AI-Matters - The Manufacturing TEF

AI in MAnufActuring TesTing and ExpeRimentation facilities for European SMEs

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CO-FINANCED BY THE DIGITAL EUROPE PROGRAMME : AI-MATTERS IS A NETWORK OF TESTING AND EXPERIMENTATION INFRASTRUCTURES DEDICATED TO THE MANUFACTURING SECTOR

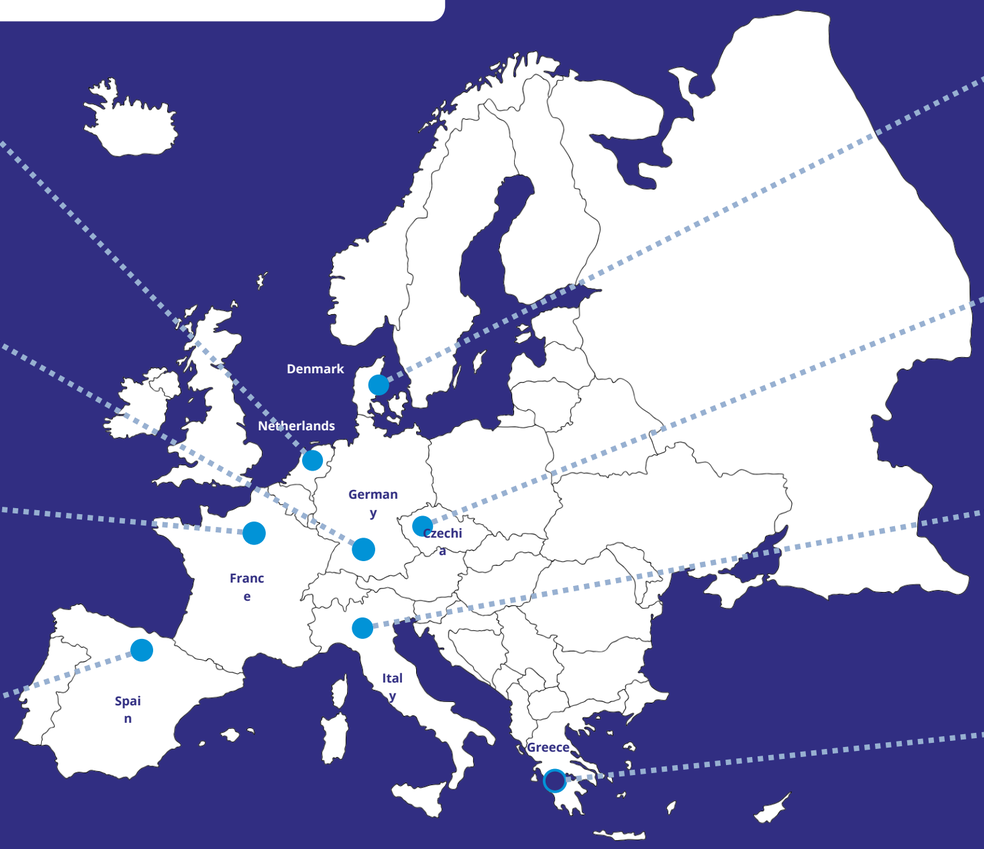
Brainport Industries
TNO innovation for life
TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

Fraunhofer
PTB Physikalisch-Technische Bundesanstalt National Metrology Institute
ARENA2036
Universität Stuttgart

NETWORK COORDINATOR
cea list

tecnalia MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE
aimen TECHNOLOGY CENTRE
ITAINNOVA INSTITUTO TECNOLÓGICO DE ARAGÓN
AFM CLUSTER FOR ADVANCED & DIGITAL MANUFACTURING

7 NODES
1 SATELLITE



DANISH TECHNOLOGICAL INSTITUTE
ODENSE robotics

CZECH INSTITUTE OF INFORMATICS ROBOTICS AND CYBERNETICS CTU IN PRAGUE
VSB TECHNICAL UNIVERSITY OF OSTRAVA
BRNO UNIVERSITY OF TECHNOLOGY

MADE Competence Center I4.0
REPLY
FONDAZIONE BRUNO KESSLER FUTURE BUILT ON KNOWLEDGE

LMS Laboratory for Manufacturing Systems & Automation

4 CHALLENGES

50+ TOPICS

325 SERVICES

8 LOCATIONS

21 PARTNERS

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AI matters

CHALLENGES IN MANUFACTURING ADRESSED BY AI-MATTERS

HUMAN-ROBOT INTERACTION

Creating efficient, safe collaborations between workers and robots to increase productivity, reduce error rates and improve worker safety

