Feasibility and implications of lowering the fingerprinting age for children and on storing a scanned copy of the visa applicants' travel document in the Visa Information System (VIS)

Final Report

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PREFACE

This report presents the assessment on the feasibility and implications of two possible measures related to the VIS: lowering the fingerprinting age for children and on storing a scanned copy of the visa applicants' travel document in the Visa Information System (VIS) in support of an impact assessment. The impacts of the proposed measures are assessed from the perspective of economic costs and benefits realised by affected stakeholders; policy (or operational) impacts related to the achievement of the defined policy objectives in the area of security, migration and the implementation of returns; and fundamental rights impacts. Impacts are quantified and monetised where feasible, notwithstanding considerable data limitations. In those cases where quantification is not possible, the direction of impact has been estimated as much as possible, supported and evidenced through rigorous analysis of qualitative data and information sources.

Throughout the course of this study, the consortium consulted a wide range of more than 100 key stakeholders across the EU and in third countries. We would like to thank them for their valuable insights in the matter.

It should be noted that the findings in this report represent the analysis and assessment by the team of consultants and does not represent in any form a position of the European Commission.

Rotterdam, March 2018

GLOSSARY

AFIS	Automated Fingerprint Identification System
CS-VIS	Central System Visa Information System
EDPS	European Data Protection Supervisor
EES	Entry-Exit System
EMLO	European Migration Liaison Officer
EMN	European Migration Network
ESP	External Service Provider
ETIAS	European Travel Information Authorisation System
ETD	Emergency travel document
EU	European Union
EURLO	European Return Liaison Officer
EURODAC	European Dactyloscopy
EUROPOL	European Agency for Law Enforcement Cooperation
eu-LISA	European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice
FRONTEX	European Border and Coast Guard Agency
ILO	Immigration Liaison Officer
INTERPOL	International Criminal Police Organization
JHA	Justice and Home Affairs
LEA	Lar Enforcement Agency
MFA	Ministry for Foreign Affairs
OCG	Organised Crime Group
NI-VIS	National Interface Visa Information System
SLTD	Stolen or Lost Document Database (Interpol)
SIS	Schengen Information System
sTESTA	Secured Trans European Service for Telematics between Administrations
TCN	Third Country Nationals
TH	Travel document Holder
TD	Travel document
THB	Trafficking in human beings
VIS	Visa Information System

1. INTRODUCTION

1.1. Context

There are two channels through which non-EU and non-Schengen citizens can access the EU: legal channels, which refers to movements and travel through recognised and authorised channels, including short-stay visas; and irregular channels, which includes the entry to, or stay in the territory using irregular or illegal means, such as without valid documents or carrying false documents. This applies to all Third Country Nationals (TCN), including children.

The Visa Information System (henceforth the VIS) was created following a 2004 Council Decision[1] for the purpose of processing short-stay visa applications by TCNs wishing to enter the Schengen Area for transit through or intended stays in the territory of no more than 90 days in any 180 day period, in line with the common European visa policy. The purpose, functionalities and responsibilities accompanying the VIS were subsequently specified and developed in the 2008 VIS Regulation and in a number of implementing acts,[2] and the VIS was gradually rolled out across the Schengen Member States' consulates between October 2011 and February 2016.[3]

The legal framework establishing and developing the VIS consists of:

- Council Decision 2004/512/EC of 8 June 2004 established the VIS as a system for exchanging visa data between Member States (**VIS founding Decision**);
- Regulation (EC) No 767/2008 of 9 July 2008 laid down the VIS's purpose, functionalities and responsibilities and laid down the conditions and procedures for the exchange of visa data between Member States to facilitate the examination of visa applications and related decisions (**VIS Regulation**);
- Regulation (EC) No 810/2009 of 13 July 2009 (**the Visa Code**) set out the rules on the registration of biometric identifiers in the VIS;
- Council Decision 2008/633/JHA of 23 June 2008 consequently laid down the conditions under which Member States' designated authorities and Europol may obtain access to consult the VIS for the purposes of preventing, detecting and investigating terrorist offences and other serious criminal offences (**the VIS Law Enforcement Access (LEA) Decision**).

The purpose of the VIS as laid down in Article 2 of the VIS Regulation is to improve the implementation of the common visa policy, consular cooperation and consultation between central visa authorities by facilitating the exchange of data between Member States on applications and on the decisions relating thereto, in order to:

- Facilitate the visa application procedure;
- Prevent 'visa shopping';
- Facilitate the fight against fraud;
- Facilitate checks at external border crossing points and within the Member States' territory;
- Assist in the identification of any person who may not, or may no longer, fulfil the conditions for entry to, stay or residence on the territory of the Member States;
- Facilitate the application of the Dublin Regulation;
- Contribute to the prevention of threats to the internal security of any of the Member States.

Every year the 26 Member States and Schengen associated countries issue around 14 million Schengen short stay visas. By the end of March 2016, data on close to 23 million visa

[1] Council Decision of 8 June 2004 establishing the Visa Information System (VIS), see http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32004D0512.
[2] Regulation (EC) No 767/2008 concerning the Visa Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation), see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:218:0060:0081:EN:PDF.
[3] See Commission Decision 2010/49/EC, Commission Implementing Decision 2012/274/EU and Commission Implementing Decision C(2013) 5914 final for the first, second and third set of regions for roll-out, respectively.

applications and 18.8 million fingerprints had been entered in the VIS. The system has exceeded the threshold of 1 million operations per day and 100 000 operations per hour. It has a capacity of up to 450 000 operations per hour and can store and process 60 million pieces of visa application data.

Under the current system, all asylum seekers and migrants over 14 years of age[4], and who are apprehended in connection with an irregular border crossing, must provide their fingerprints, which are stored in Eurodac (European Dactyloscopy, a large-scale IT system for storing fingerprints). TCNs who have applied for a short-stay visa – except for children under the age of 12 years – must provide their biometric identifiers during the application process, which are stored in the VIS. Data on national long-stay visas or residence permits are not registered in VIS, while passport biometrics information is stored in national systems.

In accordance with Article 50 of the VIS Regulation, and Article 57(3) of the Visa Code, an evaluation of the system was completed in October 2016.[5] Overall, the evaluation of the VIS concludes that the system has generally been effective in meeting its objectives; however, it also demonstrated a need to further develop the system in order to respond to new challenges in visa, border and security policies.[6] On this basis, the Commission recommends that the VIS be maintained and further developed, including improvement of its interconnectivity with other systems, such as the proposed Entry-Exit System (EES) and the EU Travel Information and Authorisation System (ETIAS).

The REFIT evaluation also concluded that the VIS is currently used for return purposes only to a very limited extent:

> "VIS could play a much more significant role if given the possibility to store a scanned and compressed data page of the visa applicant's passport. Providing Member States with the possibility to access a copy of the passport of an irregular migrant could improve the chances of effective return and accelerate the procedure. This would also enable more returns to be carried out on the basis of the EU travel document for return purposes combined with a copy of the passport."[7]

As a follow up to the REFIT evaluation of the functioning of the VIS, the European Commission is considering to incorporate in the VIS a copy of the travel document of third country nationals (TCNs) applying for a short-stay visa (i.e. a Schengen visa).

In addition, Article 57(4) of the Visa Code requires that the issue of the sufficient reliability for identification and verification purposes of fingerprints of children under the age of 12 and, in particular, the issue of how fingerprints evolve with age, be addressed based on the results of a study carried out under the Commission's responsibility. The study, carried out in 2013 by the Joint Research Centre, concluded that "[u]nder certain technical conditions, fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy."[8]

[4] Under the new Eurodac proposal, the fingerprinting age would be lowered from 14 years of age to 6 years of age.
[5] COM(2016) 655 final, Report on the implementation of Regulation (EC) No 767/2008 of the European Parliament and of the Council establishing the Visa Information System (VIS), the use of fingerprints at external borders and the use of biometrics in the visa application procedure/REFIT Evaluation {SWD(2016) 327 final} {SWD(2016) 328 final}. Brussels, 14.10.2016. Commission SWD Evaluation of the implementation of Regulation (EC) No 767/2008 of the European Parliament and Council concerning the Visa Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation) / REFIT Evaluation, Brussels, 14.10.2016 SWD(2016) 328 final.
[6] Inception Impact Assessment: VIS and the Visa Code, published 28 March 2017.
[7] REFIT evaluation Brussels, 14.10.2016 COM(2016) 655 final.
[8] REFIT evaluation, Brussels, 14.10.2016 SWD(2016) 328 final.

The European Commission's evaluation of the VIS similarly concluded that, from a technical point of view, automated fingerprint recognition for children aged between 6 and 12 is feasible[9], provided some technical obstacles related to image quality and the revision of quality metrics are overcome, and the acquisition of alternative acquisition devices for the fingerprints of children are considered. However, it was also acknowledged that there are other considerations to keep in mind before deciding on the collection of children's fingerprints:

> "It needs to be assessed whether this policy objective is to be pursued in the case of children under the age of 12 — have cases of fraud, attempts to bypass the criteria for determination of the Member State responsible for examining the visa application, or any other of the objectives set out in the VIS Regulation been identified in relation to children under the age of 12? If yes, is the scope of such phenomena significant enough to justify this measure? The pertinence of and need for identifying and verifying children under the age of 12 must be clear for further action to be taken in this area."[10]

Hence, as a follow up to the REFIT evaluation of the functioning of the VIS, the European Commission is considering to lower the fingerprinting age from 12 to 6 years old.

The purpose of this study was to evaluate the feasibility and practical implications (operational and in terms of fundamental rights) of the two considered changes to the data to be included in the VIS.

1.2. Objectives and scope of the study

The objective of this study was to examine two possible adaptations to the VIS:

Topic 1. Investigate the feasibility, necessity and proportionality of incorporating a copy of the travel document of visa applicants.

Topic 2. Investigate the feasibility, necessity and proportionality of lowering the fingerprinting age of children applying for a short stay visa.

The geographical scope of the study is the Schengen Area of 22 EU Member States (Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain and Sweden) and four associated countries (Iceland, Liechtenstein, Norway and Switzerland). In addition, four EU Member States do not yet fully implement the Schengen acquis (Bulgaria, Croatia, Cyprus and Romania).

As data on migration, irregular stay and returns are mostly collected at EU level (Eurostat, Frontex, Europol), the present study distinguishes EU Member States from Schengen Member States. Throughout this report, unless otherwise specified, 'Member States' refers to EU Member States applying the common visa policy in full (all EU Member States with the exception of Bulgaria, Croatia, Ireland, Cyprus, Romania and the United Kingdom) and the associated states, Iceland, Liechtenstein, Norway and Switzerland.

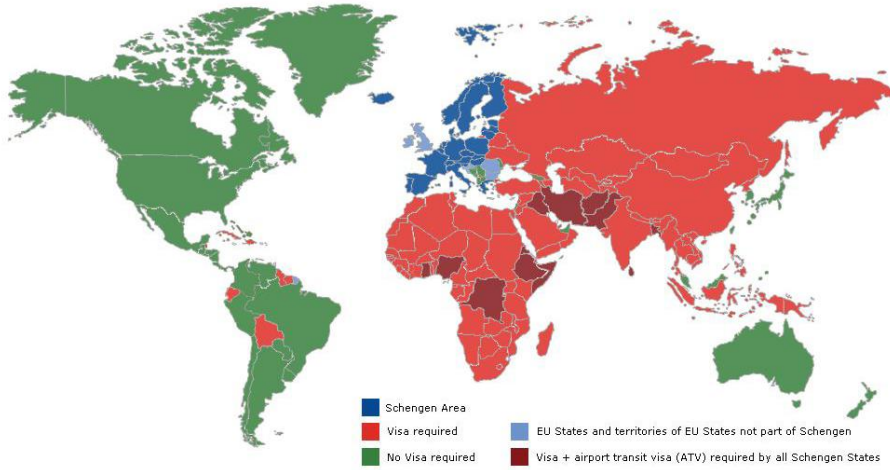
Travellers who want access to the Schengen Area are divided in two groups through a 'negative list' (EC 539/2001 Annex I) and 'positive list' (EC 539/2001 Annex II) of countries whose citizens respectively do and do not need a visa to enter the Schengen area. Countries on the 'negative list' are depicted in Figure 1 below in red and brown. Those on the negative list are required to apply for a Schengen (uniform) visa, which allows a holder to stay in the Schengen Area Member Countries (henceforth: Schengen States) for up to 90 days in the six month period starting from the date of entry. Within this category, a distinction is made between Airport Transit (A) Visa and Short-term (C) Visa. C-visas can be single-entry, double-entry or multiple-entry. The (A) Visa is outside the scope of the study due to two main reasons: the application procedure is different and this type of visa does not give the right to enter the

[9] A note must me made that since the JRC study 5 years have passed and the technology has further progressed. Newer studies have showed that accurate biometric fingerprinting matching is even possible below 6 years of age. See for example: Michigan State University (2016). Fingerprint Recognition of Young Children.

[10] REFIT evaluation, Brussels, 14.10.2016 SWD(2016) 328 final.

territory of the EU but rather gives the opportunity for travellers to stay in the international transit are of a designated airport. A granted Schengen visa may have a limited territorial validity in specific cases, which allows a holder to stay only in the issuing Schengen State and possible others if indicated specifically.[11]

Figure 1 Schengen area visa lists



Source: https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/visa-policy_en.

1.3. Fundamental Rights Impacts

Any proposal extending the storage of data into VIS or its use must be assessed with regard to its further impact on the protection of fundamental rights of the individuals.[12] These fundamental rights and freedoms are protected in the Charter for Fundamental Rights (CFR), but also in international treaties such as the European Convention on Human Rights (ECHR), the Convention on the Rights of the Child (CRC), or the Refugee Convention. The identification of fundamental rights includes the assessment of both the negative and beneficial impacts of a policy proposal.

The necessity for the fundamental rights assessment is to be distinguished from the EU subsidiarity and proportionality tests. Nevertheless, findings with regard to the necessity of the EU measure, addressing whether a measure should be adopted at the EU or national level, may be relevant for the fundamental rights assessment. If there is insufficient information for the adoption of a proposed measure on EU level, lacking information on the existence of a problem, or on the added value for solving a problem, this will result in the non-fulfilment of the necessity test for fundamental rights as well. This analysis is based on criteria developed by the European courts and the FRA, and also by considering information and experiences from stakeholders.

1.4. Methodology

1.4.1. Impact assessment questions

The study methodology follows the principles of the EU Better Regulation Guidelines to undertaking an impact assessment.[13] As such, the research approach was wholly informed by answering the six key impact assessment questions listed in Table 5. Below, we outline the methodological tools that were used in carrying out this research.

[11] See https://www.schengenvisainfo.com/schengen-visa-types/.
[12] In line with the Better Regulation Guidelines, see Commission Staff Working Document, SWD (2017) 350, 7 July 2017, p. 24-25 and tool#28 on Fundamental Rights and Human Rights, https://ec.europa.eu/info/files/better-regulation-toolbox-28_en.
[13] European Commission, Staff Working Document, Better Regulation Guidelines, SWD (2017) 350, 7 July 2017.

Table 1 Impact assessment questions

	Impact assessment steps
1	What are the problems, drivers and how will the problems evolve?
2	Why should the EU act?
3	What should be achieved?
4	What are the various options to achieve the objectives?
5	What are the impacts of the different policy options and who will be affected?
6	How do the options compare? What is the preferred option?

1.4.2. Methodological tools

The study team used a mixed-methods approach, combining qualitative and quantitative data collection and research methods in order to achieve the study objectives. The study made extensive use of each of the following tools:

- Desk research, comprising documentary and statistical analyses;
- In-depth interviews with Member State stakeholders (Schengen-8 Intensive consultation), EU stakeholders, NGOs and civil society;
- Field missions to 4 third countries;
- Modular stakeholder survey
- Feedback from the Feasibility Study Steering Group.

These sources were triangulated to provide robust analysis and results.

Desk Research

Throughout the study, we have made use of desk research to create an initial understanding of the issues at hand, to plug gaps from the stakeholder consultation inputs, and to gather available quantitative data. Desk research consisted of reviewing reports and studies on thematic issues related to the study such as visa fraud, visa overstaying, re-admission and return, trafficking and missing children. Part of the desk research was the analysis of the Open public consultation on the fingerprinting of children.

For the fundamental rights assessment, guidance is taken from different publications from the European Data Protection Supervisor (EDPS) and particularly the Toolkit of 11 April 2017, *Assessing the necessity of measures that limit the fundamental right to the protection of personal data: A toolkit*, and from the Fundamental Rights Agency (FRA), also dealing with the rights of children.[14] Specifically addressing the rights and best interest of children, the EU guidelines on the *Promotion and Protection of the Rights of the Child* of 2017 are taken into account, as well as the Communication of the European Commission of 12 April 2017 on *the protection of children in migration*.[15] Furthermore, dealing with the necessity and proportionality of different policy options, criteria are based on the case-law of the European Court of Human Rights (ECtHR) and the Court of Justice of the European Union (CJEU).

Schengen-8 Intensive consultation

The study engaged in an intensive interview programme in 8 Schengen Member States (BE, FR, DE, EL, IT, LT, PL, ES) to gather the necessary inputs for carrying out the analysis. In each

[14] EDPS *Assessing the necessity of measures that limit the fundamental right to the protection of personal data: A toolkit*, 11 April 2017; EDPS *Response to the Commission public consultation on lowering the fingerprinting age for children in the visa procedure from 12 years to 6 years*, 9 November 2017; FRA *Fundamental Rights and the interoperability of EU information systems: borders and security*, May 2017, and specifically chapter 4 on the rights of the child; FRA *Handbook on European law relating to the rights of the child*, 2015; FRA *Opinion 2/2017 on the impact on fundamental rights of the proposed Regulation on European Travel Information and Authorisation System* (ETIAS).

[15] See EU Guidelines of 7 March 2017, 6846/17, respectively the Commission's Communication 2017(211) of 12 April 2017 http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2017:211:FIN.

State, in-depth interviews were conducted with a selection of key stakeholders from the following categories:[16]

- Representative from department responsible for managing National VIS connection;
- Representative from ESP (where relevant);
- Representative from migration authorities[17];
- Representative from consular affairs department[18];
- Representative from border police authorities;
- Representative from return authorities;
- Representative from law enforcement authorities dealing with terrorism and/or serious crime;
- National Data Protection Authorities;
- Ministry/department of the rights of the child;
- Representative from Anti-trafficking authorities;
- Ombudsperson for Children.

The study team carried out a total of 46 interviews with a range of different Member State stakeholders from the above list. The interviews were conducted in-person as much as possible, otherwise by phone or Skype.

EU, civil society and other interviews

In addition, the study team conducted in-depth interviews with key EU stakeholders and representatives of civil society to gather inputs from EU agencies and civil society on how the VIS adaptations would have an impact. We have consulted:

- EU Agency of Fundamental Rights (FRA);
- European Data Protection Supervisor (EDPS);
- eu-LISA (and VIS Advisory Working Groups);
- Europol;
- Frontex (EBCG);
- EEAS (as part of the third country field visits); and
- Missing Children.

These interviews were done face-to-face or via phone/Skype.

Third country visits

As part of the intensive consultation, the study team performed fields visits to 4 third countries: Russia (Moscow), Turkey (Ankara), Nigeria (Lagos) and Morocco (Rabat). In each country, the mission team conducted between 5 to 9 interviews with:

- Staff of EU consulates;
- Staff of commercial visa application centres (for example VFS Global);
- Immigration Liaison Offices and other operational experts on Schengen Visa; and
- EU Delegation officers.

A total of 41 interviews were conducted during the field missions. Interviews were primarily carried out with consular staff and visa officers of the pre-selected Schengen 8 States, though representatives of the other Member States were also represented in the interview programme (for example, interviews were organised with consular officers of Sweden and the Netherlands, among others). These visits allowed the study team to gather inputs on the operational dimensions of the measures under investigation through valuable face-to-face interviews. Through these site visits, the study team was able to observe the workflow of officials dealing with Schengen Visa applications. By doing so, the team gained a deeper understanding of the practicalities of the VIS application and other border management processes.

[16] Overlap between categories within countries is possible.
[17] Typically: department of Interior Ministry (e.g. DE), Security/Justice (NL) or Work (FR).
[18] Typically: department from MFA.

Modular survey

A targeted survey was developed to engage with all relevant stakeholders from the 26 Schengen States, EU, civil society and international stakeholders. The targeted survey was developed along a modular approach, so that recipients only encountered questions relevant to their expertise and experience. In the survey we focused on gaining more understanding on policy impacts, such as to what extent would the options under investigation contribute to the policy goals of facilitating the return process and more effectively combating child trafficking.

1.4.3. Methodological limitations

The data collection process was designed to meet the information needs and questions that have been defined in the Terms of Reference set out by the Commission for this study. Several limitations were encountered in the data collection process, which have implications for the ensuing analysis. These limitations, and the mitigating measures that were taken to overcome them, are summarised below.

Data availability. While Member States collect various data on two topics under investigation – i.e. the detection and return of visa overstayers and TCNs found to be illegally present who entered using a visa, but who no longer possess a valid travel document, as well as cases of trafficking, smuggling, abduction of TCN children and unaccompanied minors who entered the EU with a visa (record) – methods and definitions can differ significantly across Member States, thus making data difficult to compare. Moreover, where collected, the data generally do not distinguish between cases of TCNs who have entered on a visa and those who have entered the EU via irregular channels. Also, available data often do not distinguish between the different age categories. As a result, a precise quantitative estimation of the TCN affected by the problems identified under each of the two respective subjects under investigation could not be made.

Reliance on qualitative inputs and analysis. As a result of these data limitations, the underlying evidence base relies largely on qualitative research and analysis methods, including both desk research and document review, as well as an in-depth interview consultation programme and targeted online survey. The results of the stakeholder consultation programme not only served as a data collection exercise in its own right, but also as a means to validate findings from earlier consultations and desk work, as well as to build a sound set of assumptions for estimating the size and scope of the problem, as well as the anticipated impacts of the proposed options. Despite a relatively low response rate to the online survey, the results provided useful inputs and additional insights for the problem and impact analysis.

Quantification of key impacts. For the quantification of key impacts, a methodology was developed to assess the main changes that can be expected from the proposed measures relative to a continuation of the baseline scenario. The calculation of costs incurred by the different stakeholders is based on a simplified estimation model (rather than the Standard Cost model) relating to assumptions on the amount of time that might be reasonably taken to perform the additional activities, which would be required to comply with the proposed changes. The evidence base underlying these assumptions draws from the results of the in-depth interviews with Member States' competent authorities and consular staff, in combination with available statistics (for example, Eurostat statistics on the enforcement of immigration legislation, as well as statistics gathered by Europol and Frontex).

A fundamental limitation remains, however, in that the full extent of the potential benefits to be realised in relation to the Topic 1 analysis cannot be estimated with any degree of certainty for two reasons. First, the extent of change that the measure will bring about in terms of the behaviour of third country authorities vis-à-vis the issuance of emergency travel documents for their nationals is not measurable. Second, the underlying motivations of the third country authorities vis-à-vis refusal to cooperate with the Member States on the issuance of emergency travel documents for their nationals cannot be established with any degree of certainty. As a result, conclusions regarding the potential benefits of the preferred option under Topic 1 should be interpreted with caution.

2. CURRENT SITUATION

2.1. The Visa Information System (VIS)

The VIS is a database containing information, including biometrics, on visa applications by third country nationals requiring a visa to enter the Schengen area. Since 1 December 2012, eu-LISA[19] is responsible for the operational management of the EU Visa Information System (VIS).

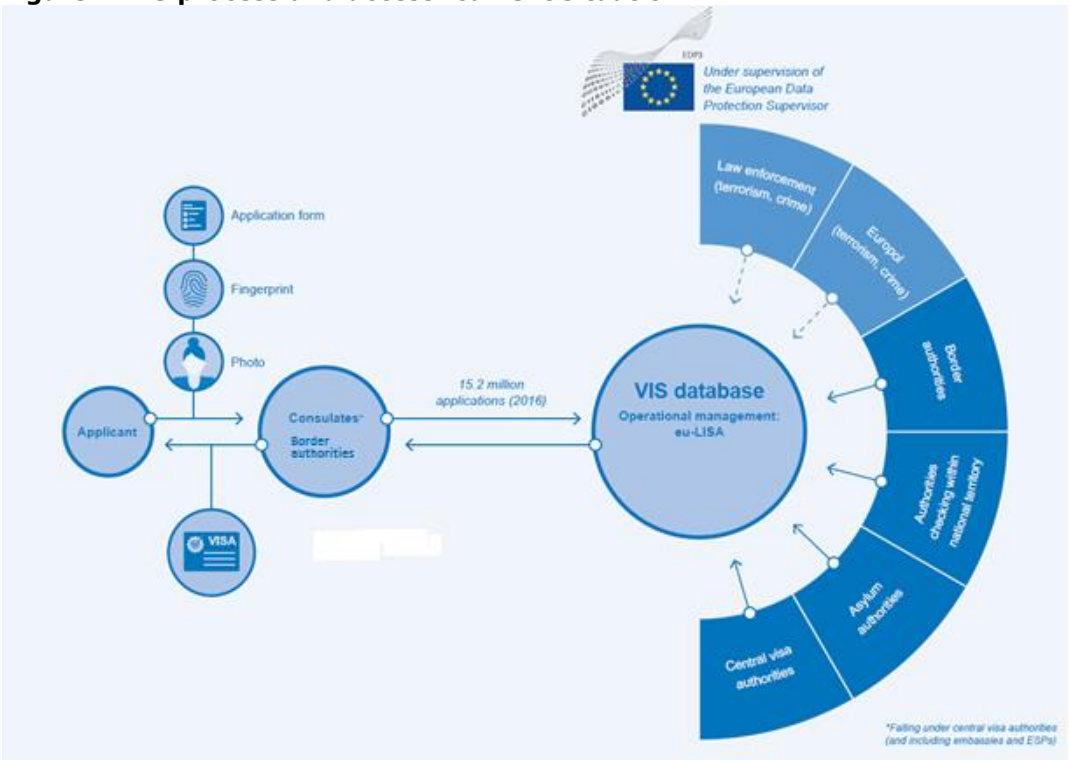
VIS consists of a central system (CS-VIS), a national interface in each Schengen State (NI-VIS), and a communication infrastructure between the central database and the national interfaces. VIS connects consulates in non-EU countries and all external border-crossing points of Schengen States. It processes data and decisions relating to applications for short-stay visas to visit the Schengen Area. The system can perform biometric matching, primarily of fingerprints, for identification and verification purposes. Moreover, VIS enables Member States to exchange information through 'VIS mail'. Indeed, the VIS can be used for consultation and requests for documents purposes and for amending already processed data (VIS Regulation, articles 16 and 24). Currently all Schengen States' consulates (over 1 800) and external border crossing points (around 2 000) are connected to the system.

The CS-VIS continuously processes the information collected by Schengen states' consulates. For example, any information entered by local visa authorities will be available in the VIS for all users within a minute[20]. Border authorities can then verify visa holders' identities at the border crossing points in just a few seconds. To check the provided data at a consulate or border crossing against data in the database, the VIS works with a Biometric Matching System (BMS). Using algorithms, it checks whether the provided data is already present in the system and as such is essential to the functioning of the VIS.

As illustrated in Figure 2, the VIS is also used by national migration authorities (asylum and visa), law enforcement, and border control authorities to perform verifications that the person presenting a visa is indeed its rightful holder, and whether the visa is still valid. Checks and issuances of visas are made easier, and abuses can be fought more easily. In addition, asylum authorities can consult the VIS database to determine the state responsible for the asylum procedures. Finally, law enforcement authorities (national and Europol) may consult the VIS when there are suspicions of terrorism or serious criminal offences.[21]

[19] European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice).
[20] eu-LISA (2017). Consolidated Annual Activity Report.
[21] Such access must be necessary for 'the prevention, detection, or investigation of terrorist offences or other serious criminal offences,' it must be necessary in a specific case, and there must be reasonable grounds to consider that consultation of VIS data 'will substantially contribute to the prevention, detection or investigation of any of the criminal offences in question' (Brouwer, 2010).

Figure 2 VIS process and access: current situation



Source: Ecorys 2017.

VIS is currently one of three centralised information systems currently in place in the field of border management in the European Union, all developed to address different needs. The **Schengen Information System (SIS)** aims to support law enforcement authorities by enabling them to enter and consult alerts on suspected criminals, people who may not be entitled to enter or stay in the EU, missing persons and stolen or lost property. **European Dactyloscopy (EURODAC)** is the biometric database in which Member States are required to enter the fingerprint data of irregular migrants or asylum-seekers to identify their point-of-entry into the EU to help determine which Member State is responsible for their asylum application under the Dublin Regulation (Regulation No. 604/2013).

The recent evaluation of the VIS by the European Commission showed that the VIS system is delivering well on its initial objectives.[22] The introduction of the VIS has led to: (i) a simplification and facilitation of the visa application process by ensuring that data gathered by all Member States are stored and exchanged via a common system; (ii) a reduction in the administrative burden of national administrations; and (iii)clear, smooth and effective procedures when dealing with processing visa applications, performing checks at external borders or in the territory, identifying third country nationals for migration or return purposes or examining asylum applications.

In parallel, progress is made with the introduction of a European Entry/Exit system, which puts the VIS into the perspective of a potential horizontal interoperability of the systems. This perspective may impact the decision to expand the VIS with the fingerprints of children aged 6-12, both technically as legally, and will need to be taken into account when addressing the impact on technical feasibility, proportionality and data security.

2.2. The visa application process

The current practice of the EU VIS is based on Regulation (EC) No 810/2009 of the European Parliament and of the Council of 13 July 2009 establishing a Community Code on Visas (Visa Code). The Visa Code establishes the conditions and procedures for issuing visas for short stays in (maximum of 90 days in any 180-day period) and transit through the EU countries and the

[22] COM(2016) 655 final.

associated states applying the Schengen Agreement in full. The Visa Code doesn't include the issuance of Long Stay Visas, or any other type of visa.

The Visa Code prescribes that the EU country that is the sole or the main destination is responsible for examining the visa application. Generally, the visa application must be submitted to the consulate of the EU country concerned. EU countries may establish bilateral arrangements for representing each other for the purpose of collecting visa applications or issuing visas (via common application centre).

An increasing number of consulates has outsourced the primary steps of the application process to an External Service Provider (ESP). Outsourcing of the application process is the responsibility of each Member State and falls outside the scope of the European Commission. For the majority of the Schengen visa applications, the administrative and non-judgmental tasks are now outsourced to these private contractors, of which VFS Global is the biggest player.[23] ESPs collect and verify the applicant's paperwork, ensure that forms are filled in properly, take fingerprints and other biometric information and collect the fees. The consular staff decides whether to grant the visa. EPSs may provide this service to the embassies of various EU Member States (and non-EU countries) within a single location. The objective of outsourcing is to make the application process more efficient and have the ability to procure the services to the most beneficial (price and quality) service provider.

When lodging a Schengen visa application, first-time applicants must appear in person at the consulate or ESP-office and present:

- an application form;
- a valid travel document;
- a photograph (often these are taken at the ESP);
- supporting documents, such as:
  - proof of sponsorship and/or accommodation (if requested);
  - proof of possession of travel medical insurance.

The applicant must allow the collection of his or her fingerprints (for the first-time applications. For subsequent applications within five years, fingerprints can be copied from the previous application file in the VIS) and pay a visa fee (including an additional service fee to the ESP).

> **Minors applying for a Schengen visa** must be accompanied by their parents or legal guardian and proof of the family ties or guardianship must be provided. The minor's application form has to be signed by the parental authority or legal guardian. In cases where one parent has sole custody over the child, proof of this must be submitted. A notarised parental authorisation signed by both parents or guardians shall be attached if the minor is to be travelling alone or with only one parent. Fingerprints are only taken from children above the age of 12.
>
> For each visa application, the visa authorities (consulates, embassies and external service providers (ESPs) of a Schengen state create an application file in the VIS and register the alphanumeric data contained in the Schengen visa application form (including the applicant's name, nationality, place of residence, occupation, travel document's number, the type of visa requested, the main destination and the duration of the intended stay, the intended border of first entry, details of the inviting person), a digital photograph, and ten fingerprints taken of the applicant.

The consular staff (or home authority) decides whether to grant the visa. After verifying the admissibility of the application, the competent authority creates an application file in the Visa Information System (VIS). Through cross-checking the VIS, it is verified whether there have

[23] See e.g. http://www.vfsglobal.com/about_us/our_clients.asp. In 2013 VFS covered around 60% of the annual volume of the 17 million Schengen visa issued, while TLS covered less than 10%, controlling the main source countries that apply for French EU Schengen visa. Source: Schellong, Alexander, Consular Outsourcing & Visa Services- The Unknown Billion Dollar Market, 7 December 2016. VFS Global is part of the Swiss tourism company Kuoni and has processed over 145 million visa applications worldwide since its establishment in 2001. It currently serves 52 governments in 128 countries of operation and 2317 visa application centres. Source: www.vfsglobal.com.

been previous requests by the applicant in other Schengen Member States, and whether possible decisions on refusal, extension, annulment or withdrawal of visas taken by these other Member States. In this way, visa fraud and visa shopping can be prevented. The consulate or home authority carries out a further examination of the application and has to take a decision within 15 calendar days from the actual application. The decision entails refusal or issuance of an uniform visa (valid for the entire Schengen area issued for 1, 2 or multiple entries with a maximum validity of 5 years), a visa with limited territorial validity, or a transit visa (corresponding to the time needed for the transit).

When a decision has been taken on the application (issuance/refusal of the visa) or subsequently (annulment, revocation, extension), the information is registered in the VIS by the visa authorities of the competent Schengen state. In 2016 about one million visa applications were not awarded, which is a refusal rate of almost 7 %.

Upon arrival at the external border of the Schengen area, visa holders are required to provide their fingerprints for comparison with those registered in the VIS. Data is retained for five years starting from the expiry date of the visa, if a visa has been issued; or from the new expiry date of the visa, if a visa has been extended; or from the date a negative decision is taken by the visa authorities. The European Data Protection Supervisor (EDPS) monitors VIS use in line with the applicable legal requirements for protection of personal data and privacy.

The modus operandi of the entire visa application process may be summarised as follows:

Schengen visa application process

Application process
Step 1. Applicant sends application to an ESP
Step 2. ESP takes documents and checks for completeness
Step 3. ESP takes biometrics and basic travel document information and creates file
Step 4. ESP sends files and biometrics to consulate
Step 5. Consulate (or home authority) performs admissibility check
Step 6: Consulate further examines the application
Step 7. Consulate (or home authority) checks information and documents, crosschecks the VIS and may ask for additional information
Step 8. Consulate (or home authority) grants or rejects visa
Step 9. ESP returns travel document and decision to applicant in a closed envelope (within 15 days).

Application (step 1)
Applicant gets information online (or via travel agency)
Applicant gets application form (or registers online)
Applicant compiles all documents and goes to ESP and presents signed application

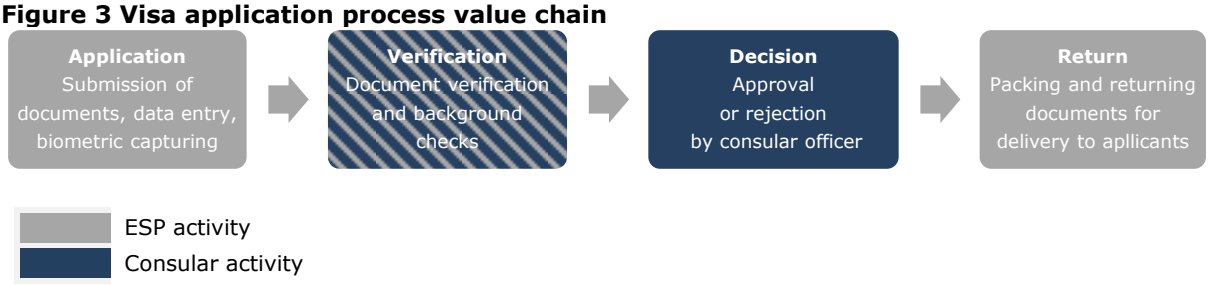
ESP (step 2 – 4)
ESP checks documents for completeness (according to visa code, national guidelines)
ESP takes biometrics and creates file (paper and electronic)
Paper files are transferred to consulate
Electronic files are transferred to consulate (via secure encrypted transmission or for example CD or flash drive)

Consulate (step 5 – 8)
Consulate reviews application: admissibility check; creating file for NI-VIS; cross check with VIS for previous applications and biometric matches (only fingerprint); check if paid; may ask for additional documents (provided by ESP or applicant directly; may request supporting documentation from other consulates)
Consulate grants or rejects (some countries back office grants or rejects)
Consulate creates final VIS entry
Consulate stores folder locally (all copies, all documents provided)
Minimum 2 years after visa has expired when granted
Minimum 5 years when rejected

ESP (step 9)
ESP receives the travel documents (and eventually letter with rejection) from the consulate in a closed envelope
ESP returns envelope to applicant (via mail or applicant collects envelope at ESP office)

The visa application process value chain may be visualised as follows:

Figure 3 Visa application process value chain



Source: Schellong, Alexander, Consular Outsourcing & Visa Services- The Unknown Billion Dollar Market, 7 December 2016.

In the current situation, different players in the visa application process value chain have access to different data of the visa applicants (Table 2) The ESP only has very temporary access to data – they merely act as a mailbox and pass the information to the consulate. Most information is stored at the consulate and an extract of this (biometrics, passport information, previous visas applications) is stored electronically in VIS. Consulates most often keep a copy of the travel documents (paper copy or electronic file).

Table 2 Who gets the data and for how long is it stored?

Stakeholder	What data	Retention duration
ESP	Assembles documents Creates paper and electronic files	Deleted within a few days
Consulates	Gets everything Keeps everything *In paper and/or electronically*	Minimum (2 years after expiry when granted, 5 years when rejected) Maximum is unspecified
VIS	Biometrics Passport information Previous visas (applications and results) *Electronically*	Retains information for 5 years (after visa expiry)

With regards to the transfer of data, there are several modus operand of how ESPs transfer their digital data to the consulate; online, cd or on a flash drive. Uploading of data from the consulate to the national VIS system and from the national VIS system to the central VIS, goes via secure online communication channels.

Table 3 How is data transferred?

Stakeholder	Access
ESP > Consulate	Paper files in sealed containers Electronic files via secure encrypted transmission Electronic files on encrypted data storage (memory stick)
Consulate > NI-VIS	Secure electronic communication
NI-VIS > VIS	Secure electronic communication

ESPs have no access to the VIS system (Table 4). Consulates have access to their 'own' application files. If they need detailed information from applications done at a consulate of another Member State, a request will be sent to this consulate (via VIS mail or a different communication tool), and if possible the consulates will exchange this information bilaterally.

Table 4 Who has access to the data?

Stakeholder	Access
ESP	Temporary access to full application Temporary access to biometrics (usually secured by specific systems)
Consulates	Access to full ('national') application files Access to all VIS information
Visa authorities Authorities doing external border checks Asylum authorities Law Enforcement authorities Europol[24]	Access to all VIS information, on the basis of purpose limits laid down in Articles 15-22 of the VIS Regulation

2.3. VIS in the long-term European perspective

Challenges of using biometrics effectively and efficiently are becoming larger when cooperation exists between multiple stakeholders and systems. This is typically the case in Europe, as will be illustrated in this section. At the same time, biometrics and identity are becoming increasingly important in securing the European society. This is due to the strong growth of mobility induced by the globalisation and the geopolitical situation, such as immigration and the digital economy. To further benefit from the potential of cross-border cooperation in fighting crime and managing immigration within the EU, harmonization of procedures and quality control is essential. This includes exchange of best practices and the definition of common (minimum) standards.

It is acknowledged that the existence of large-scale information systems also implies potential privacy and data protection issues, which need to be anticipated and addressed appropriately. The collection and use of personal data in these systems, such as adult and juvenile fingerprints, has an impact on the right to the privacy and the protection of personal data, enshrined in the Charter of Fundamental Rights of the European Union. All systems need to comply with data protection principles and the requirements of necessity, proportionality, purpose limitation and quality of data. Safeguards must be in place to ensure the rights of the data subjects in relation to the protection of their private life and personal data. It should be noted that the scenarios that involve the ID management of immigrants, asylum seekers, criminals and citizens are governed by different legal frameworks. It remains a challenge to develop parallel processes ensuring privacy and data protection for both groups of data subjects, while at the same certain porosity between these processes will need to exist, as the criminals are a subset of the citizens and asylum seekers.

'Data protection by design' and 'Data protection by default' are now principles of EU data protection rules. When developing new instruments that rely on the use of information technology and personal data (such as biometric data), the Commission will seek to follow this approach. This implies embedding personal data protection in the technological basis of a proposed instrument, such as secure data storage and management. As low biometric quality significantly raises failure rates and therefore the change of mistakes or unsolved crimes, quality and protection of biometric data are of key importance.

In the context of the above described intensive use of biometric data throughout the various systems, the Commission has stressed its concern regarding the quality of inserted data. Rightly, the Commission concludes that the reliability and value of the stored data becomes very limited, and the risk of mismatches and non-hits will undermine the value of the very systems, if Member States do not respect minimum quality requirements. A similar approach could be followed for face, even though the automation for this modality is far less advanced (mainly non existing) and the interconnection not existent (e.g., Prüm is only for Fingerprint and DNA). The issue of data quality in large scale EU systems becomes even more relevant, when adding the fingerprints of children between 6 and 12 years old is being considered. Therefor an assessment on the current status of fingerprint quality management needs to be done.

[24] Europol is granted access to VIS since 2011 but their system has yet to be connected to the VIS. They are expected to connect in 2018.

3. TOPIC 1. TRAVEL DOCUMENT COPY

3.1. Introduction

The VIS Regulation (EC) No 767/2008 foresees that the biometric data of third country nationals who apply for a visa are stored in the VIS. According to Article 2(e), one of its objectives is 'to assist in the identification of any person who may not, or may no longer, fulfil the conditions for entry to, stay or residence on the territory of the Member States.' Under Articles 19(1) and 20(1), the authorities competent for carrying out checks at external border or within the territory of the Member States are allowed to access certain VIS data for verification and identification purposes. Finally, Article 31(2) enables the Member States – via the designated competent authorities – to transfer or to make available a limited set of these data to a third country for the purpose of proving the identity of third-country nationals for the purpose of return.[25] Thus, although not explicitly defined in Article 2, when taken together, these provisions foresee that the VIS can be used to facilitate both the identification of the irregular migrant and the issuing of travel documents for return. [26]

On 14 October 2016, the Commission highlighted the importance of the VIS as an instrument for return purposes in its report to the European Parliament and the Council on the evaluation of the implementation of the VIS. The evaluation found that, "while the VIS is instrumental in assisting in the identification and return of illegal immigrants, its use in the return procedure has so far been rather limited and that recent trends indicate an increased need to use this instrument which provides a proof of identity necessary in a return procedure."[27] The report underscores recent calls to make better use of existing of European Information Systems, including the VIS, to enhance the effectiveness of the EU return system. [28]

Using the VIS within the framework of forced return has also proved challenging for the Member States, which face practical and operational problems in this context. The experience of Member States to date is that the competent authorities of the majority of third countries currently do not accept the information that can be extracted from the VIS (i.e. a VIS-hit as such) as sufficient proof to verify the person as one of 'their' nationals and request a copy of the TCN's travel document. Therefore for persons who are no longer in possession of their travel document, or who fail to produce it upon request, a copy of that individual's passport, in combination with the data provided in the VIS, is necessary for proving his/her nationality and facilitating the issuance of an emergency travel document by the competent authorities of the country of origin. When the embassy obtains, and is able to send the copy of the passport, the information can have a decisive influence on the return case. Nevertheless, the willingness to issue the emergency travel document (ETD) is ultimately highly dependent on the country of origin.[29]

3.1.1. What are the problems?

[25] The Regulation allows the designated competent authorities to transfer the following data from the visa application file: first name, surname and former surname (if applicable); sex, data, place and country of birth; current nationality and nationality at birth; type and number of the travel document, the authority which issued it and the date of issue and of expiry; residence; and in the case of minors, the surname and first name(s) of the applicant's father and mother.

[26] EMN Ad-Hoc Query on COM AHQ on Member States' Experiences with the use of the Visa Information System (VIS) for Return Purposes. Requested by COM on 18th March 2016. 24 responses were provided: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/networks/european_migration_network/reports/docs/ad-hoc-queries/ad-hoc-queries-2016.1042_com_ahq_on_member_states_experiences_with_the_use_of_the_visa.pdf.

[27] COM(2016) 655 final, "Report from the Commission to the European Parliament and the Council on the implementation of Regulation EC) No 767/2008 of the European Parliament and of the Council establishing the Visa Information System (VIS), the use of fingerprints at external borders and the use of biometrics in the visa application procedure/REFIT Evaluation," Brussels: 14 October 2016: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-is-new/work-in-progress/initiatives/docs/gmige/report_from_commission_en.pdf.

