TRACY

Brief Summary

The search for leads and evidence, including lawful access to communications data, is the cornerstone of law enforcement investigations and prosecutions, bringing criminals to justice. Law Enforcement Agencies (LEAs) have reported that non-content data (metadata) provided by Electronic communications Service Providers (ESPs), play a determinative role in an investigation or for the prosecution of cases of organized crime and terrorism.

The proposed TRACY solution is an innovative digital forensic and investigation platform to identify suspects (in relation to time and space) of serious organized crimes and terrorism in dense urban areas. TRACY will apply advanced ML algorithms on Non Content Data (NCD) provided by ESPs.

The aim of TRACY is to significantly advance the process of LEAs investigations and prosecutions and to provide further identification of persons for whom there was no suspicion of involvement in a terrorist act or serious crime prior to the evaluation and should therefore be further examined by the competent authorities (Intelligence Led Policing (ILP).

Our newsletter is published twice a year, offering updates on the latest news and advances of the project!

Visit our website for more information

Latest News and Updates

TRACY Movie Now Available!

A major milestone in the project's communication efforts was the development and publication of the TRACY official movie, which was prominently featured on the website's landing page. This short film introduces the project's objectives, technological innovations,

and impact for law enforcement agencies across Europe. The movie provides a dynamic visual representation of TRACY's tools and concepts, making the project more accessible to a wider audience.

Watch our movie here

Synergies with EU Projects

Based on the MultiRATE Holistic Readiness Level Assessment, the TRACY platform has reached an advanced technological maturity—approaching Technology Readiness Level (TRL) 8-9—demonstrating significant progress from its initial TRL 4 status. This evolution was achieved through a rigorous, multi-phased development lifecycle, involving consistent end-user feedback, iterative design, and extensive validation in relevant and operational environments.

The assessment confirms that TRACY has fully completed all requirements up to TRL 8, indicating that the system embodies all aspects of its final design, has established technical support and maintenance protocols, and has resolved identified technical issues. Furthermore, validation in operational environments under TRL 9 is well underway, with partial completion of performance metrics validation, operational risk mitigation, and product documentation. Although final mission-based demonstrations and full operational deployment remain in progress, the system is functionally stable and near-market-ready.

These developments establish TRACY as a reliable and practical digital forensic platform for Law Enforcement Agencies (LEAs), particularly in handling non-content telecom data analytics for combating serious and organized crime.

Key Findings from TRACY Training Workshops

Overall, the feedback for all three TRACY Labs was *highly positive*. Participants consistently found the training informative, educational and well organized. The sessions helped LEA members deepen their understanding of mobile technologies, the use of non-content data in criminal investigations, relevant legal considerations and the TRACY Platform and methodology.

To further enhance the impact and consistency of LEA-focused training programs, the following general recommendations are suggested, based on TRACY Labs experience:

- **Standardize** training modules across sessions to ensure consistency in learning outcomes, regardless of location or delivery mode.
- **Blend** theory and practice, incorporating live demonstrations, real-case simulations and applied exercises to solidify technical understanding.

- Facilitate peer **interaction**, discussions and feedback sessions to foster knowledge exchange and mutual learning.
- Implement pre-training **diagnostics** to adjust the content to participants' existing knowledge levels.
- Offer **post-training support**, such as Q&A sessions, office hours or access to updated materials to sustain learning momentum.
- **Monitor** and **evaluate** training effectiveness systematically using KPIs and evaluation forms, enabling continuous improvement.

TRACY participation in Events

CERIS Event: Securing Major Public Events

As part of its high-impact dissemination and engagement efforts, the TRACY project was invited to participate in the **CERIS (Community for European Research and Innovation for Security) event on "Securing Major Public Events"**, organised by the European Commission. The event took place in Brussels and brought together security practitioners, EU policymakers, research projects, and industry stakeholders to address the complex challenges associated with protecting large-scale public events such as international sports competitions, cultural festivals, and elections.

TRACY contributed to the event by presenting a **live demonstration of its investigative platform**, showcasing how non-content telecommunications data—such as mobile network metadata—can be used in a lawful and effective manner by Law Enforcement Authorities (LEAs) to support real-time threat assessment and coordinated security operations. The demo highlighted TRACY's analytical capabilities, cross-border applicability, and its compliance with EU legal and ethical standards.

TRACY Final Conference

On May 19–20, 2025, the PT successfully hosted its Final Conference in Athens, Greece, bringing together law enforcement agencies, policymakers, researchers, and fellow EU-funded projects to explore the future of trustworthy AI solutions in public security.

