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NOTE

From:	eu-LISA
To:	Working Party on JHA Information Exchange (IXIM) / Mixed Committee (EU-Iceland/Norway and Switzerland/Liechtenstein)
No. prev. doc.:	9105/21; 14203/21; 9476/22
Subject:	Roadmap for standardisation for data quality purposes – Third progress report

DOCUMENT PARTIALLY ACCESSIBLE TO THE PUBLIC (10.02.2023)

With a view to the Working Party on JHA Information Exchange (IXIM) on 1 and 2 December 2022, delegations will find in annex eu-LISA's third progress report on the implementation of the action plan for the roadmap for standardisation for data quality purposes.

INTRODUCTION

Whether or not the new EU information architecture in the JHA area will deliver the anticipated operational benefits will depend largely on the quality of the data fed into the systems. Data quality and numerous interconnections between national and central IT systems require common baseline standards in order to effectively support the associated business processes in all involved business areas (visa, border, immigration, law enforcement). They will also support a secure implementation, which is crucial to compensate the increasing number of threat vectors and relevant cyber security risks.

Against this background, at the initiative of the Croatian Presidency, the Working Party on JHA Information Exchange (IXIM) held a comprehensive discussion on the need for further standardisation in certain technical and operational areas. The initial proposal for the roadmap was presented at the IXIM Working Party meeting in February 2020¹. As a follow-up to this initial proposal, a detailed proposal containing the structure and main principles of the roadmap was proposed to the IXIM Working Party in April 2020. Following the discussion at the IXIM meeting in July 2020², eu-LISA has been entrusted to coordinate and develop the roadmap for standardization for data quality purposes.

The roadmap addresses key issues pertaining to the efficient and effective operation of the new interoperability architecture, namely:

- The ability of the Member States to feed high-quality data into the relevant EU information systems;
- The ability of the Member States and relevant EU agencies to get seamless access on the ground to the information provided via the new interoperability architecture.

¹ 5924/20

² 7125/20

To address these issues, the roadmap covers the following thematic areas:

- Biometric and alphanumeric data quality and relevant standards;
- Systematic assessment of relevant equipment, including through testing;
- Cyber security.

The Roadmap defining high-level objectives and priorities was endorsed by the IXIM Working Party in November 2020³. In order to support the practical implementation of the Roadmap, an Action Plan defining specific actions, responsible parties, as well as timelines for the implementation of actions was proposed. The Action Plan was adopted by the IXIM WP in June 2021⁴. As agreed in the IXIM WP, reports on the status of implementation of the Roadmap shall be submitted twice per annum.

The Action Plan contains 54 actions. The first update report⁵ on the progress of the implementation of actions defined in the Action Plan was provided in November 2021; the second update report⁶ was provided in June 2022. This document is the third update report, providing information on all the 54 actions. Ten (10) actions out of 54 actions in total have already been implemented.

The report was shared for consultation with the actions' owners and contributing stakeholders on EU level and the Member States (via Czech Presidency). The input is included in the table below.

In order to simplify the review of the table, the status columns are shaded and updated information is in blue ink colour.

Colour code:

- Status column:
 - *“Implemented”* status – the box is shaded in dark green colour
 - *“Ongoing”* status – the box is shaded in light green colour
 - *“Not yet started”* status – the box is shaded in light orange colour

“Update on the implementation” column - updated information is in blue ink colour.

³ 11824/2/20 REV 2

⁴ 9105/21

⁵ 14203/21

⁶ 9476/22

Summary table for the reported actions

Theme 1: IMPROVING THE QUALITY OF BIOMETRIC AND ALPHANUMERIC DATA IN THE EU JHA LARGE-SCALE IT SYSTEMS AND THEIR INTEROPERABILITY

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
<p><i>Theme 1: IMPROVING THE QUALITY OF BIOMETRIC AND ALPHANUMERIC DATA IN THE EU JHA LARGE-SCALE IT SYSTEMS AND THEIR INTEROPERABILITY</i></p> <p><i>Objective 1: To ensure high biometric sample quality across all systems using biometric data.</i></p> <p><i>Objective 2: To improve the quality of data provided through manual input in the central systems (i.e. SIS, VIS, EES, ETIAS, ECRIS-TCN, Eurodac).</i></p>						
1.1	Assure proper alignment with the international standards	2022-2027	eu-LISA	Europol Frontex EC DG JRC Member State Authorities	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> Since the beginning of 2021, eu-LISA has been involved in the work of the ISO Sub-committee 37 focusing on generic biometric technologies pertaining to human beings to support interoperability and data exchange among applications and systems. eu-LISA is monitoring the developments in all working groups of the sub-committee, and actively contributing to several working groups. In particular, eu-LISA actively participates in the evolution of the ISO/IEC 29794-5, for which the reference implementation of a face quality algorithm is ongoing (referred to as OFIQ (Open-source Face Image Quality)). The aim is to provide a scalar metric (similarly to NFIQ (NIST Fingerprint Image Quality)) for computing face image quality automatically. The goal of eu-LISA is to incorporate it to its biometric products portfolio.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
						<ul style="list-style-type: none"> • eu-LISA is actively involved in the activities of the European Association for Biometrics, as well as the National Institute of Standards and Technology of the US. Both of these organisations play an important role in the development and adoption of international standards in biometrics, which are of direct relevance to eu-LISA core business. • In addition, eu-LISA worked on the biometric quality algorithms used within the shared Biometric Matching System (sBMS) and EES User Software Kit (USK) contexts. For both fingerprints and facial images, the algorithms shall be aligned with international standards according to the specific regulations. eu-LISA has been working with the sBMS contractor to align with the ISO standards. • In parallel, eu-LISA has developed (in the context of the shared Biometric Matching System (sBMS) project) two other biometric quality algorithms, namely latent and palm print quality algorithms. These algorithms could potentially become ISO standards' reference implementations in the future. • Together with the Swedish authorities, eu-LISA is conducting a pilot project for beta testing of the USK, based on the VIS (Visa Information System) data. Over 20.000 enrolments (collected between February-May 2022) were analysed. The pilot project is ongoing.