[28] EU Action Plan on Return (COM(2015) 453 final).

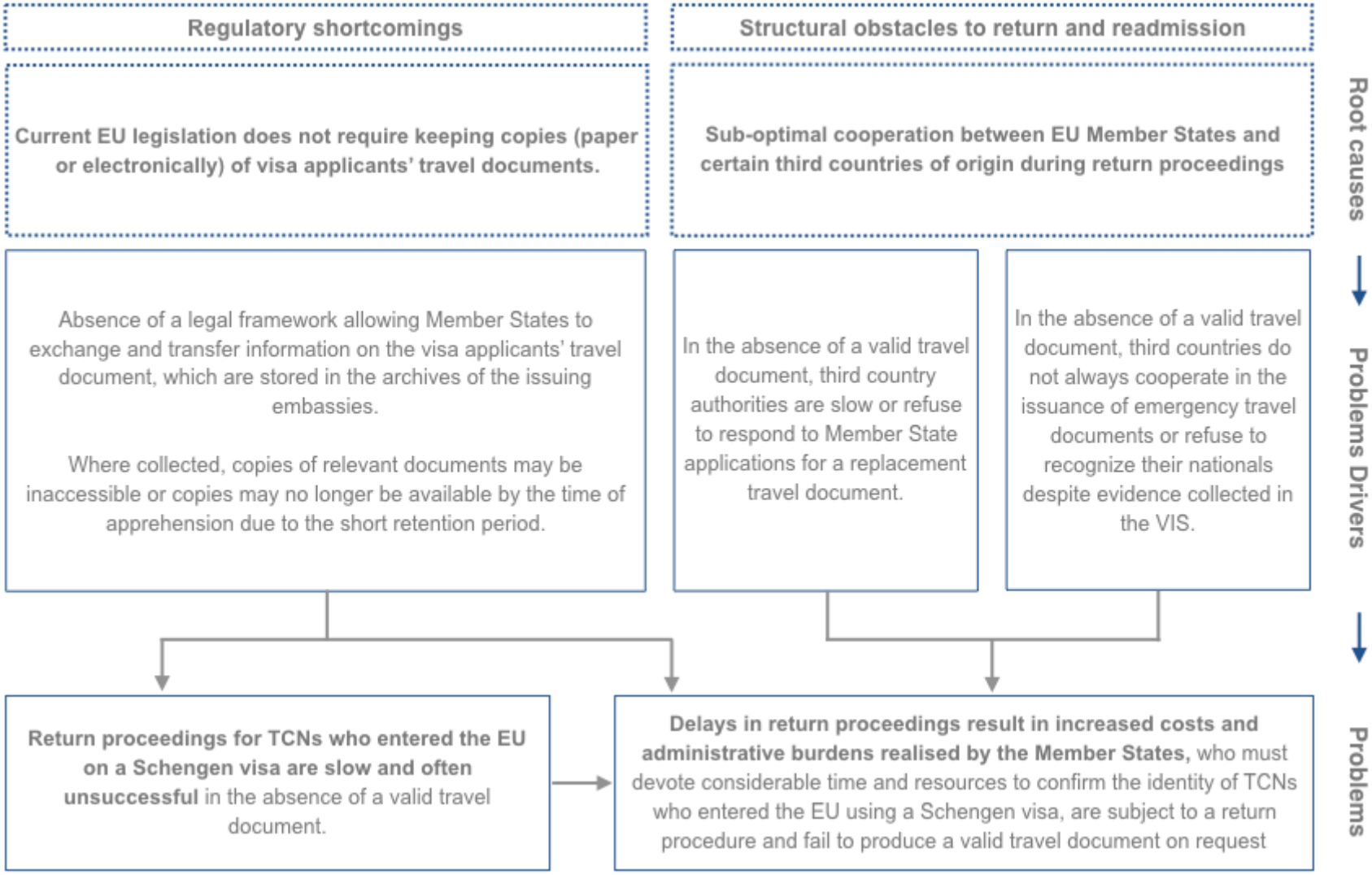
[29] European Commission (2016), SWD 327/328: Evaluation of the implementation of Regulation (EC) No 767/2008 of the European Parliament and Council concerning the Visa Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation) / REFIT Evaluation.

Under topic 1, two main problems are identified as contributing to a situation in which Member States face high barriers to complete return procedures regarding third country nationals who overstay their visa and fail to produce a valid travel document on request. These two problems are:

- Problem 1: In the absence of a valid travel document (or copy thereof), return proceedings for TCNs who entered the EU using a visa are slow and often unsuccessful;
- Problem 2: Delays in the return process result in increased costs and administrative burdens realised by the Member States.

The problem tree in Figure 4 presents an assessment of the interconnections between the root causes, problem drivers and the core problems, which are described in more detail below.

Figure 4 Problem tree: storing a copy of the travel document in the VIS



Problem 1: In the absence of a valid travel document (or copy thereof), return proceedings for TCNs who entered the EU using a visa are slow and often unsuccessful.

Third country nationals subject to a return order must be in possession of a valid travel document, without which the return cannot be executed. Although visa applicants, and subsequent visa holders, are under strong obligation to establish their identity by presenting a valid travel document during both the application process and upon entry to the EU, Member States report that the majority of TCN-VHs who become subject to a (forced) return are no longer in possession of their travel document, or fail to produce it upon request. In such cases, the sending Member State must file an application for a replacement travel document, or *laissez*-passer, either with the in-country diplomatic representation of the country of origin, or directly with the competent authorities of the country of origin, pending the positive identification of the foreign national in question. Most third country diplomatic representatives only issue an emergency travel document once the identity and nationality of the TCN can be verifiably proven by the sending Member State by providing a scanned copy of the TCN's travel document that provided the basis for issuing the Schengen visa.

The process of obtaining the travel document copy is hampered by the absence of a legal framework allowing Member States to exchange and transfer such information as well as the insufficient, slow and sometimes non-existent cooperation on the part of third country authorities. These issues are discussed under chapter 3.1.2 below.

Schengen visa overstayers

Prior to the refugee crisis, it was estimated that the majority of the irregular migrant population in the EU was constituted by persons having legally entered the EU at an official border crossing point, but who overstayed their legal period of stay or had entered the EU abusing legal channels, such as a fraudulently obtained visa.[30] While accurate statistics or estimates regarding the composition of this population are not available, the unprecedented number of detections of illegal border crossings along the EU's external borders in 2015 and 2016 would indicate that this ratio has since been reversed, and it is likely to continue to evolve in the foreseeable future.[31]

Member States' competent authorities who were interviewed and/or surveyed as part of this study were asked to provide statistical data on several relevant indicators in order to enable an estimation of the size of the problem.[32] The majority of stakeholders consulted were either unable or unwilling to provide the requested information. For those that did respond to the question (6 MS), the data on the number of detected visa overstayers per Member State range from an **annual average of 1 100 cases to 17 445 cases between 2014 and 2016.[33] As a percentage of visas issued, the 6 Member States for which data was available indicate a rather consistent average of 2%** (see Annex II for detailed explanation of the underlying calculations).

Applied to the number of visas issued at EU level (based on a 3-year average), the total number of detected overstayers is estimated at around 294 000 cases across the EU, on average. This figure is roughly in line with the figure on visa overstayers that was used in the 2016 Impact Assessment report on the introduction of an Entry-Exit System.[34]

[30] SWD(2016) 115 final, Commission Staff Working Document: Impact Assessment Report on the establishment of an EU Entry Exit System, Brussels, 6 April 2016, p. 7.
[31] According to Frontex statistics presented in its Annual Risk Analysis for 2016, the year of 2015 saw 1.8 million detections of illegal entry, accounting for an estimated 1 million individuals. This estimate is based on the assumption that all migrants first detected irregularly crossing in Greece were subsequently detected for a second time re-entering the EU from the Wester Balkans.
[32] Member States were asked to provide data on the number of detected (and estimated undetected) visa overstayer cases in the country; the number of return decisions concerning TCNs who entered on a visa and who were no longer in possession of their travel documents at the time of apprehension; and the number of cases that could not be executed due to missing travel documents.
[33] MS responses: Belgium, France, Germany, Greece, Lithuania and Poland.
[34] Based on SWD(2016) 115 final. The report estimated a stable annual average of approximately 250.000 visa overstayers EU-wide.

Based on stakeholder feedback, the present study assumes that **90% of detected overstayers become subject to return proceedings amounts to approximately 265 000 return decisions addressed to visa overstayers** (or 65% of all return decisions for nationals of visa-required third countries between 2014 and 2016 period; see Table 9 in chapter 3.1.3).

Visa overstayers who no longer possess a travel document

Based on the data provided by the Member States consulted during the study, it is estimated that roughly 10 to 20% of all visa overstayer return cases involve TCNs who no longer possess, or fail to produce their travel document on request. This amounts to an **estimated 26 445 cases to 52 891 cases of missing travel documents.**

Table 5 Estimated number of TCN-VHs subject to returns involving missing travel documents

Number of TCN visa overstayer cases involving missing travel documents				
Number of visa overstayers	Number of return decisions concerning visa overstayers (90% of visa overstayers)	% of overstayer return cases involving missing TDs	Number of overstayer return cases involving missing TDs	
			Lower (10%)	Upper (20%)
294 000	264 453	10% - 20%	26 445	52 891

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

Magnitude of delays and effective return rate of visa overstayers without valid travel documents

When confronted with such cases, Member States' authorities will seek assistance from the issuing Embassy using one of the following options:

1. The competent authorities for identification / verification in the context of return decisions in Member State X contacts its counterparts in Member State Y; the competent authorities in Member State Y then makes a request for the information from the appropriate Consulate that was responsible for issuing the visa;
2. The competent authorities for identification / verification in the context of return decisions in Member state X contacts the visa section of the Member State X Consulate / Embassy in third country of origin A and asks MS X Consulate to make a request for the information from its local counterpart at MS Consulate Y, which was responsible for issuing the visa;
3. Member State X can directly contact the CP of MS Y using VIS Mail for the transmission of requests for supporting documents.

To date, Member states have not sufficiently implemented VIS Mail end-to-end, which undermines the effectiveness of this feature and underlines the reliance on the first two avenues. Regardless of which route is utilised, interviews with Member States and Consular officials indicate that the average response time on the part of the consulates varies and is highly dependent on the workload at the respective consulate. **As a result, return procedures may be delayed by 2 days during low-seasons, and up to 2 weeks during busier periods.**

Stakeholder testimony further suggests that more than half of such cases are not executed due the authorities' inability to obtain satisfactory evidence proving the nationality of the third country national in question. **The study therefore assumes that between 60% to 75% of such cases are not implemented on these grounds, amounting to an estimated 15 867 to 39 668 returns of visa overstayers that could not be executed.** This represents roughly 13% to 33% of effective returns of visa-required third country nationals.[35] These figures are presented in Table 6.

[35] Based on the three-year average (2014 – 2016) of effective returns of nationals from visa-required third countries.

Table 6 Number of returns not executed due to missing travel documents

Number of returns not executed due to missing documents				
Number of overstayer return cases involving missing TDs		% not executed	Number of return decisions not executed	
Lower (10%)	Upper (20%)		Lower (60%)	Upper (75%)
26 445	52 891	60% - 75%	15 867	39 668

Source: Ecorys calculations based on data provided during stakeholder interviews.

While the actual number of estimated cases is low, based on our calculations, the impact of undetected cases is potentially high. Indeed, one Member State estimates that the number of detected overstayers represents just 40% of all visa overstayers (i.e. the undetected population). Moreover, according to migration officers that have run simultaneous searches of VIS against EURODAC for asylum searches, about 30-35% of asylum seekers can be identified using the VIS.[36]

Problem 2: Delays in the return process result in increased costs and administrative burdens realised by the Member States.

Travel documents associated to the visa are not stored centrally, if at all. Member States must therefore devote considerable time and resources to confirm the identity and prove the nationality of TCN who entered the EU using a visa, are subject to a return procedure and fail to produce a valid travel document on request. As a result, return proceedings for TCN visa-holders without travel documents are time consuming and lengthy (delays), resulting in high costs and increased administrative burdens realised by the Member States.

High administrative burden to Member States

The absence of any centralised access to enable the efficient extraction of travel document copies imposes an unnecessary additional burden for both the requesting Member States' authorities as well as the recipient of that request – typically a combination of different Member States' consulates. The workload associated with each request may vary depending on the number of archived files at the consulate, the accessibility of the files, etc. For example, one Member State indicated that the paper copies are not destroyed by the diplomatic representations, but rather continue to pile up, thus adding to an increasingly cumbersome retrieval process.

In addition to return cases, travel document copies may be required when fingerprints matches are not found due to the provision of false or different information by the TCN during the application process, or the fact that names can be transcribed in several ways.[37] In the experience of several authorities interviewed, the consulates and border authorities are not immune to making mistakes when it comes to translations. These problems are multiplied in the event of court proceedings, or if other Member States require the information. Three Member States indicate that personal data used for a query does not always return any matches because the TCN received a visa in another Member State using different personal data.

On average, Embassies and Consuls receive 14 to 28 requests per year for assistance in obtaining the necessary travel document copies from their national archives. The execution of a standard return decision requires an estimated 20 hours of work on the part of the relevant Member State authority.[38] Based on interviewee feedback, the study estimates that **the procedure for retrieving a scanned copy of the TCN-VHs' travel document from the consulate or embassy that issued the visa adds an additional 4 to 8 hours to the standard 20-hour workload. It is further estimated that the amount of time spent by**

[36] Commission Staff Working Document, XXX (2017), Impact Assessment accompanying the document for a proposal for a Regulation of the European Parliament and the Council establishing interoperability between European Union information systems for security, border and migration management.
[37] Frontex Risk Analysis for 2016, p. 51.
[38] This figure is taken from the Commission Staff Working Document Impact Assessment Report on the establishment of an EU Entry Exit System, SWD(2016) 115 final, Brussels, 6 April 2016, Part 3/3.

consular staff to fulfil each request ranges from between 1 to 2 hours, depending on the accessibility of the archiving system. The additional costs associated with undertaking this activity are summarised in table below.

Table 7 Costs to obtain / provide a copy of the travel document[39]

Activity	Workload	Cost per return case	Total costs (p.a.)
Obtaining a copy of the TCN-VH's travel document from issuing Embassy	4 – 8 hours per TCN	€ 120 – € 240	€ 3 173 438 - € 12 693 752
Retrieving a copy of the TCN-VH's travel document from archives	1 – 2 hours per request	€ 26 – € 42	€ 687 578 – € 2 750 313
Total costs to MS		**€ 146 – € 292**	**€ 4 059 356 - € 15 840 745**

Source: Ecorys calculations based on data provided during stakeholder interviews.

Lost costs associated with unsuccessful returns

As described in the analysis of Problem 1 above, the study estimates that return decisions concerning TCN-VHs who lack valid travel documents are successfully executed in less than one in two cases. This means that the staff cost incurred with preparing and executing the return decision for TCNs who lack travel documents is lost in the majority of cases pursued. **The amount of lost costs from return decisions that are not executed due to missing travel documents is estimated at € 11 424 377 and € 33 321 099 per annum.** [40]

The results of the stakeholder consultation revealed that Member States' authorities overwhelmingly agree that if copies of scanned travel documents were systematically available and accessible to the relevant authorities, it would:

- greatly reduce the burden to confirm this category of TCNs' identity and facilitate the return process;
- reduce delays associated with ad hoc communications and exchange between Member States' authorities and the consulates; and
- eliminate inefficient procedures involved with retrieving, scanning, zipping and coding hard copies (see chapter 3.5.3 'policy benefits').[41]

Increased costs due to delays in the return procedures

In addition to the workload associated with facilitating the issuance of an emergency travel document, Member States incur a range of costs in the process of implementing a return decision. A recent probe of some 100 joint return flights organised by the EBCG (formerly Frontex) revealed that the average cost of return operations per individual returned amounts to € 5 800.[42] This broadly covers the costs for transportation and convoying, cost for the tickets to the country of readmission; cost of escorts, including their tickets and the daily subsistence allowance (DSA) of the escorts during the travel. Expenses arising from return operations vary considerably, depending on the price of the flight, its route and the number of escort personnel needed. For example, the cost to return an Albania from Germany may cost a mere € 1 000, whereas a forced return to Nigeria or Somalia may cost upwards of € 9 000 for each individual to be returned.[43]

[39] Hourly labour costs of consular staff are estimated at € 26,00, and at € 30,00 per hour for migration authorities.
[40] It is assumed that the execution of a return decision requires 24 to 28 hours of work valued at € 30 / hour. This figure was adapted from the EES Impact Assessment study, SWD(2016) 115 final, Part 3/3.
[41] Member States may issue a substitute document for those illegally staying third-country nationals who do not possess a valid travel document. On 13 October 2016, the Council adopted a regulation that establishes a uniform European travel document for the return of illegally staying third-country nationals (European travel document for return).
[42] Matteo Civillini and Lorenzo Bagnoli, "Skyrocketing costs for returning EU migrants," EUObserver.com, Brussels, 5 May 2017.
[43] Ibid.

In addition to the flight expenses, Member States incur a number of costs associated with forcible removals of TCNS that are far more sensitive to the duration of the return proceeding than is the cost of the removal itself. These include:

- Costs for keeping of the person to be returned in the detention or pre-removal centre, or police house of detention (i.e. accommodation, or pre-deportation detention);
- Expenses on meals;
- Costs of medical care and treatment; and
- Costs for translation and interpretation to ensure communication with the TCN.

According to Member States' responses to a 2017 EMN Ad-Hoc Query on the costs associated with forcible removals of irregular TCNs, costs arising from the aforementioned list range from € 180 per day (Belgium), to € 1 500 – € 5 300 per individual (Germany) to € 32 000 per individual (Estonia). [44]

For this study, we estimate that the **average daily cost incurred by Member States for detention and pre-removal purposes is € 125 per person.** This figure is based on available data across 13 Schengen States, and 19 detention centres. [45] Moreover, and as will be outlined in the analysis of economic impacts (chapter 3.5.1), stakeholders indicate that the amount of time between a request for the travel document copy and its receipt range from 1-2 days to 2 weeks in certain cases. Table 8 summarises the estimated size of the problems identified in the previous paragraphs.

Table 8 Estimated number of overtayers and costs to Member States (2014-2016, average)

Estimation of the size of the problem in 2016		
Number visas issued (3 year average of 2014 – 2016 data)	14 643 364	
Number visa overstayers (2% of visa applicants)	293 837	
Number visa overstayers subject to return decision (90% of visa overstayers)	264 453	
Number visa overstayers in return proceedings without travel documents: (10% to 20% of visa overstayers subject to return proceedings)	Lower (10%)	Upper (20%)
	26 445	52 891
Costs incurred to obtain evidence of TCN's nationality (4 to 8 hours per case)	€ 3 173 438	€ 12 693 752
Number of cases not executed due to missing travel documents (60% to 75% of all cases involving missing visa overstayers without travel documents	Lower (60%)	Upper (75%)
	15 867	39 668
Lost costs on returns not implemented	€ 11 424 377	€ 33 321 099
Costs incurred from each day of delay in return proceedings, per TCN	€ 1 750	
Costs incurred from delays in return proceedings during the verification phase (max 14 days)	Lower	Upper
	€ 46 279 304	€ 92 558 608

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

3.1.2. What are the problem drivers?

Driver 1: Absence of a legal framework allowing Member States to exchange/transfer such information

Currently, EU legislation – including in the areas of visa policy, migration and/or elsewhere – does not provide for the storage of scanned pages of the visa applicants' passports in the VIS,

[44] EMN Ad-Hoc Query on the cost of a forcible removal of the irregular TCN's, requested by HR EMN NCP on 20 January 2017.
[45] Figures are based on available country-level data from the Global Detention Project: https://www.globaldetentionproject.org/regions-subregions/europe.

nor for making them available to other Member States. Member States may, however, establish such an obligation in their national legislation.

Article 37 pf the Visa Code (Regulation 2009/810) does, however, oblige consular staff to keep files of the visa application, which could possibly be used to provide further information to other authorities. As stated in Article 37, paragraph 3:

> *Member States' consulates shall keep archives of applications. Each individual file shall contain the application form, copies of relevant supporting documents, a record of checks made and the reference number of the visa issued, in order for staff to be able to reconstruct, if need be, the background for the decision taken on the application.*[46]

In practice, many Member States systematically require applicants to submit such copies of the bio data page (as a minimum), which are stored in paper format by the individual Member States (i.e. there is no central storage of travel documents associated to the visa). Just three Member States were identified as not having formulated an obligation, while some Member States only require it in locations that pose a particularly high migration risk. For example, Lithuanian Embassies and consulates located in the post-USSR territory – accounting for 92% of all Lithuanian visas issued in 2016[47] – do not store copies of the visa applicant's passport.

The evidence collected during this study reveal that national practices concerning storage, retention and accessibility vary considerably across the Members States. Where collected, national embassies and their consulates do not always archive travel document copies. The relevant authorities of 7 Member States report that attempts to contact the Embassy that issued the visa to obtain a scanned copy of the documents that provided the basis for issuing the visa prove unsuccessful in many cases. According to these authorities, copies of relevant documents may be inaccessible or copies may no longer be available by the time the TCN is apprehended, given the relatively short retention periods applied by the Member States.[48] On the latter point, applicants' files are typically retained for 1 to 3 years, depending on the Member State, whereas the VIS data are stored for a period of 5 years.[49] In the vast majority of cases, however, assistance requests fall within the 3 years following the issuance of the visa.[50] While information can be exchanged via VIS Mail during the visa examination process, and could be extended for the purposes described in this study, the sub-optimal implementation of VISMail to date further aggravates this problem and undermines any potential possibility that the feature would suffice to solve the existing problems under investigation.

Depending on the season in which the request is made, it can take anywhere from several days to several weeks to receive a response from the issuing embassy / consulate that was responsible for issuing the visa. Longer delays in the response time are a frequent occurrence in the lead up to high-seasons for tourism, such as 1-2 months preceding the summer holiday season.

This issue is further underscored by the fact that the VIS Regulation does not explicitly provide for this type of information exchange among the participating Member States. As a result, it was reported by two Member States that some Member States' consulates are therefore reluctant to send copies of the visa files for lack of a clear legal basis and data protection concerns, even when referring to the VIS Regulation.

The differing national practices adds to an already complex and – at times delicate and/or time-sensitive – process of confirming the identity of third country nationals who lack valid travel

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[46] Regulation 2009/810, Article 37, paragraph 3.
[47] European Commission, Complete statistics on short-stay visas issued by the Schengen States in 2016, available: https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/visa-policy_en.
[48] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/2017.1162_be_vis_in_return_matters_part_1_copies_of_documents_access_to_vis_and_fingerprints_.pdf.
[49] This finding is further confirmed by the recent EMN ad hoc survey on the use of VIS in return matters, which was commissioned by EMN Belgium, 2016. Available here: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/2017.1162_be_vis_in_return_matters_part_1_copies_of_documents_access_to_vis_and_fingerprints_.pdf.
[50] Based on stakeholder consultation interviews with Member States' authorities and Consulates.

documents, yet who entered on a visa. Moreover, the owners of these processes are different authorities across the Member States (for example, Ministry of Foreign Affairs, Ministry of Justice, Ministry of the Interior, etc.) – all of which have different approaches to, and manners for storing such documents. The result is a situation characterised by uncertainty and unreliable access to critical evidence that is necessary for facilitating the positive identification and return of TCNs who do not or no longer fulfil the conditions for entry to, or stay in the territory.

Driver 2: Insufficient (or non-existent) and/or slow cooperation of third countries in return procedures in the absence of a (copy of) the travel document

The consensus view among stakeholders interviewed is that the degree to which third countries cooperate in this field is critically dependent on the quality of relations between the third country and the returning Member State, or the EU more broadly. Bilateral return agreements between Member States and countries of origin and EU readmission agreements (EURAs) are one of the tools that can be used to ensure cooperation with countries of origin for the effective and smooth implementation of return decisions. However even in the context of EURAs and bilateral readmission agreements, Member States face practical challenges to their implementation in the absence of valid travel documents.[51] In particular, Member States have reported that in some cases, third countries do not issue travel documents to enable the readmission / return, third countries do not reply in adherence to deadlines or they require different levels of evidence with regards to accepting persons without travel documents as nationals of their country.[52]

The rather substantial gap between TCNs issued with a return decision and those who have been subject to an effective return is therefore, to a large extent, explained by the slow and/or low levels of (or altogether absence of) cooperation by the authorities of the third countries of origin or transit. This non-cooperation takes the form of:

- Non-response (lack of a reply) to Member States' requests for an emergency travel document;
- Non-recognition of their national by third countries;
- Non-issuance of a travel document allowing the return of the person.

At the same time, authorities are generally optimistic regarding the decisive influence that the presentation of document copies can have on non-cooperative third countries.

According to one Member State authority, approximately 90% of all visa-required third countries require proof for the purposes of verification / identification in the form of a copy of the travel document for the TCN in question. The REFIT evaluation of the functioning of the VIS signalled that Member States continue to face objections by certain third countries regarding the admissibility of the evidence provided in the VIS, which have implications both for the use of the VIS for return purposes as well as the overall effectiveness of return proceedings for certain categories of TCNs.[53] Most notably, the authorities of the majority of third countries currently do not accept the information that can be extracted from the VIS as sufficient evidence to verify the person as one of 'their' nationals. In other words, the VIS data alone are rarely recognised by third countries as evidence of nationality.[54]

[51] European Migration Network, Synthesis Report for the EMN Focussed Study 2014 – Good practices in the return and reintegration of irregular migrants: Member States' entry bans policy and use of readmission agreements between Member States and third countries, 2014.
[52] Ibid. See also the national reports of Austria and Greece in support of the EMN 2014 study: "Austria's return policy: application of entry bans policy and use of readmission agreements," p. 52; "EMN Readmission Report Greece," p.21, amongst others.
[53] European Commission (2016), SWD 327/328: Evaluation of the implementation of Regulation (EC) No 767/2008 of the European Parliament and Council concerning the Visa Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation) / REFIT Evaluation. See https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-is-new/work-in-progress/initiatives/docs/gmige/impact_assesment_summary_en.pdf (summary) and http://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/borders-and-visas/visa-policy/docs/impact_assessment_part1_en.pdf.
[54] Ibid.

Authorities further state that third countries are only obliged to accept a VIS hit as such on the basis of certain readmission agreements, including several EURAs. For example, the VIS is explicitly mentioned as one possible means of evidence of nationality under some of the most recent EURAs (COM(2014)199). However, no such obligation exists with most third countries, including many of those, which have historically lower levels of cooperation when it comes to legal and practical return arrangements. In the absence of a readmission agreement, either at bilateral or EU level, the majority of third country authorities ask for a scanned (paper) copy of the third country national's travel document before issuing emergency travel documents.

Member States have cited the following examples to illustrate this point:[55]

- Belgium noted difficulties to return TCNs to Morocco, Tunisia, Burundi, Guinea, Bangladesh, Suriname, Jamaica and India. These difficulties are exacerbated by the fact that no there are no readmission agreements with these countries on either EU or bilateral (Belgian) level. In Belgium's experience, a copy of the passport is considered as stronger evidence of an individual's nationality by the embassies responsible for issuing an ETD, rather than the passport data alone, which are entered into the VIS. In the absence of valid proof of identity, third country authorities will not issue a replacement travel document for the TCN to return, without which it is not possible to return the individual to their country of origin;
- France indicated that Chinese authorities consider the VIS data as prima facie evidence, while others do not recognise it at all. This is the case in, among others, Angola Mali, Mauritania, Moldavia, Mongolia, Pakistan, Senegal and the Maghreb countries;
- In reference to the use of EU travel documents, the Swedish Migration Authority observed that, to date, it has not used the VIS data on its own in support of an EU travel document, but rather only in cases for which additional evidence could be attached. Even so, cases are frequently delayed by the third country authorities (e.g. Lebanon), who insist on investigating and verifying the VIS data independently before issuing an ETD;
- Finland has experienced problems to return TCNs to various sub-Saharan Africa countries, while Luxembourg experiences difficulties with North African countries;
- Both Germany and Poland have indicated that personal data and/or photos contained in the VIS are not always sufficient to obtain the ETD from the issuing Embassy, though no specific countries are explicitly identified. Since the copies of the travel documents are an indication of citizenship, the TCNs are usually identified by the respective Embassy or Delegation of the country of origin.

In addition to the third countries referenced above, Member States report particular difficulties in obtaining emergency travel documents in time for certain West African countries of origin, most notably those with limited consular presence in the EU, such as Côte d'Ivoire, Guinea Equatorial and Senegal, as well as Afghanistan, Iraq.[56]

Greek authorities further noted that the time span between recognition and issuance of travel documents varies, depending on the COI and the level of cooperation with Greece. It should be noted that Greece faces significant problems in the issuing of travel documents by the Consular authorities of the TCNs, as the in-country Embassies do not cooperate regarding extradition, which is a hindrance to the implementation of forced returns.[57]

Finally, three Member States report that they have not experienced any cases of COIs rejecting requests on the basis of the VIS data precisely because they do not use the VIS-hits as such as the only evidence on which a readmission request (including issuance of the ETD) is made. Rather, Latvia, Slovak Republic and Sweden only use the VIS data in combination with a copy of the passport that was submitted in connection with the TCN's visa application.

[55] EMN ad hoc survey on the use of VIS in return matters, 2016.
[56] Frontex 2017 Risk Analysis Report.
[57] EMN Focused Study on the effectiveness of return in EU Member States: challenges and good practices linked to EU rules and standards – Greece, 2017.

Alternatively, the country of origin or destination may be requested to accept the returnee on an EU Travel Document[58] accompanied by supporting documentation, such as a scanned copy of the TCN's travel document. The practices across Member States suggest that the EU travel document is generally not used on the basis of VIS data alone, but rather in combination with additional evidence, including a copy of the TCN's travel document.[59] The use of a European travel document rather than a *laissez-passer* depends on the country of origin, and is typically used only for nationalities with which the EU or the Member State has made an arrangement guaranteeing its acceptance by receiving border authorities (i.e. EURAs, bilateral readmission arrangements or Memoranda of Understanding).

Although use of the EU travel document is not commonplace across Member States, there is a general consensus that having access to a scanned copy of the travel document in the VIS would be highly beneficial for return purposes in two key ways. First, it would speed up the return process by reducing the amount of steps and/or persons involved in identifying and verifying the identity of TCNs that lack travel documents. It would also facilitate the implementation of a greater number of returns, which could be carried out on the basis of the EU travel document together with the passport copy.

3.1.3. How will the problem evolve?

The purpose of the following section is to give an overview on migration and visa trends that might have an influence on how the problem will evolve in the future.

Visa restrictions remain on a high level

The level of entry visa restrictiveness has remained remarkably stable at high levels, with currently around 73 per cent of countries being visa-restricted. [60] While predominantly European and North American OECD countries maintain high levels of entry visa restrictiveness for Africa and Asia, the latter regions have the highest levels of entry restrictions themselves. For the Schengen area, 102 out of 195 countries worldwide are required to apply for a short-term visa to be able to enter the Schengen area,[61] despite the EU's visa liberalisation policy and local border traffic agreements, which resulted in higher passenger flows.[62]

It is estimated that countries that are currently in visa liberalization process might decrease the number of Schengen visa-required countries by up to an estimated 2.3 million visas.[63] Since the start of the Partnership Framework, formal negotiations on visa facilitation and readmission agreements have been opened with Nigeria, Tunisia and Jordan, in addition to those already ongoing with Morocco. However, current negotiations are in many cases on halt or suspended due to increasing politicisation of migration policy in national debates in many EU Member States.[64] Obstacles include e.g. the inclusion of a third country national clause or the acceptance by the partner country of EU travel documents for return (EU *laissez-passer*). [65] The outcome of these discussions are directly relevant to the future ease with which the EU Member States can

[58] Regulation (EU) 2016/1953 of the European Parliament and of the Council of 26 October 2016 on the establishment of a European travel document for the return of illegally staying third country nationals, and repealing the Council Recommendation of 30 November 1994, OJ L 311, 17.11.2016.
[59] EMN Focused Study on the effectiveness of return in EU Member States: challenges and good practices linked to EU rules and standards, various Member State responses.
[60] Czaika, Mathias, de Haas, Hein, Villares-Varela, María: The global evolution of travel visa regimes: An analysis based on the DEMIG VISA database, p. 134, available online at: https://www.imi.ox.ac.uk/publications/the-global-evolution-of-travel-visa-regimes-an-analysis-based-on-the-demig-visa-database.
[61] Kingdom of the Netherlands: List of countries whose nationals need or do not need a Schengen visa file:///C:/Users/alexandra.schmid/Downloads/List_of_countries_whose_nationals_need_or_do_not_need_a_Schengen_visa_11-06-2017_%2528EN%2529.pdf.
[62] Czaika, Mathias, de Haas, Hein, Villares-Varela, María: The global evolution of travel visa regimes.
[63] European Commission: Feasibility Study for a European Travel Information and Authorisation System (ETIAS),16 November 2016, p. 99.
[64] Reuters: EU puts brake on visa liberalization for now amid immigration fears, available online at: https://www.reuters.com/article/us-europe-migrants-eu-visas/eu-puts-brake-on-visa-liberalization-for-now-amid-immigration-fears-idUSKCN0YN56F.
[65] Ibid.

assure cooperation by the third country governments on the issuance of emergency travel documents for return purposes.

Visa travellers, applicants and overstayers

The number of 126 million TCN-VH border crossings per year is expected to grow at 5% per year.[66] In line with these developments, Schengen visa applications are likely to grow at a similar rate, from currently 15.2 million applications in 2016 to an estimated 19.4 million in 2020. This assumption is further corroborated by the upwards trend for passenger flows and the growing overall number of passengers due to globalisation, in particular at the air borders as well as a recovering global economy. The figures on passenger transport available for 2014 indicate a year-on-year rise of 4.4%. In the same year, passengers on arrival from extra-EU flights totalled almost 169 million, compared to 164 million in 2013. In 2014, passengers on arrival from extra-EU flights totalled almost 169 million, compared to 164 million in 2013.[67]

Return decisions and effective return rate of third country nationals

In 2015, the number of irregular migrants ordered to leave the EU amounted to 533.395, compared to 470.080 in 2014. This number once again declined in 2016 to 493 785 non-EU citizens ordered to leave EU territories (down 9% compared to 2015). Of the approximately 1 million TCNs found to be illegally present in the EU in 2016 (according to EUROSTAT data), only half received orders to leave the EU (up from 24% in 2015). Considering that 2.6 million asylum applications were lodged in 2015/2016 alone (approximately 1.3 million in both 2015 and 2016), and that the first instance recognition rate in 2016 stands at 61%, **Member States may have more than 1.5 million people to return once their asylum applications have been processed.[68]** It is worth noting, however, that the latest figures show a downwards trend in the number of asylum applications recorded in 2017. The number of asylum applications lodged in 2017 amounted to 706 913, down 43% compared to 2016.[69]

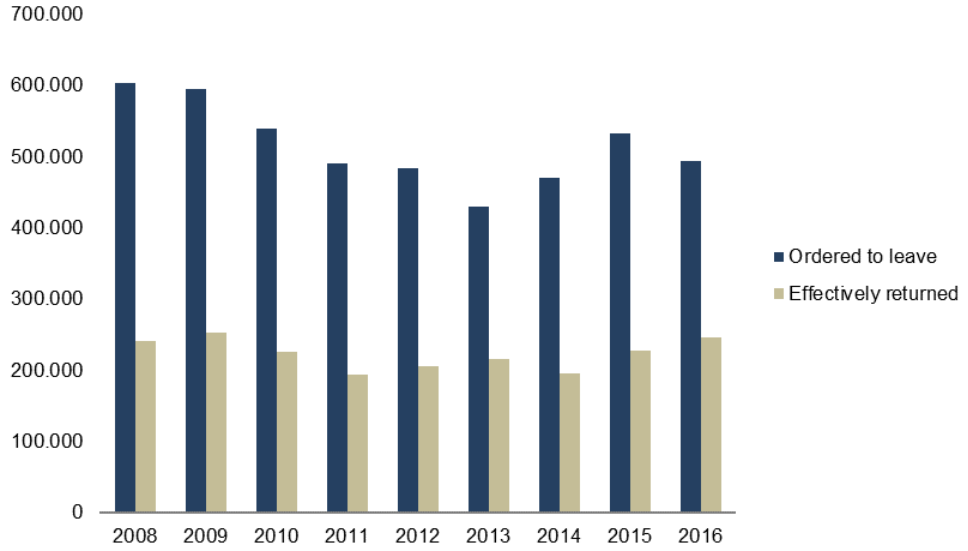
In line with previous years, the number of return decisions was significantly larger than the actual number of effective returns to third countries in 2016. While the total return rate[70] from 2014 to 2015 increased from 41.8% to 42.5%, the rate of effective returns to third countries fell slightly from 36.6% to 36.4%. When excluding returns to the Western Balkans, the EU return rate drops to 27%.[71] Despite the massive spike in irregular movements into the EU between September 2015 and March 2016, effective returns to third countries remained stable throughout 2016 at a level similar to previous years (Figure 5). Of the nearly 500 000 non-EU third country nationals ordered to leave the territory in 2016, a total of 228 625 individuals were effectively returned, a rate of 46%.[72]

While these figures signal the continuation of the recent trend in which effective returns increased over the previous year (2016 marked the second consecutive year of an increase over the previous year), the longer-term trend remains relatively stable, with minor fluctuations

[66] European Commission: Annexes to the Impact Assessment report on the introduction of an Entry Exit System https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/securing-eu-borders/legal-documents/docs/20160406/smart_borders_package_-_20160406_-_impact_assessment_-_part_2_en.pdf.
[67] Report from the Commission to the European Parliament, the European Council and the Council: Fourth Progress Report on the Partnership Framework with third countries under the European Agenda on Migration, COM(2017) 350 final.
[68] COM(2017) 200 final, Communication on a more effective return policy in the EU – A Renewed Action Plan, 2 March 2017; Eurostat statistics on Asylum and Managed Migration (accessed September 2017).
[69] EASO Press Release, Overview of 2017 EU+ Asylum trends, 1 February 2018. Available https://ec.europa.eu/home-affairs/news/number-of-asylum-applications-in-the-eu-down-by-43-percent-in-2017_en.
[70] It includes return to third countries as well as passing back of irregular migrants from a Member State to another, on the basis of bilateral readmission agreements according to Article 6(3) of the Return Directive.
[71] COM(2017) 200 final; European Commission, 'State of the Union 2017: Towards an efficient and credible EU return policy,' available: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/20170927_factsheet_towards_an_efficient_and_credible_eu_return_policy_en.pdf.
[72] Frontex 2017 Risk Analysis Report.

reported during the last decade despite the significant fluctuations in the trends of irregular arrivals and persons found to be illegally present.[73]

Figure 5 Non-EU nationals ordered to leave and returned after order to leave, 2008 - 16



Source: Eurostat (note that FRAN data are lower).

When taking into account the visa status of the returnees, a slightly different picture emerges. According to Eurostat statistics, in 2015 and 2016, just 16% of all TCNs ordered to return to a third country concern visa-free nationals, up from 15% in 2014. However, if we exclude the Western Balkans from this group, the percentage falls to just 3% of all return orders. This means that the vast majority of TCNs issued with a return order concern those from visa-required third countries (84%).

As shown in Table 9, the 2016 return rate for TCNs from visa-required countries amounted to 37% of all return decisions issued to the same group, nearly 10 percentage points below the total effective return rate for all TCNs in 2016. By contrast, the effective return rate of TCNs from visa-free countries is notably higher at 95% in 2016, up from 65% in 2014 (Table 13). This discrepancy is mitigated by the fact that the traditional visa-free countries produce comparatively few cases in terms of the absolute numbers of TCNs ordered to leave the territory. This particularly applies to the more 'difficult' visa-free countries (in terms of the effective return rate of their nationals), such as Canada (20,8%, or 100 of 480 TCNs effectively returned), Japan (5,3%, or 35 of 660 individuals) and the United States (23%, or 490 of 2 125 individuals).

Moreover, among the visa-free countries, those, which ended up as visa-free following a liberalisation process, tend to be the most cooperative on returns, exceeding 100% of TCNs ordered to leave during some periods. This group includes Albania, Bosnia and Herzegovina, FYROM, Montenegro and Serbia. These five countries alone accounted for an average of 76% of all return orders issued to visa-free countries, and 88% of all effective returns between 2014 and 2016. Excluding these countries, the effective return rate of TCNs from visa-free countries is notably lower, at 31%. A final observation is that, in general, visa-free countries tend to better cooperate with the Member States on returns than visa-required countries. Consequently, there is little need for additional measures, such as storing copies of travel documents of travellers to the EU, or such a need is less pressing than for visa-required countries. The statistical data can be found in Annex I.

[73] Frontex Risk Analysis for 2016, p. 51.

Table 9 Return orders and effective returns

Return orders	2014	2015	2016
Return orders (Total TCNs)	470 080	533 395	493 785
Return orders (TCN-VE)	69 195	85 520	79 215
Return orders (TCN-VH)	400 885	447 875	414 570
Share of return orders for TCN-VHs (out of total return orders)	85%	84%	84%
Effective returns to a third country	**2014**	**2015**	**2016**
Effective returns to third country (Total TCNs)	170 415	196 190	228 625
Effective returns to third country (TCN-VE)	44 755	65 230	74 975
Effective returns to third country (TCN-VH)	125 660	130 960	153 650
Share of effective returns for TCN-VHs (out of total returns)	74%	67%	67%
Effective return rate for visa-exempt third countries	**65%**	**76%**	**95%**
Effective return rate for visa-required third countries	**31%**	**29%**	**37%**

Source: Eurostat statistics on the enforcement of immigration legislation.

Available statistics do not distinguish the proportion of this population, which entered the EU on a Schengen visa from those that entered through irregular channels. However, further examination of the data reveal that countries such as Morocco, Algeria, India, Tunisia, Russia and China stand out as having accumulated a large number of return decisions with comparatively low numbers of detected illegal entries. The data suggest that the majority of TCNs found to be illegally present from these countries of origin, and who are issued with a return decision, have tended to cross the borders legally and then exceeded their legal period of stay or had entered the EU abusing legal channels, such as a fraudulently obtained Schengen visa.[74]

By way of contrast, It can be noted that many of the nationalities that are responsible for the largest numbers of TCNs found to be illegally present in the territory are also responsible for the most severe migratory pressure at the external borders, measured in terms of detected (and attempted) illegal entries. While the statistics are not directly comparable as such, it can be assumed that nationals from certain such countries largely fall outside the scope of this particular problem. These include Afghanistan, Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Iraq, Iran, Kosovo, Lebanon, Mali, Nigeria, Pakistan, Palestine, Senegal, Somalia, Sudan and Syria.

Based on forecast data on future trends in visa applications, we estimate that, absent further action on EU level, the proportion of visa overstayers in 2019 will increase to more than 350 000, between 30 000 to 60 000 of which will find themselves in return proceedings without valid travel documents. These calculations are presented in Table 10.

[74] Frontex Risk Analysis for 2016 and 2017, p. 30.

Table 10 Estimated number of overstayers and costs to Member States in 2019

Future evolution of the problems in 2019		
Number visas issued in 2019	17 600 000	
Number visa overstayers (2% of visa applicants)	352 000	
Number visa overstayers subject to return decision (90% of visa overstayers)	316 800	
Number visa overstayers in return proceedings without travel documents: (10% to 20% of visa overstayers subject to return proceedings)	Lower (10%)	Upper (20%)
	31 680	63 360
Costs incurred to obtain evidence of TCN's nationality (4 to 8 hours per case)	€ 3 801 600	€ 15 206 400
Number of cases not executed due to missing travel documents (60% to 75% of all cases involving missing visa overstayers without travel documents	Lower (60%)	Upper (75%)
	19 008	47 520
Lost costs on returns not implemented	€ 13 685 760	€ 39 916 800

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

Increasing burdens to return TCNs

Another aspect that deserves closers attention is the complicated nature and the rise of (dis)proportional costs for return procedures, which often cannot even be executed by the national government authorities. This development can be further illustrated by a case in which Swiss authorities asked Frontex to arrange a flight to deport four Togolese citizens and one from Benin back to their home countries. For reasons unknown, they were all removed from the passengers list just before departure. In consequence, the flight was re-routed and took off with only two Togolese nationals, who were returned from Germany and were accompanied by 13 guards. The entire operation cost 177 000 EUR, or more than EUR 85 000 for each person taken back to their country of origin. In the end, Frontex ended up spending close to EUR 90 000 for each person returned to Togo. [75]

As shown in Table 10 above, in 2019, the burden to EU Member States will increase alongside the number of return decision not implemented, amounting to € 3,8 to € 15,2 million per annum, resulting in additional lost costs from returns not implemented of € 13,7 million to € 39.9 million. Regarding the costs to identify TCNs, it can be noted that with the Visa Code Plus release, the list of authorities will be centralised in the VIS, thus Member States will be able to more easily extract this information in a format (xml) that is understood by automated national system. In this respect, it may be the case that the relevant authorities can more easily identify the 'recipient' authority for a supporting document request via VIS Mail. Nevertheless, this measure will not guarantee that the recipient authority responds to a request more so than in the current situation.

