European Anti-Cybercrime Technology Development Association (EACTDA)

At CEPOL Research and Science Conference 2022 MRU, Vilnius
Key message(s) – I of IV

• **EACTDA** can **contribute to a safer Europe by delivering fully-tested and operational-ready software tools** with **no license cost** and **access to the source code** for EU public security practitioners.
  
  • EACTDA is an **end-user driven association**, as end-users define and prioritise their needs and evaluate the results.
  
  • EACTDA facilitates the **uptake of results coming from research projects**.
  
  • EACTDA focuses on **product (software tools) development**, and
  
  • collaborates with other relevant entities that are willing to offer their technologies and/or the complementary and necessary services (e.g., training, consulting, maintenance&support).
  
  • EACTDA currently has **end-user members from 9 EU MS** and is actively looking to increase this to as many EU MS as possible.
Key message(s) – II of IV

- **EACTDA** offers a new exploitation path to Technology Providers that own software tool(s) that is(are) at TRLs 6-7 and that is(are) of the interest of European public security practitioners:
  - To enhance the prototype(s) so that they become fully-tested and operational-ready software tools/solutions.
  - **EACTDA** funds up to 90% of the personnel costs and fully covers all other costs of these “last-mile” development projects.
  - The final results will then have two exploitation paths:
    - **One for European public security practitioners**, to which results will be provided at no license costs and with access to the source code.
    - **Another one for any other potential customer**, for which there are no limitations.
  - **Licensing scheme** is as follows:
    - The Technology Provider(s) license to EACTDA their results (background).
    - EACTDA owns the results of the “last-mile” projects (foreground) and licenses back to the technology provider(s) these results.
  - **End-users as prescribers**: end-users define and prioritise their needs, therefore decide about which projects should be funded, they evaluate the results, and they might end-up adopting and using the results.
Key message(s) – III of IV

- Private Funding
- Public security organisations from the EU
- Anyone else

**Research & Development projects**
- Prototypes at TRLs 6-7

**Technology Providers**
- Industry
- RTOs
- Universities

**EACTDA / Tools4LEAs funded projects**
- Fully-tested & operational-ready PRODUCTS

**Funded by the European Union**
- Funded by EU MS programmes

**A)**
- **SERVICES**
  - (training, consultancy, integration, support, maintenance, ...)
- **TECHNOLOGY PROVIDERS**
  - Industry
  - RTOs
  - Universities

**B)**
- **LICENSES**
  - and / or
- **SERVICES**
  - (training, consultancy, integration, support, maintenance, ...)
- **TECHNOLOGY PROVIDERS**
  - Industry
  - RTOs
  - Universities

- **EACTDA**
  - Funded by the European Union

08/06/2022
Key message(s) – IV of IV

• If you are a **Ministry of Interior or a EU Members State national Law Enforcement Agency** of a country that is currently not represented within EACTDA members...

  As of June 2022 there are EACTDA end-user members from:
  • PT  • SE  • NL
  • ES  • FR  • DE
  • BE  • FI  • MT

• Or if you are a **Technology providers** willing to offer your background technologies under EACTDA licensing conditions...
The need

What does EACTDA try to address?

• To facilitate market uptake of technological solutions from research to operational use by European public security practitioners
A well-known challenge: The “Valley of death”

Research projects deliver in most cases technologies that are not mature enough as of to be ready to be directly adopted by the end-users. In many occasions, even the advanced prototypes that have been tested and evaluated in operational environments, are not ready to be adopted by the end-users as-is.

