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

Project Acronym:
DigiFoF

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Subject:
D.5.1. Action plan on joint academia industry initiatives[1]

Dissemination Level:
Restricted to other programme participants/Public

Lead Organisation:
ULBS
Project Coordinator:
ULBS

Contributors:
EMSE, UNIBG, UNIOULU, UNIBIAL, BOC,
CONTI, CLEX, OMiLAB

Reviewers:
AFIL

Revision	Preparation date	Period covered	Project start date	Project duration
V1	September 2019	Month 10-12	01/01/2019	36 Months

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[1] "Any communication or publication related to the action, made by the beneficiaries jointly or individually in any form and using any means, shall indicate that it reflects only the author's view and that the Agency and the Commission are not responsible for any use that may be made of the information it contains."

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1 Introduction

The Action plan on joint academia-industry initiatives consists in detailed planning for sub-tasks developed during WP5, namely timing, activities and actors. It is developed keeping in mind the DigiFoF performance indicators, partners involved in each joint activity and deadline of each tasks. The action plan is the first activity of *T5.1 Creating a continuous academia-industry knowledge exchange framework including implementation of specific items*. It includes the following stages:

- Preparing framework and create local partnerships
- Completing the framework (proposition of provisional activities for the 6 categories of activities) by all coupled partners and reviewing by AFIL
- Finalising the deliverable D.5.1 by UNIBIAL and providing QA report by AFIL

Knowledge Exchange activities derived from the general goal of the FoF Design Competence Network, which is: "**to reduce the knowledge gap between academia and industry**".

In order to achieve Knowledge Exchange goals with the identified stakeholders (Industry – single companies, Academia – Teachers and students and OMiLAB4FoF – virtual and physical laboratories), following activities should be considered:

1. **Online and face-to-face trainings and Webinar** – online trainings and webinars remain the most cost-effective way of sharing knowledge with some limitations of feedback mechanisms. In addition to planned webinars, evolving content should be developed in such a way to allow easy publishing and sharing via a webinar. Such webinar content can easily be indexed by Internet search engines, this activity is highly relevant for all stakeholders.

2. **Lectures (series) in academia and industry** – Lectures are also a very cost-effective way for a broad Knowledge Exchange. Lectures development activities include:
   a. Identification of potential teachers,
   b. Development and distribution of teaching materials as well as
   c. Continuous support of teacher's network.

Once developed, the lectures create a mechanism to transfer knowledge and extend DigiFoF Network on a regular basis. One interesting type of lectures is Nemo Summer School, which offers a two-week program combining lectures and practical work, in a highly-interactive environment, with focus on: Foundations of Conceptual Modelling, Technologies for Conceptual Modelling, Application Domains and Cross-cutting issues. This type of activity (summer schools) is relevant for teachers and students.

3. **Invited talks both in academic and industrial settings** – Invited talks require high efforts to be organized but could create a large impact on extending DigiFoF Network. To increase the effect of invited talks, potential speakers should be equipped with different real-life cases, success stories, etc. Therefore, DigiFoF project should focus on providing tools (templates, platforms, etc.) which would support the development of such materials. This type of activity is relevant for teachers, students and industry professionals.

4. **Internships (e.g. Erasmus+, student internships / student placements in companies)** – Internship programs should be identified, and internship positions created on HEIs with access to Physical or Virtual OMiLAB. DigiFoF Brokerage platform should become an important tool to post information on planned internships. This type of activity is relevant for teachers and students.

5. **Bachelor-, Master-, PhD -thesis project (in cooperation with industry or co-supervised)** - in addition to a Knowledge Exchange function, these activities also produce new content (cases, experiments, etc.) that can be shared within the Network. Tools to advertise such work (e.g. Brokerage platform) as well as to publish results (webinars, dedicated sections on web platforms) should be developed. This type of activity is relevant for teachers, students and industry professionals.

