Council of the European Union
General Secretariat

WORKING PAPER

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MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Visa Working Party
Subject:	Interoperability and the visa procedure - Possible implications of Interoperability on the daily work of the consulates - Presentations

Delegations will find attached the presentations made by the Commission services, eu-LISA and the Presidency on the abovementioned subject at the Visa Working Party meeting on 10 July 2019.

The interoperability between EU information systems

Presentation in the VISA WP

10 July 2019

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Unit B3 – Information Systems for Borders and Security

EU Information systems & Interoperability

European Commission

- **Interoperability proposals:** Decembre 2017

- The Regulations were adopted on 20 May 2019 and published on 22 May 2019 **(Regulations (EU) 2019/817 and 2019/818)**

- Interoperability between EU information systems operated at the EU central level.

- Interoperability is about making the systems **talk to each other and work together** in a smarter way

- Each system has its own objectives, purposes, legal bases, rules, user groups and institutional context. Interoperability does not change that.

SIS EES VIS ETIAS Eurodac ECRIS-TCN
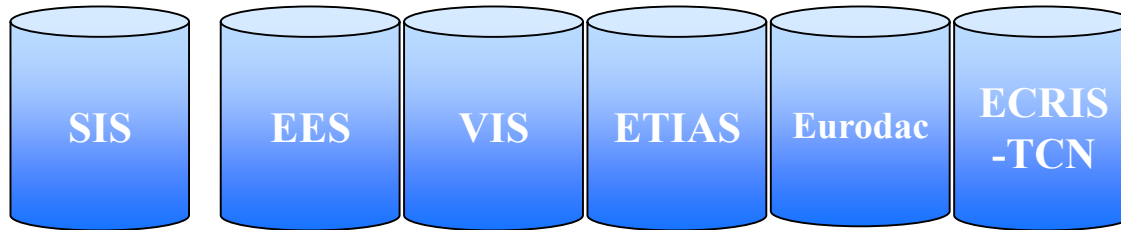
EU Information systems & Interoperability
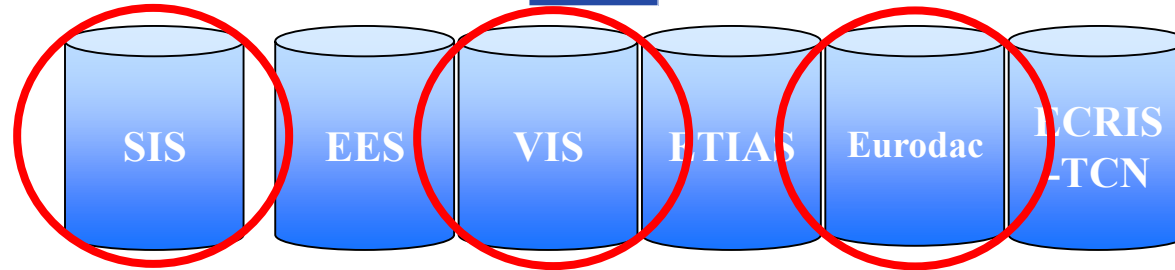
The three existing centralised information systems so far are:

- The Schengen Information System (SIS) with a broad spectrum of alerts on persons (refusals of entry or stay, EU arrest warrant, missing persons, judicial procedure assistance, discreet and specific checks) and objects (including lost, stolen and invalidated identity or travel documents);

- the Visa Information System (VIS) with data on short-stay visas; and

- the Eurodac system with fingerprint data of asylum applicants and third-country nationals who have crossed the external borders irregularly or who are illegally staying in a Member State.

EU Information systems & Interoperability

SIS   EES   VIS   ETIAS   Eurodac   ECRIS-TCN
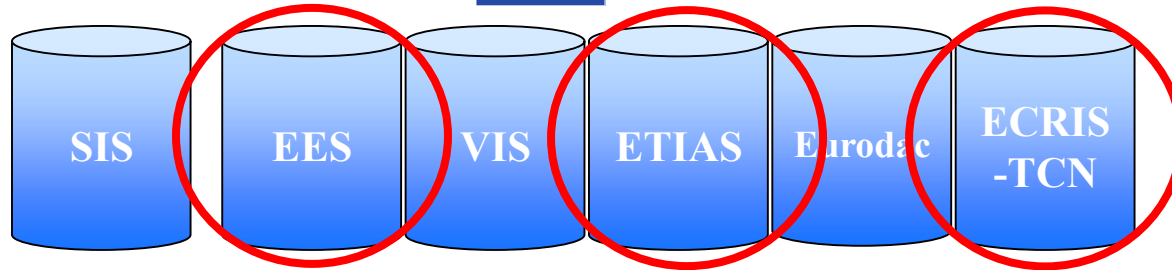
In addition to these existing systems, the Commission proposed in 2016-2017 three new centralised EU information systems:

- the Entry/Exit System (EES), which will replace the current system of manual stamping of passports and will electronically register the name, type of travel document, biometrics and the date and place of entry and exit of third-country nationals visiting the Schengen area for a short stay;

- the European Travel Information and Authorisation System (ETIAS), which will be a largely automated system that would gather and verify information submitted by visa-exempt third-country nationals ahead of their travel to the Schengen area; and

- the proposed European Criminal Record Information System for third-country nationals (ECRIS-TCN system), which would be a system for exchanging information on previous convictions handed down against third-country nationals by criminal courts in the EU.

Interoperability

The specific objectives of the 'interoperability' proposals are to:

1. ensure that end-users have fast, seamless, systematic and controlled access to the information that they need to perform their tasks;

2. detect multiple identities linked to the same set of biometric data;

3. facilitate identity checks of third-country nationals, on the territory of a Member State, by police authorities; and

4. facilitate and streamline access by law enforcement authorities to non-law enforcement information systems at EU level

Those objectives are achieved using several technical components.
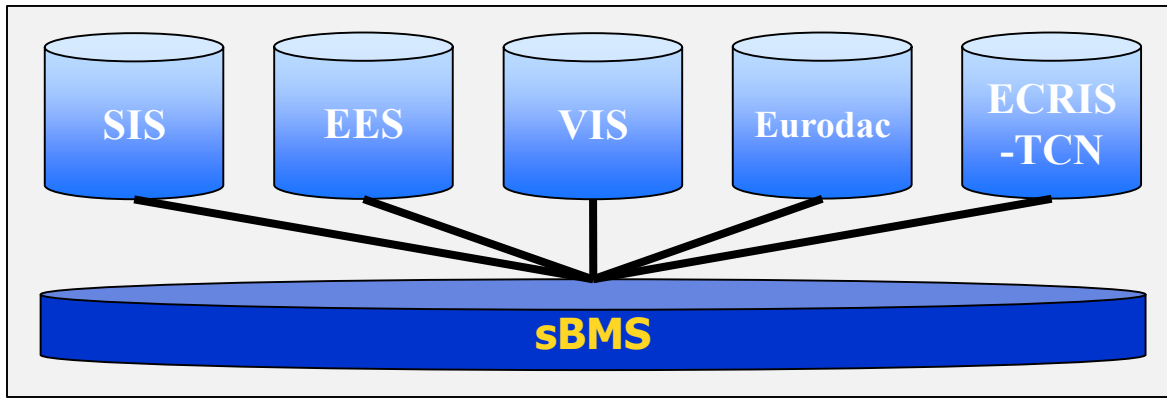
European Search Portal
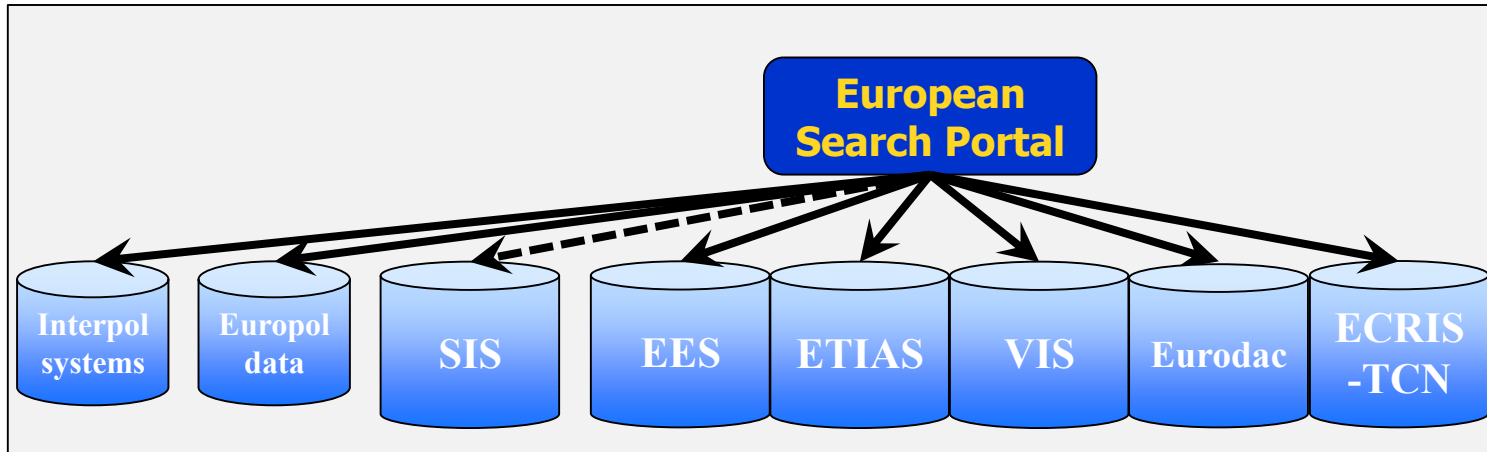
To enable end-users (or central systems) to simultaneously query several systems in parallel.