In the case of software developments, some of the missing elements include:

- The software being fully tested and functional, avoiding or minimizing and appropriately handling the errors, and being efficient and effective.
- The software being user-friendly, this is, simple from installation to interaction and to removal, easy to update (or auto-update), intuitive, aesthetically appealing, independent of third-party software, well documented, and well supported.
- The software being fully compliant with the legal, privacy, and ethical principles and obligations.
- The software having accompanying educational and training materials and courses.
- The software having high-quality support, maintenance and evolution services.
  - IDEA: a certification framework so that users can be certified as “experts”, and companies can be certified as “service providers” for training, consultancy, support, maintenance, etc.
The Association

What is EACTDA

• An European non-for-profit association.
• Currently has 29 members, 14 of which are end-users.
• It is “end-user” driven “by-design”. End-users have “veto rights” over certain decisions.
EACTDA and the Tools4LEAs:
Conceived and part of EU Security Research programmes, with EU public security practitioners and EU Security Research projects in mind

- H2020 programme funded research project
- 12 M Euro budget
- 33 partners
- 12 EU public security organisations
- End-user oriented
- Novel methodology: “short”(er) development cycles, “frequent” releases and end-user feedback, six-monthly “hackathons”...
- No license costs for EU public security organisations

- Non-profit association
- Public-private collaboration (EU public security practitioners, Academia & RTOs, Industry & others)
- End-user driven

- ISFP Direct Award
- No license costs and access to the source code for EU public security organisations
- Fully-tested and operational-ready software tools
- End-user driven
- Well-proven and mature methodology: end-user driven, “short”(er) development cycles, “frequent” releases and end-user feedback, Demonstration&Evaluation events every 6 months...

EU Public Security practitioners
**EACTDA in a nutshell**

- **H2020 project**
- **33 partners**, including 13 end-users
- Demonstrated valid the **methodology** that was later adopted by EACTDA and Tools4LEAs

**Tools4LEAs**

- **v1**
- **v2**
- **...**

- **Collaboration with third parties is essential** (e.g., Technology Providers)
- **Pre-existing assets/tools** (e.g., security research results)
- ~TRLs 6-7 at minimum

- **EU funded via ISFP Direct Award(s) and EACTDA member contributions**
- **Facilitate the uptake of security research project results**
- **Fully-tested and operational-ready software tools**
- **No license costs and access to the source code** for EU public security organisations fighting cybercrime
- **Well-proven and mature methodology**: end-user driven, “short”(er) development cycles, “frequent” releases and end-user feedback; **Demonstration & Evaluation events every 6 months...**

**EU Public Security practitioners**

- Fully-tested, operational ready tools; no licence costs; access to source code
- **End-user needs**
- **Repository of finalised tools**
- **Catalogue of pre-existing tools**
- **Last-mile development projects**
- **Technology providers**

**Non-profit association**

- Public-private collaboration (EU public security practitioners, Academia & RTOs, Industry & others)
- **End-user driven by-design** (Statutes, decision making bodies, etc.)

**End-user driven**

- can participate if/as EACTDA members
- Share / offer their pre-existing results

**Conducts projects based on prioritised end-user needs**

**Receive a license-back of the foreground**

**European Commission**

**EU Public Security practitioners**

**Fully-tested, operational ready tools; no licence costs; access to source code**

**Presented to end-users who can select and add to the list of end-user needs**

**End-user needs**

**Repository of finalised tools**

**Catalogue of pre-existing tools**

**Last-mile development projects**

**Technology providers**

**H2020 project**

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How does EACTDA fit in the overall picture

**End-users need:**
- High-quality, fully-tested, and operational-ready tools (technology);
- that is compliant and adheres to all legal and ethical obligations;
- and for which they can obtain high-quality services (consultancy, training, maintenance, support, evolution, ...)

**TECHNOLOGY PROVIDERS**
- Horizon Europe projects
- EU MS national projects
- ISFP projects
- Private projects

**SERVICE PROVIDERS**
- Research on new SELP models
- Develop applied SELP frameworks
- Prepare services
- Provide service (consultancy, maintenance, support)

**SELPS**
- Research on new service models

**RESEARCH**

**DEVELOPMENT**
- PCP projects

**ADOPTION**
- EACTDA projects

**USE**
- IPR jumpstart kits
- DPIA kits
The role EACTDA aims to play

EACTDA focuses on TRLs 6-7 to TRL 8 projects; it is the “custodian” of the repository; and it conducts maturity evaluations of own & third party results

Key collaborators for uptake of results
- Training and Education
- Service providers
- Certification
- Distribution/delivery of results

End-users & End-user Communities

Problems, needs, challenges, changes, evolution, ...