3.2. Why the EU should act

Pursuant to ensuring compliance with the principle of subsidiarity and proportionality as provided in Article 5(3) of the Treaty on European Union (TEU) and Protocol (No 2) on the application of the principles of subsidiarity and proportionality, the research will address the added value of the proposed measures compared to actions taken by the Member States at central, regional or local levels. Under Article 5(3) TEU there are three preconditions for intervention by Union institutions in accordance with the principle of subsidiarity: (a) the area concerned does not fall within the Union's exclusive competence (i.e. non-exclusive competence); (b) the objectives of the proposed action cannot be sufficiently achieved by the Member States (i.e. necessity); (c) the action can therefore, by reason of its scale or effects, be implemented more successfully by the Union (i.e. added value).'[76]

[75] EU Observer: Skyrocketing costs for returning EU migrants, available online at: https://euobserver.com/migration/137720.
[76] http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_1.2.2.html/.

More concretely, the following key questions needs to be answered when assessing whether the proposed measure respects the principle of subsidiarity:

- Legal basis: Does the EU have the competence to act (i.e. legal basis)?
- Subsidiarity and proportionality of EU action: Whether and to what extent the problem addressed has transnational aspects, which cannot be adequately addressed by action, by Member States acting alone?
- EU added value: Whether action at EU level would produce greater benefits compared to action taken solely at the level of the Member State, due either to its scale or the potential effectiveness of the proposed measure?

It should be noted that this assessment of the subsidiarity of the proposal should be distinguished from assessing the necessity and proportionality test to assess its impact on fundamental rights.

Legal basis

The VIS Regulation builds further on the Schengen acquis on a common visa policy, finding its legal basis in former Article 62 (2) (b) ii of the Treaty on the European Community (rules on the procedures and conditions for issuing visas by the Member States). The current legal basis of the common EU visa and external border policy is provided in Article 77 (2) (a) and (b) TFEU. VIS however is currently used for other goals than facilitating procedures for the issuing of short-term visa, or checking persons when crossing external borders. These purposes of VIS, defined in Article 2 of the VIS Regulation, further include: the fight against fraud, the identification of persons who may not (or no longer) fulfil conditions of entry, stay or residence in the territory of the Member States, the facilitation of the Dublin Regulation, and the contribution to the prevention of threats to the internal security of any of the Member States. Taking into account the requirement of legal transparency of EU measures, when amending the VIS Regulation for the proposed additional storage of travel documents to facilitate return procedures or to use in asylum procedures, the legal basis of the VIS Regulation should be extended, referring, dependent on the final definition of goals of VIS, to Article 78 (2) (e), 79 (2) (c) and/or 87 (2) (a) TFEU.

3.3. Policy objectives: What is to be achieved?

In relation the defined problems drivers and problems a number of objectives of the proposed measure can be defined.

The **general objectives** of the proposed adaptations to the VIS system are the following:

- Contribute to assisting in the identification and return of third country nationals that do not, or no longer fulfil the conditions for entry to, or stay on the territory of the Member States in accordance with the Return Directive;
- Improve efficiency of the VIS for the purposes of facilitating return procedures.

The **specific objectives** of the proposed measure may be formulated as follows:

- Facilitate that Member States' authorities are able to confirm the identity and prove the nationality of TCN visa overstayers who lack or fail to produce a copy of their travel document upon apprehension;
- Improve the return rate of third country nationals found in a return / readmission procedure.

3.4. Policy options

3.4.1. Description of the options

Below, the different policy options are described with regard to incorporating a copy of the travel document.

Option 0. Status quo (no change)

The 'status quo' or 'business as usual' scenario implies no implementation of a measure to store a scanned copy of the visa applicants'' travel document in the VIS. As stated under Section 3.2.3, in a 'status quo' scenario, there would continue to be no coherent EU-wide approach to requiring Member States to collect and store copies of visa applicants' travel documents during the visa application procedure, nor for making them available to other Member States. In this scenario, different national practices will continue: many Member States systematically require applicants to submit hard copies of the bio data page (as a minimum), which are then archived for an average period of 1-3 years within the issuing consulates' archives. Most importantly, MSs will continue to be confronted with the existing difficulties of exchanging TD data or acquiring such data from other Member States.

In the current situation, Article 9 of the VIS Regulation requires the visa authority to collect certain categories of personal data from the visa applicants' application form, which are then recorded into VIS.[77] The different categories of data taken from the application form are summarised in Table 11.

Table 11 Data taken from visa applicants' application form (Vis Regulation, Article 9(4))

Personal data	Information related to the travel document	Other information
• Surname (current and at birth); • First name; • Sex; • Data, place and country of birth; • Nationality (current and at birth); • Occupation and employer (or name of school, for students); • Names of applicants' father, mother (for minors); • Residence.	• Type and number of travel document; • Issuing authority; • Date of issuance and expiry.	• Type of visa requested; • Details of the person issuing an invitation and/or liable for applicants' substance costs; • Purpose of travel; • Main destination and duration of intended stay; • Intended date of arrival and departure; • Intended border of first entry or transit route; and residence.

The applicant must also present a valid travel document that is recognised by the Member State (generally ICAO compliant) when presenting the application file.

Option 1. Include a digital copy of the travel document in the VIS (centralised)

Under this option, the scanned copy of the visa applicants' travel document will be systematically recorded in the VIS system. The competent authorities for identification (and/or verification within the territory) and return – namely migration and return authorities – will gain access to search the system using the fingerprints of the apprehended TCN.

Regarding access rules, the officer who is authorised to access the VIS for the purposes of identification and return, as laid down in the existing VIS legal instruments, will have the authority to search and view the content of "hits" containing the travel document data. This means that the aforementioned competent authorities will be able to directly search and process data recorded in the VIS if necessary 'for the purpose of proving the identity of third-country nationals, including for the purpose of return' (See Article 31(2), without having to consult visa authorities and consulates to obtain scanned copies of the documents stored in consul archives.

The passport copies would be scanned as they are today (either by consulate employees or ESP employees). For applications lodged at an ESP, the ESP will then upload and transfer the data to the respective consulate. Consulate employees would then transfer this data to the NS-VIS. For applications lodged directly at the consulate, the consulate employees will be responsible for scanning the travel document page(s), uploading and directly transferring the scan to the NS-VIS. The information contained on the scanned copy of the biographical page of the passport is

[77] Regulation (EC) No 767/2008, Article 9(4)-(5).

part of the visa application process (document number, surname, given name, gender, date of birth, place of birth, date of issue, date of expiry, authority).

Below, the technical workflow is described for this option.

Consulate creating VIS entry (where relevant, otherwise starts at step 3):
1. Travel document (TD) copy (provided by visa applicant) scanned by ESP;
2. TD copy transferred to consulate (internet [secure, high bandwidth] or physical storage) or to national web application (e.g. DK solution) on which ESPs have access;
3. VIS entry transferred from consulate to NI-VIS (secure, low bandwidth);
4. NI-VIS transfers entry and TD copy to CS-VIS.

Technical workflow retrieving TD copy from CS-VIS:
1. Authority connects to NI-VIS;
2. NS-VIS queries CS-VIS;
3. CS-VIS retrieves entry and TD copy;
4. CS-VIS transmits entry and TD copy to NI-VIS;
5. NS-VIS transmits entry and TD copy to authority.

Within this option, it is possible to impose different authorization regimes. On one end of the spectrum, authorizations to access the information are arranged according to the professional needs and not divided up geographically. This would mean that e.g., a German migration officer with authorised access to the VIS for identification and return purposes would be able to search and directly view the content of a "hit" for a Nigerian national apprehended in German territory, but who obtained a visa from an Italian consulate.

On the other end of the spectrum, authorizations can be configured so that they are geographically limited by default, and only 'opened up' when officials from the Member State that handled the visa application gives its consent. In the previous example, this would mean that the German migration officer would need to submit a request to the issuing consulate for (temporary) access rights to the file. National officials in effect act as gatekeepers for their visa application data. (In this case, the technical workflow would more closely represent that of Option 2.)

In either case, searches would be logged and subject to monitoring by eu-LISA and the EDPS, as is currently the case for the VIS system. Different sub-options can be defined regarding the scope of the copy as well as the retention period.

Option 2. Include a digital copy of the travel document in national visa systems (decentralised)

Under this option, rather than storing the copy in the central European database of the VIS, the scan would be stored within the national visa systems (NS-VIS). This means that the competent authorities for migration and return would not be authorised to access the information that is available on a "hit". Rather, the Member State that owns the data will be notified of the hit obtained by the Member State that searched the system, and will then follow up on the hit by making the information available.

Below, the technical workflow is described for this option.

Consulate creating VIS entry (where relevant, otherwise starts at step 3):
1. Travel document (TD) copy (provided by visa applicant) scanned by ESP;
2. TD copy transferred to consulate (internet [secure, high bandwidth] or physical storage);
3. VIS entry and TD copy transferred from consulate to NS-VIS (secure, low bandwidth);
4. NS-VIS transfers entry to CS-VIS;
5. NS-VIS stores entry and TD copy.

Technical workflow retrieving TD copy from NS-VIS:
1. Authority connects to NS-VIS;
2. NS-VIS retrieves entry and TD copy;

3. NS-VIS transmits entry and TD copy to requesting authority.

Technical workflow retrieving TD copy from NS-VIS B (where B is a different member state):
1. Authority connects to NS-VIS A;
2. NS-VIS A queries CS-VIS;
3. CS-VIS retrieves entry;
4. CS-VIS queries NS-VIS B;
5. CS-VIS transmits entry to NS-VIS A;
6. NS-VIS B transmits TD copy to NS-VIS A;
7. NS-VIS B transmits entry and TD copy to authority.

As with storing the travel document copy in the central VIS, the passport copies would have to be scanned and uploaded into the system either by consulate employees.

The technical workflow is similar to the existing VIS mail end-to-end infrastructure in terms of requirements on data transmission between MS and the possibility to attach documents. The main difference is that the outlined option would automate this process and would be restricted to the transfer of documents that are stored in the visa system, such as the stored digital copy of the travel document.

Sub-option A and B. Scope of data storage: Biographical page only or visa pages

Two sub-options can be defined regarding the scope of the data to be recorded in VIS, namely storage of the biographical data page (sub-option A) or storage of all visa pages of the applicant's travel document with entry/exit stamps and visa stickers (sub-option B). The two sub-options can be applied to both Option1 and Option 2 described above.

The study focuses on the use of ICAO compliant machine readable travel documents (MRTDs) according to specifications that are specific to Size 3 MRTDs (TD3).[78] This includes ordinary national passports, service passports and diplomatic passports. Other categories of travel documents, such as refugee/ stateless travel documents, student passports and seaman's passports rarely occur and/or are limited to certain categories.

Sub-option A. This sub-option will involve the incorporation of the standardised MRTD size 3 data page. This is the page onto which the issuing State or organisation enters the personal data relating to the holder of the document as well as the data concerning the issuance and validity of the machine readable travel document (MRTD).

ICAO specifications provide that the MRTD data page should either be an inner page in close proximity to an end leaf of the MRP (generally located on page 2 or on the penultimate page of the TD) or form part of the cover of the TD. The MRTD data page follows a standardized layout that contains both mandatory elements and optional elements in a standard sequence.

The mandatory elements represent the minimum requirements for the data page (the 'mandatory zone'). The mandatory data may be accompanied by the presentation of number of optional data elements at the discretion of the issuing State or organisation. The optional elements must also comply with the technical specified standards as set by ICAO.

An additional category of optional elements may be included on the back of the data page or on an adjacent page. As such, any additional, optional data that is included in the optional zone of the travel document, including the amendments/remarks pages, falls outside the scope of the analysis, as these pages will not be recorded in the VIS under either option. Table 12 presents the mandatory and optional data elements that are to be included in the respective zones.

Table 12 ICAO specifications on the categories of mandatory and optional data common to all machine readable travel documents (MRTDs)

[78] ICAO, Document 9303: Machine Readable Travel Documents. Part 3: Specifications Common to all Machine Readable Travel Documents (MRTDs), Seventh Edition, 2015; ICAO, Document 9303: Machine Readable Travel Documents. Part 4: Specifications for Machine Readable Passports (MRPs) and other TD3 Size MRTDs, Seventh Edition, 2015.

Mandatory elements included in the mandatory zone	Optional elements included in the mandatory zone	Optional elements that may be included in the optional zone
• Issuing State or organisation; • Type of document; • Passport number; • Name (Full name); • Nationality; • Date of birth; • Sex; • Authority or issuing organisation; • Document date of issuance; • Document date of expiry; • Signature; • Photograph.	• Personal (identification) number; • Place and country of birth; • Fingerprint.	• Name(s) of applicants' spouse, father, mother, etc.; • Profession/ Occupation; • Civil status; • Eye colour; • Height; • Other.

Source: ICAO, Document 9303: Machine Readable Travel Documents. Part 4: Specifications for Machine Readable Passports (MRPs) and other TD3 Size MRTDs, Seventh Edition, 2015.

Annex IV presents in more detail the schematic layout related to the sequence of data in the standardised TD3. Taking into account the data that is currently taken from visa applicants and entered in VIS, as provided in Article 9 of the VIS Regulation, the main change implied by sub-option A is the format in which the data is taken and recorded in VIS, rather than the type or content of the data itself. Table 13 presents the different categories of data to be included in both the mandatory and optional zones of the travel document according to ICAO standards compared to the list of data collected by visa authorities and stored in the VIS upon lodging a visa application.

Table 13 List of mandatory and optional data in ICAO compliant travel documents and data collected by visa authorities upon lodging a Schengen visa

Information included in the passport data page	Information taken from the visa applicants upon lodging the application (VIS Reg. Art. 9)
Mandatory elements in the mandatory zone	
Issuing State or organisation	✓
Type of document	✓
Passport number	✓
Name (Full name)	✓
Nationality	✓
Date of birth	✓
Sex	✓
Authority or issuing organisation	✓
Document date of issuance	✓
Document date of expiry	✓
Signature	✓
Photograph	✓
Optional elements in the mandatory zone	
Personal (identification) number	
Place and country of birth	✓
Fingerprint	✓
Optional elements in the optional zone	
Names of applicants' spouse, father, mother, etc	✓ (for minors)
Occupation	✓
Civil status	
Eye colour	
Height	
Other…	

The sensitivity of these additional optional elements in terms of fundamental rights and data protection, including the frequency with which they appear on ICAO-compliant documents, is analysed in chapter 3.4.3.

As under the Option 1 and Option 2, sub-option A does not foresee any change in terms of the designated authorities who will be authorised to search and view the data entered in the VIS, nor any amendment to purpose limits and access rules more generally.

Sub-option B. Another approach would be to scan and record a copy of all used visa pages of the applicants' travel document, i.e. those containing entry/exit stamps and visa stickers. Sub-option B therefore builds from sub-option A, as the measure also involves the recording of the visa applicants' data page in VIS, in addition to the stamped pages. Blank pages and any other pages in the TD (i.e. annotations, the back-side of the biographic data page, the page adjacent to the data page) will not be recorded in VIS, and are thus outside the scope of this option.

Taking into account the data that is currently taken from visa applicants and entered in VIS, as provided in Article 9 of the VIS Regulation, the main change implied by sub-option B relates to both the format in which the data was taken (same as sub-option A), as well as the content of the data itself. The legal framework does not currently require visa authorities to record data on travel history (as implied by the recording of visa stickers, entry/exit stamps) in VIS.

This sub-option implies the scanning and storage of more pages in VIS and consequently, that a larger file will be added to the system.

Option 3: Incorporate a digital copy of the travel document in another system (e.g. EES, ETIAS)[79]

Under this option, the scanned copy of the travel document would be stored in another large-scale IT system in the field of visas, borders and asylum, namely the Entry-Exit System (EES)[80] or the European Travel Information and Authorisation System (ETIAS).[81] Of the existing and planned large-scale IT in databases in this field, the EES and ETIAS would be the appropriate alternatives by virtue of their procedural link to legal travel by TCNs into the territory.

The proposed Entry-Exit System (EES) will register the identities of third-country nationals (alphanumeric data, four fingerprints and facial image) together with details of their travel documents, which will then be linked to electronic entry and exit records of all third country nationals visiting the Schengen area for a short stay (maximum 90 days within any 180 period. With the implementation of this system, the current practice of stamping travel documents will be discontinued.[82]

The specific objectives of the EES are to facilitate the border crossing of bona fide travellers via increased automation at border-controls and to enable the identification of visa overstayers via central registration of the data. Apprehension and return of migrants in an irregular situation (including visa overstayers) and fighting serious crimes and terrorisms are additional purposes to the proposed EES. Currently, migration and return authorities will be allowed to search the system for the limited purpose of facilitating the apprehension and return of irregular migrants.

The EES will cover both visa-required and visa-exempt travels, and stays on the basis of a tourist visa (up to one year), however this IT system does not include the biometric identifiers of visa holders precisely because the biometrics are contained in the VIS system. In other words, VIS is the repository of biometric identifiers of visa holders who will be registered in the EES. The EES will therefore function as a border procedure instrument, which does not allow the time nor space for making and storing copies of the visa holders' travel documents.

[79] Note: The ETIAS system is not adopted by the co-legislators yet. Note: the proposal for Interoperability between JHA IT systems is not adopted by the co-legislators yet. See: https://ec.europa.eu/info/law/better-regulation/initiatives/com-2017-793_en.
[80] This has been adopted on 20 November 2017. See https://www.eu2017.ee/news/press-releases/entry-exit-system-final-adoption-council.
[81] Still being negotiated in the trilogue. See http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/599298/EPRS_BRI(2017)599298_EN.pdf.
[82] Communication on stronger and smarter borders, https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/securing-eu-borders/legal-documents/docs/20160406/communication_on_stronger_and_smart_borders_20160406_en.pdf.

In order to store a copy of the visa applicants' travel document in the EES, airports and border crossing points would need to be equipped with the necessary infrastructure (scanners, computers, network connection to the EES), for scanning and transferring the documents to be stored in the system. Alternatively, the data would be collected during the visa application procedure and subsequently sent to the MS level via a connection to the EES. The future interoperability of the systems would enable a single search interface and interconnectivity.[83]

Another tool that could be considered is the proposed EU Travel Information and Authorisation System (ETIAS), whereby visa-exempt (VE) travellers would register relevant information regarding their intended journey to the EU. Thus, ETIAS will apply to VE-TCNs travelling to the Schengen territory for a stay of no more than 90 days in any 180-day period. Travel authorisation systems are based on online applications where the applicant provides details on his/her identity, contact details, purpose of the journey, itinerary, etc. before departure. Therefore, the information could be uploaded by the TCN during the process of entering the data into the system, however TCNs from visa required countries would not be covered by this procedure unless the scope of the Regulation is extended to all third countries.

The system fills an important information gap for border guards in terms of enabling them to make an assessment of TCN visitors prior to their arrival. In addition to the primary purpose of the proposed IT-system (i.e. pre-border checks), ETIAS will have a secondary purpose of fighting serious crimes and terrorism. Neither visa issuance nor apprehension and return of migrants, including visa overstayers, is not one of the purposes of ETIAS.

From a data protection perspective, considering that ETIAS does not have the objective to facilitate returns, it is not possible to introduce the proposed measure (i.e. to store a copy of the travel document in ETIAS). To do so would require an amendment to the legal basis of ETIAS, specifically to identify return as one of the system's purposes. It is also important to note that access rules for migration and return authorities would need to be investigated, as the proposal does not authorise these authorities to carry out searches in the system. The proposal grants access only to border authorities and law enforcement authorities, limited to their respective purposes. The conditions under which return and migration authorities could be given access to the system would be purpose limited to identification (proving nationality) for return purposes, running directly (for example, temporary access rights granted following a flagged hit on specific search) or via the designated border authorities, who are currently authorised to consult the system.

Moreover, given that visa-required countries account for only 16% of return decisions (and 3% if you exclude the Western Balkans countries), with an effective return rate of 95% in 2016, the proposed measure would be disproportionate for the purposes of facilitating the implementation of returns among "difficult" third countries. Indeed, return procedures tend to function relatively well between the EU and visa-exempt third countries.

As under Options 1 and 2, different sub-options can be defined regarding the scope of the copy (biographical page versus all [visa] pages) (See description above.)

3.4.2. Technical feasibility of the options

Feasibility regarding VIS

Feasibility of Option 1 and sub-options A and B

The incorporation of a travel document in the VIS has implications on the capacity of the existing Central VIS systems (CS-VIS), as well as the national interfaces of VIS (NI-VIS). This is primarily caused by three aspects: (1) copy of the biographical page (Sub-option A), (2) copy of the entire travel document (Sub-option B), and (3) retention of the VIS information beyond the current five-year period.

This has implications on the required storage at both CS-VIS and NI-VIS, as well as the required bandwidth between NS-VIS and CS-VIS. During the creation of the VIS entry, it also affects the

[83] Ibid.

bandwidth between EPSs, consulates, and the NS-VIS systems. We will now present the methods that will be used for quantifying this information and assessing it during the project.

The additional storage requirements of the biographical page B, can be calculated by the size of the scanned image I, the meta information M (e.g. comprising information about scan hardware etc.), the number of visa applications N and the retention period R, using the following equation.

$$B = (I + M) \cdot N \cdot R$$

The size of the scanned image depends on the defined quality parameters of the system, e.g. the resolution of the scan and the size of the original travel document. The additional storage requirements for the entire travel document E can be calculated in a similar fashion, using the size of the images per page IP, the number of pages P, the number of visa applications N and the retention period R, using the following equation.

$$E = ((IP \cdot P) + M) \cdot N \cdot R$$

The meta information in this case has to be stored only once.

The additional storage requirements for the retention of the VIS information beyond the current five-year period F, is depending on the current yearly storage requirements CY, the additional retention period RA relative to the current retention period R and the additional requirements from the previous equations.

$$F = CY \cdot RA + B + E + YF$$

The additional bandwidth requirements between NS-VIS and CS-VIS BR can be calculated by the additional data transmitted AD in each transfer process P, using the following equation.

$$BR = AD \cdot P$$

In our interviews, particularly with eu-LISA, we have identified the required numbers for the calculation of the required capacity.

The following scenario was outlined for addressing the required capacity at full implementation of the proposed changes. The scenario assumes the years 2018 to 2027 for achieving a full 10-year retention period.

- Increase of the retention period from 5 years to 10 years;
- Increase of biometric profile percentage to 86%;
- Increase of visa applications by 3% a year;
- Increase of identification tasks by additional 500.000 per year;
- Sub-option A: Increase of entry size from 0,5MB to 3,5MB;
- Sub-option B: Increase of entry size from 0,5MB to 12,5MB.

The current system is set up for a number of 100 million entries and has a database size of approximately 70 Terabytes. At the end of 2027 and with above equations this scenario leads to the following outlines:

- Entries in the VIS: 188 million;
- Travel documents stored in the VIS: 188 million;
- Sub-option A: required data storage: 620 Terabytes;
- Sub-option A: required backup storage: 620 Terabytes;
- Sub-option A: required maximum network bandwidth per hour: 5GB;
- Sub-option B: required data storage: 2.200 Terabytes;
- Sub-option B: required backup storage (full travel document): 2.200 Terabytes;
- Sub-option B: required maximum network bandwidth per hour: 18GB.

The proposed policy change leads to significantly increased requirements on the capacity of the VIS, as there are significant deviations from the baseline in Option 0.

- For sub-option A, the storage requirement increases by 885%;
- For sub-option B, the storage requirement increases by 3140%.

A particular challenge is the required network bandwidth when confronted with a significant number of queries.

The technical impact of the proposed measures on the VIS are as follows:

- Storage capacity has to be increased significantly, but can be integrated in the current system with minor impact;
- I/O capacity of the storage system has to be significantly improved to cope with document retrieval, which requires an upgrade of the storage system;
- Network bandwidth has to be significantly increased and is not able to cope with document retrieval unless significant upgrades are provided.

The following suggestions were provided by eu-LISA:

- Use of high efficiency and quality compression methods for stored documents (to limit impact on I/O of storage and network bandwidth);
- Sub-option B: limit process so that queries of full documents do not occur too frequently.

Therefore, Option 1 in both varieties of sub-option A and sub-option B are technically feasible. Both will require changes to the current infrastructure. The impact is less significant for sub-option A, compared to sub-option B.

Feasibility of Option 2 and sub-options A and B

The decentralization of the VIS is analysed on a high level, as the national systems differ in their scope. The following table outlines the effects on the systems compared to Option 1, in relation to the sub-options A and B.

Table 14 Option 2 – national storage

Item	Effect
Overall storage requirements	Sub-option A: significantly increased due to overhead Sub-option B: significantly increased due to overhead
Location storage requirements	Sub-option A: very significantly lowered due to fewer entries Sub-option B: very significantly lowered due to fewer entries
Overall I/O requirements	Sub-option A: significantly increased due to overhead and multiple queries Sub-option B: significantly increased due to overhead and multiple queries
Location I/O requirements	Sub-option A: significantly reduced due to fewer entries Sub-option B: significantly reduced due to fewer entries
Overall network requirements	Sub-option A: significantly increased due to multiple queries Sub-option B: significantly increased due to multiple queries
Location network requirements	Sub-option A: significantly reduced due to fewer queries Sub-option B: significantly reduced due to fewer queries
Retrieval time	Sub-option A: moderately increased due to redirection and multiple queries Sub-option B: significantly increased due to redirection, multiple queries, and higher amount of data to be transferred
Availability	Sub-option A: improved if multiple sites have copies, reduced if data is mutually exclusive Sub-option B: improved if multiple sites have copies, reduced if data is mutually exclusive

Option 2 and both sub-options A and B are technically feasible. However, this option distributes the requirements along the NS-VIS of the member states. A high degree of technical coherence is required, which can increase the risk of such an endeavour significantly. A particular challenge is the required bandwidth, particularly for sub-option B, and the retrieval time, particularly for sub-option B. With regards to availability, Option 2 may improve this, if the local

systems provide a copy of all VIS entries. However, this would require significant upgrades of the local systems.

Feasibility regarding consulates and ESPs

The impact on the ESPs and consulates is primarily driven by the choice of sub-option A or sub-option B. The scanning of more pages of a travel document would affect the required scanning resources, while the choice of a centralized or decentralized system in Options 1 and 2 would not affect the applied technology and workflow at the ESPs and consulates.

Compared to the impact on the VIS described in the previous section, the impact on the ESPs and consulates are on a smaller scale. The technical impact is affected by the (a) the required systems for scanning the travel documents, (b) the transfer of the electronic copies to the consulate, and (c) the transfer of the electronic copies from the consulate to the NS-VIS:

- Most ESPs have scanners at their premises that are capable of creating copies of the travel document of sufficient optical quality. However, the systems dealing with biometrics are typically separated. There are in general two varieties - (1) using typical scan software to create an image of a defined quality, or (2) using a dedicated software that interfaces the scanner. Variety 1 allows for a swift implementation and most likely requires no additional hardware or software investments, but has no automated facilities to check for the quality of the scan or automatically transfer some of the collected information to another component. Variety 2 could take into account various checks on the scan quality and could collect information automatically via OCR. However, this software would have to be developed to support the integration of the travel document scanning into the existing infrastructure. Right now, various national systems do not support attaching non-biometric images to an application and might have to be adapted accordingly;
- As ESPs and consulates are only temporarily storing potential electronic copies, the expected impact is low. Member states that use physical storage would have to provide higher capacity storage or more physical storage items;
- The transfer of files between the consulates and the NS-VIS is already often a bottleneck. The data transmission would increase by approximately 700% (for sub-option A) or 2 500% (for sub-option B).

The system is technically feasible, but requires adaptation of varying magnitude to the visa software currently used. The facility to attach non-biometric digital images would have to be integrated into the software used by ESPs and the software used to create the VIS entry. Most notably a significant improvement in the network bandwidth between the consulates and NI-VIS.

3.4.3. Options discarded at an early stage

The investigation into the feasibility of Option 3 concludes that none of the existing EU IT systems meets the purpose and possesses the required functionality corresponding to the objectives of the proposed policy measure to store a copy of visa-required TCNs' travel documents. Implementation of the option involves incorporating another IT system in the JHA area in the workflows of the parties concerned with these issues: the Entry-Exit System and the European Travel Information System. This would by itself already complicate the workflows and may increase technical vulnerabilities. Moreover, such an implementation via another EU IT system would lead to a complex legislative process since their legal frameworks would need to be significantly adapted.

Specific considerations concerning the two IT systems are as follows:

Importantly, with the entry into force of the EES (expected 2020), there will no longer be passport stamps, as the entry/ exit information will be in the EES. Moreover, the EES will concern all citizens from third countries, including those who do not need a visa to enter the

Schengen territory. A final point is that the VIS already currently stores more information than the EES is foreseen to do, whereas the latter will have a more strictly delineated purpose (namely: providing an overview of who is on Schengen territory and determining whether overstays are taking place).

ETIAS is not relevant because no biometrics are used and therefore cannot be used to identify TCNs. Moreover, ETIAS contains data on visa-free TCNs, and the evidence shows that this group is minimally prone to overstaying or being subject to returns. Given the small proportion of returnees that come from visa-free countries, incorporation of additional personal data (in the form of a copy of the visa applicants' travel document) in either the EES or ETIAS would not serve the identified purposes of facilitating the implementation of returns, particularly among visa-required nationals. For these reasons, in addition to those listed in chapter 3.4.1, this option is considered to be disproportionate and can be discarded from further analysis.

3.5. Analysis of Impacts

The assessment of impacts considers three main elements:

Economic costs and benefits incurred by the affected stakeholders. The different costs can be broken down into three main categories: i) the investment or set-up costs (one-off costs), (ii) the recurrent costs incurred by the competent authorities (return and migration authorities), consulates and ESPs that are directly linked to the implementation of the measure in terms of workload and administrative burdens;; and (iii) costs incurred by third country nationals in the form of increased visa fees. In addition to these costs, certain measures will result in cost savings for the different stakeholders in the form of increased efficiencies resulting in workload reductions and reduced administrative complexity.

Policy (or operational) impacts related to the achievement of defined policy objectives in the area of security and migration and the implementation of returns. These impacts concern the capacity of relevant competent authorities for migration and return to implement return decisions for non-EU TCNs who entered the EU using a Schengen visa and fail to produce a valid travel document on request.

Fundamental rights impacts of the proposed measures, including the right to privacy and data protection, the right to asylum and non-refoulement, the right to non-discrimination and the right to effective legal remedies.

All impacts are assessed against the baseline scenario. As not all impacts can be equally well quantified, the analysis relies on a combination of qualitative data analysis, based on desk research and the results of the stakeholder consultation activities, and complemented with quantitative data where available.

3.5.1. Economic costs and benefits

One-off and recurrent costs and cost savings (benefits) are computed as the additional costs on top of the existing implementation of the VIS system. All one-off and recurrent costs are implementation costs. The research did not reveal any regulatory charges, hassle costs, additional administrative burdens or indirect costs, therefore no such costs have been quantified. All costs should be treated a provisional estimates to be confirmed by the European Commission. Notwithstanding the provisional nature of these estimates, the relative or comparative size of the costs per option are considered stable.

Investment costs / one-off costs

The one-of costs of the options will be mainly limited to the procurement of equipment (such as high quality copy-machines and scanners to compensate for the increased volume of data to be scanned) and ICT investments needed at the ESPs and consulates for visa processing; and investments needed to store and process extra data. The latter may be calculated based on

extra data capacity needed compared to current and expected spare data capacity, as well as creating the required network bandwidth between VIS and the MS. Additional one-off costs include costs for information and training for consular services and ESPs on the new requirements.

Investment in infrastructure for visa processing (ESPs, consulates and NS-VIS)

The current system for the Schengen visa application does not provide a standardized way for capturing, transmitting and checking travel documents at either the ESPs or consulates. The existing VIS Mail system would be able to support those measures on an ad-hoc basis. There are some ESPs that capture a temporary copy of the biographic page of the applicant, in order to improve the process for the visa officers.

The travel document should be captured by a secure system, similar to the biometric capture systems that are currently used. While all consulates and ESPs have document scanning devices, existing equipment is based on a non-secure communication infrastructure for the scanning process between scanner and computer (note that this does not refer to communication between computer and NS-VIS). For each of the options under consideration (main options and sub-options), the adopted measure implies a high volume of personal data to be processed and stored. Consequently, it is of particular importance to ensure high levels of data protection through the establishment of appropriate safeguards, in accordance with the EU data protection legal framework (see chapter 3.4.3), and taking into account security by design principles.

The technical infrastructure to be added at each ESP and consulate is therefore a document scanner connected to a computer, similar to the biometrics capturing devices. Preferably, the scanning infrastructure would be integrated with the existing biometric scanning capabilities, so the scanned document is managed securely in subsequent steps of the process. The use of dedicated document scanning hardware would increase the cost of the scanner (compatible devices are typically between €500 and €1500), but would enable secure transmission between scanner and computer and the potential of machine reading of the document and thus auto-filling of certain fields, leading to reduced procedure times. However, there might be additional costs for creating the software integration and auto-fill capabilities.

The required equipment per entity is:

- Document scanner (€1 000)[84];
- Document processing computer (€1 000);
- Document scanning software (€500).

As both ESPs and consulates have access to the physical travel document, one system per entity might be sufficient, unless the number of applicants exceeds the scanning capabilities. For sub-option A, the study expects that one scanner per entity will be sufficient across all ESPs and consulates. For sub-option B, the number of pages to be scanned could feasibly exceed existing scanning capabilities at certain ESPs that receive a particularly high volume of visa applicants per day (e.g. more than 1 000 per day). The study estimates that approximately 20% to 30% of ESPs will be required to procure one additional scanning device to accommodate the increased workload. By contrast, given the small number of applicants directly handled at the consulates (accounting for an estimated 10% of all applications received by the consulates), it is assumed that one scanning device per consulate will be sufficient for both sub-options.

There is an impact on the data transmission between ESPs and consulates that depends on the type of transfer chosen. For each we consider secure transmission, similar to the current transfer of biometrics:

- Very little impact for electronic transmission, as the number of applications sent between ESPs and consulates each day is not very high;

[84] This figure is an approximate estimation of the average cost of compatible devices, which range between € 500 to € 1 000.

- Minor impact for physical data storage that is reused (e.g. more USB sticks might be required);
- Medium impact for physical data storage that is not reused (e.g. more need for writable CDs/DVDs that are destroyed after use).

The data transfer from the consulates to the NI-VIS will be affected by the proposed measure, however even for high frequency consulates (€ 500-1 000 Schengen visas per day) this additional data transfer would be under 2GB/day (biographic page only), respectively 10GB/day (full document) and should be covered with minor increases.

The total cost that will be incurred by ESPs and consulates to procure security by design document scanning infrastructure is estimated at € 11,4 million under sub-option A, and in the range of € 11,9 – € 12,2 million under sub-option B. Detailed calculations are presented in Annex III.

Investments in VIS system (NS-VIS and CS-VIS)

Option 1. Central storage of the travel documents in the VIS: Sub-options A (Bio-page) and Sub-option B (Full travel document)

The primary driver for the investment cost of the system is the increased infrastructure required from significantly increasing the number of entries in the VIS by increased retention period and the increased storage required by the copy of the travel documents. The current operational cost of the VIS infrastructure is €35 000 000 in FY2017.[85] The following numbers are based on the current cost, previous works on the Smart Border study[86] and consultation with eu-LISA.

The number of entries within the 10 year period would approximately double (current supported size 100 000 000 to 200 000 000). The required storage increases from 140TB to a maximum of 4400TB. The assumed cost per TB storage is €1 200.

Table 15 Cost overview of expected VIS system

Item	Cost	Comment
Operational cost current VIS	€35 000 000	
Operational cost 10 year retention	€70 000 000	Assumed linear scaling
Investment cost additional servers	€5 000 000	Very rough estimate based on smart borders study
Investment VIS storage (Sub-option A: biographic page) + 1100TB	€1 320 000	Cost production, CU only
Investment VIS storage (Sub-option B: full document) + 4160TB	€4 992 000	Cost production, CU only

Source: Ecorys calculations based on data provided during stakeholder interviews.

Option 2. Decentralised storage of the travel documents in the national VIS

Under this option, Member States would have to invest time and money in increasing the capacity of their existing databases, or setting up an appropriate national database to operate alongside the central VIS database.

It is not feasible within the scope of this study to provide a detailed estimate of the expenses associated with a scenario in which national VIS databases are set up or significantly expanded. Nevertheless, a rough estimation can be provided, based on a division of Member States according to their previous Schengen visa applications. For these groups, one-off investments costs and recurring operational costs can be calculated, based on what we know about the costs associated with the VIS and on interviews with involved stakeholders.[87] Indeed, the range is significant. For instance, in 2016 Iceland received 5 771 Schengen visa applications and France

[85] http://www.eulisa.europa.eu/AboutUs/Finance/EULISA%20Budgets/eu-LISA%202017%20Initial%20Budget.pdf.
[86] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/borders-and-visas/smart-borders/docs/smart_borders_costs_study_en.pdf.
[87] Estimates are based on interview feedback with relevant stakeholders.

received 3 265 919 Schengen visa applications. Using this approach, the study calculates one-off investment costs in the range of € 244 - 414 million, and annual recurring operational costs of € 16 - 33 million. The analysis does not take into account any existing databases for national visa, which when adapted might reduce investment cost and operational cost. Annex III presents the detailed underlying calculations.

Awareness raising and training costs (MS authorities, ESPs, Consulates)

The results of the stakeholder consultation activities indicate that efforts related to awareness raising campaigns (development and implementation) and training activities are relatively limited. Given that the vast majority of consulates already require a scanned copy of the travel document to be submitted as part of the application suggests that the bulk of relevant training and awareness raising costs have been incurred during the initial VIS roll-out. As a result, current training content must be updated to include the additional requirements.

In this context, the training-related costs are assumed to stem from the effort involved with preparing the additional training content, and the time spent by ESPs and consulates to follow the training course. Similarly, the costs associated with the awareness campaigns relate to updating existing awareness materials and their dissemination.

Based on interviewee feedback and findings from relevant studies[88], the following assumptions are made:

- Costs of the information campaign: Development of templates for posters and other items by DG HOME that could be further used by the Member States at the desired scale: € 60 000[89];
- Development of training content and adaptation of awareness campaign materials: Use of two internal resources (€ 200/per day) for 10 days each;[90]
- Translation costs: Use of 23 internal staff (€ 200/day) for 1 day each;
- Training of consular officers: 5 minutes (added to existing training course) valued at € 26/hour[91], applied to 25 000 consular officers[92];
- Training of ESPs: 5 minutes (added to existing training course), valued at €17/hour[93], applied to 26 830 ESP staff.[94]

The study does not foresee any substantive difference between the two sub-options regarding the amount of time and investment effort required to develop and implement training and awareness raising materials. Rather, the main distinction is expected between the Option 1 and Option 2, whereby Option 2 is expected to entail slightly higher training and awareness raising costs than for Option 1, though the magnitude of this difference was not possible to calculate. Therefore the cost estimates applies uniformly to both Options and sub-options.

Table 16 Awareness raising and training costs (Option 1, both sub-options)

	Quantity	Unit price	Total
Develop awareness raising campaign materials	-	-	€ 60 000
Develop training content	2	€ 2.000	€ 4 000
Translation costs	23	€ 200	€ 4 600

[88] ETIAS Feasibility Study, 2016; Impact Assessment Report on the Introduction if the EES, 2016.
[89] Smart Borders Costs Study, F.2 Administration p. 16.
[90] Daily labour cost is taken from the Impact Assessment accompanying the Entry-Exit System (Part 3, Annex 10), which estimates the hourly labour cost of project management-level staff at € 200 per day.
[91] This value is based on the estimate provided in the EES Impact Assessment. The figure is consistent with the value given in a presentation called "Risk Analysis and Electronic Lodgment to Improve Border Management", where the identification of one overstayer was estimated to cost 60.000 AUD (Australian dollars), which equates to €45.000. The figure was obtained by dividing the budget line for these activities by the number of people this activity applied to.
[92] This figure is taken from the Impact Assessment accompanying the Entry-Exit System of 2016 (Part 2, Annex 3).
[93] The salary of an ESP employee is calculated on a lower level because government officials abroad often receive higher salaries.
[94] VFS Global has 2.453 application centres worldwide and TLS Contact has a network of 230 application centres worldwide. It is assumed that at least 10 staff per application centre will receive the new training (average – worldwide) amounting to 26.830 staff to be trained. See company websites for more information.

	Quantity	Unit price	Total
Training of consular officers	25 000	€ 2,17	€ 54 167
Training of ESP staff	26 830	€ 1,42	€ 38 009
Total costs			**€ 160 776**

Investment costs that are not related to IT infrastructure, hardware or software requirements are estimated at € 160 776 from the proposed measures.

Costs to (impacts for) ESPs and visa sections at MS consulates

The study identifies two main impacts relevant to ESPs and Member States' consulates:

Workload to receive the applicant files: The first pertains to the additional workload per visa application to scan, prepare and store a copy of the applicant's travel document. The impacts stem from the time spent to (1) make the scanned copy of the travel document page(s), (2) transfer the electronic copies to the consulate, and (3) transfer the electronic copies from the consulate to the NS-VIS.

This line of impacts is primarily driven by the choice of sub-option A or sub-option B. The scanning of more pages of a travel document would affect the required scanning resources, while the choice of a centralized or decentralized system in Options 1 and 2 would not affect the applied technology and workflow at the ESPs and consulates. As such, no quantification is made in relation to the Options 1 and 2.

Regarding the first activity, the vast majority of Member States' consulates already require TCN visa applicants to submit a scanned copy of the biographic data page as part of the visa application file. Many also require scanned copies of all additional pages containing previous visas, entry/exit stamps. Whereas, in the current situation, a majority of ESPs and consulates outsource the preparation of the scanned copy of the travel document (bio-page and visa pages), it is expected that the ESPs (or consulates, for the 10% of applications they directly receive) would be required to undertake the activity themselves to avoid false and/or poor quality copies.

Workload associated with responding to supporting document requests. The second impact is linked to the workload associated with responding to requests for copies of visa applicants' travel documents, which are stored in the Consul archives. In the current situation, the consulates receive assistance requests from the Member States migration and return authorities to provide a scanned copy of a TCN's travel document. This impact category does not affect ESPs, and is therefore only calculated for the consular staff of the Member States. The impact is expected to be the same across both of the main Options. The volume of such requests vary depending on location and migration risk profile.

Calculation assumptions related to scanning and storing the travel document:

- Number of visa applications: Based on the reference value of 15,2 million visa applications in 2016,[95] the estimated number of Schengen Visa applications are assumed to steadily rise by 5 % on a year-on-year basis and will reach approximately 17,6 million application in the year 2019;[96]
- Visas handled by Consulates and ESPs, respectively: Consulates will continue to process approximately 10 % of applications themselves (1,76 million) whereas the remaining 90 % are outsourced to a ESPs (15,8 Million);
- The number of pages to be scanned: The size of the passport: 88 mm × 125 mm[97]: one A4 (210mm x 297mm) page will suffice for the biographical page and/or 2 passport pages can be copied in one standard A4 format. The number of pages in a single

[95] Schengen States receive 15.2 million applications for short-stay visas in 2016, available online at: https://ec.europa.eu/home-affairs/news/visa-statistics-schengen-states-receive-152-million-applications-short-stay-visas-2016_en.
[96] The year 2019 will be used for the calculation as it is the year when the measure would be introduced.
[97] See https://www.icao.int/publications/Documents/9303_p4_cons_en.pdf.

passport varies depending on the type of passport (e.g. regular, diplomatic, service, etc.) and issuing country. On average, the number of pages in a regular passport is 32;
- Time spent per activity: In the current situation, the average time for ESP staff to receive and acknowledge receipt of a visa application is 3 minutes. The average time for Consul staff to receive and acknowledge receipt of a visa application, and to enter the data in the VIS is estimated at 5 minutes:[98]
  - Time required to scan one page of the travel document: 10 seconds;
  - Time required to scan the entire travel document: 2 minutes, 40 seconds;
  - Time required to prepare and transfer the electronic copies to the consulate: 1 minute;
  - Time required to transfer the electronic copies to the NS-VIS: 30 seconds.
- Labour costs: The average annual labour cost of a consular officer is € 45 000, or €26 per hour;[99] and the average labour cost for ESP staff is approximately € 30 000, or €17 per hour.[100] Calculations are based on an annual average work-year of 220 days, FTE.

Additional calculation assumptions related to supporting document assistance requests

- Number of supporting document requests: Consulates receive an average of 14 to 28 assistance requests per year. This figure comes from the estimated number of visa overstayers found in a return proceeding without a valid travel document, divided across 1.881 consulates worldwide.[101] The number of visa overstayers without travel documents is estimated to range between 26.445 and 52.891 TCNs (see Table 9);
- Time spent per activity: The average time spent on handling the request ranges between 1 to 2 hours valued at € 26 per request.