6. **Excursions (lab visits, industrial visits etc.)** – direct visits are a very effective tool to collect information and support strategic decision making. One important type of visits is a reference visit, e.g. a University interested in creating own OMiLAB visits another University with running laboratory. Success of such a visit could have a very large impact on extending the network of OMiLAB laboratories. Therefore, it is recommended to prepare materials (e.g. sample agenda, FAQs, etc.) to support these types of activities. This type of activity is relevant for all stakeholders (depending on type of a visit).

Type of activity	Responsible partner	Short description	Target group	Expected results	Estimated time period and length
Online trainings and webinars	BOC	Series of webinars on various topics, e.g. Laboratory setup, Software usage, Design Skills, etc. Webinars available both on project platform as well as on YouTube	All	Increased visibility, very cost-effective way for promoting Laboratories and sharing trainings / tutorials	During the project: 20-30 minutes webinar on monthly basis After the project: individually by each partner
Lectures - Nemo Summer School	OMiLAB	Nemo Summer School are organised three times during the project duration (2019, 2020, 2021)	Students, Teachers	Trained participants on Design Thinking and FoF concepts	Nemo Summer School is a 2-week event organised three times during project duration (2019, 2020, 2021) and on a yearly basis after the project
Lectures - other	HEIs	Usage of OMiLAB facilities and content for teaching. Once developed, teaching material could be shared	Students, Teachers	Trained students on Design Thinking and FoF concepts. New training materials	Starting in 2020 and continuous development after the project ends

		to broaden the network of potential teachers			
Invited Talks Laboratory visits	Laboratories	Laboratories (also together with industry partners) should organise promotional events (e.g. in form of Open Days) in which Laboratories/experiments will be presented	All	Inquires / decisions to create new laboratories New ideas for experiments and teaching content	Starting with 2020, events organised on a regular basis, e.g. once/twice a year
Internships	Industry partners	Using brokerage platform, industry professionals should create new positions for internships	Students, Industry Professionals, Teachers	New laboratory experiments and content, testing of new concepts, development of new industry cases	On a regular basis
Bachelor, Master, PhD-thesis projects	HEIs (in cooperation with Industry Partners)	Using brokerage platform, HEIs should create new positions for Bachelor-, Master-, PhD-thesis projects	Students, Teachers, Industry Professionals	New experiments / testing of new concepts New teaching materials, development of new industry cases	On regular basis
Industrial visits	Industry partners	On-site visits at industry partners to present/discuss Design Thinking approaches. Could be combined with Laboratory visits.	All	New experiments / development of new industry cases	Starting with 2020, events organised on regular basis, e.g. once/twice a year

The principal two key objectives for this action are creating collaboration framework for academia-industry knowledge exchange and adapting existing courses with new materials. For example, the collaborations can be the invited talks (experts from industry talk in universities or experts from university that talk in industry), the visits in industrial companies, research collaboration (for the students as semester or diploma project or for the professors as research projects) or training organized by/ for companies.

Potential risks / issues and solutions

- Bachelor, Master, PhD thesis project: Can we use PhD & master joined with other partner?
- Which mechanism to evaluate events, visits, webinars? It is not possible in all events to complete quality questionnaire.
- KPI 50 students for master, PhD … is hard to consider!

Knowledge Exchange activities should be measured with the following **indicators:**

- Number of trainings 15
  - ✓ Romania 4
  - ✓ Poland 3
  - ✓ Italy 3
  - ✓ France 4

  - ✓ Finland 1
- Number of webinars 24
- Number of placements/internships 18
  - ✓ UNIBIAL 3
  - ✓ ULBS 7
  - ✓ EMSE 3
  - ✓ UNIBG 3
  - ✓ UNIOULU 2
- Number of invited talks (not defined in the project proposal but a good indicator to measure the rate of collaboration between institutions)
- Number of visits in industrial companies organized (not defined in the project proposal but a good indicator to measure the rate of collaboration between institutions)
- Number of Bachelor-, Master, PhD- thesis projects Included in the indicator related to DigiFoF Brokerage System (aka: Job, trainings, thesis offers) – 50

2 List of joint academia-industry actions

Specific actions presented in this section will be by each partner.
As a personal note, I consider that for a good implementation of this package the most actions should be developed in partnership taking into account the geographic position of the partner but also the topics involved. I see at least the next combinations:

- ✓ ULBS – CONTINENTAL
- ✓ EMSE – CLEXTRAL
- ✓ UNIBIAL – IDPC
- ✓ UNIBG – AFIL
- ✓ UNIOULU -

2.1 Online and face-to-face trainings and Webinar

Online and face-to-face trainings and Webinar

- ✓ In case BOC cannot provide yet, each project partner involved in DigiFoF webinar series (HEI, OMiLAB and BOC) should provide the topic, short description and date of webinar they are in charge.
- ✓ Besides, each partners who implement online trainings (or other self-developed webinars) within their own OMiLAB or in a bilateral partnership (for example ULBS – CONTINENTAL, EMSE – CLEXTRAL, ULBS – Takata Sibiu (Romanian company), etc) or even with other partners that are not members of DigiFoF but working on the topic of digitalization, Industry 4.0, must be specified.
- ✓ Every partner (HEI + Industry) should provide a schedule with the **minimum** number of face-to-face trainings that will be implemented for the next 2 years (please see the above section about "*Knowledge Exchange activities indicators*").

2.1.1 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 1 - Introduction and research interest of each Laboratory	Xavier Boucher	07.10.2019
2	Circular Economy approach in servitization	Elaheh Maleki	12.02.2020
3	Multidimensional impacts of Service oriented strategies and Functional Economy	TBD	November 2020
4	Development of new skills for sales and marketing staff on new economic models	TBD	April 2021

2.1.2 Actions provided by ULBS

“Lucian Blaga” University of Sibiu provide the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 1 - Introduction to DigiFoF	Adrian Florea	06.19.2019
2	DigiFoF webinar 2 - Introduction and research interest of each Laboratory	Ion Mironescu	07.10.2019
3			

2.1.3 Actions provided by UNIBG

UNIBG provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 2 - Introduction and research interest of each Laboratory	Fabiana Pirola	07.10.2019
2	Modelling and Simulation for factory of the future	Fabiana Pirola	25.10.2019
3	Modelling and Simulation for factory of the future	Fabiana Pirola	January 2020
4	Modelling for factory of the future	Giuditta Pezzotta	January 2020
5	Digitalization and field service provision	Fabiana Pirola/Giuditta Pezzotta	March 2020

2.1.4 Actions provided by UNIBIAL

UNBIAL provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 2 - Introduction and research interest of each Laboratory	Arkadiusz Jurczuk	07.10.2019
2			
3			

2.1.5 Actions provided by UNIOULU

UNIOULU provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 2 - Introduction and research interest of each Laboratory	Juha Roning	07.10.2019
2			
3			

2.1.6 Actions provided by BOC

BOC provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 4 - FoF design with ADOxx	Zbigniew Misiak	09.18.2019
2	DigiFoF webinar 5 - How to set up Olive based portal and brokerage	Zbigniew Misiak	10.16.2019
3			

2.1.7 Actions provided by OMiLAB

OMiLAB provides the following actions.

Item	Training/webinar topic	Presenter	Date
1	DigiFoF webinar 3 - Introduction and requirements for OMiLABs	Wilfrid Utz	09.04.2019
2			
3			

2.2 Lectures (series) in academia and industry

Lectures (series) in academia and industry

- ✓ Regarding the NEMO 2019 I kindly ask the participants (EMSE, UNIOULU, etc) to write who participated, what were the lecture presented.
- ✓ If it is possible and if has the information, every project partner should indicate who might participate and the lecture to be presented (even you do not know the

name, at least the topic) at the NEMO 2020. Regarding this topic I remind you that at page 4 in the DigiFoF budget is explicitly shown the number of *Learning mobility* for each partner (*activities targeting staff*). More than that, next year, the project meeting will be at OMiLAB during the NEMO 2020.

- ✓ Every partner should provide a schedule with potential lectures from Industry (in case of Academy) or from Academia (in case of Industry) for the next 2 years.

2.2.1 Actions provided by OMiLAB

Training sessions during „Next Generation Enterprise Modelling – NEMO Summer School 2019 (15.07.2019 – 26.07.2019) developed in OMiLAB laboratory.

