

CAMI4.0 GLOSSARY

D.T1.1.2 - A report and living-paper defining
the CAMI4.0 Topics

Version 1.2
05 2020





Document Control

Document Summary	
Project Number	CE1662
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Deliverable Reviewer (If applicable)	PP8 / PTP
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Dissemination Level		
PU	Public	
PP	Restricted to other programme participants	
RE	Restricted to a group specified by the consortium	
CO	Confidential, only for members of the consortium	CO

Document History			
Date	Version	Issuer	Description of Changes
30.04.2020	1.0	MCR	Working document outline
19.05.2020	1.1	PRO	Draft for review of Project partners
25.05.2020	1.2	PTB	Approved Version



1. Executive Summary

1.1. Project Overview

CEUP 2030 aims to generate stable innovation networks which foster better understanding on Central Europe Advanced Manufacturing and Industry 4.0 (“CAMI4.0”) topics, to generate improved knowledge resource exchange on these technologies leading to an upgraded framework for policy-making and implementation.

Ultimately CEUP 2030 creates and tests a common method to promote improved knowledge dissemination to policy-making stakeholders using a collaborative exchange framework based in physical and digital-methods. These methods and the technology show-cases disseminated within these method structures are harvested from existing, high-quality innovation know-how in the CE area.

The project focuses on:

- Identifying the highest-quality innovation know-how in the CE Area, on the CAMI4.0 Topics.
- Enhancing skills capabilities and knowledge of people in charge of local, regional, and (trans)national RTI Policies, associated to the CAMI4.0 Topics.
- Creating a sustainable structure for awareness-raising and shared-sustainable RTI knowledge resource use to enhance policy decision support.
- Anticipating and fast-tracking policy / strategy policy pilot actions to promote a joint RIS3 for CAMI4.0 Excellence in CE/EU.

1.2. Work Package and Activity Overview

The overall objective of WPT1 links to the project’s specific objective of enhancing skills, capabilities and knowledge of people in charge of local, regional and (trans)national Research, Technology and Innovation policies within the triple-helix context.

The challenge manifests in two sub-objectives which are:

- (1) To train and empower people to work in the environment of new technologies (strategically and operatively) regarding policy-relevant decisions
- (2) To pool a critical mass of trained stakeholders to generate sufficient power for policy-making and appropriate selection, adaption and fine-tuning of already proven tools, instruments and methodologies.

The specific activity which is of relevance for this document is Activity A.T1.1, which is a common activity for all WPs and covers the preparation of the Harvesting activity which all PPs must participate in, to choose the outputs and results of exceptional CE and EU projects to create a “fast start” on the WP’s Key Outputs (Policy Learning Labs and Strategy Upgrade)

Specifically, the practical activities which are supported in this document are:

- the appropriate selection, adaption and fine-tuning of proven tools, instruments and methodologies, aka “Harvesting” - during A.T1.1
- The appropriate definition of the four technology topics for Central Europe Advanced Manufacturing & Industry 4.0 (CAMI4.0) - during A.T1.1

Note: It is recommended that all PPs read the WPT1 Implementation Guide to gain further understanding about the connectivity of the WP Activity objectives. This can be found on the project’s central repository - [Alfresco](#)



1.3. Scope of Document & Deliverable Summary

Deliverable D.T1.1.2 is defined in the Application as 1 living-paper defining the CAMI4.0 topics (Big& Real Data Processing, & Sensors, Automation& Robotics, New Materials, & Artificial, Intelligence). This document contains the contributions from all PP regions on research, results & policy instruments from complementary initiatives. Each partner delivered 4 Technology Use Cases and 4 Policy Labs which are the basic for further elaboration in A.T1.2

Name of Harvesting Aspect	Additional Comments	PP's Individual Obligation	CEUP 2030's Combined Obligation
Technological Good Practices	Should be examples that help policy-makers “feel” and “experience” the CAMI4.0 Topics. The PP inputs should cover at least two CAMI4.0 topic foci and two types of target group foci.	4	40
Policy Instruments	Will develop into Policy Pilot Use Cases, and should evidence the type of support which exists on the market for target groups. The PP inputs should cover at least two CAMI topics foci, two types of target group foci, and two types of instrument types.	4	40
Total Number of Inputs		8	80

Figure 1: Overview about number of Inputs

1.4. Audience

This document is directed at all project partnership members, because all PPs will be asked to review their results portfolio and provide input to the CAMI4.0 Glossary and the CEUP 2030 WPT1 Harvesting Agenda. Additional to this it is a document for all shareholders and could be used as well for the PLL and also promoting the project with some adaptations (Only the Annexes).

The appropriate status of this deliverable is reflected in the “Dissemination Level” table, on the Document Control page of this Guidance Document.

1.5. Change Control Procedure & Structure

The Deliverable Responsible: PROFACTOR (PRO/PP2), created this guidance document and it is hosted on the Project’s common repository in the appropriately named deliverable folder.

The document is under project deliverable change control protocols whereby Partners are requested to give feedback on the Draft Version within five working days. Feedback will be incorporated and Final Version will be issued by PRO. Thereafter the PPs have five additional working days for any final comments.

At any time, partners believe a project methodology should change, the request should be brought to the Deliverable Responsible (PRO/PP2) and the Work Package Leader (PTP/PP8) to consolidate feedback from other partners, and then further integrate and disseminate the final agreed changes. A new version of the document should be created, and recorded in the document’s “Document History” table.



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- **Work orders - custom made, series and semi-product work orders - all adjusted for specifics of manufacturing process. It allows you to create both simple and complex work orders for a variety of tasks. You can also establish accountability at each step of the manufacturing process. 84**
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2. Introduction

The purpose of glossary is to define the CAMI4.0 topics (Big& Real Data Processing & Sensors, Automation& Robotics, New Materials, & Artificial Intelligence); to collect contributions from all PP regions on research, results & policy instruments from complementary initiatives.

The glossary is Part one (besides the Harvesting Agenda D.T1.1.3) of the documents used for preparation of the CEUP 2030 Policy Learning Lab (Output O.T1.1) and the CEUP 2030 Strategy Upgrade & Boost (Output O.T1.2). The Glossary could be used as Handbook to show stakeholders Best practice Examples in Technology (TUC) and in Policy Instruments (PI)

3. Methodology

This section provides insight on an agreed methodology which partners followed to create Input for the Deliverable. The Methodology process is also described in D.T1.1.2

- Creation of a draft including table of content by PP2
- Preparation and sending of the templates for **Input 1 = Technology Good Practices** and **Input 2 = Policy Instruments**
- Creation of one example each for **Input 1 = Input 1 = Technology Good Practices** and **Input 2 = Policy Instruments**
- Creating a short instruction (in addition to D.T.1.1.1), sending out the templates and the example and requesting the examples
- Control of the received examples of the project partners by PP2, if necessary additional demand and integration of the examples into the Deliverable
- Evaluation, overview and completion of the deliverables
- Sending the DRAFT to the PP, collecting feedback (may and telephone), completing the deliverables
- Sending the deliverable for approval



1.1. Example One: Result Harvest from Fraunhofer IWU on Policy Learning Lab Methodology **ONE Per Partner**

Result Harvest for WPT1 Methodologies	
Name of the PP	IWU
To which WPT1 methodology does the harvested result connect?	Policy Learning Lab
What is the name of the harvested project (in English)?	3DCENTRAL In case of other, please clarify project name in English: Not Applicable
What is the name of the programme from where the result was harvested?	INTERREG CENTRAL EUROPE In case of other, please clarify programme name, in English: Not Applicable
What is the name of the harvested result (aka the output/activity name from the project)?	Tech & Inno Camp (TIC)
Hyperlink to the result location (aka where more information on the strategy or workshop methodology can be found)	Selected examples: On request we provide more info. https://www.smarthoch3.de/details/technologietransfer-zwischen-wissenschaft-und-industrie-smart3-als-worldcafe-tischpate/ http://blog.smarthoch3.de/strategisch-denken-sommerlich-feiern/ https://www.smarthoch3.de/neuigkeiten/merlin/
A short description of the result:	
<p>Tech and Inno Camps (TIC) are events dedicated for mutual learning, experience exchange and enhancement of know-how on 11 knowledge axis on Advanced Manufacturing. For this reason triple-helix stakeholders are addressed to cover tech and business knowledge as well as the transfer to policy measures.</p> <p>The TICs showcase a result-oriented training concept for new technologies which addresses and unites multifarious target groups, experts, stakeholders to (1) generate a common understanding and (2) gain excellent results about smart engineering technologies in CE.</p> <p>Its goal consists in transferring practical know-how while on same time the most appropriate solutions for CE relevant topics are developed. The Camps cover a simulation of transnational CE relevant knowledge on Advanced Manufacturing in a concentrated work and in short time, in particular using demo examples and new digital media.</p>	

Figure 2 Image of the Example for Harvesting)



4. CAMI 4.0 Glossary

The CEUP defines the following 4 technological subfields. These subfields consider the topic both globally and in some (maximum 5 subthemes). This ensures a certain focus of the themes and the related actions....

The priorities according to which the sub-themes are selected are as follows:

- **Competencies of the partners:** Is there a broadly spread know-how in the consortium sufficient to cover the topic including the sub-topic competently together with the associated partners
- **Relation to the 6 previous CEUP2030 projects** (3DCentral / Synergy / S3HubsinCE / SISCode / Spirit / DIH2): How well are these issues covered in the 6 projects that CEUP2030 links to maximise its potential
- **Additional projects:** Is there a sufficient number of excellent additional projects in the consortium on the topics to create added value
- **Transfer potential:** Do the topics including sub-topics have enough transfer potential to other domains (e.g. from industry to medicine)?
- **Associated Partner networks and competencies:** Are the Associated Partner networks well served by the topics.

4.1. Technology Field/Network 1 - Big & Real Data Processing & Sensors

Responsible Partner: PP5/KIT

Responsible Contact Person: Steffen Scholz

Description of the Topic: [Upgraded Definition] This topic includes the Technologies for **handling** (data storage, data visualization, data analysis) complex data whose volume, speed and variety are too large to be handled in the traditional way (f.e. energy monitoring) and Sensors offering big data users an operational analytics edge (f.e. printed sensors for online monitoring) and includes the following subtopics.

Subtopics: [Upgraded SubTopics As a Summary of Partner's TGP & PI Contributions]

- **Subtopic 1: Efficient storage devices and databases for Big data**, which includes the development of effective methods of extraction of data, which includes polymorphic databases, where diverse data sets can be captured, stored, managed and analysed within the storage space
- **Subtopic 2: Big Data Analytics**, which describes the complex process of examining, sorting, classifying large and varied data sets that may include structured, unstructured or semi-structured data, in order to extract the required information such as hidden patterns, models, unknown correlations, make predictions and forecasts etc. Data mining, predictive analysis, machine learning and deep learning are the techniques that often comprise of big data analytics methods.
- **Subtopic 3: Big Data application**, using software applications that analyse big data using massive parallel processing frameworks, such as Hadoop. The data itself could come from various sources such as process data during manufacturing, marketing, health care, finance etc. In the automotive industry for example Big data can be applied for product design, manufacturing, vehicle maintenance or for autonomous driving.
- **Subtopic 4: Big Data Visualization**, After analysis is done, one of the most important topics is the efficient communication of results, findings etc. to various stakeholders. This is to ensure that once the flow of raw data can be represented with images, only then decision making is possible. Therefore the creation of big data visualisation



tools, must allow for processing of various types of incoming data, application of filters to data, interaction with data sets during analysis as well as integration with company systems and other software to receive input from or to provide input to.

- **Subtopic 5: Sensors and Sensor networks**, describes the creation of wireless sensor networks as a viable data gathering infrastructure for big data systems. The challenge lies in the creation of large network of smart, connected and diverse sensors with the ability to prepare, pre-process, filter and transport data. This is applicable for example for the creation of smart grids, where smart sensor networks are introduced for energy management, and these systems can run applications for power monitoring, forecasting, coordination of distributed energy storage etc.

[Table with TGP’s related to this Topic]

Partner										
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Austria (PIA)	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	6_Lombardy Intelligent Factory Association (AFIL)	7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	8_Pomurje Technology Park (PTB)	9_Pannon Business Network Association (PBN)	10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)
Technological USE CASE 1	ASTOR Robotics Center (ARC)	Collaborative Robot Solutions	5G-Playground	SensoTool	Overmolded Orthopaedic Implants	Glebanite: a new value added circular material	CloudiFacturing	USE THE POWER OF DATA TELEKOM SLOVENIJE	Analysis of companies based on questionnaire	Collaboration of researchers through a crowd innovation platform
Technological USE CASE 2	ARIA by 1000 realities	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Green-Tech-Rada	PermaVib	SMARTLAM - A modular, flexible and scalable process	Rold SmartFab	Innovative and holistic robotic system	SMIP – SMART INFORMATION PLATFORM	Automated drone in the inventory	Infrastructure sharing
Technological USE CASE 3	Exmetrix	Assistance Systems in Production in the Context of Man – Machine Cooperation	Industry40-Laboratory	Smart eDrive	DIMAP - Novel Nano Ink Development	Portable testing unit for statistical quality check control	Innovative control system integrated in production lines	IPSPPlus	Collaborative robot – Demo development with 3D printing	Crowdfunding for research and development
Technological USE CASE 4	Smart S-Labs Plugin	Pilot-Factories	KEIFFON	PAM ² - Topology Optimised Mould inserts	Smart component for self diagnosis enabling predictive maintenance	Human-centric mechatronics framework	RoboFlex	Sensor application	Crowd innovation as an emergency response	

[Table with PI’s related to this Topic]

Partner										
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Austria (PIA)	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	6_Lombardy Intelligent Factory Association (AFIL)	7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	8_Pomurje Technology Park (PTB)	9_Pannon Business Network Association (PBN)	10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)
Policy Instrument USE CASE 1	Vouchers for Innovations	COMET - e.g. ProFuture—Products and Production Systems of the Future	aws-Industry40-Funding	Performance Centre Smart Production	ZIM - Zentrales Innovationsprogramm Mittelstand	S3-innoderiver - Vouchers to support the implementation of innovation actions of SMEs	Creation of a European metacenter in the domain of Advanced Materials and Textiles	Incentives for launching innovative companies in 2020 (P2 2020)	INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVices	HR-ZOO
Policy Instrument USE CASE 2	ScaleUp Programme	Funding Program "Production of the Future"	Digilift	Trinity – Agility for production	Karlsruhe Nano Micro Facility (KNMF)	Italian Industry4.0 Plan	stimulating business investments	Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization	HGC Academy	IRI 2
Policy Instrument USE CASE 3	Bridge Alfa	Digital Innovation Hubs in Austria and Neighbour Countries	FFG-Big-Data-for-Production	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.	Vanguard Initiative, New growth through Smart Specialisation	Call MADE Competence Center	Polo SOSIA	Voucher for cyber security	Export performance boost of the Hungarian SMEs	Integrator
Policy Instrument USE CASE 4	Digital Innovation Hubs Policy in Poland	Low Level Support for SMEs (Innovation Check)	Maturity-Model-Industry40	Smart ³ Network	Allianz Industrie 4.0 Baden-Württemberg	3DP PAN EU CALL FOR SMES	Cluster Tecnologico Nazionale "Fabbrica Intelligente"	RDI in value chains and networks	Human-machine cooperation with social economy	Innovation in the S3 environment

ALL OTHER DATA IN APPENDIX.



4.2. Technology Field/Network 2 - Automation & Robotics

Responsible Partner: PP2/PRO

Responsible Contact Person: Dipl. Ing. Christian Wögerer, MSc

Description of the Topic: [Upgraded Definition] **Automation and Robotics** support the “Factory of the Future” and enables realising efficient, effective production processes ranging from nano scale processes over collaborative robotic systems to complex adaptive production systems.

Subtopics: [Upgraded SubTopics As a Summary of Partner’s TGP & PI Contributions]

- **Subtopic 1: Robotic and Assistive Systems** focuses on systems, which are combining human and machine interaction, intelligence and processing power, human expertise and machine power. The aim of industrial Assistance Systems is to support human beings in a in a volatile, richly varied and highly flexible production. The cognitive abilities of these assistance systems are constantly being improved.
- **Subtopic 2: Machine Vision - Zero Defect Manufacturing for Automation:** The ultimate goal of any kind of quality control is to **avoid defective parts**. Technologies related to achieving this goal are summarized under the strategic topic of “**Zero Defect Manufacturing**”.
- **Subtopic 3: Augmented and virtual reality, visualization:** Visual Computing combines established and scientific methods for position determination, tracking technologies and machine learning to drive the following innovations. This includes Systems with higher-value perception and assistance options, Smart devices and tools and also Collaborating robots
- **Subtopic 4: Simulation and modelling, Flexible Production Systems:** Flexibility and Interoperability is becoming - in addition to price and quality strategies - an increasingly important competitive factor. Networked machines, software, employees, suppliers, customers are a reality. Unfortunately, the design and engineering of software for decentralised and distributed socio-technical production systems is reaching quite often its limits. PROFACTOR researches and develops infrastructure and algorithms for flexible production systems, assist people in making decisions which can’t be reached with methods based on experience alone. Plant operators can - for example - by means of model-based methods test system configurations that are most promising for a particular product version or the current process status
- **Subtopic 5: Robots for non-Industrial Applications, Man machine collaboration:** Robot for non-industrial Applications such as agriculture or medical robots have a high potential to transfer industrial solutions into other domains. Therefore, also the aspect of safety and human machine (robot) collaboration is very important



[Table with TGP's related to this Topic]

Partner										
	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. 6_Lombardy Intelligent Factory Association (AFIL) 7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT) 9_Pannon Business Network Association (PBN) 10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)									
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)				8_Pomurje Technology Park (PTB)	
Technological Good Practices										
Technological USE CASE 1	ASTOR Robotics Center (ARC)	Collaborative Robot Solutions	5G-Playground	SensoTool	Overmolded Orthopaedic Implants	Glebanite: a new value added circular material	CloudiFacturing	USE THE POWER OF DATA TELEKOM SLOVENIJE	Analysis of companies based on questionnaire	Collaboration of researchers through a crowd innovation platform
Technological USE CASE 2	ARIA by 1000 realities	robotic system for the X-Ray inspection of large composite parts (Spirit)	Green-Tech-Rada	PermaVib	SMARTLAM - A modular, flexible and scalable process	Rold SmartFab	Innovative and holistic robotic system	SMIP – SMART INFORMATION PLATFORM	Automated drone in the inventory	Infrastructure sharing
Technological USE CASE 3	Exmetrix	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Industry40-Laboratory	Smart eDrive	DIMAP - Novel Nano Ink Development	Portable testing unit for statistical quality check control	Innovative control system integrated in production lines	IPSPiplus	Collaborative robot – Demo development with 3D printing	Crowdfunding for research and development
Technological USE CASE 4	Smart 5-Labs Plugin	Assistance Systems in Production in the Context of Man – Machine Cooperation	Pilot-Factories	KEIFFON	PAM ² - Topology Optimised Mould inserts	Smart component for self diagnosis enabling predictive maintenance	Human-centric mechatronics framework	RoboFlex	Sensor application	Crowd innovation as an emergency response

[Table with PI's related to this Topic]

Partner										
	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. 6_Lombardy Intelligent Factory Association (AFIL) 7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT) 9_Pannon Business Network Association (PBN) 10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)									
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)			8_Pomurje Technology Park (PTB)		
Policy Instruments										
Policy Instrument USE CASE 1	Vouchers for Innovations	COMET - e.g. ProFuture-Products and Production Systems of the Future	aws-Industry40-Funding	Performance Centre Smart Production	ZIM - Zentrales Innovationsprogramm Mittelstand	S3-innoderiver - Vouchers to support the implementation of innovation actions of SMEs	Creation of a European metacenter in the domain of Advanced Materials and Textiles	Incentives for launching innovative companies in 2020 (P2 2020)	INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVices	HR-ZOO
Policy Instrument USE CASE 2	ScaleUp Programme	Funding Program "Production of the Future"	DigiLift	Trinity – Agility for production	Karlsruhe Nano Micro Facility (KNMF)	Italian Industry4.0 Plan	stimulating business investments	Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization	HGC Academy	IRI 2
Policy Instrument USE CASE 3	Bridge Alfa	Digital Innovation Hubs in Austria and Neighbour Countries	FFG-Big-Data-for-Production	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.	Vanguard Initiative, New growth through Smart Specialisation	Call MADE Competence Center	Polo S3SIA Cluster Tecnologico Nazionale "Fabbrica Intelligente"	Voucher for cyber security	Export performance boost of the Hungarian SMEs	Integrator
Policy Instrument USE CASE 4	Digital Innovation Hubs Policy in Poland	Low Level Support for SMEs (Innovation Check)	Maturity-Model-Industry40	Smart ³ Network	Allianz Industrie 4.0 Baden-Württemberg	3DP PAN EU CALL FOR SMES	RDI in value chains and networks	Human-machine cooperation with social economy	Innovation in the S3 environment	

ALL OTHER DATA IN APPENDIX.



4.3. Technology Field/Network 3 - Smart and New Materials

Responsible Partner: PP4/IWU

Responsible Contact Person: Kenny Pagel

Description of the Topic: called also intelligent or responsive materials, refers to designed materials that have one or more properties that can be significantly changed in a controlled fashion by external stimuli, such as stress, moisture, electric or magnetic fields, light, temperature, pH, or chemical compounds. Smart materials are the basis of many very highly integrated applications of actuators and/or sensors. The sub topics are oriented along the value chain of Smart Materials Systems

Subtopics: To Be Determined, examples such as

- **Subtopic 1: Functional Materials** include the basic development and investigation of new Smart Materials which are currently not known from the state of the art
- **Subtopic 2: Improved technologies for Smart Material manufacturing and Processing** deals with basic manufacturing technologies which turn materials into semi-finished products. In this context, rapid prototyping technologies in particular are considered as new innovative technologies.
- **Subtopic 3: System Design and Implementation** describes the general design rules for applications based on smart materials.
- **Subtopic 4: Smart Structures** deals with the systematic fusion of material and function by means of multifunctional smart materials. Compared to Subtopic 3, this enables a considerable functional compression.
- **Subtopic 5: Manufacturing of Smart Material Systems** aims to develop series production technologies for Smart Material Systems as a product. This especially includes the commercial point of view.

