



## THE TENSOR CHRONICLE

Welcome to the fifth edition of the TENSOR chronicle!

**ISSUE:** July 2025 | VOL.V

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Dear TENSOR Community,

We are delighted to share the latest updates from the TENSOR project as we enter the final six months of implementation. The past period has been marked by important milestones and renewed collaborations that continue to drive the project forward.

We successfully concluded the 2nd Periodic Review in Brussels, where the consortium had the opportunity to present our progress and receive valuable feedback. TENSOR was also proud to take part in the 2nd FCT & BM Synergy Workshop, reuniting with fellow projects ODYSSEUS, FLEXI-Cross, and TENACITY. This collaborative effort led to the publication of a joint white paper, offering an excellent example of the impact of cross-project exchange.

Our team remained active in the community by participating in high-profile events and reconnecting once again during the 5th Consortium Meeting in the beautiful city of Lisbon.

*Best regards,  
The TENSOR Project Team*



HORIZON EUROPE

TENSOR has been co-funded by the European Commission under Horizon Europe, the EU Framework Programme for Research and Innovation, under Grant Agreement 101073920.



## TENSOR's 2nd Periodic Review Meeting Successfully Concluded in Feb, 2025

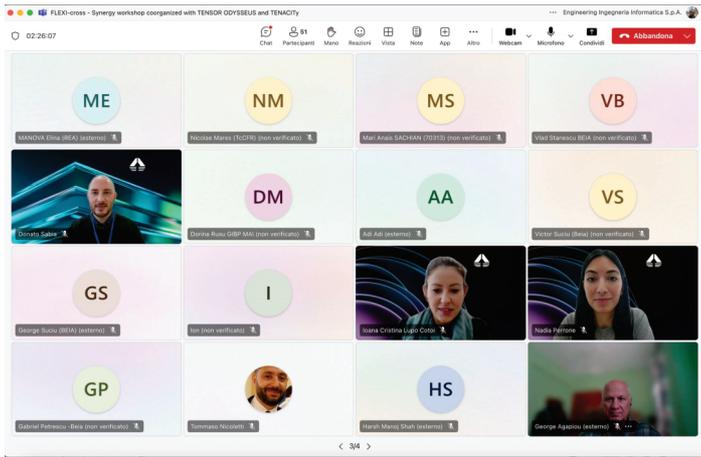


On February 26th, the TENSOR Consortium gathered in Brussels for the 2nd Periodic Review Meeting. This important milestone provided an opportunity to present the project's progress, report on the activities carried out during the second year, and showcase early demos for all pilot use cases.

Valuable feedback and constructive recommendations were offered, helping shape the project's direction as we enter the third and final year of implementation. The insights shared were well received by the TENSOR team, reinforcing our commitment to maintaining high standards and pushing the boundaries of innovation in the security domain.