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						<p>Europol</p> <ul style="list-style-type: none"> In the implementation of the JHA large scale IT systems, Europol is following the technical specifications/standards foreseen by eu-LISA. <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic is following the technical specifications/standards foreseen by eu-LISA. <p>Comment from Germany</p> <ul style="list-style-type: none"> Germany welcomes the continuation of this action. <p>France</p> <ul style="list-style-type: none"> France is preparing a new study for biometric sensors that will take into account European and international standards.
1.2	Gather best practices from eu-LISA and Frontex	2021-2023	eu-LISA, Frontex	Member State Authorities	Ongoing	<p>Actions 1.2-1.3</p> <p>eu-LISA</p> <ul style="list-style-type: none"> Best practices were collected during a number of occasions: Sept. 2021, visit by eu-LISA of the Entry/Exit System pilot project organised by Frontex in collaboration with the Spanish authorities; results of the pilot presented by Frontex at the Showcase conference; eu-LISA presented its work on face image quality in a workshop organised by the European Association for Biometrics, the US Department of Homeland Security Office of Biometric Identity Management and the National Institute for Standards and Technology;
1.3	Gather best practices in human-computer interaction in border control and biometric acquisition processes	2021-2023	eu-LISA	Europol Frontex EC DG JRC		

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						<ul style="list-style-type: none"> - In April 2022, eu-LISA visited The Netherlands for a demonstration of the EES User Software Kit (USK). National representatives tested the solution prepared by The Netherlands and provided feedback. eu-LISA provides the USK to the Member States and encouraged them to use it to ensure proper alignment of biometric quality between the central system and the national side. eu-LISA gathered best practices in the use of biometric equipment in the context of different scenarios and workflows. These were shared among the different stakeholders by presentations within the different eu-LISA Advisory Groups and the Biometric Working Group. - eu-LISA attended the final demonstration of the D4FLY EU-funded project (https://d4fly.eu/), gathering best practices and real-life operational inputs in the context of the Entry-Exit system. This information is of high value for the improvement of the existing and future eu-LISA products. <p>Europol</p> <ul style="list-style-type: none"> - Europol does not acquire biometrics nor participate in border control, but is following the developments and best practices in Member States with great interest. <p>Comment from Germany</p> <ul style="list-style-type: none"> • The information collected so far mainly focuses on flat fingerprints (used in the context of the EES). The methods to take rolled fingerprints (used in the SIS and Eurodac) should therefore also be considered.

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						<p>Comment from France</p> <ul style="list-style-type: none"> France recommends to make the document with best practices of eu-LISA and Frontex available to relevant stakeholders, in order to have a common information base.
<i>1.4</i>	Creation of new and re-designing of the existing workflows based on the actions defined above and operational knowledge/experience	2022-onwards	Frontex, MS Authorities	eu-LISA Europol	Ongoing	<p>Please see actions 1.1-1.3 above.</p> <p>eu-LISA</p> <ul style="list-style-type: none"> eu-LISA is supporting Member States in the creation of new and re-design of existing workflows or business processes. The associated environments, per core business system, are and will continue being provided, to allow the Member States test these processes end to end, with their respective National Systems and their end users, including testing in real time against the central systems. In addition, as per the Interoperability Regulations and the associated data quality implementing acts, eu-LISA together with the Member States, will agree and test common data quality rules. Thus, with the implementation of the overall interoperability architecture, common data quality rules and the associated reporting will further support this effort (please also see points 1.6 & 1.7).

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						<p>Frontex</p> <ul style="list-style-type: none"> Frontex has developed an EES Support Package to support Member States in their preparations for the entry into operation of the EES. Several actions (trainings, advices to Border Control Posts (BCPs), conference, workshops, pilots, toolkit and others) are on-going and will be continued after EES entry into operation. <p>Europol</p> <ul style="list-style-type: none"> Europol does not enter/modify any data in JHA large scale IT systems, but follows the developments closely and adapts Europol workflows where necessary/to the extent feasible. Within the context of implementing the tasks stemming from different Regulations on JHA large scale IT systems, Europol has developed or is in the process of developing workflows in close cooperation with Member States, eu-LISA and Frontex (namely SIS, ETIAS) and adapting internal workflows (access to data stored in JHA large scale IT systems). <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic uses the opportunity of rebuilding national systems due to SIS Recast, EES, ETIAS and IO to re-design national workflows in various national systems (border application, SIRENE application etc.). Data quality by design is one of the architecture principles used.

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1.5	Involvement in the development of international standards in the area of biometrics	continuous	eu-LISA, MS Authorities		Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> Please see action 1.1 above. <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic participates in eu-LISA's Biometric Working Group and other appropriate fora (e.g. eu-LISA Industry Roundtable, Europol's Information Management Forum, IO AG etc.). Czech Republic also proactively participates in implementing User Software Kit (USK) tool for EES, VIS and ECRIS-TCN biometric processes. <p>France</p> <ul style="list-style-type: none"> France is preparing a new procurement for biometric sensors based on the latest European and international standards. France recommends that Member States and eu-LISA should coordinate with each other to support and promote common needs in international biometrics fora. <p>Comment from Germany</p> <ul style="list-style-type: none"> Germany and France have sent eu-LISA a comprehensive list of questions regarding the CRRS. It remains to be confirmed whether the CRRS will contain helpful reports/information for the Member States when the EES enters into operation.

