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NOTE

From: Presidency
To: Law Enforcement Working Party

Subject: Best practices in mobile solutions for law enforcement practitioners
- report by ENLETS

At its last meeting on 21 April 2017, the LEWP invited ENLETS to provide a compilation of best practices in relation to mobile solutions for practitioners, as stipulated in the implementation part of document 7483/17, in the context of the implementation of Action 4B of the Roadmap on Information Exchange and Information Management.

The outcome of ENLETS' work is set out in the document in the Annex to this note.

The LEWP is invited to consider the recommendations made by ENLETS in the document.



European Network of Law Enforcement Technology Services

ENLETS Report

on

Best practices in mobile solutions for law enforcement practitioners

11 June 2017

<i>Document Name</i>	ENLETS Report on Best Practices in mobile solutions for law enforcement practitioners
<i>File Name</i>	2017-06-11 LEWP ENLETS Mobile Report
<i>Author</i>	ENLETS, including ENLETS Mobile forerunner group
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Executive Summary

Mobile technology

Technology change can be **incremental**—a bit smaller, a bit better, a bit faster; or **disruptive**, delivering a completely different capability.

Mobile technology such as smartphones and tablets are transforming our lives. Widely popular for internet access, social media, video streaming and photographs, it has been maturing with the addition of biometrics, encryption, and secure authentication of the mobile device. Mobile communications are improving and 5G networks offering high-speed mobile broadband will become a reality from around 2020. Mobile solutions are now a serious form of secure, main-stream computing, giving flexible, real-time integration with conventional central systems.

In the **law enforcement context** such as policing and border security, this has major potential to allow mobile officers to continue to use IT systems they depend on, on the move and on the operational front-line. Potential advantages include greatly improved accuracy and speed of identification and access to relevant information; and a ‘one-stop shop’ capability to input complete transactions to core IT systems, with proper verification of data, from the front-line; and greater visibility of police patrols with less time spent in the police station.

LEWP and ENLETS

The Law Enforcement Working Party invited the European Network of Law Enforcement Technology Services (ENLETS) to study the best practices in mobile solutions. This report explains that over the recent years, the implementation of mobile solutions have been a continuing focus, in which best practices and lessons learned are available and are shared among participants in the ENLETS Mobile group. These best practices address strategy, business process and project management more than they do the choice of what kind of mobile devices might be used.

The document portrays the ongoing exchange of best practices within the ENLETS Mobile group. ENLETS Mobile has, particularly through the engagement with law enforcement practitioners, industry and others a clear view on the progress on the development of this new generation of technology as demanded in the Council Conclusions on ENLETS.

The report reflects positive and on-going discussion with both EUROPOL and eu-LISA. EUROPOL supports creating a connected and sensible collective view on how move forward together to facilitate mobile communications in the law enforcement domain.

Europol opinion is that legality of data processing, the proper logging and recording of communication, the adherence to security standards and anticipating a level of scalability that allows for sustainable growth are key points to address. eu-Lisa recognizes the added value and is willing to support the implementation of such a system, if asked.

The work in ENLETS Mobile has been made possible by the European Commission's support for ENLETS EDBP and ESTP programme, ending in February 2018.

A turning point

A turning point has been reached where the police can deploy mobile solutions for **most or all** of their operational police officers and work processes. Mobile technology is now a disruptive force for reform—a **game-changer** for the police. This report is therefore a **wake-up call** to law enforcement services to consider how they can take advantage of this step-change... or allow themselves to fall behind.

The report contains **good practice advice and lessons learned** drawn from experts in the group, learned from successful mobile implementation in law enforcement. We emphasise the importance of a **coherent National and European strategy of mobile solutions** to enhance the interoperability in the European Union. A big difference currently exists between leading Member States and services fully implementing mobile solutions, and those beginning the journey. We are keen to promote **interoperability** between services, particularly to support cross-border operations.

Recommendations

The report makes 3 main recommendations for the Law Enforcement Working Party (LEWP).

The first two ask LEWP to not the progress being made and asks that support for this should continue at this important time.

The third recommendation invites LEWP to support consideration with eu-LISA of an initiative for secure mobile communication between MSs to support better cross-border operations including covert work. This is made with reference to:

- the report of the High-Level Expert Group on Information Systems and Interoperability (8434/1/17 REV 1);
- the draft Council Conclusions on the way forward to improve information exchange and ensure the interoperability of EU information systems; and
- the foreseen update of the Roadmap to enhance information exchange and information management including interoperability solutions in the Justice and Home Affairs and all other relevant actions contributing to the guidance Roadmap.

