

## Predictive Maintenance Education & Training System

*An alliance for boosting the European Innovation in Predictive Maintenance through entrepreneurial cooperation, education, and training*

### About Predictive Maintenance (PM)

Predictive Maintenance (PM) is a critical element for the optimization of sources used in the economy and fundamental infrastructure systems. PM's function is to anticipate and prevent the breakdown or catastrophic failure of critical infrastructure (via digital approaches) and generate a multitude of positive economic and social benefits in terms of human safety, resilience of infrastructure, and energy and resource savings. The need for comprehensive Predictive Maintenance Systems (PMS) and digital infrastructure is critical, particularly regarding transportation infrastructure and equipment where issues of human safety and preservation of resources is of the highest importance.

The critical role of PM (as an emerging work field) and the blooming prospects of its market, deems crucial the need to develop comprehensive training systems specialised on Predictive Maintenance to properly prepare the next generation of human capital that can effectively apply PMS across a wide variety of industrial/manufacturing infrastructure and equipment. The need for effective and widely used, education, training, testing, and certifying methodologies, is a key component in assuring the societal, environmental, and economic benefits that Predictive Maintenance can offer to the industrial sectors in Europe.

### Partners



### PreMETS objectives

PreMETS aims to introduce an alliance for boosting the European Innovation in Predictive Maintenance through entrepreneurial cooperation, education, and training for the development of a coherent digital platform that covers all aspects of the PM training process. The **general objectives of the PreMETS** project are:

- Fostering new, innovative and multidisciplinary approaches to teaching and learning in the field of PM by introducing an innovatively co-created PM curriculum with micro-credential certification and introducing a bespoke digital learning & co-creation platform for upskilling the current and future PM workforce.
- Helping PM companies and related service provider SMEs achieve corporate social responsibility by directly impacting on reducing environmental damage, diminishing social and societal risks and boosting their revenues.
- Promote initiative and entrepreneurial attitudes, mindsets and skills to adults, vocational and higher education learners with regards to achieving resilient PM solutions.
- Facilitating the flow and co-creation of knowledge between higher education, VET actors, research, the public sector and the business sector in the field of PM in order to jointly contribute to upskilling and regional economic growth by developing capacities and clusters in the field of PM.
- Building and supporting effective and efficient PM higher education, vocational education and training systems by delivering via a joint digital platform, which enables connectivity, accessibility and inclusivity to high quality education for all.

# PreMETS partners

## ACCELIGENCE Ltd

ACCELIGENCE Ltd has been established in 2019 in Nicosia, Cyprus. ACCELIGENCE focuses on the design, development and system integration - verification of custom-made robotic solutions, with a particular focus on Unmanned Aerial Vehicles (UAVs). ACCELIGENCE is building from scratch its own UAV prototypes, of varying technical requirements tailored to different applications and sectors' needs.



ACCELIGENCE

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## Atlantis Engineering

Atlantis Engineering is a Greek ICT SME with products that support daily production activities in different factories with simple and advanced manufacturing systems, customized maintenance consulting and training, and asset life cycle optimization.



ATLANTIS  
ENGINEERING

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## Centre for Research and Technology Hellas (CERTH) /Hellenic Institute of Transport (HIT)

The Hellenic Institute of Transport (HIT) is part of the Centre for Research and Technology Hellas (CERTH). CERTH/HIT is a pioneering, internationally recognized and renowned research institution in Greece and Europe. Since its establishment (in 2000) until today it offers basic and applied research, as well as high quality technical services in the field of transport. The activities of HIT focus in particular on issues relating to the organization, operation, planning and development of infrastructure, the standardization, economic analysis, management, vehicle technology and the impact assessment of land, maritime, air, and multimodal transport services.



CERTH  
CENTRE FOR  
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HELLAS



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## Deep Blue deepblue

Deep Blue (DB) specialises in research and consulting on human-centred design and validation in transport, manufacturing, healthcare, and environment. Deep Blue address ultimate socio-technical challenges through research and consultancy, plus help organisations innovate and grow their businesses through human-centred design solutions.

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## EIT Manufacturing



Manufacturing

EIT Manufacturing (EITM) is a public-private partnership funded by the European Institute of Innovation and Technology (EIT), a body of the European Union. EITM represent more than 50 major European manufacturing players from industry and academia from 17 different European countries.

