eu-LISA

CONSOLIDATED ANNUAL ACTIVITY REPORT

2022

eu-LISA Consolidated Annual Activity Report 2022

Adopted by the eu-LISA Management Board on 22 June 2023

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Abbreviations and acronyms

ABAC	Accrual Based Accounting
ACFC	Audit, Compliance and Finance Committee of the eu-LISA Management Board
AFIS	Automated Fingerprint Identification System
AG	Advisory Group
AI	artificial intelligence
ALM	application lifecycle management
ARES	eu-LISA records management system
BCU	Back-up Central Unit
BMS	biometric matching service
CA	contract agent
CAF	Common Assessment Framework
CEAS	Common European Asylum System
CEPOL	European Union Agency for Law Enforcement Training
CERT-EU	Computer Emergency Response Team for the EU Institutions, bodies and agencies
CIR	common identity repository
CIS	Communication and Information Systems
CMDB	configuration management database
CMMI	Capability Maturity Model Integration
CoI	conflict of interest
CRRS	central repository for reporting and statistics
CSI	Common Shared Infrastructure
CSIRT	Computer Security Incident Response Team
CSP	Common Shared Platform
CU	Central Unit
DC	Data Centre
DCC	data consistency checks
DCIM	data centre infrastructure management
DEBS	Data Exchange Between SIRENE Bureaux
DG HOME	Directorate-General for Migration and Home Affairs
DPIA	data protection impact assessment
DPO	Data Protection Officer
DubliNet	Dublin electronic communications network
EASA	European Union Aviation Safety Agency
EAW	European arrest warrant
EC	European Commission
ECA	European Court of Auditors

ECHA	European Chemicals Agency
ECM	Enterprise Content Management
e-CODEX	e-Justice Communication via Online Data Exchange
ECRIS	European Criminal Records Information System
ECRIS RI	European Criminal Records Information System Reference Implementation
ECRIS-TCN	European Criminal Records Information System – Third Country Nationals
ED	Executive Director
EDPS	European Data Protection Supervisor
EEA	European Economic Area
EES	Entry/Exit System
EIGE	European Institute for Gender Equality
EMS	environmental management system
EMAS	Eco-Management and Audit Scheme
ENISA	European Union Agency for Cybersecurity
EPDS	European Data Protection Supervisor
EPMO	enterprise programme and project management
ESA	European Space Agency
ESP	European search portal
ETIAS	European Travel Information and Authorisation System
EU	European Union
EUAA	European Union Agency for Asylum
EUAN	European Union Agencies Network
EU-ANSA	European Union Agencies Network on Scientific Advice
eu-LISA	European Union Agency for the Operational Management of Large-Scale IT Systems in the area of Freedom, Security and Justice
Eurodac	European Asylum Dactyloscopy Database
Eurojust	European Union Agency for Criminal Justice Cooperation
Europol	European Union Agency for Law Enforcement Cooperation
EUWS	end-user workstations
FAT	factory acceptance test
FG	function group
FPEN	Future Pan European Network
FRA	European Union Agency for Fundamental Rights

Frontex	European Border and Coast Guard Agency		**PAD**	public access to documents
FSAT	functional system acceptance test		**PD**	programming document
FTE	full time equivalent		**PI**	performance indicator
FwC	framework contract		**PM**	project management
HR	human resources		**PPM**	project portfolio management
HW	hardware		**PRINCE2**	Projects IN Controlled Environments
IAC	Internal Audit Capability		**R&D**	research and development
IAS	Internal Audit Service		**SAD**	software architecture document
ICD	interface control document		**sBMS**	shared biometric matching service
ICF	internal control framework		**SCG**	self-assessment group
ICT	information and communications technology		**SDLC**	systems development life cycle
IR	Interim Report		**SEMM**	Schengen evaluation and monitoring mechanism
ISO	International Organization for Standardization		**SIEM**	Security Information and Event Management System
IT	Information technology		**SIRENE**	Supplementary Information Request at the National Entries
ITIL	Information Technology Infrastructure Library		**SIS**	Schengen Information System
ITSM	information technology service management		**SLA**	service-level agreement
IXIM	Working Party on JHA Information Exchange		**SM9**	eu-LISA's IT service management tool (Microfocus Service Manager version 9)
JHA	justice and home affairs		**SNE**	seconded national expert
JHAAN	Justice and Home Affairs Agencies' Network		**SON**	Security Officers Network
JIT	Joint Investigation Teams		**SPD**	Single Programming Document
KPI	key performance indicator		**SST**	system solution test
LFS	legislative financial statement		**SW**	software
LMS	Learning Management System		**TA**	temporary agent
MB	Management Board		**TAP**	turnkey access point
MRMIC	Risk Management and Internal Control Manager		**TCN**	third-country nationals
MDC	modular data centre		**TEF**	transversal engineering framework
MFF	multiannual financial framework		**TEG**	Testing Expert Group
MID	multiple-identity detector		**TESTA-ng**	Trans-European Services for Telematics between Administrations – New Generation
MS	Member State		**TOF**	transversal operating framework
MT	MID Transition Tool		**UAT**	user acceptance test
MWO	Maintenance in Working Order		**USK**	user software kit
NCP	national contact points		**VIS**	Visa Information System
NUI	national uniform interface		**WAN**	Wide Area Network
OJ	Official Journal of the European Union		**WGAI**	eu-LISA Working Group on Artificial Intelligence
OLAF	European Anti-Fraud Office			

eu-LISA – the Agency in brief

The European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA) is responsible for the operation and continuous evolution of the EU's large-scale IT systems in the domain of Justice and Home Affairs (JHA).[1] Since starting operation in 2012, the Agency has evolved from a small technical agency into the digital heart of the Schengen Area, contributing to the implementation of a wide range of JHA policies from visas, migration and asylum to internal security and justice. eu-LISA's responsibilities focus on facilitating the efficient exchange of information between relevant authorities across Europe to ensure timely data-driven management of the EU's external borders, while delivering a secure and seamless experience for international travellers.

The Agency's core priority is to ensure the effective, secure and uninterrupted operation of the EU's JHA information systems in compliance with the legal basis and respective service-level agreements, as well as applicable data protection and security requirements. The continuous availability of these information systems is essential for ensuring the EU's internal security, while guaranteeing the freedom of movement for EU citizens and residents. eu-LISA is currently managing three core JHA systems that ensure the efficient functioning of the Schengen area:

- the **Schengen Information System (SIS)**,[2]
- the **Visa Information System (VIS)**,[3]
- and the **European Asylum Dactyloscopy Database (Eurodac)**.[4]

To further streamline the management of the EU's external borders and improve the internal security of the Schengen area, eu-LISA is in the process of developing new IT systems, together with the new interoperability architecture for the JHA domain:

- the **Entry/Exit System (EES)**,[5]
- the **European Travel Information and Authorisation System (ETIAS)**,[6]
- the **European Criminal Records Information System on third-country nationals and stateless persons (ECRIS-TCN)**,[7]
- and the **interoperability components**: sBMS, CIR, ESP, MID, and CRRS.[8]

In 2022, eu-LISA also began preparations for taking over the operational management of **e-CODEX** (e-Justice Communication via Online Data Exchange),[9] a system that facilitates secure communication between judicial authorities in cross-border civil and criminal proceedings, thus strengthening the Agency's contribution to the EU's justice domain and the Commission's initiative for the digitalisation of justice.

To ensure state-of-the-art expertise to its key stakeholders – the Commission, the Member States and other EU agencies, eu-LISA actively monitors the latest developments in **research and innovation** to identify and test new technological solutions to further enhance its operational efficiency and drive digital transformation in the JHA domain. Additionally, eu-LISA provides high-quality services to all system end-users, including 24/7 support and user training.

Throughout all its activities, the Agency remains **transparent and accountable** to its stakeholders and EU citizens, upholding its solid reputation and visibility.

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[1] **Regulation (EU) 2018/1726**, OJ L 295, 21.11.2018, p. 99–137.
[2] **Regulations (EU) 2018/1860, (EU) 2018/1861**, and **(EU) 2018/1862**, OJ L 312, 7.12.2018, p. 1-106; **Regulations (EC) No 1986/2006**, and **(EC) No 1987/2006**, OJ L 381, 28.12.2006, p. 1-23; **Council Decision 2007/533/JHA**, OJ L 205, 7.8.2007, p. 63-84.
[3] **Regulation (EC) No 767/2008**, OJ L 218, 13.8.2008, p. 60–81; **Council Decision 2004/512/EC**, OJ L 213, 15.6.2004, p. 5–7, **Council Decision 2008/633/JHA**, OJ L 218, 13.8.2008, p. 129–136.
[4] **Regulation (EU) No 603/2013**, OJ L 180, 29.6.2013, p. 1–30, **Regulation (EU) No 604/2013**, OJ L 180, 29.6.2013, p. 31–59; **Regulation (EC) No 1560/2003**, OJ L 222, 5.9.2003, p. 3–23.
[5] **Regulation (EU) 2017/2226**, OJ L 327, 9.12.2017, p. 20-82.
[6] **Regulation (EU) 2018/1240**, OJ L 236, 19.9.2018, p. 1-71 and **Regulation (EU) 2018/1241**, OJ L 236, 19.9.2018, p. 1-73.
[7] **Regulation (EU) 2019/816**, OJ L 135, 22.5.2019, p. 1-26.
[8] **Regulations (EU) 2019/817**, and **(EU) 2019/818**, OJ L 135, 22.5.2019, p. 27-135.
[9] **Regulation (EU) 2022/850**, OJ L 150, 1.6.2022, p. 1–19.

Mission, vision and core values

MISSION

to support, through technology, the efforts of the EU and its Member States to keep Europe open and secure.

VISION

to grow eu-LISA as an organisation committed to providing high-quality, efficient services and solutions by systematically aligning its technological capabilities with the evolving needs of the EU and the Member States, while also maturing as a trusted partner in driving the digital transformation in the JHA domain.

CORE VALUES

Accountability

deploying a sound governance framework, cost-efficient operations and sound financial management.

Excellence

applying the right organisational structure, the right people and the right processes, ensuring service continuity and functional comprehensiveness of the tools provided to the Member States.

Continuity

ensuring that the Agency will make the best use of the expertise, knowledge and investments made by the Member States and will continue to develop them.

Transparency

providing regular and open communication with the Agency's key stakeholders and engaging them in a continuous dialogue to define the long-term strategy for the development of the Agency.

Teamwork

seeking to empower each team member to make the best use of their knowledge and experience, contributing to shared success.

Customer Focus

ensuring the Agency's alignment with the needs and demands of its stakeholders at all times.

LOCATIONS

HEADQUARTERS
Tallinn, Estonia

TECHNICAL SITE
Strasbourg, France

LIASON OFFICE
Brussels, Belgium

TECHNICAL BACK-UP SITE
St Johan im Pongau, Austria

Long-term strategy

The strategic objectives outlined in the Agency's **long-term strategy for 2021–2027**[10] reinforce eu-LISA's primary mission of delivering state-of-the-art technological solutions and continuing the digitalisation of the JHA domain to support the stakeholders in their efforts **to keep Europe open and secure**.

To guide its long-term and annual activities, the Agency has set the following four strategic goals:

STRATEGIC GOALS

1 Continue growing as a contributor to and implementing partner for the relevant policies in the domain of Justice and Home Affairs.

2 Maintain and expand the Agency's role as a recognised and trusted partner for the European Institutions and the Member States in driving the digital transformation in the EU's Justice and Home Affairs domain.

3 Continue working on eu-LISA's organisational evolution towards a more efficient, agile and resilient organisation within the EU regulatory framework.

4 Enable and drive innovation and digital transformation in the EU's Justice and Home Affairs domain.

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[10] **eu-LISA strategy 2021–2027**, adopted by the Management Board in November 2021.

JHA information systems managed by eu-LISA

Purpose of the system	Entry into operation	Status	Data stored in 2022	Operations in 2022
Asylum, migration and borders				
Eurodac │ European Asylum Dactyloscopy database				
Eurodac is the EU database of digitalised fingerprints for the management of asylum applications under the Dublin Regulation. The system assists in establishing the responsible Member State by determining whether the applicant has previously claimed asylum in another EU country. To better combat irregular migration, eu-LISA is set to undertake a major evolution of the system, introducing new functionalities and redesigning its central system.	**2003** Operated by eu-LISA since June 2013	In operation	**6.5 million fingerprint sets**	**1 481 815**
EU internal security and borders				
SIS │ Schengen Information System				
SIS is the largest information-sharing system for the management of external borders and ensuring the internal security of the Schengen area. SIS facilitates information exchange about wanted or missing persons or objects, together with instructions for competent authorities on what to do when the person or object has been found. As such, it serves as an invaluable tool for combatting cross-border crime and terrorism.	**1995** Operated by eu-LISA since May 2013	In operation	**87 million alerts**	**12.7 billion searches performed**
Schengen, borders and visa				
VIS │ Visa Information System				
As one of the core elements of the Schengen architecture, VIS facilitates the processing of visa applications and the management of short-stay visas for third-country nationals travelling to or transiting through the Schengen area. It supports the implementation of the EU's common visa policy and helps combat visa fraud by assisting in the identification of persons not fulfilling the necessary conditions for stay or entry.	**2011** Operated by eu-LISA since December 2012	In operation	**56.7 million visa applications** **51.5 million fingerprint sets** **56.7 million facial images**	**152 million**
EES │ Entry/Exit System				
EES is set to streamline border control procedures by replacing manual passport stamping with the electronic registration of all third-country nationals entering and exiting the Schengen area. Once operational, EES will ensure better monitoring of authorised stays and the identification of possible overstayers, thereby contributing to preventing irregular migration and strengthening internal security, while also helping to combat organised crime and terrorism.	**2024**	In development		
ETIAS │ European Travel Information and Authorisation System				
ETIAS is an online travel authorisation system for visa-exempt third-country nationals travelling to 30 European countries. This pre-travel screening system compares information across all JHA systems, as well as Europol and Interpol databases, for advance identification of potential security, irregular migration or high epidemic risks that may give grounds for denying entry to the Schengen area. ETIAS authorisations are checked by air, sea and land carriers prior to boarding and also by border guards at Schengen borders.	**2025**	In development		

Purpose of the system	Entry into operation	Status	Data stored in 2022	Operations in 2022

Justice cooperation

ECRIS RI │ European Criminal Records Information System – Reference Implementation

ECRIS is a decentralised system for exchanging information between Member States on criminal records of EU citizens, as well as nationals of other countries. ECRIS RI offers an integration interface which enables connection with national criminal record registers of Member States.	**2012** Managed by eu-LISA since April 2020	In operation	*Not applicable*	*Not applicable*

ECRIS-TCN │ European Criminal Records Information System – third country nationals

ECRIS-TCN, the first IT system developed by eu-LISA for the EU's justice domain, facilitates the electronic exchange of information on the criminal records of third-country nationals and stateless persons. As such, it supports the principle of mutual recognition of sentences and judicial decisions across Europe.	**2025**	In development	*Not applicable*	*Not applicable*

e-CODEX │ e-Justice Communication via Online Data Exchange

e-CODEX is a communication platform for facilitating the secure transmission of electronic content between judicial authorities and legal professionals in cross-border judicial proceedings, ensuring a more efficient judicial process for citizens and businesses across Europe. In 2022, the EU entrusted the development and maintenance of the e-CODEX system to eu-LISA — an important step towards increasing the Agency's contribution to the digitalisation of the EU's justice domain.	**2013** Handover to eu-LISA planned for July– December 2023	In operation	*Not applicable*	*Not applicable*

New interoperability architecture

Interoperability is the capability of interconnected systems to share data and exchange information, providing relevant authorities with streamlined access to comprehensive information.	**2026**	In development		

The overarching systems interoperability for the JHA domain will be enabled by the following components that facilitate authorised searches and information exchange:

- European search portal (ESP): a single-search window for fast searches across all JHA systems managed by eu-LISA,
- shared biometric matching service (sBMS) for cross-matching biometric data across all JHA systems,
- common identity repository (CIR) for the correct identification of third-country nationals (biographical and biometric data),
- multiple-identity detector (MID) for uncovering multiple identities and combatting identity fraud,
- central repository for reporting and statistics (CRRS) for generating cross-system aggregated reports.

Management Board's analysis and assessment

The Management Board of eu-LISA has analysed and assessed the Agency's Consolidated Annual Activity Report on the achievements and results for 2022.

The Board emphasises eu-LISA's essential role in ensuring the effective functioning and resilience of the Schengen area, as well as its invaluable contribution to the successful implementation of EU policies in the areas of border control, visas, migration and asylum, e-justice, digitalisation and cybersecurity.

The Management Board:

- acknowledges eu-LISA's efforts to achieve the objectives set for 2022, as laid down in its establishing regulation and the annual work programme outlined in the Single Programming Document 2022–2024;

- thanks the Agency for its continued efforts and the good results achieved in ensuring the stable and uninterrupted availability of the EU's JHA information systems under its management and enabling the efficient functioning of the Schengen area;

- acknowledges the quality and timeliness of the support provided by the Agency to the Member States and the European Commission during 2022;

- recognises that 2022 proved to be an extremely challenging year for the systems in development, as the Agency found itself working in parallel on a large number of interrelated activities to meet the high expectations of its stakeholders, while the volume and the complexity of its operations continued to expand;

- observes that eu-LISA strove to progress with the development and delivery of new IT systems for the JHA domain – EES, ETIAS, ECRIS-TCN and SIS Recast, together with the new interoperability architecture, and acknowledges that the impeding effects of supply chain disruptions, combined with the difficulties faced with outsourced activities, prevented adherence to original implementation plans;

- encourages the Agency to further strengthen the efficiency and effectiveness of its budget management and internal control systems, in particular by improving its contract and vendor management process, and by implementing the long-standing audit recommendations as soon as possible;

- expresses its satisfaction with eu-LISA's overall management throughout 2022.

The Management Board believes this report provides sufficient assurance that, despite many challenges hindering adherence to demanding implementation schedules, **eu-LISA took a systematic and consistent approach to implement its mandate**, and used its financial and human resources in line with the purposes set out in eu-LISA's annual work programme for 2022 as outlined in the SPD 2022–2024.

The Management Board, taking into consideration the information provided in this report:

- emphasises the **considerable pressure on eu-LISA's staff** working on complex projects and stresses that the Agency needs to be further reinforced with additional human resources, both in its operational as well as horizontal and cross-organisational functions, while reducing its vacancy rate, to deliver the tasks entrusted to it in the 2021-2027 programming period;

- further underscores the need for eu-LISA to reduce its dependency on external contractors for core tasks while safeguarding a high level of compliance;

- **supports the Agency in its continuous efforts** to implement its mandate and the new initiatives, namely EES, ETIAS, ECRIS-TCN, and the interoperability architecture, to ensure their seamless entry into operation;

- recognises the **interdependencies** between the Agency's work at the central level and that of the Member States at the national level, and calls eu-LISA to continue this close and efficient cooperation with its stakeholders and the European Commission to ensure the successful delivery of the new systems;

- acknowledges the **importance of eu-LISA's capacity increase programme** to ensure sufficient data centre capacity for the efficient and sustainable deployment and management of both new and already existing IT systems, while continuing to guarantee the uninterrupted availability and timely evolution of all systems under its remit.

The Management Board expresses its gratitude to the Agency's previous Executive Director, Krum Garkov, to Interim Executive Director, Luca Tagliaretti, to eu-LISA's management and its entire staff for their steadfast commitment and efforts throughout this incredibly challenging year.

Zsolt Szolnoki,

Chairperson of the Management Board

Foreword by Executive Director

The vision, efforts and sacrifices required to build a united Europe of common values and the opportunities it brings came more clearly into focus amid the challenges of recent years, ranging from the financial crisis to a pandemic to the war in Ukraine. More than ever, critical times and crises highlight the importance of solidarity, responsibility and unity. These values underpin the strength of the European Union, fuelling the EU engine that gives the Union its power to overcome difficult periods and maintain the quest for better times for all, be they citizens of the EU or people that share our values.

Within this context, eu-LISA plays a crucial role in positively impacting the lives of millions of people. At the core of our mission is the aim to serve European citizens. We do this by helping to keep Europe safe, secure, and open. We contribute to building a better Europe with our stakeholders in EU institutions, Member States, other agencies, and a broad network of partners. We help our stakeholders by providing cutting-edge digital tools and technologies that serve citizens while protecting their privacy and personal data. The outcomes of our work are inseparable from ensuring safe and secure daily lives for European people and visitors to the Schengen Area. At eu-LISA, we are proud to contribute to these goals.

2022 marked eu-LISA's 10th Anniversary, presenting an opportunity to appreciate all its past and current achievements, milestones and key events on the journey from a technical Agency to the Digital Heart of Schengen and the role the Agency has played in key areas for Europe's internal security. The Agency's mission and values - strengthening the European Union and its Member States to keep Europe open and secure and serve citizens' needs through technology - are essential and ingrained in the hard work and commitment delivered by its teams over the past decade.

The continuously evolving regulatory framework, the political and operational environment changes, the large number of parallel and intertwined activities, and the high expectations of the Agency's stakeholders made 2022 extremely challenging. As the volume and the complexity of its operations continued to grow, 2022 stretched the Agency's resilience and ability to ensure the uninterrupted availability of the systems under its management and the normal functioning of the Schengen area.

Additionally, the Agency, together with the Member States and the European Commission, put a lot of effort throughout the year into the development of the interoperability components of the EU's JHA information systems and the new systems entrusted to eu-LISA – EES, ETIAS, and ECRIS-TCN. The new systems and the information architecture concurrently form the most complex and challenging transformation programme launched by an Agency for border management and internal security in the EU. The hindering effects of the supply chain disruptions, combined with the difficulties of some of the Agency's contractors to follow the challenging implementation schedules, resulted in delays that necessitated reviewing and revisioning original plans. The Agency made every effort under its control to keep the work pace and ensure the timely implementation of the new information architecture.

On this path, eu-LISA strived to be a reliable and capable partner to the Member States and the EU institutions. It also continued to develop and increase its contribution to successfully implementing the relevant policies in the EU's Justice and Home Affairs domain. While thus far, the focus has been primarily on the digitalisation and interoperability of border management and internal security systems, in 2022, the Agency continued to expand its role in the EU's justice domain by starting preparations for the takeover of the e-CODEX system. e-CODEX will serve as one of the strategic building blocks in the overall digital ecosystem of the EU's justice domain, improving the efficiency of European judicial authorities while providing better access to justice to citizens and businesses across the EU.

Alongside celebrating our first decade, this year also marked a year of transitions for the Agency. I want to thank Luca Tagliaretti for his work as Interim Executive Director in concluding the year. My appreciation also goes to the entire management and all eu-LISA teams, who unabatingly continued to deliver on the goals of the Agency during this period.

I look forward to working with all eu-LISA teams, stakeholders and partners to succeed together in the great missions entrusted to us.

Agnes Diallo

Executive director

Executive summary

The European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA) was established in 2011 as a technical agency to take over the management of three existing IT systems for the Schengen area. Over the past decade, it has grown into the 'digital heart' of Schengen, serving as one of the guarantors of its safety and security, while also ensuring one of the fundamental rights of Eu citizens - the freedom of movement.

Since commencing operation in 2012, eu-LISA has evolved into a key contributor to the ongoing digital transformation of the EU's domain of justice and home affairs (JHA). The Agency's overall performance in the 2022 demonstrated that eu-LISA remains a reliable and committed partner for the European institutions and Member States in the process of implementing relevant JHA policies, while also ensuring the safety and integrity of the technologies deployed.

2022 Annual Priorities

1 Stable and uninterrupted operations and services of core business systems: SIS, VIS, Eurodac.

2 Progress with the implementation of new initiatives (i.e., EES, ETIAS, Interoperability, ECRIS-TCN, Revised VIS, Eurodac Recast) in accordance with established roadmaps.

3 Progress with the second extension of the Agency's operational site in Strasbourg (renamed to 'Capacity Increase Programme').

4 Further strengthening of the Agency's internal control system, with particular emphasis on quality management, as well as contract and vendor management.

5 Further developing and improving eu-LISA's programme and portfolio management capability.

The annual activity report for 2022 reflects the Agency's progress with the implementation of a number of highly challenging and critical tasks with an increasingly complex operational environment.

Achievements of the year

↘ **Priority 1**: Stable and uninterrupted operations and services of core business systems: SIS, VIS, Eurodac

In 2022, the Agency continued to ensure the stable operation of the EU's core JHA systems: Schengen Information System (SIS), including the Automated Fingerprint Identification System (AFIS), Visa Information System (VIS) and European Asylum Dactyloscopy database (Eurodac). To ensure the continuous availability of the systems, the Agency also continued effective operational management of the underlying infrastructure, networks and services, complemented by 24/7 support services to the system end-users.

Excluding some incidents that resulted in short-term unavailability and delays, all systems complied with their respective service-level agreements, with SIS availability at 99.94%, VIS at 99.69%, and Eurodac at 99.88%. For SIS and VIS, the incidents were related to the deployment of new releases, while other incidents were due to external factors, such as the incident on the TESTA-ng network, affecting the operations of SIS and Eurodac.

Following the COVID-19-induced slump, system usage rates are recovering rapidly, with an increase exceeding 80% for both SIS and VIS, with Eurodac not far behind with 73%. While SIS and Eurodac have managed to surpass previous annual scores, VIS usage lags below pre-pandemic levels:

- **SIS searches: 12.7 billion** (82% increase from 2021, pre-pandemic baseline: 6.64 billion),
- **VIS operations: 152 million** (88% increase from 2021, pre-pandemic baseline: 294 million),
- **Eurodac transactions: 1.4 million** (73% increase from 2021, pre-pandemic baseline: 916,536 million).

In 2022, eu-LISA's main objectives were to ensure continuous system availability and deliver the required evolutions while preparing for their integration with interoperability components. Following the joint efforts of eu-LISA, the Member States, and the Commission, the renewed SIS entered operation on 7 March 2023. Another important objective for 2022 was the deployment of a new search engine for SIS – Elasticsearch, which will deliver a tenfold increase in search capacity while significantly reducing system unavailability during switching between the central and backup units.

Additionally, to test and improve system resilience, the Agency conducted the SIS II Security Exercise 2022, focusing on the central system (incl. business continuity elements and other horizontal business areas). In the latter part of the year, eu-LISA started working with the Member States on the preparation of the upcoming VIS security and business continuity exercise scheduled for 2023.

In addition to the operational management of these IT systems, eu-LISA continued to deliver several other closely related statutory objectives, such as training for Member States on the use of JHA information systems, preparing statutory reports on their technical performance, annual statistics and lists of designated authorities.

1

PRIORITY

2
PRIORITY

↘ **Priority 2**: Progress with the implementation of new initiatives and upgrades (i.e., EES, ETIAS, Interoperability, ECRIS-TCN, Revised VIS, Eurodac Recast) in accordance with established roadmaps

Working closely with the Commission and the Member States, eu-LISA remained committed to delivering new systems: EES, ETIAS, ECRIS-TCN, and the Interoperability programme, while advancing with the implementation of renewed SIS and revised VIS. However, the hindering effects of the supply chain disruptions, combined with the difficulties of some of the Agency's contractors to abide by the implementation schedules, resulted in delays that necessitated the review and revision of original plans. The Agency made every effort under its control to progress with its tasks and to ensure timely development and delivery, monitoring the situation very carefully and deploying various measures to mitigate their impact. These efforts have been particularly critical for EES, because due to interdependencies, any delays in the EES delivery schedule have a direct impact on the implementation timelines of other initiatives, in particular ETIAS and interoperability components.

To prepare for the launch of EES and ETIAS, eu-LISA joined forces with carrier associations to conduct an awareness-raising campaign to encourage registration, in particular among land carriers, in order to set up connections with the systems.

As for interoperability components, the Agency made good progress with the high-level design and the requirements repository, while also eliciting security requirements that will drive the development of the overarching security architecture for the systems under eu-LISA's remit.

In 2022, the Agency continued expanding its role in the EU's justice domain, starting preparations for the takeover of the e-CODEX system.

To deliver insights on the latest technology developments in its area of expertise, eu-LISA published a report on how the digitalisation of international travel will affect travellers headed to the EU, focusing in particular on how EES and ETIAs will facilitate the transition to more seamless border management. In addition, the Agency organised two industry roundtables, the first focusing on biometric technologies in identity management and verification, and the second exploring solutions to the challenges faced by carriers in anticipation of the entry into operation of EES and ETIAS.

Furthermore, eu-LISA co-authored a report with Eurojust on using AI solutions to support cross-border cooperation in criminal justice. In addition, the Agency took active part in the work of the EU Innovation Hub for Internal Security to explore the application of new technologies and to address knowledge and capability gaps in the JHA domain.

↘ **Priority 3**: Timely progress with the second extension of the Agency's operational site in Strasbourg (Capacity Increase Programme)

3
PRIORITY

Following the consolidation of interrelated projects under the Capacity Increase Programme in 2021, the Agency continued working on the second extension of its operational site in Strasbourg. In 2022, the building programme was updated, including all the relevant documentation and a new estimated financial envelope. Due to budget constraints, the call for tender for the building design services was not launched and the project is currently postponed to the next multiannual financial framework period.

At the same time, progress was made with the other two projects under the Capacity Increase Programme. First, the data capacity increase project to accommodate future system hosting needs, advanced with the finalisation of the concept for a modular data centre, followed by the launch of the technical solutions survey. As for the power and cooling upgrade project, the Agency concluded the power capacity pre-feasibility study, and cooling capacities are being optimised to reduce energy consumption and provide solutions for upgrading the existing system.

4
PRIORITY

↘ **Priority 4**: Further strengthening of the Agency's internal control system, with particular emphasis on quality management, as well as contract and vendor management

Throughout 2022, eu-LISA continued strengthening its internal control system, which was complemented by a comprehensive mapping of its corporate processes, improvement of its contract and vendor management process and implementation of the total quality management (TQM) approach.

The Agency carried out the effectiveness assessment of its internal control framework (ICF) in compliance with the methodology recommended by the Commission, identifying and analysing internal control strengths and deficiencies based on pre-defined monitoring criteria, registering exceptions and non-compliance events, monitoring the status of outstanding audit recommendations and results of the self-assessment exercise.

In an effort to increase its control over technology and IT security, eu-LISA strengthened its exceptions reporting process that resulted in various follow-up and improvement measures. As an important step, the Agency made a strategic transition from vertical to transversal sourcing of services and supplies for its operations and continued to invest in new controls to strengthen its contract and vendor management process. Additionally, a new contract management policy was adopted to provide an overarching framework for managing the contractual vehicles for sourcing supplies, services and works.

During this time, the corporate risks/issues management process evolved from an annual exercise to regular collection and monitoring of corporate risks and issues, including the definition of impact and probability criteria. Additionally, the Agency established a register for risks and issues at the unit level, as underscored by the previous ICF assessment.

Following the adoption of the eu-LISA Quality Policy in 2021, the Agency established the Quality Board to ensure its practical implementation and monitoring. In 2022, eu-LISA's quality management activities focused on implementing the Common Assessment Framework (CAF), a total quality management system tailored specifically for public administration organisations. The assessment was completed in 2022 and the Agency will focus on implementing the CAF action plan over the next two years.

↘ **Priority 5**: Further development and improvement of eu-LISA's programme and portfolio management capability

5
PRIORITY

As the final area of priority, eu-LISA continued consolidating its programme and portfolio management (PPM) capability to further improve its project management efficiency, with a particular focus on providing valuable outputs to facilitate informed decision-making. Under the larger effort to improve PPM processes, eu-LISA concluded the Capability Maturity Model Integration (CMMI) appraisal, which aimed to provide an accurate evaluation of existing processes and identify opportunities for improvement. In addition, eu-LISA updated its project management methodology and introduced new tools and functionalities for mapping risks and deploying a new platform to support the development of project management capabilities.

Management and internal controls assessment

The second and third parts of this report provide an overview of the Agency's management in 2022, including a summary of the annual internal control framework (ICF) report, a summary of audits, and follow-up on observations from the discharge authority.

The Agency is developing a set of complex and intricate systems, and is evolving in a dynamic environment that requires agility, while ensuring compliance with the EU rules. These create additional challenges and pressure on the work of the Agency and its organisation.

The ICF report for the year 2022 concluded that the results of the overall assessment show that the internal control system of eu-LISA is present, functioning and effective, but some improvements are needed (category 2). In addition, various audits, including by the European Court of Auditors (ECA), pointed out some areas where improvements are needed.

Going forward, the Agency is fully committed to making improvements in the areas where deficiencies were identified, in particular in the area of contract management related to operational programmes and projects. As discussed with ECA and the Management Board, the Agency is aiming to close the remaining audit recommendations in the most effective way, with a priority on the most urgent ones and those that have been pending for the longest period. To achieve this objective, eu-LISA plans to devise and monitor a comprehensive management plan in 2023.

ACHIEVEMENTS OF THE YEAR

1
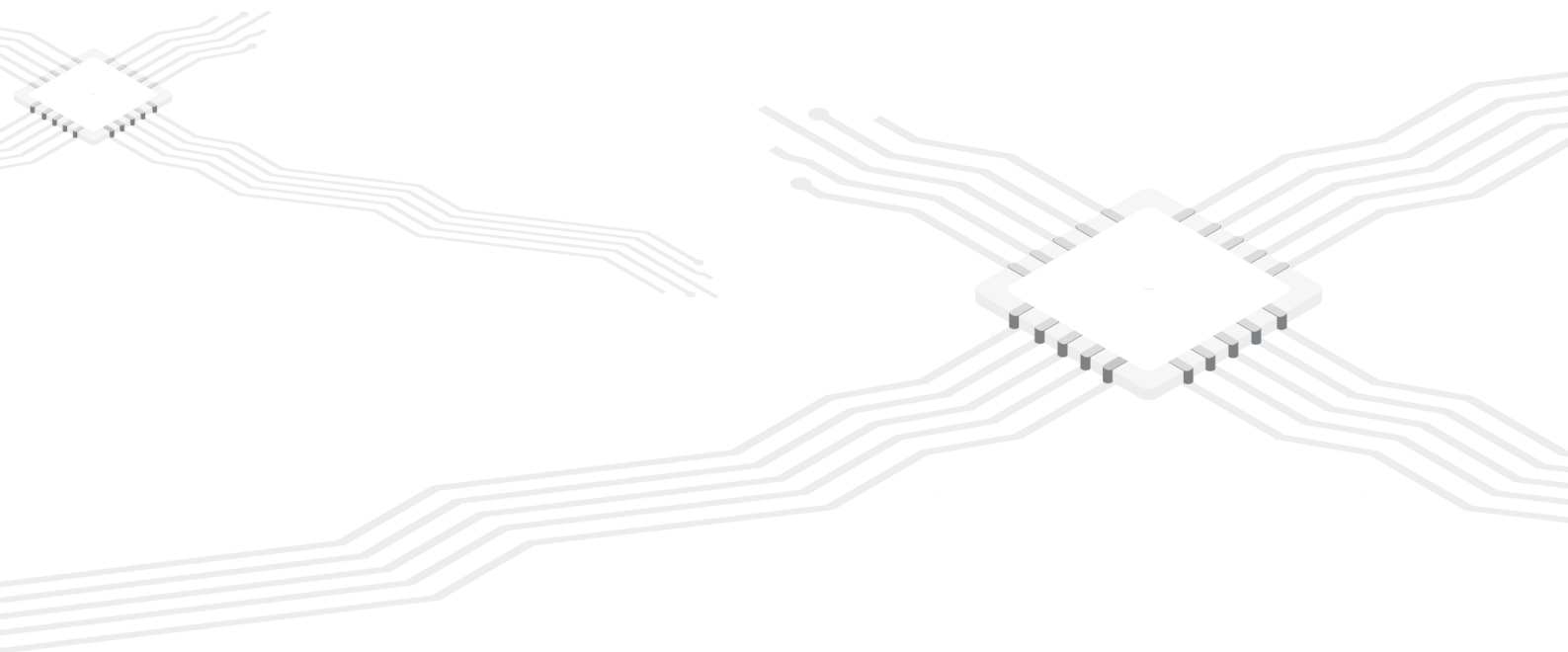
Overview of the main achievements in the operational management and evolution of JHA systems, the development of new IT systems and other key activities

Introduction

The eu-LISA Consolidated Annual Activity Report gives a structured overview of the progress made with implementing the Agency's annual work programme for 2022 and achieving the objectives outlined in the Single Programming Document 2022–2024.[11] This report aims to provide eu-LISA stakeholders with clarity and assurance that the Agency has implemented a systematic and consistent approach to efficiently utilise allocated human and financial resources to deliver its mandate.

The report follows the structure established by the European Commission for all EU agencies[12] and the requirements in Article 48 of the eu-LISA Financial Rules.[13]

- ▪ **Chapter 1** provides a detailed overview of the **achievements** related to the operational management and evolution of JHA information systems, the development of new systems, as well as other key and horizontal activities.

- ▪ **Chapter 2** describes the **main elements of eu-LISA's management**, such as budget and human resources.

- ▪ **Chapter 3** provides an assessment of the **effectiveness of the internal control framework** (ICF) and lists major corporate risks for the reporting period.

- ▪ **Chapters 4 and 5** provide relevant **declarations of assurance**.

- ▪ The annexes to this report provide a more detailed look at resource utilisation and additional transparency concerning the Agency's work and operations.

↘ Legal background

Article 24(3)(g) of Regulation (EU) 2018/1726 mandates the Executive Director to prepare and submit the draft of the Agency's CAAR to the Management Board for assessment and adoption after prior consultation with the Advisory Groups.

Article 19(1)(t) of the same Regulation tasks the Management Board with the assessment and adoption of the Agency's CAAR for the previous year, comparing, in particular, the results achieved with the objectives outlined in the annual work programme.

The Management Board must submit the report, together with its assessment, to the European Parliament, the Council, the Commission and the Court of Auditors by 1 July, while also making it available to the public.

General approach to planning: portfolios and programmes

When preparing the Single Programming Document 2022–2024, eu-LISA adopted a new approach to structure its annual work programme. The Agency's activities have been streamlined into **portfolios and programmes** to reflect eu-LISA's operating model and interdependencies between different projects and activities. This approach ensures better coordination to enable synergies and economies of scale, while also improving efficiency in terms of resource management and traceability.

Under this approach, a **portfolio** is the high-level collection of programmes that contribute to the achievement of eu-LISA's strategic objectives, e.g., 'New systems and innovation' or 'Security and business continuity'. Each portfolio comprises several **thematic programmes** that coordinate the management of interrelated projects and non-project activities, e.g., 'Entry/Exit System' or 'Interoperability'.

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[11] eu-LISA (2021) **Single Programming Document 2022–2024**.
[12] Communication from the Commission of 20 April 2020 on **strengthening the governance of Union Bodies** under Article 70 of the Financial Regulation 2018/1046 and on the guidelines for the SPD and the CAAR, COM (2020) 2297 final.
[13] **Financial Rules of eu-LISA**, Management Board decision No 2019-198, entry into force: 01 September 2019.

Achievements of the year

Throughout 2022, eu-LISA continued its efforts to contribute to a fully functioning and resilient Schengen area for the benefit of European citizens. As the Agency responsible for the operational management of the EU's JHA information systems that facilitate integrated border management and cooperation between law enforcement authorities, eu-LISA's activities affect millions of people travelling to Europe from all over the world, ensuring free movement and contributing to the EU's internal security.

↘ Article 3(2) of the Treaty on European Union

The Union shall offer its citizens an area of freedom, security and justice without internal frontiers, in which the **free movement of persons** is ensured in conjunction with appropriate measures with respect to external border controls, asylum, immigration and the prevention and combating of crime.

Swift, effective, and reliable information exchange facilitated via the large-scale IT systems managed by eu-LISA is **critical for sustaining and strengthening the EU's area of freedom, security, and justice**. To that end, the Schengen Information System (SIS) supports border control and law enforcement cooperation, while the Visa Information System (VIS) facilitates visa issuance and checks. In addition, Eurodac streamlines the examination of asylum applications. On a broader scale, all these systems **support the implementation of EU policies** in the areas of border control, visas, migration and asylum, digitalisation, and also contribute to combating organised crime and terrorism.

As the EU Agency responsible for the operational management and development of these systems, eu-LISA serves as a **key partner** to the EU institutions and agencies, and the Member States by delivering state-of-the-art expertise and engaging in proactive cooperation and information exchange with relevant stakeholders.

Within the framework of the **EU's Security Union Strategy** for 2020–2025,[14] the Agency\ focused on activities that contribute to building a **strong European security ecosystem**, including facilitating police cooperation and information exchange, ensuring strong external borders, and engaging in security-related research and innovation. Those objectives are supported by the current Schengen architecture, operated and maintained by eu-LISA, and will be further reinforced by the new JHA systems that the Agency is currently developing: Entry/Exit System (EES), European Travel Information and Authorisation System (ETIAS) and European Criminal Records Information System on third-country nationals (ECRIS-TCN).

In addition, eu-LISA is also building a **new interoperability architecture for the EU's JHA domain** that will integrate all IT systems under its operational management to improve information exchange and collaboration between law enforcement and judicial authorities across Europe. What is more, in the coming years, the new interoperability architecture, together with the new systems, will transform border management through digitalisation, delivering a seamless experience for travellers headed to the Schengen Area (*see* **the Traveller Continuum**).

1.1. Management and evolution of JHA information systems in operation

To a large extent, eu-LISA's work takes guidance from the Commission's Schengen Strategy[15] and the revised Schengen Evaluation and Monitoring Mechanism (SEMM),[16] which aim to fortify and improve the resilience of the Schengen area. As all JHA information systems operated by eu-LISA are compensatory measures to facilitate free movement within the Schengen Area, their continued evolution and maintenance are paramount to the EU and eu-LISA. These systems are critical for ensuring the efficiency of border management and the

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[14] **Communication from the Commission on the EU Security Union Strategy**, COM (2020) 605 final.
[15] Communication from the Commission to the European Parliament and the Council '**A strategy towards a fully functioning and resilient Schengen Area**', COM (2021) 277 final.
[16] **Council Regulation (EU) 2022/922** of 9 June 2022 on the establishment and operation of an evaluation and monitoring mechanism to verify the application of the Schengen acquis, and repealing Regulation (EU) No 1053/2013.

implementation of the EU's common asylum, migration and visa policies at the EU's external borders. The Agency ensures that all authorised personnel can have quick, seamless, and systematic access to travel details. Across the Schengen area, the continuous availability of these systems is essential for guaranteeing the freedom of movement of EU citizens while also contributing to the Union's internal security by facilitating cooperation between European law enforcement authorities via reliable and secure information exchange.

The Agency also supports the implementation of the Common European Asylum System (CEAS)[17] through the application of the Dublin Regulation[18] via Eurodac, one of the central instruments for streamlining the processing of asylum applications. The Recast Eurodac Regulation, enabling even more comprehensive information exchange on asylum and irregular migration matters, will facilitate even more efficient asylum and migration management across the EU as proposed by Commission's New Pact on Migration and Asylum[19].

The primary objective for the Agency was to deliver the effective and efficient management of the Schengen Information System (SIS), the Visa Information System (VIS) and Eurodac in compliance with the relevant regulations and service-level agreements (SLA), while also ensuring uninterrupted systems availability.

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[17] For more information, please visit the dedicated **Common European Asylum System** page on the website of the Directorate-General for Migration and Home Affairs (DG HOME).

[18] **Regulation (EU) No 604/2013** of the European Parliament and of the Council of 26 June 2013 establishing the criteria and mechanisms for determining the Member State responsible for examining an application for international protection lodged in one of the Member States by a third-country national or a stateless person (recast), OJ L 180, 29.6.2013, p. 31–59.
[19] Communication from the Commission on a **New Pact on Migration and Asylum**, COM (2020) 609 final.

Schengen Information System

SIS searches and hits

Figure 1. SIS – total searches performed

Year	Searches
2017	5.15 billion
2018	6.16 billion
2019	6.64 billion
2020	3.72 billion
2021	6.99 billion
2022	12.70 billion
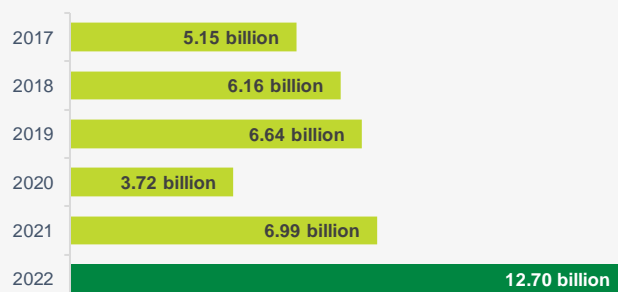
Figure 2. SIS – average daily searches

Year	Searches
2017	14.11 million
2018	16.87 million
2019	18.19 million
2020	10.19 million
2021	19.63 million
2022	35.00 million

Figure 3. SIS – average hits per day

Year	Hits
2017	668
2018	732
2019	777
2020	573
2021	611
2022	722
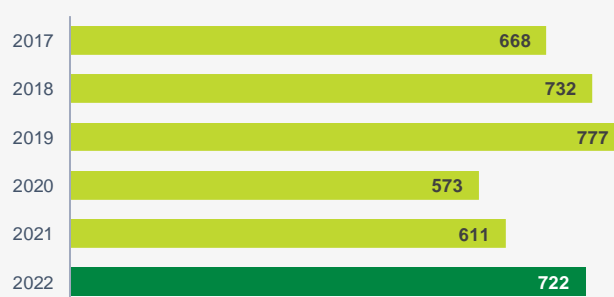
Data stored in SIS II

Figure 4. SIS – total alerts stored

Year	Alerts
2017	76 million
2018	82 million
2019	91 million
2020	93 million
2021	90 million
2022	87 million

Figure 5. SIS – breakdown of alert categories [20]

- Issued identity document: 81%
- Vehicle registration document: 7%
- Licence plate: 5%
- Vehicle: 3%
- Other: 3%
- Person: 1%

SIS alert categories in 2022
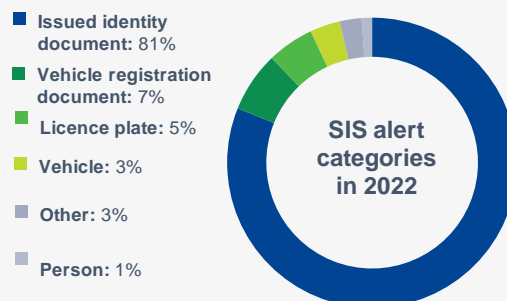
- SIS was queried by Member States 12.7 billion times – 82 % increase from 2021.
- The average number of searches per day reached 35 million in 2022.
- Over 70 million alerts were related to issued documents (e.g., passports, ID cards).
- The SIRENE Bureaux processed more than 263 000 hits on foreign alerts, an 18 % increase from 2021.
- At the end of 2022, the total number of alerts on persons stood at 1 002 342, an % increase from 2021.
- 6.5 million alerts on securities and non-cash means of payment were deleted.

[20] 'Issued documents' alert category refers to identity documents, such as passports, identity cards, residence permits, travel documents and driving licences which have been stolen, misappropriated, lost or invalidated or purport to be such a document but are false, as per Article 38(2)(I) of **Regulation (EU) 2018/1862** on the establishment, operation and use of the **Schengen Information System (SIS) in the field of police cooperation and judicial cooperation in criminal matters**, OJ L 312, 7.12.2018, p. 56–106.

1.1.1. **Schengen Information System (SIS)**

Launched in 1995, SIS facilitates the exchange of information between European national authorities (mainly law enforcement, judicial authorities, border control, customs and visa) for the purposes of sharing and consulting alerts on persons and objects, e.g., wanted or missing persons, lost or stolen objects (e.g., identity documents, vehicles), refusal of entry or stay of third-country nationals in the Schengen area, etc.

Over the years, SIS has undergone several evolutions to add new functionalities. In 2018, the biometric search capability – **Automated Fingerprint Identification System (AFIS)** – was introduced to enable the identification of persons of interest solely based on their fingerprints information added to European arrest warrants, contributing directly to law enforcement and judicial cooperation in criminal matters across the Union.

Today, SIS has grown into the EU's largest and most widely used information-sharing system for border management and internal security, constituting one of the **cornerstones of the Schengen area**. The adoption of **SIS Recast Regulations** at the end of 2018 ushered in a major phase of developing new alerts and functionalities, culminating with the entry into operation of the renewed SIS in March 2023.[21]

The Agency assumed responsibility for the system's operational management in May 2013, overseeing the efficient performance and evolution of the central system and its communication infrastructure. In 2022, eu-LISA's main objectives were to ensure continuous system availability and deliver the required evolutions, while also preparing SIS for integration with interoperability components.

Operation

SIS central system. Throughout 2022, system availability remained high at 99.94%, with 98.98% response time, slightly below the minimum target of 99%. However, due to several critical incidents listed below, overall system performance came in below the expected targets:

- in February, two unannounced maintenance activities on the TESTA-ng network caused outages for nine Member States;

- on 13 February, a malfunctioning cryptographic box in one Member State blocked messages on the SIS SIRENE Mail[22] for the duration of 22 hours, affecting several Member States, including Norway, Romania, Germany, Greece, Italy, and France;

- on 15 March, the SIS central system was unavailable for 2 hours due to the failure of network devices;

- on 30 June 2022, an incident occurred just after the deployment of a new release (21_R1). In the following days, eu-LISA worked closely with the Commission, the Presidency of the EU Council, and the Chair of the SIS Advisory Group to stabilise the system and focus on the availability of the search functionality. By 5 July, the SIS configuration and operations were completely restored. During the incident, there was a severe degradation of the services, impacting mainly the create/update/delete functionalities of the system. Search queries remained available, although with reduced performance.

In May 2022, eu-LISA presented the results of the impact study that explored the possibilities for increasing the size of files (in binary format) attached to SIS transactions (e.g., fingerprint files or scanned documents). After securing approval from the SIS Advisory Group, the Agency launched a project to prepare SIS for using **files in binary format**.

The SIS Recast Regulations included new provisions for the registration of alerts on **non-cash means of payment**, which used to constitute a separate alert category: securities and means of payment.[23] To implement these new provisions, between March and November 2022, eu-LISA deleted around 6.5 million alerts on securities and non-cash means of payment stored in SIS without affecting the normal functioning of the system for the Member States.

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[21] European Commission (2023) '**Security Union: The renewed SIS enters into operation**', press release, IP/23/1505, 7 March 2023.
[22] SIRENE Mail is an information exchange mechanism for consultation between national SIRENE Bureaux (national contact points, operating on a 24/7 basis) with regard to supplementary information related to SIS alerts.
[23] Alerts on 'securities and means of payment such as cheques, credit cards, bonds, stocks and shares which have been stolen, misappropriated, lost or invalidated' were recorded in SIS, in accordance with Article 38(1)(h) of the **Council Decision 2007/533/JHA** of 12 June 2007 on the establishment, operation and use of the second-generation Schengen Information System (SIS II).

Automated Fingerprint Identification System (AFIS). Throughout 2022, eu-LISA operated and maintained the biometric component of SIS, recoding the following incidents:

- on 31 March, the system suffered an incident, resulting in a 1.5-hour unavailability,
- on 4 October, the central system suffered a complete service outage, lasting for 1 hour, as a result of losing the connection to 24 servers,
- on 31 October, the biometric search functionality was unavailable for 2 hours due to component failure.

SIS II Security Exercise 2022. The exercise was conducted on 27 October 2022, focusing on the central system (incl. business continuity elements and other horizontal business areas). The scenario was based on three events that affected 15 different teams, giving eu-LISA valuable input for improving technology, training, policy and process, as well as exercise methodology.

In 2022, eu-LISA also closely worked with Cyprus on the preparations necessary to connect to the system. Cyprus will connect to SIS in the second quarter of 2023, in line with the relevant Council decision.

System usage

SIS central system. In 2022, system usage increased significantly, registering 12.7 billion queries from Member States, constituting an 82 % increase compared to 2021. The average number of daily searches reached 35 million, compared to around 20 million in 2021, and 18 million in 2019, before the pandemic. This increase was largely driven by a major spike in automated searches rising from 4 billion in 2021 to 8.3 billion in 2022. Some of those searches are attributable to automated number plate recognition (ANPR) systems, as reported by Belgium and the Netherlands, as well as automated queries from Advance Passenger Information (API) systems. The average daily number of hits (i.e., when a search leads to an alert and the authorities confirm it) reached 722, compared to 611 in 2021 (18 % increase), and 777 in 2019.