This report contains:

- Defining “mobile solutions”
- An overview of the developments in mobile policing
- Strategic transformation from mobile solutions: the information shift (Table 1)
- Lessons learned
- Critical issues
- Recommendations to improve the implementation of mobile solutions and to enhance the interoperability in Europe
- An overview of existing solutions in the member states (Table 2).

Defining Mobile Solutions

Mobile Solutions for law enforcement are information tools that are available to officers to be used independent of time or place. Generally they are made available on wearable (smartphones or smartwatches etc.) or portable devices (such as tablets and laptops)

Currently three levels of development (or combinations thereof) can be seen in law enforcement use.

A: access to PIM (personal information management) systems (email and schedule).

B: pull access (type request, get answer) to National or International databases relevant for policing

C: a more advanced set of functionalities in which the properties of the device are being combined with information from its owner or from background databases to produce more relevant or better information. Often the data generated is then available to be used in follow up processes that can be completed on the device itself. For instance, the phone is being used to scan a document, extract the data, and verify the data in background systems. The result can be used to “write” a traffic fine on the device.

Options in which only functionality as described under A and B is implemented still exist but are gradually being replaced by C. This report focuses on the state of play in different member states as defined under option C.

Developments in mobile policing

Mobile technology is exploding. The use of the smart devices in everyday life has changed what we do and how we do it. This unprecedented scale of change will continue to evolve, even though the use of the smartphone as the centre device may soon be replaced by other techniques, less dependent on screen and keyboard interaction. These changes have made our lives different by speeding up things we do, and by making it possible to do them independently of location or time.

Our lives have primarily changed because we can now do things we never even thought of before this technology became cheap and available. New things are now possible, creating completely new opportunities as well as new risks.

We see the same changes happening in policing: at the basis of our decision to adopt mobile solutions in policing and border control on a large scale lies the realization that this is game changing technology.

In the experience of the fore runners of ENLETS Mobile group members, the introduction of mobile technology in policing offers a huge opportunity for radical improvement. The impact of this technology on the organization of policing in modern society will be enormous. Not just because we will be able to do the old things faster and more efficiently, but because we will be able to do completely new things.

To do nothing is not an option, if only because officers are “en masse” adopting their own solutions on their own smartphones, using commercial solutions like Whatsapp and Dropbox to provide for the tools their organization does not give them. Leaving the organization no longer in charge of its own information, creating other completely new risks.

Experience with police forces represented in ENLETS Mobile shows extremely positive approval of well-designed mobile solutions. Particularly the new generation of younger officers entering service expect to be provided with modern technology that they can use actively on the ‘front-line’.

Conversely, seeing technology make major advances that do not include their police experience is highly de-motivating, particularly for the most talented officers.

In view of this a number of countries have already made strategic decisions as to the level of integration of mobile technology in policing. From relatively small first steps, involving limited functionality, to the strategic decision that the primary workspace of the police officer will be the mobile workspace, and that fixed workspace solutions will only be available for tasks that have proven to be unsuitable for mobile devices.

On a national level clear and unambiguous strategic decisions as to the position and priority of the development of a mobile infrastructure for policing are essential.

On a European level it is also clear that the primary access to security and border related data will be through mobile devices. The shift from desktop to location independent, direct, operational use dictates new rules for the way national and European systems function. This will strongly influence the usage of databases as currently being reviewed by the High Level expert group

The fact for instance that member states have not implemented Eucaris in the same way will lead to new frustration when officers are able to scan license plates with their phones (as is now possible) only to find that for some countries urgently needed, personal security related info is available within seconds, while not for others. Also, having to wait thirty seconds for an answer is acceptable behind a desk, but not when in direct contact with a suspect on the street.

This shift to direct, hands-on information in any form will put extra focus on the need to synchronize between member states.

Effective cross border operations depend on a seamless, continuous flow of information, regardless of location, time, countries or teams involved. That, in itself is a challenge, and the challenge is now bigger because it needs to be supported by respective mobile solutions in use in member states.

Currently that is not possible, as the recent ENLETS Smurfer cross-border exercise painfully showed. Members states were not able to exchange data (such as photo, video and live chats) in the exercise. With a continuous terrorist threat on Europe direct exchange of information is needed. Especially when a terrorist “on the run” crosses borders being chased by the police.

Strategic Transformation

In policing the accepted use of mobile technology has until recently been to use the mobile device to access legacy police systems and to obtain information. Type something, wait, get an answer.