End-user access rights are determined and enforced by the underlying systems!

The ESP is a message broker that will choose the systems to be queried based on user credentials.
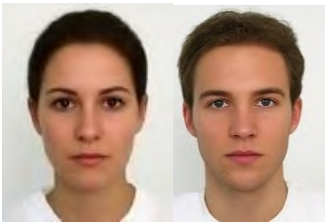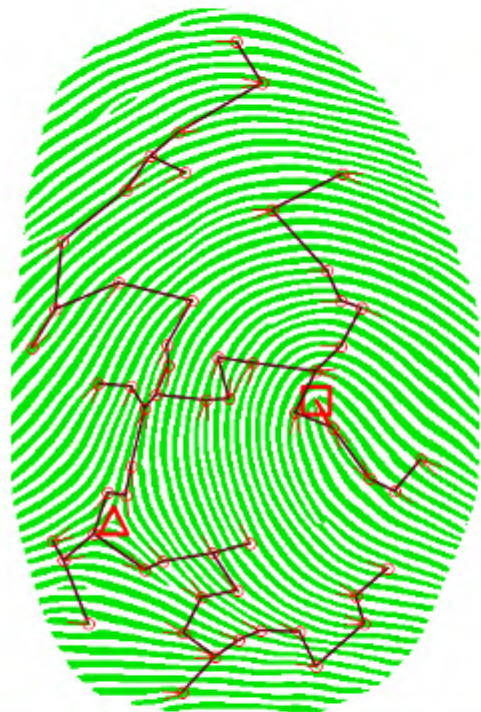
Shared BMS
A back-end infrastructure component

A shared Biometric Matching Service providing a fingerprint & facial image search service to cross-match biometric data present on all central systems.

The sBMS contains biometric templates only!

Common Identity Repository (for TCNs)
A front-end infrastructure component

European Commission

- ➢ Name, surname, gender, data of birth.
- ➢ Travel document data.
- ➢ Biometric data

→ the "identity triangle"

Common Identity Repository for TCNs

| EES | ETIAS | VIS | Eurodac | ECRIS-TCN |

sBMS
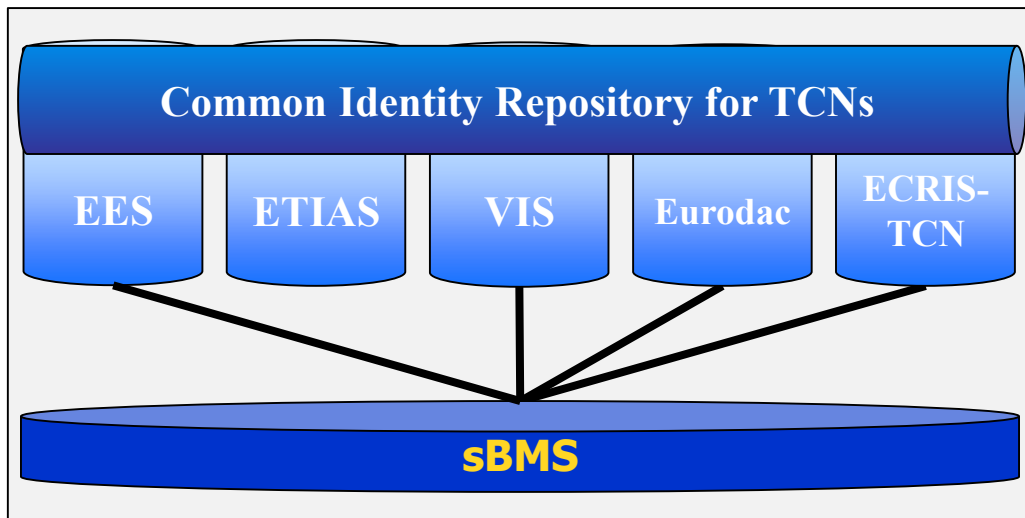
- The Common Identity Repository would combine biographical identities of persons (name, gender, date of birth)
- The common identity repository for third-country nationals would enable identification of TCNs without (proper) travel documents and is key for the functioning of the MID

What data is stored where?
(some examples)

European Commission

Common Identity Repository for TCNs
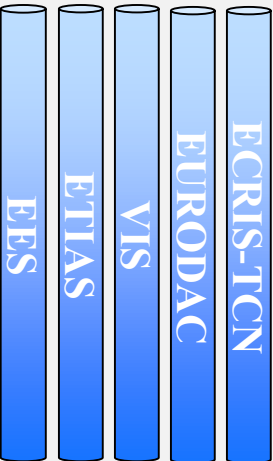
EES · ETIAS · VIS · EURODAC · ECRIS-TCN

Shared BMS

• Frank SMITH • M • 16/06/1946 • USA 123456789	• Frank T. SMITH • M • 16/06/1946 • USA 123456789	• Lea Tolstoy • F • 08/10/1952 • RUS 76543210	• Fulan Al Fulani • M • 01/01/1991 • SY ?????	• Salah Abdeslam • M • 15/09/1989 • MAR
• Entry Rome, IT 23/05/2018 • Exit Palermo, IT 27/05/2017 • Entry Warsaw, PL 05/07/2017 • Exit Hamburg, DE 08/07/2017	• Born in New York (US) • Address Washington • Professional visit • No major diseases • Sufficient funds • Health insurance: xyz	• Born in Tula (RU) • Address Moscow Tourism visit • No invitation • Sufficient funds • Port of first entry: Berlin, DE • Multiple-Entry visa	• ?	• Belgium • Terrorism
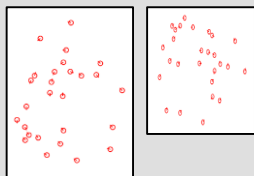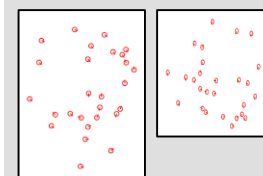
Multiple-Identity Detector
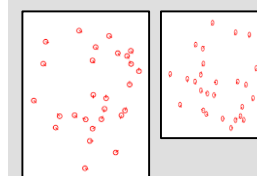

European Commission
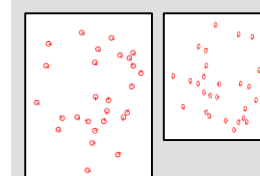
- To allow linking identities present in different systems, the Multiple Identity Detector will simultaneously query the EU information systems;
  - Detect a possible link
  - Determine the type of link
  - Store the link for future use

