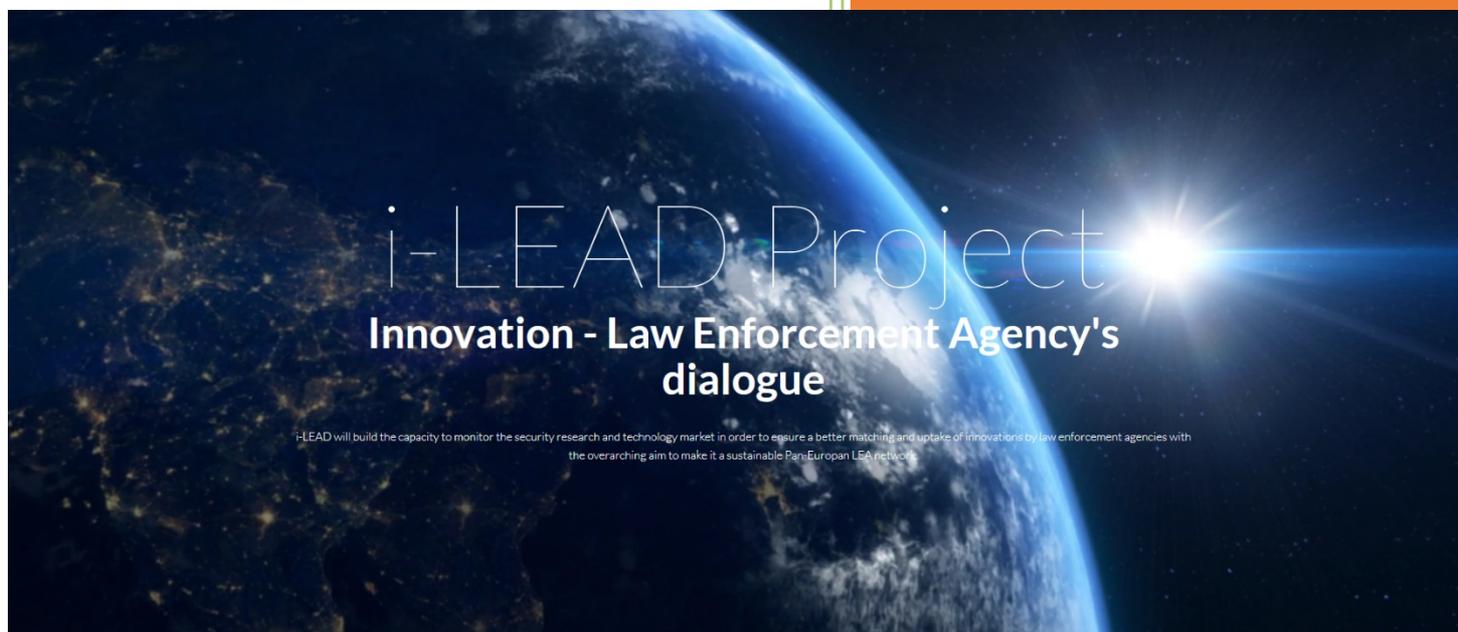




innovation - law enforcement agency's dialogue

2018

**WP4 Reports - Recommendations on Standardisation and Procurement**



**in the areas of**

**OSINT**

**Mobility for Officers**

**People Trafficking**

**Intelligence**

**Analysis**

**Forensic DNA**



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## 1. I-LEAD abstract

The I-LEAD, (Innovation – Law Enforcement Agencies Dialogue) is a coordination and support action project funded by the European Commission through Horizon 2020 Programme. The main aim of the project is to develop a Pan European Network of practitioners and other actors in the field of security to:

- 1) Monitor research and innovation projects with a view to recommending the uptake or the industrialisation of the results.
- 2) Express common requirements of Law Enforcement Agencies (LEA's) with regards capability gaps and determine innovative and fit for purpose solutions to address the gaps and improve future performance.
- 3) Indicate priorities as regards domains requiring more standardisation.

The official start of the 5-year project was September 2017 and is coordinated by the Dutch National Police and consists of a consortium of 19 partners.