[Table with TGP’s related to this Topic]

	Partner									
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	6_Lombardy Intelligent Factory Association (AFIL)	7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	8_Pomurje Technology Park (PTB)	9_Pannon Business Network Association (PBN)	10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)
Technological Good Practices										
Technological USE CASE 1	ASTOR Robotics Center (ARC)	Collaborative Robot Solutions robotic system for the X-Ray inspection of large composite parts (Spirit)	5G-Playground	SensoTool	Overmolded Orthopaedic Implants	Glebanite: a new value added circular material	CloudiFacturing	USE THE POWER OF DATA TELEKOM SLOVENIJE	Analysis of companies based on questionnaire	Collaboration of researchers through a crowd innovation platform
Technological USE CASE 2	ARIA by 1000 realities	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Green-Tech-Radar	PermaVib	SMARTLAM - A modular, flexible and scalable process	Rold SmartFab	Innovative and holistic robotic system	SMIP – SMART INFORMATION PLATFORM	Automated drone in the inventory	Infrastructure sharing
Technological USE CASE 3	Exmetrix	Assistance Systems in Production in the Context of Man – Machine Cooperation	Industry40-Laboratory	Smart eDrive	DIMAP - Novel Nano Ink Development	Portable testing unit for statistical quality check control	Innovative control system integrated in production lines	IPSPiplus	Collaborative robot – Demo development with 3D printing	Crowdfunding for research and development
Technological USE CASE 4	Smart 5-Labs Plugin		Pilot-Factories	KEIFFON	PAM ² - Topology Optimised Mould inserts	Smart component for self diagnosis enabling predictive maintenance	Human-centric mechatronics framework	RoboFlex	Sensor application	Crowd innovation as an emergency response



[Table with PI´s related to this Topic]

	Partner									
Topic:	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. 6_Lombardy Intelligent Factory Association (AFIL) 7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT) 8_Pomurje Technology Park (PTB) 9_Pannon Business Network Association (PBN) 10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)									
Policy Instruments	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	S3-innoderiver - Vouchers to support the implementation of innovation actions of SMEs	Creation of a European metacluster in the domain of Advanced Materials and Textiles	Incentives for launching innovative companies in 2020 (P2 2020)	INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVicEs	
Policy Instrument USE CASE 1	Vouchers for Innovations	COMET - e.g. ProFuture-Products and Production Systems of the Future	aws-Industry40-Funding	Performance Centre Smart Production	ZIM - Zentrales Innovationsprogramm Mittelstand					HR-ZOO
Policy Instrument USE CASE 2	ScaleUp Programme	Funding Program "Production of the Future"	DigiLift	Trinity – Agility for production	Karlsruhe Nano Micro Facility (KNMF)	Italian Industry4.0 Plan	stimulating business investments	Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization	HGC Academy	IRI 2
Policy Instrument USE CASE 3	Bridge Alfa	Digital Innovation Hubs in Austria and Neighbour Countries	FFG-Big-Data-for-Production	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.	Vanguard Initiative, New growth through Smart Specialisation	Call MADE Competence Center	Polo SOSIA	Voucher for cyber security	Export performance boost of the Hungarian SMEs	Integrator
Policy Instrument USE CASE 4	Digital Innovation Hubs Policy in Poland	Low Level Support for SMEs (Innovation Check)	Maturity-Model-Industry40	Smart ³ Network	Allianz Industrie 4.0 Baden-Württemberg	3DP PAN EU CALL FOR SMES	Cluster Tecnologico Nazionale "Fabbrica Intelligente"	RDI in value chains and networks	Human-machine cooperation with social economy	Innovation in the S3 environment

ALL OTHER DATA IN APPENDIX



4.4. Technology Field/Network 4 - Artificial Intelligence

Responsible Partner: PP6/AFIL

Responsible Contact Person: Roberta Curazzi

Description of the Topic: [Upgraded Definition] As defined by the European Commission, "Artificial intelligence (AI) refers to **systems that display intelligent behaviour by analysing their environment and taking actions** - with some degree of autonomy - to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)."

Subtopics: [Upgraded SubTopics As a Summary of Partner's TGP & PI Contributions]

- **Subtopic 1: Machine Learning (ML)** is a branch of artificial intelligence working on systems that can learn from data, identify patterns and, based on mathematical models, make decisions with minimal human intervention. Learning begins with observations or data either through direct experience or instruction, in order to define data patterns and make better decisions based on the experience collected. Accordingly, the challenge is focused on allowing systems to learn automatically without human intervention or assistance and adjust actions accordingly.
- **Subtopic 2: Natural Language Technologies (NLP)** are focusing on the interpretation and processing of human language. NLP can be used to interpret free text and make it analysable extracting a huge number of relevant information, offering companies the opportunity to improve operations and services. NLP techniques deal with the pragmatics (contextual), semantics (meanings), grammatical (syntax) and lexical (words) aspects of natural languages. The development of NLP applications is still challenging because of the complexity and ambiguity of human language (i.e. slang, regional dialects and social context) but cutting-edge deep learning techniques are applied to automated language analysis to try to overcome these issues.
- **Subtopic 3:** Recognition technologies are playing a crucial role to fuel and improve machine learning algorithms with a variety of data coming from different sources and with increasing precision. Those technologies are for example facial recognition, emotion recognition, object detection, image processing
- **Subtopic 4:** Decision management: The combination of AI technologies with decision management systems has raised a number of benefits for companies allowing faster decisions, detection of risks and process automation. Recently, businesses have implemented several AI-solutions for gathering data, analysing them with proper algorithm and generate information to support decision making. However, it is still a challenge for some companies to make an efficient use of those solutions and systems.
- **Subtopic 5:** AI-enhanced/powered hardware and robotics encompass a set of technologies that can be applied to machines to automate the tasks that are repetitive and with no value added, allowing humans to focus on more conceptual and strategic activities. AI-enhanced/powered hardware are able to collect and analyse real-world data allowing the system to take decision. Robotics is one of the main field in which AI is applied introducing flexibility and learning capabilities in previously rigid applications.



[Table with TGP's related to this Topic]

Partner										
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	6_Lombardy Intelligent Factory Association (AFIL)	7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	8_Pomurje Technology Park (PTB)	9_Pannon Business Network Association (PBN)	10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)
Technological Good Practices										
Technological USE CASE 1	ASTOR Robotics Center (ARC)	Collaborative Robot Solutions	5G-Playground	SensoTool	Overmolded Orthopaedic Implants	Glebanite: a new value added circular material	CloudiFacturing	USE THE POWER OF DATA TELEKOM SLOVENIJE	Analysis of companies based on questionnaire	Collaboration of researchers through a crowd innovation platform
Technological USE CASE 2	ARIA by 1000 realities	robotic system for the X-Ray inspection of large composite parts (Spirit)	Green-Tech-Rada	PermaVib	SMARTLAM - A modular, flexible and scalable process	Rold SmartFab	Innovative and holistic robotic system	SMIP – SMART INFORMATION PLATFORM	Automated drone in the inventory	Infrastructure sharing
Technological USE CASE 3	Exmetrix	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Industry40-Laboratory	Smart eDrive	DIMAP - Novel Nano Ink Development	Portable testing unit for statistical quality check control	Innovative control system integrated in production lines	IPSPi.us	Collaborative robot – Demo development with 3D printing	Crowdfunding for research and development
Technological USE CASE 4	Smart 5-Labs Plugin	Assistance Systems in Production in the Context of Man – Machine Cooperation	Pilot-Factories	KEIFFON	PAM ² - Topology Optimised Mould inserts	Smart component for self diagnosis enabling predictive maintenance	Human-centric mechatronics framework	RoboFlex	Sensor application	Crowd innovation as an emergency response

[Table with PI's related to this Topic]

Partner										
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)	4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	5_Karlsruhe Institute of Technology (KIT)	6_Lombardy Intelligent Factory Association (AFIL)	7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	8_Pomurje Technology Park (PTB)	9_Pannon Business Network Association (PBN)	10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)
Policy Instruments										
Policy Instrument USE CASE 1	Vouchers for Innovations	COMET - e.g. ProFuture-Products and Production Systems of the Future	aws-Industry40-Funding	Performance Centre Smart Production	ZIM - Zentrales Innovationsprogramm Mittelstand	S3-innover - Vouchers to support the implementation of innovation actions of SMEs	Creation of a European metacenter in the domain of Advanced Materials and Textiles	Incentives for launching innovative companies in 2020 (P2 2020)	INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVices	HR-ZOO
Policy Instrument USE CASE 2	ScaleUp Programme	Funding Program "Production of the Future"	DigiLift	Trinity – Agility for production	Karlsruhe Nano Micro Facility (KNMF)	Italian Industry4.0 Plan	stimulating business investments	Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization	HGC Academy	IRI 2
Policy Instrument USE CASE 3	Bridge Alfa	Digital Innovation Hubs in Austria and Neighbour Countries	FFG-Big-Data-for-Production	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.	Vanguard Initiative, New growth through Smart Specialisation	Call MADE Competence Center	Polo SÒSIA	Voucher for cyber security	Export performance boost of the Hungarian SMEs	Integrator
Policy Instrument USE CASE 4	Digital Innovation Hubs Policy in Poland	Low Level Support for SMEs (Innovation Check)	Maturity-Model-Industry40	Smart ³ Network	Allianz Industrie 4.0 Baden-Württemberg	3DP PAN EU CALL FOR SMES	Cluster Tecnologico Nazionale "Fabbrica Intelligente"	RDI in value chains and networks	Human-machine cooperation with social economy	Innovation in the S3 environment

ALL OTHER DATA IN APPENDIX

6. Conclusions

The purpose of this document has been to provide information of existing Technology Good practice (TGP) examples and Policy instruments (PI) available in each partner region. An impressive number of 80 different TGPs and PIs were described, analyzed and evaluated by the partners.

The analysis shows a good distribution of TGPs across the 4 different themes of BIG Data, Automation and Robotic, Smart Materials and AI.

This created a solid basis for the further steps in CEUP 2030





7. Abbreviations

Abbreviation	Explanation
AF	Application Form
ASP	Associated Partner (i.e. Strategic Partner)
CAMI4.0	Central European Advance Manufacturing and Industry 4.0
PI	Policy Instrument
PLL	Policy Learning Lab
PP	Project Partner
RIS3	Regional Innovation Strategy for Smart Specialisation
S3	Smart Specialisation Strategy
SBU	Strategy Boost & Upgrade
TGP	Technology Good Practice
TIN	Trend & Innovation Networks



8. Annex

	<p>4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)</p> <p>5_Karlsruhe Institute of Technology (KIT)</p> <p>6_Lombardy Intelligent Factory Association (AFLI)</p> <p>7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)</p> <p>8_Pomurje Technology Park (PTB)</p> <p>9_Pannon Business Network Association (PBN)</p> <p>10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)</p>									
Topic:	1_KRAKOW TECHNOLOGY PARK LTD (KPT)	2_PROFACTOR GmbH (PRO)	3_Association Industry 4.0 Austria (PIA)							
Methodologies for Policy Learning Lab Development										
Policy Learning Lab	Society in Innovation and Science through CODEsign	“Rent a Robot” Infrastructure sharing	Digitaler-Austausch	Tech & Inno Camp (TIC)	Synergy interactive workshops on design thinking and crowd sourcing	SMART-SPACE – Interreg Alpine Space	CaxMan	CARE4TECH, Interreg Alpine Space	Techno and InnoCamp – “Smart Services” Conference - Economic and social challenges of Industry 4.0	SMART FACTORY HUB Interreg CE
Methodologies for Strategy Boost and Upgrade										
Strategy Boost and Upgrade	Roadmap including action plan for the support of regional technology development	upperVISION2030 - Economic & Research Strategy Upper Austria	Austrian-Innovation-and-Technology-Platforms, PI	EiRoSens Network	Synergy profiling and synergic networking activities.	KACE Roadmap and Action Plan	NewTREND	Smart Factory Hub, Interreg Danube, Mapping Tool	2014-2020 territorial plan of county Vas, Hungary	The Smart Specialisation Strategy (S3)
Technological Good Practices										
Technological USE CASE 1	ASTOR Robotics Center (ARC)	Collaborative Robot Solutions	5G-Playground	SensoTool	Overmolded Orthopaedic Implants	Glebanite: a new value added circular material	CloudiFacturing	USE THE POWER OF DATA TELEKOM SLOVENIJE	Analysis of companies based on questionnaire	Collaboration of researchers through a crowd innovation platform
Technological USE CASE 2	ARIA by 1000 realities	robotic system for the X-Ray inspection of large composite parts (Spirit)	Green-Tech-Rada	PermaVib	SMARTLAM - A modular, flexible and scalable process	Rold SmartFab	Innovative and holistic robotic system	SMIP – SMART INFORMATION PLATFORM	Automated drone in the inventory	Infrastructure sharing
Technological USE CASE 3	Exmetrix	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Industry40-Laboratory	Smart eDrive	DIMAP - Novel Nano Ink Development	Portable testing unit for statistical quality check control	Innovative control system integrated in production lines	IPSPPlus	Collaborative robot – Demo development with 3D printing	Crowdfunding for research and development
Technological USE CASE 4	Smart 5-Labs Plugin	Assistance Systems in Production in the Context of Man – Machine Cooperation	Pilot-Factories	KEIFFON	PAM ² - Topology Optimised Mould inserts	Smart component for self diagnosis enabling predictive maintenance	Human-centric mechatronics framework	RoboFlex	Sensor application	Crowd innovation as an emergency response
Policy Instruments										
Policy Instrument USE CASE 1	Vouchers for Innovations	COMET - e.g. ProFuture—Products and Production Systems of the Future	aws-Industry40-Funding	Performance Centre Smart Production	ZIM - Zentrales Innovationsprogramm Mittelstand	S3-innoderiver - Vouchers to support the implementation of innovation actions of SMEs	Creation of a European metaccluster in the domain of Advanced Materials and Textiles	Incentives for launching innovative companies in 2020 (P2 2020)	INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVices	HR-ZOO
Policy Instrument USE CASE 2	ScaleUp Programme	Funding Program “Production of the Future”	Digilift	Trinity – Agility for production	Karlsruhe Nano Micro Facility (KNMF)	Italian Industry4.0 Plan	stimulating business investments	Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization	HGC Academy	IRI 2
Policy Instrument USE CASE 3	Bridge Alfa	Digital Innovation Hubs in Austria and Neighbour Countries	FFG-Big-Data-for-Production	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.	Vanguard Initiative, New growth through Smart Specialisation	Call MADE Competence Center	Polo SOSIA	Voucher for cyber security	Export performance boost of the Hungarian SMEs	Integrator
Policy Instrument USE CASE 4	Digital Innovation Hubs Policy in Poland	Low Level Support for SMEs (Innovation Check)	Maturity-Model-Industry40	Smart ⁴ Network	Allianz Industrie 4.0 Baden-Württemberg	3DP PAN EU CALL FOR SMES	Cluster Tecnologico Nazionale “Fabbrica Intelligente	RDI in value chains and networks	Human-machine cooperation with social economy	Innovation in the S3 environment

Figure 3: Overview of Technology Use Cases and Policy Instrument Use Cases



8.1. Partner Contributions on Technology Good Practices

Technology Use Case				
	USE Case 1	USE Case 2	USE Case 3	USE Case 4
1_KRAKOW TECHNOLOGY PARK LTD (KPT)	ASTOR Robotics Center (ARC)	ARIA by 1000 realities	Exmetrix	Smart S-Labs Plugin
2_PROFACTOR GmbH (PRO)	Collaborative Robot Solutions	robotic system for the X-Ray inspection of large composite parts (Spirit)	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)	Assistance Systems in Production in the Context of Man - Machine Cooperation
3_Association Industry 4.0 Austria (PIA)	5G-Playground	Green-Tech-Radar	Industry40-Laboratory	Pilot-Factories
4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)	SensoTool	PermaVib	Smart eDrive	KEIFFON
5_Karlsruhe Institute of Technology (KIT)	Overmolded Orthopaedic Implants	SMARTLAM - A modular, flexible and scalable process	DIMAP - Novel Nano Ink Development	PAM2 - Topology Optimised Mould inserts
6_Lombardy Intelligent Factory Association (AFIL)	Glebanite: a new value added circular material	Rold SmartFab	Portable testing unit for statistical quality check control	Smart component for self diagnosis enabling predictive maintenance
7_SIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)	CloudiFacturing	Innovative and holistic robotic system	Innovative control system integrated in production lines	Human-centric mechatronics framework
8_Pomurje Technology Park (PTB)	USE THE POWER OF DATA TELEKOM SLOVENIJE	SMIP - SMART INFORMATION PLATFORM	IPSPPlus	RoboFlex
9_Pannon Business Network Association (PBN)	Analysis of companies based on questionnaire	Automated drone in the inventory	Collaborative robot - Demo development with 3D printing	Sensor application
10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)	Collaboration of researchers through a crowd innovation platform	Infrastructure sharing	Crowdfunding for research and development	Crowd innovation as an emergency response

Figure 4: Overview about Technology USE Cases

8.1.1. 1_KRAKOW TECHNOLOGY PARK LTD (KPT)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	ASTOR Robotics Center (ARC)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>S3HUBSINCE INTEREG CE</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>ASTOR Robotics Center (ARC) showroom and training centre - a new place that is part of the Digital Innovation Hub - hub4industry - a pan-European network of digital innovation hubs supporting entrepreneurs in popularizing the potential of the latest technologies.</p> <p>https://www.astor.com.pl/en.html</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.astor.com.pl/en.html</p> <p>www.hub4industry.pl</p>
<p>A short description of the use case input:</p>	



Client Profile:

There are 2 primary types of client. Small and medium-sized companies that will receive subsidies from public funds for training, education and consulting related to industry 4.0 and investment preparation (tests and pilot projects). The ARC can facilitate companies development in making their first steps in the field of implementation of robotic systems. Large production companies that implement concepts, tests and projects related to robotics and automation

Client needs: growing deficit of employees in industry, availability of robots on market and a problem with their storage, insufficient level of experience and technological knowledge used in robotics and automation processes among employees.

Provided solution to meet the needs:

ASTOR Robotics Center is a place where companies making their first steps in the field of implementation of robotic systems can develop under the watchful eye of robotics engineers. The office building and the showrooms have prepared spaces for that purpose. The center also enables learning specific technologies used in robotics - such as welding or palletizing applications or robot safety systems, for example. The intelligent robot warehouse of Kawasaki Robotics, Epson and MiR allow for quick deliveries to customers. Devices from the Middle East and Europe also go from Krakow (under the Kawasaki brand).

As a part of hub4industry (DIH) ARC offers companies a set of services to support their digital transformation like: demonstrations of new technologies using, i.e. showrooms, Academy of Industry 4.0 , e-learning platform for entrepreneurs, education and consulting related to industry 4.0, investment preparation (tests and pilot projects), engineers and manufacturing managers, workshops, meetups, webinars etc.

A short description of relevance for CEUP 2030 use case input:

For the PLL understandable demo cases will demonstrate the advantages of ARC. Stakeholders will get experiences, see and feel how ARC systems work. Additionally ARC can help to gain deeper knowledge on the benefits of the digital transformation for the companies (optimization of production, cost efficiency etc.), possibilities of implementation of new technologies in the value chain at various levels, showcasing client-centred smart factories based on technologies of the future, possibilities of implementing concepts, tests, projects related to robotics and production automation.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	ARIA by 1000 realities



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>3DCENTRAL (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>Scale Up KPT</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://www.1000realities.pl/</p>
<p>A short description of the use case input:</p> <p>Client profile: Lafarge Poland - Polish branch of French company; industrial company specialising in three major products: cement, construction aggregates, and concrete.</p> <p>Client needs: Increase the effectiveness of production and safety of the industrial workers in the cement plants by using technology.</p>	



Provided solution to meet the needs:
Start-up 1000 realities designed and elaborated platform named Edge Realities, with its part ARIA, which is an innovative virtual support system for industrial workers. The system uses augmented reality with light glasses (smart glasses). This system minimizes the risk of human mistakes and improves the effectiveness and security of the production process by providing checklists embedded contextually, depending on where they are and the objects they are looking at. ARIA eliminates the need to keep paper records, providing employees with free hands at every stage of quality control or control of machinery and equipment.

This solution has been implemented and tested in frame of the Scale Up Acceleration Programme. The process of testing of the solution was based on intensive on-site analysis of the work processes in the Lafarge cement plant, one-to-one consultations and evaluations of each part of the process of adapting technology to the working environment. The pilot implementation of the process was evaluated positively and the new improvements have been introduced in the plant.

A short description of relevance for CEUP 2030 use case input:

The use and implementation process of this AI solution can be used as example of successful cooperation between innovative start-ups and large companies with industrial processes. ARIA solution was adapted to the needs and expectations in living process, with participation of the workers who tested it. The technological solution increased the effectiveness of the production but moreover it increased the security of workers and helped avoiding human mistakes in the process.

It can be presented in the CEUP2030 project as successful example of cooperation and for presentation of the advantages of using technologies in production processes.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Exmetrix



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>3DCENTRAL (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>Scale Up KPT</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://www.exmetrix.com/technology/</p>
<p>A short description of the use case input:</p>	



Client profile:

Grupa Azoty - leading Polish chemical industry, major producer of fertilizers, plastics, chemicals, oxo alcohols and pigments.

Client needs:

Analyse and predict factors affecting production and sales processes

Provided solution to meet the needs:

A tool for analysis and prediction of significant factors affecting business operations. The second element of the project is to provide ready analyzes and forecasting models for the areas of coal, gas, energy and valuation of CO2 emission rights. Analyzes and predictions are made using artificial intelligence technology. Integration between huge databases and complex analytical tools enable an easy and fast transfer from a vast database to a synthetically described knowledge hidden in this data. Exploring this hidden information works by using Data-mining technology. Information is described and presented using optimized mathematical models.