Common Identity Repository

SIS ↔ Multiple-Identity Detector — EES — ETIAS — VIS — Eurodac — ECRIS-TCN

Shared BMS
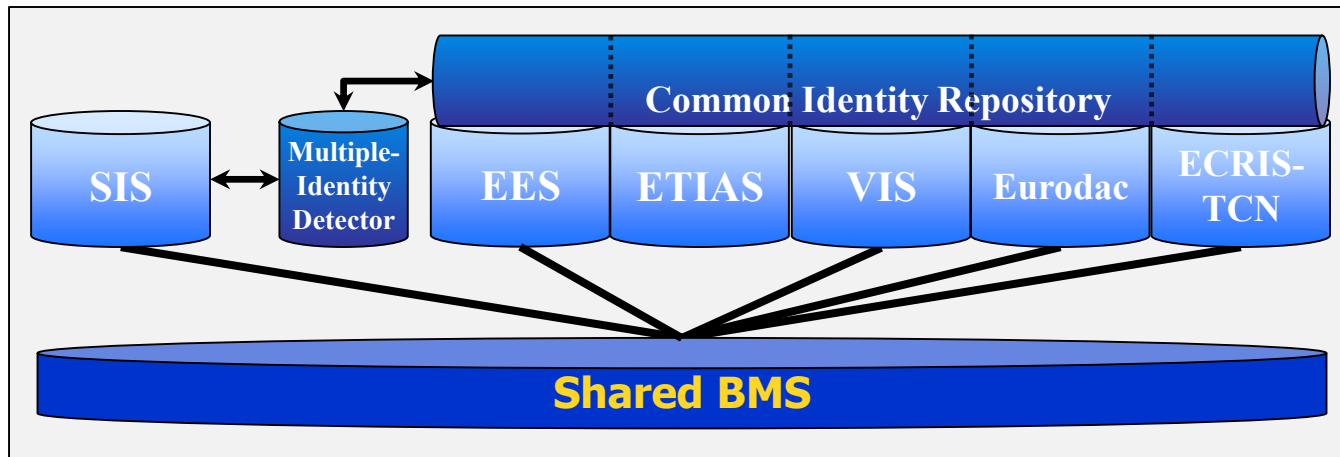
Trump, Donald

Pérez Martínez, Adrián

Lee, Song

GREEN

WHITE

RED

Trump, Donald

Pérez Martínez, Adrián

Pérez Martínez, Adrián

MID links

MID links are 'colour-coded' to indicate the following situations:

YELLOW:
- A link may exist, manual verification will lead to maintaining the link with a different colour

GREEN:
- Same or very similar biographical identities with different biometric data

RED:
- Different biographical identities are linked to the same biometric data and manual verification determines that this is unlawful (identity fraud)

WHITE:
- Same biometric data and same (or very similar) biographical data (same person in multiple systems)
- Same biometric data but lawfully differing biographical data after manual verification

Examples:

YELLOW:
- John Irving (SIS) & Jonathan P. Irving (VIS) are probably the same person

GREEN:
- Donald Trump (SIS) & Donald Trump (VIS) are two different persons

RED:
- Richard Rinkens (SIS) & Song Lee (EDAC) are the same person using different IDs

WHITE:
- Jean-Philippe Smet & Johnny Hallyday are legally different identities for the same person

Multiple-Identity Detector Consular implications
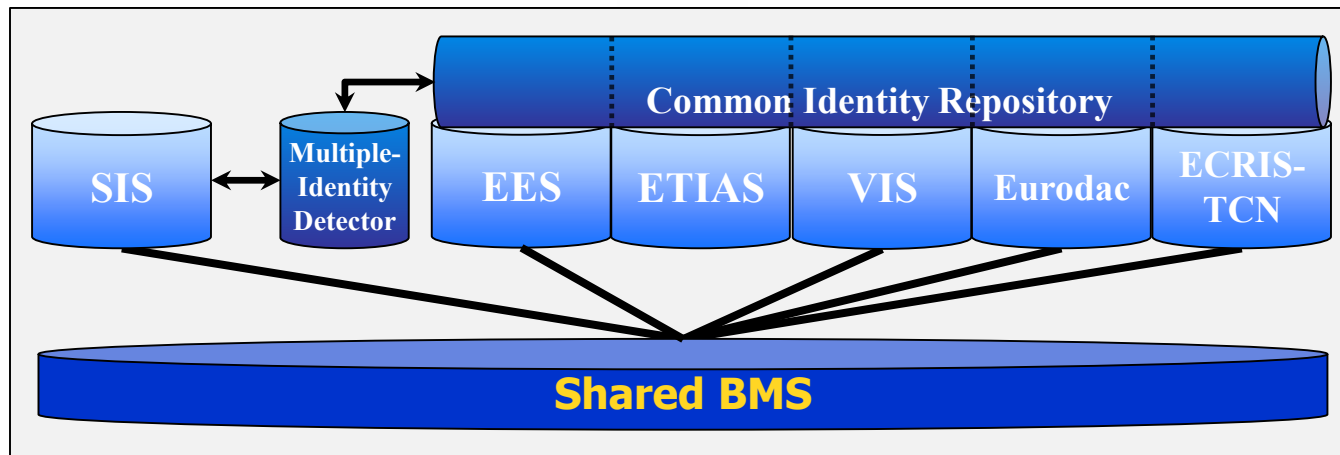
- Detailed rules on when and how the comparison of data results in a yellow link are yet to be defined.

- General rule on who is responsable for the multiple identity detection:
  - ➢ The authority that is adding the data resulting in a yellow link

- Specific rule for Article 26, 32, 34 and 36 SIS alerts:
  - ➢ The SIRENE Bureau of the MS that created the alert

- There are specific limitations to the general rule of information on the existance of a link for reasons of security, public order, to prevent crime and guarantee no investigations can be jeopardised.

Q&A

The information in this presentation is marked as:

Protection level   **LIMITED BASIC**

Releasable to   Information Stakeholders

Handling instructions:
- Distribution on a need-to-know basis.
- Not to be released outside of the information stakeholders.
- Not for publication.

Building Interoperability

State of Play
Changes to VISA and Border Control Authorities
Planning

Transformation of Border Management & Internal Security

Shift from physical to virtual

**Very fast convergence between
border management, internal security and migration management**

Interoperability: break the silos

EES - Developments on the Way to Interoperability

- EES development and new capabilities
- Enhancement of VIS and BMS to support EES volume projections. Extension and creation of interfaces to support new EES processes and data flows
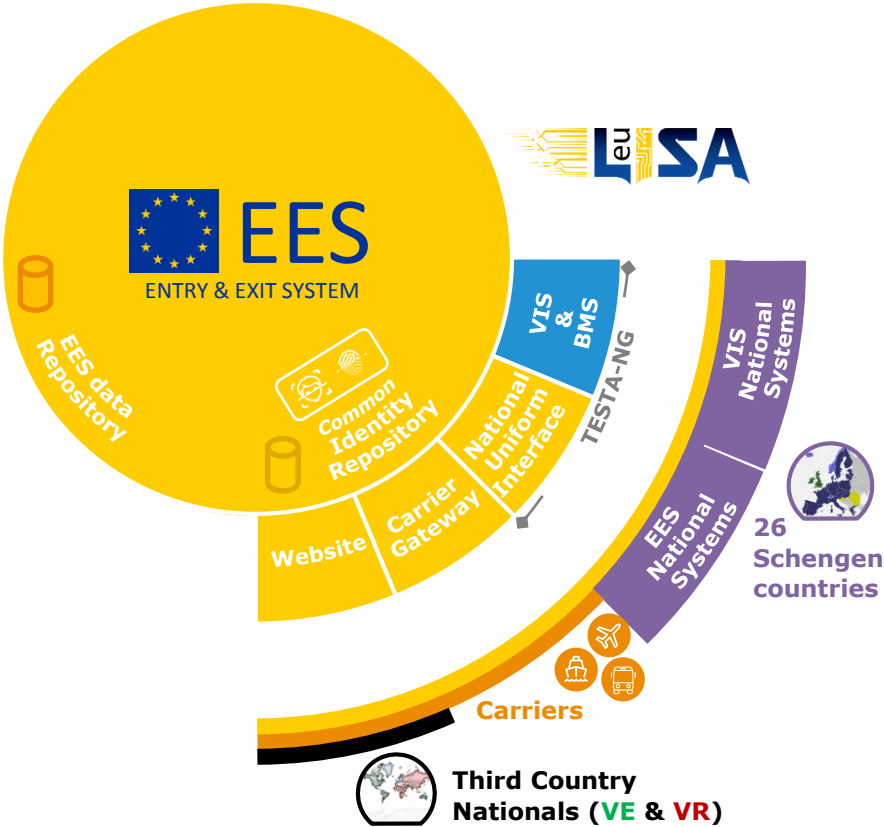
ETIAS - Developments on the Way to Interoperability

