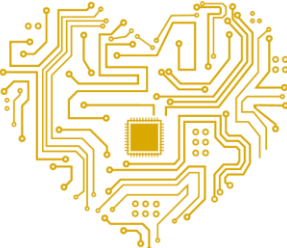# Consolidated Annual Activity Report

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European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice

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eu-LISA

THE DIGITAL ❤ **OF SCHENGEN**

eu-LISA Consolidated Annual Activity Report 2021

Adopted by the eu-LISA Management Board on 22 June 2022

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Abbreviations and acronyms

ACFC	Audit, Compliance and Finance Committee
AFIS	Automated Fingerprint Identification System
AI	Artificial Intelligence
ALM	Application lifecycle management
AG	Advisory Group
BC	Business continuity
BCU	Backup Central Unit (backup centre in St Johann im Pongau)
BMS	Biometric Matching System
CA	contract agent
CAAR	Consolidated Annual Activity Report
CBS	Core Business System
CEPOL	European Union Agency for Law Enforcement Training
CIR	Common Identity Repository
CMMI	Capability Maturity Model Integration
CRRS	Central Repository for Reporting and Statistics
CSI	Common shared infrastructure
CU	Central Unit
DG HOME	Directorate-General for Migration and Home Affairs
DPO	Data Protection Officer
DubliNET	Dublin electronic communications network
ECA	European Court of Auditors
e-CODEX	e-Justice Communication via Online Data Exchange
ECRIS	European Criminal Records Information System
ECRIS RI	ECRIS Reference Implementation
ED	Executive Director of eu-LISA
EDPS	European Data Protection Supervisor
EES	Entry/Exit System
ENISA	European Union Agency for Cybersecurity
EPMO	Enterprise Project Management Office
ESP	European Search Portal
ETIAS	European Travel Information and Authorisation System
EU	European Union
EUAN	European Union Agencies Network
Eurodac	European Asylum Dactyloscopy Database
Eurojust	European Union Agency for Criminal Justice Cooperation

Europol	European Union Agency for Law Enforcement Cooperation
FAT	Factory acceptance test
FG	Function Group
Frontex	European Border and Coast Guard Agency
FTE	Full-Time Equivalent
IAC	Internal Audit Capability
IAS	Internal Audit Service of the European Commission
ICF	Internal Control Framework
ICT	Information and Communication Technology
IT	information technology
ITIL	IT Infrastructure Library
ITSM	IT service management
JHA	Justice and Home Affairs
JHAAN	Justice and Home Affairs Agencies Network
KPI	Key Performance Indicator
LFS	Legislative financial statement
MB	Management Board
MID	Multiple-Identity Detector
MRMIC	Manager in charge of risk management and internal control
NUI	National Uniform Interface
OJ	*Official Journal of the European Union*
PPM	Project Portfolio Management
sBMS	Shared Biometric Matching Service
SIRENE	Supplementary Information Request at the National Entries
SIS	Schengen Information System
SLA	Service-Level Agreement
SM9	HP Service Manager version 9
SNE	Seconded National Expert
SPD	Single Programming Document
TA	Temporary Agent
TAP	Turnkey Access Point
TEF	Transversal Engineering Framework
TESTA-ng	Trans European Services for Telematics between Administrations — new generation
TCN	Third Country National
VIS	Visa Information System

Overview of large-scale IT systems managed by eu-LISA

Purpose of the system	Entry into operation	Status	Data stored in 2021	Operations per year (2021)
AREA: ASYLUM				
European Asylum Dactyloscopy database (Eurodac) Eurodac assists Member States in determining the country responsible for examining asylum applications by comparing the fingerprints of new applicants with those already registered in the database.	**2003** **operated by eu-LISA since June 2013**	**In operation**	5.8 million fingerprint sets	855 000
AREA: SECURITY				
Schengen Information System (SIS) SIS facilitates the exchange of information on persons and objects between European national law enforcement and judicial authorities. In 2018, the Automated Fingerprint Identification System (AFIS) was introduced as a biometric search capability in SIS, allowing for the identification of persons of interest solely based on their fingerprints.	**1995** **operated by eu-LISA since May 2013**	**In operation**	90 million alerts	6.97 billion access by Member States
AREA: BORDERS				
Visa Information System (VIS) VIS supports European consular authorities in managing applications and delivery of short-stay visit or transit visas to the Schengen Area. Its biometric matching system (BMS), enables border authorities to verify the identity of third-country nationals (TCN) travelling to the EU.	**October 2011** **operated by eu-LISA since December 2012**	**In operation**	62.5 million visa applications 56.1 million fingerprints	80 million
Entry/Exit System (EES) EES will enable the recording of entry and exit of third-country nationals at the external borders of the EU. It will replacing the current practice of manual stamping of passports with an electronic registration of the date and place of entry/exit for visits lasting up to 90 days, in any 180-day period, in a central biographic and biometric database.	**September 2022**	**In development**	n/a	n/a
European Travel Information and Authorisation System (ETIAS) ETIAS is a pre-travel online authorisation system for visa-exempt third-country nationals travelling to or through the EU. It will allow data comparison with other JHA systems, enabling advance verification of potential security, migration and public health risks. ETIAS travel authorisations will be checked by border guards at external border crossing points and by carriers (air, sea and land) prior to boarding. Law enforcement agencies and Europol will also be able to access ETIAS to prevent, detect or investigate terrorist or serious criminal offences.	**May 2023**	**In development**	n/a	n/a

Purpose of the system	Entry into operation	Status	Data stored in 2021	Operations per year (2021)
Interoperability				
Architecture to ensure that both existing and new systems in the EU's JHA domain are able to exchange data and information. This includes the following interoperability components:	**December 2023**	**In development**	n/a	n/a
■ **European search portal (ESP)**, enabling authorised users to conduct single searches and receive results from all the systems they are authorised to access,				
■ **shared biometric matching service (sBMS)**, allowing users to search and cross-match identity data with biometric identifiers,				
■ **common identity repository (CIR)**, enabling easy access to biographical information about third-country nationals, to ensure their reliable identification,				
■ **multiple-identity detector (MID),** helping detect multiple identities present in the systems, to ensure the correct identification of bona fide travellers as well as combatting identity fraud,				
■ **central repository for reporting and statistics (CRRS)**, to provide cross-system statistical data and analytical reporting for policy, operational and data quality purposes.				

AREA: JUSTICE

European Criminal Records Information System – Reference Implementation (ECRIS-RI)

ECRIS is a decentralised system for exchanging information between Member States on criminal records of EU citizens. The ECRIS Reference Implementation (ECRIS RI) is the list of functional, technical and security requirements that the Member States must follow for the ECRIS to be operational.	**2012** **managed by eu-LISA since April 2020**	**In operation**	n/a	n/a

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

ECRIS-TCN supplements the ECRIS with information on criminal records of TCNs convicted in the EU, helping 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.	**May 2023**	**In development**	n/a	n/a

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

e-CODEX is a communication platform to ensure secure cross-border communication in the area of justice.	**2013** **handover to eu-LISA planned for July–December 2023**	**In operation**	n/a	n/a

Management Board's analysis and assessment

Zsolt Szolnoki,
Chairperson of the eu-LISA Management Board

The Management Board of the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA) has analysed and assessed the Agency's Consolidated Annual Activity Report on the achievements and results for 2021. The Board acknowledges the Agency's performance and makes the following observations.

General observations

The Management Board:

- considers that eu-LISA has achieved in 2021 its overall objectives as set out in its establishing regulation and implemented its annual work programme set in the Single Programming Document 2021–2023 as well as all time highest budget execution, despite many challenges and in the difficult context of the COVID-19 pandemic;

- welcomes the launch of eu-LISA new long-term strategy for 2021–2027;

- acknowledges the excellent level of achievement of the Agency's key performance indicators for 2021;

- emphasises the importance of eu-LISA for the normal functioning of the Schengen area, and the importance of its contribution to the succesful implementation of the Union's policies on external border controls, asylum, immigration, as well as the prevention and combating of crime, which enables the free movement of persons in an area of freedom, security and justice;

- emphasises the importance of the support provided by the Agency to the Member States and the Commission in the implementation of the EES, the ETIAS, the ECRIS-TCN and of the components of the interoperability architecture;

- acknowledges the efforts of the Agency to ensure a sufficient capacity for its operational facilities in Strasbourg and the progress made with the project for building the new extension, including the deployment of the necessary temporary measures;

- recognises the Agency's success in ensuring the resilience and continuity of its operations in the ongoing crisis caused by the COVID-19 pandemic;

- acknowledges with concern the Agency's increasing staff turnover rate and emphasises the need for eu-LISA to continue its commendable efforts to ensure staff retention and professional development within the Agency;

- emphasises the need for eu-LISA to be reinforced with additional human resources in order to reduce its dependency to external contractors, as much as possible, and to safeguard the high level of compliance achieved;

- recognises the efforts of eu-LISA in consolidating its organisation and new operating model;

- welcomes the Agency's efforts to change the contractual architecture that supports the operational management and development of the systems entrusted to eu-LISA;

- welcomes the efforts of the Agency in strengthening the efficiency and effectiveness of its internal control systems, emphasises the successful implementation of the Agency's 2019–2021 anti-fraud strategy and recognises the commitment of the Agency in the implementation of audit recommendations;

- acknowledges that the Agency's internal controls have been effective, considering the results achieved by the Agency and the results of the internal and external audits.

Observations on the Agency's operational achievements

The Management Board:

- acknowledges that in line with its mandate, the Agency successfully ensured the operational management and uninterrupted availability of the SIS, VIS/BMS and Eurodac, that have successfully contributed to the achievement of the objectives and tasks set out in the relevant legal instruments;

- acknowledges the Agency's continuous efforts to improve the efficiency of its operational activities, as evidenced by the positive results of the annual stakeholder satisfaction survey;

- acknowledges the progress made in 2021 with the implementation of the EES, ETIAS, ECRIS-TCN, and the Interoperability components, and encourages the Agency to continue its efforts towards their full implementation without further delays, in close collaboration with the governing bodies, the Member States, as well as the relevant EU institutions and agencies;

- notes the progress in the implementation of the SIS Recast Regulation and the efforts of the Agency to support the Member States in the preparation for the entry into operation during 2022;

- emphasises the importance of the AFIS for SIS: recognises the efforts of the Agency to support the last Member States with their connection to AFIS, and notes the progress made by the Agency in the implementation of AFIS phase 2;

- notes the adoption of the Revised VIS Regulation, and welcomes the timely preparation work initiated by the Agency;

- acknowledges the work of eu-LISA to keep Eurodac operational in the continued absence of new legal basis.

Assessment of the Management of the Agency

The Management Board

- acknowledges the results delivered by the Agency in 2021 and, considering the positive outcomes of the internal and external audits undertaken in 2021, and the detailed information regularly shared with the Agency's governing bodies, expresses its satisfaction with the quality of the management of the Agency in 2021;

- also notes with satisfaction the discharge granted by the European Parliament to the Executive Director for the financial year 2020.

Variations in the use of human and financial resources compared with the annual work programme

The Management Board:

- particularly welcomes the Agency's proactive budget management throughout the year, and sound financial management, with high overall execution levels for commitments (100 %) and payments (99.1 %);

- considers this report provides sufficient assurance that the resources (i.e. staff and budget) allocated to the Agency were used in line with their intended purpose as set out in the eu-LISA Annual Work Programme for 2021 included in the Single Programming Document 2021-2023;

- considers that the variations in the use of resources are not significant and remain justified, given the results achieved by the Agency and the outcomes of the audits performed in 2021;

- emphasises the importance of reinforcing the Agency with the necessary amount of human and financial resources to match the tasks entrusted to the Agency in the 2021-2027 programming period.

Recommendations for 2022

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

- continue delivering its mandate, with sustained efficiency and effectiveness;

- continue the development of the EES, the ETIAS, the ECRIS-TCN and interoperability components at the highest possible pace, with a strong focus on guaranteeing the quality and robustness of the new systems, and on ensuring that all conditions are met for a seamless and timely entry into operation;

- ensure that all conditions are met for a successful entry into operation of the EES and the SIS Recast;

- continue with the project for the extension of the Agency's operational site in Strasbourg without delay;

- continue eu-LISA's close, efficient and transparent collaboration with the Member States, the Commission, the European Parliament and the relevant EU agencies;

- finalise the recruitment for all posts provided in the Agency's establishment plan without delay.

Assessment of assurance and reservations issued by the Authorising Officer

The Management Board considers that adequate and appropriate measures are in place to address the identified management and control weaknesses.

Conclusion

The Management Board is satisfied with eu-LISA's overall performance in 2021 and with its achievements throughout the year, that are in line with the goals and objectives set out in its 2021 Annual Work Programme. The Management Board is also satisfied with the adequacy and level of utilisation of available human and financial resources. However, the Board emphasises that the considerable pressure on the Agency's staff, due to multiple complex projects that are developed in parallel, remains a concern, and emphasises the need for the Agency to be further reinforced with additional human resources, both in its operational as well as horizontal and cross-organisational functions.

The Management Board invites the Agency to continue its efforts to implement its mandate and to keep the high pace of the work on the new initiatives, namely EES, ETIAS, ECRIS-TCN and the Interoperability package. At the same time, the Board acknowledges the interdependencies between the Agency's work at the central level and that of the Member States at the national level, and invites eu-LISA to continue its close and efficient cooperation with them and the European Commission to ensure the final success of the implementation of the new systems.

The Management Board acknowledges the strategic importance of the second extension of the Agency's technical site in Strasbourg in order to ensure adequate working conditions for its staff and on-site contractors. It is also necessary to ensure that there is sufficient data centre capacity for the deployment and management of both new and already existing systems in an efficient and sustainable manner, while continuing to guarantee the uninterrupted availability and timely evolution of all systems. The Board invites the Agency to continue with this project without delay.

The Management Board expresses its appreciation to the Agency's Executive Director, as well as eu-LISA's management and staff for their commitment and achievements throughout this incredibly challenging year, and wishes to thank them for their commitment and professional collaboration.

Zsolt Szolnoki

Chairperson of the Management Board

Foreword

The year 2021 was extremely challenging for eu-LISA. On the one hand, the volume and the complexity of the Agency's operations continued to grow. On the other, the global crisis caused by the COVID-19 pandemic continued to test eu-LISA's resilience and agility, and its ability to ensure the uninterrupted availability of the systems under its management, and the normal functioning of the Schengen area.

I am proud to report that for another year, eu-LISA proved itself as a reliable and capable partner to the Member States and the EU institutions in their efforts to keep Europe open to the rest of the world, while also ensuring protection against the global threats of terrorism and organised crime, as well as irregular migration.

Krum Garkov,
Executive Director

In 2021, the Agency's work was built around three key priorities:

- implementing new legislative initiatives (including Interoperability and SIS Recast),
- ensuring the stable operation of the EU's JHA information systems entrusted to eu-LISA,
- proceeding with the second extension of the Agency's technical site in Strasbourg.

This challenging year was framed by the continuously **evolving regulatory framework**, the changes in the political and operational environment, the large number of parallel and intertwined activities, and the high expectations of the Agency's stakeholders, while the pandemic continued to bring uncertainty and disruption. Nevertheless, I am confident that the Agency was successful in addressing all challenges, while also continuing to develop and increase its contribution to the succesfull implementation of the relevant policies in the EU's Justice and Home Affairs domain. In this context, I would like to highlight the following:

- the Agency made considerable progress with the implementation of the EES, ETIAS, ECRIS-TCN and the components of the Interoperability architecture;
- the Agency ensured the uninterrupted availability of SIS, VIS and Eurodac, despite the challenging operational circumstances, as demonstrated by the relevant KPIs;
- the Agency's continued the consolidation of its organisation, following a period of significant change and transformation, with a focus on reinforcing its capabilities;
- the Agency continued to strengthen its internal governance and controls, including quality management;
- the Agency was successful in maintaining a high level of engagement and commitment among the staff.

I would also like to emphasise that the new information architecture for border management and internal security in the EU, as implemented by eu-LISA, is the **most complex and challenging transformation programme** launched in recent decades worldwide. The hindering effects of the COVID-19 pandemic, primarily resulting in 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 the review and amendment of original plans. Nevertheless, the Agency, together with the Member States and the European Commission, managed to make good progress throughout the year with the development of the Interoperability components of the EU's JHA information systems, and of the new systems entrusted to eu-LISA – EES, ETIAS, and ECRIS-TCN. The Agency did everything under its control to keep the pace of the work and to ensure the timely implementation of the new information architecture.

The COVID-19 pandemic clearly demonstrated the **need to accelerate digitalisation** in practically all areas of public service. While thus far, our focus has been primarily on the digitalisation and interoperability of border management and internal security systems, the Agency is now also rapidly expanding its role in the EU's justice domain, starting with the e-CODEX system, the latest addition to eu-LISA's portfolio. The implementation of new digital solutions in the justice domain will support the ongoing modernisation of the national systems across Europe, with a view to improving the efficiency of European judicial authorities, while also providing better access to justice to citizens and business across the EU. As such, e-CODEX will serve as one of the strategic building blocks in the overall digital ecosystem of the EU's justice domain.

In line with its revised mandate, eu-LISA continued to perform research monitoring, in particular by exploring possible **applications of artificial intelligence** relevant for its area of operations. This was also the focus of one of our industry roundtables in 2021. At the same time, eu-LISA played a key role in the establishment and operationalisation of the EU Innovation Hub for Internal Security.

Partnerships are essential to the successful delivery of the Agency's mandate. Over the past decade, eu-LISA has established close relationships with relevant EU institutions and partner agencies, the Member States and the wider industry. In 2021, eu-LISA signed multiannual cooperation plans to bolster cooperation with Eurojust and Frontex. Together with other EU JHA agencies we reinforced our commitment contribute to a safer and cleaner environment by undertaking activities ranging from operational to administrative actions. In 2021, the **European Public Sector Award (EPSA)** competition[1] recognised these efforts by awaring eu-LISA headquarters in Tallinn, Estonia the second place in the "Green" category for our innovative building which combines modern and ergonomic collaboration spaces in a green and sustainable infrastructure, serving as an example across Europe of a greener public administration.

2022 will mark eu-LISA's 10th Anniversary and also the end of my tenure as the Agency's Executive Director. During the past decade, eu-LISA has grown **from a small technical agency to the 'digital heart' of Schengen**. Today, the Agency drives the digital transformation of the EU's border and migration management systems, and facilitates free movement within the Schengen Area, while also evolving as an organisation and ensuring the resilience of the EU's border management and internal security.

Considering the resilience and agility demonstrated by eu-LISA throughout 2021, I am confident that the Agency is standing on a solid foundation to sustain and further improve its successful contribution to the Member States and the EU as a whole. This report provides assurance that eu-LISA is taking a systematic and consistent approach to ensure the efficient implementation of its mandate.

I would like to take this opportunity to thank the Member States, the governments of the countries hosting the Agency's sites, the European Commission, the European Parliament, the Council of the EU, and all our partner EU Agencies, for their unwavering support and constructive cooperation throughout these years.

Finally, I also express my sincere gratitude to all my colleagues at eu-LISA for their continued resilience and commitment to deliver throughout the years. Together as one!

Krum Garkov

Executive Director

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1 More information on eu-LISA's EPSA award available on: https://europa.eu/!3K9rvg

Executive summary

The Consolidated Annual Activity Report (CAAR) 2021 provides a structured overview of the activities carried out and objectives achieved in 2021 by the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA). Pursuant to eu-LISA's establishing Regulation, the CAAR is assessed by the Management Board, following a round of consultations with the Advisory Groups. The Management Board's evaluation is based on comparing the results achieved with the objectives set out in the Agency's Annual Work Programme for 2021 as part of the Single Programming Document 2021–2023. After adoption by the Management Board, the CAAR is submitted to the European Parliament, Council, Commission and Court of Auditors, and published on eu-LISA's website.