A short description of relevance for CEUP 2030 use case input:

The use and implementation process of this AI solution can be used as example of successful cooperation between innovative start-ups and large companies with industrial processes.

Moreover the case of Exmetrix is a significant proof that AI and Big data analysis processes are universal and can be used in different sectors and companies. The technology of data analysis designed by startup Exmetrix is currently one of the most efficient tools for analysis of the Covid-19 spread.

It can be presented in the CEUP2030 project as successful example of cooperation and for presentation of the advantages of using technologies in production processes.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Smart S-Labs Plugin



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: IoT</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>3DCENTRAL (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>Scale Up KPT</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://slabs.pl/</p>
<p>A short description of the use case input:</p>	
<p>Client profile: Tauron Group - one of the largest business entities in Poland, with approximately PLN 19 billion equity and approximately 25 thousand employees. The holding is the largest electricity distributor in Poland. The Group's distribution grid covers an area of approximately 57.000 square kilometers, which represents approximately 18.3% of Poland's total area, and consists of power lines measuring about 258.000 kilometers.</p>	



Client needs:

In times when the competition is growing, the company would like to raise their competitiveness for customers in terms of cost effectiveness and differentiated offer for electricity. It is necessary to differentiate the tariffs and costs of electricity depending on different tools and equipment being used.

Provided solution to meet the needs:

Smart S-Labs plugins. The implemented solution is based on a Smart Plug device cooperating with a mobile application and an analytical system aggregating measurement data, thanks to which it enables energy companies to settle the energy consumption of the device connected to it. The Smart S-Labs solution allows you to create, communicate and settle tariffs for one device, e.g. a fridge, as well as other functions useful to the user, such as turning on devices via a smartphone, a calendar of activations, energy consumption measurement or a simplified energy audit of the entire home or small business.

The solution has been designed in the process of Scale Up Acceleration program. Testing of this solution has been implemented in close cooperation between start-up and company. The process has been deeply evaluated and adapted to the needs and processes in the company. It will be a part of the offer of the company for their customers.

A short description of relevance for CEUP 2030 use case input:

The use and implementation process of this IoT solution can be used as example of successful cooperation between innovative start-ups and large companies with industrial processes. It can be also a showcase of the process how this cooperation should be implemented (consultations at every step of the process, deep evaluation, openness for the innovation).

8.1.2. 2_PROFACTOR GmbH (PRO)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Collaborative Robot Solutions



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: CobNet - Qualification Network for Cobots (Technology Transfer)</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>Infos could be provided on request.</p>
<p>A short description of the use case input:</p>	



Client Profile: The companies Welser Profile (profile manufacturer), Doka (formwork panel manufacturer), Miraplast (SME, plastic goods manufacturer), Rupert Fertinger (LE, Cooling System Manufacturer), Duomet, Fuchs Metall Technik, Seisenbacher, (all SMEs, Metall Processing) have worked together with Profactor on a project funded by the Province of Lower Austria to introduce Cobots to companies. All the companies were interested in using cobots for future production tasks. In Addition to the development of demo applications and pilot systems, training and qualification methods for the introduction of technology were also developed.

Client needs: The companies had no experience with cobots and could not estimate their technological properties and potential due to the lack of know-how.

Provided solution to meet the needs: The companies were supported by Profactor in the evaluation of the application potential as well as in the definition, implementation and commissioning of the pilot installations. At the end of the project, 3 systems are ready for use and one system is in the phase CE Certification. Furthermore, 11 demo applications were examined and a technology evaluation center was set up by one of the partners.

A short description of relevance for CEUP 2030 use case input:

Cobots, or collaborative robots, are robots that work with people in a shared workspace. Using them contributes to increase productivity in manufacturing. CEUP 2030 could support more applications of robot systems, in particular fostering the change from traditional robots to new ones. Many companies have no experience with cobots and are unable to estimate their technological characteristics and potential due to a lack of know-how.

Thus cooperative technology transfer and innovation processes could be organised. For instance several companies with the same interests joined forces with a technology provider to estimate the use, definition and possibilities of implementation and to evaluate them through pilot installations. Important is a neutral consultancy and a common procedure including implementation and verification possibilities.

For the PLL understandable demo cases will demonstrate the advantages of cobots. Stakeholders will get experiences, see and feel how cobot systems work.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	robotic system for the X-Ray inspection of large composite parts (Spirit)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>SPIRIT (H2020)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.profactor.at/en/research/industrial-assistive-systems/machine-learning-for-machine-vision/projects/spirit/]</p> <p>https://www.spirit-h2020.eu/</p>
<p>A short description of the use case input:</p>	



The requirements for quality control, even for complex components, increase up to a 100% quality inspection. The inspection of parts of complex shape requires robotic solutions to move a sensor system in such a way that the whole surface of the part is covered.

SPIRIT aims at the development of a software framework for inspection robots that can deal with a wide range of inspection technologies without the need to re-program the robot. Sensor technologies include surface inspection by machine vision, thermography for crack detection, **X-ray inspection** or **3D sensors** for assembly checks. Eitzinger: “We are developing a software framework that can automatically plan an inspection path for all these different inspection technologies”. The inspection robot will just need a CAD model of the workcell - to avoid collisions - and a model of the part to be inspected. Given this information it will take the selected inspection technology into account and automatically generate an inspection program for the particular task.

At Centro Ricerche Fiat e.g. the robot will be used to inspect a part on the conveyor while it is moving. In this case the presence and correct mounting of plugs, cables and hoses needs to be verified by the robot

The end users in the project are large, well-known companies, but also small and medium size enterprises will benefit from the results, either by using the inspection robot for quality control of small lot sizes or - in the case of machine builders - by using the software framework for an easy deployment of the technology at end users.

“The goal of the project is to get rid of time-consuming and expensive programming tasks and instead to just configure the inspection process for the machine“

A short description of relevance for CEUP 2030 use case input:

Zero defect manufacturing is essential for the quality and experience of European industry. Many of these processes are slow, costly and labour intensive. With the use of robots, this activity can be carried out faster, more accurately and with less strain on the workers. For the PLL understandable demo cases will demonstrate the advantages of cobots even for SMEs. Stakeholders will get experiences, see and feel how cobot systems work and that this is a technology also for SMEs.

Further more it could be demonstrated that SMEs and large Industry together with Research institutes bring an added Value. Large Industry acts as Driving force for SMEs.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	FUNCTIONALIZATION AND DECORATION OF LARGE SUBSTRATES (Robot-based inkjet printing)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>www.Addmanu.at</p> <p>An Austrian national flag ship project for research, development and the establishment of additive manufacturing</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>www.Addmanu.at</p> <p>https://www.profactor.at/en/research/additive-micronano-manufacturing/inspection-and-quality-control/projects/addmanu/</p>

A short description of the use case input:



addmanu is a national flag ship project for research, development und the establishment of additive manufacturing. There are four topics are defined as key technologies for additive manufacturing: lithograph based manufacturing (LBF), Fused Deposition Modelling (FDM), selective laser welding (SLM) and the inkjet printing. These have from today's perspective the highest potential for applications and further developments.

The most important families of engineering materials, i.e. ceramics, polymers and metals are included. New materials and hybrid material systems are of particular importance.

The innovation potential of additive manufacturing is primarily determined by the creativity of the designers and the use of state-of-the-art design software for lightweight construction and material efficiency.

The coupling of topology and design optimization and additions to extremely filigree grid structures are intended to create new solutions and open up new areas of application.

Simulation- and model-supported process development for the processes enable further developments for inline process assurance.

The aspects and studies relevant for industrial implementation are dealt with in our own work packages and prepared for the mechanical engineering, toolmaking, automotive, semiconductor and refractory industries as well as for the aerospace industry.

The goals of the project are in detail:

- Development of new materials such as metal powders, ceramics, thermoplastic photopolymers and inkjet inks with significantly improved properties
- Development of a method for the production of hybrid systems metal/ceramic and steel/aluminium based on SLM technology
- Development of new lithography-based processes with significantly improved resolution and higher throughput
- Methods for inline process control in generative manufacturing
- Development of post-treatment methods to improve surface quality
- Application development under consideration of an integrated process chain

A short description of relevance for CEUP 2030 use case input:

The project is a lead project with 18 partners and is intended to develop "emerging technologies", in this case additive manufacturing, but also to bring them into the industry and to create a sustainable network of researchers and companies who will continue to work together after the end of the project.

This example can be used in the PLLs to show what additive manufacturing actually is (in contrast to the generally used formulation 3d printing) which can be used to create sustainable platforms or networks from technologies or lead projects. For this purpose, the AM platform developed from Addmanu can be used (<https://www.am-austria.com/>)

Result Harvest for WPT1 Use Case Input Topics



Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Assistance Systems in Production in the Context of Man - Machine Cooperation
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) MMAssist - Assistance Systems in Production in the Context of Man - Machine Cooperation
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type In case of other, please clarify project & programme name, in English: [Free Text Response]



<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.mmassist.at/?lang=en</p>
<p>A short description of the use case input:</p>	
<p>The flagship project MAssist II (Assistance Systems in Production in the Context of Man - Machine Cooperation) has started on May 1, 2017.</p> <p>The goal of MAssist II is a fundamental research and characterization of assistance in a production context. Based on this, optimized assistance systems for future working places focused on the human worker („Human-Centered Workplace“) will be developed, implemented and evaluated in an industrial environment. Basis for the implementation are so called „Assistenz Units“ - which are modular components for assistance systems. Assistance Units are defined in a way that they can be applied to different application contexts. The partners will implement a software framework with which Assistance Units can be dynamically configured to act as assistance system for a given application.</p> <p>In MAssist both cognitive and physical assistance systems are investigated, developed, demonstrated in prototypes and above all evaluated by the end users.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The project is a flagship project with 24 partners and is intended to further develop "emerging technologies", in this case assistance systems, but also to bring them into industry and to create a sustainable network of researchers and companies who will continue to work together after the end of the project. The partner structure is set up along the value chain, and this should be addressed sustainably in the PLLs.</p> <p>This example shows how important it is that people are at the centre of production in the PLLs. It can also be shown that the production is so complex that without assistance systems the worker becomes more and more unproductive. Furthermore it can be demonstrated how technologies and lead projects can be turned into sustainable platforms and networks and how production is and will be difficult to implement in Europe without considering the human factor.</p>	

8.1.3. 3_Association Industry 4.0 Austria (PIA)

<p>Result Harvest for WPT1 Use Case Input Topics</p>	
<p>Name of the PP</p>	<p>PIA</p>
<p>To which WPT1 use case category does the harvested result connect?</p>	<p>Technology Use Case</p>
<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>5G Playground Carinthia</p>



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: not related to a certain programme</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://5gplayground.at/en/</p>
<p>A short description of the use case input:</p>	



The 5G Playground (5GP) is a research facility in Carinthia (Southern Austria) that is open to everyone who wants to test their products and applications under 5G conditions. The fifth generation of mobile communications is characterized by peak data rates of up to 10 Gigabit per second, extremely low latency and high energy efficiency. Those conditions are available at the 5GP in the Lakeside Science & Technology Park in Klagenfurt am Wörthersee. The Playground is operated by BABEG Carinthian Agency for Investment Promotion and Public Shareholding.

Businesses and research institutions can use the available infrastructure in order to test, apply and further develop different use cases building on the 5G technology. Currently, there are four different use cases operated at the 5GP, out of which one (“Wireless Industrial Robotics” is linked directly to a CAMI4.0 topic:

- “Virtual Realities”
- “Communication in Swarms”
- “Smart City”
- “Wireless Industrial Robotics”: Use of 5G in the environment of mobile robot systems

A short description of relevance for CEUP 2030 use case input:

5G is an important technology for the future development of different industries in Central Europe and can be linked directly to the CAMI4.0 topics. The 5GP is a facility that can be used by businesses and research institutions for 5G related projects.

There is no restriction on partners for the 5GP, so CEUP 2030 project partners and associated institutions could potentially use the 5GP for the development of pilot projects that result from the project.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Green Tec Radar



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Green Tech Radar of the Green Tech Cluster Styria</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>Technology Radar</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.greentech.at/print/</p>
<p>A short description of the use case input:</p>	



The Green Tech Radar of the Green Tech Cluster Styria is a collection of technology trend publications on relevant topics of the Green Tech Industry, among these on topics like predictive maintenance, blockchain, sensors, etc. The green tech radars give a good indication for a period of five years in advance what can be expected in various areas. E.g. the predictive maintenance radar covers topics like sensors, new business models, data management, condition monitoring, decisions support and prognosis. In these fields relevant developments are highlighted and differentiated in incremental and radical developments and relevance for further development (small, medium, high). All this information is depicted on one page thus giving a profound overview of current trends. <https://www.greentech.at/print/green-tech-radar-predictive-maintenance/>

The evaluation of new trends is being worked out by research institutions.

A short description of relevance for CEUP 2030 use case input:

Forecasting is more important than ever, as the technology development takes place at breath taking speed. This tech radar is one of the best products - being done by a regional cluster - the Platform Industry 4.0 came across, as this is a very compact, well structured and designed product that is also available (in a limited version) to non-members.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Industrie 4.0 Laboratory
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: no specific programme connected to the good practice</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: Use Case Laboratory for Industry 4.0</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.fhstp.ac.at/de/campus/labore-und-ausstattung/industrie-4-0-labor</p>

A short description of the use case input:

The Industry 4.0 Laboratory (I4L) is a facility operated by the St. Pölten University of Applied Sciences. The goal of the facility is to show students, researchers and businesses the potential of digitalization and Industry 4.0 technologies. Different working stations teach visitors how production processes can be adapted and optimized through digital technologies. The project also takes the consequences for humans into account.

At the I4L different technologies are applied: Siemens S7-1200 programmable logic controller (PLC) training kits, Siemens S7-1500 HMI panels and a “Tec2Screen” tablet simulation tool can be used at the I4L. The equipment and infrastructure of the I4L are adapted and updated due to the collaboration with suppliers in the area of control and automation technology.

A short description of relevance for CEUP 2030 use case input:



The I4L shows the potential and impact of Industry 4.0 on a small scale and on a regional level. The I4L is a facility that can be used by different stakeholders in order to get to know different technologies.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Pilot Factory Scheme
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Pilot Factory Scheme</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Equipment/Infrastructure Finance</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>demonstrationsfabrik_industrie_4.0</p>

A short description of the use case input:

Within the funding scheme of “Production of the Future”, an initiative developed and funded by the Federal Ministry of Climate Protection (BMK) and managed by the Austrian Research Promotion Agency (FFG), one specific scheme was the call for establishing pilot factories in Austria (21st Call).

The Pilot Factory is to represent the state of the art in a modern manufacturing company: It has the appropriate infrastructure, and thanks to intelligent IT applications, it turns into a cyber-physical production system. It is therefore possible to carry out research activities in a realistic environment.

The components and solution modules can be acquired on the market, but only research, in-house developments and the interaction of the individual components give the production system a "smart" rating.

The Pilot Factory focuses on machining processes and robot-based laser machining processes for joining and additive manufacturing, and the fields of "Lean Logistics" and "Lean Assembly".

The Pilot Factories combine technology transfer, esp. to SMEs, research and development, training and education and raising awareness to the broad public. The pilot factory scheme is a PPP model whereby 50% of the investment costs are covered by the funding scheme (max. 2 Mio. €) and 50% are contributions by company partners, both cash and in kind.

The intention of the project is to provide an infrastructure support.

Within this scheme, three pilot factories were co-financed, all three are attached to universities. They are based in Vienna (University of Technology Vienna), Graz (University of Technology Graz) and Linz (Johannes Kepler University Linz) and are set up in such a way, that the three pilot factories form a virtual big pilot factory through exchange of data via a common interface provided by one industry partner.

A short description of relevance for CEUP 2030 use case input:



The pilot factory scheme has several targets. First and foremost it aims at supporting SMEs. SMEs can see in real a modern manufacturing line including all major components. The pilot factory offers to SMEs that they can test new solutions in the pilot factory thus interfering in their own production. Highly trained university staff supports SMEs in their digitisation efforts. At the same token the pilot factory can be sued for research and development projects (e.g. bachelor and master theses, PhD theses, etc.) and provides training to students on real equipment.

Furthermore the pilot factory scheme is a tool for universities to interact even more with companies and to understand day to day problems of SMEs, when it comes to the introduction of Industry 4.0 in a company setting.

The pilot factories raised a lot of attention by companies, research institutions, international delegations and policy makers.

8.1.4. 4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	SensoTool
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Smart³Network</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>n/a</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smarthoch3.de/inspiration/projekte/senso-tool/</p>
<p>A short description of the use case input:</p>	
<p>Senso Tool - The tactile machine tool</p> <p>An approach to power measurement close to the points of contact on rotating tools is being developed in the SensoTool project. The aim of the project is to integrate a force and temperature measurement system with wireless energy and data transmission into a flat milling tool. This system enables the machine to obtain and evaluate high-resolution process data in real time, enabling complex process interventions such as tooth feed adjustment.</p> <p>The increasing complexity of modern manufacturing tasks requires an increasingly precise adjustment of process parameters. Even small deviations lead to the exit of the stable process window, resulting in lower quality and productivity. Process monitoring systems available on the market are limited to rough evaluations and/or expensive systems. Instead Senso Tool aims at developing a tactile machine tool with the following objectives:</p> <p>Objectives:</p>	



- Measurement of cutting forces directly on the tool by means of piezoelectric sensor layers
- Wireless transmission of data from rotating tool to machine control
- Evaluation of measurement signals in the machine control
- Derivation of an appropriate reaction in the sense of a process control

Use

- Measuring process variables on rotating tools close to the points of contact
- Robust, highly dynamic, high-precision measuring system
- No reduction in tool stiffness
- Wireless power and data transmission

A short description of relevance for CEUP 2030 use case input:

CEUP 2030 could support more applications like SensoTool. Many companies are in need of precise adjustment of process parameters and this technology can easily be transferred to a European level and to European companies.

Cooperative technology transfer and innovation processes could be organised through CEUP. For instance several companies with the same interests could join forces with a technology provider to estimate the use, definition and possibilities of implementation and to evaluate them through pilot installations. Important is a neutral consultancy and a common procedure including implementation and verification possibilities.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	PermaVib



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Smart³Network</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>n/a</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smarthoch3.de/inspiration/projekte/#collapse-1991</p>
<p>A short description of the use case input:</p>	



Permavib - Universal and robust vibration systems

The aim of the project is the development of universal, robust vibration systems for the excitation of rotating tools during machining, a non-contact, self-sufficient energy supply of these systems as well as compatibility with various machine tools.

The vibration superposition during machining in continuous cutting (turning, drilling) as well as in interrupted cutting (milling) reduces both abrasive and tribochemical tool wear and achieves a sometimes significant reduction in the process forces This encompasses:

- Development of concepts for vibration systems and variant comparison
- FE modeling and simulation of vibration systems
- Design of selected vibration systems
- Development of an energy supply system
- System testing and machine integration under laboratory conditions
- Machining tests under laboratory conditions
- Process investigations under production conditions

The researchers at Fraunhofer IWU have teamed with companies TIXBO automotive, Parker Hannifin, EAAT and DEVAD to make that possible.

A short description of relevance for CEUP 2030 use case input:

CEUP 2030 could support more applications like PERMAVIB. Many companies are in need of robust vibration systems and this technology can easily be transferred to a European level and to European companies.

Thus cooperative technology transfer and innovation processes could be organised. For instance several companies with the same interests could join forces with a technology provider to estimate the use, definition and possibilities of implementation and to evaluate them through pilot installations. Important is a neutral consultancy and a common procedure including implementation and verification possibilities.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good)	Smart eDrive



<p>practice name, in English)</p>	
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Smart³Network</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>n/a</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smarthoch3.de/inspiration/projekte/#collapse-1991</p>



A short description of the use case input:

Smart eDrive - Increased efficiency of electrical aggregates in motor vehicles by means of active materials

The trend towards increasing electrification of motor vehicles continues. Be it through the use of alternative drive concepts, by optimizing previous drives, for example through the start-stop functions, or by increasing the number of electric auxiliary drives.

As part of this project, a study for the use of active materials (smart materials) in motor vehicles to increase the efficiency of electrical aggregates will be carried out and the effectiveness will be demonstrated by selected demonstrators. Since the complete substitution of existing electric drives is not possible in every case, the first focus of this project is to investigate the possibilities of increasing efficiency by integrating smart materials in electrical aggregates in an extended function.

The goal is an optimally adapted efficiency in the respective operating state and at the same time an acoustically unobtrusive and accepted by the customer noise.

The second focus is the analysis of possibilities for full substitution of previous electric drive concepts through alternative drive concepts with smart materials. The aim here is to reduce the required construction space, the number of individual parts and the weight with the same or higher effect wheel and at least constant acoustic behaviour.

A short description of relevance for CEUP 2030 use case input:

CEUP 2030 could support more applications like smart eDrive. Automotive manufactures in CEE could make use of the developed technologies and transfer it to a European level.

Cooperative technology transfer and innovation processes could be organised through CEUP. For instance several companies with the same interests could join forces with a technology provider to estimate the use, definition and possibilities of implementation and to evaluate them through pilot installations. Important is a neutral consultancy and a common procedure including implementation and verification possibilities.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	KEIFFON



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: Medical Technology</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>Hospitals, Medical Organisations</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Smart³Network</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>n/a</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smarthoch3.de/inspiration/projekte/#collapse-1991</p>
<p>A short description of the use case input:</p>	



KEIFFON - Novel intelligent fixation mechanisms for modularly built acetabular cups and heads made of ceramic in connection with shape memory alloys

Modern hip implants are often modular in order to enable the revision of individual implant components. In the course of a revision, however, problems arise, which concern both the connection between the socket housing and an insert and the connection between a stem cone and a ball head. A problem arises when a ceramic insert has to be removed from the socket housing. The release of the insert should be done intraoperatively by a blow to the edge of the insert, but there is a risk of chipping and breaking, and, according to market estimates, this procedure is successful in only 30% of the revisions.

The aim of the project is to use shape memory alloys (FGL) for modular hip implants in order to solve the aforementioned problems. Specifically, concepts and technical systems are to be developed that enable a simple, non-destructive removal of a ceramic insert from a modular acetabular cup as well as an extraction and rotation-stable anchoring of a ceramic revision head on an in-situ stem cone.