ETIAS development and new capabilities (including ETIAS screening engine)

EES implementation of incremental ETIAS specific capabilities & functionalities

Enhancement of existing systems to support ETIAS volume projections and extension of existing, or creation of, interfaces to support new ETIAS processes and data flows

Commercially available services
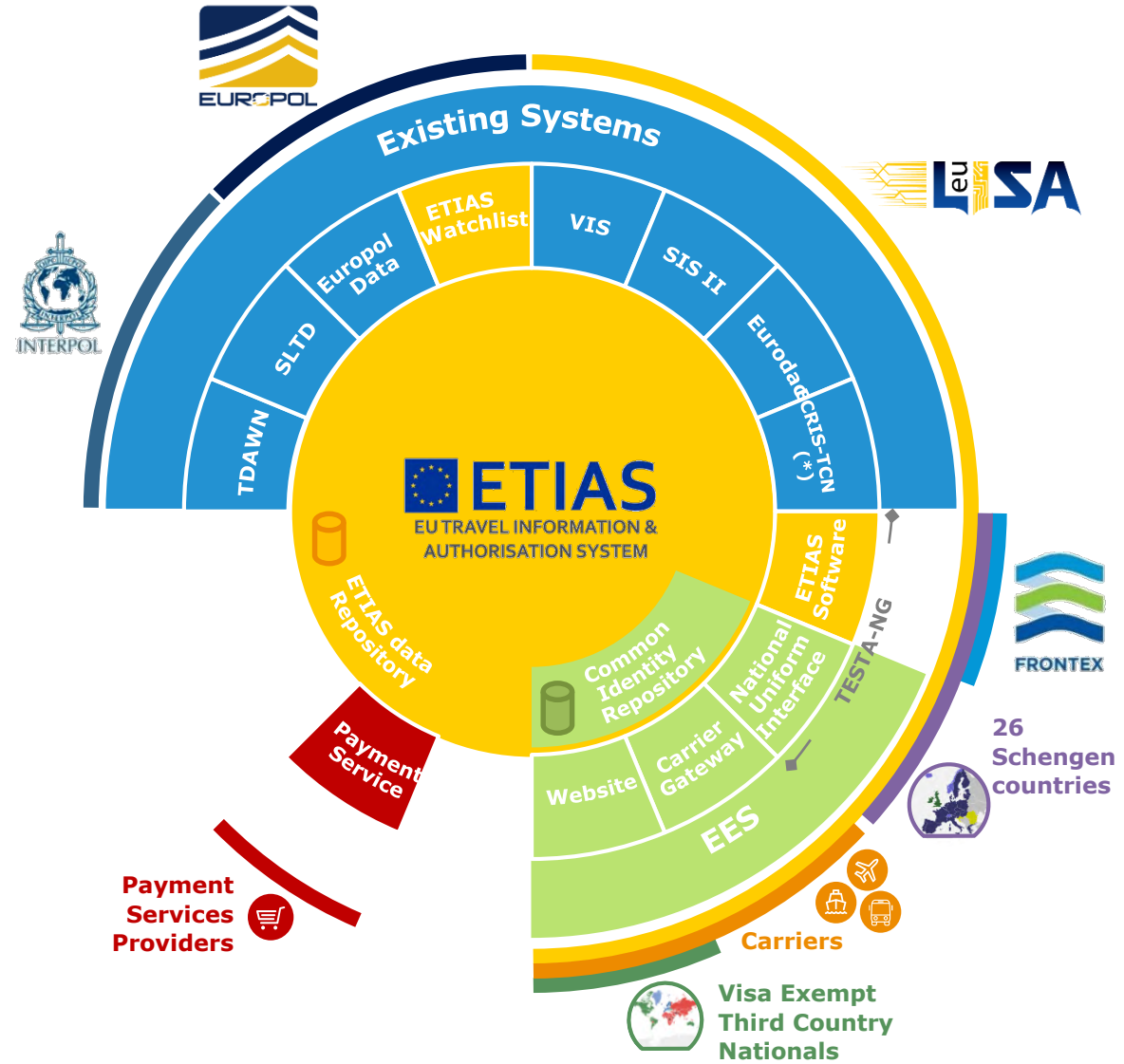
VIS - Developments on the Way to Interoperability

- Changes to the core VIS system

- Development & implementation of incremental VIS specific capabilities & functionalities in re-usable assets and interfaces

- Enhancement of existing systems to support VIS additional volume and, where required, extension of existing interfaces to support new VIS process and data flows

