

Immigration, Information and Interoperability

Abstract: The migration wave in 2015 caught Europe unprepared. Masses of people fleeing from the Middle East and North African countries into Europe brought a lot of challenges in the area of border management and security. Foreign fighters, terrorist attacks in European cities, human trafficking/smuggling was a new phenomenon, and people did not know how to react. One of the European Commission responses to these events was the establishment of the High Level Expert Group with a task to analyse the situation in the Justice and Home Affairs domain, to find possible information gaps to be dealt with among the information systems available and to propose a solution to improve the usage of such systems. By comparing the situation of border management today and the possible future border management based on new legislative proposals, this article would like to illustrate one of the possible scenarios of the technical implementation of future regulations at the national level.

Keywords: immigration, fingerprints, face, biometry, SISII, VIS, EURODAC, ETIAS, EES, ECRIS-TCN, interoperability.

1. Introduction

Immigration is the international movement of people into a destination country of which they are not natives or where they do not possess citizenship in order to settle or reside there, especially as permanent residents or naturalized citizens, or to take-up employment as a migrant worker or temporarily as a foreign worker.

Legal immigration is regulated by law. In 2015 4.7 million people immigrated to one of the EU 28 Member States (2.8 EU citizens + 1.5 mil non-EU citizens + returns).

Illegal immigration is not regulated by law. In 2014 the number of non-EU citizens found to be illegally present in the EU-28 increased to close to 670,000, and one year later, this number tripled to around 2,136,000 in 2015.

1.1 2015 Challenges

The so called migration wave exposed Europe to several problems in connection with migration management and masses of people trying to enter Europe, mostly illegally, such as unaccompanied/missing children, identity issues / frauds / stolen identities, terrorism, foreign fighters, new methods of organized crime in connection to human trafficking and smuggling, false documents.

The reaction of the European Commission to the unfamiliar situation at European external borders came in the form of new legislative proposals and a reformed wording of the already existing regulations in the area of Justice and Home Affairs. In 2016, Communication from European Commission to the European Parliament **about Stronger and Smarter Information Systems for Borders and Security** COM(2016)205 of 6th April 2016 brought several ideas, which were elaborated into eight legislative proposals for an improvement of the existing information systems for border management (SISII – Schengen Information System, VIS – Visa Information System, EURODAC), together with a proposal to establish new centralized information systems (PNR – Passenger Name Record system, ETIAS – European Travel Information and Authorization System, EES – Entry/Exit System, ECRIS-TCN – European Criminal Record Information System for third country nationals) for covering information gaps identified by High Level Expert Group (HLEG) created by the European Commission for this purpose.

One of the weaknesses of the today's situation is the lack of interoperability at the EU level. This is mainly caused by the legacy systems, which are “standalone systems”, each working according to its own regulations, own technical specifications, processing of own data sets and data formats, which are not compatible with others and all this causes that IT systems at the EU level such as SISII, VIS and EURODAC are not interoperable.

To overcome this issue many countries developed their Single Search Interface which enable border guard officers to reach from one point, using one data set, as much a centralized system as possible, while respecting the pre-defined authentication and authorization rules (Fig 1).

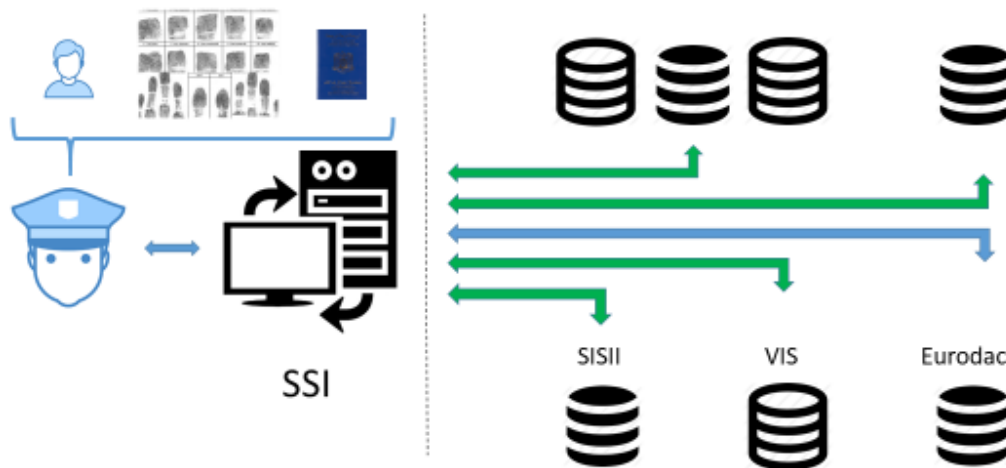


Figure 1 – Illustration of the Slovak Single Search Interface

The figure illustrates that from one workstation national and European databases are reachable, but each database has its own entry point, own root and SSI interprets the data from many sources into one complex result that the border guard officer sees on the screen. This complex information must reach this officer as quickly as possible, and on the other hand, it must be unambiguous so that the officer is able to make swift decision to continue the procedure with a person standing in front of him or her.