The I-LEAD project will build LEA community networks around 5 specific key Practitioner Groups these being:

- Front Line Policing
- Cross Border Crime
- Cybercrime
- Crime & Intelligence
- Forensics

More information about the project at can be found at: [www.i-lead.eu](http://www.i-lead.eu)

## 2. WP4 description

Work Package 4 - standardisation and procurement (WP4) is viewed as the supporting department for the I-LEAD project. It will liaise with practitioners of the community networks to determine the present situation with regards standardisation, and if relevant and required, put forward recommendations for the development of existing standards or the creation of new standards.

This objective is to support LEA's within Europe to strengthen cross border cooperation in the fight against crime and terrorism via the standardisation of technologies, procedures and processes, in the activities of; criminal investigation, offender detection and the gathering and submission of evidence that is acceptable by courts of law.

Further, EU-wide standards will also enable economy of scale advantages for both LEA's and suppliers (industry and SME's) of technologies, tools, systems and services, as the same product will meet the

requirements of each LEA (in most) of the EU Member States. From that reason developing new tools and solutions will be more cost-effective. And finally, common standards will also accelerate pre-commercial procurement (PCP) and public procurement of novel solutions and products.

WP4 is designed to meet the following main objectives:

- Examine the opportunities for standardisation of the results of Practitioner Groups workshops.
- Build the European LEA capacity and knowledge for joint procurement actions
- Accelerate process of joint PCP and PPI projects.

### 3. OSINT

#### State of the art in the field of OSINT in terms of standardization and procurement

With regard to the latest Web-based media sources, its quantity, diversity, and speed of information expand by the minute. The challenge today is not to “connect the dots” as before but rather to systematize the flow of information. It is about differentiating between “noise and signs,” plus authenticating sources without delay and in a timely manner in order to equally support decision makers. On the other hand, volume can also help the analyst to uncover biased or deceptive information, as he can compare numerous sources. The endless transcripts that need to be analysed overwhelm today’s analysts, and thus, the pursuit for more efficient analytic tools is still a big challenge for industry and academia. As a result, teams of researchers are working to create visualization tools that will allow analysts to identify crucial information more efficiently<sup>1</sup>.

Most of the practitioners had some experience with standards. Some of LEA applied Forensic standards for OSINT investigation process. Several subjects were mentioned in PG workshop when asked how standardisation could be helpful in their daily job:

- We would need to have common terminology and definitions to be able to do this
- Clear definition of key terms
- There is ongoing debate regarding where to put OSINT in the judicial system
- An understanding of what laws should be applied regarding data privacy
- Duration of storage of data – common requirements
- The discipline is very new and the methodologies differ from country to country
- More structured and clearly defined OSINT LEA specialists required qualifications and skillset

In the context of OSINT, we focus on four key steps : data collection, processing, exploitation, and production. These stages can be described as acquiring information, validating that information (with classified sources), identifying the value of the information, and providing the information (OR insights gained based on the information) to decision makers. Development of unified methodology in all steps of the investigation process using OSINT technologies would be beneficial for consistency and quality of investigations at the same time it is the most challenging task for all involved parties.

OSINT continues to grow and prosper and Intelligence Community has yet to take full advantage of it.

#### Recommendations on standardization and procurement in the field of OSINT, concertinaing on the THOR dimensions (*technical, human, organizational and regulatory*)

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<sup>1</sup> <http://www.globalresultspr.net/blog/the-challenges-of-open-source-intelligence-osint-in-an-increasingly-connected-age/>

	<b>Practitioners needs and requirements (based on PG meeting report)</b>	<b>Standards recommendations</b>	<b>Legislative recommendations</b>	<b>Joint Procurement recommendations</b>
	<b>Technical: REQUIREMENTS IN TECHNOLOGY/TOOLS</b>	Standardization of a tool to bring a case to court	There is ongoing debate regarding where to put OSINT in the judicial system	<ul style="list-style-type: none"> <li>• The company supplying the tool must be reliable</li> <li>• The company that provides the tool must not leave a trace on the internet</li> </ul>
1.	Be able to search using a more automotive system - too much manual input	-	-	This requires the buying of tooling in order to automate. Additionally, inventory of which software every member state use and if the software complies with the end-user requirements.
2.	The use of artificial intelligence/algorithms	Common methodology and process definition will increase efficiency of technology usage	-	Common methodology and process definition will allow easier to organize procurement based on qualitative requirements rather than focusing only on cost efficiency
3.	Links with other systems (closed, open) – share data	Common information exchange format and data formats, as well as data structures will allow easier technical solutions integration and will minimize needs for customization costs for each separate system-to-system integration	Support of UMFII or UMFIII standard can be legislative requirement	-

