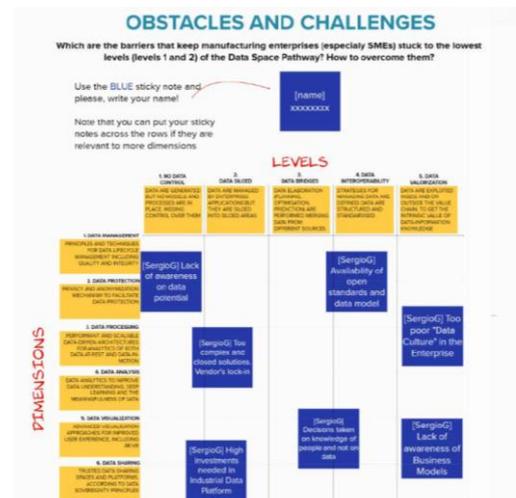
4.2.2.4 Digital Manufacturing Platforms Cluster Meetings

CF2 regularly communicates with the DMP for Connected Smart Factories projects (DT-ICT-07-2018-2019) through the regular organisation of DMP Cluster Meetings and by joint dissemination events where synergies will be exploited. The DMP Cluster meetings are topic-specific, addressing the different pathways and cross-cutting factors, and aim at refining both pathways and factors, as well as collecting information and stimulating collaboration between projects in the cluster. In particular, the DMP Cluster Working Groups correspond to: WG1 – Standardisation, WG2 – Dissemination, WG3 – Scientific and Socio-Economic Impact, WG4 – Experimentation, WG5 – Platforms and Architectures, each of them regularly meeting to refine, discuss, and obtain feedback from involved participants on their corresponding areas of focus.

Half-yearly DPM Cluster meetings were planned for the duration of CF2 CSA. So far, six have already been organised. Figure 15 and Figure 16 show interactive sessions and outputs from several DMP Cluster meetings, touching topics such as standardisation and data spaces.

Digital Transformation - Industry 4.0					
Dimensions / Levels	Level I No Data Control	Level II Data Silos	Level III Data Bridges	Level IV Data Interoperability	Level V Data Valorization
Data Management					
Data Protection			Data Engineering & Security Privacy	Data Sovereignty and GDPR	Data-driven Business Models
Data Processing	Data are generated, processed and visualized by CPPS and I4.0 systems	Enterprise Applications (ERP, SCM, PLM, CRM) collect, store and visualize Data	Complex applications require data from different sources	AI-driven applications; Digital Assistants; VR/AR	Data Economy and Industrial Data Platforms
Data Analytics					
Data Visualization					
Data Sharing			Data Spaces Interoperability	Data Sharing Spaces	Flexible Data Marketplaces

(a) Data Spaces Pathway evolutionary matrix



(a) First Interactive Session results on obstacles and challenges

Figure 15. Outputs and discussion of the DMP Cluster meeting on Data Spaces on the 2nd of December, 2020

WP 1 Standardisation: WG1 Workshop

Agenda

- > (16 - 17 CEST) General update on actions (MEYER, QUALITY)
 - ☐ Projects Status Update (ALL)
 - ☐ Tasks:
 - Task 1.2 Common standards (MEYER)
 - Task 1.3 Collection of recommendations (gaps) (MEYER)
 - Task 1.6 & T1.5: Standardisation events and joint dissemination activities (MEYER)
- > (17 - 18 CEST) T1.4 - CWA preparation (GRUNEWALD, ZDMP)
 - ☐ Task 1.4 Joint CWA proposals

Supported by the European Commission through the Factories of the Future PPP (Grant Agreement Number 873086)

Working Group 18 February 2021

(a) Meeting Agenda

DigiPrime DIGITAL PLATFORM FOR CIRCULAR ECONOMY IN CROSS-SECTORIAL SUSTAINABLE VALUE NETWORKS

DigiPrime's Potential Inputs to Standards

DMP Cluster Meeting, February 17th, 2021

Presenter: John Soldatos [INTRASOFT]

Project coordinator: Marcello Colledani marcello.colledani@polimi.it

Funded by the Horizon 2020 framework programme of the EU GA n° 873111

(b) Presentation of DigiPrime at the meeting

Figure 16. DPM Cluster meeting on standardisation on the 17th of February, 2021

DMP Cluster Plenary Meetings (Figure 17) are organised to discuss cluster interactions⁵. A DMP Cluster Plenary meeting took place on the 12th of March during the CF2 Dissemination Event, and more focused DMP Cluster working group meetings took place regularly.