1.2 Information Systems today

SISII – Schengen Information System is a centralized European information system which seeks to maintain public security, including national security, within the Schengen area. Member States may issue alerts for: wanted persons, arrests, extraditions, aliens to be refused entry, missing persons, witnesses or those under judicial summons, persons and vehicles subject to additional checks, lost or stolen vehicles, documents and firearms, and suspect bank notes. **SISII introduced central AFIS in July 2017 and it is possible to process fingerprints and other alphanumeric information.**

VIS – Visa Information System is a centralized information system which helps to implement a **common visa policy** by facilitating the examination of visa applications and external border checks while contributing to the prevention of threats to Member States’ internal security. It includes data on visa applications, photographs, fingerprints, related decisions of visa authorities and links between the related applications. **VIS can be used at EU external borders to verify the identity of visa-holders via fingerprints**, it has the possibility for law enforcement authorities to access this system when the conditions set in the regulation are met.

EURODAC is a centralized information system, which helps to implement a **common asylum policy** by facilitating the registration of asylum seekers, illegal immigrants and third country nationals illegally present in territory of the EU while contributing to the prevention of threats to Member States’ internal security. It includes fingerprints, sex, date of fingerprinting and the date of application. **It can be used at EU external borders to verify the identity of a person via fingerprints**, it has the possibility for law enforcement authorities to access this system when the conditions set in the regulation are met.

1.3 Future information systems for border management

SISII, VIS and the anticipated EES and EURODAC systems are EU measures that deal directly with actions taking place physically at the borders.

Future EES – Entry/Exit System will register entry and exit data and refusal of entry data of third country nationals crossing the external borders of the Member States of the European Union, there will be the possibility for law enforcement authorities to access the data after fulfilling the preconditions. It will include alphanumeric data, fingerprints (slap + latent), facial image for verification or identification.

Future PNR – Passenger Name Record will include personal information provided by passengers and collected and held by air carriers such as the name of the passenger, travel dates, itineraries, seats, baggage, contact details and means of payment. Even though PNR data are passenger data linked to travel, they are mainly used as a criminal intelligence tool rather than as a border control tool. They are used prior to border crossing and not at the border crossing itself. The main aim of using PNR data is to fight terrorism and serious crime rather than to fight irregular immigration and facilitate border controls.

Future ETIAS - EU Travel Information and Authorization System; all visa-exempt third-country nationals who plan to travel to the Schengen area will have to apply for travel authorization through the system, online, prior to their trip. ETIAS would run a risk assessment by querying the information present at that time in all the databases connected to it, namely **SISII, VIS, Eurodac, Europol and Interpol data, the future EES and possibly ECRIS-TCN**

Future SISII will include alphanumeric data and will have AFIS matching fingerprints for verification or identification (TP, LT, PP, PL), facial image, scanned ID document, DNA profile.

Future Eurodac will possibly have more alphanumeric information about a person, fingerprints (TP, LT search), facial image with automatic search capability, colour image of an identification document, alphanumeric and biometric search for law enforcement authorities when preconditions are fulfilled (access without prior VIS search), biometric and alphanumeric data of third country national who will be a subject of EU or national resettlement procedure.

Future ECRIS-TCN - European Criminal Records Information System for third country nationals will probably store biometric and alphanumeric data, but this is still the subject of debate and decision-making at the EU level.