Option 1. Central storage of the travel documents in the VIS

Option 1 does not affect the amount of time (workload) associated with scanning, processing and storing a copy of the visa applicants' travel document; rather, workload impacts are contingent on the selected sub-option.

The workload associated with responding to, and fulfilling these requests would be eliminated – or significantly reduced (for return purpose) – under Option 1. This is because the designated competent authorities for carrying out checks within the territory as to whether the conditions for entry to, stay or residence on the territory are fulfilled (Article 19 and Article 20 of the VIS Regulation) or for carrying out checks at external border crossing points in accordance with the Schengen Borders Code (Article 20, idem) – namely, designated migration and return authorities – will be granted access to search the VIS, and – if the search indicates that data on the applicant are recorded in the VIS – gain access to consult the corresponding application file. Specifically, the competent authority will be able to view the scanned copy of the applicants' travel document, which will now be recorded and stored in VIS as part of the applicants' application file. The addition of this data to the application file will effectively eliminate the role of consulates as the intermediary for supporting document requests for purposes of identification for the return purposes. It is important to note that none of the proposed measures would eliminate the workload associated with responding to supporting document requests for other purposes, as provided in Article 16 of the VIS Regulation. In case the Member States or other consulates would need the entire application dossier, which is often the case in

[98] European Commission, Impact assessment study supporting the review of the Union's visa policy to facilitate legitimate travelling, developed by ICF/GHK, July 2013.
[99] This value is based on the estimate provided in the EES Impact Assessment. The figure is consistent with the value given in a presentation called "Risk Analysis and Electronic Lodgment to Improve Border Management", where the identification of one overstayer was estimated to cost 60.000 AUD (Australian dollars), which equates to €45.000. The figure was obtained by dividing the budget line for these activities by the number of people this activity applied to.
[100] The salary of an ESP employee is calculated on a lower level because government officials abroad often receive higher salaries.
[101] The number of Schengen consulates worldwide is 1.881, according to the EES Impact Assessment study.

asylum handling cases, consulates will continue to receive similar requests from the Member States.

The total saved costs per consulate is valued at € 366 to € 1 462 per year, and the total saved costs across all consulates is estimated at € 687 578 to € 2 750 313.

Option 2. Decentralised storage of the travel documents in the national VIS

Option 2 does not affect the amount of time (workload) associated with scanning, processing and storing a copy of the visa applicants' travel document; rather, workload impacts are contingent on the selected sub-option.

The study does not foresee any difference between the two options regarding the amount of time required to look up the travel document. Therefore, the number of requests would be lower in both cases, since national authorities and other Member State consulates would be able to directly access the VIS system or indirectly the national data system. Consequently, the cost savings estimates are equal for Option 1 and for Option 2.

Sub-option A: Bio-page only

The additional workload per application associated with scanning, processing, and transferring the data from the ESP to the consulate, and from the consulate to the NS-VIS will be relatively minor for both ESPs and consulates. Under sub-option A, the amount of handling time per application will increase by 10 seconds for the scanning of the bio-page (mostly incurred by ESPs, and 10% of the cases by consulates). For ESPs, the amount of time per application will increase by an additional 1 minute to prepare and transfer the data to the Consulates, and by an additional 30 seconds for consulates to transfer the digitized files to the NS-VIS. This represents a 39% increase in time per applicant for ESPs, and a 10-13% increase among consular staff.

The total additional workload to consulates is valued at: € 3 875 000 per annum and at € 5 250 000 per annum for ESPs.

Cost savings from no longer having to handle supporting document requests for visa applicants' travel documents are driven by the main options, and are thus not impacted by the sub-option. Therefore, the cost savings will be the same as for Option 1 and Option 2. However, this does not exclude the possibility that in certain cases, some Member States may wish to obtain a scanned copy of the entire document (i.e. sub-option B, however the full travel document is not decisive for the purposes of proving nationality. Moreover, the evidence suggests that such requests are infrequent. For this reason, when we did not distinguish the volume or frequency of requests for the bio-data page as opposed to the full travel document in our calculation of the expected cost savings from sub-option A.

Sub-option B: Full travel document (all pages with entry/exit stamps and visa stickers)

For the second sub-option, if the entire document is to be stored in the VIS, the workload impact will be higher since the number of pages to scan is increasing from 1 to 16. The amount of handling time per application will increase by a maximum of 160 seconds in order to scan all pages of the travel document (mostly incurred by ESPs, and 10% of the cases by consulates). The amount of time to prepare and transfer the data to the consulates and to the NS-VIS, respectively, remains the same as under Sub-option A.

The total time spent per application then increase by 122% for ESPs and by 10% to 63% among consulate staff. The total additional cost to consulates is valued at € 5 750 000 per annum, and at € 16 500 000 per annum for ESPs.

See Annex II and III for details on the underlying calculations.

Impacts for Member States' migration and return authorities

The study identifies the following three main impacts for Member States' migration and return authorities:

Workload associated with obtaining a copy of the TCN visa-holders' travel document. According to Member States' authorities interviewed for this study, the effort involved in confirming the identity of TCNs who no longer possess a valid travel document, or who fail to produce it on request, can be significant in the current situation. In such cases, Member States need to obtain a scanned copy of the visa holders' travel document that provided the basis for issuing the visa from the issuing Embassy. The options under investigation would effectively eliminate this step, enabling Member States to directly or indirectly search in the VIS for the required documents. This line of costs is linked to the way in which the travel documents are stored, and thus accessible to the authorities (Option 1 and Option 2), rather than the scope of information stored.

Cost savings from reduced delays in return procedures: In the current situation, Member States' authorities expend considerable effort and time to confirm the identity of TCNs who entered the EU using a visa, and are subject to a return procedure, yet fail to produce a valid travel document on request. Stakeholders indicate that the amount of time between a request for the travel document copy and its receipt range from 1-2 days to 2 weeks in certain cases. Longer time lags are most often a function of workload at the visa-issuing consulate.

Member States incur a range of costs due to delays in return proceedings. Such costs include accommodation in pre-removal detention centres, food and subsistence costs, as well as health care costs (see analysis under Problem 2). By enabling Members States' authorities to directly search the VIS for the required supporting document(s) without having to go through the consulate that issued the visa, the proposed measures will contribute to decreasing the number of days of delay at the verification stage. The study was not able to obtain reliable data on the average daily total cost(s) incurred by Member States due to delays in return procedures, therefore the estimate relies on available data for daily costs of detention centres in 19 locations across Europe.[102] As a result, the identified benefits should be interpreted with caution.

It is important to note, however, that any reduction in delay at the verification stage does not necessarily imply a speedier response on the part of third country authorities. As a result, it is not possible to estimate with any degree of certainty the precise impact of the options on the timely response of the third country authorities, and thus overall impact for delays. Indeed, Member States indicate that non-cooperative third countries may take up to 4 months respond, if they respond at all. Nevertheless, the overwhelming consensus is that, even if cooperation cannot be guaranteed once the travel documents are retrieved, third country authorities are far more likely to respond – if not to cooperate – once the documents are presented to them.

Cost savings from executing a higher proportion of return decisions, in less time: The proposed measures would provide a reliable means for Member States to systematically present evidence of a TCN visa overstayers' nationality, thus facilitating the execution of return decisions for TCNs that could not otherwise be executed due to missing travel documents. In other words, if Member States are able to reliably produce a copy of the travel document copy, it can be expected to have a positive influence on the responsiveness (cooperation) of third country authorities. Reductions in delays and increased efficiency may also lead to the possibility that authorities are able to facilitate the issuance of higher number of ETDs and/or EU travel document, thus increasing the rate of effective return for TCN visa holders.

Assumptions:

- Time spent per activity: The assumption is made that the execution of a return decision requires 20 hours of work for TCNs in possession of their travel document at the time of apprehension, and an additional 4 – 8 hours of work for TCNS without their travel document. This is valued at € 30 per hour; [103]

[102] Figures are based on available country-level data from the Global Detention Project: https://www.globaldetentionproject.org/regions-subregions/europe.
[103] The figures for TCNs in possession of their travel document (20 hours) and value of time were taken from the EES Impact Assessment report (SWD(2016) 115 final, Part 3/3, Annex 11). The figure for the workload involved in executing return decisions for TCNs without a valid travel document is derived from interviews with key stakeholders carried out in the context of the present study.

- Length of delays: Delays resulting from the current procedures are assumed in the range of 2-3 days (lower bound) to 2 weeks (upper bound);
- Number of cases: It is estimated that roughly 3% to 5% of all visa overstayer return cases involve TCNs who no longer possess, or fail to produce their travel document on request. This amounts to an estimated 5 625 cases to 11 875 cases of missing travel documents (see chapter 3.1.1. for an explanation of this calculation), of which 50% - 60% are not executed due to missing travel documents. The assumption is that the proportion of effectively executed returns will increase from 50% to 75% as a result of the options under investigation;
- Daily costs of delays: The average daily costs incurred by Member States for accommodation and provision of food, medical and related basic services in pre-removal / detention centres is approximately € 125 per TCN.[104]

Option 1. Central storage of the travel documents in the VIS

Under Option 1, the relevant authorities would no longer be required to go through the issuing embassy, but rather would have systematic access to a centralised database containing the necessary documents. Indeed, they will have a direct access to the information thus not having to use several channels of communication to contact internal or external services (via VISMail, email or phone). The total cost savings to migration authorities due to the reduced time spent on retrieving the travel document copies of TCNs in a return proceeding is estimated in the range of € 3 173 438 to € 12 693 75, representing an efficiency gain of approximately 17%-29%.

Moreover, the accompanying delays will be effectively eliminated under this option, as the document will be directly searchable and retrievable by the relevant authorities. This suggests a delay reduction in the range of the full 2-3 days to 14 days experienced in the current situation. If delays are reduced by 14 days, then the accompanying benefit to the Member States is estimated in the range of € 46,3 million to € 92,6 million per annum, thus offsetting costs incurred to implement the measure. Regarding cost savings from implementing a higher proportion of returns, also taking into account efficiency gains, the study cautiously, estimates that the proportion of effectively executed returns of TCNS, which would not otherwise be carried out due to missing travel documents, will increase in the range of 50% to 75% (see analysis under chapter 3.5.2). The resulting benefits after combining these cost savings with the efficiency gains from less time spent to retrieve the document copy are summarised in the table below.

Table 17 Cost savings from implementing a higher proportion of returns (Option 1)

Impact on the implementation of returns (#): Additional returns of TCNs without travel documents			
Estimated number of returns not implemented	% improvement	Number of additional returns: Scenario A (50% improve)	Number of additional returns Scenario B 75% improve

[104] Figure is based on the average daily cost per person staying in a pre-removal detention centre. The average is based on available data across 13 Schengen States, and 19 detention centres. See: https://www.globaldetentionproject.org/regions-subregions/europe.

Lower	Upper		Lower	Upper	Lower	Upper
15 867	39 668	50% - 75%	7 934	19 834	11 900	29 751
Cost savings from implementing a higher proportion of returns (fewer lost costs) [105]			€ 5 712 188	€ 16 660 549	€ 8 568 283	€ 24 990 824
Total cost savings from implementing a higher proportion of returns in less time (efficiency gains)[106]			€ 6 664 220	€ 21 420 706	€ 9 996 330	€ 32 131 060

Source: Ecorys calculations based on data provided during stakeholder interviews; see Annex II.

The full extent of this impact is, however, dependent on the willingness of third country authorities to cooperate. This is an important external factor that may continue to hamper the effectiveness of the options to contribute to the implementation of returns.

Option 2. Decentralised storage of the travel documents in the national VIS

Under Option 2, the travel document copies would not be directly searchable by all parties with access (and appropriate authorisations), but rather that access would go via the national authority storing the scan. It is not affected by either of the two sub-options. This means that, even though they have a direct access to the information, migration and return services may still need to contact other Schengen countries' authorities in order to obtain the copy of the travel document or to request further information on the latter. As a result, workload reductions are marginally lower under Option 2 than Option 1. The time required to search request the necessary authorisations is estimated in the range of 15 minutes, leading to cost savings of approximately € 2 975 098 to € 12 297 072.

Delays will also be reduced under Option 2, though also marginally less so than under Option 1. The same reasoning applies as described above: Because the documents will not be directly searchable, but rather go via the national system that stored the document, a delay of up to ½ day can be expected. Nevertheless, the waiting time will be reduced when compared to the current situation. If delays are reduced by 13,5 days, then the accompanying benefit to the Member States is estimated in the range of € 44,6 million to € 89,3 million per annum. The benefits would offset recurrent operational costs, whereas the one-off costs will be larger and take several years to offset.

Because the option would provide the same level of guarantee as Option 1 in terms of the accessibility to the required supporting document(s), which would be stored in the national VIS systems, cost savings from increased returns is assumed to be the same as under Option 1.

Table 18 Cost savings from implementing a higher proportion of returns (Option 2)

Impact on the implementation of returns (#): Additional returns of TCNs without travel documents						
Estimated number of returns not implemented		% improvement	Number of additional returns: Scenario A (50% improve)		Number of additional returns Scenario B 75% improve	
Lower	Upper		Lower	Upper	Lower	Upper

[105] Calculation: Value = [(50% to 75%) x (15.867 to 39.668 of TCN visa overstayers found in a return procedure that could not be executed due to missing travel documents) x 24 to 28 hours x € 30/hour] in cost savings.

[106] Calculation: Value = [(50% to 75%) x (15.867 to 39.668 of TCN visa overstayers found in a return procedure that could not be executed due to missing travel documents) x 24 to 28 hours x € 30/hour] + 0,17% to 0,29% efficiency gain (i.e. cost savings from reduced time spent, or workload, to retrieve a copy of the travel document).

15 867	39 668	50% - 75%	7 934	19 834	11 900	29 751
Cost savings from implementing a higher proportion of returns (fewer lost costs)			See Option 1			
Total cost savings from implementing a higher proportion of returns in less time (accounting for efficiency gains)[107]			€ 6 604 718	€ 21 271 951	€ 9 907 077	€ 31 907 927

Source: Ecorys calculations based on data provided during stakeholder interviews; see Annex II.

Sub-option A: Bio-page only

Impacts are dependent on the main Options.

Sub-option B: Full travel document (all pages with entry-exit stamps and visa stickers)

Impacts are dependent on the main Options.

Impacts on TCN visa applicants (not related to fundamental rights)

The main economic impacts to TCN visa applicants pertain to the visa servicing fees levied by ESPs and the time spent waiting at the visa application centre.

Visa service fees: Any changes in the visa service fee will derive from the workload impacts associated with the two sub-options. Indeed, if the number of documents to be processed increases, as would be the case under sub-option B, interviewees indicated that ESPs may offset additional workload costs by increasing the service fees levied per applicant. This would likely be limited to the busiest locations in terms of the volume of applications received, however market competition may counter-balance tendencies to increase service fees.

It is important to note that there are alternative scenarios to the increase of service fees. For instance, considering that the market between ESPs is so competitive in certain third country locations, ESPs may instead absorb the higher costs themselves, or they might opt for an increase of budget in their contract negotiations with authorities.

Wait time at the visa application centres: The additional time that would be spent per applicant / application for scanning the copies may result in longer wait times and fewer appointment slots per day. The additional wait time would likely occur in those locations with the highest numbers of applications, such as Moscow, Beijing, Shanghai, New Delhi, to name a few.

One additional impact is the cost incurred to scan and print the travel document pages should applicants be required to supply them as part of the completed application file. As described in the analysis of costs to ESPs and consulates, most third country locations currently require TCN visa applicants to prepare and submit a scanned copy of their travel document, including visa pages, as part of their visa application file. Because this activity will likely be undertaken by the ESPs and consulates if the measure is adopted, this could be interpreted as a cost saving for visa applicants. Given the negligible price associated with scanning and printing 1 -16 pages, this impact has not be quantified.

Assumptions:

[107] Calculation: Value = [(50% to 75%) x (15.867 to 39.668 of TCN visa overstayers found in a return procedure that could not be executed due to missing travel documents) x 24 to 28 hours x € 30/hour] + 0,16% to 0,28% efficiency gain (i.e. cost savings from reduced time spent, or workload, to retrieve a copy of the travel document).

- Number of visa applications: Based on the reference value of 15,2 million visa applications in 2016,[108] the estimated number of Schengen Visa applications are assumed to steadily rise by 5 % on a year-on-year basis and will reach approximately 17,6 million application in the year 2019;[109]
- Additional wait time: The study estimates an additional wait time in the range of 1 minute, 10 seconds (sub-option A) to 220 seconds (sub-option B);
- Visa fees: The average service fee currently charged is approx. €25, and the maximum possible fee that can be levied is €30. The additional visa fee charged to applicants is assumed to range between € 1 to € 5.

Option 1. Central storage of the travel documents in the VIS

Impacts are dependent on the sub-option.

Option 2. Decentralised storage of the travel documents in the national VIS

Impacts are dependent on the sub-option.

Sub-option A: Bio-page only

The opportunity cost to visa applicants from the additional 70 second wait time at the visa application centre would be a marginal cost per applicant, estimated at less than €0,60.

As a result, and because sub-option A would result in only a marginal increase in the workload of ESPs (as described above) relative to the current situation, ESPs are unlikely to increase the visa service fee levied on visa applicants under sub-option A.

Sub-option B: Full travel document (all pages with entry-exit stamps and visa stickers)

Assuming 17,6 million visa applications are submitted in 2019 (see assumptions under "Impacts to consulates and ESPs" in the following section), the total opportunity costs to visa applicants from the additional 220 seconds of wait time at the visa application centre is an estimated € 1.89 per applicant.

ESPs will experience a more significant increase in their workload per application as a result of sub-option B, therefore they may be expected to raise the visa-servicing fee per applicant. The average additional amount to be charged to visa applicants is estimated as € 1,00 to a maximum of € 5,00 per application. The total loss to TCNs would amount to € 17,6 to € 88 million in 2018.

3.5.2. Policy impacts

The implementation of return decisions addressed to TCNs who entered the territory on a Schengen visa and are found in a return / readmission procedure is expected to benefit from the proposed measure to store a scanned copy of the visa applicants' travel document in the VIS.

The study estimates that the total number of visa holders becoming irregular migrants by overstaying their visa is approximately 294.000 persons per annum. According to stakeholders interviewed for this study, around 90% of visa overstayers (i.e. 264.453) will become subject to return proceedings, and we estimate that 10% to 20% of these cases involve TCNs without travel documents at the time of apprehension; and that more than half will not be executed due to Member States' inability to obtain evidence to prove the TCN's nationality.

On this basis, **the number of return decisions concerning TCNs who entered the territory on a visa, and that could not be implemented due to missing travel**

[108] Schengen States receive 15.2 million applications for short-stay visas in 2016, available online at: https://ec.europa.eu/home-affairs/news/visa-statistics-schengen-states-receive-152-million-applications-short-stay-visas-2016_en.
[109] The year 2019 will be used for the calculation as it is the year when the measure would be introduced.

documents, is estimated between 15 867 to 39 668 cases (see Table 5 in chapter 3.1.1). This represents roughly 13% to 33% of effective returns of visa-required third country nationals.[110] While the actual number of estimated cases is low, based on our calculations, the impact of undetected cases is potentially high. Indeed, one Member State estimates that the number of detected overstayers represents just 40% of all visa overstayers (i.e. the undetected population). Moreover, according to migration officers that have run simultaneous searches of VIS against EURODAC for asylum searches, about 30-35% of asylum seekers can be identified using the VIS.[111]

The experience of Member States to date indicates that there is a direct correlation between the rate of effective returns based on VIS matches combined with a copy of the travel document on the one hand, and the level of historical cooperation with the given country of origin on the other. In other words, if a return theoretically feasible (due to positive confirmation of identity), and the country in question is typically cooperative in dealing with returns, then the information in the VIS matches coupled with a copy of the TCN's travel document will be extremely useful and sufficient for facilitating the return. However, if the country in questions is non-cooperative on returns in general, Member States have few recourses to compel the return.

In this context, both **options 1 and 2** enable Member States to confirm the identity of TCNs without adequate documentation to equal effect. This is because both options provide systematic access to the TCN's travel document, thus facilitating identification and return, where possible. In both cases, however, the effective change is highly dependent on the third country in question. This is discussed in more detail below.

The key differentiating aspect between the options under investigation is the amount of information that would become accessible to the migration and return authorities as a result of the selected sub-option for implementation. For the purposes of proving nationality, the bio-data page (sub-option A) is sufficient. Storing copies of all travel document pages (or those that include exit/entry stamps and visa stickers) from various third countries (sub-option B) would not provide any added value towards achieving this objective. In other words, these pages would not lend further credibility to proving the nationality of a given TCN.

Sub-option B would, however, be considered useful for purposes other than return. For example, access to a scanned copy of the full travel document would be useful to migration and asylum authorities in order to prove escape routes for refugees, etc.

Based on inputs provided during the stakeholder consultation, the study cautiously assumes that the proportion of **effectively executed returns will increase by 50% to 75%** as a result of the proposed options.

- If the proportion of effectively executed returns increases by 50%, then the benefit is an **additional 7 934 to 19 834 TCNs returned** compared to the current situation;
- If the proportion increases by 75%, then benefit is an **additional 11 900 to 29 751 persons returned.**

Table 19 Estimated benefits for the implementation of returns

Impact on the implementation of returns: Additional returns of TCNs without travel documents						
Estimated number of returns not implemented		% improvement	Number of additional returns: Scenario A (50% improvement)		Number of additional returns: Scenario B (75% improvement)	
Lower	Upper		Lower	Upper	Lower	Upper
15 867	39 668	50% - 75%	+ 7 934 TCNs returned	+ 19 834 TCNs returned	+ 11 900 TCNs returned	+ 29 751 TCNs returned

[110] Based on the three-year average (2014 – 2016) of effective returns of nationals from visa-required third countries.
[111] Commission Staff Working Document, XXX (2017), Impact Assessment accompanying the document for a proposal for a Regulation of the European Parliament and the Council establishing interoperability between European Union information systems for security, border and migration management.

The estimates in the table above should be treated cautiously as the full extent of these potential benefits cannot be estimated with any degree of certainty for two reasons. First, the extent of change that the measure will bring about in terms of the behaviour of third country authorities vis-à-vis the issuance of emergency travel documents for their nationals is not sufficiently known or measurable. Second, the underlying motivations of the third country authorities vis-à-vis refusal to cooperate with the Member States on the issuance of emergency travel documents for their nationals cannot be established with any degree of certainty.

3.5.3. Fundamental rights impacts

Any EU proposal of storing copies of travel documents into VIS is bound by the fundamental rights framework of the EU, which includes both the Charter of Fundamental Rights (CFR), and by international treaties to which the EU Member States are bound individually, including the European Convention of Human Rights (ECHR) and the Refugee Convention.

This section describes the possible (negative and positive) impacts of the proposed storage of travel documents of visa applicants for followings fundamental rights of the CFR:

- Right to asylum and protection of the principle of non-refoulement (Article 18 and 19);
- Rights to non-discrimination (Article 21);
- Right to effective remedies (Article 47);
- Rights to the protection of privacy and personal data (Article 7 and 8).

Right to asylum and protection of the non-refoulement principle

VIS Regulation
Article 21. Access to data for determining the responsibility for asylum applications
Article 22. Access to data for examining the application for asylum

The VIS may contain data on asylum seekers, including individuals who can qualify for international protection according to the EU Qualification Directive (Directive 2011/95).[112] This is recognised in Article 21 VIS Regulation, allowing asylum authorities access to the VIS for the purpose of determining which state is responsible for the asylum application under the Dublin Regulation (Regulation 604/2013). Article 22 VIS Regulation gives access to asylum authorities to data about the applicant to be used in the examination procedure.

EU Charter on Fundamental Rights
Article 4. Prohibition of torture and inhuman or degrading treatment or punishment
Article 19. Protection in the event of removal, expulsion or extradition

European Convention on Human Rights
Article 3. Prohibition of torture

Dealing with the storage of information in central databases, the specific vulnerability of asylum seekers and the absolute protection of the non-refoulement principle and the rights in Article 3 ECHR and 4 and Article 19 CFR, must be taken into account.[113] Even if at the moment of the visa application, the applicant is not identified as a potential asylum seeker, if this person later submits an asylum application, on the basis of Article 21 VIS Regulation, information on the asylum seeker can be accessed by the designated authorities. The existing safeguard which bans the transfer of personal data to third countries if that person has requested international protection continues to apply (Article 31(3)), mitigating the risk of serious harm for asylum applicants or their families.

A positive impact of both options 1 and 2 is that a designated asylum authority with access to VIS for purposes of assessing an asylum application will be able to access the travel document copy of a person in need of international protection. The data could be used as additional evidence to prove that person's nationality, in addition to referring to the biometric information

[112] The fundamental right to asylum is protected in Article 18 CFR.
[113] See the Opinion of the EDPS, 5 September 2012, on the proposal of the access by law enforcement authorities to Eurodac, EDPS 12/12.

that is already included in the VIS. Taking into account that in asylum procedures, evidence on who you are and where you are from is crucial and this includes for both the applicant and the asylum authorities MS an obligation to provide or to seek for information necessary to support the application (see 13 Procedure Directive and 4 Qualification Directive), this his information could facilitate the procedure for granting international protection.[114] The information could further be useful to asylum authorities for proving the escape route that the person used, which is important in an assessment of merits for asylum cases.

VIS Regulation
Article 3. Availability of data for the prevention, detection and investigation of terrorist offences and other serious criminal offences
Article 31. Communication of data to third countries or international organisations

According to the Return Directive 2008/115, and the absolute protection offered in Articles 3 ECHR, 4 and 19 CFR, Member States may not return individuals in violation of the non-refoulement principle.[115] In other words, return decisions can only be issued after appropriate non-refoulement checks have been carried out. Moreover, it is important to note that a return decision is never based solely exclusively on data in the passport, but is made on a case-by-case basis, dependent on a person's situation and right to remain in the territory. Information stored in VIS, particularly a copy of the travel document, which is a duplication of the information that is already stored in VIS, cannot by itself lead to a return decision. Indeed, the copy increases the likelihood that the data entered in the VIS is correct, which can be cross-referenced against the data in the travel document copy.

Article 31 (1) states that data processed in the VIS shall not be transferred or made available to a third country or to an international organisation. However, derogations are allowed in certain circumstances. Derogations may be made for the purposes of return (Article 31 (2)) and in exceptional case of urgency for the purposes of the prevention and detection of terrorist offences and of other serious criminal offences (Article 3 (3)), in accordance with the Council Decision 2008/633/JHA of 23 June 2008.[116] If data are transferred to third countries, certain conditions must be fulfilled as stipulated in Article 31 (2) and Article 31 (3). These conditions include: the adoption of an adequate protection decision of personal data with regard to that third country by the Commission, the agreement by the third state or international organisation to use the data only for the purpose for which they were provided and, to guarantee that transfers of personal data to third countries or international organisations shall not prejudice the rights of refugees and persons requesting international protection, in particular 'as regards non-refoulement'.

To ensure the protection of those visa applicants, the current restriction to transfer information to third states in the VIS Regulation should explicitly provide that the additional information in VIS will not be shared with third states if this could result in a treatment of this person by the authorities in that state in violation of Article 4 CFR. Therefore, Member States may not provide copies of the TCNs' travel documents to countries of origin if that information would endanger the person at stake (for example from information of the traveling route or previous stays in other EU countries), as this would constitute a violation of Article 4 CFR.

On the other hand, travel documents are by definition issued by the country of origin. Thus the transfer of a copy of the travel document (sub-option A) during a return procedure does not provide the country with any information which they do not already have and there is no negative impact to the right to asylum and the principle of non-refoulement from storing the travel document copies in the VIS. Contrary to the personal data contained on the travel document data page, sub-option B involves information that is not necessarily known to the authorities in the TCNs' country of origin. Therefore, the transfer of information on the visa

[114] Notes of informal meeting between the Commission and FRA, 11 September 2017 on the possible impact on fundamental rights of storing copies of travel documents in VIS.
[115] See for example ECtHR *Salah Sheekh v. the Netherlands*, 11 January 2007, appl. no. 1948/04, §135-136.
[116] The information that can be transferred as per Article 31(2) includes: data on name, surname, sex, place and country of birth, current nationality and nationality of birth, type and number of travel document and authority which issued it, date of issuing and expiry, place of residence, and in the case of minors (sur)names of applicant's father and mother.

applicants' travel history (sub-option B) may constitute new and/or sensitive information. However, as the information would not support return procedures, but rather serve as an element of proof in various migration and asylum procedures, there would be no objective justification to transfer the copies of travel pages to third country authorities. Thus, any amendment to Article 31 would not include the possibility to transfer the additional data implied by sub-option B. This guarantee should be added to the current text of the VIS Regulation.

Furthermore, as further developed in the personal data protection impact below, and specifically important in the context of Article 4 CFR and the non-refoulement principle, it should be guaranteed that the overview of the application of the rules dealing with the transfer of data to a third state is carried out by an independent supervisory authority.[117] In general and in accordance with the criteria as developed by the CJEU in the DRI judgment, the rules allowing transfer of personal data to third states must determine in a clear and precise manner, which data are to be transferred.[118] To this end, the safeguards established in Article 41 and 43 would continue to apply in the context of the proposed measure.

Right to non-discrimination

The right to non-discrimination refers to Article 21 of the Charter of Fundamental Rights (CFR), which states that: (1) any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited, as well as (2) discrimination on grounds of nationality. Article 14 ECHR mirrors Article 21 CFR.

EU Charter of Fundamental Rights
Article 21 - Non-discrimination

European Convention on Human Rights
Article 14 - Prohibition of discrimination

Storing a copy of the visa applicants' travel document in the VIS system does not violate Article 21 (1) CFR, discrimination on the grounds such as sex, race, colour, ethnic or social origin, et cetera. The VIS system does distinguish, however, between third country nationals who should be in possession of a visa when crossing an external EU border and those who are not under obligation to hold a visa. The option of storing a copy of the travel document will apply to all Schengen visa applicants, regardless of nationality. The measure as such is therefore not discriminatory.

Right to effective legal remedies

EU Charter on Fundamental Rights
Article 47. Right to an effective remedy and to a fair trial

General Data Protection Regulation
Article 79. Right to an effective judicial, remedy against a controller or processor

The right to an effective judicial remedy is protected in Article 47 CFR and, as will be dealt with below, more specifically with regard to data processing, safeguarded in Article 79 GDPR.[119] In the *Schrems* judgment, the CJEU emphasized the importance of the right to effective judicial protection in data protection cases: 'legislation not providing for any possibility for an individual to pursue legal remedies in order to have access to personal data relating to him, or to obtain the rectification or erasure of such data, does not respect the essence of the fundamental right to effective judicial protection, as enshrined in Article 47 of the Charter. The first paragraph of Article 47 of the Charter requires everyone whose rights and freedoms guaranteed by the law of the European Union are violated to have the right to an effective remedy before a tribunal in

[117] CJEU Opinion 1/15 of 26 July 2017 on the EU-Canada PNR Agreement.
[118] CJEU, *Digital Rights Ireland*, C-293/12, para. 68.
[119] 79 GDPR: '… each data subject shall have the right to an effective judicial remedy where he or she considers that his or her rights under this Regulation have been infringed as a result of the processing of his or her personal data in non-compliance with this Regulation.'

compliance with the conditions laid down in that article. The very existence of effective judicial review designed to ensure compliance with provisions of EU law is inherent in the existence of the rule of law.'[120]

VIS Regulation
Article 40. Remedies

Considering options 1 and 2, including sub-options, the proposed measures will have no positive nor negative impact on the protection of this right to effective legal remedies, as the storage of data as such does not change the availability of remedies as currently provided in Article 40 of the VIS Regulation. This includes the right to bring an action or complaint before the competent authorities or courts of a Member State refusing the right to access, correction or deletion of his or her data.

Impacts on the rights to privacy and to the protection of personal data

EU Charter on Fundamental Rights
Article 7. Respect for private and family life
Article 8. Protection of personal data
Article 52 (1). Scope and interpretation of rights and principles

European Convention on Human Rights
Article 8. Right to respect for private and family life

Article 52 (1) CFR requires that any limitation to the right to privacy and data protection, protected in Articles 7 and 8 CFR, is provided for by law and respect the essence of those rights and freedoms, subject to the principle of proportionality. Furthermore, limitations may be made only if they are necessary and genuinely meet objectives of general interest recognised by the Union or the need to protect the rights and freedoms of others'. In its case-law, the CJEU generally applies a high threshold assessing the justification of limitations to the right to data protection, using the 'strictly necessary' test.[121] Following Article 8 (2) ECHR, a limitation to the right of privacy must be provided by law, has to have a legitimate aim and must be necessary in a democratic society, which includes a subsidiarity and proportionality test.[122]

General Data Protection Regulation
Article 6. Lawfulness of processing
Article 9. Processing of special categories of personal data
Article 10. Processing of personal data relating to criminal convictions and offences

Furthermore, the new rules of the General Data Protection Regulation (GDPR) of 2016, which will be applicable as from May 2018[123], provide that processing of personal data shall only be lawful for the grounds specified in Article 6. Dealing with the execution of public tasks, this provision entails that the processing must be 'necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller'. Concerning data relating to criminal convictions and offences 'or related security measures', Article 10 GDPR provides that this data processing may only be carried out 'under the control of official authority' or when the processing is authorized by EU or national law providing for 'appropriate safeguards for the rights and freedoms of data subjects'. Except for "reasons of substantial public interest," among other situations described in paragraph 2, Article 9 prohibits the processing of special categories of personal data such as racial or ethnic origin, religious or philosophical belief, and biometric data. This means, where passports of third states include data on for example religion, ethnicity or membership of a national minority group on the page adjacent to the data page, the further processing of travel document copies may fall under this prohibition.

[120] CJEU C-362/14, *Schrems v. Data Protection Commissioner*, 6 October 2015, para. 95.
[121] CJEU C-362/14, *Schrems v. Data Protection Commissioner*, 6 October 2015, para. 93-93, 98.
[122] As provided in Article 53 CFR, the level protection of the CFR will not go below the standards of the ECHR. These standards include the explanation of the ECHR in the case-law of the ECtHR.
[123] Regulation 2016/679 of 27 April 2016, *OJEU* 4.5.2016, L 119.

Principle of data minimisation

The principle of data minimisation requires that personal data must be "adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed."[124] This principle refers both to the amount of data that is collected, as well as to the type of data processed.

Thus, two key questions emerge: (1) To what extent does a scanned copy of the travel document's bio page (sub-option A) and/or visa pages (sub-option B) contain additional data relative to those data currently entered into VIS? (2) If yes, what are the implications (effects) on the right to privacy and the protection of personal data?

On the first question, Table 11, Table 12 and Table 13 show that Member States already record all mandatory elements of any travel document into VIS via the visa applicants' application form, in accordance with Article 9(4) of the VIS Regulation. Thus, when compared to the data that is currently and entered in the VIS from the applicants' application form, the only additional category of personal data that could potentially be stored relative to the current situation is the personal identification number of the document holder.

In addition to the mandatory zone, States may include additional personal data either on the page adjacent to the bio page, on the reverse side of the bio page (outside scope) or on any page not designated for visa stamps (outside scope). This information may include, *inter alia*, name(s) of document holders' spouse, father, mother, etc., Occupation, Eye colour, Height. If information is included in the optional zone (i.e. any page outside the data page, such as the annotations page, reverse side of the bio-data page), it will not be collected as part of the proposed measure. **This means that the aforementioned categories of sensitive personal data fall outside the scope, and no such infringement is foreseen.**

Based on a sampling of the national and diplomatic passports of 25 third countries, the study found that such data is most likely to be included on the page adjacent to the data page, though the occurrence rate is low. The latter observation is validated by EU experts on travel documents. In just 3 of 25 cases, passports contain a reference to the holders' occupation; in 2 cases, a reference to height is included and in just 1 case, a reference to hair colour. Such information, to the limited extent that third countries include it at all, is outside the scope of the study, as it is not contained in either biographic data page or the visa pages.

Considering the above findings, for sub-option A, the interference on the right to privacy and data protection would not be greater than the current VIS system in the vast majority of cases, as few States appear to include additional personal data in the mandatory zone, if at all. In a potentially small number of cases, however, the biographic data page will contain additional data to what is currently collected, namely the individuals' national identification number. At the same time, however, the personal data that would be subject to storage in the VIS does not go beyond what the competent authority (migration or return authority) may see when they manage to obtain a scanned copy of the applicants' travel document from the consulate that issued the visa. The main difference is that the information would be systematically available, and it could possibly be compared against other IT systems, such as the future EES. To the extent that the study finds evidence of the aforementioned sensitive data in the data page, its use is purpose limited. Therefore, any such risk of retaining such data is extremely low and existing safeguards in the VIS Regulation would prevent their processing.

The same limitations to fundamental rights as identified under sub-option A also apply to sub-option B. The option further involves the storage of personal data pertaining to the visa applicants' past travel history (visa stickers, entry/exit stamps). This implies the storage and processing of new information relative to the current situation, and thus a further limitation of the right to privacy and data protection (7 and 8 CFR, 8 ECHR and the General Data Protection Regulation 2016/679). Taken together, the interference on the right to privacy under sub-option

[124] Article 5(1) (c) of the GDPR and Article 4(1) (c) of the GDPD, as well as Article 5(c) of Convention 108 and Articles 5(4)(c) of the draft Modernised Convention 108.

B would be greater than the current VIS system. Whereas the scanned copy of the bio-data page of the visa holders' travel document is considered to be necessary for the purposes of proving nationality of a TCN for facilitating that individual's return, copies of all pages containing entry/exit stamps and visas are not. In other words, the processing of data implied by sub-option B does not appear to be necessary and/or proportionate to achieve the purpose of VIS and raises issues under the principles of data minimisation and purpose limitation.

A final issue pertains to the period of data retention. The study examined the possibility of extending the period for retaining data from the standard 5 years to 10 years for the particular measure under investigation. Currently, VIS data are retained for five years following the last entry of record of the authorities, or its annulment, refusal or revocation (VIS Regulation, Article 23). [125] Extending the period of retention to 10 years for this particular category of data will mean a misalignment with other data that is already collected and stored in the VIS, as well as with other IT systems such as EES and ETIAS. Moreover, retaining the travel document copy for a longer duration than the validity period for travel documents means that information stored into VIS can be outdated, therefore the sub-option to keep the data retention period of five years is preferable.

In its opinion on the proposed ETIAS, FRA noted that "the large amount of personal data that is to be stored in ETIAS and the planned interoperability with other IT systems increases the risk of unlawful access and use (in violation of purpose limitations), in addition to other data security breaches."[126] The same equally applies to measures currently under investigation: The proposed measures imply the storage of sensitive personal data not already stored in VIS – such as the person's personal (national) identification number, should this data be included in the data page of the holders' travel document. Furthermore, sub-option B implies the additional storage of the visa applicants' travel history. Due to the sensitivity of the data and increased security risks related to allowing for the transfer of data to third states, the proportionality of retaining the data for 10 years would need to be better justified in light of the purposes of the VIS, and particularly, of the proposed amendment.

Principle of purpose limitation

EU Charter on Fundamental Rights
Article 8. Protection of personal data

General Data Protection Regulation
Article 5. Principles relating to processing of personal data

As outlined in the Article 8(2) CFR and Article 5(1)(b) of the GDPR and Article 4(1)(b) of the GDPD, the principle of purpose limitation requires that personal data be processed only for specified purposes, which must be explicitly defined. The GDPR states that the personal data may only be collected for specified, explicit and legitimate purposes and must not be further processed in a manner that is incompatible with those purposes. Moreover, the person concerned should be able to foresee the purpose for which his or her data will be processed.

As outlined in chapter 3.1, the VIS data should be used to support and facilitate return procedures. While the VIS has been set up for the specific main purpose of supporting the visa application process and border checks, additional purposes imply the use of data for return purposes as well. According to Article 2(e), one of its objectives is 'to assist in the identification of any person who may not, or may no longer, fulfil the conditions for entry to, stay or residence on the territory of the Member States.' This is supported by Article 18 and 19, which enables the authorities competent for carrying out checks at external borders or within the territory of the Member States to access certain VIS data for the purposes of verification and/or identification of apprehended persons. Finally, Finally, Article 31(2) enables the Member States – via the designated competent authorities – to transfer or to make available a limited set of these data to a third country for the purpose of proving the identity of third-country nationals

[125] Only if their visa refusal has been annulled by a final decision of a national tribunal or court, the (extra) data on refusals of visa applications as provided in Article 12 VIS Regulation, must be deleted on the basis of Article 25(3).
[126] FRA, The impact on fundamental rights of the proposed Regulation on the ETIAS, Opinion of FRA, FRA Opinion 2/2017, Vienna: 30 June 2017.

for the purpose of return.[127] Thus, although not explicitly defined in Article 2, when taken together, these provisions foresee that the VIS can be used to facilitate both the identification of the irregular migrant and the issuing of travel documents for return. [128]

Depending on the purpose at stake, access to personal information in VIS is limited: not every entry of VIS data is accessible to every authority. Articles 15-22 of the VIS Regulation. clearly define the type of authorities that can search the VIS. Member States are obliged to notify the Commission 'without delay' the name of the authorities and the purpose for which entitled to access the VIS, and the Commission makes this information publicly available. Table 20 presents an overview of the different types of authorities allowed to search the VIS for different use purposes.

Table 20 Purpose of access to carry out searches in VIS per type of authority

Purpose of search	Visa issuance	Border checks	Fighting serious crime and terrorism	Combatting irregular migration	Return procedure	Dublin procedure
Type of authority	Visa and border authorities	Border authorities	Police and Europol	Police	Immigration authorities	Asylum authorities

Source: FRA Report on biometrics, based on existing legal instruments, December 2017.

Accessibility to the scanned copy of a visa applicants' travel document, which would be stored in VIS, should be limited to the purposes as currently provided in Articles 15 to 22 of the current VIS legal framework (VIS Regulation). Article 31 (2) should be amended to ensure that copies of travel document copies may be transferred to third countries for the purpose of identification, only for the purpose of return of a third country national. The proposed measures will therefore not have any impact on the purpose limits and access rights of the different authorities, and existing safeguards will continue to apply in this respect. The specific case of law enforcement access, however, is analysed separately below.

Access by law enforcement authorities

In its report on the fundamental rights implications of large-scale IT systems and the use of biometrics, FRA highlighted that access to personal data by law enforcement authorities represents a limitation on the right to respect for private and family life (Article 7 CFR) and the right to protection of personal data (Article 8 CFR).[129] Under Articles 52(1) CFR and 8 (2) ECHR, any limitation of fundamental rights must be provided for by law, respect the essence of those rights and, complying with the principle of necessity and proportionality freedoms, be necessary (and least intrusive) for meeting objectives of general interest recognised by the EU or for protecting the rights and freedoms of others.[130]

As described above, one of the purposes of the VIS is to contribute to threats to the internal security of any of the Member States. According to the VIS Regulation (Article 3), this is done by making the information stored in the system available to national law enforcement authorities and Europol for combatting terrorism and serious criminal offences. Article 3(1) of the VIS Regulation only permits access by designated law enforcement authorities "if there are reasonable grounds to consider that the consultation of VIS data will substantially contribute to the prevention, detection or investigation of terrorist offences, or of other serious criminal

[127] The Regulation allows the designated competent authorities to transfer the following data from the visa application file: first name, surname and former surname (if applicable); sex, data, place and country of birth; current nationality and nationality at birth; type and number of the travel document, the authority which issued it and the date of issue and of expiry; residence; and in the case of minors, the surname and first name(s) of the applicant's father and mother.

[128] EMN Ad-Hoc Query on COM AHQ on Member States' Experiences with the use of the Visa Information System (VIS) for Return Purposes. Requested by COM on 18th March 2016. 24 responses were provided: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/networks/european_migration_network/reports/docs/ad-hoc-queries/ad-hoc-queries-2016.1042_com_ahq_on_member_states_experiences_with_the_use_of_the_visa.pdf.

[129] FRA, Draft Report on European large-scale information systems and the use of biometrics: fundamental rights implications, 22 December 2017.

[130] EDPS toolkit Assessing the necessity of measures that limit the fundamental right to the protection of personal data. A toolbox on proportionality is prepared by the EDPS, but not published yet.

offences."[131] Both alphanumeric data and biometric data can be used to establish if there is a "hit" if the purpose is to establish the travel history. Such data can include purpose of travel, date of arrival and departure and residence.[132] Given the wide range of search categories that can be applied, searches could result in a group of people included in the "hit". Moreover, the VIS Law Enforcement Decision currently does not limit access to data, but provides full access to the data of the file in case of a "hit".