## The FCT & BM synergy has joined forces again



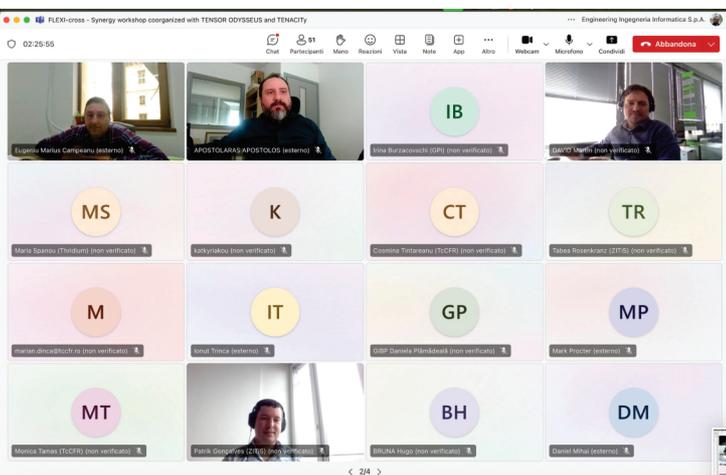
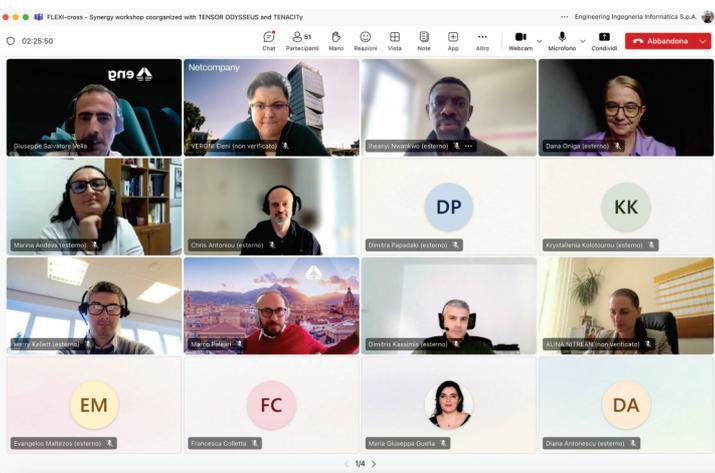
FLEXI-Cross, ODYSSEUS, TENACITY and TENSOR co-hosted the second edition of the FCT & BM synergy workshop on April the 1st.

The Workshop was filled with insightful discussions on:

- Ethical Considerations regarding Responsible use of AI in security applications,
- Standardization aspects focusing on shaping the future of AI and
- Lessons Learnt and the identification of technical gaps.

This joint session provided a valuable opportunity to engage in critical discussions on cutting-edge technological innovation, while also addressing the multidimensional aspects of ethics and responsible deployment of emerging technologies in the critical domains of law enforcement and border management.

All participating projects agreed that bridging innovation with best practices and ethical considerations remains essential for delivering meaningful and sustainable impact.





## FCT & BM synergy - A joint Report

The outcomes of the 2nd FCT & BM Synergy Workshop are captured in the Joint Report “Improved crime fight and prevention for stronger borders and efficient digital forensics.”

The report brings together key insights from four Horizon Europe Cluster 3 projects—TENSOR, FLEXI-cross, ODYSSEUS, and TENACITY—focusing on shared challenges, lessons learned, and strategic recommendations to enhance border security and law enforcement capabilities across Europe.

Key themes include biometric technologies on the move, travel intelligence, ethical AI, and data interoperability. TENSOR contributes its insights on multi-modal biometric fusion, explainable AI, and secure cross-border data sharing, while the other projects introduce advancements such as UAV-assisted scanning and digital travel credentials.

The report also highlights technical and operational gaps, proposing policy and standardisation actions to promote trustworthy, scalable, and interoperable solutions, reinforcing the impact of the FCT & BM synergy.

Improved crime fight  
and prevention for  
**stronger borders and  
efficient digital forensics**

A Collaborative White Paper by FLEXI-cross,  
TENSOR, ODYSSEUS, and TENACITY

White Paper

FLEXIcross TENSOR TENACITY ODYSSEUS



## 5th TENSOR Consortium Meeting in Lisbon



Polícia Judiciária (PJ) has hosted the 5th Consortium Meeting of TENSOR in the beautiful city of Lisbon on 3-4th July!

The TENSOR team came together once again to share the latest updates and align on the project's final phase. Now well into the third and final year of implementation, the consortium focused on preparing the execution of the pilot use cases, where TENSOR's solutions will be validated and evaluated in real-world scenarios.

The first day of the meeting was dedicated to a comprehensive review of the progress across all active work packages, with particular emphasis on the operational planning and coordination required for the upcoming pilots, as well as on the exploitation of the project's results.