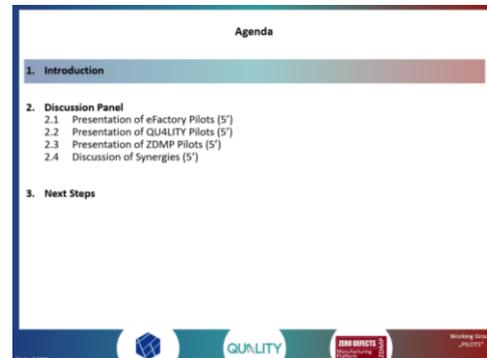
The DMP Cluster and its origin

- Projects financed under the call “H2020-DT-ICT-07-2018- 2019 - Digital Manufacturing Platforms for Connected Smart Factories”.
- **OBJECTIVE:** to define a common cluster strategy for cooperating, dissemination and outreach of the cluster projects results.

- ZDMP pushed the establishment of the DMP Cluster
- First meeting (September 25th 2019) during the World Manufacturing Forum Organised by QU4LITY & OPEN-DEI CSA



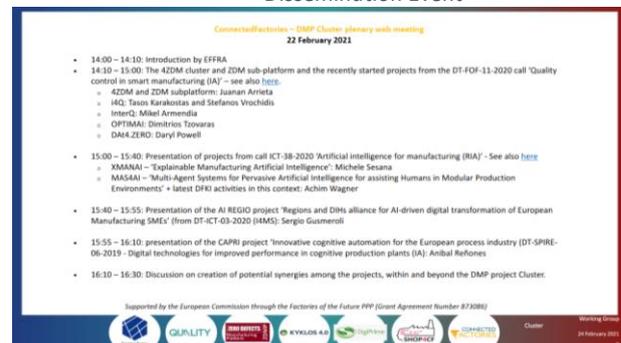
(a) DMP Cluster meeting at the CF2 Dissemination Event



(b) DMP Cluster session agenda at the CF2 Dissemination Event



(c) DMP Cluster meeting the 21st of February



(d) Agenda DMP Cluster meeting the 21st of February

Figure 17. DMP Cluster Plenary meetings

To support and efficiently exploit the results obtained at each meeting, a dedicated mailing list has also been created for the DMP Cluster and its working groups and a cloud service for presentations, minutes, and recordings whenever they take place.

4.2.3 Training and skilling

The WP elaborates on trainings and skills available as well as future skills and job profiles needed. [Identification of emerging skills and job requirements \(V.0.9\) \(connectedfactories.eu\)](https://www.connectedfactories.eu). Next to sharing Training and reskilling opportunities on the CF2 website the partners themselves are actively giving trainings or lectures in universities as well as for academia (see annex for details).

4.2.4 Consortium participation in events and networking activities

The CF2 participants were actively involved in relevant additional activities from the European manufacturing landscape. In such events, CF2 partners participated as keynote speakers but also further engaging with specialised counterparts and stakeholders, providing a platform to CF2 in those instances. The details are presented in the annex of this document.

⁵ The full meeting observed in: <https://www.youtube.com/playlist?list=PLpaccoqg8rxbu6tzTHX70wbBqZ0wMVBGv>

5 Exploitation Strategy

5.1 Exploitable results and alignment with strategy

The CF2 project and its offered services provide a source of great value for European manufacturing companies with an interest in digitisation. All services presented on the website and EFFRA Innovation Portal, be it the unique digitisation pathways, the project wiki, the use cases and tools, the skill profiles and training courses, aiming at supporting companies willing to adapt to the challenge of digitisation. Key to this will be in providing information developments in the digital platform area, enhance technology transfer and ultimately get access to innovative digital tools and services to tackle the challenge of digitisation. Additionally, being informed on and taking cross-cutting factors like advances in standardisation, cybersecurity and evolving business models into account can reduce risk and uncertainty when implementing new digital technologies and applications.