Whereas the proposed measure might lead to the use of or access to travel document copies in VIS for law enforcement purposes, this will fall within the scope of Council Decision 2008/633 of 23 June 2008 on the access for consultation of VIS by designated authorities for combatting terrorism and serious crimes, as well as Directive 2016/680 of 24 April 2016 on the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties will apply.[133] This Directive provides that access for law enforcement purposes should be limited to designated authorities, and only be provided on a case-by-case basis. Furthermore, this Directive requires that data subjects must be given adequate rights of access, correction and if necessary deletion of their data, the right to an effective legal remedy, and an independent supervision mechanism must be established.

Availability of procedural guarantees

The importance of procedural guarantees has been highlighted by the CJEU in *Digital Rights Ireland* (DRI) in 2014 and *Schrems* in 2015, and more recently in the opinion on the PNR agreement between the EU and Canada, must be taken into account.[134] The conclusions of the CJEU refer to general principles and criteria with regard to the interpretation of the fundamental right to data protection and privacy, and are not only applicable in the case of telecommunication data.[135] The CJEU defined different criteria for the assessment whether data processing as in the proposed measure, is in accordance with Article 7 and 8 CFR, including compliance with the principle of proportionality.[136]

Taking into account the data protection standards and criteria in the DRI judgment of the CJEU, the adoption of the proposal of storing copies of travel documents into VIS, must be accompanied with measures ensuring the right of access, deletion and correction for the data subject, access to remedies, and independent supervision. In February 2016, the VIS Supervision Coordinating Group noted the absence, or in some MS very low number of requests by data subjects to exercise their data protection rights in regards of the VIS in general, which was partially attributed to the lack of knowledge on these rights but also about the way how to exercise these rights.[137] The adoption of new data processing measures should be accompanied by measures enhancing the awareness of both national authorities, and visa applicants, to safeguard the effectiveness of procedural guarantees and the availability of individual rights.

3.6. Comparison of options

3.6.1. Objectives of general interest

Implementation of a measure to store a scanned copy of the visa applicants' travel document in VIS would contribute to assisting Member States to return third country nationals who entered the territory using a Schengen visa, and that do not or no longer fulfil the conditions for entry

[131] Regulation (EC) No 767/2008, Article 3(1).
[132] Council Decision 2008/633/JHA of 23 June 2008.
[133] *OJEU* L 119, 4.5.2016, p. 89–131, repealing former Directive 2008/977.
[134] CJEU, *Digital Rights Ireland Ltd*., 8 April 2014 C-293/12 and CJEU *Schrems v. Data Protection Commissioner*, October 2015, C-362/14 and Opinion 1/15 of 26 July 2017.
[135] See also the overview of case-law of the CJEU in the EDPS toolkit on necessity.
[136] C-293/12, para. 57-68. These criteria include the scope of data processing, and whether its goal justifies the storage of data of an entire group of persons; the availability of prior review by court or independent body to review which access for law enforcement purposes, is strictly necessary; the availability of specific limits with regard to authorities having access to data and their subsequent use; and finally, time limits, restricting the storage of data to what is strictly necessary.
[137] VIS SGC, *Report on access to the VIS and the exercise of data subjects' rights*, February 2016, https://edps.europa.eu/sites/edp/files/publication/16_02_report_on_access_vis_exercise_data_subjects_rights_en.pdf.

and/or stay on EU territory, in accordance with the Return Directive. This would be achieved by ensuring that scanned copies of the visa applicants' travel document are systematically available and accessible to the relevant authorities, thus providing Member States' authorities with the necessary evidence to prove the nationality of TCN visa overstayers who lack, or fail to produce a copy of their travel document upon apprehension. As a consequence, it would be difficult for third countries to deny return, as both the information in VIS, as well as copies of the travel documents would be available. The measure would therefore contribute to improving the overall return rate of third country nationals found in a return / readmission procedure by increasing the probability that an otherwise non-cooperative third country will accept the TCN as their national and facilitate the issuance of a travel document.

Indeed, currently, Member States face difficulties to obtain copies of visa applicants' travel documents from the issuing Embassy in time for return purposes, resulting in costly delays and high burdens incurred in the process. The current procedure of retrieving, scanning, zipping and coding hard copies of visa applicants' travel documents is inefficient both for Member States' authorities, as well as for the consular staff tasked with fulfilling Member States' requests.

Both Option 1 and Option 2, as well as their sub-options, are capable of contributing to the identified objectives of general interest, though Option 1 performs moderately better than Option 2. Whereas Option 1 will require all data to be automatically stored in the central VIS database, Option 2 entails storage in the national system. This means that, rather than having access to search for the required data directly and without having to rely on VISMail, the relevant authorities will still be required to request the information from the responsible storing Member State, which would then be exchanged via VISMail. It is expected that this information could be shared within a matter of hours following a request, and without any additional administrative burden. However, the reliability of this option to achieve the stated objectives is undermined by the sub-optimal implementation of the VISMail feature to date. If Member States do not diligently implement the VISMail system, the effectiveness of Option 2 will be severely limited.

Sub-option B, will not increase the effectiveness of either Option 1 nor Option 2 beyond improvements that will be achieved by sub-option A. The latter is sufficient for the identified purposes of facilitating return procedures.

3.6.2. Cost-Benefit

Costs of the options

Table 21 and Table 22 present an overview of all relevant costs (both one-off and recurrent, as well as recurrent compliance costs) from the options and their sub-options. The cost estimations are based on various sources (experience of related initiatives, stakeholder consultation) and derive from a number of assumptions, which have been detailed in Chapter 3.5.1 and in Annex III.

Table 21 Summary of investment and operational costs

Investment and operational costs	Option 1	Option 2	Sub-option A	Sub-option B
One-off costs (m)				
Additional servers. VIS databases	€ 5	€ 244 – € 414	-	-
Additional VIS storage	-	-	€ 1.3	€ 5
Scanning equipment: Consulates	-	-	€ 4,7	€ 4,7
Scanning equipment: ESPs	-		€ 6,7	€ 7,2 – 7,5
Training and awareness raising	€ 0,2	€ 0,2	-	-
Total one-off costs	**€ 5,2**	**€244,2- 414,2**	**€ 12,7**	**€ 16,9 – 17,2**
Recurrent operational costs (m)				
Operational cost 10 year retention	€ 35	€ 16 – € 33	-	-
Total recurrent costs	**€ 35**	**€ 16 – 33**	**-**	**-**
Workload impacts* (m)				
Consulates	-	-	€ 3,9	€ 5,8
ESPs	-	-	€ 5,3	€ 16,5
Total additional workload costs	**-**	**-**	**€ 9,1**	**€ 22,3**
Total investment and recurrent compliance costs (m)	**€ 40,2**	**€ 260,2-447,2**	**€ 21,9**	**€ 39,1 – 39,5**

Note: Calculations may not add up due to rounding.

Table 22 Summary of additional workload-related costs

Workload impacts	Option 1	Option 2	Sub-option A	Sub-option B
Costs to TCNs				
Visa fees (per TCN)	-	-	-	€ 1 – € 5
Opportunity costs (per TCN)	-	-	€ 0,60	€ 1,89
Total costs to TCNs	**-**	**-**	**€ 0,60**	**€ 2,89 – 5,89**

*Costs to scan, prepare and transfer the TD copies.
Note: Calculations may not add up due to rounding.

Both options and the two sub-options require some one-off costs, both to implement the proposed change and to train the relevant personnel and raise awareness along the chain of stakeholders.

One-off investment costs are significantly higher for Option 2 than for Option 1. Under option 1, additional VIS system costs would amount to € 5 million, whereas under Option 2, one-off costs are estimated to range from € 244 – € 414 million. These costs would involve the expansion or setting up of national systems. Recurrent operational costs are only slightly to moderately higher under Option 1. The study notes, however, that since the history of previous applications can be easily checked in the VIS, no new copies are requested from the applicant if documents have already been submitted during a previous application, and if that document has not yet expired and been replaced with a new one. This suggests that required investments in storage capacity under Option 2 may be substantially lower than the calculations suggest. The study was unable to collect data enabling an accurate estimation of the investments required at national level due to the late inclusion of this option in the analysis.

Regarding the sub-options, the technical infrastructure to be added at each ESP and consulate is limited to security-by-design document scanning infrastructure (both sub-options). Costs will be slightly higher under sub-option B due to the higher volume of data to be scanned, thus requiring additional infrastructure. At a small proportion of the ESPs – in particular those, which receive a high volume of applications – at least one additional document scanner, would be required in the event that the number of applicants exceeds the scanning capabilities.

Training costs and awareness raising costs are limited in scope, though additional training costs might be required under Option 2 given the decentralised nature of the Option.

On-going costs incurred by visa authorities and ESPs stem from the additional time spent to (a) make the scanned copy of the travel document, (b) transfer the data to the consulate and (c) to transfer the data (digitised copies) from the consulate to the NS-VIS. The costs are driven by the choice of sub-option; the main options do not affect the workload of the consulates and

ESPs. The total costs to consular staff from the additional workload associated with scanning and storing a copy of the bio-data page (sub-option A) are valued at € 3,9 million per annum, and at € 5,3 million for ESPs. The additional workload to scan and store all pages of the visa applicants' travel document (sub-option B) are valued at € 5,8 million for consulates and € 16,5 million for ESPs. Thus, the costs for consulates and ESPs are substantially higher under sub-option B compared to both sub-option A and the current situation (baseline scenario).

The **economic impacts to third country nationals** are similarly driven by the two sub-options. In the event that sub-option B is implemented, ESPs and consulates may pass additional workload costs onto the TCNs in the form of increased visa service fees charged to applicants. Given that the average service fee charged to applicants today is approximately € 25,00, the average fee increase will range from € 1,00 to € 5,00 per applicant under sub-option B. By contrast, sub-option A would result in only a marginal increase in the workload of ESPs relative to the current situation, therefore the ESPs are unlikely to increase the service fee levied on visa applicants. Visa applicants may additionally experience increased wait time at the application centres due to the increase in time spent by ESP personnel for receiving each application. The additional wait time is valued at a cost of € 0,60 per applicant under sub-option A and at € 1,89 per applicant under sub-option B. Overall, sub-option B results in higher additional costs to third country national visa applicants than sub-option A, though all costs are relatively minor compared to the current situation.

Economic benefits of the options

As shown in Table 27, the measures will also produce several important economic benefits for Consulates (and ESPs, as a result of the additional visa fees) as well as Member States' migration and return authorities. Implementation of a measure to systematically include scanned copies of visa applicants' travel document in the VIS, which would be either directly or indirectly searchable and accessible to the relevant authorities, will have the following benefits:

- Greatly reduce the burden to confirm this category of TCNs' identity and facilitate the return process while facilitating the likely cooperation on the part of third country authorities to issue an emergency travel document to return their nationals;
- Reduce delays associated with ad hoc communications and exchange between Member States' authorities and the consulates; and
- Eliminate inefficient procedures involved with retrieving, scanning, zipping and coding hard copies.

While Option 1 performs marginally better on these objectives compared to Option 2, both measures will significantly reduce inefficiencies associated with the current procedures.

As with the cost calculations, the calculated benefits are based on various sources (experience of related initiatives, stakeholder consultation) and derive from multiple assumptions, which are detailed in Chapter 3.5.1 and Annex III.

Table 23 Summary of benefits of the policy options

	Option 1	Option 2
Consulates		
Cost savings from time spent on responding to document requests	€ 687 578 – € 2 750 313 (€ 366 – € 1.462 per consulate)	€ 687 578 – € 2 750 313 (€ 366 – € 1.462 per consulate)
Migration and return authorities		
Cost savings from time spent on retrieving TD copy	€ 3,2 – 12,7 m	€ 3,0 – 12,3 m
Cost savings from reduced delays in return procedures	Daily costs of delays reduced by up to 14 days € 46,3 m – 92,6 m	Daily cost of delays reduced by up to 13,5 days; costs incurred for delays of ½ day € 44,6 – 89,3 m
Cost savings from executing a higher proportion of return decisions, in less time	€ 6,7 – 21,4 m *(if 50% improvement)* € 10,0 – 32,1 m *(if 75 % improvement)*	€ 6,6 – 21,3 m *(if 50% improvement)* € 9,9 – 31,9 m *(if 75% improvement)*
Total benefits: 50% improvement	**€ 57,5 m – 132,2 m**	**€ 55,6 – 128,3 m**
Total benefits: 75 % improvement	**€ 60,8 – 142,9 m**	**€ 58,9– 139,0 m**

The saved costs for consulates from the reduced number of supporting document assistance requests is estimated to range between € 0,7 million to € 2,8 million across all Schengen consulates worldwide. The impact is the same across all options and sub-options.

The saved costs for migration and return authorities from the reduced workload associated with contacting the consulates and obtaining the scanned copy of the via applicants' travel document is estimated to range between € 3,2 million to € 12,7 million under Option 1. This is based on the assumption that the additional workload from carrying out this activity would be eliminated under the option. The benefit is valued higher under Option 1 than under Option 2, as the access is more direct and efficient. Under Option 2, Member States will still need to request the information from the national authorities responsible for storing the scanned copy, a procedure that would require an estimated 15 minutes or less to carry out. The cost savings under this option are therefore slightly lower, estimated at € 3,0 million to € 12,3 million.

The cost savings from executing a higher proportion of returns will also increase, though the full impact is difficult to estimate with any accuracy, as it is wholly dependent on the cooperativeness of the third country authorities. Under option 1, if we assume that the measure would lead to a 50% increase in returns that cannot currently be executed due to missing travel documents, while taking into account the efficiency gains realised from the measure, then the additional benefit is calculated as € 10 million to € 21,4 million. If 75% of currently unsuccessful returns would be implemented, then the benefit is calculated as € 10 million to € 32,1 million. The benefits are only marginally lower under Option 2, due to the remaining workload associated with making requests to the storing authority, as shown in Table 23.

In terms of the impact on duration and timeliness of return proceedings, would significantly reduce the wait time imposed on return authorities in the process of confirming the identity of TCNs. Member States currently report delays in the response by consulates in the range of 2 to 14 days. Option 2 would also reduce this delay, though minor delays remain. Member States may still be required to wait for several hours before receiving a reply from the responsible national authority for storing the travel document; this also assumes that the Member States fully implement the VISMail system end-to-end, thus guaranteeing the timely response by the storing authority. Member States stand to gain between € 46,3 m – 92,6 m under Option 1, and between € 44,6 – 89,3 m under Option 2. These estimates may underestimate the full extent of economic benefits to be realised from reduced delays, which will depend on much more than the average daily detention cost per TCN. This suggests that the potential benefits would be sufficiently substantial to offset the costs incurred to implement and comply with the respective options.

3.6.3. Feasibility

For Option 1, the incorporation of a travel document in the VIS has implications on the capacity of the existing Central VIS systems and on the capacity of the national interfaces. Both sub-options (centralised storage of the bio-data page or all pages) are technically feasible and would lead to significantly increased requirements on the capacity of the VIS. Indeed, the storage requirement will very much increase (by 885% for sub-option A and by 3240% for sub-option B). However, the impact would be less significant for sub-option A compared to sub-option B.

With regard to the consulates and the ESPs, the impact is primarily driven by the choice of sub-option A or sub-option B. The latter would have a bigger impact as it will require a more pages to be scanned while the centralised storage would not affect the applied technology and workflow at the ESPs and Consulates.

Regarding Option 2, the decentralised storage of the bio-data page or all pages are technically feasible. However, a high degree of technical coherence would be required, as the storage would not be managed centrally. One of the challenges that is highlighted is the required bandwidth and the retrieval time, in particular for sub-option B, which would require significant upgrades of the local systems.

For the consulates and the ESPs, similarly to option 1, the impact is primarily driven by the choice of sub-option A or sub-option B. The latter would have a bigger impact as it will require a more pages to be scanned while the centralised storage would not affect the applied technology and workflow at the ESPs and Consulates.

3.6.4. Fundamental rights impacts

In accordance with the Charter of Fundamental Rights of the EU, to which EU Member States and institutions are bound when they implement EU law (Article 51(1) CFR), the identified benefits of the proposed measure must be balanced with the obligation to ensure that any corresponding interferences with fundamental rights are limited to what is strictly necessary to genuinely meet the objectives of general interest pursued, subject to the principle of proportionality (Article 52(1) CFR).

As described in detail in chapter 3.4.3, the proposed measure brings both risks and opportunities with respect to fundamental rights. Indeed, the centralised or decentralised storage of a scanned copy of the visa applicants' travel document in the central VIS (Option 1) or national VIS (Option 2) can have a positive impact for the right to asylum (Article 18 CFR) and the protection of the principle of non-refoulement (Article 19 CFR). By providing designated authorities access to additional evidence to prove an asylum seekers' identity, Sub-option A could in fact be useful to asylum authorities for verifying the identity of a person in need of international protection. The existing safeguard which bans the transfer of personal data to third countries if that person has requested international protection continues to apply (Article 31(3)), mitigating the risk of serious harm for asylum applicants or their families. Sub-option B could further be useful to asylum authorities for proving the escape route that the person used, which is important in an assessment of merits for asylum cases. However, as the information would not support return procedures, but rather serve as an element of proof in various migration and asylum procedures, there would be no objective justification to transfer the copies of travel pages to third country authorities. Thus, any amendment to Article 31 would not include the possibility to transfer the additional data implied by sub-option B.

The proposed measure would create an interference with the right to privacy and family life (Article 7 CFR) and the right to the protection of personal data (Article 8 CFR), as it involves the processing of personal data. Under sub-option A, this limitation is modest as the only additional category of personal data that could potentially be stored relative to the current situation is the personal identification number of the document holder. The size of the affected population is unknown, as the inclusion of these data in the mandatory zone of a travel document depends on national practices. In fact, the measure implies the processing of nearly the same amount and type of personal data as is processed in the current situation, merely stored in a different format (i.e. the scanned copy of the travel document, as opposed to an entry in the VIS file based on information submitted as part of an application form). Safeguards prohibiting the further processing of these data by migration and return authorities as well as to prevent unauthorised access and unlawful sharing with third parties should limit any potential negative impacts implied by the sub-option.

By contrast, sub-option B involves the processing of a large amount of new personal data, which would affect the entire population of TCNs under visa obligation. The new data to be processed includes the TCNs' travel history, as depicted by the entry/exit stamps and stickers on the travel document visa pages. The data is not currently stored into VIS, therefore new safeguards would need to establish the purpose of the data processing. Such safeguards should explicitly prohibit the sharing of these data with third parties given that it is not foreseen to positively contribute to the objective of facilitating return.

Regarding the data protection impact of the main options, whereas Option 1 involves the central storage of the scanned travel document copy, Option 2 involves implies storage at national level. This means that the Member State, which entered the data, would own the data, and thus be responsible for sharing its data with the requesting Member State following a positive "hit". Option 2 may include less risks with regard to purpose limitation and accessibility of personal information serving as an additional safeguard against unauthorised access.

To mitigate the impact on the TCN's right to privacy, the personal data to be stored should be minimal. Indeed, given that the data implied by sub-option B does not serve the main purpose of the proposed measure, which is to support the facilitation of return procedures, the processing of these data is considered disproportionate.

The measure has no impact on the right to an effective remedy (Article 47 CFR) as currently provided in Article 40 of the VIS Regulation. The measure would also not affect the right to non-discrimination, as it does not discriminate on any of the grounds established in Article 21 CFR.

3.6.5. Necessity and Proportionality

Necessity

The Commission underlined the importance of the VIS as an instrument for return purposes in its report to the European Parliament and the Council on the evaluation of the implementation of the VIS. The Commission further underlined that while the use of the VIS in the return procedure has so far been rather limited, "the recent trends indicate an increased need to use this instrument which provides the indisputable proof of identity necessary in a return procedure. […] although third countries often do not consider data collected from the VIS as sufficient evidence for issuing travel documents for the purpose of return, the VIS could play a much more significant role if given the possibility to store a scanned data page of the visa applicant's passport. Providing Member States with the possibility to access a copy of the passport of an irregular migrant could improve the chances of effective return and accelerate the procedure."[138]

While visa applicants, and subsequent visa holders, are under strong obligation to establish their identity by presenting a valid travel document during both the application process and upon entry to the EU, Member States report that many TCNs visa overstayers who become subject to a (forced) return are no longer in possession of their travel document, or fail to produce it upon request. In such cases, the sending Member State must file an application for a replacement travel document, or *laissez*-passer, either with the in-country diplomatic representation of the country of origin, or directly with the competent authorities of the country of origin, pending the positive identification of the foreign national in question. Most third country diplomatic representatives only issue an emergency travel document once the identity and nationality of the TCN can be verifiably proven by the sending Member State. Notably, the authorities of the majority of third countries currently do not accept the information that can be extracted from the VIS as sufficient evidence to verify the person as one of 'their' nationals. In this context, Member States can prove nationality by providing a scanned copy of the TCN's travel document that provided the basis for issuing the Schengen visa.

In the current situation, the process by which Member States obtain the travel document copy is hampered by the absence of a legal framework allowing Member States to exchange or transfer such information, as well as the slow or non-existent cooperation on the part of third country authorities. The storage of visa applicants' travel documents in VIS will improve the

[138] COM 2016(655) final, p. 8, 14-15.

implementation of the objective of facilitating returns of TCNs who have been issued with a return decision. Indeed, in the absence of a valid travel document, the scanned copy of a former visa holders' travel document is key to being able to prove the nationality of a TCN. This is particularly necessary for facilitating returns to traditionally non-cooperative countries of origin in respect of readmission of their nationals. While the effectiveness of the measure ultimately depends on the willingness of third countries to cooperate with the Member States, the evidence suggests that the measure would make it difficult for third countries to deny return, as both the information in VIS, as well as copies of the travel documents would be available.

The main purpose of the measure is to facilitate returns of TCNs, particularly those who do not possess a valid travel document. Data limitations notwithstanding (see detailed explanation of calculations and underlying assumptions in chapters 3.1.1 and 3.5.1), the number of (visa) overstayer return cases involving missing travel documents is estimated in the range of 26.000 to 53.000 per year, up to 75% of which cannot be executed. While the data do not distinguish between TCNs under visa obligation and those who are not, available statistics indicate that proportion of return cases involving nationals from visa-free third countries, and which could not be implemented, are low (less than 5% of all return orders; see Table 13). The vast majority of relevant cases are therefore presumed to involve TCNs under visa obligation. On this basis, there is an objective need for migration and return authorities to have access to a scanned copy of the visa holders' travel document for the purposes of facilitating return decisions.

One key issue that could, however, affect the necessity and proportionality of the measure is the need for differential treatment between accepted and reject visa applicants. As pointed out by the FRA, a differentiation must be made between visa applicants whose visa has been denied, and visa applicants who have been issued a visa.[139] For visa applicants who have been refused a visa and who have never entered the Schengen territory, the storage of copies of their travel documents is not necessary at all for return procedures.

Assessing the necessity of adding travel documents copies into VIS and comparing sub-options A (bio-page only) and B (all pages), information which may be derived from the first page of the travel document, could be the same as the information which is already stored into VIS on the basis of Article 9 VIS Regulation, which may, in option 1 sub-option A, result in duplication of data in VIS.[140] Therefore, if the objective of storing these copies into VIS is to support the verification of a former visa holder's identity for return procedures, the necessity of sub-option B cannot be established, whereas sub-option A is sufficient for the stated purposes. Assessing sub-option B, including the storage of all pages of the travel document into VIS (centralized or decentralized), it has not been established that the addition of these data into VIS, which may differ dependent on the national laws of the issuing third states, is necessary for the facilitation of the visa applications or return procedures.

Added value with regard to other existing or proposed measures

Currently, different measures, aside from the existing large-scale databases Eurodac, SIS II and VIS, have been adopted, or are being prepared to be adopted in the field of border control and processing of personal information. The necessity of storing travel documents copies in VIS must be considered against the background of these measures. The Entry Exit System (EES) is expected to be in place in 2020, which will include information on the entry and exit of each third country nationals also with the purpose of prevention of irregular overstay.[141] Second, the ETIAS proposal when adopted will provide for the storage of information on visa exempt third country nationals in ETIAS.[142] The purpose of this database is to prevent entry and presence of visa exempt persons posing an irregular migration, health, or security threat. Furthermore, a legal proposal awaits adoption by the EU legislator, allowing for the storage of copies of travel documents into SIS II by the state that first apprehended an illegally staying third-country

[139] Notes from an Informal meeting between the Commission and FRA on the possible impact on fundamental rights of storing copies of travel documents in VIS, 11 September 2017.
[140] Interviews with EDPS and FRA, 23 November 2017.
[141] Proposal for a Regulation of the European Parliament and of the Council establishing an Entry/Exit System (EES), 2016/0106 (COD), adopted on 20 November 2017.
[142] Proposal for a Regulation establishing a European Travel Information and Authorisation System, COM (2016)731, 16 November 2016.

national.[143] The aim of the proposal is to establish a system for sharing information about return decisions issued in accordance with provisions respecting Directive 2008/115/EC by the Member States in view of facilitating their enforcement and to monitor the compliance of illegally staying third-country nationals with their obligation to return. The measure proposed in the SIS II Regulation will be complementary to the proposed storage of travel document copies in VIS at the beginning of the application process, with regard to the objective of facilitating return procedures.

At the same time, utilizing the VIS itself has much added value:

1. The VIS is the only EU system which takes data upstream (i.e. outside EU territory, at the beginning of a procedure and not after a person is already an irregular migrant and when it becomes too late to have reliable data);
2. Due to the nature of the visa process, there is sufficient time and resources to take that data from the TCN, as this is data, which they present anyway in the process of visa application. The only question is to which extent and for how long this data should be retained.

Proportionality

The proportionality test requires demonstrating that the measure would be suitable with respect to achieving its purpose. The answer for Option 1, Option 2 and Sub-option A is affirmative, as the travel document data page is precisely what is required by third country authorities as proof of nationality in the absence of a valid travel document. A separate question is whether the measure can be made more targeted to reduce its interference on the right to privacy and data protection. In addition to what is explained in the description of fundamental rights impacts (chapter 3.4.3), the measures analysed are targeted to TCN travellers to the EU who are under visa obligation.

Option 1 and 2. Centralised storage of the travel document data (Option 1) or decentralised storage of the travel document data (Option 2)

Regarding the choice of main option, as described in chapter 3.4, the alternative to central storage could be the decentralised storage of the scanned travel document copies in the national VIS systems. According to this measure, the authorised return or migration authority in one Member State is allowed to query the national database of the Member State, which stored the data. Option 2 may include less risks with regard to purpose limitation and accessibility of personal information, serving as an additional safeguard against unauthorised access. However, this alternative does not necessarily guarantee speed and efficiency in the process, particularly given the sub-optional implementation of relevant communication instruments (i.e. VISMail) to date. Moreover, the effort of having a Member state respond to a query in a decentralised manner does not address one of the key problems identified as hampering Member States in the current situation – namely, that travel document copies are currently maintained in a fragmented manner, stored in archives located in the issuing Embassy's premises. Thus, while both options will achieve the same level of effectiveness, Option 1 achieves a higher level of efficiency (timeliness and cost-efficiency). Furthermore, Option 2 (decentralised storage) would not be considered as less intrusive given that the same information would be made available to the designated authorities in all MS.

While the central storage (as opposed to decentralised storage) may be perceived as a more intrusive measure, the technical solution does not modify its intrusiveness. No matter which technical architecture is selected, the measure is intended to enable a Member State's authority to access data stored by (an)other Member State during the visa procedure. It is important to highlight that access to the data will be strictly purpose limited to authorised return or migration authorities in involved in the process of identification and return of TCNs. Moreover, and as will be described in more detail below, the amount of data to be replicated and processed centrally would be very limited (presuming the selection of sub-option A). In fact, the personal data that would be subject to storage in the VIS does not go beyond what the competent authority (migration or return authority) may see when they manage to obtain a scanned copy of the applicants' travel document from the consulate that issued the visa.

[143] Proposal amending the SIS II Regulation to use the SIS for the return of illegally staying third country nationals, COM (2016) 881, 21 December 2016.

Sub-Options A and B .Storage of the bio-data page (sub-option A) or all pages containing entry/exit stamps and visa stickers (excluding empty) (sub-option B)

To answer the question as to the proportionality of the sub-options, it is relevant to distinguish between the personal data stored in the data page of one's travel document and the information that can be derived from the visa stamps and stickers affixed to the documents' visa pages.

The scope of personal data to be stored under sub-option A is both relevant and necessary for the stated purposes of facilitating returns. Overall, the intrusiveness of the proposed sub-options is in itself very modest. Regarding sub-option A, the personal data that would be subject to storage in the VIS does not go beyond what migration and return authorities currently see in a VIS entry in the vast majority of cases. The only difference is that the relevant authority would now have systematic access to the same data in a different format, which is the scanned copy of the visa applicants' travel document. A very small percentage of travel documents include additional data in the mandatory zone – namely the national personal identification number, which is not currently collected from the applicants. Assuring that appropriate safeguards prevent against the processing of these new data, the interference on the right to privacy and the protection of personal data would not be greater than the current VIS system, for which no complaint on data protection has been registered to date (COM(2016) 655 final, page 12), and adequate safeguards have been put in place. See page 100.

By contrast, the data implied by sub-option B will not contribute to the explicit objective of the measure, but may be useful for other migration and asylum procedures, such as for proving the escape route an asylum seeker used, which could be processed by asylum authorities for assessing the merits of an asylum case. In order for Member States' authorities to benefit from these data would require expanding the purpose limits to include additional purposes beyond those defined chapter 3.2 and 3.4.3. On this basis, the study concludes that sub-option B is more intrusive and no more effective for achieving the identified objectives. As a result, the processing of these data is considered disproportionate.

Conclusion on necessity and proportionality

The analysis undertaken in the preceding sections suggest that it is possible to justify the necessity and proportionality of a measure involving storage – either at central level (Option 1) or decentral level (Option 2) – of a scanned copy of the data page of the visa applicants' travel document in the VIS system.

Furthermore, the proportionality of including copies of travel documents into VIS, must take into account the adoption of the current proposal for interoperability of EU databases.[144] As long this interoperability, according to the adopted law, does not amend current rules on the purpose of VIS or accessibility of VIS data, this will have no influence to the necessity and proportionality test.

3.6.6. Preferred option

The preferred option to emerge from this study is Option 1, sub-option A: centralised storage of a scanned copy of the bio-data page of the visa applicants' travel document in the VIS.

In the absence of a valid travel document, the scanned copy of a former visa holders' travel document is necessary for being able to prove the nationality of a TCN. In this context, storage of a scanned copy of the visa applicants' travel document in VIS is necessary to achieve the purpose of facilitating returns of TCNs who have been issued with a return decision.

Both Options 1 and 2 enable Member States to confirm the identity of TCNs without adequate documentation to equal effect, with limited difference in terms of their respective effectiveness. Option 1, however, achieves a higher level of efficiency (timeliness and cost efficiency). By ensuring that accessibility to the copies of travel documents in VIS is limited for the purposes as

[144] See also EDPS *Reflection paper on interoperability* (2017), point 23 and FRA *Fundamental rights and the interoperability of EU information systems* (2017), p. 21. See the Proposal for a Regulation establishing a framework for interoperability between EU information systems COM (2017) 7973, 12.12.2017.

currently provided in 15, 16, 18, 19 and 20 VIS Regulation, amending Article 31 (2) to limit transfer of travel document copies to third countries for the purpose of facilitation return procedures, Articles 18, 19 and 20 VIS Regulation, and establishing adequate safeguards to ensure rights to privacy and data protection are respected, Options 1 and 2, and sub-Option A pass the test of proportionality.

From a fundamental rights perspective, the main potential benefit of Option 2 vis-à-vis Option 1 is that the travel document copy would be stored nationally and therefore access by the designated migration or return authority in one Member State would be subject to the authorisation granted by the Member State that entered the data into VIS. However, similar results could be obtained under Option 1, by using a restricted authorizations regime. Furthermore, from a data protection perspective, independent supervision and data security may be easier to ensure under Option 1. Moreover, in terms of privacy impacts and the degree of intrusiveness, Option 2 (decentralised storage) would not be considered as less intrusive given that the same information would be made available to the designated authorities in all MS. In addition, there may be high costs associated with expanding and/or creating national databases in certain Member States for storing the travel document copy under Option 2, whereas the economic and policy benefits of the option are the same or marginally lower than those, which will be realised under Option 1.

When comparing the options, it can be concluded that Option 2 is more costly than Option 1 (€ 244,2 – 414,2 million versus € 5,2 million one-off costs, and € 35 million versus € 16 - 33 million recurrent compliance costs, respectively); and that sub-option B is more costly than sub-option A (€ 17 million versus € 13 million one-off costs, and € 22,3 versus 9,1 million compliance costs, respectively). The costs under Option 1 and the sub-options are, however, expected to be broadly compensated in the first year of implementation, whereas Option 2 will be compensated within 3 to 5 years by the expected cost savings and delay cost reductions at the level of Member States (also to be realised under Option 1). By contrast, while sub-option B is slightly more costly than sub-option A, it does not provide any added value for achieving the policy objective relative to sub-option A. Storing copies of all travel document pages (or those that include exit/entry stamps and visa stickers) from various third countries (sub-option B) would not lend further credibility to proving the nationality of a given TCN. Therefore, sub-option B can be discarded.

In terms of the benefits of the main Options, Option 1 is marginally more effective than Option 2, in terms of: reducing the burden to Member States to confirm this category of TCNs' identity and facilitating the cooperation of Member States to issue ETDs for their return; reducing delays associated with ad hoc communications between Member States and their consulates; and by eliminating inefficient procedures involved with retrieving, scanning, zipping and coding hard copies of travel documents. While Option 1 performs only marginally better on these objectives compared to Option 2, both measures will significantly reduce inefficiencies associated with the current procedures.

A key question is whether the measure should be in service to other objectives and parts of the migration cycle, in which case, storage of the full document copy may be warranted. However, in light of the main objectives to be achieved by the measure, as set out in the TOR, the first sub-option could be implemented with minimal costs, while contributing to the purported objective of facilitating the issuance of emergency travel documents for TCNs who entered on a visa but cannot be returned due to missing travel documents.

4. TOPIC 2. CHILD FINGERPRINTS

The purpose of the VIS is to improve the implementation of the common visa policy and to improve cooperation between visa authorities and member states by facilitating the exchange of data on applications and decisions. For the pursuit of its objectives, the VIS Regulation[145] (Article 9(6)) requires Member States to store the fingerprints of applicants in the VIS. The inclusion of 10 fingerprints and a facial image is provided through Article 13(2) of the Visa Code.[146] Biometric matching of fingerprints constitutes the most reliable method for identification and verification. Children under the age of 12 are currently exempt from the obligation to provide fingerprints in the VIS. The age limit was set in 2006, in line with technological developments available at that time, as children over the age of six have measurable fingerprints but special algorithms are required to deal with growth changes and to be able to arrive at a result, which is as accurate as for an adult[147]. Furthermore, to achieve a procedure as uniform as possible in the EU the compulsory fingerprinting age was set to 12 years across all existing IT instruments supporting the application of EU policies. Storage of fingerprint up to 12 years of age is permissible in national systems if provided for by national legislation.

Article 57 (3) of the Visa Code dictates that the Commission shall present, three years after the VIS is brought into operation and every four years thereafter, a report to the European Parliament and to the Council on the implementation of Articles 13, 17, 40 to 44 of the VIS regulation, and Article 57 (4) prescribes that the first report as described under Article 57 (3) shall also "address the issue of the sufficient reliability for identification and verification purposes of fingerprints of children under the age of 12 and, in particular, how fingerprints evolve with age, on the basis of the results of a study carried out under the responsibility of the Commission".

In line with these articles in 2013, the European Commission's Joint Research Centre (JRC) carried out a study[148] on the question whether or not automated fingerprint recognition for children is possible with recognition rates similar to those reached for adults. The study concluded that under appropriate conditions, fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy. One such condition would be, for example, to ensure an appropriate level of training of operators to acquire high quality images.

On 14 October 2016, the Commission reported to the European Parliament and the Council its findings on the evaluation of the VIS system[149]. On the basis of this study, and insights from the 2016 Commission Report on human trafficking[150], the study called for further exploration of the possibility to lower the age limit for collecting fingerprints of children to 6 years, taking into account the best interests of the child, in order to assess also its potential to assist in identifying victims of trafficking in human beings and traffickers.

The Commission Report on the progress made in the fight against trafficking in human informs that traffickers exploit loopholes in enforcement or control of legislation and existing policies and tools, such as the VIS can assist in identifying victims of trafficking in human beings and detecting traffickers. *"When a person regularly requests a new visa or has been issued with a multiple-entry visa and is travelling repeatedly with different 'other' persons (for example other children), there could be a suspicion of trafficking. The biometric data in the VIS makes it*

[145] Regulation (EC) No 767/2008.
[146] COM(2014) 164 final.
[147] NOTE 9403/1/06 REV 1 LIMITE.
[148] JRC (2013). Fingerprint Recognition for Children.
[149] COM(2016) 655 final.
[150] Commission staff working document accompanying the document Report from the Commission to the European Parliament and the Council on the progress made in the fight against trafficking in human beings, SWD(2016) 159 final.

furthermore impossible for multiple persons (looking alike) to travel on the same visa or passport."[151]

Although the existing VIS legal basis has no explicit purpose in regard to protecting children, VIS procedures and the application of the VIS should, like all EU actions, in all times respect the best interests of children as stipulated in Article 24 of the EU Charter of Fundamental Rights.

In the accompanying Commission Staff Working Document to the report from the commission to the European Parliament and of the council on the implementation of Regulation (EC) No 767/2008 of the European Parliament and of the Council establishing the Visa Information System (VIS), the use of fingerprints at external borders and the use of biometrics in the visa application procedure/REFIT Evaluation[152] the European Commission stated that before the fingerprinting age could be lowered, the pertinence of and need for identifying and verifying children under the age of 12 must be clear.

The JRC study was also at the basis of the proposal for a revised EURODAC Regulation[153], which would lower the fingerprinting age from 14 to 6. EURODAC was established to allow for the comparison of fingerprints for the effective application of the Dublin Regulation. Due to challenges, resulting from the migration and refugee crisis in 2015 it was reflected that EURODAC should be reinforced to reflect changes to the Dublin mechanism and it was also considered that the system could contribute to fighting irregular migration. The growing number of unaccompanied children that arrived in the EU, and relating child protection and missing children challenges also became an additional concern that required amendments to the regulation. The ability to collect biometrics for the purposes of EURODAC from a lower age could help with the identification of children and could assist the establishment of family links or links with a guardian in another Member State.

In relation to the proposal for a revised Eurodac Regulation, the Fundamental Rights Agency (FRA) provided insights into the impact on children of taking fingerprints at a young age.[154] The FRA reminded that, as is stated in the Article 3 of the United Nations (UN) Convention on the Rights of the Child, for all actions and decisions concerning children, the child's best interests must be a primary consideration. Children are an extremely vulnerable group and the storage of biometric data could have both positive and negative impacts, therefore lowering the age can only be justified if it explicitly pursues a child protection objective and sufficient safeguards are in place.

With this as a background, the current study shall look into the necessity, feasibility and proportionality of lowering the fingerprinting age for the VIS.

4.1. Problem definition

4.1.1. What are the problems

Current EU legislation on the visa application procedure for short-stay visas exempts children under the age of 12 from the provision of fingerprints. Without fingerprints it is more difficult to unambiguously verify the identity of a TCN child (<12) at the border or within the Schengen territory. In relation to this root cause, 2 problems have been formulated that the introduced adaptation might be able to address.

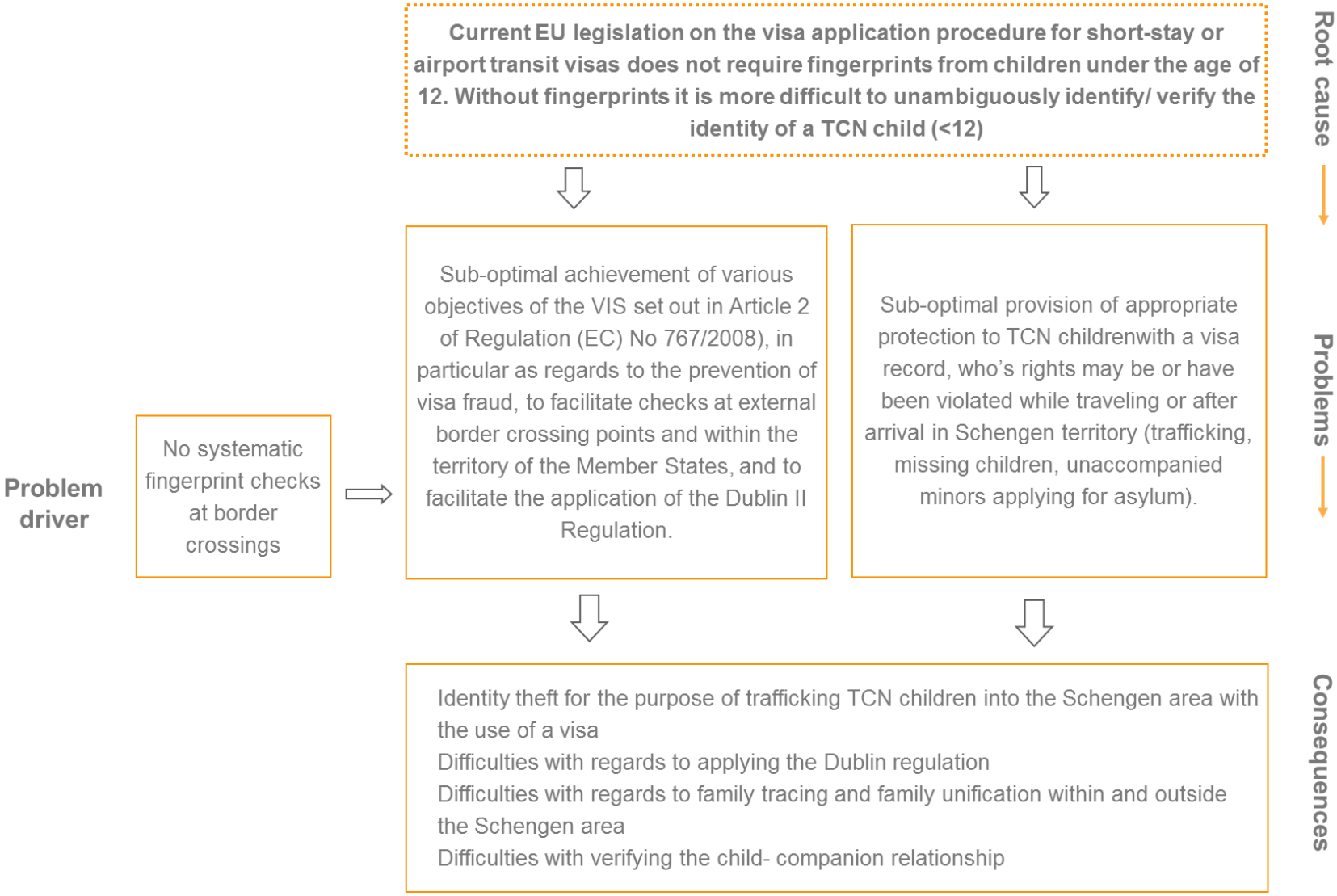
Problem 2.1: sub-optimal achievement of various objectives of the VIS set out in Article 2 of Regulation (EC) No 767/2008), in particular as regards to the prevention of visa fraud, to facilitate checks at external border crossing points and within the territory of the Member States, and to facilitate the application of the Dublin II Regulation.

[151] Commission staff working document accompanying the document Report from the Commission to the European Parliament and the Council on the progress made in the fight against trafficking in human beings, SWD(2016) 159 final.
[152] SWD(2016) 328 final.
[153] COM(2016) 272 final.
[154] See http://fra.europa.eu/en/opinion/2017/impact-proposal-revised-eurodac-regulation-fundamental-rights.

Problem 2.1: sub-optimal provision of appropriate protection to TCN children with a visa record, who's rights may be or have been violated while traveling or after arrival in Schengen territory (trafficking, missing children, unaccompanied minors applying for asylum).

The defined problems will be further clarified below Figure 6. The problem tree presents an overview of the interconnections between the root cause, problem driver, problems and consequences.

Figure 6 Problem tree: Lowering the fingerprinting age



Problem 2.1: Without fingerprints it is more difficult to unambiguously verify the identity of a TCN child (<12), at the border or within the Schengen territory, resulting in sub-optimal achievement of various objectives of the VIS set out in Article 2 of Regulation (EC) No 767/2008), in particular as regards to the prevention of visa fraud, to facilitate checks at external border crossing points and within the territory of the Member States, and to facilitate the application of the Dublin II Regulation.

As presented in the introduction the purpose of the VIS as laid down in the Vis Regulation is:

- to facilitate the visa application procedure;
- to prevent visa shopping;
- to facilitate the fight against fraud;
- to facilitate checks at external border crossing points and within the territory of the Member States;
- to assist in the identification of any person who may not, or may no longer, fulfil the conditions for entry to, stay or residence on the territory of the Member States;
- to facilitate the application of the Dublin II Regulation for determining the EU country that is responsible for the examination of a non EU-country national's asylum application and for examining said application;
- to contribute to the prevention of threats to the internal security of any of the Member States.