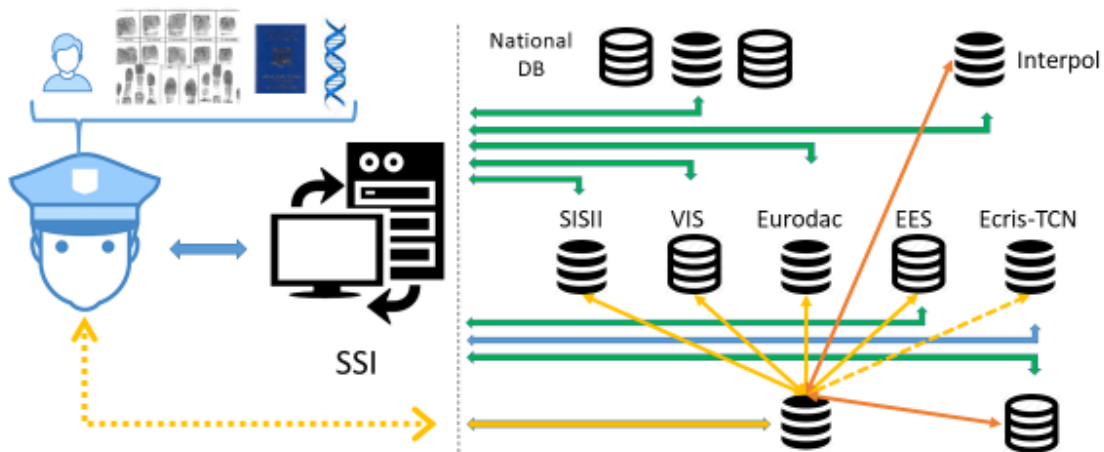


Figure 2 - If interoperability does not exist at EU level in 2020, ETIAS will be the only IT system interoperable with other EU IT systems, and national SSI will probably still be used for data exchange.

1.4 HLEG interoperability vision and recommendation

When the final report of HLEG was published in 2016, it contained three main recommendations. To establish the European Search Portal (ESP), shared Biometric Matching System (BMS) and Common Repository of Data (CRD).

Future ESP should be **capable of searching parallel in all relevant EU systems and to produce combined results on one single screen**. This should include **Europol data**, but an analysis must be made together with Europol if this is feasible and under what conditions. The same applies to **Interpol databases** (Stolen and Lost Travel Documents (SLTD) and Travel Documents Associated with Notices (TDAWN), too.

The Commission should explore, together with the European Data Protection Supervisor and the Fundamental Rights Agency, the data-protection implications of the establishment of a European search portal, **in particular for law enforcement access**.

Future sBMS – shared biometric matching service should work as a **support for various information systems**. Shared biometric matching service would perform identifications and verifications for all centralized systems such as SISII, VIS, Eurodac, the proposed EES and proposed ECRIS-TCN, and possibly the Europol data. This would not necessarily require any changes to the legal instruments as each parent system will by default only search within its own data, in line with the existing rules on access and use of the data. Personal data protection rules enshrined in the legal bases of the systems will be respected by compartmentalizing the data, with

separate access control rules for each category of the data. HLEG considered that the most solid approach in terms of data protection safeguards is based on anonymous hit/no-hit ‘flags’.

Future CRD - a common repository of data for different information systems. It should be the repository of alphanumeric identity data such as name, date of birth, gender from various existing systems to uncover many identities of one person linked via their fingerprints.

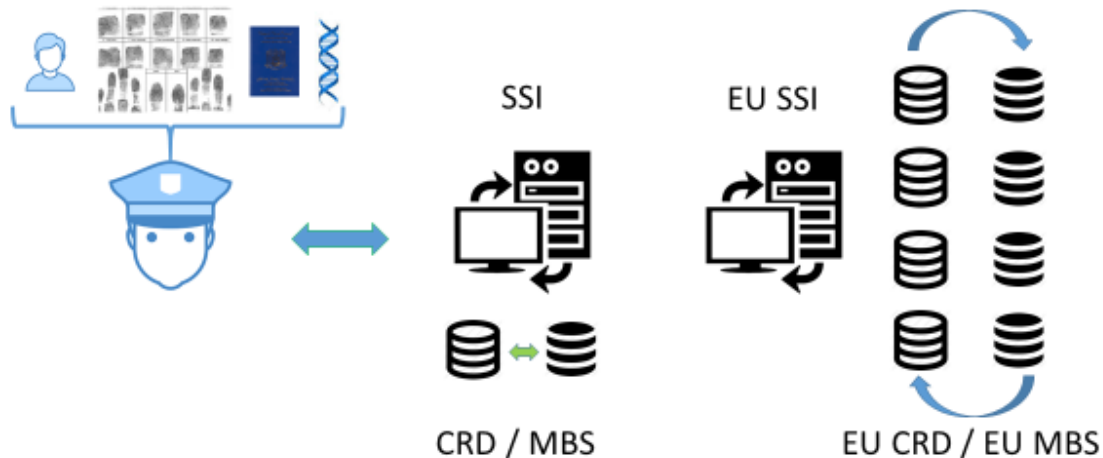


Figure 3 – Illustration of possible *Future* international data exchange at EU level with all three tools established for border management and LEA purposes where national SSI communicates with ESP as router to other information systems to receive one complex result in real time.