The Agency's **Annual Work Programme for 2021** focused on the following priorities:

↘ **PRIORITY 1:** implementing the new legal initiatives, including recasts,

↘ **PRIORITY 2:** ensuring stable operation of the systems entrusted to the Agency,

↘ **PRIORITY 3:** implementing the second extension of the Agency's operational site in Strasbourg,

↘ **PRIORITY 4:** consolidating the Agency following a period of change, growth and transformation, with a focus on capabilities development,

↘ **PRIORITY 5:** further strengthening the Agency's internal governance and controls, incl. quality management

The Agency's overall performance in 2021 demonstrated that eu-LISA remains a committed and trustworthy partner in the **EU's policy domain of Justice and Home Affairs (JHA)**, an organisation with a well-defined structure and staff comprising highly qualified professionals. As the '**digital heart' of the Schengen architecture**, eu-LISA acted as one of the central guarantors of the freedom of movement, a fundamental right in the EU, while also ensuring the safety and security of the Schengen area. In response to the challenges and constraints related to the ongoing global pandemic, the Agency, together with the Commission and the Member States, implemented effective mitigation measures to ensure the continuous delivery of all its services.

↘ PRIORITY 1 │ IMPLEMENTING THE NEW LEGAL INITIATIVES, INCLUDING RECASTS

In 2021, the evolution of the Agency's regulatory frameworks continued with the adoption of several important legal instruments:

■ the **Revised VIS Regulation**, adopted in July 2021, extends the scope of VIS to include long-stay visas and residence permits, the carrier gateway, the live capture of facial images, while also ensuring interoperability with other JHA systems and databases.

■ the **ETIAS consequential amendments**, adopted in July 2021, provide the legal basis enabling ETIAS to make queries from other JHA information systems. Among others, the implementing regulations for carriers set out the rules and conditions for carrier verification queries and the carrier web service.

In addition, the Commission put forward the following **policy initiatives and legislative proposals**:

- in April 2021, a proposal for a legal framework on AI – the **European approach to artificial intelligence**,

- in June 2021, under the **new strategy for the Schengen area**, a proposal to revise the **Schengen valuation and monitoring mechanism (SEMM)**,

- in December 2021, a **new initiative on the digitalisation of justice**, aiming to modernise cooperation between Member States in cross-border judicial procedures,

- in December 2021, a **legislative package on enhanced police cooperation** , including a proposal for a regulation on automated data exchange for police cooperation under the 'Prüm' framework.

In 2021, the Agency continued its work on and made significant prgress with **developing the new systems entrusted to the Agency** – EES, ETIAS and ECRIS-TCN – and the **components of the interoperability architecture**. However, despite the progress made, various technical difficulties caused serious delays that resulted in the postponement of EES final release delivery. Acknowledging these difficulties, the JHA Council endorsed on 9 December 2021 a **new timeline for the entry into operation of the new systems**, while preserving the overall schedule for the completion of the interoperability architecture by end of 2023, postponing the entry into operation of:

- EES from May 2022 to the end of September 2022,

- ETIAS and ECRIS-TCN from December 2022 to mid-May 2023,

- the complete revised SIS Regulations from February 2022 to June 2022.[2]

Despite these difficulties, eu-LISA made significant effort to complete the development of the **EES central system**, reaching an important milestone in December with the start of full system testing. The Agency sucessfully completed the installation of the National Uniform Interfaces (NUI), required for the operation of the EES and ETIAS, together with the upgrade of the VIS communication infrastructure. In addition, progress was made with the development of the **EES-ETIAS web service**, with some delays that contributed to the new timeline for the entry into operation of the EES. In December, the Agency released the **sBMS (shared Biometric Matching Service)** for testing, and made the user software kit available for the Member States.

At the beginning of 2021, eu-LISA awarded the contract for the development services of the **ETIAS** to a consortium of private companies. The development of ETIAS progressed according to plan but faced some challenges due to dependencies with the EES programme. As for **ECRIS-TCN,** the Agency completed the tendering procedures and awarded the first development contracts by the end of the year. With regard to the **Interoperability programme**, eu-LISA reached the final stage with such key deliverables as high-level design and the requirements repository.

In 2021, the Agency also stepped up its efforts in **research and innovation**, in particular with a view to enhancing its expertise in the area of Artificial Intelligence. To that end, eu-LISA established a dedicated Working Group on Artificial Intelligence, initiated the preparation of the Roadmap for Artificial Intelligence, and collaborated with Eurojust in preparing a report on the application of AI-based tools in cross-border judicial cooperation in criminal matters. In addition, the Agency completed the **eVISA Prototype project**, demonstrating the feasibility of an online visa application portal for the EU.

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2 On 24 March 2022, the eu-LISA Management Board mandated its Chair to ask the Council to endorse the proposal for SIS Recast to enter into operation in September 2022, and EES to enter into operation in November 2022 (Decisions of the 34th Meeting of the eu-LISA Management Board, 2022–084)

During the reporting period, the **operation of the systems** – SIS (incl. AFIS), VIS/BMS, and Eurodac – in terms of their **overall performance and availability** to the Member States were in compliance with the relevant service-level agreements. Despite the effects of the COVID-19 pandemic, all systems remained continuously available, as confirmed by their key performance indicators: the availability of SIS, and VIS both reached 99.98 %, and for Eurodac, the indicator stood at 99.80 %.

The usage levels of SIS (7 billion searches in 2021) and Eurodac (65 000 new asylum applications as at November 2021) were comparable to 2019 levels, following a sharp decline in 2020. The usage of VIS (80 million operations in 2021) constituted approximately 28 % of its value before the pandemic. The Agency ensured the operational management and daily operation of its infrastructure, both at the main technical site in Strasbourg (France), and also at the backup site in Sankt Johann im Pongau (Austria).

With regard to **SIS**, the main efforts focused on implementing the new SIS Recast Regulations, progressing with the development of the AFIS phase 2, and deploying a new search engine. The deployment of the new search engine was delayed until the end of the year, and the AFIS 2 releases were postponed to 2022. In the second half of year, eu-LISA worked with the Member States on the tests for the SIS Recast.

As for **VIS/BMS,** eu-LISA's main efforts focused on the interconnection between VIS and EES, and completing the integration of VIS with sBMS. In addition, The Agency completed the feasibility study on implementing ETIAS consequential amendments for VIS and proceeded with the impact assessment. On 26 July, Bulgaria and Romania were successfully connected to the VIS with read-only access.

Throughout the year, the Agency ensured the availability of the **communication infrastructures** of SIS, and VIS in accordance with the legal and operational requirements. Additionally, the SIS and VIS communication infrastructures were upgraded to ensure compatibility with new functionalities and new systems. What is more, the Agency also completed the **common shared infrastructure (CSI)** with a backup system.

In the absence of the adoption of the **Eurodac** Recast, the main evolution of the system was postponed. Acknowledging the risks to the performance of the system, the Agency decided to limit the planned Eurodac redesign to the minimal changes necessary to ensure the system's compliance with the relevant requirements.

In 2021, eu-LISA continued its close, transparent and constructive **collaboration with its key stakeholders**: Management Board, Programme Management Boards, and Advisory Groups. The Agency also contributed to ongoing discussions with the European Commission, Parliament, and the Council on the topic of existing and new JHA information systems, the overarching interoperability architecture, and further innovation.

The Agency continued its participation in the **Schengen evaluation and monitoring mechanism** to assess the application of the Schengen acquis, with a focus on the SIS areas of use, and the implementation of the EU's common visa policy.

The Agency organised on 27 October its annual flagship event – the **8th eu-LISA Annual Conference 'Towards the Digital Schengen Area'** – in collaboration with the Slovenian Presidency of the Council of the EU. This year's conference focused on the development programmes of new systems, together with the effects of the COVID-19 pandemic on air travel.

As part of the Agency's research and technology monitoring function, eu-LISA organised **two industry roundtables** – the first, held in June, focused on technologies and approaches facilitating seamless and contactless travel and border crossing, and and the second, held in November, focused on the use of AI in biometric recognition applications for predictive analytics, and in IT operations.

Furthermore, the Agency continued to provide **trainings to the Member States** on existing and new systems, in close collaboration with other partner agencies. The Agency also continued active cooperation in the framework of the EU's JHA Agencies Network (JHAAN), and the EU Agencies Network (EUAN).

Throughout 2021, eu-LISA continued work on the **second extension of its operational site in Strasbourg**, with a view to delivering additional capacity both in terms of data centre and office spaces. In 2021, the project faced some challenges, particularly in terms of financing. Taking into consideration the most recent requirements related to ongoing systems development, and also the new initiatives, the Agency concluded that additional computing capacities were needed much earlier than the expected delivery of the second extension in 2028. Owing to that, eu-LISA reviewed the project and opted to make the following changes: make the second data centre modular, reduce the surface area allocated for future office space, and deploy a phased approach for the construction work.

↘ **PRIORITY 4** | **CONSOLIDATING THE AGENCY FOLLOWING A PERIOD OF CHANGE,
GROWTH AND TRANSFORMATION,
WITH A FOCUS ON CAPABILITIES DEVELOPMENT**

In 2021, the Agency launched its **cultural transformation project** as the next stage of its organisational transformation programme – eu-LISA 2.0. Throughout the year, the Agency worked on aligning cultural ambition within the organisation and invested efforts in identifying and mapping key capabilities, skills, knowledge, abilities, and attitudes.

↘ **PRIORITY 5** | **FURTHER STRENGTHENING THE AGENCY'S INTERNAL GOVERNANCE
AND CONTROLS, INCLUDING QUALITY MANAGEMENT**

Throughout the year, the Agency continued to provide high-quality **administrative and logistical support** to ensure the successful functioning of eu-LISA's Management Board, Programme Management Boards and Advisory Groups.

In 2021, eu-LISA carried out the **effectiveness assessment of its internal control framework (ICF)** in accordance with the methodology recommended by the European Commission. The assessment included the identification and analysis of internal control strengths and deficiencies based on pre-defined monitoring criteria, the register of exceptions and non-compliance events, the status of outstanding audit recommendations, and a self-assessment exercise with Heads of Units.

During the second half of 2021, eu-LISA launched a new initiative to ensure the continuous **monitoring of the corporate risks and issues management process**, instead of doing it once per year. The risks raised in 2021 were assessed and confirmed by the Manager in charge of risk management and internal control (MRMIC). Subsequently, the corporate risks register was made available to all staff members. The Agency also continued to strengthen its **project portfolio management (PPM) capability**, and undertook a Capability Maturity Model Integration (CMMI) appraisal to further improve the PPM processes. Additionally, eu-LISA also completed a major revision of its service and process framework.

In November 2021, the Agency adopted the **eu-LISA Quality Policy**, which provides an overarching framework for quality management initiatives across the Agency. The practical implementation and monitoring of this policy is scheduled to start in 2022.

Introduction

The purpose of the **eu-LISA Consolidated Annual Activity Report** is to give a structured overview of the activities performed and objectives achieved in 2021 as outlined in the Agency's Single Programming Document 2021–2023. The report follows the common structure set for all EU Agencies by the European Commission.

Chapter 1 provides a detailed overview of the main achievements in the operational management of JHA information systems, their evolution, 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 reviews the effectiveness of the internal control framework (ICF) and lists the major corporate risks for the reporting period. Chapters 4 and 5 provide relevant declarations of assurance.

Legal background

Article 24(3)(g) of Regulation (EU) 2018/1726 requires 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 requires the Management Board to assess and adopt 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 is required to send both the report and its assessment by 1 July of each year to the European Parliament, to the Council, to the Commission and to the Court of Auditors, while also ensuring that the Annual Activity Report is published.

Background information

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 by Regulation (EU) No 1077/2011, and became operational on 1 December 2012. The Agency is responsible for the operational management and development of the EU's large-scale IT systems in the area of freedom, security and justice. The Agency's revised establishing Regulation[3] entered into force on 11 December 2018, expanding the Agency's mandate to improve, design and develop information systems in the area of internal security, border management and judicial cooperation. The revised mandate also broadened the Agency's scope of work on research, innovation, testing, enabling the possibility to support the delivery of pilot projects and proofs of concept.

Currently, eu-LISA manages the Schengen Information System (SIS),[4] the Visa Information System (VIS)[5] and the European Asylum Dactyloscopy Database (Eurodac).[6] These systems are the essential cornerstones for the smooth functioning of the Schengen area. At the EU's external borders, these IT systems are critical to ensure the efficiency of border management, and the implementation of the EU's common asylum, migration and visa policies. Within the Schengen area, the continuous availability of these systems is essential to guarantee the freedom of movement of EU citizens and residents, while also ensuring the security of the EU.

In addition, eu-LISA is also developing the Entry/Exit System (EES),[7] the European Travel Information and Authorisation System (ETIAS),[8] the European Criminal Records Information System for Third-Country Nationals (ECRIS-TCN),[9] and the new components that will make up the interoperability architecture of the JHA information systems under eu-LISA's purview.[10]

Throughout all operations, the Agency ensures a high level of data protection and the appropriate level of data and physical security, in accordance with applicable rules and provisions.

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3 Regulation (EU) 2018/1726, OJ L 295, 21.11.2018, p. 99–137.
4 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.
5 Regulation (EC) No 767/2008, OJ L 218, 13.8.2008, p. 60–81.
6 Regulation (EU) No 603/2013, OJ L 180, 29.6.2013, p. 1–30.
7 Regulation (EU) 2017/2226, OJ L 327, 9.12.2017, p. 20-82
8 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.
9 Regulation (EU) 2019/816, OJ L 135, 22.5.2019, p. 1-26.
10 Regulations (EU) 2019/817, and (EU) 2019/818, OJ L 135, 22.5.2019, p. 27-135.

Mission, vision and core values

MISSION

Support through technology the efforts of the EU and Member States to keep Europe open and secure.

VISION

Growing the Agency as an organisation that is committed to providing high quality efficient services and solutions, systematically aligning the capabilities of technology with the evolving needs of the EU and the Member States, and maturing as a trusted partner in driving the digital transformation in the domain of Justice and Home Affairs.

VALUES

Accountability, transparency, excellence, continuity, teamwork and customer focus that underpin and drive not only all operational activities, but also the Agency's strategic development.

Accountability

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

Transparency

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

Excellence

Through having the right organisational structure, the right people and the right processes in place, ensuring the service continuity and functional comprehensiveness of tools provided to the Member States

Continuity

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

Teamwork

Seeking to empower each individual team member to make the best use of his or her knowledge and experience, contributing to shared success

Customer Focus

Ensuring that the Agency is aligned at any time with the needs and demands of its stakeholders

LOCATIONS

HEADQUARTERS

Tallinn, Estonia

TECHNICAL SITE

Strasbourg, France

TECHNICAL BACK-UP SITE

St Johann im Pongau, Austria

LIAISON OFFICE

Brussels, Belgium

PART I

ACHIEVEMENTS
OF THE YEAR

1. Achievements of the year

In 2021, eu-LISA's role and importance as the Digital Heart of Schengen continued to grow. The Agency is among the key contributors to the realisation of a fully functioning Schengen area and to the implementation of the EU policies in the area of freedom, security and justice. The Agency's activities also play an essential role for the hundreds of millions of people living in or travelling to the EU, as they facilitate the crossing of external borders, contribute to the freedom of movement within the Schengen area and supports a high level of security and protection.

In 2021, eu-LISA continued to **support the implementation of EU policies**, such as the free movement of people and goods, common travel visa, border control, immigration and asylum, as well as cooperation between national law enforcement and judicial authorities, including combating organised crime, human smuggling and trafficking and terrorism. Throughout, the Agency upheld its role as a key partner in close collaboration with the Commission, the Council and the Parliament, with other EU Agencies and with the Member States.

> ↘ 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."*

More than ever, **sustaining and strengthening the area of freedom, security and justice** is contingent on the swift, effective and reliable information exchange via the Union's large-scale IT systems entrusted to eu-LISA. On a daily basis, the SIS is extensively used for border control and law enforcement cooperation, the VIS facilitates the issuance and checks of visas, and Eurodac streamlines the examination of applications for international protection. On a broader scale, these systems also contribute to combatting cross-border crimes and terrorism. Furthermore, eu-LISA progressed on the development of the new information systems, the EES, the ETIAS and the ECRIS-TCN, that will be integrated into a new interoperable IT architecture for the EU's JHA domain, with a view to further reinforcing the Union's area of freedom, security and justice.

Taking stock of all changes that occurred since the adoption of its new establishing regulation in 2018, eu-LISA adopted a **new long-term strategy** for 2021–2027. The strategy identifies four strategic goals that guide eu-LISA's long-term roadmaps and future multiannual and annual programming.

Strategic goal 1:

Continue to grow as a contributor to and implementing partner for the relevant policies in the Justice and Home Affairs domain

Strategic goal 2:

Maintain and expand the role of the Agency as a recognised and trusted partner of the European Institutions and the Member States in driving the digital transformation in the Justice and Home Affairs domain

Strategic goal 3:

Enable and drive innovation and digital transformation in the Justice and Home Affairs domain

Strategic goal 4:

Evolve further eu-LISA towards efficient, agile and resilient organisation within the EU regulatory framework

1.1. New systems and innovation

In 2021, eu-LISA's key priority was the development of several new large-scale IT systems entrusted to the Agency in the EU's Justice and Homa Affairs (JHA) domain.

In the home affairs domain, eu-LISA is responsible for the development of two new systems: the **EES (Entry/Exit System)** and the **ETIAS (European Travel Information and Authorisation System)**. Their development and subsequent operation will constitute a major contribution to the **EU Security Union Strategy**, offering, together with the existing systems, strong support to the Member States in the areas of border management and internal security. On a practical level, they will streamline the border checks process for the millions of people from around the world travelling to and from the EU.

In the justice domain, eu-LISA is responsible for the development of one new system: the **ECRIS-TCN (European Criminal Records Information System – Third Country Nationals)**, that will identify the Member States holding information on previous convictions of third-country nationals.

In addition, eu-LISA is responsible for the development of **interoperability components** and the integration of all EU's JHA information systems into an overarching Interoperability architecture.

Despite significant progress, the Agency's development programmes were affected by the continuing COVID-19 pandemic, causing, among other things, hardware unavailability, delays in equipment delivery and installation, as well as less frequent on-site presence of staff and contractors. As a result of delays, the JHA Council revised the implementation schedules for the new systems in December 2021.

1.1.1. Home affairs

The development of new IT systems in the home affairs domain was initially envisaged by the Commission in 2013 in the framework of its **'Smart Borders' programme**, which resulted in the adoption of several proposals for the development of the following JHA systems: the EES in 2017, the ETIAS in 2018 and the interoperability architecture and its components in 2019.

By the end of 2021, eu-LISA had progressed significantly with the development of all these new systems and components. However, technical difficulties in the second half of the year resulted in delays, and the postponement of the delivery of the EES final release. On 8 October, the JHA Council acknowledged delays faced by several Member States. eu-LISA was mandated to analyse possible alternative scenarios and to propose the most feasible solution to the Agency's governing bodies.

On 9 December, the EU Home Affairs Ministers at the JHA Council reviewed and adopted the proposed alternative scenario presented by eu-LISA The scenario implies to maintain the overall deadline for the implementation of the Interoperability architecture by the end of 2023, to allocate sufficient time for the implementation of planned activities both at the European and national levels, and to include all systems supporting the interoperability architecture (i.e., SIS, EES, ETIAS, ECRIS-TCN, and the interoperability components).

