



HI • EURECA • PRO
HERITAGE INNOVATION

HI-EURECA-PRO

Industrial, Cultural and Mining Heritage in the Age of
Digitalisation

Heritage Innovation in the EURECA-PRO Alliance · Horizon Europe

Szymon Ogonowski
HI-EURECA-PRO Hackaton on Industrial Heritage
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Our **Mission**

The **HI-EURECA-PRO** project, funded by the European Union, builds on the potential of heritage-based innovation to drive sustainable economic and social development in rural and urban areas of Poland, Greece and Romania.

Leveraging the strengths of the **EURECA-PRO Alliance**, the project unites eight universities across Europe to develop innovative tools and measurable methods for material sustainability — showcasing industrial, cultural and mining heritage innovations.

It bridges academia with industry and governance to achieve research excellence and a greener, more digitally adept future.



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AT A GLANCE

Horizon Europe

Coordinated by the Technical University of Crete

8 universities • 7 countries

3 heritage demonstration sites

Grant Agreement 101136779



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The **HI-EURECA-PRO** consortium

8

Partner universities

7

European countries

3

Heritage demo sites

Technical University of Crete

Greece — Coordinator

University of Petroșani

Romania

TU Bergakademie Freiberg

Germany

Universidad de León

Spain

Silesian University of Technology

Poland

Montanuniversität Leoben

Austria

Hochschule Mittweida

Germany

Hasselt University

Belgium



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Our **Goals**

1

Build a regional innovation ecosystem

Engage the full quintuple helix of heritage innovation: environmental, social, economic, political and academic.

2

Strengthen HEI–heritage collaboration

Open new roads between universities and the heritage sector to test sustainable materials, tools and methods.

3

Advance the green & digital transition

Develop educational tools and methods that support knowledge creation and transfer in the green and digital era.

4

Foster new research careers

Build research careers in heritage sustainability with hands-on industry, society and government experience.

5

Make upskilled knowledge accessible

Introduce new and upskilled knowledge available to all heritage stakeholders.



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Implementation: **Three Demonstrators**

Each widening country leads a heritage demo site, supported by Alliance partners from Germany, Belgium, Austria and Spain.

ROMANIA

Mining Heritage

Location

Jiu Valley

Flagship output

Digital Mining Museum

GREECE

Cultural Heritage

Location

Crete

Flagship output

Empowering Capacity & Skills

POLAND

Industrial Heritage

Location

Gliwice

Flagship output

Digital Transformation Hub



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Romania — **Mining Heritage**

Jiu Valley · a landscape shaped by Dacian, Roman, Austro-Hungarian and modern Romanian mining heritage, transitioning towards a sustainable future.

- 1 Promote research excellence and innovation — transition, circularity and sustainability
- 2 Build new skills and transfer knowledge through summer schools and workshops
- 3 Support sustainable development while preserving mining heritage in the Jiu Valley
- 4 Create a Digital Mining Museum with the Mining Museum and Planeta Petrila Association
- 5 Strengthen links with the local innovation ecosystem
- 6 Facilitate knowledge transfer and intellectual property management



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Greece — **Cultural Heritage**

Crete · a cultural mosaic of Minoan, Greek, Roman, Byzantine, Venetian and Ottoman legacies inspiring modern innovation.

- 1** Advance research excellence by leveraging Greece's academic and cultural heritage through innovation and international collaboration
- 2** Foster interdisciplinary upskilling and empower young talents for the green transition
- 3** Develop, test and integrate sustainable materials, green energy practices and smart tools for cultural heritage preservation
- 4** Accelerate the green and digital transformation through co-creation across research, policy, cultural sectors and society



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Poland — **Industrial Heritage**

Gliwice · a historic hub of engineering, shaped by Piast, Prussian, Austro-Hungarian and Polish traditions, now blending heritage with cutting-edge research.