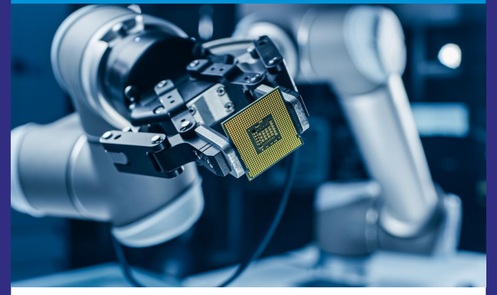
FACTORY LEVEL OPTIMIZATION

Leveraging advanced technologies and process improvements to streamline operations towards enhancing efficiency, minimizing waste, and boosting productivity

CIRCULAR ECONOMY

Minimizing waste and making the most of resources, designing products for longevity, reuse, and recyclability, developing sustainable production processes

OTHER UPCOMING AND ENABLING TECHNOLOGIES



Integrating innovative tools and systems that support and enhance manufacturing processes and facilitate smarter production, supply chain efficiency and product innovation

As an outcome TEFs* provide annotated and qualified data for R&I on Generative AI

*Testing and Experimentation Facility

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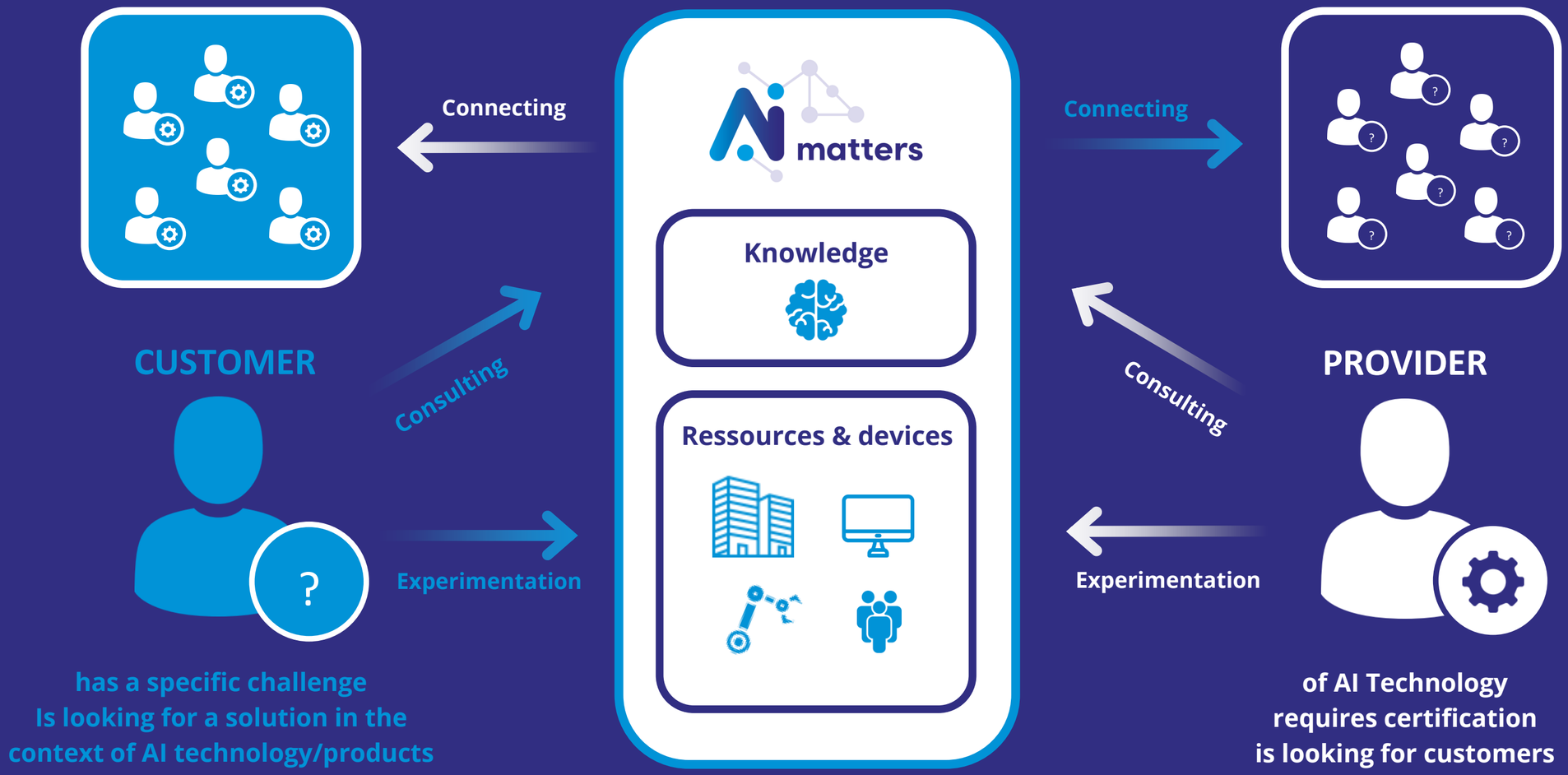
THE AI-MATTERS OFFER



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HUMAN-ROBOT INTERACTION

CZECH NODE

Testing customer’s solutions in a complex industrial environment in connection to many technologies in customer-defined scenarios

ROBOTIC INTRA-LOGISTICS TESTING

The service offers experiments and tests with robots of different types in complex industrial environments equipped with precise optical localization systems. It also offers support for AI implementation and development of AI-based systems for perception and control in mobile robots including advanced human-machine interfaces.