1.5 Interoperability regulations

Based on the findings in HLEG’s final report, feasibility studies and several workshops on interoperability which the Commission held together with representatives of the member states, EU Agencies (euLISA, FRONTEX etc.) and other important stakeholders such as UNHCR or the European Data Protection Supervisor (EDPS), the Commission introduced, on 12th December 2017, two proposals on establishing a framework for interoperability between EU information systems. The first proposal is dedicated to the interoperability of EU information systems for borders and security, the second one aims at IT systems dedicated to police and judicial cooperation, asylum and migration.

The aim of the regulations is to improve security within the EU, make checks at external borders more effective and efficient, and prevent and combat illegal migration. Interoperability between information systems will allow the systems to complement each other, help facilitate the correct identification of persons and contribute to fighting identity fraud. The regulations establish the following interoperability components:

- **European search portal (ESP)**, which would allow competent authorities to search multiple information systems simultaneously, using both biographical and biometric data.

- **shared biometric matching service** (sBMS), which would enable the searching and comparing of biometric data (fingerprints and facial images) from several systems.
- **common identity repository** (CIR), which would contain biographical and biometric identity data of third-country nationals available in several EU information systems.
- **multiple identity detector** (MID), which checks whether the biographical identity data contained in the search exists in other systems covered, to enable the detection of multiple identities linked to the same set of biometric data.

The systems covered by the regulation include the entry/exit system (EES), the visa information system (VIS), the European travel information and authorisation system (ETIAS), Eurodac, the Schengen information system (SIS) and the European criminal records information system for third country nationals (ECRIS-TCN), as well as Europol data and certain Interpol databases on travel documents.

On 14 June 2018, the Permanent Representatives Committee (Coreper) endorsed, on behalf of the Council, a mandate for negotiations on two regulations establishing a framework for interoperability between EU information systems in the area of justice and home affairs. On the basis of this mandate, the Council Presidency continues intense negotiations with the European Parliament even now.

In general, member states have confidence in the Austrian Presidency and most of the proposals for rewording the text are in agreement. Negotiations consist of assessing a large number of technical issues, in which a common understanding between the institutions is gradually being built, but it is not clear whether the process will be completed by the end of the year 2018 as wished, since there are numerous issues that need to be resolved (V. Šimoňák, personal communication, 26 November 2018).

2. Summary and future challenges

New threats bring new challenges to which we respond with new tools and technologies. To the wave and its negative results, COM responded with new legislative packages to reform and reshape the existing policies, and with IT tools the member states immediately had at their disposal for border management. However, the Commission's response brings new issues we have to understand and deal with in a way that we will be prepared to fulfil the obligations arising from the new proposals and on which we have agreed at the EU level.

The issues common for the Commission / euLISA and the member states can be identified as:

- **Legislation** – preparation of new proposal, drafting compromise proposal and transposition of EU legislation into the national legislation,
- **Technical** – EU regulation will have to be technically implemented, new central systems are going to be established so we need EU solutions as well as national solutions,
- **Financial resources and procurement** – the deadline 2020 is the same for at least two new systems which is financially very challenging. So EU and MSs must allocate the budget for something that cannot be predicted at the moment since technical specification is not available even though the procurement procedure should have started already,
- Many stakeholders involved means a lot of **communication** (euLISA / COM / MS / vendors) which may create misunderstandings and problems,
- **We are introducing biometry** into each system we have or which is going to be created. So far, only Eurodac and VIS have contained fingerprints. Fingerprints, face (for the first

time) and possibly DNA are going to be exchanged now and there is a limited number of vendors able to deliver such technology; moreover, the vendors have limited internal resources for all stakeholders which are going to be needed, too, especially **IT personnel**.

- **At the national level** fingerprint, face recognition, false documents and DNA experts will be needed for verification of matches from the EU systems. With new identification technology comes the need for new trainings, elaboration of new methods, new workflows, possibly new standard procedures and their accreditation... All these issues must be properly addressed.