The network of partners aligned to the CF2 project will foster the exploitation and commercialisation of new digital technologies. Thus, the CSA's mission to promote as best as possible these products, opportunities, and services offered and make them available to a large group of stakeholders. This will in turn grow and strengthen the digital platform ecosystem and support the digital transformation of the European manufacturing industry.

The foreseen exploitable results, the target groups and means of exploitation are outlined below.

Exploitable Result	Description and means of explanation	Target groups / Users
CF2 Digitization Pathways	<p>The CF1 and CF2 digitisation pathways represent a unique means to give an overview on digitisation routes with dedicated steps and milestones in different settings, e.g., towards a fully 'autonomous factory', 'hyperconnected factory', or 'product service factory' (CF1) as well as pathways covering Circular Economy, data spaces, cybersecurity and artificial intelligence for manufacturing developed in CF2.</p> <p>These pathways can guide individual companies step-by-step through the digitisation process until reaching the targeted more mature digital state.</p> <p>Project partners can exploit this methodology to provide consultancies and digital transformation services to their customers. Moreover, Digital Innovation Hubs can include this methodology to assess their customer needs and accompany them during their digital maturation. The pathways also serve as a valuable instrument to give an overview of the current state-of-the-art tools and services to policy makers and identify gaps and hurdles in the overall picture to be overcome (e.g. by future research and innovation efforts).</p>	SMEs, mid-caps, LE, DIH, policy making
CF2 Cross-Cutting Factors	<p>The cross-cutting factors assessed in CF2 include 'business models', 'industrial agreements and legal aspects', 'interoperability and standardisation', 'cybersecurity' and 'humans in manufacturing'.</p>	SMEs, mid-caps, LE, DIH, policy making,

	<p>All these factors play a key role in a company's safe and successful digitisation journey. Profound knowledge about advances and risks as well as tools and methods available will help European Industries to overcome hurdles in the digital transformation.</p> <p>Knowledge of these factors and engagement with the respective communities will give project partners the means to exploit within future developments but also consultancies to own customers or via DIHs.</p>	RTOs, academia
<p>CF2 website, Structured wiki, Mapping framework, EFFRA Innovation Portal</p>	<p>The CF2 wiki, website and EFFRA Innovation Portal gather and present a rich portfolio of the CF2 and sister projects research and development results, use cases, new products, tools and methodologies, knowledge on cross-cutting factors and CF pathways. As the CF2 results are presented and embedded in the open EFFRA Innovation Portal, they become searchable and exploitable by the very broad FoF / MadeinEurope community and beyond. As the EFFRA Innovation Portal is not restricted to the project duration, it ensures technology transfer and sustainability of project results after the projects end. The results can be accessed and assessed by researchers from industry and academia to be used to get an overview of recent R&I efforts and as a roadmap to align future developments to end-user needs. Moreover, end-users, companies and policy making can get an overview of new products and tools as well as advances in cybersecurity, standardisation and other important cross-cutting factors. In summary, the Innovation Portal represents a living repository with up-to-date information on key aspects for the overall digital manufacturing community. Including CF2 results there leads to a much broader and more sustainable dissemination as well as multiplication of its impacts through enhanced exploitation possibilities.</p>	RTO, academia, industry, policy making
<p>Workshops, Thematic groups</p>	<p>CF2 results are widely discussed in open workshops and thematic groups. CF2 acts as a platform to bring key stakeholders together to share advances and/or find consensus regarding specific. Moreover, CF2's interactive approach gathers knowledge, experiences and perspective of sister projects, related initiatives and other interested audiences. By enhancing knowledge exchange, cross-fertilisation and technology transfer from academia to industry, CF2 is contributing to the exploitation of project and program results already during the project lifetime. Moreover, with the structured wiki and thematic groups, it contributes to the standardisation efforts in Europe.</p>	RTO, academia, industry, policy makers, standardisation groups
<p>Event outcomes, research results</p>	<p>Dissemination events ensure a broad communication and dissemination of project and program outcomes to collect end-user feedback, enhance technology transfer, and facilitate early uptake of project results.</p>	End-users, industry, policy makers, RTO

