

## Industry 4.0 Context and challenges

- The interdisciplinarity of the competences and skills needed to support digital transformation and physical assets connectivity in industry
- New trends in industrial maintenance, production and quality engineering powered by industry 4.0 concepts
- Gaps between transformation challenges and existing Higher Education Institutions' training programmes



## Project Objectives

- Strengthen the skills and training expertise of both Tunisian and Moroccan universities in Maintenance, Production and Quality (MPQ 4.0) to boost the transition to industry 4.0 era.
- Innovate by developing new technopedagogical content and delivery methodologies to ensure smooth and pragmatic transition to industry 4.0 technologies and practices.
- Enable networking and build solid and constructive collaboration between EU and North African partners.

Gap analysis between:

- Industry requirements in MPQ4.0
- Higher education MPQ4.0 skills training programmes

### Develop:

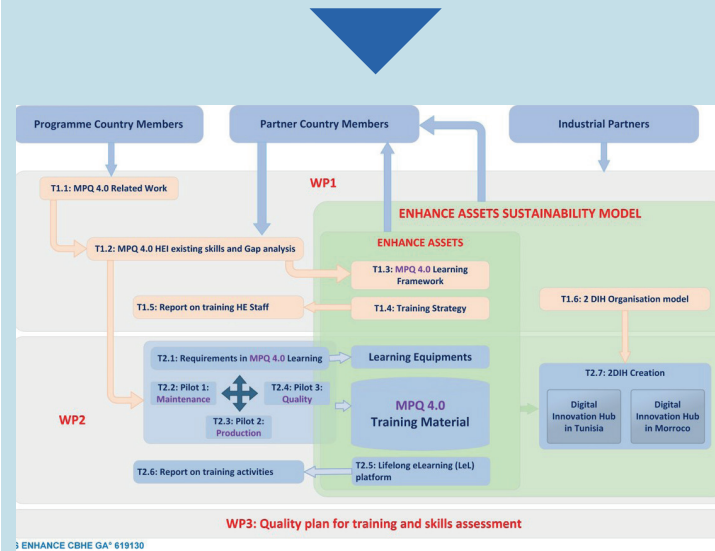
- Innovative learning framework
- Innovative training materials
- Learning by doing methodologies

### Create:

- Lifelong eLearning (LeL) Platform for practitioners
- Two Digital Innovation Hubs (DIHs) for MPQ4.0 in each PC



The CBHE ENHANCE project is designed towards the creation of effective MPQ 4.0 training materials and related equipment for Partner Country institutions in Tunisia and Morocco.



## ENHANCE MPQ 4.0 ASSETS

- > Learning framework
- > Training strategy
- > Learning equipment
- > Training materials
- > Lifelong eLearning platform



## ASSETS SUSTAINABILITY MODEL

- > MPQ 4.0 Digital Innovation Hub in Tunisia
- > MPQ 4.0 Digital Innovation Hub in Morocco

## IMPACT ON TUNISIAN AND MOROCCAN UNIVERSITIES

- New innovative teaching and learning approaches sparking thinking and creativity.
- Advanced capacities in Tunisian and Moroccan HEI to support companies in integrating new MPQ 4.0 concepts and technologies.
- Increase the visibility of research laboratories and research centers through the publication of new articles on new and emergent technologies.
- New learning framework connected with up-to-date industrial needs.

## IMPACT ON TUNISIAN AND MOROCCAN INDUSTRY

- Strengthen the collaboration between Partner Countries industries and universities.
- Alignment with the new Tunisian and Moroccan Digital Transformation strategies for the development of PC industry.
- Development of new skills related to MPQ4.0 topics.
- Economic improvement based on the integration of new MPQ4.0 skills in industry.
- The creation of two DIHs to upscale the university-industry collaboration channels and provide training services to support the smooth adoption of industry 4.0 concepts.

## Project consortium



- Université Lumière Lyon 2 – Lyon, France – Coordinator
- Bremer Institut für Produktion und Logistik – Bremen, Germany
- NOVA University Lisbon – Lisbon, Portugal
- International Institute of Technology – Sfax, Tunisia
- University of Carthage – Tunis, Tunisia
- Ecole centrale of Casablanca – Casablanca, Morocco
- University Ibn Tofail – Kenitra, Morocco



## Associate Industrial partners



- SOPAL, Sfax, Tunisia
- Maghreb Steel, Casablanca, Morocco
- Tunisian Union for Commerce, Industry and Handicrafts (UTICA), Tunisia
- Engineering Polymers Services, Tunisia



**Enhance**  
*Maintenance - Production - Quality*



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<http://eplus-enhance.eu/>



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- Action: Capacity Building in the field of Higher Education
- Action Type: Joint Project
- Project duration: 01/2021 – 01/2024
- Global Budget: 779 667€



**strENgthening skills and  
training expertise for TunisiAN  
and MorroCan transition to  
industry 4.0 Era / ENHANCE**

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