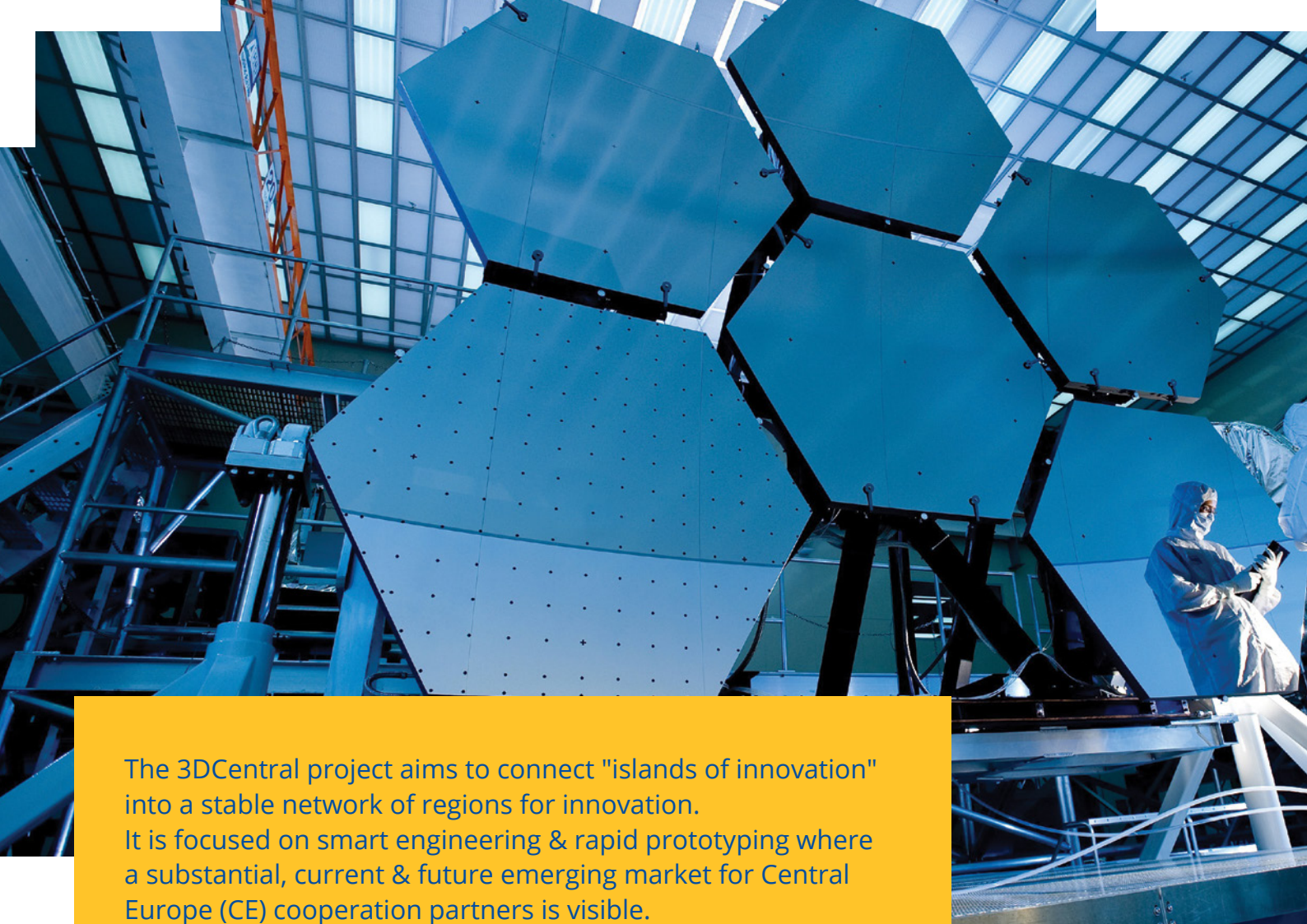


MODULAR PUBLICATION CATALOGUE



The 3DCentral project aims to connect "islands of innovation" into a stable network of regions for innovation. It is focused on smart engineering & rapid prototyping where a substantial, current & future emerging market for Central Europe (CE) cooperation partners is visible.

Generally, there is a solid knowledge base in the CE area, however, not enough structured and connected. This affects efficiency of regional development ecosystems. To tackle these challenges 3DCentral project strives for establishing and anchoring a practicable, user-friendly, replicable and future robust system of new strong structures – so called Knowledge Axes for the Central Europe (KACE), repeatable processes (CE Brain Base) and leading-edge demonstration cases in format of CE flagship projects.

The main structures, processes and outputs are all transnationally oriented. 3DCentral unites highly competent partners with strong networks & capitalisation to guarantee appropriate “money for value” as well as to tighten and boost the linkages and capacities amongst the relevant technology and innovation actors of smart engineering and rapid prototyping in CE area.



BUILDING A TRANSNATIONAL HUB FOR COMMON KNOWLEDGE

3DCentral brings together Project Partners who represent technology hubs and expertise across Central Europe. All of these partners have an extensive network of organisations, companies, clusters, research institutions, who carry knowledge and expertise related to smart engineering and rapid prototyping.