In the present collaborative project, novel intelligent fixation mechanisms for modular artificial acetabular cups and heads made of ceramic in connection with shape memory alloys are to be researched and evaluated. In order to simplify the removal of the ceramic insert from the socket housing, SMA elements are to be attached to the ceramic insert, which push the insert out of the socket shell when the temperature is targeted or stabilize the jamming of the insert and socket housing at body temperature in vivo. This simplifies the loosening of the insert for the surgeon, i.e. A defined removal of the insert to be changed is made possible and the risk of ceramic insert breaks is minimized during the change operation. Furthermore, the risk of abraded material from the implant or extraction instrument, which can arise when removing the inserts under the influence of force, is minimized. A load on the interface between acetabular bone and socket, which can lead to the bone trabeculae shearing off from the outside of the implant, is also excluded. This avoids consequential damage and the service life can be improved for the revision implants.

A short description of relevance for CEUP 2030 use case input:

CEUP 2030 could support more applications like KEIFFON. Partners in CEE could make use of the developed technologies and transfer it to a European level.

Cooperative technology transfer and innovation processes could be organised through CEUP. For instance several companies with the same interests could join forces with a technology provider to estimate the use, definition and possibilities of implementation and to evaluate them through pilot installations. Important is a neutral consultancy and a common procedure including implementation and verification possibilities.

8.1.5. 5_Karlsruhe Institute of Technology (KIT)



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Overmolded Orthopaedic Implants
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below
Which target group is addressed by this input? (multiple choices are possible)	<input type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) HINMICO FP7-2013- NMP-ICT-FOF -609110
What type of instrument is it? (Only for the policy instrument)	
Hyperlink to the result location (i.e. where more information on the	https://www.hinmico.eu/



technology good practice or policy instrument can be found)	
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A short description of the use case input:

In the last decade the number of applications of micro components has increased steadily. Mass fabricated products either in the form of micro three-dimensional parts or for larger components with micro/sub-micro structured surfaces have been developed, produced and implemented into many products in different sectors. Due to these major developments, polymer micro products have played a primary role due to the possibility to be replicated by means of high throughput processes based on plastic moulding (injection moulding, micro injection moulding, hot embossing). The integration of multiple subcomponents in a single multi-material part, allows the production of enhanced properties microparts.

Specifically the goals of HINMICO were to develop:

- A) Fast and precise μ -replication-assembly processes with new tooling concepts/designs for processing high quality miniaturised multi-material parts and to fabricate:
- B) High-throughput process chain by the integration of the above mentioned μ -replication-assembly and back-end processes for product finishing or a complementary activation step, to fabricate multi-material functional devices:
- C) Global process chains with increased reliability (50%) and fabrication of high quality products.
- D) High added value μ -devices with advanced functionalities:

The integration of high accuracy replication of multi-material functionalized components and back-end processes for additional functionalities will enable the introduction and combination of properties like enhanced bio-compatibility with drug delivery, conductivity with non-conductive, etc. One of the demonstrators within the project to demonstrate the technological developments within the project was an overmoulded orthopaedic implant, that displayed exactly the capabilities of an integrated, precise, high-throughput and repeatable solution while achieving a thin, defect-free structured polymer layer and to ensure a high and consistent implant quality.

A short description of relevance for CEUP 2030 use case input:

The HINMICO project and its use cases were aimed at supporting and developing an integrated production process for the development of multi-material micro parts in order to support European SMES. This was motivated mainly by a lack of technological knowledge and technical capacity. This use case displayed a rapid reaction to the market and to customer's needs by fast development of complex and high functional micro-manufacturing cost effective processes in order to succeed in competition with low-wage countries. In this collaborative research effort, European SMEs key role were essential due to their enviable view of the market requirements. This use case is therefore relevant to CEUP as it shows a successful collaboration between SMEs in



research in order to collectively develop without being left behind in a technology area very relevant to CEUP 2030.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	SMARTLAM - A modular, flexible and scalable process
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below) SMARTLAM EU-FP7- 314580</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://www.smartlam.eu/</p>
<p>A short description of the use case input:</p>	
<p>Currently fabrication technologies for the manufacturing of micro devices, require expensive tooling, and face long turn around times, making continuous optimisation techniques, performance modifications and design changes an expensive and time consuming process. These methods also show limited flexibility and therefore complicated parts or components cannot be developed without considerable expense to molds and assembly fixtures. This naturally creates a barrier to the development of higher functionality devices where the cost to benefit of incorporating functionality is too risky for a typical lab, diagnostic or medical device developer.</p> <p>Smartlam proposed a solution by the creation of a modular, flexible, scalable 3D-Integration scenario (3-DI) will be combined with state of the art scalable 3D compatible technologies, such as aerosol jet for printing of electrical circuits and sensors, laser technologies for structuring and welding as well as a handling system allowing for the 3D positioning of the tools. This complete system was also supplemented by a completely integrated modelling environment which will support user in the creation, design and process selection.</p> <p>Besides tackling the technological challenges, an important contribution by the efforts of SMARTLAM is the demonstration of a complete business case scenario.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>SMARTLAM tackled both the technological challenges and the business aspect of creating a completely new process chain. Thereby adopting a holistic approach not only to the system wide performance of the manufacturing, but also providing commercialisation strategies. This technology was then demonstrated by placing the developed modular system at an OEM SME site where they were able to run 5-10 production lots, each with mid volume series between 500 up to 250.000 per year and in total leading to a large volume production. This example gives insight into a joint approach of technology development and business case development in a field very relevant to the CAMI 4.0 topics and therefore very relevant to CEUP 2030</p>	

Result Harvest for WPT1 Use Case Input Topics



Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	DIMAP - Novel Nano Ink Development
To which CAM4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) DIMAP (Digital Materials for 3D printing) EU H2020 - 685937
What type of instrument is it? (Only for the policy instrument)	
Hyperlink to the result location (i.e. where more information on the technology good	http://www.dimap-project.eu/



<p>practice or policy instrument can be found)</p>	
<p>A short description of the use case input:</p>	
<p>DIMAP is a collaborative research project of 12 partner institutions from science and industry funded under the Horizon 2020 Framework Programme for Research and Innovation of the European Commission.</p> <p>With the development of novel ink materials for 3D multi-material printing new individual products will be possible. DIMAP focuses on two uses cases additive manufactured robotic joints and luminaires. The DIMAP project utilised the new paradigm offered by Additive Manufacturing technologies, such as the rapid distributed manufacture of complex objects as well as the potential to reduce waste and decentralised manufacturing. For this purpose the project concentrated on the development of novel nano ink materials for 3D multi-material printing by using Polyjet technology. They greatly advanced the state of the art in functional printing technology through the usage of these nano enhanced inks. And further developed a novel production process for large scale production using this technology, which was then demonstrated in their two application fields of bio-inspired robotic joints and luminaires.</p> <p>Finally a roadmap was established for the identification of future development needs in the related fields to allow Europe to compete in the forefront of the Additive Manufacturing revolution.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>This technology use case acts as an example of a full fledged holistic development that is required when completing a project that concerns the process and technology development for new and innovative applications. In the case of DIMAP that included the material research and development, design of components, process development, system integration, quality control, qualification and demonstration. All in a CAMI 4.0 field that is relevant for CEUP 2030. DIMAP also developed new business models, provided new customisation insights, and conducted technology development of multi-material printing that will enable SMEs as well as large companies to offer new and custom unique products for high impact electronic markets.</p> <p>This gives insight into a holistic project approach that can act as an example for policy makers when evaluating of reviewing project ideas</p>	

<p>Result Harvest for WPT1 Use Case Input Topics</p>	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	PAM² - Topology Optimised Mould inserts



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below <p>Additive Manufacturing, part of advanced Manufacturing</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>PAM² (Precision Additive Metal Manufacturing) H2020 MSCA ITN - 721383</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://pam2.eu/dissemination/publications/</p>

A short description of the use case input:

The application of Additive Manufacturing (AM) technologies in Industrial process chains has gained greater acceptance in recent times due to the wide variety of benefits offered such as the reduced design to production time, reduced lead times, increased design freedom etc. As a result of which the usage of AM for tooling production is continuously growing. The main benefit of using AM for tooling is the ability to produce intricate internal cooling channels that can greatly improve the thermal properties of the mold, thereby improving the lifetime of the mold and the mold insert.



Topology optimisation is a computational design tool that is used to determine the optimal material distribution for a predefined objective following a set of constraints. The problem with topology optimised designs are that they are extremely difficult to manufacture or machine using conventional techniques. Which makes AM an extremely effective enabler for topology optimised designs. In this use case, a topology optimised design for a mold insert was successfully design and printed using laser based powder bed fusion (LPBF) process.

One of the unique outputs as performed in this use case was the inclusion of the underlying thermal aspects of the LPBF process in the topology optimisation process itself. Thereby in one single optimisation problem, the computation was able to produce a design that was both printable while also reducing the overall mass of the mold insert, while still performing effectively as required.

A short description of relevance for CEUP 2030 use case input:

This use case depicts the intersection of a number of topics that are of prime importance for the field of Industry 4.0, namely, Additive Manufacturing, Topology optimisation, Innovative design etc. which correlate very well with the CAMI 4.0 topics relevant for CEUP2030. An example of how different fields such as AM and topology optimisation can work well together with Synergy even though they are fundamentally different technologies.

8.1.6. 6_Lombardy Intelligent Factory Association (AFIL)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Glebanite: a new value added circular material
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: FIBEREUSE - H2020</p> <p>The technology is the result of 18 years R&D activities, so it was not mainly related to the mentioned project</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.euronews.com/2019/03/11/the-italian-firm-recycling-glassfiber</p>

A short description of the use case input:

Since 1963, Rivasca S.p.A. has been producing fibreglass-reinforced polyester laminates. The company offers solutions for a variety of applications in of civil, industrial, sports, agricultural and zootechnical coverage.

One big issue in the high-volume continuous production of composite laminates is the amount of material that is wasted during the process, due to the shaping and the cutting of the edges. For this reason, Rivasca decided to invest in R&I activities to generate a business opportunity from its own waste and developed Glebanite, a material made out from the industrial waste of the GFRP (Glass Fiber Reinforced Plastic). The material, obtained by shredding GFRP waste and mixing it with resins and virgin glass fibres is fiberglass recycled into GFRP again.

It has been developed in years of research, and demonstrates to have both good mechanical and aesthetic properties.

- **Eco-sustainable:** It allows to recycle products and production wastes which was not recyclable before



CEUP 2030

- **Workable:** It is extremely ductile before the cross-linking processes, and can be "transformed" with different technologies.
- **Performance:** It offers better chemical-physical performance than many thermoplastic and stone materials
- **Economical and competitive:** It can be sold at a competitive price compared to many competitors
- **Versatile:** It can be transformed into different types of artefacts, can float or resist fire or withstand loads.

A short description of relevance for CEUP 2030 use case input:

It is a simple and very concrete case presenting the results of investments in R&I that lead to the generation of a sustainable new material with high performances. Accordingly, it can be a good example both for policy makers that can concretely perceive the outcomes of investment in industrial policies and for companies which can learn from the experience of a best practice collecting more information on the results achieved

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Rold SmartFab: A “ready to use” platform to monitor, analyse and have production data always available, in “real time” on smart devices.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>Cento4.0 - an initiative launched by AFIL In 2017 to map and collect best practices in Industry4.0</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.rold.com/industrial/smartfab/</p>

A short description of the use case input:

Starting situation: Rold is a leader in the domestic appliance components sector. The company was experiencing some issues in its production plant: i) Production machinery not connected to each other; ii) Data not available in real time and communicated in paper format; iii) Widespread presence of subjective information and not objectified by the process; iii) Difficulty in having visibility of inter-plant processes; iv) Digital technologies not very common at the shop floor level; v) Need for operator empowerment in process control.

Proposed solution: Rold SmartFab is the result of Rold's research and development collaboration leading to the creation of a system for SMEs operating in industry that allows monitoring, analyzing information coming from the company's subsystem plants and making them available on fixed, mobile and wearable devices.

This Digital manufacturing Platform allows: i) Real-time monitoring of production lines; ii) Real-Time Data and Alarms on touch screen devices and mobile devices, wearable devices



that are user-friendly (e.g. smartwatch); iii) Using middleware: putting a common factor of modern machines with older ones; iv) Cost reduction: reduction of technical intervention and maintenance times; v) Empowerment of operators in the control of processes that can leverage objective information.

A short description of relevance for CEUP 2030 use case input:

SmartFab is an ideal solution that could be disseminated to companies in the mechatronic and manufacturing sectors, since it acquires the operating status of the machines and returns it in total usability, at any time and anywhere to eliminate criticalities, such as downtime and significant slowdowns.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Portable testing unit for statistical quality check control
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>BEinCPPS - H2020</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://polimi.wixsite.com/beincpps/beincpps-portable-testing-unit</p>

A short description of the use case input:

Whirlpool Corporation is a manufacturer and marketer of home appliances. It was involved in BEinCPPS project to conduct the experiment in Biandronno plant, located in Varese (Italy).

The company developed a portable testing unit for statistical quality check. The Statistical Quality Control (SQC) plays a crucial role in white good manufacturers toward the Zero Defect goal. In Whirlpool it is done by the Zero Hours Quality department (ZHQ), who performs test on statistical production sample simulating the first usage of Whirlpool products at the customer's premises. This is done in addition to quality tests that are

The current ZHQ implementation experiences many problems: i) Mobility: Operators are required to frequently interact with the appliance under test; ii) Scalability A full implementation of ZHQ requires important investments in hardware and software and is not easily scalable; iii) Data Interoperability ZHQ still lack a full integration with other company systems (ERP); iv) Availability of time series data from many of the physical



quantities is not yet fully exploited; v)Flexibility: some behaviours of the system are still depending of specified product families.

The experiment implemented focused on the CPS-ization of Statistical Quality Check and the company developed a Portable Testing Unit to perform Statistical Quality Check on Microwave Ovens and Refrigerators. In the new state, quality managers and operators will rely on a portable, flexible and smart Testing Unit, which enables the easy adaptation of the statistical quality check to the great variety of customer requirements. A specific production batch of any produced models can be tested using a digital testing protocol. The quality operator can move the portable lab where the product is located and be guided through test steps using a mobile device. Moreover, several Testing Units running in parallel can share data and communicate to each other variations in testing programs or parameters without the intervention of the operator.

The solution was realised embedding devices into the physical testing stations, which can both communicate, compute data and control stations. In particular PLCs are used in a sensors/actuators portable unit, which will communicate with the portable controller unit. The modular approach allows the system to be adapted to completely different products (e.g. more complex) without changing the control layer.

A short description of relevance for CEUP 2030 use case input:

This is an experiment carried out by a so called „champion“ in Lombardy Region and triggered the development of other CPS-based solutions financed by cascade funding within BEinCPPS project.

Besides inspiring other companies, it can be a good example both for policy makers that can concretely perceive the outcomes of investment in industrial policies and evaluate the possibilities of aligning EU funding with regional schemes to support the implementation of similar project in a smaller scale.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Smart component for self diagnosis enabling predictive maintenance



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>SMART4CPPS - Regional Funding POR-FESR 2014-2020</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smart4cpps.it/pilot/pilot1/ (Available only in Italian)</p>
<p>A short description of the use case input:</p>	



Camozzi Automation, Ste Industries and the University of Bergamo collaborate to create a smart component, specifically an electromechanical actuator capable of self-diagnosing its status and transmitting this information to the factory system to perform analysis for predictive maintenance.

In synergy with University of Bergamo, Camozzi is studying a Condition Assessment algorithm to control the profile variation of the current flowing in the actuator drive system to provide useful information. The algorithm can be incorporated into the actuator drive software, allowing an advanced reading of the current status and thus deducing the health status of the component.

The partners went further creating an innovative test bench for testing the actuators, equipped with different sensors to allow the collection of a high volume of data in a precise and punctual way, to be able to extract useful information to monitor and predict the operating conditions of a component of a machine or plant, thus allowing predictive maintenance operations.

To complement the collaboration STE Industries, end-user and consolidated partner of Camozzi, is testing the solution for the development of stand-alone sensors with extremely low energy consumption data transmission capacity.

A short description of relevance for CEUP 2030 use case input:

This is an experiment carried out in the contest of an innovation project financed by Lombardy Region. In this pilot it has been demonstrated that the new generation components will not only be able to guarantee the key specifications, such as, in the case of an electromechanical actuator, repeatability and backlash, but they must also be "Industry 4.0 ready".

Besides inspiring other companies, it can be a good example both for policy makers that can concretely perceive the outcomes of their investment in industrial policies and understand how to further progress in the new programming period taking into account the results achieved so far.

8.1.7. 7_SiIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	CloudiFacturing empowered over 60 European organizations and supported about 20 cross-national application experiments that were selected via Open Calls.



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>CloudiFacturing</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Choose an instrument type</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.cloudifactoring.eu/</p>
<p>A short description of the use case input:</p>	



The mission of CloudiFacturing is to optimize production processes and producibility using Cloud/HPC-based modeling and simulation, leveraging online factory data and advanced data analytics, thus contributing to the competitiveness and resource efficiency of manufacturing SMEs, ultimately fostering the vision of Factories 4.0 and the circular economy. To pursue this mission, computationally demanding production engineering and simulation, as well as data analytics tools, are to be provided as Cloud services to ease accessibility and make their use more affordable. In CloudiFacturing, minimum 21 cross-border application experiments will be conducted in three waves. Seven experiments comprising the first wave are already defined, while the participation in the second and third waves will be via Open Calls. All wave one experiments will run across national borders. All experiments bring together different expertise: technical knowledge from Cloud/HPC, data analytics, simulation, modelling, security, etc. and also business modelling expertise. CloudiFacturing supported about 20 cross-national application experiments that were selected via Open Calls. In order to maximise the impact of the experiments, each experiment was accompanied by a Digital Innovation Hub (DIH).

A short description of relevance for CEUP 2030 use case input:

One of the project results was the creation of a single point of access to the consolidated technology by connecting people and facilitating collaboration, as well as providing interactive interfaces for different service providers and workflows. The CloudiFacturing Marketplace will be the default entry point to the CloudiFacturing solution. In other words, it will directly interact with the CloudiFacturing platform components and will therefore, enable the execution of artefacts available within the execution engines. CEUP 2030 could benefit of the collected know-how boost the competitiveness of the European manufacturers (especially Small and Mediumsized Enterprises - SMEs).



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Innovative and holistic robotic system for the handling of flexible and deformable materials within labor-intensive production processes
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: SOFTMANBOT
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type



CEUP 2030

	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://softmanbot.eu/</p>
<p>A short description of the use case input:</p>	
<p>SOFTMANBOT is an industrial-end-user driven project that will provide an innovative and holistic robotic system for the handling of flexible and deformable materials within labor-intensive production processes.</p> <p>The robotic system will be composed by three main pillars including a generic robotic perception system (perception of the product and the human operator), a multi-sensor control and planning platform (advanced control algorithms for shape and contact servoing, AI based task generalization) and smart dexterous grippers (smart mechanical design which will embody grasping/manipulation skills and integrate sensors - mainly tactile - for identifying precisely the contact state between the product and the gripper) able to handle soft components with high-levels of robustness and flexibility.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The project is in an early phase (M7) but this use case (having a highly relevant topic) could provide knowledge and good relationships to CEUP 2030 project.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Innovative control system integrated in production lines able to reduce the product variability, increase the line flexibility, and achieve zero defect production.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: STREAM-0D
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type



CEUP 2030

	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.stream-0d.com/</p>
<p>A short description of the use case input:</p>	
<p>STREAM-0D uses multi-physics simulation models able to predict the product quality indicators in response to these critical input parameters. The models are fed with actual data from online measurements: based on the model prediction, they allow workers to control the critical steps of the line so to adjust the product to the exact design specifications, or to quickly change specifications for producing customized batches.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The project is coming to an end, this use case (having a highly relevant topic) could provide knowledge and good relationships to CEUP 2030 project. The very intensive work actuated in STREAM-0D for fine-tuning the software, the real-time machine and data monitoring, could be of great use for next generation operators.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Human-centric mechatronics framework composed by a set of 15 software and hardware modules
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: SHAREWORK
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type



	In case of other, please clarify project & programme name, in English: [Free Text Response]
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	www.sharework-project.eu
A short description of the use case input:	
<p>In a collaborative robotics growth scenario, Sharework applies human-robot collaboration in four types of real industrial scenarios in the automotive, railway, metal and capital goods manufacturing industries.</p> <p>To this end, it develops modular software based on human-robot collaboration capable of flexibly and efficiently adapting to the required work, thanks to the robot's perception of the environment through multiple sensors, smart data processing, augmented reality and gesture and speech recognition technology. It also continuously evaluates work ergonomics and make suggestions for improving the worker's posture.</p>	
A short description of relevance for CEUP 2030 use case input:	
<p>This methodology is developed under Industry 4.0, one of whose innovations implies that humans and robots work side by side and collaborate by combining their capabilities. To make this possible, the robot must be capable of flexibly adjusting a series of variables, such as speed and strength, to ensure the worker's safety, in addition to effectively participating in the industrial process. CEUP 2030 could support more applications of robot systems, in particular fostering the change from traditional robots to new ones. It could provide knowledge and good relationship to CEUP 2030 project</p>	

8.1.8. 8_Pomurje Technology Park (PTB)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	USE THE POWER OF DATA TELEKOM SLOVENIJE



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://metronik.net/references/use-the-power-of-data-telekom-slovenije/</p>
<p>A short description of the use case input:</p>	



The Telekom Slovenije Group is among the most comprehensive communication service providers in South-Eastern Europe. The Group's activities include fixed and mobile communications services, digital content and services, multimedia services and digital advertising, system integration and cloud computing services, construction and maintenance of telecommunications networks, and conservation of natural and cultural heritage in the Sečovelje Saltpans Regional Park.

Telekom Slovenije has more than 200 locations distributed across Slovenia. To ensure uninterrupted operation of the telecommunication network, all sites have to work uninterruptedly and have to be therefore constantly monitored, data from the sites has to be archived and analysed. If problem occurs, maintenance personnel has to receive immediate alarm to their personal mobile devices.