In the pursuit of these goals, the collection and processing of biometric data in the VIS was deemed necessary to ensure reliable verification and identification of visa applicants. With the exemption of children (<12) from the provision of fingerprints there will be a sub-optimal achievement of the VIS objectives, in particular with regards to the prevention of fraud, the facilitation of checks at external border crossing points and within the territory of the Member States, and the facilitation of the application of the Dublin II Regulation.

Facilitation of checks at external border crossing points and thereby facilitate the fight against identity theft.

The Schengen Borders Code[155] dictates the rules governing the movement of persons across the Schengen borders. The code dictates that minors are subject to a strict border check. The same entry and exit checks as for adults apply, but border guards shall pay particular attention to minors both travelling accompanied and unaccompanied. Despite the checks in place, in the Schengen Border Code it is described that "only a verification of fingerprints can confirm with certainty that a person wishing to enter the Schengen area is the person to whom the visa has been issued". Currently fingerprints of children under 12 years old are not taken, which, as it is difficult to unambiguously verify the identity of children traveling with a visa, creates favourable conditions for identity theft, where children are coerced to travel on genuine visas that are not theirs.

Problem driver: no systematic border checks on fingerprints

The Schengen Borders Code dictates how persons may be authorised to enter the Schengen territory. EU citizens and those that are granted the right of free movement are subject to a minimum check, meaning their identities are checked on the basis of their travel document, who in turn are subject to a straightforward verification of their validity and authenticity. With the introduction of the e-passports, it became possible to perform these checks automatically for EU/EEA/CH passport holders. The border crossing procedure is more extensive in the case of TCN's (as for example entry/exit stamps need to be checked and the purpose of their stay needs to be verified), which limits the possibility for an automated check. Since October 2014 border authorities have the obligation to verify the identity of the visa holder and the authenticity of the visa by checking fingerprints[156]. However, according to interviewed authorities in practice not every Schengen state systematically checks fingerprints yet.

[155] REGULATION (EU) 2016/399.
[156] European Commission (2016). COMMISSION STAFF WORKING DOCUMENT. Evaluation of the implementation of Regulation (EC) No 767/2008 of the European Parliament and Council concerning the Visa

Facilitation of checks within the territory of the Member States, and thereby facilitate the application of the Dublin II Regulation.

Taking fingerprints of children might facilitate the application of the Dublin Regulation, which determines the Member State responsible for processing an asylum claim. The regulation reads that family relationships prevail over other criteria for determining which Member State is responsible for examining an application for international protection. Fingerprint might assist in the identification of a child and the search for family members. In the case, such family members are found the state has the obligation to investigate whether the person is able to take care of the child and whether that is in the best interest of the child.

Problem 2.2: Without fingerprints it is more difficult to unambiguously verify the identity of a TCN child (<12), at the border or within the Schengen territory, which hampers the provision of appropriate protection to TCN children with a visa record, who's rights may be or have been violated while traveling or after arrival in Schengen territory (trafficking, missing children, unaccompanied minors applying for asylum).

Facilitating the protection of children traveling with a visa to the Schengen territory.

Currently fingerprints of children under 12 years old are not taken, which, creates a situation that can be exploited by traffickers and exposes children to child protection risks. As currently, it is not possible to unambiguously verify the identity of a TCN child who has a visa record that was granted under the age of 12, TCN children can be coerced to travel to the Schengen area with a visa that is not theirs. The proposed measure might thus by facilitating border checks assist in the prevention of fraud identity theft and thereby prevent the trafficking of TCN children.

In addition, the detecting of fraud and prevention of the trafficking of children also contributes to the exposure and identification of traffickers and trafficking networks.

Facilitating the protection of children with a VIS record in Schengen territory.

Under the proposed recast Eurodac Regulation, the fingerprinting age is lowered from 14 to 6 years. This means that TCN children as young as six years old who enter the EU seeking international protection (asylum seekers) and/or who enter the EU through irregular channels – including those who have been apprehended in connection with irregular entry or irregular stay in an EU Member State – will be required to provide fingerprint data. These data will be recorded in Eurodac. The new Eurodac proposal allows designated authorities to identify and verify the identity of children as young as 6 years old who have entered the EU via international protection and/or irregular channels and facilitates them in fulfilling their responsibility to take all available measures to respect children's rights.

At the same time, under the current VIS Regulation, TCN children (<12) are exempt from the requirement to provide fingerprints to be stored in the VIS as part of the visa application procedure. Authorities in the Schengen area are currently thus not able to unambiguously identify/ verify the identity of TCN children with a VIS record. Missing children, in line with TCN-VHs who become subject to a (forced) return order, and confirmed by for example the German authorities, are not likely to possess or (be able to) present a valid travel document).

This discrepancy has the potential to create a 'protection gap' for children with TCN children with a VIS record that was granted before the age of 12, in the case they are found in a situation where their rights have been or could be violated. The children that might be impacted by the adaptation of the measure are children that have travelled to the Schengen area in regular circumstances, those we have been trafficked to Schengen area, or those with a VIS record due to previous visa applications, who have entered irregularly, and have gone missing.

Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation) / REFIT Evaluation.

Having fingerprints available in the VIS would, after the introduction of the proposed automated fingerprint identification system in SIS[157], also allow searching SIS by fingerprints and facilitate the tracing of missing children.

Missing migrant children have the same rights to protection as missing national children. To be able to offer appropriate protection children need to be identified, registered and referred to child protection authorities. The absence of fingerprints in the VIS hampers for example the possibility to reunite children with their families.

4.1.2. Scope of the problems

Number of children applying for a Schengen visa

The number of children applying for a visa is not measured consistently, and the open source statistics on short-stay visas issued by the Schengen States available on the European Commission website do not disaggregate the data according to age group.[158] Also, most of the consulates or ESPs that were consulted during this study do not collect age statistics, so evidence is thin but on the basis of fragmented information a global insight into the size of the target group can be provided.

One indication comes from the ESP BLS, which handles administratively the Schengen visa application process for Spain since the end of 2016. Since the start of their work in Rabat, they have kept track of the number of children that applied for a visa. Around 30 % of the visas is given out to children (until 18). Around 7 % of the visas are granted to children under 12.

Table 24 Number of Schengen visa applications for children for Spanish Consulate

Month	0-06 (age)	06-12 (age)
12 (2016)	6	8
1 (2017)	63	66
2 (2017)	45	41
3 (2017)	104	78
4 (2017)	78	65
5 (2017)	83	95
6 (2017)	99	111
7 (2017)	104	118
8 (2017)	87	63
9 (2017)	51	28
10 (2017)	91	63
11 (2017)	39	13

Source: Spanish ESP (BLS).

In Lagos, Nigeria, ESP VFS Global manages the administrative process for various Schengen countries such as Italy, France and Belgium. They estimate that around 50 % of the total applications concerns children.[159] This estimation differs from that of the German consulate, which does not outsource the application process. They indicate handling around 10 cases of young children every month, which represents only a small percentage on well over 10 000 applications a year.

The Lithuanian embassy in Moscow, Russia estimates the proportion of visas issued to children at roughly 1/3rd of all visas issued to Russian nationals during the holiday season. In peak periods the Lithuanian consulate in Moscow receives around 200 visa applications per day, with over 35 000 applications received in 2016.

[157] COM/2016/093 final.
[158] See: https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/visa-policy_en#stats.
[159] They specific age range is not disclosed.

The Polish consulate in Istanbul, Turkey, was able to share some numbers on children in the visa application process (see Table 29). The numbers contain both national & Schengen visas but the Schengen visas make up the majority. On a yearly basis, the Polish consulate handles over 8 000 Uniform visa applications. Therefore, without taking national visas into account, the percentage of children in the procedure is less than 1.5 %.

Table 25 National and Schengen visa applications of children <12, Polish consulate in Istanbul

	2014	2015	2016
Number of children under 12 that have applied for a Schengen visa	117	98	120
Number of visas issued to children under 12	110	87	103
Number of visas refused to children under 12	7	11	17

Source: Polish consulate Istanbul.

The Polish home authority shared that, across all their consulates, they issued over 100 000 visas to children below 12 in 2016.

The Lithuanian consul in Ankara estimates that they handle around 100 visa applications from children under 12 on a yearly basis, which is less than 10 % of the applications. The Spanish consulate in Istanbul reports around 2 000 applications of children under 12 each year, which makes up less than 5 % of the total number of applications. Germany reports that around 14 % of all visa applications (including national visas) is made by children under 15 years old. The Italian visa section estimates that children under 12 make up no more than 1 out of 10 applications. Greece provides a rough estimate of children under 12 making up 20 to 30 % of all applications. They indicate that they mainly issue short stay visas to families with children going on a holiday.

The national authority of Greece was able to provide statistical information on the total number of children under 12 that have applied at a Greek consulate for a Schengen visa. In 2016 and 2017 they issued around 140 000 Schengen visas to children under 12, representing around 14 % of the total number of issued visas. The Italian home authority reports that roughly the same number of Schengen visas have been issued in 2016 to children under 12, representing around 8 % of the Italian total.

Providing a solid average percentage of children in the visa application process is not possible, but a rough estimation can be made that, **on average, children under 12 make up 10 to 15 % of applicants**. As on a yearly basis, over 15 million applications are made, and almost 14 million uniform visas get granted, this means that between **1.4 and 2.1 million children under 12** travel into the Schengen area with a uniform visa each year. As the numbers provided by the Spanish consulate suggest that the a roughly equal number of visas is granted to children younger than 6 and to children aged between 6 and 12, we assume that between **0.7 and 1.05 million children aged younger than 6** are granted a visa each year.

According to the participating consulates, the refusal of a visa for children is linked to the refusal of a visa for the (presumed) parents, because their documents are forged (including documents proving the parental relationship) or because they are considered to be a risk for violating their visa rights. Reported refusal levels for children are on average ranging between 1 and 5 %. Only a few anecdotes were given on cases were a visa was refused to a child because of suspected risks for trafficking. In these cases the children were mostly older than 12.

Child trafficking

The proposed measure could help to prevent the trafficking of children into and around the Schengen territory. Data on child trafficking victims is scarce. In national data sources, such as police records, cases of human trafficking are often not recorded as such. Exploitation that resulted from trafficking is in statistics hidden behind numbers on related illegal activities such as prostitution or irregular migration. Another reason for the lack of comparable data is the great variety in the legal definitions and identification mechanisms used in EU member states.[160] There are some figures on the number of cases that have been detected and estimates of the

[160] Europol (2016). Situation Report Trafficking in human beings in the EU.

overall problem, however most **do not distinguish children from the EU and third countries** (probably 70 % of the problem is intra-EU, see below). **Nor do these figures distinguish between TCN children who have been involved in a Schengen visa procedure and those who have not.**

Data on human trafficking is collected by the Counter-Trafficking Data Collaborative (CTDC).[161] The database consists of over 80 000 records on victims of 180 nationalities trafficked in 117 countries. Figure illustrates the country of origin and destination of victims. Europe is a dominant origin and destination market. Approximately 5 % of the identified cases were aged 0-8 years, and 12 % was aged 9-17 years old. 44 % of all identified children entered the trafficking process while they were under 12 years old. Girls are often trafficked at a somewhat older age: 27 % of the trafficked girls was under 12, against 49 % of the boys. Over two thirds of children were recruited by a family member or relative.

In 2016, *Europol*[162] provided its latest insights into the number of victims who are trafficked in Europe (2014 data). They analysed the cases of 4 185 registered victims. The vast majority of the victims and suspected child traffickers (70%) are EU nationals. In many cases, victims and offenders share the same nationality or ethnicity. Most victims come from Central and Eastern Europe, and the top 5 non-EU28 victims come from Albania, Brazil, China, Nigeria, and Vietnam. The most commonly reported form of exploitation is sexual exploitation.

The European Commission (2016)[163] reported 15 846 (identified and presumed) victims of trafficking in the EU for the period 2013-2014 – of which at least 15 % children). In line with the Europol report, around 35 % of the registered victims were TCN citizens (meaning well over 800 TCN children victims). The commission reports that due to the nature of the phenomenon it can be expected that the actual numbers of victims of trafficking in the EU are substantially higher. This is also suggested by the numbers presented in the 2015 *Eurostat* working paper on Trafficking in Human Beings in Europe,[164] in the period 2010-2012 there were 30 146 victims of human trafficking registered in the 28 EU Member States. Based on data from 17 Member, 45 % of registered victims were aged 25 or older; 36% were between 18-24, 17 % were registered aged 12-17, and 2 % of the registered victims were below 12 (meaning a total of over 5 700 child victims of which arguably around 1 710 are coming from third countries).

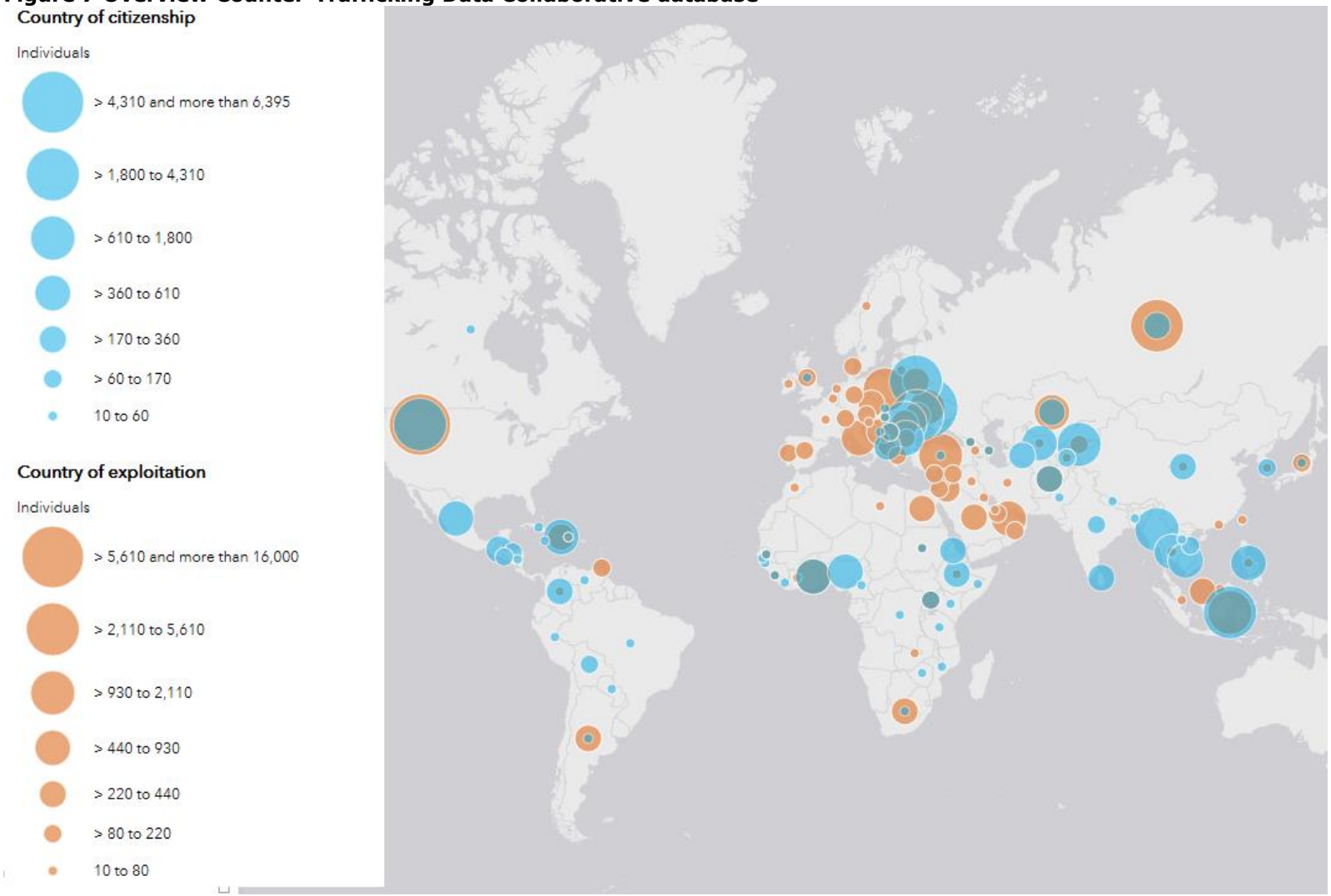
On the basis of available data we estimate that on a yearly basis there are between 1 500 and 2 000 TCN children (<12) found victim of trafficking in the Schengen area.

As said, we have no information on how many of these trafficking victims have travelled with a visa to the Schengen area. For the purpose of this study, we thus need to resort to making an assumption about the size of this group. On the basis of various respondents stating that the majority of TCN victims have travelled to the Schengen area via irregular routes, **we assume that 25 % of them went through the visa process (375-500 children on a yearly basis).** Again, it must be said that due to the nature of the phenomenon it can be expected that the actual numbers of victims of trafficking in to the EU are substantially higher.

In addition, as with MEVs with up to 5 years validity, children up to 17 years old can travel to the Schengen area with a visa obtained without taking fingerprints, the actual number of children that might be protected by the proposed adaptation rises further.

[161] See https://www.ctdatacollaborative.org/.
[162] Europol (2016). Situation Report Trafficking in human beings in the EU.
[163] European Commission (2016). Report from the commission to the European Parliament and the Council. Report on the progress made in the fight against trafficking in human beings (2016) as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims {SWD(2016) 159 final}.
[164] Eurostat statistical papers, Trafficking in human beings, 2015.

Figure 7 Overview Counter-Trafficking Data Collaborative database



Source: https://www.ctdatacollaborative.org/map.

Missing children

The storage of fingerprints in the VIS of TCN children (<12) might also assist the identification / verification of identity of children with a VIS record that go missing in Schengen territory and might thereby facilitate their protection. Missing children are generally considered to be vulnerable to exploitation by criminals. The protection of any child in the territory of a Member State is the remit and responsibility of that Member State.

The children that might be impacted by the adaptation of the measure are children that have travelled to the Schengen area in regular circumstances, those we have been trafficked to Schengen area, those with a VIS record due to previous visa applications or who have entered irregularly, and have gone missing.

In the context of missing children in the EU different definitions are used, but in most countries they are considered as those aged under 18, for whom no information can be found on their whereabouts. Distinctions are often made between the following categories[165]:

Runaways:

- Abduction by a third person;
- International parental abduction;
- Missing unaccompanied migrant minors;
- Lost, injured or otherwise missing children.

The categories abduction (by parents or a third person) and missing unaccompanied migrant minors are of most relevance for the purpose of this study as these children might have a VIS record.

Data on missing children is scarce and often shows inconsistencies due to differences in collections methods and definitions. Age records are not always kept and breakdowns by nationality are rarely possible.[166] As with trafficking numbers, it might be expected that that the actual numbers are higher than numbers reported.

Abduction[167]

Available and comparable data on parental or third person abduction is limited and often outdated. Often data collected in the European Union only reports about abduction from the EU to another EU or third country.

In a 2015 assessment of cross-border, parental child abduction in the European Union was made by the European Parliament.[168] Around 1 000 requests for returns of an abducted child have been received in total by EU member states in 2008. The countries that were able to present data for 2009- 2013 showed on average an increase in the number of requests compared to 2008. It is not known what percentage of requests comes from visa required countries.

[165] European Commission (2013). Study on missing children: Mapping, data collection and statistics on missing children in the European Union. http://ec.europa.eu/justice/fundamental-rights/files/missing_children_study_2013_en.pdf.
[166] European Commission (2013). Study on missing children: Mapping, data collection and statistics on missing children in the European Union. http://ec.europa.eu/justice/fundamental-rights/files/missing_children_study_2013_en.pdf.
[167] The Vis regulation speaks of access for LEAs to the VIS in the case of serious criminal offences. These relate also to kidnapping, illegal restraint and hostage-taking. To better connect with the terminology used by the European Commission on this topic we resort to using the term abduction.
[168] European Parliament (2015). Cross-border parental child abduction in the European Union.

Overall, abduction of TCN children (<12) into the Schengen area does not seem to be a problem of large scale (although this is hard to state definitively in the absence of more concrete data).

Missing unaccompanied migrant minors

In February 2018, SIS contained 68 371 alerts on missing children (but may consist of obsolete files). This number does not differentiate in the age of missing children reported in SIS II, their nationality and whether they have a vis record.

The unaccompanied migrant children category is a distinct category that might be relevant for the purposes of this study. This group only comprises Third Country Nationals. And although they have entered the Schengen area via irregular routes, they might, before resorting to this route, have applied for a visa and thus have a VIS record.

In 2016, Sweden carried out a largescale and comprehensive study on missing unaccompanied children. They reported that over a period of three and a half years, 1 829 unaccompanied migrant children seeking asylum have disappeared in Sweden[169]. 3% of the children that have gone missing in Sweden are younger than 12.

In its figures and trends 2016 overview the NGO Missing Children states that the number of missing (unaccompanied) migrant children reported to hotlines has increased to 7 % of all missing children cases in 2016 (5 742).[170] It stressed that the numbers reported to hotlines or the police underreport the actual numbers and that the number of unaccompanied minors going missing from reception centres are alarmingly high. Europol estimated that in 2015, **at least 10 000 unaccompanied children went missing**.

In 2016, Eurostat data[171] illustrated that one in four asylum seekers in the EU were children (of which over 50 % less than 14 years old). 15 % of all minors applying for asylum in 2016 were unaccompanied, which comes down to more than 60 000 children. Nearly 10% were below 14 years old (6 265). It is not known how many of these children have a vis record. These children might be affected by the proposed adaptation with regards to the application of the Dublin procedure.

In 2016 there were 179 027 incoming Dublin requests and 152 825 outgoing requests. Around 5 % of the applications were for family reasons. There is no information on how many applications are made for children.

How will the problem evolve?

As was described under section 3.1.3, the number of Schengen visa applications are likely to grow from currently 15.2 million applications in 2016 to an estimated 19.4 million in 2020. Thus, the number of Children traveling into the Schengen area on a visa is likely to grow as well. In a continuation of the current scenario, it is expected that the trafficking of TCN children (<12) into the EU using genuine visas will remain high – or may even rise further due to the increasing number of applications and the involvement of organised trafficking networks, which are becoming more professional.[172] Intercontinental trafficking requires organisation and the involvement of multiple persons, for which organised crime groups are well-equipped. Europol reports that the groups involved in THB are more and more run like corporate businesses. The most dangerous groups are those who arrange the whole process. OCGs in THB are mostly networks bonded by family kinship or ethnic ties. Groups are flexible, adapt fast to new circumstances and respond quickly to new challenges. The involvement of OCGs is recognised by consulates and third countries. The problem might also rise further in the case Crime Networks resort to the visa channel even more when the Eurodac becomes more restrictive for these networks.

[169] The County Administrative Boards of Sweden (2016). Lost in Migration - a Report on Missing Unaccompanied Minors in Sweden.
[170] Missing Children (2016). Figures and trends 2016. From hotlines for missing children and cross-border family mediators.
[171] Eurostat, [migr_asyappctza] and [migr_asyunaa].
[172] Europol (2016). Situation Report Trafficking in human beings in the EU.

4.2. Why should the EU act?

4.2.1. Legal basis

The VIS Regulation builds further on the Schengen acquis on a common visa policy, finding its legal basis in former Article 62 (2) (b) ii of the Treaty on the European Community (rules on the procedures and conditions for issuing visas by the Member States. As mentioned above, in 2.2.5, the current legal basis of the common EU visa and external border policy is provided in Article 77 (2) (a) and (b) TFEU. Taking into account the extended purposes of the VIS, described in section 2.2.5, together with the proposed of lowering the age of fingerprinting (such as the fight against human trafficking), the legal basis of the use of VIS requires further specification. This may entail an investigation into the legal basis found in Article 78 (2) (e), 79 (2) (c) and 87 (2) (a) TFEU, but possibly also 81 TFEU when the purpose of preventing child's abduction is considered.

4.3. Policy objectives: What is to be achieved?

In relation to the defined problems, two objectives of the proposed second adaptation can be defined:

- Better meeting the various VIS objectives (facilitation of the fight against fraud, facilitation of checks at external border crossing points, facilitate the application of the Dublin II Regulation);
- Support with the prevention and fight against child trafficking, and with the identification/verification of identity of TCN children who are found in Schengen territory in a situation where their rights may be or have been violated (trafficking, missing children, unaccompanied minors applying for asylum).

4.4. Policy options

4.4.1. Description of the options

Below, the various policy options are described.

Option 0. Baseline (no change)

The VIS Regulation (Article 9(6)) requires Member States to enter the fingerprints of applicants in the VIS. The inclusion of 10 fingerprints and a facial image is arranged through Article 13(2) of the Visa Code. Biometric matching of fingerprints constitutes the main method for of identification and verification. Children under the age of 12 are currently exempt from the obligation to provide fingerprints. In the case, the measure to take fingerprints of children under the age of 12 would not be introduced border authorities and relevant authorities in the Schengen area continue to have challenges to identify and verify the identity of young children.

In a continuation of the current scenario, it is likely the organised crime networks most often involved in the trafficking of TCN children will continue to take advantage of this situation, with the knowledge that Member States will be unable to verify identity of TCN children while traveling with a visa. Additionally, these criminal networks have increasingly professionalised and modernised their modus operandi and there are no indications of a strong declining migration trend[173]). Therefore, by not including this category into any fingerprinting procedure, the numbers of children that are at risk of being trafficked with the use of a visa will remain high – or may even rise further. Crime Networks might even resort to the visa channel even more if the Eurodac becomes more restrictive for these networks.

[173] In 2015 4,7 million immigrants immigrated to one of the EU-28 Member States. An estimated 2.4 million citizens came from non-member countries, around 19.000 were labelled stateless. http://ec.europa.eu/eurostat/statistics-explained/index.php/Migration_and_migrant_population_statistics.

Option 1. Lowering the fingerprinting age to 6 years

Under this scenario, fingerprints will be taken from every visa applicant from 6 years of age and above, thereby effectively increasing the group of applicants by adding the cohort of 6 to 11 year-olds.

In 2013, the European Commission's Joint Research Centre (JRC) carried out a study on the question whether or not automated fingerprint recognition for children is possible with recognition rates similar to those reached for adults. The study concluded that under appropriate conditions, fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy. One such condition would be, for example, to ensure an appropriate level of training of operators to acquire high quality images.

Option 1 is also in line with the proposal for a revised EURODAC Regulation, which would lower the fingerprinting age from 14 to 6. The JRC study and recent developments related to the protection of children in irregular migration were at the basis of this proposal.

Option 2. Lowering the fingerprint age including all ages

Under this scenario, fingerprints will be taken from visa applicants of all ages thereby effectively increasing the group of applicants by adding the cohort of 0 to 11 year-olds.

In the JRC study, evidence is presented from other studies that it is feasible to take reliable fingerprints of children even younger than 6, although this may result in stronger technical and procedural changes (see paragraph 4.4.2 for detailed explanation). These indications, combined with the fact that all children have the same rights, including rights to protection, result in the presentation of option 2.

4.4.2. Technical feasibility of the options

The addition of fingerprints from children younger than 12 with the purpose to perform central checks seems to be a logical step in eliminating system gaps and in contributing to child protection, including detection of child trafficking. However, there are questions about the 1) actual improvements that this would bring to the defined problems), 2) how this should be integrated into the application and checking processes, 3) whether and how current technical infrastructure needs to be adapted (such as other fingerprint sensors, or adjusted fingerprint and quality assessment algorithms) and 4) what the privacy and legal impacts will be.

For the latter member states may have different opinions. The study from the JRC comes to the conclusion that fingerprint recognition for children as from 6 years old is technically feasible ("provided appropriate best practice guidelines are developed and achievable within certain constraints of technical and organisational nature").

Other studies that looked at fingerprints of children under 6 (e.g. Camacho et al.) consider this a more challenging problem that needs further technical and legal investigation for this younger age group. After all, the case should be made by a convincing and solid use case, rather than because it is technically possible. That means that the voice of the VIS/BMS end-users and the law enforcement agencies should be heard. The JRC study further concludes that measures to ensure a good image quality of the juvenile fingerprints constitutes one of the factors influencing the quality of identification. Smaller fingers pose higher requirements on the quality of the scanning device, in order to capture the smaller structures at an appropriate level, particularly for infants. It was also noted that relevant quality metrics (like NFIQ) likely would need to be revised in order to be adequately applied for children. The conclusions confirm that *'under appropriate conditions, fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy. Further results from the study may help as well to quantify those conditions.'*

The technical feasibility of lowering the fingerprinting age has been a question that was tangentially discussed in various reports. Apart from potential visa-related applications, the use cases have ranged from easier identification, or even the control of medical treatment of infants, particularly in regions that have less developed registration systems. There are several existing reports that cover the feasibility of low fingerprint ages:

- JRC technical report on fingerprint recognition for children;
- Report on recognizing infants and toddlers over an on-production fingerprint database - Research Paper by Camacho et al. based on 45.000 infant fingerprints collected in Uruguay[174];
- Specific Advances in Capturing Child Fingerprints: A High Resolution CMOS Image Sensor with SLDR Method by Koda et al;[175]
- Longitudinal study of Fingerprint Recognition of Young Children by Jain et al.[176]

Some fingerprint sensor companies have started the development of fingerprint recognition systems aimed at new-borns and infants.[177] They have a higher resolution than typical scanners (1 200 dpi vs. 500 dpi) but take images of smaller objects. We assume that the associated software would allow dealing with the scaling of fingerprint images to a larger size but smaller dpi.

The technical feasibility of capturing fingerprints of children under 12 has been demonstrated in those reports. It was shown that even fingerprints of 6-hour old infants provide sufficient characteristics for subsequent identification tasks. However, a problem that has to be managed is the long-term viability of the stored fingerprint images, e.g. identifying a 10 year old child with a template that was taken at a very young age. The comparison performance as reported by Camacho et al. is significantly reduced in such cases. However, the specific study was limited to a single country. The procedural responses may include (a) more frequent re-enrolment of young children in the fingerprint database, or (b) limiting matching operation to within a certain age group. Variety (a) requires an increased procedural overhead and is limiting to the child, while variety (b) reduces the potential for successful matches.

Relevant questions that should be explored regarding variety (b) are: what is the impact on the overall performance of the BMS (with regards to processing performance, database capacity, and transaction throughput) when these fingerprints are added? According to consultation with the vendors by eu-LISA, the same matching algorithms can be used in a specific configuration. (See also Section 2.5.3.)

Therefore, the lowering of the fingerprint age to 6 **(Option 1)** is technically feasible, without additional requirements on the existing technical infrastructure. Lowering the fingerprint age further, **(Option 2)** may result in stronger technical and procedural changes, and potentially lower identification rates. Additional investigation is required to create more evidence for the feasibility of Option 2.

4.4.3. Options discarded at an early stage

No options are discarded at this stage.

[174] See https://dl.gi.de/bitstream/handle/20.500.12116/4667/paper9.pdf?sequence=1&isAllowed=y.
[175] Koda, Yoshinori, Teruyuki Higuchi, and Anil K. Jain. "Advances in capturing child fingerprints: A high resolution CMOS image sensor with SLDR method." Biometrics Special Interest Group (BIOSIG), 2016 International Conference of the. IEEE, 2016.
[176] Jain, Anil K., et al. "Fingerprint Recognition of Young Children." IEEE Transactions on Information Forensics and Security 12.7 (2017): 1501-1514.
[177] See NEC Corporation http://www.nec.com/en/press/201610/global_20161014_02.html.

4.5. Impacts

The assessment of impacts considers three main elements:

Economic costs and benefits incurred by the affected stakeholders. The different costs can be broken down into three main categories: i) the investment or set-up costs (one-off costs) induced by modifications in procedures and technological requirements of the proposed measures; (ii) the recurrent costs incurred by the competent authorities, consulates and ESPs that are directly linked to the implementation of the measure in terms of workload and administrative burdens; and (iii) opportunity costs incurred by authorities and TCN children and their parents.

Policy impacts related to the achievement of defined policy objectives. These impacts concern combatting identity theft to prevent trafficking and enabling for example the possibility to verify the familiar relationship.

Fundamental rights impacts of the proposed measures, including the right to privacy and data protection, the right to family life and the right to non-discrimination.

All impacts are assessed against the baseline scenario. As not all impacts can be equally well quantified, the analysis relies on a combination of qualitative data and quantitative data where available.

4.5.1. Economic costs and benefits

Three main categories of economic costs and benefits are relevant to the analysis:

(i) the investment or set-up costs (one-off costs) induced by modifications in procedures and legal changes and;
(ii) the impacts in terms of workload and administrative burden (operational costs), which may have a net positive or negative economic impact for the involved stakeholders;
(iii) opportunity costs for TCN children and parents resulting from additional waiting time at the visa application centres and costs incurred by authorities in the Schengen area.

The operational costs (on-going or compliance costs) are directly linked to day-to-day operations, workflows and maintenance costs to ensure the continued functioning of the VIS. To cover additional costs authorities might resort to EU /ISF funding to cover investment costs for both equipment and training (among others).

(i) One-off costs

Child-friendly equipment

The current scanners can be used for children from 12 to 6 years; hence, under **option 1** there would be no additional costs for purchasing new fingerprinting equipment. A potential one-off investment could be children-friendly equipment such as chairs, which allow children to better reach the fingerprinting station (who are normally statically placed on desks that are not easily reached by children). However, interviewed ESP's do not believe such investments need to be made.

The expected investment costs for technical equipment at the ESPs and consulates under **option 2** are limited to potential new fingerprint scanners and software that is capable of taking fingerprints of applicants that are not able of using regular scanners - such as infants between 0-6 months. The required cost for infant fingerprint scanners and software is difficult to estimate as they are in a prototypical stage. The cost of the scanner plus software is assumed at €3 000 per system. VFS Global has 2 453 application centres worldwide and TLS Contact has

a network of 230 application centres worldwide[178]. Assuming that they would all need at least one new scanner this amounts up to a total investment of €8 049 000. In addition, consulates handling applications would require such a scanner. In 2016 there were 1 651 Schengen consulates in non-Schengen countries[179].

Increased size of biometric samples in VIS

The number of visa applications of children 6-12 is estimated at 0 875 million, and additional 0 875 million for 0-6. With a retention period of 5 years, for option 1 this leads to the following effects on the VIS:

- Increased storage capacity for ~4.4 million biometric fingerprints;
- Increased size of the BMS by ~4.4 million entries.

Under the same retention period, for option 2 this leads to the following effects:

- Increased storage capacity for ~8.8 million biometric fingerprints;
- Increased size if the BMS by ~8.8 million entries.

The storage of the system and the capacity of the BMS have to be adapted accordingly. The size of a fingerprint set in the VIS is approximately 750kB. The additional storage requirements are therefore approximately:

- For option 1: ~7.7 TB (includes 15 % operational overhead + 100 % backup capacity);
- For option 2: ~15.4 TB (includes 15 % operational overhead + 100 % backup capacity).

The cost impact on the BMS is difficult to assess given the impact of coordination between vendor and eu-LISA. Therefore, the assumption is a linear increase at a current capacity of 100 million entries, leading to:

- **For option 1**: increased cost by 4.4 %;
- **For option 2**: increased cost by 8.8 %.

Training costs (ESPs, Consulates)

The results of the stakeholder consultation activities indicate that efforts related to awareness raising campaigns (development and implementation) and training activities are relatively limited. Given that the consulates and ESPs are already required to take fingerprints from adults and children from the age of 12, it can be assumed that consular and ESP staff is familiar with the overall procedure. Nevertheless, additional psychological training sessions might be needed to familiarize staff on how to best explain younger children (and their parents) what they need to do. In this context, the training-related costs are assumed to stem from the effort involved with preparing the additional training content, and the time spent by ESPs and consulates to follow the training course. In this context, the training-related costs are assumed to stem from the effort involved with preparing the additional training content, and the time spent by ESPs and consulates to follow the training course.

Based on interviewee feedback and findings from relevant studies[180], the following assumptions are made:

- Development of training content: use of two internal resources (€ 200/per day) for 10 days each;[181]
- Translation costs: use of 23 internal staff (€ 200/day) for 1 day each;

[178] See company websites for more information.
[179] 2016 Schengen consulates visa stats.
[180] ETIAS Feasibility Study, 2016; Impact Assessment Report on the Introduction if the EES, 2016.
[181] Daily labour cost is taken from the Impact Assessment accompanying the Entry-Exit System (Part 3, Annex 10), which estimates the hourly labour cost of project management-level staff at € 200 per day.

- Training of consular officers and ESP staff: 5 minutes[182] (added to existing training course) valued at € 30/hour, applied to 25 000 consular officers[183] and 26 830 ESP staff.[184]

Therefore, the overall cost estimates for training and awareness purposes are estimated at € 138 175. Although content may need to be slightly changed for topic, 2 compared to topic 1, the investment costs in relation to training are assumed to be the same for **option 1** and **option 2**.

Table 26 Awareness raising and training costs

	Quantity	Unit price	Total
Development of training content and awareness raising campaign materials	2	€ 2 000	€ 4 000
Translation costs	23	€ 200	€ 4 600
Training of consular officers	25 000	€ 2.5	€ 62 500
Training of ESP staff	26 830	€ 2.5	€ 67 075
Total costs			**€ 138 175**

(ii) Operational costs

The results of the stakeholder consultation activities indicate that for **option 1** the additional workload per application caused by the implementation of the measure would be relatively limited for consulates as well as for ESPs, ranging from approx. 0.2 to 1 min for taking the fingerprint of a child between the ages of 6-12.

Based on interviewee feedback and findings from relevant studies, the following assumptions are made:

- The number of visa applications of children is estimated between 0,7 and 1.05 million with an average of 0.875 million which is the value used for the calculation;
- Consulates continue to process approx. 10 % of minor applications themselves (87 500) whereas the remaining 90 % are outsourced to a ESPs (787 500);
- The average annual labour cost of a consular officer is EUR 45 000, or EUR 26 per hour;[185] and the average labour cost for ESP staff is approximately EUR 30 000, or EUR 17 per hour;[186]
- Calculations are based on an annual average work-year of 220 days, FTE.

Table 27 Additional costs per year for consulates and ESPs

Stakeholder	Number of minor applications handled	Labour costs (per hour)	Age of children	Additional time per fingerprint (min)	Additional costs per year
Consulates	87 500	€ 26 / hour	12-6	0.2 -1	€ 7 583-37 941.50
ESPs	787 500	€ 17 / hour	12-6	0.2-1	€ 44 625- 223 124.50

[182] This figure is taken from the Impact Assessment accompanying the Entry-Exit System of 2016 (Part 3, Annex 11), which indicates that immigration enforcement has a value of time of € 30/hour. In the absence of a data for consular services, the study assumes the same applies to consular staff.
[183] This figure is taken from the Impact Assessment accompanying the Entry-Exit System of 2016 (Part 2, Annex 3).
[184] VFS Global has 2.453 application centres worldwide and TLS Contact has a network of 230 application centres worldwide. It is assumed that at least 10 staff per application centre will receive the new training (average – worldwide) amounting to 26.830 staff to be trained. See company websites for more information.
[185] This value is based on the estimate provided in the EES Impact Assessment. The figure is consistent with the value given in a presentation called "Risk Analysis and Electronic Lodgment to Improve Border Management", where the identification of one overstayer was estimated to cost 60.000 AUD (Australian dollars), which equates to €45.000. The figure was obtained by dividing the budget line for these activities by the number of people this activity applied to.
[186] The salary of an ESP employee is calculated on a lower level because government officials abroad often receive higher salaries.

The number of applications the ESPs are handling are much higher (90 %) than the number of applications that are handled by the consulates (10 %). Consequently, the cost estimates are much higher for ESPs than for consulates. The additional added cost estimate for consulates ranges from EUR 7 583 to EUR 37 941.50 per year. For ESPs, the additional cost estimate ranges from EUR 44 625 to EUR 223 124.50 per year.

As for **option 2**, it might expected that the additional workload for consulates and ESP's per application caused by the implementation of the measure would be higher in the case of taking a print of a child younger than 6 than taking the fingerprint of a child between the ages of 6-12. It is expected by interviewees that it might take a little longer to take a print of an even younger child because they might have more difficulties to fully understand the request and to hold fingers still. In addition, and the main explanation for a higher workload is the fact that the scanner needed to take print of very young children would only capture 1 finger at a time. Therefore if multiple prints of infants are needed the time increases again. Let's assume that the time for taking prints of children younger than six is doubled compared to taking those of 6-12 year olds, meaning it ranges from approx. 0.4 to 2 minutes.

Making the following assumptions:

- The number of visa applications of children under 12 is estimated between 1.4 and 2.1 million with an average of 1.75 million which is the value used for the calculation
- Consulates continue to process approx. 10 % of minor applications themselves (175 000) whereas the remaining 90 % are outsourced to a ESPs (1 575 000)
- The average annual labour cost of a consular officer is EUR 45 000, or EUR 26 per hour;[187] and the average labour cost for ESP staff is approximately EUR 30 000, or EUR 17 per hour.[188]
- Calculations are based on an annual average work-year of 220 days, FTE.

Table 28 Additional costs per year for consulates and ESPs

Stakeholder	Number of minor applications handled	Labour costs (per hour)	Age of children	Additional time per fingerprint (min)	Additional costs per year
Consulates	175 000	€ 26 / hour	>6	0.4 -2	€ 30 332- 151 766
ESPs	1 575 000	€ 17 / hour	>6	0.4- 2	€ 178 500- 892 498

The number of applications the ESPs are handling are much higher (90 %) than the number of applications that are handled by the consulates (10 %). Consequently, the cost estimates are much higher for ESPs than for consulates. The additional added cost estimate for consulates ranges from EUR 30 332 to EUR 151 766 per year. For ESPs, the additional cost estimate ranges from EUR 178 500 to EUR 892 498 per year.

(iii) Opportunity costs and costs for Member State authorities and TCN children and parents

Impacts on TCN visa applicants (not related to fundamental rights)

In the current situation, children already need to join their parents at the consulate or the ESP in order to apply for a visa for them. Additional costs related to the implementation of the measure would therefore only be the additional time needed for taking the fingerprints of the children. For children aged 6-12 years old it would mean they would need to spend less than one minute extra time, younger children need to spend less than two minutes extra. ESP's

[187] This value is based on the estimate provided in the EES Impact Assessment. The figure is consistent with the value given in a presentation called "Risk Analysis and Electronic Lodgment to Improve Border Management", where the identification of one overstayer was estimated to cost 60.000 AUD (Australian dollars), which equates to €45.000. The figure was obtained by dividing the budget line for these activities by the number of people this activity applied to.

[188] The salary of an ESP employee is calculated on a lower level because government officials abroad often receive higher salaries.

indicate that currently most children are disappointed if they cannot provide fingerprints themselves. In the case they would be allowed to provide their prints, the extra application time involved for families would therefore likely not feel as a burden to them.

Impacts for Member States' authorities dealing with trafficked/ missing children

The Schengen Information System plays a major role in the cross-border exchange of information, as this is the main database for registering missing persons throughout Europe. Recent legislative proposals cover the extension of subcategories of missing persons to different groups of children, including missing unaccompanied children and runaways, and for preventive alerts to be issued subject to procedural safeguards in the case of a risk of parental abduction.[189] A fingerprint search functionality is foreseen to be added to SIS II. After introduction, and in the case fingerprints of TCN children (<12) would have been included in the VIS, a trafficked or missing TCN child (<12) that is found by authorities could be identified on the basis of this information.

In the case of a trafficked TCN child, the system may be less of use, as it is unlikely that an alert about the missing child is given out by someone. Thus in the current situation Member States authorities dealing with trafficked or missing children are expected to spend a considerable amount of time to identify children. The fact that the only means currently available for identifying a child is the picture in the travel document makes the procedure complicated and time-consuming. The proposed VIS adaptation may be able to fill the protection gap left by current systems and speed up the process. Since the amount of time authorities currently spend on identifying these children are unknown, a calculation of the saved time is not possible and the specific impact on the measure for the authorities cannot be calculated at this stage.

4.5.2. Policy impacts

The policy impacts are evaluated against the intended objectives of lowering the fingerprinting age. Benefits and disadvantages can be quantified from an effectiveness and efficiency perspective. Impacts in relation to efficiency (for example: verification of TCN children (<12) found unaccompanied in Schengen territory can be done faster and with less people involved) are described under 4.6.1 as they can be translated into direct costs. In this paragraph, impacts in relation to effectiveness are discussed.

Combatting identity theft to facilitate in the fight against trafficking of TCN children (<12)

The prevention of identify fraud is raised by several consulates as the main potential benefit of the proposed adaptation. One consulate raised that especially multiple entry visas are susceptible for abuse as multiple children could, by committing identify theft, potentially be trafficked using one visa. This might be prevented by the adaptation of the measure. An additional benefit is that the measure enables the identification of adults involved in trafficking.