Item	Lectures topic	Lecturer / Participant	Schedule
1	The EU Project: DigiFoF	Wilfrid Utz	07.19.2019
2			
3			

2.2.2 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1.	NEMO 2019	Xavier Boucher	July 2019
2.	NEMO 2020	Xavier Boucher	July 2020
3.	NEMO 2020	Elaheh Maleki	July 2020
4.	NEMO 2021	Xavier Boucher	July 2021
5.	Industry 4.0 in master MIT	Elaine Mosconi	October 2019
6.	Security and health management for Digital FoF	Nadine Dubruc	April 2019
7.	Security and health management for Digital FoF	Nadine Dubruc	April 2020
8.	PSS design in industrial transition	Xavier Boucher	November 2019
9.	PSS design in industrial transition	Xavier Boucher	November 2020
10.	PSS design in industrial transition	Xavier Boucher	November 2021
11.	Life-cycle integration and management	Xavier Boucher	November 2019
12.	Life-cycle integration and management	Xavier Boucher	November 2020
13.	Life-cycle integration and management	Xavier Boucher	November 2021
14.	PSS lifecycle	Elaheh Maleki	March 2020

Item	Lectures topic	Lecturer / Participant	Schedule
15.	Business process management using OMiLAB	Xavier Boucher	October 2019
16.	Business process management using OMiLAB	Xavier Boucher	October 2020
17.	Business process management using OMiLAB	Xavier Boucher	October 2021
18.	Enterprise modelling and design using OMiLAB	Xavier Boucher	December 2019
19.	Enterprise modelling and design using OMiLAB	Xavier Boucher	December 2020
20.	Enterprise modelling and design using OMiLAB	Xavier Boucher	December 2021
21.			
22.			

2.2.3 Actions provided by BOC

BOC provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.4 Actions provided by CIRRID

CIRRID provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.5 Actions provided by Clextral

Clextral-France provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1	International Management	Gilles Maller	April 2019
2	International Strategy	Gilles Maller	May 2019

Item	Lectures topic	Lecturer / Participant	Schedule
3	International Management	Gilles Maller	May 2020
4	International Strategy	Gilles Maller	April 2020
5	International Management	Gilles Maller	April 2021
6	International Strategy	Gilles Maller	May 2021
7			

2.2.6 Actions provided by CONTINENTAL

Continental Romania provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.7 Actions provided by IDPC

IDPC Poland provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.8 Actions provided by PRELMET

PRELMET Romania provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.9 Actions provided by ULBS

“Lucian Blaga” University of Sibiu provide the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1	Introduction to ADOxx	DOBRILA Petric Victor *Participant*	10–12.04.2019
2	NEMO 2019	MUNTEAN Maria *Participant*	15-26.07.2019
3	NEMO 2019	Balteş Octavian Isaia *Participant*	15-26.07.2019

2.2.10 Actions provided by UNIBG

UNIBG provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1	NEMO 2019 - Service Engineering models for the design and development of PSS	Sergio Cavalieri - lecturer	17.07.2019
2	NEMO 2020	1 student participants	July 2020
3	NEMO 2020 – service engineering	1 lecturer	July 2020
4	NEMO 2021	1 student participants	July 2021
5	NEMO 2021 – service engineering	1 lecturer	July 2021

2.2.11 Actions provided by UNIBIAL

UNBIAL provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1			
2			
3			

2.2.12 Actions provided by UNIOULU

UNIOULU provides the following actions.

Item	Lectures topic	Lecturer / Participant	Schedule
1	NEMO 2019 - Collaborative and well-behaved outdoor robots in harsh environment	Juha Röning - lecturer	17.07.2019
2			
3			

2.3 Invited talks both in academic and industrial settings

Invited talks both in academic and industrial settings

- ✓ Every partner should provide a schedule with potential **invited talks both in HEI and Industry** with different real-life cases, success stories. For example, this could be organized joint with other events like student contests (Hardware-Software Engineering – ULBS), Researcher Nights (available at European level), or Sibiu Innovation Days, etc.