The JHA Council endorsed the following new timeline[11] for the entry into operation of the new systems:

- EES postponed from May 2022 to the end of September 2022,

- ETIAS and ECRIS-TCN postponed from December 2022 to mid-May 2023,

- the complete revised SIS Regulations postponed from February 2022 to June 2022.

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11 On 24 March 2022, the eu-LISA Management Board mandated its Chair to ask the Council to endorse the fact that the SIS Recast would enter into operation in September 2022, and that the EES would enter into operation in November 2022 (Decisions of the 34th Meeting of the MB of eu-LISA, 2022–084).

Entry/Exit System (EES)

The EES is one of the two new large-scale IT systems to be introduced in the domain of home affairs to improve the management of external borders and prevent irregular immigration, while also strengthening internal security and the fight against terrorism. The system aims to modernise and increase automation at the EU's external borders by enabling the electronic recording of the entry and exit of third-country nationals (TCN). Once operational, EES will replace the current practice of manual stamping of passports with an electronic registration in a central database of biographic and biometric information. The system is intended to keep track of short-term stays, registering the dates and places of entry/exit for visits lasting up to 90 days, in any 180-day period, enable better monitoring of authorised stays and the identification of possible over-stayers. EES will support the Member States in dealing with ever-increasing flows of travellers, without increasing the number of border guards.

The development of EES started in January 2018, and its entry into operation has been scheduled to the end of September 2022. EES implementation schedule was revised by the JHA council in December 2021 to account for delays in the development of the central system and the web services infrastructure, as well as to ensure sufficient time for the Member States to test their national systems. EES comprises a central system, which operates a central database of biometric and alphanumeric data, a national uniform interface (NUI) for the connection of the national border infrastructure to the EES in each Member State, a secure communication channel between the central systems of the EES and the VIS (Visa Information System), and a secure and encrypted communication infrastructure between the EES central system and the NUI. eu-LISA is responsible for the development and hosting of the central system, for the development of the communication infrastructure and the NUI, and for setting up the communication channel between EES and VIS.

In 2021, the Agency made great progress towards completing the development of the central system and the communication infrastructure, finalising the installation of the NUIs in the Member States, and conducting several testing campaigns in close collaboration with all future users of the EES. eu-LISA also commenced work on the transition to operation, in collaboration with all stakeholders.

Development of the EES central system

In 2021, one of the primary objective of the EES programme was the development of the central system application, and several interim versions were released throughout the year. Additionally, the Agency also pursued the development of the workflow engine software, which will centrally manage a number of business processes related to border management. Although the first application tests started already in March (pre-compliance tests), by the end of June the EES contractor notified the Agency of delays in the upcoming releases of the application, that were planned to include the workflow engine, and integration of the EES with the VIS and the sBMS (shared Biometric Matching Service). The work plans were revised with the contractor, and approved by the eu-LISA Management Board. In July, the Agency took several measures to start monitoring progress more closely in order to ensure the timely delivery of the project. The delayed release was eventually delivered in mid-November, significantly reducing the time available for subsequent testing.

During the second half of the year, the testing resulted in instabilities of the application deployed in the Member State testing environments. This issue will be fully addressed upon the completion of the comprehensive test

campaigns scheduled for 2022. On 8 December 2021, an important milestone was achieved with the start of the system solution testing for the purposes of validating the complete integrated system. In parallel with the development of the application, the Agency delivered the updated Central System Simulator and the associated documentation, used by the Member States for the development of their national systems.

Deployment of the national uniform interface

In order to securely connect their national border infrastructures to the EES central system, all Member States must install a national uniform interface (NUI). The NUI installation process was started back in 2020, and was completed by end of May 2021. Cyprus requested an additional NUI, which was delivered in May 2021, and its final setup was finalised in September 2021. The connections between the NUIs, which fall under the responsibility of the Member States, were completed by all but two countries by the end of 2021.

Development of the EES-ETIAS web service for TCNs and carriers

The EES web service is built on a new infrastructure separate from the EES, and will also be used for the ETIAS (European Travel Information and Authorisation System). The joint web service will enable the online verification by TCNs of their authorised stay status in the EU. In addition to travellers, the web service will also be used by carriers (i.e. air, land and sea), in line with their obligations stemming from the Schengen Convention, for verifying whether a passenger's visa has at least one remaining authorised entry.

Started in 2020, the development of the EES-ETIAS web service progressed significantly in 2021. For carriers, the documentation for the system-to-system connection was delivered in June, and the corresponding simulator was made available in the end of November. The Commission Implementing Regulation for the operation of the web service, adopted in July 2021[12], included several elements that delayed the identification of requirements and specifications. In addition, the preparation of the web service infrastructure was also affected by a 3.5-month delay, caused by global shortage of electronic chips for hardware components. This delay had a direct impact on the readiness of the EES for entry into operation.

In 2021, another key objective was to involve carriers with the EES ahead of the system's entry into operation. Due to the delay in the launch of the online onboarding and support tool, the Agency arranged the pre-enrolment of carriers by deploying a semi-automated process through a professional service desk. However, the number of pre-enrolled carriers was rather low – out of several hundreds of carriers required to apply, 79 had enrolled as at 17 December 2021, which might hinder the readiness of the carrier community to fulfil its obligations upon launch of the EES. Throughout the year, the Agency pressed this topic in the Working Group for Carriers, in close collaboration with the European Commission, Frontex, carrier associations and their IT service providers, convening three times in 2021. Furthermore, eu-LISA discussed with the European Union Aviation Safety Agency (EASA) a working arrangement for the exchange of information related to air operators to support the implementation of the EES-ETIAS web service.

Development of the shared Biometric Matching System (sBMS)

The sBMS is one of the central Interoperability components, which is intended to be used by all JHA information systems operating within the overarching interoperability architecture. The sBMS will obtain biometric templates from the different systems, store them in a logically separate form depending on their origin, and enable biometric data queries by the systems. The development of the sBMS progressed significantly in 2021. The latest release was delivered for testing on 17 December 2021, with a two-month delay due to late delivery of shared software components needed for the system's integration with the EES. By the end of the year, the

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12 Commission Implementing Regulation (EU) 2021/1224 of 27 July 2021 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 provided for by Regulation (EU) 2017/2226 of the European Parliament and of the Council and repealing Commission Implementing Decision C(2019)1230.

sBMS infrastructure hardware was successfully installed in all environments, while the installation of the infrastructure software was ongoing.

To ensure the quality of biometric data in the system, eu-LISA purchased the User Software Kit (USK) and made the licences available to the Member States. During the reporting period, the Agency conducted beta testing for the EES data quality thresholds was completed. During the year, eu-LISA discussed with the Member States the possibility to use real biometric data to test the accuracy of the sBMS for the EES. In November, the European Data Protection Supervisor (EDPS) confirmed the lawfulness of the approach towards data protection regulations, and approved the use of fingerprint data from the VIS, but requested. additional information for the use of real facial images.

Interoperability readiness

In order to provide sufficient bandwidth to accommodate the needs of the EES and the ETIAS, the Agency was tasked with upgrading the VIS communication infrastructure that connects national systems to the VIS central system. This project was completed in April 2021 with the upgrade of all Turnkey Access Points (TAPs) installed in remote locations of Member State sites.

To enable systems interoperability between the EES and the VIS, a secure communication channel must be established between the two central systems. The development of the VIS interoperability with the EES and the sBMS progressed significantly during 2021. During the second part of the year, the interoperability was tested between the two systems, and with the Member States. The completion of the development, planned for mid-October, was delayed until 2022 due to late delivery of shared software components needed for the integration with EES.

Following the adoption of the technical specifications for the Central Repository for Reporting and Statistics (CRRS) in March 2021, eu-LISA also launched the project to interface the EES and the CRRS. Similarly, the Agency also commenced with the project to interface the EES and the ETIAS, following the adoption of the ETIAS Consequential Amendments in July 2021.

European Travel Information and Authorisation System (ETIAS)

The ETIAS is a new pre-travel online authorisation system for visa-exempt TCNs travelling to the Schengen area. Once operational, the ETIAS will streamline border-crossing procedures for TCNs, while also enhancing the security aspects of EU border management and reinforcing the EU's visa liberalisation policy. Furthermore, the system will allow cross-checking information across both existing and future databases, enabling advance verification of potential security, migration and public health risks. The ETIAS travel authorisations will be checked by border guards at external border crossing points and by carriers (air, sea and land) prior to boarding. What is more, law enforcement agencies and Europol will also have the possibility to access the ETIAS database in order to prevent, detect or investigate terrorist threats or serious criminal offences.

The ETIAS comprises:

- the Information System, developed and managed by eu-LISA;

- the Central Unit, established within Frontex, that will process the application in case there is a hit against any of the searched database, and if needed trigger the manual processing of the application;

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

The ETIAS Information System shares several hardware and software components with the EES, such as the National Uniform Interface (NUI), the web service and the communication infrastructure, described in the previous section. The development of the ETIAS started at the end of 2018, and is planned to enter into operation by mid-May 2023, pursuant to the revised schedule endorsed by the JHA council on 9 December 2021.

Regulatory framework

Although the regulation establishing the ETIAS was adopted in September 2018, some major building blocks of the ETIAS regulatory framework were only adopted in 2021, such as the implementing acts on data quality (in May),[13] the ETIAS Watchlist (in June)[14] and carriers (in July)[15]. Moreover, following prolonged negotiations, the ETIAS Consequential Amendments were finally adopted in July 2021, with implications for the ETIAS, for the EES, the SIS, the VIS, and the ECRIS-TCN. These amendments define the data to be used by the ETIAS to query other systems to assess the risk posed by a traveller, and what data is to be sent back to the ETIAS. Additionally, these amendments also grant the ETIAS National Units access to other EU information systems, such as the ECRIS-TCN.

Additional delegated and implementing acts are still required on various technical elements, and will affect the interaction of the different information systems with the ETIAS. Stable versions are required to elaborate the corresponding technical specifications. To mitigate the effect of these changes, eu-LISA engaged in close collaboration with the Commission on the preparation of these delegated and implementing acts.

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13 C (2021) 1830 final
14 C (2021) 4123 final
15 Commission Implementing Regulation (EU) 2021/1217

Development of the Information System

On 21 January, the Agency awarded the contract for the development services of the ETIAS to a consortium of private companies. During the reporting period, the programme faced some challenges due to external dependencies, in particular from the EES components that the ETIAS will either use or connect to. Another challenge was related to the development of the search functionality of encrypted data for the ETIAS Watchlist, listing data related to persons suspected of terrorism or other serious criminal offences. The technical challenge was eventually resolved and the Watchlist Implementing Act was updated accordingly.

The infrastructure part of the development programme also faced issues due to the unavailability of system components in the wake of the COVID-19 pandemic. To address the problem, the Agency prepared a contingency plan, prioritising the installation of the testing infrastructure to minimise potential delays in the Member State testing campaigns.

Audio and video tool for the ETIAS National Units

Once the new system is in place, the ETIAS National Units may, when warranted, invite applicants for an interview, prior to departure. The ETIAS Regulation provides that such interviews may be conducted using audio and video communication in case consular services are located too far away from the applicant's place of residence. The relevant regulation on the audio-video tool included a provision for eu-LISA to provide a 'white list' of suitable tools that meet the requirements. In May 2021, a market research conducted by eu-LISA identified a preliminary list of suitable audio-video tools that will be tested in 2022 to produce the final 'white list'. The 'white list' of audio-video tools endorsed by eu-LISA is expected to facilitate subsequent procurement by Member States.

ETIAS data protection impact assessment

The first ETIAS data protection impact assessment (DPIA) exercise, launched in 2020, was concluded in mid-June 2021 and contributed to the preparation of the detailed technical specifications for the ETIAS. The assessment focused on the safeguards, the security measures and the controls to mitigate identified risks, and concluded that although personal data will be processed, it does not represent a high risk to the rights and freedoms of natural persons. The report was shared with the EDPS, the Member States, Frontex, and Europol for feedback that will be used for the further completion of the DPIA.

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 both existing and new JHA information systems. To that end, eu-LISA has been entrusted with the development of several new systems, also referred to as interoperability components, that will together form the framework ensuring the interoperability of all EU's information systems in the JHA domain: the SIS, the VIS, Eurodac, the EES, the ETIAS, and the ECRIS-TCN.

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

European search portal (ESP), enabling authorised users to conduct single searches and receive results from all JHA information systems they are authorised to access;

common identity repository (CIR), database of biographical information on TCNs to ensure reliable identification;

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;

shared biometric matching service (sBMS), enabling more efficient searches and cross-matching of identity data with biometric identifiers across all JHA systems.

In addition, the Agency 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 1. The interoperability components and the CRRS
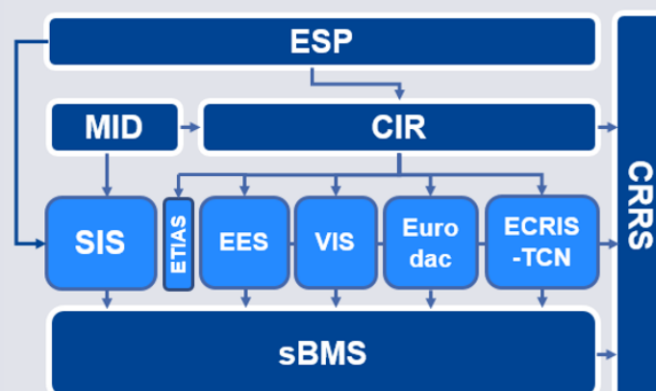
The Agency commenced developing the Interoperability programme in mid-2019, following the adoption of the Interoperability Regulations in May 2019. In 2021, eu-LISA completed the programme's preparation and launched the implementation, making significant progress. By the end of the year, the Interoperability programme was on track with the implementation schedule endorsed by the JHA Council on 9 December 2021. However, the programme faces the risks of delay due to dependencies with other programmes under development, mainly the EES and the ETIAS, and possible disruptions in the supply chains for hardware caused by global microchip shortages. For a more detailed overview of the development of sBMS, please refer to the section of the EES section on page 25.

Regulatory framework

The Agency supported the European Commission and Member States in the preparation of the relevant implementing and delegated acts in the framework of the Interoperability Committee and Expert Group meetings. In 2021, the EU adopted a total of 22 delegated and implementing acts affecting the Interoperability programme,[16] laying down the specific requirements for the interoperability components (e.g. data quality, user profiles, query procedures, etc.). Two additional implementing acts are expected to be adopted by mid-2022.

Development of the components

The ESP, CIR, MID and CRRS, have entered the implementation phase with some delay. The Agency received the Commission's formal opinion on the technical specifications for the ESP, the CIR, the MID and the CRRS in the first quarter of 2021. The specifications were subsequently adopted by the eu-LISA Management Board, in March for the CRRS, and in April for the ESP, CIR and MID, and the Agency concluded the first detailed design contracts in July. By the end of the year, key deliverables, such as the high-level design and the requirements repository, were nearing completion. The work also progressed on the drafting of architecture and interface documents. In December, the Agency commenced work on the development and integration of the systems, and signed contracts for the procurement of infrastructure needed for testing activities. All interoperability components are expected to enter into operation by end of 2023.

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16 Eleven legislative acts covering the borders and visa area (Regulation 2019/817), and eleven similar acts covering the police and judicial cooperation (Regulation 2019/818).

1.1.2. **Justice**

The ECRIS-TCN is the first large-scale IT system to be designed and developed by the Agency in the justice domain and the first formal engagement with the EU justice community. In 2021, eu-LISA continued to work on the development of the ECRIS-TCN in close cooperation with the Member States, the European Commission, Europol, Eurojust and the European Public Prosecutor's Office (EPPO). The Agency also continued providing technical maintenance for the ECRIS Reference Implementation.

The Agency also contributed to discussions on the digitalisation of justice in various formats (e.g. Hit/no-Hit Task Force, Digital Justice Ministerial Forum and Focus Group on Digitalisation of Cross-border Judicial Cooperation, etc.), supported the negotiations on the e-CODEX system (e-Justice Communication via Online Data Exchange) proposal, and supported the Commission in the preparation of the draft proposal on the collaboration platform for Joint Investigation Teams.[17]

European Criminal Records Information System Reference Implementation (ECRIS RI)

Under EU law, national courts must to take into account previous convictions when passing sentences in criminal cases[18]. The European Criminal Records Information System (ECRIS), operational since 2012, is a decentralised system for exchanging information on criminal records between EU Member States.

The ECRIS Reference Implementation (ECRIS RI) is the list of functional, technical and security requirements that the Member States must follow for the ECRIS to be operational. As of 14 April 2020, eu-LISA is in charge of the maintenance of the ECRIS RI, and responsible for the submission of monthly statistics to the Commission. By the beginning of 2021, eu-LISA had successfully coordinated the upgrade of the ECRIS RI software in all Member States. This upgrade included mandatory changes stemming from the changing legal framework as well as some key bug-fixing.

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17 For more information on the collaboration platform for Joint Investigation Teams, please refer to page 72.
18 Council Framework Decision 2008/675/JHA of 24 July 2008 on taking account of convictions in the Member States of the European Union in the course of new criminal proceedings.

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

The ECRIS-TCN is a centralised hit/no-hit system, supplementing the ECRIS with information on criminal records of TCNs 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. In this way, the 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.

The ECRIS-TCN comprises:

- 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 national central access points.

As part of the JHA interoperability architecture, the system will use interoperability components. By the end of 2021, the preparation phase of ECRIS-TCN was nearly completed, with the procurement and implementation phases already underway. ECRIS-TCN is expected to enter into operation by mid-May 2023.

Regulatory framework

By the end of 2021, ECRIS-TCN regulatory framework was almost complete. The implementing decision including provisions related to alphanumeric and biometric data was discussed with the Member States and is scheduled for adoption in the first quarter of 2022.

In addition to the implementing and delegated acts, the ETIAS and VIS consequential amendments entered into force in August 2021, expanding the future scope and functions of ECRIS-TCN through the interoperability with ETIAS and VIS.

Development of the central system

The preparation of the tender tender technical specifications was completed in February 2021 and adopted by the Management Board on 21 June. By the end of the year, three specific contracts were signed with the winning consortium and the work started for the project set-up, the analysis and design, and the development and testing activities.

eu-LISA prioritised the procurement and installation of the infrastructure for the ECRIS-TCN to mitigate the risks of delay due to the possible unavailability of components in the wake of the COVID-19 pandemic.

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

The e-CODEX system provides the European digital infrastructure for secure and interoperable cross-border communication in the area of justice.[19] The e-CODEX system is a key technological enabler for modernising, through digitalisation, the communication in the context of cross-border judicial proceedings. eu-LISA's engagement with e-CODEX is an important step towards increasing the digitalisation of the justice domain.

The e-CODEX communication platform has been in operation since 2013 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, for which the transmission is allowed under national law. The e-CODEX system has been used so far by around 30 countries and partner organisations, and only for pilot testing certain legal procedures.

On 2 December 2020, the Commission adopted a 'Proposal for a Regulation on a computerised system for communication in cross-border civil and criminal proceedings (e-CODEX system)'.[20] The Council Presidency and the European Parliament reached a political agreement on 8 December 2021, and the formal adoption of the legal act is expected in the first half of 2022. The proposed regulation will entrust the subsequent development and maintenance of the e-CODEX system to eu-LISA who will assume responsibility between July and December 2023.

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19 **e-CODEX website** https://www.e-codex.eu
20 Proposal for a Regulation of the European Parliament and of the Council on a computerised system for communication in cross-border civil and criminal proceedings (e-CODEX system), and amending Regulation (EU) 2018/1726, COM/2020/712 final.

