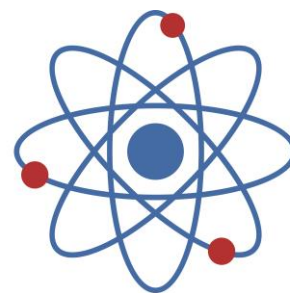


PROJECT NEWSLETTER

ISSUE 1 / YEAR 2019



BRACKET

2018-1-HR01-KA202-047493

Boosting a novel and innovative tRAining approaCh of Key Enabling Technologies

BRACKET INFO

The BRACKET project is a study of the representation of new technologies (nanotechnology, biotechnology and advanced materials) in Vocational Education and Training (VET). In the scope of the project, the situation analysis in the project partner countries will be carried out, as well as the preparation and implementation of a new training program in the field of key advanced technologies and a joint platform for cooperation containing all educational content developed through the project.

November 1, 2018 - April 30, 2021

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KICK-OFF MEETING

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BRACKET
 Building a novel and innovative training approach of key enabling technologies


KICKOFF MEETING
 December 12 - 13, 2018


Coordinator
IRMO
 Institute for Research and Development in Mechanical Engineering

Partners
     



The First Transnational Project Meeting was held in Zagreb, Croatia, on 12th- 13th December 2018. The representatives of all project partners were present and they presented their respective organisations. The objective of the project and the different aspects that compile the project were presented: intellectual outputs, activities, transnational meetings and multiplier events. Also, the activities related to dissemination and quality assurance were discussed, and the tasks related to the first intellectual output were thoroughly studied and the deadlines for its deliverables agreed.







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MAIN INTELLECTUAL OUTPUTS

RESULTS OF IOs → DELIVERABLES

D1. Key study based on current knowledge, skills and qualifications needs in VET regarding KETs	M3 (January 19)	IRMO
D2.1. Definition of learning outcomes	M10 (August 19)	CETEM
D2.2. Training modules and its specifications	M12 (October 19)	CETEM
D2.3. Definition of the assessment methodology	M13 (November 19)	INNORENEW
D2.4. Validation of Joint Curriculum Report	M15 (January 20)	BEFO
D3.1. Training of trainers materials	M16 (February 20)	TEI/Th
D3.2. Training content	M23 (September 20)	TEI/Th
D3.3. Final tool for knowledge verification	M25 (November 20)	LURS
D4.1. MOOC platform	M25 (November 20)	DANMAR
D4.2. Training course material uploaded in the MOOC platform	M26 (December 20)	DANMAR
D4.3. Guideline on how to use e-learning platform	M27 (January 21)	DANMAR
D4.4. Results of the Real verification and improvements	M29 (March 20)	LURS

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RESULTS

- Development of a flexible learning pathway in line with the needs of VET learners and other stakeholders related to Key Enabling Technologies.
- An online and open course of Key Enabling Technologies for VET students, whose direct impact will be the innovation and excellence of entirely new industries and the transformation of the existing industrial base.

RESULTS







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Dissemination – evidences for reporting

- For the National events:
 - Description of the event (including place, date)
 - Participant lists – participants outside of your own organisation appreciated
 - Photos
 - Agenda
 - Evaluation
- Keep info about website visitors
- Make printscreens of all news you are posting on your website
- Photos/printscreens of other materials as articles...
- Keep materials / photos from other events
- All materials as leaflets, brochures, newsletters etc.

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CETEM'S ROL IN QUALITY

Responsibilities of the Quality Manager in BRACKET Project (DoW):

- 1.- Monitoring progress (results) of actions (at activity level)
- 2.- Monitoring resources (working days) allocated to actions
- 3.- Reporting on progress results (every 3 months)
- 4.- Development of a "Quality Assurance" Plan
- 5.- Handling risks (identification, planning contingency actions)
- 6.- Monitoring some "Indicators of Achievement" (IA)
- 7.- Elaboration of satisfaction questionnaires (IO, manag., ME)
- 8.- Coordination with Project Coordinator (milestone report)

IRMO      

WHAT ARE KEY ENBLING TECHNOLOGIES?

Key Enabling Technologies (hereafter “KETs”) are the technologies that enable process, goods and service innovation throughout the economy. KETs currently include Micro-/Nanoelectronics, Nanotechnology, Photonics, Advanced Materials, Industrial Biotechnology and Advanced Materials. All these technologies are knowledge-intensive and associated with high R&D intensity, rapid innovation cycles, high capital expenditure and highly skilled employment.

KETs have the potential for application in virtually all sectors and industries, including aeronautics, automotive, engineering, chemicals, textiles, space, construction, healthcare and agriculture. KETs are the “technology building blocks” behind a wide range of innovations, such as 3D printers, LED lighting, advanced robotics, bio-based products, smart phones, nanodrugs, smart textiles, etc.

KETs

KETs have become a priority in European industry policies in order to accelerate the exploitation processes of these technologies within the European Union (EU) and foster growth in the industrial and working fields. Thus, the Commission is working towards several initiatives as part of the **strategy** to increase the KETs deployment activities. The [interactive map](#) created by the European Commission shows that European countries and its technological centres helping SMEs innovate on KETs.



Concretely, BRACKET project encompasses three KETs detailed below:

- Industrial Biotechnology: including enzymes, micro-organisms, amino acids and fermentation processes, excluding biotechnology for healthcare and agriculture. Industrial biotechnology is used for products such as bio-fuels, detergents, materials including plastics, rubber, chemicals, etc.
- Nanotechnology: dealing with methods to manufacture structures on a molecular or atomic scale. Examples of applications include nanomedicine for improved healthcare, as well as carbon nanotubes for lighter materials and for higher conductivity and improved energy management.
- Advanced materials: covering a broad area of innovation in materials such as lightweight materials, low-carbon material energy solutions and other, including polymers, macromolecular compounds, rubber, metals, glass, ceramics, etc.

“nanotechnology, biotechnology and advanced materials”

WHAT HAS BEEN DONE SO FAR

Desk-research analysis for demanded Key Enabling Technologies and their implementation in industry and VET education. The report will include National Policy Overview - the inclusion of KET in policy documents on national level: national strategies, sectoral strategies, education and science policies, operational programmes, funding possibilities.

Data collection by means of questionnaires aims to analyze the incoming trends regarding KETs and competences necessary to foster its implementation in work. Findings will be input for a project activity of developing a new online course available for VET students who are interested in developing and fostering new skills on KET.

Based on the results obtained by each partner research, IRMO will prepare the first draft of the “Key Study on Vocational Education and Training towards Key Enabling Technologies”. This study will provide a complete analysis of the current situation about how the concept of KETs, concretely focused in nanotechnology, biotechnology and advanced materials, is being implemented within VET. This activity has the objective of identifying the current knowledge in order to define the skills and competences needed by VET students (initial VET which are willing to work in these sectors and continued VET, already involved in technological industries).

ACTIVITIES IN THE NEXT PERIOD

- 2nd Transnational Project Meeting will be held in Yecla, Spain, on 6-7 May, 2019
- Review of achieved project results O1 (Study and Questionnaires)
- Development of Output 2



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