



INTERNATIONAL JOINT POST-GRADUATION IN INDUSTRY 4.0 DIGITAL INNOVATION AND TRANSFORMATION

Universities of the Future



UNIVERSITIES OF THE FUTURE

OBJECTIVES

The International Joint Post-Graduation in Industry 4.0 Digital Innovation and transformation aims to address the existing (and potentially growing) gap between industry and higher education offer by developing new, innovative and multidisciplinary approaches to teaching and learning for upskilling and reskilling of the current workforce, stimulating an entrepreneurial mind-set and digital skills, while facilitating the exchange, flow and co-creation of knowledge.

This innovative course offers the possibility for participants to learn in an international environment and in a collaborative way, inspired by real scenarios based on challenges and problems faced by industry.

ORGANIZATION

This initiative is a result of the collaborative efforts of the Universities for the Future consortium members. The delivery of this international course is a joint responsibility of P.PORTO, Aalto University and Warsaw University of Technology.

P.PORTO



**Warsaw University
of Technology**



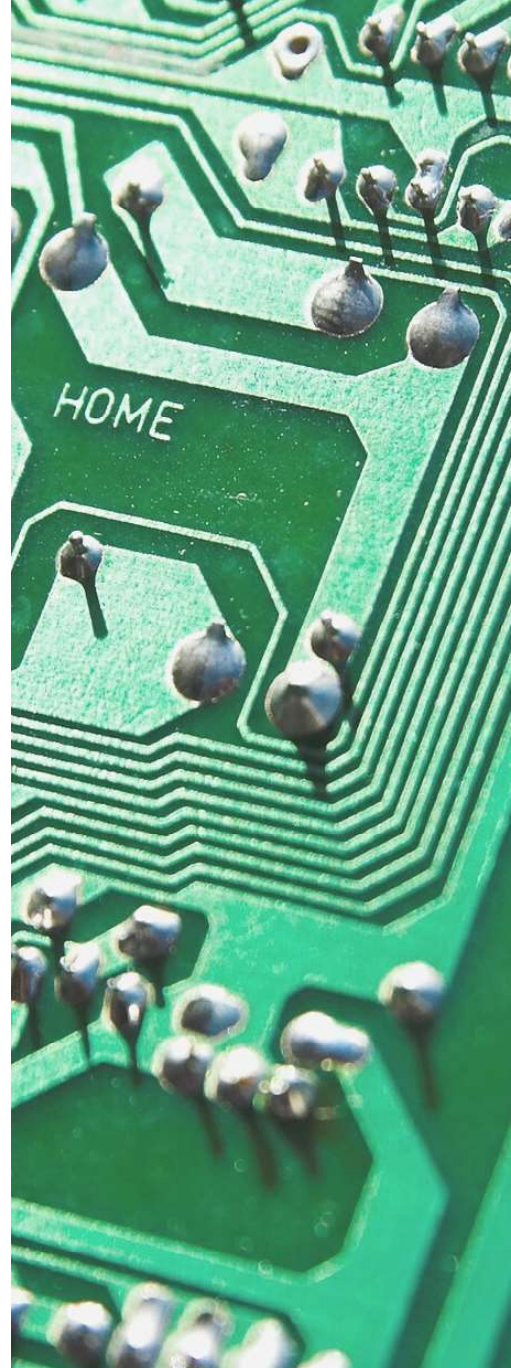
STRUCTURE

Corresponding to 30 ECTS, the Post-Graduation in Industry 4.0 Digital Innovation and Transformation will have the full duration of 720 hours and includes six modules, covered in the span of 21 weeks.

This course is divided into 200 contact hours (online synchronized lessons of 2 hours duration, complemented with some on-site activities and two intensive working weeks in an international environment) and 520 hours of participants autonomous work.

The two working weeks will take place in Poland and Finland, where all the participants from the three countries will be working together to solve hands-on projects (**see organizational aspects for further information**).

The Post-Graduation is supported by a Virtual Factory, based on real challenges and problems from industry (hands-on projects), with joint international students working together as a team using the collaborative platform, streaming, etc.



	Modules	Contact hours	Autonomous Work	ECTS
1	Project	56	112	7
2	Soft and T-skill	48	120	7
3	Shifting to I4.0: Change Management and IT Driven	24	72	4
4	Co-creation, New Business Models and Business Analytics	24	72	4
5	Intelligent IS and Decision Support Systems	24	72	4
6	Sustainable Enablers	24	72	4
	TOTAL	200	520	30

CALENDAR

Starting on 21st of September 2020, the Post-Graduation will last for 21 weeks, ending by the end of February 2021 (stopping during the Christmas holidays and National holidays).