2.3.1 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1	Elaine Mosconi	Industry 4.0	October 2019	Sherbrooke university
2	Jean-Pierre Bosle	PSS and sustainability	October 2019	ECOBEL
3	Jean-Pierre Bosle	PSS and sustainability	October 2020	ECOBEL
4	Y. Fontaine	Digital transformation and circular Economy	May 2019	PRIMETAL
5	C. Tutenuit	Digital transformation and circular Economy	May 2019	EPE
6	TBD	Business model transformation for FoF	May 2020	TBD

2.3.2 Actions provided by BOC

BOC provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.3 Actions provided by CIRRID

CIRRID provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.4 Actions provided by Clextral

Clextral-France provides the following actions. Clextral-France does not have any activity relate to this category.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.5 Actions provided by CONTINENTAL

Continental Romania provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.6 Actions provided by IDPC

IDPC Poland provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.7 Actions provided by PRELMET

PRELMET Romania provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.8 Actions provided by ULBS

"Lucian Blaga" University of Sibiu provide the following actions.

Item	Presenter / Contact person	Topic	Event and Date	Company
1	Langa Remus	Research problems at CONTINENTAL Sibiu	Hardware and Software Engineering, 17.05.2019	Continental Automotive System Sibiu
2	Anda Antonescu	The R&D expansion plan of Marquardt Sibiu: Intelligence Opens Doors to New Possibilities	Marquardt Schaltsysteme S.C.S. University Event, 22.05.2019	Marquardt Schaltsysteme S.C.S. Sibiu
3				

2.3.9 Actions provided by UNIBG

UNIBG provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1	Antonio Maffei	Business Models and challenge-driven research: a perspective from production research	06.11.2019	University of Bergamo
2				
3				

2.3.10 Actions provided by UNIBIAL

UNBIAL provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.3.11 Actions provided by UNIOULU

UNIOULU provides the following actions.

Item	Presenter	Topic	Event and Date	Company
1				
2				
3				

2.4 Internships (e.g. Erasmus+ / student internships)

Internships (e.g. Erasmus+ student internships)

- ✓ Every HEI partner (supported by industrial partner) should provide a schedule and a list with the minimum number of placements/internships that will be implemented for the next 2 years (please see the above section about "*Knowledge Exchange activities indicators*").
- ✓ Every HEI partner should provide the number of placement available into Erasmus+ programs developed between DigiFoF partners.
- ✓ Every HEI partner should provide the number of students that will participate at the next two editions of NEMO (2020 and 2021). Regarding this topic I remind you that at page 4 in the DigiFoF budget is explicitly shown the number of Learning mobility for each partner (*activities targeting learners*).

2.4.1 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

	Erasmus+				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.	Thomas Suosse	PSS management	Final year of Master	February 2020	EMSE
2.	Thomas Suosse	PSS management	Final year of Master	February 2021	EMSE
3.	Xavier Boucher	PSS design	PhD	July 2019	University of Vienna
4.	Xavier Boucher	PSS design	PhD	July 2020	University of Vienna
5.	Xavier Boucher	PSS design	PhD	July 2021	University of Vienna

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.	Roua Allaoui	Data analysis for industrial and commercial strategy	Final year of Master	May 2019	Clextral
2.	Thibault Gourdon	Studying the market of second hand extrusion machine	Final year of Master	October 2019	Clextral
3.	Thibault Gourdon	Configuring a new business for second hand extrusion machine	Final year of Master	February 2020	Clextral

2.4.2 Actions provided by BOC

BOC provides the following actions.

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1					
2					
3					

2.4.3 Actions provided by CIRRID

CIRRID provides the following actions.

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.4.4 Actions provided by Clextral

Clextral-France provides the following actions.

	Student internships

Item	Student Name	Specialization	Year study	Start date	Organising Company
1.	Roua Allaoui	Data analysis for industrial and commercial strategy	Final year of Master	May 2019	Clextral
2.	Thibault Gourdon	Studying the market of second hand extrusion machine	Final year of Master	October 2019	Clextral
3.	Thibault Gourdon	Configuring a new business for second hand extrusion machine	Final year of Master	February 2020	Clextral

2.4.5 Actions provided by CONTINENTAL

Continental Romania provides the following actions.