Automated Fingerprint Identification System (AFIS). The usage of SIS AFIS continued to grow rapidly in 2022, with the total number of queries increasing more than threefold compared to 2021, thus confirming the increased relevance of these functionalities for the Member States. As per SIS Recast Regulations, all Member States were required to enable SIS AFIS fingerprint search functionality by the end of 2020. Throughout 2022, eu-LISA continued supporting the remaining Member States in their efforts to enable this functionality, with France joining in January and Finland in August. By the end of the year, all Member States were using this functionality except Poland and Estonia, despite achieving technical readiness.

SIS upgrade and evolution

Implementation of SIS Recast Regulations

The SIS Recast regulations, adopted in November 2018, expanded the scope of the system's functionalities by introducing new alert categories and by expanding the list of objects for which alerts can be issued. This step marked a major evolution for SIS and expanded eu-LISA's contribution to the EU Security Union Strategy. As a result of the joint efforts of eu-LISA, the Member States and the Commission, the renewed SIS entered into operation on 7 March 2023, with a delay of approximately one year compared to the initial plan.

During the reporting period, the Agency focused on **finalising the implementation of the SIS Recast Regulations** by preparing and testing the final releases, i.e., acceptance tests of the central system, data migration tests, and compliance tests for the national systems. However, the testing process was protracted, leading eu-LISA to work closely with the Member States to monitor the situation and mitigate delays. The switch to the new version of SIS was planned to occur at the same time for all Member States, with no option to fall back to the previous version. Therefore, it was critical to ensure that all Member States were ready and had sufficient time to prepare for the transition to the new system.

As at 16 November, three Member States were still waiting to complete their tests, leading the eu-LISA Management Board to submit a proposal to the JHA council to postpone the entry into operation of the renewed SIS to 7 March 2023 at the latest.[24] This decision was endorsed at the JHA council meeting on 8 December 2022.[25] To support the Member States with the evolution of their national systems, eu-LISA operates the SIS central system simulator which was upgraded twice in 2022.

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[24] Decisions of the **39th meeting of the eu-LISA Management Board**, 2022–382.
[25] For more information, please visit the Council website detailing the **outcomes of the JHA council meeting of 8-9 December 2022**.

SIRENE Bureaux. All Member States operating SIS have set up national SIRENE (Supplementary Information Request at the National Entries) Bureaux, responsible for any supplementary information exchange and coordination of activities related to SIS alerts.[26] The SIRENE Bureaux use the SIS communication infrastructure to securely exchange supplementary information. This functionality is operated by eu-LISA using the SIS II Mail Relay service. eu-LISA worked with the national SIRENE experts throughout the year to prepare and test the new SIS functionalities ahead of their entry into operation.

As part of the SIS Recast project, eu-LISA is responsible for preparing the **Data Exchange Between SIRENE Bureaux** (DEBS) documentation, a set of technical specifications defining the process. Throughout the year, the DEBS documentation was updated several times to reflect the new functionalities stemming from the SIS Recast Regulations and delivered to the Member States. The Agency also collaborated with the Member States on updating the lists of National SIS offices and SIRENE Bureaux, and the list of competent authorities authorised to search the data in SIS directly, in accordance with the new legal framework. Taking into account the delayed implementation of the revised SIS, this list was published on 7 March 2023.[27]

As of December 2022, eu-LISA implemented an updated version of the **SIS Operator Manual**, including several improvements stemming from lessons learned, e.g., establishment of Critical Incident Coordinator role following the critical incident that occurred in June 2022.

SIS AFIS Phase 2 implementation. In 2019, eu-LISA launched the AFIS phase 2 project, covering the extension of the biometric system for the renewed SIS. The project combines performance improvements with new biometric functionalities stemming from the SIS Recast Regulations, e.g., inclusion of palm prints and latent prints (impressions on a surface).

In 2022, the Agency finalised the **AFIS architecture upgrade** needed to enable the second phase of AFIS implementation. The new hardware was installed in production on 29 June. Due to an incident between 29 June and 5 July, the system became fully accessible to the Member States on the evening of 4 July 2022. The Agency completed all the necessary tests for the updates for the AFIS phase 2, which was deployed in March 2023 as part of the entry into operation of the renewed SIS.

New search engine. Another important objective for 2022 was the deployment of a new search engine for SIS – Elasticsearch, which is expected to deliver a tenfold increase in terms of search capacity, while also significantly reducing system unavailability during switching between the central and backup units. The objective for 2022 was the **migration of national systems** to the new search engine. The migration was eventually completed on 7 November. In light of the new launch date for the renewed SIS, eu-LISA continued working on upgrading Elasticsearch. Oracle upgrades, also part of the project, have been postponed to future releases.

Data consistency checks. The proper functioning of SIS requires running **regular data consistency checks** (DCC)[28] to ensure that the central system and national copies remain synchronised (e.g., after temporary disconnection of a national system). In June 2022, the Agency reached the capacity to run up to two simultaneous DCCs on a daily basis,[29] significantly improving the process of ensuring data consistency between the central system and the national counterparts in the Member States. In the second part of the year, the DCC project was put on hold due to contingencies with renewed SIS and it is set to resume in 2023.

> ### Interoperability readiness

SIS interconnection with ETIAS. The contract for the analysis and design phase was signed on 18 January. eu-LISA worked on identity data correspondence for the purpose of multiple identity detection.

SIS interconnection with interoperability components. Preparations are underway for a contract to start the project for sBMS, ESP, MID and CRRS. However, by the end of 2022, the SIS Interoperability ICD has not been delivered to the Member States. During this time, eu-LISA also started preparing the migration of SIS AFIS functionalities to sBMS.

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[26] For more information, please refer to the Commission's dedicated website on **SIRENE cooperation**.

[27] The lists of competent authorities who are authorised to conduct direct searches in SIS, together with the list of National SIS Offices and the national SIRENE Bureaux, were published in the **Official Journal of the European Union, Vol 66, C 85, 7 March 2023**.

[28] Data consistency checks (DCC) is a procedure for updating national databases. This is done by checking that the alerts, links and binaries of the national copies are fully synchronised with the central system.

[29] Following the entry into operation of the renewed SIS in March 2023, up to four parallel DCCs can be run on a daily basis.

Visa Information System

- Total VIS operations increased significantly (88 %) compared to 2021, reaching 152 million. However, usage remains below pre-pandemic levels of 294 million (2019).
- 56.7 million visa applications stored in VIS.
- 51.5 million fingerprint sets and 56.7 million facial images stored in VIS.

Data stored in VIS

Figure 6. VIS – total visa applications stored

Year	Value
2017	52 million
2018	65 million
2019	77 million
2020	73 million
2021	62 million
2022	57 million
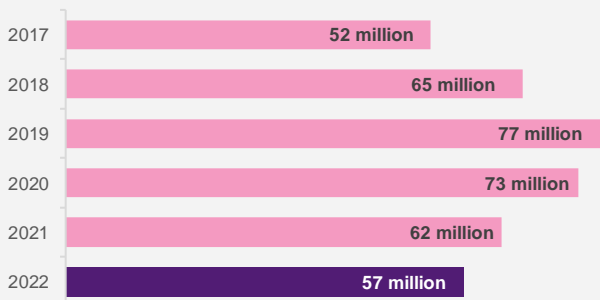
Figure 7. VIS – total fingerprints stored

Year	Value
2017	45 million
2018	57 million
2019	69 million
2020	66 million
2021	56 million
2022	52 million
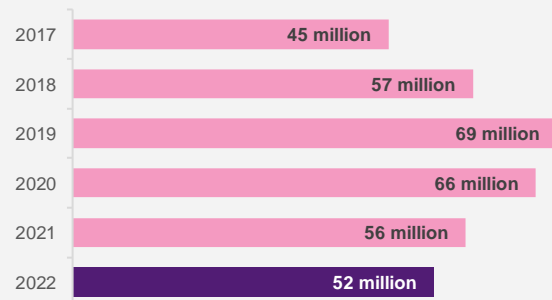
Border operations performed using VIS

Figure 8. VIS – total border operations

Year	Value
2017	45.42 million
2018	40.86 million
2019	43.13 million
2020	10.99 million
2021	7.49 million
2022	13.92 million
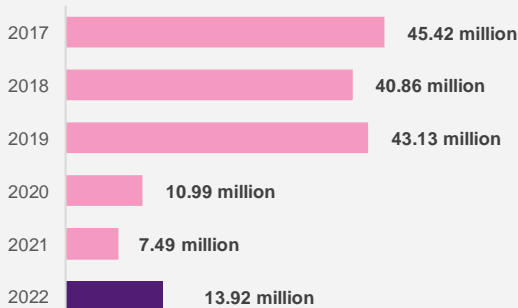
Figure 9. VIS – total visas issued

Year	Value
2017	15.28 million
2018	14.32 million
2019	15.33 million
2020	2.72 million
2021	2.56 million
2022	5.99 million
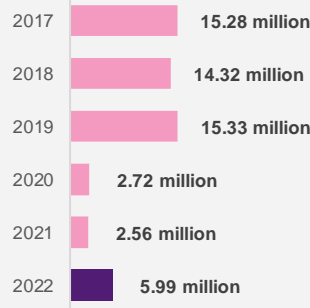
Figure 10. VIS – border operations per month from 2017 to 2022

COVID-19 restrictions
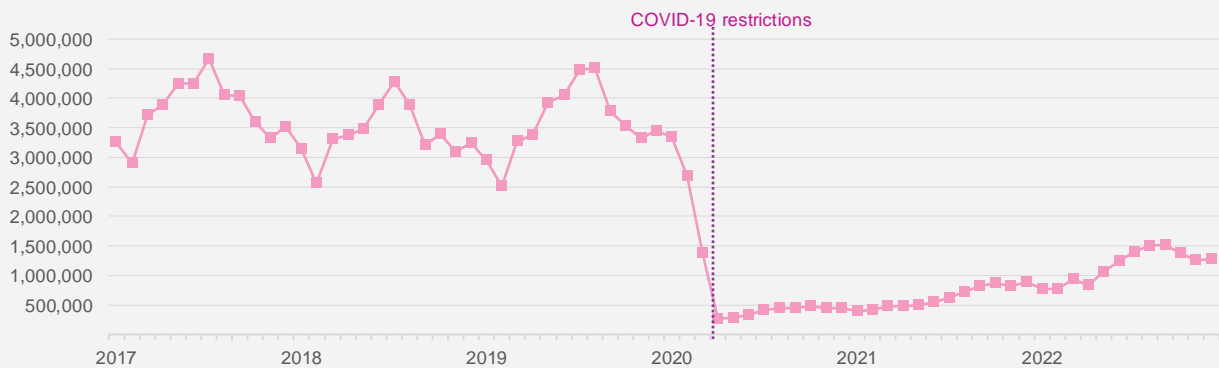
Figure 11. VIS – visas issued per month from 2016 to 2021
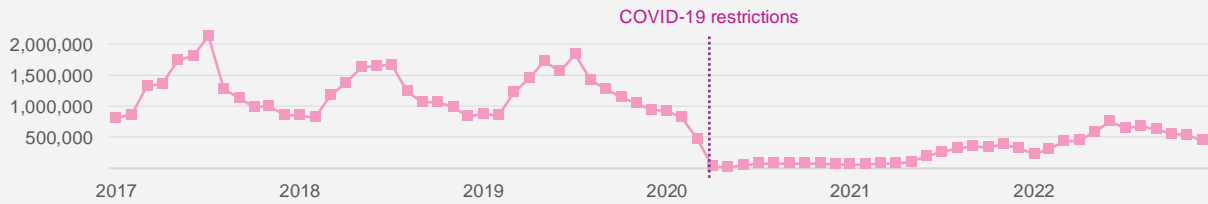
Figure 12. VIS – total alphanumeric searches

2018	23 million
2019	25 million
2020	10 million
2021	9 million
2022	14 million
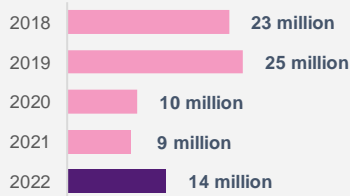
Figure 13. VIS – total biometric searches

2018	8 million
2019	7 million
2020	2 million
2021	3 million
2022	6 million
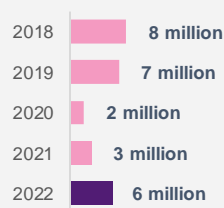
1.1.2. Visa Information System (VIS)

The VIS entered into operation in October 2011 and has been operational worldwide since February 2016. As one of the core elements of the Schengen area, VIS connects the EU's external border crossing points with Member State consulates in non-EU countries and supports visa authorities in the management of short-stay visas for third-country nationals (TCNs) travelling to or transiting through the Schengen area.

The VIS includes a **biometric matching system (BMS)**, enabling border authorities to verify the identity of TCNs travelling to the Schengen area. Furthermore, VIS supports the fight against visa fraud by assisting in the identification of persons who may not or no longer fulfil the conditions for entry, stay or residence in the Schengen area. In addition, VIS supports the identification of the Member State responsible for examining an asylum application and contributes to the prevention of threats to internal security.

The regulation reforming the VIS was adopted in July 2021, adding new functionalities, most importantly, long-stay visas and residence permits.[30] The implementation of these new functionalities requires a redesign of VIS business processes and a significant update of the central system. Following the adoption of the new regulation, eu-LISA provided technical support to the Commission in the preparation of secondary legislation.

Operation

During 2022, **VIS central system** performance remained within the targets specified in the service-level agreement. The availability of the VIS central system was 99.63 %, and the response time performance indicator was 99.70 %. The VIS Mail functionality was also successfully operated during the reporting period.

The system was unavailable due to the following incidents:

- on 1 January, BMS encountered a bug related to the change of year, which resulted in the full unavailability of the biometric service for a duration of 21:59 hours. Services related to VIS were only impacted for 1.5 hours due to a switchover to the backup central unit and a switchback to the central unit after troubleshooting and a tentative plan to restore BMS service;

- on 14 October, VIS faced a severe degradation in performance. Although the service was available, it was not in compliance with the service level agreement. In order to restore performance, a switchover to the backup central unit was performed, resulting in 30 minutes of downtime on VIS/BMS. The root cause of the slowness on the central unit was triggered by faulty disk on storage.

Additionally, a few instances of system unavailability occurred in the context of release deployments.

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[30] **Regulation (EU) 2021/1134** of 7 July 2021 for the purpose of **reforming the Visa Information System**, OJ L 248, 13.7.2021, p.11.

The Agency successfully implemented the **VIS release plan for 2022**, consisting of two releases:

- in May, an adaptive maintenance release was deployed, including several upgrades to prepare for future interoperability with the Entry/Exit System (EES),
- in September, eu-LISA deployed a corrective and adaptive release, including fixes related to problems raised by the Member States.

During the autumn, the Agency started working with the Member States on the availability of testing environments. The availability of testing environments is particularly important for the Member States, as they need them for several tasks, such as testing new national implementations or new developments related to the evolution of the system. As several new developments may happen concurrently, the availability of testing environments can be a bottleneck affecting the schedule of projects.

From September, eu-LISA also started working with the Member States on the preparation of the **VIS security and business continuity exercise**, which is scheduled for October 2023.

Croatia. On 8 December 2022, the JHA council approved the full application of the Schengen acquis in Croatia. As a result, the border controls at internal land and sea borders between Croatia and the other Schengen countries were lifted on 1 January 2023, followed by internal air borders on 26 March 2023 to align with aviation practices.[31] As per the Council's decision, Croatia was also granted full access to VIS as of 1 January 2023. In anticipation of this decision, eu-LISA and Croatia had stepped up their collaboration in the last months of 2022 to ensure successful transition. Although Croatia had already completed VIS and VIS Mail[32] tests in 2016 and 2017, the same tests were executed once again in November and December. In addition, the Agency organised the training of Croatian VIS operators. As a result, Croatia successfully gained full access to VIS on 1 January 2023.

System usage

Usually, VIS operations follow a seasonal trend, peaking in the summer months. At the beginning of 2022, usage levels remained comparable to 2021, but starting from June, there was a significant upsurge which lasted until September, reaching pre-COVID-19 levels (exceeding 15 million operations per month) during the summer months. Nevertheless, the grand total for 2022 was lower. The war in Ukraine had a limited impact on VIS usage.

The number of stored visa applications and fingerprints continued to decline, following a trend that started in 2020.[33] However, the number of visa applications and issued visas doubled in 2022 compared to 2021, with altogether 7.4 million visa applications processed compared to 3 million in 2021. Nevertheless, these figures remain far lower than in 2019, when that number stood at 17 million.

In 2022, the volume of alphanumeric, biometric searches, and biometric authentications continued to increase but were still significantly below the observed values before the COVID-19 pandemic. During the reporting period, alphanumeric searches were performed on average in 0.36 seconds, with an expected performance of 30 seconds, and biometric authentications in 0.85 seconds on average, with expected performance of 3 seconds, meeting the expected performance.

Ahead of the entry into operation of the EES, similar to the past years, eu-LISA continued sharing with the Member States analysis on the low usage of fingerprint checks at border crossings, which could impact the added value of interoperability, jeopardising, in particular, the effectiveness of EES. This topic will be followed up with the VIS Advisory Group and the eu-LISA Management Board.

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[31] JHA Council (2022) '**Schengen area: Council decides to lift border controls with Croatia**', press release, 8 December 2022.
[32] VIS Mail is an information exchange mechanism used by national visa authorities for consultations related to Schengen visa applications.
[33] Data is stored in VIS for up to five years, counted from the expiry date, a negative decision or a decision to modify the visa.

VIS upgrade and evolution

Following the adoption of the Revised VIS Regulation in July 2021, the system is undergoing major changes. On the one hand, VIS needs to be upgraded to ensure that the system fulfils its critical role through its interoperability with other JHA systems, in particular EES and ETIAS. On the other hand, new functionalities will be added under the Revised VIS Regulation, such as long-stay visas and residence permits. To that end, eu-LISA started 2022 by launching two projects structuring the system's evolution: the **Revised VIS project** and the **VIS interoperability** project, including the establishment of direct connections between VIS and EES, and also between VIS and ETIAS. In June 2022, the eu-LISA Management Board decided to support the alignment of the schedules for these two projects to prevent a situation where Member States would have to change their national systems twice.

Revised VIS

To accommodate the new functionalities stemming from the legislative revision, VIS business processes will have to be redesigned, which will require a significant update of the central system.

At the beginning of 2022, the Revised VIS project started with the collection of requirements, preparation of business use cases and drafting of the interface control document, with two iterations of the documents completed together with the Member States and the Commission. The Agency also provided technical support to the Commission for the preparation of secondary legislation. However, by the end of 2022, three critical implementing acts were not yet available, as they required further discussion with the Member States.

Interoperability readiness

To enhance and streamline the efficiency of border checks, the Revised VIS Regulation foresees the establishment of interoperability between VIS and EES, and also between VIS and ETIAS.

VIS-EES interoperability. To enable the automated retrieval of visa-related data from VIS, a direct communication channel must be established between the two systems for updating the respective data in EES, i.e., allowing border authorities to retrieve visa-related information from VIS and import it to EES (e.g., visa validity and identity verification), and conversely, enabling visa authorities to consult EES when processing visa applications.

After completing the development of **microservices** enabling VIS-EES interoperability at the start of 2022, eu-LISA focused on common solution testing and conducting tests with the Member States. However, towards the end of the year, the **delays affecting the EES development programme** prevented proceeding with full integration testing.

The Agency continued the preparations and tests for the **migration of the VIS biometric search functionality to sBMS.** The VIS-sBMS functional integration was completed in 2022, and several tests were carried out in preparation for data migration activities which will continue into 2023.

Interoperability with ETIAS. To enable the simultaneous querying of VIS and ETIAS, an interoperability connection must be established between VIS and the European search portal (ESP). This obligation was introduced by the ETIAS consequential amendments, adopted in July 2021.[34]

VIS connection to CRRS. The Agency started the development of a common interface between VIS and the Central Repository for Reporting and Statistics (CRRS).

The Agency started working on the **VIS-ETIAS interconnection**, as well as on the **interoperability of VIS with CIR, ESP, MID and CRRS**. eu-LISA initiated the collection of requirements and prepared the business use cases and the interface control document. The first versions of the technical documents were submitted to the Member States for review and approved.

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[34] **Regulation (EU) 2021/1152** as regards the **establishment of the conditions for accessing other EU information systems for the purposes of ETIAS**, OJ L 249, 14.7.2021, p. 15–37.

Eurodac

Figure 14. Eurodac total traffic

Year	Value
2017	1,012,465
2018	879,072
2019	916,536
2020	644,926
2021	855,498
2022	1,481,815
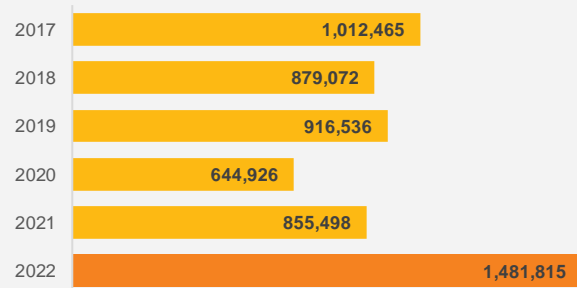
Figure 15. Eurodac traffic per category in 2022[35]

- Category 1: 950,768 (64%)
- Category 2: 192,121 (13%)
- Category 3: 337,382 (23%)
- Category 5: 53 (0%)
- Category 4: 1,491 (0%)

Traffic per category in 2022
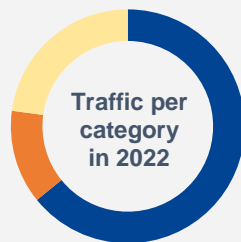
Figure 16. Asylum seekers (category 1)

Year	Value
2017	633,324
2018	551,253
2019	592,691
2020	401,590
2021	510,696
2022	950,768
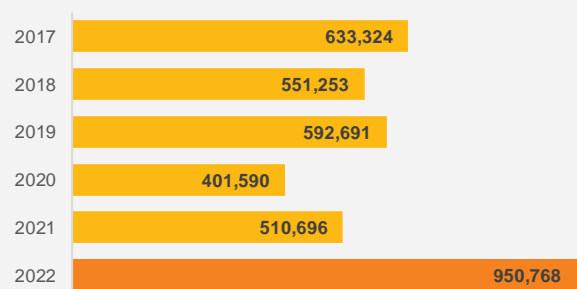
Figure 17. Irregular border crossings (category 2)

Year	Value
2017	160,816
2018	103,333
2019	111,761
2020	82,285
2021	132,356
2022	192,121
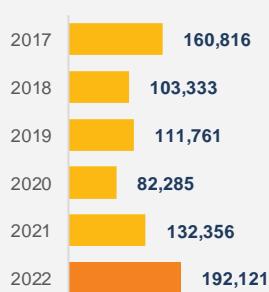
Figure 18. TCNs found illegally in MSs (category 3)

Year	Value
2017	217,661
2018	224,180
2019	211,635
2020	160,843
2021	211,960
2022	337,382
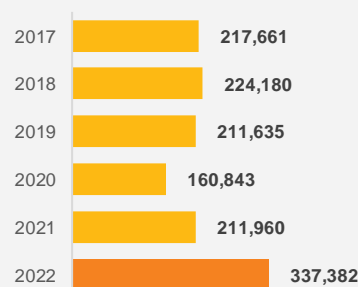
Figure 19. Eurodac searches by national law enforcement authorities (category 4)

Year	Value
2017	550
2018	296
2019	242
2020	206
2021	466
2022	1,491
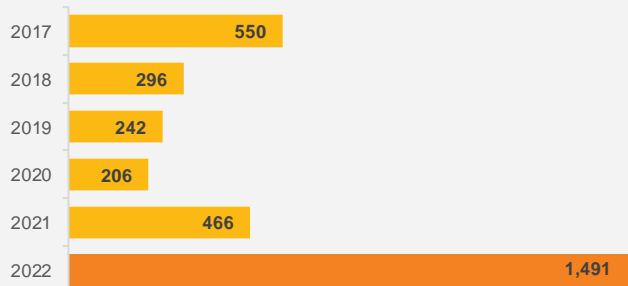
Figure 20. Eurodac searches by Europol (category 5)

Year	Value
2017	114
2018	10
2019	207
2020	2
2021	20
2022	53
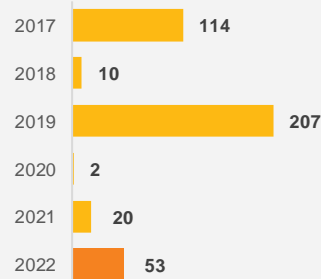
- Overall traffic increased by 73% and more data was transmitted in all categories compared to 2021.
- Total of 6.5 million fingerprint sets stored in Eurodac – a 12 % increase compared to 2021.
- 96 % of Eurodac data sets are related to international protection applications (category 1).
- Around 4 % of data sets concern irregular border crossings (category 2).

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[35] Figure 16: Eurodac data categories relate to fingerprint data sets of TCNs or stateless persons, aged 14 or older. Category (1) asylum applicants, (2) irregular border-crossings, (3) persons found staying illegally within the Schengen area, (4) comparative searches by national law enforcement authorities, (5) comparative searches by Europol.

1.1.3. Eurodac

Operational since 2003, the European Asylum Dactyloscopy database – Eurodac – supports the application of the Dublin Regulation[36] as one of the instruments used to implement the Common European Asylum System (CEAS).[37] Eurodac assists the Member States in determining the country responsible for examining an asylum application by comparing the fingerprints of a new applicant with those already registered in the database. For this purpose, Eurodac also contributes to establishing the identity of persons apprehended in connection with the unlawful crossing of the external borders of the Member States and of persons found illegally staying on their territory. Since July 2015, national law enforcement agencies and Europol have also had the possibility, under strict conditions and as a last resort, to access Eurodac in order to prevent, detect or investigate terrorist or serious criminal offences. eu-LISA has been in charge of the operational management of Eurodac's central system since June 2013.

Operation

During the reporting period, the overall performance of the **Eurodac central system** remained within the service-level agreement (SLA), with only a few events affecting system availability. The availability of the Eurodac central system was 99.88 %, and the response time performance indicator was above 99.99 %. The COVID-19 pandemic continued to impinge on Eurodac maintenance, mainly due to restrictions related to the on-site presence of contractors, affecting the quality and efficiency of day-to-day support. The system's availability was affected by the following events:

- on 26 January, an incident on the TESTA-ng network made Eurodac unavailable and stopped the synchronisation between the central unit and the backup central unit, leading to almost 4.5 hours of unavailability. As a result, 479 transactions were processed with delay, and none were lost;

- on 4 May, an incident caused by a mail relay component blocked all emails for 1 hour and 45 minutes. No messages were lost. The cause of the incident was fixed;

- on 26 October, Eurodac did not process fingerprint-related transactions for 4 hours. This affected nine Member States, who sent over 500 transactions during the incident. These transactions were delayed but not lost. The issue was related to one Member State transaction with an incorrectly configured file. To prevent similar incidents, the Agency followed up with a change request, which will be deployed in the next release, as the urgency of the change was deemed to be of medium level.

DubliNet is a secure electronic network for the exchange of data between national authorities dealing with asylum applications. In 2022, the maintenance of DubliNet remained within the agreed service-level agreement (SLA), and eu-LISA continued to work with the Member States to integrate them with the Agency's IT service management framework, connecting all of them to eu-LISA's ticketing system as of 15 April 2022. In addition, the Agency also worked with the Member States on the renewal of DubliNet certificates to ensure compliance with the EDPS audit recommendation. eu-LISA also progressed on the implementation of another EDPS recommendation: the automatic physical deletion of fingerprints beyond the retention period.

System usage

In 2022, the volume of data transmitted to the Eurodac database increased significantly: overall, it reached over 1.4 million transactions, 73 % more than in 2021, and a level comparable to that of 2016 (1.6 million), during the second year of the peak in refugee and migrant movement. This increase was found in all categories of the Eurodac database: the transactions for category 1 (international protection application) increased by 86 %, for category 2 (irregular border crossings) by 45 %, for category 3 (TCNs found illegally in the Member States) by 59 %, and for category 4 and 5 (searches by law enforcement authorities, in the Member States and by Europol) by 231%).

The number of records stored in the Eurodac database also continued to grow, continuing a steady trend that started in June 2021 and accelerated significantly in March and again in the Autumn. Russia's war of aggression against Ukraine caused an **increase in the number of asylum registrations** in Eurodac, in particular by people holding either Ukrainian or Russian citizenship.

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[36] **Regulation (EU) No 604/2013**, OJ L 180, 29.6.2013, p. 31–59
[37] For more information, please visit DG HOME's dedicated page on the **Common European Asylum System**.

In 2022, it became evident that the Eurodac **database storage capacity** needed to be upgraded. Eurodac storage capacity is directly linked to the system's retention policy: 10 years for asylum applicants and 18 months for irregular border crossings. eu-LISA worked closely with the Commission and the Member States to prepare several alternatives for increasing Eurodac's storage capacity.

System evolution

Pending a new legal base for Eurodac, the Agency continued with the system's **minimal upgrade project** started in 2021. This included the upgrade of the biometric matcher and of Oracle, the upgrade of the mechanism for the synchronisation between the central unit and the backup central unit and the replacement of hardware components reaching the end of vendor support, which could not be completed in 2022 due to supply chain shortages.

In September, eu-LISA started a project to increase Eurodac's maximum **daily throughput and storage capacity** (from 7 million records to 9 million records). The upgrade, which will prevent performance degradation, is needed to accommodate the rapidly increasing volume of stored records and is expected to be operational by May 2023.

Adaptive maintenance. To improve the service to the Member States, eu-LISA worked on the revision of the test environment and on the pre-production environment. Volume and stress tests were performed using **synthetic fingerprint data**. Additionally, to improve the operational management of the system, eu-LISA revised Eurodac's technical documentation, together with the process for access control and on-site intervention of external contractors.

Interoperability readiness. The integration of the Eurodac system within the **interoperability architecture** is foreseen in the framework of the recast of the Eurodac Regulation.

1.1.4. Systems operations support

To ensure the continuous availability of JHA systems under its remit, the Agency provides support services to all system end-users via the eu-LISA Service Desk, operating on a 24/7 basis. To that end, the Service Desk is responsible for the handling of service requests (standard procedures) and coordinates the resolution of incidents (service disruptions) and problems (investigation of root causes).

Throughout 2022, the services provided to JHA system end-users remained uninterrupted. In 2022, the Service Desk performance indicator peaked at 82.37 %, exceeding the target of 75 %. This indicator shows the percentage of requests completed within the target of the service-level agreement (SLA) concluded between eu-LISA and the Member States by measuring the Agency's response through two distinct aspects: (1) the time it takes to respond to a notification submitted by a system end-user (time to respond), and (2) how long it takes to resolve the issue raised (time to resolve).

In 2022, the eu-LISA Service Desk handled 1538 service requests and 3415 incidents for JHA systems in operation. Altogether, more than 1200 tickets were submitted by system end-users, with another 3672 tickets submitted internally, either in the course of routine systems monitoring or by onsite contractors.

Despite a few critical incidents, in particular affecting SIS, the robust processes and the efficient collaboration between the Agency's support teams and other operational teams (incl. external contractors), managed to ensure a good level of overall systems availability for the JHA community.

In 2022, eu-LISA's technical function focused on reducing the problem backlog, as well as eliminating critical and high-priority problems in the production environment. This contributed to high systems availability, mainly by minimising the impact of individual incidents. The support teams were also involved in the preparation of complex new releases (e.g., renewed SIS) and commenced training on the new systems (e.g., EES, sBMS).

Throughout the reporting period, eu-LISA continued to upgrade its **IT service management (ITSM) tools**, in particular in the context of the transition to the transversal operating model. The Agency's ITSM tool (Microfocus Service Manager version 9, SM9) was updated several times to include new capabilities and functionalities, including the dynamic sharing of tickets between different contractors. Approximately 40 upgrades were made to the SM9 tool between June and October, including an upgrade from the 32-bit to the 64-bit version, bringing significant performance gains and new features.

In addition, ITSM reporting was also further automated with dynamic reports for quarterly KPIs, as well as with several fully automated daily, weekly and monthly reports for process owners and other teams.

Finally, the system operations function devised the new 'Event management' process and launched a study to identify the necessary toolset. Another study was launched to replace the tool (eOPM) used by the eu-LISA Service Desk for interacting with the Member States via SIS. The objective is to find a solution that could be easily extended to all the current and future systems entrusted to the Agency.

Table 1. JHA systems: number of incidents[38] and service requests handled in 2022

	SIS	VIS	BMS	Eurodac	DubliNet	Other[39]	Total
Incidents	1528	469	592	338	30	458	**3415**
opened by MS	423	81	0	168	14	2	699
opened internally	1094	388	592	170	16	456	2716
Service requests	1089	131	56	191	57	14	**1538**
opened by MS	371	80	0	74	57	0	582
opened internally	718	51	56	117	0	14	956

Table 2. JHA systems: breakdown of incidents by priority and system

Priority[40]	SIS	VIS	BMS	Eurodac	DubliNet	Other	Total
Critical	21	5	1	2	0	1	30
High	233	64	9	26	1	28	361
Moderate	1053	285	449	255	20	326	2388
Low	221	115	133	55	9	103	636
Total	**1528**	**469**	**592**	**338**	**30**	**458**	**3415**

Table 3. JHA systems: breakdown of problems by priority and system

Priority	SIS	VIS	BMS	Eurodac	DubliNet	Other	Total
Critical	3	0	0	0	0	0	3
High	21	4	1	10	0	0	36
Moderate	18	6	4	8	0	8	44
Low	23	13	8	14	0	6	64
Total	**65**	**23**	**13**	**32**	**0**	**14**	**147**

1.1.5. Testing, release and deployment management

As part of planned system evolutions, the deployment of releases allows the Agency to update its IT systems with the latest functionalities and patches. In this process, the preparation and timing of releases is of utmost importance to minimise the impact on the performance and availability of systems in operation.

At the beginning of the year, the Agency approved release plans for SIS, VIS and Eurodac. For VIS, four releases were deployed in accordance with the plan, whereas SIS and Eurodac experienced delays, in part due to quality issues detected during testing. One Eurodac release was deployed, and for SIS, the Agency implemented only one of the planned releases in 2022.

The Agency also updated the process and procedures for operational change management to ensure the effective, efficient and timely management of an increasing amount of IT changes that will, in turn, affect the performance and availability of the systems entrusted to eu-LISA.

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[38] An incident is a single unplanned event that causes service disruption. A problem is a root cause of one or more incidents.
[39] This category includes systems, equipment and infrastructure used in the production and pre-production environments
[40] The priority of an incident is determined based on the business impacted on the affected service and the urgency to resolve the incident.

During 2022, test management activities were performed for SIS, VIS, Eurodac, EES and sBMS. During the functional system acceptance test (FSAT) of VIS and EES, the Agency tested a new set of internal tools with promising results.

Throughout the year, the Agency organised several dedicated meetings of test expert groups (TEG) for SIS, VIS and EES. These meetings contributed greatly to the success of the testing with the Member States, helping to foster a strong team spirit in the testing community. In addition, a brand-new set of testing tools dedicated to end-users were made available to the Member States, delivering a much quicker and easier support process. In parallel, eu-LISA defined the interoperability test approach to address the complex intertwined quality assurance procedures for systems interoperability testing. During the second half of the year, the Agency concluded a contract with an external test support provider to better manage the increasing volume and complexity of testing.

Additionally, eu-LISA continued to work on the 'Application Lifecycle Management' (ALM) to support applications delivery and manage the complexity related to the reuse of common components in different systems, as well as the interconnectivity and interoperability of new systems.

1.2. New systems and innovation

With the expansion of eu-LISA's mandate in 2018, the Agency was entrusted with the development of several **new large-scale IT systems**, as well as devising the **overarching interoperability architecture** for the EU's justice and home affairs (JHA) domain. Furthermore, to support eu-LISA's capabilities for the continuous development and evolution of IT systems, the revised mandate also broadened the scope of its **research and innovation** activities to include the implementation of proof-of-concept and pilot projects.

The idea of introducing new IT systems that would complement the EU's existing systems in the home affairs domain – SIS, VIS, and Eurodac – was put forward by the Commission under the **'Smart Borders'** legislative package to enhance the EU's internal security and modernise the management of its external borders. The development of these new systems – the Entry/Exit System (**EES**) and the European Travel Information and Authorisation System (**ETIAS**) – has been among the Agency's key priorities since the adoption of the respective establishing regulations in 2017 and 2018.

Once operational, the new systems will facilitate the exchange of information between competent national authorities and render more seamless the travel experience for international travellers to the EU. Figure 21 shows the journey of a TCN traveller to the Schengen Area from the traveller's perspective, as well as the different checks operated automatically by systems and on databases at each step.

Figure 21. The Traveller Continuum
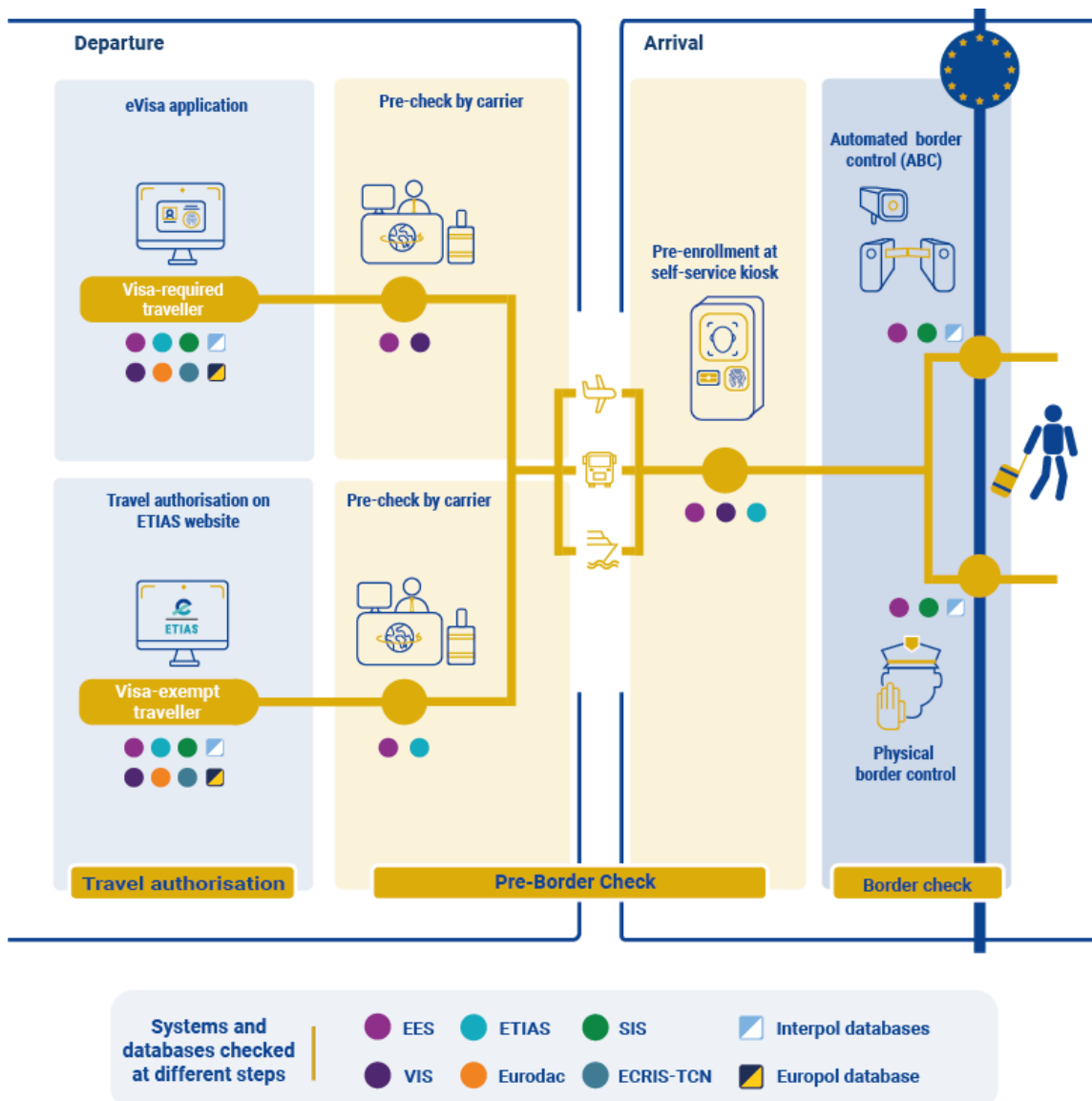
In addition, to facilitate information exchange between the new and existing IT systems, eu-LISA was also tasked with the development of an overarching **interoperability architecture** for the JHA domain. Once operational, the interoperability of JHA systems will support integrated border management and internal security, serving as the Agency's main contribution to the **EU Security Union Strategy**.

The expansion of eu-LISA's mandate introduced new responsibilities in the EU's **justice domain** as well, including the development of a new IT system – the European Criminal Records Information System for Third Country Nationals (**ECRIS-TCN**), and assuming the responsibility for the operational management of the **e-CODEX system**, the electronic communication platform facilitating cross-border judicial proceedings. With this, the Agency began stepping up its contribution to the digitalisation of justice,[41] intended to improve cooperation between European judicial authorities and provide better access to justice for EU citizens and businesses.

Throughout 2022, the development and delivery of new systems continued despite persistent delays, mainly due to the inability of the contractor to deliver on time. In addition, disruptions and shortages in the global supply chain affected the availability of critical hardware and software components. To address these issues, eu-LISA worked closely with the Member States and the Commission, carefully monitoring the situation and devising measures to mitigate the impact. This has been particularly critical for EES because, due to interdependencies, any delays in the EES delivery schedule are bound to have a direct impact on the implementation timelines of ETIAS and interoperability components. The extended timeline for the entry into operation is likely to impact the resources, both human and financial, required to complete the development.

In the domain of home affairs, EES is one of the two IT systems that is set to modernise the management of the EU's external borders by replacing the current practice of manual stamping of passports with the **electronic registration** of all third-country nationals (TCNs) entering and exiting the Schengen area, incl. data related to refusals of entry. In addition, EES will also enable the monitoring of authorised short-term stays (for visits lasting up to 90 days, in any 180-day period) and the identification of possible over-stayers by automatically calculating the duration of authorised stay and generating alerts upon expiry.

As such, the system is intended to prevent irregular immigration and strengthen internal security by helping to combat organised crime and terrorism. Once operational, the automation of border checks introduced by EES will also support the Member States in managing increasing traveller flows, while also optimising the number of border guards at crossing-points.

eu-LISA is responsible for the development and hosting of

- the EES central system,
- a national uniform interface (NUI) for establishing the connection between the EES central system and the national border infrastructure in each Member State,
- a secure and encrypted communication infrastructure between the EES central system and the NUIs,
- a secure communication channel between the central systems of EES and VIS.

The operation of the EES central system requires the integration of the EES component, the biometric matching system (BMS) and the amendment of the existing Visa Information System (VIS). In addition, EES will have a joint web service with ETIAS that will provide online interfaces for international passenger carriers and third-country nationals.

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[41] Communication from the Commission on the **Digitalisation of Justice in the European Union: A Toolbox of Opportunities**, COM (2020) 710 final.

The development of EES began in January 2018 and the programme's implementation has progressed to the testing stage. Despite many challenges faced during the reporting period, the Agency made progress towards completing the development of the EES central system, incl. conducting several test campaigns in close collaboration with Member States.

Throughout 2022, eu-LISA continued working closely with all the stakeholders to devise effective measures for mitigating the effects of continued delays related to EES, as well as their collateral impact on the scheduled delivery of ETIAS and interoperability components.

On 24 March 2022, considering the status of the EES development programme, the eu-LISA Management Board asked the Council to endorse the postponement of the system's entry into operation to November 2022.[42] The Management Board revised the timeline once more on 22 June 2022, postponing the system's entry into operation to mid-May 2023. Due to contingencies, the delivery of ETIAS had to be rescheduled to November 2023 and the interoperability components progressively until June 2024.[43] This revised timetable was endorsed by the JHA Council in July at its informal meeting in Prague.

Despite all efforts, the situation remained still challenging at the end of 2022, and the consortium tasked with the development of the EES central system was unable to present a plan with a specified delivery date.[44]

Testing

The implementation of the EES development programme has progressed to the development and testing stage, and it is expected to conclude with the transition into operation and subsequent final system acceptance (FSA) in early 2024.

EES central system application. In January 2022, eu-LISA commenced with the scheduled functional testing campaign of the **integrated solution** (i.e., EES central system, with sBMS and the updated VIS central system). While the development of VIS and shared biometric matching system (sBMS) parts were completed in due time, the development of the EES part lagged several months behind the initial target date of 15 September 2022. At the end of 2022, the contractor estimated delivery at the beginning of January 2023, which would affect the test period available to the Member States while also postponing the start of the non-functional testing at eu-LISA premises. To monitor progress and accelerate delivery, eu-LISA continued to conduct daily meetings with the contractor's team, as well as weekly meetings with the contractor's management, incl. regular escalation to executive levels.

Test environments and simulators. eu-LISA delivered an intermediate release, integrating EES, VIS and BMS for the first time, which was successfully installed on Germany's dedicated testing environment on 20 October 2022. Meanwhile, the EES consortium faced difficulties in upgrading the dedicated testing environments for the remaining Member States until mid-December 2022. This issue, as well as the lengthy installation times due to technical issues, were escalated to the contractor's management.

Member States testing. The EES compliance testing environment for the Member States was made available at the end of February 2022. However, the national system tests had to be conducted using VIS and sBMS simulators due to continued problems with the delivery of the fully integrated release of the EES central system application. 13 Member States had practically finalised testing using the VIS and sBMS simulators by the end of the year with a 93% success rate, indicating the good quality of the application interface. At the beginning of 2023, Member States were still conducting test campaigns. The Agency is actively supporting the Member States in this process and facilitating weekly reporting through the EES status report.

To proceed with testing the integrated version, eu-LISA delivered an intermediate release. The compliance testing showed a 90% success rate within a few days, confirming the good integration quality of the intermediate release. However, the full testing (end-to-end business testing of the full set of functionalities,

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[42] Decisions of the **34th meeting of the eu-LISA Management Board**, 2022–084.
[43] Decisions of the **36th meeting of the eu-LISA Management Board**, 2022–198.
[44] In January 2023, the Management Board concluded that it was no longer feasible to meet the deadline set for May 2023 and that it was not possible to define the delivery date with the required level of assurance, primarily due to the unavailability of test environments for compliance tests. Despite further delays, the Board requested all Member States and stakeholders to continue with their preparations at border crossing points (Decisions of the **40th meeting of eu-LISA Management Board** (12.01.2023, 2022-467)). In March, the Board requested the Agency to revise the implementation timeline for the JHA interoperability architecture. At its **42nd meeting on 15.03.2023**, the eu-LISA Management Board took note of the status of EES implementation and additional delays from the contractor's side, and concluded that it was no longer feasible for EES to enter into operation in 2023. (15.03.2023, 2023-065).

incl. biometrics) was not possible due to a blocking issue of the sBMS.

<div style="background:#e8a0c0; padding:4px;">**Interoperability readiness**</div>

The EES Regulation foresees the establishment of interoperability between EES and VIS (together with BMS), and also between EES and ETIAS to enhance and streamline the efficiency of border checks.

Interoperability with VIS. To enable the automated retrieval of visa-related data from the VIS, a direct communication channel must be established between the two systems for updating the respective data in EES, i.e., verification of validity or visa annulment, revocation or extension. The development of **microservices** enabling VIS-EES interoperability was completed at the start of 2022, and for the rest of the year, eu-LISA focused on common solution testing and conducting tests with the Member States. The VIS-sBMS functional integration was completed, and several tests were carried out in preparation for data migration activities which will continue into 2023.

Interoperability with ETIAS. To enable the simultaneous querying of EES and ETIAS, an interoperability connection must be established between EES and the European search portal (ESP). Originally not foreseen in the initial EES release, this obligation was introduced by the ETIAS consequential amendments, adopted in July 2021.[45] In 2022, eu-LISA continued contractual discussions and preparations for adapting EES to ETIAS.

EES connection to CRRS. The Agency started the development of a common interface between EES and the Central Repository for Reporting and Statistics (CRRS). Due to delays in the finalisation of CRRS specifications, eu-LISA explored options for providing a customised reporting functionality to cover the first operation period of EES before its eventual integration with CRRS.

<div style="background:#e8a0c0; padding:4px;">**Transition into Operation**</div>

During the reporting period, eu-LISA commenced preparations for the transition into operation phase by conducting several technical meetings with the Member States and sharing the first version of the EES operation manual.

1.2.2. EES/ETIAS web services

When it comes to granting entry to the Schengen area, a distinction is made between visa-required and visa-exempt third-country nationals (TCN). While EES will verify whether visa-required TCNs have a valid visa for at least one authorised entry, ETIAS is needed to verify whether visa-exempt TCNs hold the required travel authorisations. To facilitate integrated and **streamlined processing of incoming TCN travellers** at Schengen borders, eu-LISA is tasked with developing the web services for EES and ETIAS, which will include the central **carrier interface**[46] for querying both systems to verify whether a TCN traveller holds a valid visa or travel authorisation for entry to the Schengen area.

These joint web services comprise several public-facing modules, including dedicated web interfaces and mobile applications for travellers and carriers. In addition to the carrier interface, the complementary web interface for travellers will allow visa-required TCNs to check their remaining valid entries to the Schengen area. Once ETIAS becomes operational, the web services will also include an online platform where visa-exempt TCNs can apply for the mandatory ETIAS travel authorisation, which must be approved prior to travel.

Due to shared components, these joint web services will be developed under the EES project, dividing the scope into two parts: one for web interfaces (carriers/ TCNs) and another for carrier onboarding and support tools. This approach was chosen by eu-LISA to ensure efficient implementation and economies of scale.

Throughout 2022, eu-LISA continued implementing the software for EES/ETIAS web services, but due to procurement difficulties, delays of the contractors and the technical complexity of the infrastructure, the

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[45] **Regulation (EU) 2021/1152** of the European Parliament and of the Council of 7 July 2021 amending Regulations (EC) No 767/2008, (EU) 2017/2226, (EU) 2018/1240, (EU) 2018/1860, (EU) 2018/1861 and (EU) 2019/817 as regards the **establishment of the conditions for accessing other EU information systems for the purposes of ETIAS**, OJ L 249, 14.7.2021, p. 15.
[46] eu-LISA Working Group for Carriers presentation '**EES/ETIAS Carrier Interface Overview**', March 2023.

deployment of the test environment for carriers was further delayed into 2023. In addition, factory acceptance tests[47] revealed numerous defects, which remained unresolved at the end of 2022.

The Agency worked closely with the Commission and Frontex to deliver EES/ETIAS web services and launched the contractual process for their development. The contract negotiations for the web services were finalised by August 2022.[48] The late approval affected the finalisation of the underlying requirements and specifications for the web services, delaying the conclusion of the implementation contract.

Support to Member States

To assist Member States in the rollout of EES and ETIAS, the Commission published a revised version of the 'Practical Handbook for Border Guards (Schengen Handbook),[49] to which eu-LISA contributed an overview of technical updates that focused on system-to-system connections, and the carrier interface (incl. different query scenarios and responses). In addition, eu-LISA collaborated with Frontex on two guidelines documents: 'Standard Operational Procedures' and 'FAQs in support of carriers' public section'.[50]

Carrier registration

By the end of 2022, altogether **947 carriers** (799 air, 51 sea and 97 land carriers) had registered with eu-LISA to set up system-to-system connections for EES and ETIAS. In addition, 54 carrier software providers had also applied for registration. Approximately 40 % are EU carriers, and 60 % are from outside the EU.

Ultimately, the number of registered carriers, in particular among land carriers, proved much lower than anticipated. To mitigate the possible impact on the operational readiness of EES, eu-LISA stepped up its efforts by joining forces with carrier associations and organising awareness-raising activities to address this problem and boost registrations. Together with the Commission, Frontex, carrier associations and their IT service providers, this topic was also kept high on the agenda of the Working Group for Carriers throughout 2022.

To support the carrier testing process, the Agency opened a **cloud-based simulator** which was available until December 2022. Out of a target of 488 carriers, only 380 requested access to the simulator, and only one service provider managed to complete the full sequence of testing.

1.2.3. European Travel Information and Authorisation System (ETIAS)

ETIAS is the online pre-travel authorisation system for visa-exempt third-country nationals (TCNs), which will introduce travel authorisation as a **new condition for entering the Schengen area** for a short stay. In addition to streamlining border-crossing procedures for TCNs, ETIAS will also contribute to the EU's internal security through advance identification of potential security, migration and public health risks. This **risk assessment** will be enabled by the future interoperability of JHA systems, allowing to check background information across all systems managed by eu-LISA, as well as relevant Europol and Interpol databases.