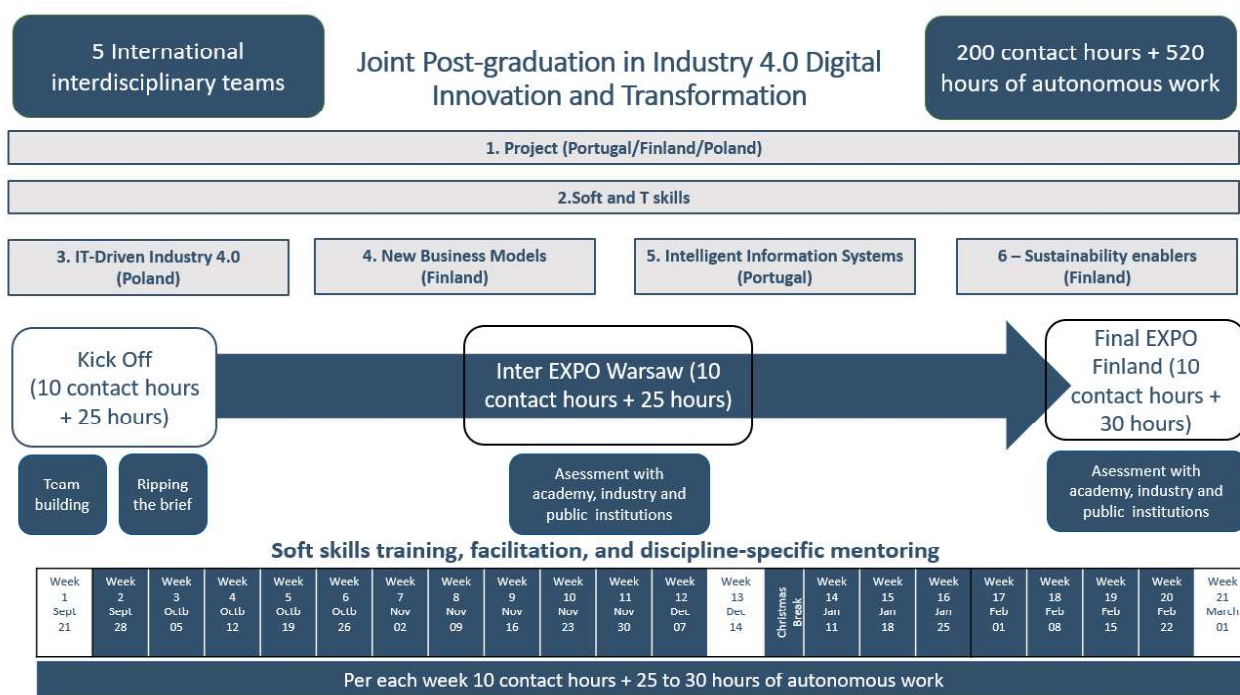
During the week 13 and 21, all the participants will be together **in a work intensive week in Warsaw and Helsinki** respectively (see organizational aspects for further information). During five days the group will be working together in face-to-face practical oriented sessions, complemented by autonomous work. This work weeks will take place at:

Warsaw, 14 to 18 December 2020 | Helsinki, 01 to 05 March 2021.

In all the other weeks, the participants will be engaged in online classes (2 hours duration each) enriched by autonomous work. The regular classes will be offered online and synchronized by P.Porto, Aalto University and Polytechnic University of Warsaw, with mentoring adjusted to each module. The post-graduation uses a digital platform (Virtual Factory) to support the online classes. Participants will have some on site activities as well.

All the classes will be delivered in the following schedule.

- 8:30 to 10:30 am Monday-Friday (Portugal)
- 9:30 to 11:30 am Monday-Friday (Poland)
- 10:30 to 12:30 am Monday-Friday (Finland)



