Presentation on the Commission's Technical Study on Smart Borders

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The Commission completed its Technical Study on Smart Borders in October 2014. We have already presented the outcomes of the main part of study to the LIBE Committee on 16 October; the Cost chapter was presented in December, and further informal technical meetings on certain aspects of the study took place since then. The entire study (in total over 600 pages) is also available online.

As you know the Technical Study represents the first step of the so-called 'proof of concept' that was agreed with co-legislators in February 2014. The second step is the 'testing phase' on which will come to speak later.

During the discussions on the 2013 Commission Smart Borders proposals both Council and EP raised technical, operational and cost-related questions, and the objective of the Study was provide answers where possible. It addresses four clusters of issues: (1) architecture of the system, (2) biometrics to be used, (3) data aspects and (4) the impacts on border processes. A fifth issue – costs – is cross-cutting.

(1) Architecture

One system

The 2013 Commission Smart Borders proposals presented the Entry-Exit System (EES) and the Registered Travellers Programme (RTP) as two separated systems without direct interaction between them.

The study demonstrates that it is preferable to build **one single system** with both EES and RTP functionalities. This decreases the development and operation costs, avoids the duplication of travellers' personal data, and reduces the impact on national systems.

Building one single system is cheaper than two separate ones (as already indicated in the 2013 proposals). The difference is considerable: about **€49 m** over 4 years.

Link with VIS

Another issue the Study looked into is about the links between such single EES/RTP system on the one hand, and the Visa Information System (VIS) on the other hand.

The first thing to mention is that – as was already foreseen in the 2013 proposals – EES/RTP and VIS will be served by **a common Biometric Matching System** (BMS). Secondly, EES/RTP should in any case have the **possibility to query VIS** to verify if the traveller has a valid visa. This means that, whatever architectural option is chosen, the system will be able to 'talk' to each other.

When it comes to **the actual architecture of the systems**, three options were analysed: (i) EES/RTP independent from the VIS, (ii) EES/RTP integrated with the VIS, (iii) EES/RTP independent from the VIS but reusing some VIS elements, and working towards a gradual integration. The Study concludes that the last option is the preferred one.

The first option (EES/RTP independent from VIS) is not good because it implies a duplication of capabilities and data flows.

The second option (EES/RTP fully and immediately integrated with VIS) has its supporters, but is in our view not without risks. To link up a new system to an already up and running VIS system, which is operational across 30 countries and has very high 24/7 requirements on availability, will have serious impacts on MS systems and MS organisation. The problem is not at the central level, but it is indeed about the operational risks. This is one of the lessons that were learned – at a price – with the development of the SIS, and we should not ignore this.

The third, and as said preferred, option would be the one where we would re-use certain elements from VIS. Such approach is safer and would (despite of the higher development costs) be far cheaper than the second option.

Link with national EES

A last issue to be mentioned under 'architecture' is the link with national systems. Thirteen Member States are already using a national system comparable to the EES. These MS have, mainly for costs and organisational reasons, requested that their existing national systems will be integrated in the future EES/RTP. The Study proposes to do so through a so-called '**National Unique Interface'** that would be developed centrally and would allow the integration of the existing national EES while at the same time providing all the necessary functionalities to those MS that do not have a national system.

(2) Biometric identifier

The 2013 Commission proposals mention fingerprints as the sole biometric identifier (10 fingerprints for the EES and 4 fingerprints for the RTP), in line with the acquis on VIS, e-passports and residence permits.

Given the technical progress in the field of biometry and the practical problems of enrolling a high number of fingerprints notably at land borders, the Study looked into options to reduce the number of fingerprints recorded in the systems, without compromising security. It considered three main options

- fingerprints alone,
- photo / facial image alone,
- combination of fingerprints and facial image

The Study concludes – not surprisingly – that more fingerprints **enrolled** allow for better verification and identification performances, but may also lead to delays for passengers and border-guards.

Once biometric information is enrolled in the system, for **verifications** (1:1) one fingerprint or a good quality facial image is enough.

If one would choose to perform **identifications in real time at the borders,** one requires (at least some) fingerprints.

