

Project Title:
THE FOF-DESIGNER:
DIGITAL DESIGN SKILLS FOR FACTORIES OF THE FUTURE

Project Acronym:
DigiFoF



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D8.2- Workshops and Tutorials¹


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Public

Lead Organisation:
AFIL

Project Coordinator:
ULBS

Contributors:
All Partners

Reviewers:
BOC

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1 Executive Summary

From a general perspective, WP8 deals with the dissemination and exploitation of the results achieved during the DigiFoF project. The estimated start date of WP8 is PM1, while the estimated end date is PM36. Lead organisation is VIAMECA.

In this regard, *D8.2 – Workshops and Tutorials* is related to *T8.3 - Realization of exploitation events and activities* regarding the workshops and exploitation events organized and carried out during the whole duration of the DigiFoF project. T8.3 duration is from PM6 to PM36.

According to the cycle of the project, D8.2 has been structured as a living document till the end of the project. The purpose of the document is to provide guidance on how structure, organize and manage workshops, tutorials as well as other events such as conferences.

An important note: during the second part of 2020, physical events have been affected by the pandemic crisis due to Covid – 19 that have inhibit it. These situation has affected the Digi-FoF project.

2 Methodology

D8.2 formalizes the approach that will be followed by the DigiFoF consortium to ensure the best possible quality of the exploitation events and activities. All the partners are involved in performing this activity in line with their specific expertise and responsibilities.

2.1 Criteria

Exploitations events and activities are dedicated to mutual learning and exchange of experiences. Their aim is to enhance the know – how about the results / outputs that are realized in the framework of the DigiFoF project, promoting the training concepts and materials for design aspects of the Factory of the Future among several stakeholders e.g. Higher Education Institutions (HEIs), enterprises and companies.

In particular, exploitations events and activities aims to foster the knowledge transfer between academia and industry: in this regard, the exploitation events and activities will be carried out by the whole Consortium, according to their specific expertise and responsibilities.

2.2 Exploitation Activities and Events

In line with the objective of the DigiFoF project – i.e. to propose a network of training environments to develop skill profiles, training concepts as well as materials for design aspects of the Factory of the Future – exploitation events and activities include:

- Participation in national and international scientific conferences
- Workshops
- Tutorials
- Information sessions
- Webinars
- Summer Schools

- Other Events

In line with *D6.2 – Quality Assurance and Risk Management Plan* – all the exploitation events and activities carried out in the context of the DigiFoF project shall be organised and managed in an effective and efficient manner to ensure the coherence between them. In the next section, the main guidelines are depicted.

2.3 Guidelines

The aim of this section is to define rules and standards to ensure the coherence between the events organised by the project partners. As previously mentioned, the consortium members promote the outcomes / results of the DigiFoF project – according to their network, responsibilities and expertise – through a set of different events and activities (e.g., participation in national and international scientific conferences, workshops, tutorials, information sessions, meetings, summer school, other events) that can be organized either independently as well as in synergy with other initiatives.

Exploitation events and activities can be organized both in academic as well as in industrial context involving a heterogeneous set of attendees – from academic to industrial stakeholders including PhDs students.

In line with D6.2, Project Partners will be asked to:

- Inform about the date and the topic of exploitation event and activity, either organised independently or organized in co-joint with other initiatives such as the participation to scientific national or international conferences.
- In case of exploitation event and activity organisation, Project Partners will provide in due time a full information package regarding the exploitation event and activity e.g. agenda, materials, link to online software (in case of webinar) and other useful information (e.g., venue and transportation).
- In case of organisation of scientific conferences, the Project Partners (organiser) shall communicate to the consortium the topics of the conferences, the website, as well as the related sessions.
- In case of participation to a national / international scientific conference, the Project Partners (attendees) shall communicate to the consortium the topics of the conference, the website, the proceeding presented and the related session.
- From a general perspective, all the presentations used in occasion of the scientific conferences, webinars, tutorials, and other initiatives shall be carried out using the standard DigiFoF Power Point Template.
- In case of exploitation event and activity organisation, the list of attendees must be filled-in following the defined template (ANNEX B of D6.2). Similarly, the following documents shall be filled according to D6.2; **i)** participation feedback form (ANNEX C of D6.2); **ii)** the Event Report Template (ANNEX D of D6.2) and **iii)** evaluation by participants.