4.	Be able to obtain 'real time' data - proactive –v- reactive	-	-	-
5.	Have geo-location tool within a system	Standard tools especially around security and confidentiality Support of common geospatial standards will increase systems efficiency	-	Common requirement in most of the investigations and OSINT information analysis, that can be defined as standard for all OSINT tools procurement
6.	Use of facial recognition	Standard tools especially around security and confidentiality	The right to own image is defined as right protected under the privacy laws. It must be examined in what circumstances it is forbidden to collect such a data and in what it is openly available.	-
7.	Better security within systems	Development standards must be defined, as currently most of the tools are coming from technological start-ups using open code platforms, sub-solutions and that puts the risk of security in final products	-	Development process, teams, tools and sub-products used in all steps of product creation should have standard security requirements imbedded into all procurement terms defined for LEA OSINT acquisitions.
	<b>Technical: REQUIREMENTS IN INFORMATION AND DATA ISSUES</b>	The discipline is very new and the methodologies differ from country to country	-	-
1.	Better sharing of information	Standard data format would make data sharing much easier	An understanding of what laws should be applied regarding data privacy	-

2.	Combining/integration of information	Standard information structure and support of common LEA standards, like UMF would create the value here	-	Support of UMF standard can be good candidate for standard LEA procurement clause
3.	Data collection management	Standard tools especially around security and confidentiality	Duration of storage of data – common requirements	Support of EXIM defined rules can come as standard LEA procurement clause
4.	Improve quality control of reliability of information	-	What regulation can be defined for information reliability (we should refer to laws applied for information recognition in courts)	-
5.	Improve reporting mechanism/reporting your findings conclusion	Standard information reporting schemas and standard EU report formats can be set here (like support of OCTA and similar)	-	-
6.	Validation of large data sets very difficult	-	Algorithms for data and information validation, can be formally tested and certified for the process feasibility	-
7.	Identify misleading or fake or false information	-	Formal data and information source, as “trusted source” can be established	-
8.	Know what the investigator requires from the OSINT operative? Combine OSINT with other intelligence systems	Standard list of processes, functions, capabilities must be defined	-	-
	<b>Human/Organizational REQUIREMENTS IN TRAINING, PEOPLE AND PROCESSES</b>	-	-	-

1.	Formalize processes	Standardised processes	Legally defined process and methodologies	Support of standard processes
2.	Formalize/standardization of training		Recognized education and professional development courses. Certification programmes	Tools must correspond to the capabilities provided by education/training programmes
3.	Decide what the training will include	Standardized training curricula	Define who must decide on the training scope and content	-
4.	Identify who will carry out the training - who has the right mind set?		Certified list of providers	Providers must hold formal institutional and personal certification
5.	Identification of experts and specialists (who are they, where are they?)	-	Formal DB of LEA OSINT experts and specialists	-
6.	Have a strategic framework	-	Defined EU OSINT LEA strategy	-
7.	More than one person to undertake OSINT work (more capacity) Have different levels of operatives	More concrete and structured OSINT competence framework	-	-
8.	Regulatory: Requirements	-	List of regulations applied for the OSINT field	-

**Recommendations for PCP/PPI/FTI regards to OSINT**

List of Challenges that have been presented by EU LEA during PG workshops might be considered as future roadmap for R&D projects. Different EU funding instruments PCP/PPI/FTI must be evaluated assessed and adjusted to the agreed priorities.

As the first step in the process leading to the future projects development a few areas indicated as the biggest and up to date challenges needs deeper examination and assessment. During the next PG meeting ideas how to

address those challenges could be presented by different groups of stakeholders (Industry, academia, end-user org.)

