Summary of responses to the questionnaire on prioritisation of AI use-cases

Total number of responses received: 12

This document provides a summary of responses to the questionnaire and indicated the use-cases prioritised based on these responses. Number of points to calculate priority scores was calculated on the basis of the total number of use cases and priority order in which those were indicated. For example: If there are a total of three use cases, then the highest priority use-case received 3 points, second – 2 points, last – 1 point. If there are six use-cases, then the highest priority received 6 points, second-highest – 5 points, last – 1 point. These points were then summed and the use-case receiving the highest number of points was prioritised.

Short stay visa issuance

Use case ID	Brief description (see Annex B |for a detailed description)
VISA-1 (Application chatbot)	Chatbot supporting visa application process by (1) taking in information, (2) answer questions posed by the applicant and (3) ensure data quality.
VISA-3 (Application triaging)	Application triaging using individual risk assessment for rapid, more efficient risk analysis.
VISA-8 (Identification of irregular travelling patterns)	Identification of irregular travelling patterns as an additional piece of risk analysis and identify so-called "malafide" travellers.
VISA-9 (Tailored application form)	Use of a personalised application form using AI to tailor questions asked to the applicant creating an augmented application form.

One MS indicated that 'Visa application triaging has been implemented'.

Other respondents indicated that none of the use-cases have been implemented at MS level.

Use case	Priority scores	Priority #
Application triaging	25	2
Identification of irregular travelling patterns	**28**	**1**
Tailored application form	19	3

Issuance of long-stay visas or residence permits in the Schengen area

Use case ID	Brief description (see Annex B |for a detailed description)
LTSTAY-1 (Application chatbot)	Virtual assistant supporting long-term stay permit or migration application process
LTSTAY-3 (Application triaging)	Automatic triaging of applications to speed up risk assessments
LTSTAY-9 (Moving within the Schengen area)	Supporting system for moving within the Schengen Zone, speeding up the application process (e.g. through use of a virtual assistant)

Four respondents indicated that one of the use cases was implemented at MS level:

- Virtual assistant supporting long-term stay permit/migration application process (Two MS)
- Automatic triaging of applications to speed up risk assessments (Two MS)

Use case	Priority scores	Priority #
Application chatbot	20	2
Application triaging	**34**	**1**
Moving within the Schengen area	18	3

Asylum

Use case ID	Brief description (see Annex B |for a detailed description)
ASYLUM-3 (Vulnerability assessment)	Sensory analysis of individual to analyse if the person should be further investigated by a human social worker or granted special procedural guarantees
ASYLUM-5 (Registration chatbot)	Use of an AI chatbot which facilitates the registering process by going through the steps which do not require human expertise
ASYLUM-7 (Abscondment risk assessment)	AI model to predict risk of an applicant absconding during review of application and the return process (e.g. using variables such as country of origin, previous application history, age)
ASYLUM-11 (Refugee allocation	AI to allocate refugees to geographic regions (at regional level within countries) where they are more likely to find work and integrate smoothly
ASYLUM-14 (Intelligence search engine)	Intelligent search engine to assist with risk assessment of returns to origin country by locating documents, reports, other evidence

None of the use-cases have been reported as implemented at MS level.

Use case	Priority scores	Priority #
Vulnerability assessment	**43**	**1**
Registration chatbot	34	4
Abscondment risk assessment	**40**	**2**
Refugee allocation	23	5
Intelligent search engine	**40**	**2**

SIS/SIRENE

Use case ID	Brief description (see Annex B |for a detailed description)
SISSIRENE-1 (Alert detection)	Computer vision to detect SIS alerts using cameras
SISSIRENE-4 (Knowledge search/management tools)	An AI tool to aid in the knowledge management of SIS
SISSIRENE-6 (Automatic form completion)	Automatically fill in SIRENE forms

Five MS reported national implementation of two cases:

- Alert detection
- Automatic form completion (2 MS)
- AI tool to aid in the knowledge management of SIS (2MS)

