



## Expression of interest

### Contact details

Country	TURKEY
Name of the organisation (*)	TÜBİTAK BİLGEM Software Technologies Research Center
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### Short description of the organisation

TÜBİTAK BİLGEM Software Technologies Research Institute (YTE) established in 2012, develops R&D-focused software solutions that take into account new technologies and innovative approaches to meet the digital transformation needs that provide digital policies of public institutions and organizations. YTE is the one and only institution owning CMMI Level 5 accreditation located in Turkey.

As the pioneer research institute contributing to the development of informatics ecosystem in order to implement effective digital transformation policies. YTE aims to;

- Define national, institutional and thematic Digital Transformation needs with the perspective of Enterprise Architecture and plan solutions considering new technology and innovative approaches,
- Carry out Strategic, Critical and R&D Software Development projects in digital government policies,
- Contribute to the development and widespread use of Opens Source Software Development Technologies,
- Develop guidelines and reference models and offer guidance in order to develop the skills needed in the ecosystem,
- Develop Information Science methods and models to create intelligence from memory formed by Digital Government applications,

\* More information could be found at [https://yte.bilgem.tubitak.gov.tr/sites/images/yte\\_bilgem/yte-katalog-en-27.jan.2022.pdf](https://yte.bilgem.tubitak.gov.tr/sites/images/yte_bilgem/yte-katalog-en-27.jan.2022.pdf).

### Specific skills related to the project

HORIZON-CL5-2024-D6-01-06: Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport

The main capabilities of TUBİTAK BİLGEM YTE are the following:

- Digital Transformation Planning: Define national, institutional and plan solutions with innovative approaches thematic digital transformation needs with an enterprise architecture perspective and innovative guidelines,
- Software Development: Conduct strategic, critical and R&D software development projects in digital government policies,



- Digital Capacity Development: Develop guideline and reference models with the purpose of building capacities required in informatics ecosystem and to provide guidance and build capacity in new technology areas by following international digital trends
- Information Science: To develop information science methods and models by carrying out the activities of creating minds from memory formed by Digital State applications,
- Digital Strategy Development: Conduct policy researches to improve the performance and quality of informatics ecosystem

The information about projects implemented by TUBITAK BİLGEM YTE could be found in [https://yte.bilgem.tubitak.gov.tr/sites/images/Dosyalar/project\\_brochure\\_eng.pdf](https://yte.bilgem.tubitak.gov.tr/sites/images/Dosyalar/project_brochure_eng.pdf).

In addition the experience gained from the development and maintenance of the data exchange platform implemented by open source software technologies and live for an important digital government domain enabling an important number of integrations could be beneficial for the implementation of the call. Besides, the domain expertise in the Smart Cities field including Smart Transportation would enable YTE to adapt to the project scope easily, quickly and also to contribute in the ideazation and projectization for the call. Moreover the information science capabilities including ontology and modelling, information and data modelling, quantitative and qualitative data analytics and interoperability would be an important asset for the call.

### Proposed activities for the project

TÜBİTAK BİLGEM YTE can participate in the proposed project in terms of digital transformation planning, software development and information science capabilities.

### References

Project acronym / starting date	Main objectives	Main activities	Role in the project
TÜBİTAK BİLGEM: H2020 LIGHTTEST 2016-2019	The objective of LIGHTTest is to create a global cross-domain trust infrastructure that renders it transparent and easy for verifiers to evaluate electronic transactions. By querying different trust authorities world-wide and combining trust aspects related to identity, business, reputation etc. it will become possible to conduct domain-specific trust decisions.	This is achieved by reusing existing governance, organization, infrastructure, standards, software, community, and know-how of the existing Domain Name System, combined with new innovative building blocks. This approach allows an efficient global rollout of a solution that assists decision makers in their trust decisions. By integrating mobile identities into the scheme, LIGHTTest also enables domain-specific assessments on Levels of Assurance for these identities.	Software design and development.



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TÜBİTAK BİLGEM: H2020 FutureTrust 2016-2019	FutureTrust project addresses the need for globally interoperable solutions through basic research with respect to the foundations of trust and trustworthiness, actively supports the standardisation process in relevant areas, and provides Open Source software components and trustworthy services which will ease the use of eID and electronic signature technology in real-world applications.	In particular, the FutureTrust project extends the existing European Trusted List (TL) infrastructure towards a “Global Trust List”, develops a comprehensive Open Source Validation Service as well as a scalable Preservation Service for electronic signatures and seals and provides components for the eID-based application for qualified certificates across borders, and for the trustworthy creation of remote signatures and seals in a mobile environment.	Software design and development.
TÜBİTAK BİLGEM: H2020 BEYOND5 2020-2023	The world is rapidly changing with advanced technologies such as radio-frequency electronics and IoT. To stay competitive, Europe must be ready to apply its own strategy to secure sustainability, development and social well-being for the future.	To that end, the EU-funded BEYOND5 project will offer the first European industrial roadmaps for adding connectivity and functionality features on existing CMOS technology. It will bring together significant European actors from the entire value chain, from materials and semiconductor technologies to the systems, to build a complete European supply chain for RF electronics, enabling new RF domains for sensing, communication, 5G radio infrastructure and beyond. Ultimately, the project will allow a high-scale integration for reduced consumption of power and costs, leading to the production of reliable and environmentally friendly components.	Software design and development.



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TÜBİTAK BİLGEM: H2020 HumanE-AI-Net	The EU-funded HumanE-AI-Net project brings together leading European research centres, universities and industrial enterprises into a network of centres of excellence. Leading global artificial intelligence (AI) laboratories will collaborate with key players in areas, such as human-computer interaction, cognitive, social and complexity sciences.	The project is looking forward to drive researchers out of their narrowly focused field and connect them with people exploring AI on a much wider scale. The challenge is to develop robust, trustworthy AI systems that can 'understand' humans, adapt to complex real-world environments and interact appropriately in complex social settings. HumanE-AI-Net will lay the foundations for designing the principles for a new science that will make AI based on European values and closer to Europeans.	Software design and development.