- Interoperability components providing:
  - An interface to other systems ESP (ETIAS)
  - A common identity repository (EES/ETIAS)
  - A shared biometric matching system
  - Multiple identity detection capabilities
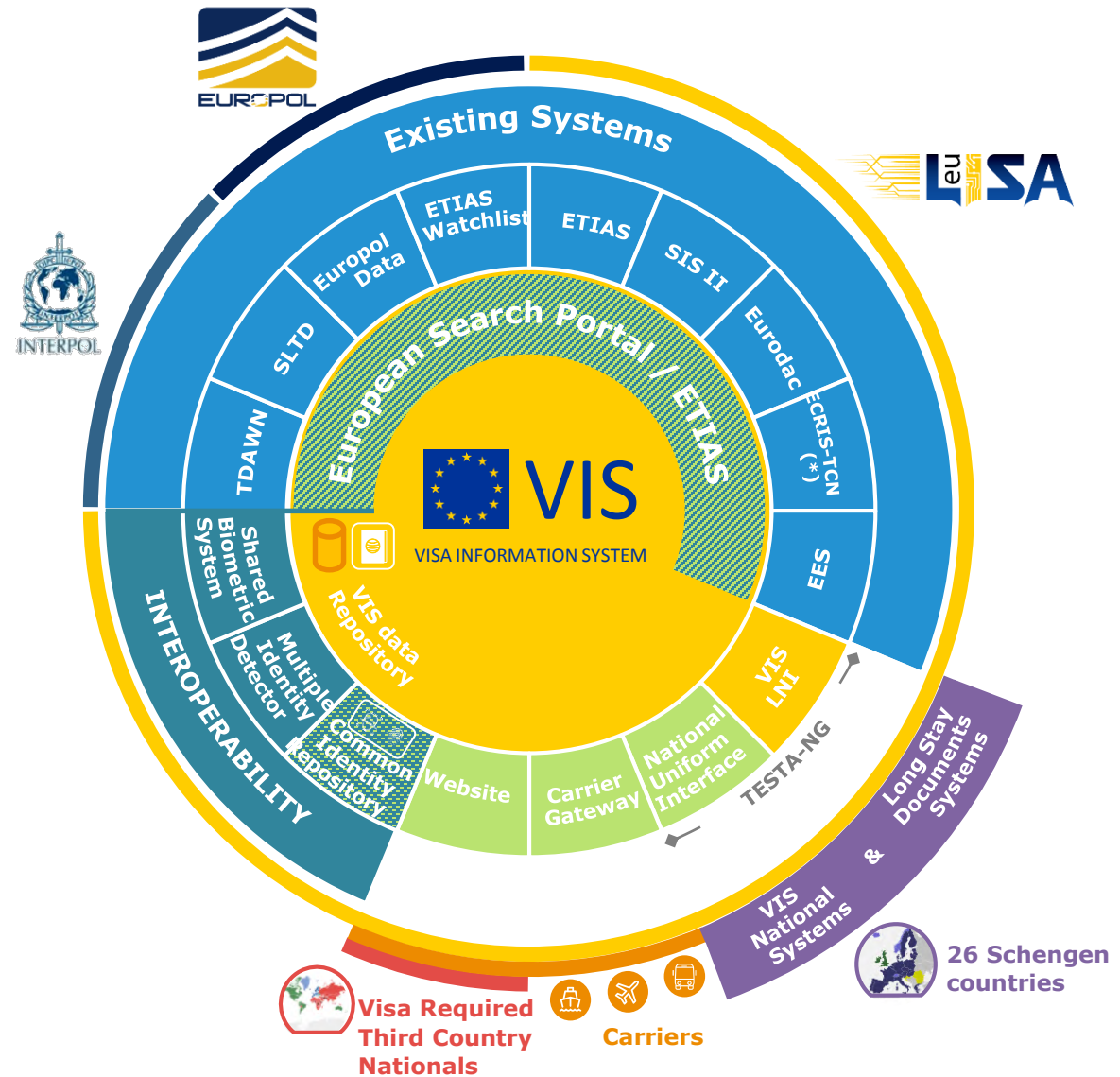
Interoperability for VISA and Border Authorities
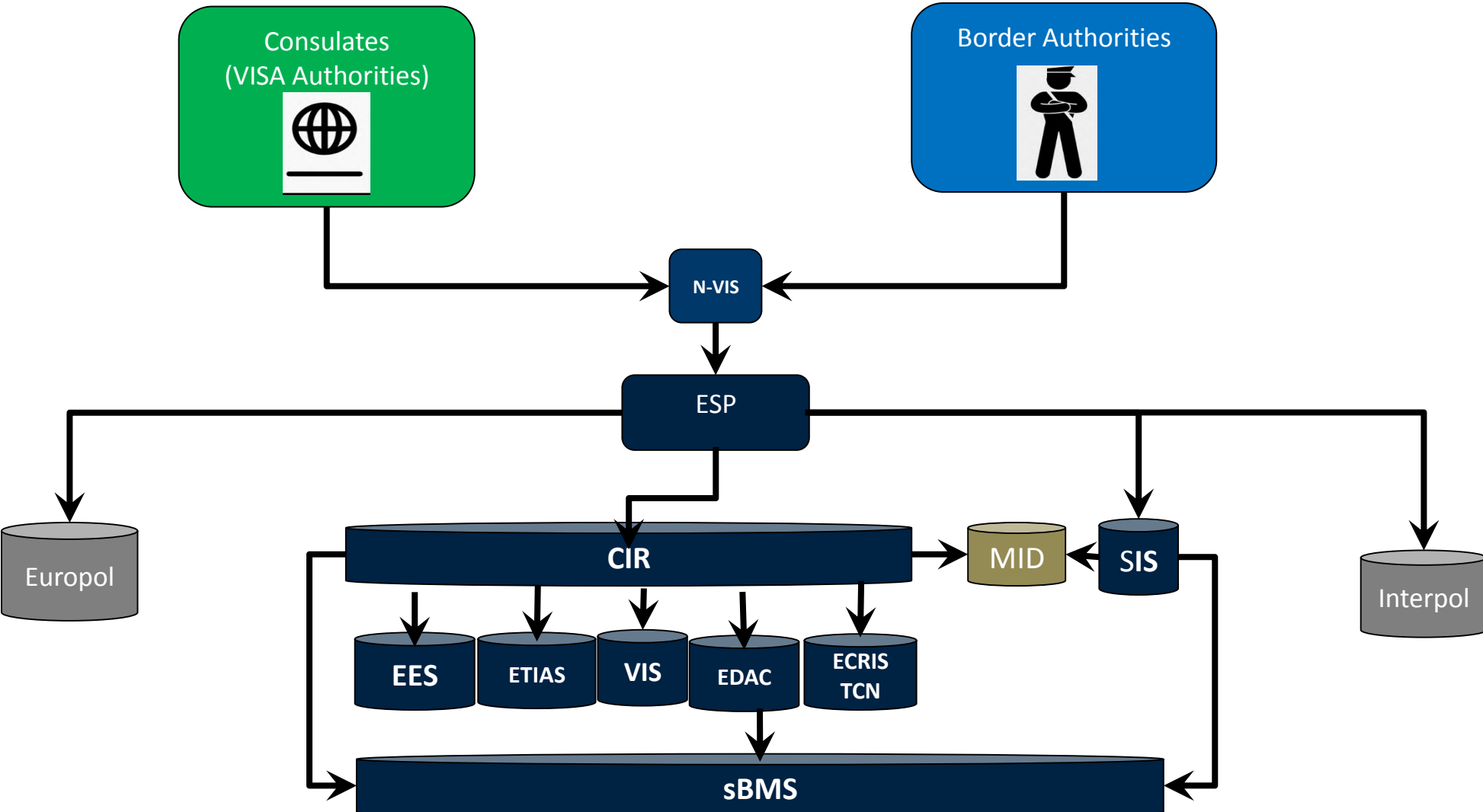
Objectives of Technology and Redesign
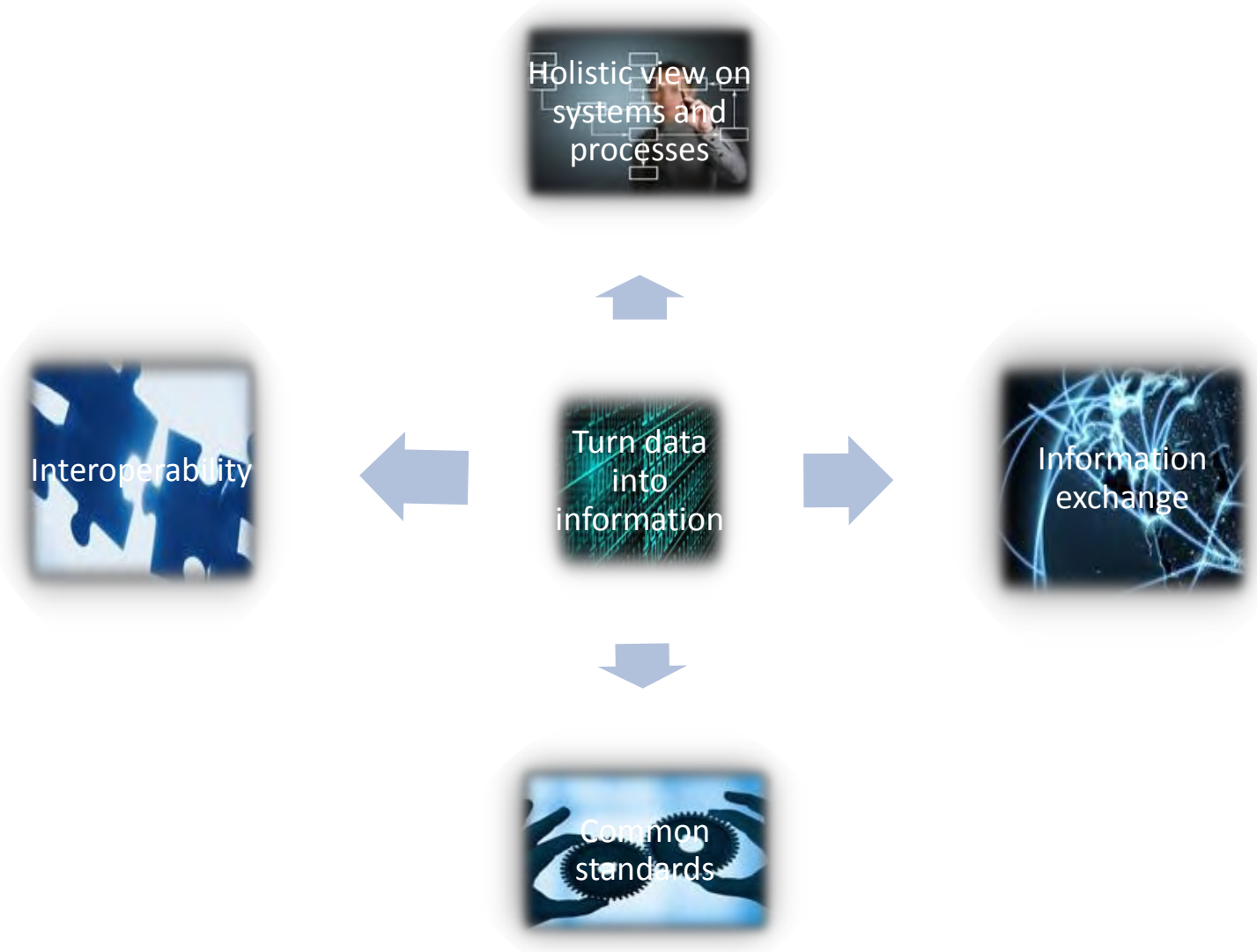
Specifying an Interoperable Architecture

