D4.X 1st year training report

Reporting period:

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Actual submission date	M14
Organisation name of lead beneficiary for this deliverable	UPV
Dissemination Level	PU
Start date of project	1.10.2022
Duration	36 months

Responsible organization:	UPV
Authors:	Jose A. Antonino-Daviu and Jose E. Ruiz-Sarrio
Version:	Version 1 (12/09/2023)

Contents

1. HISTORY OF CHANGES

No.	Chapter	Change	Page
1.			

2. ABSTRACT

DiTArtIS Work Package 4 (WP4) is dedicated to the management of training activities as defined in the proposal document (Part B, DiTArtIS, section 1.2.5.). The follow up of expert visits and short visits (Part B, DiTArtIS, section 1.2.3.) is included in the present report as well. This deliverable corresponds to month 13 as defined in the Gantt Chart (Part B, DiTArtIS, section 3.1.). The first part of the report provides the details about the first training event that took place in Cluj-Napoca during the 24th and 25th April 2023. The second part is dedicated to instruction of mentors though the implementation of a coaching course. Finally, the list of short and expert visits is provided.

3. ACTIVITIES CARRIED OUT DURING THE REPORTING PERIOD

Consortium level event 1. Training event 1.

The first training event was organized in the Technical University of Cluj-Napoca, Romania, in the specific location Dacoviciu 15, Aula Domsa during the 24th and 25th of April 2023. It was held in a hybrid way with both in-person and on-line attendees. The detailed program is provided below:

Monday 24th of April: Introduction to Artificial Intelligence

9:00-9:30	Welcome from the coordinator
9:30-10:30	AI: Challenges and opportunities for electromechanical and power systems applications - prof. Herman van der Auweraer & prof. Paula Moldenaers (KU Leuven, Belgium)
10:30-11:30	Terminology and basic concept in AI - Daniel Berger, PhD - online (Siemens Digital Industries Software, Germany)
11:30 - 12:30	From Artificial Intelligence to Deep Learning – prof. Catalin Caleanu & assoc. prof. Georgiana Simion – online (Politehnica University Timisoara, Romania)
12:30 - 14:00	Lunch
14:00-15:00	AI tools for energy flexibility (PV forecasting, aggregation, optimization, and trading based on Big Data, IoT, Machine learning/AI, and blockchain) - Dacian Jurj, PhD (RENERGIA, Cluj-Napoca, Romania)
15:00 - 15:15	Coffee break
15:15 - 16:15	Application of machine learning techniques to predict intermittent earth fault in MV distribution networks – Meysam Pashaei & assoc. prof. Mazaher Karimi (University of Vaasa, Finland)
16:15 - 16:30	Coffee break
16:30 - 17:30	Deep Learning tools for automatic diagnosis of rotating electrical machines via vibration signals – Jose E. Ruiz-Sarrio, PhD (Universitat Politecnica de Valencia, Spain)
18.00	Dinner

Tuesday 25th of April Research Data management and open science workshop

9:30-11:00	Research Data management and open science workshop – prof. Claudia Martis (Technical University of Cluj-Napoca, Romania)
11:00 - 11:15	Coffee break
11.15-11.45	Conclusions and future events
12.00	Lunch

The list of in-person attendees within the Ditartis project is provided below:

Herman Vanderauweraer	herman.vanderauweraer@gmail.com
Paula Moldenaers	herman.vanderauweraer@gmail.com
Anca Constantinescu	anca.constantinescu@enm.utcluj.ro
Sorin Cosman	sorin.cosman@enm.utcluj.ro
Claudia Martis	claudia.martis@enm.utcluj.ro
Jose E. Ruiz-Sarrio	joruisar@die.upv.es
Vicente Biot Monterde	vibiomon@die.upv.es
Angela Navarro	annana3@die.upv.es
Alexandra Baicoianu	alexandra.baicoianu@siemens.com
Miadreza Shafiekhah	mshafiek@uwasa.fi
Esin Ilhan Caarls	e.ilhan@tue.nl
Goksenin Hande Bayazit	g.h.bayazit@tue.nl
Elena Lomonova	e.lomonova@tue.nl
Cristi Irimia	cristi.irimia@siemens.com
Raluca Raia	raluca.raia@emd.utcluj.ro
Sasu Daniela	daniela.sasu@siemens.com
Arpad Kerestely	arpad.kerestely@siemens.com
Razvan Bocu	razvan.bocu@siemens.com
Gros Ioana	ioana.gros@emd.utcluj.ro
Mircea Ruba	Mircea.ruba@emd.utcluj.ro
Claudiu Oprea	Claudiu.Oprea@emd.utcluj.ro