The ETIAS travel authorisations will be checked by air, sea and land carriers prior to boarding and also at the external border crossing points by border guards who will be responsible for taking the final decision on granting or refusing entry. In addition, national law enforcement agencies and Europol will also have access to the ETIAS database in order to prevent, detect or investigate terrorist threats or serious criminal offences.

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[47] **Factory acceptance test (FAT)** demonstrates that the developed business functionalities are tested in the factory site before their delivery and verify sufficient functional stability before submitting the software to system solution testing (SST).
[48] **Commission Implementing Regulation (EU) 2022/1409** of 18 August 2022 concerning the detailed rules on the conditions for the operation of the web service and data protection and security rules applicable to the web service, as well as measures for the development and technical implementation of the web service and repealing Implementing Regulation (EU) 2021/1224, OJ L 216, 19.8.2022, p. 3–19.
[49] **Practical Handbook for Border Guards (Schengen Handbook)**, 28.10.2022, C (2022) 7591 final.
[50] Frontex (2022) '**Frequently Asked Questions (FAQ) in support of carriers' public section**', 09 December 2022.

ETIAS comprises:

- the Central System, developed and managed by eu-LISA,

- the Central Unit, established within Frontex, for processing the application in case there is a hit against any of the searched databases, and triggering the manual processing of the application, if necessary,

- National Units in each Member State, which will be responsible for examining and deciding on applications sent for manual processing.

ETIAS will share several hardware and software components with EES, such as the National Uniform Interface (NUI), communication infrastructure, and web services (see above under 1.1.2).

The development of ETIAS started at the end of 2018. However, because of significant interdependencies with EES, the system's development and delivery are contingent on the finalisation and successful entry into operation of EES (incl. ETIAS can enter into operation six months after EES).

To support the cross-checking of information across all JHA systems, the **ETIAS consequential amendments** adopted in July 2021,[51] introduced the obligation, originally not foreseen in the initial EES release, to establish an interoperability connection between EES and the European search portal (ESP) upon the entry into operation of ETIAS.[52]

Regulatory background

The requirements and specifications necessary for the development of ETIAS are pending the adoption of **secondary legislation** to implement the ETIAS consequential amendments. By January 2023, 21 legal acts had been adopted, and five acts were under formal adoption (e.g., amended versions of the watchlist and data management acts are in the final stages of adoption). Work on acts related to reporting of costs (to assess the need to adjust the ETIAS fee), as well as on leaflets and payment methods are still ongoing, pending Commission's internal inter-service consultation.

Two implementing acts stemming from the ETIAS consequential amendments are in the final stage of adoption: (1) Commission implementing decision on laying down the **technical specifications for data retention** and (2) Commission delegated decision on specifying the conditions for the **correspondence between the data** present in a record, alert, or file of the other EU information systems consulted and an application file. These two acts will have a direct effect on the implementation of ETIAS, as well as other JHA systems and the interoperability programme (incl. integration with the Europol database).

Analysis and Design

The finalisation of the ETIAS central system design was affected by the dependencies with the components shared with EES, as well as interoperability specifications. As a result, the closure of the analysis and design phase was postponed until the end of February 2023.

At the start of 2022, several end-users requested new functionalities for which eu-LISA prepared impact assessments in consultation with the Commission. In parallel, the Agency proceeded with the development of elements whose design was mature and stable.

In April, the Commission adopted the initial version of the ETIAS watchlist implementing act, finalising the technical specifications and prompting eu-LISA to update the **ETIAS Interface Control Document** (ICD), including the approach to encryption and ESP specifications, which was shared with the Member States on 2 June. A corrective release, reflecting the alternative approach to watchlist authentication and the latest common identity repository (CIR) data model impact, was shared with the Member States on 22 December.

The fifth and **final iteration of the ETIAS software mock-up** was presented to the Member States in April. eu-LISA also organised three workshops for the Commission and Frontex to present mock-ups of the public website for the TCN travel authorisation platform, together with the mobile application.

Throughout 2022, eu-LISA continued to update the **ETIAS Data Protection Impact Assessment** to provide a comprehensive response to the comments received from the EDPS in September 2021.

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[51] **Regulation (EU) 2021/1152** of the European Parliament and of the Council of 7 July 2021 amending Regulations (EC) No 767/2008, (EU) 2017/2226, (EU) 2018/1240, (EU) 2018/1860, (EU) 2018/1861 and (EU) 2019/817 as regards the **establishment of the conditions for accessing other EU information systems for the purposes of ETIAS**, OJ L 249, 14.7.2021, p. 15.
[52] Since the EES entry into operation planned for May 2023 is no longer considered achievable due to delays related to contractors, eu-LISA has initiated the revision of the interoperability architecture timeline, which will affect the ETIAS implementation schedule as well.

The delivery of ETIAS functionalities was planned in an **iterative approach** (similar to the one used for its design elements) to mitigate the effect of dependencies with EES and interoperability components on the compliance testing campaign.[53]

The initial **system solution testing** activities planned for December were postponed due to the delay in the deployment of the ETIAS infrastructure equipment for the test environment and the non-availability of the NUI for ETIAS, endangering the compliance testing schedule for the Member States.

Under the ETIAS Regulation, eu-LISA was tasked with providing a 'white list' of suitable **audio-video tools** for conducting interviews with TCNs applying for travel authorisation. The Agency completed the market study in 2021 and organised altogether 15 demonstrations for the Member States in November and December. The final report is expected to be shared with the Member States in 2023.

Throughout the year, the Agency continued with the **ETIAS watchlist** implementation. eu-LISA also worked with the Member States on aspects related to the encryption and authentication approaches.

Infrastructure

In February 2022, eu-LISA ordered the **network equipment for the testing environment**. It was complemented in July 2022 by the ordering of the rest of the **hardware equipment for the testing environment.** However, the delivery of contracted equipment was delayed due to hardware shortage, and the Agency made serious efforts to prioritise the installation and configuration of test infrastructure to minimise the impact on the compliance testing schedule. Although the network equipment for the testing environment was delivered in May 2022 and most of the hardware equipment in September 2022, the installation did not commence due to protracted contractual negotiations that were still ongoing at the end of 2022, delaying the system testing process.

In May and June, eu-LISA signed the framework contracts for the future maintenance of all applications and infrastructure (including ETIAS) as part of the transversal operations framework.

1.2.4. European Criminal Records Information System Reference Implementation (ECRIS RI)

Under EU law, national courts must take into account previous convictions when passing sentences in criminal cases. The European Criminal Records Information System (ECRIS), operational since 2012, is a decentralised system for exchanging information on criminal records between EU Member States.

ECRIS Reference Implementation (ECRIS RI) offers an integration interface which enables connection with national criminal record registers of Member States. The Agency has been responsible for maintaining the ECRIS RI since April 2020. In the first half of 2022, eu-LISA conducted a security analysis of the ECRIS RI source code, revealing several security vulnerabilities. In October 2022, eu-LISA organised a workshop presenting alternative solutions to this problem, leading to the Management Board's decision in November that the ECRIS RI front-end interface should be replaced. At the same time, the Member States were strongly encouraged to upgrade to the latest version of ECRIS RI in order to mitigate any residual security risks.

In 2022, eu-LISA also prepared for the transfer of the ECRIS RI maintenance to the transversal operating framework (TOF) used by the Agency for the operation of all JHA systems. The transfer is expected in 2023.

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[53] The Agency shared the updated version of the compliance test description document with Member States in January 2023. At the end of March, the first version of the **ETIAS central system simulator** was ready to start testing the national implementations, and the training for Member States was delivered on 12 May 2023.

1.2.5. European Criminal Records Information System – Third Country Nationals (ECRIS-TCN)

ECRIS-TCN is a centralised hit/no-hit system, supplementing ECRIS (European Criminal Records Information System) with information on criminal records of third-country nationals (TCN) convicted in the EU. Together these two systems will help judges, prosecutors, and other relevant authorities obtain comprehensive information on the criminal history of TCNs, regardless of the Member State where they were previously convicted. As a result, ECRIS-TCN will also contribute to implementing the principle of mutual recognition of sentences and judicial decisions in the common area of freedom, justice and security.

ECRIS-TCN comprises:

- the central system that stores the identity information on convicted TCNs,
- national central access points in each Member State,
- interface software enabling the connection of competent authorities to the central system,
- communication infrastructure connecting the central system with the national central access points.

As part of the JHA interoperability architecture, ECRIS-TCN will be connected to the interoperability components, enabling searches across all JHA information systems.

Regulatory background

The Commission implementing decision with provisions on alphanumeric and biometric data was published on 16 December 2022.[54]

Analysis and design

In 2022, eu-LISA focused on completing system requirements and updating the **ECRIS-TCN interface control document** (ICD), taking into consideration the alignment with interoperability components developed in parallel. Due to dependencies with the shared EES components and interoperability specifications, the analysis and design phase of ECRIS-TCN was not completed in 2022 and had to be extended.

Following the discovery of security vulnerabilities in ECRIS RI, the Agency presented an overview of the situation to the ECRIS-TCN Advisory Group. A contingency plan was devised in collaboration with the Commission, the Member States and the contractor to prevent any transmissions and limit the impact on the development of ECRIS-TCN.

Implementation

The implementation of ECRIS-TCN continued. In December, the Agency launched a new specific contract for the development of a new integrated simulator.

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[54] **Commission Implementing Decision (EU) 2022/2470** of 14 December 2022 laying down measures necessary for the technical development and implementation of the centralised system for the identification of Member States holding conviction information on third-country nationals and stateless persons (ECRIS-TCN), OJ L 322, 16.12.2022, p. 107–121.

1.2.6. e-CODEX (e-Justice Communication via Online Data Exchange)

The e-CODEX system provides the digital infrastructure for secure and interoperable communication and data exchange between European judicial authorities, serving as a key technological enabler for modernising cooperation in cross-border civil and criminal proceedings.[55] The Agency's engagement with e-CODEX is an important step towards European-wide effort in the **digitalisation of justice**.

In operation since 2016, the e-CODEX communication platform was originally developed to overcome the wide variety of fragmented and incompatible national IT tools and to ensure secure electronic transmission of information in **cross-border judicial proceedings**.

Thus far, e-CODEX has been deployed in the IT solutions used voluntarily by the judicial authorities, as well as other legal professions, of around 30 countries and partner organisations in civil and criminal matters such as European payment orders[56] and arrest warrants.[57]

The e-CODEX regulation was adopted on 30 May 2022, formally laying down the system's legal basis, describing its components, functions and governance, and listing eu-LISA's responsibilities.[58] The Agency is set to **take over the operational management of e-CODEX** in the second half of 2023. In addition, eu-LISA has also been tasked with spearheading the further digitalisation of judicial procedures that could make use of the secure and interoperable cross-border communication and data exchange provided by e-CODEX.

In 2022, eu-LISA contributed to the Commission's work in the preparation of the implementing acts covering the system's minimal technical specifications, service level requirements, and the specific arrangements for the takeover process. In December, eu-LISA established the e-CODEX Programme Management Board to provide guidance to the Agency's management and made preparations for the establishment of the dedicated Advisory Group to provide technical expertise.[59] In preparation for the takeover in 2023, eu-LISA has been working closely with the consortium that has so far overseen the system's development and maintenance.

1.2.7. Interoperability

Interoperability is the ability of information systems to exchange data and information. The efficient management of Europe's internal security and borders relies upon the interoperability of the various JHA information systems facilitating cooperation between national authorities in the areas of border and migration

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[55] For more information, please visit the official website of **e-CODEX**.
[56] The **European Payment Order** is a simplified procedure for cross-border monetary claims which are uncontested by the defendant.
[57] The **European arrest warrant (EAW)** is a simplified cross-border judicial surrender procedure for the purpose of prosecution or executing a custodial sentence or detention order.
[58] **Regulation (EU) 2022/850** of the European Parliament and of the Council of 30 May 2022 on a computerised system for the cross-border electronic exchange of data in the area of judicial cooperation in civil and criminal matters (**e-CODEX system**), and amending Regulation (EU) 2018/1726, OJ L 150, 1.6.2022, p. 1–19.
[59] The first meeting of the e-CODEX Advisory Group took place on 17 January 2023, and the e-CODEX Programme Management Board met for the first time on 18 January 2023.

management and contributing to internal security.

To that end, the EU has entrusted eu-LISA with developing the overarching interoperability architecture for the JHA domain. The Agency started developing the Interoperability programme in mid-2019, following the adoption of the Interoperability Regulations in May 2019.

This new architecture will be enabled by interoperability components that will together unlock the interoperability for all EU's information systems in the JHA domain: SIS, VIS, Eurodac, EES, ETIAS, and ECRIS-TCN.

The EU's JHA interoperability architecture comprises the following components:

- the **European search portal (ESP),** enabling authorised users to conduct single searches and receive results from all JHA information systems they are authorised to access,
- the **common identity repository (CIR),** a database of biographical information on third-country nationals (TCN) to ensure reliable identification,
- the **multiple-identity detector (MID),** facilitating the detection of multiple identities with the dual purpose of ensuring the correct identification of bona fide travellers as well as combatting identity fraud,
- the **shared biometric matching service (sBMS)** for cross-matching of identity data with biometric identifiers across all JHA systems.

In addition, eu-LISA is also developing a **central repository for reporting and statistics (CRRS)** to provide cross-system statistical data and analytical reporting on all JHA systems for policy, operational and data quality purposes.

Figure 22. Interoperability architecture
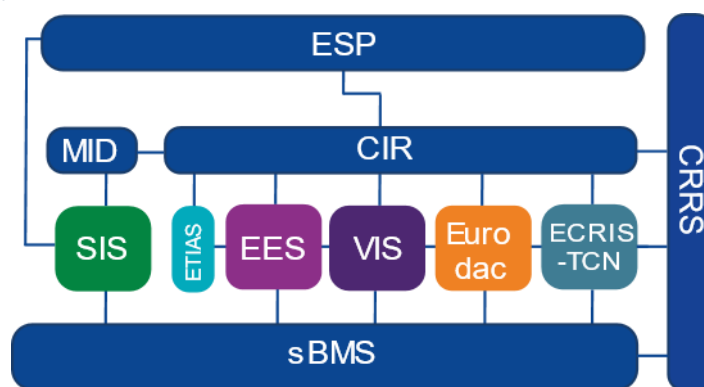
Development of the shared biometric matching service (sBMS)

By the end of January 2022, the sBMS was included in the **common system solution testing** of EES and the updated VIS. This testing phase was successful as no significant defects were detected for the sBMS. The dedicated system solution testing of sBMS started in June and ended successfully in December.

In February, eu-LISA submitted the updated sBMS **data protection impact assessment** (DPIA) to the European Data Protection Supervisor (EDPS) for opinion, addressing the recommendations made in November 2021. The EDPS provided a positive opinion in July 2022, requesting further information on the processing of facial images.

In 2022, the Agency launched the procurement process for the sBMS infrastructure components to be used by both EES and VIS. After successfully installing the hardware elements, software solutions were installed on the different environments, completed for the test environment, and ongoing for pre-production and production environments.

In January 2022, eu-LISA commenced the **integration of ECRIS-TCN with sBMS** by updating the sBMS requirements and design, delivering the full-scope release at the end of August. The testing is scheduled for 2023, together with sBMS version 1.1.

In May 2022, the Agency began the implementation of the sBMS release supporting SIS, with delivery planned

in September 2023.

An updated version of the sBMS **user software kit** (USK) was released in March, including new functionalities stemming from ECRIS-TCN and SIS requirements. In addition, eu-LISA also prepared the approach for the continuous accuracy measurement of the system's performance.

Development of other interoperability components: ESP, CIR, MID, and CRRS

During 2022, eu-LISA progressed with the implementation of the remaining **interoperability components**: European search portal (ESP), common identity repository (CIR), multiple-identity detector (MID), and central repository for reporting and statistics (CRRS).

Maintenance activities for high-level design, requirements repository and security deliverables have started and are advancing, focusing on critical elements, such as the software architecture document (SAD) and the detailed design specifications. Development activities continued in parallel.

The newest versions of the Interoperability **interface control documents** (ICD) were provided to the Member States in November 2022. The maintenance process for external ICDs with a new release cycle of two and a half months was already in use, as agreed with the Member States.

In terms of infrastructure, the advanced procurement for launching test activities was ongoing at the end of 2022. The installation of the infrastructure was also planned. In addition, the Agency launched the process for signing the first contract for interoperability testing activities.

1.2.8. Innovation, research and development

eu-LISA proactively monitors research activities and technological innovation in the areas of large-scale IT systems. The Agency needs to keep up with the latest developments and to anticipate the evolutions that will contribute to delivering high-quality IT services, while also standing ready to test novel technologies and solutions with a view to enhancing the efficiency of JHA information systems managed by eu-LISA.

Research and technology monitoring

In December 2022, eu-LISA published its **annual research and technology monitoring report** titled **'Enabling Seamless Travel to the European Union'**.[60] The report focuses on the ongoing developments in the digitalisation of border management procedures throughout the travel continuum. More specifically, the report provided an overview of recent policy developments concerning the digitalisation of border management procedures, as well as new technologies and solutions enabling seamless international travel.

Furthermore, in July 2022, eu-LISA and Eurojust published a joint report on using AI solutions to support cross-border cooperation in criminal justice.[61] The report provides a high-level overview of the policy and legal context for using AI in cross-border judicial cooperation. It also explores applicable technologies and possible use cases for using AI in the judicial sphere.

Stakeholder engagement

In 2022, eu-LISA continued coordinating the reporting on the implementation of the **Roadmap for Standardisation for Data Quality Purposes**, adopted by the Council Working Party on JHA Information Exchange (IXIM WP) in December 2020 and involving various actors across Europe (the European Commission, several EU agencies, and Member State authorities). The Council launched the initiative to address the gaps in data quality and access to information in the EU by developing, endorsing and implementing common standards for biometric data, alphanumeric data, devices and solutions for acquisition and access to data, as well as cybersecurity. The Agency presented two progress reports, endorsed by the IXIM, in June and in December 2022.

The Agency participated actively in the work of the **EU Innovation Hub for Internal Security**, hosted at

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[60] eu-LISA (2022) '**Enabling Seamless Travel to the European Union**' eu-LISA Research Monitoring Report, December 2022.
[61] eu-LISA and Eurojust (2022) '**Artificial intelligence supporting cross-border cooperation in criminal justice**' July 2022.

Europol.[62] Established in 2020, the Hub is a collaborative network of innovation labs focused on exploring the application of new technologies, in particular, mapping the relevant projects, knowledge and capability gaps in the JHA domain. To support the EU Innovation Hub Secretariat, eu-LISA deployed a staff member to Europol at Europol as of May 2022 and continued actively participating in the work of the Hub Team and Hub Steering Group. Under the Hub's umbrella, the Agency launched a **study on AI in CRRS to improve risk analysis and analytics for ETIAS and Revised VIS**. In addition, eu-LISA supported the Hub in organising its annual event, 'Shaping responsible solutions for internal security', which took place in September 2022 in Brussels, focusing on the need to develop effective security solutions while at the same time meeting citizens' expectations in terms of privacy, transparency and accountability.[63]

Based on the Agency's involvement in the **EU Framework Programme for Research and Innovation**, agreed in 2021, eu-LISA continued to support the Commission and the Research Executive Agency in implementing the Horizon Europe Framework Programme through different activities. In particular, eu-LISA participated in the definition of priorities for the research and innovation work programmes and contributed to the evaluation of proposals submitted in response to calls with operational relevance to the Agency.

Additionally, the Agency supported the European Commission in **several studies**, such as the 'EU Security Market Study'[64] and the study on security research uptake.[65] The Agency also supported the Commission's Directorate-General for Migration and Home Affairs (DG HOME) in evaluating critical technology dependencies in internal security and the initiative 'EU Security Data Space for Innovation'.

In 2022, the Agency also participated in a pilot project with the Swedish Agency for Migration to analyse the **quality of operational fingerprint data** in the context of VIS. One of the outcomes of this project is the first scientific paper authored by eu-LISA which was submitted and accepted to the 2023 International Workshop on Biometrics and Forensics (IWBF).[66] The paper analyses fingerprint capture, highlighting the difference in quality among individual fingers, and provides an assessment of the potential impact on the development of fingerprint scanners and their deployment in large-scale IT systems.

Artificial intelligence

In May 2022, eu-LISA completed its participation in the **VisaChat proof-of-concept project**, launched in July 2021 by DG HOME to define the technical requirements for the chatbot that is envisioned for the EU's future digital visa portal. The machine-learning visa chatbot was trained to respond to questions from visa applicants in their native language. Once operational, chatbots would reduce the workload of visa authorities tasked with responding to requests in Member States, as well as ensuring a consistent application of the EU's Visa Code. The Agency contributed to this project by defining the solution's technical requirements and sustainability, and is expected to be tasked with the development of the chatbot application for the EU's digital visa portal.

Throughout the year, eu-LISA hosted three meetings of the **Working Group on Artificial Intelligence** (WGAI), facilitating discussions and knowledge exchange between Member State authorities and EU institutions. Meetings included presentations on AI solutions, ongoing projects and plans for new activities, as well as discussions on further development and the implementation of relevant AI use cases.

In addition, the Agency finalised an **internal Roadmap for Artificial Intelligence** that will support the coordination of the development and implementation of AI-based solutions within eu-LISA.

Industry Roundtables

In 2022, eu-LISA hosted **two Industry Roundtable events**, convening experts from EU institutions, Member State authorities and the industry to exchange views on selected focus areas and featuring presentations of novel technologies, products and services, while also addressing the needs and capability gaps of Member States.

> **For more information, please refer to the Industry Roundtable reports for June** https://bit.ly/405n57a
> **and October** https://bit.ly/3lpEGlb

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[62] For more information, please visit **EU Innovation Hub for Internal Security** website.
[63] EU Innovation Hub for Internal Security '**Shaping Responsible Solutions for Internal Security**', September 2022.
[64] European Commission (2022) '**EU security market study**', Directorate-General for Migration and Home Affairs (DG HOME), 2022.
[65] European Commission (2022) '**Innovation Uptake of EU-funded Security Research outcomes**', DG HOME, 2022.
[66] **11th International Workshop on Biometrics and Forensics** (IWBF 2023) April 19th - 20th, 2023.

The first event, held in June, focused on **biometric technologies in identity management and verification**, framed by the context of integrated border management.[67] Participants shared experiences, best practices and technologies for addressing capability gaps in identity verification at external border crossing points, as well as innovative solutions for identity management. Organised in collaboration with the French Presidency of the Council of the EU, the event was arranged in a hybrid format in Strasbourg, France. More than 100 participants joined the event in person, and over 170 followed online, representing altogether 34 countries worldwide.

The second industry roundtable, held in October, focused on solutions to the challenges faced by carriers in anticipation of the entry into operation of EES and ETIAS, requiring all carriers to query these new JHA systems to verify the validity of travel authorisations of third-country nationals seeking entry to the Schengen area. The event, titled **'EES, ETIAS and Carriers Getting Ready for the Entry into Operation'** allowed all stakeholders to discuss and share practical experiences and good practices to improve traveller processing while enhancing overall security. The roundtable was organised in a hybrid format in Tallinn, Estonia, attracting more than 300 participants online and 115 in person, jointly representing over 50 countries worldwide.[68]

1.3. Infrastructure and networks

To effectively support the operational management of large-scale JHA information systems entrusted to it throughout the year, the Agency provided a secure and reliable infrastructure to host all systems, ensured secure, reliable data transfer between them and provided direct support and technical services needed to run all IT systems managed by eu-LISA.

1.3.1. Networks

The Agency is responsible for the management of the communication infrastructure that provides secure and reliable data transfer between the central systems operated by the Agency and the users of these systems, the Member States and other EU Agencies. In addition, the communication infrastructure also provides a point-to-point connection between the central unit (CU) at eu-LISA's operational site in Strasbourg, and the back-up central unit (BCU) in Sankt Johann im Pongau, Austria.

The communication infrastructure uses the TESTA-ng (Trans-European Services for Telematics between Administrations – New Generation) network that provides a backbone network separate from the public internet and is also used by several European public administrations. The TESTA-ng contract is overseen by the European Commission, and the network is operated by a private service provider.

The Agency uses three domains on the TESTA-ng for the operation of the large-scale systems (the interoperability components will be used on all three domains):

- SIS Domain for SIS II and SIRENE Mail,[69]
- VIS Domain for VIS (incl. VISMail[70]), EES, and ETIAS,
- EuroDomain for Eurodac, DubliNet and ECRIS-TCN.

The three domains are physically separated at the user premises. The end users connect to the domains using separate turnkey access points (TAPs), usually two, located in geographically distant facilities to be able to resume operations quickly in case of disaster or maintenance. To further ensure the availability and reliability of the network, the TAP themselves include additional redundancies. In addition to the encryption of data managed by the TESTA-ng service provider, eu-LISA manages a second encryption layer for the SIS Domain.

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[67] eu-LISA Industry Roundtable '**Biometric Technologies in Identity Management and Verification**' June 2022. Strasbourg, France.
[68] eu-LISA Industry Roundtable '**EES, ETIAS and Carriers Getting Ready for the Entry into Operation**' October 2022, Tallinn, Estonia.
[69] **SIRENE Mail** is a communication mechanism used by national SIRENE Bureaux for supplementary information related to SIS alerts.
[70] **VISMail** is an information exchange mechanism used by national visa authorities to consult on Schengen visa applications.

Operational management of the communication infrastructure

In 2022, the framework contract covering SIS and VIS communication infrastructures (using the TESTA-ng services) performed in compliance with the legal requirements for the respective systems, with an average availability exceeding the 99.99 % target, with 99.9984 % availability for SIS, and 99.9984 % for VIS. In addition, the SIS II second encryption layer ensured the security of the SIS II and SIRENE Mail business data at 100 % availability.

Evolution of the communication infrastructure

The Agency started to connect EES to the VIS communication infrastructure to start performing tests with the Member States. The preparations for the evolution of the TESTA framework contract started in 2018 under the leadership of the Commission. The process, initially expected to be concluded in 2020, was delayed. The Commission informed the Agency that the signature of the framework contract is currently suspended following the Court Order of the Vice-President of the Court of Justice, dated 22 July 2022.[71]

The Agency has also continued to provide support to Member States by coordinating and managing the move of existing TAPs to new data centre locations, the installation of new TAPs and the decommissioning of old ones. In addition, it has ensured the management of network services and afferent changes required to network components in order to maintain and evolve the TESTA-ng infrastructure and guarantee the continuity of system operations.

1.3.2. Data centres

The Agency's data centres, the central unit (CU) in Strasbourg, France, and the back-up central unit (BCU) in Sankt Johann im Pongau, Austria, are the infrastructure that physically hosts all the IT systems entrusted to eu-LISA, while also hosting other operational and non-operational systems needed for development and testing. As such, they constitute eu-LISA's core assets and are of critical importance for the execution of its mandate.

In 2022, eu-LISA took all measures necessary to ensure that both units remained continuously operational, contributing to high-level system performance, in particular systems availability. However, the operation of the data centres continued to be particularly complex in the first half of the year because of COVID-19-related access and travel restrictions that considerably limited the availability of staff and contractors at those facilities.

To support operations and projects, the Agency proceeded with the development and implementation of the 'data-centre-as-a-service' (DCaaS) approach for the purposes of centralising the operational management, monitoring and capacity planning of the underlying IT infrastructure used by JHA systems. To that end, eu-LISA has introduced a dedicated data centre infrastructure management (DCIM) tool that includes several modules, such as infrastructure optimisation and energy management to increase its operational efficiency.

In addition, eu-LISA continued to optimise and reorganise its data centres to accommodate future capacity needs by implementing structured cabling and modifying rack layouts for cooling optimisation. For the data centre in Strasbourg, all power installations were evaluated for optimisation and to free up some more space.

The Agency also made progress on the preparations for its **future modular data centre** in Strasbourg, which is meant to provide an additional buffer capacity needed for the future updates of the main data centre layout. The modular data centre will also provide a 50% capacity increase for hosting new JHA systems.

At the backup central unit in Austria, eu-LISA proceeded with the preparations for ensuring the compliance of preproduction and production environments with the Common Shared Platform (CSP) standards. To that end, the available cooling capacity has been maximised by adjusting the hydraulics and pumps, while also implementing other networking upgrades.

Additionally, eu-LISA continued to provide hosting services for the backup systems of Frontex and the European Union Agency for Asylum (EUAA).

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[71] Court of Justice of the EU, **Order of the Vice-President of the Court of 14 March 2023** in case C-141/23 P(R)-R.

1.3.3. Common shared platform

The common shared platform is the scalable, agile and standardised infrastructure platform for providing the underlying technical services needed to run all IT systems managed by eu-LISA. Applying state-of-the-art technologies, the CSP offers a resource-efficient framework, streamlining development and operation tasks (DevOps-oriented deployment pipeline) and offering a high degree of automation for infrastructure management (Infrastructure as Code). The existing JHA systems use only some of the CSP services (e.g., VIS uses storage services and database services), whereas smaller systems (e.g., SIRENE Mail and VISMail) are fully hosted on the CSP. Once operational, all new systems that are currently under development will be fully hosted on the CSP as well.

In 2022, eu-LISA carried out all operations necessary for the maintenance of the common shared platform servicing all core business systems. As a result, the CSP remained fully available, and all issues were resolved within the targets specified in the SLAs. In addition, the Agency introduced a process for adaptive maintenance in cyclic releases, ensuring that all systems are kept up to date, and necessary replacements are accurately forecast and planned. To upgrade its storage services, eu-LISA conducted a market survey and started implementing a high-performance storage system solution.

An important milestone was achieved in 2022 with the migration of the framework contract regulating infrastructure services. The previous framework contract, titled 'Common Shared Infrastructure (CSI)', was replaced by a new contract under the '**Transversal operations framework (TOF)**' contract.[72] The new contract entered into effect on 16 December 2022, enabling access to enhanced services for the operation of JHA systems.

1.4. Security and business continuity

The Agency continuously implements an information security management process to ensure that each information system, including internet-facing corporate systems, stows a risk assessment-based **'defence in depth'** approach, under which the Agency implements layers of security measures to provide resilience to incidents and cyberattacks. To ensure timely identification and response to cyber threats, eu-LISA puts monitoring tools, security incident procedures, and 24/7 stand-by duty arrangements in place. The Agency operates a Security Information and Event Management System (SIEM) in conjunction with CERT-EU (The Computer Emergency Response Team for the EU institutions, bodies and agencies) to identify and respond to cyber threats for its corporate IT systems.

In **cyber security** particularly, the primary focus was to reinforce the Agency's **defensive readiness posture** in the face of increasing cyberwarfare activities by certain nation-state actors. In particular, with the support of guidance from CERT-EU, the Agency has been improving its cybersecurity posture, strengthening its cyber defences, and ramping up its capabilities to detect and react to cyber operations quickly.

As part of the **operational management** of large-scale IT systems, the Agency continuously monitors and manages security risks, testing and enhancing security controls to ensure an effective security posture. Notably, it ensured continuous monitoring of the security threat landscape following the Russia-Ukraine conflict, especially in the context of hybrid threats. Due to Russia's war of aggression against Ukraine, the new geo-political situation was under particular consideration also because of the geographical distribution of the Agency in four EU Member States (Estonia, France, Austria and Belgium), where the level of threats (mainly physical and cyber) substantially differs.

The security of the new systems is a major element of their development. For the ongoing implementation of **new JHA systems**, eu-LISA focused its security-related efforts on eliciting security requirements that will drive the development of the **overarching security architecture**. In this context, following the risk assessment process, eu-LISA finalised the security architecture of the EES Internet Zone. The Agency also worked on a reference **Enterprise Security Architecture model** for the JHA IT systems. In addition, eu-LISA was engaged in security testing activities (related to EES, VIS, and sBMS) while integrating all the necessary security testing capacity, in terms of tools and capability, in the eu-LISA DevSecOps (development, security, and operations) pipeline.

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[72] The TOF contract covers vendor maintenance, corrective and adaptive maintenance, as well as technical monitoring of infrastructure.

In 2022, the Agency progressed with the implementation of security-related recommendations stemming from several audits and assessments (e.g., the 2020 Internal Audit Services audit on IT Security, EDPS inspection on Eurodac) as well as the implementation of recommendations stemming from the previous security and business continuity exercises run together with the EU Member States. During the first quarter of 2022, the Agency completed an **internal security assessment** focusing on technical and organisational aspects while also launching the security audits of six suppliers of technical services to provide additional assurance of their compliance with contractual security requirements.

To improve its Information Security Management System, eu-LISA **adopted several standards and guidelines on information security**. In the context of security risk management, the Agency completed the risk assessments, security plans and **business continuity plans** for sBMS, EES and Eurodac systems. In addition to in-house experts, the security experts from Member States, the European Commission and Frontex reviewed these plans in the Security Officers Network (SON) framework. The plans have received a positive opinion from the Advisory groups, and the Management Board adopted the documents in November 2022.

Regarding security coordination and outreach, the cooperation with EU agencies and institutions facilitated the exchange of knowledge and best practices on matters related to business continuity, especially in the context of the COVID-19 pandemic and Russia's war of aggression against Ukraine. The network of Business Continuity Officers continuously shared knowledge, risk assessments and good practices on managing staff safety and the resilience of the different organisations in support of their mandate. The Agency also participates in the Inter-Institutional Security Training and Awareness Group initiatives to keep the Agency up to date with the latest security matters. Moreover, to continuously exchange best practices in all security and business continuity domains, the Agency actively collaborates with SON. eu-LISA organised the 15th and 16th SON meetings in 2022 to discuss the EU's overall threat landscape and the latest cyber security challenges. Additionally, in line with eu-LISA's Security Rules on protecting Communication and Information Systems (CIS), the Agency's IT Security Working Group met every two months to discuss and exchange up-to-date information on security-related matters.

In preparation for implementing the Interoperability Implementing Act on cooperation procedures in case of a security incident[73] and to reinforce its security incident management capabilities, the Agency has established a **Computer Security Incident Response Team** (CSIRT). eu-LISA also has been actively consulting with the Interoperability Advisory Group and the Cooperation Group to set up its security incident cooperation processes. Additionally, eu-LISA has been actively contributing to developing two new legislative proposals: one for an EU Regulation on information security in the Union institutions and bodies, and another for a Regulation on measures for a high common level of cybersecurity at the Union institutions, bodies and agencies.

In the context of **protective and physical security**, the Agency completed several improvements to improve security and safety in all Agency's premises and staff operating the systems on a 24/7 basis. The Agency also carried out specialised training for the staff to increase preparedness to respond to urgent situations. Additionally, the Agency prepared the security requirements for the second extension of the operational site, the modular data centres, and the temporary premises in Strasbourg and Liaison Office in Brussels.

1.5. **Stakeholder relationships**

To maintain and reinforce eu-LISA's visibility and image as a trusted and reliable partner in its areas of expertise, the Agency continuously improves and develops efficient information exchange and working relations with eu-LISA's stakeholders, in particular with all key institutions in the EU's JHA domain, as well as other stakeholders based in Brussels. Additionally, this cooperation allows eu-LISA to provide information and policy expertise on legislative initiatives in the EU's JHA domain and collect information to prepare and advocate eu-LISA's positions.

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[73] Commission implementing decisions [**C(2021)6663** and **C(2021)6664** of 16 September 2021] laying down the specifications of the cooperation procedure as regards security incidents that have or may have an impact on the operation of the interoperability components or on the availability, integrity and confidentiality of the data, pursuant to Article 43(5) of Regulation (EU) 2019/817, and Article 43(5) of Regulation (EU) 2019/818.

1.5.1. Partnerships with the Member States, EU institutions and bodies

Throughout 2022, eu-LISA continued to foster its strong partnerships with Member States, EU institutions and bodies, and actively engaged in technical and strategic discussions held within the relevant Committees and Working Parties of the EU Council and in the framework of Justice and Home Affairs Council meetings.

In 2022, the Agency contributed to the technical and strategic discussions within the relevant bodies of the Council of the EU, including the Standing Committee on Operational Cooperation on Internal Security (COSI), the Working Party on JHA Information Exchange (IXIM), Working Party on Frontiers, Working Party on Judicial Cooperation in Criminal Matters (COPEN), and the Visa Working Party.

In 2022, eu-LISA also continued to closely follow the activities of various Committees of the European Parliament, especially the Committee on Civil Liberties, Justice and Home Affairs (LIBE), Committee on Budgets (BUDG), Budgetary Control Committee (CONT), Committee on the Internal Market and Consumer Protection (IMCO), Committee on Legal Affairs (JURI), and the Special Committee on Artificial Intelligence in a Digital Age (AIDA) until it concluded its mandate in May 2022.

The Agency received four high-level visits:

- on 14 February, Didier Reynders, European Commissioner for Justice, visited eu-LISA operational site in Strasbourg;
- on 21 March, Ylva Johansson, European Commissioner for Home Affairs, visited the eu-LISA headquarters in Tallinn;
- on 24 May, eu-LISA welcomed the European Parliament's Committee on Legal Affairs (JURI) to the Agency's headquarters in Tallinn,
- on 3 October, a delegation of the European Parliament's Committee on Civil Liberties, Justice and Home Affairs (LIBE) visited eu-LISA's operational site in Strasbourg.

Additionally, the Agency's Executive Director had a bilateral meeting with the Ambassador of the incoming Czech Presidency of the Council of the EU to discuss the Czech Presidency's priorities and the Agency's support for achieving them.

The Agency also continued holding annual meetings to present to its stakeholders eu-LISA's annual priorities and to exchange views on the current and future activities. In April, eu-LISA presented its annual briefing online for JHA Counsellors, the heads of diplomatic missions to Estonia and senior Estonian officials.

eu-LISA Annual Conference

In 2022, in cooperation with the Czech Presidency of the Council of the European Union, eu-LISA organised the anniversary edition of its annual conference, **'10 Years as The Digital Heart of Schengen'**, marking a decade of activity for the Agency.[74] The conference hosted 20 speakers and reunited 388 participants, with 130 participants present in Tallinn. The event featured high-level representatives of eu-LISA stakeholders, EU Member States, and EU Institutions and Agencies, including Margaritis Schinas, the Vice-President of the European Commission, and Ylva Johansson, European Commissioner for Home Affairs.

During the conference, eu-LISA took stock of all achievements, milestones and key events over the past ten years covering the journey from a technical Agency to the Digital Heart of Schengen and the role the Agency has played in two key areas for Europe's internal security: home affairs and digitalisation of justice. The conference also focused on looking ahead to the next direction in eu-LISA's evolution and the areas where the Agency could further contribute to support the EU Institutions and Member States' efforts in making Europe safer and stronger.

Schengen evaluations

The effective functioning of the Schengen area relies on a complex regulatory and policy framework, among them common visa policy and SIS/SIRENE cooperation, the latter established as compensatory measure for the abolition of internal borders to facilitate free movement in the Schengen zone. To ensure the effective

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[74] eu-LISA 10th annual conference '**10 Years as The Digital Heart of Schengen**', held on 13 October 2022 in Tallinn, Estonia.

application of the Schengen *acquis* by Member States, the EU has set up a dedicated mechanism for evaluating and monitoring its implementation. The responsibility for implementing the **Schengen evaluation and monitoring mechanism** (SEMM)[75] is shared jointly by the Member States and the Commission, to which eu-LISA contributes by taking part in Schengen evaluations and subsequent report drafting.

In 2022, eu-LISA took part in

- six on-site **SIS/SIRENE evaluations**: Spain (March), Sweden (April), Norway (May), Iceland (June), Denmark (October) and Portugal (December),
- one joint evaluation of **common visa policy** (including VIS). The joint evaluation of Italy and France was conducted in October in respective consular posts in Senegal.[76]

In addition, eu-LISA contributed to two training courses for Schengen evaluators, organised by the Commission and the EU agency for Law Enforcement Training (CEPOL), one on visa policy held in Ankara, Turkey, and another on SIS/SIRENE cooperation which was organised in Estonia.

1.5.2. Partnerships with other EU Agencies

Throughout 2022, eu-LISA's cooperation with other EU agencies, primarily in the JHA domain, continued both at the bilateral level and through several networks, in particular the **JHA Agencies Network** (JHAAN) and the **EU Agencies Network** (EUAN).

FRONTEX

- Working arrangement since 2014
- Cooperation Plan for 2021–2023

The cooperation with the **European Border and Coast Guard Agency** (Frontex) focuses on the exchange of statistics, security of JHA information systems, as well as research and development of JHA systems managed by eu-LISA. eu-LISA and Frontex also cooperate in the context of JHAAN.

In 2022, eu-LISA and Frontex revised their working arrangement to take into account their revised mandates. For both agencies, the main focus was on implementing the EES, ETIAS, and Interoperability regulations. Throughout the year, regular inter-agency coordination meetings were held on the development of ETIAS, and both agencies attended each other's Management Board meetings. In addition, Frontex participated in eu-LISA's Biometrics Working Group and the Working Group on Artificial Intelligence (WGAI). In addition, eu-LISA continued to host the Frontex disaster recovery site.

EUROPOL

- Memorandum of Understanding since 2016

The main areas of cooperation with the **EU Agency for Law Enforcement Cooperation** (Europol) cover access to JHA information systems, training and administrative cooperation. eu-LISA and Europol also cooperate in the context of JHAAN.

In 2022, the main focus was on implementing the SIS Recast, EES, ETIAS, and Interoperability regulations. Europol is an end-user of SIS and has set up its connection to the SIRENE network to exchange SIS alerts. Additionally, the agencies collaborated in the framework of Europol's Working Group on Information Management, eu-LISA's Biometrics Working Group, and the Working Group on AI. Moreover, Europol has also been regularly attending eu-LISA's Management Board meetings. Both agencies were also actively involved in implementing the EU Innovation Hub for Internal Security hosted at Europol, and in May, eu-LISA deployed one of its staff members to the Hub.

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[75] **Council Regulation (EU) 2022/922 of 9 June 2022** on the establishment and operation of an **evaluation and monitoring mechanism to verify the application of the Schengen acquis**, and repealing Regulation (EU) No 1053/2013, OJ L 160, 15.6.2022, p. 1–27.
[76] In addition, eu-LISA was invited to contribute to two other joint Schengen evaluations in consular posts: joint evaluation of Austria and the Netherlands, and the joint evaluation of Malta, Iceland and Luxembourg. However, due to high workload and limited resources, the Agency was ultimately able to contribute only to the joint evaluation of Italy and France.

EUROJUST

- Memorandum of Understanding since 2017
- Cooperation Plan for 2021–2023

The cooperation with the **EU Agency for Criminal Justice Cooperation** (Eurojust) focuses on administrative cooperation and access to JHA information systems (Eurojust has access to SIS). eu-LISA and Eurojust also cooperate in the context of JHAAN.

In 2022, the cooperation focused on the implementation of ECRIS-TCN and e-CODEX, the Interoperability regulations, and the coordination of activities related to the digitalisation of judicial cooperation. In addition, Eurojust attended eu-LISA's Working Group on AI, and the agencies prepared a **joint report, 'Artificial intelligence supporting cross-border cooperation in criminal justice'**,[77] published in 2022.

EUAA

- Working arrangement since 2014
- Cooperation Plan for 2021–2023

The main areas of cooperation with the **EU Agency for Asylum** (EUAA) cover priority areas such as the exchange of statistics, cooperation on issues related to asylum and DubliNet, as well as ICT and administrative matters. eu-LISA and EUAA also cooperate in the context of JHAAN.

In 2022, the cooperation focused on implementing the Commission regulation on the 'DubliNet' electronic communications network. EUAA and eu-LISA shared their expertise and supported the Dublin Network by planning the enhancement of the DubliNet security certificates. In addition, eu-LISA continued to host the EUAA disaster recovery site. In September, eu-LISA's delegation, led by the Executive Director Mr Krum Garkov, visited EUAA to meet with his counterpart, Ms Nina Gregori, and senior management to discuss EUAA's revised mandate, progress with the implementation of the Interoperability package, as well as the possibilities to strengthen mutual cooperation, particularly within JHAAN as part of the network's Trio Presidency coordination concept.

CEPOL

- Working arrangement since 2013
- Cooperation Plan for 2022–2024
- Annual Joint Work Plan

The cooperation with the **EU Agency for Law Enforcement Training** (CEPOL) focuses mainly on training the end-users of JHA information systems managed by eu-LISA. The two agencies also cooperate in the context of JHAAN.

In 2022, the agencies focused on organising joint training courses on the use of JHA systems, covering both existing and new ones, together with the overarching interoperability architecture. In addition, CEPOL and eu-LISA organised training courses for Schengen evaluators.

In June 2022, CEPOL and eu-LISA signed a three-year cooperation plan for 2022-2024 to reinforce their collaboration in providing joint training courses and sharing expertise in areas of mutual interest. Additionally, the agencies signed the annual joint work plan on cooperation related to jointly organised training activities. In addition, CEPOL took part in eu-LISA's Working Group on AI.

FRA

- Working arrangement since 2016
- Cooperation Plan for 2020–2022

The main areas of cooperation with the **EU Agency for Fundamental Rights** (FRA) cover research on biometrics and administrative cooperation. eu-LISA and FRA also cooperate in the context of JHAAN.

In 2022, the two agencies organised joint training courses highlighting the aspect of fundamental rights in the management of JHA information systems. In addition, FRA attended eu-LISA's Working Group on AI. The two agencies also cooperated in preparing reports on topics of mutual relevance, with eu-LISA providing input to FRA's 'Fundamental Rights Report 2022'.

ENISA

- Memorandum of Understanding since 2018

The priority areas for collaboration with the **EU Agency for Cybersecurity** (ENISA) cover IT security, business continuity and administrative cooperation.

In 2022, the agencies collaborated on the practical implementation of the EU's cybersecurity legislation and in the framework of the EU's Security Officers Network (SON). The two agencies also cooperated with CERT-EU in the cyber security area. In

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[77] eu-LISA and Eurojust (2022) '**Artificial intelligence supporting cross-border cooperation in criminal justice**', July 2022.

- Cooperation Plan for 2021–2023

addition, ENISA supported eu-LISA's annual cybersecurity exercise and attended eu-LISA's Working Group on AI.

EASA

The prospective cooperation with the **EU Aviation Safety Agency** (EASA) could cover information exchange with air carriers as stipulated in the EES and ETIAS regulations. To support the implementation of the EES and ETIAS Regulations, both agencies proposed draft working arrangements to the Commission and submitted the draft to DG HOME for an inter-service consultation.

EIGE

eu-LISA cooperates with the **European Institute for Gender Equality** (EIGE) on cyber security, resilience, and business continuity matters, and also in the context of JHAAN.

Inter-agency cooperation

JHAAN

The **JHA Agencies Network** (JHAAN) is an umbrella organisation for the nine EU agencies operating in the European area of freedom, security and justice.

Member since 2012

In 2022, JHAAN was chaired by CEPOL and focused on three thematic priorities: digitalisation, the European Green Deal and cooperation with third countries. Next year, the JHAAN will be chaired by EUAA, followed by eu-LISA in 2024. Together, these three agencies constitute the JHAAN's first Presidency Trio to ensure the continuity of overarching priorities and smooth transition between the Presidencies. As part of the Presidency Trio, eu-LISA participated in two meetings organised with the incoming Czech and Swedish Presidencies of the Council of the EU. Thus far, eu-LISA has substantially contributed to shaping the network´s priorities, setting meeting agendas and joint initiatives.

In the context of Russia's war of aggression against Ukraine, JHAAN prepared a joint paper outlining the contribution of JHA agencies to the EU's solidarity with Ukraine.[78] Furthermore, the network continued to map the activities of its nine member agencies in response to the COVID-19 pandemic, releasing an updated version of its joint paper on the COVID-19 response in September.[79]

EUAN

The **European Union Agencies Network** (EUAN) shares information and expertise and offers technical services that offer evidence-based advice to policy-makers and legislators at the EU and national levels.

Member since 2013

In 2022, eu-LISA's contribution focused on administrative matters such as budget and finance, human resources, and the effects of COVID-19, contributing to the annual discharge process and inter-agency surveys, while also sharing information on its best practices in different administrative areas.

Additionally, the Agency participated in different EUAN sub-networks such as Heads of Communication and Information Network (HCIN), Greening Network (GN), Information and Communication Technology Advisory Committee (ICTAC), Performance Development Network (PDN), Inter-Agency Legal Network (IALN), Network of Agencies Procurement Officers (NAPO and Inter-Agency Accounting Network (IAAN). In 2022, eu-LISA also became an observer of the Network of Science Advice Agencies (EU-ANSA) in consideration of submitting an official request to join the subnetwork in the future.

1.5.3. Capabilities building

Training for Member States

The annual training plan was presented to the Member States at the start of 2022 and updated throughout the

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[78] JHAAN (2023) '**JHA Agencies' Contribution to EU Solidarity with Ukraine**' JHAAN Joint Paper, March 2023.
[79] JHAAN (2022) '**COVID-19 Response of EU Justice and Home Affairs agencies**', second update, September 2022.

year to reflect the revised timelines of the systems under development.

In 2022, eu-LISA delivered altogether **48 training activities** (incl. face-to-face training, webinars, virtual classrooms, online courses and modules) – a record number for the Agency. The training activities reached almost 2800 participants, and taking into account pre-existing online materials, the grand total was 3800. With 90% of the participants reporting satisfaction with the quality of training, the satisfaction rate peaked at 5.4 out of 6, surpassing the target (4).[80]

Figure 23. Participation in eu-LISA trainings for Member States
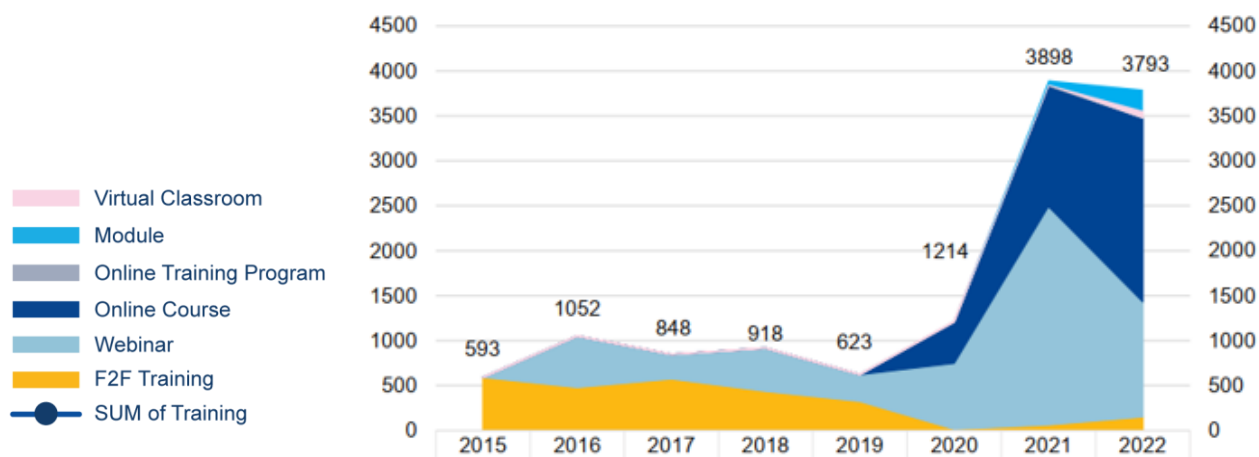
During the first half of 2022, eu-LISA held two online meetings for the National Contact Points for Member State Training Network (NCP Network), including one in June to launch the Training Needs Assessment exercise that forms the basis for the preparation of the **Training Plan** for the following year. The annual meeting of the NCP network took place in November to present the results of the Training Needs Assessment exercise, a draft of the 2023 Training Plan and the development of the Learning Management System (LMS) platform used for the delivery of training activities. This was the first face-to-face NCP network meeting organised after the lifting of COVID-19 restrictions.

The Agency also continued to further enhance and develop its **e-learning platform**, successfully upgrading the Learning Management System (LMS) in May – an important step to improve usability and performance. To facilitate user access to the resources, the Agency dedicated efforts to increasing the LMS reporting functionalities and data quality.

In January, eu-LISA finalised its **Member States Training Roadmap** and Action Plan to support the implementation of planned improvements, with 29 actions to be implemented by the end of 2023. The actions completed in 2022 focused on streamlining and documenting internal processes, increasing the quality and regularity of communication targeting internal and external stakeholders and initiating the LMS update.