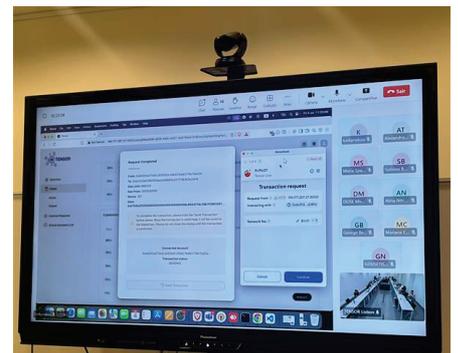
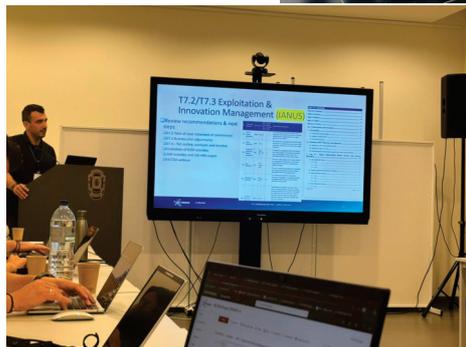
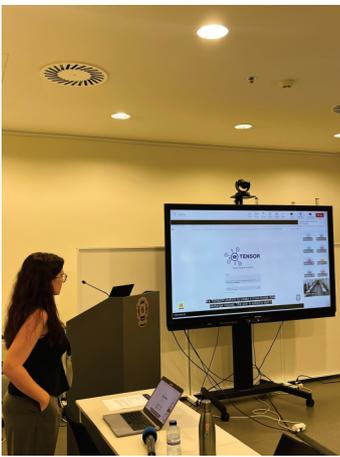


## Successful Execution of Pilot Use Case 3 at PJ: Secure Cross-Border Biometric Data Exchange

Day 2 of the Consortium Meeting in Lisbon offered a highlight for our LEA partners: a live, hands-on demonstration of TENSOR's Biometrics Dataspace, hosted at the premises of Polícia Judiciária (PJ).

The participants had the opportunity to engage with the platform in realistic investigative scenarios, experiencing first-hand how secure biometric data exchange can be carried out while upholding privacy and legal compliance. Guided by the technical teams, our LEA colleagues from PJ successfully retrieved a suspect's identity from the General Police Inspectorate (GPI) of the Republic of Moldova, demonstrating the effectiveness of the Biometrics Dataspace in supporting cross-border investigations.

The session highlighted the potential of data space technologies to significantly enhance international cooperation in a secure and trusted manner.





## Publications and Scientific Outputs

We are thrilled to share our latest publication!

Building on the experience gained from developing the AI-powered Digital Assistant in TENSOR, the Netcompany team has published a peer-reviewed article in the prestigious IEEE Access journal titled "[Exploring the Potential of Offline LLMs in Data Science.](#)" The paper investigates how large language models (LLMs) can be deployed securely and offline to generate data analysis code based on natural language queries. This research addresses key challenges around privacy and control, which are particularly relevant for sensitive environments like law enforcement, and showcases the potential of AI-powered tools to simplify complex data tasks.

The work was directly supported by the TENSOR project and demonstrates how our work is contributing to broader advances in secure, human-centric AI.

IEEE Access  
Multidisciplinary | Rapid Review | Open Access Journal

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RESEARCH ARTICLE

### Exploring the Potential of Offline LLMs in Data Science: A Study on Code Generation for Data Analysis

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## Participation in events & conferences