<p>CF2 list of new skills and job requirements</p> <p>Training catalogue</p>	<p>Digital platforms and the application of novel technologies in manufacturing create a demand for new skills. Aspects such as life-long learning and new teaching paradigms have become increasingly important. CF2 will create a list of emerging, new skills and job requirements and identify associated training, courses and online offerings for industrial workers/managers. Next to this, CF2 will assess novel delivery mechanisms and analyse academic and professional curricula to understand gaps and provide directions.</p> <p>The CF2 skills and training catalogue and work on future job profiles will prepare SMEs and industries for upcoming needs and human resources strategies. It will also inform academia and industry on emerging education and training needs. The results are crucial to aligning the upcoming skills need with the education and training programs.</p>	<p>SMEs, industry, policy makers, academia</p>
<p>Digital Transformation Cases Catalogue</p> <p>CF2 Use Cases, Demonstrators, Infrastructures</p>	<p>The CF2 use cases and demonstrators illustrate how specific products, project developments, methodologies, or services can contribute to digitisation in manufacturing, e.g., by enabling the next level of digitisation within a pathway. CF2 will collect, catalogue and disseminate key practical results of sister projects and related initiatives. This provides Large Industry and SMEs with practical examples of commercial and community lead digital manufacturing platforms to find 'tested' cases to inspire and encourage them to invest in digital platform deployment, smart connected services and application projects. Innovation being well ahead of real market deployment, often seem very distant for industries, especially SMEs. Through cases from industrial state-of-the-art to demonstrators and pilot lines, CF2 aims to give innovations broad visibility to the early adopters of new technologies, with the aim of mobilising the industry in general, and SMEs in particular, to benefit from technological developments for digital transformation.</p>	<p>Early adopters, SMEs, industry</p>
<p>Policy Recommendations for Digital Europe</p>	<p>CF2 will provide a document on 'Foresights and Recommendations of Digital Manufacturing Platforms for a Digital Europe', which will give an outlook on key challenges for the EU industry and provide key recommendations to motivate future lines of research. The document will analyse the portfolio of platforms, use cases and demo centres to detect the areas in which the implementation of the new technologies is more widespread. It will also help to identify the challenges that will have to be addressed with future initiatives. It will identify new scenarios and key lines of evolution of digital platforms towards increased levels of intelligence and autonomy. With this, the document will be of great value for regional, national as well as European policy makers to support decisions and structure future research.</p>	<p>Policy makers</p>

The exploitation routes for the CF2 project as well as for individual partners will be further detailed in the second part of the project.



6 Conclusion

The ultimate success of the ConnectedFactories 2 project is, by its nature, vitally dependent on intensive exchange with various stakeholders external to the consortium (manufacturing industry/SMEs, platform end-users, policy makers, researchers, standardisation groups, related projects and national/regional initiatives). For this, an up-to date communication, dissemination and outreach strategy is an essential factor. As described in this document, all communication, dissemination and exploitation activities in CF2 are directly aimed to support the digital manufacturing platforms community, either on its input side (attracting stakeholders and collecting important information) or on its output side (disseminate and discuss the CF2 and sister projects results).