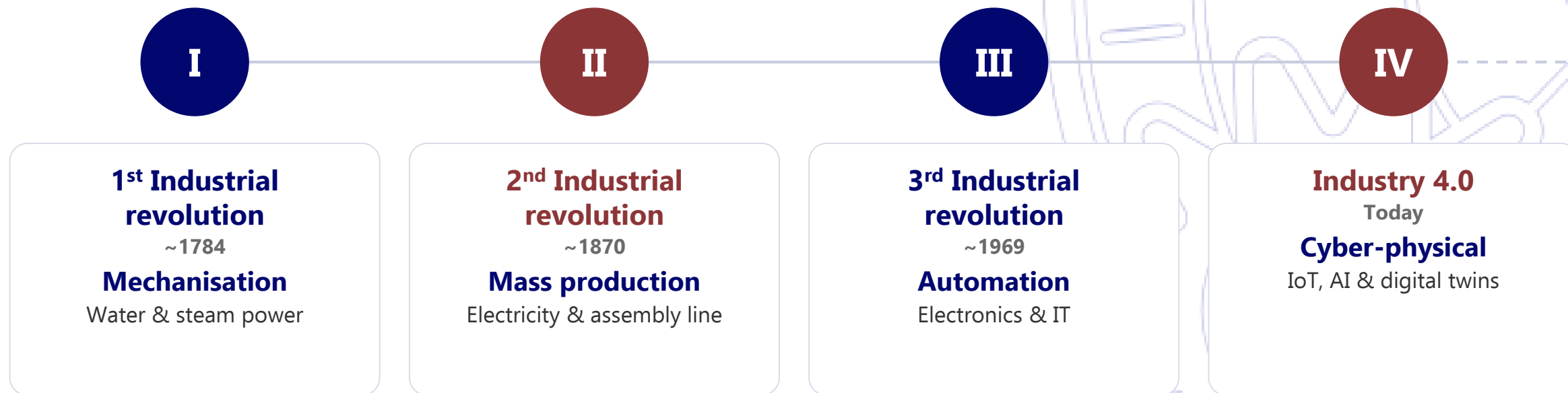
- 1 Achieve research excellence — leverage Poland's academic and industrial heritage through innovation and local collaboration
- 2 Support sustainable industrial transformation — green and digital, guided by Responsible Consumption & Production
- 3 Enhance global competitiveness of researchers via training, industrial internships and workshops
- 4 Foster interdisciplinary collaboration between science, industry and policy actors
- 5 Develop a Digital Transformation Hub — a central platform for research, training and digitalisation
- 6 Engage local communities with upskilling courses and public seminars





Industrial Heritage: **The Industrial Revolutions**

From mechanisation to cyber-physical systems — the journey that defines today's industrial heritage.





Digital Transformation & Digital Competences

Industrial heritage today means navigating a continuous chain: **Industrial Revolutions** → **Digital Transformation** → **Digital Competences**.

Effects of transformation

Weighing the positive and negative impacts of rapid digital change on industry and society.

Impact on stakeholders

Understanding how different groups, e.g. workers, learners, industry, are affected.

Education & outreach

Meeting the challenge of educating and popularising digital skills for all generations.

EU guidelines (DigComp)

Aligning with the European Digital Competence Framework for citizens.





Our Response in the Project **(1/2)**

How the Industrial Heritage Demo turns digital transformation into action:

- | | |
|--|---|
| ✓ Seminars on digital transformation | Good-practice seminars for researchers and society, including education and outreach. |
| ✓ Establishing the DTH network | A science–business–government–society network on digital transformation. |
| ✓ Pilot visits & workshops | Hands-on DTH sessions for students, pupils and industry, trainings, hackatons. |
| ✓ International internships | Student internship programmes at partner institutions abroad. |
| ✓ IP & technology-transfer training | Workshops on IP protection, good CTT practice, proposal writing and innovation methods. |





Our Response in the Project **(2/2)**

Building future skills and lasting research structures:

- | | |
|---|--|
| ✓ Future-skills panels | Seminars and discussion panels on the competences and skills of the future. |
| ✓ Curriculum guidelines | Recommendations to adapt study programmes towards future competences. |
| ✓ Cooperation with the Labour Office | Pilot upskilling courses for people negatively affected by digital transformation at work. |
| ✓ Joint research structures | Building shared research structures across the partner universities. |

Teachers, pupils, future students — and simply the residents of Gliwice and the region — are warmly invited to take part.





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Thank you for your attention

Heritage Innovation in the EURECA-PRO Alliance

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