Both for verification and identification a **combination** of fingerprints and facial image gives the best results (in terms of speed versus accuracy).

Considering that the main objective of the Smart Borders package is to improve the management of the external borders, the use of facial image as biometric identifier, alone or in combination with a limited number of fingerprints will be sufficient.

Looking at this issue from the cost perspective it appears that the scenario using only Facial Image (without FP) is the cheapest. Some **€23m** less than the 10FP scenario.

(3) Data

Data retention

In the 2013 Commission proposals the data retention period proposed for each entry-exit record is up to six months (*for overstayers: 5 years after the end of the authorised stay*). For RTP, the proposed data retention period is 5 years after the expiry date of the RTP status.

The study shows that a better alignment of the retention periods for the two systems is appropriate. For EES, the retention period is considered as very short. It does not take into account the requirements of the border control process. If records of previous stay are deleted very quickly it means that travellers have to re-enrol more often. It would also mean that border guards can only see a very short period of the travellers travel history. Just to recall: in the current situation with stamped passports border guards can reconstruct up several years of travel history when looking at the passport of the person that stands in front of them ...

Dataset

As regards the dataset necessary for the functioning of EES the Study concludes that it could be smaller than initially proposed. Instead of the 36 items mentioned in the 2013 proposals, 26 items would suffice for EES. For RTP the proposed number of 33 items remains unchanged. A smaller dataset means less data to store and faster border crossing times.

LEA

Still under the heading of data, let me also briefly refer to the discussion on **Law Enforcement Access.** Obviously, the study has not looked into the political aspects of this issue, but it did calculate what it would cost to make the system useful for law-enforcement authorities.

It appears that the additional software and hardware cost (mainly for searches based on latent FP) are not very high. Development cost are some €2,5 m. Yearly maintenance and operation costs €0,2 m.

However LEA is of limited interest if the EES data retention is only 90 days after the last exit (as foreseen in the current legal proposal). The IA of the 2013 proposals recommended that, **if** law enforcement authorities would be granted access to EES, a 5 years data retention period would be appropriate. The Study calculated that the development cost of such extension would be €32 m and the yearly maintenance cost and operation would be over €9 m.

(4) **Border control process**

The Study also looked into the practical terms and constraints of enrolling biometrics at various borders. It is clear that **general conditions are not the same at air, sea and land borders** and they also differ at each specific Schengen border crossing point. The future system should be **suitable for all circumstances**. This is again a specific point of attention for the testing phase.

There are many elements that affect the time delays at the borders. I already mentioned the fundamental importance of the choice of biometric identifiers, and the fact that

delays will be shortest if we minimise the data needed for first entry registration. We should also ensure the re-use of existing VIS data and biometrics (for TCNVHs). The use of biometric passports should be maximised. And so-called process accelerators should be used as much as possible. 'Pre-border registration', through self-service kiosks before the actual border check, is very important in this context.

The Study proposes an alternative application process for the RTP that could limit the additional resources needed at MS level for dealing with RTP applications. The idea is to allow people that are already registered in the EES to apply on-line for RT status, while using the data that is already in EES. This option does not have a significant financial impact on the central level, but would also lead to important savings at the national level.

The 2013 Commission proposals also include the notion of a separate RTP 'token', which would be required to benefit from the system. The study concludes that the introduction of such a token is not necessary and that the same objectives could be reached by using the Machine Readable Zone (MRZ) of the electronic passport. Dropping the token brings a financial saving of **€15m** for the system, as compared to the 2013 proposals.

Final word on costs

The study assessed whether the budget allocated for the SB project package in the **MFF** 2014-2020 **(€791 m**) are sufficient to cover the estimated costs. The answer is positive. T**hree years of development (from 2017 to 2019) and one year of operations (2020), w**ith the 2013 proposals as the baseline scenario, would cost some €430m. Extrapolating to **a 7 years period** (artificial, but to allow for a comparison with the MFF period) the total development and operational costs for the two systems would be €622 m (= 22% lower than the currently allocated amount).

Needless to say that these calculations will need to be redone and updated once we know the precise shaping of the new legislative proposals. This will be part of the new impact assessment.