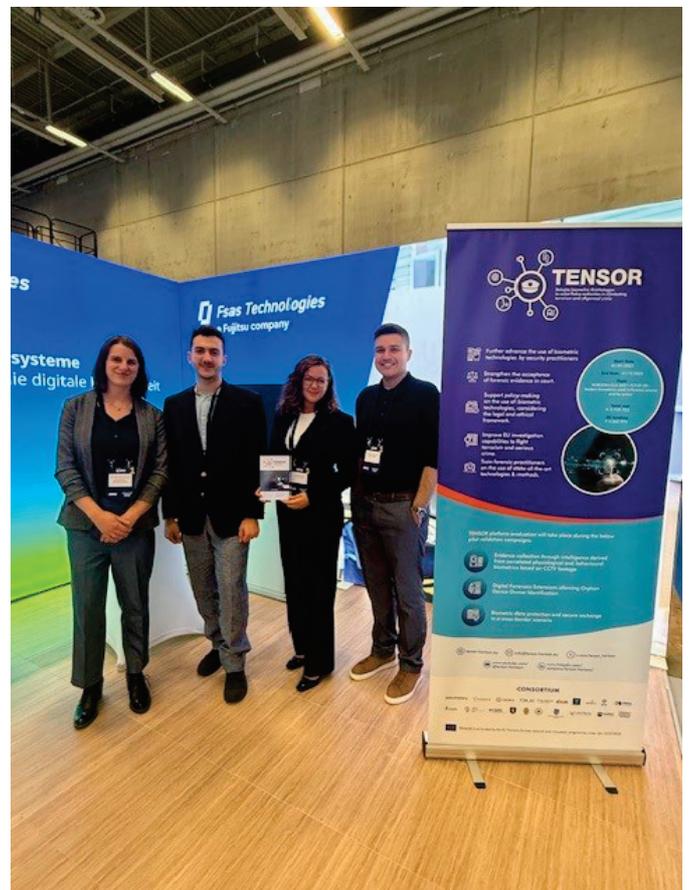
### 28th European Police Congress (EPC 2025)

Location: Berlin, Germany

Date: 20-21, May 2025

We are proud to announce that our consortium partner, FSAS Technologies organized in a perfect detail TENSOR's participation in EPC 2025! Reinforced by Netcompany, Quadible, SquareDev and ZITiS, they co-hosted the forum "TENSOR: Advanced Offender Identification through Behavioral Biometrics".

This session featured live demonstrations of passive behavioral biometric technologies and their ability to enhance identity verification and boost operational efficiency in real-world scenarios. The booth of FSAS was overwhelmed with positive feedback confirming the growing enthusiasm in leveraging modern biometric technologies to fight against crime.





## Multi-RATE final event - A synergy event!

Location: Athens, Greece

Date: 28, May 2025

On 28 May 2025, TENSOR participated in the Final Event of the Horizon Europe-funded MultiRATE project, held in Athens, Greece. MultiRATE, which concluded in May 2025, developed a holistic and systematic methodology for evaluating the maturity of security technologies across several dimensions, including technical, societal, legal, ethical, and commercial readiness.

The event brought together researchers, industry stakeholders, and EU project representatives to reflect on the project’s outcomes and promote cross-project synergies. TENSOR was invited to showcase its solutions and how it applied MultiRATE’s web-based TRL calculator to reassess the maturity of its technological components. During the session, Netcompany, in its role as TENSOR’s Project Coordinator, introduced the project with a high-level overview before presenting the framework of collaboration with MultiRATE.

The presentation showcased how the adoption of MultiRATE’s methodology supports robust, evidence-based validation of TENSOR’s technologies and reinforces alignment with the EU’s strategic priorities for secure, integrated innovation in the security sector. Building on this successful synergy, TENSOR plans to leverage MultiRATE’s TRL calculator once more to perform a final reassessment of all technological components following the completion of its 2nd pilot phase, scheduled for late 2025.





## ISS World Europe 2025

Location: Prague, Czech Republic

Date: 3-5 June 2025

TENSOR Project, represented by Phonexia, made its mark at ISS World Europe 2025 in Prague —the premier gathering for law enforcement, intelligence, and cybersecurity professionals.

Representing TENSOR at booth #107, Phonexia showcased the power of Voice Biometrics in enhancing modern security and surveillance capabilities.

It's true - Voice Biometrics are shaping the future of security — and TENSOR is proud to be at the forefront showcasing cutting edge technologies offered by the consortium partner Phonexia! This comes on the heels of Phonexia's outstanding performance in the NIST Speaker Recognition Evaluation (SRE), where they ranked among the top-performing teams. Their innovative work with ResNets, ReDimNets, and Whisper-PMFA is paving the way for the future of speaker verification.