Services (e.g., training, integration, deployment, support, maintenance, adaptation, customization)

Participate in evaluations

 Govern (lead)

Individual organisations

REPOSITORY

Common MATURITY EVALUATION model/method

Security Research & Development Projects

- Researchers, LEAs, and industry working together
- Temporary endeavours (projects)
- Produce results at different maturity levels

- Tools, methods, and other R&D results at TRLs 6-7

- Common maturity evaluation model/method
- Comprehensive testing
- Checks maturity (and quality) of multiple aspects (i.e., functionality, usability, legal/privacy compliance, code security)
- Facilitates standardisation, normalization/harmonization among results from different projects

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Value added

What benefits does EACTDA bring to its different stakeholders?

• **End-users**: Software tools for EU public security organisations that have no license cost, with access to the source code, that have been fully-tested, and that are operational-ready.

• **Technology Providers**: a new exploitation channel for results of research projects.

• **Service Providers**: The possibility of opening new market opportunities.

• **Policy makers**: contributions to the “policy feedback”, from Policy to project(s), back to policy, then to new project(s)...
Membership

Member categories and conditions

• End-user driven “by-design”
• Two flavours: Full-members & Observer members
• 3 categories of members: end-users, RTO&Academia, Industry&Others
• Open to new members, in a “per invitation only” approach (candidates supported by active members)
Membership

• The Association is “end-user” driven “by-design” (in its Statutes and in the Internal Rules). End-users have “veto rights” over certain decisions.

• It is intended to maintain a balance between end-user and non end-user members. As of Apr’22 there are:
  • 29 members, 14 of which are end-users.
  • End-user members from: PT, ES, BE, SE, FR, FI, NL, DE, and MT.

• EACTDA welcomes new members that:
  • Are public security practitioners (end-users) from new EU MSs (ideally, at least one from each EU MS).
  • Are technology providers (e.g., industry, academia, research organisations) willing to make available their technologies to EU public security practitioners with no license cost and with access to the source code.

• It is possible to be an “Observer” member, that will not have voting and decision making rights, but that will participate in many of the activities of the Association.
The **Tools4LEAs** project

The instrument to implement EACTDA’s mission

- An ISF Police Direct Award
- A long-term initiative that...
  - starts with a 2 year duration project...
  - ... and is planned to be followed-up by subsequent projects (v2, v3, ...)
The **Tools4LEAs** project

- The **1st Tools4LEAs project lasts 24 months and is structured in 2 phases**, all oriented towards **building a “permanent” structure** which should **deliver on regular basis** (6-monthly) **fully-tested**, and **operational-ready** software **tools** with no license costs.

- However, **Tools4LEAs** aims to become a new and **long-lasting instrument**; therefore the plan is to have **multiple sequential projects** after this initial one.

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### PHASE 1: "SET UP"

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**PREPARE**
- Design and setup of the DevSecOps, Test&Eval, and Repository of tools.
- Establish the End-user Advisory Board.
- Pilot test the infrastructures, processes, governance mechanisms, etc. in a pilot phase that will include members-only and a reduced number of tools.
- Build collaboration frameworks.

**PROVE**
- Fine-tune processes
- Increase the number of tools development projects
- Ensure quality of results being delivered
- Open to external stakeholders
- Strengthen collaboration frameworks.

### PHASE 2: "STABILIZE AND GROW"

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**GROW & MATURE**
- Maximise number of tools development projects
- Ensure satisfaction of all stakeholders:
  - End-users
  - Technology providers
  - Policy makers,
  - Collaborators
  - …
- Focus on transferring of results from EACTDA to end-users

**IMPROVE**
- Continuous improvement
- Focus on maximising end-user satisfaction

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Software Quality and Software Testing @ EACTDA and the Tools4LEAs

• To ensure the “fully tested” and “operational ready” condition, **end-users’ participation** combined with **high-quality development and testing processes** is essential.