Data from each location is provided via the telecommunication network using 191 distributed OPTO 22's PAC R1 controllers, characterised by high reliability, protection against power disturbances and powerful communication options. Apart from the assessment of the ambient conditions within the facilities the PAC R 1 controllers also communicate data on the consumption of electric power at the locations allocated to the lessees, supervision of the operation of the UPS systems and other devices like air-conditioners, diesel generators, inverters, local batteries, access control, opening doors etc....

The complete system continuously acquires more than 40,000 measurements and data from all remote sites, which are available to the telecom operators.

The control system is based on the geographically redundant SCADA iFix software which continuously acquires data such as status of energy supply, status of air conditioning, energy consumption, power etc. from all sites in two management centres located in Ljubljana and in Maribor in order to ensure higher security. At both centres, a redundant Historian is installed for continuous acquisition and long-time storage of data, which are accessible through Web server by the maintenance personnel which are located in all Slovene regions.

The maintenance staff of Telekom Slovenije is now virtually instantly receiving alarms on any occurring defect or error at any of the 200 sites. Therefore upon any alarm the staff can immediately take measures and eliminate errors much faster than before..

The system uses the potential of Internet of Things (IoT) principle for linking and transfer of data from remote locations to the center and represents a fine example how to generate added value for users by using the latest technologies.

A short description of relevance for CEUP 2030 use case input:



The system has considerably increased the reliability of the operation of the telecommunication network and provided transparency regarding the consumption of energy by individual network users. The solution is based on open and globally proven technologies (GE Digital, Opto 22) providing users with a high level of functionality, modular approach with the option of subsequent solutions and enhancements as well as long-term safety of the investment

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	SMIP - SMART INFORMATION PLATFORM
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p> <p>Smart factory hub, Interreg Danube Transnational</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.3-port.si/en/internet-of-things-iot/smart-information-platform</p> <p>https://www.smipcloud.com/</p> <p>http://www.p-tech.si/sfh-mapping/</p>

A short description of the use case input:

SMIP is a web-based IoT platform that can connect a variety of smart devices, applications and users. It is used to visualize, monitor, store and manage data from devices or other data sources (web services...)

Features / functionalities:

- Real-time data visualization from devices
- Historical data visualisation
- Alarms and alerts triggering (adjustable threshold values)
- Periodic report generation (daily, weekly, monthly, ..)
- Remote control of connected devices (houses, residential buildings, industrial buildings ...)
- Web API for integration with backend systems
- support the rapid addition of new devices and new users for operators
- Look&Feel, i18n

The SMIP platform can act as a:

- Central data repository
- Collects data from connected devices (or web services) through custom implementations of communication drivers (the list of supported devices is continuously expanding)
- Data normalization and unification
- Data models and virtual variables for consistent use in user interfaces
- Can expose data through a dedicated WEB API for integration with backend systems or provisioning data to third parties)
- Ecosystem for application hosting
- A framework for agile modeling of user interfaces
- Real-time dashboards



- A rich set of charts for historical data UIs
- Responsive design for adaptability to all types of devices
- An advanced user management system for multi-level user hierarchies

SMIP based solutions in different segments:

Energy management systems

- HEMS -> Home Energy Management System
- BEMS -> Building Energy Management System

Smart cities

- SMIP City -> a system for monitoring data generated in the urban environment (traffic counters, environmental measuring stations, parking lots, integration with available national data infrastructure)

Smart buildings

- SMIP Sense -> indoor air quality monitoring system (radon, CO2, oxygen, VOC, humidity, temperature, air pressure ...)

Smart factories

- SMIPeR - Machine Monitoring -> an application for continuous monitoring of individual machines in production lines

A short description of relevance for CEUP 2030 use case input:

Availability of solutions that represent typical focus use-cases in topics defined in CEUP2030 as the SMIP platform supports:

- Collection of data from geographically dispersed devices
- Collecting data from diverse data sources
- Connected devices (MQTT, HTTP...)
- Web services (REST, WSDL...)
- Diverse databases (SQL, NoSQL...)
- Data files (CSV, Access...)
- Adding intelligence to devices, making them »smart«
- Differentiation from other manufacturers on the market
- Possibility of after-sales activities (selling the item should not be the end of sales activities); offering subscriptions to cloud services
- A more efficient and responsive customer service (remote access to the device, insight into device functioning history, remote repair)
- Alternative to SCADA systems (moving from SCADA technology to a cloudbased system)
- Expands possibilities for new business models
- Subscription fees or metered services (pay-per-use) instead of classic selling model. Pay-per-use services are already a regular way of selling that is



spreading to different branches of the economy (eg Kaeser compressors, Bosch screw guns ...)

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	IPSPlus
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p> <p>Smart factory hub, Interreg Danube Transnational</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://www.inin.si/en/software-solutions/manufacturing/</p>

A short description of the use case input:

IPSPlus is complete and easy to use software designed for small and mid-sized manufacturing companies that offer advanced work orders, bills of materials and other features that your company needs to maximize efficiency. It offers high level of flexibility, which means that it is customized for your production process. The process of implementation also involves blueprint and several meetings with key employees responsible for production, with the aim to develop solution that will help manufacturing company keeps its competitive advantage and increase efficiency. It is suitable for make to order, custom and series production.

Key features of IPSPlus Manufacture:

- Easy to use and complete solution - one solution including all modules that manufacturing company needs for covering its information flows. It covers manufacturing process, material process and engineering.
- Work orders - custom made, series and semi-product work orders - all adjusted for specifics of manufacturing process. It allows you to create both simple and complex work orders for a variety of tasks. You can also establish accountability at each step of the manufacturing process.

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- Work orders - custom made, series and semi-product work orders - all adjusted for specifics of manufacturing process. It allows you to create both simple and complex work orders for a variety of tasks. You can also establish accountability at each step of the manufacturing process
- Flexibility - solution can be adjusted to fit production process and specifics of any manufacturing company.
- Inventory management - provides features that helps you manage multiple warehouses, automatic material reorders, generate purchase orders and more.



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- Products management - solution includes managing semi-manufactured products, finished products, defective product and cooperation
- Material evaluation - material evaluation with direct connection to liquidation
- Cost Price calculation - solution provides the feature of cost price calculation for each product or semi-manufactured product (comparability with flat-rate costs of manufacture)
- Production tracking - feature for production tracking using barcodes and scanners.
- Optimized purchasing - solution helps manufacturing company with material orders with quantity and time suggestion
- Internal work orders - automatically generated internal work orders for semi-products
- Production stages - solution includes defining multilevel work orders that utilize production stages, which helps manufacturing company track work order status and see if everything is according to schedule.
- Work order instructions and multilevel bills of material - solution allows company to create work order instruction and multilevel bills of material for each product. It makes production faster and accurate, because instructions and list of required material is always available for workers.
- Accompanying documentation - each product and/or work order can require different accompanying documentation. Solution provides feature that helps you determining required documentation and providing instruction for attaching it to the product or order.

A short description of relevance for CEUP 2030 use case input:

A successful case of managerial tool for SMEs to control their manufacturing processes, from design, to production and monitoring through production and finally work with customers' orders, payments, possibility to monitor figures and provide best data for decision making processes. This can be applied in various industries and profiles of companies to monitor working flow of data and supporting documents through an app.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	RoboFlex



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p> <p>Smart factory hub, Interreg Danube Transnational</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.virs.si/avtomatizacija-in-robotizacija/robo-flex-basic/</p>

A short description of the use case input:



RoboFlex is a robotic cell that is awarded for its design and versatility. Due to its small size and flexible design, it is possible to add any modules, from "basic" to "advanced" version. Why Roboflex?

- is the smallest cell on the market
- Versatile usable
- Affordable price
- Suitable for small and large series
- Provides high productivity
- Possibility of modular expansion
- Possibility of different welding processes
- High flexibility of the welding robot
- Easy control and programming
- Easy moving of the cell

Robo-flex Basic is a welding robotic cell for “every pocket”. It consists of a robot, a robot controller and all the necessary welding equipment. It is mounted on a compact base for easy transport with a forklift. The welding cell makes it very easy to add additional modules (e.g. positioners) to extend the usefulness of the welding robot.

Robo-flex Advanced is a robotic welding cell expanded with additional modules. The latter can be attached to any of the three mounting points on the Robo-flex Basic variant if necessary. Extension is possible with three modules at a time or with four outer robot axes.

A short description of relevance for CEUP 2030 use case input:

Smallest welding cell that enables upgrade functionalities with multiple sensors and data collection for monitoring of various information important for managing technology directors to be able to predict maintenance issues, productivity, connectivity of the specific cell with whole backbone structure and potential introduction of digital twinning.

8.1.9. 9_Pannon Business Network Association (PBN)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Analysis of companies based on questionnaire



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>4STEPS (Interreg Central Europe)</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>-</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>The technology use case was developed by amLAB - Digital Innovation Hub</p> <p>www.am-lab.hu</p>
<p>A short description of the use case input:</p>	



In seven countries, about 50 companies per country were asked about their technological development and their motivation for newer technologies. The answers were analysed and segmented the companies using statistical methods describing the data.

The database with the given answers contained tens of thousands of records. The data was placed in several different tables, from which it was necessary to filter out useful information.

At the descriptive analysis it had to be considered carefully what statistical methods to use, and how to portray the results. To handle the mixed data types Python programming language was used at the evaluation.

In order to create the common characteristics of the groups and also a comprehensive opinion, the appropriate methodology needed to be found.

A short description of relevance for CEUP 2030 use case input:

Based on the analysis, it becomes possible to understand several statistical and data analytics algorithms. The methodology can be used for data analysis problems. The method can be useful in a way that we combined an Interreg Europe deliverable with a data analysis method and we reached a much better result in understanding the facts and figures coming from the collected data. This methods could help the deeper understanding and detailed and more useful analysis of the questionnaires.



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Automated drone in the inventory
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In house development project in am-LAB DIH but it is connected with L4MS (H2020 project)
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type -



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<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>The technology use case was developed by amLAB - Digital Innovation Hub www.am-lab.hu</p>
<p>A short description of the use case input:</p>	
<p>The aim is to put in place an indoor logistics solution whereby a drone will autonomously be able to take stock of the required storage area by recognising the QR codes used in the storage system.</p> <p>The drone produces a live video from take-off to landing, and forwards it to a server where the video stream recognises the different QR codes in real time. The drone can note them and does not read the same code twice. In parallel, the drone has downloaded images of QR codes and its itinerary in order to check the process at a later stage.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>AS CEUP 2030 is dealing with the importance and understanding of advanced manufacturing, this use case can be a good example how to show to SMEs the real benefit of the activities realized by a Digital Innovation HUB. It could motivate the cooperation between companies and DIHs and in longer term also business based projects are foreseen.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Collaborative robot - Demo development with 3D printing
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) DIH2 (H2020)
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type -



<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>The technology use case was developed by amLAB - Digital Innovation Hub www.am-lab.hu</p>
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A short description of the use case input:

The aim of the project is to create a robotic demo programme, whereby the UR3 robot arm is able to distinguish, on the basis of their colour, between mixed black and green capsules and sort them.

Main challenges of the process were:

- The camera system is very sensitive to light conditions
- As the glass tubes are very fragile, new buckets had to be designed to keep the work pieces as optimally as possible, avoiding cracking of the glass. These fasteners were made using 3D printing.

The sorted products can be sorted back, but in this case without taking into account the colours, so as to ensure that the two colours are randomly placed in the initial position.

A short description of relevance for CEUP 2030 use case input:

AS CEUP 2030 is dealing with the importance and understanding of advanced manufacturing, this use case can be a good example how to show to SMEs the real benefit of the activities realized by a Digital Innovation HUB. It could motivate the cooperation between companies and DIHs and in longer term also business based projects are foreseen.



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Sensor application
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In house project of am-LAB DIH but there is a connection with DIH2 (H2020) project
What type of instrument is it? (Only for the policy instrument)	Choose an instrument type -



<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>The technology use case was developed by amLAB - Digital Innovation Hub www.am-lab.hu</p>
<p>A short description of the use case input:</p>	
<p>The aim of the development is to extract, database and display the operational data provided by 3D printers, robot arms and autonomous truck in the HUB plant of am-LAB Digital Innovation, as well as the data of sensors subsequently installed in these devices.</p> <p>A few remarks - among others:</p> <ul style="list-style-type: none"> • Many internal data are not relevant in most cases, but can provide valuable information in case of errors. • One of the most important data is the status of the machine. • In order to analyse the machine's data, it may be necessary to collect data from the outcome of the process. <p>Opportunities for the future:</p> <p>It is possible to search for new machines and new sensors on a continuous basis. As the industry uses a lot of protocols for machines and sensors, it is always possible to learn something new:</p> <ul style="list-style-type: none"> - Discover new communication protocols - In-depth knowledge of databases and data evaluation - Data visualisation 	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>AS CEUP 2030 is dealing with the importance and understanding of advanced manufacturing, this use case can be a good example how to show to SMEs the real benefit of the activities realized by a Digital Innovation HUB. It could motivate the cooperation between companies and DIHs and in longer term also business based projects are foreseen.</p>	

8.1.10. 10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)

<p>Result Harvest for WPT1 Use Case Input Topics</p>	
<p>Name of the PP</p>	<p>HAMAG-BICRO</p>
<p>To which WPT1 use case category does the harvested result connect?</p>	<p>Technology Use Case</p>



<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>Collaboration of researchers through a crowd innovation platform</p>
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>SYNERGY (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://synergyplatform.pwr.edu.pl/challenges</p>

A short description of the use case input:



In the scope of SYNERGY project, the Synergic Crowd Innovation Platform was developed and its functionalities were tested through a set of pilot actions. From March until April 2020, the SYNERGY Project team carried out the online Pilot Action "Research & Innovation Projects" which targeted higher education & research, large enterprises, SMEs, start-ups, business support organisations, student groups and the general public.

One segment of platform users submitted their request (challenges) for collaboration, competences and services related to their work in the thematic areas of Additive Manufacturing, Industry 4.0 and Micro-& Nanotechnology. The other segment of platform users responded to those requests and offered collaboration. Participants jointly developed a solution plan.

A participant from Croatia, a researcher from the University of Rijeka, published a challenge on the platform and got a response from another researcher in Italy. They jointly elaborated a research plan related to the development of high sensitivity magnetometer that has a great potential of application in I4.0 manufacturing systems and products. It is expected that their research plan could be executed by the end of 2020.

A short description of relevance for CEUP 2030 use case input:

Innovation support infrastructure such as Synergic Crowd Innovation Platform allows effective collaboration between different actors from the education and research community on development on innovation applicable in Industry 4.0. The platform fosters open innovation and crowd innovation approaches in which users benefit from joint and diverse problem-solving approaches, individual feedback, new cooperation and resource sharing. Users are able to get customised solutions for their research / innovation challenges, promote their technology and competences in an international environment, create novel partnerships and cooperation and also increase awareness for their project idea and chances of success.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Infrastructure sharing



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: Micro and nano technologies; Additive manufacturing</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>SYNERGY (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://synergyplatform.pwr.edu.pl/challenges</p> <p>https://synpro.e-science.pl/infrastructures</p>

A short description of the use case input:



In the scope of SYNERGY project, the Synergic Crowd Innovation Platform was developed and its functionalities were tested through a set of pilot actions. One of the functionalities was focused on infrastructure sharing - offering of equipment and services on a platform in order to pursue collaboration on innovation development and commercialize existing resources.

Dedicated pilot action was aiming at bringing together infrastructure providers and potential users in order to develop joint infrastructure solutions in the thematic areas of Additive Manufacturing, Industry 4.0 and Micro- & Nanotechnology. Current infrastructure providers include companies, research institutions and universities across Europe which are listed and can be contacted via the SynPro IT-Tool that is a part of Synergic Crowd Innovation Platform.

Different users from Croatia also offered their research or development infrastructure on the platform. One segment of the users were university research centres, offering their research infrastructure, equipment and services. An example would be a Centre for Micro- and Nanosciences and Technologies of the University of Rijeka, that offered their infrastructure for a possible collaboration on solutions that could be applicable in Industry 4.0. A few companies and associations that own additive manufacturing equipment also offered their infrastructure and services on the platform (FabLab, Mikrotvornica, 3D grupa). During the pilot action, there was no request for infrastructure offered on the platform in Croatia.

A short description of relevance for CEUP 2030 use case input:

Infrastructure sharing functionality of the Synergic Crowd Innovation Platform offers a unique possibility to use sophisticated high-end R&D equipment and collaborate on innovation development.

For infrastructure providers, the functionality offers to share information and reaching visibility for the infrastructure they own. It allows to more efficiently use the equipment and commercialize their existing resources, technology and services.

For those looking for new technologies, machines and equipment, functionality gives them the opportunity to test new technologies cheaply, without having to invest in equipment, before they implement such technologies into their business processes based on Industry 4.0 paradigm.

The SYNERGY Crowd Innovation Platform facilitates the matchmaking between infrastructure providers and takers among companies, research institutions and universities, thus boosting the collaboration, innovation and transformation of conservative industries towards Industry 4.0.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case



<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>Crowdfunding for research and development</p>
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: Micro and nano technologies</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>SYNERGY (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://synergyplatform.pwr.edu.pl/campaigns</p>



A short description of the use case input:

The SYNERGY consortium conducted seven regional workshop/networking events on "Simulated Crowdfunding" in order to test platform functionality Crowdfunding for research and innovation. Participants had the opportunity to learn more about alternative funding mechanisms such as crowdfunding and acquire hands-on-experience on the workings of a Crowdfunding campaign in a simulated Crowdfunding pilot action. The participants received valuable feedback on their project ideas and connections to other innovation actors and potential new business and cooperation partners.

Two enterprises from Croatia participated in the pilot action with their ideas of a new product (Tao Tech, Fjaka). One idea was based on product enhancement using additive and advanced manufacturing while the other one included the integration of microtechnology into wearables and connecting it to other devices on IoT principle.

Both ideas are in the early stage of development (one has a prototype while the other is a concept), therefore there is no actual technology use at the moment, but it is foreseen in the near future. Still, using the platform for testing the idea in a simulated environment proved to be a valuable tool for assessing the desirability for products that could be developed with Industry 4.0 technologies.

A short description of relevance for CEUP 2030 use case input:

Crowdfunding is not the most common scheme used for funding innovation and research projects, but it is often used for product development, especially in an *open innovation* environment. Such functionality is proven to be a useful tool for developing of a product prototype, testing the desirability and enhancing the product based on the feedback from the experts and general public that can take a part in the crowdfunding campaign.

An online infrastructure that can provide crowdfunding in order too support Industry 4.0 initiatives could allow users to raise money for your project, get high-quality feedback at an early stage on their project idea, increase awareness of the project idea and chances of success, communicate directly with potential investors and connect to other innovation actors, business or cooperation partners.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Technology Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Crowd innovation as an emergency response



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: Additive and advanced manufacturing</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input checked="" type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: Public institutions and organizations (healthcare, emergency, safety and security)</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>SYNERGY (INTERREG CE)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://synergyplatform.pwr.edu.pl/campaigns</p> <p>https://www.interreg-central.eu/Content.Node/Pilot-Action-Vouchers-for-developed-Solutions-of-the-Resear.html</p>

A short description of the use case input:



As a part of developing and testing the newly established Synergic Crowd Innovation Platform, the SYNERGY project partnership envisioned a set of pilot actions in order to test the platform's crowd innovation functionalities. One pilot action that is designed to test certain crowd innovation scheme is currently underway. The pilot action is envisioned so that a certain user of the platform publishes a problem that he has with a project or a work process that needs to be solved with certain technology (from SYNERGY's 3 key project areas: micro and nano technologies, additive manufacturing and Industry 4.0). Other users of the platform are encouraged to propose a solution if they own competences and resources. The problem publisher accepts the most suitable solution under agreed conditions for compensation. In the scope of pilot action, the best solutions are additionally awarded a voucher by the SYNERGY partnership.

Due to the present situation with the Covid-19 pandemic, the SYNERGY partnership implements this pilot action explicitly with the focus on problems and potential solutions related to the pandemic. The target groups of this pilot action are representatives from large enterprises, SMEs, higher education and research organizations, health service organizations, public bodies and general public. The pilot action recently started and there are no matches to be reported at this point.

A short description of relevance for CEUP 2030 use case input:

Crowd innovation as a process for research and innovation projects' development could be extremely efficient in case of emergencies such is the fight against the Covid-19. Described pilot action aims to join forces between all actors that could help the emergency from the key project areas of Additive Manufacturing and 3D-Printing, Micro- and Nanotechnologies and Industry 4.0.

Online tools for crowd innovation can create a pool of the best ideas and competences to reduce the consequences of the current pandemic and similar emergencies in Central Europe. They can help to establish fruitful collaborations where different users can jointly create urgently needed solutions.

By matching innovative ideas with specific technical competences, platforms like the SYNERGY platform can create the possibility for emergency responders (public health, safety and security services) to receive direct support from the research and industry communities in a quick and simple way.



8.2. Partner Contributions on Policy Instruments

8.2.1. 1_KRAKOW TECHNOLOGY PARK LTD (KPT)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Vouchers for Innovations
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	Vouchers for innovation
What type of instrument is it? (Only for the policy instrument)	OTHER (Please Clarify Below) It is both a subsidized service and a funding scheme



Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)

<https://www.mcp.malopolska.pl/en>

A short description of the use case input:

To support innovative development of micro, small and medium-sized enterprises Malopolska Region has introduced a dedicated policy instrument called the Innovation vouchers. They are managed by Małopolska Centre for Entrepreneurship (MCP). MCP is a self-government organisational unit of the Małopolska Region established on 29th October 2007 in order to implement European funds, especially for micro, small and medium enterprises (SMEs) in Małopolska. MCP implements EU funds under the Regional Operational Programme for the Małopolska Region 2014-2020 in the field of: Priority Axis 1. Knowledge Economy, Priority Axis 3. Entrepreneurship in Małopolska, Priority Axis 4. Regional Energy Policy, Priority Axis 8. Labour Market, Priority Axis 9. Socially Coherent Region, Priority Axis 10. Knowledge and Competences, Priority Axis 11. Revitalisation of Regional Space.