Three Distinct Stages of Decision-making
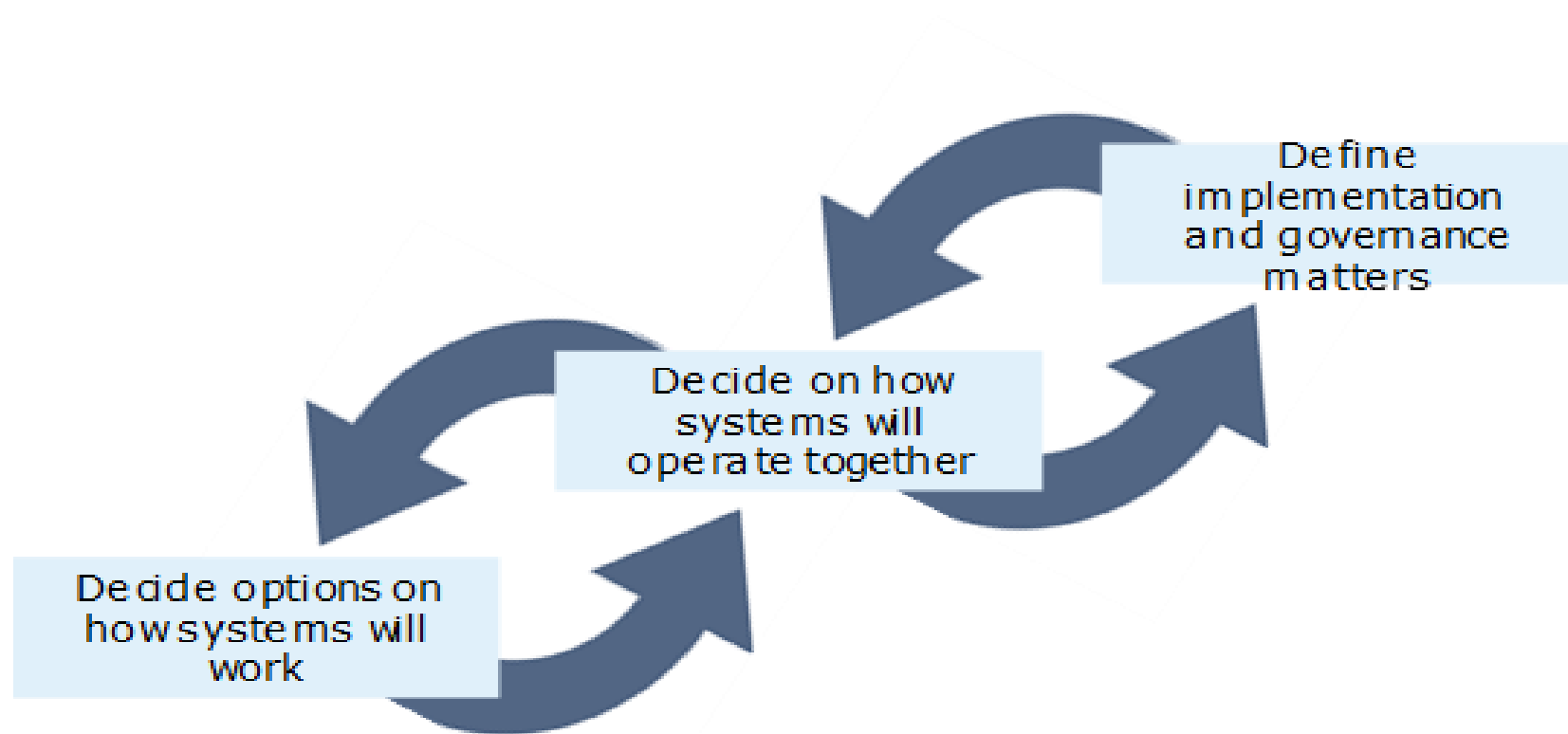
Interoperability Architecture - Objectives

Definition of the future architecture

Interoperability architecture comprising the ESP, shared BMS, CIR, MID and CRRS

Definition of the different architecture perspectives

Covering business, application, data, technology and security

High level impact assessment

Based on relevant criteria for data migration

Providing a valid reference point for decision-making

For implementing new systems, updating existing ones, interfacing

Interface mapping

Between interoperable components and existing and future systems

Interoperable and Reusable Repository

Architecture Vision Document

Shows a high-level aspirational view of the end architecture product (target architecture).

Architecture Requirements Specification

Specifies the high-level requirements of the target architecture.

Architecture Definition Document

Describes the target architecture on the business, data, application, technology and security domain.

Architecture Building Blocks

Defines the various application architecture building blocks for the interoperability components.

Architecture Repository

Consists of a structural framework allowing eu-LISA to differentiate between different types of architectural assets.

Service Oriented Reference Architecture (SOA)

Explorers the capabilities and benefits of adopting integration, SOA and API-based solutions.

Recommended Usage Patterns and Guidelines for SOA

Presents guidelines and recommendations to evaluate on when to introduce SOA architectures.

SOA Runtime Architecture

Lists considerations on runtime management, monitoring and organizational management in a SOA architecture.

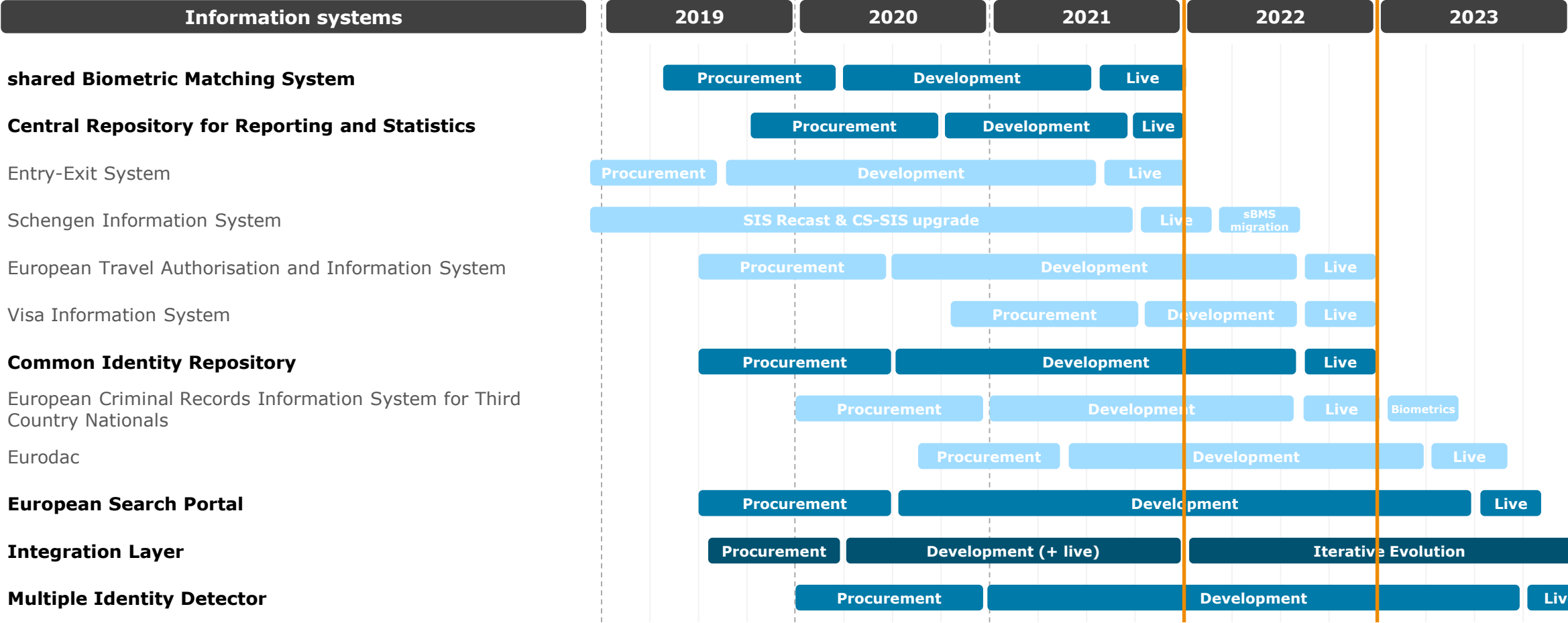**Requirements Impact Assessment**

Analyses the new requirements and their impact on an organizational and architectural level.