- In case of an organisation of an exploitation event or activity, the Project Partners (organisers) are responsible for reporting the collected feedback using the DigiFoF standard template.

2.4 Target Group

The training concepts as well as the materials for design aspects of the Factory of the Future – exploitation events and activities are dedicated to a variety of target groups and stakeholders that can achieve a benefit by having access to the courses and laboratories developed during the project. Targets groups are:

- Students (also PhDs)
- Higher Education Institutions (HEI)
- Teachers in HEI
- SMEs
- Large Companies
- Clusters and Professional Associations
- General Public

3 Workshops and Tutorials

The projects partner has started to plan and exploit the idea, the first progresses as well as the first achievements of the DigiFoF project., summarized in Table 1 and Table 2.

According to the DoW, the main indicators of the DigiFoF project are: 6 Workshop, 4 Academia-Industry workshop, 5 workshops during scientific conferences, 6 tutorials for an overall amount of 15 workshops and 6 tutorials.

Title	Event (Type)	Venue	DATE	DigiFoF PARTNER	Note
Visit of Continental Automotive Sibiu	Academia – Industry Workshop	Sibiu, Romania	25 January 2019	ULBS / Continental	Realized as satellites at kick-off meeting
The 9th International Conference on Manufacturing Science and Education - MSE 2019 – SESSION 14 – TRAINING WORKFORCE SKILLS IN DIGITALIZATION ERA OF FACTORY OF THE FUTURE	Workshop	Sibiu, Romania	05 June 2019	ULBS	MSE 2019 – SESSION 14 – TRAINING WORKFORCE SKILLS IN DIGITALIZATION ERA OF FACTORY OF THE FUTURE

<i>EMSE Transformation numérique et économie circulaire: des livres complémentaires pour innover</i>	Academia – Industry Workshop	Saint – Etienne, France	22 May 2019	EMSE	Organized during Journée DEFII de l’Institut Henri Fayol 2019.
PRO-VE 2019 – Collaborative Decision Making for value creation networks life-cycle management www.pro-ve.org	Workshop	Turin, Italy	23-25 September 2019	EMSE	Workshop supported by the DigiFoF Research project
Visit to the SMILE – Smile Manufacturing Innovation Lab for Enterprises - Kilometro Rosso.	Academia – Industry Workshop	Bergamo, Italy	27 September 2019	AFIL / UNIBG	Realized as satellites at project meeting
Officine 4.0	Academia – Industry Workshop	Bergamo, Italy	04 October 2019	UNIBG	
PS3M	Tutorials	Saint Etienne	06 November 2019	EMSE	
OMILAB Design Thinking	Tutorials	Saint Etienne	7 July 2020	EMSE	Planned
PRO-VE 2020, Skills for Organizations of the Future	Workshop	Valencia	23-25 November 2020	SOCOLNET, ULBS	Online
Sibiu Innovation Days (SID 2020), Digitalization/ Industry 4.0	Workshop	Sibiu	26-27 November	ULBS	Online
Sibiu Innovation Days (SID 2020), Future of work / Challenges of business level, employees level, academic level	Workshop	Sibiu	26-27 November	ULBS	Online
SmartCity Online Training	Tutorial	-	15.05.2020	ULBS	Online tutorial

Table 1: Workshop and Tutorials

4 Conferences and other Events

As mentioned in the introduction, D8.2 includes not only workshops and tutorials, but also other events such as conferences. Table 2 reports the conferences and other events carried out throughout the project duration.

Title	Event (Type)	Venue	DATE	DigiFoF PARTNER	Note
15 th International Scientific Conference eLearning and Software for Education.	Conference	Bucharest, Romania	11-12 April 2019. PM4	ULBS	Conference Proceeding
AFIL General Assembly	Assembly	Varese, Italy	31 May 2019. PM6	AFIL	Presentation of the DigiFoF
9 th international conference on Manufacturing Science and Education. Section 14: Training Workforce skills in digitalization era of factory of the future.	Conference	Sibiu, Romania	5-7 June 2019. PM6	ULBS - Organizer	Section 14 organized by the DigiFoF Research Project
DoCEIS 2020 - 11th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems	Conference	Caparica, Lisbon Portugal	Originally Scheduled on 6-8 May,2020	SOCOLNET	The conference has been rescheduled due to Covid-19 as on-line conference on 1-3 July 2020
AFIL General Assembly	Assembly	OnLine	16 July 2020. PM19	AFIL	Presentation of the DigiFoF