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.	Anghel Adrian	Electromechanics	3	08.07.2019	Continental Automotive System Sibiu
2.	Badiu Bogdan Vasile	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu
3.	Bardasu Maria Roxana	Multimedia Systems Engineering	3	08.07.2019	Continental Automotive System Sibiu
4.	Berbecel Adina	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
5.	Bianca Mosor	Computer science and Computer Engineering	3	08.07.2019	Continental Automotive System Sibiu
6.	Bratu Mioara	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
7.	Diac Rares Dumitru	Multimedia Systems Engineering	3	08.07.2019	Continental Automotive System Sibiu
8.	Dobre Elvis Marin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
9.	Draghici Gabriel Constantin	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
10.	Dragomir Darian	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu

11.	Dragut Roxana Diana	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
12.	Drumar Radu	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
13.	Filip Cristian	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
14.	Fratila Ionut	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
15.	Gurau Florin Adrian	Information Technology	2	22.07.2019	Continental Automotive System Sibiu
16.	Hertoiu Bogdan George	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
17.	Lica Anamaria	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu
18.	Linte Irina	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
19.	Lupu Andreea	Computer science and Computer Engineering	3	08.07.2019	Continental Automotive System Sibiu
20.	Muresan Mihai	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
21.	Nanu Paul	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
22.	Neacsu Maria Madalina	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
23.	Popa Nicolae Catalin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
24.	Pridie Ceridian Atanasie	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
25.	Statescu Andrei	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
26.	Totoroga Madalina	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
27.	Tudoroiu Ilie Valentin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
28.	Turbureanu Aida Maria	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu

29.	Udrescu Claudiu	Electromechanics	3	08.07.2019	Continental Automotive System Sibiu
30.	Vasilas Iulia	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu

2.4.6 Actions provided by IDPC

IDPC Poland provides the following actions.

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.4.7 Actions provided by PRELMET

PRELMET Romania provides the following actions.

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.4.8 Actions provided by ULBS

“Lucian Blaga” University of Sibiu provide the following actions.

	Erasmus+				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1					
2					
3					

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.	Anghel Adrian	Electromechanics	3	08.07.2019	Continental Automotive System Sibiu
2.	Badiu Bogdan Vasile	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu
3.	Bardasu Maria Roxana	Multimedia Systems Engineering	3	08.07.2019	Continental Automotive System Sibiu
4.	Berbecel Adina	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
5.	Bianca Mosor	Computer science and Computer Engineering	3	08.07.2019	Continental Automotive System Sibiu
6.	Bratu Mioara	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
7.	Diac Rares Dumitru	Multimedia Systems Engineering	3	08.07.2019	Continental Automotive System Sibiu
8.	Dobre Elvis Marin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
9.	Draghici Gabriel Constantin	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
10.	Dragomir Darian	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu
11.	Dragut Roxana Diana	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
12.	Drumar Radu	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
13.	Filip Cristian	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
14.	Fratila Ionut	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
15.	Gurau Florin Adrian	Information Technology	2	22.07.2019	Continental Automotive System Sibiu
16.	Hertoiu Bogdan George	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu

17.	Lica Anamaria	Multimedia Systems Engineering	2	08.07.2019	Continental Automotive System Sibiu
18.	Linte Irina	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
19.	Lupu Andreea	Computer science and Computer Engineering	3	08.07.2019	Continental Automotive System Sibiu
20.	Muresan Mihai	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
21.	Nanu Paul	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
22.	Neacsu Maria Madalina	Applied Electronics	2	08.07.2019	Continental Automotive System Sibiu
23.	Popa Nicolae Catalin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
24.	Pridie Ceridian Atanasie	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
25.	Statescu Andrei	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
26.	Totoroga Madalina	Information Technology	2	08.07.2019	Continental Automotive System Sibiu
27.	Tudoroiu Ilie Valentin	Applied Electronics	3	08.07.2019	Continental Automotive System Sibiu
28.	Turbureanu Aida Maria	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu
29.	Udrescu Claudiu	Electromechanics	3	08.07.2019	Continental Automotive System Sibiu
30.	Vasilas Iulia	Computer science and Computer Engineering	2	08.07.2019	Continental Automotive System Sibiu

2.4.9 Actions provided by UNIBG

UNIBG provides the following actions.