Reporting and statistics

Throughout 2022, eu-LISA prepared statutory technical and statistics reports on JHA systems, in line with its statutory obligations, and published the following reports on the Agency's website:

Schengen Information System (SIS)

- **SIS II annual statistics report 2021** presents an overview of data received from Member States and

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[80] For a more detailed overview, please refer to factsheet '**eu-LISA Training Activities for Member States 2022**'.

Schengen associated countries, pairing it with data from the SIS central system,[81]

- **SIS II technical functioning report 2019–2020** provides an overview of the operational management of the central system (incl. security), together with annual statistics.[82]

Visa Information System (VIS)

- **VIS technical functioning report 2019–2021** provides an overview of the operational management of the central system, incl. data provided by Member States.[83]

Eurodac

- **Eurodac list of designated authorities 2022** provides a list of asylum authorities with access to the Eurodac central system,[84]

- **Eurodac annual statistics report 2021** provides information on data stored in the system, as well as transactions by asylum and authorised law enforcement authorities,[85]

- **Eurodac annual report 2021** provides an overview of the operational management of Eurodac, the latest maintenance updates and developments, and statistical data on system usage.[86]

Furthermore, in preparation for the entry into operations of the **renewed SIS**, eu-LISA worked closely with the Commission to define the new statistics requirements and a new data collection template for reporting. Additionally, eu-LISA compiled a **new list of competent authorities** who are authorised to search SIS directly, together with the list of National SIS offices and the SIRENE Bureaux, which were published once the renewed SIS entered operation in March 2023.[87]

1.6. Governance and compliance

In all its activities, the Agency's primary objective is to ensure efficient and cost-effective management and governance of the organisation, ensure day-to-day administration and general support while also defining and strengthening the Agency's capability to address changes in political priorities in the EU's domain of Justice and Home Affairs, as well as increasing demands from its stakeholders.

The Agency continuously improves and implements sound, transparent and accountable corporate governance for efficient and cost-effective operation and data-driven decision-making. These activities comprise strategic and operational planning, data protection, performance monitoring, and reporting, as laid down in the legal framework and internal audits, including also transparent and timely information-sharing on eu-LISA's operational and organisational matters.

1.6.1. Governance

Governance bodies

Throughout 2022, eu-LISA continued to provide high-quality administrative and logistical support to its Management Board (MB), Programme Management Boards and Advisory Groups.

In December 2022, eu-LISA measured the overall satisfaction with the support provided to its governance bodies. The feedback received showed very high satisfaction with the organisation of the meetings, reaching 98,6, well above the set target.

In 2022, eu-LISA organised 117 meetings for the governance bodies:

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[81] eu-LISA (2022) '**SIS II annual statistics report 2021**' and '**SIS II annual statistics 2021 factsheet**', March 2022.
[82] eu-LISA (2022) '**SIS II technical functioning report 2019–2020**' and '**SIS II technical report 2019-2020 factsheet**', May 2022.
[83] eu-LISA (2022) '**VIS technical functioning report 2019-2021**' and '**VIS technical report 2019-2021 factsheet**', August 2022.
[84] eu-LISA (2022) '**Eurodac list of designated authorities 2022**', April 2022.
[85] eu-LISA (2022) '**Eurodac annual statistics report 2021**' and '**Eurodac statistics report 2021 factsheet**', June 2022.
[86] eu-LISA (2022) '**Eurodac annual report 2021**' and '**Eurodac annual report 2021 factsheet**', December 2022.
[87] The lists of competent authorities who are authorised to conduct direct searches in SIS, together with the list of National SIS Offices and the national SIRENE Bureaux, were published in the **Official Journal of the European Union, Vol 66, C 85, 7 March 2023**.

- seven Management Board meetings, including two extraordinary meetings,
- seven meetings of the Board's Audit, Compliance and Finance Committee (ACFC), and five meetings for the Coordination Group,
- 53 Advisory Group meetings, including seven extraordinary meetings of the SIS Advisory Group,
- 45 Programme Management Board (PMB) meetings, incl. three extraordinary EES PMB meetings and 12 joint meetings of the Interoperability, EES and ETIAS PMBs.

Throughout 2022, eu-LISA also organised meetings of several other sub-groups. Regular meetings were organised for the following groups established under the mandate of respective Advisory Groups: Working Group for Carriers and Biometric Working Group (under the mandate of EES-ETIAS AG), the informal Testing Expert Groups for VIS and EES (under the mandate of VIS and EES-ETIAS AG), as well as VIS and SIS Programme Management Forum (under the mandate of VIS and SIS AG, respectively). In addition, eu-LISA's Management Board Secretariat supported the organisation of 15 technical workshops, requested by AG chairpersons. The Agency also oversees the Working Group on Artificial Intelligence (WGAI), and the Management Board's technical Horizontal Expert Working Group convened on an ad hoc basis, as requested. In 2022, eu-LISA introduced two new meeting formats: the Cooperation Group for Interoperability Security Incidents and the ETIAS Testing Expert Group (TEG), which had its first meeting in June 2022. Furthermore, the Agency also made preparations to launch two new governance bodies in 2023: the Advisory Group and the Programme Management Board for e-CODEX.

Internal governance and controls

The Agency's Management Board adopted all statutory corporate programming documents and mandatory corporate reports in line with regulatory requirements and within legal deadlines: the draft Single Programming Document (SPD) 2023–2025 on 25 January 2022, and the final version, with a slight delay, on 20 December 2022. The Agency also prepared the draft SPD 2024-2024, which the Board adopted on 31 January 2023. On 22 June, the Board adopted eu-LISA's Consolidated Annual Activity Report 2021 and the Interim Report 2022 on 31 August 2022. In 2022, the Agency's also adopted a **strategy implementation roadmap** to align its strategic and operational objectives and to monitor the implementation of eu-LISA's long-term strategy for 2021-2027. Additionally, in 2022, the Agency decided to introduce a new planning tool (Anaplan) for the upcoming multiannual and annual planning process to improve the overall planning process, including the allocation of resources.

At the end of 2022, eu-LISA launched a **benchmarking project** to support the preparation of the Agency's external evaluation in 2023. The benchmarking exercise focused on the Agency's operational model and the allocation of human resources. The project also includes a **review of corporate KPIs** to improve the measurement of eu-LISA's impact on the implementation of relevant EU policies. The Agency also initiated the comprehensive mapping of its internal and external **governance structures**.

In 2022, eu-LISA's quality management activities focused on the implementation of the **Common Assessment Framework (CAF)**, a total quality management system tailored specifically for public administration organisations. The CAF project was launched in September 2021 with an in-depth analysis of the Agency's strengths and weaknesses by the CAF Self-Assessment Group (SAG), composed of staff from across the organisation, who presented their recommendations for organisational improvement in the **Self-Assessment Report** delivered in April 2022. This report formed the basis for the CAF **Improvement Plan** outlining 10 action packages of consensus-based improvements to serve as the roadmap detailing eu-LISA's priorities for organisational development. The plan was endorsed by the Management Committee in October, and over the next two years, its implementation will be overseen by the Agency's Quality Board. In November, eu-LISA applied for the **label of 'Effective CAF User'**, and the external review process is scheduled for May 2023.

From January to March, eu-LISA conducted an assessment of the effectiveness of its **Internal Control Framework (ICF)** during which the Manager in charge of Risk Management and Internal Control collected and analysed data from various sources (e.g., staff surveys, register of exceptions and non-compliance events, and internal and external audit reports) based on pre-defined monitoring criteria. The assessment report, finalised at the end of March, confirmed that the Agency's internal control system is present, functioning and effective, although some improvements are needed. In April, eu-LISA presented the results to the Audit, Compliance and Finance Committee (ACFC) and to the Management Board on 22 June. The results were

summarised in the Consolidated Annual Activity Report 2021.[88]

The Agency conducted two analyses of its central Register of **Exceptions and Non-compliance events**, resulting in relevant follow-up and improvement measures. The Agency also delivered tailor-made training sessions to raise awareness of the importance of exceptions and non-compliance reporting to improve the quality of such reports and minimise the occurrence of similar cases in the future.

Enterprise programme and project management (EPMO)

The Establishing Regulation mandates the Agency to use an adequate project management structure for efficiently managing all projects. To that end, eu-LISA closely monitors its programmes and projects using the PRINCE2 (Projects IN Controlled Environments) methodology.[89]

Throughout the year, the Agency continued to reinforce its **project portfolio management (PPM) capabilities** with a particular focus on providing, based on the data collected through the PPM tools (Planview EnterpriseOne and ProjectPlace), valuable outputs to facilitate informed decision-making about the opportunities and risks related to portfolio management, while also offering a better understanding of the effort spent on different activities across the organisation.

In March, eu-LISA carried out its annual compliance check of the **project management methodology** and presented the results to the Management Committee in May. In addition, the Agency launched an important update of its project management methodology, embedding feedback received on the current version and clarifying dependencies with internal processes.

The Agency also introduced new functionalities, such as implementing the Corporate and Unit Risks/Issues Registers in Planview Enterprise. At the end of 2022, the Agency also deployed a new learning platform to further support project management capabilities development.

To improve the processes under the PPM capability, the Agency also analysed the usage of the collaborative solution, ProjectPlace. The analysis of the answers indicated that 75% of the ProjectPlace users were satisfied with the EPMO support for the tool, and 51% were satisfied with the training provided. However, only 49% of the users were satisfied with the learning resources. The Agency developed an action plan to address the comments and improve overall satisfaction with ProjectPlace.

As part of a larger initiative to improve processes under the PPM capability, eu-LISA concluded the performance of the **Capability Maturity Model Integration (CMMI) appraisal**. The appraisal aimed to provide the Agency's senior management with an accurate evaluation of existing processes and identify opportunities for improvement. With the introduction of the CMMI methodology, eu-LISA will increase its compliance control with the project management methodology. The Agency formalised the results of the CMMI appraisal into an action plan. However, since the adoption of a formal Agile approach is currently under consideration, the Agency launched an analysis to explore replacing the CMMI evaluation with an Agile Readiness assessment.

In the second quarter of 2022, eu-LISA finalised the review of the Rules of Procedure of **Programme Boards**, extending their remit to include oversight and monitoring of resource allocation and consumption within the programme. Additionally, eu-LISA updated the composition of the Programme Boards to include additional internal stakeholders. The Agency also delivered regular reports to the European Parliament and the Council on the progress with the development of new systems (i.e., progress reports every six months) and monthly reports to respective Programme Management Boards in full compliance with legal requirements.

Moreover, as the eu-LISA Financial Rules state that all programmes and activities requiring significant expenditure are subject to an **ex-ante evaluation** before their approval and inclusion in eu-LISA's annual work programme, the Agency's performed these evaluations as per the two-phased approach approved in 2019: first, conducting an opportunity assessment 2 years before starting the project, and then, one year prior to start, a feasibility assessment. In 2022, no large-scale projects were eligible for feasibility assessment.[90]

To better manage transversal elements of the external consultancy services' framework contracts, the Agency established a Contracts Management Committee (CMC) in March 2022, with a view to improving the coordination of sourcing external consultancy services. In addition, eu-LISA also developed a tool for following

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[88] eu-LISA (2022) **Consolidated Annual Activity Report 2021**.
[89] For more information, please visit the official website on **PRINCE2 methodology**.
[90] However, at the beginning of 2023, the Management Board was presented with a report on 23 projects scheduled to launch in 2024, and qualifying for an ex-ante opportunity assessment.

up on the status and progress of the external sourcing requests.

Service and process framework

Throughout the year, eu-LISA maintained its Product and Service Catalogue and integrated process model, which provides an up-to-date listing of all the products and services that the Agency delivers to internal and external stakeholders and ensures clarity in all aspects of process execution. In 2022, the focus was on **identifying necessary updates and changes** to existing and new services related to the future operation of new systems and initiatives (i.e., ETIAS, ECRIS-TCN, Interoperability). In addition, eu-LISA started mapping and documenting all its corporate processes, with up-to-date end-to-end documentation, to increase transparency and accountability in its operations and guarantee the effective and efficient provision of services to its stakeholders, including effective performance measurement.

As part of the eu-LISA's integrated process model, in July 2022, the Agency initiated a project to strengthen its **knowledge management** via the development and implementation of a customised tool, which will significantly facilitate access to relevant documents by the respective stakeholders.

Contract and vendor management

In 2022, eu-LISA pursued its strategic transition from a vertical to a transversal sourcing of services and supplies for its operations and continued to invest in new controls to strengthen its contract and vendor management process. A dedicated team supported the operational units in contract implementation and performance, as well as contractual risk management, strengthening the use of efficient, effective and compliant practices.

In 2022, eu-LISA adopted a new **Contract Management Policy** to provide an overarching framework for the management of the contractual vehicles used for sourcing supplies, services and works. Roles and responsibilities were defined, as well as the applicable control framework. The Agency also created a dedicated Contracts Management Committee (CMC) to provide oversight of framework contracts for outsourced human resources in alignment with the Contract Management Policy.

As a trial, the Agency rolled out a Performance Balanced Scorecard for some key contracts to derive lessons learnt for exploitation in the upcoming contract cycles and worked on the formalisation of a Liquidated Damage and Reduced Payment Procedure, finalised by the end of 2022.

The Agency also addressed audit findings and disseminated lessons learnt internally to improve adherence to rules while pursuing business objectives in an ever-changing multivendor contractual ecosystem.

Enterprise architecture

In 2022, eu-LISA continued the implementation of its Enterprise Architecture, which was launched in 2019 after the rollout of the eu-LISA 2.0 organisational structure. The Enterprise Architecture Process was adopted in December. Having set up the processes and governance framework for Enterprise Architecture and establishing the Architecture Review Board, the Agency is now focused on maintaining optimal alignment of architectural, design and development initiatives with eu-LISA's overarching goals, as well as corporate and technology strategy.

1.6.2. Compliance

Internal audit

Article 80 of eu-LISA Financial Rules[91] require the Internal Audit Capability (IAC) to report to the Management Board and the Executive Director on its findings and recommendations. It also requires that internal audit

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[91] **Financial Rules of eu-LISA**, Management Board decision No 2019-198, entry into force: 01 September 2019.

actors cooperate efficiently. In November 2021, the Board adopted[92] the Internal Audit Plan for the year 2022,[93] which was amended in November 2022.[94] In March 2022, the Board adopted the IAC Activity Report, and in November 2022, the Internal Audit Plan for the year 2023.

The IAC continued to serve as the contact point for the audits carried out by the Internal Audit Service of the European Commission (IAS) and the European Court of Auditors (ECA). This role was important to minimise the disruption to the Agency's regular activities and avoid the duplication of efforts. As the main contact point, the IAC did not assume any management responsibility to preserve its independence and objectivity.

There was no impairment to individual objectivity, such as conflict of interest or scope limitations. However, since the IAC is *de facto* responsible for the preparation, maintenance, monitoring, reporting and coordination of the implementation of eu-LISA's Anti-fraud Strategy, there is a risk of perceived impairment. The IAC will not provide (re)assurance over the few elements of the Strategy that were designed by IAC as a safeguard for its objectivity and independence. Instead, the IAS will be invited to provide (re)assurance over those elements as appropriate.

The 2022 results of IAC's performance indicators[95] are presented below.

Table 4. eu-LISA Internal Audit Capability (IAC) performance indicators

Performance Indicators (PI)	Target	2020	2021	2022
Delivering the Annual Audit Plan	> 80 %	80 %	80 %	82 %
Audit reviews completed within budget and on time	> 80 %	60 %	60 %	55 %
IAC staff training hours per year	> 80 %	70 %	77 %	72 %
Stakeholder satisfaction				
external	> 80 %	87.5 %	90 %	87.5 %
internal	> 80 %	80.4 %	80.4 %	89.7 %

In the last quarter of 2022, as part of its Quality Assurance and Improvement Programme, the IAC undertook the **second self-assessment with independent external validation**, which was concluded in February 2023.[96] The independent external assessor certified that eu-LISA's IAC is generally in compliance with the International Standards for the Professional Practice of Internal Auditing and the Code of Ethics.[97]

Data protection

Throughout the year, the Agency continuously ensured the highest level of data protection in compliance with the EU's data protection law, including specific provisions for each JHA information system under its remit. The eu-LISA Management Board has appointed a data protection officer to oversee the Agency's compliance with the rules for the processing of personal data by EU institutions and agencies and to work closely with data controllers, data processors and the European Data Protection Supervisor (EDPS) to find effective solutions that ensure compliance with relevant privacy and personal data protection regulations.

To raise awareness about data protection, the Agency undertook various activities throughout the year, including general training and awareness sessions, onboarding sessions for newcomers, one-on-one coaching sessions, weekly newsletters and a dedicated intranet page. In January 2022, to celebrate European Data Protection Day, an innovative board game was presented to interactively learn about privacy notices, data protection impact assessments, and data breaches. In October, the Agency organised a dedicated webinar on

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[92] Ref. MB document 2021-350 MB Decisions, point A.25.
[93] Ref. MB document 2021-358, the Internal Audit Plan for the year 2022, Ares(2021)7075595 – 17/11/2021.
[94] Ref. MB document 2022-382 MB Decisions, point B15.
[95] Ref. MB document 2023-046 REV1, IAC Activity Report 2022, Ares(2023)1905996 – 16/03/2023.
[96] In line with Standard 1312 External assessments, IAC must ensure that the internal audit activity takes an external assessment at least once every five years by an independent assessor or assessment team from outside the Agency that is qualified in the practice of internal auditing as well as the quality assessment process.
[97] The **International Professional Practices Framework** (IPPF) is the conceptual framework that organises authoritative guidance promulgated by the Institute of Internal Auditors.

data protection in procurement and contract management (delivered by EDPS), providing an opportunity to exchange experiences on data protection issues related to contracts with external service providers involving the processing of personal data.

Throughout the year, the Agency maintained a **record of all categories of processing activities** carried out on behalf of controllers. Additionally, as eu-LISA is required to maintain a record of all processing activities carried out on behalf of one or more controllers, eu-LISA organised coaching sessions and workshops with the product and service owners of SIS, VIS, Eurodac, and EES to provide adequate support. Additionally, the Agency **established the register of processing activities** as required by the Regulation.

In addition, the data protection officer supported the development and evolution of IT systems by participating in the change management process and engaging at different stages of the development of data protection impact assessments (DPIAs). The Agency put efforts into tackling its biggest data protection challenges, particularly those deriving from using biometric matching technologies and measures to mitigate the identified risk. In September 2022, eu-LISA began revising its DPIA methodology to support responsible staff.

In March, the **DPO Annual Work Report 2021** was presented to the eu-LISA Management Board and published on the Agency's website.[98] The report presented the status of eu-LISA's data protection activities and the state of play regarding the Agency's data protection activities and compliance.

Throughout the year, eu-LISA's data protection officer participated in the Supervision Coordination Groups for SIS, VIS and Eurodac, presenting the latest developments and systems performance to the national data protection authorities and the EDPS, focusing on developments and issues that may impact the processing of personal data. At the meetings of the DPOs Network, eu-LISA's data protection officer participated in discussions on international transfers, handling of data breach notifications, social media, the impact of the Schrems II judgment,[99] whereas the JHA DPO Network meetings addressed implementing rules, international data transfers and cooperation with EDPS.

In October 2022, Europol and eu-LISA organised a bilateral meeting in Tallinn to share experiences regarding prior consultations with EDPS, DPIAs, and an exchange of views on EDPS inspections to further strengthen their collaboration.

1.7. Administration and general support

The Agency continuously aims to grow as an organisation to ensure operational excellence, deliver its mission, and successfully achieve its annual objectives while ensuring efficient and agile performance in full compliance with the EU regulatory framework. These support functions include maintaining legal services, proactive human and financial resources management, and ensuring effective support within the Agency to existing and new stakeholders.

1.7.1. Organisational transformation

eu-LISA started its **cultural transformation** journey to establish a flexible and resilient organisation that could adapt and deliver in any circumstances.

In 2022, eu-LISA conducted a cultural assessment via the Cultural Ambition Map (which includes aspired behaviours people should exhibit in eu-LISA). In the process of defining the 'to-be culture', eu-LISA identified a set of behaviours that it would like to see as the foundation of its culture. A comprehensive assessment was conducted, followed by several workshops, resulting in a Cultural Ambition Map, which will contribute to transforming eu-LISA and can also be used to identify cultural matches in recruitment procedures.

The Agency also started the development of its **Competency-based Human Resources Management Strategy**, with a view to improving eu-LISA's recruitment, workforce planning, performance management and learning offer. The Agency launched the revision of its Competency Framework to provide comprehensive

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[98] For more, see **eu-LISA DPO Annual Work Report 2021**. The **Annual Work Report for 2022** was adopted in February 2023.
[99] Judgment of the Court of Justice of the EU (Grand Chamber) of 16 July 2020, Data Protection Commissioner v Facebook Ireland Limited and Maximillian Schrems **(Schrems II), C-311/18**, ECLI:EU:C:2020:559.

guidelines, tools and procedures. The framework introduces competency as a central element, focusing on individuals. The final report and rollout roadmap, now in the final stage, has been successfully piloted in the preparation of vacancy notices and assessment of candidates.

1.7.2. Human resources

HR diagnostic

In the first quarter of 2022, eu-LISA performed an **HR Diagnostic exercise** to assess its HR function and performance, generating valuable information on the profiles to be recruited. It will also help set the foundations for the **HR Strategy** and identify potential efficiency gains to offer the best HR services.

In 2022, a new **Talent Management Sector** was created to look at the whole employment lifecycle from attraction, recruitment, onboarding, retention, career development, separation and to ensure that appropriate actions are taken to unlock people's potential and cultivate teams that contribute to a safer Europe.

Talent acquisition

Efforts to attract a **diverse pool of candidates** and to position eu-LISA as an employer of choice were further continued throughout 2022. eu-LISA represented the EU Agencies Network at the **virtual career fair** for International Organisations in Berlin, which convened more than 60 international organisations and over 4,000 participants. In addition, the Agency intensified its employer branding activities through dedicated campaigns, such as testimonials of staff members in social media, as well as using social media as a sourcing tool for talent outreach purposes. This extended awareness of eu-LISA's employee value proposition and enhanced visibility of its career opportunities allowed to reach new audiences with limited knowledge about the EU and its agencies.

Talent acquisition efforts were impacted by staff turnover. The Agency has performed a comprehensive assessment to understand the reasons behind the turnover and faster ways of acquiring new talent. In total, 36 staff members were recruited in 2022, excluding changes of contracts within the Agency or offering career growth opportunities to existing staff members.

In addition, eu-LISA launched an Internal Mobility Programme pilot project to capitalise on the competencies of existing staff members and foster continuous professional growth within the Agency. The call targeted four different profiles in the Programme and Project Delivery Unit (PPU), resulting in the establishment of a talent pool and the transfer of two staff members

Digitalisation of HR processes

The migration of iLearn (eu-LISA talent management platform) to the cloud was successfully completed, enabling access to information and features from anywhere, thus improving the overall user experience.

The Agency continued to focus on the digitalisation of its HR processes and recruitment to improve efficiency. In November 2022, the first round of testing of Sysper module dedicated to planning and reporting stand-by duty was performed. In addition, eu-LISA digitalised the submission of the mandatory declarations or requests to implement the rules on the prevention and management of conflicts of interest.

Learning and development

The **annual learning plan** was defined and several sessions were delivered for the entire staff. Throughout the year, various training activities were organised, attracting altogether 1366 participants and processing 89 service requests.

The first new content to become available in iLearn is the new onboarding programme aimed to ensure a smoother learning experience for staff and newcomers, as well as saving time for operational staff who don't need to repeat the pre-recorded sessions.

The **Annual Appraisal and Reclassification exercise** was completed, with 25 staff members reclassified in 2022. In addition, the Agency updated the process and tools supporting individual setting of objectives, creating a better link between the individual's annual objectives and the organisation's strategic objectives.

Employee experience and well-being

The Agency continues measuring employee engagement on an annual basis. In 2022, the staff engagement score remained stable. Based on the input collected from the engagement surveys, eu-LISA continues to prioritise staff well-being, incl. launching a mental health programme for staff and their families, built around three pillars: awareness, prevention, support. Additionally, the staff were offered a self-care service in the form of a mobile application subscription, webinars on mental health at work, as well as individual counselling sessions with a qualified psychotherapist in order to support staff and their families in coping with difficult times.

To further promote respect and dignity at work, the Agency completed the selection of the new confidential counsellors. Five new staff members were selected and trained to support staff seeking assistance in situations perceived as psychological or sexual harassment.

Having gained valuable experience and feedback from the special working arrangements during the pandemic, eu-LISA increased the scope of teleworking possibilities offered to staff by introducing hybrid working, awaiting the formal adoption of the Agency's rules on this matter. It contributed to reducing the absenteeism rate.

HR policies

To align its legal framework to the changing environment of EU agencies, eu-LISA **adopted new implementing rules to the Staff Regulations on administrative inquiries** and **revised its guidelines on whistleblowing**. Following the approval of the Management Board, the Agency obtained a derogation from the Commission rules on working time and **hybrid working** until a new model decision, or a specific decision, is developed on this matter.

1.7.3. Finance and procurement

In 2022, eu-LISA continued developing and strengthening its internal financial processes and procedures to ensure transparent and effective management of its financial resources. In addition, eu-LISA made a renewed effort to plan for the future, especially in budget and procurement digitalisation. Furthermore, eu-LISA established the necessary elements for the future deployment of activity-based budgeting, along with continuous monitoring and development of its financial and procurement procedures.

1.7.4. Capacity increase programme

Following the expansion of eu-LISA's mandate in 2018, the Agency needed to extend the capacity of its site in Strasbourg to accommodate the operational needs of new systems, primarily in terms of increasing data centre capacity and providing additional office space for staff. In February 2020, eu-LISA launched the project for the **second extension of the Strasbourg site,** which is scheduled for delivery in 2028. In June 2021, the decision was amended to include two more projects – **modular data centre** (MDC) and the **power and cooling upgrade** to address urgent business needs ahead of completing the second extension.

To ensure effective project management and implementation, these three interrelated infrastructure projects are governed under the overarching '**Capacity Increase Programme**':

- **second extension of the operational site.** The project focuses on building new office spaces at the Strasbourg site. In 2022, the building programme was updated, including all the relevant documentation and a new estimated financial envelope. Due to budget constraints, the call for tender for the building design services framework contract was not launched, and the project is currently postponed to the next multiannual financial framework period.

- **modular data centre 2.** The project foresees installing a containerised modular data centre, a flexible and scalable solution that does not require any construction activities. In 2022, eu-LISA worked on finalising the concept for a modular data centre 2, taking into consideration the future needs of system hosting. In addition, the Agency launched a survey to provide an overview of possible technical solutions for modular data centres.

- **power and cooling infrastructure upgrade.** The goal is to cover the short and long-term power and cooling needs of the operational site in Strasbourg. The power capacity pre-feasibility study was concluded in May 2022, providing alternative scenarios for the short, medium and long term. The outcomes will also be used for the modular data centre 2. additionally, the cooling study investigates how to optimise the cooling capacities of the equipment installed in the data centre to reduce energy consumption and to provide solutions for an upgrade of the existing system.

1.7.5. Corporate Services

Enterprise Content Management (ECM) Programme

In 2020, the Agency began implementing the **Enterprise Content Management (ECM) programme** to provide eu-LISA's staff with an integrated framework, comprising all strategies (including policies and procedures), methods and tools used to manage, process and store information relating to the Agency's activities. The implementation of the ECM programme is gradual and is expected to last until the end of 2025.

In 2022, the Agency continued working with two projects under this programme. First, the **new document management system (DMS)** project proceeded with the creation of a project and resource plan, outlining objectives, performance measures and roles and responsibilities. Second, **eu-LISA's new website** project focused on the contractual preparation.

Cloud adoption programme

The cloud is a strategic enabler for digital transformation. Modern organisations are interested in building and delivering scalable and secure solutions without having to invest in and develop supporting physical infrastructures. In the digital world, organisations also want to use their software and access their content from anywhere, on demand. eu-LISA's business motivations for a move to the cloud are the following: managing technology end-of-support; introducing new technical capabilities and meeting future business demands; improved security and regulatory compliance; providing operational excellence in terms of delivery, cost-efficiency, and faster time-to-market; improving technology stability; enhancing efficiency, productivity and interactions between employees, users, and contractors for a better user experience.

In 2022, the strategic approach for Cloud Adoption in ICT was approved, and the programme's business case (including budget, timeline and scope) was consolidated.

This modernisation of corporate ICT systems is planned to be incrementally delivered during the 2023-2024 period through the following initiatives: **unified communication** (incl. chat and meeting capabilities in productivity-focused enterprise, cloud providers, using hybrid on premise, multi-cloud architecture); **line of business** (i.e., migrating line of business applications (business management monitoring application, contract monitoring tool, continuous service improvement (CSI) register tool, reporting tool(s), security clearance application) to productivity focused enterprise cloud provider); **mail and calendar** (migrating mail/calendar capabilities to productivity focused enterprise cloud provider); **unified backup** (unifying the backup and disaster recovery procedures across systems using hybrid on premise / multi cloud architecture).

General services

Throughout 2022, eu-LISA performed and optimised the maintenance of all its sites and facilities to ensure a secure, efficient and functional building infrastructure that is fully aligned with the Agency's business needs. To promote cycling to work, a bike shelter project was launched to host more bicycles at the premises.

To accommodate the Agency's expansion in terms of staff, several projects were implemented to ensure a well-distributed space with more workplaces. A new hot desking policy was introduced together with an online tool for workspace booking. In addition, an activity-based workplace study was launched to make even more efficient use of office space, a more comfortable work environment and generally improving well-being at work.

In 2022, the environmental policy of eu-LISA was adopted, with a view to securing the **EU's Eco-Management and Audit Scheme (EMAS) registration by 2024**. In addition, the occupational health and safety policy was also consolidated.

Corporate ICT services

In 2022, the Agency changed its approach to providing corporate ICT services by focusing on performance indicators to monitor service quality. One of the success factors of this transition was the currently ongoing ITIL implementation project in ICT Services, which facilitated the necessary adaptation. The Agency implemented new Internet and WAN lines in Brussels and inter-sites (Tallinn-Strasbourg), which also improved security posture. In addition, eu-LISA also upgraded the backup and storage infrastructure in order to support better recovery objectives and introduced hybrid identity management for supporting multifactor authentication.

1.7.6. Communication

The Agency's external communication focused on providing transparent, objective, reliable and easily understandable information to increase overall awareness and visibility. Notably, in 2022 eu-LISA was recognised with the Forbes Social Award for its innovative and inspirational initiatives in public communication, standing out for its strong ethical vocation and use of innovative communication strategies, techniques and tools.

External communication

In 2022, the focus was on ensuring the visibility of eu-LISA's achievements and increasing public awareness of the Agency's role in serving the interests of EU citizens and delivering IT services to its stakeholders. Using various multimedia formats, the Agency promoted its role and achievements in managing and advocating IT as a key factor for implementing EU policies in the area of freedom, security and justice. In particular:

- eu-LISA published a special booklet to commemorate its **10th anniversary**.[100] The publication was disseminated through dedicated social media cards to further increase the Agency's visibility, reaching an audience of over 14,500 on LinkedIn;

- eu-LISA launched a new online portal **'Discover eu-LISA 2.0'** to provide an updated overview of the Agency's core tasks and business areas;[101]

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[100] eu-LISA (2022) **eu-LISA 10-year anniversary**. For more, please visit **eu-LISA 10-Year Anniversary website**.
[101] **Discover eu-LISA – our core activities for a safer Europe**. For more, please visit **discover.eulisa.europa.eu**.

- the Agency attended meetings on the European Commission's EES and ETIAS communication campaigns. In particular, eu-LISA promoted the **carrier registration and awareness campaign** across all its social media channels and corporate website to increase awareness and boost registration. In addition, eu-LISA contributed to the ETIAS Quarterly newsletter, published by Frontex, which provides an overview of the most recent developments related to the deployment of ETIAS. The Agency also supported the European Commission's **SIS Recast campaign**.

During the year, the Agency also focused its external communication efforts on strengthening media relations and further broadening its online presence across its websites and social media channels. eu-LISA also published comprehensive overviews of its role and tasks in several national media outlets (incl. German, Italian, French, and Estonian). eu-LISA also contributed to the networks of the EU Agencies to highlight commonly shared stances (incl. Stand with Ukraine, EU Green Deal and Women in IT campaigns) and increased the outreach of related information and messages to external audiences.

Finally, eu-LISA communicated on its main events (i.e., annual conference and industry roundtables) to increase visibility and engagement with target audiences, resulting in increased numbers of followers on its social media channels (incl, LinkedIn +42%, Twitter +21%, and Facebook (+15%).

Internal communication

Throughout 2022, reciprocal communication between the management and the employees, as well as between subdivision, was efficiently facilitated by eu-LISA's internal communication function. According to the results of the staff survey, overall satisfaction with internal communication stood at 91%.

To celebrate its 10th anniversary, eu-LISA organised various activities, including a special online photo exhibition 'Then and Now', a dedicated Flashback Newsletter, and a series of personal interviews with staff members. A notable part of the 2022 internal communication activities included crisis communication related to the COVID-19 pandemic and Russia's war of aggression against Ukraine.

In addition, the Agency also promoted various EU-wide social campaigns (e.g., World Clean-up Day, 3 Million Tree Pledge 2030, Cyber Security month, International Women's and Men's Days) to raise awareness among its staff and invite colleagues to contribute to the topics that are important to all EU agencies.

2

MANAGEMENT

The main elements of eu-LISA's management, such as budget and human resources.

Management

2.1. Management Board

In 2022, eu-LISA continued its close, transparent and constructive collaboration with its Management Board. Alongside statutory obligations, the Agency also regularly updated the Board on all significant risks and issues identified, including the mitigation measures implemented for the development of new large-scale IT systems entrusted to eu-LISA.

The Agency regularly updated and reported to the Board on the implementation status of EES, ETIAS, Interoperability and ECRIS-TCN, and on the opinions taken within respective Advisory Groups and Programme Management Boards, provided reports on the risks and issues associated with the development of the systems, proposed mitigation measures and the overall evolution of the programmes. The Board repeatedly confirmed its strong commitment to implementing the interoperability architecture as the highest priority. The SIS, VIS and Eurodac Advisory Groups also reported to the Board on the status of the operational management of the respective systems, including associated risks and issues, together with mitigation measures. The Management Board also received regular reports from eu-LISA's Security Officer, Data Protection Officer and Internal Audit Capability.

Throughout 2022, the Management Board adopted several significant decisions to ensure the Agency's business continuity:

- appointment of the interim Executive Director,
- authorisation for a working arrangement with the EU Agency for Fundamental Rights (FRA) for the services of an Accounting Officer and appointment of an Accounting Officer *ad interim*,
- proposals for changing the dates of entry into operation of systems,
- adoption of statutory planning and reporting documents (i.e., SPD (incl. financial statement), annual and interim activity reports, annual accounts),
- adoption of the security and business continuity plans for the communication infrastructure and Eurodac, as well as security plans, business continuity and disaster recovery plans for EES and sBMS,
- adoption of guidelines on public access to documents.

The Board's Audit, Compliance, and Finance Committee (ACFC) monitored the risks managed by the Agency and the internal control arrangement setup. In addition to three regular meetings of the ACFC, four extraordinary meetings were also organised. The ACFC and the Board received regular updates on the status of the negotiations regarding the budgetary procedure and financial management, and also on the status of implementing audit recommendations. Furthermore, the Board followed closely the updates on the Agency's staffing situation and its capacity increase programme.

In 2022, the Management Board convened for two extraordinary meetings: one on the ACFC report and another on the status of SIS Recast implementation and entry into operation. In three meetings, the Management Board met online, and the other meetings were organised in a hybrid format. The Management Board's June meeting was held in Strasbourg, under the auspices of the French Presidency of the Council of the EU, and its November meeting in Prague, under the auspices of the Czech Presidency of the Council of the EU.

To further improve transparency and contribute to raising public awareness of its activities, the Agency continued publishing summaries of regular Management Board meetings on its website.

2.2. Major developments

2.2.1. Adopted regulations

In June 2022, the **e-CODEX Regulation** entered into force, entrusting eu-LISA with the operational management and future evolution of e-CODEX and laying down the requirements for the system's handover by the Consortium of Member States that have been managing e-CODEX.[102] Preparations started for the takeover and a dedicated Advisory Group was established.

On 15 June, the Council adopted a **Regulation revising the Schengen evaluation and monitoring mechanism** (SEMM) to change the interval of the evaluation cycles and enhance the role of the EU Agencies in the monitoring and evaluation processes.[103] This will result in changes in the upcoming evaluation cycle.

At the end of 2022, the EU adopted the directive on measures for a high common level of cybersecurity across the Union (**NIS 2 directive**).[104] While not directly impacting eu-LISA's core activities, the NIS 2 directive is set to enhance cybersecurity within the EU by requiring a certain level of preparedness from the Member States in strategic areas.

Regarding artificial intelligence (AI), the Council adopted its general approach to the **Artificial Intelligence Act** on 6 December 2022.[105] This Act is part of the Commission's legislative package published in 2021, including a review of the Coordinated Plan on Artificial Intelligence. The proposed Regulation introduces a set of harmonised rules applicable to the design, development and use of certain high-risk AI systems and restrictions on certain use of remote biometric identification systems.[106] Although the proposed Regulation foresees a provision exempting components of the large-scale IT systems overseen by eu-LISA and placed on the market or put into service year before the date of its application, where applicable, the Agency will consider the regulatory requirements in the evaluation of each large-scale IT system under its remit. Additionally, any significant change in the design or intended purpose of the AI system or component concerned will trigger the full application of the Regulation.

2.2.2. Revised/Amending regulations

In 2022, the Council and the Parliament established their negotiating mandates for the Recast Eurodac Regulation to complete the **reform of the Eurodac system**.[107] Once adopted, it will be the last major building block to be integrated into the JHA interoperability framework. The proposal extends the scope of the Eurodac Regulation by introducing new categories to support the requirement of collecting and storing data on third-country nationals or stateless persons who have been found irregularly on EU territory, thus providing more search functionalities and establishing mechanisms to monitor individual situations of asylum applicants and irregular migrants instead of applications. Inter-institutional negotiations are scheduled to begin in 2023, with both the European Parliament and the incoming Council Presidencies committed to finalising the legislative reform by April 2024, which will serve as the basis for the Eurodac upgrade to be implemented by the Agency.

In June 2022, **eu-LISA's establishing Regulation** was amended to bring e-CODEX (e-Justice Communication via Online Data Exchange) under the Agency's responsibility.

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[102] **Regulation (EU) 2022/850** of 30 May 2022 on a computerised system for the cross-border electronic exchange of data in the area of judicial cooperation in civil and criminal matters (**e-CODEX system**), and amending Regulation (EU) 2018/1726, OJ L 150, 1.6.2022.

[103] **Council Regulation (EU) 2022/922** of 9 June 2022 on the establishment and operation of an evaluation and monitoring mechanism to verify the application of the Schengen acquis, and repealing Regulation (EU) No 1053/2013, OJ L 160, 15.6.2022, p. 1–27.

[104] **Directive (EU) 2022/2555** of the European Parliament and of the Council of 14 December 2022 on **measures for a high common level of cybersecurity across the Union**, amending Regulation (EU) No 910/2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148 (NIS 2 Directive), OJ L 333, 27.12.2022, p. 80–152.

[105] JHA Council (2022) '**Artificial Intelligence Act: Council calls for promoting safe AI that respects fundamental rights**', press release, 6 December 2022.

[106] Proposal for a Regulation of the European Parliament and of the Council laying down ha**rmonised rules on artificial intelligence (Artificial Intelligence Act)** and amending certain union legislative acts, COM/2021/206 final.

[107] '**Eurodac: MEPs updated their position in view of upcoming negotiations with the Council**', European Parliament, Committee on Civil Liberties, Justice and Home Affairs (LIBE), press release, 13 December 2022.

Finally, on 12 July 2022, the European Parliament and Council adopted the **amended Schengen Information System (SIS) Regulation** to include the entry of information alerts into the SIS on third-country nationals in the interest of the Union.[108] This amendment lays down the applicable procedures and safeguards, enabling Europol to propose the addition of new alerts to SIS. The Commission's SIS SIRENE Committee continued discussions on the necessary amendments to the implementing acts, including the reference to the new alert categories. Once the implementing acts are adopted, the Agency will implement the new information alert proposed by Europol.

2.2.3. Russia's war of aggression against Ukraine

From the onset of the Russian invasion of Ukraine on 24 February 2022, the Agency has been actively supporting Member States, ensuring the uninterrupted availability of the EU's border management systems.

As of March 2022, eu-LISA attends and contributes to the meetings of the **EU Migration Preparedness and Crisis Management network**.[109] To support the implementation of the Temporary Protection Directive,[110] the Agency has provided expert support to the Commission in developing the **Temporary Protection Platform** for registering people fleeing Russia's war of aggression against Ukraine.

In the first semester, eu-LISA contributed to the **Integrated Political Crisis Response** (IPCR)[111] working group, primarily by supporting the Council on matters related to large-scale IT systems in the JHA domain and providing regular reports to inform the Commission on the usage of JHA systems and cyber threat levels.

In addition, eu-LISA has established regular contact with other EU agencies in host countries sharing borders with Ukraine and Russia (i.e., BEREC Office, EIGE, Frontex, CEPOL, ECHA) to analyse threat levels in terms of cyber security and business continuity. Furthermore, eu-LISA has also stepped up the monitoring of possible risks and threats to large-scale IT systems and the corporate infrastructure under its remit and is communicating pertinent information to relevant parties. At the staff level, several initiatives have been launched within eu-LISA to support the refugees through charity actions.

2.2.4. Change of the Executive Director

On 31 October 2022, eu-LISA Deputy Executive Director, Mr Luca Tagliaretti, was appointed by the Management Board to serve as Executive Director *ad interim* to ensure operational continuity and oversee day-to-day management after the departure of Mr Krum Garkov, eu-LISA's Executive Director since the Agency's inception.

In this capacity, Mr Tagliaretti also assumed the tasks of the Authorising Officer who is responsible for implementing eu-LISA's internal controls. To prevent conflict of interest with his previously assigned role of Risk Management and Internal Control Manager (MRMIC) for the purposes of implementing the Internal Control Framework, the role of MRMIC was delegated to the Head of Governance and Capabilities Unit until the appointment of the new Executive Director.[112]

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[108] **Regulation (EU) 2022/1190** of the European Parliament and of the Council of 6 July 2022 amending Regulation (EU) 2018/1862 as regards the entry of information alerts into SIS on third-country nationals in the interest of the Union, OJ L 185, 12.7.2022, p. 1–9.

[109] **Migration Preparedness and Crisis Blueprint**, an EU mechanism for preparedness and management of crises related to migration, established by **Commission Recommendation (EU) 2020/1366 of 23 September 2020**.

[110] **Council Directive 2001/55/EC** of 20 July 2001 on **minimum standards for giving temporary protection in the event of a mass influx of displaced persons** and on measures promoting a balance of efforts between Member States in receiving such persons and bearing the consequences thereof, OJ L 212, 7.8.2001, p. 12–23, and **Council Implementing Decision (EU) 2022/382** of 4 March 2022 establishing the existence of a **mass influx of displaced persons from Ukraine** within the meaning of Article 5 of Directive 2001/55/EC, and having the effect of introducing temporary protection, OJ L 71, 4.3.2022, p. 1–6.

[111] For a more detailed overview of how the Council coordinates the EU response to crises, please visit the dedicated page on **integrated political crisis response (IPCR)**.

[112] On 12 January 2023, Ms Agnes Diallo was appointed as the new Executive Director by the eu-LISA Management Board, and she took office on 16 March 2023.

2.3. Budgetary and financial management

2.3.1. Financial management

The Agency's budget for the financial year was financed by funds from various sources,[113] with the main revenue coming from the annual contribution from the EU budget, i.e., section III, title 11, chapter 10 'Border Management – Decentralised Agencies', as adopted by the budgetary authority.[114] Additionally, eu-LISA receives contributions from associated countries.

2.3.2. Budgetary implementation

The final statement of the revenue and expenditure for 2022 was adopted by the eu-LISA's Management Board.[115] As at the end of 2022, the eu-LISA's budget implementation rates are as follows:

- 99.0 % for commitment appropriations, taking into account the non-automatic carryover of commitment appropriations authorised by the Management Board in February 2023,[116] see table below;
- 91.6 % for payment appropriations, including the carry-forward of administrative expenditure to 2023.

Commitment appropriations (in € million)

2022 budget implementation as of 31/12/2022			Budget implementation with carryover by decision	
2022 final adopted budget	executed commitments	% implemented	non-automatic carryover	% implemented, taking into account non-automatic carryover
319.64	291.29	91.1%	25.15	99.0%

Execution of commitment appropriations

The commitment credits (C1[117]) finally accepted for 2022 were divided among the different titles as follows:

- 8% (25.49 million euros) for infrastructure and operating expenditure (Title 2),
- 13% (41.22 million euros) for staff expenditure (Title 1),
- 79% (252.93 million euros) for the operational budget (Title 3).

With regard to Title 3, owing to the multiannual nature of the contracts used to support core operations, 195.88 million euros of open commitment appropriations foreseen for 2022 were automatically carried forward to be used in 2023 and also in the following years. For a detailed breakdown, please refer to Annex II.

The operational budget, amounting to 252.93 million euros, was implemented 100% (taking into account the non-automatic carryover of commitment appropriations approved by the Management Board) shown in Figure 24 by chapter.

In 2022, the Agency cancelled 1.11 million euros of commitment appropriations carried forward from previous years, representing .0.3 % of the total appropriations carried forward under Title 3 – operational expenditure. The de-commitments are summarised in Table 5 by the year of origin of the underlying legal commitment.

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[113] In accordance with Article 46(3) of the Agency's establishing Regulation.
[114] See Articles 45(5) and 46(3) of eu-LISA establishing Regulation. The EU contribution relates to C1 commitment and payment appropriations (voted credits for the current budgetary year).
[115] In accordance with Article 45(7) of eu-LISA establishing Regulation.
[116] eu-LISA Management Board decision 2023-040 of 09/02/2023; Article 12 eu-LISA Financial Rules.
[117] Appropriations for the year (i.e., initial budget + amending budget ± transfers). These are 'fresh' appropriations, entered in the budget at the start of the financial year. These appropriations can be transferred or supplemented by appropriations from an amending budget.

Table 5. 2022 de-commitments of budgetary commitments by year of origin (in million euros)

Budget Chapter	Budget Article	2018	2019	2020	2021	Total
Infrastructure	Shared System Infrastructure			-0.13		-0.13
	Networks			-0.01	-0.01	-0.02
Applications	SIS II	-0.08		-0.13		-0.21
	VIS/BMS	-0.38				-0.38
Operational support activities	Operational support			-0.01	-0.36	-0.37
Total		**-0.46**		**-0.28**	**-0.38**	**-1.11**

Under operational support, 0.37 million euros refers to cancellations of budgetary commitment appropriations for which the contract end date was reached, and contractually foreseen provisions were not required (e.g. de-commitments related to external support contracts (including extra costs for overtime), remainders of advisory groups meetings and training activities related to systems and Member States, as well as applied liquidated damages).

Execution of payment appropriations

The Agency's total voted final budget for payment appropriations amounted to 296.51 euros million. At the end of 2022, the execution of payment appropriations for C1 credits reached 91.6%, including the carry-forward of administrative expenditure to 2023. The following figures show the breakdown of the total budget by title and overall consumption of funds and payment appropriations during 2022.

89.4% of the payment appropriations carried forward from 2021 to 2022 in administrative expenditure were executed.

Commitment appropriations under Title 1 (staff expenditure)[118] amounting to 0.67 million euros, and under Title 2 (infrastructure and operating expenditure) amounting to 13.71 million euros, not yet paid in 2022 and for which a valid legal commitment exists, were carried forward to 2023 together with the corresponding payment appropriations.[119] Under Title 3, the largest proportion of payment appropriations was spent on the shared system infrastructure. The breakdown of executed payment credits for the operational budget is provided on the following page.

Performance indicator: Time to Pay

In 2022, eu-LISA executed altogether 2 892 payment transactions with a payment time limit, an increase of 36.16% compared to 2021, including:

- 2 808 transactions with a maximum payment time of 30 days,
- 50 with a maximum payment time of 45 days,
- 32 with a maximum payment time of 60 days,
- 2 with a maximum payment time of 90 days.

The average time to pay for all types of payments remained far below the stipulated time limits: 18.4 days for 30-day payments, and 30.4 days for 60-day payments.

Overall, 90.08% of all transactions were made within the contractual time limit. Altogether 287 payments were delayed, of which four resulted in late interest, amounting to EUR 9 048.07 payable to creditors.

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[118] Commitment and payment appropriations related to remuneration are not carried forward.
[119] In accordance with Article 12(6) of eu-LISA Financial Rules.

Budget implementation in 2022

As part of its annual reporting framework, the Agency publishes its budget execution rates and performance indicators.