1.1.3. Innovation, research and development

In terms of research, eu-LISA proactively monitors the latest developments and innovative solutions related to the operational management of large-scale IT systems. Given the pace of technological developments in this area, it is essential for the Agency to keep up with the latest developments and anticipate the evolutions that will contribute to the delivery of high quality IT services in the future. What is more, eu-LISA must stand ready to test innovative technologies and services for future deployment that may be entrusted to the Agency by the Commission.

The new Pact on Migration and Asylum[21], presented on 23 September 2020, sets the objective of making the visa procedure fully digitalised by 2025, with a digital visa and the ability to submit visa applications online. One of eu-LISA's key achievements this year was the completion of the **eVisa Prototype Project**, spearheaded by eu-LISA in collaboration with the Directorate-General for Migration and Home Affairs (DG HOME) and Member State authorities. The project's objective was to demonstrate the feasibility of an online portal for EU visa application, aimed at providing a harmonised digital and seamless visa procedure for applicants, efficient application management for central authorities and consular officers and a streamlined and coherent visa processing. The eVisa project was launched in October 2020 and the prototype of the EU visa application platform was completed in November 2021. In view of future legislative proposals concerning the digitalisation of the EU visa procedure, the outcomes of this project will support the definition of the technical, budgetary and legal requirements for a future EU Online Visa Application Platform.

The Agency also contributed to the **VisaChat proof-of-concept (PoC) project**, launched in July 2021. The visa-chatbot, using artificial intelligence, will allow visa applicants to ask questions online, in their own language, get an immediate reply and as a result reduce the workload of the services in charge of responding to requests in Member States, as well as ensure a consistent application of the visa rules. In this project, eu-LISA helped define the solution technical requirements, and its sustainability.

In 2021, eu-LISA continued with 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. The initiative was launched by the Council 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; cybersecurity). The Agency developed a detailed action plan for the implementation of the Roadmap, which was adopted by the IXIM WP in June 2021. eu-LISA delivered the first report to the IXIM WP in December 2021, and will report twice a year on the implementation of the action plan.

Following the publication of eu-LISA's 2020 **research and technology monitoring report** focusing on artificial intelligence (AI), the topic continued as one of the focus areas of the Agency's research and technology monitoring activities. The Agency established a **Working Group on Artificial Intelligence (WGAI)** to support knowledge exchange and the sharing of best practices related to AI-based solutions. As from May 2021, the WGAI met three times, gathering AI experts representing Member State authorities, the Commission, and relevant EU Agencies. In addition, eu-LISA initiated the preparation of a **Roadmap for Artificial Intelligence**, outlining a structured approach to the development of AI capabilities within the Agency in the coming years. eu-LISA also contributed with the Commission to the definition of the requirements and scope of a Centre of Excellence for Artificial Intelligence, that will overall serve as an umbrella for eu-LISA activities on AI. The aim is to support the development and implementation of artificial intelligence applications within the scope of the Agency's core business activities and for the JHA community more generally. Finally, with the expansion of the Agency's in the area of justice, eu-LISA prepared jointly with Eurojust a report on the opportunities for the application of AI-based tools for criminal cross-border judicial cooperation. The report will be published in the first half of 2022.

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21 More information on the New Pact on Migration and Asylum documents available on: https://europa.eu/!Ug76wP

As part of its research and technology monitoring activities, eu-LISA organised in 2021 **two Industry Roundtable events.** Their objective was to inform Member States and other key stakeholders on the latest technology developments and address technology gaps in Member States in areas related to the mandate of the Agency. Due to restrictions imposed by the COVID-19 pandemic, both events were conducted online, attracting more than 300 participants from 40 countries. The first roundtable, held in June 2021, focused on the technologies and approaches facilitating **seamless and contactless border crossing**. The second industry roundtable, organised in November 2021, focused on the **AI applications in the area of Justice and Home Affairs**. The topics covered included, for example, the use of AI in IT operations, in biometric recognition applications, and for predictive analytics.

eu-LISA was also actively involved in the work of the **EU Innovation Hub for Internal Security**, an initiative launched by the Council's Standing Committee on Operational Cooperation on Internal Security (COSI). The Innovation Hub gathers EU Agencies in the JHA domain, the European Commission (including DG HOME, the EU Joint Research Center), the Council and the Member States. Hosted by Europol, it aims to act as an observatory of new technological developments and to drive innovation for internal security across Europe, including by developing common technological solutions for Member States in the field of internal security. The initiative is receiving a lot of political attention and expectation from the Member States and the European Commission. In 2021 eu-LISA actively contributed to the setting and activities of the Hub, by coordinating the design of its operating and financial models and contributing to the identification of priorities for the Hub. In addition, eu-LISA is a member of the Hub the Steering and is in the process of deploying a Liaison Officer to the Hub Secretariat at Europol in The Hague.

In early 2021, the Agency agreed with DG HOME on eu-LISA's involvement in the implementation of the EU **Framework Programme for Research and Innovation**. The Agency supported DG HOME by contributing to the annual event and other activities of the Community for European Research and Innovation for Security (CERIS).

1.2. Operational management and evolution of the systems

The operational management of large-scale IT systems constitutes the core of eu-LISA's mandate – 24 hours per day, 365 days per year, the Agency ensures that the EU's JHA information systems under its management (i.e. the SIS, the VIS and Eurodac) are available to all Member States at all times. The operational management entrusted to eu-LISA covers the continuous monitoring and maintenance of these systems, provision of services listed in the Agency's IT service management (ITSM) framework, and close collaboration with the Member States. Despite the ongoing COVID-19 pandemic and its effects, the services provided to the Member States by eu-LISA remained uninterrupted throughout the reporting period.

As always, the Agency's priority was to ensure the uninterrupted availability of the systems for all users, and for the second year, this was achieved in the context of the COVID-19 pandemic. Throughout 2021, travel and site access restrictions had major implications for the Agency's staff working at the technical sites, the central unit (CU) in Strasbourg, France, and the backup central unit (BCU) in St Johann im Pongau, Austria. Despite those 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 key performance indicators (KPIs): central system availability and response times (Table 1).

Table 1. Key performance indicators (KPIs) for the operational management of the systems overseen by eu-LISA

	Corporate KPIs	Targets	2020	2021	Target achieved
KPI 3	Eurodac central system availability	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.87 %	99.80%	
KPI 4	Eurodac central system response time	Green ≥ 99.45 % 99.45 %> Amber ≥ 90 % Red < 90 %	99.95 %	100 %	
KPI 6	SIS central system availability	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.94 %	99.98 %	
KPI 7	SIS central system response time	Green ≥ 99.5 %, 99.5 %> Amber ≥ 99 % Red <99 %	99.86 %	99.85 %	
KPI 8	VIS central system availability	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.93 %	99.98 %	
KPI 9	VIS central system response time	Green = 100 % 100 %> Amber ≥ 90 % Red <90 %	99.98 %	99.90 %	
KPI 19	Customer satisfaction: percentage of Member States satisfied or very satisfied with the overall service provided by eu-LISA Service Desk	≥ 80 %	95 %	95 %	
KPI 20	Service Desk performance	≥ 75 %	99.9 %	95%	

Overall, the performance of the EU's JHA information systems remained at the same level as in 2020 (Figure 2). Additionally, eu-LISA also ensured that its systems operation support services remained available 24/7. Those services are essential for the Member States, and throughout the year, requests and issues were addressed timely and effectively. The 2021 customer satisfaction survey confirmed that, despite the manifold challenges, eu-LISA managed to uphold its high level of service provided to the Member States.

Figure 2. Availability of the central systems (SIS, VIS, Eurodac) from 2017 to 2021
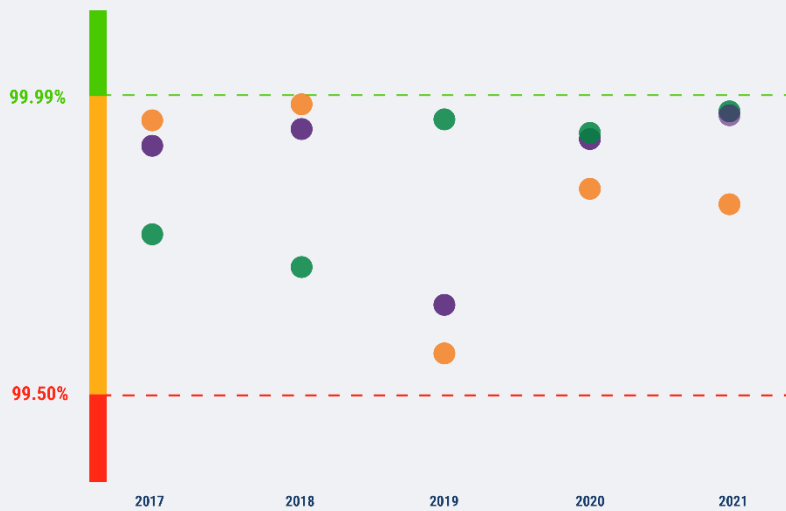
Schengen Information System (SIS)

The SIS is the EU's preeminent large-scale IT system in the area of home affairs, facilitating the exchange of information on persons and objects between national law enforcement and judicial authorities. In 2020, the SIS celebrated its 25th anniversary, having grown into the largest and the most widely used information sharing system for internal security and external border management in Europe.

As the main compensatory mechanism for the abolition of internal border controls among EU Member States, the SIS constitutes a **cornerstone of the Schengen acquis**, facilitating the free movement of people within the Schengen area by offering essential support to the management of the EU's external borders, ensuring a high level of internal security and contributing to law enforcement and judicial cooperation across Europe.

Since 2013, eu-LISA has been in charge of the operational management of the SIS central system and its communication infrastructure, ensuring 24/7 operational monitoring support and timely system evolution. The **second generation of SIS (SIS II)** entered into operation in 2013, and in December 2018, a major phase of development of new functionalities for the SIS was ushered in by the adoption of the SIS recast Regulations. It is expected to enter into operation by June 2022.

In 2018, eu-LISA launched the **Automated Fingerprint Identification System (AFIS)**, introducing biometric search capability in the SIS to enable the identification of persons of interest solely based on their fingerprints. By the end of 2020, all Member States were under obligation to enable the SIS AFIS searches.

Operations

During 2021, the overall performance of the SIS central system remained within the specifications of the service-level agreement (SLA): system availability was 99.98 % (KPI 6), which corresponds to less than two hours of full unavailability due to incidents during the whole year. The response time indicator was 99.85 % (KPI 7). In 2021, the system's availability was affected only by minor incidents:

- on 13 April, the central system was fully unavailable for around 1.5 hour, due to an Oracle issue. The AFIS was also unavailable.

- on 6 June, the central system became partially unavailable to one Member State (Slovenia), blocking approximately 200 transactions. The Agency restored the central system availability by the end of 8 June, and all blocked messages were processed, but

- on 1 October, an incident on the central system led to a service outage of 30 minutes for many Member States.

- on 2 December, the system was unavailable during 30 minutes due to an issue on the TESTA-ng network.

Owing to the active involvement of the Member States, the performance of **regular data consistency checks (DCCs)** continued to improve significantly, becoming more successful and stable. Regular data consistency checks are necessary to ensure that the central system and national systems remain synchronised, for example, after temporary disconnection of a national system. Although the duration of DCCs has increased due to the expanding size of the database, the Agency is already working on the evolution of DCCs, with a view to compressing the duration of these checks.

The **SIS AFIS**, the biometric component of the system, was also successfully operated and maintained. The SIS AFIS facilitates the identification of wanted persons based on fingerprint information added to European arrest warrants (EAW), contributing directly to law enforcement and judicial cooperation in criminal matters across the Union. The usage of SIS AFIS has doubled annually, and several Member States have indicated their interest in using it even more frequently. Pursuant to the SIS Recast Regulations, all Member States were obligated to enable SIS AFIS searches by the end of 2020, and in 2021, the Agency continued to support the remaining Member States in their effort to enable the SIS fingerprint search functionality using AFIS, e.g., Norway in February, and Estonia in October.

For eu-LISA, one of the major achievements of 2021 was the **integration of Ireland** to the SIS. Following the preparations that were finalised in 2020, the process of entry into operation started on 4 January and was successfully completed on 15 March. In May, Ireland conducted its first data consistency check, and completed its connection to AFIS, commencing use on 28 July.

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.[22] 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. In April, eu-LISA successfully migrated the Mail Relay to the common shared infrastructure (CSI), making it the first operational system to be fully migrated to the CSI. This marked an important milestone for the Agency, contributing to a more efficient and standardised use of the infrastructure. In line with the provisions of the SIS Recast regulations, eu-LISA also collaborated with Europol to establish their connection to the SIRENE network, effective on 8 March.

The **disconnection of the UK** from the SIS was seamlessly completed on 31 December 2020. As planned, the UK maintained its connection to SIRENE until 31 March, in order to be able to resolve the pending cases from 2020. From 1 January 2021, all UK alerts were no longer searchable by the end users, and by the end of April, all UK alerts were deleted, effectively closing the process.

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22 More information on SIRENE cooperation available on: https://europa.eu/!R3JKFY

System usage

In 2021, the overall SIS usage returned to levels comparable to 2019, following a sharp decrease in 2020. The average number of searches reached almost 20 million a day in 2021, compared to around 10 million in 2020, and 18 million in 2019. In 2021, the number of hits (when a search leads to an alert and the authorities confirm it) per day reached 611, compared to 573 in 2020, and 777 in 2019. The monthly usage of AFIS grew steadily throughout 2021, from over 40 000 fingerprint searches in January to over 207 000 in December.

- **The Member States accessed the SIS almost 7 billion times – 88 % increase from 2020 (5 % increase from 2019).**

- **At the end of 2021, 90 million alerts were stored in the SIS central system.**

- **In 2021, over 67 million of the alerts in the system were related to issued documents (e.g. passport, ID card)**

- **In December 2021, the number of AFIS queries reached 207 000, compared to 31 000 in December 2020.**

- **The average number of searches per day almost doubled compared to 2020, reaching 20 million.**

- **The SIRENE Bureaux processed nearly 223 000 hits on foreign alerts in 2021.**

- **By the end of December, the total number of alerts on persons was 962 175 – a slight decrease from 2020.**

- **5.7 million alerts were deleted following the disconnection of the UK.**

In March, the eu-LISA Management Board adopted the SIS II 2020 statistics report, subsequently published on the Agency's website with a factsheet.[23] In July, the *Official Journal of the European Union* published the updated list of competent authorities, who are authorised to make direct searches in the SIS II, together with the list of national N.SIS II Offices and SIRENE Bureaux.[24]

Stored data

Figure 3. Total alerts stored in the SIS

Year	Alerts
2016	71 million
2017	76 million
2018	82 million
2019	91 million
2020	93 million
2021	90 million

Figure 4. Breakdown of SIS alert categories in 2021

- Issued document: 75%
- Security: 7%
- Vehicle registration document: 6%
- Licence plate: 5%
- Vehicle: 4%
- Other: 2%
- Person: 1%

SIS alert categories in 2021

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23 **eu-LISA (2021) SIS II – 2020 statistics, March 2021**, available on: https://europa.eu/!Cb68HK
24 Official Journal of the European Union C 287, 16.07.2021, available on: https://europa.eu/!MJjmcY

SIS searches and hits

Figure 5. Total searches performed in the SIS

Year	Searches
2016	3.90 billion
2017	5.15 billion
2018	6.16 billion
2019	6.64 billion
2020	3.72 billion
2021	6.99 billion
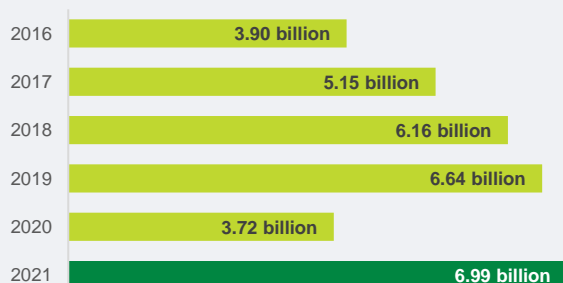
Figure 6. Average searches performed per day

Year	Searches
2016	10.85 million
2017	14.11 million
2018	16.87 million
2019	18.19 million
2020	10.19 million
2021	19.63 million
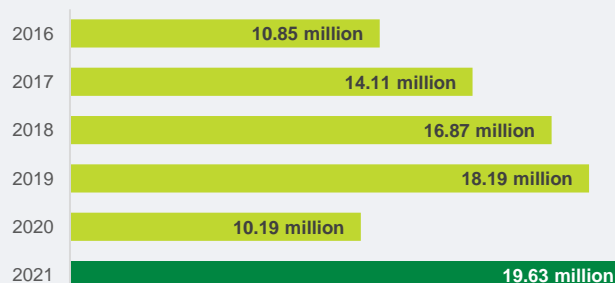
Figure 7. Average hits per day

Year	Hits
2016	550
2017	668
2018	732
2019	777
2020	573
2021	611
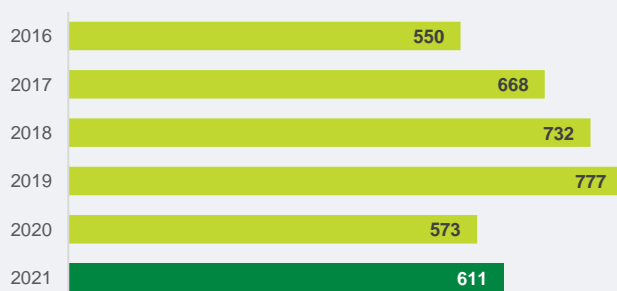
System evolution

In 2021, eu-LISA's main efforts were focused on the implementation of the **new SIS Recast Regulations**, alongside the continued development of the AFIS phase 2 (see below). In December 2021, the JHA Council endorsed revised schedules for several developments, including the SIS Recast, postponing its entry into operation from February 2022 to June 2022.

▪ SIS Recast

The SIS Recast regulations, adopted in November 2018, expanded the scope of the system's applications and functionalities, e.g. by introducing additional categories of alerts and by expanding the list of objects for which alerts can be issued. This marked a major evolution for the SIS, making the SIS Recast project one of eu-LISA's major contributions to the **EU Security Union Strategy**.

During the first half of 2021, the progress on the SIS Recast implementation was affected by some delays that were, in part, related to to dependencies with other SIS evolution projects (e.g. AFIS phase 2 and capacity increase), and also due to the late delivery of essential hardware for the test environment. In addition, several Member States faced issues with procurement and development activities.

In the spring of 2021, the Agency ran compliance tests for the interim release 1, containing changes related to alerts on persons, and prepared the interim release 2, containing alerts on objects. Subsequently, eu-LISA launched the compliance test campaign for the Member States. The system documentation, covering both the SIS Recast and AFIS, was approved by the SIS Advisory Group on 5 July.

On 14 June, the eu-LISA Management Board convened for an extraordinary meeting to address possible delays, and to update the programme planning, in particular for the Member State testing campaigns. Throughout the summer and in the autumn, eu-LISA worked on the tests with the Member States in a challenging schedule. In November, eu-LISA prepared an alternative rescheduling scenario that would account for development delays in several Member States, delays in the delivery of the testing database, and the fact that several Member States were not able to support parallel testing. In December, the JHA Council enorsed 14 June 2022 as the new deadline for the entry into operation. By the end of the year, the testing campaign was still ongoing, with significant risks to the programme's schedule still remaining.

As part of the SIS Recast project, eu-LISA is responsible for the **Data Exchange Between SIRENE Bureaux (DEBS)** documentation, a set of technical specifications defining how SIRENE Bureaux exchange information. Troughout the year, the Agency prepared and released several updates of the documentation to facilitate the exchange of information between the SIRENE Bureaux on the new functionalities stemming from the SIS Recast.