SID 2020 Sibiu Innovation Days	Conference	Sibiu	26-27 November 2020	ULBS	online
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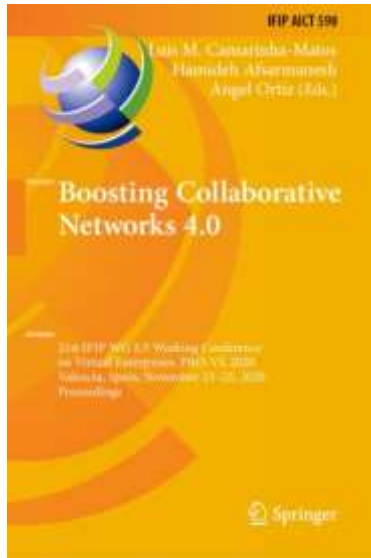
Table 2 Conferences and other events

5 Publications (papers) with reference to DiGiFoF

- Graça P., **Camarinha-Matos L.M.** (2020). Performance Indicators of a Collaborative Business Ecosystem – A Simulation Study. In: *Technological Innovation for Life Improvement. DoCEIS 2020*. IFIP AICT, vol 577, pp 3-17. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-45124-0_1 (**Best paper award**)
- Graça P., **Camarinha-Matos L.M.** (2020) Evaluating and Influencing the Performance of a Collaborative Business Ecosystem – A Simulation Study. In: *Boosting Collaborative Networks 4.0. PRO-VE 2020*. IFIP AICT, vol 598, pp 3-18. Springer, Cham. https://doi.org/10.1007/978-3-030-62412-5_1 (**Best paper award**)
- Nazarenko A.A., **Camarinha-Matos L.M.** (2020) The Role of Digital Twins in Collaborative Cyber-Physical Systems. *Technological Innovation for Life Improvement. DoCEIS 2020*. IFIP AICT, vol 577, pp 191-205. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-45124-0_18
- **Osório A.L., Camarinha-Matos L.M., Afsarmanesh H., Belloum A.** (2020) Liability in Collaborative Maintenance of Critical System of Systems. In: *Boosting Collaborative Networks 4.0. PRO-VE 2020*. IFIP AICT, vol 598, pp 191-202. Springer, Cham. https://doi.org/10.1007/978-3-030-62412-5_16
- Liu Q., Gou J., **Camarinha-Matos L.M.** (2020) Towards Agile Operation for Small Teams in Knowledge Intensive Organizations: A Collaboration Framework. In: *Boosting Collaborative Networks 4.0. PRO-VE 2020*. IFIP AICT, vol 598, pp 263-272. Springer, Cham. https://doi.org/10.1007/978-3-030-62412-5_22
- **Karagiannis D.; Buchmann R A; Boucher X; Cavalieri S; Florea A; Kiritsis D; Lee M** (2020) OMILAB: A Smart Innovation Environment for Digital Engineers. In: *Boosting Collaborative Networks 4.0. PRO-VE 2020*. IFIP AICT, vol 598. Springer, Cham. https://doi.org/10.1007/978-3-030-62412-5_23
- Mironescu I., Crăciunean DC., **Florea A., Bondrea I.** (2020) Improving the Training Methods for Designers of Flexible Production Cells in Factories of the Future. In: *Boosting Collaborative Networks 4.0. PRO-VE 2020*. IFIP AICT, vol 598. Springer, Cham. https://doi.org/10.1007/978-3-030-62412-5_24

6 Publications (proceedings books) with reference to DiGiFoF

- **Camarinha-Matos LM; Afsarmanesh H; Ortiz, A** (2020). **Boosting Collaborative Networks 4.0.** IFIP AICT, vol 598. Springer, Cham.



Technical Sponsors



Society of Collaborative Networks



Project



IFIP WG 5.5 COVE
Co-Operation Infrastructure for Virtual Enterprises
and Electronic Business

- Camarinha-Matos LM; Farhadi N; Lopes F; Pereira H (2020). **Technological Innovation for Life Improvement**. IFIP AICT, vol 577. Springer, Cham.