In addition to these attendees, several participants from the different Ditartis partners and outside were present in an on-line mode. The complete list of on-line attendees was not recorded.

Consortium level event 1. Training event 2.

The 2nd Training was held at the Typhoon HIL office, in Novi Sad, October 30-31, under the lead of Typhoon HIL Serbia (TY) and Siemens Industry Software Romania (SISW), with the support of TU/e and UPV.

The first day was focused on Digital Twins - a central concept in the digital transformation. The attendees explored the Digital Twin concept and its role from the product development to lifecycle management, including presentations about its business value as well as examples in different application areas. A hands-on demonstration to the enabling technologies was presented.

In the second day, a workshop on Management of Technology transfer & Innovation and Entrepreneurship was hosted, providing insights on the importance of technology transfer in Europe and best practice examples both from Europe and associated countries.

The event was held in a hybrid way with both in-person and on-line attendees. The detailed program is provided below:

October 30th - Digital Twins: a central concept in the digital transformation			
Start	End	Title	Presented by
09:00	09:30	Arrival and Welcome	
09:30	09:45	Welcome from the Project Coordination	Prof. Claudia Martis (UTCN, Cluj-Napoca)
09:45	10:45	The Digital Twin concept: from development to product lifecycle management.	Ivana Ciric (Typhoon HIL)
10:45	11:00	Coffee Break	
11:00	12:30	Digital Twin: testbed demonstration + Typhoon HIL Office tour	Jovana Markovic (Typhoon HIL)
12:30	14:00	Lunch	
14:00	15:00	Executable Digital Twin: Concept, solutions and use cases	Dr. Leoluca Scurria (Product Manager - Siemens Software)
15:00	15:45	An Overview of Reduced Order Modelling Activities at Siemens Industry Software - Simulation and Test Solutions	Dr. Onur Atak (Research Engineering Manager - Siemens Industry Software)
15:45	16:15	Coffee Break	
16:15	17:30	Research Groups' meeting: collaboration ideas.	All
19:30	21:00	Dinner (Restaurant Sokače)	All

October 31st - Management of Technology transfer & Innovation and Entrepreneurship			
Start	End	Topic	Details
09:00	09:30	Arrival and Welcome	
09:30	10:45	Implementing successful technology push projects. An introduction to marketing strategy	Prof. Israel Griol-Barres (IDEAS institute, UPV)
10:45	11:00	Coffee Break	
11:00	12:15	Innovation Management in Cyber Physical Systems	Prof. Jeroen Voeten (TU/e)
12:30	14:00	Lunch Break	

The list of registered attendees within the Ditartis project is provided below. 18 people attended the event in-person, including partners from Siemens Software Romania (SISW), Technical University of Cluj-Napoca (UTCN), Eindhoven University of Technology (TU/e), University of Vaasa (UVA), and Universitat Politècnica de València (UPV). In addition to the attendees on the list, other participants were joined online but were not registered in the event.