Architecture Roadmap

Summarises the required initiatives to transition from the baseline architecture to the target architecture.

Indicative Timeline – Implementation Plan Roadmap

Information systems	2019	2020	2021	2022	2023
shared Biometric Matching System	Procurement	Development		Live	
Central Repository for Reporting and Statistics		Procurement	Development	Live	
Entry-Exit System	Procurement	Development		Live	
Schengen Information System		SIS Recast & CS-SIS upgrade		Live / sBMS migration	
European Travel Authorisation and Information System		Procurement	Development		Live
Visa Information System			Procurement	Development / Live	
Common Identity Repository	Procurement	Development		Live	
European Criminal Records Information System for Third Country Nationals		Procurement	Development	Live / Biometrics	
Eurodac		Procurement	Development		Live
European Search Portal	Procurement	Development			Live
Integration Layer	Procurement	Development (+ live)		Iterative Evolution	
Multiple Identity Detector		Procurement	Development		Live

Transition Architecture A   B   Final

Interoperability components	Core Business Systems	Integration Layer

Indicative Timeline – Migration Plan Roadmap

Thank you for your attention
Any questions?

Interoperability is a System of Systems
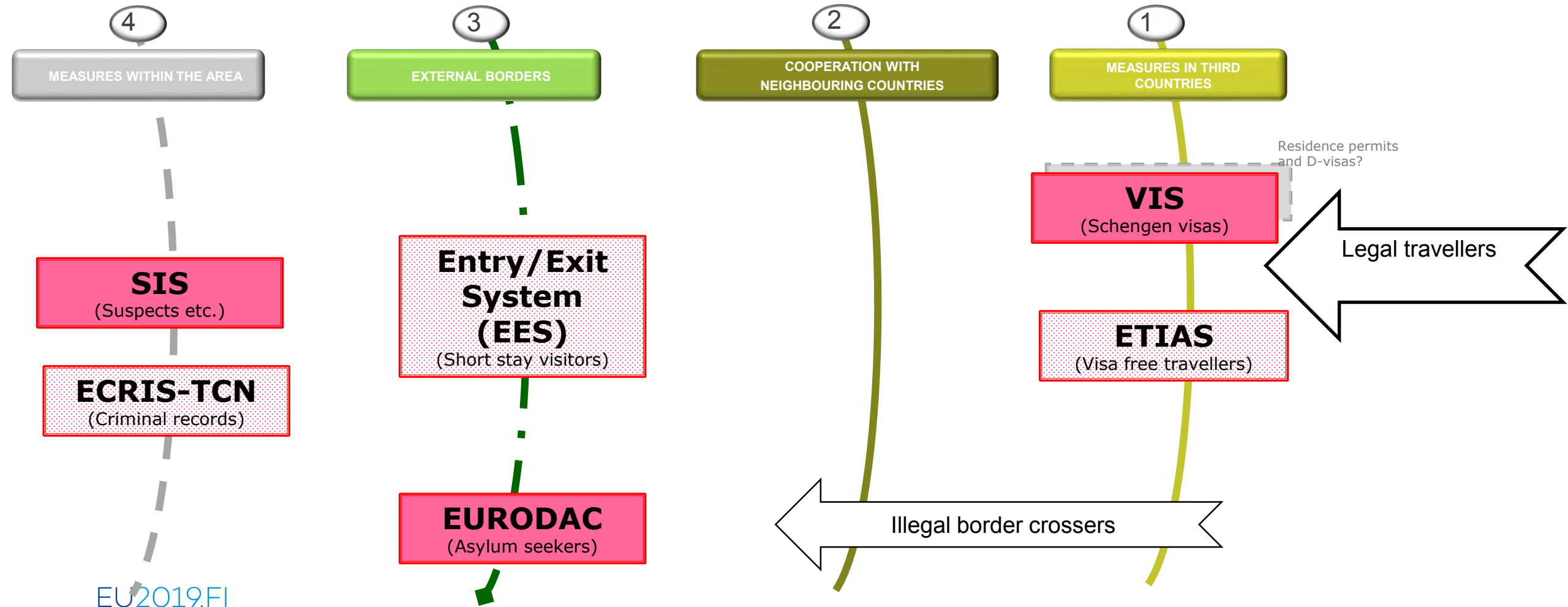
Key points of the regulation

Multiple-identity detection (Art 27)

1. Multiple-identity detection in the CIR and SIS shall be launched where:

    (b) an **application file is created or updated in VIS** in accordance
        with Regulation (EC) No 767/2008;

Manual verification and authorities responsible (Art 29)

1. Authority responsible for manual verification of different authorities shall be:

    • the **visa authorities** for matches that occurred when creating or updating an application
      file in the VIS

2. (in certain cases) Sirene Bureau of the Member State that created the alert in SIS

3. the Authority responsible shall have **access to linked data**. It shall assess the
   different identities without delay.

INDIVIDUAL FILE

Identity file stored in the CIR

	VIS	ETIAS	EES	Eurodac	SIS	ECRIS-TCN
BIOMETRIC DATA	10 FP	-	FI, 4 FP	10 FP	(poss.)	FP
IDENTITY DATA	X	X	X		(X)	X
TRAVEL DOCUMENT DATA	X	X	X		(X)	(X)

<u>Abreviations:</u>
   FI = Facial image, usable for automated biometric matching
   FP = Finger prints, usable for automated biometric matching

EU IT-systems

"Born in the silos"

FRA Opinion – 1/2018
[Interoperability]

Vienna, 11 April 2018

Interoperability and fundamental rights implications

Opinion of the
European Union Agency for Fundamental Rights

Annex 1: Identity data to be stored in the Common Identity Repository according to Article 18 (1)

	Legal instrument	EES Regulation	VIS Regulation	ETIAS Proposal	Eurodac proposal	ECRIS-TCN proposal
	Article(s) referred to	16 (1) (a)-(d), 17 (1) (a)-(c)	9 (4) (a)-(c), (5) & (6)	15 (2) (a)-(e)	13 (2) (a)-(e), (g) & (h)	Some data from Art. (5) (1) (a) + 5 (1) (b) & 5 (2)
NAME	Surname(s) and/or family name	O	O	O	O	O
	First name(s) and/or given name(s) and/or forename(s)	O	O	O	O	O
	Surname at birth		X	O		
	Name at birth				O	
	Former surname(s)		X			
	Previous names				O	X
	Alias(es)			X	O	X
	Pseudonyms(s)					X
	Artistic name(s)			X		
	Usual name(s)			X		
BIRTH	Date of birth	O	O	O	O	O
	Place of birth		X	O	O	O
	Country of birth		X	X		X
	Nationality(ies)	O	O	O	O	O
	Nationality at birth		X			
	Sex or gender	O	O	O	O	O
	First name(s) of parents			X		
TRAVEL DOCUMENT (TD)	Type and number of TD(s)	X	X	X	X[a]	
	Authority issuing the TD		X[b]			
	Country issuing TD		X			
	3 letter code of the issuing country	X	X[b]		X	
	Issuance date		X[b]			
	Expiry date/validity	X	X	X	X	
	Facial image	X	X[b]		X	X
	Fingerprints	X[c]	X		X	X[d]
	Photograph		X[b]			