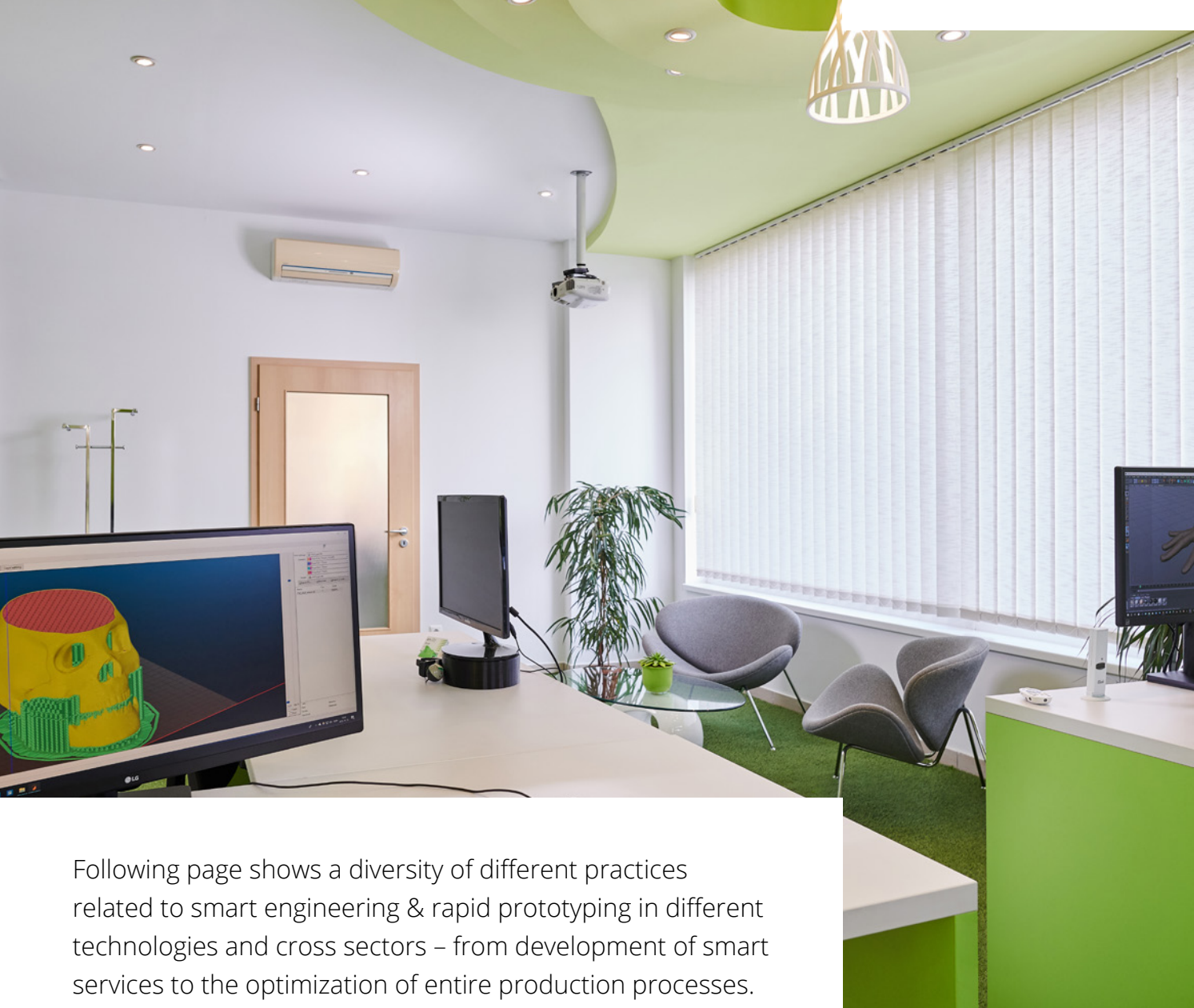
All the good practices and associated lessons learnt are derived from real-life examples to which the Project Partner has been exposed. This ultimately means that Project Partners have good access to the organisations involved in the good practice and can more easily facilitate cooperation and the aforementioned competence enhancement that makes up a key output of this project. The methodology behind is composed of two major steps:

1st step

identification of Smart engineering & rapid prototyping solutions offered by SMEs and research institutions in each region.

2nd step

out of identified regional solution providers Good Practices and lessons learnt were selected and described by each partner.



Following page shows a diversity of different practices related to smart engineering & rapid prototyping in different technologies and cross sectors – from development of smart services to the optimization of entire production processes. This cross-sectoral characteristic is quite important, in itself; it shows that advanced manufacturing techniques such as smart engineering and rapid prototyping, are relevant and currently in practice across different aspects of Central Europe's value-chain. It also shows that techniques can be applied across sectors; something that emerges in the municipal transportation sector, could be viable in the industrial engineering sector; and something that is viable in the textile industry, could be applied in the medical sector.

The good practice examples also include innovative network approaches for knowledge transfer in certain regions, which demonstrates that certain Partners are recognising the importance of early development of knowledge architecture structures within their regions to enhance their market response capabilities.

Idea behind the concept was to identify possibilities which could be transferred via pilot actions and in later stages as follow up project.