The two-day event began with a closed-door technical demonstration at the Hellenic Police Headquarters, where invited LEAs had the opportunity to engage hands-on with TRACY's core technologies — including its AI-driven dashboard, NLP capabilities, and investigative workflow tools. This practical session was followed by a feedback roundtable, ensuring that TRACY's solutions remain closely aligned with operational realities.

The second day, held at the Museum of Cycladic Art, welcomed a wider audience in a hybrid format. Highlights included:

- Keynotes from DG HOME and EACTDA on scaling AI and EU-wide interoperability,

- A full presentation of TRACY's outcomes and tools, including ethical and legal insights,

- Demo sessions from leading sister projects such as POLIIICE, IAMI, EMPOWER, MASC, TESSERA, and MultiRATE,

- And a validation workshop under Task 6.4, where stakeholders reviewed TRACY's Data Analytics Roadmap for LEAs across Europe.

This final event marked a key milestone in TRACY's mission to bridge technological innovation with real-world law enforcement needs — responsibly, transparently, and at scale.

Publications

A new **peer-reviewed publication** co-authored by TRACY partners has been added to the website, further strengthening the project's academic dissemination impact. The publication, titled:

- **"Building AI-Enabled Tools for Law Enforcement: The TRACY Approach"** appears in the Springer Lecture Notes in Computer Science (LNCS) series, as part of the proceedings of the European Intelligence and Security Informatics Conference (EISIC) 2024.

  Access the publication here.

Finalisation of TRACY Pilot Use

During the second year of the project, the TRACY platform was refined to the point it can be used to resolve "real LEA cases" in a sequence of user centered iterations.

The challenge for the TRACY project has been to introduce the right AI Analytics methodology for this problem domain so it can enable LEA investigators and analysts to resolve actual cases. In total TRACY platform was used in 3 pilot cases selected by Law Enforcement Agency of Greece to gain further understanding of both the LEA methodology and the TRACY methodology and tools.

Our data-driven AI methodology provided a formal process workflow to improve the efficiency and the quality of results of criminal investigations. Although the number of cases is small, some general conclusions emerge, and we would like to summarize.

- Criminal investigations can benefit from analysis of (voluminous) telecom data using automated analysis procedures and visual analytics.
- Mobile Network Provider data present a challenge in this approach, given their representation of variability, data quality issues and inconsistent set of attributes. As our common model (TCM) has proven, perhaps it would be better if the providers returned the requested data in a common format.
- The TRACY methodology provides a standardized process in resolving cases, and despite its focus on NCD (Non-Content Data), it can model a variety of other evidence.
- The iterative approach of TRACY can exclude suspects that have low probability of being the real suspect, so the analysts can focus more on highly probable cases.

TRACY and EACTDA Strategic Collaboration

The TRACY consortium is pleased to announce the establishment of a **pre-agreement for strategic collaboration** with the **European Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (EACTDA)**.

This pre-agreement marks an important step toward the **sustainability and scalability of TRACY's AI-driven solutions** for law enforcement. EACTDA, as a key actor in the operational coordination of EU-wide digital infrastructure, plays a central role in enabling the secure, ethical, and effective deployment of innovative tools across Member States.

The cooperation will focus on:

- **Exploring pathways for scaling up TRACY technologies** through the Tools4LEAs framework;

- **Aligning TRACY's data analytics roadmap** with operational needs and long-term digital transformation goals;

- **Supporting knowledge exchange** between EU-funded projects and large-scale IT system implementers;

- And identifying **future collaboration opportunities** within EU security and digital governance programmes.

This initiative reflects TRACY's commitment to building bridges between research, policy, and operational implementation — ensuring that project outcomes live on beyond the funding cycle.

Project Achievements

Between M19 and M24 of the project lifetime the following deliverables have been delivered.

Deliverable No.	Title
D1.2	Data Management Plan
D2.4	Revised data protection impact assessment report
D2.5	Revised Platform & Appliances Detailed Design Specifications
D4.2	Pilot Assessment Report
D4.3	Annotated Demonstration Dataset
D4.4	TRACY Methodology Validation Report
D5.3	Training Material 2
D5.6	Training delivery and evaluation report 2
D6.5	Dissemination, communication and exploitation activities Report 4
D6.7	Recommendation for standardization and for policy framework Report
D6.8	Data Analytics Roadmap for tackling serious, organised crime and terrorism exploiting ESP ecosystem Report
D6.12	Final Conference

TRACY Consortium

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