Vouchers for Innovations (only for SMEs sector) are implemented under Axis 1. Knowledge Economy.

The intervention concerns the purchase of services in the field of industrial research and / or experimental development, design services, services for the development of a feasibility study for R&D projects, services in the field of advanced market research and pre-implementation analyses, services in the field of quality research and compliance with specific requirements or standards and certification, intellectual property protection services. The maximum level of co-financing is 90% of eligible costs. The beneficiary chooses the contractor from among: scientific units, entrepreneurs having the status of a R&D centre, independent units which are accredited laboratories or notified laboratories, technology transfer centres, special purpose companies of business environment institutions - innovation centres, patent offices.

A short description of relevance for CEUP 2030 use case input:

The policy instrument as vouchers for innovations are one of the key instruments that can be used by SMEs to boost their competences, product/service development and sales in CAMI40 areas. They are worth using for building collaboration among companies applying vouchers, service providers and managers of the voucher system, creating a dynamic process which is scalable nationally and internationally, boosting development of local companies and strengthening cooperation with companies from outside the own region. The vouchers for innovation strengthen the cooperation between SMEs, universities, research centers as well as practitioners (end and heavy users) to create products and services that meet the requirements of demanding digitalized market and needs of varied group of stakeholders for CAMI4.0 policy and strategies preparation. They are designed to support R&D project preparation, verification and validation of products. They stimulate new business development concepts by multidisciplinary approach, support the exporting and building international partnership, build bridges between SMEs and R&D making them involved in delivering required measurements and justification



and sharing laboratory infrastructures. They are also crucial for preparation and sparring the funding proposal, preparation of co-projects in future financial programming.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	ScaleUp Programme
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [national funding scheme]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>[Free Text Response]</p>

A short description of the use case input:

The ScaleUP is a program run by Polish Agency for Enterprise Development that aims at providing the break-through technology solutions to Polish corporations by enabling them cooperation with start-ups. The programme is co-sponsored by the Polish Agency for Enterprise Development and by large corporates willing to implement new innovative solutions.

The aim of the programme is to provide comprehensive support to mid-stage start-ups who have a B2B prototype and are ready to start their cooperation with large corporates. Start-ups operating in Industry 4.0 receive a grant of 200 000 PLN (ca 50 000 EUR) and pass an acceleration programme to tailor their products to corporates requirements. The program includes training and mentoring sessions, and a direct cooperation opportunity with one of the corporates. The program ends with successful implementation cases. The start-ups provide solutions products or services for industry and smart cities include: rapid prototyping solutions, production automation lines, smart locking solutions and many others (Industry 4.0, IIoT, AI, AR, VR).

Polish Agency for Enterprise Development selected on the national level 10 ScaleUp acceleration programmes, one of them is KTP ScaleUp. KPT ScaleUPs main corporate partners are: TAURON Group, Grupa Azoty, ASTOR, Grupa VOX, JMP Flowers, Lafarge Polska, VelvetCare, Voxel, Werner Kenkel, Woodward Warbud, companies that are acting as technology receivers and supporting partners of the programme. Applicants should be startups and scientists with solutions in the following areas: Industry 4.0. smart home, smart city, energy efficiency. The program offers: the opportunity to implement with a corporate partner, 6 months of work with the best experts and financing up to PLN 200 000. Two pilot editions were organised so far, over 40 start-ups took part in the programme and implemented their solution in large enterprises.

A short description of relevance for CEUP 2030 use case input:



Relevance for CEUP 2030 could be elaborated by:

- Providing evidence within Policy Learning Labs on how to effectively support CAMI 4.0 topics
- Invitation and better integration of policy makers both in the discussions on future road mapping and monitoring of technology trends (Trend & Innovation Networks on CAMI4.0)
- Integration of stakeholders in RIS Round Tables for CAMI4.0

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Bridge Alfa
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input checked="" type="checkbox"/> Other, Please Clarify Below Spin-off In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below) Bridge Alfa In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme The Bridge Alfa program supports scientists and inventors in commercialization of the research and development projects through investing into Spin-Off companies established on the basis of R&D projects building their values and thereby increasing the supply of attractive investment entities based on results of the R&D works for Venture Capital and Private Equity funds. In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.ncbr.gov.pl/programy/fundusze-europejskie/poir/bridgealfa/</p>

A short description of the use case input:

Bridge Alfa is an NCBR (National Center for Research and Development) program that is focused on providing support to research and development (R&D) projects in the Proof-of-Principle and Proof-of-Concept phases, i.e. the earliest stages in project development. The Bridge Alfa program aims to commercialize the results of research or development works as well as other forms of their transfer to management and to stimulate investment through development research activities. The assumption of the program is to increase the supply of projects with commercialization potential through the involvement of business partners (investors) at the early stages of R&D work carried out by technical universities, enterprises, research institutes and individual scientists.

Investments in enterprises in the early stages of development carried out by specialized organizations (venture capital funds). As a result of the investment, the company raises funds for development, and the venture capital fund becomes a co-owner of the enterprise. The fund realizes its profits by leaving the company by selling its shareholding. Non-returnable co-financing from the National Center for Research and Development is 80% and the support that an individual project can count on is about PLN 1 million.

A short description of relevance for CEUP 2030 use case input:



The Bridge Alfa program is developed to help commercialization projects in research and development and to attract private partners to the program in the hope of launching inventions that might not have left the laboratories otherwise. It seems that combining public and private capital is a very good idea. Private capital makes sure that public funds are invested in appropriate, forward-looking projects on which private investors will also earn. The Bridge Alfa might be a good support opportunities for CAMI4.0 stakeholders, that will be one part of the discussion base for the RIS3 Round Tables (WPT3).

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KPT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Digital Innovation Hubs Policy in Poland
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>S3HUBSINCE INTEREG CE</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [it combines both subsidized services (trainings, consultancy etc.) and equipment infrastructure]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://przemyslprzyszlosci.gov.pl/ https://www.interreg-central.eu/Content.Node/S3HubsinCE.html</p>

A short description of the use case input:

In March 2019 Polish Ministry of Enterprise and Technology launched Future Industry Platform Foundation, a strategic project of the Polish Industrial Platform 4.0. The Foundation acts as an integrator responsible for the transformation of domestic industry to the level of Industry 4.0, which already developed in many countries of the European Union.

The main objectives of the Polish Future Industry Platform Foundation are: distribution of knowledge and skills concerning the use of modern information technologies, support for entrepreneurs within the framework of raising the technical level and introduction of digital transformation of industry in Poland.

In addition, the Foundation will coordinates the network of Digital Innovation Hubs in Poland, which aim to provide to polish SMEs access to the latest knowledge and technology. Polish Future Industry Platform Foundation provides non-financial support in the form of trainings, consultancy etc.

Polish Future Industry Platform Foundation launched in 2019 a call for the identification of national Digital Innovation Hubs. The project was called “Standardisation of DIH’s services for digital transformation of polish enterprises”. It has been a first attempt to identify DIHs in Poland on the national level. From over 40 applications there have been selected 5 consortiums. Each of the 5 DIHs is covering a specific technology fields and a specific geographic territory.

The main activities carried out by each of the 5 national DIHs are:

- information about the potential of new technologies (showcasing solutions)
- demonstration activities to practically approach digital technologies (prototyping, simulation of processes)
- education, trainings for SMEs who want to approach digital transformation



- consulting services on how to introduce optimization or innovation, preparation of digital transformation plan
- facilitation of implementation activities integration of new machines, devices and software

The Digital Innovation Hub (DIH) KPT is Poland's first initiative to tackle the subject of digital transformation of enterprises in such a complex manner; moreover, not only in the areas of hard competences and specific tools, but also of change management and sustainable use of resources. Carried out with support of the Ministry of Development, the DIH KPT aims at educating, supporting, and providing tools that will prepare businesses for the implementation of the latest Industry 4.0 solutions. The DIH operating in Kraków is the leading consortium, the only one of the five operating in southern Poland. The project developed by the KPT and its partners was selected through competition, winning more points than any other of the 41 entrants. The consortium is composed of following partners: Krakow Technology Park, Astor, T-Mobile, University of Science and Technology in Krakow, Krakow University of Technology, Kosciuszko Institute, BIMKlaster. KPT DIH focuses on following technologies: 5G, AI, IoT, cloud computing, cybersecurity, automation & robotics, AR/VR, BIM, 3D. The activity of KPT DIH - inauguration, action plan, pilot actions - is widely described within the S3HubsinCE project in WP2.

SMEs interested in cooperation with KPT DIH receive complex consulting in introducing technologies 4.0 - from the concept stage as far as the selection of the solution and its implementation. They go through expert scanning, an analysis of the current state and potential, and benchmarking tests. There will be able to see live the technologies adapted in leading Polish and foreign businesses, undergo training and participate in workshops preparing to design and introduction of change. The SMEs can benefit from:

- scanning (analysis of the company's potential) and benchmarking conducted by experts
- free training and workshops
- study visits in leading Polish and foreign businesses
- an implementation strategy
- mentoring and consulting starting with concept to go as far as implementation

A short description of relevance for CEUP 2030 use case input:

DIH can become an effective policy instrument to strengthen the digitalization of SMEs in CE countries. To benefit from this policymakers should be aware of the opportunities that DIH offer and of the role they can play for the regional and transnational ecosystem.

S3HubsinCE partnership has emerged around building a network of DIH with strong alignment in RIS3 and Smart Specialisation. Further development of the results within CEUP 2030 can provide input to a collaboration model, that can become a starting point for such initiatives like European Digital Innovation Hubs.

8.2.2. 2_PROFACTOR GmbH (PRO)



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	COMET e.g. Pro ² Future-Products and Production Systems of the Future (several further CAMI4.0 applications)
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	Choose Good Practice Project Name COMET (Competence Centers for Excellent Technologies) In case of other, please clarify project & programme name, in English: [Free Text Response]
What type of instrument is it? (Only for the policy instrument)	Funding Scheme



	In case of other, please clarify project & programme name, in English: [Free Text Response]
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	https://www.ffg.at/en/comet-competence-centers-excellent-technologies https://www.ffg.at/sites/default/files/allgemeine_downloads/strukturprogramme/COMET/Factsheets_K1_EN/COMET_K1_Call4_FactSheet_Pro2Future_en_2018-04-27_0220.pdf

A short description of the use case input:

Since 1998 competence centre programmes have been implemented in 45 centres and networks in Austria in order to build up key research competences through cooperation between science and industry, providing a network of hubs offering high quality research. Bundling these competences within a single centre and defining promising/emerging fields of research via science - industry collaboration shall stimulate new research ideas, encourage technology transfer, and strengthen the innovative capacity of companies. This should result in the creation of new product, process and service innovations.

COMET is managed by the Austrian Research Promotion Agency (FFG) on behalf of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Federal Ministry for Digital and Economic Affairs (BMDW). The Austrian provinces support COMET with additional funds.

BMK is ASP of PP/PIA for CEUP 2030. BMDW is connected to CEUP 2030 via the RIS3 Round Tables and the Framework 2030.

A short description of relevance for CEUP 2030 use case input:

Relevance for CEUP 2030 could be elaborated by:

Aligning complementary national and regional Competence Center systems among Central Europe macro-region, managed by e.g. RIS3 Round Tables and TINs

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Funding Program "Production of the Future"



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>Funding Program "Production of the Future"</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.ffg.at/en/program/migriert-production-future-calls</p>
<p>A short description of the use case input:</p>	



The engine of the Austrian economy is the highly innovative and competitive tangibles industry. It contributes significantly to securing the business location and jobs in Austria. This is successfully supported by intelligent and future-oriented production technology and materials research.

In 2011, the [BMVIT](#) initiated the FTI initiative "Production of the Future" in order to sustainably expand and secure the success story of production research in Austria for Austria as a business location.

"Production of the Future" aims to promote cooperation between business and science, the development of human resources and the establishment of research infrastructure. The production of competitive products and the increase of productivity to secure economic growth in Austria are in the foreground. Projects with a particularly high innovation content and an increased development risk are the focus of promotion.

Submission possibilities Production of the future

National submission opportunities are regularly offered through the instruments Cooperative RTD Projects, Leading Projects and R&D Services. Furthermore, endowed professorships and research infrastructure projects such as "Industry 4.0 pilot factories" have been funded in order to make innovative production technology and ICT accessible to both scientists and companies.

Transnational submission opportunities exist through the European Research Area Network M-ERA.NET "From Materials Science and Engineering to Innovation for Europe". The FFG participates in annual calls for transnational RTD projects with 43 funding organisations from 32 countries.

Bilateral submission opportunities have existed with China since 2014. Calls for proposals are made with the Chinese Academy of Sciences (CAS) and the University of Shanghai and Shanghai Industrial Technology Institute (SITI).

A short description of relevance for CEUP 2030 use case input:

The "Production of the Future" programme has been in existence for almost 10 years and was evaluated extremely positively in 2019. In the PPLs one can demonstrate how a structured selection of calls for proposals with the involvement of all stakeholders works and how to design a Technology Initiative that is very well received by both research and industry.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Digital Innovation Hubs in Austria and Neighbour Countries



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>Improve - Digital Innovation Hubs in Austria and Neighbour Countries</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>Innovation HUBS could be funded or could be established by other needs (Services) without or wit partial funding</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.interreg-athu.eu/en/improve/</p> <p>https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/12521/view</p>
<p>A short description of the use case input:</p>	



Digitalization is bringing enormous challenges for the businesses across all sector. The challenge could be overcome only by a structured, systematic approach, which is integrating all potential enablers of the transformation. Highly populated areas, big cities have an economic of scale for assisting this transformation - like new platforms, shift in the automotive from diesel to e-mobility or new technologies (like 3Dprinting or data science). This phenomena is affecting both the Austrian and the Hungarian companies.

By linking organizations dedicated to digital transformation from both sides of the border, the necessary pool of knowledge could be gained and contribute to the successful transformation of the companies. It will assist the cross-border interactions, meanwhile also upgrading the individual technology transfer organizations competencies.

- a complementary service portfolio of the digital transformation organizations - later called digital innovation hubs (DIH) - will be elaborated,
- joint methodology will be worked out for measuring technological maturity and digitalization potential for the individual companies,
- case studies will be realized to provide proof of concept, with cross-border service offer,
- internationalization of the network, integrating with policy stakeholders from various levels will be achieved.

A short description of relevance for CEUP 2030 use case input:

In the PLL and in the Workshops we can show the stakeholders three major lessons learned: Those DIHs are selected for the Improve! partnership, which are regionally, nationally or internationally appointed/accredited innovation hubs. These **hubs alone do not have and cannot have the full spectrum of competency** - from metal 3Dprinting through maturity audits to digital twinning or Nanoprinting -, therefore their **integration** is essential.

Digital Innovation Hubs are the **strategic vehicles** on European level for Digital Europe and Horizon Europe programs.

By **connecting them** in a cross-border way, with evidence of the service quality validation, a flagship project can be realized on EU level.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Low Level Support for SMEs (Innovation Check)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In Austria there are different low-level support schemes for SMEs like Innovation Vouchers (Regional, national), or Feasibility studies or Cluster projects</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.kmudigital.at/</p> <p>https://www.ffg.at/news/hoehere-foerderungen-fuer-feasibility-studies</p> <p>Innovationscheck</p> <p>digitalisierung-in-SMEs</p>

A short description of the use case input:



In Austria there are many different low-level support actions for SMEs. They are as well on a national and also on a regional level. Goal of all of them is to act very quickly and very fast.

Feasibility Studies: The aim of this upgrading (up to now max. 12,000 euros) is to enable SMEs to be even more successful in finding a concrete R&D project in the basic programme and thus increase their commitment to research. This makes it possible to support "expensive" feasibility studies in areas where more experiments are necessary or where the company is still far away from the later possible product, process or service.

Innovation Cheque: The Innovation Cheque aims to enable small and medium-sized enterprises (SMEs) in Austria to enter into continuous research and innovation activities.

KMU DIGITAL promotes individual advice on digitisation in your company and helps you to implement the first digitisation projects in your company. Subsidies of up to 4,000 € in the consulting module and up to 5,000 € in the implementation module are offered

Beside this there are some more of this actions, like **FFG Förderung „Kleinprojekt, KMU.DIGITAL 2.0 Förderprogramm des BMDW und der WKO, TIP NÖ Beratungsförderung Schwerpunkt Digitalisierung, aws Digitalisierung, Kooperationsförderung des Landes Niederösterreich, DIHOST Digital Innovation Hub OST**

A short description of relevance for CEUP 2030 use case input:

The topic of fast, unbureaucratic and efficient support for SMEs in the form of low-level support is a very complex issue that is not accepted by companies, even or in spite of these many instruments. The reasons for this should be highlighted in the PLL with other actions from the environment of the project partners

8.2.3. 3_Association Industry 4.0 Austria (PIA)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	aws Industry 4.0 Project Funding



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>aws Industry 4.0 Project Funding</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.aws.at/aws-digitalisierung/industrie-40-projekte/</p>
<p>A short description of the use case input:</p>	



The Industry 4.0 Project scheme of the Austria Wirtschaftsservice (aws) is funding scheme that supports SMEs in their Industry 4.0 endeavours. The maximum funding is € 500.000,- . This includes three phases:

Phase 1: Planning Phase, max. € 150.000,--

Phase 2: Investment Phase, max. € 200.000,--

Phase 3: Training and qualification phase, max. € 150.000,--

The investment contribution is oriented at EU completion regulations, i.e. small enterprises get a higher investment support than medium sized enterprises.

Support for automation processes is not enough, there is a need to include aspects of digital transformation, e.g. data integration

A short description of relevance for CEUP 2030 use case input:

This is the only industry 4.0 related funding scheme in Austria (on the national level) that includes an investment support. The combination of a planning, investment and training phase addressed a need of SMEs. The planning phase in many cases included some kind of maturity evaluation where SMEs could prioritise projects of quick return or high significance. This step was very important for companies to make the right investment decisions (phase 2). In order to be able to adequately use the equipment training elements were regarded as key factors for SMEs.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Digilift
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: SRSS Exchange Austria-Sweden</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://tillvaxtverket.se/english/digitalization.html</p>

A short description of the use case input:

Digilift is a Swedish programme for accelerating digitalization within the Swedish industry, especially among SMEs. The main focus of Digilift is on the manufacturing industry.

The key goal of Digilift is to create awareness among SMEs, to empower them and to provide coaching to them in the area of digitalisation. Digilift focuses on three areas - Insight and Knowledge; Coaching, Advice & Network; and Guidance and Knowledge Online - each of these has dedicated projects:

- Insight and Knowledge: “Kickstart Digitalization” seminars and workshops, together with the Swedish industry as well as trade unions, business parks etc.
- Coaching, Advice & Network: 15 different coaching projects in Sweden providing tailored digitalization/Industry 4.0 coaching
- Guidance and Knowledge Online: online toolbox “Time to Digitalize”, should be a ‘one-stop shop’ for information and tools

The initial programme period was set for approx. 3.5 years (until February 2020). The programme is considered a success as many SMEs with a low level of digital maturity were



reached through the programme. 9 out of 10 companies have increased their knowledge of digitalization and 9 out of 10 companies have started digitalization projects as a result of Digilift.

A short description of relevance for CEUP 2030 use case input:

The Digilift Program is one of the main actions coming out of the Swedish Smart Industry Strategy. The program has been a major pillar in supporting Swedish SMEs in the area of production to improve their skills and knowledge regarding digitalization and Industry 4.0.

Especially the seminars called “Kickstart Digitalization” could be interesting for CEUP 2030: In the seminars, SMEs in different regions were targeted, experts and “influencers” were gathered in order to hook and motivate the SMEs to start first projects in the area of digitalization/Industry 4.0. The goal was to make “small factories become smart factories”.

The Swedish agency has summarized some of their experiences that can be highly relevant for the development of pilot projects within CEUP:

- Collaboration with local partners and expert organisations which have the technical and regional knowhow is essential
- Inspiration needs to be authentic and tangible
- Focus on activities rather than projects
- Continuous adjustment of the programme, e.g. after 10 seminars (pilot), need-oriented

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Big Data in Production



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: bilateral funding scheme between Austria and Germany</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.ffg.at/bigdatainderproduktion/ausschreibung</p>
<p>A short description of the use case input:</p>	



The bilateral call Big Data in Production (BDP) is a funding scheme based on the Research, Technology and Innovation strategies of Austria and Germany. The goal of BDP is to enable the establishment of a bilateral flagship project on the topic of “smart and sovereign usage of data for production”. A total amount of 5 million euros is available for this project.

The idea behind the project is to capitalize on the strong economic relationships between Austria and Germany by enabling the use of big data building on the connected value chains between the two countries. Within a certain value chain, big data technologies should be used in order to process data throughout the whole production process

The project has three focus areas:

- Identify, extract and organize data relevant for production
- Increase efficiency and flexibility of production through processing relevant data
- Guarantee the safety and availability of data relevant for production

The project needs to involve businesses and research facilities from Austria and Germany working together on the project for a maximum of four years. The project that will be funded by BDP has the option to use the GAIA X platform (see relevance below).

A short description of relevance for CEUP 2030 use case input:

The BDP funding scheme is a result of the collaboration between two countries involved in CEUP 2030 (Austria and Germany). It is built in connection to the German initiative “GAIA X” that aims for creating a sovereign European data infrastructure and reducing European dependency on international cloud services. BDP is based in Central Europe (CE) and building on existing strategies in CE, the call is directly connected to the CAMI4.0 topics and therefore highly relevant.

BDP is a funding scheme that has different requirements for participating organizations in Austria and Germany, united within a common framework. Therefore, the use case can also serve as a model for transregional cooperative structures.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PIA
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Maturity Model for Industry 4.0



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: Policy Instrument for the realm of Digitalization in general</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: not connected to a certain programme</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://plattformindustrie40.at/services/#reifegradmodell</p>
<p>A short description of the use case input:</p>	



The Maturity Model Industry 4.0 (MMI; “Reifegradmodell Industrie 4.0”) is a tool developed by the Mechatronic Cluster in Upper Austria and the University of Applied Sciences in Steyr.