▪ AFIS Phase 2

The AFIS phase 2 project, covering the extension of the SIS biometric system, was launched in 2019. The project combines performance improvements to the existing AFIS with **new biometric functionalities** identified in the SIS Recast, such as the extension of search capabilities with dactyloscopic data on palm prints and latent prints.[25]

During the reporting period, the Agency launched the testing of the first 2021 release and the development of the second release. Owing to the delays in the development, both releases were postponed to 2022.

▪ Deployment of the new search engine

The deployment of the new search engine for SIS was another important objective for 2021. The new search engine – Elasticsearch – is expected to deliver a tenfold increase in terms of search, and significantly reduce system unavailability during switching between the central unit and the backup unit. Unfortunately, the entry into operation of the new search engine was significantly delayed, and was deployed at the end of year 2021. The delay was due to the COVID-19 pandemic, and some quality issues with the release, which were uncovered during the testing phase. As a result, the migration of the national systems to the new search engine was rescheduled for 2022.

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25 Latent prints are impressions of fingers or palms on a surface.

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, the VIS connects the EU's external border crossing points with Member State consulates in non-EU countries, and supports consular authorities in the management of short-stay visas for TCNs travelling to or transiting through the Schengen Area.

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

Operations

During 2021, the **overall performance of the VIS central system** remained within the targets specified in the service-level agreement (SLA). The availability of the VIS central system was 99.98 % (KPI 8), and the response time performance indicator was 99.90 % (KPI 9).

- On 5 August, the system was unavailable for less than six hours due to a cooling outage at the central unit.
- On 21 November, the planned downtime for adaptive maintenance had to be extended and reached three hours.

Besides these incidents, the few instances of system unavailability occurred in the context of release deployments.

The Agency successfully implemented the VIS **release plan for 2021** comprising four releases (incl. one postponed from 2020):

- the maintenance upgrades for different components on both VIS and BMS (February),
- the hardware replacement (for the firewall and network equipments) (April),
- an upgrade of the BMS' operating system (August),
- the migration of some VIS components to the Common Shared Infrastructure (CSI) platform and the upgrade of the application server (November).

In addition, the Agency also successfully migrated the VIS backup and archive onto the CSI. The **migration of system components to the CSI** is an important goal, as it contributes to a more efficient and standardised use of its infrastructure resources. Additionally, the Agency also migrated the **VIS Mail system** onto the CSI. The VIS Mail is a communication system operated by eu-LISA to allow the transmission of information between Member States via the VIS communication infrastructure.

System usage

In 2021, owing to the continuing COVID-19-related travel restrictions and consequent decrease of border checks, the amount of stored visa applications and fingerprints in the VIS continued to decrease compared to 2020 and 2019.[26] Altogether three million visa applications were processed in 2021, the same number as in 2020, compared to 17 million in 2019. The overall usage of the VIS was at about 28 % of the normally expected value. The VIS database stores 73 million visa applications and 66 million fingerprints.

- **Total VIS operations increased slightly compared to 2020, reaching 80 million.**
- **56.1 million fingerprints stored in the VIS database by Member States.**
- **62.2 million visa applications stored in the VIS database by Member States.**

In 2021, the volume of alphanumeric, biometric searches, and biometric authentications continued to increase, but was still significantly below the observed values before the COVID-19 pandemic. During the period, the system performed well: alphanumeric searches were performed in 0.38 seconds on average, with an expected performance of 30 seconds, and biometric authentications in 0.87 seconds on average, with expected performance of 3 seconds.

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26 The retention period of data in VIS is five years from the expiry date of the issued visa, the date a negative decision is taken or the date a decision is taken to modified an issued visa.

Data stored in the VIS

Figure 8. Total visa applications stored in the VIS

Year	
2016	36 million
2017	52 million
2018	65 million
2019	77 million
2020	73 million
2021	62 million
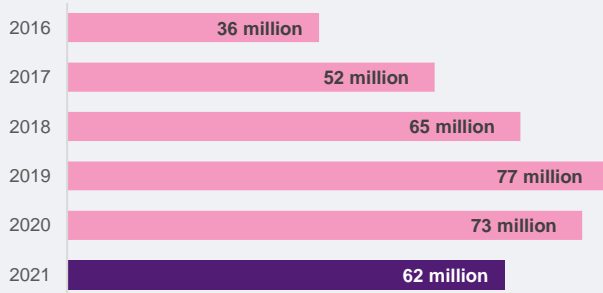
Figure 9. Total fingerprints stored in the VIS

Year	
2016	30 million
2017	45 million
2018	57 million
2019	69 million
2020	66 million
2021	56 million
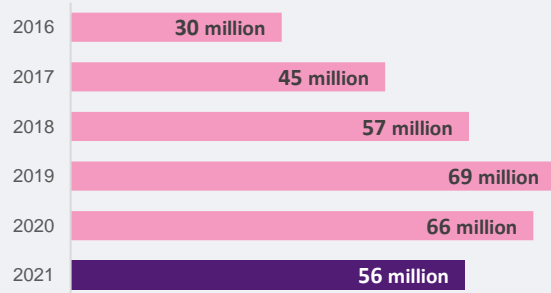
Border operations performed using the VIS

Figure 10. Total border operations

Year	
2016	40.23 million
2017	45.42 million
2018	40.86 million
2019	43.13 million
2020	10.99 million
2021	7.49 million
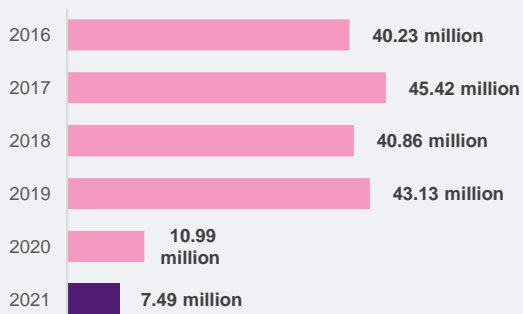
Figure 11. Total visas issued

Year	
2016	14.23 million
2017	15.28 million
2018	14.32 million
2019	15.33 million
2020	2.72 million
2021	2.55 million
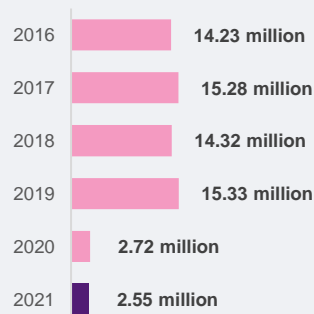
Figure 12. Number of border operations in the VIS per month from 2016 to 2021

COVID-19 restrictions
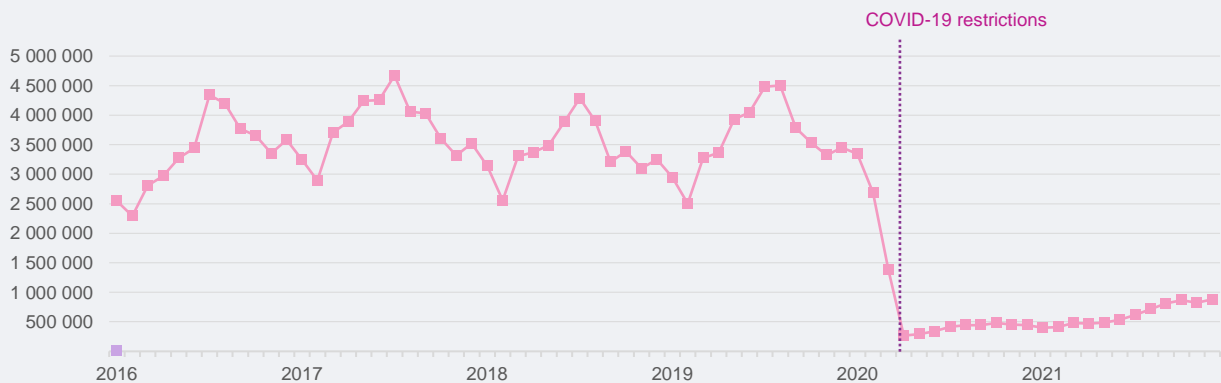
Figure 13. Number of visas issued per month from 2016 to 2021

COVID-19 restrictions
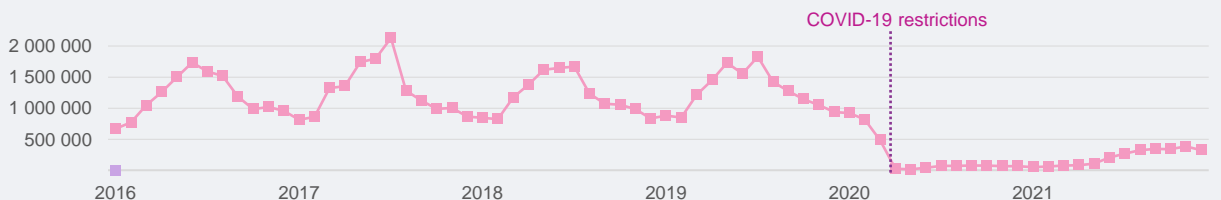
Number of searches

Figure 14. Total of alphanumeric searches in the VIS

Year	Value
2018	23 million
2019	25 million
2020	10 million
2021	9 million
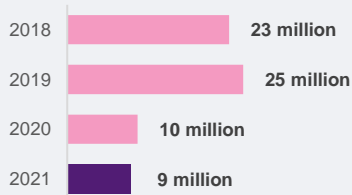
Figure 15. Total of biometric searches in the VIS

Year	Value
2018	8 million
2019	7 million
2020	2 million
2021	3 million
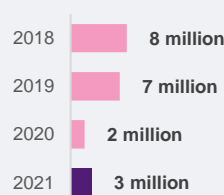
System evolution

▪ Revised VIS Regulation

The regulation reforming the VIS[27] was adopted in July 2021, adding a significant amount of new functionalities, in particular **the integration of long-stay visas and residence permits** into the VIS. In order to develop and accommodate these new functionalities, the VIS business processes will have to be redesigned, and eu-LISA will have to complete a significant update of the central system. However, before commencing with the technical preparations, the EU must adopt a series of implementing and delegated acts to further define relevant business and technical requirements. To that end, the Agency spent the second half of 2021 supporting the Commission in the preparation of the corresponding legislative acts.

Due to a significant delay in the adoption of the new VIS Regulation, the related legislative financial statement (LFS) has been postponed by one year. Despite the delay, the Agency proceeded with the necessary preparations in order to be able to start with the identification of requirements stemming from the new legal instruments in January 2022.

▪ Interoperability readiness

A direct consultation between the VIS and the EES will be enabled for defined usage, e.g. to allow border authorities to retrieve visa related information from the VIS and import them to the EES, or to allow visa authorities to consult the EES for the examination of visa applications. In 2020, to establish this interconnection between the two systems, eu-LISA commenced with the **migration of biometric data from the VIS to the sBMS**, ahead of the original plan. During the reporting period, the project progressed according to schedule, completing the integration of the VIS with the sBMS by the end of 2021, and proceeding to the test phase. In parallel, the Agency finalised the testing of the migration tools, and prepared the rehearsal of the biometric data migration. The migration of the VIS fingerprint database to the sBMS is expected to take place by mid-2022.

The introduction of the **Common Identity Repository (CIR)**, the database of biographical information on TCNs, as a mandatory component in the ETIAS consequential amendments required a significant modification of the VIS legacy architecture (also called refactoring), in order to guarantee the VIS-ETIAS interconnection and allow the query of VIS by ETIAS, e.g. for automated verification. In 2021, the Agency completed the feasibility study for the refactoring, and commenced with an impact assessment.

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27 Regulation (EU) 2021/1134 OJ L 248, 13.07.2021, p. 11-87.

■ Test environment

Responding to the needs of the Member States, the eu-LISA Management Board decided in 2020 to introduce an updated version of the VIS/BMS new test environment to increase its availability, reliability and agility for operational support, significantly improving incident resolution and service recovery time for the benefit of all Member States. The new contract for the VIS test platforms was signed at the end of December 2021, and is expected to be operational in March 2022.

■ Integration of new users

On 26 July 2021, Bulgaria and Romania, not party to the Schengen Area, were successfully connected to the VIS for passive (read-only) access, allowing them to view visa applications and access e-mail services. Having read-only access to an applicant's visa history, enables them to better verify the validity and authenticity of Schengen visas issued by other Member States, and will also support them in the implementation and future usage of the EES. This, in turn, will help prevent visa fraud, as well as combat serious crime and terrorism. The integration followed a series of successfully completed technical tests required to connect to the system. The project was launched in 2019, covering the design, development and testing of the passive mode at central and national levels.

Eurodac

Operational since 2003, the **European Asylum Dactyloscopy database – Eurodac –** supports the application of the Dublin Regulation[28] as one of the instruments used to implement the Common European Asylum System (CEAS).[29] 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 assists in 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 also have the possibility, under strict condictions 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.

Operations

During the reporting period, the **overall performance** of the Eurodac central system remained within the service-level agreement (SLA), with only few events affecting system availability. The availability of the Eurodac central system was 99.8 % (KPI 3), and the response time performance indicator was 100 % (KPI 4). 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 **disconnection of the UK** from Eurodac was completed on 1 January 2021, resulting in seven hours of unavailability outside of business hours. The process of deleting UK data was completed on 12 January, resulting in a significant drop in average daily incoming traffic, and in the number of stored records, from 5.85 million by the end of December 2020 to 5.55 million after the deletion. However, starting from June, the number of records witnessed rapid growth, reaching similar pre-Brexit levels by the end of the year.

From March to May, eu-LISA supported the Member States in the process of **renewing Eurodac certificates**, an activity performed every two years. On 18 March, some functionalities of the central system were affected by an issue with a certificate renewal, causing a partial system unavailability for the duration of one day, and necessitating the shutdown of the central system for one hour in the following day to restore all functionalities.

In April, **Denmark** was granted access to the Eurodac functionality for performing law enforcement searches (category 4) in accordance with the protocol concluded with the EU.[30] The process was finalised on 7 April, resulting in a 30-minute unavailability of the central system.

In October, the Agency deployed a **release** that included the upgrade of operating systems of Eurodac components, in conjunction with the installation of security patches. The development and deployment of the release was affected by the COVID-19 pandemic and by quality issues, causing a 5-month delay. Due to the

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28 Regulation (EU) No 604/2013, OJ L 180, 29.6.2013, p. 31–59
29 More information on the Common European Asylum System available on: https://europa.eu/!NJjvQd
30 Council Decision (EU) 2019/836, OJ L 138, 24.5.2019, p. 3–4

complexity of the project, two planned and one unplanned system outage occurred. In total, system unavailability related to the deployment of the release lasted altogether nine hours.

During the reporting period, eu-LISA continued to support the **integration of four remaining Member States** with the Agency's IT service management (ITSM) tool. The integration process was completed with Belgium, Cyprus and Malta, and Ireland's connection is expected to be finalised in 2022.

Throughout 2021, the maintenance the EU's encrypted electronic transmission channel for national asylum authorities – **DubliNET** – remained within the agreed service-level agreement (SLA). Additionally, eu-LISA commenced preparations for upgrading system certificates used for encryption and signature of data exchanged between the Member States via DubliNET, with a view to using stronger, and therefore more secure, certificates to align with most recent security standards. However, the upgrade was postponed to 2023 in order to ensure Member States sufficient time to adapt their systems for the upgrade. In all matters related to DubliNET, eu-LISA continued its close cooperation with the **European Agency for Asylum (EUAA).**[31]

System usage

The impact of the COVID-19 pandemic can be observed in Eurodac usage statistics. In the first half of the year, the number of new asylum application registrations (Category 1) remained below 30 000 per month, at a lower level than in the period before the pandemic. However, from June 2021, the numbers began to increase steadily, reaching 65 000 in November, comparable to 2019 levels. Volumes of irregular border crossings (Category 2) in 2021 were similar to before the pandemic. The processing time of the searches, for Categories 1 and 3 was at an average of around 30 seconds per search.

- **More data was transmitted in all categories compared to 2020. Overall traffic increased 30%.**

- **Total of 5.8 million fingerprint sets were stored in Eurodac – a slight decrease compared to 2020.**

- **5.8 million data set is stored in Eurodac, most data sets come from asylum seekers.**

- **Approximately 350 000 data set deleted due to Brexit.**

The Eurodac statistics report for 2020[32] was adopted and published in March, together with a factsheet[33], and in May, eu LISA published the annual updated list of designated authorities[34] that have access to data recorded in the Eurodac central system.

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31 Formerly the European Asylum Support Office (EASO)
32 **Eurodac Statistics Report 2020**, March 2021, available on: https://europa.eu/!Xk76Tf
33 **Eurodac 2020 Annual Statistics Factsheet**, March 2021, available on: https://europa.eu/!WH89mF
34 **List of designated authorities** that have access to data recorded in the Central System of Eurodac pursuant to Article 27(2) of the Regulation (EU) No 603/2013, for the purpose laid down in Article 1(1) of the same Regulation, May 2021, available on: https://europa.eu/!YtbnbW

Data transmitted via the Eurodac system

Figure 16. Total traffic in Eurodac

Year	Value
2016	1 641 377
2017	1 012 465
2018	879 072
2019	916 536
2020	644 926
2021	855 498
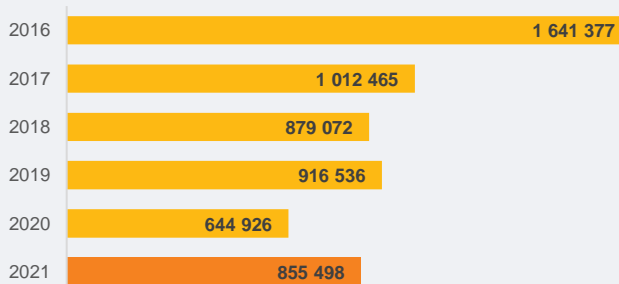
Figure 17. Traffic per category in 2021

- **Category 1**: 510 696 (60%)
- **Category 2**: 132 356 (15%)
- **Category 3**: 211 960 (25%)
- **Category 5**: 20 (0%)
- **Category 4**: 466 (0%)

Traffic per category in 2021
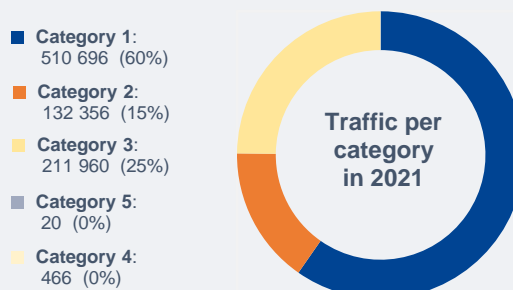
Figure 18. Category 1: asylum seekers

Year	Value
2016	1 018 074
2017	633 324
2018	551 253
2019	592 691
2020	401 590
2021	510 696
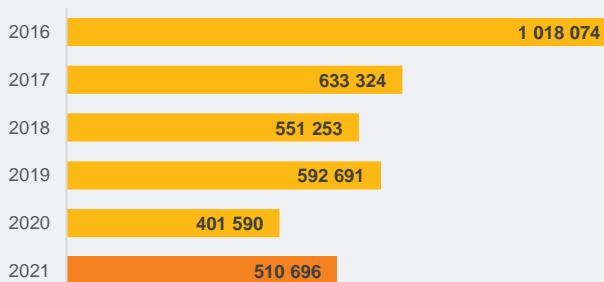
Figure 19. Category 2: irregular border crossings

Year	Value
2016	370 418
2017	160 816
2018	103 333
2019	111 761
2020	82 285
2021	132 356
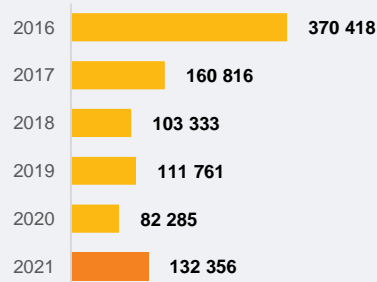
Figure 20. Third country nationals found illegally in Member States

Year	Value
2016	252 559
2017	217 661
2018	224 180
2019	211 635
2020	160 843
2021	211 960
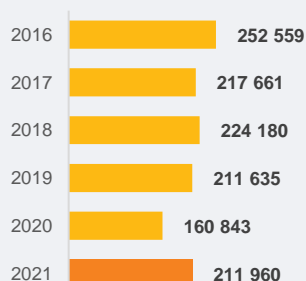
Figure 21. Category 4: Eurodac searches by national law enforcement authorities

Year	Value
2016	326
2017	550
2018	296
2019	242
2020	206
2021	466
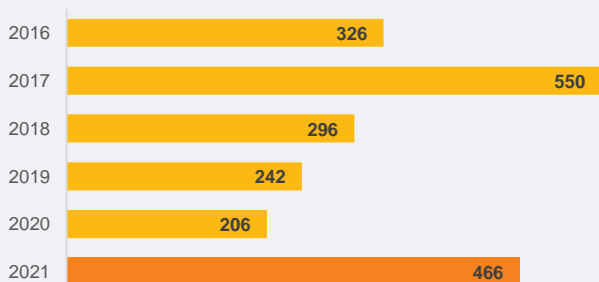
Figure 22. Category 5: Eurodac searches by Europol

Year	Value
2016	0
2017	114
2018	10
2019	207
2020	2
2021	20
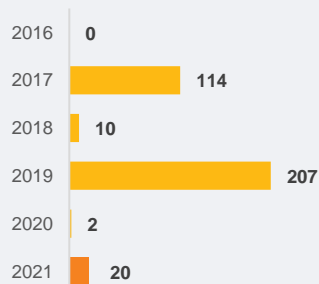
▪ Eurodac and Dublin recast

On 23 September 2020, the European Commission presented a **comprehensive New Pact on Migration and Asylum**.[35] One of the key elements of the pact was the amended proposal for a regulation on the establishment of Eurodac. According to the draft regulation, Eurodac should be transformed into a case management system with a broadened scope that would also include migration and relocation to another Member State. The new regulation provides for a clear and consistent link between specific individuals and the procedures they are subject to, to better assist with the control of irregular migration and the detection of unauthorised movements. It also supports a new solidarity mechanism, and allows Eurodac to be part of the interoperability framework of the EU's JHA information systems.