A **necessary precondition** to achieve the full potential effectiveness of entering fingerprints of TCN children (<12) for the prevention of trafficking of TCN children (<12), is having fingerprints of each incoming TCN checked and verified at Schengen entry ports. At the moment, such checks are not consistently executed.

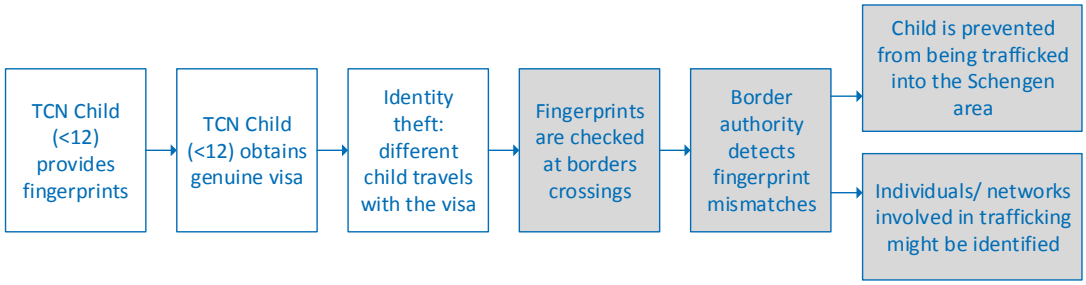
A positive side note, according to various stakeholders, having the proposed adaptation in place might already have a restrictive impact on traffickers coercing children to travel on a visa not theirs.

[189] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/legislative-documents/docs/20161221/establishment_operation_and_use_of_sis_field_police_cooperation_judicial_cooperation_criminal_matters_repealing_en.pdf.

Interviewed stakeholders could not present any hard data to support their statements, but relatively speaking, numbers appear to be small, as they often recall none or one or two cases over a longer time period. However, regardless of the actual numbers, each individual case in which a child could potentially be saved from being trafficked would seem to be a worthy one on its own merits.

The following figure visualises the possible contribution of the provision of fingerprints. In the case, a child is coerced to travel with a visa of another child, and fingerprints are checked at the border, border authorities detect fingerprint mismatches. As a result, the child is protected from being trafficked to the Schengen area, and individuals and networks involved in the trafficking might be identified.

Figure 8 Potential social impacts of the proposed measure



The main benefits of the measure reside in unambiguously identifying these children, according to the interviewees allowing for:

- Family unification within and outside the Schengen area;
- Verifying the family relationship;
- Dublin and asylum examination.

Family unification within and outside the Schengen area

Respect for family life is a fundamental right granted by Article 7 of the Charter of Fundamental Rights of the European Union,[190] which might result in family tracing and family reunification. Safeguards must be in place to allow for tracing and reunification, as this may only be done in the case this is in the best interest of the child[191]. Children who are found unaccompanied in the Schengen area might be separated from their parents due to various causes, during their journey towards, through or in the Schengen area, unintentionally or intentionally. Sometimes traffickers for example separate children from their family for future exploitation reasons.[192] The VIS record might assist the identification of children found unaccompanied and reunification with parents, family or caregivers.

Young children might have also been separated from their families already in their home countries. The reasons are various, they might be sent to Europe by their family in the pursuit of a better life, to enable future family reunification, adoption or they might be trafficked (with or without consent of the parents) for exploitation purposes.[193] Again, a record in the VIS might assist the identification and tracking of family in the home country.

A phenomenon, in relation to children being sent to the Schengen area for a better life, brought up by the Belgian authorities is the 'out of nowhere' appearance of very young -often African- unaccompanied children. Parents accompany the child to Schengen and then abandon the child, with the idea, the child will have a better educational and life opportunities if it grows up in the

[190] FRA (2016). Thematic focus: Family tracing and family reunification. http://fra.europa.eu/en/theme/asylum-migration-borders/overviews/focus-family.
[191] European Asylum Support Office (2016). EASO practical guide on family tracing.
[192] Facts and figures on the magnitude of this issue are unknown.
[193] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/asylum/uam/uam_infographic_a4_en.pdf.

EU. Many of these children apply for asylum. Tracing their identities and origin is a daunting task and fingerprint registration in the VIS could aid this process.

Unidentified Congolese
A four-year-old Congolese was recently brought to the Guardianship Desk by her 'aunt', after the aunt had been called by somebody to tell her that the child had arrived in Belgium and would wait for her at the station. It is suspected this child travelled accompanied by her parents or other adults from Congo to Belgium on a European visa. As her fingerprints were never taken, it will be impossible to recover the true identity of both the child and the parents.

Source: Guardianship Desk of the Ministry of Justice.

Verifying the parental/ guardian relationship

Another perceived benefit is that storing a fingerprint of the child in the VIS would allow for verifying the claimed relationship between a child and adults presenting themselves as parents or guardians. A person accompanying the child who is not the one who has applied for a visa with the child raises a red flag which calls for further investigation and adults may be identified that are traveling multiple times with different children, presenting themselves as the parents). Being able to verify the relationship between a child and an adult may thus in a decrease of children being trafficked.

An important- negative- side effect of closing the visa route- might be that traffickers resort to trafficking children via irregular ways of entry. Hindering the detection possibilities even further however this point was not raised by any of the stakeholders. No information is provided on the scope of this issue.

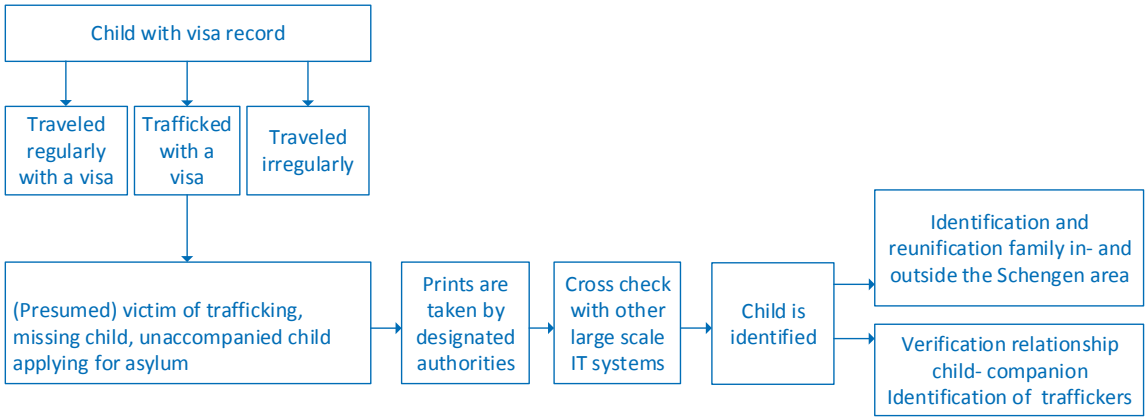
Dublin and asylum examination

Taking fingerprints of children might facilitate the application of the Dublin Regulation[194], which determines the Member State responsible for processing an asylum claim. The regulation reads that family relationships prevail over other criteria for determining which Member State is responsible for examining an application for international protection. Fingerprint might assist in the identification of a child and the search for family members. In the case, such family members are found the state has the obligation to investigate whether the person is able to take care of the child and whether that is in the best interest of the child.

The following figure visualises the possible contribution of the provision of fingerprints. In the case, a TCN child with a vis record is found in Schengen territory to be (presumed) victim of trafficking, a missing child or an unaccompanied child applying for asylum, fingerprints could help in their identification process. This could assists in the identification and reunification with family, in- and outside the Schengen area, and it could assist in the verification of the relation of the child- companion relationship, and thereby the identification of traffickers.

[194] REGULATION (EU) No 604/2013.

Figure 9 Possible contribution of the proposed measure to the application of Dublin and asylum examinations



4.5.3. Fundamental rights impacts

The proposed adaptation of storing fingerprints of TCN children under the age of 12 in the VIS entails both risks and opportunities for fundamental rights. The assessment examines the following rights as specified in the CFR and ECHR:

- the right to human dignity (Article 1 CFR);
- the right of the child (Article 24 CFR);
- the right to asylum and protection of the principle of non-refoulement (Article 18 and 19 CFR);
- the right to the protection of privacy and personal data (Article 7 and 8 CFR).

Specific rights of the child, following the UN Convention on the Rights of the Child (CRC) and CFR Article 24, are central to this analysis. This includes the right of children to 'such protection and care as is necessary for their well-being'; the right to be heard; the obligation that, in all actions relating to children, taken by private or public authorities, their best interests must be primary consideration; and their right to maintain a personal relationship and direct contact with both parents unless this would be contrary to his or her interest.[195] Furthermore, the CRC includes, *inter alia,* the obligation to protect the best interest of the child (Article 3), but also to protect children against all forms of physical or mental violence or sexual abuse (Article 19), or from exploitation, abduction or trafficking (Articles 32-35).

Rights to dignity

EU Charter of Fundamental Rights
Article 1 – Human dignity

Actions to enforce the obligation to collect biometric data from children may interfere with the right to dignity, which is guaranteed in Article 1 CFR. Article 1 states that human dignity is inviolable and that it must be respected and protected. This right is the foundation of all rights in the Charter[196], and it is part of EU law as confirmed by the CJEU in its case law.[197]

[195] See E.J. Kindt (2013), p. 870.
[196] FRA, Draft Report on European large-scale information systems and the use of biometrics: fundamental rights implications, 22 December 2017, p. 76.
[197] CJEU, Case C-377/98, Netherlands v. European Parliament and Council, 9 October 2001, paras. 70-77, as stated in FRA Draft Report on Biometrics, 2017, p. 76.

In its report analysing the fundamental rights implications of storing biometrics in large-scale IT systems, FRA points out that in the specific context of a measure to lower the fingerprinting age for child visa applicants, fingerprints must be taken in full respect of human dignity and in a manner that is appropriate to the child's age and maturity. [198] As FRA pointed out in its opinion on the proposal for a revised Eurodac Regulation, this may be challenging when taking biometric data from children as young as six years of age (i.e., Option 1).[199] It may be even more difficult for children below the age of 6 (Option 2).

While both the VIS Regulation (recital (12)) and the Visa Code (Article 39(2) and recital (6)) contain general clauses on the right to dignity, Article 13(1) of the Visa Code explicitly states that fingerprints be taken in accordance with safeguards laid down in the Council of Europe's Convention for the Protection of Human Rights and Fundamental Freedoms, in the CFR and the CRC. Nevertheless, to reduce the risk of disrespectful treatment when collecting the child's fingerprints, the proposal for amendment is advised to include a provision explicitly requiring that fingerprints be taken in a child-friendly and child-sensitive manner by consulate officials or ESP personnel who have been specifically trained to collect biometric data from children. Child-friendly / child-sensitive practices may include having the parents/guardians accompanying the child and informing them in clear and plain language that is easily understandable, via pictograms and colourful infographics.

Inclusion of such a safeguard could be inserted in Article 13(1) of the Visa Code, and in Article 7 of the VIS Regulation. This will contribute significantly to limiting possible incongruity with the rights of the child as guaranteed by the UN Convention on the Rights of the Child as well as Article 24 CFR.[200]

Rights of the child

EU Charter of Fundamental Rights
Article 24 - The rights of the child

Article 24 CFR underlines the fact that the best interests of the child is to be a key principle of all actions taken in relation to children by public authorities and private actors. This means that Member States must afford the child with such protection and care as is necessary for the child's well-being and development. The best interests of the child is also one of the four core principles of the UN Convention on the Rights of the Child.[201]

Whereas the best interests of the child is reflected in the Schengen Border Code (SBC)[202], the Visa Code does not make any reference to the best interests of the child. Such a provision should be explicitly guaranteed in the Visa Code, such that visa authorities pay particular attention to children when submitting an application for a Schengen visa.

UN Convention on the Rights of the Child (CRC)
Article 3
1. In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration;
2. States Parties undertake to ensure the child such protection and care as is necessary for his or her well-being, taking into account the rights and duties of his or her parents, legal guardians, or other individuals legally responsible for him or her, and, to this end, shall take all appropriate legislative and administrative measures;
3. States Parties shall ensure that the institutions, services and facilities responsible for the care or protection of children shall conform with the standards established by competent authorities, particularly in the areas of safety, health, in the number and suitability of their staff, as well as competent supervision.

[198] FRA Draft Report on Biometrics, 2017, p.76.
[199] FRA, The impact of the proposal for a revised Eurodac Regulation on fundamental rights. Opinion of the EU Agency for Fundamental Rights, p. 14.
[200] See FRA, Opinion on the revised Eurodac Regulation, p. 14.
[201] United Nations, Convention on the Rights of the Child, 20 November 1989, Article 3.
[202] Regulation (EC) No 562/2006, Article 19 and Annex VII require border guards to pay particular attention to children, whether travelling accompanied or unaccompanied.

Article 19
1. States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child;
2. Such protective measures should, as appropriate, include effective procedures for the establishment of social programmes to provide necessary support for the child and for those who have the care of the child, as well as for other forms of prevention and for identification, reporting, referral, investigation, treatment and follow-up of instances of child maltreatment described heretofore, and, as appropriate, for judicial involvement.

The processing of fingerprints for children under the age of 12 has both positive and negative impacts on the individual's fundamental rights and freedoms, particularly on the best interests of the child. First and foremost, the storage of fingerprints in VIS could bring important child protection advantages by enabling for more robust and timely detection and protection of child victims of trafficking. It may also enhance Member States' capabilities to trace, identify and protection of children who have gone missing. Missing migrant children have the same right to protection as missing national children.[203]

When it is in their best interest, enabling these children to reunite with their family members ensures their right to family life is protected according to Articles 8 ECHR and 7 CFR. Both Option 1 and Option 2 could have a positive impact for the right to family by equipping Member States with the necessary tool to identify missing children who entered the Schengen territory using a visa. In addition, the ability to accurately identify this category of children will contribute to ensuring that asylum applications of minors are dealt with by the Member State where the minor's family members are located, in line with the framework of the Dublin Regulation. [204]

Another positive impact is the fact that the measure will help to capture the size and scope of the very phenomena investigated in the present study. This includes, for example, secondary movements of children who enter the territory on a Schengen visa, go missing and then are subsequently detected as a child trafficking victim. Improved insight into the phenomena will better equip Member States to understand and combat future violations.

At the same time, the proposed change has important implications for the rights of the child to be effectively informed, which is a pre-condition for the exercise of the right to the protection of personal data. The assessment of personal data protection impacts is presented in a separate section below. Here we examine the need to provide effective information on the VIS to child visa applicants in a manner that is understandable and accessible.

The right to be effectively informed on the processing of one's own personal data includes the right to be given information on the identity of the data controller, the purpose of the personal data processing and the recipients of the data, and the right to access and amend / rectify one's own data.[205] The GDPR further guarantees access to information on the retention period and criteria that was used for establishing it.[206] The latter also contains a provision requiring that information be provided in a manner that is "concise, transparent, intelligible and easily accessible […], using clear and plain language, in particular for any information addressed specifically to a child."[207] Information should be communicated in writing, however other forms are possible and highly advisable in the case of young children, who may not yet be literate at the time their fingerprints are taken. It is therefore critical that information is provided not only to the child in question, but that it is also understood by the child and his or her parent(s) or legal guardian(s).

[203] European Commission, Communication on the protection of children in migration, COM (2017) 211, 12 April 2017, p. 7.
[204] This includes situations in which an asylum seeker's parents are legally present in another Member State, as well as situations involving beneficiaries of international protection or applicants for international protection (7-10 Dublin Regulation 604/2013).
[205] Directive 95/46/EC, Article 10.
[206] Regulation 2016/679 (GDPR Regulation), Article 13.
[207] Ibid, Article 12 (1).

The VIS currently contains a provision outlining the rights to information of visa applicants. Article 37 states that the information "shall be provided in writing to the applicant" when the data are collected, and will be presented on the forms that are signed by those applicants. The proposed measure therefore requires an amendment to Article 37 of the VIS Regulation. It should be explicitly stated that… "and where necessary, orally, in a language and manner that the data subject understands or is reasonably supposed to understand. Children must be informed in an age-appropriate manner, using leaflets and/or infographics and/or demonstrations specifically designed to explain the fingerprinting procedure" to them.

Right to asylum and protection of the principle of non-refoulement

As outlined in chapter 3.4.3, the right to asylum is guaranteed by Article 18 CFR. Moreover, the concept of the best interests of the child is firmly embedded in European law, including the Charter of Fundamental Rights, and, for example given more prominence in recast proposals under the Common European Asylum System. [208]

In its opinion on the recast Eurodac, FRA emphasized the extreme sensitivity of personal information which can allow the country of origin to deduce that an individual – in this case, a child – has applied for asylum in one of the Member States, as it can expose the child's family member(s) remaining in the country of origin to retaliation measures. At the same time, "if Member States are to return rejected international protection applicants, or to request their readmission following a negative admissibility decision, they must be allowed to use personal information available to them to identify the individual or obtain travel documents from the country of origin."[209]

Due to safeguards in place, unaccompanied minors are hardly never subject to return procedures. In the rare case certain conditions are fulfilled, Article 31(2) of the VIS allows Member States to share with third countries the personal data stored in VIS on a specific individual after a positive fingerprint match. The article stipulates that Member States may share all information that is necessary in order to prove the identity of the TCN child for the purposes of return. Article 31(3) goes on to unambiguously ban the transfer of personal data to third countries if there is a risk that, as a result of such transfer, the person (i.e. child) may be subjected to torture, inhuman and degrading treatment or punishment, or any other violation of his or her fundamental rights. Thus, the existing safeguards will equally apply to children under the age of 12, mitigating any possible limitation to the right to asylum and the principle of non-refoulement.

Rights to the protection of privacy and personal data

The proposal of lowering the age of fingerprinting children, **whether it being option 1 or 2,** entails a further limitation to the right to the protection of privacy and personal data under Articles 8 ECHR and 7 and 8 CFR as it implies further data processing .[210] As outlined in detail in chapter 3.4.3, any limitation to the right to these rights must be provided for by law; meet objectives of general interest; respect the essence of the rights and be proportionate.

Fingerprints are a special category of personal data, the processing of which could create significant risks to the individual's fundamental rights and freedoms.[211] Considering the proposed adaptation of central storage of fingerprints of children in the light of the right to data protection, children, and specifically very young children, must be considered as a particularly vulnerable group, requiring specific and more stringent criteria when assessing these limitations.[212] The sensitivity of storing such biometric data is particularly acute in the case of

[208] http://ec.europa.eu/justice/fundamental-rights/files/rights_child/ceas_provision_on_children_table_updated.pdf.
[209] FRA, Opinion of the EU Agency for Fundamental Rights on the impact of the proposal for a revised Eurodac Regulation, 22 December 2016.
[210] As recognized by the ECtHR judgment in *S. and Marper v. United Kingdom*, §§ 68 and 84, ECHR 2008.
[211] Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), recital (51) and Article 9.
[212] ECtHR, *Mugenzi v. France*; appl.no. 52701/09, 10.07.2014, *Maslov v. Austria* 23.06.2008, appl.no. 1638/03 and *Tarakhel v. Switzerland*, appl.no. 29217/12, 4.11.2014. See also, the FRA *Handbook on European law relating to the rights of the child*, 2015.

children as the retention of their data can affect their lives despite not having participated in the parents' decision to apply for a visa, and thus, to provide their biometric data for that purpose. Taking into account the extra vulnerability of children, the pursued objectives of data processing must be clearly identified to assess whether these measures are appropriate, proportionate and fully address the problem at stake.[213]

Assessing the data protection or privacy impact, the question whether the personal information is actually used, is not relevant for the question whether the data processing entails a violation of the right to privacy. Both in the case of adults and children, biometrics establish unique identifiers enabling competent and designated authorities of Member States, and Europol having access to these data, and, in accordance of the proposal on interoperability, if adopted, to compare multiple databases without knowledge of the data subject. Therefore, every system using biometrics as identifier brings along a risk for 'identity theft' (someone misusing another person's identity with stolen or falsified data). Dealing with identity theft, the central storage and use of the same biometrics in different EU databases may have a positive impact for the rights of the individual, enabling the tracing of children based on the comparison with information in other EU databases in order to avoid identity mistakes.

Data minimisation and purpose limitation

The study identifies two clear objectives of the proposed adaptation to the VIS:

- Better meeting the various VIS objectives (facilitation of the fight against fraud, facilitation of checks at external border crossing points, facilitate the application of the Dublin II Regulation);
- Support with the prevention and fight against child trafficking, and with the identification/verification of identity of TCN children who are found in Schengen territory in a situation where their rights may be or have been violated (trafficking, missing children, unaccompanied minors applying for asylum).

The principle of data minimisation requires that the processing of personal data is adequate, relevant and limited to what is necessary in relation to the purposes for which those data are processed. The principle of purpose limitation requires that personal data be processed only for specified purposes, which must be explicitly defined. See chapter 3.4.3 for a more detailed explanation of the underlying principles.

According to the CJEU in *Schwarz v. Bochum*, dealing with the implementation of Regulation 2205/2004 on the biometric passport and the storage of two fingerprints, 'Fingerprints constitute personal data, as they objectively contain unique information about individuals which allows those individuals to be identified with precision …'.[214] In this judgment, in which it was decided that in the submitted case there was no violation of Article 7 and 8 CFR. This conclusion was based on the fact that the storage at stake only concerned a limited number of fingerprints, in combination of the facial recognition; the fact that the biometric data were only stored for limited purposes (verification of the authenticity of the passport and the identification of its owner) and the data would not be used for other purposes than preventing irregular migration of individuals to the EU territory; and finally, Regulation 2252/2004 did not provide for the central storage of the collected fingerprints: as they are only stored in the travel document which remains in the exclusive possession of the owner.

Objective 1: Better meeting the various VIS objectives

The reason for taking fingerprints in general is the notion that misidentification is more likely when based exclusively on alphanumeric data. Adding fingerprints to the file reduces the likelihood of misidentification to virtually zero. By storing fingerprints in the VIS the system provides a secure link to the identity to the applicant though biometrics. This applies to adults as well as children (under the precondition that fingerprint recognition of children is achievable

[213] See EDPS, *Reflection paper on the interoperability of information systems in the Area of Freedom, Security and Justice*, 17 November 2017, p. 8 and also the Austrian Data Protection Authority in response to the Commission public consultation, 24 October 2017.
[214] CJEU 17 October 2015, C-291/12, *Schwarz v. Bochum* para. 27. See for the specific criteria: 48, 55-56, 59 and 60-61.

with a satisfactory level of accuracy, as demonstrated in the 2013 JRC study). In conclusion: the data is relevant and needed to contribute to the first objective of improving the implementation of the common visa policy).

Data minimisation

To limit the infringement on the right of privacy the data to be collected should be minimised. Fingerprints (and no additional biometric data) will be sufficient. The rational of taking ten fingerprints (instead of for example two) is to increase accuracy and to ensure against pour quality of the fingerprints taken. It is worth highlighting the position of the EDPS on the Second EU Smart Borders Package. In its opinion, the EDPS noted that, in contrast to the CJEU ruling above, "a lower number of biometric data [fingerprints] is not necessarily synonymous with a lower interference" if one takes into account the combination of two types of biometric data that were considered by CJEU in Schwarz v. Bochum. Nonetheless, due to their very nature, processing of biometric data implies a more serious interference and therefore requires ensuring a higher level of data protection.

Purpose limitation

Children fall under the same safeguards as adults in protecting their personal data and respecting their privacy. As explained in section 3.4.3 the current VIS Regulation ensures data protection and data privacy. The processing of fingerprint data for children will be subject to the same safeguards and purpose limitations as exist for the processing of biometric data of TCN visa applicants above the age of 12. The existing safeguards ensure the strict purpose limits of the data processing. The safeguards continue to prevent unauthorised access and unlawful sharing of this information to third parties. This applies to adults as well as children. The interference on the right to privacy will not be greater for children under the age of 12 than for the existing population subject to the fingerprint requirement (above 12). Moreover, according to the VIS evaluation no complaint on data protection has been registered to date, which proves that adequate safeguards have been put in place.

Objective 2: Using the VIS for the purpose of child protection

As described in the problem analysis there are cases of children entering or attempting to enter the EU on a visa who are victims of child trafficking, or have gone missing. Such cases could be detected by a more complete visa policy (specifically: by collecting fingerprints of children younger than 12). This objective requires that the relevant or designated authorities would access to search and process the data stored in VIS.

The question here is, is achievement of objective 2 (child protection) a consequence ('bonus' or positive impact) within the current propose of the VIS? Or does it require an explicit extension of the VIS purposes?

Access to VIS is limited to authorities as specified in the VIS Regulation. Law enforcement has access to the data for the prevention, detection and investigation of terrorist offences and other serious criminal offences. Child protection authorities currently do not have access to the VIS. If they should be granted access, this should be specified in the VIS Regulation.

As pointed out by the EDPS, a difference must be made between the use of children data in the interest of children, (such as with the objective of protecting children, for example against human trafficking or re-unification with parents), and its use for objectives that could possibly be in their detriment. Assessing potential violation of the fundamental rights of children of the storage of fingerprints for the purpose of protecting the child against human trafficking or to trace missing children, leads to a different outcome, when compared to the assessment of storing fingerprints of children for the prevention of overstaying or irregular migration or the possible investigation or prosecution of that child for law enforcement purposes in future. Taking into account the recommendations provided in the previous sections to insert additional safeguards referring to the best interests of the child, the risk of serious violations should be mitigated.

4.6. Comparison of the options

4.6.1. Objectives of general interest

As current EU legislation on the visa application procedure for short-stay does not cover children under the age of 12 it is currently not possible at external borders to irrefutable verify the identity of a TCN child (<12) using a short-stay visa. Consequently there is no possibility to identify/ verify identity of TCN children (<12) with a VIS record who have entered Schengen territory and gone missing and/ or are (presumed) victims of trafficking or abduction.

Both options under consideration would enable the verification of identity of children who are traveling with a visa and they would allow for the identification/ verification of children with a vis record who are found in the Schengen area. Thereby they would allow for the detection of identity fraud attempts involving TCN children (<12) traveling with a Schengen visa and the identification and verification of the identity of TCN children <12 with a Vis record on Schengen territory, thereby facilitating the protection of these children, the fight against trafficking and the identification of traffickers and trafficking networks (through VIS links between the files of persons travelling together).

One important remark must be made in relation to protecting children while traveling towards the Schengen area. Traveling with a visa of a different child can only be prevented when entry ports check and verify the fingerprints of TCN children entering the Schengen area. At the moment, such checks are not consistently executed. This is however a necessary precondition to achieve its full potential effectiveness.

4.6.2. Cost- Benefits

Table 33 presents an overview of the relevant economic costs and benefits related to option 1 and option 2. Compared to the baseline situation one-off costs need to be made in three areas: investment or set-up costs (one-off costs), operational costs related to the impact in terms of workload and administrative burden and the costs/benefits incurred by authorities and TCN children and parents.

Table 29 Overview cost-benefits option 1 and 2

	Option 1 (6-12 years)	Option 2 (all ages)
One-off costs		
Child- friendly equipment	No costs	€13 002 000
Increased size of biometric samples in VIS- BMS costs	Increased cost by 4.4 %	increased costs by 8.8 %
Training costs (ESPs, Consulates)	€ 138 175	€ 138 175
Operational costs		
Workload and administrative burden	Range from €52 208 to €261 066	Range from € 208 832 to € 1 044 264
Costs for Member State authorities and opportunity costs		
Impacts on TCN visa applicants (not related to fundamental rights)	Less than one minute additional waiting time per child	Less than two minutes additional waiting time per child
Impacts for Member States' visa authorities	No costs/ savings	No costs/ savings
Impacts for Member States' authorities dealing with missing children/ unaccompanied children	Savings unknown	Savings unknown

The **one-off costs** are higher for option 2 than for option 1. This is first of all because taking fingerprints of children younger than 6 requires a different type of scanner than is likely to be needed for taking prints of children aged between 6 and 12. Further investigation is needed but for example infants between 0-6 months are not able of using regular scanners but require new fingerprint scanners and software. In the case of 6-12 year olds the current scanners can be used, while in the case of children younger than 6 new equipment needs to be procured. Secondly, as the size of biometric samples to be included in in the case of the second option is

larger more is requested in terms of storage of the system and the capacity of the BMS. The expected training costs are estimated to be the same for some options.

With regards to **operational costs**, again the costs are expected to be higher for option 2 than for option 1. Not only are prints to be taken from double the number of children, but also the time that it takes to capture a print is expected to be longer.

As for the third category of costs/ savings, the fingerprinting time of the youngest age group is expected to be higher, resulting in more additional waiting (/**higher opportunity costs**) time for a child under 6 and its family than for children aged 6-12. For **member state authorities** no impacts are expected for Member States' visa authorities. It is expected that the adaptation to the age limit might save Member States' authorities dealing with trafficked/ missing children considerable time identifying children. The specific impacts are unknown but it seems logic to assume that total benefits are higher in the case of option two as this option affects more children.

4.6.3. Feasibility

As for **option 1,** the EC-JRC (Fingerprint recognition for Children, 2013, Report EU 26 193) came to the conclusion that under appropriate conditions, fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy. Other studies support this conclusion. Lowering of the fingerprint age to 6 is technically feasible without additional requirements on the existing technical infrastructure.

As for **option 2**, lowering the fingerprint age to include all children may result in stronger technical and procedural changes, and potentially lower identification rates. Additional investigation is required to create more evidence for the feasibility of this option.

4.6.4. Fundamental rights impacts

Both options under investigation could have positive fundamental right impacts. The adaptations could assist in the prevention of children being trafficked and in identifying children who have gone missing, who became victims of human traffickers, or those who apply unaccompanied for asylum, thereby enabling these children to reunite with their family members (but only if it is in their best interest). Also, it could support the execution of the Dublin Regulation.

The proposal of lowering the age of fingerprinting children, whether it being **option 1 or 2**, will also have an impact on the rights to human dignity and privacy and personal data protection. Fingerprints must be taken in full respect of human dignity and in a manner that is appropriate to the child's age and maturity. It is advised to include a provision to the Visa code explicitly requiring that fingerprints be taken in a child-friendly and child-sensitive manner by consulate officials or ESP personnel who have been specifically trained to collect biometric data from children.

With regards to privacy and personal data protection, as children are a particularly vulnerable group, the pursued objectives of data processing must be clearly identified to assess whether these measures are appropriate, proportionate and fully address the problem at stake. The processing of fingerprint data for children will be subject to the same safeguards and purpose limitations as exist for the processing of biometric data of TCN visa applicants above the age of 12. The existing safeguards ensure the strict purpose limits of the data processing. The safeguards continue to prevent unauthorised access and unlawful sharing of this information to third parties.

As described in the problem analysis there are cases of children entering or attempting to enter the EU on a visa who are victims of child trafficking, or who have gone missing. Such cases could be detected by a more complete visa policy. This objective requires that the relevant or designated authorities would need access to search and process the data stored in VIS. Child protection authorities currently do not have access to the VIS. If they should be granted access, this should be specified in the VIS Regulation. A difference must be made between the use of children data in the interest of children, (such as with the objective of protecting children, for example against human trafficking or re-unification with parents), and its use for objectives that could possibly be in their detriment.

4.6.5. Necessity and Proportionality

Lowering the fingerprinting age of children in VIS may have a positive impact for the protection of the fundamental rights of children, protecting them against human trafficking or protecting the right to family life by reuniting missing children with their family members. Considering this objective of tracing or identifying missing children in Europe, the proposed measure, may complement the existing tool in SIS II for the reporting of alerts on missing persons.

The necessity and proportionality of the proposed measure of lowering the fingerprinting age to children of 6 year old **(option 1),** or to include all ages **(option 2)** depends on the size of the problem. First of all it depends on the number of TCN children who are found to be involved in visa fraud (traveling on a visa of a child younger than 12).

Between 1.4 and 2.1 million children under 12 are traveling into the Schengen area with a uniform visa each year, half of them are presumably younger than 6 years old. There are no numbers available on identity theft after a visa has been granted (as currently there is no possibility to verify identity at border crossings).

In addition, it depends on the number of TCN children with a vis record who have gone missing in the Schengen area and/ or are (presumed) victims of trafficking or apply for asylum unaccompanied. The proposed adaptation might assist in the provision of appropriate protection to these TCN children.

With regards to victims of trafficking, each year they are expected to be around 375-500 TCN child trafficking victims under 12 year old to be found each year. Studies and expert opinions suggest the lower the age the lower the share of victims. As with MEVs with up to 5 years validity, children up to 17 years old can travel to the Schengen area with a visa obtained without taking fingerprints, the actual number of trafficked children with the use of a visa might be higher.

Abduction of TCN children (<12) into the Schengen area does not seem to be a problem of large scale (although this is hard to state definitively in the absence of more concrete data). The number of unaccompanied minors missing children is. In 2015, at least 10 000 unaccompanied minors went missing (age unspecified). But it is not known if they have a VIS record. Interviewed stakeholders believe this number to be marginal. One remark: with regards to both trafficking and missing children numbers it may be expected that the number of factual cases is a higher than the number of known cases.

Option 1. Although the number of potentially affected children appears to be low, taking into account the positive impact for protecting the right to family life and best interests of the child, this option can be considered a proportional measure under specified purposes, strict conditions and safeguards, ensuring that the fingerprints are only accessed and used to protect children from trafficking or identify and protect missing children. Considering the data protection impact and the right to information included in Article 37 VIS Regulation, taking into account that children (generally) have no impact on the decision of their parents, strict time limits must be applied to ensure that their data are no longer stored than for what is strictly necessary. Sufficient safeguards must be provided to ensure that the fingerprint are taken in a child friendly manner, not only at the time of collection during the visa application, but also within the EU territory for the purpose of identification of the child and the comparison of the fingerprints with data in VIS or other databases. ESP's should be bound by the same standards and ensure the protection of the rights and best interest of the child when taking fingerprints.

Option 2. All children are entitled to protection, and this option may have a positive impact with regards to the protection of all TCN children with a visa. However, for this age group there are practical problems with regards to the accurate collection of their fingerprints. Further investigation is preferred but it is to be expected that investments in scanners and software need to be made. This, in combination with the even smaller number of children below the age of 6 that are at risk of human trafficking or go missing this option could be concluded to lack both necessity and proportionality.

4.6.6. Preferred option

Although it is clear that the phenomena as investigated in this study exists, their precise frequency and magnitude are unknown. For instance, there is no available data to allow for a concrete calculation of how many children have been trafficked to the Schengen area on a visa not theirs or on those who have gone missing after arrival. If fingerprint data were available to the MS in order to enable the children's positive identification, more children could have been identified and their human rights violations prevented. Consequently, the justification for storing and processing this data must necessarily rely on hypothesis and on the certainty that the absence of statistics is in part due to non-existence of a formal mechanism through which the identity of TCN children can be indisputably verified or identified.

With this important remark being made, the preferred option to emerge from this study is Option 1: lowering the fingerprinting age to 6 years.

Both options contribute to the policy objectives as identified in section 4.3. The policy impacts achieved by the options are in essence the same, they both facilitate in various ways in the protection of these children while traveling with a visa and after arrival in the Schengen area, but the main difference is that, the number of children affected by the second option could be larger as it is encompassing all children.

However, the evidence currently available indicates that the group of children under 6 that is likely to be affected by the proposed adaptation is very small. This, in combination with the needed additional investigations into the feasibility of taking accurate fingerprints of this younger age group, and the presumed substantial investment costs that are associated with the purchase of new tailored machines result in the conclusion that necessity and proportionality are lacking.

5. CONCLUSIONS

5.1. Conclusions Topic 1

Currently, the process by which Member States obtain a scanned copy of the visa applicants' travel document, where required for return purposes, is hampered by the absence of a legal framework allowing Member States to exchange or transfer such information, as well as the slow or non-existent cooperation on the part of third country authorities. Both **Option 1 and Option 2** will enable Member States to Member States to obtain the necessary evidence for proving the nationality of TCN visa overstayers who have been issued with return decision, but who lack a valid travel document, to equal effect. This is because both options entail the systematic collection and storage of the visa applicants' travel document that provided the basis for issuing the Schengen visa in VIS. In both cases, however, the effective change is highly dependent on the third country in question. This is discussed in more detail below.

When comparing the options, it can be concluded that Option 2 is more costly than Option 1 (€ 244,2 – 414,2 million versus € 5,2 million one-off costs, and € 35 million versus € 16 - 33 million recurrent compliance costs, respectively); and that sub-option B is more costly than sub-option A (€ 17 million versus € 13 million one-off costs, and € 22,3 versus 9,1 million compliance costs, respectively). The costs under Option 1 and the sub-options are, however, expected to be broadly compensated in the first year of implementation, whereas Option 2 will be compensated within 3 to 5 years by the expected cost savings and delay cost reductions at the level of Member States (also to be realised under Option 1). While Option 1 performs marginally better in terms of cost savings and delay reductions compared to Option 2, both measures will significantly reduce inefficiencies associated with the current procedures.

From a fundamental rights perspective, the main potential benefit of Option 2 vis-à-vis Option 1 is that the travel document copy would be stored nationally and therefore access would be restricted. However, similar results could be obtained under Option 1, by using a restricted authorizations regime. Furthermore, from a data protection perspective, independent supervision and data security may be easier to ensure under Option 1. In addition, there may be high costs associated with expanding and/or creating national databases in certain Member States for storing the travel document copy under Option 2, whereas the economic and policy benefits of the option are the same or marginally lower than those, which will be realised under Option 1.

A key differentiating aspect between the sub-options under investigation is the amount of information that would become accessible to the migration and return authorities as a result of the selected sub-option for implementation. For the purposes of proving nationality, the bio-data page (sub-option A) is sufficient. Storing copies of all travel document pages (or those that include entry/exit stamps and visa stickers) from various third countries (sub-option B) would not lend further credibility to proving the nationality of a given TCN. Therefore, sub-option B, while marginally more expensive than sub-option A, does not provide added value towards achieving the stated objective of facilitating return.

The study concludes that the preferred option to emerge from this study is Option 1, sub-option A: centralised storage of a scanned copy of the bio-data page of the visa applicants' travel document in the VIS. The combination of the two proposed policy measures will enable Member States to obtain the necessary evidence for proving the nationality of TCN visa overstayers who have been issued with return decision, but who lack a valid travel document. While only slightly more effective than Option 2, Option is significantly more cost-efficient and no more intrusive from a fundamental rights perspective. For these reasons, Option 1 combined with sub-option A is the preferred option.

5.2. Conclusions Topic 2

Both options under consideration would contribute to the identified policy objectives:

- Better meeting the various VIS objectives (facilitation of the fight against fraud, facilitation of checks at external border crossing points, facilitate the application of the Dublin II Regulation);

- Support with the prevention and fight against child trafficking, and with the identification/verification of identity of TCN children who are found in Schengen territory in a situation where their rights may be or have been violated (trafficking, missing children, unaccompanied minors applying for asylum).

The options under investigation would enable the verification of identity of children who are traveling with a visa and they would allow for the identification/ verification of children with a VIS record who are found in the Schengen area. Thereby they would allow for the detection of identity fraud attempts involving TCN children (<12) traveling with a Schengen visa, thereby facilitating the protection of these children by helping to prevent trafficking and identify traffickers and trafficking networks. The options would also facilitate the protection of TCN children with a VIS record on Schengen territory, who are (presumed) victims of trafficking have gone missing or are unaccompanied and seeking asylum. Identification and verification of identity could allow for family tracing and reunification and implementation of the Dublin regulation.

Although it is clear that the phenomena as investigated in this study exists, their precise frequency and magnitude are unknown. The proposed measure will help to capture the size and scope of the very phenomena investigated in the present study. Improved insight into the phenomena will better equip Member States to understand and combat future violations.

The justification for storing and processing fingerprint data must necessarily rely on hypothesis and on the certainty that the absence of statistics is in part due to non-existence of a formal mechanism through which the identity of TCN children can be indisputably verified or identified. The lack of evidence currently available on the scope of the problem of TCN children that may be assisted by the proposed adaptation hampers the provision of a firm conclusion. However, we believe that the preferred option to emerge from this study is Option 1: lowering the fingerprinting age to 6 years.

Various studies have concluded that fingerprint recognition of children aged between 6 and 12 years is achievable with a satisfactory level of accuracy. For the second option, additional investigation is required to create more evidence for the feasibility of this option. The first option could be implemented with minimal costs, mainly because the current fingerprint scanners can be used (which is not the case in the second option).

From a fundamental rights perspective both options under investigation have identical positive (f.e: prevention of children being trafficked and in identifying children who have gone missing) fundamental right impacts. In the case of both options, sufficient safeguards must be in place to guarantee the best interest of the child is always taken at heart.

Under the strict conditions that the stored data is only used to trace missing children, or to protect them from trafficking and that sufficient safeguards are provided to guarantee fingerprints at all times are being taken in a child friendly manner, option 1 can be considered a necessary and proportional measure. Although all children are entitled to the same level of protection, the small number of children below the age of 6 that go missing or are at risk for human trafficking and the practical problems relating to the accurate collection of their fingerprints, lead to conclude that this option currently lacks both necessity and proportionality.