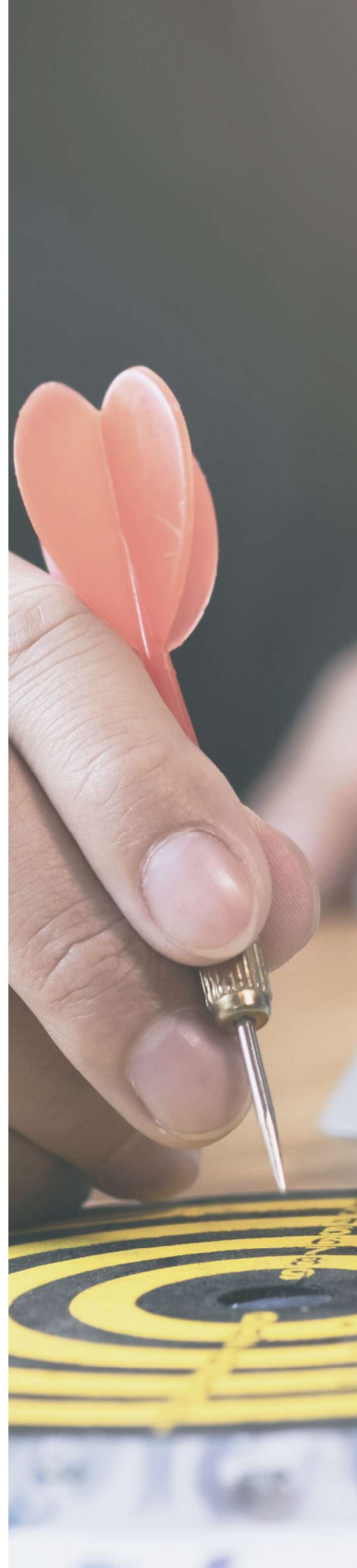
TARGET GROUPS

The Post-Graduation targets the current industry workforce interested in reskilling and upskilling their competences and putting into practice projects to accelerate their company's digital innovation and transformation processes.

Participants will be selected upon the following criteria:

- Bachelor's degree (preferably in Engineering or Management or in any related study areas)
- At least two years of professional experience, assuming currently a decision taking job position
- Involved, conducting or expecting to be in any digitization process
- Fluent in English
- Motivated and willing to invest his/her time in an innovative learning process

The selection committee will guarantee the gender balance between the participants. In case of need, candidates might be invited for a selection interview, to review his/her background and willingness to participate in the Post-Graduation. The participation in this pioneering programme is limited to 30 participants from Portugal, Poland and Finland (10 participants per each country).



HOW TO APPLY

If you feel motivated to take part of this adventure, please consult the application requirements in each university.



Aalto University

Aalto University, Finland

Applicants are invited to send a full CV and a motivation letter in English before 30th June to: uof@aalto.fi.

Warsaw University of Technology

Warsaw University of Technology, Poland

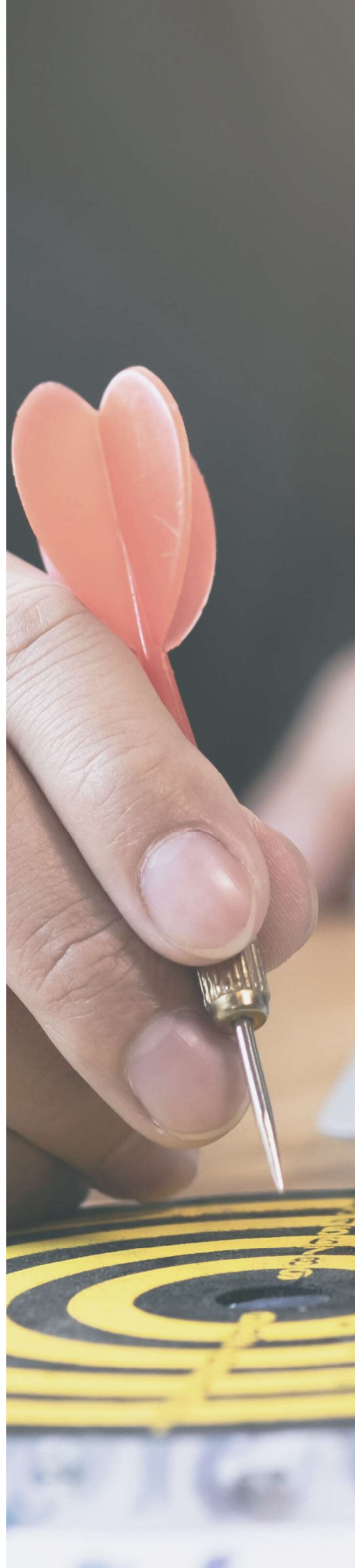
Applicants are invited to send a full CV and a motivation letter in English before 30th June to: wdf@pw.edu.pl.