In 2021, the adoption process of the updated legislative proposals for Eurodac and Dublin regulations was still ongoing, resulting in the postponement of major Eurodac evolution, including the implementation of the new functionalities and the integration of Eurodac with the JHA interoperability architecture.

▪ Eurodac redesign

The repeated rescheduling of the Eurodac Recast regulation has significantly hampered the efficient evolution the system and of its components. Because some components were reaching their end of life stage, when they would no longer be supported by the vendors, eu-LISA launched the Eurodac redesign project already back in 2020, ahead of the adoption of the new regulation. In addition, the redesign project also included the migration of Eurodac's core infrastructure onto the Common Shared Infrastructure (CSI), and the designing of an open and scalable system architecture to facilitate the upcoming system recast.

The first phase of the project was completed in 2021, delivering the new system design. However, the second phase was canceled due to global component shortage in the wake of the pandemic. These significant delays posed high risk to the operational management of Eurodac, leading to the cancellation of the redesign project after completing phase 1. Instead of the cancelled redesign project, the Agency prepared a minimal upgrade project for Eurodac, which will be carried out in 2022 and 2023, to implement the minimum necessary changes to keep the Eurodac central system running in compliance with the legal instruments. What is more, the design produced in phase 1 will be reused for the Eurodac Recast.

1.2.1. Systems operations support

The Agency's support services are available 24/7 to ensure the continuous availability of the large-scale IT systems. Despite the effects of the COVID-19 pandemic, the services provided to the Member States remained uninterrupted throughout the year. In 2021, the performance indicator of the service desk reached 95 %, exceeding the target of 75 % (KPI 20). This indicator measures the Agency's ability to support end-users by responding to service requests and handling incidents through two distinct aspects: the availability of support (time to respond), and the performance of support (time to resolve). This indicator shows the percentage of requests completed within the target of the SLA concluded between eu-LISA and the Member States.

In 2021, the Agency handled 2 785 incidents, and 1 497 service requests, an increase of approximately 10 % compared to 2020 when the usage of the systems was lower, due to the pandemic (Figure 23). Altogether, more than 1 000 tickets were submitted by the Member States, with another 2 938 tickets submitted internally, either in the course of monitoring events or by onsite contractors.

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35 COM/2020/609 final

Figure 23. Number of incidents and service requests handled in 2021

	SIS	VIS	Eurodac	Total
Incidents	1 288	1 079	418	2 785
Opened by the MS	379	131	208	718
Opened internally	909	948	210	2 067
Service requests	1 127	166	204	1 497
Opened by the MS	457	70	99	626
Opened internally	670	96	105	871

Figure 24. Breakdown of incidents by priority and system

Priority	SIS	VIS	Eurodac	Total
Low	259	309	81	649
Moderate	782	655	254	1 691
High	242	113	80	435
Critical	5	2	3	10
Total	1 288	1 079	418	2 785

The Agency has been focusing on the necessary preparations to enable a transversal event management process, and on the necessary updates to its IT service management (ITSM) process management tool SM9 (HP Service Manager version 9), that will enable ticket sharing between multiple contractors on a need-to-know basis and in a flexible manner.

1.2.2. Testing, release and deployment management

The **deployment of releases** allows the Agency to update IT systems with the latest functionalities and patches, as part of the planned evolutions. The preparation and timing of releases is of utmost importance to minimise the impact on the performance and availability of the systems.

At the beginning of the year, the Agency approved release plans for the SIS, the VIS and Eurodac. For the VIS, four releases were deployed in accordance with the plan, whereas the SIS and Eurodac experienced delays, in part due to quality issues detected during testing. One Eurodac release was deployed, and for the SIS, the Agency implemented only one of the planned releases in 2021.

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.

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

Throughout the year, the Agency organised several dedicated **Test Expert Groups (TEG)** meetings for the SIS, VIS and the 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 of 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.

1.3. **Infrastructure and networks**

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 Agency's main technical site in Strasbourg (central unit – CU), 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:

- **SIS Domain** for the SIS II and SIRENEMail;

- **VIS Domain** for the VIS, VISMail, the EES, and the ETIAS;

- **EuroDomain** for Eurodac, DubliNET and the ECRIS-TCN.

The interoperability components will be used on all domains. The three domains are physically separated at the users' premises. 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.

Operational management of the communication infrastructure

In 2021, the SIS and the VIS communication infrastructures using the TESTA-ng services framework contract performed in accordance with the legal requirements for the respective systems. The SIS communication infrastructure reached an availability of 99.9996 %, and the VIS communication infrastructure 99.9980 %. The SIS II second encryption layer ensured the security of the SIS II and SireneMail business data, reaching an availability of 100 %.

Figure 25. Availability of the wide area network, 2017–2021
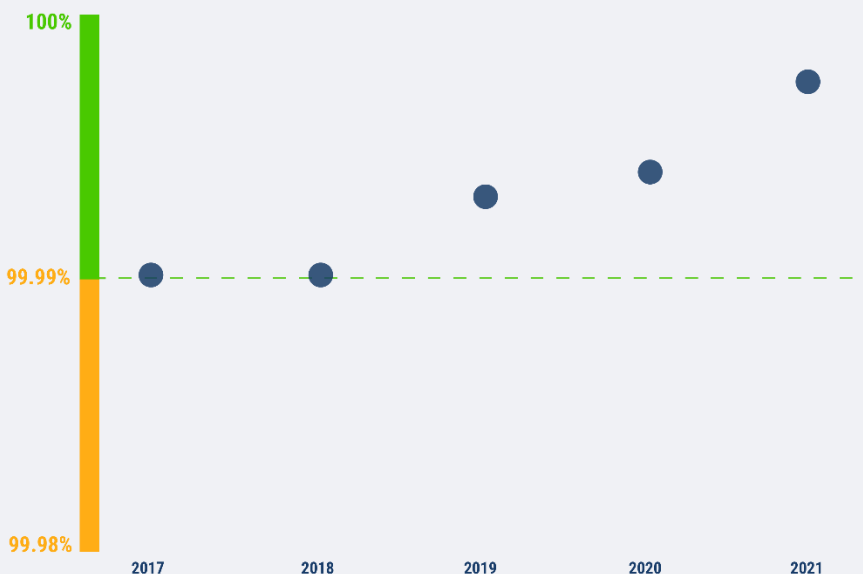
The preparations for the evolution of the **TESTA-ng framework contract** started in 2018, under the leadership of the Commission. The process, initially expected to be concluded in 2020, was delayed. In 2021, the Agency contributed to the technical evaluation of the offers for the new framework contract, which was completed by the end of 2021.

Evolution of the communication infrastructure

The Agency continued to upgrade the SIS communication infrastructure, to ensure that the Member States could efficiently use new system functionalities, stemming from the SIS recast and AFIS projects. Throughout the year, and despite the COVID-19 restrictions, eu-LISA worked with the Member States to replace the remaining turnkey access points (TAPs), the components linking the national systems to the SIS network, and on the activation of most of the missing secondary backup sites.

The SIS second encryption layer was upgraded to accommodate the higher bandwidth needs, and to ensure hardware replacement to avoid issues with vendor support. This activity was completed by the end of 2021, with 100 % of the sites in the Member States successfully replaced.

In 2021, the Agency also completed the VIS communication infrastructure upgrade to ensure the increased bandwidth needed for the operation of the EES and the ETIAS. For a more detailed overview of this process, please refer to the section on the EES on page 26.

1.3.2. Data centres

The Agency's data centres, the Central Unit (CU) in Strasbourg, and the Back-up Central Unit (BCU) in Sankt Johann im Pongau, are the infrastructure that physically host all large-scale IT systems entrusted to eu-LISA, while also hosting other operational and non-operational systems needed for such tasks as development and testing. As such, they constitute the Agency's core assets, and are of critical importance for the execution of its mandate.

In 2021, the Agency took all measures necessary to ensure that the data centres located at both technical sites remained continuously operational. This successful achievement contributed to the high level of performance of the systems, in particular their availability.

eu-LISA continued to work towards the implementation of 'data-centres-as-a-service', to ensure the integration of IT with infrastructure management, to help centralise the monitoring, the operational management and the capacity planning. In 2021, the Agency further facilitated the remote access to the data centres, to reduce the dependence on physical access, which was of particular importance during the pandemic period. This work involved the review of several processes, e.g. for access control and requests. eu-LISA also deployed a data centre infrastructure management (DCIM) software solution, which was gradually populated with IT assets and modules, such as infrastructure optimisation and energy management to increase the operational efficiency.

eu-LISA also worked on improving its design and capacity planning capabilities, using the new DCIM solution, to prepare the extended capacities that are needed in the coming years. In this perspective, the Agency continued to align its CU and BCU infrastructure with the internal standards of the Common Shared Infrastructure (CSI), and deployed new lines to improve the connectivity. Several assets from legacy systems were also decommissionned.

To achieve additional buffer capacities at the CU site in Strasbourg, eu-LISA successfully deployed a containerised mobile data centre, which once fully equipped, will provide an additional 30 % of infrastructure assets for the newest systems' priorities and requirements. eu-LISA continued to provide hosting services for Frontex and EUAA backup systems.

1.3.3. Common shared infrastructure (CSI)

The Agency is gradually implementing a common shared infrastructure (CSI) programme for all large-scale IT systems, aiming to create a **scalable, agile and standardised infrastructure**, ready to serve as the technical foundation for systems interoperability, while also generating efficiency gains in terms of system administration and maintenance. This constitutes a significant change for eu-LISA, compared to the initial situation where each systems used its own dedicated infrastructure and maintenance services. Now, all new systems are deployed on this central infrastructure by default, e.g. the EES versions used for the development and the acceptance tests with the Member States.

In December 2021, eu-LISA completed the last missing element of the CSI with a complementary central backup system, enabling the Agency to offer an internal solution for **'backup-as-a-service' (BaaS)**. As part of the project, VIS Mail and SIRENE Mail are now also using this solution, and the migration of an early version of the EES, sBMS and VIS backups was ongoing, with Eurodac next in line.

1.4. Security and business continuity

Throughout 2021, eu-LISA continued to maintain and upgrade its security measures in the areas of physical security, personnel security, systems security and resilience, in order to ensure the fulfilment of the Agency's mandate. In alignment with eu-LISA's new strategy for 2021-2027, the Management Board adopted the **Security and Continuity Strategy 2021-2027**.

Additionally, eu-LISA has strengthened its business continuity through the adoption of a **Corporate Business Continuity Plan**, **Business Continuity Implementing Rules** and an **Emergency Management Policy**. To that end, the Agency trained business continuity correspondents, to support the resilience of each business area in the organisation, and also first responders, who assist the security personnel in emergency situations at eu-LISA premises.

The Agency also runs security and business continuity exercises on annual basis. On 16 March, the eu-LISA Management Board adopted the final report on the **2020 Multisystem Exercise,** which was carried out in November 2020, and focused on end-to-end security, business continuity and disaster recovery of the SIS, the VIS and Eurodac. At the end of 2021, the Agency carried out a corporate business continuity exercise that focused on testing the resilience of internal business services in case of disruption.

In the area of **information security**, the Management Board adopted, in June 2021, the updated Security and Business Continuity/Disaster Recovery Plans for the SIS and the VIS. The information security framework was additionally strengthened by the adoption of several security standards and guidelines, in alignment with international best practices. The Agency also worked on the preparation of the security and business continuity plans for Eurodac, the EES, the sBMS, the CSI, and also for the communication infrastructure.

The **security of the new systems** is a major element of their development. In this context, eu-LISA contributed to the preparation of technical specifications and to the development of secure architectures for each system. To that end, the Agency was actively involved in the work of the **Security Officers Network (SON)**, facilitating the exchange of best practices in all security and business continuity domains between the Member States, the Commission and the EU's JHA Agencies. In 2021, SON experts gathered twice to discuss risk assessment processes, the EU's threat landscape, as well as overall security and business continuity. What is more, as a follow-up to the adoption of the implementing acts on interoperability, the Agency and the Member States have initiated the creation of a **Cooperation Group** for preparing the procedures and the platform for operational response in case of security incidents affecting the interoperability components.

As part of **operational management of large-scale IT systems**, the Agency performed continuous monitoring and management of security risks, testing and enhancing the security controls to ensure effective security posture.

In 2021, eu-LISA conducted a **cybersecurity exercise** on its corporate IT infrastructure to test its response and resilience to cyber threats. The exercise was followed by an assessment of the results, which was adopted by the Agency's Management Committee, together with a **Corporate Infrastructure Security Plan**.

In addition, eu-LISA has been actively contributing to the development of two new 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**, despite the limited staff presence at the Agency's sites due to COVID-19-related safety measures, several improvements were introduced to enhance site security, mostly for the purposes of ensuring a healthy workplace for critical staff operating the systems on a 24/7 basis, as well as for other horizontal supporting functions. Additionally, security requirements were drafted for the second extension of the operational site, and also for the temporary premises in Strasbourg.

Regarding security coordination and outreach, the **cooperation with EU agencies and institutions** was very fruitful in terms of exchanging knowledge and best practices on matters related to business continuity, especially in the context of the COVID-19 pandemic. The **network of Business Continuity Officers** continuously shared knowledge, risk assessments and good practices on managing the safety of staff, and the resilience of the different organisations in support of their mandate. The Agency also participates in the initiatives of the **Inter-Institutional Security Training and Awareness Group** and the **JHA Security Officers Network** that tackle common security matters.

1.5. **Stakeholder relationships**

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

In 2021, eu-LISA continued to foster its strong partnerships with Member States, EU institutions and bodies. The Agency was actively engaged in the technical and strategic discussions held within the relevant **Committees and Working Parties of the EU Council**, and also in the high-level discussions in the framework of Justice and Home Affairs Council meetings.

In addition, the Agency continued to closely follow the activities of various **Committees of the European Parliament** (e.g. Civil Liberties, Justice and Home Affairs (LIBE), Budgets (BUDG), Budgetary Control (CONT), Artificial Intelligence in a Digital Age (AIDA), and Legal Affairs (JURI)), attending and contributing to the discussions held within the **Schengen Scrutiny Working Group**.

Furthermore, the Agency also supported the work of the **European Commission** in the context of the consultations on the **legislative package on the digitalisation of justice**, as well as in the process revising the **Prüm framework for automated data exchange** that allows Member States to query DNA, dactyloscopic, and vehicle registration data in the national databases of other Member States.[36]

During the first half of the year, the Portuguese Presidency invited the Agency to contribute to the discussions held in the **Council Working Party on Frontiers** on the redesign of the business processes for border management, that are expected to take place in parallel with implementation of the EES and the ETIAS. Specifically, eu-LISA was invited to give a presentation on the different use cases identified for border, visa, immigration and law enforcement authorities.

The Portuguese Presidency also requested, the Agency's input on the **Eurodac Recast negotiations**, inviting eu-LISA to deliver a presentation to the asylum community highlighting the gaps in the current Eurodac system, the main functionalities introduced by the Eurodac Recast, and the impact of its late adoption.

Additionally, eu-LISA was also actively engaged and supported the **Commission's Directorate-General for Justice and Consumers (DG JUST)** in the process of preparing the e-CODEX legislative proposal, while also working closely with the Member States in the context of the **e-CODEX handover** workshop discussions led by the Me-CODEX II consortium that is currently operating the system.

As one of its main priorities, eu-LISA collaborated with the Member States and EU institutions on the topic of **artificial intelligence**. The main achievements in this area are presented in section 1.1.3 'Innovation, research and development' on page 33.

Throughout the year, the Agency provided regular support to the Commission and the Member States in the process of **preparing implementing and delegated acts for** the EES, the ETIAS, the ECRIS-TCN, the SIS recast, revised VIS and Interoperability. In addition, eu-LISA also provided the Parliament and the Council with regular reports on the status of the evolution of current systems and the development of new ones. Furthermore, the Agency also followed closely and supported the discussions on other legislative proposals pertaining to its mandate.

In 2021, eu-LISA pursued its involvement in the **European Multidisciplinary Platform Against Criminal Threats (EMPACT)**, a security initiative driven by the Member States to identify, prioritise and address threats posed by organised and serious international crime. As a contribution to EMPACT, the Agency organised a training session on the role of Eurodac and the SIS in tackling the facilitation of illegal immigration. In February 2021, the Council of the EU decided to make EMPACT a permanent initiative, and defined its 10 priorities for the 2022–2025 period. Subsequently, eu-LISA announced its participation in the following priorities: cyber attacks, migrant smuggling, and firearms trafficking.

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36 The Prüm framework is based on the Council Decisions 2018/615/JHA and 2008/616/JHA, addressing cross-border cooperation, particularly in the areas of combating terrorism and cross-border crime.

eu-LISA Annual Conference

The Agency's flagship event, **the 8th eu-LISA Annual Conference 'Towards the Digital Schengen Area'**, held on 27 October 2021, was organised in cooperation with the Slovenian Presidency of the Council of the EU. For the second year running, the event was arranged online, attracting more than 320 participants. High-level speakers, from the EU and various international organisations, contributed to forward-looking discussions on the current developments in the EU's JHA domain, focusing on the upcoming launch of the EES, the ETIAS and the new Interoperability architecture. The conference also addressed the implications of the COVID-19 pandemic to air travel, with presentations on the relevant new initiatives launched. The conference also tackled the tremendous potential of AI applications in the areas of internal security and border management, as well as the importance of privacy and the respect for fundamental rights in their development and operation. The audience was given a chance to interact and contribute by answering polling questions that were published the conference website. For more information, please refer to the interactive conference report.[37]

Schengen evaluations

The seamless functioning of the Schengen area without internal border controls, relies on the diligent and fastidious application of compensatory measures (e.g. the Common Visa Policy and the SIS/SIRENE) by the Member States. To that end, the EU has set up a dedicated mechanism for evaluating and monitoring the implementation of the Schengen *acquis* by Member States.[38] The responsibility for implementing the **Schengen evaluation and monitoring mechanism (SEMM)** is shared jointly by the Member States and the Commission, who are supported in this task by eu-LISA, among others.