In summary, the numerous activities related to dissemination and exploitation focussed on:

- Increasing awareness of the development of the digital manufacturing platforms with wide coverage across Europe
- Disseminating the CF2 project and sister projects results and stimulate knowledge exchange
- Attracting relevant stakeholders to the ecosystem and engaging them in project activities
- Influencing on the future development directions

This was achieved by:

- Providing platforms and tools for efficient communication, dissemination and exploitation of the CF2 project (CF2 website, mailing lists, social media, newsletters, working groups, events)
- Connecting to EFFRA as a multiplier (EFFRA open portal, social media, newsletter, sessions at events)
- Reinforcing collaboration between the DT-ICT-07 sister projects (e.g. by DMP Cluster Meetings and thematic working groups)
- Creating linkages between the digital manufacturing ecosystem and EU, national as well as regional initiatives and attracting SMEs from regional ecosystems
- Maximising the impact of CF2 and its sister projects by reinforcing links to other European activities such as relevant European partnerships and other initiatives like I4MS, SAE and standardisation groups
- Developing and adapting the CF2 pathways to digitisation together with key stakeholders
- Creating and promoting a catalogue of 'digital manufacturing platform' use-cases to enable technology transfer and early uptake of results

The activities engaged a large number of stakeholder and had a wide reach, good coverage across Europe and were very well received by the community. Despite the careful planning of dissemination activities, the pandemic situation has posed and will pose some challenges to the dissemination and exploitation activities. Nevertheless, the consortium has adapted quite quickly to the situation and adapted its methods, tools and strategy in a flexible way. Further planning will focus mainly on digital communication, dissemination and exploitation for 2021 and will be readily turned back into face-to-face activities as soon as they become possible.



7 Annex

The following tables show the communication and dissemination activities in which the CF2-consortium organised or participated in, during year one of the project (December 2019 to December 2020), as well as activities projected for the second year of the project (December 2020 to December 2021).

First-Year Period (December 2019 – December 2020)

Date/ Period	Name of event/ activity	Main lead, Partic ipant	Type of activity *	Description	Place	Type of audience	Size audie nce
15.12.2019	CF2 website	EFFRA	website	Creation CF2 webiste	Online	Scientific Community; Industry; SMEs; policy making	n.a.
23.01.2020	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
01.03.2020	CF2 Flyer	EFFRA	Flyer	Creation of CF2 Flyer	Print	Scientific Community; Industry; SMEs; policy making	n.a.
02.03.2020	Open Innovation Kongress	S2i	Organisation of a conference	Networking at CF2 booth	Stuttga rt, Germa ny	Scientific Community; Industry; SMEs; policy making	800
03.03.2020	"Aktuelle trends in der robotik chancen und herausforderun gen fuer unsere wirtschaft	EIL	Organisation of a workshop	Discussion on Robotik trends and challenges	Budap est, Hungar y	Scientific Community; Industry; SMEs	50
3-5.03.2020	Metromeet	Innova lia	Organisation of a Conference	Intelligent metrology for a sustainable and efficient digital factory	Spain	Scientific Community; Industry; SMEs	100
04.03.2020	Workshop	IMR	Organisation of a workshop	Workshop on digitisation in supply chain	Ireland	Industry, SME's, MNE's	10
11.03.2020	Digitalisation and digital platforms for manufacturing Webinar	EFFRA	Organisation of a Conference	Focused on the projects associated to the call topic DT-ICT-07-2018- 2019, complemented by other key projects in this area.	Online	Scientific Community; Industry; SMEs; policy making	204
12.03.2020	DMP Cluster / Plenary	CF2	Organisation of a workshop	Presentation / WG1 report on current status and results	Online	CF2 cluster members	38
25.03.2020	Industrial Steering Board	IMR	Meeting	Digitisation progress review with Irish manufacturers	Online	Industry, SME's, MNE's	20
03.04.2020	Webinar	IMR	Webinar	Virtual class on Blockchain fundamentals	Online	Industry, SME's, MNE's	40
01.05.2020	Industrial Steering Board	IMR	Meeting	Digitisation progress review with Irish manufacturers	Online	Industry, SME's, MNE's	25