	Erasmus+				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					

2.					
	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.4.10 Actions provided by UNIBIAL

UNBIAL provides the following actions.

	Erasmus+				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.4.11 Actions provided by UNIOULU

UNIOULU provides the following actions.

Computer Science and Engineering Department offers course Practical training, where students apply knowledge and skills learned during university studies to complete work assignments in his/her own field. Almost every student does practical training in industry For privacy reasons only general information about internship is available.

	Erasmus+				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					

	Student internships				
Item	Student Name	Specialization	Year study	Start date	Organising Company
1.					
2.					
3.					

2.5 Bachelor, Master, PhD thesis project

Bachelor, Master, PhD thesis project

- ✓ Every HEI partner (supported by industrial partner) should provide the number of Bachelor-, Master, PhD- thesis projects (already developed in 2019 and estimation for 2020 and 2021). For the already developed and the existing in progress projects please provide a list with names of the students, the projects titles, topics and the target companies.

2.5.1 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

Item	Thesis Type	Student Name	Project title	Year	Target companies
1	Master	TBD	Impact of digitalization on human resource management	2020	AMVMECA
2	PhD	Andres-Camilo MURILLO-COBA	Design of PSS value chains for thermic systems	2019	ElmLeblanc
3	PhD	Omar-Ahmed-Mostafa EZZAT	Modularity for PSS customization	2019	Academic

2.5.2 Actions provided by ULBS

"Lucian Blaga" University of Sibiu provide the following actions. The list includes only the students that were leaded by ULBS DigiFoF members (Daniel Volovici, Remus Brad, Adrian Florea, Daniel Morariu):

Item	Thesis Type	Student Name	Project title	Year	Target companies
1	Master	FLEACĂ Valentin	Face Emotion Recognition	2019	Continental System Sibiu
2	Master	IAMANDI Laura Diana	System for picking and estimating the number of objects in a warehouse	2019	Continental System Sibiu
3	Master	STANCIU Sergiu Gabriel	Small scale autonomous guided vehicle	2019	Continental System Sibiu
4	Master	MODRÂNGĂ Cristina Maria	A Study of Hematoma Detection from Medical Images	2019	Sibiu County Clinical Hospital
5	Master	TALPOȘ Elena Mădălina	A Study of Pedestrian Detection from Infrared Images	2019	Continental System Sibiu

Item	Thesis Type	Student Name	Project title	Year	Target companies
6	Master	STOIA Paul Claudiu	Automatic Measurements of Foetal Head Circumference in Ultrasound Images	2019	Sibiu County Clinical Hospital
7	Bachelor	Durdun Abel Emanuel	Development of a hardware-software application for air quality monitoring	2019	Environmental Protection Agency Sibiu
8	Bachelor	Dușleag Alin Dumitru	Smart buffer	2019	Continental System Sibiu
9	Bachelor	OPRIȘ D-I. KARINA-MIHAELA	Driver Assistance application by obstacles detection	2019	Continental System Sibiu
10	Bachelor	LICĂ I. ADELINA TEODORA	Position and braking lights detection at motor vehicles from image sequences	2019	Continental System Sibiu
11	Bachelor	BOȘTINĂ V. CĂTĂLINA-MARIA	Pedestrian detection from image sequences	2019	Continental System Sibiu
12	Bachelor	MESEA V. IONICA-CRISTINA	Defect detection on the road surfaces	2019	Continental System Sibiu
13	Bachelor	CIUCĂ A. MIHAI MARIUS	Behaviour autonomous car prediction in the event of a pedestrian collision	2019	Continental System Sibiu
14	Bachelor	DANCIU L. DANIEL-IONUȚ	Application for controlling the specific parameters to a robotic arm. Analysis the cobot problems	2019	Marquardt GmbH Sibiu
15	Bachelor	OANCEA Ș. ANDREI ȘTEFAN	Development an interlocking system applied to manual processes in production.	2019	IFM efector /prover SRL
16	Bachelor	CIUCLEA G. VICTOR-ȘTEFAN	Stack consumption analysis in the context of embedded systems applications.	2019	Continental System Sibiu
17	Bachelor	OLARIU I. DIANA IOANA	Air quality information and monitoring platform using IoT devices.	2019	Sibiu City Hall, Environmental Protection Agency Sibiu