That is changing.

First, because the number of sources of highly relevant information is rapidly increasing. Social media, multimedia, Internet of Things, trackers and tracers, inter officer chat, a number of new sources are now (becoming) available to officers, without the direct need for back office intervention.

Second, because the old "pull" concept of typing in a question and waiting for an answer from a background system is disappearing. Smartphones have sensors, they know who you are, what your skills are, your preferences, your tasks, whether you are walking, running or driving, they know where you are and what is relevant there. They can recognize faces, voices and fingerprints. They are able to combine all that data into context relevant information and provide you with it at the right time, or the right location. Without being asked for it.

We are rapidly going towards a situation in which there will be a symbiotic relationship between a user (policeman) and his wearable devices, in which the device acts on sensor data to constantly provide the officer with relevant, made to measure information from the sources mentioned above, and many others yet to come.

This facilitates, even necessitates, a wholly different approach to the design of mobile solutions, but also a new way of looking at the organization of policing.

Experiences in the fore runner countries show that a firm and coherent strategy must be in place to successfully implement mobile solutions, as well as adherence to best practices that are described in

Table 1, below.

Table 1—What is Strategic Mobile Transformation?

Topic	Where we are now	Where this leads us in the future
1. Use of mobile solutions by police officers	Limited pilots / specific purposes, or none. Maybe no more than to 10% of officers using mobile devices.	Broad application to 90%+ of core operational activity; most officers carrying mobile IT as a standard part of front-line policing.
2. Access to supporting IT systems in the infrastructure	Limited, specific purpose, resulting from tactical initiatives.	Extensive, strategic use: all / most IT systems well integrated with the officer’s mobile device.
3. Business benefits	Very limited because of limited functionality, access to backing systems and limited take up by users.	Game-changer for operational policing: real-time access to identification, answers to searches, validation of data being input, creating more accurate input to core systems: live access.
4. Information push or pull?	Pull technology only: if the officer asks a question or makes a search, an answer may be available.	Push and pull—the system will frequently prompt the officer with smart information that is highly relevant to where he is, what he is doing, who the officer is talking to, but that he/she wouldn’t know to ask about.
5. Where is my primary IT?	On a conventional PC desktop in the police station. Elsewhere, service is significantly poorer.	On a small mobile device (e.g. smartphone) carried with the officer. Can be used in the street, in a police vehicle, in an office.
6. How does my mobile device communicate?	3G or 4G using a commercial network—coverage will vary and is likely to be incomplete, therefore often interrupted.	3G, 4G and (from 2020?) 5G mobile high-speed broadband. Coverage greatly improved with critical networks delivering data as well as voice.

Mobile solutions: lessons learned

In designing and building mobile solutions mobile solutions member states have found that a number of best practices should be considered. Some, the most important, are described below.

Create new processes, not quicker paper.

Many current policing procedures were developed in a time where paper and pen were the technique used to organize work. This now often leads to an approach of mobile policing in which the forms of yesterday are being digitized: paper is being put behind glass, preferably on tablets as their size factor is more recognizable and familiar. This works, of course, but it is manually intensive and therefore suboptimal.

Mobile technology gives you the opportunity to completely redesign and optimize your processes.

In doing this you will of course find that this affects all connected processes, workflows, protocols, support structures etc. Changes made to the back office will allow optimal use of the opportunities that present themselves. Not only in your organization, but also in all organizations that you interact with. This will increase complexity of realization, but also increases the benefits of change hugely. Implementing a mobile functionality for writing traffic tickets and continuing to use paper by printing the result as a handout is an anachronism.

Furthermore, the focus on tablets for front line policing should be reconsidered: tablets are relatively clumsy, require two hands, experience shows officers tend to not always carry them with them. Their screen size leads to digital forms, where designing for a smart phone requires process redesign and clever interaction solutions. Officers never leave their smartphone behind: the result is much better process coverage, smarter solutions, and higher quality in input.

Quality first

A major opportunity lies in the fact that mobile technology allows for the introduction of extensive quality enhancing measures in operational policing. There should be a constant check on the validity or completeness of the input, on legality of actions taken. Context relevant best practices can be suggested by the device. This is the real benefit of mobile policing: standardization and optimization of best practices and procedures where it has until now been extremely difficult to achieve: at the operational level, on the beat. It is also a major factor in combatting data quality problems: careful design of the user-device interaction right at the start of the process has the potential to remedy a large part of the problem. For this reason some countries are now focusing on thorough ID checks as a mandatory first step in any process. Through dedicated mobile functionality, by using the device as a ID document scanner to prevent data entering errors, by always verifying scanned data from ID documents in background systems and automatically inserting verified data in processes. The results show much higher quality and a reduced need for standard, costly error correcting at a later stage in the chain.