Notes: O: identity data as defined in Art. 4 (9)
X: other data included in Art. 18 (1)
[a]   or identity document
[b]   changes introduced with the proposed amendments to the VIS Regulation (Article 55d of the interoperability proposal in the field of borders and visa). VIS currently contains a photograph. The interoperability proposal will amend Article 9 (5) of the VIS Regulation and replace the photograph with a facial image. The authority issuing the travel document and its date of issue (included in the table in italics) will be moved to Art. 9 (4) (cc), therefore they will be not stored in CIR. Article 9 (4) (b) will include the three-letter code of the issuing country of the travel document or documents.
[c]   only for visa-exempt third-country nationals
[d]   including the reference number of the fingerprint data of the convicted person including the code of the convicting Member State
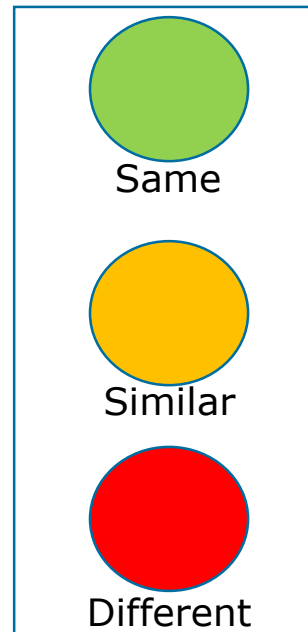
Source: FRA, 2018

EU2019.FI

Automated Comparison of individual files

SYSTEM A

MID

SYSTEM B

Biometric data
- Depending on the system

Same

Biometric data
- Depending on the system

Identity data
- Depending on the system

Similar

Identity data
- Depending on the system

Travel document data
- Depending on the system

Different

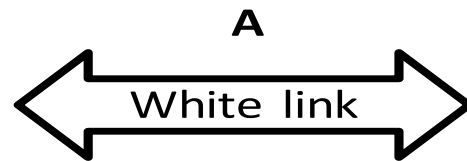| Travel document data |
| --- |
| - Depending on the system |

SAME   SIMILAR(?)   DIFFERENT

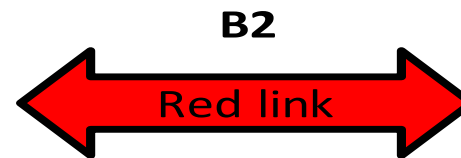| SYSTEM A	(same, similar, different)	SYSTEM B
Biometrics	← – – – – – – – – – – – – – – ►	Biometrics
Identity data	← – – – – – – – – – – – – – – ►	Identity data
Travel document	← – – – – – – – – – – – – – ►	Travel document

Comparison (1:n)

AUTOMATED COMPARISON

A
White link

B
Yellow link

MANUAL VERIFICATION

B1
Green link

B2
Red link

B3
White link
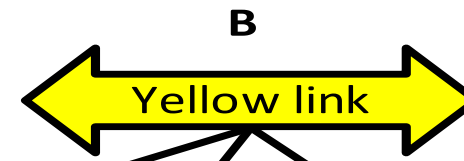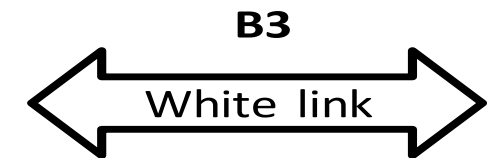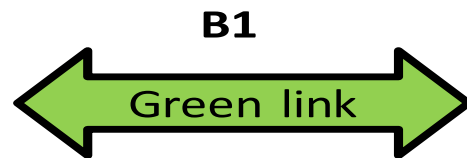
Visa process
Case with External Service Providers (ESP)

1 Applicant fills the visa application form

2 At the Visa Centre ESP collects:
- Application
- Biometrics
- Documents

3 Applicant returns to home

4 ESP delivers collected data to the consulate (digital/paper)

5 Data is uploaded to national visa system for processing

6 Application is created in the VIS

7 Visa is issued

EU2019.FI
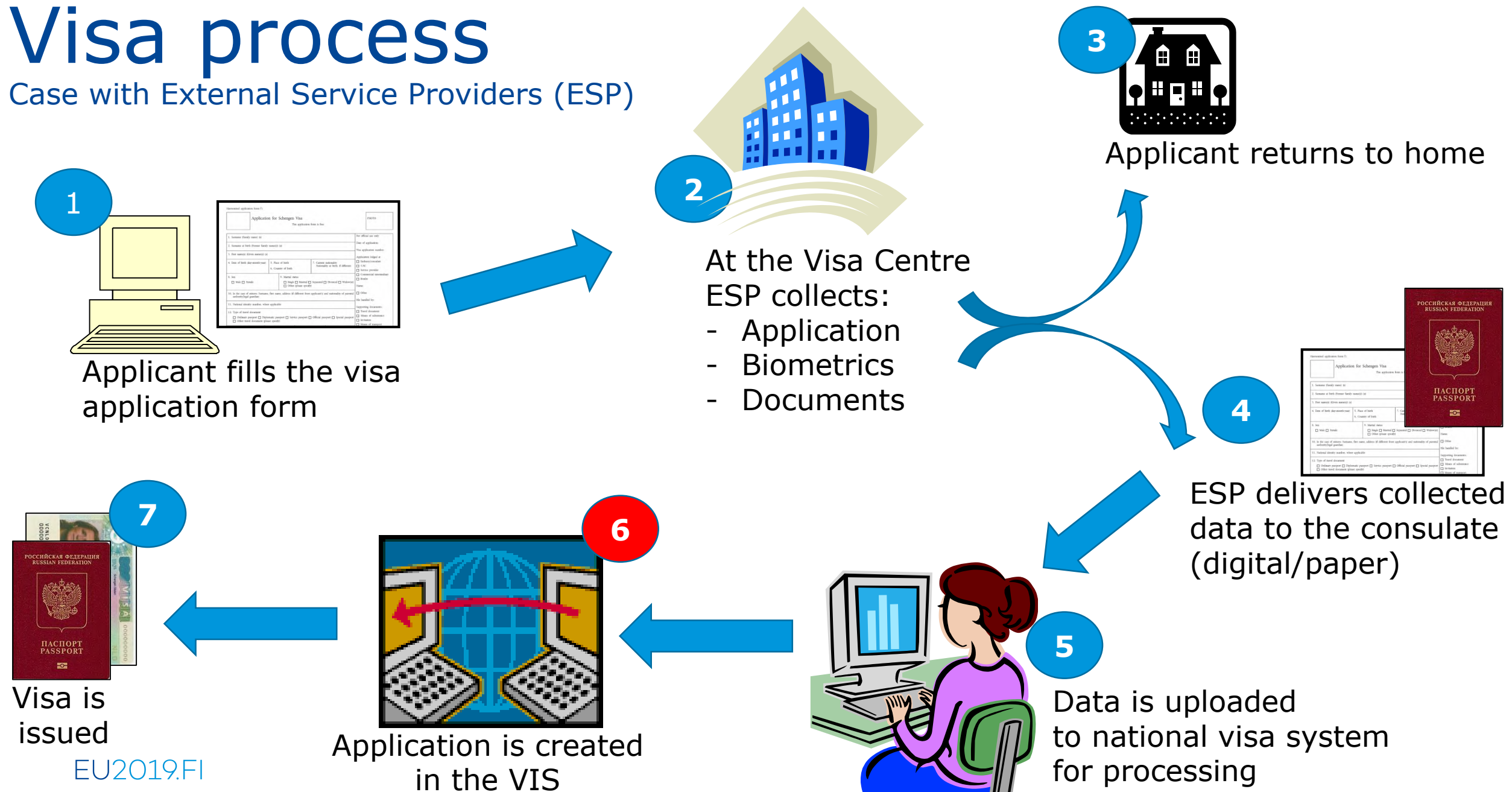
Questions to be asked

1. Workload coming from Interoperability
- How many yellow links there will be?

2. Need to adjust process for visa handling
- How does one clarify yellow links in practice?
- In case of a yellow link – should we meet the applicant?
- How to inform negative decisions and the rights of an applicant?

3. Need to adjust Visa Code and VIS regulation
- What is the impact of unharmonized datasets and data quality in different IT-systems?

Thank you for your attention

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