GOOD PRACTICES & LESSONS LEARNT

1. **Process optimization** - multinational company supported by solution of a start-up company
2. **Manual and machine assisted wood carving of sacral art** - from traditional to smart services
3. **Textile SMART Monitoring** - remote monitoring of the test machines among customers
4. **Additive Manufacturing Robot** - for Continuous Fibers Composites / easy up / down scaling
5. **Development of an education robot cell** - for the Talent Center- Graz / adopted to be used by pupils between the ages of 13 and 15.
6. **Driverless transport Automotive** - memory based navigation system with pre-programmed paths; more efficient than optical sensors and AR tags.
7. **Live Video Remote System** - the opportunity for an expert to support and guide the process via Live-broadcasting
8. **Robot cell inclusive test bench** - which automatically assembles the locking systems and then quality checks this system in the test bench (used in rail transport).
9. **Smart³** - an innovation network, connecting over 100 members from science and research, art and design, social sciences, production companies, architecture and construction, the automotive industry, medical engineering and more, for improving product design and development by smart materials.
10. **FiberCheck** - a sensor system for continuous detection and monitoring of damages within fibre-reinforced plastics.
11. **Laserscan data analysis with virtual reality** - a new IT product was created that is able to treat 3D Laserscan data in immersive virtual reality environments by cooperation of two companies.
12. **Virtual trade fair for special purpose machine manufacturer** - feasibility of using a virtual reality (VR) presentation for exhibiting a machine
13. **Perception Analytics** - a social-media analytics solution that provides insights into real-time public perception trends by following several social media networks
14. **Development of sail system** with inhibition of induced drag effect for radical improving of aerodynamic performance.
15. **Power quality improvements in production process** - a modular system engineered to effectively and economically optimize power quality, providing guaranteed energy savings, through reductions in power demand and power consumption
16. **Automobile chassis welding** line which consists of four separate devices.
17. **Using of 3D printing in production process** - a new separate development lab inside the production area which allows to the students to visit and learn the processes and practicing the new technologies and also manage research activities for PHD students
18. **Robotised welding line** - Process of production of compressed air tanks is fully automated from the delivery of components to the moment when the final products reach the station for marking the finished products; use of 5 robots that weld the tanks and clean the welds
19. **Mechanical Engineering in Railway Production**
20. **SLS application for preparation elements for medicine** / clamp used for vain closure during surgical operations
21. **Rapid Prototyping in industrial machines building** – designing 3D printers, scanners, big volume 3D printers, other devices and engineering for final customers.
22. **Rapid Prototyping for society** - educational project "3D Printing in Schools" where pupils can learn the basics connected with using a 3D printer, design their own, first model and create an object by using 3Doodler.



11 KACE TOPICS SET-UP WITH IDENTIFIED PARTNER COMPETENCES

Through the consolidation of regional and national strategies in the area of Smart Engineering and Rapid Prototyping as well as partners' competences, 11 content-related Knowledge Axes for Central Europe (KACE) were identified. The KACE is conceived as modular system or the management of knowledge, cooperation and transfer involving a critical mass of target groups and stakeholders.

Each KACE topic is divided into subtopics by partners of the project, after which different cooperation actions were identified in order to help partners prepare for further activities of the project. On the other hand, the modular system approach also helps Associated partners and external stakeholders to identify opportunities related to R&D projects, trainings or/and strategic actions.

KACE Topic	KACE description	Partner Responsible
Additive Manufacturing	Technologies for additive manufacturing and hybrid technologies for production systems	PK IWU
3D Design Engineering Scanning Simulation	Technologies and process optimisation for 3D design and engineering, including tools and methodologies	IDM PBN
Smart and functional materials	New materials exploration such as nano-materials as well as integrated computational materials engineering	IWU PK
Digital life	New technologies and production processes for personalisation and low volume manufacturing of health-improving products	TPL EVO
Technologies for sustainable manufacturing	Development and implementation of sustainable manufacturing systems reducing total resource and circular economy	AFIL TPL
Virtual and augmented reality for manufacturing	Factory and product planning, prototype development, acceleration and implementation	WRS IDM
Value-added virtual supply chains	Digital and virtual factory, technologies 4.0, cyber-physical systems, Internet of Things, Big Data and the e-Eloud	PTP AFIL
Smart Services	The development of value-added services to support the smart engineering and rapid prototyping, e.g. smart maintenance	PBN CAM
Robotics (components, monitoring and intelligent robots)	Use of flexible robots augments intelligence, automates certain processes and creates new forms of worker-robot interaction	KPT WRS
Mechatronics (sensor)	Synergistic combination of mechanical engineering, electronic control and systems thinking in design of products and manufacturing processes	CAM PTP
Brain Base	Anchoring best practice knowledge transfer through shared tools, methodologies and training	EVO KPT