Figure 24. Consumption of C1 commitment appropriations (in million euros)

- Voted budget
- Commitment appropriations carried over
- Commitment appropriations consumed

Title 1: staff expenditure — 92.3% — 41.22 / 38.03

Title 2: infrastructure and operating expenditure — 100.0% — 25.49 / 25.49

Title 3: operational budget — 100.0% — 252.93 / 25.15 / 227.78
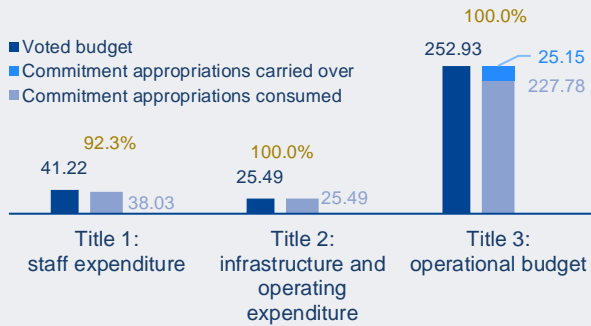
Figure 25. Trends in consumption of funds committed and budgeted during the year (in million euros)

Total budget: 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6 319.6

Committed: 43.6 55.1 86.2 113.5 119.2 123.9 139.2 154.5 168.1 177.2 188.4 291.3

Dec 2021 / Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

— Total budget — Committed
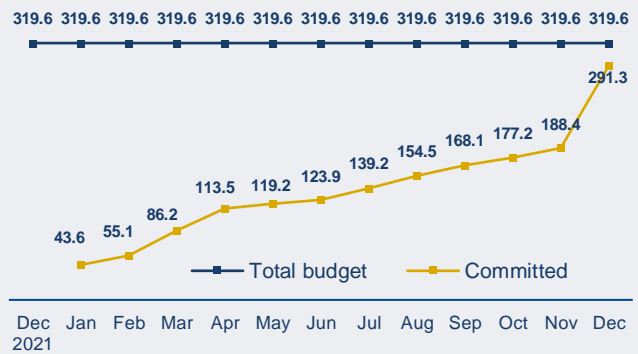
Figure 26. Execution of Title 3 commitment appropriations (EUR million)

Total **252.9** million

- BCU, external support, training, meetings directly related to systems, others 10.44 (4%)
- Ecris 0.01 (0%)
- Eurodac 9.17 (4%)
- SIS II 17.25 (7%)
- Shared system infrastructure 97.00 (38%)
- Interoperability 26.81 (11%)
- EES 22.35 (9%)
- VIS/BMS 56.62 (22%)
- ETIAS 13.27 (5%)
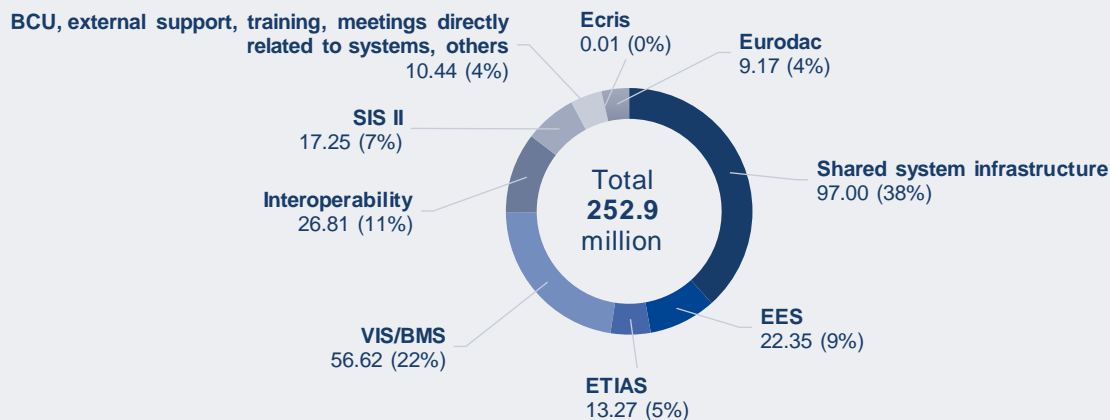
Figure 27. Consumption of C1 payment appropriations (in million euros)

- Voted budget
- Payment appropriations carried forward
- Payment appropriations consumed

Title 1: staff expenditure — 92.3% — 41.22 / 0.67 / 37.36

Title 2: infrastructure and operating expenditure — 100.0% — 25.49 / 13.71 / 11.78

Title 3: operational budget — 90.5% — 229.80 / 207.95
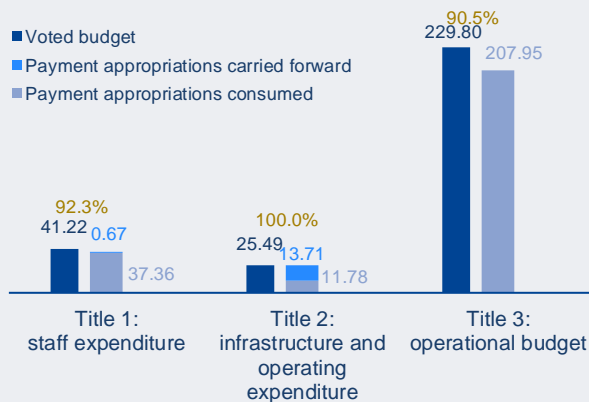
Figure 28. Trends in consumption of funds paid and budgeted during the year (in million euros)

Total budget: 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5 296.5

Paid: 19.4 33.9 49.9 59.1 75.3 97.3 111.6 129.3 144.1 158.7 181.8 257.1

Dec 2021 / Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

— Total budget — Paid
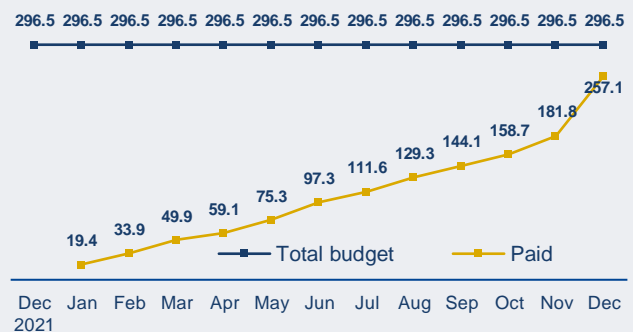
Figure 29. Executed payment appropriations under Title 3 (in million euros)

Eurodac
6.53 (3%)

Interoperability
10.03 (5%)

ECRIS-TCN
2.40 (1%)

BCU, external support, training, meetings
directly related to systems, others
8.60 (4%)

EES
42.50 (20%)

ETIAS
28.73 (14%)

Total
208.0
million

VIS/BMS
24.22 (12%)

Shared system infrastructure
61.75 (30%)

SIS II
23.20 (11%)
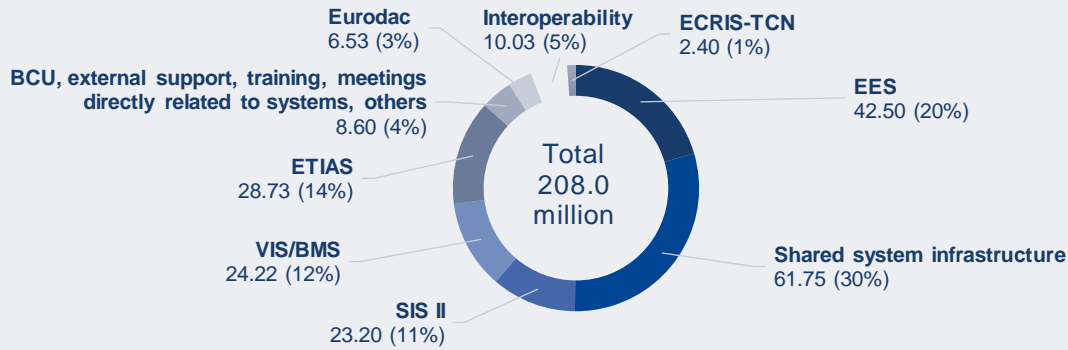
Figure 30. Monthly evolution of overall Time to Pay

A1 Staff Expenditure · A2 Infrastructure and Operational Expenditure · B03 Operational Expenditure — Average
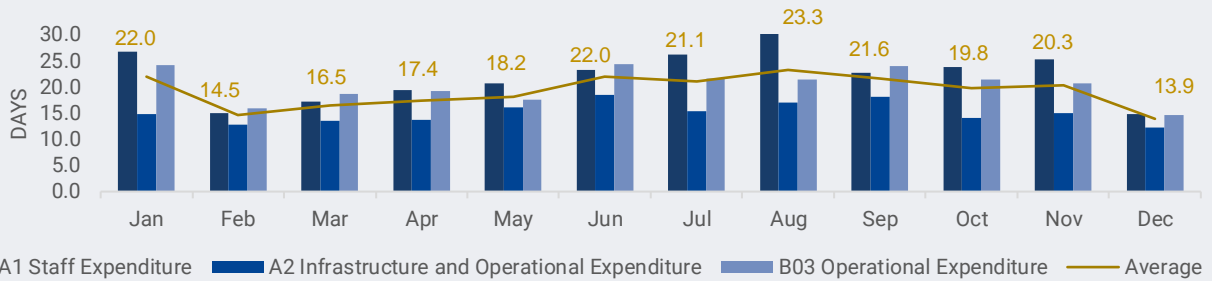
Figure 31. Payments within time limit of 30 days

Average 2022 = 18.4

16.68 · 18.69 · 20.87 · 17.52

Time to Pay in days — Average
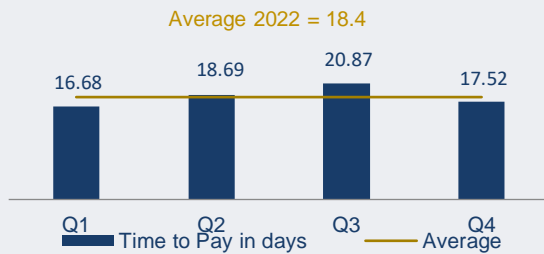
Figure 32. Payments within time limit of 60 days

Average 2022 = 30.4

39.00 · 20.50 · 33.00 · 23.56

Time to Pay in days — Average
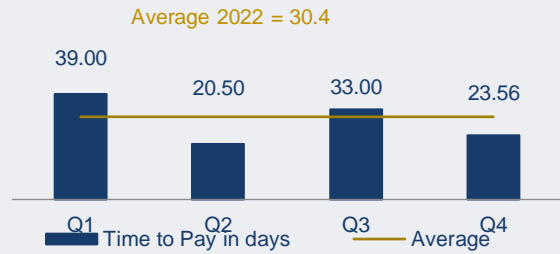
2.3.3. Procurement procedures

The figure below shows the results of a synoptic volume analysis performed by examining the number of transactions (i.e. contracts) during the period from 2014 to 2022. The volume analysis highlights the need to strengthen procurement functions across the Agency.

The figure shows the split between the different types of contracts, highlighting the steadily growing number of specific contracts and order forms under framework contracts.

Figure 33. Procurement activity 2014–2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
■ Direct Contracts	16	12	5	18	11	13	13	14	7
■ Framework Contracts eu-LISA non-systems	3	5	3	2	22	11	11	22	24
■ Framework Contracts eu-LISA systems	2	0	1	2	0	1	8	11	9
■ Purchase order	76	49	55	54	56	56	42	43	39
■ Specific Contracts/Order Forms under FWCs	118	195	278	338	476	559	582	675	726
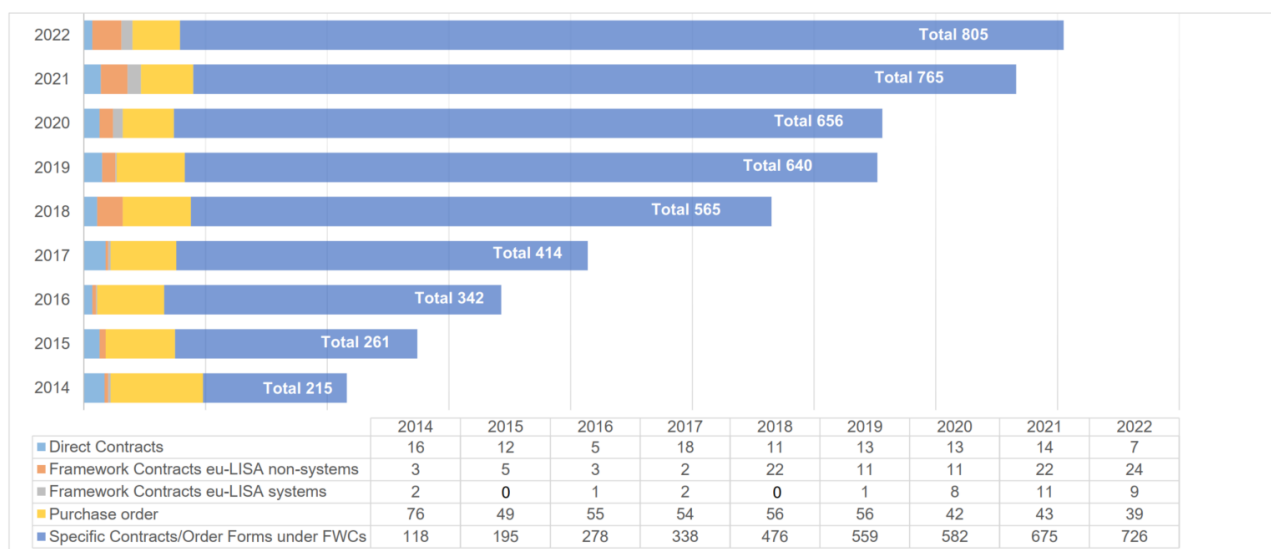
2.4. Delegation and sub-delegation of budget implementation powers to Agency staff

Under eu-LISA Financial Rules, particularly Articles 41 and 46, the Authorising Officer delegates budget implementation powers to designated Authorising Officers. The designated Authorising Officer exercises the delegation of powers under the Charter for Authorising Officers by Delegation, which lists the tasks and responsibilities of the Authorising Officers by Delegation. These delegations are applied based on the budget ownership matrix, established within eu-LISA as the allocation of authority and responsibility to designated staff based on their managerial function within the organisation over planning, implementing, and monitoring of budgetary resources within all financial circuits. The delegation of power stands at the level of a budget line for all fund sources. It is performed by staff formally appointed to that role by an ED decision within a specified amount (i.e., financial ceiling).

2.5. Human resources management

2.5.1. Recruitment

In 2022, eu-LISA launched 17 new selection procedures. For 12 of these selection procedures, the Agency received a total of 1657 applications[120]. The average number of applications per procedure was 141, which constitutes an increase compared to 108 applications in 2021. The highest number of applicants for a closed selection procedure was 247, and the lowest was 39.

In order to meet the talent acquisition targets set for 2022, in the context of a high number of short-term non-renewable posts to be recruited in combination with the relatively high turnover, the Agency published a higher number of vacancy notices, while also significantly strengthening its employer brand and enhancing its quality standards to attract the right type of talent.

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[120] This includes those selection procedures where a reserve list has been established during 2022.

The following qualitative initiatives led ultimately to a better candidate experience with an increased headcount in 2022:

- creation of a new subdivision, Talent Management Sector, incorporating a dedicated Talent Acquisition Service (for more, refer to page 59);
- smoother process allowing efficiency gains and additional synergies for recruiters and Selection Committee members (incl. new tools to reduce the administrative burden), resulting in an improved candidate experience;
- more strategic use of social media and other tools to advertise open positions and to brand eu-LISA as the employer of choice, in particular for highly specialised posts, e.g., on LinkedIn, the Agency's vacancy notices attracted over 74,000 unique views;
- participation in the global online career fair 'Women in Tech'.[121] This event, targeting experienced technology professionals, helped to attract a diverse pool of candidates and boosted eu-LISA's image as an attractive employer, encouraging female candidates to apply for IT-related positions;
- maximum use of reserve lists by grouping similar profiles into selection procedures, and better use of existing reserve lists by matching transferable skills with open posts, and also collaborated with the EU Agencies Network (EUAN) to make use of reserve lists from other EU Agencies.

2.5.2. Learning and development

As part of the **Annual Learning Plan**, the Agency:

- organised 56 trainings with a total duration of 125 days and a total of 1366 participants,
- organised 35 external trainings with a total of 94 participants,
- reached 82% general satisfaction rate for in-house trainings,
- processed a total of 216 individual training requests,
- a total of 49 staff members participated in language courses.

2.5.3. Employee experience and well-being

In 2022, eu-LISA facilitated the onboarding of 36 newcomers. The Agency organised 8 webinars focusing on mental health and well-being with a total of 485 participants, and 10 people made use of 24 individual counselling sessions, while 127 people were granted access to a well-being app. In addition, new confidential counsellors were appointed and trained, with a total of 9 cases reported and regular supervision sessions organised. The Agency conducted 4 preliminary assessments in response to possible breaches of statutory obligations and to evaluate the information received to determine the appropriate follow-up.

2.5.4. Establishment plan and headcount

In eu-LISA's establishment plan for 2022, authorised posts comprised 215 Temporary Agents (TA), 167 Contract Agents (CA), and 11 Seconded National Experts (SNE), for a total of 393 authorised posts. This was an increase of 37 posts compared to 2021. The number of CA posts increased by 35, from 132 to 167, due to the budget authorisation for the new tasks entrusted to the Agency (Revised VIS, ETIAS, and Interoperability). The number of SNE posts did not change during this period.

Figure 34. Status of occupied post as of 31.12.2022

TA positions in Establishment Plan 2022	TA posts filled	TA posts occupied + job offers issued	Authorised for 2022 (TA, CA, SNE)	Filled posts (total)	Posts occupied + job offers issued (total)
215	192	198	393	324	341

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[121] **Online career event for Women in Tech**, organised by Global Careers in June 2022.

In 2022, the occupancy rate was 89.3 % of the establishment plan and 92.1 % if including issued job offers - a slight decrease compared to 2021 (-1 %). The overall occupancy rate for all types of posts was 82.4 % and 85.5 %, including the issued job offers. For the posts authorised in the 2022 establishment plan, and where the respective legal financial statements (LFS) have been adopted, the Agency reached 89 % for TA posts, and 87 % occupancy rate for all posts, including the 'job offer issued' stage.

By the end of 2022, 61 staff members had successfully completed their probation period (including one managerial), whereas three ended with negative probation outcomes.

By the end of 2022, the **total headcount** reached 324, up from 310 at the end of 2021. In 2022, 89 posts had to be filled in accordance with the authorised number of posts. However, the recruitment of 4 posts was not possible due to lack of approval, due to the delay in the adoption of the Recast Eurodac Regulation, and the move of post allocations from 2022 to 2023 for the SIS Recast (Police). Overall, eu-LISA closed 12 selection procedures. As at 31 December 2022, 18 posts were at the 'job offer issued' stage, including one already accepted.

Table 6. Actual and authorised headcount as at 31 December 2022

Staff population	Occupied as at 31.12.2021	Authorised for 2022 (TA, CA, SNE) under EU budget[122]	Occupied as at 31.12.2022	Occupancy rate as at 31.12.2022
Temporary agent (TA)	193	215	192	89.3%
Contract agent (CA)	107	167[123]	121	72.5%
Seconded national expert (SNE)	10	11	11	100%
Total	**310**	**393**	**324**	**82.4%**

At the end of December 2022, eu-LISA had 324 full-time staff members: 192 TAs, 121 CAs, and 11 SNEs. Additionally, seven interns were invited to undergo a professional internship at the Agency.

Figure 35. Distribution of eu-LISA staff by sites and types of contracts

31 December 2022	TA	CA	SNE	Total
Tallinn	50	29	4	83
Strasbourg	140	89	6	235
Brussels	1	3	1	5
Hague	1	0	0	1
Total	**192**	**121**	**11**	**324**

Compared to 2021, there were no significant changes in the distribution of staff between eu-LISA's three sites – the headquarters in Tallinn, Estonia, operational site in Strasbourg, France, and the Liaison Office in Brussels, Belgium. Almost one-third of the staff (26 %) were employed at the eu-LISA headquarters in Tallinn, and 73 % at its operational site in Strasbourg, with the Liaison Office in Brussels representing 1 % of eu-LISA's staff. The Agency does not have any staff permanently employed at the backup technical site in Sankt Johann im Pongau, Austria. In 2022, one staff member was temporarily assigned to the EU Innovation Hub for Internal Security coordinated by Europol in the Hague.

The Agency's staff includes people representing 23 nationalities (22 EU member states and the United Kingdom). Compared to 2021, there was a slight improvement in gender balance (+0.9 %), with women constituting 31.5 % of the staff (102 persons), while men comprised 68.5 % (222 persons). This improvement was observed at both levels: staff and management.

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[122] These figures include also 2 TA posts, for which the legal base was not adopted in 2022, and 2 CA posts, which due to their short-term duration and a delay in the adoption of the legal base were not available for recruitment, remaining vacant.
[123] The total figure of CAs should be 169 posts in line with the adopted LFS. However, 167 CA posts is the figure reflected in the staff planning and reporting due to the adjustment of staff allocation for the Revised VIS (all staff figures were moved by one year).

2.5.5. Performance indicators in the area of human resources

The absenteeism rate was measured by three indicators:

- the average number of sick leave days per employee was 4.1 days (target: <15 days per employee);
- the percentage of staff on long-term sick leave was 3.2 % (target: <10 %);
- the percentage of staff that did not take any sick leave was 51.6 % (target: >15 % of all staff).

The exit turnover of staff was 7.1 %, above the target of 5 %, due to 23 employees leaving the organisation in 2022. At Tallinn headquarters, the staff turnover was 7.95 %, and 6.78 % at the operational site in Strasbourg.

The percentage of staff submitting their declarations of interest on time was 90 % (target: > 80 %), showing slight improvement compared to 2021 when this indicator stood at 89%.

The talent retention index, assessing the average performance of people leaving the Agency compared to the average performance of staff, reached 0.3 (target: >0), compared to 0.2 in 2021.[124]

2.5.6. Compensatory leave schemes

Pursuant to the European Parliament's 2011 Discharge Report,[125] all EU agencies are required to report on the number of leave days authorised to each grade under the flexitime and compensatory leave schemes.

Flexitime is a working scheme applied at eu-LISA by analogy with the Implementing Rules on Working Time.[126] The Agency is mandated to provide its services to Member States on a continuous basis (24/7), meaning that some of its staff work in shifts or are on stand-by duty. Occasionally, interventions on the IT systems managed by the Agency require that the work be performed outside regular office hours, including at night or on public holidays. Consequently, overtime compensation for flexitime work or during stand-by duty interventions is an integral feature of the Agency's daily operations.

The table below shows the amount of leave (number of days) granted as compensation for overtime work, broken down by function group, grade of staff member, and the average number of days compensated. Compared to 2021, there was a decrease in the number of compensated flexitime and overtime, which led to a decrease of 1.6 days (from 7.4 to 5.8) in the overall average number of compensatory leave days. Stand-by duty is compensated financially to staff and, therefore, not included in the overview, while it is compensated in time to the Seconded National Experts (SNE) under flexitime or overtime depending on the number of hours or days to be compensated for the duty service.

Table 7. Compensatory leave breakdown per type of leave and grade of staff (in days)

Functional group and grade	Compensated	Functional group and grade	Compensated
AD05	5	0	313.5
AD06	2	0	131.5
AD07	0	0	230.5
AD08	16	0	244
AD09	2	0	83
AD10	1	0	49
AD11	0.5	0	8
AD12	2	0	0
AD13	0	0	0
AD14	1	0	0
AD15	0	0	0

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[124] The value indicates whether talent is leaving the Agency (if negative) or remaining in the Agency (if positive).
[125] **European Parliament resolution of 17 April 2013** on discharge in respect of the implementation of the budget of the European Union agencies for the financial year 2011: performance, financial management and control (2012/2214(DEC)).
[126] **Commission decision on Working Time** of 15 April 2014, C(2014)2502, adopted by the Management Board on 15 April 2015.

Functional group and grade	Compensated	Functional group and grade	Compensated
AD16	0	0	0
AST01	0	0	0
AST02	0	0	0
AST03	0	0	80.5
AST04	0	0	4
AST05	0	0	11
AST06	0	0	34.5
AST07	3	0	29.5
AST08	11	0	27.5
AST09	0	0	2.5
AST10	0	0	0
AST11	0	0	0
Total number of days (TA)	**43.5**	**0**	**1249**
Number of people (TA)	**16**	**0**	**181**
GFIII09	0	0	66
GFIII10	1	0	67
GFIV13	0	0	42
GFIV14	0	0	162.5
GFIV15	0	0	38.75
GFIV16	0	0	48
GFIV17	0	0	28
GFIV18	0	0	3
Total number of days (CA)	**1**	**0**	**455.25**
Number of people (CA)	**1**	**0**	**106**
SNE	15	0	66
Total number of days (SNE)	**15**	**0**	**66**
Number of people (SNE)	**1**	**0**	**11**
TOTAL number of days:	59.5	0	1770.25
TOTAL number of people:	18	0	298
Average number of days per type of leave	3.3	0	5.9
Overall average number of compensatory leave days	5.8		

2.5.7. **Staff benchmarking exercise**

In accordance with the requirements of the Framework Financial Regulation, and the methodology adopted by the Heads of Administration of EU agencies, eu-LISA performed its annual benchmarking exercise to assess the ratio of administrative to operational staff. It is generally considered that an optimal distribution of posts and staff should be around 70 % for operational activities, 20 % for administrative support and coordination tasks, and 10 % for neutral (financial) activities. The results of the 2022 benchmarking exercise indicated that eu-LISA's staff distribution is as follows: **74.7 % in operational duties, 16.3 % in administrative and coordination tasks, and 9 % of posts are neutral**. For a more detailed overview of eu-LISA's 2022 benchmarking exercise results, please refer to Annex IV.

2.6. Strategy for efficiency gains

To achieve its policy objectives set for 2022, eu-LISA had to consider budget constraints and the available human resources for the mandated tasks. To that end, the Agency engaged in regular discussions and worked on mitigating measures to address staff shortages.

In February 2022, to optimise the use of resources, eu-LISA adopted a **Sourcing Strategy** to clarify and harmonise its human resources planning and guide the Agency's sourcing decisions at the operational and strategic levels to optimise and balance the overall composition of eu-LISA's human resources (i.e., the share of in-house staff to external service providers). This is done by distinguishing between the functions and services that must be maintained and developed internally versus those that the Agency could outsource to external service providers. At the same time, the continued use of **framework contracts for external support services** has also proven effective in dealing with relevant tasks to achieve the Agency's objectives on a short-term basis.

In staff recruitment, eu-LISA achieved efficiency gains **using existing reserve lists** created during previous selection procedures. The Agency also grouped profiles and longer reserve lists to cover several posts within one recruitment procedure, which generated significant efficiency gains as it allowed, among other things, the Agency to fill more available posts with fewer publications of vacancy notices.

Further efficiency gains are expected to be achieved in the long-range perspective with the **digitalisation of processes** that require excessive paperwork. To support the transition to paperless administration and facilitate more efficient workflows, eu-LISA continued to push forward with the development and implementation of IT tools in the area of human resources, e.g., iLearn and two SYSPER2 modules: HR Reporting and ATS modules.

The Agency is also working on drafting its Efficiency Gains Strategy to address improvements in process management, use of human resources, and optimisation of organisational structure and governance.

2.7. Assessment of audit and ex-post evaluation results

This section presents a summary of audits carried out by the Internal Audit Service of the European Commission (IAS) and the Internal Audit Capability (IAC) of eu-LISA. This section also includes the audits carried out by the EDPS and opinions of the European Court of Auditors on the reliability and regularity of transactions underlying the accounts, and the relevant findings issued.

2.7.1. Internal Audit Service of the European Commission (IAS) and Internal Audit Capability of eu-LISA (IAC)

At its meeting in November 2021, eu-LISA's Management Board adopted[127] the Internal Audit Plan for 2022,[128] which was amended in November 2022.[129] In 2022, IAC continued to serve as the contact point for the Internal Audit Service of the European Commission (IAS) and the European Court of Auditors (ECA). This role is important in order to ensure minimal disruption of the Agency's regular operation and avoid the duplication of efforts.

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[127] Ref. MB document 2021-350 MB Decisions, point A.25.
[128] Ref. MB document 2021-358, the Internal Audit Plan for the year 2022, Ares(2021)7075595 – 17/11/2021.
[129] Ref. MB document 2022-382 MB Decisions, point B15.e.

Table 8. Summary of internal audit topics covered in 2022

Auditor	Audit topic delivered in 2022 (topic type)	Thematic and results
IAS	The strategic audit risk assessment and audit plan for eu-LISA (assurance)	Identifying, assessing and reporting on the risks to Agency's objectives, enhancing the likelihood of their achievement. Preparing the strategic audit plan for the next three years. The 2023–2025 strategic internal audit plan for eu-LISA[130] describes the strategic audit plan established by the IAS[131] for 2023–2025, incl. shortlist of audit topics to support the planning of IAS audits during the period. The audit plan is based on the results of an in-depth risk assessment carried out by the IAS in July 2022. The assessment also highlighted several high-risk areas related to the Agency's objectives: ■ organisational agility and responsiveness, ■ use of scarce human and financial resources, ■ procurement and contract management, ■ security of IT systems, ■ governance, ■ project management, ■ communication and coordination with commission services.
IAS	Multi-entity audit on coordination between DG HOME and the EU decentralised agencies eu-LISA, EUAA, Europol, CEPOL and EMCDDA	Providing (re)assurance on the adequacy of the design and the effective and efficient implementation of the coordination arrangements between DG HOME and the audited decentralised agencies, including eu-LISA. The scope of the audit covered the processes and internal controls for the coordination between the agencies eu-LISA, EUAA, Europol, CEPOL and EMCDDA and DG HOME as regards planning, monitoring / supervising the operations and performance of the agencies and reporting. The audit work was carried out during 2022 with a cut-off date 16 November 2022. The audit resulted in an audit conclusion and two audit recommendations.[132] In response, the Agency's management will put in place an action plan.
IAC	Audit on the EES Central System Project: IT Solution Development (assurance)	Providing (re)assurance on the effectiveness and efficiency of internal controls put in place for the implementation of the project. The audit focused on the project's governance, risk management, reporting management, quality and change management, test management, contract and vendor management. The audit resulted in an audit conclusion and several audit recommendations.[133] In response to the audit, the Agency's management put in place an action plan.
IAC	Review of the management of ABAC[134] access rights (assurance)	Providing (re)assurance on the management of ABAC[134] access rights at eu-LISA. The audit focused on conducting/updating the risk assessment on granted access rights; performing the periodic validation of ABAC access rights (i.e., ABAC workflow, accounting, and reporting) against the responsibilities entrusted to the users as per standing procedure. The audit resulted in an audit conclusion and one audit recommendation.[135] In response to the audit, the management put in place an action plan.
IAC	Monitoring of the implementation of eu-LISA's Anti-fraud Strategy (coordination/ assurance)	Helping to combat fraud by minimising opportunities for perpetrators to commit fraud. According to the Agency's anti-fraud Strategy 2022-2024, there are three objectives: ■ achieve full compliance with anti-fraud principles, ■ set and maintain a high level of ethics in all activities of eu-LISA, ■ develop and use data collection and analysis. IAC delivered the annual monitoring report[136] that disclosed an implementation rate of 70% of the action plan to the Anti-fraud Strategy.

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[130] Excerpt from the IAS Report, ref. Ares(2022)8285043 – 30/11/2022.

[131] According to Article 70.5 of the Financial Regulation (EU, Euratom) 2018/1046, the Commission's Internal Auditor shall exercise the same powers over the bodies set up under Articles 70 and 71 of the Financial Regulation as those exercised in respect of the Commission.

[132] IAS Final Audit Report on coordination between DG HOME and the EU decentralised agencies eu-LISA, EUAA, Europol, CEPOL and EMCDDA, ref. Ares(2023)3266879 – 10/05/2023.

[133] IAC Report, ref. Ares(2022)6160738 – 06/09/2022.

[134] ABAC (accrual-based accounting) is the corporate information system allowing the daily execution and monitoring of all budgetary and accounting operations by the Commission's Directorate Generals, the Agencies, and the Institutions. The system has been developed by the Commission and includes a complete set of features to ensure compliance to the Financial Regulation and Implementing Rules.

[135] IAC Report, ref. Ares(2022)3945170 – 25/05/2022.

[136] IAC Monitoring Report on the implementation of the Anti-fraud Strategy action plan for 2022, ref. Ares(2023)523216 - 24/01/2023.

Auditor	Audit topic delivered in 2022 (topic type)	Thematic and results
IAC	**Monitoring of implementation of audit recommendations issued by IAS, IAC, ECA and OLAF (coordination)**	Helping to ensure that identified issues are solved and improvements are implemented. In 2022, IAC delivered four monitoring reports.
IAC IAS	**Follow-up to audit recommendations (assurance)**	Confirming independently that issues are solved, and improvements are implemented. IAC and IAS followed up the recommendations stated as 'implemented' (ready for review) by eu-LISA's management and closed 12 recommendations.
IAC	**Annual audit risk assessment (assurance)**	Identifying, assessing and reporting on the risks to Agency's objectives set in the SPD. Enhancing the likelihood of achievement of the Agency's SPD objectives. Preparing the audit plan for the next year. The assessment[137] highlighted ten main risks to the achievement of the Agency's SPD objectives and supported the preparation of the Internal Audit Plan for the year 2023.

The results of the Internal Audit Plan for the year 2022 were formalised in a detailed activity report that was analysed and discussed with the Executive Director and the ACFC (meeting of 22 February 2023) and adopted by the Management Board on 15 March 2023.[138]

2.7.2. European Data Protection Supervisor (EDPS)

Ensuring a high level of data protection is one of the Agency's main objectives. External audits on data protection compliance contribute to facilitating this goal and are part of the eu-LISA continuous improvement plan for the operational management of JHA information systems.

In 2022, eu-LISA continuously followed up on **implementing recommendations** identified in the audits conducted by the European Data Protection Supervisor (EDPS) on SIS, VIS and Eurodac:

- SIS and VIS audit, conducted in November 2018, resulted in a final report which the Agency received in April 2020, including 43 recommendations (with additional feedback provided in November 2022);
- Eurodac audit was conducted in December 2019 and culminated in a final report that eu-LISA received in March 2021, containing 29 recommendations, incl. additional feedback provided in November 2022.

In all instances, the Agency drafted corresponding action plans, incorporating the recommendations put forward by the EDPS. Quarterly reports were prepared and shared with the EDPS, the Management Board and its Audit, Compliance and Finance Committee (ACFC). In 2022, internal follow-up meetings took place in February, April, June and September. Additionally, the DPO proactively updated the EDPS quarterly on the progress and status of implementing the recommendations.

In 2022, eu-LISA dedicated its efforts to ensuring the smooth coordination of the EPDS new inspection carried out in October on Eurodac, Visa Information System (VIS) and Schengen Information System (SIS II). The audit focused on the overall IT security governance, security incidents and data breaches and methodology and practices for the secure development and testing of the systems, focusing on access control management in the different environments. It also included the follow-up on the previous SIS, VIS and Eurodac EDPS inspections. The Agency received the draft minutes of the audit at the end of November 2022.

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[137] IAC 2022 audit risk assessment report ref. Ares(2022)8692434 – 14/12/2022.
[138] Point 17.b. of Decisions of the **42nd meeting of the eu-LISA Management Board**, ref. doc 2023-065, 15/03/2023.

2.7.3. **European Court of Auditors (ECA)**

In 2022, the European Court of Auditors (ECA) finalised the usual audit on the Annual Accounts of the eu-LISA for the financial year 2021.[139] The Court audited:

- the Agency's accounts, comprising the financial statements[140] and budget implementation reports[141] for the financial year ended on 31 December 2021,
- the legality and regularity of the transactions underlying those accounts.

In ECA's opinion, the accounts of the Agency for the year ended 31 December 2021 present fairly, in all material respects, the financial position of the Agency at 31 December 2021, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

In ECA's opinion, the revenues underlying the accounts for the year ended 31 December 2021 are legal and regular in all material respects. Concerning payments, ECA identified a total amount of payments of 18,11 million euros affected by non-compliance, representing 6.2 % of the payment appropriations available in 2021, thus exceeding the materiality threshold set for the audit and resulting in a qualified opinion on the legality and regularity of payments underlying the accounts.

ECA also made observations on the management, control systems and budgetary management that did not call the above opinions into question. The Agency devised an action plan to address these observations.

2.8. **Follow-up on audit recommendations and related action plans**

Pursuant to the decision of eu-LISA's Executive Director,[142] the Agency's Internal Audit Capability (IAC) is responsible for monitoring progress on the implementation of audit recommendations. To that end, IAC collects updates from the owners of these recommendations and compiles monitoring reports the are submitted to the Executive Director and the Management Board.

In 2022, the implementation rate of audit recommendations[143] was 63 %, with 20 recommendations implemented out of 32 recommendations due. The status of eu-LISA's progress on implementing audit recommendations as at 31 December 2022 is summarised below.

Table 9. Audit recommendations: progress on implementation

IAS, IAC, ECA and OLAF recommendations by rating	Total open for 2022	In progress	Implemented	Past due	Closed in 2022	Total open at the end of 2022
Critical	3	3	0	0	0	3
Very important	31	12	12	7	11	20
Important	15	2	8	5	5	10
Total	**49**	**17**	**20**	**12**	**16**	**33**

Terminology:
- **in progress:** implementation is proceeding according to plan or new deadline / action plan agreed with the auditor,
- **implemented:** confirmed by the recommendation owner and is ready for the auditor's follow-up,
- **past due**: implementation is in progress but was not achieved by the agreed deadline,
- **closed:** the auditor has formally closed the issue,
- **critical:** fundamental weakness in the audited process that is detrimental at the entity level,
- **very important**: fundamental weakness that is detrimental to the whole process (all ECA recommendations carry this designation),
- **important:** significant weakness in the whole process or a fundamental weakness in a significant part of the audited process.

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[139] European Court of Auditors (2022) '**Annual Report on EU Agencies for the financial year 2021**', 27 October 2022, pp. 234-240.
[140] These include the balance sheet and the statement of financial performance, the cash flow table, the statement of changes in net assets and a summary of the significant accounting policies and other explanatory notes
[141] These comprise the reports which aggregate all budgetary operations the explanatory notes.
[142] eu-LISA Executive Director decision on the adoption of a system of compulsory reporting to the ED and the Head of the IAC on the subject of the progress made in the area of audit recommendations and/or findings, ref. Ares (2018)6152498 – 30/11/2018.
[143] IAC Monitoring Report of implementation of audit recommendations as at 31 December 2022, Ares(2023)1158875 – 17/02/2023

Table 10. List of open audit recommendations issued by internal auditors IAS and IAC, including the ones recording significant delays (> 6 months, as at 31.01.2023)

#	Auditor/ Audit Title / year	Rec Number / Title	Rating	Original implementation deadline	Delayed > 6 months
1	IAS Audit on IT Operations / 2016	1. Configuration management	Important	31/12/2017	five years and one month
2	IAC Report on IT Asset Management of eu-LISA	1.2.1 IT asset management governance	Very Important	31/10/2018	four years and three months
3	IAS Report on the controls over the Procurement process / 2017	3. Controls before establishing specific contracts	Important	31/12/2018	four years and one month
4	IAC Report on Entry / Exit Central System Project Management / 2020	1.a. Budget	Very Important	24/03/2020	two years and nine months
5	IAS Report on staff recruitment and engagement of structural service providers and organisational ethics in eu-LISA / 2020	1. Sourcing of human resources needs to be based on a documented and updated assessment	Very Important	30/09/2020	two months and four months
6	IAC Report on Entry / Exit Central System Project Management / 2020	1.e Resource management	Very Important	31/12/2020	two years and one month
7	IAC Report on Entry / Exit Central System Project Management / 2020	2.b Testing preparation	Important	30/03/2021	one year and nine months
8	IAC Report on Entry / Exit Central System Project Management / 2020	2.a Reporting and communication	Important	30/06/2021	one year and six months
9	IAS Report on staff recruitment and engagement of structural service providers and organisational ethics in eu-LISA / 2020	2. Legal assurances on the use of structural service providers	Important	31/12/2021	one year and one month
10	IAC Report on Entry / Exit Central System Project Management / 2020	2.c Design of the EES Central System	Important	31/12/2021	one year and one month
11	IAS Report on Management of IT Security in eu-LISA / 2021	4. Management of builds and solutions	Very Important	31/03/2022	n/a
12	IAS Report on Management of IT Security in eu-LISA / 2021	1. IT security services management	Very Important	31/12/2022	n/a
13	IAS Report on Management of IT Security in eu-LISA / 2021	3. Configuration management	Very Important	31/12/2022	n/a
14	IAS Report on Management of IT Security in eu-LISA / 2021	6. Change management	Important	31/12/2022	n/a
15	IAS Report on Management of IT Security in eu-LISA / 2021	7. Information security management system	Important	31/12/2022	n/a
16	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	5. Testing environment	Very Important	01/01/2023	n/a
17	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	6. Resource, skills and time allocated to the test phase	Very Important	01/01/2023	n/a
18	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	4. Budget and payments management	Very Important	31/01/2023	n/a
19	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	7. Anomalies/defects management	Very Important	01/03/2023	n/a
20	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	9. Traceability between requirements and other upper/lower-level documentation	Important	01/03/2023	n/a
21	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	1. Governance and project organisation	Critical	31/03/2023	n/a

22	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	8. Change and exception management	Important	01/04/2023	n/a
23	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	2. Resource management	Critical	01/06/2023	n/a
24	IAC Report on Entry / Exit Central System Project - IT Solution Development / 2022	3. Contract deliverables	Critical	01/06/2023	n/a

The Agency is committed to taking prompt and decisive action to address the delays in the implementation of outstanding recommendations, including revising target dates. Going forward, the Agency will keep the auditors informed about progress with implementing relevant action plans.

To confirm the closure of the recommendations stated as 'Implemented' by eu-LISA (see items under header 'Closed in 2022'), the IAS[144] and the IAC[145] carried out annual follow-up on action plans that the Agency declared as 'Implemented' and closed 12 audit recommendations. The ECA also followed-up on the implementation of its audit recommendations from previous years,[146] closing four of them. The residual work is outlined below.

Table 11. Implementation of audit recommendations made by ECA in previous years

Year	ECA's observations	Status	Agency's actions
2017	eu-LISA currently manages three separate, non-integrated large-scale IT systems (SIS II, VIS and Eurodac), all dealing with data in the EU's policy area of freedom, security and justice. Such an approach may prevent eu-LISA from achieving economies of scale and synergies between the different systems.	**Ongoing**	In 2023, eu-LISA will finalise implementing the transition plans for each of the core business systems (SIS II, VIS and Eurodac) from the old MWO structure into the finalised TEF and TOF frameworks.
2018 2019 2020	Budget implementation was less than planned. eu-LISA, together with the European Commission, should improve the alignment of budgetary planning with the timing of the related legal acts.	**Ongoing**	In cooperation with the Commission, eu-LISA will define a minimum set of documentation required for consultations on legislative financial statements (LFS) and set the basis for the corresponding internal planning.

2.9. Follow-up actions related to investigations conducted by OLAF[147]

In 2022, the Agency addressed recommendations from OLAF investigations related to cases OC/2020/0441-A2 and OC/2017/1121/A2.

2.10. Follow-up on observations from the discharge authority

In 2022, the Budgetary Control Committee (CONT Committee) of the European Parliament launched the process of discharge of the activities of EU Agencies and Joint Undertakings performed in the financial year 2021. This process ensures compliance with the relevant legal and regulatory framework requirements and the application of sound financial management principles, namely economy, efficiency and effectiveness.

In November 2022, on the request of the CONT Committee, eu-LISA responded to a set of written questions divided into individual (addressed only to eu-LISA) and horizontal ones (identical for all the EU Agencies and Joint Undertakings). Subsequently, a dialogue was held with the CONT Committee, and the European Court of Auditors prepared the 'Follow-up to the ECA's audit on eu-LISA's 2021 Accounts – Action Plan', which was submitted to the eu-LISA Audit, Compliance and Finance Committee (ACFC) in May 2023.

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[144] Follow-up of outstanding recommendations from past audits – IAS Note on audit conclusions, ref. Ares(2022)810155 - 03/02/2022, and ref. Ares(2022)7132265 – 14/10/2022.
[145] IAC follow-up results for 2021, ref. Ares(2022)1548233 - 02/03/2022.
[146] **ECA Annual Report on EU Agencies for the financial year 2021**, p.234 to 240.
[147] Article 11 of Regulation (EU/Euratom) 883/2013 of the European Parliament and of the Council concerning investigations conducted by the European Anti-Fraud Office (OLAF).

At the end of May 2023, the European Parliament granted the Executive Director of eu-LISA discharge regarding implementing the Agency's budget in 2021. It approved closing eu-LISA's accounts for the financial year 2021 and shared with eu-LISA its observations in a resolution.

To highlight identified areas for improvement and address areas of critical interest, the Agency, in particular:

- took the necessary steps to strengthen internal controls and update internal processes for procurement procedures in order to mitigate the weaknesses identified by auditors,
- continued with the transition from vertical sourcing to transversal for core systems development, evolution and maintenance,
- redefined its recruitment strategy to better tackle concerns related to recruitment and gender balance,
- strengthened several elements of the risk assessment component and continued monitoring the strategic roadmap to better align strategic and operational objectives, while also improving the overall implementation of the Agency's long-term strategy.

In response to ECA's observations on eu-LISA´s 2021 accounts, the Agency prepared an action plan as a follow-up to the ECA's audit. The Management Board took note of the action plan on 15 March 2023, and the revised version was submitted to the Board on 15 June 2023.

Observation of the Discharge Authority	Response and measures taken by the Agency
Budget and financial management	
1. Notes with appreciation that budget-monitoring efforts during 2021 resulted in a budget implementation rate of 100 % which represents an increase of 24,39 % compared to 2020; notes, furthermore, that the payment appropriations execution rate was 94,65 %, representing an increase of 0,24 % compared to 2020.	eu-LISA takes note of the observation.
2. Welcomes the fact that, in 2021, no non-automatic carry-overs were performed; notes, however, a high amount of automatic carry-overs (€11,1 million) of non-differentiated payment appropriations for Title II (infrastructure and operating expenditure), representing 56 % of the total of €19,8 million for that title and 93,55 % of the total amount (€11,8 million) of automatic carry-overs from 2021 to 2022; echoes the Court's opinion that high rates of carry-overs contradict the budgetary principle of annuality and are indicative of structural issues in the implementation of the budget; notes the Agency's reply that carry-overs of Title II expenditure related mainly to external support service providers, contracted by the Agency to address systematic understaffing following the assignment of new tasks to the Agency that were not accompanied by an adequate allocation of human resources; further notes that the timeliness of contracts with such external service providers were not aligned with the calendar year, but with the duration of the necessary services provided; calls, nevertheless, on the Agency to address those issues and report to the discharge authority on the measures taken in that respect; calls on the Commission to improve coordination between the allocation of new tasks and the necessary resources in order to reduce the need for resorting to external service providers.	The eu-LISA action plan "Follow-up to the ECA audit on Agency´s 2021 Accounts" (taken note by the Management Board on 15 March 2023, revised version to be submitted on 15 June 2023) includes the following actions addressing part of this observation: "The deadline to submit new budgetary commitment requests is 30 September 2023/, ensuring the contract periods to be better aligned with the financial year. Senior management to ensure that exceptions are kept to a strict minimum, as the impact on the carry-overs is significant. Recurrent, running expenditures to be committed whenever possible under the anticipated budget at the end of the 4th quarter to cover the expenditures of the upcoming year in line with the financial rules." Taking advantage of the signature of the new framework contract for the provision of external support services expected in Q4 2023, an alignment of the annual service contracts timeline with the annual calendar is envisaged to significantly decrease the use of financial carry-forward.
3. Considers that the Agency should continue its dialogue with the Commission in order to propose changes to its multiannual budget planning, so that it only receives funds for developing systems once legal certainty is ensured.	As Regulations for new tasks set short deadlines for systems to become operational, eu-LISA needs to start preparing well before their adoption. As adoption is often delayed, however, some budgets have been made available even before finalisation of the corresponding legal basis. This cascades in very complicated procurement challenges, especially in consideration that the adoption of the Regulation is not sufficient, in most cases, to prepare detailed tender technical specifications. This can only happen when implementing acts are adopted. This also puts significant pressure on budgetary planning, resulting in large budget carry-overs which are necessary to preserve budgets which would otherwise be lost. More timely and systematic consultation with eu-LISA on the legislative financial statements accompanying the proposed legislation, plus a more flexible approach by the Commission on the actual inclusion of budget in the EU general budget, would reduce these risks. These measures are a recurring recommendation by ECA, on which eu-LISA has limited agency.

Observation of the Discharge Authority	Response and measures taken by the Agency
	Equally important, the availability of implementing acts is a precondition for effective procurement. The shortening of the preparation of the implementing acts would have a direct impact on eu-LISA's capacity to better plan its procurement and limit contractual changes.
	Taking advantage of the signature of the new framework contract for the provision of external support services expected in Q4 2023, an alignment of the annual service contracts timeline with the annual calendar is envisaged in order to significantly decrease the use of financial carry-forward.

Performance

4. Welcomes the fact that the Agency uses certain tools, such as key performance indicators, to assess the added value provided by its activities and to improve its budget management; notes that, according to the statement of the Agency, it has achieved its objectives for 2021 as set out in its establishing regulation, Regulation (EU) 2018/1726[2], and delivered the results defined in its 2021 annual work programme, both in terms of outcomes and performance; welcomes the continued efforts made in 2021 by the Agency to adapt to its updated mandate as set out in that Regulation, which entered into force on 11 December 2018, and notes the adoption of a long-term strategy for the period 2021-2027, guiding the Agency's long-term development and activities and its future multiannual and annual programming.	eu-LISA takes note of the observation.
5. Notes that the performance and availability of the IT systems operated by eu-LISA was in accordance with the relevant service-level agreements; notes the continued development of new systems for EES, ETIAS, and ECRIS-TCN and of interoperability between the new and the existing systems; further notes that the entry into operation of those new systems was postponed by several months, while the overall schedule for the completion of the interoperability architecture by end of 2023 was preserved; commends eu-LISA for having completed several projects, such as the installation of the National Uniform Interfaces, the upgrade of the communication infrastructure for VIS, and the release of the sBMS; welcomes the fact that eu-LISA has stepped up its efforts in research and innovation through projects in the areas of artificial intelligence, technologies for seamless and contactless border crossing, and internal security; notes that the Agency is on track with the project for the second extension of its operational site in Strasbourg; further notes that the Agency reviewed that project in order to make additional capacities available earlier than the expected delivery in 2028 through a modular data centre, reduction of office space and a phased construction approach for the site extension.	Pertaining to the EES and the overall Interoperability timelines, the EES, ETIAS, Interoperability PMB of the 25th of May 2023 has endorsed both the new strategy for the implementation of the EES, the minimum viable product (MVP) approach and the full revision of the Interoperability timeline which was presented. This timeline comprises several waves, which aim to deliver the Interoperability components with intermittent releases every 6-9 months extending to 2026. Furthermore, this replanning comes with a number of conditions which the PMB has recommended that all stakeholders do their utmost to uphold. The new EES strategy and the Interoperability roadmap will be discussed by the Management Board on the 31st of May for endorsement.
6. Welcomes the fact that the Agency, along with EUAA and Frontex, provide active support to the Member States which are the main entry points for migrants and asylum seekers into the Union; notes that the Agency operates the central component of a series of large-scale IT systems in the area of freedom, security and justice, which are connected to national systems.	eu-LISA takes note of the observation.
7. Welcomes the Agency's continuing support in the implementation of EU policies in the areas of free movement of people and goods, common travel visa, border control, immigration and asylum, as well as in the cooperation between national law enforcement and judicial authorities, incl. combating organised crime, human smuggling and trafficking, and terrorism.	eu-LISA takes note of the observation.

Staff policy

8. Notes that, on 31 December 2021, the establishment plan was 90,61 % implemented, with 193 temporary agents appointed out of the 213 temporary agents authorised under the Union budget (compared to 202 authorised posts in 2020); notes that, in addition, 107 contract agents and 10 seconded national experts worked for the Agency in 2021, out of 132 contract agents and 11 seconded national experts authorised.	eu-LISA takes note of the observation.

Observation of the Discharge Authority	Response and measures taken by the Agency
9. Highlights that, in 2021, seven members of staff left the Agency, representing a turnover of 5,5 %, higher than the target of 5 % and higher than the 3,7 % baseline of 2020; welcomes the monitoring and evaluation of reasons with respect to that indicator by the Agency's management; notes from the Agency's replies that among the identified causes, contracts with limited duration, contracts with low grades and the heavy workload were reported during exit interviews organised by the Agency; highlights the need for increased flexibility in terms of the availability of human resources to allow the Agency to adapt to fluctuations in the workload and possible delays in the adoption of relevant legislative acts; calls on the Commission to engage in a constructive dialogue with the Agency and address those issues when determining the availability of resources in future establishment plans.	In order to better understand the reasons of high turnover, eu-LISA has been performing consistent exit interviews. In 2021, based on our analysis of exit interviews, the majority of the interviewees claimed a desire for better career opportunities as the main reason for seeking alternative employment. Better career opportunities were described as having higher grades, longer contract duration and renewable contracts. The second most significant reason for looking for other opportunities was for family and/or personal reasons, followed by the need for improved work-life balance. A large proportion of interviewees reported that the high workload had a negative effect on their work-life balance.

eu-LISA is recruiting mainly IT profiles which are in high demand in the labour market and for all EU institutions. Most of the posts are low-grade, short-term or non-renewable and therefore not appealing nor perceived as a competitive offer on the market. Of all offers issued, 40% were not accepted. Among the main reasons were lack of interest in short-term and/or non-renewable contracts; better career opportunities found or higher grades offered by other EU institutions. |
| 10. Notes with concern the composition of eu-LISA's senior management with respect to gender, with 2 men (100 %) and no women, of its Management Board with 49 men (81,7 %) and 11 women (18,3 %), and of its staff overall with 215 men (69,4 %) and 95 women (30,6 %); acknowledges that the responsibility of appointing persons to the management board lies with the relevant national authorities in each Member State; calls on the Member States to actively consider gender balance as a factor when nominating and appointing members of eu-LISA's management board; takes note of eu-LISA's efforts to improve gender balance and welcomes the slight improvement registered in 2021; calls, nevertheless, on eu-LISA to work actively towards gender balance and report to the discharge authority on an action plan in that respect; also recalls the importance of ensuring a balanced geographical representation within its management and staff. | As of mid-March 2023, the new Executive Director, Ms Agnès Diallo, took up office, having an effect on the composition of the Agency's senior management from the perspective of gender balance. |
| 11. Notes that in 2021 eu-LISA launched 15 selection procedures and received 1944 applications for a total of 18 recruitment procedures; commends the Agency for the reported efficiency gains and for the improvement of the Agency's recruitment process and of its image as an attractive employer; notes in that sense the Agency's various actions such as the 'agile recruitment' pilot project, its participation in the online global career fair 'Women in Tech', the publication of vacancy notices beyond the Agency's website and the grouping of profiles or the use of existing reserve lists for equivalent grades and function groups; further notes that an analysis of the Agency's competency framework was carried out and encourages the Agency to develop its competency-based human resources management strategy. | eu-LISA takes note of the observation. |
| 12. Commends the Agency for its policy for zero-tolerance on harassment; notes that in 2021, 14 cases related to psychological or sexual harassment were dealt with by the Agency; further notes in this context that the Agency performed two preliminary assessments which led to the launch of three administrative inquiries and the dismissal of one staff member; welcomes the organisation by the Agency of webinars and awareness sessions on harassment prevention and the role of its confidential counsellors, as well as its measures to improve well-being at work and the work-life balance of the Agency's staff through webinars on mental health and individual counselling sessions. | In 2021, a dedicated session was organised on the prevention of harassment for managers as well as for all staff.

eu-LISA also offered a 'Mental health and well-being programme', featuring a series of 10 webinars presented by certified clinical psychologists. In addition, one extra webinar was dedicated to managers to support them in their role. The programme also offered the opportunity to organise workshops for teams (Unit/Sector) to tackle some specific area considered critical by the managers. In total, 5 workshops were requested and organised. As part of the programme, individual coaching sessions were also offered to staff members who requested it. In addition, eu-LISA offered subscriptions to a mindfulness app with an easy-to-use interface.