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1.6	Analysis of best practices devised within the scope of sub-actions 1.1-1.3 by Member State authorities	2022-onwards	eu-LISA, MS Authorities		Ongoing	Actions 1.6-1.7 eu-LISA <ul style="list-style-type: none"> • eu-LISA provided the EES User Software Kit (USK) to the Member States to ensure Data Quality at end user level during biometrics capturing. In addition, reports on biometric data quality will be provided as soon as the central repository for reporting and statistics (CRRS) is in production and connected to all eu-LISA core business systems. Moreover, in a number of meetings and pilots (Biometrics Working Group, eu-LISA Advisory Groups), eu-LISA explained to Member States how to capture biometric data, to use devices, and provided best practices and guidance to comply with the requirements of its core business systems. • eu-LISA contributed to the ISO standardisation work as well as to the use of the NFIQ2⁷ standard libraries, as well as complied with ICAO / ISO standards. Best practices will come in the near future, when the implementation of the interoperability architecture will be in production. Europol <ul style="list-style-type: none"> • Europol does not acquire biometrics nor participate in border control, but is following the developments and best practices in Member States with great interest. Czech Republic <ul style="list-style-type: none"> • Czech Republic participates in eu-LISA's Biometric
1.7	Sharing best practices identified in sub-actions 1.1-1.3 with the Member State authorities	2022-2023	eu-LISA, MS Authorities	Europol, Frontex		

⁷ Quality standard from the US National Institute for Standards and Technology (NIST) for fingerprint image quality

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						<p>Working Group and other appropriate fora (e.g. eu-LISA Industry Roundtable, Europol's Information Management Forum, IO AG etc.). Czech Republic also proactively participates in implementing User Software Kit (USK) tool for EES, VIS and ECRIS-TCN biometric processes.</p> <p>France</p> <ul style="list-style-type: none"> • After internal consultation, France will provide information on best practices to eu-LISA. • In case any of the good practices cannot be implemented in a national context, France recommends to provide feedback and propose alternatives. In addition, France recommends to start a data quality review cycle as of 2023.
1.8	Elaboration and carrying out of training activities for the end users of biometric equipment for enrolment, identification and verification	2022-onwards	eu-LISA, Frontex	Member State Authorities	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> • Data Quality will be tackled specifically in the "shared Biometric Management System (SBMS) and Biometric Data Quality" online training to be delivered by eu-LISA by the end of 2022. Training on biometrics is developed and implemented as part of the training for all eu-LISA core business systems (e.g., training activities on the Automated Fingerprint Identification System (AFIS) are part of the Schengen Information System (SIS) training)). <p>Comment from Czech Republic</p> <ul style="list-style-type: none"> • This is part of regular training activities for corresponding EU systems and processes. <p>Comment from France</p> <ul style="list-style-type: none"> • Member States will potentially need to identify needs and mobilise end-users for training activities.

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1.9	Monitoring the effects of adoption of best practices on the quality of biometric data introduced in the systems using readily available assessment methods	2023-onwards	eu-LISA, Frontex	Member State Authorities	Not yet started	This action will start in 2023.
1.10	Campaigns for updating obsolete equipment for biometric data acquisition at Member States' level	Q4 2021-Q2 2022	eu-LISA	Member State Authorities	Implemented	eu-LISA <u>Actions</u> <ul style="list-style-type: none"> • Provision of test environments per core business system where Member States can test the performance of their business processes, with their respective National Systems and ICT solutions (equipment). • Provision of USK (User Software Kit) and presentations in the Biometrics Working Group and the Advisory Groups. • Provision of biometric quality functionalities in the associated core business systems. • Provision of biometric accuracy process as per Interoperability regulation. • Future setting up of a Testing Lab (please see actions 2-8-2.8) to allow Member States to test equipment in relation to its compliance to legal requirements and in relation to the support of the associated business processes per core business system.

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						<u>Details</u> <ul style="list-style-type: none"> • The responsibility to comply with the legal requirements lies with the Member States. eu-LISA will further support the Member States when a Testing Lab will be in place. Until then, Frontex is expected to support the Member States, taking into account the associated eu-LISA core business systems requirements. • eu-LISA, via its Governance bodies (Advisory Groups, Programme Management Board and Biometric Working Group) ensures constant information and monitoring campaigns with its stakeholders. As per applicable regulations, it is the Member States responsibility to ensure that comprehensive testing is performed at their level. This includes testing of the devices to prove that they are compliant with the legal requirements. The Agency is supporting the Member States by providing environments where they can connect devices via their respective National System and tools which can support this exercise. The USK tool for biometrics is provided and pilots are executed to ensure that the associated requirements are respected. eu-LISA will provide testing environments with central systems connected; thus, Member States can connect and, via their National Systems, test their devices continuously. To avoid any competitive advantage and promotion of specific industry devices, the Agency recommends reference to the requirements mentioned in the legal base only. Thus, any

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						<p>device referenced to the catalogue will be placed there only in relation to specific requirements. In parallel, in the future, the activities of the Testing Lab will allow creating test environments where Member States / Union Agencies can test devices and business processes with simulations of the central systems.</p> <p>European Commission</p> <ul style="list-style-type: none"> The Commission launched a call for expression of interest under the Specific Action “Support for the establishment of shared technical copies of the Schengen information System (SIS) by Member States and biometrics” under the Instrument for Financial Support for Border Management and Visa Policy (BMVI). The Specific Action 1.5.7 has an envisaged budget of EUR 5.5 million. It comprises three lots. Lot 1.5.7.3 “SIS modernisation of equipment for the capturing of biometrics” aims at supporting Member States to modernise their biometric data capturing equipment used primarily to capture biometric data for inclusion in the SIS. In particular, the purpose of lot 1.5.7.3 is for Member States with an urgent need to modernize the equipment for biometric data gathering, in order to increase the number of biometric data introduced in SIS and to enhance their quality in line with the provisions of the SIS Regulations and the specific implementing acts. Therefore, in order to apply for it, Member States must demonstrate an urgent need for modernisation in order to

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						<p>meet the quality requirements of SIS. The action was launched on 11 May 2022. The deadline for submission of proposals was 1 November 2022. Expenditure for the Specific Action is eligible as of 1 May 2022.</p> <p>Czech Republic</p> <ul style="list-style-type: none"> • Czech Republic acquires new biometric devices continuously. New generation of mobile and stationary Livescans will be acquired within a new framework contract for national automated biometric identification system (ABIS) system. <p>France</p> <ul style="list-style-type: none"> • The new procurement for biometric sensors incorporates international quality standards. • With the help of the quality standards, the competent authorities of the Member States will be able to check the conformity of the equipment with the requirements of the European standards.