2.5.3 Actions provided by UNIBG

UNIBG provides the following actions.

Item	Thesis Type	Student Name	Project title	Year	Target companies
1.	PhD	Roberto Sala	Design and assessment of a decision-making process for data-driven maintenance provision in Product-Service System	2020	Balance Systems SMI Spa
2.	PhD	Chiara Cimini	A roadmap for the integration of human workers and technology in the next generation manufacturing systems: a socio-technical perspective	2019	Brembo
3.	PhD	Michela Zambetti	A data-driven approach to PSS engineering: explore the	2020	ABB

Item	Thesis Type	Student Name	Project title	Year	Target companies
			potential of data availability and its impact on PSS ecosystem		
4.	Bachelor	Riccardo Belotti	Logistics 4.0 : analysis of the new technologies to support the operator	2019	
5.	Bachelor	Marco Piazzalunga	Applications of Industry 4.0 in the agri-food sector	2019	MioOrto
6.	Master	Luca Rota	Sustainable Product-Service System Design from a strategic sustainable development perspective	2019	
7.	Master	Paolo Amato	Decision making in field service scheduling	2019	AtlasCoop

2.5.4 Actions provided by UNIBIAL

UNBIAL provides the following actions.

Item	Thesis Type	Student Name	Project title	Year	Target companies
1					
2					
3					

2.5.5 Actions provided by UNIOULU

UNIOULU provides the following actions.

Item	Thesis Type	Student Name	Project title	Year	Target companies
1	Master	Timo Mäenpää	Usage of robotics for studying adsorbents in continuous column experiments	2020	Academic
2					
3					

2.6 Excursions (lab visits, industrial visits etc.)

Excursions (lab visits, industrial visits etc.)

- ✓ Every HEI partner should provide the number of visits in industrial companies (not necessary those involved in the project) organized in 2019 and an estimated number for the next two years (2020 and 2021).

List with all participants in all activities will be included in the report (Deliverable D5.2).

2.6.1 Actions provided by EMSE

Ecole Nationale Supérieure des Mines de Saint Etienne (EMSE) provides the following actions.

Item	Excursion Name / Excursion topic	Company(ies) visit	No. of participants	Date
1	EMSE PSS research team	Clextral		June 2019
2	French partners of DigiFoF	ITM Factory		April 2019
3	Project meeting partners	Clextral		March 2021

2.6.2 Actions provided by ULBS

"Lucian Blaga" University of Sibiu provide the following actions.

Item	Excursion Name / Excursion topic	Company(ies) visit	No. of participants	Date
1	The fascination of the Auto Industry	BMW manufacture, BMW Museum Audi manufacture, Audi Museum Technique Museum from Munich	??	9.12.2019 – 16.12.2019
2				
3				

2.6.3 Actions provided by UNIBG

UNIBG provides the following actions.

Item	Excursion Name / Excursion topic	Company(ies) visit	No. of participants	Date
1	Industry 4.0 in action	ABB	55	28/11/2019
2	Lean 4.0 in action	Vinservice	50	20/11/2019
3				

2.6.4 Actions provided by UNIBIAL

UNBIAL provides the following actions.

Item	Excursion Name / Excursion topic	Company(ies) visit	No. of participants	Date
1				
2				
3				

2.6.5 Actions provided by UNIOULU

UNIOULU provides the following actions.

Item	Excursion Name / Excursion topic	Company(ies) visit	No. of participants	Date
1				
2				
3				