In 2021, no burnout case was reported at eu-LISA. The Agency tried to prevent this from occurring by organising awareness sessions dedicated to the well-being of staff, conflict and stress management, psychological support and continuing implementation of the so-called FIT programme. |

Observation of the Discharge Authority	Response and measures taken by the Agency
13. Welcomes the fact that the Agency is using all basic modules of the SYSPER human resources management tool and several optional modules; encourages the Agency to continue the digitalisation of its human resources management system.	eu-LISA uses all basic SYSPER modules and several optional modules. The Agency implemented all the modules in line with the timeline agreed with the Commission (project manager responsible for eu-LISA for the implementation). The relevance of using SYSPER has increased significantly after the SYSPER-NAP transcode. eu-LISA is not going to implement all existing modules due to a difference in the rules of procedure.

Procurement

Observation of the Discharge Authority	Response and measures taken by the Agency
14. Notes the Agency reporting that the Transversal Engineering Framework (TEF), the largest tender ever signed by the Agency, has proven viable for several of its key operational activities, while maximisation of the benefits of transversal procurement through coordination of the inputs of different contractors across several projects remains a goal; observes that in 2021 several important tenders were prepared and contracts were signed, namely regarding the ECRIS-TCN central system, the updated version of the VIS/BMS new test environment, and the assessment of the technology for the future document management system solution.	Starting in 2020, the Agency initiated the transition in the sourcing of the main system development, evolution and maintenance, from vertical sourcing to transversal. This meant that the procurement model inherited from the Commission, which was organised through vertical and end-to-end framework contracts by system (at that time, only SIS II, VIS and Eurodac), was no longer viable when the mandate of the Agency was substantially increased. This transition was completed in 2022, when in addition to the Transversal Engineering Framework (TEF), the second pillar of the transversal procurement was added, with the award of the Transversal Operational Framework (TOF). The transition from the vertical procurement model is providing the expected benefits, mainly: ▪ reduction of vendor lock-in, ▪ economies of scale (especially for infrastructure), ▪ contractual vehicles for implementing interoperability, with the corresponding synergies between systems, ▪ cost reductions for the contracts which are preceded by a reopening of competition, ▪ substantial expansion of the pool of vendors, with the corresponding reduction of overdependence risks.
15. Highlights ECA's qualified opinion on the legality and regularity of payments due to the irregularity of six payments made in 2021 for a total of €18,11 million in connection with several framework contracts, representing 6,20 % of the payment appropriations available in 2021; notes with concern that 2021 is the second year in a row for which ECA issued a similar qualified opinion regarding eu-LISA's procurement and contract management; notes that, according to eu-LISA, compliance in this area is affected by several factors linked to operational and budgetary planning, the sourcing model, managing contractual evolutions and insufficient staffing which restrict the possibility to limit the scope, duration and value of contracts; highlights that given the additions and updates to the large scale IT systems managed, the Agency had transitioned from vertical to transversal sourcing, rendering the initial vertical procurement model inherited from the Commission no longer viable; notes that the main reasons behind this transition related to reducing vendor lock-in and achieving economies of scale or reducing costs.	eu-LISA's action plan 'Follow-up to the ECA audit on Agency´s 2021 Accounts' includes the following actions addressing part of this observation: 1. Include additional checks in the procurement and contract management guidelines to capture any potential deviation from the underlying framework contract, and tender procedure is documented and subject to an exception procedure, and/or requires a prior framework contract amendment. 2. Include in the asset management policy a control to correctly baseline maintenance and insurance contracts and implement the corresponding procedures and checks. The control should be linked to the inventory stock-taking process used for financial offers that have been defined in the TOF context. 3. Perform an ex-post examination of the case where delivery dates were informally amended to establish the nature of the error and take appropriate measures.
16. Highlights ECA's observations concerning a specific contract of €40 million to implement a framework contract related to large-scale IT systems that the Agency signed without specifying the details of the services acquired; notes from the Agency's explanations that the rapid pace of evolution in technology requires enhanced flexibility in the field of IT procurement; points out that the framework contracts drafted by the Agency require a large degree of flexibility in order to adapt not only to technological evolutions, but also to legislative changes such as establishing new or adapting existing large-scale IT systems managed by the Agency; underlines that repeated delays in the adoption and implementation of relevant legal acts, aspects completely outside of the Agency's control, are key factors in determining the level of detail and precision that the Agency is able to offer when initially establishing framework contracts; further notes the information from the Agency that its procurement policies and practices have improved over the last several years, but that it has little impact on older ongoing contracts; calls on the Agency to take stock of the experience gained and of the insights provided by the Court in order to guarantee lasting improvements in this area; supports the Agency in its endeavour to adopt a comprehensive set of procurement guidelines and its first contract management policy and calls on the Agency to provide the discharge authority with such	To address this part of the observation, eu-LISA's action plan includes the following: 1. To address the budgetary planning issues identified by ECA: ▪ define a minimum set of documentation required for consultations on legislative financial statements (LFS) and set the basis for the corresponding internal planning, ▪ update financial MoU with the Commission to include mandatory systematic preliminary consultations on LFS. 2. Review procurement guidelines & corresponding checks to: ▪ limit to a minimum generic Quoted Time and Means (QTM) (implementation mode of SC19) contract modality in time and precision of scope and deliverables, ▪ whenever feasible and not requiring additional staff to perform the controls, review the way controls are documented, introducing for example checklists in addition to those already existing. 3. Perform a risk assessment and cost-benefit analysis to determine what organisational set-up, staffing levels, and intensity of controls would minimise risk in the compliance area.

Observation of the Discharge Authority	Response and measures taken by the Agency
documents once approved; calls on the Agency, ECA and the Commission to explore possible solutions towards enhancing procurement flexibility and adaptability for the efficient implementation of the Agency's mandate.	4. Amend signed contract (SC) 19 VIS to create a clear legal basis for the RAO to approve payments in line with Article 73(3) AFR, by including the service requests still active. 5. Revise the demand management processes to ensure eu-LISA's readiness with the technical, financial and human resource requirements when it is entrusted with new tasks.
17. Notes eu-LISA's position that the formal irregularities identified by ECA did not result in any financial prejudice to the EU's budget.	eu-LISA takes note of the observation.
18. Highlights that in 2021, 759 legal commitments were signed by eu-LISA; notes that eu-LISA employs 14 procurement staff members (11 officers and 3 assistants); highlights that the Agency does not dispose of an appropriate level graded post in order to organise a fully operational procurement unit; calls on the Commission to take into consideration these needs when determining the availability of resources in future establishment plans.	eu-LISA takes note of the observation.

Prevention and management of conflicts of interest, ethics and transparency

19. Acknowledges the Agency's existing measures and ongoing efforts to secure transparency, prevention and management of conflicts of interest, and the protection of whistleblowers; welcomes the fact that in 2021 the Agency revised and adopted its guidelines on whistleblowing to introduce eu-LISA's Internal Audit Capability to the role of providing confidential and impartial guidance on the whistleblowing rules.	In June 2018, eu-LISA adopted the Commission's model decision on implementing rules laying down guidelines on whistleblowing, revised in March 2022. Under these guidelines, a staff member may use any of the following safe channels: ■ staff member's line manager or the ED (first option), ■ the Chair of the Board or directly to OLAF (second option), ■ the President of either the Commission, the Council, the Parliament or ECA, or the Ombudsman (as last resort). In addition, for an initial confidential and impartial consultation and guidance on the whistleblowing procedure, a staff member has the option to address either the Internal Audit Capability (IAC) or to anonymously access OLAF's web-based fraud notification system. In 2021, one staff awareness session was organised on whistleblowing within the regular annual training on ethics, integrity and conflict of interest.
20. Notes with appreciation that the Agency publishes yearly the declarations of interest and the CVs of the members of its management board and its senior management on its website; welcomes the fact that the Agency has established a transparency register whereby meetings between its senior management and economic operators are published on its website.	Pursuant to the eu-LISA rules on the prevention and management of conflict of interest, the Management Board members are required yearly to fill in a declaration of interest and an annual public statement of commitment. Senior management is required to submit the declaration of interest annually (or any time when the situation changes), in compliance with the implementing rules on the prevention and management of conflicts of interests of eu-LISA staff (Management Board decision No 2020–405 of 23.12.2020). The implementing rules foresee specific provisions for the Executive Director and the Deputy Executive Director. The declarations are made available on eu-LISA´s website.

Internal control

21. Notes that, in 2018, EDPS conducted a data protection audit of SIS II and VIS, and in 2019 an inspection of Eurodac, all operated and managed by eu-LISA, issuing a total of 72 recommendations; notes that eu-LISA has been implementing those recommendations and that it organises quarterly follow-ups to monitor the progress of their implementation; encourages the Agency to keep its activities regarding data protection high on its agenda; calls on the Agency to report to the discharge authority about the progress made in the implementation of those recommendations.	eu-LISA takes note of the observation.
22. Welcomes eu-LISA's annual assessment of its ICF that concluded that its internal control system is present, functioning and effective, although some improvements are needed; further welcomes the progress made regarding ECA's observations and Parliament's discharge resolutions from previous years and the fact that eu-LISA has implemented ECA's recommendations from 2018 and 2019 concerning non-compliance with public procurement rules; recalls that work with regard to two remaining observations is still ongoing; calls on eu-LISA to step up its efforts to implement corrective measures regarding ECA's outstanding observations.	eu-LISA takes note of the observation. In 2022, the Board's Audit, Compliance and Finance Committee (ACFC) reinforced the monitoring of the implementation of ECA's outstanding observations. Recently, the Agency put in place a specific action plan to address ECA's observations. The ACFC has closely monitored the progress in implementing it to ensure swift and complete implementation.

Observation of the Discharge Authority	Response and measures taken by the Agency
23. Notes that at the end of 2021, the implementation rate of audit recommendations was 77 % (24 recommendations implemented and 37 due); notes that in total 32 recommendations were open at the end of 2021, out of which none were 'critical'; notes with concern that 7 recommendations were past the due date, meaning that the implementation of the recommendation was ongoing though the deadline for implementation had lapsed; calls on the Agency to implement the outstanding recommendations without further delay and to report to the discharge authority about the progress made; considers that the findings of OLAF report OC-2020-0441-A2 should be made available to the discharge authority; further calls on the Agency to provide the discharge authority with a report on the implementation of the recommendations from OLAF.	eu-LISA takes note of the observation. In 2022, the Management Board's ACFC reinforced the monitoring of the implementation of outstanding audit recommendations to ensure their swift and complete implementation.

Digitalisation and the green transition

24. Commends eu-LISA for its various measures to improve energy efficiency, from the use of green electricity and recycled paper only to heating the building in Tallinn through the reuse of heat from the server room; calls on the Agency to accelerate the procedures for certification under the Union's Eco-Management and Audit Scheme (EMAS); further calls on the Agency to provide the discharge authority with the Agency's latest environmental statement reports.	eu-LISA takes note of the observation.
25. Notes eu-LISA's additional measures taken in 2021 in the area of cybersecurity, such as the adoption of 6 standards on the matter and the initiation of the establishment of a computer security incident response team, as well as its continuous cooperation with the Computer Emergency Response Team for the EU institutions, bodies and agencies (CERT-EU) and the implementation of a structured IT security risk management and control framework; notes that in 2021 eu-LISA collaborated with ENISA (EU Agency for Cybersecurity) on the practical implementation of EU's cybersecurity legislation and its annual cybersecurity exercise; calls on eu-LISA to adopt new tools in the areas of budget and procurement digitalisation, e.g., e-signature, e-contracts and e-invoicing.	Concerning the core business systems, the Agency did not experience cyberattacks on the central systems in the past years. Nonetheless, eu-LISA kept enforcing measures derived from legal instruments along with consolidated risk management processes to ensure the effectiveness of response mechanisms to counter cyberattacks. This requires the availability of cybersecurity capability at the edge despite the challenges arising from COVID-19 and hybrid threats generated by Russia's war of aggression against Ukraine, all in an evolving security threat landscape. The Agency regularly runs security exercises as planned, with the involvement of MS, to test key resilience elements from an end-to-end viewpoint.

Business continuity during the COVID-19 crisis

26. Commends the Agency for its ability to ensure the uninterrupted availability and resilience of the systems under its management and the normal functioning of the Schengen area, despite the challenges caused by the COVID-19 pandemic that continued in 2021; notes in this context, nevertheless, that implementation schedules regarding the development of the new systems were revised due to hardware unavailability, delays in equipment delivery and installation, and less frequent on-site presence of staff and contractors.	As a legal requirement, the Agency's main priority is to ensure the uninterrupted availability of the systems for all users. This was achieved despite the COVID-19 pandemic and changes to the geopolitical context, where the supply chain was one of the key impacted elements with limited availability of technical components necessary for eu-LISA's day-to-day operations. Despite such known difficulties, the Agency and its staff extended maximum effort to guarantee that all systems entrusted to eu-LISA remained available to users at all times – a commendable achievement, confirmed by the excellent results of KPIs: central system availability and response times.
27. Commends the Agency for its cooperation with other Union institutions, bodies, offices and agencies in the exchange of knowledge and best practices in matters related to business continuity; further commends the Agency for its participation in the initiatives of the Inter-Institutional Security Training and Awareness Group and the JHA Security Officers Network (SON) to tackle common security matters.	eu-LISA kept running two SON meetings per year as an indicator of high interest and commitment from MS authorities and their security functions, all aimed at ensuring proper protection of the core business systems. Equally, the Agency is developing the security incident response capability under the interoperability framework (Cooperation Group), which will enhance the cooperation at the operational level with an international response capable on a 24/7 basis.

Other

28. Welcomes the Agency's active online presence in 2021 and notes the improvement of its social media metrics; commends the Agency for its contribution to online external campaigns (e.g., 'Digital EU' and 'Women in Tech') and for organising events with good outreach, e.g., eu-LISA annual conference and industry roundtables.	eu-LISA takes note of the observation.
29. Refers, for other observations of a cross-cutting nature accompanying its decision on discharge, to its resolution of 10 May 2023[3] on the performance, financial management and control of the agencies.	eu-LISA takes note of the observation.

2.11. Environment management

Following the endorsement of the Environmental Policy in 2022, the Agency is committed to putting in place an internal environmental management system (EMS), in compliance with the EU Eco-Management and Audit Scheme (EMAS), and is working to obtain EMAS certification by 2024. This will ensure that eu-LISA's activities are in alignment with the European Green Deal initiative to reduce CO_2 emissions in all business areas.[148]

In 2022, the Agency prepared an environmental statement report for 2021, detailing objectives, monitoring and progress. The report includes a summary table outlining the sources of environmental impacts, action plans, and performance indicators for all environment-related aspects. The environmental statement report for 2022 is under preparation.

2.12. Assessment by Management

The Agency's management has reasonable assurance that the internal controls put in place are appropriate and functioning as intended. In 2022, major risks were identified and managed, as further confirmed by the results of both internal and external audits performed throughout the year.

2.13. External evaluation

According to Article 39 of the eu-LISA Establishing Regulation, the Agency must undergo a **performance evaluation every five years**, with the next evaluation scheduled for 2023. The Commission's evaluation will consider the Agency's performance against its mandate, objectives, locations and tasks. The evaluation also assesses how successfully the Agency contributes and adds value to the operational management of large-scale IT systems and how it has succeeded in establishing a coordinated, cost-effective and coherent IT environment for the EU's JHA information systems.

To prepare for the Agency's forthcoming external evaluation, eu-LISA undertook an **independent benchmarking exercise** in 2022 to evaluate the operational management of its core business systems. To gain a comprehensive overview of operational performance, the Agency also assessed its development practices, the sourcing strategy and available human resources, as well as eu-LISA's contribution to implementing relevant EU policies. Due to the extensive scope of the exercise, the final evaluation report will be ready by mid-2023.

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[148] More information on the European Green Deal available on: https://europa.eu/!wn4N99

ASSESSMENT OF THE EFFECTIVENESS OF THE ICF

3

The effectiveness of the internal control framework (ICF) and major corporate risks for the reporting period.

Assessment of the effectiveness of the ICF

3.1. Effectiveness of the Internal Control Framework

3.1.1. Methodology

Internal control systems help organisations achieve their objectives while sustaining operational and financial performance in compliance with relevant rules and regulations. A well-functioning internal control system supports sound decision-making and helps reduce risks to acceptable levels through cost-effective controls. In 2019, the eu-LISA Management Board tasked the Executive Director with implementing an Internal Control Framework (ICF) in compliance with the principles and characteristics adopted by the Board.[149]

The Agency's ICF comprises the following five components: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities. For effective internal control over operations, these five interrelated components must be present and function well at all levels of the organisation. The ICF further specifies the underlying principles for each component and related characteristics of each principle that are defined to consider the specific governance arrangements established in the Agency. These internal control principles and characteristics constitute the minimum standards set in Article 45(2) of the eu-LISA Financial Rules.[150]

To ensure the effectiveness of the internal control system, the Executive Director is mandated to conduct an annual assessment of the effectiveness of the ICF. The Agency's Deputy Executive Director was appointed as the Risk Management and Internal Control (MRMIC) manager to support setting up, monitoring, implementing, assessing and reporting eu-LISA's ICF. In 2022, the role of MIRMIC was temporarily delegated to the Head of Governance and Capabilities Unit from 1 November 2022 to 16 March 2023 due to the currently appointed MRMIC, the Deputy Executive Director, concurrently assuming the role of the Executive Director until the new Executive Director took up her office (see section 2.2.4).

The annual assessment of the ICF comprises establishing monitoring criteria for each internal control principle, the identification of strengths and areas of improvement, assessing at principle and component levels, and an overall assessment. The indicators for each ICF principle, their baselines and targets are defined in Annex 2 to the Decision of the Executive Director on the Adoption of Internal Control Monitoring Criteria and the appointment of the MRMIC. To conduct the assessment, the MRMIC collects and analyses data based on pre-defined monitoring criteria from various data sources in the Agency, including the staff survey, the register of exceptions and non-compliance events, internal and external audit reports, and other documentation of the Agency's business processes.

3.1.2. Assessment Results

Internal control monitoring criteria

The self-assessment resulted in 81% of internal control monitoring criteria <u>achieved or partially achieved</u> in 2023, as in 2022.

Internal control monitoring criteria	2022	2023
Total number of indicators	**79**	**79**
Achieved	55 (70%)	56 (71%)
Partially achieved	9 (11%)	8 (10%)
Not achieved	15 (19%)	15 (19%)
Not available	0 (0%)	0 (0%)

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[149] eu-LISA Management Board decision No 2019-042 of 19.03.2019 on the adoption of the revised internal control framework.
[150] **Financial Rules of eu-LISA**, Management Board decision No 2019-198, entry into force: 01 September 2019.

Internal control strengths and deficiencies

In 2022, 21 internal control deficiencies were identified during the annual assessment: 1 major deficiency, 16 moderate deficiencies and 4 minor deficiencies.

Throughout 2022, the Agency conducted various activities to implement remediation plans and remove internal control deficiencies. The risks related to some internal deficiencies increased in 2022, therefore leading to the increase of severity of two deficiencies, in particular:

- 2 moderate deficiencies were closed,
- 1 minor deficiency was closed,
- 1 major deficiency was downgraded to moderate,
- 1 moderate deficiency was downgraded to minor,
- 1 moderate deficiency was upgraded to major,
- 1 minor deficiency was upgraded to moderate.

In the 2023 assessment, one new critical deficiency was identified, leading to a total of 19 internal control deficiencies: 1 critical deficiency, 2 major deficiencies, 14 moderate deficiencies and 2 minor deficiencies.

Deficiencies status in 2022	Deficiencies status in 2023
■ Major ■ Moderate ■ Minor	■ Critical ■ Major ■ Moderate ■ Minor
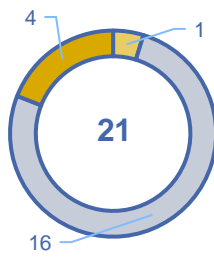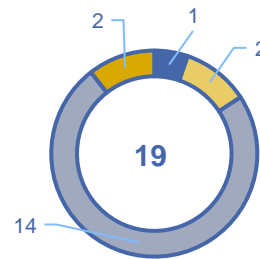
ICF components	Strengths	Deficiencies
I Control environment	■ Oversight of the Management Board and its Audit, Compliance and Finance Committee (ACFC) on internal controls ■ Improved communication and training on ethics and integrity	■ Increase enforcement of accountability
II Risk assessment	■ Preparation of Strategic Goal Roadmap and Strategy Implementation Roadmap ■ Improvements to risk management, in particular, risk identification at unit level ■ Implementation of a transparency register	■ Increase ex-ante controls to better align planning and implementation ■ Lack of standardised approach to risk management in Programme Boards
III Control activities	■ Automation of controls in project management compliance ■ Implementation of audit recommendations ■ Adoption of the contract management policy	■ Internal control weaknesses in EES central system project ■ Preparation of the Control, Risk and Compliance strategy ■ Implementation of specific guidelines for contract management
IV Information and communication	■ Revision of the long-term preservation policy ■ Adoption of guidelines on public access to documents ■ Improved information on separate communication lines	■ No deficiency
V Monitoring activities	■ Participation in the performance development network working group on internal control	■ Strengthen the process of declaration of assurance and assessment of reservations

Assessment of ICF components

I Control environment

The control environment component comprises a set of standards of conduct, processes, and structures that provide the basis for carrying out internal control activities across an organisation. At the management level, the overall tone regarding the importance of internal controls, including expected standards of conduct, is set by the Management Board, the Executive Director, and the rest of the top management.

The control environment component of the ICF is present and functioning, but some improvements are needed (Category 2).

The Agency continued to strengthen its commitment to integrity and ethical values, in particular by launching a new dedicated page on ethics on its intranet, by broadcasting a dedicated video message by the Interim Executive Director, and by revising the internal rules on administrative inquiries. In 2022, the Management Board and the Audit, Compliance and Finance Committee (ACFC) continued to exercise their oversight on the topic of internal control. The Agency ensured that its structure, reporting lines, authorities, and responsibilities were well established and reviewed when and where needed. Despite the Agency's efforts, the staff turnover increased, and the occupancy rate dropped, in particular, due to the number of short-term and lower-grade posts that eu-LISA has to offer. The Agency also identified the need to reinforce individual accountability for internal control responsibilities.

Principle	Assessment
1. Demonstrates commitment to integrity and ethical values	The principle is present and functioning well (category 1).
2. Exercises oversight responsibility	The principle is present and functioning well (category 1).
3. Establishes structure, authority and responsibility	The principle is present and functioning well (category 1).
4. Demonstrates commitment to competence	The principle is present and functioning well (category 1).
5. Enforces accountability	The principle is present and functioning, but some improvements are needed (category 2).

II Risk assessment

Risk assessment is a dynamic and iterative process for identifying and assessing risks that could affect the achievement of objectives and for determining how such risks should be managed.

The risk assessment component of the ICF is present and functioning, but some improvements are needed (Category 2).

Following the adoption of eu-LISA's long-term strategy for 2021-2027, in November 2021, the Agency prepared a Strategy Implementation Roadmap, mapping the strategic goals and the strategic objectives with the activity areas and the main deliverables for the period 2021–2027. The reporting to the different stakeholders continued to be done in accordance with the statutory requirements. In Q2 2023, eu-LISA conducted the monitoring of the delivery of its strategy implementation roadmap for 2021 and 2022, showing that 73% of the deliverables were implemented in time, 25% postponed to the following year and 2% cancelled.

The Agency continued to improve its approach to risk tolerance and materiality of programmes, in particular by revising the rules of procedures of Programme Boards. Progress continued to be registered in the identifications of risks at unit level, using the Planview tool. By the end of 2021, eu-LISA achieved an implementation rate of 92 % for its Anti-Fraud Strategy, covering the period from March 2019 to December 2021. Following a dedicated fraud risk assessment exercise, the new Anti-Fraud Strategy 2022-2024 was prepared and adopted by the Management Board, together with an implementing action plan identifying 12 actions. In 2022, the Agency underwent important changes related to leadership positions, in particular, a change of Executive Director and Accounting Officer. The changes were identified in advance, and interim solutions were established to ensure the continuity of the two functions.

Principle	Assessment
6. Specifies suitable objectives	The principle is present and functioning, but some improvements are needed (category 2).
7. Identifies and analyses risk	The principle is present and functioning well (category 1).
8. Assesses fraud risk	The principle is present and functioning well (category 1).
9. Identifies and analyses significant changes	The principle is present and functioning, but some improvements are needed (category 2).

III Control activities

Control activities ensure the mitigation of risks related to the achievement of policies, operational and internal control objectives. They are performed at all levels of the organisation, at various stages of business processes, and across the technology environment. They may be preventive or detective, and they encompass a range of manual and automated activities, as well as segregation of duties.

The control activities component of the ICF is partially present and functioning; however, major improvements are needed (category 3).

The 2023 assessment of the control activities component concluded that the component is partially present and functioning, and as a result, was **scaled down from category 2 in 2022 to category 3**. This is largely due to a critical deficiency that was identified by an audit of the EES central system project. The residual risks from deficiencies in control activities remain high, despite the efforts of the Agency in the implementation of remediation action.

Control activities have been carried out at different levels as part of existing processes, procedures and governance mechanisms in the different departments and units. The integration of controls into a strategy is expected to facilitate the assessment of their effectiveness, as well as their costs and benefits, as required by the Financial Rules. The Agency started working on the internal control strategy, which will include a list of the main control activities and processes, as well as their owners, to be finalised by summer 2023. The Agency continued to work on strengthening controls around the compliance to project management methodology, but this remains a high-risk domain, as demonstrated by the results of the IAC audit on the EES central system project. The Agency invested significant efforts in new directive controls in areas such as contract management, procurement and sourcing, as well as for the transition to the horizontal operating model. The Agency continued to increase its control over technology and its controls for IT security, displaying good results. In addition, eu-LISA further strengthened its exception reporting process by organising a biannual review of the register and formalising the follow-up on remediation actions.

Principle	Assessment
10. Selects and develops control activities	The principle is partially present and functioning, major improvements are needed (category 3).
11. Selects and develops general control over technology	The principle is present and functioning well (category 1).
12. Deploys through policies and procedures	The principle is present and functioning, but some improvements are needed (category 2).

IV Information and communication

Information delivered by means of internal and external communication is necessary for any organisation to carry out internal control activities and to support the achievement of objectives. Internal communication provides staff with the information it needs to achieve its objectives and to carry out day-to-day controls, while external communication provides the public and stakeholders with information on the Agency's policy objectives and actions.

The information and communication component is present and functioning well (Category 1).

The Agency's information and communication activities follow well-established procedures and processes that support the achievement of broader organisational objectives. In 2022, eu-LISA continued to strengthen its controls on information management with the revision of its document preservation procedures and long-term preservation policy, while also adopting the guidelines on public access to documents.

The Agency's internal communication was also managed successfully, also addressing Russia's war of aggression against Ukraine. eu-LISA increased the clarity and visibility of its various communication channels available to the staff, including confidential counsellors or whistleblowing. External communication was also conducted in line with the plan, focusing on communication related to internal controls.

Principle	Assessment
13. Uses relevant information	The principle is present and functioning well (category 1).
14. Communicates internally	The principle is present and functioning well (category 1).
15. Communicates externally	The principle is present and functioning well (category 1).

V Monitoring activities

In order to ascertain whether each of the five ICF components is present and functioning, the Agency engages in continuous and specific assessments. Continuous assessments, built into processes at different levels of the organisation, provide timely information on any deficiencies. As a result, findings are regularly assessed, and deficiencies are communicated and corrected in a timely manner.

The monitoring activities component is present and functioning, although some improvements are needed (category 2).

The Agency continued to strengthen the monitoring and assessments of its internal controls. They are based on self-assessments by staff within their area of responsibility, on reporting activities, on the analysis of exceptions and non-compliance events, on the implementation of the anti-fraud strategy, on audits, both internal and external, and on the corporate risk register.

Principle	Assessment
16. Conducts ongoing and/or separate assessments	The principle is present and functioning well (category 1).
17. Assesses and communicates deficiencies	The principle is present and functioning, but some improvements are needed (category 2).

3.1.3. Major corporate risks

In the first quarter of 2022, the Corporate Risks/Issues Management process evolved from an annual exercise into a **continuous approach** for collecting and monitoring corporate items. To that end, the Agency clarified the impact and probability criteria. The managers in charge of Risk Management and Internal Control validated improved criteria to standardise and automatically qualify potential corporate-level items. Additionally, to address the 2021 ICF assessment findings, **risks and issues registers** were created at the Unit level.

The Agency quarterly presents the status of its **corporate risks and issues** to the Management Committee, and in 2022, the Agency submitted the reviews in April, July, and October.

During the year, the Agency closed two risks, demoted five and identified six new risks at the corporate level. The Agency also proposed three items for the peer-review risk assessment exercise conducted by the EU Agency Network (see below risks 2017-01, 2020-06 and 2020-07).

Table 12. Corporate risks as at December 2022

Risk ID	Corporate Risk Title	Probability	Impact	Owner and other contributors
2017-01	Targeted and successful external cyber-attack on the eu-LISA infrastructure.	3 – High	4 – Very High	Head of Security Unit
2018-01	Measures already taken might not be sufficient to ensure that the sizing of the data centre capacity will enable the Agency to host new systems.	3 – High	4 – Very High	Head of Infrastructure Management Unit and Head of Corporate Services Department

2018–06	Breach of confidentiality: accidental public exposure of sensitive data when responding to requests for public information.	3 – High	4 – Very High	Head of Security Unit
2019–05	Lack of physical space available on time to accommodate crucial needs of the Agency.	3 – High	4 – Very High	Head of Corporate Services Department and Head of Corporate Services Unit, Head of HR Unit
2019–08	Technical support model and capacity: the significant increase of requests addressed to the Agency's technical support functions after the entry into operation of new systems may lead to severe degradation of the technical support for new and existing systems	3 – High	4 – Very High	Head of Systems Operations Unit and Head of Security Unit, Head of HR Unit
2020-01	Insufficient legal checks	3 – High	4 – Very High	Head of Operations Department and Head of Corporate Services Department
2020-04	Operational level agreements – coordination of efforts in the same project/for the same system between multiple contractors in the transversal contract ecosystem	3 – High	4 – Very High	Head of Programme and Project Delivery Unit / Vendor and Contract Management Sector and Finances Unit
2020-06	Challenge to hire resources aligned with Agency's needs – risk of not finding the 'right fit' for eu-LISA	3 – High	4 – Very High	Head of Human Resources Unit
2020-07	Slow cultural transformation, change in leadership	4 – Very High	3 – High	Head of Human Resources Unit / Talent Mgmt Sector
2020-08	Maintenance in working order contracts are not efficient enough for end-of-lifecycle hardware and software	3 – High	4 – Very High	Head of Planning and Standards Unit and Head of Infrastructure Management Unit
2020-09	Insufficient enforcement of the existing Quality Management System might prevent it from being, as expected, a key enabling factor for the Agency to achieve its strategic objectives	3 – High	4 – Very High	EPMO Sector and Governance and Capabilities Unit
2020-10	Insufficient integration of stakeholders within the collaboration model required by the Transversal Procurement approach	3 – High	4 – Very High	Head of Programme and Project Delivery Unit / Vendor and Contract Mgmt Sector and Test and Transition Unit
2021-02	Accurate, complete and updated System documentation is not kept in a central repository administered by eu-LISA.	3 - High	4 – Very High	Planning and Standards Unit and Programme and Project Delivery Unit
2022-01	TESTA-ng III framework contract might expire before the completion of migration to FPEN	4 – Very High	4 – Very High	Head of Infrastructure Management Unit
2022-02	People (eu-LISA staff and contractors) might be exposed to high-level electromagnetic fields in the data centre basement	3- High	4 – Very High	Head of Operations Department and Head of Corporate Services Department
2022-04	Insufficient resources for the management of external support contracts	3 – High	4 – Very High	Head of Corporate Services Department
2022-05	Failure to forecast budget for CSI maintenance	4 – Very High	4 – Very High	Head of Corporate Services Department and Head of Operations Department
2022-06	Despite 50% ceiling increase, the external support Lot 4 'Administrative Support for the eu-LISA headquarters in Tallinn' may be insufficient before its expiration in November 2023 (based on current consumption patterns)	4 – Very High	4 - Very High	Head of Corporate Services Department
2022-07	Due to Russia's war of aggression against Ukraine, the geopolitical situation in Europe has increased the risks for the EU institutions, bodies and agencies. For eu-LISA, the main risks are related to possible cyber-attacks and physical security of the sites.	3- High	4 - Very High	Head of Security Unit and Executive Director

3.1.4. Implementation of the Anti-Fraud Strategy Action Plan for 2022[151]

The Anti-fraud Strategy of the Agency for the period 2022–2024 has three strategic objectives:

- achieve full compliance with anti-fraud principles,
- set and maintain a high level of ethics in all activities of eu-LISA,
- develop and use data collection and analysis.

The regular monitoring of the status of implementing the Anti-fraud Strategy 2022-2024 action plan indicated that none of the fraud risks materialised in 2022. The action plan comprises 13 actions, each aimed at mitigating one or several fraud risks. In December 2022, the results of the monitoring exercise showed that the Agency implemented seven out of ten actions due (three actions are 'ongoing' within the deadline), thus the implementation rate stood at 70%.

The overall quantitative implementation of the Action Plan to the Anti-fraud Strategy of eu-LISA in 2022 appears sufficient for the year 2022. However, the action owners will intensify the efforts needed to achieve full implementation in the upcoming years.

3.2. Conclusions of the assessment of the effectiveness of the ICF

Overall, the assessment results indicate that **eu-LISA's internal control system is present, functioning and effective, but some improvements are needed (category 2).**

The result of the assessment shows that eu-LISA has a well-established control environment, composed of a set of standards of conduct, processes and structures, which provides the basis for carrying out internal controls. The Agency continuously reviews and updates its control environment to increase its effectiveness and efficiency. The Agency ensured that its structure, reporting lines, authorities and responsibilities were well established and reviewed when and where needed. Despite eu-LISA's efforts, the staff turnover increased and the occupancy rate dropped, mainly due to the number of short-term and lower-grade posts that eu-LISA offers. The need to reinforce individual accountability for internal control responsibilities was also identified.

Overall, eu-LISA can rely on its strategy and risk assessment processes to effectively specify its objectives, as well as identify and analyse risks. Following the adoption of eu-LISA's long-term strategy for 2021-2027 in November 2021, the Agency prepared the Strategy Implementation Roadmap, mapping the strategic goals and the strategic objectives with the activity areas and the main deliverables expected for the period. The Agency continued to improve its approach on risk tolerance and materiality of programmes, incl. revising the rules of procedure of Programme Boards. Progress continued to be registered in the identification of risks at unit level, using the Planview tool. The Management Board adopted the new Anti-Fraud Strategy for 2022-2024, together with an action plan identifying 12 actions. In 2022, eu-LISA experienced important changes in leadership positions, in particular, a change of Executive Director and Accounting Officer. The changes were prepared in advance, and interim solutions were established to ensure the continuity of the two functions.

The 2023 assessment of the control activities component concluded that the component is partially present and functioning, and as a result, lowered from category 2 in 2022 to category 3. This is largely due to a critical deficiency that was identified from a critical result of the EES central system project. The residual risks from deficiencies in control activities remain high, despite the efforts of the Agency in the implementation of remediation action. Control activities have been carried out at different levels as part of existing processes, procedures and governance mechanisms in the different departments and units. The Agency invested significant effort in new directive controls in areas such as contract management, procurement and sourcing, as well as for the transition to the horizontal operating model. The Agency continued to increase its control over technology and its controls for IT security, displaying good results. Additionally, eu-LISA further strengthened the reporting process for exceptions by organising a biannual review of the register, and formalising the follow-up on remediation actions.

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[151] IAC Monitoring Report on the implementation of the Anti-fraud Strategy action plan for 2022, ref. Ares(2023)523216 - 24/01/2023.

The Agency's information and communication activities follow well-established procedures and processes that support the achievement of broader organisational objectives. In 2022, eu-LISA continued to strengthen its controls on information management with the revision of its document preservation procedures and long-term preservation policy, while also adopting the guidelines on public access to documents. eu-LISA continued to manage its internal communication successfully, also addressing Russia's war of aggression against Ukraine. eu-LISA increased the clarity and visibility of the separate communication channels available to the staff, e.g., confidential counsellors and whistleblowing. External communication was also conducted in line with the plan, and the Agency progressed on the communication related to internal controls.

The Agency continued to strengthen the monitoring and assessments of its internal controls. They are based on self-assessments by staff within their area of responsibility, on reporting activities, on the analysis of exceptions and non-compliance events, on the implementation of the anti-fraud strategy, on audits, both internal and external, and on the corporate risk register.

3.3. Statement of the Manager in charge of Risk Management and Internal Control

I, the undersigned,

the Manager in charge of risk management and internal control at the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA),

in my capacity as the Manager in charge of risk management and internal control, I declare that in compliance with eu-LISA's Internal Control Framework, I have reported my advice and recommendations on the overall state of internal control in the Agency to the Executive Director.

I hereby certify that the information provided in this Consolidated Annual Activity Report and its annexes is, to the best of my knowledge, accurate, reliable and complete.

Luca Tagliaretti

MANAGEMENT ASSURANCE

4

Declarations of assurance.

Management assurance

4.1. Review of the elements supporting assurance

This section provides an overview of the building blocks underpinning the reasonable assurance given by the Authorising Officer via their declaration of assurance in the annual activity report. The Agency's building blocks of assurance are summarised as follows:

↘ Building block 1: Assessment by the management

Assessment by the Management. The Agency's management is reasonably confident that, overall, suitable controls are in place and that they are functioning as intended. Additionally, risks are being monitored and mitigated appropriately, and various improvements and reinforcements are implemented as necessary.

Furthermore, eu-LISA's management recognises the need to maintain the effectiveness of its internal control framework, and to ensure monitoring and assessment of its implementation for the purposes of ensuring the achievement of the Agency's objectives as set out in the establishing Regulation and long-term strategy.

Register of exceptions and non-compliance events. The formal procedure was established in 2013 and the respective guidelines were developed in 2021. The procedure lays down appropriate measures for ensuring that any exceptional cases of overriding controls or deviations from the established regulatory framework are thoroughly explained, registered and reported in accordance with the principle of transparency. All exceptions and non-compliance events must be documented and registered, and all exceptions must be approved at the appropriate level before any action is taken. According to eu-LISA guidelines, the management is tasked with following up on all reported cases twice a year via a dedicated analytical report.

In 2022, altogether 21 exceptions and 10 non-compliance events were registered by eu-LISA. All registered cases, as well as the corrective and mitigating actions, were analysed and reviewed by the Agency's management in Q3 2022 and Q1 2023, resulting in improvement actions to minimise their occurrence. These analyses were also used to identify deficiencies for the ICF effectiveness assessment.

↘ Building block 2: Results of external audits

The European Court of Auditors (ECA) issued the following statement of assurance to the European Parliament and the Council:

Opinion on the reliability of the accounts: In ECA's opinion, the accounts of the Agency for the year ended 31 December 2021 present fairly, in all material respects, the financial position of the Agency at 31 December 2021, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in compliance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

Opinion on the legality and regularity of revenue underlying the accounts: In ECA's opinion, the revenues underlying the accounts for the year ended 31 December 2021 are legal and regular in all material respects.

Opinion on the legality and regularity of payments underlying the accounts: Concerning the payments, ECA identified a total amount of payments of 18,11 million euros affected by non-compliance, representing 6.2 % of the payment appropriations available in 2021, thus exceeding the materiality threshold set for the audit and resulting in a qualified opinion on the legality and regularity of payments underlying the accounts.

↘ Building block 3: Follow-up on reservations from previous reporting periods

The declaration of assurance provided by the Authorising Officer in the Consolidated Annual Activity Report for 2021 did not contain any reservations.

4.1.1. **Conclusion**

Based on information provided in chapter 3 of this report, it can be concluded that there are no significant weaknesses in internal controls that might have an impact on the declaration of assurance.

4.2. **Reservations**

Based on the information provided above, the Authorising Officer issued the following reservations in relation to the management's declaration of assurance for 2022:

- the entry into operation of the renewed SIS was postponed from November 2022 to March 2023,

- eu-LISA Management Board concluded in January 2023 that the entry into operation of the Entry/Exit System in May 2023 was no longer feasible. This delay also postponed the entry into operation of sBMS,

- in consideration of the observations stemming from internal and external audits, controls weaknesses exist in the context of operational programmes and projects affecting the regularity of procurement and contract management activities performed in the financial year 2022,

- the litigation process with the building contractor (related to the first extension of eu-LISA's technical site in Strasbourg) which continued in front of the Court (2nd instance) in Strasbourg, was closed in the beginning of 2023 (out-of-court mediation and signature of bilateral agreement imminent).

DECLARATION
OF ASSURANCE

5

Declaration of assurance

I, the undersigned,

the Executive Director of the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA),

In my capacity as Authorising Officer,

declare that the information contained in this report gives a true and fair view.

I further state that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls (i.e., the audits of the Internal Audit Service of the European Commission, the audits of eu-LISA's Internal Audit Capability, and the audits of the European Court of Auditors) for the years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the Agency or its stakeholders.

However, the following reservations should be noted:

- The eu-LISA Management Board concluded in January 2023 that the entry into operation of the Entry/Exit System in May 2023 was no longer feasible. The delay of the EES programme also postponed the entry into operation of the sBMS. A new and more realistic timeline is currently under discussion with the Agency's stakeholders, including the European Commission and the Council. The extended timeline for the entry into operation is likely to impact the resources, both human and financial, required to complete the development.

- Driven by its fast-paced growth trajectory, the Agency is developing a set of complex and intricate systems. It is evolving in a dynamic environment that requires agility, while at the same time also calling for full compliance with the EU rules. This creates a particularly challenging context.

- In support of this dynamic evolution, eu-LISA has increasingly put more effort into further strengthening its internal control systems and capabilities and will continue to do so. In 2023, the Agency will further pursue these efforts as priority initiatives to achieve material progress in the areas where improvements are needed, as highlighted in the 2023 annual internal controls framework report and audits, in particular in the areas of contract management for operational programmes and projects.

I should also emphasise that I took up the role of eu-LISA's Executive Director on 16 March 2023.

[Qualified electronic signature]

6

ANNEXES

Annexes provide a more detailed overview of utilising resources while ensuring additional transparency regarding the Agency's work and operations.

Annex I. **Core business statistics**

Operational management of JHA information systems

System availability

No	Corporate KPI	Target	2020	2021	2022	Status
3	Eurodac central system availability					
		green ≥ 99.99 % 99.99 %> amber ≥ 99.50 % red <99.50 %		99.80 %	99.88 %	**Achieved**
6	SIS central system availability					
		green ≥ 99.99 % 99.99 %> amber ≥ 99.50 % red <99.50 %		99.98 %	99.94 %	**Achieved**
8	VIS central system availability					
		green ≥ 99.99 % 99.99 %> amber ≥ 99.50 % red <99.50 %		99.98 %	99.69 %	**Achieved**

Response time

No	Corporate KPI	Target	2020	2021	2022	Status
4	Eurodac central system response time					
		green ≥ 99.45 % 99.45 %> amber ≥ 90 % red < 90 %		100.00 %	99.99 %	**Achieved**
7	SIS central system response time					
		green ≥ 99.5 % 99.5 %> amber ≥ 99 % red <99 %		99.85 %	98.98 %	**Not achieved**
9	VIS central system response time					
		green = 100 % 100 %> amber ≥ 90 % red <90 %		99.90 %	99.70 %	**Achieved**

Communication infrastructure availability

No	Corporate KPI	Target	2020	2021	2022	Status
5	Wide Area Network (WAN) availability (for SIS and VIS)					
		green ≥ 99.99 % 99.99 %> amber ≥ 99.50 % red <99.50 %		99.9988 %	99.9984 %	**Achieved**

Operational support and training

No	Corporate KPI	Target	2020	2021	2022	Status
16	**Training for Member States on JHA systems**					
	satisfaction rate (scale 1-6)	average > 4	4.5	5.4	5.4	**Achieved**
19	**Customer satisfaction: % of end-users satisfied or very satisfied with the overall operation of JHA systems**					
		≥ 80 %		95%	97%	**Achieved**
20	**eu-LISA Service Desk performance**					
		≥ 75 %		95.00%	82.37%	**Achieved**

Security

No	Corporate KPI	Target	2020	2021	2022	Status
1	**Percentage of security objectives implemented (as defined per the legislation)**					
		100 %	100 %	100 %	100 %	**Achieved**
2	**Number of emergency drills, security and business continuity-related exercises performed annually**					
		2	2	2	3	**Achieved** (one per site)

Governance and compliance

No	Corporate KPI	Target	2020	2021	2022	Status
21	**Project assessment: completion evaluated against the baseline of defined quality/cost/time parameters, taking into account the project tolerances**					
		< 10 %	9.19 %	15.75 %	16.59 %	**Not achieved**
22	**Project management: assessing the compliance of completed projects against eu-LISA project management methodology during the project lifecycle**					
	small projects	> 75 %	n/a	20 %	n/a	No small projects in scope
	medium projects	> 80 %	71 %	76.2 %	66 %	**Not achieved**
	large projects	> 85 %	73.5 %	n/a	74 %	**Not achieved**
23	**Audit: (A) Percentage of audit recommendations implemented within stipulated deadlines**					
	Critical	100 %	n/a	n/a	n/a	**Not achieved**
	very important	≥ 90 %	67 %	72 %	63 %	**Not achieved**
	Important	≥ 80 %	60 %	85 %	62 %	**Not achieved**
23	**Audit: (B) Number and age of outstanding audit recommendations**					
	Recommendations past due for less than 6 months	≤ 4	2	3	4	**Partially achieved**
	Recommendations past due between 6 months and 1 year	≤ 2	1	0	0	**Achieved**
	Recommendations past due for more than 1 year	≤ 1	10	6	8	**Not achieved**

Administration and general support

No	Corporate KPI	Target	2020	2021	2022	Status
15	**Environmental indicator: carbon footprint**					
		baseline	341.04 tons	401 tons	570 tons[152]	scope modified
10	**Cancellation rate of payment appropriations**					
		< 5 %	13.60 %	7.00 %	10.6 %	**not achieved**
11	**Rate of budgetary commitments implementation (%)**					
		95-99 %	99.10 %	100.00 %	99.0 % (incl. non-automatic carryover)	**achieved**
12	**Rate of payment implementation (%)**					
		> 95 %	99.00 %	99.00 %	91.6 %	**not achieved**
13	**Ratio of administrative resources vs operational resources compared to all human resources (staff and SNEs) (%)**					
	Administrative	20 %	16.50 %	16.90 %	16.3%	**achieved**
	Operational	70 %	72.50 %	73.20 %	74.7%	**achieved**
14	**Ratio of payments completed within statutory deadlines (%)**					
		> 87.5 %	95.90 %	99.00 %	90.1 %	**achieved**
17	**Efficiency of the procurement process**					
		< 25 %	11 %	21.40 %	9.5	**achieved**
18	**Acquisition management: procurement projects on schedule**					
		> 60 %	163.6 %	80.10 %	140	**achieved**
24	**Annual absenteeism rate:**					
	a) average number of sick days	< 15 days per employee		4.1 days	7.5 days	**achieved**
	b) % of staff on long-term sick leave	< 10 %		3.2 %	4.6 %	**achieved**
	c) % of staff not using sick leave	> 15 %		51.6 %	42 %	**achieved**
25	**Annual staff turnover (%)**					
		≤ 5 %		5.48 %	7.1 %	**not achieved**
26	**Annual occupancy rate (%)**					
		> 94 %		94.2 %	82 %	**not achieved**
27	**Talent retention index**					
		> 0		0.2	0.3	**achieved**
28	**Staff engagement level**					
		≥ 63 %		7.3 (index)[153]	7.3	**achieved**
29	**eu-LISA external communication impact**					
	a) social media	+200 followers per platform per year	LinkedIn: +1888 Twitter: +477 Facebook: +332	YouTube: +37% Twitter: +35% Facebook: +20%	LinkedIn: +42% YouTube: +25% Twitter: +21% Facebook: +15%	**achieved**
	b) satisfaction with engagement events	> 90 %	84 %	80 %	86,3 %	**partially achieved** (due to online engagements)
	c) participation rate	> 95 %	105 %[154]	95 %	95,3 %	**achieved**
30	**eu-LISA internal communication impact (satisfaction survey)**					
	a) participation rate	> 51 %	52 %	55 %	59 %	**achieved**
	b) satisfaction rate (internal channels and activities for staff)	> 70 %	93 %	93 %	91 %	**achieved**

[152] Includes the CO_2 emissions of the temporary office building in Illkirch, Strasbourg, France.
[153] The data collection method was changed. This index equals to 73%.
[154] This is due to the changed format of participation. The baseline was set to in-person participation but due to COVID-19 restrictions the event had to be conducted solely online, allowing for a considerable increase in the number of participants.

Annex II. **Statistics on financial management**

Initial budget, transfers and amending budgets

The table below summarises at chapter level the internal budgetary transfers operated for C1 funds in 2022.

Budget Chapter		Commitment appropriations (in m euros)				Payment appropriations (in m euros)			
		Initial budget	Transfers	Amending budget	Final budget	Initial budget	Transfers	Amending budget	Final budget
A-11	Salaries & allowances	41.25	-4.58		36.67	41.25	-4.58		36.67
A-12	Expenditure related to recruitment	1.06			1.06	1.06			1.06
A-13	Mission Expenses	0.66			0.66	0.66			0.66
A-14	Socio-Medical Infrastructure	2.23	-0.11		2.13	2.23	-0.11		2.13
A-15	Training for Staff	0.60	0.11		0.71		0.60	0.11	0.71
	TITLE 1 - STAFF EXPENDITURE	**45.80**	**-4.58**		**41.22**	**45.80**	**-4.58**		**41.22**
A-20	Expenditure for premises	3.92	0.57		4.49	3.92	0.57		4.49
A-21	Corporate IT & Telecom	4.10	0.00		4.10	4.10	0.00		4.10
A-22	Movable Property and Associated Costs	0.29	-0.11		0.18	0.29	-0.11		0.18
A-23	Current Administrative Expenditure	1.86	-0.55		1.30	1.86	-0.55		1.30
A-24	Postage	0.04	-0.02		0.02	0.04	-0.02		0.02
A-25	Management Board	0.71	-0.20		0.51	0.71	-0.20		0.51
A-26	Information and Publications	0.55	0.85		1.40	0.55	0.85		1.40
A-27	External Support Services	8.35	1.49		9.84	8.35	1.49		9.84
A-28	Security	4.26	-0.61		3.65	4.26	-0.61		3.65
	TITLE 2 - INFRASTRUCTURE and OPERATING EXPENDITURE	**24.07**	**1.42**		**25.49**	**24.07**	**1.42**		**25.49**
B3-0	Infrastructure	101.98	22.99		124.97	90.63	-11.18		79.45
B3-1	Applications	136.74	-18.06		118.68	127.39	15.34		142.73
B3-8	Operational support activities	11.05	-1.77		9.27	8.61	-0.99		7.62
	TITLE 3 - OPERATIONAL EXPENDITURE	**249.77**	**3.16**		**252.93**	**226.64**	**3.16**		**229.80**
	TOTAL	**319.64**	**0.00**		**319.64**	**296.51**	**0.00**		**296.51**

Implementation of eu-LISA budget for 2022 (funding source C1)

As far as the 2022 appropriations (funding source C1) are concerned.

Budget title	Commitments (C1, in million euros)			Payments (C1, in million euros)		
	Budgeted	Consumed	%	Budgeted	Consumed	%
Title 1 – Staff expenditure	**41.22**	**38.03**	**92.3%**	**41.22**	**38.03**	**92.2%**
of which executed		38.03	92.3%		37.36	90.6%
of which automatic carry-forward					0.67	1.6%
Title 2 – Infrastructure and Operating expenditure	**25.49**	**25.49**	**100.0%**	**25.49**	**25.49**	**100.0%**
of which executed		25.49	100%		11.78	46.2%
of which automatic carry-forward					13.71	53.8%
Title 3 – Operational expenditure	**252.93**	**252.93**	**100.0%**	**229.80**	**207.95**	**90.5%**
of which executed		227.78	90.1%		207.95	90.5%
of which non-automatic carryover		25.15	9.9%		-	-
TOTAL	**319.64**	**316.45**	**99.0%**	**296.51**	**271.47**	**91.6%**
of which executed		291.29	91.1%		257.09	86.7%
of which non-automatic carryover and automatic carry-forward		25.15	7.9%		14.368	4.8%

Implementation of the budget from other funding sources

In addition to the budget for the year (funding source C1), the Agency implemented appropriations:

- from internal assigned revenue (funding source C4),[155]
- carry-forward of commitments (differentiated in Title 3 and non-differentiated in Titles 1 and 2 and the corresponding payment appropriations (non-differentiated only) from previous years (source C8),[156]
- from external assigned revenue, as a contribution from the associated countries pursuant to Article 46(3)(b) of eu-LISA's establishing Regulation (funding source R0,[157] Title 3 only).