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<i>1.11</i>	Define the technical requirements for the standardised transliteration schemes and automated solutions for transliteration	2023	eu-LISA	EC DG HOME Member State Authorities, Europol, DG JUST	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> • eu-LISA drafted a document describing the cross-system transliteration/transformation rules to be applied on its core business systems. • In addition, there is an ongoing work to develop a Business Search Engine (part of interoperability), a shared component that will provide search capabilities to the Core Business Systems managed by eu-LISA. These search capabilities will include exact and inexact search capabilities (fuzzy, partial, wildcards etc.), as well as transliteration rules according to ICAO 9303 standard and phonetisation according to phonetic extraction algorithm Metaphone 3. These capabilities in the Business Search Engine will enable a cross-system search when the Core Business Systems interoperate. <p>Europol</p> <ul style="list-style-type: none"> • Europol will align its implementation of JHA large scale IT systems accordingly when the documentation is made available by eu-LISA. <p>Comment from France</p> <ul style="list-style-type: none"> • Member States will need to develop standardised solutions respecting the quality level of alphanumeric data inserted manually into the central systems.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
<i>1.12</i>	Conduct assessment of training needs in the area of biographic/alphanumeric data input; develop and conduct regular training activities for MS authorities	2022-2023	eu-LISA	EC DG HOME, Cepol, Europol, Frontex	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> The 2022 eu-LISA Training Needs Analysis was launched in August 2022 through system-specific questionnaires to Member States. The specific training need on biographical / alphanumerical data will be assessed through the questionnaires, in order to conduct the relevant trainings in 2023. <p>Europol</p> <ul style="list-style-type: none"> Europol is contributing to the training courses organised by CEPOL and eu-LISA by delivering training in line with its mandate. <p>Frontex</p> <ul style="list-style-type: none"> Dedicated discussions also took place with Frontex. <p>CEPOL</p> <ul style="list-style-type: none"> CEPOL published an Operational Training Needs Analysis on Law enforcement cooperation, information exchange and Interoperability in 2021, identifying training needs of law enforcement including the proficiency level of training needed and the profile of participants for the period of 2022-2024. Training needs of law enforcement on biographic/alphanumeric data input shall be assessed in future training needs analyses conducted by CEPOL.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
<i>1.13</i>	Elaborate and propose requirements to ensure that the future development of the UMF meets the requirements of the new systems (i.e. EES, ETIAS, ECRIS-TCN) and the Interoperability purposes	2021-2022(Q4)	eu-LISA, EC DG HOME	Europol, Frontex, Member State Authorities	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> Requirements stemming from the interoperability components and core business systems managed by eu-LISA have been shared with the owner of the Universal Message Format (UMF) standard. UMF v 3.1 was released to include most of the proposed changes. According to the agreement between eu-LISA, DG HOME and the UMF project lead, the implementation of UMF is a continuous process and will require further activities to achieve the alignment of UMF and the new systems. <p>European Commission</p> <ul style="list-style-type: none"> This action (UMF) is being addressed in comitology (Commission implementing acts). The content of the implementing act is stable and is expected to be adopted by the Commission as an Implementing act in Q4 – 2022. <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic (as other Member States) participates in the IO (interoperability) Committee, where the Implementing Act on Universal Message Format (UMF) standard is created.

Theme 2: CREATION OF A REFERENCE CATALOGUE OF DEVICES AND SOLUTIONS FOR THE ACQUISITION OF DATA AND ACCESS TO INFORMATION IN THE CENTRAL SYSTEMS (SIS, VIS, EES, ETIAS, ECRIS-TCN, EURODAC)

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
<p><i>Theme 2: CREATION OF A REFERENCE CATALOGUE OF DEVICES AND SOLUTIONS FOR THE ACQUISITION OF DATA AND ACCESS TO INFORMATION IN THE CENTRAL SYSTEMS (SIS, VIS, EES, ETIAS, ECRIS-TCN, EURODAC)</i></p> <p><i>Objective 1: To establish a well-structured and coordinated approach for the development of a reference catalogue of devices and solutions for the acquisition of data and access to information.</i></p> <p><i>Objective 2: To enable testing of devices and solutions in real-life environments and business processes.</i></p>						
2.1	Consolidation and analysis of available studies, surveys and reports	Q3 2023	eu-LISA	Frontex Europol Member State Authorities EC DG HOME and DG JRC	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> eu-LISA started the assessment of building a repository of relevant studies and reports on standardisation on the Agency's Intranet, to be finalised in Q3 2023, with an aim to integrate it in the new Knowledge Management tool that is being developed at the Agency (Q2 2023), which will allow its consultation by Member States, European Commission and relevant agencies. <p>Europol</p> <ul style="list-style-type: none"> Europol will contribute to the exercise when requested so by eu-LISA. <p>Comment from France</p> <ul style="list-style-type: none"> FR will consult internally to identify and provide any relevant studies carried out. Member States will need to communicate and make available at EU level any relevant studies, as well as commit to carry out additional studies and tests on the equipment under consideration, in their national laboratories.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.2	Making the eu-LISA central repository for the requirements management process (requirements documents, analysing, tracking, monitoring and comparison) available to relevant stakeholders	Q1 2022 - continuous	eu-LISA		Ongoing	eu-LISA <ul style="list-style-type: none"> In September 2021, eu-LISA finalised its requirements management process, which is now in use. To ensure efficient and consistent requirements and demand management, the Agency launched a project aiming at defining a process for Business Analysis and to implement a tool to manage the service development lifecycle. eu-LISA envisages making some of the requirements available to the authorised stakeholders (e.g. Business Requirements, Stakeholder Requirements or Functional Requirements per core business system). As soon as the associated tools will be available, the relevant extraction could be envisaged and requirements documentation can be provided to authorised teams in the Member States and EU Agencies.
2.3	Performance of supplementary studies	Continuous	eu-LISA	Frontex, EC DG Home Member State Authorities EC DG JRC	Ongoing	eu-LISA <ul style="list-style-type: none"> eu-LISA, in line with its mandate and responsibilities is implementing all requirements stemming from the applicable legislation and associated LFS (Legislative Financial Statement). Stakeholders (Member States, European Commission, Agencies) may submit additional requirements. In that case, the Agency follows its Demand Management Process approved by eu-LISA Management Board in October 2021. Under this process, all associated impacts of the potential implementation of the additional requirements are assessed (legal aspects, resources at financial / human levels,