ID	FIRST NAME	LAST NAME	From	Attendance:
1	Bogdan	Butnariu	UTCN	In person
2	Sebastian	Ursache	UTCN	In person
3	Raymond	Birasa	UTCN	In person
4	Paula-Ioana	Serban	UTCN	In person
5	Cristina	Adascalitei	UTCN	In person
6	Mircea	Ruba	UTCN	In person
7	Gounou Kouontchou	Lionel Steebe	UTCN	In person
8	Paula	Petrescu	UTCN	In person
9	Ioana Cornelia	Gros	UTCN	In person
10	Claudia	Martis	UTCN	In person
11	Cosman	Sorin Iulian	UTCN	In person
12	Marko	Merdzan	TU/E	In person
13	Mazaher	Karimi	UVA	In person
14	Calin	Husar	SISW	In person
15	Alexandra	Baicoianu	SISW	In person
16	Arpad	Kerestely	SISW	In person
17	Juan	Escarate	TU/E	In person
18	Florin	Jurca	TU/E	In person
19	Doha Kamal Mohamed	Idris	UTCN	Online
20	Esin	Ilhan Caarls	TU/E	Online
21	Goksenin Hande	Bayazit	TU/E	Online

22	Jose R.	Ruiz-Sarrio	UPV	Online
23	Seyed Mahoor	Ebrahimi	UVA	Online
24	Seyed Farhad	Zandrazavi	UVA	Online
25	Vahid	Shahbazbegian	UVA	Online
26	Israel	Griol Barres	UPV	Online

Mentorship program – Mentor training

Goal of the program:
Raised research profile of EMD-UTC staff, namely highly skilled researchers from UTC and twinning partners (6 to 8 mentors) trained for supporting in guiding career development and integration of young researchers in research teams.

Agenda of the program:
The training was organized in six meetings with different topics of six hours each (between 9-15 CET time) in the following days: 24.03, 3.04, 4.04, 11.04, 28.04, 5.05.2023
Trainer: Maria Dofeldt

The program included 2 hours for one-on-one sessions, with a certified coach, during the days between modules.

Content:
Module 1 (day 1 and 2) To set the foundation for a coaching collaboration
After module 1 the participants get concrete tools to get started with coaching with their researchers . They learn how to create trust with the client and how to master active listening.
Module 2 (day 3 and 4) Transformation
In module 2 the participants get a number of exercises in values, talents, dreams and goals that leads to increased self-awareness.
Module 3 (day 5 and 6) Set SMART goal and Action
A presentation of different tools was introduced and practiced. In this full module the participants also learn "What makes a question powerful?" and how the coach by partnering with the client can increase
the client's awareness and see new possibilities.
Supervision
The participants show that they master what they learned by a supervised coaching session in front of the group with positive feedback, learn to master the technic appreciation.

The mentors had to practice for 5 hours with at least one PhD student or with a researcher
In order to receive the certificate of participation, students must participate in all days and have the 5 hours of practice.

Attendees:

No.	Name	Affiliation	E-mail address/phone
1	Ioana Gros	UTC	Ioana.vese@emd.utcluj.ro
2	Claudiu Oprea	UTC	Claudiu.oprea@emd.utcluj.ro
3	Caio Osorio	TY	caio.osorio@typhoon-hil.com
4	Alexandra Baicoianu	SISW	alexandra.baicoianu@siemens.com
5	Calin Husar	SISW	Calin.husar@siemens.com
6	Arpad Kerestely	SISW	Arpad.kerestely@siemens.com
7	Larisa Dunai	UPV	ladu@upv.es
8	Jose E Ruiz Sarrió	UPV	joruisar@die.upv.es
9	Mazaher Karimi	UV	mazaher.karimi@uwasa.fi
10	Xiaoshu Lu	UV	xiaoshu.lu@uwasa.fi
11	Constantinescu-Dobra Anca	UTCN - as coach training assisstent	Anca.constantinescu@enm.utcluj.ro

Records:

Positive view of humans "Hero approach"