Through certified consultants the tool can be used to assess the digital maturity of businesses and supports them in defining next steps for developing the capacities to apply Industry 4.0 in their companies.

The tool relies on and creates a database that is used for benchmarking companies against each other anonymously. The data is also used to further develop the model and to show the development of different economic sectors in regards to Industry 4.0.

A short description of relevance for CEUP 2030 use case input:

The analysis of businesses is a necessary process for creating the baseline on which pilot projects and policies are deployed. The MMI could serve CEUP 2030 for creating that baseline and provide valuable input for the Trend and Innovation Networks (TINs) and the Policy Learning Labs (PLL).

While there are several maturity models available on the market, the MMI is partially publicly funded and could become a non-proprietary alternative to the existing services in Central Europe.

8.2.4. 4_Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. for its Fraunhofer (IWU)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Leistungszentrum Smart Production - Performance Centre Smart Production
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>n/a</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.leistungszentrum-smart-production-materials.de</p>

A short description of the use case input:

The "Smart Production" performance centre is one of the 17 performance centres of the Fraunhofer Society. It was founded on 5 July 2017 and focuses on interdisciplinary profile-building clustering with the involvement of stakeholders in Saxon production research, materials and lightweight construction research and electronics technology in the design of strategic research priorities.

The individual project- or domain-specific transfer efforts are bundled and recombined. This creates a wide range of innovations that addresses entire value chains and networks and assumes an incubator function for ideas for business start-ups and for growth, especially from small and medium-sized enterprises. The Performance Centre thus brings together the university, companies and research organisations with the intention of establishing an efficient innovation system with an international appeal and thus creating sustainable added value for the region.

A short description of relevance for CEUP 2030 use case input:



Relevance for CEUP 2030 could be elaborated by:

Aligning complementary national and regional Research Foundations among Central Europe macro-regions, managed by e.g. RIS3 Round Tables and TINs

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Trinity - Agility for production
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name Horizon 2020</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://trinityrobotics.eu/</p>
<p>A short description of the use case input:</p>	
<p>The main objective of TRINITY is to create a network of multidisciplinary and synergistic local digital innovation hubs (DIHs) composed of research centers, companies, and university groups that cover a wide range of topics that can contribute to agile production: advanced robotics as the driving force and digital tools, data privacy and cyber security technologies to support the introduction of advanced robotic systems in the production processes.</p> <p>The result will be a one-stop shop for methods and tools to achieve highly intelligent, agile and reconfigurable production, which will ensure Europe's welfare in the future. The network will start its operation by developing demonstrators in the areas of robotics we identified as the most promising to advance agile production, e.g. collaborative robotics including sensory systems to ensure safety, effective user interfaces based on augmented reality and speech, reconfigurable robot workcells and peripheral equipment (fixtures, jigs, grippers, ...), programming by demonstration, IoT, secure wireless networks, etc.</p> <p>These demonstrators will serve as reference implementation for two rounds of open calls for application experiments, where companies with agile production needs and sound business plans will be supported by TRINITY DIHs to advance their manufacturing processes. Besides technology-centered services, primarily laboratories with advanced robot technologies and know-how to develop innovative application experiments, TRINITY network of DIHS will also offer training and consulting services, including support for business planning and access to financing. Services of participating DIHs and dissemination of information to wider public will be provided through a digital access point that will be developed in the project..</p>	



A short description of relevance for CEUP 2030 use case input:

Relevance for CEUP 2030 could be elaborated by:

Aligning complementary national and regional Research Foundations among Central Europe macro-regions, managed by e.g. RIS3 Round Tables and TINs

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	Choose Good Practice Project Name Forschungsnetzwerk Mittelstand https://www.aif.de
What type of instrument is it? (Only for the policy instrument)	Funding Scheme In case of other, please clarify project & programme name, in English: [Free Text Response]
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	https://www.fgw.de/mechatronik/themenfelder.html

A short description of the use case input:

The Forschungsgemeinschaft Werkzeuge und Werkstoffe (Research Foundation for Tools and Materials) - FGW based is a private, non-profit institution for applied research founded in 1952 by the German tool industry. Founded as a neutral service provider for research and development, the FGW supports companies and generates a direct technical and economic benefit through industrial transfer. It does this in collaborative research as well as in direct contract development.

The FGW maintains three areas of expertise: tools, materials and transformation and innovation.

A short description of relevance for CEUP 2030 use case input:

Relevance for CEUP 2030 could be elaborated by:

Aligning complementary national and regional Research Foundations among Central Europe macro-regions, managed by e.g. RIS3 Round Tables and TINs

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	IWU
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Smart ³ Network



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name Bundesministerium für Bildung und Forschung www.bmbf.de</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.smarthoch3.de</p>

A short description of the use case input:



Smart3 is an initiative of companies and scientific institutions with the aim of developing new, innovative products based on smart materials. Engineers, designers, social scientists and economists as well as entrepreneurs and technicians are working together on the commercial breakthrough of intelligent products in a wide range of applications - from health to climate protection, from energy production to production technology, from lifestyle to mobility.

More than 150 partner institutions from academia and business are working together on a paradigm shift in product understanding: Structural and functional components should no longer be considered separately. Instead, smart3 works in a variety of R&D projects to integrate actuating and sensory functions directly into the component structure. The separation of functionality and structure is eliminated in order to drastically reduce component complexity, weight and mass.

A short description of relevance for CEUP 2030 use case input:

Relevance for CEUP 2030 could be elaborated by:
 Aligning complementary national and regional Research Foundations among Central Europe macro-regions, managed by e.g. RIS3 Round Tables and TINs
 Drive forward the development of future-oriented technologies and products and thus secure long-term competitive advantages for Central and Eastern European Countries. Draw on the different material, design and production competences of an interdisciplinary network and experience new solutions and insights and put that on an European level.

8.2.5. 5_Karlsruhe Institute of Technology (KIT)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	ZIM - Zentrales Innovationsprogramm Mittelstand



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>German Federal Ministry for Economic Affairs and Energy</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy</p>	<p>https://www.zim.de/ZIM/Navigation/DE/Meta/Englisch/englisch.html</p>



instrument can be found)	
A short description of the use case input:	
<p>ZIM” stands for “Zentrales Innovationsprogramm Mittelstand”, which means “Central Innovation Programme for small and medium-sized enterprises (SMEs) It is a funding programme of the German Federal Ministry for Economic Affairs and Energy that aims to foster the innovative capacity of SMEs and thus to contribute to economic growth and the creation of new jobs. It launches several thousand new projects every year all around Germany, making it the country’s largest innovation programme for SMEs.</p> <p>ZIM funds innovative companies with business operations in Germany which want to develop new or significantly improve existing products, processes or technical services. Public and private non-profit research and technology organisations (RTOs) acting as a cooperation partner of an SME are also eligible for ZIM funding. The programme is open to all sectors and fields of technology. Funded projects must be highly innovative, market-oriented and entail a substantial technological risk.</p>	
A short description of relevance for CEUP 2030 use case input:	
<p>Since ZIM strictly focuses on the needs of SMEs, it offers easy application and quick decision-making processes. Another feature which accommodates the needs of SMEs is that ZIM offers a range of possibilities to structure innovative activities in various project forms. They also include various possibilities for transnational cooperation.</p> <p>SMEs play a major role in the economy of any country and ZIM not only funds national activities but also includes cooperation projects and cooperation networks, whereby a German company and/or research institute can jointly work on a project with a foreign company and/or research partner. This is a model that has proven to be very successful within Germany with 1000s of project already being funded. A policy such as this can also work in Central European countries and can help jointly work on the CAMI 4.0 topics.</p>	

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Karlsruhe Nano Micro Facility (KNMF)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>Karlsruhe Nano Micro Facility, Funded by the Helmholtz Association.</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>For more information look at description.</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.knmf.kit.edu/</p>

A short description of the use case input:

KNMF is a high-tech platform for structuring and characterizing a multitude of functional materials at the micro- and nanoscale. The KNMF, an initiative of, and funded by the Helmholtz association of German research centers (HGF) and located at the Karlsruhe Institute of Technology (KIT) offers access to a uniquely complete set of fabrication and characterization technologies. External users from academia and industry, either national or international, can apply for open and - if the results are published - free access. While large companies and even SMEs can submit applications for urgent and commercial projects can be submitted at any time. The highly qualified KNMF staff guides users



through the relevant processes and techniques to address their processing goals and characterization needs.

The worldwide unique technology portfolio and leading expertise of the KNMF stimulates the users' current needs and expectations for structuring and characterising a multitude of functional materials, components, and systems at the micro- and nanoscale.

A short description of relevance for CEUP 2030 use case input:

The KNMF follows the corporate philosophy of open innovation and the large scale user facility provides users from industry and academia open and in case of public work free access to a dedicated set of multimaterial state-of-the-art micro and nanotechnologies. In its portfolio of available technologies, the KNMF makes available a wide array of bleeding edge technologies in its 2 main lab clusters of Micro and Nano Structuring, as well as the lab for Microscopy and Spectroscopy. Covering all technologies from Additive Manufacturing, Direct laser writing, Injection moulding, Nuclear Magnetic resonance etc available at the state of the art technical centers of the KIT. And makes it all available for industrial or academic research either at no cost or on a contract basis.

With an additional technology investment budget of 23.3 Mio. Euro, allocated by the Helmholtz Association of German Research Centers (HGF), regular updates and major investments are subject to a continuous improvement of both, the value of the facility and the welfare of its users. This is a proven and successful model that is relevant within the CEUP project in order to further enhance and promote Central European innovation capabilities.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Vanguard Initiative, New growth through Smart Specialisation.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>Vanguard Initiative</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.s3vanguardinitiative.eu/</p>

A short description of the use case input:

The Vanguard Initiative new growth through smart specialisation is driven by a political commitment made by regions to use their smart specialisation strategy to boost new growth through bottom-up entrepreneurial innovation and industrial renewal in European priority areas. The political leadership in every partner region has undertaken this commitment by signing the Milan Declaration.

This Vanguard Initiative has its foundations at the regional level. EU regions are the closest policy link to the bottom-up growth dynamics necessary for the renewal of our industrial fabric through their proximity to innovative partnerships and clusters. Such partnerships and clusters form eco-systems that are the catalyst for fast-growing innovative SMEs. Regional innovation ecosystems can and do develop solutions for significant societal challenges while delivering on the EU's ambitions for improved international competitiveness.

The Vanguard Initiative seeks to lead by example in developing interregional cooperation and multi-level governance for supporting clusters and regional eco-systems to focus on smart specialisations in priority areas for transforming and emerging industries. Vanguard regions want to build the synergies and complementarities in smart specialisation strategies to boost world-class clusters and cluster networks, in particular through pilots



and large-scale demonstrators. These investments will strengthen Europe’s competitive capacity to lead in new industries in the future and develop lead markets that offer solutions to our common challenges.

A short description of relevance for CEUP 2030 use case input:

The Vanguard Initiative is pioneering a new approach to support EU industry internationalisation and competitiveness by bringing regions (and clusters) together to

- discuss common objectives and find complementarities,
- map and better understand regions’ industrial competencies and capabilities,
- develop joint strategic action plans (building critical mass and complementary specialisations) and
- align strategic investments arising from these roadmaps

The goal of this approach is creating “inter-regional smart specialisation platforms”. The “VI methodology” consists of four subsequent phases: learn, connect, demonstrate and commercialise.

This initiative help set examples for activities in CEUP, especially regarding the involvement of policy makers, academics and industrialists in a unified way exactly in the CAMI4.0 topics, relevant for CEUP 2030 for the joint development of Central Europe.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	KIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Allianz Industrie 4.0 Baden-Württemberg
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>Allianz Industrie 4.0 Baden-Württemberg</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>OTHER (Please Clarify Below)</p> <p>State sponsored support network.</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.i40-bw.de/en/</p>

A short description of the use case input:

Allianz Industrie 4.0 Baden-Württemberg is a network founded and sponsored by the Ministry of Economic Affairs, Labour and Housing Baden-Württemberg.

The aim is to pool technological expertise in production as well as IT and communications to provide support for medium-sized industrial companies in their shift towards Industrie 4.0.

Industrie 4.0 has many faces: intelligent machines with dynamic process control, or driverless transport systems completely replacing assembly lines – this is no abstract vision, but rather lived reality in daily business today. Therefore to ensure the small and medium sized businesses are not left behind and that they don't miss the boat with digitalization, they offer a variety of services such as

- a neutral, state-sponsored initial consultation with certified Industrie 4.0 scouts.
- Funding opportunities for Industry 4.0 projects
- A readiness check for Industry 4.0 readiness
- Qualification of new Industrial processes

A short description of relevance for CEUP 2030 use case input:



The Allianz Industry 4.0 provides a tested, and successful model that is currently benefitting small and medium size companies to adopt Industry 4.0 approaches to their own processes without being left behind or impacted by fierce and unfair competition for larger companies.

This is in the same CAMI 4.0 topics that are significant for CEUP2030 and therefore worth having a look at.

8.2.6. 6_Lombardy Intelligent Factory Association (AFIL)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	S3-innodriver - Vouchers to support the implementation of innovation actions of SMEs
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>This is a regional funding instrument financed by Lombardy Region. As AFIL, we supported Lombardy Region in the improvement of this instrument through S34GROWTH project (INTERREG EU)</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.openinnovation.regione.lombardia.it/b/572/apreinnodrivermilioniallempmidomandealviasullamisurab</p> <p>Available only in Italian</p>

A short description of the use case input:

Regione Lombardia is using the vouchers' system since 2010 to finance innovative business projects. In particular, the instrument aims to enhance cooperation between SMEs and knowledge providers supporting innovation in SMEs and technology transfer. After the definition of Lombardy Smart Specializations Strategy - RIS3 Regione Lombardia is now shaping a new vouchers' system aligned to more precise goals consistent with RIS3 and with the R&I Work Programs of the specialisation. The types of voucher supported are:

- Digital: Stimulate process and product innovation through digital technologies
- Start -up: Support high innovative start up through incubators
- Collaboration research-industry: process and product innovation
- Participation to H2020: support to proposal presentation
- European and International patent legal support and taxes
- Sinergy with H2020 Seal of Excellence - SME instrument

In October 2019, Lombardy Region lunched the latest call for "Innodriver-S3", a new edition of the vouchers aimed at supporting SMEs in the acquisition and development of advanced innovation services.

The financial resources allocated to the last call are € 7,000,000.00, divided among the different measures:

- 6,100,000.00€ Measure A - Collaboration between SMEs and research centers,
- 900,000.00 € Measure B - Support for proposals that have obtained the "Seal of Excellence" in phase 1 "SME tool" of Horizon 2020,



Later in the beginning of 2020 additional 1,500.0000.00 were allocated on Measure C - Support for patenting processes.

A short description of relevance for CEUP 2030 use case input:

This is a funding instrument that can be easily accessible by companies, especially SMEs, to acquire support services from technical expert for the implementation of new technologies or innovative solutions in different fields.

From the perspective of policy makers, this is a good practice that can be shared with regions who are not yet implementing scheme like this. At the same time, Lombardy Region is interested in improving the technical content of the vouchers, meaning that the update of regional strategy and related work programme will consequently affect the thematic areas targeted in the instrument. Moreover, in a logic of interregional collaboration, this is an instrument that can be designed ad adapted to foster interregional collaboration among foreign companies and service providers. However, this is a complex work to be done, which requires interactions among policy makers of different regions. CEUP2030 can support in this sense.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Italian Industry4.0 Plan
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English:



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Equipment/Infrastructure Finance</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://ec.europa.eu/growth/tools-databases/dem/monitor/content/italy-%E2%80%9Cindustria-40%E2%80%9D</p>

A short description of the use case input:

In February 2017, the Italian Ministry of Economic Development has launched the Industria 4.0 National Plan (I4.0). The strategy puts in place horizontal measures accessible for all enterprises with an objective to boost the investment in new technologies, research and development, and revitalise the competitiveness of Italian companies.

The core activities comprise innovative investment, stimulating private investment in the uptake of I4.0 technology, expenditures in R&D, and development of skills.

The first group of measures is based on tax incentives. ‘Hyper and super depreciations’ schemes support companies in their tangible investments in their technological and digital transformation processes. For hyper-depreciation, the investment costs are increased (for fiscal reduction purposes) by 150% of their value, while for super-depreciation by 40%. The second group of measures ensures easy access to finance, providing a contribution for payment of interest from 2.75-3.57% when requesting a



bank loan (€ 20,000- € 2 million) to invest in machinery, equipment and capital goods to be used in production and digital technologies. The third group puts an emphasis on the development of skills related to new technologies and innovative processes stemming from the fourth industrial revolution. I4.0 launched the ‘Digital Innovation Hubs’, which serve as a contact point between companies, investors and research institutions, supporting and facilitating innovative investment plans, and the ‘I4.0 Competence Centres’, which provide training, live demos, presentation of best practices, technical advisory services for SMEs, launching and accelerating innovative projects and technological development.

A short description of relevance for CEUP 2030 use case input:

The development of a well structured strategies for the upcoming programming period should take into account the already implemented measures in order to focus the target of new investment on technology deployment and improvement of skills. Currently, a lot of companies have renewed their machinery but they are not fully exploiting their potential.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Call MADE Competence Center
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.made-cc.eu/bandi?lang=en</p>

A short description of the use case input:

MADE, the competence center for technical and managerial skills, supports the enterprises in their digital transformation path towards Industry 4.0. It provides a wide range of knowledge, methodologies, and digital tools that encompass the entire product lifecycle: from the design to the engineering, from the production management to the delivery to the customer, and the end of the product lifecycle.

MADE has recently launched a call to realize innovation projects (product, process, organization), industrial research, and experimental development on the topics of Industry 4.0. The call is intended for startups, micro, small, medium, large enterprises, in the form of a single entity or in collaboration with others. The call has a total funding of 1,5M€. To implement a project, each company can get a maximum contribution of 50% of costs/expenses incurred up to € 200,000.



A short description of relevance for CEUP 2030 use case input:

This is a funding instrument that can be easily accessible by companies, especially SMEs, to acquire support services from technical expert for the implementation of new technologies or innovative solutions in different fields.

This funding instrument is financed by the national level, so it is interesting to exploit CEUP2030 to foster the alignment among different levels (i.e. National, Regional, EU)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	AFIL
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	3DP PAN EU CALL FOR SMES
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input checked="" type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: 3D Printing technologies
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English:</p> <p>3DP-PANEU project</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://3dppan.eu/call-smes</p>
<p>A short description of the use case input:</p>	
<p>The ‘3DP Pan EU’ project aims at fostering awareness, knowledge and uptake of 3D Printing technologies in Europe by facilitating and promoting SMEs’ access to high quality services related to testing, validating and certifying 3D Printing solutions.</p> <p>3DP PAN EU has launched a Call for SMEs to test and validate a number of industrial demonstration 3D Printing based projects in different application fields. This call will support SMEs looking to carry out projects with facility centres mapped in the 3DP PAN EU platform.</p> <p>The call will provide funds to max 10 selected SMEs, providing the following services:</p> <ol style="list-style-type: none"> 1. Support service in the definition of the partnership between the SME and the facility centres; 2. Financial support in the form of grant which will cover 100% of the eligible costs with a maximum amount of 40,000 euro; 	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>Cascade funding is another important source of funding for companies, especially SMEs. There is a number of EU funded projects that are launching open calls to fund very specific applications in diverse fields (including CAMI4.0)</p> <p>CEUP2030 support its target groups to access those funding and at the same time involving its policy makers representatives can foster the definition of strategies that leverage on synergies with these schemes.</p>	

8.2.7. 7_SIIIT S.c.p.a. Intelligent Integrated Systems Technologies (SIIT)



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Creation of a European metacluster in the domain of Advanced Materials and Textiles, ICT and the emerging domain of connected materials, for security and defence.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: Alliance for international business development of advanced materials and connectivity for defence and security markets
What type of instrument is it? (Only for the policy instrument)	Funding Scheme



CEUP 2030

	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.clustercollaboration.eu/escp-profiles/alliance</p>
<p>A short description of the use case input:</p>	
<p>ALLIANCE objective is the creation of an association, the European metacluster in the domain of advanced materials and textiles, ECT and connected materials for safety and defense applications. Long-term international partnerships (business and technical) between European organisations (SMEs, technical centers, partners of the project) and international stakeholders in the USA, Japan and South Korea.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The project created a wide network of clusters and SMEs operating in the focus fields interested in the dual use technologies and in commercial opportunities coming from the ALLIANCE network. This network could be of great use for spreading CEUP 2030 knowledge and exchanging opinions.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	The measure is aimed at stimulating business investments in staff training on subjects concerning the relevant technologies for the technological and digital transformation of businesses.
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: Bonus formazione 4.0
What type of instrument is it? (Only for the policy instrument)	Subsidised Service



CEUP 2030

	In case of other, please clarify project & programme name, in English: [Free Text Response]
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	https://www.ipsoa.it/dossier/industria-4-0
A short description of the use case input:	
Funding of training activities aimed at acquiring and consolidating skills and knowledge in the following technologies: big data and data analysis; cloud and fog computing; cyber security; simulation and cyber-physical systems; rapid prototyping; visualization systems, virtual reality and augmented reality; advanced and collaborative robotics; human machine interface; additive manufacturing (or 3D printing); internet of machines; digital integration of business processes.	
A short description of relevance for CEUP 2030 use case input:	
This kind of support could be of great interest for Italian target groups involved in CEUP2030	

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Polo SOSIA



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input checked="" type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input checked="" type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: Polo SOSIA</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.polososia.siitscpa.it/it/</p>

A short description of the use case input:



The Research and Innovation Center S.O.S.I.A. (Environmental risk management and territorial control, Cybersecurity of critical infrastructures, ICT innovative systems for the Intelligent Factory and automation) was established in response to the Guidelines issued by the Liguria Region for the "Reorganization and Harmonization of Research and Innovation Poles of the Liguria Region "to be implemented with the contribution of the European Regional Development Fund (POR-FESR-2014-2020-axis 1). The SOSIA hub has more than 50 members from small, medium and large industry, academy, research centres, etc.