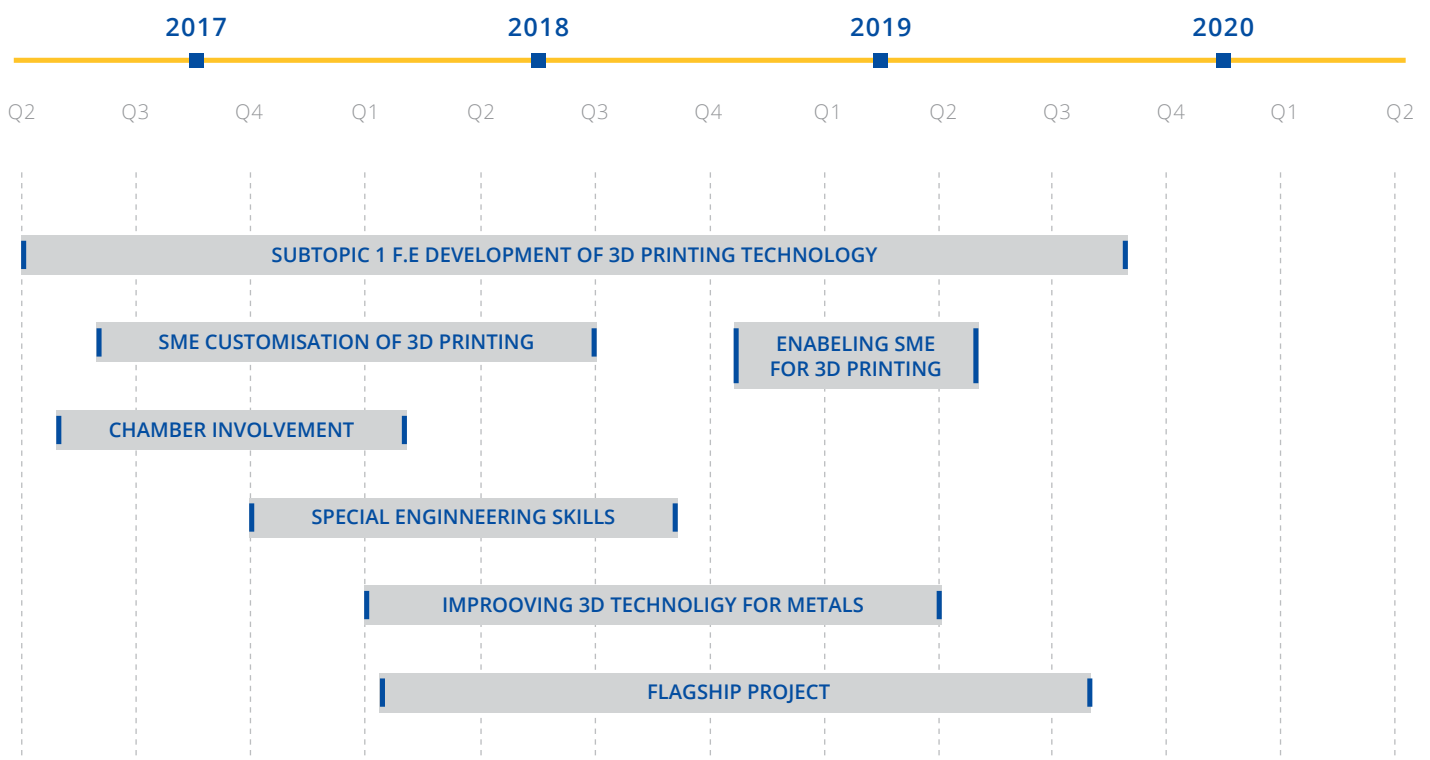


ACTION PLANS FOR ALL 11 KNOWLEDGE TOPICS

In order to effectively develop a transnational roadmap, each project partner contributed with information on EU level as well as trends and regional situation for each KACE Topic. The information gathered allowed the project partners to generate KACE Action plans reflecting partners and regions interested as well as transfer potentials. Moreover, KACE Action plans are representing the solid ground for joint activities as R&D projects which present the basis for capitalization, trainings in the format of Moodle platform and strategic actions in format of workshops with key stakeholders.

For discussing complex issues, visualisation is essential. Therefore, the KACE Action plan is in a visual format in order to keep the overview on the various actions proposed or already defined.

ADDITIVE MANUFACTURING



KACE TOPIC 2:

3D DESIGN/ ENGINEERING/ SCANNING/ SIMULATION

LEAD PARTNER: IDM

3DDESIGN FOR SMES

SUPPORT FOR 3D DESIGN FÜR 3D PRINTING

3D SIMULATION

DEVELOPING SIMULATION LABORATORIES

3D SCANNING

QUALITY ASSESSMENT PROJECTS

SUPPORTING PARTNER: PBN

IMPLEMENTATION OF 3D DESIGN CULTURE

INCREASING USAGE OF CAE TOOLS

IMPROVE QUALITY
CONTROL IN THE
MANUFACTURING SECTOR

KACE TOPIC 3:

SMART AND FUNCTIONAL MATERIALS

LEAD PARTNER: IWU

BROADER USAGE OF SMART MATERIALS

NEW TECHNOLOGICAL COMMUNICATION

SMART AND FUNCTIONAL MATERIALS
FOR MEDICAL USAGE

SMART HEALTH

POOLIN EXPERTISE IN THE FIELD
OF SMART MATERIALS

SUPPORTING PARTNER: PK

ENHANCE MARKET ABILITIES
OF SMART MATERIALS

ENABLING IMPROVED MEDICAL TREATMENT

PUSH PARADIGM SHIFT IN PRODUCTS

KACE TOPIC 4: DIGITAL LIFE

LEAD PARTNER: TPLJ

SUPPORTING PARTNER: EVO

DIGITAL LIFE /
DIGITAL HEALTH NETWORK OF HUBS

IDENTIFICATION OF MAIN CHALLENGES /
SERVICE DEVELOPMENT BY OPEN
(COLLABORATIVE)
INNOVATION PRINCIPLES

DIGITAL LIFE / DIGITAL HEALTH USER CENTER
& SMART LEARNING

STANDARDISATION AND DEV. PROTOCOLS,
IPR/BRANDING IN DIGITAL LIFE

ENABLING SMES
ACCESS TO MARKET PARTNERS,
NEW TRENDS

ENABELING SMES/
STARTUPS COMMERCIALISATION
AND ACCESS TO PROTOTYPE SERIES
MANUFACTURER

KACE TOPIC 5: TECHNOLOGIES FOR SUSTAINABLE MANUFACTURING

LEAD PARTNER: AFIL

SUPPORTING PARTNER: TPLJ

CIRCULAR
ECONOMY

RAISE AWARENESS
ON THE TOPIC OF
CIRCULAR ECONOMY
AND REGIONAL
EXCELLENCES

FOSTER THE
ESTABLISHMENT OF
NEW INTERREGIONAL
INITIATIVES
OR PARTNERSHIP

SUSTAINABLE
MATERIALS AND
PRODUCTION
TECHNOLOGIES

RAISE AWARENESS
ON THE TOPIC OF CIRCULAR
ECONOMY AND REGIONAL
EXCELLENCES

FOSTER THE
ESTABLISHMENT OF
NEW INTERREGIONAL
INITIATIVES
OR PARTNERSHIP

KACE TOPIC 6:

VIRTUAL AND AUGMENTED REALITY FOR MANUFACTURING

LEAD PARTNER: WRS

OPERATOR 4.0

WEARABLE COMPUTING
FOR SHOPFLOOR WORKERS

VIRTUAL ACCEPTANCE

PRODUCT ACCEPTANCE ON
THE BASIS OF 3D MODELS

VIRTUAL TRAINING

ESTABLISHING VIRTUAL TRAINING METHODS

SUPPORTING PARTNER: IDM

INCREASING COMPETITIVITY
FOR EUROPEAN SMES

NEW APPLICATION FIELD
OF VIRTUAL TECHNIQUES

PUBLIC AWARENESS AND
UNDERSTANDING OF VIRTUAL TRAINING

KACE TOPIC 7:

VALUE-ADDED VIRTUAL SUPPLY CHAINS

LEAD PARTNER: PTP

LEAN SUPPLY CHAIN

IMPLEMENTATION OF LEAN SUPPLY
CHAIN METHODS / SOLUTIONS

SMART SUPPLY NETWORK

CLOUD BASED/ MOBILE TECHNOLOGY/
PREDICTIVE ANALYTICS

RESPONSIVE MANUFACTURING

BIG DATA AND PREDICTIVE ANALYTICS

SUPPORTING PARTNER: AFIL

IDENTIFICATION AREAS USING
UNNECESSARY RESOURCES

ENABLING COMPANIES
TO IMPLEMENT SMART
SUPPLY NETWORK

IMPLEMENTATION OF
RESPONSIVE MANUFACTURING

KACE TOPIC 8: SMART SERVICES

LEAD PARTNER: PBN

DIGITAL TWINNING

CUSTOMIZATION OF DIGITAL TWINNING
TOWARD REGIONAL SMES

APPLICATION SERVICE BASED ON AM
AND SENSOR-TECHNOLOGIES

PROCESS MONITORING OF VARIOUS
TECHNOLOGIES

SUPPORTING PARTNER: CAM

DIGITAL SERVICES
ABOUT NOVELTIES
PLATFORM FOR SMES

KACE TOPIC 9: ROBOTICS (COMPONENTS, MACHINES AND INTELLIGENT ROBOTS)