Budget Title		Fund Source	Commitment			Payment		
			Budgeted (in m euros)	Consumed (in m euros)	%	Budgeted (in m euros)	Consumed* (in m euros)	%
A-1	**Staff expenditure**	C1	41.22	38.03	92.3%	41.22	37.36	90.6%
		C4	0.00	0.00	100%	0.00	0.00	100%
		C8	0.70	0.48	69.0%	0.70	0.48	69.0%
		Subtotal	**41.92**	**38.51**	**91.9%**	**41.92**	**37.85**	**90.3%**
A-2	**Infrastructure and Operating Expenditure**	C1	25.49	25.49	100.0%	25.49	11.78	46.2%
		C4	0.02	0.02	100%	0.02	0.00	20.6%
		C8	11.10	10.08	90.7%	11.10	10.08	90.7%
		Subtotal	**36.61**	**35.58**	**97.2%**	**36.61**	**21.86**	**59.7%**
B0-3	**Operational Expenditure**	C1**	252.93	252.93	100%	229.80	207.95	90.5%
		C8	349.36	348.25	99.7%			
		R0	58.67	0.00	0.0%	58.67	0.00	0.0%
		Subtotal	**660.96**	**601.18**	**91.0%**	**288.47**	**207.95**	**72.1%**
TOTAL			**739.49**	**675.28**	**91.3%**	**367.00**	**267.66**	**72.9%**

- * For Title 3 C1, 57.06 million euros refer to payments of commitments of the year. The remainder, amounting to 150.90 million euros, was used to cover commitments from previous years.
- ** Commitment consumed include non-automatic carryover of 25.15 million euros.

Budgetary transfers performed in 2022

During 2022, the following internal transfer operations were performed under Article 26 of the Agency's Financial Rules. The rationale for the transfers was to ensure optimal budget allocation of commitment and payment appropriations. The Agency performed three transfers in accordance with Article 26(1) of the eu-LISA Financial Regulations. No transfer under Article 26(2) of the Agency's Financial Rules was performed.

	Budget Title	Title 1 Staff expenditures		Title 2 Infrastructure and operating expenditures		Title 3 Operational expenditures	
Budgetary transfer[158]	Reference	Commitment Appropriation	Payment Appropriation	Commitment Appropriation	Payment Appropriation	Commitment Appropriation	Payment Appropriation
1	LIS.4351					Transfer within budgetary title	

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[155] Appropriations from internal assigned revenue of the year.

[156] Carry-forward of commitments (differentiated and non-differentiated) and payment (non-differentiated) appropriations. When commitments are made against non-differentiated appropriations and the corresponding amounts have not been paid in full, the payments appropriations corresponding to the commitment outstanding amount are carried over automatically to the next financial year only. In this case, the fund source is then changed from C1 to C8. The appropriations are therefore carried over to the following year and the corresponding commitments are carried forward. In the case of differentiated appropriations against which the amounts committed have not yet been paid, the commitments are carried forward automatically, as are the corresponding commitment appropriations (i.e., funding source C8). The payment appropriations, on the other hand, are not carried over, and other sources of funding will have to be found for the following year (i.e., funding source C1).

[157] Appropriations from external assigned revenue (of the year and carried over).

[158] Budget transfers between titles are indicated in full value in euros.

2	LIS.4367	-984,000	-984,000	984,000	984,000	Transfer within budgetary title	
	LIS.4368					Transfer within budgetary title	
3	LIS.4371					Transfer within budgetary title	
4	LIS.4376	-1,000,000	-1,000,000	1,000,000	1,000,000	Transfer within budgetary title	
5	LIS.4386	Transfer within budgetary title		Transfer within budgetary title		Transfer within budgetary title	
6	LIS.4395	Transfer within budgetary title		Transfer within budgetary title		Transfer within budgetary title	
	LIS.4396			Transfer within budgetary title			
7	LIS.4408			Transfer within budgetary title		Transfer within budgetary title	
8	LIS.4424					Transfer within budgetary title	
	LIS.4425	-2,595,500	-2,595,500	-567,988	-567,988	3,163,488	3,163,488
9	LIS.4428					Transfer within budgetary title	
TOTAL		**-4,579,500**	**-4,579,500**	**1,416,012**	**1,416,012**	**3,163,488**	**3,163,488**

Detailed list of budgetary transfers (all fund sources)

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
1	LIS.4351	10/03/2022	B03100 SIS II projects	-1,500,000.00	-1,500,000.00
			B03101 SIS II operational maintenance	-6,000.00	0.00
			B03102 SIS II recast	1,506,000.00	1,500,000.00
			B03110 VIS/BMS projects	-3,808,608.02	0.00
			B03120 Eurodac projects	3,808,608.02	0.00
			B03130 EES projects	6,000,000.00	0.00
			B03131 EES operational maintenance	-6,000,000.00	0.00
			B03810 External Support	0.00	-146,955.00
			B03811 Consultancies and studies	0.00	146,955.00
			B03822 Schengen evaluations	49,500.00	49,500.00
			B03831 Training for Member States	-49,500.00	-49,500.00
2	LIS.4367	21/04/2022	A01110 CA salaries and allowances	-984,000.00	-984,000.00
			A01400 Annual medical check-ups	31,000.00	31,000.00
			A01403 Social activities	-31,000.00	-31,000.00
			A02600 Information and Publications	984,000.00	984,000.00
			B03000 Shared System Infrastructure	19,000,000.00	19,000,000.00
			B03002 Back-up site - running costs	0.00	250,000.00
			B03003 Interoperability	-8,000,000.00	-8,000,000.00
			B03010 Wide area networks	0.00	-4,000,000.00
			B03102 SIS II recast	0.00	2,400,000.00
			B03110 VIS/BMS projects	0.00	-1,200,000.00
			B03120 Eurodac projects	0.00	340,000.00
			B03130 EES projects	0.00	3,500,000.00
			B03131 EES operational maintenance	-3,000,000.00	-6,500,000.00
			B03140 ETIAS projects	-4,000,000.00	0.00
			B03150 ECRIS projects	-4,000,000.00	-5,790,000.00
	LIS.4368		B03000 Shared System Infrastructure	6,900,000.00	6,900,000.00
			B03101 SIS II operational maintenance	-2,300,000.00	-2,300,000.00
			B03111 VIS/BMS operational maintenance	-2,300,000.00	-2,300,000.00
			B03121 Eurodac operational maintenance	-2,300,000.00	-2,300,000.00

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
3	LIS.4371	28/06/2022	B03002 Back-up site - running costs	300,000.00	0.00
			B03003 Interoperability	0.00	-4,000,000.00
			B03100 SIS II projects	0.00	3,000,000.00
			B03102 SIS II recast	0.00	1,000,000.00
			B03110 VIS/BMS projects	-1,461,606.00	-2,000,000.00
			B03120 Eurodac projects	1,161,606.00	0.00
			B03130 EES projects	0.00	2,000,000.00
			B03140 ETIAS projects	0.00	2,000,000.00
			B03150 ECRIS projects	0.00	-2,000,000.00
			B03810 External Support	500,000.00	500,000.00
			B03831 Training for Member States	-500,000.00	-500,000.00
4	LIS.4376	08/08/2022	A01100 TA salaries and allowances	-1,000,000.00	-1,000,000.00
			A02700 External Support Services	1,000,000.00	1,000,000.00
			B03003 Interoperability	0.00	-7,000,000.00
			B03010 Wide area networks	0.00	-7,400,000.00
			B03100 SIS II projects	0.00	3,500,000.00
			B03110 VIS/BMS projects	-3,814,123.22	-6,300,000.00
			B03111 VIS/BMS operational maintenance	0.00	1,800,000.00
			B03120 Eurodac projects	0.00	1,000,000.00
			B03130 EES projects	1,814,123.22	7,400,000.00
			B03140 ETIAS projects	0.00	7,000,000.00
			B03150 ECRIS projects	0.00	-2,360,000.00
			B03810 External Support	3,500,000.00	3,300,000.00
			B03811 Consultancies and studies	0.00	60,000.00
			B03820 Advisory Groups	-500,000.00	-500,000.00
			B03831 Training for Member States	-1,000,000.00	-500,000.00
5	LIS.4386	27/09/2022	A01402 European school	-100,000.00	-100,000.00
			A01500 Training for staff	100,000.00	100,000.00
			A02000 Expenditure for premises	98,189.00	98,189.00
			A02200 Other Technical Equipment and Installation	-98,189.00	-98,189.00
			B03001 System security and business continuity	180,000.00	0.00
			B03100 SIS II projects	200,000.00	0.00
			B03101 SIS II operational maintenance	-200,000.00	0.00
			B03110 VIS/BMS projects	-180,000.00	0.00
			B03130 EES projects	13,961,000.00	0.00
			B03131 EES operational maintenance	-247,194.00	0.00
			B03150 ECRIS projects	-13,713,806.00	0.00
6	LIS.4395	06/12/2022	A01402 European school	-5,000.00	-5,000.00
			A01500 Training for staff	5,000.00	5,000.00
			A02000 Expenditure for premises	461,000.00	461,000.00
			A02100 Corporate IT & Telecom	-29.04	-29.04
			A02210 Furniture and Office Equipment	-9,971.22	-9,971.22
			A02220 Documentation and Library Expenditure	-1,767.73	-1,767.73
			A02300 Office Supplies	-25,556.42	-25,556.42
			A02320 Legal Expenses	-93,000.00	-93,000.00
			A02331 HR fees and charges	-2,551.85	-2,551.85
			A02400 Postage	-22,500.00	-22,500.00

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			A02510 Other meetings	-100,462.63	-100,462.63
			A02600 Information and Publications	-102,236.83	-102,236.83
			A02700 External Support Services	190,236.83	190,236.83
			A02800 Corporate Security	-293,161.11	-293,161.11
			B03000 Shared System Infrastructure	5,218,037.91	-1,000,000.00
			B03001 System security and business continuity	0.00	222,000.00
			B03002 Back-up site - running costs	0.00	10,000.00
			B03003 Interoperability	0.00	-3,800,000.00
			B03010 Wide area networks	-5,218,037.91	-1,000,000.00
			B03100 SIS II projects	0.00	2,000,000.00
			B03101 SIS II operational maintenance	0.00	-1,000,000.00
			B03102 SIS II recast	0.00	-1,000,000.00
			B03110 VIS/BMS projects	0.00	-1,000,000.00
			B03111 VIS/BMS operational maintenance	0.00	3,000,000.00
			B03112 VIS/BMS recast	0.00	-5,600,000.00
			B03121 Eurodac operational maintenance	0.00	-1,000,000.00
			B03130 EES projects	2,185,168.56	14,918,125.00
			B03131 EES operational maintenance	-633,168.56	-593,089.00
			B03140 ETIAS projects	0.00	1,902,101.00
			B03141 ETIAS operational maintenance	0.00	-602,101.00
			B03150 ECRIS projects	0.00	-3,900,000.00
			B03151 ECRIS operational maintenance	0.00	-227,036.00
			B03810 External Support	0.00	-200,000.00
			B03811 Consultancies and studies	186,615.00	0.00
			B03820 Advisory Groups	-150,000.00	-500,000.00
			B03821 Other meetings and missions	-182,000.00	-182,000.00
			B03822 Schengen evaluations	-20,000.00	0.00
			B03830 Operational learning and development	-500,000.00	-250,000.00
			B03831 Training for Member States	-886,615.00	-198,000.00
	LIS.4396		A02000 Expenditure for premises	8,563.80	8,563.80
			A02320 Legal Expenses	-8,425.00	-8,425.00
			A02400 Postage	-80.80	-80.80
			A02600 Information and Publications	-58.00	-58.00
7	LIS.4408	15/12/2022	A02000 Expenditure for premises	6,822.70	6,822.70
			A02300 Office Supplies	-6,822.70	-6,822.70
			A02320 Legal Expenses	-88,169.32	-88,169.32
			A02330 Other Running Costs	-327,770.48	-327,770.48
			A02700 External Support Services	415,939.80	415,939.80
			B03000 Shared System Infrastructure	8,499,900.00	4,730,000.00
			B03001 System security and business continuity	-76,537.32	0.00
			B03002 Back-up site - running costs	-528.76	0.00
			B03003 Interoperability	3,792,400.00	-1,800,000.00
			B03100 SIS II projects	2,317,124.22	0.00
			B03101 SIS II operational maintenance	-4,267,576.54	0.00
			B03110 VIS/BMS projects	-3,539,063.07	-2,710,000.00
			B03111 VIS/BMS operational maintenance	-1,446,686.26	0.00
			B03112 VIS/BMS recast	-2,992,400.00	0.00

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			B03120 Eurodac projects	-98,061.96	-200,000.00
			B03130 EES projects	622,465.39	1,520,000.00
			B03141 ETIAS operational maintenance	-1,326,000.00	0.00
			B03150 ECRIS projects	0.00	423,910.22
			B03151 ECRIS operational maintenance	-485,047.00	0.00
			B03810 External Support	-14,709.00	-590,910.22
			B03811 Consultancies and studies	100.00	-100,000.00
			B03820 Advisory Groups	-530,863.84	-400,000.00
			B03822 Schengen evaluations	0.00	-20,000.00
			B03830 Operational learning and development	-210,981.61	-103,000.00
			B03831 Training for Member States	-243,534.25	-750,000.00
8	LIS.4424	21/12/2022	B03000 Shared System Infrastructure	-6,900,000.00	-6,900,000.00
			B03101 SIS II operational maintenance	2,300,000.00	2,300,000.00
			B03111 VIS/BMS operational maintenance	2,300,000.00	2,300,000.00
			B03121 Eurodac operational maintenance	2,300,000.00	2,300,000.00
	LIS.4425		A01110 CA salaries and allowances	-2,595,500.00	-2,595,500.00
			A02220 Documentation and Library Expenditure	-44.98	-44.98
			A02320 Legal Expenses	-8,840.68	-8,840.68
			A02500 MB Meetings	-86,659.43	-86,659.43
			A02510 Other meetings	-10,716.86	-10,716.86
			A02600 Information and Publications	-30,085.40	-30,085.40
			A02700 External Support Services	-113,430.67	-113,430.67
			A02800 Corporate Security	-318,210.46	-318,210.46
			B03000 Shared System Infrastructure	-775,416.06	249,315.61
			B03001 System security and business continuity	-847.75	0.00
			B03003 Interoperability	-2,964,341.82	0.00
			B03010 Wide area networks	3,034,788.15	2,355,472.54
			B03100 SIS II projects	-248,254.07	-350,000.00
			B03102 SIS II recast	-1,500,399.28	0.00
			B03110 VIS/BMS projects	22,987,373.97	128,700.33
			B03111 VIS/BMS operational maintenance	2,663,141.99	0.00
			B03112 VIS/BMS recast	-9,783,590.73	0.00
			B03130 EES projects	-5,306,443.79	40,000.00
			B03140 ETIAS projects	-3,727,244.78	800,000.00
			B03810 External Support	-1,113,542.00	0.00
			B03811 Consultancies and studies	0.00	18,000.00
			B03820 Advisory Groups	-43,064.89	-18,000.00
			B03821 Other meetings and missions	-11,363.00	0.00
			B03830 Operational learning and development	-2,300.72	0.00
			B03831 Training for Member States	-45,006.74	-60,000.00
9	LIS.4428	22/12/2022	B03010 Wide area networks	4,854.40	0.00
			B03130 EES projects	407.08	0.00
			B03822 Schengen evaluations	-5,261.48	0.00

Annex III. **Organisation chart**

In 2022, the Agency's organisational structure remained unchanged.

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Advisory Groups ─── Management Board
                         │
                    Interim Executive Director
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- Security Officer
- Deputy Executive Director (acting as Interim Executive Director) (1)
- Internal Audit Capability (3)
- Accounting Officer (1)
- Liaison Office (4)
- EPMO Sector (5)
- Data Protection Officer (4)

Security Unit (23)

Corporate Governance Department (0)
- Executive Support and Stakeholders Relations Unit (12)
- Governance and Capabilities Unit (19)

Corporate Services Department (1) — Legal Sector (3)
- Human Resources Unit (20)
- Finance and Procurement Unit (32)
- Corporate Services Unit (20)

Operations Department (5)
- Systems Operations Unit (72)
- Infrastructure Management Unit (47)
- Test and Transition Unit (34)
- Programme and Project Delivery Unit (39)
- Planning and Standards Unit (42)

Annex IV. Establishment plan and additional information on human resources management

eu-LISA establishment plan for 2022

The 2022 establishment plan included 215 TA posts.

Table 13. Establishment plan 2022

Category and grade	Temporary agents	Category and grade	Temporary agents
AD 16	0	n/a	n/a
AD 15	1	AST 11	0
AD 14	1	AST 10	0
AD 13	3	AST 9	1
AD 12	4	AST 8	3
AD 11	9	AST 7	4
AD 10	11	AST 6	12
AD 9	19	AST 5	12
AD 8	32	AST 4	10
AD 7	15	AST 3	11
AD 6	36	AST 2	0
AD 5	31	AST 1	0
Total AD	**162**	**Total AST**	**53**

Information on the entry level for each type of post (indicative table)

Table 14 presents the levels at which the key functions listed by the European Commission are represented in eu-LISA. The job titles used in the Agency are listed in case of differences between the Commission's and the Agency's terminology. The entry grades that exceed the ones mentioned in Article 53 of the Conditions of Employment of Other Servants of the European Union (CEOS) are due to staff recruitment during the Agency's start-up phase when higher grades were allocated in eu-LISA's establishment plan.

Table 14. Entry levels of key functions

Key functions	Type of contract (official, TA or CA)	Function group, grade of recruitment	Function
Head of Department (level 2)	TA	AD12	administration/operations
Head of Unit (level 3)	TA	AD 9	administration/operations
Head of Sector (level 4) (no head of entity role)	TA, CA	AD 5, AD 7	administration/operations
Senior Officer	TA	AD 7	administration/operations
Officer	TA, CA	AD 5, AD 6, FG IV	administration/operations
Junior Officer	n/a	n/a	n/a
Senior Assistant	n/a	n/a	n/a
Junior Assistant	n/a	n/a	n/a
Head of Corporate Services Department	TA	AD 12	administration
Head of Human Resources Unit	TA	AD 9	administration
Head of Finance and Procurement Unit	TA	AD 10	neutral
Head of IT (Head of Corporate Services Unit)	TA	AD 9	administration

Secretary / Assistant / Assistant to the Head of Department or Head of Unit[159]	TA, CA	AST 3, FG III	administration/operations
e.g., mail clerk	n/a	n/a	n/a
e.g., webmaster-editor	n/a		n/a
Data Protection Officer	TA	AD 8	administration
Accounting Officer	TA	AD 9	neutral
Head of Internal Audit Capability	TA	AD 9	administration/neutral
Personal Assistant to the Executive Director	TA	AST 5	administration

eu-LISA benchmarking exercise 2022

At the end of 2022, eu-LISA conducted its benchmarking exercise in accordance with the methodology agreed by the Heads of Administration of the EU agencies in 2014. This methodology has been devised by adapting, refining and elaborating the Commission's screening methodology. The screening categorises human resources by the organisational role each job is serving. The main focus of this exercise is to generate figures for the number of 'administrative support and coordination', 'operational' and 'neutral' jobs in all organisational entities in order to compare the results with previous years. The screening was applied to all eu-LISA posts. The results of this screening are presented in the tables below.

The results of the 2022 benchmarking show a slight increase (0.5 %) in the proportion of operational posts (from 74.2 % to 74.7 %), where general operational activities increased by 0.2 %, mostly due to the need for the development of new systems, while programme management increased by 0.4 % and top-level coordination decreased by 0.2 %. The percentage of administrative and coordination posts slightly increased by 0.3 % from 16 % to 16.3 %. The number of neutral posts decreased by 0.8 % from 9.8 % to 9 %.

More services for administrative support and coordination were outsourced, up from 55.8 % to 60.5 %, while operational activities decreased from 40.4 % to 36.1 %. The outsourced neutral posts have also decreased from 3.8 % to 3.4 %.

Table 15. eu-LISA benchmarking exercise 2022: staff posts

Job type (sub)category	2019 (%)	2020 (%)	2021 (%)	2022 (%)
Administrative support and coordination	**16.6%**	**16.5%**	**16%**	**16.3%**
Administrative support	11.5%	12%	11.1%	11.3%
Coordination	5.1%	4.5%	4.9%	5.0%
Operational	**72.4%**	**72.5%**	**74.2%**	**74.7%**
Top-level operational coordination	6.7%	7%	5.3%	5.1%
Programme management and Implementation	3.1%	4%	3.5%	3.9%
Evaluation and impact assessment	0%	0%	0%	0.0%
General operational	62.6%	61.5%	65.4%	65.6%
Neutral	**11%**	**11%**	**9.8%**	**9.0%**
Finance / Control	11%	11%	9.8%	9.0%
Linguistics	0%	0%	0%	0.0%

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[159] The eu-LISA establishment plan does not include posts for secretaries or clerical functions. With the entry into force of the new Staff Regulations on 1 January 2014, eu-LISA decided to keep the grades approved in the establishment plan and to augment the tasks of assistants hired at grades AST 2 and AST 3. Secretarial duties are also performed by external service providers, as necessary.

The Agency also screened the posts occupied by external service providers (the on-site contractors' personnel), with the following results:

Table 16. eu-LISA benchmarking exercise 2022: external service providers (on-site contractors)

Job type (sub)category	2019 (%)	2020 (%)	2021 (%)	2022 (%)
Administrative support and coordination	**51.2%**	**52.2%**	**55.8%**	**60.5%**
Administrative support	47.8%	40.2%	37.5%	33%
Coordination	3.4%	12%	18.3%	28%
Operational	**43.5%**	**42.4%**	**40.4%**	**36.1%**
Top-level operational coordination	2.4%	2.2%	1.9%	0.0%
Programme management and implementation	2.9%	2.2%	1.5%	12.3%
Evaluation and impact assessment	1.8%	2.2%	1.4%	0.0%
General operational	36.3%	35.8%	35.6%	23.8%
Neutral	**5.2%**	**5.4%**	**3.8%**	**3.4%**
Finance / Control	5.2%	5.4%	3.8%	3.4%
Linguistics	0%	0%	0%	0%

HR implementing rules adopted in 2022

In 2022, eu-LISA adopted two implementing rules to the Staff Regulations and requested a derogation from the Commission rules on working time and hybrid working until a new model decision, or a specific decision, is developed on this matter:

- revised guidelines on whistleblowing (Management Board decision No 2022-039 of 04.03.2022),
- decision on laying down general implementing provisions on the conduct of administrative inquiries and disciplinary proceedings (Management Board decision No 2022-081 of 24 March 2022).

Human resources by activity

In 2022, out of total of 324 staff members, 238.15 full-time equivalents (FTE) (74.7 % of staff) were used for operational activities and 28.85 FTEs (9 % of staff) for related procurement and financial activities. 52 FTEs (16.3 % of staff) were used for horizontal activities (general coordination and administrative support). Table 17 presents an overview of eu-LISA staff per legislative proposal as authorised in the budget for 2022 in accordance with the establishment plan.

Table 17. Human resources per area of activity in 2022

Area of activity	Authorised for 2022			Actual situation as at 31 December 2022		
	TA	CA	SNE	TA	CA	SNE
eu-LISA Regulation						
Revised eu-LISA Regulation (baseline staff)	113	30	9	106	27	9
Revised eu-LISA Regulation (additional staff)	23	27	2	23	23	2
short-term[160]					6	
System-specific regulations (adopted)						
SIS Recast (Return and Borders)		4			4	
SIS Recast (Police)		2			0	
Revised VIS	5	5		2	2	
EES	32			26		
ETIAS	7	35		6	28	
ECRIS-TCN		5			4	
Interoperability	33	36		29	21	
e-CODEX		2				
EES/ETIAS carrier support[161]		21			6	
Legislative proposals pending adoption[162]						
Recast Eurodac	2			0		
Total FTEs	**215**	**167**	**11**	**192**	**121**	**11**

Expenditure according to activity-based costing

In 2018, eu-LISA developed an activity-based costing methodology, allowing it to identify the total costs of each system managed by the Agency. The total system expenditure comprises the following:

- direct expenditure, covering maintenance and project costs,
- network expenditure,
- horizontal expenditure, including operational costs for shared infrastructure, system security and corporate and horizontal expenditure, mainly staff and running expenditure.

The re-allocation of corporate and operational horizontal expenditure is based on the following cost drivers:

- direct system expenditure,
- time (cost of manpower) allocated to the systems.

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[160] These posts were filled due to savings in the budget to cover the urgent needs in staffing (HR, legal service, accounting service, procurement, security and one replacement for a person on maternity leave).
[161] These posts are temporarily allocated from Frontex to eu-LISA for a three-year period lasting from 2022 to 2024.
[162] The indicated staff numbers are provisional and based on the legislative financial statements annexed to respective proposals.

During the reporting year, the Agency implemented a budget of 240.8 million euros, of which:

- 75 % was spent on operational activities,
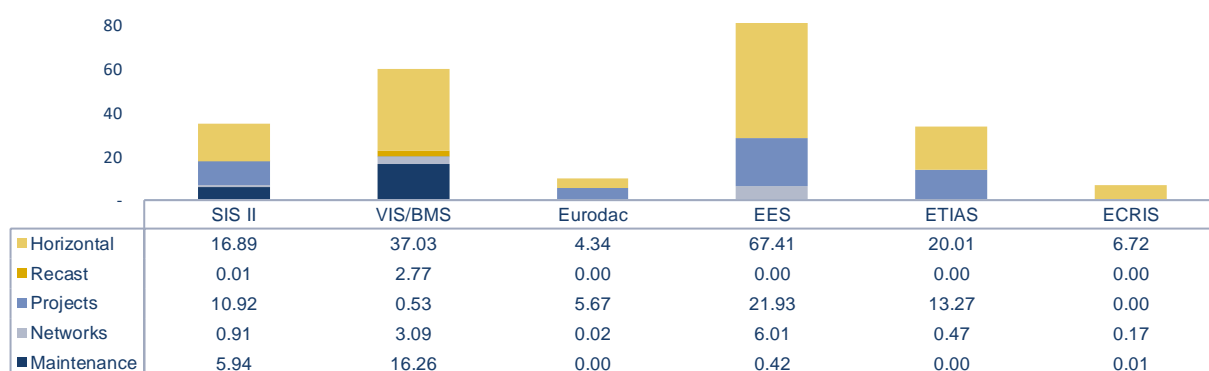- 25 % represented corporate horizontal costs.

Table 18. Total system costs

Systems	Total costs (in million euros)	Share of Total Cost (%)
SIS II	34.664	14%
VIS/BMS	59.675	25%
Eurodac	10.032	4%
EES	95 774	40%
ETIAS	33.755	14%
ECRIS-TCN	6.904	3%
TOTAL	**240.804**	**100%**

It should be noted that most of the Agency's core activities are not repetitive but project-based. Therefore, their costs cannot be standardised as in a standard process-based business model.

The following graphs provide the cost breakdown for each system in million euros and as a percentage of the total cost of the systems:

Cost breakdown for each system (in EUR million)

	SIS II	VIS/BMS	Eurodac	EES	ETIAS	ECRIS
Horizontal	16.89	37.03	4.34	67.41	20.01	6.72
Recast	0.01	2.77	0.00	0.00	0.00	0.00
Projects	10.92	0.53	5.67	21.93	13.27	0.00
Networks	0.91	3.09	0.02	6.01	0.47	0.17
Maintenance	5.94	16.26	0.00	0.42	0.00	0.01

Expenditure related to the multi-site organisation

In line with the external evaluation recommendation (R 4.34), the direct costs associated with the Agency's multi-site organisation are summarised in the table below.

Table 19. Share of 2022 direct costs associated with the Agency's multi-site organisation (in million euros)

Budget title		Total executed payments	Payments related to the Agency's multi-site organisation	Share (%)
A-1	**Staff expenditure**	37.36	0.18	0.5%
A-2	**Infrastructure and Operating Expenditure**	11.78	n/a	n/a
B0-3	**Operational Expenditure**	207.95	0.04	0.0%
TOTAL		**257.09**	**0.22**	**0.1%**

Direct costs related to eu-LISA's multi-site organisation are mission expenditure for statutory staff travelling between the Agency's headquarters in Tallinn and its operational site in Strasbourg. In 2022, this represented 0.1% of the total of payments executed.

Annex VI. Contribution, grant and service-level agreements

Not applicable to eu-LISA.

Annex VII. **Environment management**

The impact of environmental matters on organisational performance is increasing and will continue to do so. The Agency is committed to improving its environmental performance and is working towards registration under the EU's Eco-Management and Audit Scheme (EMAS), to be achieved by 2024 at the latest. In addition, after the endorsement of the environmental policy, eu-LISA will implement its own environmental management system (EMS) based on the principles of the EMAS and the Commission's European Green Deal Action Plan.

In devising its environmental management system, the Agency needs to focus not only on what happens but must also analyse why it happens. Over time, the systematic identification and correction of detected shortcomings will lead to better environmental (and overall organisational) performance.

In 2020, eu-LISA introduced a new key performance indicator (KPI) to measure its environmental performance. Environmental KPIs are quantifiable metrics that reflect the environmental performance of an organisation in the context of achieving its wider goals and objectives. The purpose of this metric is to demonstrate eu-LISA's progress related to greenhouse CO_2 emissions to achieve energy savings and to comply with the EU 2030 target for the use of renewable energy sources and for reducing greenhouse gas emissions. The data collected in 2020 will become the baseline reference for eu-LISA's environmental KPI. The data sources are energy meters (electricity and heating) combined with consumption invoices; water meters combined with consumption invoices; invoices for paper consumption; and the weight of solid waste.

Annex VIII. **Annual accounts**

BALANCE SHEET - 2022 (EUR)

ASSETS

NON-CURRENT ASSETS	31/12/2022	31/12/2021	Variation	Var (%)
Computer software	43,427,266	53,422,918	(9,995,652)	-19%
Intangible assets under construction	66,969,819	36,541,630	30,428,188	83%
Intangible assets	**110,397,085**	**89,964,548**	**20,432,536**	**23%**
Land and buildings	32,017,632	33,508,672	(1,491,040)	-4%
Plant and equipment	87,067	283,462	(196,395)	-69%
Furniture and vehicles	159,628	159,164	464	0%
Computer hardware	79,616,674	76,478,883	3,137,791	4%
Other fixtures and fittings	1,020,658	694,708	325,950	47%
Property. plant and equipment	**112,901,659**	**111,124,889**	**1,776,770**	**2%**
Non-current pre-financing	**2,546,822**	**2,546,822**	**-**	**0%**
Non-current exchange receivables	**137,797**	**137,797**	**-**	**0%**
TOTAL NON-CURRENT ASSETS	**225,983,363**	**203,774,056**	**22,209,306**	**11%**
CURRENT ASSETS				
Deferred charges	13,307,960	16,094,899	(2,786,939)	-17%
Other exchange receivables	97,332,433	29,232,321	68,100,112	233%
Current exchange receivables	**110,640,393**	**45,327,220**	**65,313,173**	**144%**
VAT receivables	1,325,357	1,539,514	(214,157)	-14%
Accrued income	-	7,584,440	(7,584,440)	-100%
Contribution from associated countries	6,343,406	24,405,313	(18,061,907)	-74%
Non-exchange receivables	**7,668,763**	**33,529,267**	**(25,860,504)**	**-77%**
TOTAL CURRENT ASSETS	**118,309,155**	**78,856,487**	**39,452,668**	**50%**
TOTAL ASSETS	**344,292,518**	**282,630,544**	**61,661,975**	**22%**

LIABILITIES

NET ASSETS	31/12/2022	31/12/2021	Variation	Var (%)
Accumulated surplus	201,187,412	139,313,173	61,874,238	44%
Economic result of the year (+ profit)	42,879,247	61,874,238	(18,994,991)	-31%
NET ASSETS	**244,066,659**	**201,187,412**	**42,879,247**	**21%**
CURRENT LIABILITIES				
Current payables	32,419,850	34,654,276	(2,234,427)	-6%
Accounts payables with consolidated entities	26,281,667	3,075,730	23,205,937	754%
Accounts payables	**58,701,517**	**37,730,007**	**20,971,510**	**56%**
Accrued charges	**41,524,343**	**43,713,125**	**(2,188,783)**	**-5%**
TOTAL CURRENT LIABILITIES	**100,225,859**	**81,443,132**	**18,782,728**	**23%**
TOTAL LIABILITIES	**344,292,518**	**282,630,544**	**61,661,975**	**22%**

STATEMENT OF FINANCIAL PERFORMANCE 2022 (EUR)

REVENUE	2022	2021	Variation	Var (%)
EU Contribution	270,226,598	260,867,265	9,359,333	4%
Contribution of EFTA countries	16,474,672	32,069,317	(15,594,645)	-49%
Non-exchange revenues	**286,701,270**	**292,936,582**	**(6,235,312)**	**-2%**
Administrative revenues with consolidated entities	-	4,087	(4,087)	-100%
Miscellaneous income	8,613	618	7,995	1294%
Exchange rate gains	-	21	(21)	-100%
Exchange revenues	**8,613**	**4,726**	**3,887**	**82%**
Total revenues	**286,709,883**	**292,941,308**	**(6,231,425)**	**-2%**

EXPENSES				
Operational expenses	(127,063,564)	(132,513,317)	5,449,753	-4%
Staff expenses	(36,101,247)	(30,877,862)	(5,223,384)	17%
Finance costs on late payment	(9,048)	(3,192)	(5,856)	183%
Administrative and IT expenses	(8,988,906)	(7,265,149)	(1,723,758)	24%
Other external service provider expenses	(6,360,820)	(4,575,529)	(1,785,291)	39%
Expenses with consolidated entities	(2,807,104)	(3,458,695)	651,591	-19%
Fixed asset related expenses	(61,780,865)	(51,700,205)	(10,080,659)	19%
Operating Lease Expenses	(713,280)	(672,865)	(40,415)	6%
Exchange rate losses	(5,803)	(256)	(5,547)	2167%
Administrative expenses	(116,767,072)	(98,553,753)	(18,213,319)	18%
Total expenses	**(243,830,636)**	**(231,067,070)**	**(12,763,566)**	**6%**

ECONOMIC RESULT FOR THE YEAR	42,879,247	61,874,238	(18,994,991)	-31%

CASH-FLOW STATEMENT 2022 (INDIRECT METHOD IN EUR)

Cash Flows from operating activities	2022	2021
Economic result of the year - Profit/(loss)	42,879,247	61,874,238
Amortisation of intangible fixed assets	21,480,761	19,329,041
Depreciation and write-off of tangible fixed assets	35,073,305	26,957,710
(Increase)/decrease in Long-term Pre-financing/Deposits	-	(2,520)
(Increase)/decrease in Short-term Receivables	(39,452,668)	(26,441,365)
Increase/(decrease) in Accounts payable and accrued charges	(4,423,209)	(5,274,421)
Increase/(decrease) in Liabilities related to consolidated EU entities	23,205,937	(534,783)
Net cash Flow from operating activities	78,763,373	75,907,900
Cash Flows from investing activities		
(Increase) of tangible and intangible fixed assets	(78,763,373)	(75,907,900)
Net cash flow from investing activities	(78,763,373)	(75,907,900)
Net increase/(decrease) in cash and cash equivalents	**-**	**-**
Cash and cash equivalents at the beginning of the period	-	-
Cash and cash equivalents at the end of the period	-	-

Annex IX. **Annual activities and indicators**

Operational management

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
SIS operational management and recast				
SIS maintenance	**Delivered** ■ two releases deployed in production, ■ central system availability affected by several incidents.	(1) SIS service-level agreement (SLA) (2) SIS KPIs	(1) SLA met 100 % (2a) availability: 99.99 % (2b) response time: 99.95 %	**Below target** (1) 100% (2a) amber (2b) red
SIS AFIS maintenance	**Delivered** ■ SIS AFIS regular maintenance delivered.	SIS AFIS service-level agreement (SLA)	standard and specific SIS AFIS SLA met 100 %	**On target** 100%
SIS support to Member States	**Delivered** ■ successful deployment of SIS Recast release (delayed to 2022, switchover on 29 June, switchback on 1 July), ■ dedicated workshops for Member States on the renewed SIS, incl. questionnaires (specific inputs/feedback) to facilitate participation in the rehearsal and entry into operation activities.	(1) adherence to the testing plan for MS national systems (2) quality and time of MS integration (if any)	(1) no deviation from the plan	**On target** (1) achieved (2) achieved
New search engine and Oracle upgrade for SIS, improving availability and considering transcription aspects	**Ongoing – delayed** ■ new search engine update deployed in March 2023, followed by migration of Member States, completed in November, ■ Oracle upgrade (part of moving SIS to Oracle Exadata) postponed to 2023 due to delayed implementation of Recast Regulations.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Below target** (1) red: delays incurred by the project in 2021 and 2022, affecting the cost and scope of the project (2) red (3) amber
Extended capacity of SIS	**Other – on hold** ■ project on hold (delays related to interoperability components).	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Other** activity on hold due to dependencies with other SIS projects and Interoperability
Implementation of SIS AFIS Phase 2	**Delivered** ■ new architecture hardware installed and deployed on 29 June, ■ updates included in renewed SIS, deployed in March 2023.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Below target** (1) amber (2) red: 21_R1 deployment delay linked to previous delays in project (3) amber

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
New SIS legal framework implementation	**Ongoing – delayed** ■ central system: factory acceptance tests completed, full system tests ongoing, simulator updates delivered to MS, ■ new interface control document (ICD ver. 5) adopted in June, ■ development activities completed by the end of 2022, renewed SIS entry into operation postponed to 7 March 2023, ■ updated version of Data Exchange between SIRENE Bureaux (DEBS) prepared and delivered.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Below target** (1) green (2) red: entry into operation affected by delays in the development of central system and with MS (3) green
New SIS central system release (incl. return decision functionalities)	**Ongoing – delayed** ■ carried out together with the previous activity.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Below target** (1) green (2) red (3) green entry into operation affected by delays in the development of central system and with MS
SIS evolution (projects, evolutions and studies)	**Ongoing – delayed** ■ data consistency check (DCC) parallelisation project first step deployed as part of the renewed SIS, ■ DCC algorithm improvement study completed on 30 June.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Partially on target** (1) green (2) amber (3) green delays due to late deployment of SIS 21_R1 release
C.SIS integration to ESP and MID, and other interoperability components	**Other – on hold** ■ project postponed due to dependencies with other SIS projects and the Interoperability programme.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Other** activity postponed
VIS operational management and recast				
VIS/BMS maintenance	**Delivered** ■ ensure VIS/BMS performance in accordance with legal basis and service-level agreement (SLA).	(1) VIS/BMS service-level agreement (SLA) (2) VIS KPIs	(1) SLA met 100 % VIS central system KPIs (2a) availability: 99.99 % (2b) response time: 100 %	**Partially on target** (1) 100% (2a) amber (2b) amber
VIS Recast development	**Ongoing** ■ technical specifications drafted, followed by procurement, design, testing and integration of functional and non-functional changes.	(1) cost (2) schedule (3) scope	(1) total deviation ≤ 5 % (2) total deviation ≤ 5 % (3) no deviation	**Partially on target** (1) green (2) amber: schedule below target due to delayed adoption of secondary legislation (3) green
Implementation of VIS active-active architecture	**Ongoing** ■ active-active setup horizontal methodology for all JHA systems, ■ implement active-active setup together with revised VIS design.	(1) cost (2) schedule (3) scope	(1) total deviation ≤ 5 % (2) total deviation ≤ 5 % (3) no deviation	**Partially on target** (1) green (2) amber: schedule below target due to delayed adoption of secondary legislation (3) green

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Eurodac operational management and recast				
Eurodac - DubliNet maintenance	**Delivered** ■ DubliNet certificates duly renewed for all Member States.	(1) Eurodac-DubliNet SLA (2) Eurodac KPIs	(1) SLA met 100 % Eurodac central system KPI: (2a) availability: 99.88 % (2b) response time: 99.99 %	**Partially on target** (1) 100% (2a) amber (2b) green
Unplanned evolutions stemming f adaptive maintenance of Eurodac and DubliNet	**Ongoing** ■ Eurodac minimal upgrade project implementation kick-off, ■ Eurodac capacity upgrade project implementation kick-off, ■ DubliNet certificates migration project launched.	(1) cost (2) schedule (3) scope	(1) total deviation ≤ 5 % (2) total deviation ≤ 5 % (3) no deviation	**On target** (1) green (2) green (3) green
Operational management – other				
24/7 1st level support for operational management of JHA systems - eu-LISA Service Desk	**Delivered** ■ active participation in the preparation of documents for EES and EES/ETIAS web services, incl. operator manual and standard operating procedure, ■ contribution to Member State technical trainings.	(1) Service Desk KPI (2) annual customer satisfaction survey	(1) above 75% (2) above 80%	**On target** (1) achieved: 82% (2) achieved: 97%
24/7 2nd level application support for operation management of the core business systems	**Delivered** ■ participation in release deployment and active follow-up of incidents and problems related to production environments, ■ participation in the review of new systems: sBMS, EES, ■ maintenance of Oracle Exadata and Zero Data Loss Recovery Appliance.	(1) SIS / VIS / Eurodac SLAs (2) annual customer satisfaction survey	(1) SIS II / VIS / Eurodac availability (2) above 80%	**On target** (1) SIS II / VIS / Eurodac: amber (2) achieved: 97%
ECRIS reference system maintenance	**Delivered** ■ in April, vulnerabilities detected during source code security analysis, list of alternative solutions prepared, ■ ECRIS RI upgrade (1.7.1), incl. support to Member States.	ECRIS RI service-level agreement (SLA)	standard and specific ECRIS RI SLA met 100 %	**On target**
Delivering the information security and assurance service for the CBSs	**Delivered** Information Security and Assurance: ■ implementation of relevant IAS and EDPS recommendations, ■ elicitation of security requirements for ETIAS, ECRIS-TCN, sBMS and other interoperability components (ongoing), ■ Enterprise Security Architecture model for JHA systems, ■ testing security requirements against new JHA systems. Security Operations and Response: ■ computer security incident response team (CSIRT) established, ■ update/development of processes/mechanisms: for security monitoring, incident management, secure configuration and hardening, continuous vulnerability and patch management, ■ security functionality of JHA systems managed by eu-LISA, ■ improvement of security operations based on findings and recommendations from external audits and inspections, ■ cyber security management to mitigate cyber threats.	(1) statutory security objectives implemented (3) JHA system security risk assessments (5) cyber security exercises (per year)	(1) 100% (3) 100% (5) 1	**On target** (1) achieved (3) achieved **(5) achieved** * two confidential performance indicators removed due to sensitivity

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Operate, plan and develop the business continuity aspects of large-scale IT systems	**Delivered** ■ business continuity plans: adopted for EES, Eurodac and sBMS; prepared for ETIAS, ECRIS–TCN and interoperability.	(1) exercises and tests (2) business continuity plan for all JHA systems	(1) 1 (2) 100 %	**On target** (1) achieved (2) achieved
Security and business continuity exercise for SIS	**Delivered** ■ exercise scope and objectives were updated to exclude the Member States as per SIS AG request, ■ high-level scenario prepared, execution in October.	(1) cost (2) schedule (3) scope	(1) total deviation ≤ 5 % (2) total deviation ≤ 5 % (3) no deviation	**On target** (1) green (2) green (3) green (scope updated)
eu-LISA ITSM framework processes run, continuous reviews and service/process improvement	**Delivered** ■ 2021 process KPI report adopted in May 2022.	(1) process KPIs (2) customer satisfaction	(1) compliance with KPIs (2) survey results	**On target** (1) achieved (2) achieved → for more, see section 1.6.1.
Operational change management	**Delivered** ■ legacy systems: qualification, implementation and post-implementation review of changes, ■ new systems: EES, sBMS, Internet Zone.	annual KPI report	stable number of opened changes	**Partially on target** difficulties in the processing of operational change tickets for EES for all stakeholders
Release and deployment management and transition to operations	**Delivered** ■ implementation of VIS-BMS releases 22_ADP and 22_R1, ■ Implementation of SIS II release 21_R1.	(1) release plans prepared (2) deployment of releases	(1) release plans finalised in Q1 (2) releases deployed as per release plans	**Partially on target** (1) achieved (2) partially achieved: both VIS releases on target, entry into operation as per schedule; SIS II release 21_R1: below target, launch delayed
Test management	**Delivered** ■ alignment of test policies and procedures with the operational reality, regular coordination meetings, incl. 3 Testing Expert Group (TEG) meetings for EES-VIS and ETIAS tests, ■ test tools support, incl. cloud test tools to streamline the reporting and handling of defects, and issues related to tests, resulted in increased tool usage and centralisation of reports.	(1) requirements coverage (2) test results as expected (as per agreed risk levels)	(1) 100% coverage (2) timely and successful completion of test campaign	**On target** (1) achieved (2) achieved
Business as usual, including Carrier Support	**Delivered** ■ in March, new data segmentation solution for SM9 tool, improved interoperability between systems and contractors, ■ from June to October, additional update deployed.	n/a	n/a	**On target**
EOPM Replacement - Impact Assessment/Study	**Ongoing** ■ in October, impact assessment study commissioned under the TEF Lot 1 framework contract.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target**

New systems

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Smart Borders				
Business relations, demand, requirement management between eu-LISA and its stakeholders	**Delivered** ■ all three interrelated business relations management processes performed as per expectation and design, initiation of numerous demand management requests, ■ eu-LISA coordinated and supported activities of several advisory groups, working groups and expert groups.	(1) interaction with stakeholders (2) requirements and demand management processes[163]	(1) monthly reports and supporting materials duly delivered for AGs and PMBs (2) capture of business Requirements	**On target** (1) 100% (2) 70%
EES adjustments for interoperability components	**Ongoing** ■ continued preparations and implementation of adjustments for the interoperability components, ■ draft interface control document for EES shared with Member States.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) **amber**: dependencies with interoperability components create a risk on hardware, software (off-the-shelf) and development costs (2) **amber**: delays due to further clarification of scope and contractual setup (3) **amber**: due to dependencies interoperability components
EES BMS maintenance (active-active setup)	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	EES BMS service-level agreement (SLA)	100% compliance	**Other** activity postponed
EES BMS maintenance (hardware)	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	EES BMS service-level agreement (SLA)	100% compliance	**Other** activity postponed
EES BMS maintenance (software)	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	EES BMS service-level agreement (SLA)	100% compliance	**Other** activity postponed
EES core implementation	**Ongoing – delayed** ■ delivery of EES interface control document, containing changes stemming from system solution tests, ■ testing of the EES central system application ongoing, incl. with Member States, ■ testing environment and simulators for MS test campaigns and the upcoming central system tests (incl. preparation of any relevant technical documents and testing artefacts), ■ preparation of the first EES Operation Manual.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) **amber** (2) **red** (3) **amber**: EES entry into operation remains delayed (incl. testing), resulting in additional costs and effort, further exacerbated due to interdependencies between various EES work streams (sBMS, VIS, web services).