The SOSIA hub has as its priority objective the development and implementation of programs, projects and activities mainly related to the following areas:

- Environmental risk management and territorial control
- Definition of a temporal roadmap that provides support for the development of an articulated program for the recovery and environmental control of the territory of the Liguria Region.
- Cybersecurity: critical infrastructures, including industrial control systems for the production and distribution of energy, for supply chains, and for transport.
- Security of data, digital identities and applications in emerging computing paradigms (web, mobile, cloud and Internet-of-Things
- Innovative ICT systems for the Intelligent Factory and automation

A short description of relevance for CEUP 2030 use case input:

POLO SOSIA is a wide network of large, medium and small enterprises operating in the focus fields interested in security, industry and IoT. This network could be of great use for spreading CEUP 2030 knowledge and exchanging opinions.



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	SIIT
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Cluster Tecnologico Nazionale “Fabbrica Intelligente”
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: National Technological Cluster "Smart Factory"
What type of instrument is it? (Only for the policy instrument)	OTHER (Please Clarify Below)



	In case of other, please clarify project & programme name, in English: [Free Text Response] National cluster
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	https://www.fabbricaintelligente.it/
A short description of the use case input:	
<p>This Cluster is a recognized association with the aim of implementing a strategy based on research and innovation for the competitiveness of Italian manufacturing. It is the only table at which all the stakeholders involved in the fate of Italian industry sit simultaneously: companies, business associations, regions, universities and research bodies, institutions. Part of the importance of the cluster are the Technical-Scientific Thematic Groups (GTTS) which are the operating mode that the Cluster has chosen to integrate visions, programs and actions of the industrial and academic components.</p> <p>They have the purpose of concretizing the strategic indications of the Roadmap for Research and Innovation of the CFI, promoting a process of analysis of the scientific and industrial state of the art, monitoring active projects and existing infrastructures, defining the ways of developing technologies specifying the research priorities and their level of technological maturity.</p>	
A short description of relevance for CEUP 2030 use case input:	
<p>This Cluster allows stakeholders and companies to share and build new ideas and work towards innovation. This network could be of great use for spreading CEUP 2030 knowledge and exchanging opinions, as well as building new contacts and cooperations.</p>	

8.2.8. 8_Pomurje Technology Park (PTB)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Incentives for launching innovative companies in 2020 (P2 2020)



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.podjetniski-portal.si/razpisi/javni-razpis-spodbude-za-zagon-inovativnih-podjetij-v-letu-2020-p2-2020-2020-02-21</p>
<p>A short description of the use case input:</p>	



The purpose of the call is the development of supported companies and the successful transfer of development ideas of entrepreneurial individuals and groups into commercially successful companies and the creation of new innovative companies with growth potential, with emphasis on development and commercialization of products, processes and services.

The objectives are:

- the successful operation of most of the supported companies that employ, generate net sales revenue and operate at a profit,
- entry of a strategic investor or venture capital investors in a few supported companies. Implementation body: Public Fund of the Republic of Slovenia for Entrepreneurship

Conditions for participation: Micro and small companies (hereinafter referred to as SMEs) with their registered office in the Republic of Slovenia, which are engaged in economic activity as a legal or natural person and are organized as companies, entrepreneur or cooperatives, may apply. To identify SMEs and determine the size of the company, applicants shall follow the provisions set out in Annex 1 to Regulation 651/2014 / EU. Related companies are also companies that are related through the ownership shares of natural persons, subject to the provisions of Annex I of Commission Regulation 651/2014 / EU.

Applicants (after approval of co-financing: beneficiaries) according to this public call are companies that registered or notified with the competent authority between 1 January 2019 and 15 March 2020 (the date of registration of the company in court or with the competent authority is taken into account).

Budget: The approximate total amount of funds is EUR 2,160,000.

Deadline: The deadline for submitting applications is 20 April 2020

A short description of relevance for CEUP 2030 use case input:

Among activities that are supported with this measure there are also product development and product design categories in order to enable / support companies and to successfully transfer entrepreneurial ideas into successful commercial companies and the creation of new, technology based innovative companies with growth potential, with emphasis on development and commercialization of value added products, processes and services.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case



<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>Supporting strategic (innovation development) partnerships regarding priority fields of smart specialization</p>
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>http://www.p-tech.si/sfh-mapping/</p>



A short description of the use case input:

Objective of call is to enhancing networks and new synergies in innovation system. Implementation body Ministry of Economic Development and Technology Country Slovenia From 2016 To 2018

Budget 12000000

Eligible costs: Financing rate micro and small companies up to 45 %, medium up to 35 %, large up to 25 % Eligible costs staff costs and external experts

Max grant 500000

A short description of relevance for CEUP 2030 use case input:

A logic of pilot funding based on various projects implementation - applicable in so called demo or use or pilot cases, which serve as testing ground for future policy recommendation to relevant ministries and national implementing bodies/agencies, to foster specific type support for SMEs to go digital and be able to become part of bigger (international) vertical supply chains. In this particular case it served to test some of Industry 4.0 testing cases in Danube region, upon which an internet or web based mapping tool remained (sustainability assured) and ready to be used as possible input for improved tool project, growing data base of offer (I 4.0 solutions) and to achieve shorter learning curve for partnerships as well as using this ready - made tool for further improvements of regional ecosystems - possible channel for solution providers internationalization.

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Voucher for cyber security
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.podjetniskisklad.si/sl/produktisklada/sps-dvojcekdpora-pri-produktih/vavcerski-sistemi/vavcer-za-kibernetsko-varnost</p>

A short description of the use case input:

Objective: Co-financing of ensuring an increase in cyber security by co-financing the following eligible costs:

- implementation of the system safety inspection, including the preparation of a safety report and a technical report with recommendations for debugging = 1,000 - 5,000 EUR
- costs of making an intrusion (penetration) test, including the production of a technical report with examples and a technical report on corrected errors = 1,000 - 9,999.99 EUR

A short description of relevance for CEUP 2030 use case input:



The purpose of this instrument was promoting the awareness and development of cyber security solutions which are more and more important in further development of Industry 4.0 and Internet of Things, where more and more data is stored in the clouds and real time performance enables more complex and also financial activities, which might have been of interest to competition of criminal actions. For companies to monitor their production and/or management & finances it is important to test their safety.

Name of the PP	PTP
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	RRI v verigah in mrežah vrednosti (ENG: RDI in value chains and networks)
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>Choose Good Practice Project Name Smart Factory Hub (Interreg Danube) In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>Link</p>

A short description of the use case input:

According to Slovene Operational programme 2014-2020 and Smart Specialization Strategy and instrument by Ministry of Economic Development and Technology called was launched. The objective is: Encouraging business investment in research and innovation and establishing links and synergies between business, R&D centers and the higher education sector, in particular by encouraging investment in product and service development, technology transfer, social and environmental innovation, public service applications, demand stimulation , networking, clusters and open innovation through smart specialization and supporting technological and applied research, pilot lines, early product evaluation measures, advanced production capacity and first production, in particular in key enabling technologies and the dissemination of general purpose technologies ", which is" Increased share of innovation-active companies ”.

A short description of relevance for CEUP 2030 use case input:

As we believe this particular call offers funding to SMEs and RTO's to connect and develop new novel technologies to be introduced into industry (covering also all 4 CAMI topics), it might be a good instrument to consider as benchmark for other regions to look & learn about it and definitely consider its implementation in their regions. Naturally through PLL we see the opportunity to check the real impact of instrument with policy stakeholder who launched the call.

8.2.9. 9_Pannon Business Network Association (PBN)

Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN



<p>To which WPT1 use case category does the harvested result connect?</p>	<p>Policy Instrument Use Case</p>
<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVicEs</p>
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English:</p> <p>The project itself deals with the methodology on how to develop a policy instrument with the involvement of stakeholders in the topic e-health.</p> <p>In the frame of the project there are some initiatives/good practices in e-health which apply big data analysis and sensor solutions.</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input checked="" type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English:</p> <p>Relevant national/regional/local stakeholders: those working on health technology and innovation issues, on structural funds management and potential beneficiaries of the targeted policies e.g. authorities, governments and representatives of healthcare: GPs,</p>



	<p>hospitals (specialists, nurses), elderly homes (seniors and caregivers), etc.</p> <p>EU level stakeholders: staff of relevant EU institutions, Members of the EU Parliament, Committee of the Regions, Offices of the EU regions in Brussels, etc</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: INTENCIVE: INnovation and Technology ENhancing Customer Oriented Health SerVicEs (INTERREG EUROPE)</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme</p> <p>EDIOP (Economic Development and Innovation Operational Programme)</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://www.interregeurope.eu/intencive/</p>

A short description of the use case input:

INTENCIVE seeks to re-think and re-plan health services in the aging society using genuine customer orientation and innovation-driven health technology to guarantee high quality and accessibility.

The overall objective of the project is to improve the implementation of the relevant policies and programmes in the partner regions and influence the ERDF Regional Operational Programs or Regional Strategies.

The project aims to map the innovations in health technology and the good practices of how those are used in the health services in the partner regions. Thanks to the analysis of best practices found and the exchange of experience, each partner region will be assisted in finding the potential new approaches for planning and organizing their health services.

PBN aims to keep contact with relevant ministries in order to propose potential topics and/or approaches to handle in the regional health care system.



INTENCIVE project focuses on good practices in e-health especially with digital innovation solutions. Based on the elaborated 5 regional action plans containing exchange of experiences among the partner regions 3 Growth & Jobs or ETC programmes with structural funds link and additional 2 policy instruments without structural fund link are addressed by the project where measures inspired by the project will be implemented. Thanks to this policy influence there will be 5 new health-related solutions developed by companies in Hungary, 4 innovative e-health solutions launched in Malta addressing in particular the needs of the elderly and those suffering from dementia, 3 new Finish projects supported which deliver innovative customer orientated e-health services and also 3 projects with end-users that have access to innovative e-health solutions will be managed in Brittany, furthermore additional 80 Spanish people will use e-health services.

A short description of relevance for CEUP 2030 use case input:

E-health is a special field of digitalization and in our today's life it is a highly important topic. The lessons learnt from Intencive project can give the possibility for DIHs who are also dealing with e-health to widen their network, find new good practices on European level and see the methodology how policy level and DIHs can cooperate.



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	HGC Academy
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: EDIOP 1.1.4.-16 - HGC Academy
What type of instrument is it? (Only for the policy instrument)	Funding Scheme EDIOP (Economic Development and Innovation Operational Programme)



	<p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>Website is in Hungarian http://hgcaademia.hu/</p>
<p>A short description of the use case input:</p>	
<p>HGC Academy is a professional knowledge base, a talent management program and a knowledge transfer platform. PBN was contracted nationally to improve performance of SMEs in absorbing policy instrument funds, shift from open calls to partnership-based approach and enable the expansion of the Hungarian medium-sized company segment. To achieve it, holistic approach was applied, involving foreign relations - with the integration of the ministry of foreign relations - , technology audits and future funding schemes - with the ministry of innovation and technology.</p> <p>Companies were developed in different fields to increase their effectiveness. Mentoring topics were:</p> <ul style="list-style-type: none"> • technology readiness • high performance management • CRM/ ERP systems • Financing • Foreign market presence - internationalisation • Online presence <p>Workshops were organized with more than 200 participants and more than 40 SMEs got an individual mentoring programme.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The intervention fields for SMEs which are mentioned above can be connected with all CAMI4.0 topic in the CEUP2030 project. The available training materials, the way how we approached the SMEs and the structure of the programme can be useful of the involvement and possible development of SMEs within this project.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Export performance boost of the Hungarian SMEs
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: UpGradeSME - Improving policy instruments supporting innovative SME performance; Interreg Europe programme



<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Funding Scheme EDIOP (Economic Development and Innovation Operational Programme) In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	
<p>A short description of the use case input:</p>	
<p>The main objective of the UpGradeSME project is the joint analysis and optimisation of the selected policy instruments dealing with SME internationalization and export support in the participating regions on base of national and international exchange of experience. During the program the project partners, national and regional actors, ministries and the beneficiaries of the policy instruments - the SMEs - realize effective cooperation and intensive transnational learning.</p> <p>PBN was lead partner of an initiative to boost export performance of the Hungarian SMEs, in close partnership with the ministry of foreign relations. During the implementation exporters were interviewed from 6 countries around Europe to provide insights about the feasibility of instrument development. As a result, the call structure was modified, moving from purely concentrating on fairs and events to engage the entire value chain of a specific company.</p>	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>The project helps the export ability of the SMEs which is connected with their digitalization level on a way like as the export ability is higher they have to make the production more effective. For this, digitalization has to be the first option. For these SMEs CEUP 2030 can help with the services provided by the participating DIHs. Furthermore, as most of the Interreg project, UpgradeSME can also give good examples and it can help to widen the network, too.</p>	



Result Harvest for WPT1 Use Case Input Topics	
Name of the PP	PBN
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Human-machine cooperation with social economy
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input type="checkbox"/> Smart & New Materials <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> Business Support Organisation <input checked="" type="checkbox"/> Higher Education & Research Organisation <input checked="" type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
What is the project name from which you learnt about the technology good practice or policy instrument? (in English)	OTHER (Please Clarify Below) In case of other, please clarify project & programme name, in English: ERUDITE - Interreg Europe EDIOP (Economic Development and Innovation Operational Programme)



<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>-</p>
<p>A short description of the use case input:</p>	
<p>With a view to social responsibility, PBN has developed a complex solution to connect the employment of a healthily disadvantaged person with a digitalisation solution. The person's left arm cannot be used due to health reasons, so his daily work is supported by a collaborative robot, namely a robotic arm.</p> <p>The robotic arm not only helps to carry out the work, but during its use, valuable experiences can be collected for the developer every day.</p> <p>PBN has achieved a triple objective with the example:</p> <ol style="list-style-type: none"> 1. started employing an inactive, disadvantaged person in the labour market, 2. included this extremely humane solution among the possible areas of use of the collaborative robot, 3. raised awareness in the region of the wide range of possible usage of collaborative robots. 	
<p>A short description of relevance for CEUP 2030 use case input:</p>	
<p>This solution is a unique methodology how to combine digitalization with social economy. Furthermore, it helps to decrease the problem of lack of human resource: people who were not able to work because of physical disabilities, can be also employed with the help of this solution. We think that this example is useful for all participating DIHs and can be a good example for policy makers, too.</p>	

8.2.10. 10_Croatian Agency for SMEs, Innovations and Investments (HAMAG)

<p>Result Harvest for WPT1 Use Case Input Topics</p>	
<p>Name of the PP</p>	<p>HAMAG-BICRO</p>
<p>To which WPT1 use case category does the harvested result connect?</p>	<p>Policy Instrument Use Case</p>



<p>What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)</p>	<p>HR-ZOO</p>
<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input type="checkbox"/> Automation & Robotics</p> <p><input type="checkbox"/> Smart & New Materials</p> <p><input type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: SMART FACTORY HUB Interreg CE</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Equipment/Infrastructure Finance</p> <p>The HR-ZOO project is a strategic project that is funded through the Operational Program Competitiveness and Cohesion 2014-2020. within Specific Outputs 1a1 "Increased R&D and Innovation (R&D) Sector's Capacity to Conduct Top Quality Research and Meet the Needs of the Economy"</p>



	In case of other, please clarify project & programme name, in English: [Free Text Response]
Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)	https://www.srce.unizg.hr/hr-zoo
A short description of the use case input:	
The purpose and main objective of the project are to build a computer and data cloud that will be a fundamental component of the national research and innovation e-infrastructure. The project envisages the establishment of a network of five headquarters in four cities: Zagreb, Split, Rijeka and Osijek. It will represent a distributed national e-infrastructure of computer, storage and network resources for various purposes, the purpose of which is to strengthen the capacity of the academic and research community of the Republic of Croatia (RH) for research, technological development and innovation.	
A short description of relevance for CEUP 2030 use case input:	
Modern and advanced e-Infrastructures represent a collaborative environment and a set of tools that enable researchers to collaborate, regardless of geographical location and distance from physical research resources, and are an indispensable basis for new methods and advances in today-ubiquitous data-intensive research, and is a link to Big & Real Data Processing & Sensors theme of CEUP 2030 project.	

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	IRI 2



<p>To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> Big & Real Data Processing & Sensors</p> <p><input checked="" type="checkbox"/> Automation & Robotics</p> <p><input checked="" type="checkbox"/> Smart & New Materials</p> <p><input checked="" type="checkbox"/> Artificial Intelligence</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input checked="" type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input checked="" type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [SMART FACTORY HUB Interreg CE]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://strukturnifondovi.hr/natjecaji/povecanje-razvoja-novih-proizvoda-i-usluga-koji-proizlaze-iz-aktivnosti-istrzivanja-i-razvoja-faza-ii/</p>

A short description of the use case input:



This Call will co-finance the development of new products (goods and services), technologies and business processes by increasing private investment in R&D, and enhancing the capacity of R&D and innovation firms, by fostering their cooperation with partners, including cooperation with research organizations. and dissemination of knowledge. The project must result in the development of new or significantly improved products (good or services) arising from the research and development activities of the applicants and partners (if there are partners in the project). Eligible activities are R&D activities (excluding basic research) that include own R&D activities, contract research and collaborative research with effective collaboration, and initial investment activities in tangible and intangible assets to enhance R&D capacity.

A short description of relevance for CEUP 2030 use case input:

The call is a continuation of the previous highly successful scheme. Among the projects that have received funding through this competition is the development of an intelligent system for video detection of traffic conditions, deadlock prediction, and support for incident prevention and resolution, then the development of an open smart grid of energy-efficient public LED lighting and the development of a system for managing energy infrastructure through collaboration in augmented reality. Pilot projects are popular in companies for experimenting with industry 4.0 concepts.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Integrator
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>Which target group is addressed by this input? (multiple choices are possible)</p>	<p><input checked="" type="checkbox"/> SME</p> <p><input type="checkbox"/> Large Enterprise</p> <p><input type="checkbox"/> Business Support Organisation</p> <p><input type="checkbox"/> Higher Education & Research Organisation</p> <p><input type="checkbox"/> Education / Training Centre & School</p> <p><input type="checkbox"/> Other, Please Clarify Below</p> <p>In case of other, please clarify topic name, in English: [Free Text Response]</p>
<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: [SMART FACTORY HUB Interreg CE]</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://strukturnifondovi.hr/natjecaji/integrator-2018/</p>

A short description of the use case input:

The call will support the collaboration of SMEs to create supplier relationships with Integrator companies through the creation of new innovative products and services and to become part of their value chain in the targeted strategic segment. The support under this Call is intended to co-finance the process and/ or business innovation of organizing a consortium of SMEs to establish long-term supply relationships/ value chains with other companies. To the integrators. For this Call, the consortium must consist of a minimum of 3 (three) SMEs. The grants are awarded through OP Competitiveness and Cohesion 2014-2020.

A short description of relevance for CEUP 2030 use case input:



It is known that Industry 4.0 offers promising opportunities in customization, but a large focus is on research not on implementation. The supply chain is the centre of all operational activity of every manufacturing company and a decisive factor in gaining competitive advantage. To get the best results integration of stakeholders along the supply chain is required. This leads to dynamic coordination of material and task flows and overall process improvement. This call focuses on that segment of Industry 4.0 in the context of SMEs targeting improvements in the company's customer experience. Industry 4.0 promotes the digital integration of all stakeholders along the supply chain.

Result Harvest for WPT1 Use Case Input Topics

Name of the PP	HAMAG-BICRO
To which WPT1 use case category does the harvested result connect?	Policy Instrument Use Case
What is the name of the harvested use case input? (i.e. policy instrument name or technology good practice name, in English)	Innovation in the S3 environment
To which CAMI4.0 topic does the harvested result connect? (multiple choices are possible)	<input checked="" type="checkbox"/> Big & Real Data Processing & Sensors <input checked="" type="checkbox"/> Automation & Robotics <input checked="" type="checkbox"/> Smart & New Materials <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]
Which target group is addressed by this input? (multiple choices are possible)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> Large Enterprise <input type="checkbox"/> Business Support Organisation <input type="checkbox"/> Higher Education & Research Organisation <input type="checkbox"/> Education / Training Centre & School <input type="checkbox"/> Other, Please Clarify Below In case of other, please clarify topic name, in English: [Free Text Response]



<p>What is the project name from which you learnt about the technology good practice or policy instrument? (in English)</p>	<p>OTHER (Please Clarify Below)</p> <p>In case of other, please clarify project & programme name, in English: SMART FACTORY HUB Interreg CE</p>
<p>What type of instrument is it? (Only for the policy instrument)</p>	<p>Subsidised Service</p> <p>In case of other, please clarify project & programme name, in English: [Free Text Response]</p>
<p>Hyperlink to the result location (i.e. where more information on the technology good practice or policy instrument can be found)</p>	<p>https://strukturnifondovi.hr/natjecaji/inovacije-u-s3-podrucjima/</p>

A short description of the use case input:

This Call encourages SMEs to commercialize product/ service innovation solely in line with the identified priority thematic areas and cross-cutting themes of the Smart Specialization Strategy (S3). The award of grants will support innovative SMEs, which in their business activities are focused on the production and marketing of innovative products/ services on the market, which will contribute to the increase of exports and thus the competitiveness of the Croatian economy in the global market. Eligible project activities must be aimed at launching the finished product/ service on the market, investing in tangible and intangible assets, obtaining patents, staffing costs and research to innovate and commercialize new products and services solely in accordance with the identified priority thematic areas and cross-cutting themes of the Smart Specialization Strategy (S3).

A short description of relevance for CEUP 2030 use case input:

In recent years, SMEs have moved into the focus of many economies. Due to their flexibility, entrepreneurial spirit, and innovation capabilities, SMEs have proved to be more robust than large and multi-national enterprises. Small organizations are increasingly proactive in improving their operational processes, which is a good starting point for introducing the new concepts of Industry 4.0. The readiness of SME-adapted Industry 4.0 concepts and the organizational capability of SMEs to meet this challenge exist only in some areas. This opens the need for further research and technical solutions for preparing SMEs in a technical and organizational direction. Therefore, special research is needed for the implementation of Industry 4.0 technologies and concepts in SMEs.