LEAD PARTNER: KPT

INDUSTRIAL ROBOTICS FOR SMES

THESES AND ENGINEERING WORKS
IN COLLABORATION WITH INDUSTRY

DEVELOPMENT & DISSEMINATION
OF SERVICE ROBOTICS

DEVELOPING ROBOTICS LABORATORIES

POPULARISATION AND USE
OF CUSTOMER ROBOTICS

ROBOTIC CONTESTS AND HACKATHONS

SUPPORTING PARTNER: WRS

IMPLEMENTATION OF ROBOTIC SOLUTIONS IN
SMES

INCREASING PRESENCE OF ROBOTICS IN CIVIL
SERVICES

IMPROVE QUALITY OF LIFE,
HEALTH AND WELL-BEING
OF THE SOCIETY

KACE TOPIC 10: MECHATRONICS

LEAD PARTNER: CAM

MECHATRONICS FOR SMES

MECHATRONICS EVO-LABS FOR SMES

PROCESS MONITORING IN AM

PROCESS MONITORING OF VARIOUS
AM TECHNOLOGIES

SUPPORTING PARTNER: PTP

MECHATRONICS TRENDS AND NOVELTIES
PLATFORM FOR SMES

R&D MEETS NON CONVENTIONAL PROCESS
MONITORING IN AM

KACE TOPIC 11: CE BRAIN BASE

LEAD PARTNER: TPLJ

TRANSFER MANAGEMENT

KNOWLEDGE MANAGEMENT

INNOVATIONS MANAGEMENT

SUPPORTING PARTNER: EVO



TRANSNATIONAL HUB FOR CHANGE ELEMENTS COOPERATION

3DCentral LEARNING HUB FOR THE CENTRAL EUROPE COOPERATION

The perfect way to enhance knowledge on rapid Prototyping is to join online training courses. On the 3DCentral e-learning tools platform you can find courses in smart engineering and rapid prototyping: the most important technologies of the future. The content of the courses has been developed by all the partners of the consortium which established a network of regions of innovation active in rapid prototyping and smart engineering technologies. Methodological courses cover subtopics as knowledge management, transfer management, and tools. Each of Thematical courses is devoted to a specific technology: additive manufacturing, 3D design, engineering, scanning and simulation, smart and functional materials, digital life, technologies for sustainable manufacturing, virtual and augmented reality for manufacturing, value added virtual supply chains, smart services, robotics, mechatronics - and focused on practice.



MAPPING TO IDENTIFY TRANSFER AND INNOVATION PROCESSES BY PRESENTING ACTORS AND BEST PRACTICES

Core activities of the project are reflected in cooperative knowledge to boost the linkages and capacities amongst technology and innovation actors. Hypertree – an IT based tool supporting identification and mapping of transfer and innovation processes was developed. Due to its main advantage - visualisation of competences and technology fields within the regions of the project consortia – it helped to connect »islands of innovation« into a stable network of regions for innovation.



MECHATRONICS

ADDITIVE
MANUFACTURING

CE BRAINBASE

ROBOTICS

3D DESIGN/
ENGINEERING/
SCANNING

SMART
AND
FUNCTIONAL
MATERIALS

3D CENTRAL

DIGITAL LIFE

TECHNOLOGIES
FOR SUSTAINABLE
MANUFACTURING

VIRTUAL
AUGMENTED
REALITY FOR
MANUFACTURING

VALUE-ADDED
VIRTUAL SUPPLY
CHAINS

SMART
SERVICES



3DCENTRAL KNOWLEDGE AND INNOVATION TRANSFER PROCESS

A model »knowledge and innovation transfer process« was developed in order to elaborate the identified applications, to find potentials for knowledge transfer and collaboration and support the creation of partnership system. Several transfer applications have been identified or initiated at physical meetings between project partners on Tech & Inno Camps and conferences, with all together 33 applications for transnational transfer and innovation processes elaborated.

KNOWLEDGE SUPPLIER-KNOWLEDGE CREATION/MANAGEMENT PROCESS

BASIC RESEARCH

APPLIED RESEARCH

PROTOTYPING

INDUSTRIAL
REPLICATION

KNOWLEDGE
TRANSFER
PROCESS

SEARCH
FOR AVAILABLE
KNOWLEDGE

SEARCH
FOR APPLICATIONS

MARKET NEED IDENTIFICATION

KNOWLEDGE
TRANSFER
PROCESS

CONTACT
DEVELOPMENT

PROJECT
DEVELOPMENT

KNOWLEDGE RECEIVER-INNOVATION PROCESS

NEW
KNOWLEDGE
AWARENESS

SELECTION
OF NEW
KNOWLEDGE

PREPARATION
FOR INFUSION

INFUSION OF
NEW KNOWLEDGE

ANCHORING
NEW
KNOWLEDGE

— NETWORK —

OF KNOWLEDGE INNOVATION TECHNOLOGY TRANSFER SCOUTS TO FOSTER TECH AND INNO COOPERATION



Johannes Brunner,
IDM,
Automotive and internationalisation



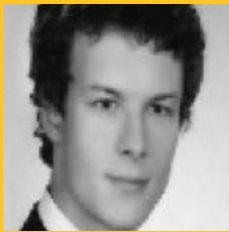
Kurt Matzlert,
University Innsbruck,
International Management



Michael Riedl,
Fraunhofer Italia,
Automation and mechatronics



Sarah Hedden,
Mind consult & Research GmbH,
Cooperation project development
expert



Nowak Dominik,
Husarion,
IOT & Rapid prototyping



Fabio Floreani,
Consorzio Intellimech,
Scouting and matching of technology
partners



Andrea Jester,
Neurosubianco Srl,
Expert on international R&D project
development



Borut Zrim,
Pomurje Technology Park,
Business modelling and market
research expert



Tomaž Zdravec,
Pomurje Technology Park,
Digital marketing in ICT,
tourism and food domain



Agnieszka Żyra,
Cracow University of Technology,
Management and Production engineering



Dominik Wszyński,
Cracow University of Technology,
Mechanical engineering



Anna Boratyńska -Sala,
Cracow University of Technology,
Production engineering and innovation
management



Ferenc Tolner,
AM-Lab,
Production and innovation
manager



Ali Abdallah,
Campus02,
Expert on rapid prototyping for
sensing and microfluidic applications
and for simulation of microfluidic
systems



Viktoria Ilger,
Evolaris,
Innovation management expert



Walter Hannes,
Evolaris,
Innovation management
and industry 4.0 expert



Roman Elsner,
Fraunhofer IWU,
Smart structures and materials



Kenny Pagel,
Fraunhofer IWU,
Leader Actuators and Sensors for
Smart Structures and Materials with
a focus on Machine Tool Building