Topics for new opportunities:

**More automatic capability:**

The practitioner still require to input data and search assignments manually, which is labor and time intensive, and result of the work is highly dependent on the competency of the OSINT officer, e.g. experience, skill, knowledge and ability. Yet there is no artificial intelligence or self-learning computer system that can help with the activity

**Improve links with other systems:**

The OSINT practitioner needs to utilize many types of tooling and software, and has to work between different systems. As there is no link between the systems, open-to-open source data transfer, as well as open-to-closed source is very problematic. Especially in the case of open-to-closed source data integration organization, as they have to deal with differences in legislation and jurisdiction.

**More information about what the investigator requires from the OSINT operative:**

Often it is not clear for the practitioners what kind of information the investigator requires. The information product they deliver doesn't comply with the information product the investigator expects. There is no form of regulation, standardization in this area. In addition, investigators need to know - what is possible and what is not within the field of OSINT.

**Have a professional development:**

There is no system/platform/organization/plan in place and no chain of custody to professionalise OSINT development, in particular - tooling, mechanisms, work procedures and training. There is a gap between member states development and expertise level on OSINT. There is no uniformity on EU level regarding OSINT.

**Improve management of information (organisational intelligence circle):**

Information management and organisational intelligence circle lack of common approach and methodology. There is no standardisation or common instrument that can help develop a management information system or procedures.

**Be able to monitor real-time intelligence :**

Real-time monitoring of intelligence is quite an issue. Mostly they work with specific assignments or targeted groups/persons. For example: In case of terrorism it is important to monitor signs of radicalization or possible new modus operandi's. In order to do that they need to monitor real-time intelligence.

**Additional recommendations and remarks**

*An agreement to standardization within the discipline would be a positive move forward. As the first step towards unified approach we have to identify the most important areas for standardization :*

- Data privacy
- Data storage
- Software tooling

*In addition few very important aspects must be considered:*

- A need to have a common terminology and definitions: Clear definition of key terms
- A clear understanding of what laws should be applied regarding data privacy
- Duration of storage of data – common requirements must be defined
- The discipline is very new and the methodologies differ from country to country- unified approach must be defined.

*Solutions that have been proposed by participants of PG workshop:*

- Search for a tool that can be bought by EU LEA and plugged in very easily. It must be flexible/adjustable for each country. For example: the language needs to be adjustable. In case of open to closed source: This question can be forwarded to a juridical expert.
- Produce a manual, that is regularly updated, which explains what can be expected from internet research.
- Give the proper education to every LEA combined with the level they work with. Combined with a skill matrix perhaps. Make an inventory of all available courses/education and the content of that course/education

## 4. Mobility for Officers

State of the art in the field of Mobility for Officers in terms of standardisation and procurement				
<p>Mobility for officers is related with many type of products, solutions and technologies which for many years are standardised. Starting from cars and other vehicles, through different types of uniforms, ending with communications systems, all of these areas are in the process of standardisation done by many technical committees on national, European and global level. But still, there is a need for LEA engagement, which should be one of relevant stakeholders, taking part in the process of standardisation.</p> <p>Because most of the “Mobility for Officers” products are already standardised, they have big potential for joint procurement.</p>				
Recommendations on standardisation and procurement in the field of Mobility for Officers, concentrating on the ‘THOR’ dimensions ( <i>technical, human, organisational and regulatory</i> )				
	Practitioners needs and requirements (based on PG meeting report)	Standards recommendations	Legislative recommendations	Joint Procurement recommendations
1.	European data base for people identification	Unified system for all European LEAs with immediate access	EU law for all European LEAs, including unified data access and data base content	-
2.	Police smartphones enabling access to maps and police systems, with the possibility of creating official documentation (including protocols with electronic signature), which is sent directly into police servers immediately after creation. The goal of such system, which is used by	Unified operating system for all European LEAs, including the same electronic data protocol  <i>CEN/CLC/JTC 13 could be right place to discuss this issue.</i>	EU law for all European LEAs	Possibilities of international cooperation in procuring smartphones