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						<p>planning etc.) to approve or not the new demand.</p> <ul style="list-style-type: none"> • eu-LISA, with the support of the European Commission, monitors on a regular basis all changes to the primary and secondary legislation. and follows the associated internal processes (Business, Demand and requirement management). • eu-LISA organises Industry Roundtables, aiming to present state of the art technologies and the future trends to the Member States. The Agency is also supporting all involved stakeholders (Member States, EU Institutions, European Union Agencies) in the relevant fora, where the discussions are taking place. • eu-LISA also took part in the workshops of the study led by Frontex “Technology Foresight on Biometrics for the Future of Travel”. <p>DG JRC</p> <ul style="list-style-type: none"> • DG JRC is conducting four related studies: <ul style="list-style-type: none"> - Quality of fingerprints of elderly citizens (above 65) - Enrolment of the data subjects targeted group has started on 3rd of November 2022 following DPO approval. - Development of a Face quality metric algorithm (FaceQnet); a first prototype was submitted to the NIST. - Development of a finger-mark quality metric algorithm (AFQA) - report on complementing AFQA using dactyloscopic expert opinions will be issued by the end of 2022. - Evaluation of the performance of the matching system and the quality of data (facial recognition and fingerprints) of the EES together with eu-LISA.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
						France <ul style="list-style-type: none"> France will consult internally to identify the testing initiatives carried out or planned.
2.4	Collection of data on equipment or devices that are already either in use, have been tested, or otherwise proven to be fit for purpose by the EU agencies or Member State authorities	2021-2022 (initial assessment); 2023-onwards (continuous)	eu-LISA, Frontex	EUAA Member State Authorities EC DG HOME and DG JRC	Ongoing	eu-LISA <ul style="list-style-type: none"> Preparatory work has started, taking into account the Frontex Entry/Exit System Border Pilot study and other Member States pilot studies, as presented at EES/ETIAS Advisory Group. eu-LISA is preparing surveys aiming at collecting information on the devices in operation, tested and certified as fit for purpose, by the Member State Authorities or JHA Agencies, such as Frontex and Europol. EUAA <ul style="list-style-type: none"> EUAA participates as an observer at the moment. Frontex <ul style="list-style-type: none"> In Q2 2021 Frontex developed a platform for Member States experts to exchange information on EES procedures and equipment. It includes a list of equipment and knowledge on specific questions related to the use of EES equipment, including for the collection of biometric data. France <ul style="list-style-type: none"> France will consult internally and send relevant information to eu-LISA. National JHA, border, visa and immigration authorities will need to exchange knowledge on different types of devices (e.g. for the capture and analysis of Facial Images and Fingerprints), aiming at collecting the business and operational requirements, as well as analyse the legal perspective.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.5	Development of technical standards for the equipment used by MS authorities in context of border checks, and in particular within the scope of the EES and ETIAS	2024	Frontex	eu-LISA EC DG HOME Member State Authorities	Ongoing	<p>Frontex</p> <ul style="list-style-type: none"> In September 2021 Frontex released a Technical Guide for Border Checks on Entry/Exit System (EES) related equipment. Frontex plans to develop Technical Standards for border checks equipment integrating EES equipment as part of the second iteration of development of Technical Standards. <p>eu-LISA</p> <ul style="list-style-type: none"> eu-LISA developed biometric quality algorithms for fingerprints and face images. These algorithms are aligned with the relevant EU and ISO standards, as well as with the EU regulation for EES and the EES Handbook. Following their integration into products (the EES User Software Kit - USK), they were tested in operational contexts, in Q2-Q3 of 2022. Based on the testing of the algorithms in close-to-operational conditions and analysis of the outputs, eu-LISA has developed further improvements and created new versions of the algorithms. This practice will continue once sBMS (Shared Biometric Matching Service) enters into operation. <p>Comments from France</p> <ul style="list-style-type: none"> France will consult internally and send relevant information to eu-LISA. France suggests to Member States to exchange knowledge on the devices in use, tested and certified fit for use, including information on technical and user requirements.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.6	Conduct a feasibility study to support the creation of the Testing Lab	Q1 2022 – Q1 2023	eu-LISA	Frontex Europol EC DG JRC	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> eu-LISA started internal discussions on the setting up of a Testing Lab, including its scope and objectives. A concept paper was discussed at the Management Board in November 2022. <p>Relevant stakeholders will be involved to fine-tune the concept and a feasibility study will be launched in 2023.</p>
2.7	Set up an Expert Group on the Testing Lab	Q1 2022 (continuous)	eu-LISA	Frontex Europol Member State Authorities	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> It is envisaged to set up the expert group to help fine tuning the concept of the testing lab. <p>Comment from Germany</p> <ul style="list-style-type: none"> The expert group will be very relevant for defining the European specifications for approved biometric hardware, in particular with regard to the technical requirements and biometric certification. <p>Comment from France</p> <ul style="list-style-type: none"> France will consult internally to participate in this expert group, follow its work and disseminate its deliverables. France recommends that the expert group should discuss the scope of the tests, their implementation, requirements and resource implications. The laboratory should interact with national testing laboratories to develop synergies and optimise resources.
2.8	Establishment of the Testing Lab	Q1 2023	eu-LISA, Frontex, Europol	EC DG JRC EC DG HOME	Ongoing	<p>eu-LISA</p> <p>See 2.6</p>

