



INSTITUTO NACIONAL DE ESTATÍSTICA STATISTICS PORTUGAL



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# Innovation in AI/ML and Quality:

# The One-Stop-Shop on AI/ML for Official Statistics



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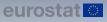
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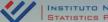


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## BACKGROUND

- Proposal to form One-stop-shop (1SS) for AI-ML for Official **Statistics**
- Funded by EU action grant
- Project kick off in April





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### **OBJECTIVES**

Develop, maintain and evolve coherent set of capabilities

Set up sandpit platform/hub

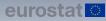
Provide support & guidance for integration & maintenance of AI/ML solutions through training and active support

Build communities around OSS solutions developed by NSI's Share ideas, experiences, lessons and success/failure stories to stimulate AI/ML innovation

Enable transition from experimental solutions to industrialised and production solutions







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### **PROJECT OUTCOMES**

Build a framework for developing AI/ML solutions to be used in the context of official and European statistics,

ESS staff and partners have access to established and proven AI/ML solutions/resources to be leveraged in the context of official statistics production,

ESS organisations are encouraged to innovate and eventually realise benefits from the use of AI/ML approaches for statistical products, and

Economies of scales and resources are achieved through cooperation inside and outside the ESS and transition from ideas to production is accelerated.





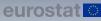
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## **CONSORTIUM MEMBERS**



di Statistica









Statistisk sentralbyrå **Statistics Norway** 

**Statistics** Poland















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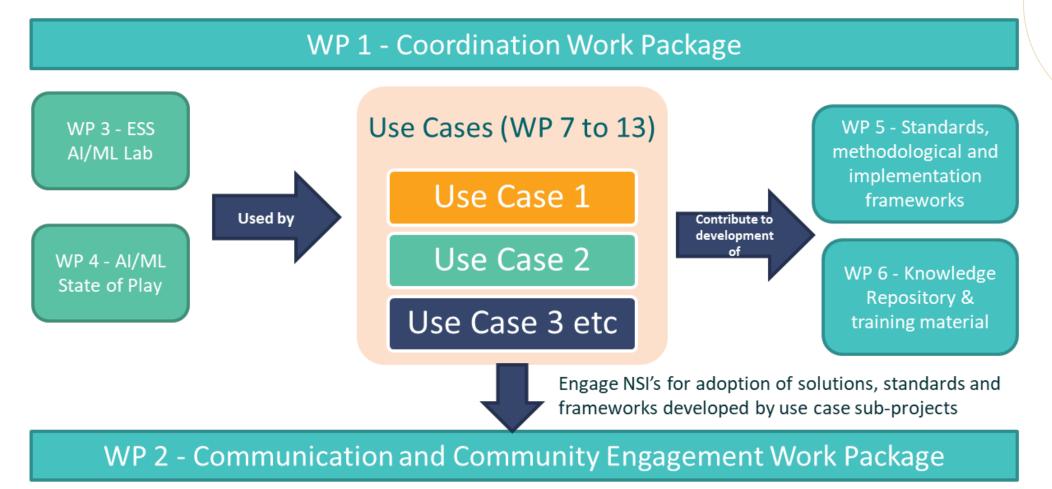


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## **PROJECT FRAMEWORK**







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## **CROSS-CUTTING WORK PACKAGES**

WP1 Coordination – CSO

WP2 Comms & Engagement – ISTAT

WP3 Platform – INSEE

WP4 AI/ML Ecosystem - DeStatis

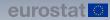
WP5 Standards – DeStatis & CBS

WP6 Knowledge Sharing & Training – Statistics Poland





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#### **USE CASE WORK PACKAGES**

AI/ML on earth observation data, satellite imagery

Editing focus - Statistically valid and efficient editing in official statistics by AI/ML

Imputation focus - Statistically valid and efficient imputation in official statistics by AI/ML

From text to code - Experiences and potential of the use of AI/ML for classifying and coding

Applying ML for estimating firm-level supply chain networks

Use of generative large language models in statistics

Generation of synthetic data in official statistics: techniques and applications





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## **QUALITY ASSURANCE OF WORK PACKAGES**

- Review panel is being established
- Peer reviews at the beginning, middle and end of each Use
  Case
- Provide ad hoc advice and guidance during the delivery of the Use Case







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### **QUALITY AT THE HEART**

#### Methodological and implementation guidelines for applying AI/ML in official statistics

Generalised knowledge, identified norms and best practices for developing and operating AI/ML-based solutions in official statistics

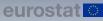
Standards in applying AI/ML in official statistics to facilitate the transition from development and experimentation of AI/MLbased solutions to industrialisation and production



STATISTICS



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## **QUALITY AT THE HEART**

#### Standards

- Clarity
- Interpretability
- Transparency
- Data Quality
- Auditability
- Ethics

#### Methodology

- Unbiased
- Reproducible
- Valid statistical outcomes

#### Implementation

- MLOps
- AI/ML Labs
- Experimentation to Production



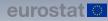
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### **HOW TO FIND OUT MORE**

European Sharing Platform - CROS

Conferences, events participants

Collaborations with Universities, Enterprises...

Newsletter

Social media



#### **Contact: 1ssai-mlcsoprojectteam@cso.ie**



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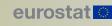


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