Mobile devices also offer huge opportunities to standardize work. Fore runner countries find that the use of the smart device as the primary access to information and follow up work, combined with a generic, consistent interface designed on the basis of accepted best practices in policing is a deciding factor in achieving a much higher level of quality.

Applications should be designed so that standardization and quality control is an integral part of their workings

Designing

Mobile solutions for policing are not primarily about buying devices and building apps. They are about behaviour, about how police officers work more effective and efficient, about the way their best practices in work define the tools they use and not the other way around. Designing and building adequate solutions requires a lot of hands on knowledge of policing, and it requires constant attention to how this knowledge is translated into device-user interaction. Trying to define this in exhaustive sets of specs at the start of a program has shown to be impossible.

This is an ongoing iterative activity in which there is constant interaction between experienced officers and designers/programmers.

Police officers should be in the lead as product owners when designing, building and testing. Experience in ENLETS Mobile has consistently shown the importance of joint involvement of experienced operational users in the project team, working with technical staff.

Security

Security is not what prevents mobile solutions, it is what makes mobile solutions possible. There is no absolute security, nor should you strive for it. There is only acceptable security. Always a compromise is necessary between what is necessary in functionality and what is acceptable in terms of risks. That is never a technical decision: it is a business responsibility to weigh benefits and risks and decide on acceptability of security risks. Furthermore, user behaviour appears clearly to be the deciding factor, as conscious and unconscious choices in everyday police use show. In the end a system that combines technology and behaviour-focused methods to achieve the best possible compromise is called for, together with the strategic decision to accept cost-benefit assessment that comes with it. Privacy is also closely related to security: new mobile solutions should embody the principle of privacy by design.

Organizing the work

Absolutely crucial to a successful implementation of mobile technology is the organization of the work. Implementing mobile solutions in policing on a large scale is a major undertaking. As described, it involves an integral change process on most aspects of the organization and as such strategic level priority is called for.

It is therefore never an IT project: it is an undertaking of profound organisational change (given: with an important IT component). Put the business in charge, IT in the supplier role. It is essential to have a senior police officer with the right skills and experience, and a strong mandate, in charge. This, together with real engagement of operational officers who have meaningful influence over the design, is the way to ensure that the end-product is seen by operational users as really being fit for purpose.

Designing and building, testing and implementing mobile solutions requires optimal flexibility, as it will be next to impossible to define definite specs. Technology is changing constantly. Operational life of solutions is relatively short. This calls for small, frequent steps, with full participation of users and constant operational testing of new functionality, however small. It requires agility, flexibility, taking risks while at the same time minimizing them. Small steps mean small risks.

The focus should not be on the perfect **plan**, but on the perfect **team** and the strategic backing it gets.

ENLETS Experience shows the importance of an **evolutionary** approach to successful mobile programmes: agile development and frequent prototyping and confirmation of designs with front-line users.

Search

Having a federated search facility is crucial to the future of mobile technology in the organisation. As mobile use increases, data sources and breadth of solutions will also increase. So a simple universal search facility, like a Google search, is better than having to select different transactions to search vehicles, persons, locations or objects, etc. The officer to receive answers that automatically respond to the context. The potential for speech to text input, and text to speech output, may allow the officer to receive results of searches while in pursuit of a vehicle.

Critical issues

Having identified that operational actors involved in cross-border surveillance and covert operations lack technical tools that enable efficient and effective bilateral and group messaging, exchange of photos, videos and/or documents or tracking of the important movements of people, goods or vehicles, the group considered various approaches to addressing the gap. Solutions available on the market and others could be put in place by dedicated development teams given appropriate time and resources. The group noted that the most critical aspect in the deployment of any solution thus available was its operation by a capable centralized authority which could provide 24/7 services to establish, dissolve and modify user groups to meet the needs of frequently changing operations, provide possibilities for use by all Member States no matter what mobile solutions they have in place or what systems they have already developed (i.e. to avoid each Member State having to procure the chosen solution by itself) and operate the servers and networks through which data would flow in a neutral manner.

eu-LISA, the European Agency for the Operational Management of Large-scale IT systems in the Area of Freedom, Security and Justice is considered a possible candidate to implement and operate such a system given that it already acts as a trusted IT system operator for all Member States and offers the expertise, capabilities and structures necessary for delivering and evolving the services foreseen. As mandate limitations appear to limit the Agency's possibility to develop any such system, the ENLETS mobile group requests update of this mandate at the earliest possible opportunity, offering the chance to develop a mission-critical application usable by all Member States once suitable resources are made available.