In the framework of SEMM evaluation missions, the Agency is regularly invited to send technical experts to Member States as observers to ensure a better usage of the SIS and the VIS. In 2021, the Commission invited eu-LISA to contribute to the **SIS/SIRENE Schengen, and Common Visa Policy evaluations in** Italy (September), Malta (September), and Greece (November). Due to COVID-19 restrictions, eu-LISA had to cancel its participation to the Common Visa Policy evaluation of Cyprus.

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37 eu-LISA Annual Conference Report 2021 'Towards the Digital Schengen Area' https://eulisaconference.eu/report-2021
38 Council Regulation (EU) No. 1053/2013

1.5.2. Partnerships with other EU Agencies

Throughout the years, eu-LISA has fostered a close and fruitful cooperation with a wide range of EU agencies, particularly in the **domain of Justice and Home Affairs**, counting Frontex, Europol, Eurojust, the EU Agency for Asylum (EUAA), the European Union Agency for Law Enforcement Training (CEPOL), and the EU Agency for Fundamental Rights (FRA) as its closest partners.

FRONTEX

The Agency's cooperation with Frontex, the European Border and Coast Guard Agency, is set out in a working arrangement, and in a cooperation plan for 2021–2023. In 2021, the main focus for both agencies was on the **implementation of the EES, ETIAS, and Interoperability regulations**. Frontex took part in eu-LISA's Working Group on Biometrics, and the Working Group on Artificial Intelligence (WGAI). In addition, eu-LISA continued to host the **Frontex disaster recovery site**, and supported Frontex in upgrading the IT and communication infrastructure for the identification and registration of mixed migration flows in North Macedonia, and Montenegro, with a view to enabling a connection to the EU's JHA information systems in the future.

EUROPOL

The partnership between eu-LISA and Europol, the EU Agency for Law Enforcement Cooperation, is based on a memorandum of understanding, and a cooperation plan for 2019–2021. During the reporting period, the main focus was on the **implementation of the the SIS, EES, ETIAS, and Interoperability regulations**. In addition, the agencies collaborated in the framework of Europol's Working Group on Information Management, as well as eu-LISA's Working Group on Biometrics, and the Working Group on AI. Both agencies were also actively involved in the implementation of the **EU Innovation Hub for Internal Security** (for more, see section 1.1.3), hosted by Europol, with eu-LISA agreeing to deploy a Liaison Officer to the Hub as from 2022.

EUROJUST

The Agency's bilateral cooperation between Eurojust, the EU Agency for Criminal Justice Cooperation, is set out in a bilateral memorandum of understanding, and in a cooperation plan for the period 2021–2023. In 2021, their cooperation focused on the **implementation of the ECRIS-TCN, and Interoperability regulations**, as well as on 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 research monitoring report on the use of AI in cross-border criminal justice**, scheduled to be published in 2022.

EUAA

The European Union Agency for Asylum (EUAA) collaborates with eu-LISA on the basis of a working arrangement, and a cooperation plan for 2021–2023. During the reporting period, their cooperation focused on the **implementation of the Commission regulation on the 'DubliNET' electronic communications network**. In addition, eu-LISA continued to host the **EUAA recovery site**, and renewed the corresponding service-level agreement between the two agencies.

CEPOL

The EU Agency for Law Enforcement Training (CEPOL), and eu-LISA collaborate based on a working arrangement, a cooperation plan for 2019–2021, and annual cooperation agreements on joint training activities. In 2021, their collaboration focused on **organising joint training courses on the topic of large-scale IT systems in the EU's JHA domain**, covering both existing and new systems, as well as the overaching interoperability architecture. Additionally, CEPOL and eu-LISA organised **trainings for Schengen evaluators**.

FRA

The EU Agency for Fundamental Rights (FRA) and eu-LISA collaborate based on a working arrangement, and a cooperation plan for 2020-2022. In 2021, the two agencies organised **joint trainings to highlight aspects related to fundamental rights in the management of large-scale IT systems**. In addition, the two agencies also prepared reports on topics of mutual interest.

ENISA

In addition to EU agencies in the JHA family, eu-LISA cooperates on a regular basis with the European Union Agency for Cybersecurity (ENISA). The bilateral cooperation between the two agencies is based on a memorandum of understanding, and a cooperation plan for 2021–2023. During the reporting period, the agencies worked together on the **practical implementation of the EU's cybersecurity legislation**, and in the framework of the eu-LISA Security Officers Network (SON). In 2021, the ENISA also provided support to eu-LISA's **annual cybersecurity exercise**.

EASA

Additionally, eu-LISA developed closer working relations with the European Union Aviation Safety Agency (EASA) to facilitate **the implementation of the EES, and ETIAS regulations** by air carriers. To that end, the two agencies prepared a draft working arrangement to enable information exchange with air carriers as stipulated in the relevant regulations.

Inter-agency cooperation

JHAAN

eu-LISA continued its active participation in the activities of the JHA Agencies Network (JHAAN), serving as an umbrella organisation for the nine EU agencies operating in the European area of freedom, security and justice (AFSJ). In 2021, the JHAAN was chaired by Frontex, focusing on the following priorities: **European Green Deal, digitalisation, research and innovation, fundamental rights, and the assessment of the network's activities** during the past ten years. Motivated by a recommendation put forward in the JHAAN's assessment report, the network decided to introduce a **Trio Presidency format**. Starting **from 2022 until 2024, eu-LISA** will be part of JHAAN's first trio presidency, together with CEPOL and the EUAA.

EUAN

In addition, eu-LISA continued to participate in the work of the European Union Agencies Network (EUAN) that focuses on various **administrative matters** ranging from budget and finance, to human resources, and the effects of COVID-19.

1.5.3. Capabilities building

Training for Member States

As per its legal mandate, the Agency continued to coordinate, prepare and deliver technical trainings to Member States on the topic of EU's large-scale IT systems in the JHA domain. Due to the COVID-19 pandemic, **the majority of the trainings took place online**, with the exception of two activities organised onsite.

In 2021, eu-LISA delivered **altogether 34 training activities for the Member States**, using a variety of delivery methods (i.e., live webinars, self-paced online courses, face-to-face learning, etc.). The training activities covered the existing systems in operation, new systems under development, and the Interoperability framework. Three of the training activities were organised jointly with CEPOL. In addition, eu-LISA delivered eight webinars for Schengen evaluations, prior to and in support of the SIS/SIRENE evaluations.

The trainings organised by the Agency were **attended by a total of 3 898 participants**. The average participant satisfaction rate stood at 89 % (5.4 / 6, well above the KPI target of 4.5 / 6). With the majority of training activities delivered online, the eu-LISA Learning Management System (LMS) platform registred 604 new accounts, and 1 348 new enrolments in online training activities.

Figure 26. Number of training activities for the Member States, 2015–2021
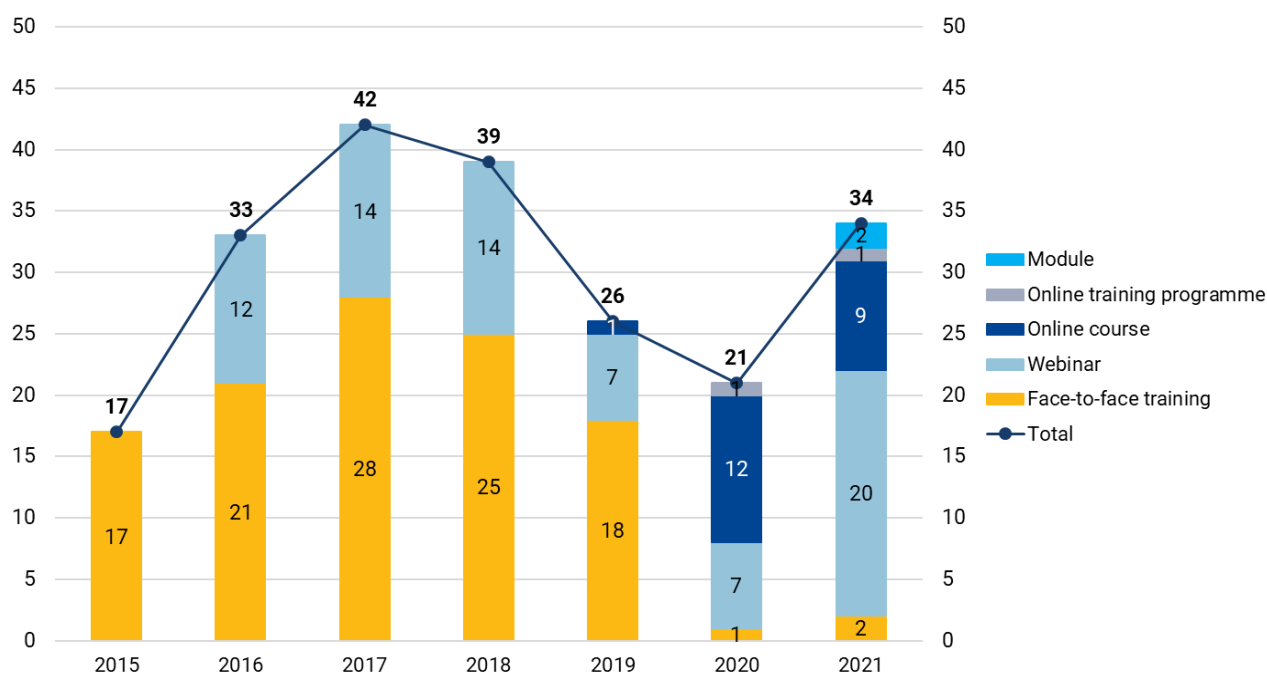
In 2021, the Agency organised the first **training needs analysis (TNA) exercise for the ECRIS-TCN and the Interoperability framework**, asking the Member States to indicate their training needs to be included in the training plan for the upcoming year. The Interoperaility TNA was supported by eu-LISA's newly established Interoperability Expert Training Group (IETG), with participants from the Member States, Frontex and the European Commission.

For the first time, **an external evaluation of the Agency's training activites** was conducted to gain insights for improving the existing operational model in the context of eu-LISA's expanded mandate, and the digitalisation of training activities that was greatly accelerated by the COVID-19 pandemic. Overall, the outcome of the evaluation was positive, helping eu-LISA pinpoint specific areas for improvement, in particular the internal organisation of the Agency's training function, as well as the use of online technologies for training. All improvement proposals from the evaluation were incorporated into the eu-LISA Member State training roadmap to be implemented in 2022-2023.

Figure 27. Number of participants in eu-LISA trainings, 2015–2021
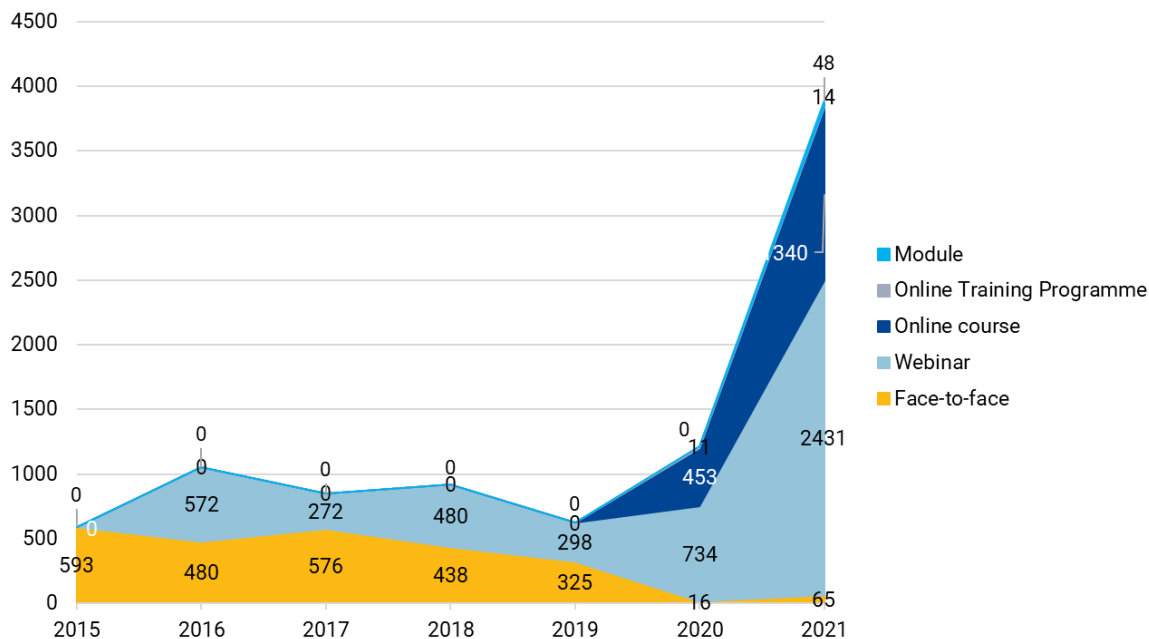
Reporting and statistics

Throughout 2021, the Agency published relevant **technical and statistics reports**, as well as updating related documentation, in compliance with the legal requirements of the systems under its operational management. eu-LISA's public statistics and technical reports are available to the general public on the Agency's website.[39]

In March 2021, **SIS II and Eurodac** 2020 annual statistics reports were published, following their approval by the respective Advisory Groups. The reports were published together with factsheets, highlighting the main facts and figures (for the SIS, see section on page 38, and for Eurodac, see section on page 48).

In the second quarter of the year, the Agency issued updated lists of:

- competent authorities authorised to search directly the data contained in the SIS II, and
- the list of National SIS II Offices and national SIRENE Bureaux.

Both documents were translated into the official languages of the EU, and published in the Official Journal of the EU on 16 July 2021.[40]

For Eurodac, the Agency issued two more publications in addition to the annual statistics report:

- an updated list of designated authorities that have access to data recorded in Eurodac's central system, published on eu-LISA's corporate website at the end of May, following adoption by the Management Board on 26 May 2021
- **Eurodac 2020 Annual Report**, focusing on the activities, the technical functioning, and security of its central system. The report was adopted on 26 November 2021 by the Management Board, and later published on the Agency's website, together with an explanatory factsheet. The report was also officially submitted to the relevant EU Institutions.

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39 **eu-LISA Statistics Reports** https://eulisa.europa.eu/our-publications/reports
40 Official Journal of the European Union C 287, 16.07.2021, available on: https://europa.eu/!hvYphC

1.6. Governance and compliance

1.6.1. Governance

Governance bodies

Throughout 2021, the Agency continued to provide administrative and logistical support to eu-LISA's Management Board, Programme Management Boards, and Advisory Groups.

In 2021, eu-LISA held **altogether five ordinary and two extraordinary Management Board meetings**, and **48 Advisory Group (AG) meetings**, including one extraordinary EES-ETIAS AG meeting, and two extraordinary SIS AG meetings. The Agency's governance bodies (including chairpersons) are supported by the Management Board Secretariat that ensures their smooth functioning. The Secretariat is primarily responsible for the efficient organisation and documentation of meetings by recording, keeping track of and following up on all decisions taken, while also checking their legal compliance, and monitoring legal obligations, in addition to ensuring ongoing communication with all members of the bodies and groups. Throughout 2021, the Agency conducted almost all of its meetings online, ensuring the business continuity of eu-LISA's governance bodies in the context of the COVID-19 pandemic.

Internal governance and controls

Strategic planning and reporting. In 2021, the Agency continued its efforts to develop and update its internal planning and programming processes, and map out the requirements for a new planning tool.

- The **Single Programming Document for 2021–2023**, adopted by the Management Board in November 2020, was updated twice during 2021. In accordance with the delegation of powers, on 11 October, the Executive Director updated an activity addressing eu-LISA's capability needs for cybersecurity monitoring and incident response. On 9 December, the Board adopted an update to include a new activity covering the implementation of a secure network access service to support the Agency's business continuity.

- In February 2021, the Management Board adopted the draft **Single Programming Document 2022–2024**, and sent it to the European Parliament, the Council and the Commission for formal opinion. The final version was adopted by the Management Board in November 2021, while also reviewing the first draft of the **Single Programming Document 2023–2025**.

- In June 2021, the Management Board adopted the Agency's **Consolidated Annual Activity Report 2020**, and the Interim Report 2021 was adopted in October.

Internal control. In 2021, eu-LISA carried out the **effectiveness assessment of the internal control framework (ICF)** based on the methodology recommended by the European Commission. This included the identification of strengths and deficiencies in the Agency's ICF, based on the review of internal control monitoring criteria, the register of exceptions and non-compliance events, the state of play of implementation of audit recommendations, and the self-assessment exercise with heads of units. The manager in charge for risk management and internal control (MRMIC) presented the assessment results to the Management Board's Audit, Finance and Compliance Committee in May, and to the Management Board later in June. The Board asked to be regularly updated on the implementation of remediation actions identified for all deficiencies. The summary of the ICF assessment was also included in the Agency's Consolidated Annual Activity Report 2020.

Quality management. The Agency's **new Quality Policy**, adopted in Novermber 2021, serves as the guiding document for all eu-LISA's quality management efforts in alignment with its mission, and strategic goals. The policy provides the governance structure for eu-LISA's system of quality management in the form of a Quality Board to be established in 2022.

In September 2021, eu-LISA formally launched the implementation of its corporate total quality management review using the **Common Assessment Framework (CAF)**.[41] To that end, all units nominated representatives to the Agency's self-assessment group who will contribute to the procces throughout 2022. The CAF self-assessment process and the resulting improvement plan is expected to be finalised by the end of 2022.

Corporate risks and issue management. During the second half of 2021, eu-LISA decided to start reviewing its corporate risks and issue management process on a continuous basis, instead of once per year. The manager in charge of risk management and internal control (MRMIC) assessed additional risks raised in 2021 and included them in the **corporate risks register** which was made available to all staff members. The status of all corporate risks and progress with the mitigation plan were presented to the Management Committee in March, June and November 2021 (for more, see section 3.1.3).

Enterprise programme and project management (EPMO)

The Establishing Regulation mandates the Agency to use an adequate project management structure for efficiently managing all undertaken projects. To support and control the achievement of this objective, all eu-LISA's programmes and projects are closely monitored using the **PRINCE2 (PRojects IN Controlled Environments) methodology.**[42]

Project portfolio management (PPM) capability. In February 2021, eu-LISA adopted the **PPM Capability Policy** with a view to enhancing the Agency's ability to undertake and deliver programmes and projects in a complex environment. The main focus for the year was on the development of **capabilities related to people and tools**. To that end, eu-LISA uses **project management software Planview** for reporting time spent on administrative, operational and project activities by staff and on-site contractors, with a compliance rate exceeding 94 %. This has enabled the collection of useful data for planning, while also providing valuable insights for further improving the Agency's project management. The Planview software has also been used for improving the monitoring of planning activities, the oversight of the Annual Work Programme, and proactive optimisation of human resource allocations. Ultimately, this type of internal business intelligence capability will help convert PPM data into valuable information that will 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.