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.9	Development of standardised Business Process Validation use cases (for EES/ETIAS)	start in Q4 2021 (continuous)	eu-LISA	Frontex, EC DG HOME, Member State authorities	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> In 2021 eu-LISA provided the EES business processes to the Member States (as well as in the Frontiers Working Party). The Member States are in charge of implementing these processes at national level, testing them and training their end-users accordingly. Before every EES and ETIAS Advisory Group meeting, the Member States are requested to provide their input concerning the progress in a questionnaire. eu-LISA discusses the questionnaire outcomes monthly with Member States at the EES and ETIAS Advisory Group meetings. Moreover, eu-LISA works on a daily basis with Member States to address any question. In addition, eu-LISA provided the continuous testing / test-driven development (CT TDD) and will also provide the provisional system acceptance test (PSAT TDD). Member States will have the opportunity to collect test cases from these TDDs, design their own process test cases and thus test the performance of their processes before the associated entry into operation of the new systems. eu-LISA, Frontex and CEPOL are closely collaborating to provide training activities to Member States, on the new systems.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.10	Creation of new and re-engineering of existing business processes	2021-2022	MS Authorities	eu-LISA Frontex EC DG HOME Europol	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> As mentioned in actions 1.1-1.3 above, eu-LISA is providing full support to the Member States in the creation of new and the re-designing of the existing workflows or business processes. In this respect, the associated environments, per core business system (CBS), are/will be provided, to allow the Member States test these processes end to end, with their respective National Systems and their end users. This will be the opportunity for the Member States and EU Agencies to also train their end users, including testing in real time against the central systems. eu-LISA continues to monitor the activities on the state of play of Member States regarding the re-engineering of processes by means of a regular questionnaire. Member States are requested to report on their preparation. This has been done via the associated Advisory Groups and in line with the relevant Management Board decisions. Additionally, the Industry roundtable events regularly organised by eu-LISA focus on the use of automated equipment at the border and biometrics providing Member States with information on the state-of-the-art technologies. In addition, eu-LISA provided the continuous testing / test-driven development (CT TDD) and will also provide the provisional system acceptance test (PSAT TDD). Member States and EU Agencies will have the opportunity to collect test cases from these TDDs, design their own process test cases and thus test the performance of their processes before the associated entry into operation of the new systems.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
						<p>Europol</p> <ul style="list-style-type: none"> • Europol is developing new and changing existing business processes to implement the changes stemming from the Regulations of various JHA large scale IT systems, especially in relation to ETIAS and SIS. <p>Czech Republic</p> <ul style="list-style-type: none"> • Czech Republic uses the opportunity of rebuilding national systems due to SIS Recast, EES, ETIAS and IO to re-design national processes and to implement them into various national workflow systems (border application, SIRENE application etc.). <p>France</p> <ul style="list-style-type: none"> • Lesson learnt exercises will be needed to ensure optimisation of training activities in real life environments. <p>Comment from Germany</p> <ul style="list-style-type: none"> • The active re-engineering of business processes, in particular for interoperability, needs further improvement, with timely responses regarding the development of the business processes (e.g. updating the workflow engine with regard to interoperability) and transparent documentation to follow up on unresolved questions.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.11	Regular monitoring of the progress made in developing new and re-engineering of the existing business processes at Member State level	2021-2022 (continuous)	eu-LISA	Member State Authorities Europol	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> On a monthly basis, Member States are requested to provide information concerning the progress made in developing new processes and re-engineering of the existing business processes for the preparation for the entry into operations of EES and ETIAS. eu-LISA collects the information from the Member States through a questionnaire, and also reports the feedback provided by Member States during the EES and ETIAS Advisory Groups. Member States are fully aware by when these processes have to be in place and tested, as the associated milestones are communicated. <p>Europol</p> <ul style="list-style-type: none"> Europol also submits monthly reports to eu-LISA in the context of the same exercise. <p>France</p> <ul style="list-style-type: none"> France will consult internally and send relevant information to eu-LISA.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
2.12	Monitor and analyse updates stemming from future legal basis and standards	Q4 2021 (continuous)	eu-LISA	EC DG HOME	Ongoing	eu-LISA <ul style="list-style-type: none"> • eu-LISA monitors the changes in the legal base on a regular basis. The Agency has established an internal “Legal Observer” - a centralised database, where all primary and secondary legislative acts are kept up-to-date. • eu-LISA participates in the Committees and Expert Groups where new legal texts are discussed, analyses the proposals and provides feedback within the remit of its mandate. The agency also collaborated with the Commission and the Member States since 2021, in the review and development of the EES, ETIAS and Interoperability Handbooks.