Primoz Kunaver,
Primum d.o.o.,
Innovation management and
technology transfer expert



Gunther Riegel,
Manufature-BW e.V.,
Project development expert



Mojca Cvirn,
expert on EU projects
management,
Focus on healthcare sector



Mathias Stickel,
Innovationhouse Deutschland
GmbH, Knowledge and technology
transfer expert

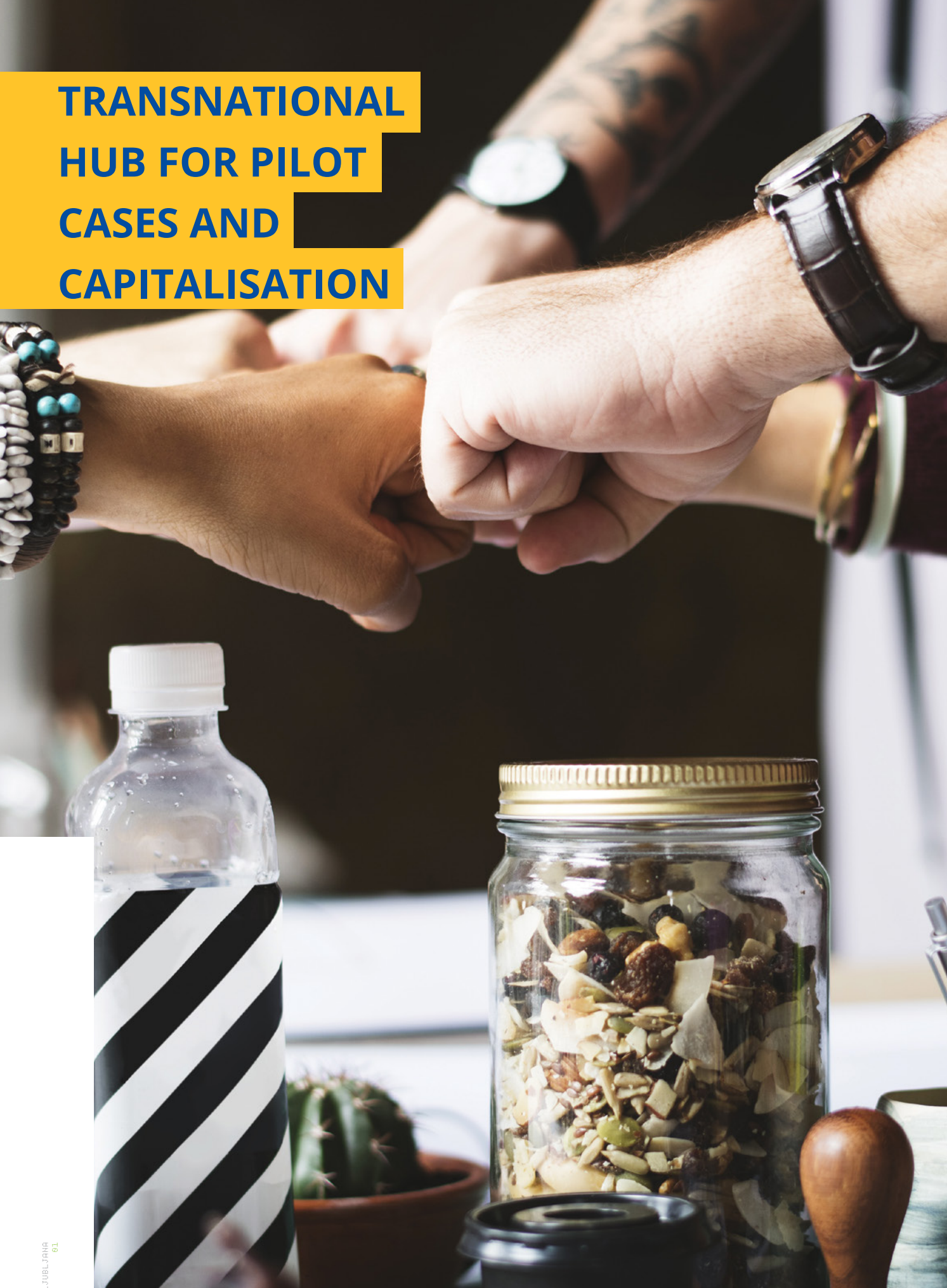


Walter Schrittwieser,
Business model innovation
and research for future trends
and change management



Monika Machowska,
Expert on business development
and international R&D project
development