	Yorkshire Police, is to remove the necessity of creating any kind of traditional „paper” documentation.			
3.	Unified on-line system dedicated for the contact and data transfer between the Police and Prosecutors and Courts.	„Cloud” data base with the aim of sharing process data between national LEAs and dedicated prosecutors/judges  Might be relevant: CEN TC 224 (Persona identification and related personal devices with secure element, systems, operations and privacy in a multi sectoral environment)	Internal law prescriptions regulating the question of official process documentation – leaving traditional paper acts, enhancing document sharing between Police and Prosecution	-
4.	Improved procedures of data exchange between European LEAs.	Easy data exchange (personal and vehicle data) between LEAs – direct („street level”) access to European data bases	EU law for all European LEAs	-
5.	Unified European legal prescriptions and procedures for all LEAs improving international cooperation and transborder Police operations.	Unified procedures for Police actions and operations involving international crimes and international operations	EU law for all European LEAs	-
6.	Body-worn cameras for the „first line” police officers	Potential for standardizing LEAs needs and share this information with body-worn camera producers. Also, potential for standardization of training	Common law regulations for LEA from EU Member States, defining the possibilities and restrictions for body-worn cameras	Potential for joint procuring of different kind of body-worn cameras

		and rules of use (kind of guideline)	(including especially GDPR)	
7.	Police vehicles	<p>Great potential for standardising police cars, basing of LEAs current needs related with using a lot of hard equipment (shields, helmets, weapon) and electronic equipment, which have to be stored and charged</p> <p><i>NATO standard database containing information on these topics might be helpful</i></p>	-	Many possibilities for joint procurement
8.	Drones for LEA	<p>Potential for standardizing LEAs needs and share this information with drone's producers. Also, potential for standardization of training and rules of use (kind of guideline)</p> <p>Might be relevant:</p> <ul style="list-style-type: none"> <li>- ISO/AWI 21895 (Categorization of civil unmanned aircraft systems)</li> <li>- ISO/CD 21384 (Unmanned aircraft systems)</li> </ul>	-	Many possibilities for joint procurement
<p><b>Recommendations for Pre-Commercial Procurement (PCP) / Public Procurement of Innovative solutions (PPI) / Fast Track for Innovation (FTI), regards to Mobility for Officers</b></p>				
<p>Taking into account that current drones and police vehicles to not meet all LEA expectations, it is recommended to develop these produces basing on PCP/PPI and FTI projects.</p>				

## 5. People Trafficking

### State of the art in the field of People Trafficking in terms of standardisation and procurement

People Trafficking is one of many types of crimes carried out by organised crime groups, and LEA's are using the same variety of tools and solutions, as in combating other types of crimes, for example wiretaps and other types of surveillance, face recognition system, mobile phone analysis, hard disk analysis, plates identification, internet crawlers, etc.

It should be mentioned here that two very important standards in area of Trafficking Human Beings (THB), were developed by the Dutch Standardisation Institute, these being, NEN 4400-1 and NEN 4400-2. (See below for more information about these standards in point 7).

### Recommendations on standardisation and procurement in the field of People Trafficking, concentrating on the 'THOR' dimensions (*technical, human, organisational and regulatory*)

	<b>Practitioners needs and requirements (based on PG meeting)</b>	<b>Standards recommendations</b>	<b>Legislative recommendations</b>	<b>Joint Procurement recommendations</b>
1.	Problems with finding interpreters and high costs of translation	Standardised procedures for translation based on videoconference systems (interpreter can be physically in different country during live translation)	Common law, allowing LEA and justice system in different EU countries to use interpreters service via videoconference system (interpreter physically can be in different country during live translation)	Joint procurement of interpreter's services. Or Common platform operated by EU institutions like Europol  Joint procurement of video conference tools
2.	Translation tools as a support during investigative operations	Standard that contains technical specifications to support such a translation tool (in terms of capabilities, type of use, etc.)	-	Possibility for joint procurement