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## EEITE 2025 - Spessial Session 10

Location: Chania, Greece

Date: 4-6 June 2025

The TENSOR project proudly co-organized and chaired Special Session 10, titled “AI-Powered Crime Detection and Prevention: Bridging Technology and Law Enforcement”, at the prestigious EEITE 2025 Conference. This vital session addressed the mounting complexity of criminal activity in today’s digitalized world, highlighting how the evolution of the internet and social media is empowering offenders while presenting unprecedented challenges for Law Enforcement Agencies (LEAs). Special Session 10 served as a unique forum to:

- Showcase Advanced Solutions.
- Promote Interdisciplinary Collaboration.
- Addressed Emerging threats.

Alongside TENSOR, the special session was co-organized by Horizon Europe and national projects:

**AVALANCHE:** Fostering holistic approaches to broaden LEA capabilities in detecting and preventing cross-border illicit activities and cyber-enabled crimes.

**PRESERVE:** Delivering privacy-preserving, AI-powered, and big data decision-support systems for European LEAs, with emphasis on federated learning and user behavior analytics.

**CYGNUS:** Providing big data and AI services with human-in-the-loop processes for scalable, explainable intelligence in civilian and law enforcement settings.

**FERMI:** Analyzing disinformation and fake news propagation, equipping police authorities to respond proactively to digital misinformation campaigns.

Special Session 10 perfectly aligned with EEITE 2025’s mission to bridge theoretical advancement and real-world application.





## Security Research Event (SRE 2025)

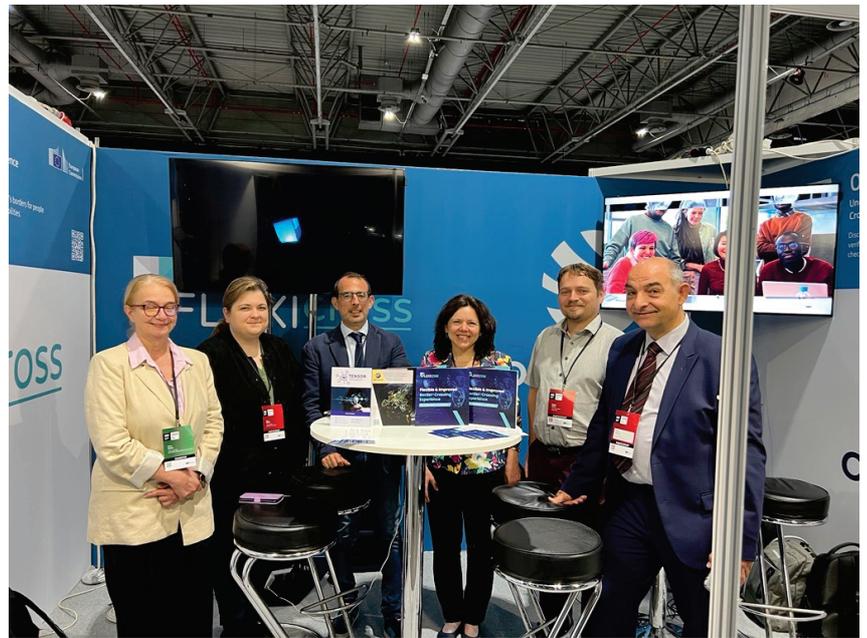
Location: Warsaw, Poland

Date: 24-25 June 2025

The Security Research Event 2025 brought together over 600 participants from across Europe and beyond, representing academia, end users, policy makers and civil society, under the theme “Boosting security through EU-based innovation”.

Featuring five thematic panels, an exhibition of 50+ EU-funded projects, and the Security Innovation Award, it explored innovations in border management, crisis preparedness, supply chain resilience, and strategic autonomy.