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ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
<i>Theme 3: STRENGTHENING CYBER SECURITY</i> <i>Objective 1: Safeguarding the integrity, security and resilience of infrastructures, networks and services participating in the EU large-scale IT systems in the JHA area (SIS, VIS, EES, ETIAS, ECRIS-TCN, Eurodac and the interoperability components).</i> <i>Objective 2: Strengthening the ability to prevent, discourage, deter and respond to malicious cyber activities that may affect the operation of the EU large-scale IT systems (SIS, VIS, EES, ETIAS, ECRIS-TCN, Eurodac and the interoperability components).</i> <i>Objective 3: Strategic, operational and technical cooperation between European and national level for the operation of the EU large-scale IT systems (SIS, VIS, EES, ETIAS, ECRIS-TCN, Eurodac and the interoperability components).</i>						
3.1	Improve service protection applying cybersecurity protective measures on internet facing services	2022	eu-LISA	ENISA CERT-EU, EC DG HOME	Implemented	eu-LISA <ul style="list-style-type: none">The security requirements were included by eu-LISA in the web services currently implemented for EES and ETIAS. The Risk assessment and Security plan of the Agency include the measures and controls linked to this project. DELETED <ul style="list-style-type: none">DELETED ENISA <ul style="list-style-type: none">A recurring cyber exercise with eu-LISA and its stakeholders was conducted at the end of October 2022. Findings and lessons learned are available to eu-LISA.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.2	Enhance security monitoring mechanisms and threat hunting on internet facing services	2022-2023	eu-LISA	ENISA CERT-EU	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> The activity has been integrated to the creation of a Security Operation Centre (SOC) in eu-LISA to manage response to cyber security incidents for the large-scale IT systems operated by the Agency. <p>CERT-EU</p> <ul style="list-style-type: none"> CERT-EU expressed interest to cooperate in this area. <p>ENISA</p> <ul style="list-style-type: none"> A recurring cyber exercise with eu-LISA and its stakeholders was conducted at the end of October 2022 to facilitate security monitoring. Also, ENISA has published guidelines on how to set up Security Operation Centre SOC.
3.3	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.4	Develop stronger cooperation between eu-LISA, MS and JHA agencies on security management practices covering end-to-end security and business continuity of the large-scale IT systems achieved through periodic meetings of the Security Officers Network	start in 2022 (continuous)	eu-LISA,	ENISA, CERT-EU, Frontex, ICDT Cybersecurity, EUAA, EC DG HOME	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> The Security Officers Network of the JHA Agencies (JHA SON) had meetings twice a year since November 2021, where different points related to the security of the large-scale IT systems have been discussed. Particular attention was paid to cooperation in case of security incidents in the context of interoperability. The creation of the Cooperation Group and of the JHA SON in 2021 has enhanced the sharing of security best practices. In addition, eu-LISA has actively participated in the CERT-EU cooperation arrangement with other EU institutions and agencies. <p>ENISA</p> <ul style="list-style-type: none"> A recurring cyber exercise with eu-LISA and its stakeholders was conducted at the end of October 2022. Findings and lessons learned are available to eu-LISA.
3.5	Promote the use of the IT Security Risk Management Methodology (ITSRM2) following the guidelines set under the ETIAS Implementing Act and the model security and business continuity plans	2022-2023	eu-LISA	Member State Authorities, Frontex, JHA Agencies, EC DG HOME	Implemented	<p>eu-LISA</p> <ul style="list-style-type: none"> In the preparation of the new security plans for the large-scale IT systems, eu-LISA has used the ITSRM methodology and has presented it during the JHA Security Officers Network (SON) meetings. An approved standard on the ITSRM methodology is also available for the security community. <p>France</p> <ul style="list-style-type: none"> France participates in the work of ENISA in the context of IT Security Risk Management Methodology (ITSRM2).

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.6	Prioritise the setup of the Cooperation Group in line with the Implementing Act on security incident response under the interoperability framework	2022	eu-LISA, MS Authorities	ENISA CERT-EU, EC DG HOME, Member State Authorities	Implemented	<p>eu-LISA</p> <ul style="list-style-type: none"> The Cooperation Group was set up, its leader was designated, and processes were drafted. Work for set-up the cooperation procedure and Cooperation Platform has started. The Cooperation Group was set up to ensure cooperation between Member States, ETIAS Central Unit, Europol and eu-LISA in the event of security incidents, as required by Commission Implementing Decision 2021 (6663) and Commission Implementing Decision 2021 (6664). <p>See also actions 3.24 - 3.27.</p> <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic participates in the Cooperation Group and implements its outcomes into the national interoperability (IO) architecture. <p>France</p> <ul style="list-style-type: none"> France participates in the Cooperation Group.
3.7	Revise the applicable security control frameworks to encompass additional controls addressing AI, including machine learning, threat landscape and security of modern cloud technologies	2022-2023	eu-LISA, MS Authorities	EC DG HOME, JHA Agencies, ENISA, CERT-EU	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> eu-LISA has launched the revision of the applicable security control frameworks. <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic is gathering necessary inputs related to Artificial Intelligence from various fora and working groups (eu-LISA's Working Group on Artificial Intelligence, Europol's Working Group on Information Management, ENLETS etc.).

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.8	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.9	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.10	Review the mission, charter, objectives, and responsibilities of the SOC entity and determine the SOC Processes and the necessary service functions to support them	2022	eu-LISA	ENISA, CERT-EU, Europol	Implemented	eu-LISA <ul style="list-style-type: none"> A computer security incident response team (CSIRT) Maturity Improvement project is currently running until 2023, designed to assess and improve the maturity of the eu-LISA CSIRT organisation to the Intermediate maturity level of the ENISA CSIRT Maturity Framework and to achieve accreditation under the TF-Introducer Scheme, with the sponsorship of CERT-EU and CERT-EE. This action has been completed in the context of CSIRT Maturity project.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.11	Identify the SOC structures, building blocks and roles needed to support the SOC organisation	2022	eu-LISA	CERT-EU, Europol, EC DG HOME	Implemented	eu-LISA <ul style="list-style-type: none"> Please see action 3.10. This action has been completed in the context of CSIRT Maturity project.
3.12	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.13	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.14	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.15	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.16	Develop threat intelligence capability on actionable information sources	2022-2023	eu-LISA	ENISA, Europol, CERT-EU	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> A computer security incident response team (CSIRT) Maturity Improvement project is currently running until 2023, designed to assess and improve the maturity of the eu-LISA CSIRT organisation to the Intermediate maturity level of the ENISA CSIRT Maturity Framework and to achieve accreditation under the TF-Introducer Scheme, with the sponsorship of CERT-EU and CERT-EE. This action will be completed in the context of this project. <p>DELETED</p>