P.Porto, Portugal

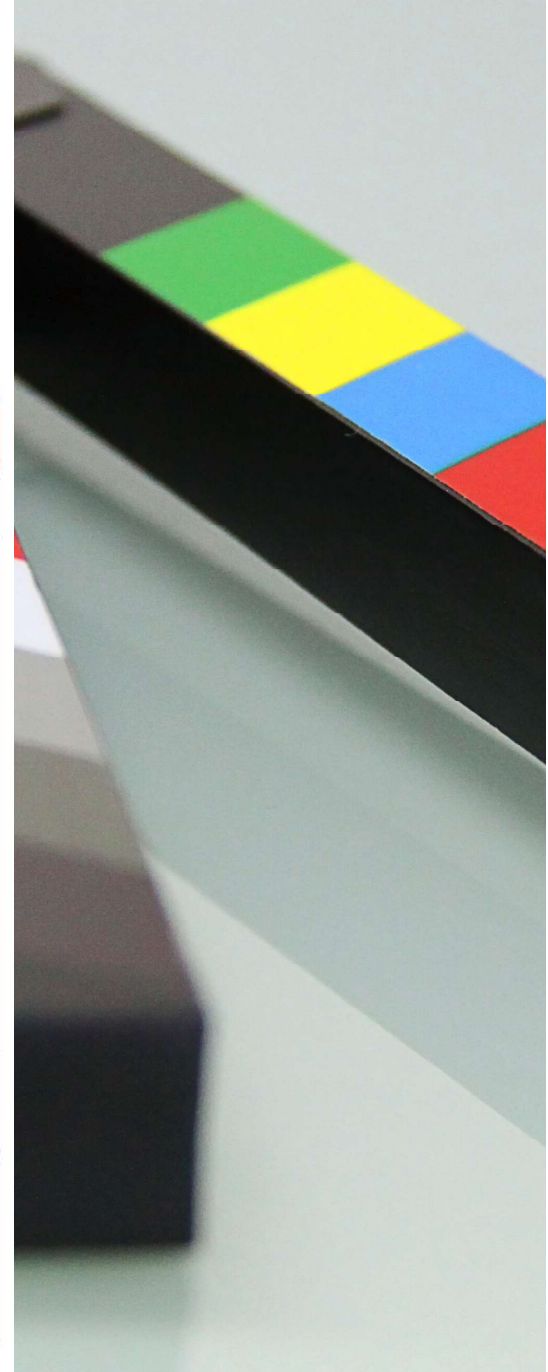
Applicants were already selected following the provisions of the public announcement available at <https://www.portoglobalhub.ipp.pt/>.

For any inquiry please contact: portodesignfactory@sc.ipp.pt.