This person:
- Is a hero (an everyday hero)
- Has dreams and visions
- Has the ability to find his or her own answers and solutions
- Has something to teach me
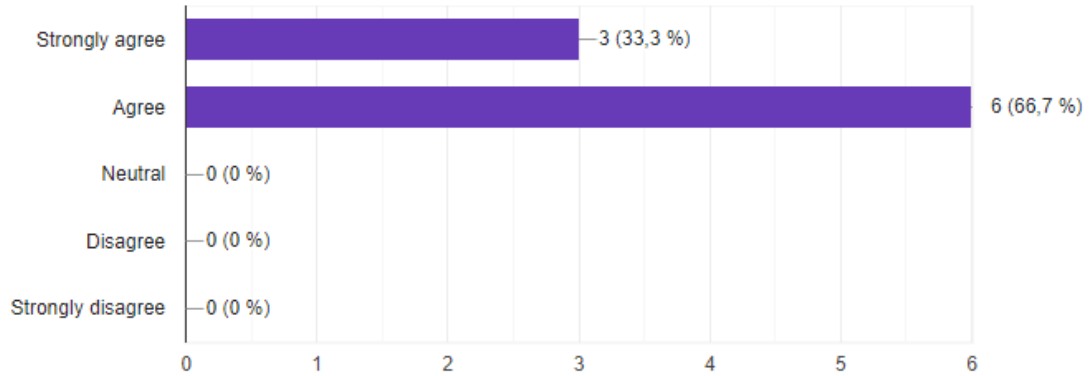- Deserves to be treated with dignity and respect
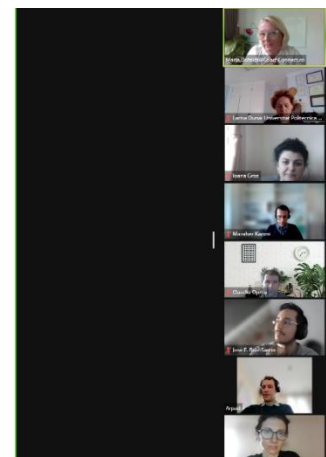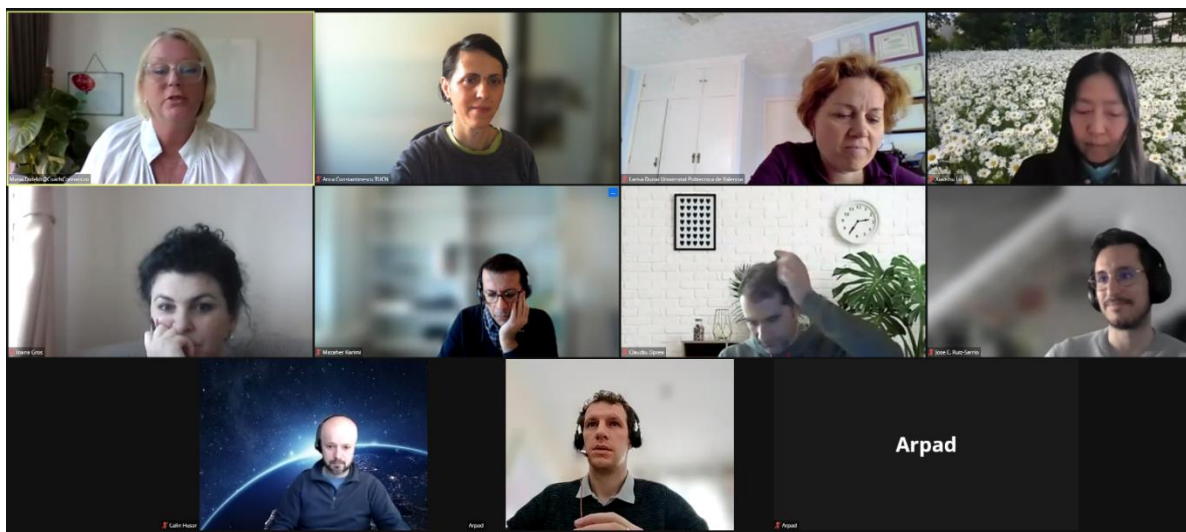
Feedback:

The participants' feedback was positive. They declared they learnt how to ask powerful questions, to guide a research discussion, to approach different personalities and create an effective team. A survey was conducted among all training participants at the end of the training. The results are attached below:
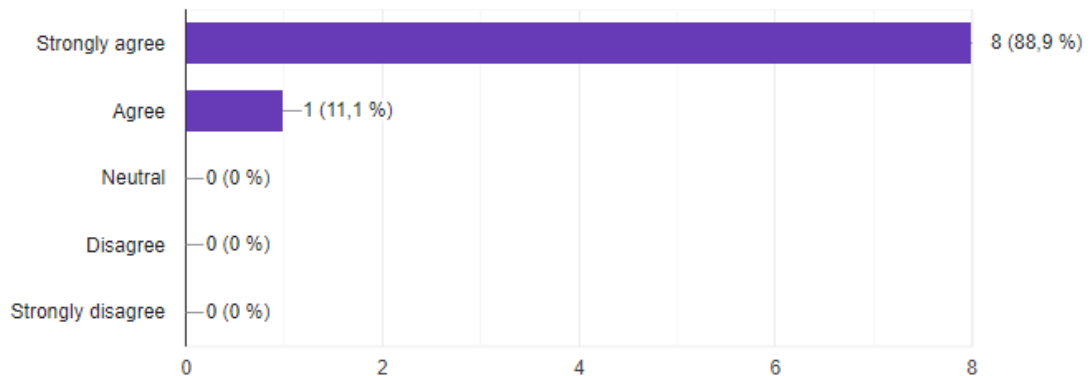
The objectives of the trainig were clearly defined.

9 răspunsuri

Strongly agree	3 (33,3 %)
Agree	6 (66,7 %)
Neutral	0 (0 %)
Disagree	0 (0 %)
Strongly disagree	0 (0 %)

Copiază

Participation and interaction were encouraged

9 răspunsuri

Copiază

Strongly agree	8 (88,9 %)
Agree	1 (11,1 %)
Neutral	0 (0 %)
Disagree	0 (0 %)
Strongly disagree	0 (0 %)

The content was organised and easy to follow

9 răspunsuri

Copiază

Strongly agree	3 (33,3 %)
Agree	5 (55,6 %)
Neutral	1 (11,1 %)
Disagree	0 (0 %)
Strongly disagree	0 (0 %)
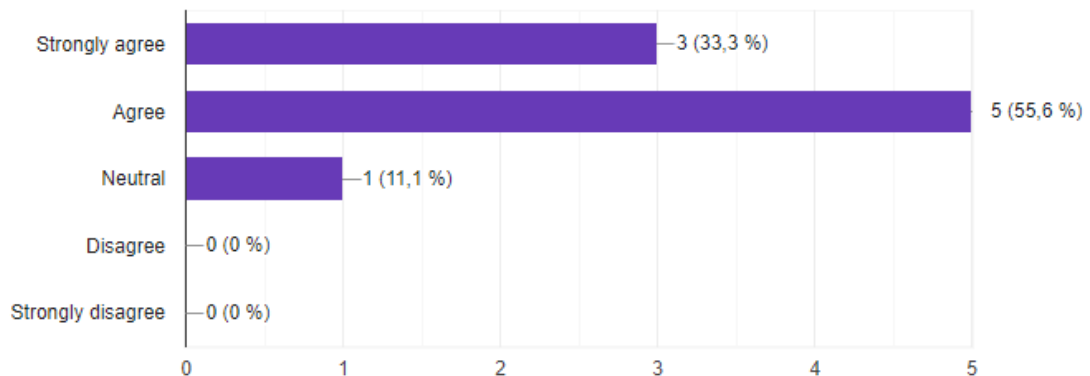
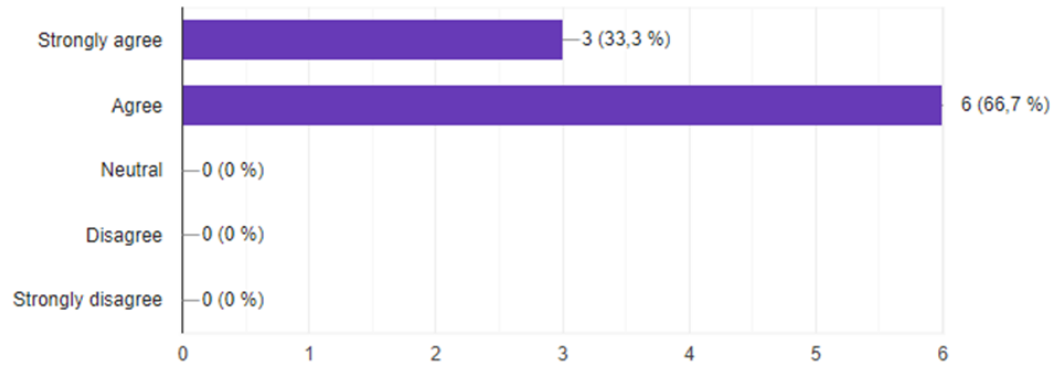## The training experience will be usefull in DITARTIS project