• To ensure the **quality** of the processes, EACTDA and the Tools4LEAs project rely on the use of **standards** and best practices.
Software Quality and Software Testing @ EACTDA and the Tools4LEAs


- **PRODUCT quality**
  - 8 characteristics
  - 31 subcharacteristics

- **Quality IN USE**
  - 4 characteristics
  - 9 subcharacteristics
Software Quality and Software Testing @ EACTDA and the Tools4LEAs
The End-User Advisory Board (EUAB)

- The Tools4LEAs’ tools development work plan will be end-user driven.
- The project has an End-User Advisory Board (EUAB), chaired by Europol and with the participation of multiple EU MS LEAs.
- The EUAB will decide about the tool development roadmap and it will have veto right over the projects to be funded.
- The EUAB will primarily focus on two activities:
  - Providing inputs about end-user needs and their priorities
  - Evaluating the tools once they have been developed (during and after the 6-monthly DEM&EVAL events)
- The EUAB members will be encouraged to contribute to the pool of needs in their individual professional capacity, but they will not be responsible for collecting, documenting, distributing (etc.) all the needs that will be processed.
End-User needs
Two approaches to identify end-user needs

• “Top-down” vs “Bottom-up”, which is the difference and why should we have the two of them?

• “Top-down”:
  - We might not be able to identify existing “background” tools that can be used as a start point.
  - If there is not a pre-agreement with the owners of the “background”, the time to reach out the owners and reach a pre-agreement might delay the start of the new tool development project(s). If no agreement is reached, we will not be able to use that background.

• “Bottom-up”:
  - The EUAB might not be aware of some of the pre-existing tools that might be of their interest.
  - There will be a pre-agreement in place with the owners of the background, thus time-to-market should be faster.
Licensing scheme

1. “Technology providers” (TP) sign a “pre-agreement” with EACTDA declaring their intent to offer/share some of their assets under the EACTDA/Tools4LEAs licensing terms and conditions.
2. TPs offer concrete pre-existing solutions under the conditions “pre-agreement”, which are included in the “Bottom-up” list of pre-existing solutions.
3. The End-User Advisory Board (EUAB) prioritises all end-user needs.
4. TPs owners of the Top-ranked end-user needs are contacted to launch new tool enhance/development projects.
5. EACTDA launches a Request for Project Proposals.
6. TPs submit their proposals.
7. Proposals go through the Project Portfolio Management process and, if approved, a collaboration agreement is signed between TPs and EACTDA.
8. TPs license-in their background to EACTDA.
9. EACTDA owns the foreground created during the project, which then licenses-back to the affected TPs.
10. The final product (background + foreground) is licensed-out by EACTDA to the end-users, with the condition that any derivative work has to be licensed-back to EACTDA.
Status and next steps

Highlights

• Founded in 2020
• Currently in “set up” phase
• Started the Tools4LEAs project in July’21, a Direct Award funded under the EU ISFP programme.
• Planning to be fully operational and starting to deliver value to its members and all stakeholders by mid-2022.
Status and work plan for 2021-22

- **Q1’21:**
  - Internal Rules, policies, guidance and best practices, code of conduct, etc. completed
  - Start hiring staff, establishing the office for the Secretariat, acquiring infrastructures, ...

- **Q2&Q3’21:**
  - Start the ISFP Direct Award project
  - Start set-up activities

- **2022 till Q2’23:**
  - Complete set-up activities
  - Start delivering new tools to EU public security practitioners
  - Stabilize
  - Increase presence, membership, impact

- **Q3’23 onwards:**
  - Launch Tools4LEAs v2
  - Scale up, fine tune, adapt, improve, ...
Thank you for your attention!

- More info at
  - https://eactda.eu/
  - info@eactda.eu
  - https://tools4leas.eactda.eu/

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