3.	Information sharing platform – very fast communication between officers is needed	Terminology standard that forms the basis for fast and efficient communication (see point 8)	Could be linked with JITs (Joint Investigation Teams)	Designed and shared by Europol – or improved if already exists
4.	Standardized OSINT reports – easier to share information between LEA in different countries	Recommendations for OSINT tools vendors	-	-
5.	OSINT tools	-	-	All institutions are buying the same type of products. It makes sense to procure collectively to bring down costs – joint procurement is a good direction to go
6.	Forensic tools (computer and mobile phone data)	Standard that contains technical specifications to support such forensic tools (in terms of capabilities, type of use, etc.)	Harmonized law allowing LEA to recovery and analyse data in cloud storage solutions	All institutions are buying this kind of products. It makes sense to procure collectively to bring down costs – joint procurement is a good direction to go
7.	Face recognition systems	Standard that contains technical specifications to support/create 'state of the art' face recognition systems	Harmonized law specifying range and limits of using face recognition systems by LEA	All institutions are buying this kind of products. It makes sense to procure collectively to bring down costs – joint procurement is a good direction to go
8.	Common paragraphs for the penal code in area of human trafficking	Terminology standard that defines crime of people trafficking/THB etc., this must be agreed across the EU – all practitioners need to understand and talk about the same things	Standardisation of the definition of crime of people trafficking/THB, this must be agreed across the EU – all practitioners need to understand and talk about the same things	-

**Recommendations for Pre-Commercial Procurement (PCP) / Public Procurement of Innovative solutions (PPI) / Fast Track for Innovation (FTI), regards to People Trafficking**

- Forensic tools – develop software to enable recovery and analyse data from applications to communication (Viber, WhatsUp, etc.)
- Tools for translation, for investigation operations purposes

**Additional recommendations and remarks**

- Arrivals to the country could get SMS with information about potential THB risks
- Europol is developing Universal Message Format (UMF). It is part of standardization.
- Standardisation of training and certification in area of THB – could be a good idea. Potential role for CEPOL
- Dutch standards for companies-employers who hire temporary staff or outsource work: NEN 4400-1 and NEN 4400-2. It is a good solution to help mitigate THB crimes. Specific good practices related to the standard:
  - Black list for companies which hire illegal employees and are involved in THB
  - White list for those employers who fulfil the criteria and have a standard for hiring workers
  - Standardization means reliability!

It should be analysed possibilities of developing CEN or ISO standard based on NEN 4400. If practitioners from at least 5 European countries decide to start the process of developing this European standard, i-Lead's WP4 can support them at the initial phase.
- Having an on-line platform for identifying what type of equipment is being bought or how to use it – this could be something that I-LEAD could facilitate. In the UK, equipment such as body worn cameras, is put into the government website for LEAs.

## 6. Intelligence Analysis

State of the art in the field of Intelligence Analysis in terms of standardization and procurement				
No specific and valuable information was discovered.				
Recommendations on standardisation and procurement in the field of Intelligence Analysis, concentrating on the 'THOR' dimensions ( <i>technical, human, organisational and regulatory</i> )				
	Practitioners needs and requirements (based on PG meeting)	Standards recommendations	Legislative recommendations	Joint Procurement recommendations
1.	Standardized digital template for banks and other financial institutions	Recommendations for banks and financial institutions to use the same digital templates when they send data to LEA	Legislation obliges banks and other financial institutions to send data to LEA in digital form, using standardized template.	-
2.	Data retention	-	It could be considered to define the same data retention period in all EU member states.	-
3.	Common European data base with standardized reports.	Would be easier if LEA from Member States have access to one European data base containing all relevant standardized reports.	-	-
4.	Trainings	Develop standardized concept of trainings for intelligence analysts with common definitions,	-	-

		guidelines and analyst's role profiles (potential role for CEPOL).		
5.	Intelligence Analysis tools	-	-	All LEA are procuring the same tools. Great potential for joint procurement. Easy way to make joint technical and functional/operational specification.
6.	Standardisation of Analytical Products	A set of user specific requirements should be developed and used to ensure that practitioners needs fit for purpose technological solutions for developing analytical products	There is a strong need of involvement of all EU countries and also EUROPOL in creating a European framework for Intelligence Analysis.	
7.	Common criminal law	-	Common criminal law would make international cooperation between LEA much easier	-
<p><b>Recommendations for Pre-Commercial Procurement (PCP) / Public Procurement of Innovative solutions (PPI) / Fast Track for Innovation (FTI), regards to Intelligence Analysis</b></p> <ul style="list-style-type: none"> <li>It is a potential for developing better intelligence analytical tools, predicting crimes</li> </ul>				