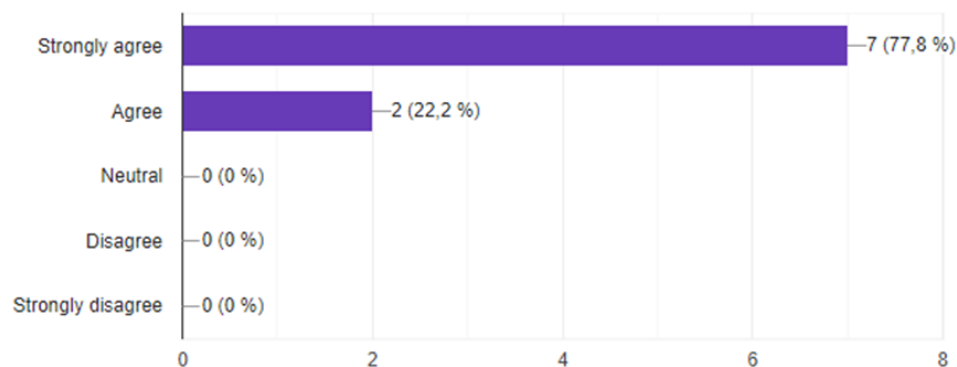9 răspunsuri

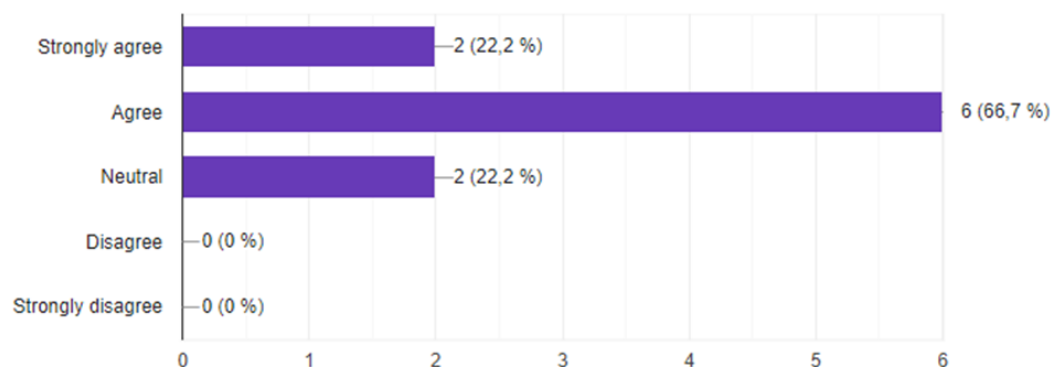## The trainer was knowledgeable about the training topics.

9 răspunsuri

The training objectives were met.

9 răspunsuri

Short and expert visits.

No visits have been recorded up to this date (End of September 2023).

4. DEVIATIONS FROM THE WORKPLAN

This section presents the deviations from the original research plan according to the Gantt Chart presented in the Part B of the proposal (Fig. 3.2 DiTArtIS project Gantt Chart).

TC1-3 implementation is delayed