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.17	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.18	Identify patterns and capabilities to support root cause analysis of incidents and elimination of the threat while ensuring the risk of recurrence is properly handled.	2022-2023	eu-LISA	ENISA, CERT-EU, Europol, JHA Agencies	Ongoing	eu-LISA <ul style="list-style-type: none"> A computer security incident response team (CSIRT) Maturity Improvement project is currently running until 2023, designed to assess and improve the maturity of the eu-LISA CSIRT organisation to the Intermediate maturity level of the ENISA CSIRT Maturity Framework and to achieve accreditation under the TF-Introducer Scheme, with the sponsorship of CERT-EU and CERT-EE. This action will be completed in the context of this project.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.19	Improve Security Incident and Response Team (SIRT) capability from the greenfield to establishing level, focusing on improved near-real-time threat detection through the development of the necessary detection and response engineering functions	2022-2023	eu-LISA	CERT-EU, ENISA	Ongoing	Actions 3.19-3.20 eu-LISA <ul style="list-style-type: none"> A computer security incident response team (CSIRT) Maturity Improvement project is currently running until 2023, designed to assess and improve the maturity of the eu-LISA CSIRT organisation to the Intermediate maturity level of the ENISA CSIRT Maturity Framework and to achieve accreditation under the TF-Introducer Scheme, with the sponsorship of CERT-EU and CERT-EE. This action will be completed in the context of this project.
3.20	Prepare a continuous assessment plan for prevention and detection capabilities as a way to ensure SIRT objectives	2022-2023	eu-LISA	CERT-EU, ENISA		

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.21	Develop and sign a trilateral Memorandum of Understanding between eu-LISA, the European Commission and Member States to address a common collaborative approach on risk management covering strategic, operational and technical cooperation	2022-2023	eu-LISA, MS Authorities	Member State Authorities, EC DG HOME, EC DIGIT	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> In the context of interoperability, the JHA Security Officers Network (SON) will assess the preparation of recommendations for security and Business Continuity plans (similarly as done for EES and ETIAS) with the aim of promoting a common collaborative approach on risk management. Discussions to be launched (Security Officers Network of the JHA Agencies mandate was expected to be adopted by the JHA Agencies Directors on 29 November 2022. Following this, a dedicated meeting may be organised in 2023); issuing technical guidelines by eu-LISA to be considered. <p>Czech Republic</p> <ul style="list-style-type: none"> Czech Republic is waiting for the outcomes/proposals from eu-LISA and European Commission. <p>France</p> <ul style="list-style-type: none"> France is interested in the cooperation on this topic.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.22	Adopt a commonly acceptable set of cybersecurity processes among the stakeholders (Member States, JHA Agencies and the European Commission) on the way cybersecurity is setup and managed focusing on common monitoring, measurement and continuous improvement metrics and indicators.	2022-2023	eu-LISA, DG DIGIT	Member State Authorities, EC DG HOME, ICDT Cybersecurity	Ongoing	Actions 3.22-3.23 eu-LISA <ul style="list-style-type: none"> The activity is linked to the adoption of the new Cyber Security Regulation for EU institutions, bodies and agencies, foreseen for adoption in 2022. The Regulation is being discussed by the co-legislators. In preparation to this activity, a number of guidelines are under preparation by ENISA. These activities are ongoing.
3.23	Adopt a common set of cybersecurity standards to support the cybersecurity processes allowing for alignment among stakeholders while promoting common maturity and overall performance.	2022-2023	eu-LISA, DG DIGIT	Member State Authorities, EC DG HOME, ENISA, ICDT Cybersecurity		

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.24	Identification of the mission, scope, functionality and organisation of the Cooperation Platform	2022-2023	eu-LISA	Member State Authorities, EC DG HOME	Ongoing	eu-LISA <ul style="list-style-type: none"> The Cooperation Group has completed the identification of the mission, scope, functionality and organisation of the Cooperation Platform. The Platform is under development.
3.25	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED

<i>ID</i>	<i>Sub-action</i>	<i>Timeline</i>	<i>Owners</i>	<i>Contributing stakeholders</i>	<i>Status</i>	<i>Update on the implementation</i>
3.26	DELETED	DELETED	DELETED	DELETED	DELETED	DELETED
3.27	DELETED	DELETED	DELETED	DELETED		

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.28	Develop and sign a multilateral Memorandum of Understanding between eu-LISA, CEPOL, ENISA and CERT-EU to include cooperation on cybersecurity awareness and training targeting specific threats and response management applicable to the EU large-scale IT systems	2022-2023	eu-LISA, CEPOL	ENISA, CERT-EU, Europol, EC DG HOME	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> In 2022 the JHA agencies have created the JHA Security Officers Network (SON) that foresees cooperation in this area. In parallel, the cyber security Regulation and Inter-Institutional Security Training and Awareness Group are equally covering these cooperation aspects on cyber security awareness and training. <p>CERT-EU</p> <ul style="list-style-type: none"> CERT-EU is developing the User Awareness Program and has informed eu-LISA in June 2022. <p>ENISA</p> <ul style="list-style-type: none"> A recurring cyber exercise with eu-LISA and its stakeholders was conducted at the end of October 2022. Findings and lessons learned are available to eu-LISA. <p>CEPOL</p> <ul style="list-style-type: none"> Annual joint working plan with eu-LISA addresses areas of training delivery covering topics of joint interest.

ID	Sub-action	Timeline	Owners	Contributing stakeholders	Status	Update on the implementation
3.29	Exchange of staff among agencies under MoU for a defined period (1-2 weeks) to facilitate the delivery of standardised cyber security awareness and training and enable exchange of best practices to develop mutual understanding of the security environment, business contexts and enable better cooperation	2022-2023	eu-LISA, CEPOL	Europol, ENISA, CERT-EU, EC DG HOME	Ongoing	<p>eu-LISA</p> <ul style="list-style-type: none"> The initiative is under assessment by eu-LISA in the context of the update of existing Memoranda of Understanding and linked to the adoption of the new Information Security Regulation for EU institutions, bodies and agencies, foreseen for adoption in 2022. The Regulation is being discussed by the co-legislators. <p>CEPOL</p> <ul style="list-style-type: none"> Subject to the MoU to be concluded, CEPOL may send staff to other agencies for 1 or 2 weeks in the form of mission with a staff development focus. Similarly, CEPOL may receive staff from other agencies for a defined period for the purpose of receiving an outside perspective of risks for CEPOL's ICT infrastructure stemming from cyber security.