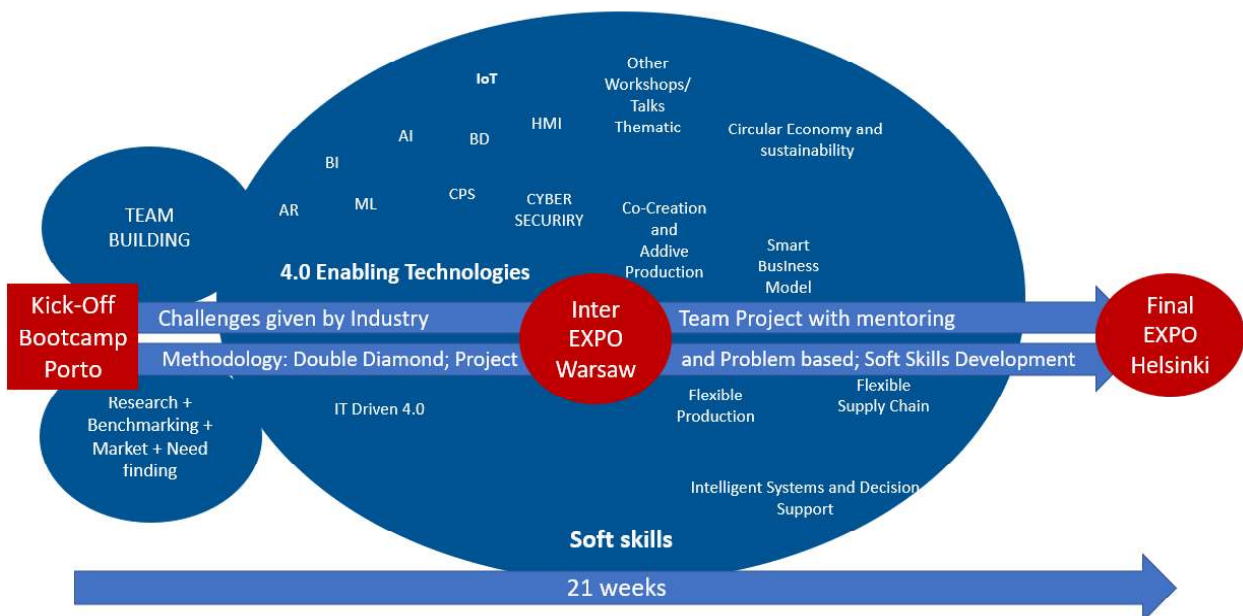


TOPICS

Modules and Topics		
M1 Project	M2 Soft and T-skill	M3 IT Driven Industry 4.0
Challenges based project (given by industry) using adapted Double Diamond Methodology	Introduction: Neuroscience and Human Development in VUCA Environments (4.0) Self: Self Awareness and Self Knowledge The other: Interpersonal Relationship The team: Productivity and Positivity The organization: Tune, Sync and Synergy Society: Sustainability, Ethics and Moral Development	Introduction to I4.0 Cyber Physical Systems IOT Cyber Security
M4 Co-creation, New Business Models and business analytics	M5 Intelligent Information Systems and decision support	M6 Sustainable enablers
Methods and Tools Cases Studies Data analytics and machine learning methods Projects	Decision Support Enterprise architecture – EA Enterprise Applications Enterprise Modelling Systems interoperability	Physical internet Additive Production Circular economy



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ORGANIZATIONAL ASPECTS

A confirmation email will be sent individually to all the selected participants no later than 4th September, 2020. By that time, participants will be asked to provide the following elements (scanned versions):

- copy of ID card or passport
- letter of commitment to secure your involvement in the three joint working weeks.

The participation in the International Joint Post-Graduation **is free of charge!** However, the participation in this initiative might include some costs related to the participation in the joint working weeks abroad (each participant might have to travel twice for two periods of one week each).

The costs of travelling and subsistence that the participants will have to incur will be compensated with the attribution of a grant of 360€ for costs of flight and of 275€ for costs of subsistence and accommodation. These individual grant is attributed following the rules of the Erasmus+ Programme.

DISCLAIMER:

The realization of the two international working weeks in the format proposed will be confirmed until the end of October 2020. If the conditions do not allow these joint working moments, these two weeks will be transformed into online shynchronized moments.



Erasmus+

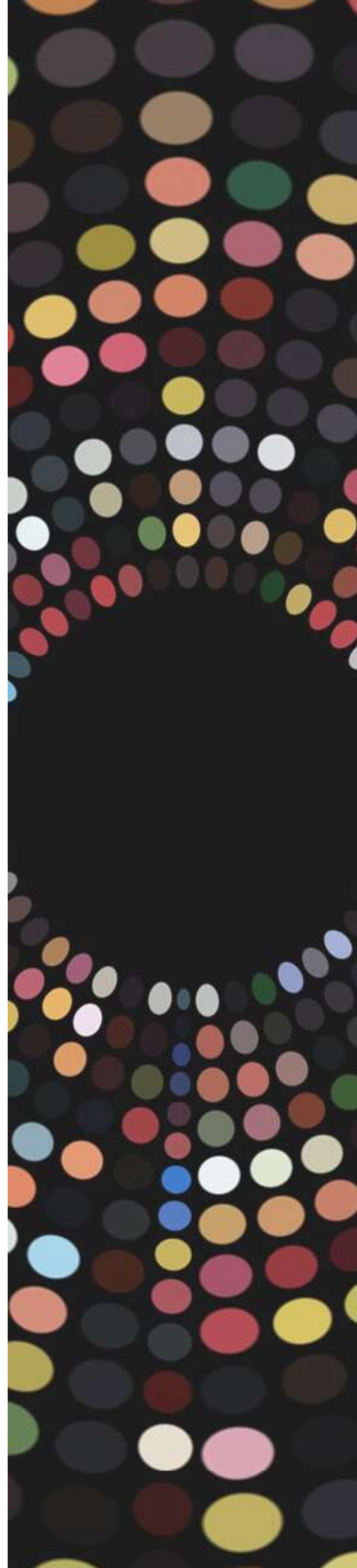


THE PROJECT

Universities of the Future (UoF) is a Knowledge Alliance Project funded with support from the European Commission through the Erasmus+ programme. UoF is aiming to create a paradigmatic change in the way higher education institutions, industry, and public bodies collaborate around education for Industry 4.0.

The project is a 3-years duration initiative (started in 2018) aimed to address the educational needs arising from Industry 4.0 in Europe by creating innovative educational offers and resources. During the project implementation, a group of 13 institutions from four countries is promoting research in the core topics and organizing collaborative events fostering the creation of a community of practice for the development, implementation, and dissemination of the outcomes.

The consortium produces three research-based reports with a focus on education for Industry 4.0: state-of-the-art, best practices, and a blueprint for the Universities of the Future. Furthermore, the consortium is creating a Virtual Teaching and Learning Factory for Industry 4.0. The Factory provides a virtual platform for supporting the piloting of new collaborative teaching and learning activities around Industry 4.0, that are created as a part of the project.



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