Use case	Priority scores	Priority #
Alert detection	19	3
Knowledge management/search tools	23	2
Automatic form completion	**30**	**1**

Transversal processes

Use case ID	Brief description (see Annex B |for a detailed description)
CROSS-1 (Multi-lingual translation)	Multi-lingual translation
CROSS-6 (Forged supporting docs detection)	Identification of fraudulent supporting documents
CROSS-7 (Historical case reasoning)	Consistent decision making (historic case reasoning engine)
CROSS-8 (Ethical monitoring)	AI to monitor the ethicality of other AI systems
CROSS-12 (Forged travel document detection)	Detection of forged travel documents
CROSS-20 (Post application monitoring)	Post application monitoring of TCNs
CROSS-23 (General EU chatbot)	Effective and simplified stakeholder communication
CROSS-25 (Biometric matching)	Improved biometric matching (facial recognition)

Several respondents indicated certain use-cases implemented:

- Detection of forged travel documents (Six MS);
- Identification of fraudulent supporting documents (Three MS);
- Improved biometric matching (facial recognition) (Four MS);
- Consistent decision-making (historical case reasoning engine);

Use case	Priority scores	Priority #
Multi-lingual translation	**56**	**3**
Identification of fraudulent supporting documents	**62**	**1**
Consistent decision making (historical case reasoning engine)	54	5
AI to monitor the ethicality of other AI systems	21	7
Detection of forged travel documents	**61**	**2**
Post-application monitoring of TCNs	27	6
Improved biometric matching (facial recognition)	55	4

Other use-cases suggested by respondents

- Transcription (speech to text) - this is in implementation in some systems
- Categorization of criminal data for use of analysing.
- for visa applicants, there are a lot of requirements for supporting documents, appendixes for visa application form. It would be good to have a database where all the supporting documents are scanned and anonymized. And AI would notice any pattern common to fraudulent purpose of visa applicant. The data pool for supporting documents is like big data where all kind of research and machine learning can be possible depending on need and possible scenarios.
- Other use case is for issuing authority information in travel documents. For instance it is useful for decision makers and authorities that certain issuing authority with certain passport number may need additional investigation in order to find out the real purpose of

visa applicant. Thus, the information about issuing authority is important (but unfortunately not in use any more)

- Additionally use case may be, that if somewhere someone has stolen a bunch of passport or empty visa stickers, the numbers or series of those passport numbers can be checked against database when dealing with visa applications. AI could help to resolve whether the visa applicants passport belongs to the certain number of passports.
- Implementation of AI assisted filling of SIRENE forms is projected in the near future

Implementation of use cases

1. **Seven out of 12 respondents indicated that they would be interested in collaborating on the prioritised use-cases.**
2. **The following use-cases were indicated by the MS interested in collaboration**
   a. One of the challenges in LEA is analysis of child sexual abuse material. Investigators have to find relations in large amounts of seized images, videos and sounds. Without AI techniques this is not possible. These AI techniques can detect object in these images and videos, recognize similar faces, classify similar material in the same group etc and can be provided by eu-LISA as well as repository for large amount of these material. Without this centralized solution each member state has to find own AI components and set own data repository for this material.
   b. Visa related project with MS with similar privacy regulation.
   c. Identification of fraudulent visa applications based on the analysis of supporting documents.
   d. Identification of forged passports/visas based on passport/visa number (stolen blank passport books/Visa stickers)
   e. Implementation of AI assisted filling of SIRENE forms
3. **11 out of 12 respondents indicated that they'd need additional funding for the implementation of specific use-cases**
4. **Nine out of 12 respondents would see a role for eu-LISA in the implementation of prioritised use-cases. The roles indicated are:**
   a. Provide centralised infrastructure (e.g., compute);
   b. Facilitate collaboration with authorities from other Member States
   c. Provide data sets for model training/testing;
   d. Help to create a regulatory environment to secure the legal compliance of the pilot.
   e. Provide expertise in AI, project lead, coordinator