TENSOR was represented at the event by the Netcompany team, who also had the opportunity to reconnect with representatives from FLEXI-Cross and ODYSSEUS, our longstanding partners in the FCT & BM Synergy group. The reunion offered a valuable moment to exchange insights, strengthen collaboration, and reinforce the collective impact of the three projects in shaping the future of EU security research.





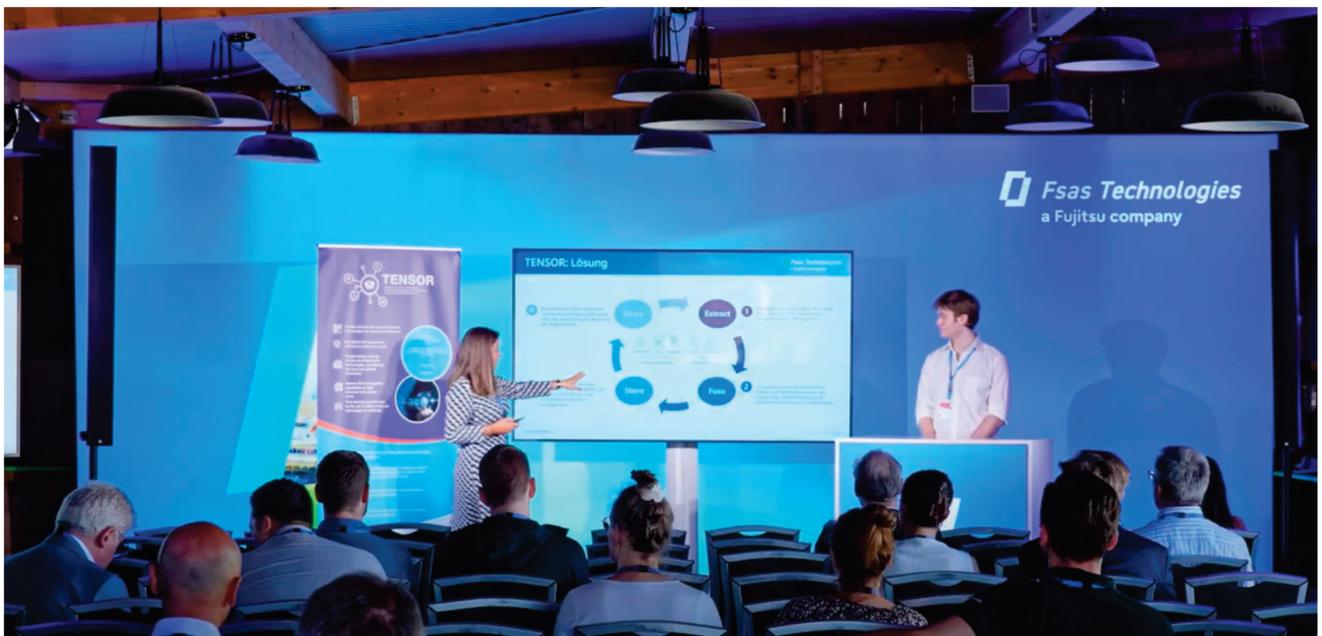
## FSAS Technology Summit

Location: Munich, Germany

Date: 1 July 2025

TENSOR Project, had a special 45 minute session under the FSAS Technology Summit in Munich! Our consortium partners presented the Horizon Europe Framework, focusing on TENSOR project providing an overview, and detailed the TENSOR use cases.

A special treat for the mixed audience including customers and industry organizations, was a deep dive into Use Case 2 «Digital Forensic Extensions allowing Orphan Device Owner Identification» followed by a special live demonstration.





## Thank you for your continued support!

Stay tuned for more updates on TENSOR's transformative journey in the realm of biometrics technologies for seamless identification and identity verification.

For any inquiries or feedback, please feel free to reach out to us at

[info@tensor-horizon.eu](mailto:info@tensor-horizon.eu).

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