ANNEX I. STATISTICAL DATA ON IMMIGRATION ENFORCEMENT IN THE EU

Table 30 Data on TCN (ordered to) return(ed), detected at border crossings, 2014-2016

	Return orders			Detections illegal BCP			Ratio of detections to return orders		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Afghanistan	23 445	38 890	30 325	22 132	267 485	54 366	94%	688%	179%
Algeria	16 820	16 065	21 925	1 032	3 331	5 140	6%	21%	23%
Angola	1 490	1 080	1 055	6	10	20	0%	1%	2%
Armenia	5 195	4 190	3 945	20	39	18	0%	1%	0%
Azerbaijan	1 235	1 090	1 235	3	5	7	0%	0%	1%
Bahrain	15	15	15				0%	0%	0%
Bangladesh	11 110	10 850	9 725	4 527	13 098	9 445	41%	121%	97%
Belarus	1 880	1 780	1 830	23	28	31	1%	2%	2%
Belize	5	5	0	1	0	0	20%	0%	-
Benin	625	480	535	140	412	400	22%	86%	75%
Bhutan	75	40	60	0	1	0	0%	3%	0%
Bolivia	1 950	1 375	705	1	0	2	0%	0%	0%
Botswana	45	45	40	0	0	0	0%	0%	0%
Burkina Faso	915	785	870	533	873	1 498	58%	111%	172%
Burundi	355	250	195	7	25	31	2%	10%	16%
Cambodia	110	125	85	0	0	0	0%	0%	0%
Cameroon	4 960	3 805	3 755	1 987	3 040	4 417	40%	80%	118%
Cape Verde	1 250	1 110	950	0	0	4	0%	0%	0%
CAR	565	220	235	386	161	118	68%	73%	50%
Chad	900	505	420	505	331	445	56%	66%	106%
China	11 770	9 475	9 165	22	73	45	0%	1%	0%
Comoros	810	650	680	230	436	956	28%	67%	141%
Congo (DR)	5 175	5 570	5 130	452	2 116	948	9%	38%	18%

	Return orders			Detections illegal BCP			Ratio of detections to return orders		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Congo	1 975	2 100	1 905	212	828	471	11%	39%	25%
Côte d'Ivoire	3 470	3 370	4 390	2 000	5 010	14 300	58%	149%	326%
Cuba	690	670	705	190	170	97	28%	25%	14%
Djibouti	140	135	110	1	2	3	1%	1%	3%
Dominican Republic	1 475	1 260	920	60	424	328	4%	34%	36%
Ecuador	1 720	1 405	830	0	1	3	0%	0%	0%
Egypt	6 285	5 490	6 545	4 691	3 208	4 873	75%	58%	74%
Equatorial Guinea	295	255	185	59	6	698	20%	2%	377%
Eritrea	7 680	6 820	4 185	34 586	40 349	21 349	450%	592%	510%
Ethiopia	1 105	1 480	1 475	591	2 735	3 659	53%	185%	248%
Fiji	30	30	25				0%	0%	0%
Gabon	770	660	680	99	26	39	13%	4%	6%
Gambia	1 865	2 060	2 650	8 725	8 874	12 927	468%	431%	488%
Ghana	4 285	3 710	4 155	2 412	5 005	5 756	56%	135%	139%
Guinea	4 095	4 830	5 565	2 156	5 174	15 985	53%	107%	287%
Guinea-Bissau	1 215	1 050	1 145	464	615	565	38%	59%	49%
Guyana	70	45	55	0	0	1	0%	0%	2%
Haiti	635	415	425	2	43	25	0%	10%	6%
India	15 930	15 225	17 610	83	768	353	1%	5%	2%
Indonesia	430	430	580	2	1	2	0%	0%	0%
Iran	5 585	11 000	10 985	468	24 671	6 605	8%	224%	60%
Iraq	6 330	30 230	33 660	2 109	101 275	32 068	33%	335%	95%
Jamaica	1 365	1 415	1 100	0	7	2	0%	0%	0%
Jordan	325	310	320	18	62	53	6%	20%	17%
Kazakhstan	790	545	595	1	6	5	0%	1%	1%

	Return orders			Detections illegal BCP			Ratio of detections to return orders		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Kenya	585	580	545	45	66	39	8%	11%	7%
Kosovo	8 855	21 320	13 545	22 069	23 793	927	249%	112%	7%
Kuwait	355	345	445	4	52	23	1%	15%	5%
Kyrgyz Republic	890	360	385	5	2	3	1%	1%	1%
Laos	45	25	20	0	4	0	0%	16%	0%
Lebanon	1 085	1 445	1 755	38	2 059	400	4%	142%	23%
Lesotho	5	5	5	0	0	0	0%	0%	0%
Liberia	370	260	245	79	195	456	21%	75%	186%
Libya	2 395	1 745	2 075	226	1 037	1 176	9%	59%	57%
Madagascar	385	325	315	0	25	18	0%	8%	6%
Malawi	285	255	210	12	9	4	4%	4%	2%
Maldives	0	55	10	2	0	0	-	0%	0%
Mali	5 495	3 505	3 695	10 567	6 526	10 270	192%	186%	278%
Mauritania	1 525	1 175	1 185	71	293	301	5%	25%	25%
Mongolia	1 510	1 510	1 990	8	95	28	1%	6%	1%
Morocco	32 825	31 810	34 170	3 085	12 966	6 836	9%	41%	20%
Mozambique	50	40	50	2	1	0	4%	3%	0%
Myanmar	615	540	270	12	259	62	2%	48%	23%
Nauru	0	0	0				-	-	-
Nepal	1 815	1 610	1 945	65	341	226	4%	21%	12%
Niger	550	380	330	150	214	713	27%	56%	216%
Nigeria	13 830	12 915	11 450	8 706	23 605	37 811	63%	183%	330%
North Korea	150	150	50	0	0	0	0%	0%	0%
Oman	55	35	70	2	3	0	4%	9%	0%
Pakistan	21 210	23 290	25 745	4 115	43 310	17 973	19%	186%	70%

	Return orders			Detections illegal BCP			Ratio of detections to return orders		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Palestine	1 870	2 830	1 075	7 401	8 943	2 549	396%	316%	237%
Papua New Guinea	5	0	5	0	1	2	0%	-	40%
Philippines	2 280	1 990	1 975	3	16	2	0%	1%	0%
Qatar	35	15	25				0%	0%	0%
Russia	10 055	9 065	9 620	184	137	140	2%	2%	1%
Rwanda	520	370	280	21	32	4	4%	9%	1%
Saudi Arabia	215	265	295	8	25	20	4%	9%	7%
Senegal	5 510	4 695	5 445	4 789	6 352	10 391	87%	135%	191%
Sierra Leone	1 110	665	720	349	445	1 617	31%	67%	225%
Somalia	6 890	5 585	4 915	7 675	17 694	8 244	111%	317%	168%
South Africa	570	500	635	6	31	10	1%	6%	2%
South Sudan	40	15	20	0	12	8	0%	80%	40%
Sri Lanka	4 565	3 385	3 815	42	335	505	1%	10%	13%
Sudan	3 850	5 770	5 520	3 552	9 661	9 515	92%	167%	172%
Suriname	910	665	795				0%	0%	0%
Swaziland	35	105	50	0	0	0	0%	0%	0%
Syria	44 470	53 985	13 380	78 887	594 059	88 551	177%	1100%	662%
Tajikistan	240	235	450	2	15	3	1%	6%	1%
Tanzania	260	280	235	8	35	2	3%	13%	1%
Thailand	770	700	670	0	1	0	0%	0%	0%
Togo	760	585	550	188	496	941	25%	85%	171%
Tonga	10	10	20				0%	0%	0%
Tunisia	13 500	10 235	10 290	1 739	1 061	1 368	13%	10%	13%
Turkey	9 910	8 100	7 920	402	591	1 060	4%	7%	13%
Turkmenistan	90	200	165	2	4	0	2%	2%	0%

	Return orders			Detections illegal BCP			Ratio of detections to return orders		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Uganda	685	695	470	78	321	31	11%	46%	7%
Uzbekistan	635	480	605	1	30	2	0%	6%	0%
Vietnam	3 195	3 890	4 210	265	497	468	8%	13%	11%
Western Sahara	20	25	20	3	12	17	15%	48%	85%
Yemen	235	315	205	66	466	239	28%	148%	117%
Zambia	140	150	135	10	8	1	7%	5%	1%
Zimbabwe	550	560	595	4	3	12	1%	1%	2%

Source: Eurostat data on the enforcement of immigration legislation (return orders); Frontex statistics on detections of illegal border crossings.

Table 31 Summary of return decisions and effective returns for visa-exempt third country nationals

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Albania	29.665	24.020	81,0%	41.785	34.780	83,2%	35.250	42.665	121,0%
Serbia	11.540	8.630	74,8%	14.180	12.885	90,9%	13.595	12.880	94,7%
Macedonia	2.265	890	39,3%	5.355	5.760	107,6%	5.975	7.665	128,3%
Bosnia and Herzegovina	5.235	3.275	62,6%	5.380	4.025	74,8%	5.000	3.730	74,6%
Brazil	4.805	1.945	40,48%	4.505	1.465	32,52%	4.920	1.215	24,70%
United States	1.835	270	14,71%	1.690	460	27,22%	2.125	490	23,06%
Colombia	2.370	990	41,77%	1.685	905	53,71%	1.640	810	49,39%
Montenegro	1.055	525	49,76%	1.510	1.200	79,47%	1.490	2.405	161,4%
Venezuela	740	275	37,16%	735	170	23,13%	750	280	37,33%
Honduras	925	470	50,81%	915	505	55,19%	745	385	51,68%
Paraguay	1.545	770	49,84%	1.090	650	59,63%	735	335	45,58%
Japan	645	30	4,65%	440	25	5,68%	660	35	5,30%
Peru	855	350	40,94%	700	220	31,43%	635	250	39,37%
Chile	795	495	62,26%	690	400	57,97%	615	365	59,35%
Trinidad and Tobago	10	5	50,00%	360	5	1,39%	600	0	0,00%
El Salvador	295	150	50,85%	345	200	57,97%	500	230	46,00%
Canada	410	125	30,49%	385	80	20,78%	480	100	20,83%
Israel	410	195	47,56%	460	290	63,04%	470	255	54,26%
Argentina	810	435	53,70%	605	325	53,72%	460	185	40,22%
Nicaragua	690	265	38,41%	485	260	53,61%	420	190	45,24%
Mexico	435	180	41,38%	430	170	39,53%	400	110	27,50%
South Korea	415	55	13,25%	350	40	11,43%	390	35	8,97%
Australia	305	55	18,03%	235	35	14,89%	345	40	11,59%
Mauritius	260	55	21,15%	240	35	14,58%	230	45	19,57%
Malaysia	170	45	26,47%	130	50	38,46%	145	60	41,38%
New Zealand	105	5	4,76%	55	10	18,18%	120	5	4,17%

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Uruguay	250	110	44,00%	185	95	51,35%	115	75	65,22%
Guatemala	150	80	53,33%	115	90	78,26%	95	50	52,63%
United Arab Emirates	20	5	25,00%	165	15	9,09%	85	15	17,65%
Singapore	60	5	8,33%	150	5	3,33%	65	5	7,69%
Costa Rica	55	30	54,55%	45	25	55,56%	45	25	55,56%
Panama	35	15	42,86%	25	30	120,00%	35	10	28,57%
Brunei Darussalam	0	0	-	0	0	-	20	0	0,00%
Tonga	5	5	100,00%	10	15	150,00%	15	10	66,67%
Seychelles	10	0	0,00%	10	0	0,00%	10	0	0,00%
Andorra	0	0	-	0	0	-	5	0	0,00%
Antigua and Barbuda	0	0	-	5	0	0,00%	5	0	0,00%
Bahamas	0	0	-	0	0	-	5	0	0,00%
Dominica	20	0	0,00%	5	0	0,00%	5	20	400,0%
Saint Lucia	0	0	-	0	5	-	5	0	0,00%
Timor-Leste	0	0	-	60	0	0,00%	5	0	0,00%
Vanuatu	0	0	-	5	0	0,00%	5	0	0,00%
Barbados	0	0	-	0	0	-	0	0	-
Federated States of Micronesia	0	0	-	0	0	-	0	0	-
Grenada	0	0	-	0	0	-	0	0	-
Kiribati	0	0	-	0	0	-	0	0	-
Marshall Islands	0	0	-	0	0	-	0	0	-
Monaco	0	0	-	0	0	-	0	0	-
Palau	0	0	-	0	0	-	0	0	-
Saint Kitts and Nevis	0	0	-	0	0	-	0	0	-
Saint Vincent and the Grenadines	0	0	-	0	0	-	0	0	-
Samoa	0	0	-	0	0	-	0	0	-
San Marino	0	0	-	0	0	-	0	0	-

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Solomon Islands	0	0	-	0	0	-	0	0	-
Tuvalu	0	0	-	0	0	-	0	0	-
Vatican City State	0	0	-	0	0	-	0	0	-
TOTAL	**69.195**	**44.755**	**64,7%**	**85.520**	**65.230**	**76,3%**	**79.215**	**74.975**	**94,6%**

Source: Eurostat data on the enforcement of immigration legislation (return orders and effective returns).

Table 32 Effective return rates for visa-required third countries

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Afghanistan	23 445	2 385	10%	38 890	1 520	4%	30 325	8 340	28%
Algeria	16 820	3 630	22%	16 065	3 335	21%	21 925	3 760	17%
Angola	1 490	280	19%	1 080	205	19%	1 055	200	19%
Armenia	5 195	1 105	21%	4 190	1 055	25%	3 945	1 130	29%
Azerbaijan	1 235	480	39%	1 090	445	41%	1 235	605	49%
Bahrain	15	35	233%	15	50	333%	15	65	433%
Bangladesh	11 110	3 620	33%	10 850	2 940	27%	9 725	2 415	25%
Belarus	1 880	1 505	80%	1 780	1 520	85%	1 830	1 605	88%
Belize	5	5	100%	5	10	200%	0	20	-
Benin	625	45	7%	480	40	8%	535	55	10%
Bhutan	75	5	7%	40	0	0%	60	5	8%
Bolivia	1 950	1 020	52%	1 375	740	54%	705	315	45%
Botswana	45	50	111%	45	45	100%	40	55	138%
Burkina Faso	915	80	9%	785	45	6%	870	45	5%
Burundi	355	45	13%	250	15	6%	195	15	8%
Cambodia	110	25	23%	125	130	104%	85	15	18%
Cameroon	4 960	380	8%	3 805	355	9%	3 755	340	9%
Cape Verde	1 250	125	10%	1 110	100	9%	950	50	5%
Central African Republic	565	10	2%	220	15	7%	235	25	11%
Chad	900	20	2%	505	30	6%	420	30	7%
China	11 770	4 735	40%	9 475	4 230	45%	9 165	4 015	44%
Comoros	810	60	7%	650	30	5%	680	55	8%
Congo (DR)	5 175	210	4%	5 570	210	4%	5 130	225	4%
Congo	1 975	120	6%	2 100	125	6%	1 905	80	4%
Côte d'Ivoire	3 470	220	6%	3 370	235	7%	4 390	195	4%

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Cuba	690	95	14%	670	100	15%	705	110	16%
Djibouti	140	15	11%	135	20	15%	110	30	27%
Dominican Republic	1 475	330	22%	1 260	315	25%	920	340	37%
Ecuador	1 720	820	48%	1 405	645	46%	830	320	39%
Egypt	6 285	2 655	42%	5 490	1 530	28%	6 545	1 575	24%
Equatorial Guinea	295	30	10%	255	30	12%	185	25	14%
Eritrea	7 680	235	3%	6 820	175	3%	4 185	175	4%
Ethiopia	1 105	145	13%	1 480	145	10%	1 475	145	10%
Fiji	30	40	133%	30	25	83%	25	25	100%
Gabon	770	60	8%	660	50	8%	680	45	7%
Gambia	1 865	230	12%	2 060	210	10%	2 650	240	9%
Ghana	4 285	1 080	25%	3 710	850	23%	4 155	865	21%
Guinea	4 095	270	7%	4 830	145	3%	5 565	275	5%
Guinea-Bissau	1 215	55	5%	1 050	65	6%	1 145	30	3%
Guyana	70	40	57%	45	40	89%	55	50	91%
Haiti	635	30	5%	415	25	6%	425	20	5%
India	15 930	9 410	59%	15 225	9 380	62%	17 610	8 005	45%
Indonesia	430	290	67%	430	320	74%	580	335	58%
Iran	5 585	1 320	24%	11 000	1 280	12%	10 985	5 330	49%
Iraq	6 330	1 920	30%	30 230	4 950	16%	33 660	17 075	51%
Jamaica	1 365	515	38%	1 415	585	41%	1 100	530	48%
Jordan	325	270	83%	310	250	81%	320	255	80%
Kazakhstan	790	500	63%	545	400	73%	595	390	66%
Kenya	585	325	56%	580	265	46%	545	260	48%
Kosovo	8 855	3 370	38%	21 320	17 060	80%	13 545	13 040	96%

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Kuwait	355	370	104%	345	415	120%	445	505	113%
Kyrgyz Republic	890	645	72%	360	295	82%	385	240	62%
Laos	45	25	56%	25	10	40%	20	15	75%
Lebanon	1 085	365	34%	1 445	415	29%	1 755	1 205	69%
Lesotho	5	5	100%	5	0	0%	5	0	0%
Liberia	370	45	12%	260	35	13%	245	25	10%
Libya	2 395	985	41%	1 745	660	38%	2 075	520	25%
Madagascar	385	80	21%	325	40	12%	315	40	13%
Malawi	285	120	42%	255	70	27%	210	55	26%
Maldives	0	5	-	55	10	18%	10	5	50%
Mali	5 495	355	6%	3 505	165	5%	3 695	180	5%
Mauritania	1 525	75	5%	1 175	45	4%	1 185	40	3%
Mongolia	1 510	810	54%	1 510	1 025	68%	1 990	1 025	52%
Morocco	32 825	9 415	29%	31 810	8 585	27%	34 170	9 925	29%
Mozambique	50	15	30%	40	15	38%	50	10	20%
Myanmar	615	40	7%	540	55	10%	270	35	13%
Nauru	0	0	-	0	0	-	0	0	-
Nepal	1 815	1 020	56%	1 610	1 235	77%	1 945	1 170	60%
Niger	550	35	6%	380	35	9%	330	45	14%
Nigeria	13 830	3 860	28%	12 915	3 770	29%	11 450	3 130	27%
North Korea	150	35	23%	150	20	13%	50	35	70%
Oman	55	70	127%	35	55	157%	70	50	71%
Pakistan	21 210	10 645	50%	23 290	7 690	33%	25 745	6 420	25%
Palestine	1 870	305	16%	2 830	295	10%	1 075	130	12%
Papua New Guinea	5	5	100%	0	0	-	5	0	0%

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Philippines	2 280	1 760	77%	1 990	1 560	78%	1 975	1 385	70%
Qatar	35	165	471%	15	135	900%	25	145	580%
Russia	10 055	6 755	67%	9 065	5 075	56%	9 620	5 610	58%
Rwanda	520	55	11%	370	45	12%	280	40	14%
Saudi Arabia	215	555	258%	265	575	217%	295	615	208%
Senegal	5 510	815	15%	4 695	585	12%	5 445	500	9%
Sierra Leone	1 110	110	10%	665	165	25%	720	110	15%
Somalia	6 890	270	4%	5 585	380	7%	4 915	205	4%
South Africa	570	455	80%	500	435	87%	635	480	76%
South Sudan	40	5	13%	15	5	33%	20	5	25%
Sri Lanka	4 565	1 690	37%	3 385	1 595	47%	3 815	1 135	30%
Sudan	3 850	300	8%	5 770	225	4%	5 520	250	5%
Suriname	910	370	41%	665	325	49%	795	285	36%
Swaziland	35	10	29%	105	5	5%	50	5	10%
Syria	44 470	2 390	5%	53 985	4 035	7%	13 380	1 265	9%
Tajikistan	240	205	85%	235	195	83%	450	325	72%
Tanzania	260	155	60%	280	165	59%	235	120	51%
Thailand	770	415	54%	700	455	65%	670	470	70%
Togo	760	55	7%	585	40	7%	550	50	9%
Tonga	10	10	100%	10	15	150%	20	15	75%
Tunisia	13 500	3 155	23%	10 235	2 495	24%	10 290	2 540	25%
Turkey	9 910	2 560	26%	8 100	2 190	27%	7 920	2 260	29%
Turkmenistan	90	30	33%	200	40	20%	165	30	18%
Uganda	685	210	31%	695	175	25%	470	140	30%
Uzbekistan	635	330	52%	480	405	84%	605	310	51%

	2014			2015			2016		
	Order	Return	Rate	Order	Return	Rate	Order	Return	Rate
Vietnam	3 195	1 865	58%	3 890	1 900	49%	4 210	1 465	35%
Western Sahara	20	5	25%	25	0	0%	20	5	25%
Yemen	235	70	30%	315	60	19%	205	40	20%
Zambia	140	80	57%	150	70	47%	135	75	56%
Zimbabwe	550	240	44%	560	225	40%	595	190	32%

Source: Eurostat data on the enforcement of immigration legislation (return orders).

ANNEX II. ASSUMPTIONS UNDERLYING CALCULATIONS

The main sizing parameter for compliance costs is a full-time equivalent (FTE). Average hourly labour cost is calculated based on the assumption that there are 220 working days per year and 8 working hours per day.

Table 33 Hourly labour costs of relevant stakeholders

	Average hourly labour cost	Number of staff affected	Source
European Commission staff: Project management level	€ 25,00	2	EES Impact Assessment
European Commission staff: Translation	€ 25,00	23	EES Impact Assessment
Migration and return authorities	€ 26,00	25 000	EES Impact Assessment
Consular staff	€ 26,00	25 000	EES Impact Assessment
ESP staff	€ 17,00	26 830	Internal assumptions

The number of affected ESPs has been estimated on the basis of research on the total global number of two of the largest ESPs in the market: VFS Global and TLS Contact. VFS Global has 2.453 applications centres worldwide, and TLS Contact has a network of 230 application centres worldwide.

For the assessment of investment costs required at consulates and ESPs, under topic 1-Sub-option A, it is assumed that between 100% of consulates and ESPs will be required to purchase a new scanning system. Under topic 1-sub-option B, it is assumed that between 20% to 30% of ESPs will require more than one additional scanner.

Table 34 Assumptions underlying the number of entities affected for the purposes of estimating investment costs

Procurement of visa processing infrastructure: Consulates	Unit cost	Number entities impacted
Document scanner	€ 1 000	1881 consulates 2683 ESPs
Document processing computer	€ 1 000	
Document scanning software	€ 500	
Total costs to consulates	**€ 2.500**	

For the assessment of the size of the problem related to topic 1 (the population of visa overstayers who are found in a return procedure and who lack a valid travel document), the study relied on a combination of open source data and data obtained during the consultation process. Member States' competent authorities were requested to provide data on the number of detected visa overstayers in their country who become subject to return proceedings and for which returns cannot be executed due to missing travel documents. Table 35 summarises the data collected and received which provide the basis for the calculations under Topic 1.

Table 35 Member State data on visa overstayers (2014 - 2016)

	Visas issued				Detected visa overstayers				
	2014	2015	2016	Average (2014 – 2016)	2014	2015	2016	Average (2014 – 2016)	Average % of visa overstayers out of visas issued
MS A	179 640	197 624	179 396	185 553	15 540	16 275	19 320	17 045	9,2%
MS B	2 062 501	2 997 410	2 839 401	2 633 104	19 224	18 145	14 967	17 445	0,7%
MS C	1 901 612	1 872 322	1 853 655	1 875 863	7 905	8 134	8 362	8 134	0,4%
MS D	1 345 405	842 276	949 399	1 045 693	9 417	9 417	9 417	9 417	0,9%
MS E	458 279	419 470	414 974	430 908	1 482	962	958	1 134	0,3%
MS F	1 106 797	946 674	1 065 212	1 039 561	4 801	6 011	7 701	6 171	0,6%
Average									**2,0%**

Source: Interviews with Member State stakeholders, European Commission Statistics on Schengen visas.

Based on the above, the following calculations have been made.

Table 36 Estimated number of overtayers and costs to Member States (2014-2016, average)

Estimation of the size of the problem in 2016		
Number visas issued (3 year average of 2014 – 2016 data)	14 643 364	
Number visa overstayers (2% of visa applicants)	293 837	
Number visa overstayers subject to return decision (90% of visa overstayers)	264 453	
Number visa overstayers in return proceedings without travel documents: (10% to 20% of visa overstayers subject to return proceedings)	Lower (10%)	Upper (20%)
	26 445	52 891
Costs incurred to obtain evidence of TCN's nationality (4 to 8 hours per case)	€ 3 173 438	€ 12 693 752
Number of cases not executed due to missing travel documents (60% to 75% of all cases involving missing visa overstayers without travel documents	Lower (60%)	Upper (75%)
	15 867	39 668
Lost costs on returns not implemented	€ 11 424 377	€ 33 321 099
Costs incurred from each day of delay in return proceedings, per TCN	€ 1 750	
Costs incurred from delays in return proceedings during the verification phase (max 14 days)	Lower	Upper
	€ 46 279 304	€ 92 558 608

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

Table 37 Estimated number of overtayers and costs to Member States in 2019

Future evolution of the problems in 2019		
Number visas issued in 2019	17 600 000	
Number visa overstayers (2% of visa applicants)	352 000	
Number visa overstayers subject to return decision (90% of visa overstayers)	316 800	
Number visa overstayers in return proceedings without travel documents: (10% to 20% of visa overstayers subject to return proceedings)	Lower (10%)	Upper (20%)
	31 680	63 360
Costs incurred to obtain evidence of TCN's nationality (4 to 8 hours per case)	€ 3 801 600	€ 15 206 400
Number of cases not executed due to missing travel documents (60% to 75% of all cases involving missing visa overstayers without travel documents	Lower (60%)	Upper (75%)
	19 008	47 520
Lost costs on returns not implemented	€ 13 685 760	€ 39 916 800

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

ANNEX III. TOPIC 1 COST CALCULATIONS

The tables below present the detailed calculations that were made for the estimation of one-off and on-going administrative and compliance costs as presented in chapter 3.

One-off / investment costs

Table 38 Awareness raising and training costs (also relevant to topic 2)

Activity	Number staff	Time per activity	Labour costs	Total costs €
Develop awareness raising materials	-	-	-	€ 60 000
Develop training content	2	10 days	€ 200/day	€ 4 000
Translation costs	23	1 day	€ 200/day	€ 4 600
Training costs consulates	25 000	5 minutes	€ 26/hour	€ 54 167
Training costs ESPs	26 830	5 minutes	€ 17/hour	€ 38 009
TOTAL				**€ 160 776**

Table 39 Summary of estimated investment costs for document scanners (Sub-options A & B)

Stakeholder impacted	Sub-option A: Scanning equipment costs		Sub-option B: Scanning equipment costs	
	Lower	Upper	Lower	Upper
Consulates	€ 4 702 500	€ 4 702 500	€ 4 702 500	€ 4 702 500
ESPs	€ 6 707 500	€ 6 707 500	€ 7 244 100	€ 7 512 400
TOTAL	**€ 11 410 000**	**€ 11 410 000**	**€ 11 946 600**	**€ 12 214 900**

Table 40 Cost overview of expected VIS system developments: Option 1

Item	Cost	Comment
Operational cost current VIS	€35 000 000	
Operational cost 10 year retention	€70 000 000	Assumed linear scaling
Investment cost additional servers	€5 000 000	Very rough estimate based on smart borders study
Investment VIS storage (Sub-option A: biographic page) + 1100TB	€1 320 000	Cost production, CU only
Investment VIS storage (Sub-option B: full document) + 4160TB	€4 992 000	Cost production, CU only

The following table compiles the 2016 applications per MS and the expected number of entries with a 5 year retention period (and with a 10% growth of applications factored in), which are used to support the calculation of one-off investment costs resulting from Option 2 in Topic 1. The one-off investment costs are estimated at a range between 3€ and 5€ per database entry, as a rough order of magnitude analysis. The recurring operational costs between 0,20€ and 0,40€ per entry. In addition, there is a minimum setup cost, estimated at € 0,5 million for the one-off investment and € 0,1 million for the operational cost. Also not taken into account are costs for the interoperability between the systems and the required additional bandwidth.

Table 41 Estimated cost of national Schengen visa systems: Option 2

MS	Applications in 2016	Estimated size of the MS Schengen visa database	Estimated one-off investment cost	Recurring operational cost
France	3 265 919	17 962 555	€ 50 - 85 m	€ 3,5 - 7 m
Germany	2 004 235	11 023 293	€ 30 - 55 m	€ 2 - 4,5 m
Italy	1 806 938	9 938 159	€ 30 - 50 m	€ 2 - 4 m
Spain	1 583 848	8 711 164	€ 26 - 43 m	€ 1,5 - 3,5 m
Poland	1 096 465	6 030 558	€ 18 - 30 m	€ 1 - 2,5 m
Greece	986 032	5 423 176	€ 16 - 27 m	€ 1 - 2 m
Netherlands	558 101	3 069 556	€ 9 - 15 m	€ 0,5 - 1 m
Finland	550 046	3 025 253	€ 9 - 15 m	€ 0,5 - 1 m
Czech Republic	48 992	269 456	€ 8 - 13 m	€ 0,5 - 1 m
Switzerland	460 653	2 533 592	€ 7 - 12 m	€ 0,5 - 1 m
Lithuania	421 143	2 316 287	€ 7 - 12 m	€ 0,5 - 1 m
Hungary	295 226	1 623 743	€ 5 - 8 m	€ 0,25 - 0,5 m
Austria	268 388	1 476 134	€ 5 - 8 m	€ 0,25 - 0,5 m
Sweden	227 005	1 248 528	€ 4 - 6 m	€ 0,25 - 0,5 m
Belgium	219 687	1 208 279	€ 4 - 6 m	€ 0,25 - 0,5 m
Portugal	204 596	1 125 278	€ 3 - 5 m	€ 0,25 - 0,5 m
Norway	188 737	1 038 054	€ 3 - 5 m	€ 0,25 - 0,5 m
Latvia	165 814	911 977	€ 3 - 5 m	€ 0,25 - 0,5 m
Denmark	145 143	798 287	€ 2 - 4 m	€ 0,15 - 0,3 m
Estonia	122 872	675 796	€ 2 - 4 m	€ 0,15 - 0,3 m
Slovakia	62 472	343 596	€ 1 - 2 m	€ 0,1 - 0,2 m
Malta	27 767	152 719	€ 0,5 - 1 m	€ 0,1 - 0,2 m
Slovenia	25 876	142 318	€ 0,5 - 1 m	€ 0,1 - 0,2 m
Luxembourg	9 902	54 461	€ 0,5 - 1 m	€ 0,1 - 0,2 m
Iceland	5 771	31 741	€ 0,5 - 1 m	€ 0,1 - 0,2 m
			€ 244 - 414 m	**€ 16 - 33 m**

Source: Ecorys calculations based on data provided during stakeholder interviews and Schengen visa statistics of the European Commission, DG HOME website.

On-going costs

The following two tables present the additional costs incurred by ESPs and Consulates to comply with the policy options.

Table 42 Additional workload to Consulates and ESPs: Sub-option A

Sub-option A: Bio-data page only	Number applications	Labour costs	Additional time (per applic)	Total costs €
Additional scanning workload				
ESPs	15 840 000	€ 17 / hour	10 seconds	750 000
Consulates	1 760 000	€ 26 / hour	10 seconds	125 000
Additional workload to enter data into the VIS				
ESPs	15 840 000	€ 17 / hour	60 seconds	4 500 000
Consulates	17 600 000	€ 26 / hour	30 seconds	3 750 000
Total costs to ESPs				**5 250 000**
Total costs to consulates				**3 875 000**
Total costs (all)				**9 125 000**

Table 43 Additional workload to Consulates and ESPs: Sub-option B

Sub-option B: All pages	Number applications	Labour costs	Additional time (per applic)	Total costs €
Additional scanning workload				
ESPs	15 840 000	€ 17 / hour	160 seconds	12 000 000
Consulates	1 760 000	€ 26 / hour	160 seconds	2 000 000
Additional workload to enter data into the VIS				
ESPs	15 840 000	€ 17 / hour	60 seconds	4 500 000
Consulates	17 600 000	€ 26 / hour	30 seconds	3 750 000
Total costs to ESPs				**5 750 000**
Total costs to consulates				**16 500 000**
Total costs				**22 250 000**

The following table presents the calculations underlying the estimated costs incurred by TCNs from the proposed policy options.

Table 44 Total estimated opportunity costs for TCNs (both options)

Sub-option	No. applications	Opportunity costs	Time spent per application	Opportunity costs (total)	Cost per applicant
Bio page only	17 600 000	€ 31/hour	70 seconds	10 608 889	€ 0,60
All pages	17 600 000	€ 31/hour	220 seconds	33 342 222	€ 1,89

Quantification of economic benefits

The following tables present the underlying calculations for estimating the cost savings to consulates and Member States' authorities from the reduced workload related to supporting document assistance requests.

Table 45 Reduced workload due to fewer request handling per year: Option 1

Option 1: Centralised storage	Time saved*	Labour costs (per hour)	Costs saved	
Activity			Low	High
Obtaining a copy of the TCN-VH's travel document from issuing Embassy (MS authority)	4 - 8 hours	€ 30	€ 3 173 438	€ 12 693 752
Retrieving a copy of the TCN-VH's travel document (Consulates)	1 - 2 hours	€ 26	€ 687 578	€ 2 750 313
Total costs to MS			**€ 3 861 016**	**€ 15 444 065**

*compared to the current situation.

Table 46 Reduced workload due to fewer request handling per year: Option 2

Option 2: Decentralised storage	Time saved*	Labour costs (per hour)	Costs saved	
Activity			Low	High
Obtaining a copy of the TCN-VH's travel document from issuing Embassy (MS authority)	3 ¾ - 7 ¾ hour s	€ 30	€ 2 975 098	€ 12 297 072
Retrieving a copy of the TCN-VH's travel document (Consulates)	1 - 2 hours	€ 26	Same as option 1	Same as option 1
Total costs to MS			**€ 3 662 676**	**€ 15 047 385**

*compared to the current situation.

The following table presents the estimated cost savings to Member States from implementing a higher proportion of return decisions, also taking into account the efficiency gains realised from the reduced workload to obtain the travel document copies (see previous tables).

Table 47 Estimated benefits from implementing a higher proportion of returns, in less time (efficiency gains (Option 1 and Option 2)

Impact on the implementation of returns: Additional returns of TCNs without travel documents						
Estimated number of returns not implemented without TDs		% improvement	Number of additional returns: Scenario A (50% improvement)		Number of additional returns: Scenario B (75% improvement)	
Lower	Upper		Lower	Upper	Lower	Upper
15 867	39 668	50% - 75%	+ 7 934 TCNs returned	+ 19 834 TCNs returned	+ 11.900 TCNs returned	+ 29 751 TCNs returned
% of TCN-VH returns			6,3%	15,8%	9,5%	23,7%
Option 1: Cost savings from implementing a higher proportion of returns, in less time (efficiency gain)			€ 6 664 220	€ 21 420 706	€ 9 996 330	€ 32 131 060
Option 2: Cost savings from implementing a higher proportion of returns, in less time (efficiency gain)			€ 6 604 718	€ 21 271 951	€ 9 907 077	€ 31 907 927

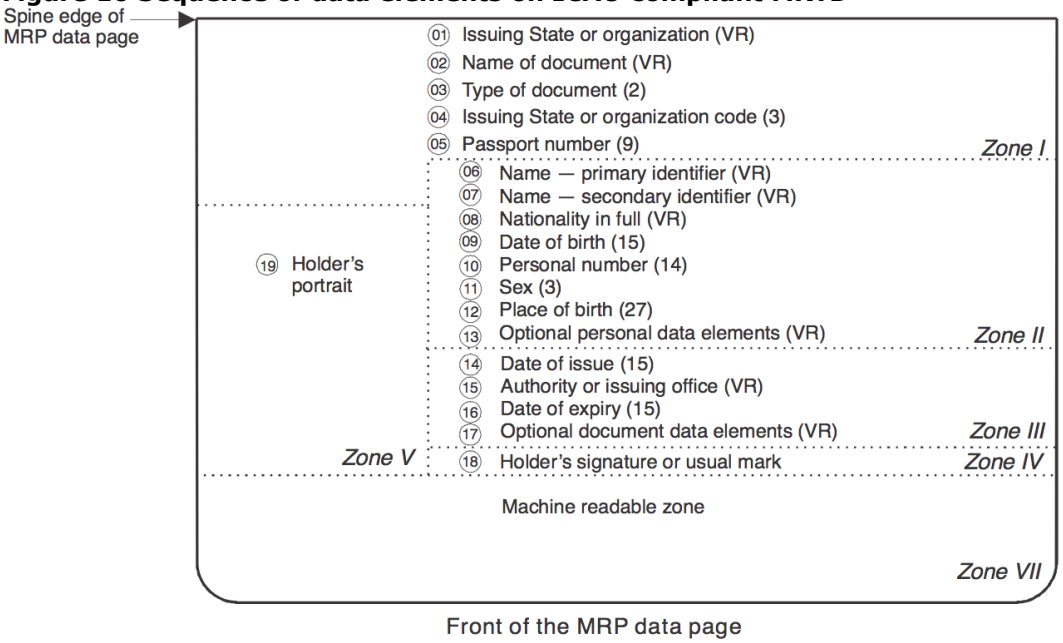
The following table presents the estimated cost savings from the decrease in daily costs incurred during the process of obtaining proof of evidence of nationality.

Table 48 Estimated benefits related to cost savings from reduced number of days delayed during the process of verifying TCNs' nationality

Impact from delay reductions during the process of verifying TCNs' nationality						
Option	Daily cost of delay	Number TCNs affected (overstayers without docs)		Change in number of days delayed	Total cost savings	
		Lower	Upper		Lower	Upper
Option 1	€ 125	26 445	52 891	Reduced by max. 14 days	€ 46 279 304	€ 92 558 608
Option 2				Reduced by max. 13 ½ days	€ 44 626 472	€ 89 252 943

ANNEX IV. ICAO SPECIFICATIONS FOR MRPS AND OTHER SIZE 3 MRTDS

Figure 10 Sequence of data elements on ICAO compliant MRTD[215]



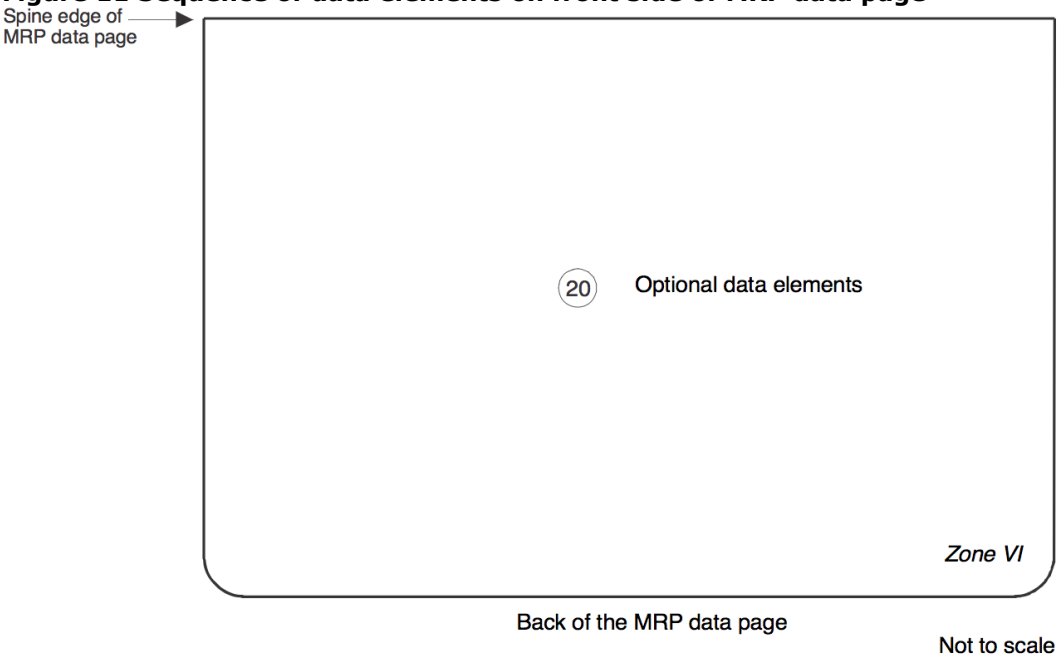
Accompanying notes:

Note 1.— (VR) = variable number of characters in field.

Note 2.— (n) = the maximum or fixed number of characters allowed in the field.

Note 3.— O = indicates the field number.

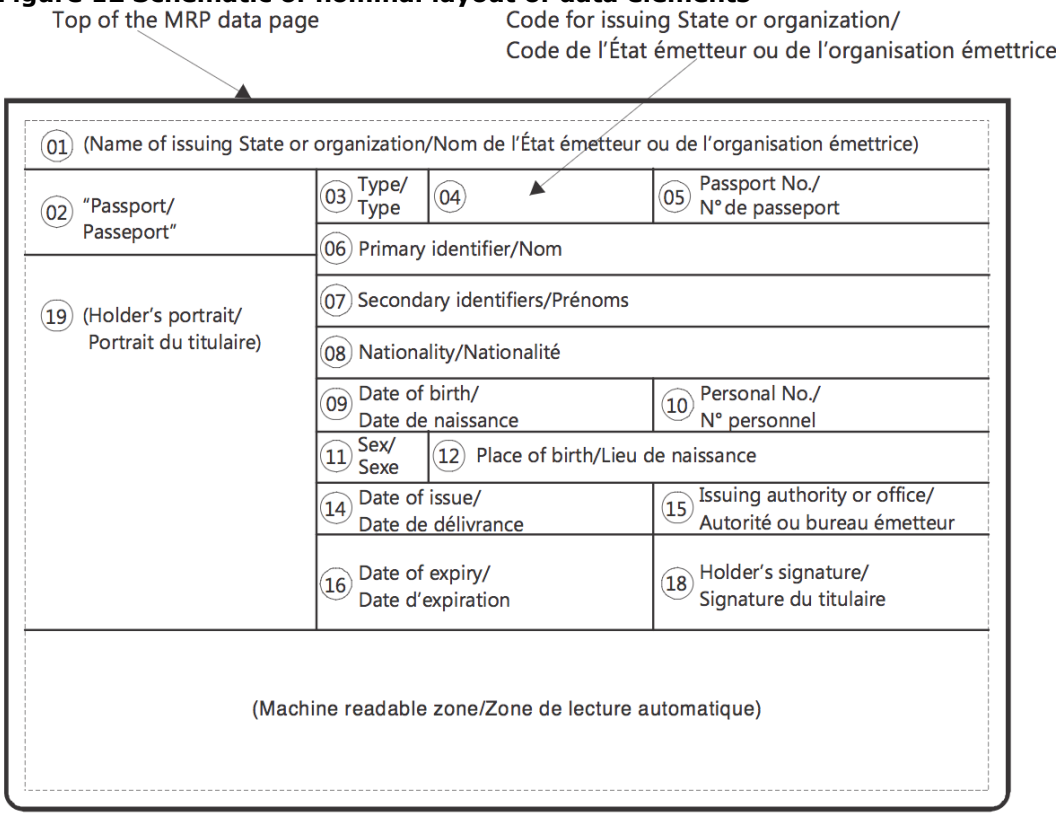
Figure 11 Sequence of data elements on front side of MRP data page[216]



[215] ICAO, Document 9303: MRTDs. Part 4, 2015. https://www.icao.int/publications/Documents/9303_p4_cons_en.pdf.

[216] ICAO, Document 9303: MRTDs. Part 4, 2015. https://www.icao.int/publications/Documents/9303_p4_cons_en.pdf.

Figure 12 Schematic of nominal layout of data elements[217]



Not to scale

Note 1.— Optional data Fields 13 and 17 are excluded in the recommended practice.
Note 2.— Captions corresponding to the field names printed in the above illustration, except those within parentheses, shall be printed on the MRP data page.

[217] ICAO, Document 9303: MRTDs. Part 4, 2015. https://www.icao.int/publications/Documents/9303_p4_cons_en.pdf.

ANNEX V. TERMINOLOGY

Definitions used throughout the study will be in line with:

- Regulation (EC) No 767/2008 of the European Parliament and of the Council of 9 July 2008 concerning the Visa Information System (VIS) and the exchange of data between Member States on short-stay visas (VIS Regulation);
- Regulation (EC) No 2017/2226 of the European Parliament and of the Council establishing an Entry/Exit System (EES) to 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 and determining the conditions for access to the EES for law enforcement purposes and amending Regulation (EC) No 767/2008 and Regulation (EU) No 1077/201.

Definitions of some of the key concepts related to the two topics under investigation are:

Irregular immigration

The immigration of a person to a new place of residence using irregular or illegal means, without valid documents or carrying false documents. Source: International Labour Organization irregular migrant.

Irregular stay

The presence on the territory of a Schengen State of a non-EU national who does not fulfil, or no longer fulfils, the conditions of entry as set out in the Schengen Borders Code (Regulation 562/2006), or other conditions for entry, stay or residence in an EU State. Source: Directive 2008/115/EC.

Visa overstaying

Overstaying the visa means a person stays longer than the authorised period of stay as granted on the visa in the Schengen zone[218]. There are some possible consequences attached, such as getting an entry ban to Schengen area countries up to 5 years.[219]

Identification

The process of establishing the validity of a claimed identity through a fingerprint search against multiple sets of data (one-to-many check). Source: Regulation (EC) No 767/2008.

Verification

The process of comparison of sets of data to establish the validity of a claimed identity (one-to-one check). Source: Regulation (EC) No 767/2008.

Child trafficking

Child trafficking is defined as human trafficking concerning children under the age of 18. Article 2 par.1 of the Anti-trafficking Directive defines trafficking in human beings as: "The recruitment, transportation, transfer, harbouring or reception of persons, including the exchange or transfer of control over those persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation".

[218] https://www.schengenvisainfo.com/tourist-schengen-visa/.
[219] Directive 2008/115/EC of the European Parliament and of the Council of 16 December 2008 on common standards and procedures in Member States for returning illegally staying third-country nationals.

Children are a vulnerable group to trafficking for all forms of exploitation, including sexual exploitation, labour exploitation forced begging, criminal activity, forced marriage, sham marriage, for adoption.[220] Directive 2011/36/EU further defines a position of vulnerability as occurring " when the person has no real or acceptable alternative but to submit to the abuse involved." (…) "Exploitation shall include, as a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, including begging, slavery or practices similar to slavery, servitude, or the exploitation of criminal activities or the removal of organs.[221] This is almost identical to the definition in the UN protocol on trafficking in persons."

Missing children

Children on the move are at high risk to go missing.[222] A typology of missing children has been developed in a previous EU study by Ecorys[223]. According to this study, sub-typologies of missing children are:

- Runaways;
- Abduction by a third person;
- Parental abduction;
- Missing unaccompanied migrant minors;
- Lost, injured or otherwise missing children (in possession of visa).

Child abduction

Child Abduction is the wrongfully removing or retaining, detaining or concealing of a child or baby. There are two types of child abduction: parental child abduction and abduction by a stranger. In most cases, children are abducted by parents or family members to another country without the permission of the other parent or in violation of a court order, or a parent fails to return with the child. Consent of both parents is needed to apply for a visa.

Unaccompanied minors

A non-EU national or stateless person below the age of 18 who arrives on the territory of the EU States unaccompanied by an adult responsible for him/her, and for as long as s/he is not effectively taken into the care of such a person, including a minor who is left unaccompanied after s/he has entered the territory of the EU States, (Asylum acquis, e.g. Qualification Directive) for example:

- to escape from wars and conflicts, poverty or natural catastrophes, discrimination; or
- persecution or serious harm, i.e. international protection (asylum);
- in the expectation of a better life, following economic and aspirational reasons;
- to join family members;
- as victims of trafficking in human beings destined for exploitation, such as sexual exploitation and forced labour or services.

Children in migration

The term 'children in migration' covers all third country national children who migrate from their country of origin to and within the territory of the EU in search of survival, security, improved standards of living, education, economic opportunities, protection from exploitation and abuse, family reunification or a combination of these factors. They may travel with their family or independently (unaccompanied child) or with an extended family or a non-family member (separated child).

[220] Ecorys (2015). Study on high-risk groups for trafficking in human beings, see https://ec.europa.eu/anti-trafficking/node/4921.
[221] Article 2(3) Directive 2011/36/EU.
[222] Unicef (2017). A child is a child. Protecting children on the move from violence, abuse and exploitation.
[223] Ecorys (2013). Study on missing children: Mapping, data collection and statistics on missing children in the European Union.

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