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## Helixconnect

HELIXCONNECT EUROPE emerged as a need for a better hands-on approach to facilitating innovation, helping organisations grow and enabling a proper integration among innovators, NGOs, industry and government. Our vision is to link Eastern Europe and Western Balkans with the global innovation systems and enable national knowledge and technology transfer.

helixconnect  
Consult. Finance. Grow

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## Inteliform



Inteliform delivers customized and innovative solutions in mechanical engineering. Inteliform is involved in research projects and produces industrial applications in the automotive, electronics and food industry sectors.

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## ISIM TIMIȘOARA



ISIM excels in high-quality applied research, technological development, qualification, certification, expertise, inspection, and consultancy in welding and materials since 1970.

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## Lodz Chamber of Industry and Commerce

Lodz Chamber of Industry and Commerce (LCIC) is a private, non-profit self – government institution based in Lodz, Central Poland. The Chamber serves as a platform for the exchange of knowledge, experience and contacts between enterprises to boost business opportunities. The Chamber now associates 400 companies from the region coming from the textile and construction industry and are primarily small and medium enterprises.



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## Belgrade Metropolitan University

BMU is an integrated university consisting of three faculties, which are no legal entities. BMU offers BSc, MSc & PhD programs in the areas of information technology, software engineering, video game development, operations management, business and marketing, graphic design, design of interactive media and fashion design. BMU operates in two campuses in Belgrade and Niš, both in Serbia.



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## University of Piraeus Research Center (UPRC)

The University of Piraeus Research Center (UPRC) was established in 1983 and it is a research, non-profit organization. University of Piraeus' and its Research Center's research output is characterized by scientific excellence and wide range of application. It aims to support the local economic and business structure of the greater Piraeus area (blue growth, traditional occupations, innovation etc.) as well as the society in general by supporting joint actions and projects. The Quantitative Analysis in Shipping Laboratory (QuALS), established in 2015, serves educational and research needs in shipping and maritime transport with emphasis on modelling, forecasting, data and market analyses.



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## WEGEMT

WEGEMT is a European Association of the largest network of marine related universities in 16 European countries, formed in 1978 for increasing the knowledge base and updating and extending the skills of practicing engineers and postgraduate students working at an advanced level in marine technology (including predictive manufacturing) and related sciences. The actions taken by WEGEMT to accomplish its mission as an Association include the active participation in collaborative research projects, the organization of training courses to postgraduate students and professionals, the participation in groups like the Waterborne TP.



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## YET - Youth | Entrepreneurship | Education | Technology

YET, is a non-profit organisation that has been tirelessly working towards promoting entrepreneurship, exploring cutting-edge technologies (Blockchain, AI, Cybersecurity), developing skills and providing networking opportunities with a focus on activities that bring a positive impact to people's lives. With over a decade of experience, we have catered to various target groups such as college students, women, small business owners, unemployed individuals, and underserved populations.



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# NEWS - PreMETS Achievements & Ongoing work

## PreMETS Kick-Off Meeting highlights

The first spark of the PreMETS project light up on the first physical (kick-off) meeting on CERTH HQ in Thessaloniki during the end of August (28-29 August 2023) in a fruitful 2-day event. During these days, project partners presented their organizational profile, planned the work for the upcoming 6 months and set up important key strategic goals, operational approaches and common working methods. **Next project meeting will take place virtually during December 2023** before Christmas holiday period.



## Project key planning documents have been submitted!

During the first 6-month period of the PreMETS project (**July-December 2023**), **seven (7) deliverable reports have been finalized** and published that contain key information about the proper implementation of the project activities. Each deliverable report describes different key implementation, impact and strategic plan. The list of published deliverables during the first semester of the project are:

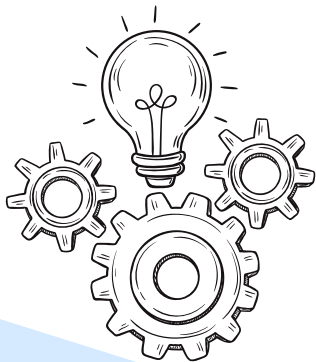
- Project management plan
- Data management plan
- Future Predictive Maintenance (PM) employee profile
- Macro quality assurance plan
- Communication and dissemination plan
- Project visual identity pack
- Preliminary Impact measurement plan



**SUBMIT**

You may find the deliverable reports in [PreMETS Zenodo community](#) (which you can also bookmark it!) by **clicking on the SUBMIT button** above.

## Work in progress....



Currently, PreMETS project partners prepare three **(3) deliverables over the upcoming 6 months**. More specifically, these efforts focus on:

- External evaluation strategy
- Predictive Maintenance (PM) toolkit
- Train-the-trainers toolkit

**Follow us!**



Co-funded by  
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This project has received funding from the European Union's Erasmus+ Programme.