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CIRCULAR ECONOMY

FRENCH NODE

Helping customers evaluate intelligent robotic systems for performing complex disassembly tasks

SETTING UP TEST-BED FOR AUTOMATIC DISASSEMBLY TASK

A highly integrated and compact system combining a single arm and exchangeable tools with 3D vision sensors, is proposed for disassembling operations. Enhanced with intuitive programming and advanced perception capabilities, it ensures an easy deployment to different use cases.

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FACTORY-LEVEL OPTIMISATION

ITALIAN NODE

Tracking AGVs as they displace items from the warehouse to the workfloor

ASSET TRACKING EXPERIMENTATION

Support in asset tracking through the use of selected technologies (GPS, WIFI, BLE, UWB) based on the company's transportation and logistics requirements.

The service includes an analysis/assessment phase and adoption of the selected technologies for a limited period in order to test and experiment the technical and functional requirement of technology adopted.

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HUMAN-ROBOT INTERACTION

DUTCH NODE

Testing grippers and manipulation strategies, before investing time in automation

DUAL COBOT MANIPULATION

Experiment whether one or two cobots can be used to automate a task in the production line. A single arm could be utilized for product singulation, e.g. in a bin- or heap picking task. The dual arm setup extends the ability towards tasks where humans normally need both their hands.
Examples could be (dis)assembly tasks, packaging or introducing products to the production line.

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EXAMPLE OF CUSTOMER : VLM ROBOTICS

VLM Robotics

AGILE ROBOTIC CELL MANUFACTURER

FIRST CUSTOMER UNDER CONTRACTING

Service :

Using digital tools for prototyping new product in additive manufacturing

→ PARTICIPATION TO THE ALL TEF OPEN FOR BUSINESS IN BERLIN (MARCH 4TH)

Area of Interest with TEF services

- Make POC for potential client
- Test development on a new control function
- Test how AI can enhance control function
- Identify by AI inter-dependance of parameters

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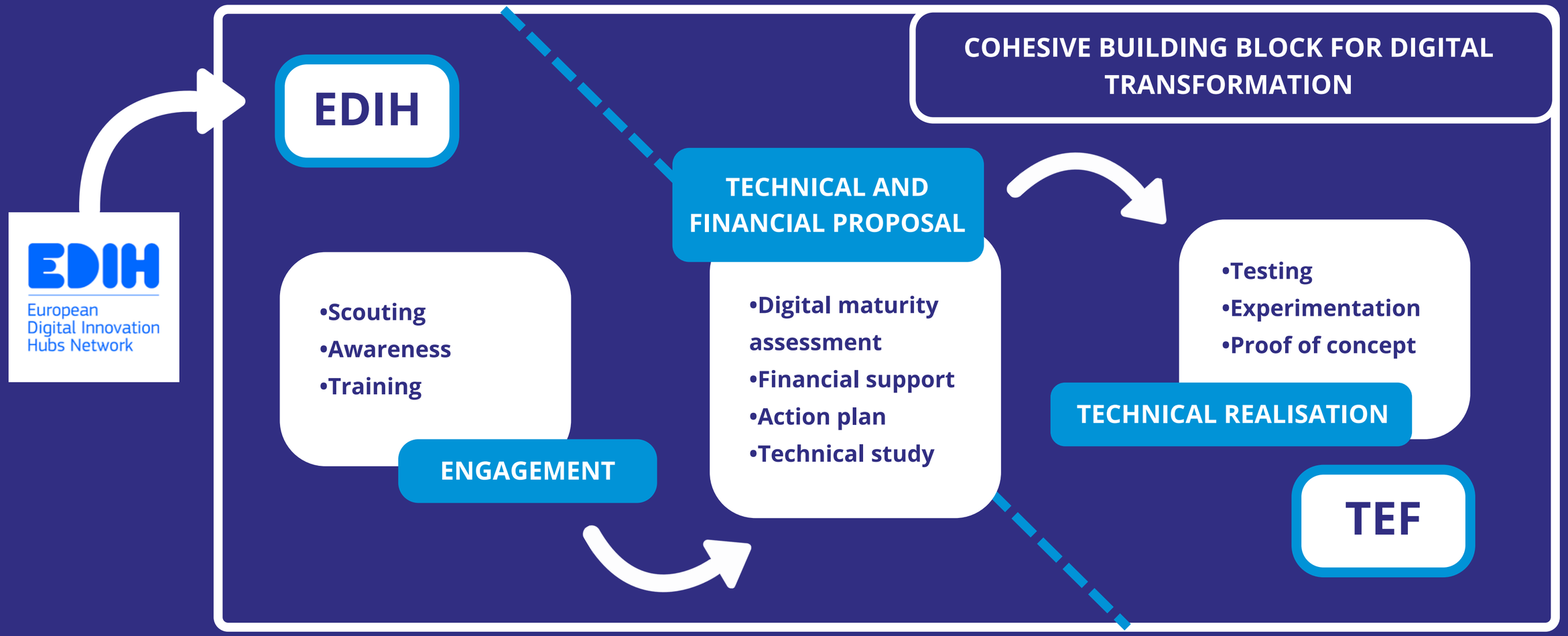
AI matters