	07.05.2020	Industrial Days	EIL	Participation to a workshop	"Online Industry workshop for industrial leaders.	Online	Industrial Days	100
	07.05.2020	Workshop	IMR	Workshop	Workshop on digitisation in supply chain	Online	Industry, SME's, MNE's	11
	12.05.2020	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
	13.05.2020	DMP Cluster / Plenary	CF2	Organisation of a workshop	Presentation / WG1 report on current status and results	Online	CF2 cluster members	50
	18.05.2020	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
	04.06.2020	DMP Cluster Meeting	CF2	Organisation of a workshop	Presentation / WG1 report on current status and results	Online	CF2 cluster members	58
	23.06.2020	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
	13-17.07.2020	1st Innovalia Week	Innovalia	Organisation of a Conference	Present solutions, tools and methodologies that are developed and marketed by the group	Online	Scientific Community; Industry; SMEs	+200
	20.08.2020	Workshop	IMR	Workshop	Workshop on digitisation in product development	Ireland	Industry, SME's, MNE's	6
	14.09.2020	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
	16.09.2020	DMP Cluster / Leads	CF2	Organisation of a workshop	Discussion / WG1 report on current status and results	Online	CF2 cluster members	30
	25.09.2020	DMP Cluster Meeting	CF2	Organisation of a workshop	Discussion / Alignment between DMP Cluster and CF2 activities; WG1 / CF2 Task 1.3 alignment	Online	CF2 cluster members	48
	01.10.2020	IoT course	IMR	Class Development	Creation of IoT class to	Ireland	Industry, SME's, MNE's	10
	16.10.2020	Praktische Standardisierungsschritte für Ihr Unternehmen	IPA/S2i	Organisation of a workshop	National/regional WS: Practical standardisation steps for your company	Online / GER	Scientific Community; Industry; SMEs, policy, standardisation groups	35
	20.10.2021	Standards for digital manufacturing Webinar	EFFRA	Organisation of a workshop	use cases and best practices that illustrate how standards are used in research & innovation on digital manufacturing	Online	Scientific Community; Industry; SMEs; policy, standardisation groups	236
	29.10.2020	CEN/CENELEC CWA ZDMTerms the	CF2	Participation to an event other than a	CWA / WG1 supervision of the projects joint work	Online	EU standardization bodies; Industry;	10-20



		1st Meeting (Kick-Off)		conference or workshop			CF2 projects representatives, etc	
	29.10.2020	Workshop: Industry 4.0 Development Directions, Challenges – Competitive and Sustainable Manufacturing	EIL	Organisation of a workshop	National/regional WS: The aim of the workshop was to give an overview of the current issues of Industry 4.0, with specific emphasis on sustainable manufacturing and the smart factories	Online / HU	Scientific Community; Industry; SMEs; Customers	50
	3-5 Nov. 20	EBDVF	S2i	Participation to a conference	AI and Big Data Transforming Business and Society	Berlin Virtual	Scientific Community; Industry; SMEs	600
	11.-12-11.2020	WMF	S2i, FPM	Participation to a conference	Organisation of a session with DIHs	Online	Scientific Community; Industry; SMEs	900
	19.11.2020	Upskilling for Digital Manufacturing	MTC	Organisation of a workshop	Nat/regional WS: Workshop focusing on the "Upskilling for Digital Manufacturing"	Online / UK	Primarily manufacturers although it was mixed	27
	20.11.2020	DMP Cluster / Leads	CF2	Organisation of a workshop	Discussion / Alignment between DMP Cluster and ConnectedFactories2 activities; WG1 / CF2 Task 1.3 alignment	Online	CF2 cluster members	40
	24.11.2020	Industry 4.0, Focus on Automotive Industry	EIL	Participation to a conference	Discussion on Industry 4.0 and Connected Factories	Budapest, Hungary	Industry; Customers; SMEs;	70
	24.11.2020	Digital Transformation in Learning	INESC TEC	Organisation of a workshop	National/regional WS: Discuss the transformation in learning to push and cope with digitalisation	Online / PT	Scientific Community (higher education, Research); Industry; SMEs;	62
	25.11.2020	Future Forum	VTT	Lecture	Presentation on Industry5.0 Vision	Online	Regional authorities, students and teachers of polytechnics, anyone (youtube video)	
	26.11.2020	EFECTS	S2i	Participation to a conference	Technology radar Session	Online	Scientific Community; Industry; SMEs	60
	26.11.2020	EN/CENELEC CWA ZDMTerms the 2nd Meeting	CF2	Participation to an event other than a conference or workshop	CWA / WG1 supervision of the projects joint work	Online	EU standardisation bodies; Industry; CF2 projects representatives, etc	10-20