TRANSNATIONAL HUB FOR PILOT CASES AND CAPITALISATION



Throughout the 3DCentral lifetime 14 Tech&Inno Camps were organised

- IDM TIC on Additive Manufacturing, 3D design / Engineering/ Scanning, Bozen, 2016
- AFIL TIC on Technologies for Sustainable Manufacturing, 3D design / Engineering/ Scanning, Milan, 2018
- CAMPUS02 TIC on Additive Manufacturing 3D Design/ Engineering/ Scanning, Mechatronics (sensors, monitoring and control), Graz, 2017
- CAMPUS02 TIC on Additive Manufacturing 3D Design/ Engineering/ Scanning, Mechatronics (sensors, monitoring and control), Graz, 2018
- EVOLARIS TIC on Virtual and Augmented Reality for Manufacturing, Smart services, Graz, 2017
- CAMPUS02 TIC on Additive Manufacturing 3D Design/ Engineering/ Scanning, Graz, 2018
- Fraunhofer IWU TIC on Smart and functional materials, Dresden, 2018
- WRS TIC on Additive Manufacturing, Virtual and Argumented Reality for Manufacturing, Smart services, Value Added virtual supply chains, Stuttgart, 2017
- TPLJ TIC on Digital Life, Ljubljana 2017
- TPLJ TIC on Digital Life, Technologies for sustainable manufacturing, Brain Base, Bled, 2017
- PTP TIC on Value Added virtual supply chains, Murska Sobota, 2017
- PBN TIC on Smart services, 3D design / Engineering/ Scanning, Sombathely, 2018
- KTP TIC on Robotics, Virtual and Augmented Reality for Manufacturing, 3D design / Engineering/ Scanning, 2017, Krakow
- PK TIC on CE Brain Base, Additive Manufacturing, Krakow, 2017

Tech & Inno Camps – a result-oriented training concept

- Connecting experts
 - Encourage knowledge sharing
 - Focused on smart engineering technologies in CE
 - Showcasing the solutions
 - Hands-on workshops
 - Developing new initiatives and projects as a result of moderated networking
 - Getting together key stakeholders on transnational level
 - Promoting best practices and lessons learnt related to 3DCentral objectives
-

3DCENTRAL DEMO PILOTS & SUCCESS STORIES



The take-aways from the TICs could be summarised: We can not talk anymore about the digital business optimisation, we should discuss digital business transformation: products and services and new business models. Thus, also financing on the level of SMEs are shifting towards investing more into innovation.

Following lessons learned, a total of 11 flagship projects and 22 Transfer and Cooperation Actions were initiated during the project duration and realized beyond the end of the project. The flagship projects and transfer and cooperation actions directly serve the overall project goal to connect islands of innovation related to smart engineering and rapid prototyping in Central Europe and are briefly described below.



SMART4REGION:NET is about fostering cooperation and transfer for future innovation in the smart engineering arena, starting with applications in the automotive innovation ecosystem and generating transnational ecosystem.

RMIH:NET is a network of Regional Manufacturing Innovation Hubs facilitating the connection and exchange of available knowledge in the Central Europe area.

CBC:NET network of smart engineering CBC projects and strategic partners.

ADDED*VALUE:NET uses a trans-regional model to improve manufacturing efficiency.

The goal of **SMART*GROWTH:NET** is to develop the common transnational support structure (Digital Innovation Hubs from CE) to create links between RIS3 stakeholders and promote stronger strategic collaboration between regions and companies.

CE Brain Base aims to sustain, enrich & enhance the outputs of 3DCentral's modular learning system and Knowledge Axis in Central Europe regions.

2020:NET is intended to facilitate and support research cooperation and transnational technology transfer with and to Central Europe and beyond.

HIGH*TECH:NET fosters research cooperation on an advanced level and in a transnational manner in Central Europe / Europe-wide / world-wide. Connecting high-tech RTD centres & companies for a joint research agenda

DIGITAL*LIFE:NET

Enabler for innovation & entrepreneurship in Healthcare Tech with a vision to support community as knowledge and reference point

The Service*Lab:NET is converting complex knowledge into smart products and services by applying the latest digital technology to create value for the manufacturing sector

A2B:NET strengthens cooperation between R&D centres and supports the creation of important solutions for additive manufacturing as well as fields of robotics and automation.



SUCCESS STORIES

amLAB

By implementing 3DCentral project Pannon Business Network gained knowledge about smart factory solutions, smart services & additive manufacturing. Based on this experience and thanks to 3DCentral network Pannon Business Network managed to open his own spin-off tech transfer company with the name amLAB specialised for the application and presentation of most recent manufacturing technologies. The team consists of multidisciplinary professionals with economic, engineering, technological and medical background

All success stories are available

<https://www.youtube.com/watch?v=n6RexN1PgZo&>



Digital Life Ecosystem – a Dynamic Community

By implementing 3DCentral project Technology Park Ljubljana successfully connected stakeholders in order to boost advantage from interdisciplinary innovation and cross-sector alliances in digital healthcare. The digital healthcare ecosystem has been elevated into a dynamic community promoting positive aspects of digitalisation in healthcare and provide support services to health-tech-based solution providers, including startups. The ecosystem has already transcended into a FabLab TPLJ. In numbers: follow-up projects with funds granted, connected to transnational alliances, +40 SMEs supported, 4 showcase and mobility events, +375 attendees.

VR Expo

The VR Expo demonstrates Virtual Reality applications and use cases for engineering and business solutions. The exhibition addresses professional visitors as well as young talents. Solution providers from 40 technology companies as well as research institutes demonstrate actual VR and AR applications and solutions. The visitors can test large VR installations and VR Labs, Tech Talks and networking events offer opportunities to meet the experts. The VR Expo is designed as an annual event and is part of the action plan of the KACE VAVAR for manufacturing.

In numbers: 15 stakeholders, 41 exhibitors, more than 700 visitors attended the VR Expo at 2 days, several mobility actions with partners AFIL, KTP, TPLJ,...