CUSTOMER JOURNEY AND ARTICULATION EDIH-TEF



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SYNERGIES WITH INDUSTRIAL CLUSTERS AND OTHER INITIATIVES / FRENCH NOD

EDIH PARIS SACLAY

DIGHALL

The Paris Region Hub accompanying digital transformation of companies **by practical adoption of responsible AI**

OUR STAKEHOLDERS AT EU/NATIONAL/REGIONAL LEVEL

enterprise europe network

FRANCE ADDITIVE FILIÈRE IMPRESSION 3D

CCI PARIS PARIS ILE-DE-FRANCE

Alliance INDUSTRIE DU FUTUR

FFCRobotique.fr les clusters robotiques français

INDUSTRIAL CLUSTERS

Large companies -
prime contractors
Affiliated clubs

FactoryLab

Alliance INDUSTRIE DU FUTUR

→ **Promoting the AI-Matters service offer,** guiding SMEs toward the Manufacturing TEF, extending the industrial ecosystem with the help of federations and large companies.
As well as **getting the needed feedback on the relevance of our service catalogue** to enrich it.

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AI matters

HOW TO REACH US ?

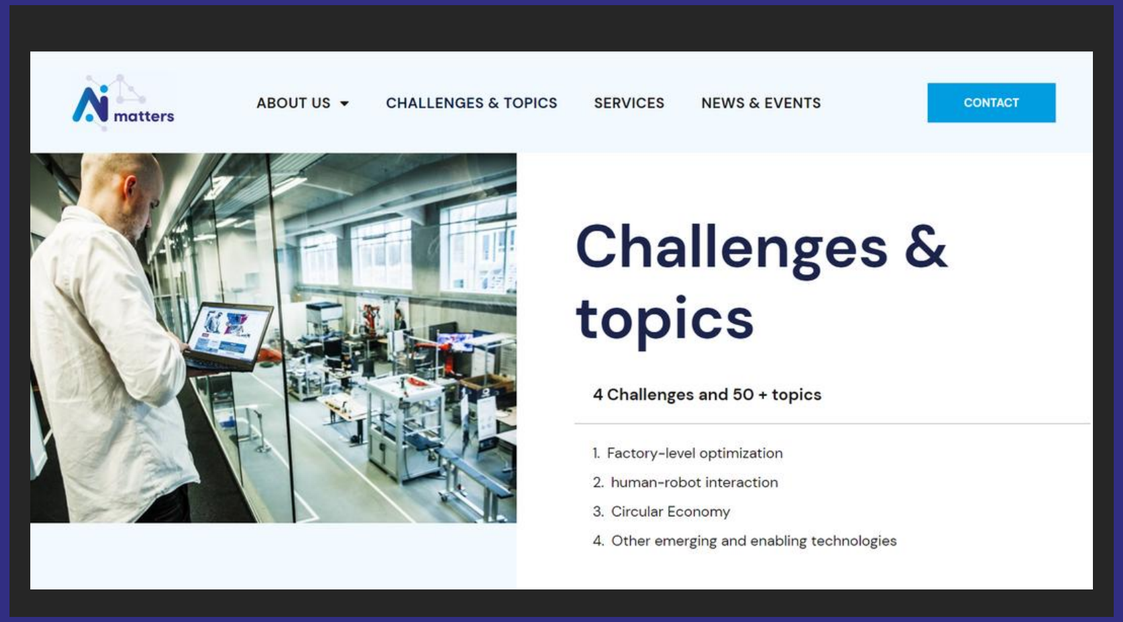
THROUGH OUR WEBSITE AND CONTACT FORM :

https://ai-matters.eu/

By direct emails to node partners and/or coordinator

WHAT TO EXPECT?

At this stage, the modalities of service delivery & contracting depend on each case (some nodes consider using open calls for proposals, others do not)



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