Second Year Period (December 2020 – December 2021)

Date/ Period	Name of event/ activity	Main lead, Partic ipant	Type of activity *	Description	Place	Type of audience	Size audien ce
01.12.2020	Interoperability and Circular Economy	TECNIC ALIA	Organisation of a workshop	National/regional WS: Learn from scientific and industrial stakeholders their views on interoperability and circular economy	Online / Spain	Scientific Community; Industry; SMEs	30
02.12.2020 – 3.12.2020	DMP Cluster Meeting	CF2	Organisation of a workshop	Develop and discuss the new Data Spaces pathway	Online	Scientific Community; Industry; SMEs	49
03.12.2020	Zero Waste Production	INES TEC	Organisation of a workshop	National/regional WS: Showcase technologies and use cases in zero waste production	Online / PT	Scientific Community; Industry; SMEs	62
03.12.2020	Circular economy and digital manufacturing – Building Sustainability and Circularity for Manufacturing Industry	VTT	Organisation of a workshop	National/regional WS: Collect feedback to the Circular Economy and Data Spaces pathways	Online / Finland	Scientific Community; Industry; SMEs	26
09.12.2020	DMP Cluster / WG1 Standardization Working group	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	0-20
11.12.2020	IoT deployment	IMR	Deployment	Deployment of teachable IoT infrastructure on manufacturing site	Ireland	Industry, SME's, MNE's	3
14.12.2021	An Introduction to the Data Spaces pathway	FPM	Organisation of a workshop	Presentation of the Data Spaces pathway + interactive sessions	Online	Industry, SME	15
14.12.2021	An Introduction to the Circular Economy pathway	FPM	Organisation of a workshop	Presentation of the Data Spaces pathway + interactive sessions	Online	Industry, SME	15
01.01.2021	5G	IMR	Announcement	5G MPN deployment	PR	Industry, SME's, MNE's	200
20.02.2020	Cybersecurity Workshop	LSEC, EFFRA	Organisation of a workshop	Cybersecurity Pathway	Online	Scientific Community; Industry; SMEs	118
20.01.2021	Industrial Steering Board	IMR	Meeting	Digitisation progress review with Irish manufacturers	Online	Industry, SME's, MNE's	20
25.01.2021	Cybersecurity	LSEC	Organisation of a workshop	National/regional WS: Provide insight into recent developments on cybersecurity in manufacturing	Online / BE	Scientific Community; Industry; SMEs	50



26.-27.01.2021	EDIH Networking Event	S2i	Participation in a Conference	Collaboration between EDIHs and EEN/Start-up EU Networks	Online	Scientific Community; Industry; SMEs	700
28.01.2021	DMP Cluster / Leads		Organisation of a workshop	Discussion / WG1 report on current status and results	Online		20
29.01.2021	CEN/CENELEC CWA ZDMTerms the 3rd Meeting	external	Participation to an event other than a conference or workshop	CWA / WG1 supervision of the projects joint work	Online	EU standardisation bodies; Industry; CF2 projects representatives, etc	ca. 10-20
17.02.2021	DMP Cluster / WG1 Standardization	F-IPA	Organisation of a workshop	General update on actions (O. MEYER, CF2), collection and discussion of projects contributions	Online	CF2 cluster members	10-20
25.02.2021	AerospaceUP Hour - https://www.aerospaceup.com/	UNOTT	Participation to an event other than a conference or workshop	Monthly AerospaceUP SME meeting	Nottingham, UK (Virtual)	[UK Manufacturing SMEs (Aerospace)	20
22.02.2021	DMP Cluster / Plenary	EFFRA	Organisation of a workshop	Presentation / WG1 report on current status and results	Online	Scientific Community (higher education, Research); Industry; SMEs;	187
26.02.2021	NCP Walonie	EFFRA	Participation to an event other than a conference or workshop	Presentation at Event	Online	Policy making	30
26.02.2021	CEN/CENELEC CWA ZDMTerms the 4th Meeting	external	Participation to an event other than a conference or workshop	CWA / WG1 supervision of the projects joint work	Online	EU standardisation bodies; Industry; CF2 projects representatives, etc	10-20
01.03.2021	Workshop	IMR	Meeting	Digitisation progress review with Irish manufacturers	Online	Industry, SME's, MNE's	20
5 & 12.03.2021	"Digital Manufacturing 101" 4 SMEs - https://www.entbrite.co.uk/e/digital-manufacturing-101-4-smes-tickets-131171773305	UNOTT	Organisation of a workshop	Digital Manufacturing training and dissemination of resources for SMEs.	Nottingham, UK (Virtual)	UK Manufacturing SMEs (General)	12
11.03.2021	CSA Industry4.E Collaboration Meeting	EFFRA	Participation to a workshop	Presentation of CF2	Online	Industry, SME scientific community	40
15.03.2021	Promotion of CF2 National Workshop	CEA	Social media	Posts from CEA LIST social network accounts: Facebook, LinkedIn, Twitter	Online	Industry, SME scientific community	3000 followers
15.03.2021	Promotion of CF2 National Workshop	CEA	Website	Promotion of the event in CEA LIST website	Online	Industry, SME scientific community	1000 visits/month