Recommendation

ENLETS Mobile has shown the operational and strategic value of practitioners discussing mobile solutions and topical developments. It is essential to treat this development as valuable source of relevant information for strategic decision making. Furthermore, it is a thriving network which is widely used also outside formal meetings and in this way it actively promotes cross border cooperation on this highly relevant area of expertise.

It is therefore **recommended** that LEWP:

- **Notes** the progress that is being made with the development of mobile solutions for law enforcement services; the importance that this should continue to receive active encouragement and support; and the important role of leading innovators, the ENLETS Mobile subgroup and the broader ENLETS working group in assisting with this collective effort in Europe.
- **Agrees** to the continued tasking of ENLETS Mobile, and ENLETS, building on the existing work and experiences of practitioners, to support the effective application of mobile technology by European law enforcement by providing human and financial resources for ENLETS Mobile. The work should include continuing the European exchange of experience, good practice and assistance; and the use the opportunities that ENLETS Mobile offers for aligned procurement and development to assist the member states.

- **Requests** that ENLETS / ENLETS Mobile explores urgently with eu-LISA the possibility of establishing a European 24/7 centralised infrastructure for bilateral exchange in operations / secure messaging, as provisionally discussed at the most recent meeting of ENLETS Mobile in May 2017 in Athens.

Patrick Padding, Core Group Co-ordinator, ENLETS

Frank Smith, Chair, ENLETS Mobile subgroup

Table 2—Examples of mobile solutions from ENLETS Mobile

This table summarises mobile solutions as presented to recent meetings of ENLETS Mobile or reported in a recent ENLETS survey, (a) for **police** and related systems (including eu-LISA); and (b) **borders**, including immigration enforcement.

Member State and function	Description	Remarks
POLICE		
Netherlands	MEOS: smartphone for 50,000 officers in National Police of NL	Positive experience with police over 2 years—wide functionality, connects to 20+ support IT systems
Sweden	Smartphone for 27,000 police	Similar, covering most officers and extending range of functionality
Norway	Smartphone for 11,000 police	Recent rollout to most police after national restructuring
Denmark	Smartphone for 10,000 police	Deployed to all police after pilot with sample apps (e.g. burglary reports)
Germany (Hamburg)	1,400 smartphones + pilot link to patrol cars. Will be deployed for G20 conference in July 2017	Person and casework information, and secure inter-agency communications. Drive to reduce paper. Working with other German police + NL police (MEOS)
Estonia	Recent mobile service. 200 units deployed	Map + text-based search:
Slovenia	ePolicist (ePoliceman) app (150 devices)	Mobile service using shared devices
Ireland	Mobile programme within police reform	Part of extensive reform plan: mobile has a key role
Finland	Police vehicles with IT, camera, radar, etc.	Dispersed terrain makes vehicle-based mobile police stations a good solution

Member State and function	Description	Remarks
UK (43 forces)	43 local police forces: several systems in use. Example: 6,000 in West Yorkshire Police	Several large mobile rollouts. Plan to share more experience between UK police forces?
Greece	Smart Policing Project launched: will use mobiles	New plan to build similar solution: ENLETS Mobile experts will help
Romania	SisPol 2 project launched: will use over 650 handheld units	Plan to build similar solution: ENLETS Mobile experts will help
Bulgaria	760 tablets deployed for Traffic Police	Email, ID search, penalty tickets, connected by 3G/4G. Roadmaps follow; more tablets will be rolled out.
Italy	400 units for Italian Police. Strategy under development	Email, identity, search, penalties, control room comms / hi-res video
eu-LISA	Early discussion on interoperability (comms)	Discussion at Athens meeting May 2017 re. x-border police ops + co-operation

Continued / **Borders...**

Table 2 (continued)... Border Control / Immigration Enforcement

Member State and function	Description	Remarks
BORDERS		
Poland, Finland	On-train border control	Long experience on Russian / Schengen land border; updating to new tech.
eu-LISA / FRONTEX	Interoperability for migrant enrolment	Interest in enabling MSs to share officers to assist in receiving large migrant flows
UK Enforcement	Mobile fingerprint capability since 2002	2010 version to be upgraded on new UK critical communications network
Italy	Planning new project	Proposal for new border mobile solution