### Additional recommendations and remarks

- 1) Novel Actionable Information will be one of the topics conducted by Romanian EU Presidency (first half of 2019). This subject will be focused on three main pillars: technology, mobility and intelligence analysis, having the purpose of focusing on actionable information. It is essential to continue a working process of defining necessary technologies of police force working in the street and to create tools for receiving necessary information in the right time, in order to have a successful intervention in any given case.
- 2) Practitioners consider that a standardisation for a unitary model for financial information is extremely important in order to enhance the analytical process and the outcomes of it.
- 3) It could be a webpage, for ex. ENLETS, with updated information about current obligatory period of time data retention in all EU Member States (in some cases Police wouldn't ask LEA from different country for data, if they know that in X country data is not stored for so long; or Police would know to hurry if they need data from X country).
- 4) Intelligence Analysis tools can be chosen for i-Lead's task 4.3, where exercise based on preparation of joint technical and functional/operational specification for procurement purposes will be done.
- 5) Role profiles for intelligence analysts are defined/standardised in UK. College of Policing provides a breakdown of the occupational standards for specific role profiles: Analyst, Senior Intelligence Analyst, Head of Intelligence Analysis, Intelligence Researcher. Description of these profiles could be a reference point for LEA from different countries. More information about the products and techniques used by Intelligence Analysts in the UK: <https://www.app.college.police.uk/app-content/intelligence-management/analysis/>
- 6) Regarding to training needs, in first half of 2018 CEPOL organised training titled: "Strategic intelligence analysis". More information at: <https://www.cepola.europa.eu/education-training/what-we-teach/residential-activities/762018-strategic-intelligence-analysis>  
Important to highlight, that above training is not for operational intelligence analytics. Strategic intelligence analysis are more for policy and decision makers.

## 7. Forensic DNA

### State of the art in the field Forensic DNA in terms of standardization and procurement

The field of Forensic DNA is well standardized. The most essential standards are:

- **ISO/IEC 17020:2012**, reviewed and confirmed in 2017: *Conformity assessment - Requirements for the operation of various types of bodies performing inspection*
  - Specifies requirements for the competence of bodies performing inspection and for the impartiality and consistency of their inspection activities.
- **ISO/IEC 17025: Testing and calibration laboratories**
  - Enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and around the world. It also helps facilitate cooperation between laboratories and other bodies by generating wider acceptance of results between countries. Test reports and certificates can be accepted from one country to another without the need for further testing, which, in turn, improves international trade.
- **ISO 18385:2016: Minimizing the risk of human DNA contamination in products used to collect, store and analyze biological material for forensic purposes - Requirements**
  - Specifies requirements for the production of products used in the collection, storage, and analysis of biological material for forensic DNA purposes, but not those consumables and reagents used in post-amplification analysis.
  - The consumables and reagents covered by this International Standard include those used for evidence collection (sampling kits), such as swabs, containers, and packaging, and also products used in the analysis of DNA samples, such as tubes and other plasticware, disposable laboratory coats, gloves, and other consumables.
  - Specifies a requirement for manufacturers to minimize the risk of occurrence of detectable human nuclear DNA contamination in products used by the global forensic community.
- **ISO/IEC 19785 series: Common Biometric Exchange Formats Framework**
- **ISO/IEC 19794 series: Biometric data interchange formats**

*No specific and valuable information regarding procurement was discovered.*

**Recommendations on standardisation and procurement in the field of Forensic DNA, concentrating on the 'THOR' dimensions (technical, human, organisational and regulatory)**