18.03.2021	I4MS4Ts Collaborative session for CSAs	VTT, S2i	Participation in activities organised jointly with other H2020 project(s)	Collaboration event for H2020 CSA projects organised by I4MS	Online	EDIH candidates, DIH, policy, Industry, SME scientific community	600
23.03.2021	HAMK (Hämeenlinna polytechnics) course on Industry 4.0	VTT	Training	Opening lecture	Online	Students, teachers	30
24.03.2021	Pathways to digitalisation of manufacturing and associated use cases	EFFRA	Organisation of a workshop	European WS: ConnectedFactories2 pathways and coordination actions	Online	Industry, SME scientific community	56
25.03.2021	<u>Metromeet</u>	Innovalia	Organisation of a Conference	Intelligent metrology for a sustainable and efficient digital factory	Online	Industry, SME scientific community	from more than 15 countries
30.03.2021	<u>Machine Learning and Artificial Intelligence for Quality 4.0</u>	Project QU4LITY	Participation to a workshop	Machine Learning and Artificial Intelligence for Quality 4.0	Online	Industry, SME scientific community	-
01.04.2021	Webinar	IMR	Training	Industry 4.0	Online	Industry, SME's, MNE's	30
01.04.2021	CF2 National Workshop: Interoperability and Cybersecurity	CEA, EFFRA	Organisation of a workshop	National / regional WS: workshop to discuss the cross-cutting factors of interoperability and cybersecurity in two of the CF2 pathways for adoption of DMPs: autonomous factory and hyperconnected factories	Online / FR	Industry, SME scientific community	25
13.03.2021	Clust-ER MECH (Italian Cluster)	EFFRA	Participation to a workshop	Keynote, including ConnectedFactories	Online	Industry, SME scientific community	50
31.03.2021	AI REGIO Manufacturing Data Space	FPM	Organisation of a workshop	Workshop to provide an overview about Data Space for Manufacturing	Online	Industry, SME, DIHs	30
15.04.2021	Digitaler Arbeitsplatz der Zukunft	I4.0	Organisation of a workshop	National/regional WS: Present the design thinking approaches of the workplace of the future	Online / AU	Industry, SME scientific community	50
22.04.2021	Digitalisation of manufacturing: pathways, key enablers and skill	EFFRA	Organisation of a workshop	Projects update, pathways and CF2 work	Online	Industry, SME scientific community	228
24.04.2021	<u>Data Spaces Dialogue</u>	IDSA	Participation to a conference	The sequel of IDSA LiveSessions	Online	Industry, SME scientific community	120
19.05.2021	Shape the future of Digital Manufacturing Platforms in Horizon and Digital Europe	EFFRA	Participation to a conference	Overview of DMP in HE and DEP	Online	Academia, RTO, policy making,	100