Two years after the European migration wave, the situation in Europe is calmer, but international movement of people, legal and illegal still exists. New technology solutions for the Justice and Home Affairs domain support the idea of stronger and smarter borders via interoperability among the EU IT systems; also, new systems that are responding to the existing information gaps are established. This complex solution strengthens internal security, fights against illegal immigration and also helps to restore the feeling of security of EU citizens.

References

- European Criminal Records Information System for third country nationals (ECRIS-TCN), Directive proposal, COM (2016) 7 final, 19 January 2016.
- Communication from EC to the EP about Stronger and Smarter Information Systems for Borders and Security COM(2016)205, 6 April 2016.
- Entry/Exit System, COM (2016) 194 final, 6 April 2016
- Passenger Name Record approved by Parliament and adopted by Council on 21 April 2016
- Communication from EC to the EP and the Council – COM (2016) 205 final, 6 May 2016, AFIS functionality in the SIS by mid-2017.
- Eurodac Regulation - COM proposal, part of EU asylum system reform “first package”, May 2016.
- High Level Expert Group, Commission Decision C (2016) 3780, 17 June 2016, OJ C 257/3, 15 July 2016.
- European Travel Information and Authorization System, COM (2016) 731 final, 16 November 2016.
- SISII Regulation - COM proposal - Return of TCN COM (2016) 881 final, 21 December 2016.
- SISII Regulation - COM proposal, Border checks COM (2016) 882 final, 21 December 2016.
- SISII Regulation - COM proposal, Police and Judicial cooperation in criminal matters COM (2016) 882 final, 21 December 2016
- ECRIS TCN – new REGULATION, COM proposal (2017) 10 940/17 + ADD1, 31 August 2017
- REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
on establishing a framework for interoperability between EU information systems (police and judicial cooperation, asylum and migration), {SWD (2017) 473 final}, {SWD(2017) 474 final}, COM (2017) 794 final 2017/0352 (COD), 12 December 2017
- REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing a framework for interoperability between EU information systems (borders and visa) and

amending Council Decision 2004/512/EC, Regulation (EC) No. 767/2008, Council Decision 2008/633/JHA, Regulation (EU) 2016/399 and Regulation (EU) 2017/2226, COM (2017), 793 fin al, 2017/0351 (COD), 12 December 2017

Immigration, In *Wikipedia*, [online] 2017 [cit. 2017.05.08]. Available online: <<https://en.wikipedia.org/wiki/Immigration>>

Immigrants 2016, In *Migration and migrant population statistics* [online] 2017 [cit. 2017.05.08]. Available online: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Migration_and_migrant_population_statistics>

Non-EU citizens found to be illegally present in the three most affected EU Member States, 2008-2017, In *Statistics on enforcement of immigration legislation* [online] 2017 [cit. 2017.05.08]. Available online: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_enforcement_of_immigration_legislation>

Draft final Report of High-level expert group on information systems and interoperability, April 2017

Eurodac Annual Report 2017, In *Reports* [online] 2017 [cit. 2017.05.08]. Available online: <http://www.eulisa.europa.eu/Publications/p_reports/Pages/default.aspx>

ETIAS - Information about the new Authorization System to travel across the European Union, In *What exactly is ETIAS?* [online] 2017 [cit. 2017.05.08]. Available online: <<http://www.etiaseuropa.eu/>>

Immigration in the EU, In *EU Immigration Portal*, [online] 2017 [cit. 2017.05.08]. Available online: <https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/docs/infographics/immigration/migration-in-eu-infographic_en.pdf>

Piktogramy, [online] 2017 [cit. 2017.05.08]. Available online: <www.freepik.com>

Piktogramy, [online] 2017 [cit. 2017.05.08]. Available online: <<http://superawesomevectors.com/dna-vector-icon/>>

Piktogramy, [online] 2017 [cit. 2017.05.08]. Available online: <<https://pixabay.com/sk/ot%C3%A1znik-ot%C3%A1zka-faq-op%C3%BDtajte-sa-1421013/>>

Improving security through information sharing: Council agrees negotiating mandate on interoperability, In *PRESS RELEASE 342/18, 14/06/2018* [online] 2018.06.04 [cit. 2018.12.07]. Available online: <<https://www.consilium.europa.eu/en/press/press-releases/2018/06/14/improving-security-through-information-sharing-council-agrees-negotiating-mandate-on-interoperability/#>>

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