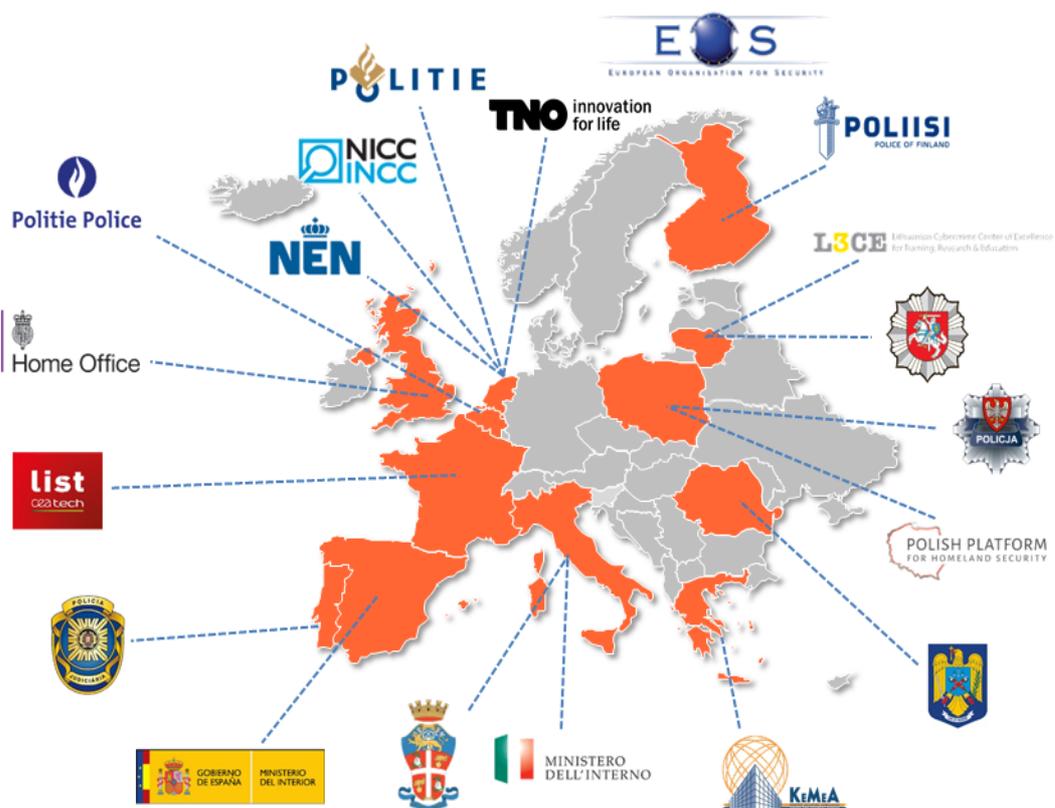
	<b>Practitioners needs and requirements (based on PG meeting)</b>	<b>Standards recommendations</b>	<b>Legislative recommendations</b>	<b>Joint Procurement recommendations</b>
1.	Elimination database	Recommendations for the requirements for an elimination database.	EU legislation should be established to develop and deploy a mandatory elimination database for DNA.	-
2.	Clear forensic regulation	-	European regulations for forensics should be clearer to avoid different interpretations.	-
3.	Common European database for DNA information	Would be easier if LEA from Member States have access to one European database containing all relevant DNA information.	EU legislation for the centralized DNA database should be established.	Centralized procurement of common European database.
4.	Information exchange	-	Legislation for cross-border DNA information exchange should be established. The legislation should state what information can be given, used and retained.	-
5.	Compatibility with other IT solutions	Standard data interfaces between IT solutions.	-	-
6.	User-friendly, open-source, user-driven software for laboratories	Standard data interfaces between IT solutions.	-	Centralized development and procurement of laboratory software.
7.	Best practice manual	Manual for the best practices in the European countries.	-	-
8.	Training database	DNA training work packages exist but no-one really knows what training is out there. A common training database would	-	-

		gather the relevant trainings in one place.		
<b>Recommendations for Pre-Commercial Procurement (PCP) / Public Procurement of Innovative Solutions (PPI) / Fast-Track to Innovation (FTI), regards to Forensic DNA</b>				
<ul style="list-style-type: none"> <li>• According to FBI, <i>Rapid DNA</i>, or <i>Rapid DNA analysis</i>, is a term used to describe the fully automated (hands free) process of developing a DNA profile from a reference sample buccal (cheek) swab without human intervention. The aim is to generate a DNA ID to identify an individual quickly (less than 2 hours). There already are rapid DNA technologies on the market but their accuracy is still premature. There could be room for R&amp;D efforts between the LEAs and the industry for example in FTI.</li> <li>• Vendor lock-in is an actual threat in forensic DNA and should be avoided. This could be done by collaborating with several vendors in R&amp;D as well as in deployment of technology.</li> <li>• Vendor lock-in can also be avoided by joint procurement framework agreement with several vendors.</li> </ul>				
<b>Additional recommendations and remarks</b>				
Do not applicable				



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