[163] Only for the new systems under development, i.e., EES, ETIAS, ECRIS-TCN and interoperability components. As the process was not in place during the development of SIS, VIS and Eurodac, the process will be applied to those systems as follows: (1) SIS and VIS: for current and all evolutions from 2022 onwards, and (2) Eurodac: following the adoption of the recast regulation.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
EES maintenance	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	EES BMS service-level agreement (SLA)	100% compliance	**Other** Activity delayed
EES/ETIAS web services implementation finalisation	**Ongoing – delayed** ■ monthly meetings with the Working Group for Carriers, ■ preparation of contracts for the development of carrier registration and support tools and services, transition into operation and operation of a cloud simulator.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** **(1) amber**: budgetary adjustment discussed with contractor for EES/ETIAS web services **(2) red**: chip outage in IT industry and pandemic-related restrictions created a three-month delay in the implementation of the infrastructure needed alignment for schedule as complexity of the solution, low progress rate in the test phase, and number and severity of defects **(3) green**
EES/ETIAS web services maintenance	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	EES/ETIAS web services service-level agreement (SLA)	100% compliance	**Other** activity postponed
ETIAS implementation	**Ongoing – delayed** ■ central system simulator delivered (March), software mock-up (5th iteration) completed (April), interface control document (ICD) delivered (June), corrective releases in September and December, ■ update of the ETIAS Data Protection Impact Assessment.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) **green** **(2) red**: delays in hardware delivery and installation, dependencies with shared components (EES) **(3) amber**: ETIAS consequential amendments and need to develop new components (e.g., NUI software components, Interoperability layer, business continuity services)
ETIAS maintenance	**Postponed** ■ activity delayed until full system acceptance and is expected to start 6 months after EES entry into operation.	ETIAS service-level agreement (SLA)	100% compliance	**Other** activity postponed
Development of ECRIS-TCN	**Ongoing – delayed** ■ high-level design document finalised (March), ■ user interface mock-up (June), interface control document (ICD) updated.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) **green** (2) **amber** (3) **green**
Interoperability				
European search portal (ESP) development	**Ongoing** ■ interface control document (ICD) update (November), ■ ESP release v.01 ready for testing at the end of 2022.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) **green** (2) **amber**: estimated delay of 3 months for the design documents (3) **green**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Common identity repository (CIR) development	**Ongoing** ■ updated interface control document (ICD) (November), ■ CIR release v.01 ready for testing at the end of 2022.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) **green** (2) **amber** (3) **amber**: initiation and planning delays affecting development and testing timeline
Multiple-identity detector (MID) development	**Ongoing** ■ updated of interface control document (ICD) (November), ■ MID release v.01 ready for testing at the end of 2022.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) **green** (2) **amber** (3) **amber**: initiation and planning delays affecting development and testing timeline
Central repository for reporting and statistics (CRRS) development	**Ongoing – delayed** ■ interface control document (ICD version 4) submitted to the Member States, ■ CRRS release v.01 ready for testing at the end of 2022.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) **green** (2) **amber** (3) **amber**: delays in deliverables
Implementation of the interoperability between EES and VIS	**Ongoing – delayed** ■ VIS is ready to exchange information with EES.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) **amber** (2) **red**: waiting for EES to proceed with compliance testing and entry into operation (3) **green**
Implementation of the interoperability between ETIAS and VIS (consequential amendments ETIAS)	**Ongoing – delayed** ■ contractual setup ongoing.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) **amber** (2) **red**: activity delayed due to contractual setup and ETIAS development schedule (3) **green**
Preparation of ECRIS-TCN development in sBMS	**Ongoing** ■ functional requirements, design of the biometric subsystem, reassessment of capacity and performance requirements, ■ sBMS interface control document (ICD) updated, data protection impact assessment (DPIA) updates in progress, ■ user software kit (USK) configuration agreed, implementation partially completed, pilot preparations ongoing.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target** (1) green (2) green (3) green
Preparation: sBMS impact on MID	**Delivered** ■ temporary approach for MID-related sBMS performance (accuracy targets, border/non-border use-cases), ■ capacity assessment, incl. architecture options/constraints, ■ biometric requirements for MID Transition Tool, incl. accuracy thresholds and intervals.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target** (1) green (2) green (3) green

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
USK (user software kit) maintenance	**Delivered** ■ USK Maintenance contract implemented, incl. new versions for Member States in the first half of 2022, ■ 2023 maintenance roadmap agreed with the contractor.	compliance with operational SLA	100%	**On target** achieved
VIS sBMS functional integration/data migration and increased availability	**Ongoing – delayed** ■ VIS-sBMS biometric functionalities completed, incl. design and specifications, USK requirements, tests ongoing, sBMS DPIA updates in progress, ■ data migration tools designed and implemented, rehearsal on pre-production environment (platform) in the pipeline, ■ required VIS capacity for sBMS partially purchased.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Partially on target** (1) (2) (3)
EES BMS / sBMS implementation	**Ongoing – delayed** ■ common system solution testing with EES and the updated VIS (January), ■ updated sBMS data protection impact assessment (DPIA) submitted to EDPS (February), ■ start of system solution testing of isolated sBMS (June).	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Below target** (1) green (2) red: installation of sBMS hardware components affected by delays and dependencies with shared components (EES) (3) amber
Improvements / development of the biometric portfolio	**Delivered** ■ biometric vocabularies harmonisation strategy drafted, ■ synthetic accuracy datasets project improvement completed, incl. candidate accuracy datasets (fingerprints, facial images), ■ ISO and British Standards Institution (BSI) standardised facial images quality algorithm: OFIQ (Open-Source Face Image Quality) kick-off meeting and active follow-up.	(1) high priority areas studied/researched (2) solutions found	N/A	**On target** (1) achieved (2) achieved
Continuation of new service and process definitions as part of the eu-LISA's ITSM framework	**Delivered** ■ eu-LISA Product and Service catalogue and process model updated based on new systems and initiatives, ■ process definitions for corporate and governance services revised and updated.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target** (1) green (2) green (3) green → for more, see 1.6.1
Other				
Application Lifecycle Management implementation	**Postponed** ■ implementation has not started, current ALM/SDLC (Systems Development Life Cycle) is in the design phase (Phase 1).	integrated Core Business Systems	integrated Core Business Systems 80%	**Other** activity postponed
Core SIS generic interconnection module / interface to allow SIS connections to other systems and implementation of ETIAS interconnection	**Ongoing – delayed** ■ contract signed in January, project in analysis and design phase.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**Partially on target** (1) **green** (2) **amber**: delays due to late delivery of hardware components and dependencies with other interoperability projects (3) **amber**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Implementation of the roadmap for Artificial Intelligence	**Ongoing** ■ stable version of the 'Roadmap for Artificial Intelligence' submitted to Management Committee, ■ feasibility study for implementing AI within CRRS/ETIAS finalised.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**On target** → see section 1.2.8 for more information
Implementation of the roadmap for standardisation	**Ongoing** ■ action plan implementation ongoing, ■ 2nd and 3rd progress reports duly submitted and endorsed by the JHA Council working party on JHA Information Exchange (IXIM WP) in June and December, respectively.	(1) cost (2) schedule (3) scope	(1) green (2) green (3) green	**On target** → see section 1.2.8 for more information
Enterprise architecture continuum - establishing the interoperability architecture	**Ongoing** ■ Global Enterprise Architecture (w standards and architecture principles) successfully implemented, ■ updating eu-LISA's Technology Catalogue, ■ established link with Transversal Engineering Framework (TEF) contractors at the level of Enterprise Architecture, ■ drafting Architecture Vision to incorporate Interoperability and uninterrupted availability targets, complemented by update of eu-LISA's Technology Strategy.	Implementation of Phase3: Enterprise Architecture - Enterprise Continuum	100%	**On target** achieved

Infrastructure and networks

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Integration of the single integrated monitoring solution with the event management process (continued)	**Ongoing** ■ Event Management project launched in January, ■ in November 2022, impact assessment study commissioned under the TEF Lot 1 framework contract.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target** (1) green (2) green (3) green
Application management services	**Delivered** ■ technical advice and document reviews for design quality, ■ regular updating of the Agency's 'IT Technology Catalogue'.	document review performed in due time	targets defined by projects	**On target**
Support of Application Lifecycle Management (ALM) platform and related tools (build pipeline, testing tools)	**Delivered** ■ build pipeline: support for onboarding the sBMS and VIS-EES interoperability component on the ALM platform, ■ preparations for the integration of EES, ETIAS, ECRIS-TCN, and interoperability components.	ALM platform availability	0% impact, i.e., no planned projects, releases or operational activities impacted due to unavailability of tools/data	**On target**
Initiate a software engineering capability	**Ongoing** ■ code quality reviews of intermediate deliveries from contractors, incl. build and unit test, automated and manual code reviews.	process in place and code reviews done in time	defined by projects	**On target**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Network operations services	**Delivered** ■ network development started for EES (incl. web services), SBMS and VIS-EES interoperability component.	service-level indicators for operational processes	(1) network availability (2) incidents, problems, changes and releases are implemented	**On target**
Communication infrastructure services	**Delivered** ■ communication infrastructure availability ensured in compliance with service-level agreements (SLA).	Availability of communication infrastructure as per SLAs.	availability of communication infrastructure as per SLAs.	**On target** 99.99%
Transition to new TESTA network	**Ongoing** ■ migration to new TESTA network provider as per schedule and with minimal disruption of operations, ■ implementation delayed.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Other** signature of the framework contract is suspended following a court order
Central and backup unit operational activities and evolutions / improvements	**Delivered** ■ technical post-implementation reviews (PIR) as a service to ensure adherence to standards, ■ data centre assets data upload into DCIM software (Nlyte), ■ modular data centre (MDC): connectivity contract awarded, ■ **central unit (CU-DC1):** structured cabling implementation and rack layout optimisation to improve cooling capacity, deployment of the power device unit (PDU) network for live power consumption data, optimisation of power installations.	data centre availability as per operational level agreements (OLA)	24/7 service availability	**On target**
Backup central unit (BCU) operational and running costs	**Delivered** ■ BCU OTM (out of the mountain) cooling capacity maximisation by adjustment of hydraulics and pumps, ■ BCU ITM (in the mountain) connectivity to network and storage area network (SAN) between R09 and new R08, ■ basement OTM ready for operation, ITM 2nd room operational, ■ planning for site extension completed.	(1) service availability (2) resource availability (cooling, power)	24/7 availability	**On target**
Continuation of data centres reorganisation activities	**Delivered** ■ floor space optimisation, power/cooling solutions developed, ■ access control via dedicated data centre web services, incl. delivery follow-up and registration.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target**
Oracle maintenance renewal	**Ongoing** ■ Oracle maintenance licence renewed in due time.	licence renewed before expiry	No financial exceptions related to the renewal	**On target** licence renewal completed in due time without issues
Adaptive maintenance of centralised infrastructure	**Delivered** ■ HP firmware upgraded; checkpoint firewall upgrades ongoing.	adaptive maintenance plan (set under TEF contract)	TBD	**On target**
Corrective maintenance and monitoring of centralised infrastructure	**Delivered** ■ handling of requests and incidents to ensure compliance with service-level agreements (SLA).	uptime of the central infrastructure platform	99.9% uptime, excluding schedule maintenance	**On target**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Hardware and software maintenance renewal (infrastructure)	**Delivered** ■ hardware and software renewal duly completed.	all items under maintenance and exchanged at end-of-life	items without maintenance	**On target** 12% price increase due to inflation
Operational management / administration of test systems infrastructure	**Delivered** ■ start of active operational management of test systems, ■ resolution of incidents.	test systems availability	99.9% (from 09.00 to 17.00)	**On target**
Operational management CBS 2nd line infrastructure support	**Delivered** ■ provision of 2nd level technical support.	system availability	99.99%	**On target**
Operational management of CMDB	**Delivered** ■ configuration management procedure in place, ■ configuration management database (CMDB) up to date.	offline data on CSI configuration items (CI)	90% in sync with online CMDB	**Partially on target** 50% no resources available for configuration management
Operational management: change implementation	**Delivered** ■ ongoing implementation of changes.	change request tickets	<50 pending	**Partially on target** >200 pending changes on infrastructure, limited resourcing
Operational management: EUWS support	**Delivered** ■ acquisition of infrastructure for end-user workstations (EUWS), ■ provision of EUWS endpoints and related services.	service availability	99.9%	**On target**
Operational management: integration testing	**Delivered** ■ infrastructure tester resource hired, ■ started the definition of infrastructure test cases.	defects detected during integration test	TBD	**On target**
Operational management: platform administration	**Delivered** ■ deployment ongoing for several new Core Business Systems.	service availability	99.99 %	**Partially on target** responsibilities for OCP and pipeline administration still unclear
Operational management: system engineering	**Delivered** ■ infrastructure design for new JHA systems.	n/a	n/a	**On target**
Acquisition of new storage solution	**Delivered** ■ new storage solution acquired; implementation ongoing.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target**

Corporate activities

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Corporate IT				
Administration and maintenance of corporate IT applications	**Delivered** ■ timely maintenance of SharePoint platforms, configuration of subsites, rights and permissions in collaboration spaces, ■ development of new tools to address staff needs, incl. new programming tool, action lists for Project Board and Corporate Steering Committee.	(1) service delivery (2) service availability	(1) timely service delivery and support (2) 90% uptime	**On target**
Administration and maintenance of corporate IT networks and communications	**Delivered** ■ Network and Security Modernisation project: ICT infrastructure upgrades, replacement of email security appliances (Cisco Iron Port) at Strasbourg and Tallinn sites, new Wi-Fi self-registration portal at all sites, replacement of back-end firewalls, network performance enhanced, new high-speed inter-site links, ■ Serena project: new connectivity between corporate network infrastructure and JHA systems to provide Internet-facing services and user access (internal and external) to Serena (Secure Network Access) infrastructure, ■ setting up new geo-redundant interconnection links between Tallinn, Strasbourg and Brussels (bandwidth of 1GB/s).	network availability	network uptime 90%	**On target**
Administration and maintenance of corporate IT systems and storage	**Delivered** ■ maintaining and upgrading the underlying ICT infrastructure, incl. backup and storage capabilities, latest security patches, ■ all hardware updated to the latest firmware and drivers to avoid any system malfunctions, ■ end-user applications/software upgraded to the latest versions, ■ creation of topology diagrams for all systems infrastructure, technical documents, processes to support the new Managed ICT Services contract.	service availability	90% availability of corporate IT systems	**On target**
Corporate IT infrastructure and applications (migration to cloud)	**Ongoing** ■ Migration to Cloud project: programme initiation and strategic approach; business case definition (incl. budget, scope and timeframe); formalisation of project plan and controls.	successful migration to cloud	(1) cost (2) schedule (3) scope	**On target**
ITIL implementation in corporate IT services	**Ongoing** ■ Implementation of ITIL practices for service (ITSM) and asset management (ITAM), ■ analysis of 'as-is' process and definition of 'to-be' process, and subsequent process mapping (iterative approach): definition of interfaces, controls and detailed design, incl. prioritisation for 2022 (and 2023), etc., ■ eu-LISA Ticketing Portal: initiation of refurbishment, alignment to ITSM deliverables, strategic and tactical priorities, ■ ICT satisfaction survey 2022, incl. workshops, action plan.	process mapping project deliverables (iteration_1 and _2) have been secured within budget, time and scope.	(1) cost: green (2) schedule: green (3) scope: green	**On target**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Enterprise Content Management	**Ongoing** ■ document management system (DMS) implementation: project plan approved, evaluation study completed, service request for implementation, data migration scheduled for Q1 2024, ■ new website: project plan approved, evaluation study done, ■ preparations for new projects: public document registry (start Q3 2023) intranet (Q3 2023), mail registry (Q1 2024), workflows (setup, execution and monitoring; planned start Q1 2024).	(1) DMS available (2) new website under way	(1) cost (2) schedule (3) scope	**On target**
Management of information services	**Delivered** ■ long-term records preservation policy and procedures adopted.	timely service delivery and support		**On target**
Procurement of corporate ICT equipment, infrastructure and services	**Delivered** ■ procurement of ICT software, hardware, equipment, services and licences (incl. timely extension), ■ computer network and mobile telephony connection contracts duly signed/amended.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target**
Provision of end-users with IT support (Service Desk)	**Delivered** ■ setup and onboarding of new recruits (>90 people), ■ end-user support: 9346 tickets logged (requests and incidents), ■ distribution of more than 130 mobile phones (1/3 of eu-LISA staff), to be continued in 2023.	end-user satisfaction	satisfaction rate: 90%	**On target**
Corporate management				
Corporate governance, planning and reporting	**Delivered** ■ coordination of multiannual/annual planning and reporting processes, ■ statutory planning documents and reports duly submitted and adopted by the eu-LISA Management Board.	(1) timely adoption of draft SPD 2023-2025 (2) timely adoption of finalised SPD 2023-2025 (without major amendments in 2022) (3) timely submission of activity reports for review, (4) timely adoption of 2021 interim report and 2002 CAAR.	(1) draft SPD 2023-2025 adopted by 31 January (2) Board's amendments must not exceed 5 % of proposed activities and 5 % of the budget, (3) reports submitted not less than 14 calendar days before respective AG/MB meetings, (4) 2021 CAAR and 2022 interim report duly adopted by Board	**On target** (1) achieved (2) achieved with a slight delay and without major amendments (3) achieved (4) achieved → for more, see 1.6.1
Operations department governance, planning and reporting	**Delivered** ■ coordination of planning processes and activity reporting for the Operations Department to provide timely input for the drafting of statutory planning and reporting documents, i.e., SPD, CAAR.	N/A Operations Department inputs for the Agency's statutory planning and reporting documents	N/A timely delivery of inputs	**On target**

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Providing legal advice to eu-LISA	**Delivered** ■ advice and opinions to 472 internal requests, handling of staff complaints (5) and administrative inquiries (3), litigations pending in front of national courts (3), and in front of the General Court of EU (3), incl. 2 cases finalised, ■ public access to documents: handled 17 initial requests and 5 consultations. On 24 March, the Management Board adopted decision No 2022-090 on the practical arrangements regarding public access to the Agency's documents; awareness session organised for staff on 6 May 2022.	timely provision of legal advice and opinions	n/a	**On target**
Implementation of the annual internal audit plan	**Delivered** ■ audit conclusion and recommendations on the EES project, ■ regular, accurate and timely information to the Executive Director and the Board's ACFC on the status of implementation of audit recommendations, ■ self-assessment with independent external validation certified that IAC's activities are in compliance with the International Standards for the Professional Practice of Internal Auditing and the Code of Ethics.	(1) % of processes with assured outputs meeting targets within tolerances (2) % of processes undergoing independent review	(1) at least 80% processes meet targets within tolerance (2) at least 30% processes annually reviewed	**Other** IAC could not measure these new indicators. Instead, it continued measuring the initial indicators, see 1.6.2 Compliance.
Maintaining the Agency's accounts	**Delivered** ■ eu-LISA's 2021 Provisional Annual Accounts submitted to the Commission and the ECA on 1 March 2022, ■ 2021 Final Annual Accounts adopted by the Management Board on 14 June 2022, and forwarded to the Commission, ECA and budgetary authority together with the Board's opinion, and published on the Agency website.	timely delivery of provisional, consolidated, final accounts to the Commission, ECA and the budgetary authority	reporting deadlines laid down in the EU Financial Regulation and by the Commission's accounting officer	**On target**
Operate and evolve PPM capability and related processes	**Delivered** ■ governance: Programme Board Rules of Procedure revised, weekly presentations of project execution results, monthly meetings of Corporate Steering Committee and Contracts Management Committee, ■ process: review of Corporate Risks/Issues Management process and project management methodology, Programme Management Framework initiated, ■ tools: Planview and ProjectPlace improved features deployed, customised reports/dashboards, incl. information sessions.	objectives cascaded by line managers	n/a	**On target**
Official appraisal based on CMMI model	**Delivered** ■ Capability Maturity Model Integration (CMMI) final appraisal report delivered.	(1) cost (2) schedule (3) scope	(1) total deviation ≤ 5 % (2) total deviation ≤ 5 % (3) no deviation	**On target**
Independent benchmarking evaluation of the operational management of core business systems	**Ongoing** ■ scope expanded on the approval of the Commission, postponing the final report to spring 2023, ■ high-level analysis completed in 2022, and deep-dive analysis to be finalised at the start of 2023.	(1) overseeing the contract signed with the external evaluator, incl. timely implementation and adjustment of the project plan	(1) high-quality final report to be delivered as per schedule	**Partially on target** (1) due to expanded scope, the final report deadline was postponed to 2023. → for more, see 2.13.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Stakeholder management and communication				
Policy monitoring, and coordination to represent eu-LISA's views at EU Institutions, stakeholder management, and translating between technical and legal communities	**Delivered** ■ monitoring legislative developments and conducting policy analysis to inform eu-LISA's management and stakeholders, and representing the Agency's positions in various committees and expert groups, ■ coordinating with relevant stakeholders on matters of mutual interest providing support to policy development at the institutional level.	(1) comprehensive and timely policy coordination and development (2) representing eu-LISA at different events and institutional meetings (3) high-quality contribution to policy and other documents	(1) high-quality, efficient and timely policy monitoring and coordination (2) high-quality representation of eu-LISA's positions (3) high-quality and timely contributions	**On target** (1) achieved (2) achieved (3) achieved → for more, see sections 1.5.1 and 2.2.
Stakeholder engagement and policy coordination	**Delivered** ■ active participation in the work of the JHA Agencies Network (JHAAN) and EU Agencies Network (EUAN), ■ updating the working arrangement with Frontex and drafting a new one with the EU Aviation Safety Agency (EASA), ■ drafting the Stakeholder Management Strategy for 2023-2027.	(1) efficient management of stakeholder relations (2) EUAN, JHAAN and bilateral meetings (3) stakeholder support	(1) as per annual plan and working arrangements (2) high-quality representation of eu-LISA's positions (3) high-quality support provided on time	**On target** (1) achieved (2) achieved (3) achieved → for more, see section 1.5.
Timely administrative support for Advisory Groups	**Delivered** ■ 53 meetings delivered as planned, incl. 7 extraordinary meetings of SIS AG, ■ stakeholders reported high satisfaction with the performance of the Management Board Secretariat, especially in terms of communication skills and high professional level of service.	(1) Advisory Group meetings (2) stakeholder survey	(1) AG meetings delivered as planned (2) stakeholder satisfaction rate: > 70 %	**On target** (1) achieved (2) achieved → for more, see 1.6.1.
Timely administrative support for the Management Board	**Delivered** ■ all Board meetings (7) were delivered as planned, incl. 2 extraordinary meetings, 12 *ad hoc* working group meetings, ■ stakeholders reported high satisfaction with the performance of the Management Board Secretariat, especially in terms of communication skills and highly professional service.	(1) eu-LISA Management Board meetings (2) stakeholder survey	(1) Board meetings delivered as planned (2) stakeholder satisfaction rate: > 70 %	**On target** (1) achieved (2a) meetings: 98,6 % (2b) SPOC: 99,8 % → for more, see 1.6.1.
Implementation of the external communication and information action plan	**Delivered** ■ eu-LISA's 10th anniversary communication campaign, incl. new online presentation portal 'Discover eu-LISA 2.0', online photo exhibition 'Then and Now', dedicated Flashback Newsletter, ■ main visibility events: annual conference (380 participants, over 40,600 views, 2318 interactions); Industry Roundtables (June/October, ca 690 participants, boosting online following), ■ contribution to Commission's EES and ETIAS communication campaigns, carrier registration campaign, ■ new website development ongoing.	(1) delivery of high-quality content as per action plan (2) online visibility and engagement levels (web analytics and social media monitoring) (3) participant satisfaction with event management (evaluation sheets)	(1) content published as per action plan (2) positive evolution compared to previous year (3) high satisfaction with event management (4) 100 % of media enquiries receive a response	**On target** (1) achieved (2) achieved (3) eu-LISA events participation rate: 95,3 engagement: 86,3% (4) 64 media enquiries / information requests → for more, see 1.7.6, and Annex I for KPI No 29.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Implementation of eu-LISA internal communication action plan	**Delivered** ■ facilitating internal communication, incl. over 70 email reports, 44 newsletters, 150 intranet news items; regular crisis communication reports and guidelines on COVID-19 and Russia's war of aggression; EU-wide awareness-raising campaigns, e.g., 3 Billion Tree Pledge, Cyber security month. ■ 8 staff assemblies and 5 special briefings, social events at all sites to boost staff engagement, incl. meetings with Commissioner Ylva Johansson, and Vivian Loonela, new Head of European Commission Representation in Estonia, ■ information sessions on transitioning to the new corporate visual identity (incl. how to use new corporate templates).	(1) delivery of high-quality content as per action plan (2) satisfaction survey	(1) annual action plan for internal communication implemented as per milestones, defined deadlines and objectives (2) high satisfaction with internal communication	**On target** (1) achieved (2) achieved: 91% satisfaction with internal communication → for more, see section 1.7.6, and Annex I for KPI No 30.
Data protection				
Cooperation with EDPS and DPOs of other EU entities (Data protection function: Cooperate)	**Delivered** ■ overview of implemented recommendations on sBMS DPIA, follow-up on sBMS-EES Accuracy Measurement DPIA; ■ sBMS-EES Accuracy Measurement procedure package submitted, with proof of implemented recommendations; ■ support to DPIAs of ETIAS, ECRIS-TCN, and interoperability components, also for revised VIS and renewed SIS (additional assessment of data protection impacts on one-time processing activities, e.g., migration process); ■ JHA DPO (Data Protection Officer) network meetings, 50th EDPS-DPO network meeting, as well as Supervision Coordination Group (SCG) meetings for VIS, SIS and Eurodac.	(1) EDPS requests (2) consultations with EDPS (3) SCG meetings (4) DPO network meetings* (5) JHAA DPO network meetings* * potentially one organised by eu-LISA DPO	(1) 80 % of requests handled (2) 60 % of consultations with EDPS (3) meeting attendance: 85 % (4) meeting attendance: 100 % (5) meeting attendance: 100 %	**On target** (1) achieved (2) achieved (3) achieved (4) achieved (5) achieved
DPO annual work report 2021 and reporting on data protection compliance to the Management Board (Data protection function: Inform)	**Delivered** ■ DPO Annual Work Report 2021 presented to eu-LISA Management Board and published online, ■ intermediate status report on data protection presented to eu-LISA Management Board in March 2022.	deliverables provided as per deadlines	two weeks ahead of Board meetings	**On target**
Monitoring data protection compliance	**Delivered** ■ reports on the implementation of audit recommendations (both internal and external) presented to the Executive Director (ED), ■ follow-up activities related to EDPS inspection reports on SIS, VIS and Eurodac, incl. quarterly follow-up sessions (internal), reports submitted to EDPS in Q1 and Q2, and presented to eu-LISA ED and the Board's Audit, Compliance and Finance Committee in February and June.	(1) data protection compliance reports (2) annual data protection survey[164]	(1) audit recommendations implemented and followed	**On target** (1) achieved

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[164] In 2022, the annual data protection survey was put on hold due to insufficient resources. Instead, DPO focused on providing data protection guidance and support for eu-LISA's most critical priorities: new and existing JHA information systems, monitoring the implementation of EDPS audit recommendations and coordinating new EDPS audits.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Organising data protection activities (Data protection function: Organise)	**Delivered** ■ **data breaches:** central register kept up to date (4 reported breaches in 2022); support to data controllers (in line with EDPS guidelines); timely notification of eu-LISA ED, EDPS and affected data subjects (Art 34 and 35 of Regulation (EU) 2018/1725),[165] relevant templates and online resources regularly reviewed and updated; ■ processing activities as data controller: dedicated activity register kept up-to-date and made public without delay; provision of step-by-step instructions and templates on documenting activity records; relevant templates and online resources regularly reviewed and updated; ■ processing activities as data processor: dedicated register finalised; step-by-step instructions and templates on documenting activities made available.	(1) eu-LISA's public register of processing activities (Article 31(1) of Regulation (EU) 2018/1725) (2) days to log a data breach in the register (as of receiving a complete and validated data breach report)	(1) eu-LISA's public register of processing activities is updated at least once per month (2) eu-LISA's data breach register is updated within 15 working days	**On target** (1) achieved (2) achieved As at end of 2022, the register contained 121 records (incl. 7 registered in 2022).
Provide recommendations and advise on the application of Regulation 2018/1725 (Data protection function: Advise)	**Delivered** ■ support and advice to data controllers (and responsible staff) on new records of processing activities (4 reported breaches in 2022), as well as on international transfer clauses and data controller-processor agreements, ■ support/recommendations to product owners (i.e., SIS, VIS, Eurodac) on the creation of records as data processors, ■ advice on data protection impact assessments (DPIAs).	(1) requests received from business owners	(1) 80 % are submitted at an early stage of project (2) 60 % are fulfilled (3) 60 % fulfilled within the agreed time	**On target** (1) achieved (2) achieved (3) achieved
Raising data protection awareness	**Delivered** ■ training sessions: board game session on Data Protection Day (in January, 100 participants); onboarding session for newcomers (in April, 25 participants); one-on-one coaching sessions for data controllers or processors; EDPS personalised training webinar (in October, 75 participants); ■ newsletters: 20 articles shared via 15 weekly newsletters, including a dedicated 'Flashback' issue in December; ■ DPO intranet: regular reviews and updates, two new sections: 'International transfers' and 'Data Protection Clauses: Controller-Processor relationship'; ■ following the adoption of new standard contractual clauses (SCC) for international transfers of personal data to countries outside the EU/EEA, eu-LISA DPO started coaching all internal data controllers, incl. on transfers impact assessments (TIAs).	(1) info sessions on data protection and personal data breaches (2) information material disseminated via internal communication channels (i.e., newsletters, email, intranet, etc.)	(2) minimum 15 informative awareness notes (per year) shared with eu-LISA staff	**On target** achieved

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[165] **Regulation (EU) 2018/1725** of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the **processing of personal data by the Union institutions, bodies, offices and agencies** and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC, OJ L 295, 21.11.2018, p. 39–98.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Human resources management				
Competency and capability development related to operations	**Delivered** ▪ finalisation of operational capabilities training plan, information sessions for staff, incl. tailored for units/sectors, increased number of individual training requests compared to 2021.	(1) training activities delivered (2) satisfaction rate	(1) 90 % of training plan activities implemented (2) > 85 % satisfaction	**Below target** (1) 80 % due to limited capacity and high turnover (2) 82 % (unreliable due to low response rate)
Further consolidation of the Agency following growth and transformation with focus on digitalisation of HR services and recruitment	**Delivered** ▪ adoption of revised whistleblowing guidelines and new rules on administrative inquiries, main focus on the digitalisation of HR services and recruitment, ▪ HR reporting (in Sysper): user acceptance testing completed, ▪ conflict of interest prevention: digitalisation of declaration submission process (incl. requests for implementation).	(1) annual absenteeism rate[166] (2) talent retention index (3) ratio of admin. / operational HR resources (4) conflict of interest prevention[167] (5) annual staff turnover rate (%) (6) annual occupancy rate (%)	(1) annual absenteeism rate: < 15 days / < 10 % / > 15 % (2) > 0 (3) 20 / 70 % (4) submission rate of declarations: 100% (incl. > 80 % on time) / > 90 % evaluated / n/a. (5) < 5 % (6) > 90 %	**Partially on target** (1) 4.1 sick days per employee / 3.2 % on long-term sick leave / 51.6% no sick leave (2) 0.3[168] (3) 16 % / 74 % (4) 97 % submission rate (incl. 90 % on time / 100% evaluated / 1% with measures) (5) 7.1% (6) 82.4% due to staff turnover, incl. HR unit → for more, see section 2.5.4, and Annex I for KPIs No 13 and 24 to 28.
Organisational development and cultural transformation	**Delivered** ▪ February, staff engagement survey (overall score 7.3), ▪ workshops on competency-based HR organised for all units, ▪ competency framework: testing new role profiles for vacancy intake meetings, ▪ performed HR diagnostic exercise to assess service quality and make adjustments based on organisational needs.	(1) staff engagement survey (2) staff performance (annual average) (3) eu-LISA cultural transformation project evaluation criteria	(1) survey results > 7.5 (2) average performance (annual appraisal exercise) (3) cost / schedule / scope	**On target** (1) survey result: 7.3 below target, with variation across Units (2) annual average: 2.4 (3) on time/budget/scope
Finance and procurement				
Execution of the procurement and acquisition plan	**Delivered** ▪ timely provision of procurement and acquisition services in compliance with statutory obligations and within the planned budgetary framework.	(1) procurement process efficiency (2) acquisition management	(1) < 25 % (2) > 60 % procurement projects on schedule	**On target** (1) 9.5 % (2) 140 % → for more, see Annex I for KPIs No 17 and 18.

[166] KPI 24: annual absenteeism rate: a) average number of sick leave days per employee (target: <15 days), b) staff on long-term sick leave (target: <10%), c) staff not taking sick leave (target: >15%).
[167] New KPIs introduced to measure conflict of interest prevention: a) number of submitted declarations of interests (of which on time), b) number and percentage of evaluated declarations, c) number and percentage of preventive measures or decisions limiting participation.
[168] Includes also negative probation periods; however, if probation periods are removed, then below target.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Internal control, procedures, audits related to finances and procurement	**Delivered** ■ all checklists and workflows for financial transactions are in line with the Agency's Financial Rules.	comprehensive set of procedures for main financial and procurement processes	80% of annual work plan procedures	**On target**
Timely delivery of services related to budgetary, asset and financial management	**Delivered** ■ budget implementation for commitment appropriations reached 99% (incl. non-automatic carryover of commitment appropriations approved by the Board), whereas payment appropriations stood at 92% (incl. carry-forward of administrative expenditure to 2023), ■ budget implementation was followed-up in due time, and all services delivered as per defined standards.	(1) payment appropriations cancellation rate (2) budgetary commitments implementation rate (3) payment implementation rate (4) duly executed payments (%)	(1) < 5 % (2) 95-99 % (3) > 95 % (4) > 87.5 %	**Partially on target** (1) 10.6 % (2) 99.0 % (3) 91.6 % (4) 90.1 % → for more, see Annex I for KPIs 10 and 14.
Corporate security				
Delivering the information security and assurance service for corporate infrastructure	**Delivered** ■ transition to the Managed IT Security framework contract, ■ adaptive improvements to security monitoring infrastructure, ■ cybersecurity exercise in November, ■ special focus on critical cyber security management activities in response to the increased threat landscape.	(1) statutory security objectives (2) JHA system security risk assessments (3) cybersecurity exercises (per year)	(1) implementation rate: 100 % (2) 100 % (3) 1	**On target** (1) achieved (2) achieved two confidential performance indicators removed due to sensitivity
Business continuity, disaster recovery, emergency response parts of the security and continuity management	**Delivered** ■ overseeing eu-LISA's corporate business continuity management system (BCMS), incl. BC improvement plan, ■ business continuity plans tested for effectiveness of established controls, incl. exercise in October, ■ monitoring and response to the COVID-19 outbreak.	(1) BCMS covers all areas (2) business continuity plans tested for effectiveness of established controls	(1) 100% business areas covered (2) at least one exercise is run to test corporate resilience	**On target** (1) achieved (2) achieved
Operate, plan and develop the protective elements of the security and continuity management	**Delivered** ■ management of security systems (incl. clearances), and ensuring protective security at all eu-LISA premises on a 24/7 basis, incl. security controls for the temporary premises, ■ Access Policy drafted and stand-by duty procedures adopted.	(1) protective security measures in line with risk assessment, regulations and standards (ISO) (2) ensuring physical security at eu-LISA premises and security for missions, activities, personnel at acceptable risk levels	(1) 100% compliance security management in place at all eu-LISA sites (2) risks mitigated to acceptable levels of risk	**On target** (1) achieved (2) achieved
Operate, plan and develop the horizontal elements of security and continuity management	**Delivered** ■ delivery of annual staff trainings, incl. security, health & safety, ■ organisation of stakeholder outreach events, e.g., 15th Security Officers Network (SON) meeting and NIS[169] Cooperation Group meetings (3).	(1) statutory security policies in place (also for JHA systems) (2) Security Awareness Framework (for n+1 year) (3) delivery of annual security trainings for staff (4) stakeholder outreach events	(1) at least 80 % of planned policies adopted by end of 2022 (2) develop Security Awareness Framework (n+1) by end of 2022 (3) at least 80 % of planned annual security trainings delivered (4) at least one event organised with external stakeholders	**On target**

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[169] The **Network and Information Systems (NIS) Cooperation Group** was established by the NIS Directive to ensure cooperation and information exchange among Member States.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
Facilities management				
Capacity Increase Programme	**Delivered** ■ **2nd extension project:** updated building programme, quality control on the design services call for tender (launch pending), ■ **modular data centre:** sourcing survey tender documents, survey launched, ■ **power and cooling upgrade:** preliminary power study completed, implementation launched; cooling study phase A completed, phase B ongoing.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**Other**
Environmental management	**Delivered** ■ Environmental Policy, environmental review, and EU EMAS certification roadmap finalised, ■ Energy Sobriety Plan implemented, incl. green electricity.	environmental indicators[170]	90 %	**Other**
Health and safety management	**Delivered** ■ roadmap for Occupational Health and Safety (OHS) Management System finalised, together with draft versions of OHS Policy and internal rules.	staff satisfaction with working environment and occupational safety	90 % satisfaction rate[171]	**Other**
Facility operations and services	**Delivered** ■ delivery of facility services to support operations, incl. continuous service improvement by monitoring tickets and response time to closure, ■ improvements made to building infrastructure, focusing on core business activities and employee well-being.	compliance with applicable standards	maximum compliance at all Agency sites	**On target**
Logistics and office supply services	**Delivered** ■ workspace improvements in Strasbourg, Illkirch and Tallinn, ■ space allocation project, incl. 100 workstations for contractors.	(1) cost (2) schedule (3) scope	(1) cost: green (2) schedule: green (3) scope: green	**On target**
Management and support of mission services	**Delivered** ■ continuous improvement of the mission portfolio, ■ new framework contract for travel management services.	(1) duly executed missions (2) new framework contract signed	(1) 100 % (2) 100 %	**On target** (1) achieved (2) achieved
Operational management of corporate services	**Delivered** ■ support for business services and service delivery.	(1) end-user experience (2) resource management	90 %	**On target** (1) achieved (2) achieved

[170] eu-LISA started monitoring volumetric indicators for water, energy, paper consumption and waste production in 2020 but was not able to establish baselines due to COVID-19-related restrictions that were in place until 2022. As a result, the baselines for environmental indicators will be set in 2023, to be used for the calculation and evaluation of these performance indicators from then on.
[171] Evaluation will be possible only after implementation of activities, pending the approval of the OHS Policy in 2023.

Project/task	Description of key outcome delivered in 2022	Performance indicators	Performance target	Status and value
General coordination				
Contribution as an observer to Schengen evaluations in the fields of SIS/SIRENE and Common Visa Policy (incl. VIS)	**Delivered** ■ Schengen evaluation missions: SIS/SIRENE (6), common visa policy (1).	(1) participation in evaluations, and contribution to evaluation reports	(1) timely contributions and submission of input as per the Commission's schedule	**On target** → for more, see 1.5.1.
Drafting reports on the technical functioning of the systems, and aggregating statistics	**Delivered** ■ statutory reports published on SIS (2), VIS (1), Eurodac (3).	statutory performance reports on SIS, VIS and Eurodac, incl. statistics reports and lists of designated authorities	timely submission and publication of statutory performance reports	**Partially on target** all on target, except updated SIS authorities list was delayed until the system's launch on 7 March 2023 → for more, see 1.5.3.
Implementation of the planned annual research and technology monitoring activities, in line with the adopted R&D roadmap	**Delivered** ■ two research monitoring reports published: 'Artificial Intelligence Supporting Cross-Border Cooperation in Criminal Justice' (June 2022), 'Enabling Seamless Travel to the European Union' (December 2022); ■ events: annual conference in October and two annual industry roundtables (in June and October).	(1) research and technology monitoring reports (2) event attendance	(1) at least one report published per year (2) attendance rates (a) industry events: > 50 participants (b) annual conference: > 120 participants	**On target** (1) 2 reports published (2a) June: 170+ online, 100+ in person; October: 300+ online, 115 in person; (2b) 388 participants, incl. 130 in person. → for more, see 1.2.8.
Implementation of the Training plan for provision of training to the Member States on the technical use of JHA systems	**Delivered** ■ 48 training activities, 3800 participants, 90% satisfaction rate, ■ Annual Training Plan (70%), drafting next year's plan, ■ completed migration of revamped Learning Management System, further upgrade ongoing.	satisfaction with MS training activities (participant surveys)	satisfaction rate: above 4 (average on a scale of 1-6)	**On target** satisfaction rate: 5.4 → for more, see section 1.5.3.
Integration of research findings into application life cycles	**Delivered** ■ contribution to projects overseen by DG HOME and EU Innovation Hub for Internal Security, ■ participation in meetings of eu-LISA Working Group on AI (3) and the Biometrics Working Group.	(1) technology briefs (upon request by management or operations) (2) engagement with Advisory Groups (3) technology projects	(1) at least 2/3 briefs delivered annually (2) at least one presentation for each AG (per year) (3) part of the core team in at least one large-scale technology project	**On target** (1) Achieved (2) Achieved (3) Achieved → for more, see 1.2.8.
Supporting the implementation of parts of the EU Framework Programme for Research and Innovation	**Delivered** ■ defining the priorities for the work programme to implement the EU Framework Programme for Research and Innovation (EU FP for R&I), ■ evaluating research proposals in the area of internal security.	(1) thematic priorities for EU FP for R&I work programme (2) project presentations to staff and stakeholders (3) EU FP for R&I projects delegated to eu-LISA	(1) adoption of one set of EU FP for R&I thematic priorities by the Management Committee and relevant AGs (2) at least 2 projects (incl. outcomes) presented (3) project implementation as per scope, objectives and schedule.	**On target** (1) Achieved (2) Achieved (3) Achieved → for more, see 1.2.8.

Annex X. **Report on public access to documents**

To ensure the transparency of the Agency's operations, eu-LISA should make public information on all of its activities, provided that it will not jeopardise the achievement of the objectives of its operations. Throughout 2022, eu-LISA remained committed to guaranteeing transparency in its activities, processes and decision-making. The Agency observed the highest levels of good administrative conduct and complied with all legal requirements.[172]
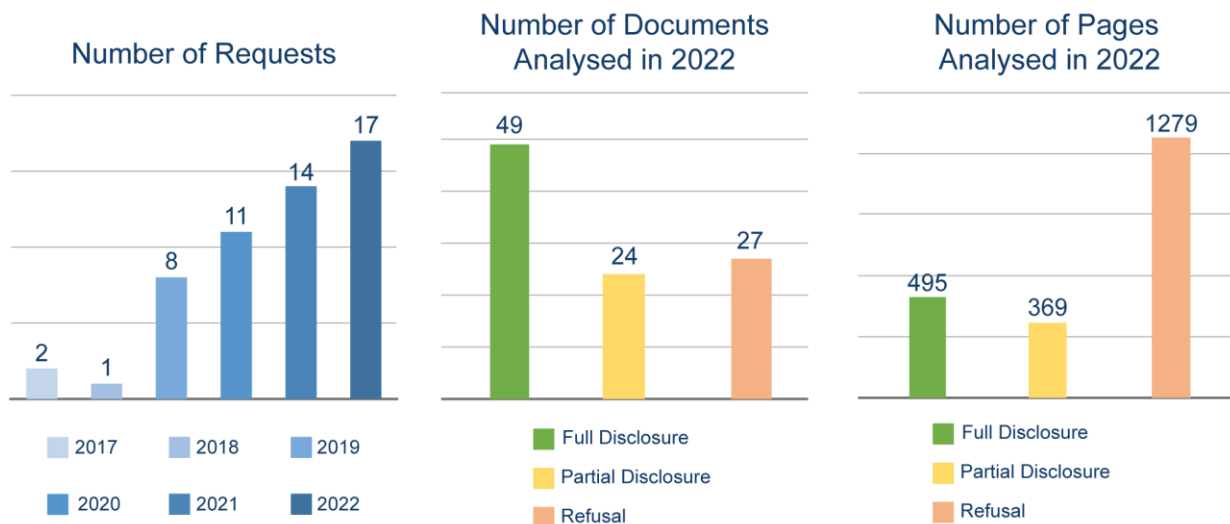
Report on requests for access to documents

The Agency is committed to guaranteeing transparency in all of its activities, processes and decision-making, including the procedure for public access to documents. In 2022, eu-LISA observed the highest levels of good administrative conduct and respected all deadlines specified by Regulation (EC) No 1049/2001.[173]

In 2021, eu-LISA received 17 requests to access documents, an increase from the previous years. In 11 cases, the Agency invited the applicants to clarify the scope of their requests in accordance with Article 6(2) of Regulation (EC) No 1049/2001.

In addition, in 6 requests for public access to documents, the Agency did not hold all or some of the requested documents and, accordingly, it could not grant (or refuse) access. The applicants were duly informed of the fact and directed towards publicly available information and other appropriate institutions, where possible.

During the year, eu-LISA analysed 100 documents, of which 49 were fully disclosed to the applicants, 24 were partially disclosed with parts redacted, and in 27 cases the request for access was refused. These documents comprised a total of 2143 pages, out of which 495 pages were fully released, 369 were partially released, whereas access to the remaining 1279 pages was refused.

Number of Requests
- 2017: 2
- 2018: 1
- 2019: 8
- 2020: 11
- 2021: 14
- 2022: 17

Number of Documents Analysed in 2022
- Full Disclosure: 49
- Partial Disclosure: 24
- Refusal: 27

Number of Pages Analysed in 2022
- Full Disclosure: 495
- Partial Disclosure: 369
- Refusal: 1279

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[172] According to Article 17 of the Management Board decision of 28 June 2012, which reflects the wording of Article 17 of Regulation (EC) No 1049/2001 regarding public access to European Parliament, Council and Commission documents, and following Article 34 of the Agency's establishing regulation, eu-LISA shall annex a report on access to documents to its annual report. The report shall include the number of cases in which the institution refused to grant access to documents and the reason for such refusals.

[173] **Regulation (EC) No 1049/2001** of the European Parliament and of the Council of 30 May 2001 regarding **public access to European Parliament, Council and Commission documents**, OJ L 145, 31.5.2001, p. 43–48.

The partial redaction of documents and the refusal of access to documents by eu-LISA were based on the exceptions specified in Article 4 of the Regulation (EC) No 1049/2001, in particular, on the protection of privacy and the integrity of the individual (in accordance with the relevant EU legislation regarding the protection of personal data),[174] public interest as regards public security, ongoing decision-making processes and commercial interests.

It is noteworthy that among the 27 documents for which the Agency refused access to the applicants in 2022, 26 documents were related to technical aspects of the large-scale IT systems developed and managed by the Agency. The release of these documents to the public would reveal technical and sensitive information about the systems. Therefore, the disclosure of the requested documents had to be refused based on the protection of the public interest as regards public security.

There were no confirmatory applications against the Agency's initial decisions. Furthermore, the Agency's decisions on public access to documents were not challenged before the EU Courts. Additionally, no complaints regarding the Agency's process of handling the requests for access to documents were made before the European Ombudsman.

In 2022, the Agency also received 5 consultations for access to documents from other EU entities, in accordance with Article 4(4) of Regulation (EC) No 1049/2001, a decrease compared to last year.

Other activities related to access to documents

The Agency has been continuously striving to guarantee full compliance with the legal requirements and to improve the practice of handling requests for public access to documents. In this context, eu-LISA continues to work on reviewing the practical arrangements for public access to documents in order to improve the efficiency and operational effectiveness of the process. Furthermore, the Agency achieved several milestones in 2022, which will ensure the smooth processing of future requests for public access to documents.

On 24 March 2022, the eu-LISA Management Board adopted the decision No 2022-090 on the practical arrangements regarding public access to the documents held by the Agency, with the ultimate purpose of laying down the practical arrangements of the application of the Regulation (EC) No 1049/2001, ensure good administrative practices and high standards of public access to documents, taking into account the specific nature of the Agency and its mandate.

In May 2022, the Agency's Legal Sector, as eu-LISA's designated public access to documents (PAD) team, delivered an online awareness session on the subject to provide eu-LISA staff an overview of the recently adopted internal legal framework, the process for initial applications, the exceptions to the rights on access based on Art. 4 of the Regulation (EC) No 1049/2001, and the possible legal consequences.

On 22 September 2022, the Executive Director adopted eu-LISA's Guidelines on Public Access to Documents, outlining the allocation of work within the Agency, and in order to safeguard eu-LISA's ability to carry out its tasks regarding public access to documents.

On 11 October 2022, the Executive Director adopted the decision on the appointment of PAD contact persons to be part of a cross-divisional network overseen by the PAD coordinator, for the purposes of handling PAD applications in their respective areas of work. All the newly appointed PAD contact persons were invited to take part in the annual mandatory training on public access to documents, organised by the Legal Sector in October 2022. The training, delivered by an expert from the European Institute of Public Administration, provided an overview of the theoretical and practical aspects of Regulation (EC) No 1049/2001. Finally, in November 2022, the Agency's PAD Team delivered a briefing on the topic of 'PAD Contact Persons in eu-LISA' to introduce the respective roles that the contact persons will play in various processes and to enhance the collaboration between the PAD Team and the contact persons.

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[174] **Regulation (EU) 2018/1725** of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the **processing of personal data by the Union institutions, bodies, offices and agencies** and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC, OJ L 295, 21.11.2018, pp. 39-98.

Annex XI. **Sustainability initiatives**

Sustainability issues are gaining a more prominent role, and public administration institutions are invited to be increasingly proactive, transparent and, where possible, lead by example in terms of how to approach sustainability challenges.

eu-LISA, being conscious of its responsibilities as a public entity, has taken several steps towards improving its sustainability. These include our contribution to energy efficiency by designing and building an energy-efficient smart building for the Agency's headquarters in Tallinn and establishing an action plan for energy savings. With its unique role, eu-LISA will continue to contribute to Schengen security and freedom of movement through its mandate and core operational activities.

Sustainability initiatives

eu-LISA's contribution to energy efficiency: Energy Sobriety Action Plan

In 2022, eu-LISA adopted the Energy Sobriety Action Plan with the goal of reducing energy consumption across all Agency premises. The plan focuses on energy reduction in the following areas:

- premises heating by reducing temperatures, when and where applicable,
- premises cooling by increasing the default temperature setpoint of the air conditioning/cooling system,
- premises lighting by reducing the intensity of office lighting and minimising the use of hallway lights,
- IT equipment by turning off equipment when not in use.

eu-LISA's contribution to energy efficiency: Green and smart headquarters building

Upon eu-LISA's establishment, one of the priorities was to ensure that its services are supported by a modern, smart and green infrastructure. This motivated eu-LISA to design and build a green and smart headquarters building in Tallinn, Estonia. The Agency's headquarters is an innovative combination of sustainable green infrastructure, ergonomic workstations and modern collaboration space, making it a role model in public buildings construction and management in Estonia and the rest of Europe.

In the construction of the building, innovative solutions were used that allow energy efficiency and energy savings wherever possible. For example, the office air quality is improved by more than 200 indoor plants systematically placed throughout the building so that no additional humidifiers and air cleaners are needed. There is an innovative floor heating system supported by exhausting hot air from the server room via heat exchangers, which is also used to preheat the fresh air for inflow. All lighting solutions, including external lighting, are based on LED technology and connected to the Building Management System, enabling control and programming according to needs.

In 2021, eu-LISA received one the highest recognitions in public administration at the EU level – the European Public Sector Award (2nd place in the category Green Public Administration) for its headquarters in Tallinn, citing the exemplary approach in project design and inspiring model of project delivery, communication and its impact, strengthened with the targeted staff awareness and trainings on sustainable resource use and management.

eu-LISA's contribution to Schengen security and freedom of movement

In the coming years, the EU will continue maintaining internal security for the benefit of its citizens, residents, visitors, territory and infrastructure. To support this ambition, eu-LISA's mandate and core operational activities are aimed at strengthening the EU's external borders by contributing to migration management and internal security initiatives and supporting the European asylum system reform.
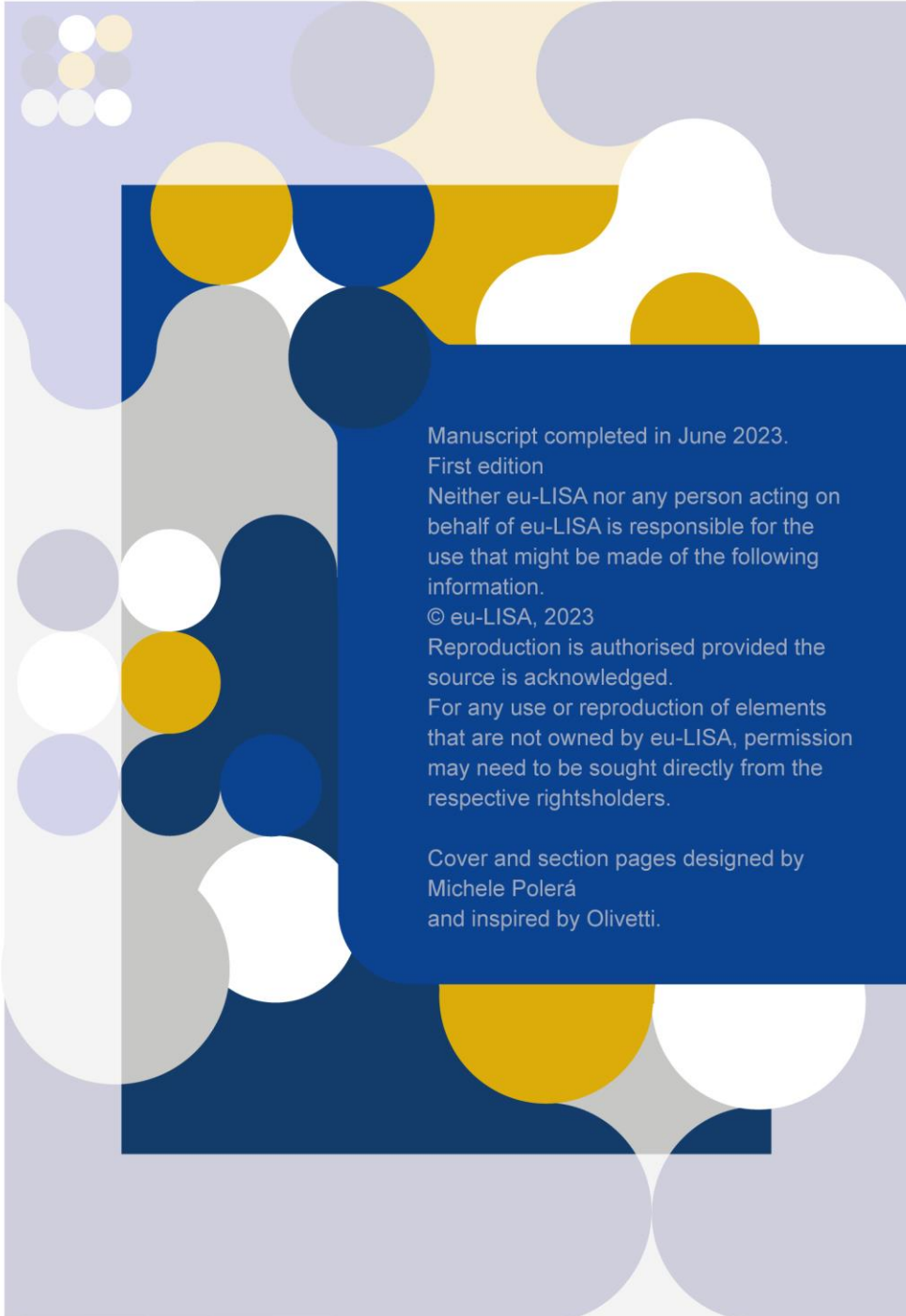
The ability to respond to continuously evolving security threats (i.e., terrorism, organised crime and cybercrime) rely on the timely and comprehensive exchange of information between relevant national and European authorities, best facilitated by modern information systems. New systems expected to start operation by 2023–2024 (i.e., EES, ETIAS and ECRIS-TCN) will support all these operational needs. These will provide an integrated intelligent approach to ensuring Europe's internal security.

In addition, eu-LISA's work takes guidance from the Commission's Schengen Strategy, which aims to fortify and improve the resilience of the Schengen area — the world's largest free movement area. In principle, all Justice and Home Affairs information systems operated by eu-LISA serve as compensatory measures to facilitate free movement within the Schengen Area. Therefore, their continued evolution is paramount to the EU and eu-LISA.

Sustainability Reporting

Sustainability reporting is the voluntary disclosure of environmental, social and economic indicators. It also includes the communication of a progress state towards the organisations' sustainability goals.

eu-LISA is planning to disclose its sustainability information in the Consolidated Annual Activity Report for 2023 in accordance with an established sustainability reporting framework. The choice for the reporting framework will be made during 2023 after analysing eu-LISA's compatibility with the attributes of the most widely used frameworks among public organisations. The Agency's first sustainability report for 2023 will provide a modest overview of eu-LISA's reported information with the objective of providing transparency on our initiatives related to social, human and environmental capital. In the following years, the aim is more ambitious – to increase the amount of disclosed information and determine how sustainability reporting can contribute to strengthening the Agency's long-term strategy.