Internal reporting and control of project performance. The Agency monitors ongoing project performance on a regular basis through the weekly dissemination of project dashboards, and also via final reports at project closure, presented by project managers. The 2021 **annual compliance check exercise** was conducted at the end of 2020 for both active and closed projects. The Management Committee reviewed the results in the first quarter of 2021, and approved the proposed action plan. In addition, during 2021, the Agency delivered numerous regular and ad hoc reports to eu-LISA's Management for analysis.

External reporting and control over development programmes. In accordance with the legal requirements, the Agency delivered **regular reports** to the European Parliament and the Council on the development of new systems (i.e. progress reports every six months), as well as monthly reports to respective Programme Management Boards.

The eu-LISA Financial Rules state that all programmes and activities requiring significant expenditure are subject to an ex-ante evaluation prior to their approval and inclusion in the Agency's Annual Work Programme. The Agency's **ex-ante evaluations** are performed in accordance with the two-phased approach approved in 2019 which foresees:

- an **opportunity assessment** two years before the start of the project, and

- a **feasibility assessment** one year before the start of the project.

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41 More information on the CAF available on: https://www.eupan.eu/caf/
42 More information on the PRINCE2 methodology available on: https://www.prince2.com/eur/prince2-methodology

In 2021, no large projects underwent ex-ante feasibility assessment, while eight projects that are scheduled to launch in 2023, qualified for an ex-ante opportunity assessment. A summary report on the ex-ante opportunity assessments was presented to the Management Board in November 2021.

Capability Maturity Model Integration (CMMI) evaluation. As part of a larger initiative to improve processes under the PPM capability, eu-LISA decided to undertake a Capability Maturity Model Integration (CMMI) appraisal. The purpose of the appraisal was to provide the Agency's senior management with an accurate evaluation of existing processes and identify opportunities for improvement. The results of the CMMI appraisal were formalised in a report and will lead to the definition and implementation of a relevant action plan.

Service and process framework

In 2016, eu-LISA established a comprehensive **IT service management (ITSM) framework** to ensure the successful achievement of its objectives as a provider of IT services. The ITSM framework is based on on the ITIL (IT Infrastructure Library) standards and best practices, and is built around the eu-LISA service model, service catalogue, process model and integrated process map.

In 2021, eu-LISA completed a substantial **revision of its service and process framework**, which now also covers operational ITSM processes. The revised eu-LISA service and process framework comprises altogether 22 processes covering all operations in support of the Agency's objectives. The product and service catalogue was updated in 2021 to align with the overarching product management approach. Furthermore, the Agency also started mapping and documenting its corporate processes as part of a long-running project that will be gradually implemented until 2023.

In addition, eu-LISA invested particular efforts in its **knowledge management capabilities** to ensure the efficient application and sharing of knowledge beyond the Agency's own staff to include also end users and private contractors. The continuous improvement process that supports eu-LISA in keeping its service and process models up-to-date, was also further improved.

Enterprise architecture

In 2021, the Agency continued the implementation of its Enterprise Architecture, started in 2019, following the rollout of the eu-LISA 2.0 organisation. After setting up the **process and governance framework**, the Agency also put in place the **Architecture Review Board** and is now is focusing on mainaining optimal alignment of architectural, design and development initiatives with the Agency's overarching goals, as well as corporate and technology strategy.

1.6.2. Compliance

Internal audit

Throughout the year, the Agency's Internal Audit Capability (IAC) provided independent and objective assurance and consulting services to the Executive Director and the Management Board. The Agency also continued its cooperation with the **audit missions** of the European Court of Auditors (ECA) and the Internal Audit Service of the European Commission, while also coordinating the response measures to audit recommendations (for more information, see page 89). The IAC oversaw the preparation of reports, missions and follow-up activities, while also raising awareness among the Agency's management and staff about the principles, objectives and procedures of both internal and external auditing. The 2021 results of IAC's performance indicators are presented in Table 2.

Table 2. IAC performance indicators

Performance Indicators (PI)	Work done in 2021	Target	2020 values	2019 values
Delivering the Annual Audit Plan	80%	>80%	80%	89%
Audit reviews completed within budget and on time	60%	>80%	60%	42%
IAC staff training hours / year	77%	>80%	70%	53%

Going forward, the IAC is committed to implementing improvement proposals identified during the self-assessment exercise conducted as part of its **Quality Assurance and Improvement Programme**.

Data protection

Pursuant to European Union data protection law, eu-LISA must ensure a high level of data protection in all its activities, including specific provisions for each JHA information system entrusted to the Agency. To that end, the eu-LISA Management Board has appointed a **Data Protection Officer (DPO)** to oversee the Agency's compliance with the Regulation 2018/1725[43], laying down the rules for 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.

In the framework of internal **awareness raising**, eu-LISA's DPO organised four awareness-raising sessions, with three of them for onboarding newcomers. In May, the DPOs of eu-LISA and ENISA organised a joint webinar 'Privacy and Data Protection by Design', with invited experts from the EDPS, the Spanish Data Protection Authority, and the KU Leuven university, Belgium. Additionally, the DPO provided individual coaching sessions to staff members seeking guidance in their role as data controllers or processors.

Throughout 2021, the DPO worked on ensuring that the Agency closes the gap between the **current and the previous[44] regulation** on the processing of personal data by EU agencies. These activities included the adoption of Internal Rules in line with Article 25 of the new regulation, the conversion of old notifications into records, the maintainenance of a record of all categories of processing activities carried out on behalf of controllers, and the update of the existing Policy on Personal Data Breach.

Furthermore, the DPO also supported the Agency in major challenges related to data protection, in particular mitigating the risks from the use of biometric matching technologies and measures.

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43 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.
44 Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

1.7. Administration and general support

1.7.1. Organisational transformation

In January 2021, eu-LISA launched its **cultural transformation project** as the next stage of the organisational transformation initiated by the eu-LISA 2.0 programme. The project aims to design a flexible and resilient organisation that would be able to adapt and deliver in any circumstances. To that end, the project is expected to deliver a comprehensive framework, including both hard elements (i.e. structures, processes and strategy), and soft elements (i.e. values, competencies, people and leadership), to support the Agency in its transformation.

In 2021, eu-LISA conducted a **'Cultural Diagnosis' exercise**, to map out its existing culture, and outline the aspired organisational culture for the future. To that end, the Agency organised workshops for staff, together with surveys and cultural ambition workshops with the management. The collected input was consolidated by the Agency's Management Committee, who also defined the cultural aspiration in the form of a **Cultural Ambition Map**. The outcome of eu-LISA's cultural transformation project is illustrated in Figure 28.

Figure 28. eu-LISA's Cultural Ambition Map
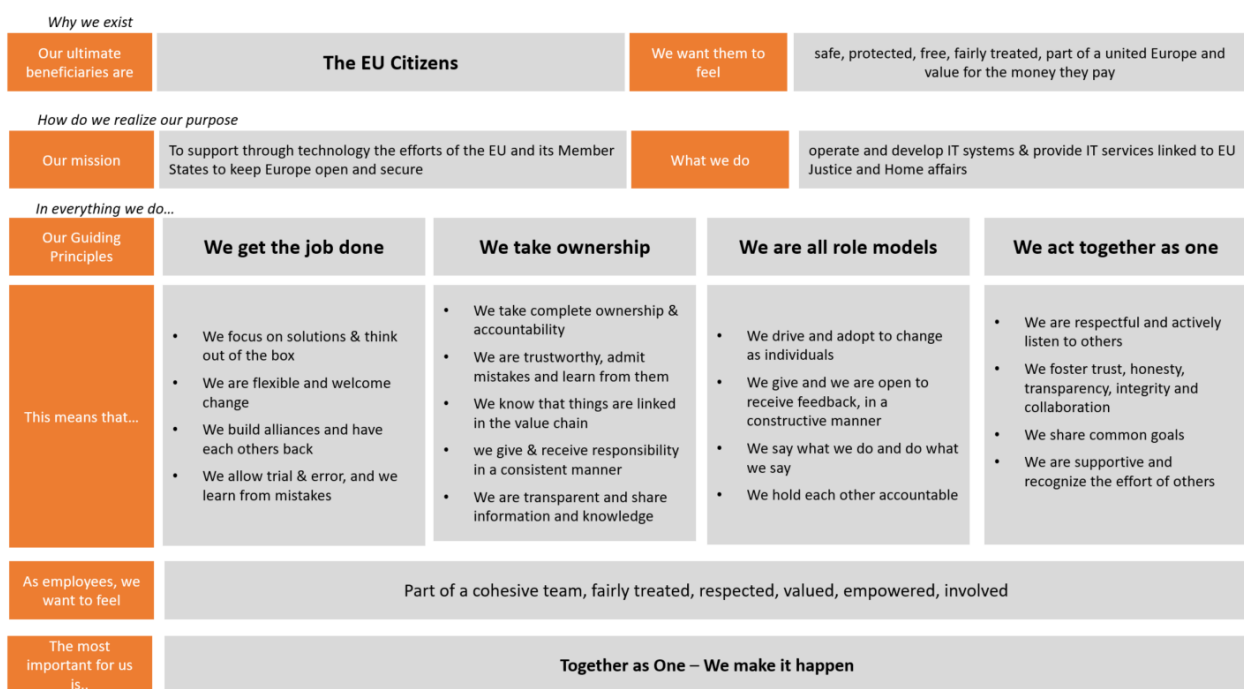
With a view to designing eu-LISA's **new operating model**, the Agency launched the 'as-is' analysis to map out the main dimensions of its current operating model, including strategies, policies and governance, as well as processes and services. Additionally, the Agency also commenced work on improving its capacity and capability, with a focus on identifying the current situation of resources related to knowledge, skills, abilities and attitudes in eu-LISA.

A further analysis of the **eu-LISA Competency Framework** was performed, together with the mapping of roles with key capabilities, skills, knowledge, abilities and attitudes. This work will feed into eu-LISA's Competency-based Human Resources Management Strategy, contributing to the improvement of the Agency's recruitment, workforce planning, performance management and learning offer.

1.7.2. Human resources

The year 2021 continued to be challenging for eu-LISA in terms of human resources. Despite the introduction of mitigating measures, the **ongoing effects of the COVID-19 pandemic** continued to affect the wellbeing and engagement of staff, as well as the recruitment of new staff. As a consequence, the people recruited during the pandemic, comprising almost a third of the Agency's workforce, had to undergo their onboarding process and start working remotely without having met their colleagues in person. Towards the end of the year, the staff turnover rate started to increase partly due to the expiry of short-term contracts, while those remaining in service faced an increased workload due to insufficient staffing.

Despite the continued enforcement of certain COVID-related travel restrictions, the Agency continued its **recruitment efforts**, which were facilitated by the re-opening of the Commission's Medical Service, and the procurement of medical services in Tallinn. In this context, eu-LISA observed that many candidates were interested in working only remotely from abroad.

Throughout the year, the Agency organised many training activities, attracting altogether 2 737 participants.To address the direct impact of the pandemic on the Agency's workforce, eu-LISA launched a **Mental Health and Wellbeing Programme** that was built around three pillars: awareness, prevention, and support. In addition to eu-LISA staff, the programme was made available to the familiy members as well.

In 2021, eu-LISA continued to invest in the development of its leadership. Taking guidance from the principles of evidence-based management, the Agency analysed various sources of data to build its **Leadership Development Programme**.

At the end of 2021, eu-LISA's total headcount was 310, compared to 274 at the beginning of the year (Table 3). During 2021, 82 posts had to be filled in accordance with the authorised number of posts. However, the recruitment of 11 posts was not possible due to the delay in the adoption of the Eurodac regulation, or the move of the posts allocation from 2021 to 2022 in the case of the revised VIS regulation. Overall, eu-LISA closed 18 selection procedures.

To expedite the recruitment process, the Agency has been grouping similar posts into one procedure, when possible, in order to maximise resources and generate longer reserve lists. In 2021, there were 30 recruitments from existing reserve lists. In total, 61 persons were recruited during the year, including changes of contracts. Additionally, 19 job offers were issued and accepted by the end of 2021.

Table 3. Actual and authorised headcount as at 31 December 2021

Staff population	Filled as at 31.12.2020	Authorised under EU budget[45] for 2021	Actually filled as at 31.12.2021	Occupation rate for 2021 – status as at 31.12.2021
Temporary agent (TA)	181	213	193	90.61 %
Contract agent (CA)	83	132	107	81.06 %
Seconded national expert (SNE)	10	11	10	90.91 %
Total	**274**	**356**	**310**	**87.08 %**

Additionally, eu-LISA continued to advance the **development and implementation of IT tools in the area of human resource management (HRM)**, e.g. deploying a new module for declarations and staff entitlements was deployed in the HRM system SYSPER, together with setting up a connection with the payroll system. Furthermore, the Agency also streamlined the process for the prevention and management of conficts of interest via the ARES document management system by testing a new module dedicated to ethics.

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45 These figures include also the 11 posts mentioned above for which the legal base was not adopted in 2021, remaining vacant.

1.7.3. Finance and procurement

In 2021, eu-LISA continued the development and strengthening of its internal financial processes and procedures to ensure the transparent and effective management of its financial resources. Numerous efforts were also made to **digitalise certain critical tendering processes**, via the e-submission platform, which is now operational for all procedures. With the support of the Commission, the Agency managed to make full use of the platform, resulting in a marked shift from paper to electronic workflows in tendering processes.

Additionally, eu-LISA made a renewed effort to plan for the future, especially in the areas of budget and procurement digitalisation, and to welcome changes to its existing processes, resulting from the possible activation of the following tools, using the e-PRIOR platform developed by the Commission:

- e-Request (quotation request for services or goods, supplier formal offers),
- e-Ordering (orders based on framework contracts and others),
- e-Fulfilment (dispatch and receiving advices),
- e-Invoicing (standard invoices, debit and credit notes),
- and any other modules that are being developed or will be developed in the future such as e-Contracts, e-Signature, e-Catalogue.

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. Second extension of the technical site in Strasbourg

Following the revision of eu-LISA's Establishing Regulation, significantly expanding the Agency's mandate, it was clear that additional capacity was needed at the technical site in Strasbourg, both for the data centre and office space. The preparations for launching the Strasbourg technical site extension process began in 2019. Once completed, the enlarged site will allow the efficient fulfilment of the Agency's current and future tasks.

In 2021, the Strasbourg capacity extension project faced various challenges, including the question of its financing. Given the most recent requirements stemming from ongoing developments, and also from upcoming initiatives, the Agency concluded that **additional computing capacities were needed** earlier than the expected completion of the works in 2028. To that end, eu-LISA conducted the first revision of the building construction in May, and another one at the end of 2021. Based on the results of analyses done in the framework of these revisions, eu-LISA decided to optimise the general timeline of the project, abandoning the design contest approach to proceed with a **standard procurement approach**.

As a result, the main goals of the extension project were reviewed to include the following:

- to increase the **data centre computing capacity** on the current site by the end of 2022,
- to build the remaining structures in a **phased construction approach** to deliver the increased computing capacity by 2027, and the office buildings by 2028.

Additionally, the Agency took three major decisions for the future of the project:

- the second data centre will be **modular**,
- the surface area allocated for future **office space** will be reduced, and
- the construction process will follow a **phased approach**.

Modular Data Centre 2. As result of revising the Strasbourg extension project, it was decided that eu-LISA's future Data Centre 2 (DC2) will be a **fully modular and containerised structure** ('pay-as-you-grow'), instead of a traditional brick and mortar building. The chosen approach provides the Agency with more flexibility for progressive upscaling of available computing capacity in response to identified needs. The first modular data centre (MDC1) was built in 2021 and it was connected to the power lines in October 2021. However, to address the urgent need for more computing capacity by 2022, a decision was made to build a second MDC as well. The remaining structures will be installed in 2027 as part of the DC2.

Reduction of office space. In the first budget revision, the Agency decided to apply an Activity-Based-Workplace rate of 30 % for staff and on-site contractors to decrease the surface area for the offices, thereby reducing the costs of the project. Subsequently, a decision was made to extend the **Activity-Based-Workplace approach with a rate of 50 %** for the external support staff, based on the recent experience with the teleworking regime and the planned development of a secure network that will allow more opportunities for remote access (SERENA project).

Phased construction process approach. While the design of eu-LISA's second extension in Strasbourg will cover the entire infrastructure and all the required buildings, the **construction works will be implemented in a phased approach**. In the first phase, the entire infrastructure will be constructed to host additional data centre containers on the new plot (e.g. the concrete slab and specific foundations, fences, new guardhouse, technical premises etc.). In the second phase, the office buildings will be constructed on the new parcel.

The division of the construction works into two phases is expected to deliver the following advantages:

- the costs of each phase are better manageable in the year of expenditure,
- the smaller scope of construction works for each phase should lead to a shorter schedule for phase 1, leading to the faster delivery of the required facilities for increased computing capacity.

1.7.5. Corporate Services

Enterprise Content Management (ECM) Programme

In 2020, the Agency began implementing the Entrerprise Content Management (ECM) programme, in order to **improve and streamline corporate processes**, while also increasing the overall control over content. The main objective of the programme is to provide eu-LISA's workforce 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 2021, the Agency initiated two projects as part of the ECM programme:

- the **Document Management System (DMS)** project, expected to be delivered in 2023, was kicked-off with high-level analysis and a collection of business requirements, with workshops, interviews, surveys and questionnaires. In October, the Agency signed a contract to assess the technology for the future DMS solution;
- **eu-LISA's new website** project was launched in December 2021 and is scheduled for completion by mid-2023. Interviews and workshops with the internal communication team were organised to gather the high-level business requirements, and technical documents were prepared for the evaluation of the solution.

To further improve the **digitisation of business processes**, the Agency introduced Qualified Electronic Signatures, and implemented them in the Records Management System to reduce the administrative burden of eu-LISA's top management.

In October 2021, the Executive Director approved the **eu-LISA Records Management Policy**, ensuring compliance with the applicable legal and regulatory framework by setting and monitoring the records management processes, while also making sure that the Agency's records, regardless of their format, are reliably protected and preserved during their entire lifecycle.

General services

Throughout 2021, eu-LISA performed and optimised the maintenance of all its sites and facilities, to ensure a secure, efficient and functional building infrastructure, fully aligned with the business needs. In September 2021, the Agency moved some of its staff to an office building in Illkirch, near the Strasbourg technical site, to provide additional temporary workspaces during the construction phase of the extension project.

In 2021, there was a significant increase in the number of external contractors working at the Strasbourg technical site for the operational maintenance of the systems. The Agency adopted several measures to optimise the use of existing officer space, and improve the effiency of space allocation to adapt to changing circumstances and maintain quality working conditions in a very dynamic context. As a result of flexibility and effective collaboration between different teams across the organisation, 100 additional work stations were made available for external contractors.

On 29 November 2021, eu-LISA's headquarters building in Tallinn was awarded the second place in the 'Green' category at the European Public Sector Award (EPSA) competition. This award highlighted the efforts of the Agency, in collaboration with the Estonian State Real Estate Company (Riigi Kinnisvara AS), to design a building that combines modern and ergonomic spaces in a green and sustainable infrasturcture.

ICT services

In 2021, eu-LISA continued to face various challenges in the operation of its corporate ICT services. The Agency started a project to follow the **IT service management (ITSM) approach** based on the ITIL framework. The workload of the corporate ICT Service Desk continued to increase with the expanding size of the Agency, processing on average of 720 tickets per month.

In Strasbourg, eu-LISA migrated its corporate Internet lines to a new provider, resulting in a 5-time higher and highly available bandwidth. The inter-sites and internet links for the rest of the premises are scheduled to be upgraded in 2022. The Agency also prepared a roadmap for a modernised corporate networking and security infrastructure, and initiated the first contracts. In addition, to meet the growing requirements for ICT network services, eu-LISA conducted a study to redesign the corporate network infrastructure, taking into account future needs, the lifecycle of the existing network components and new market trends. Afterwards, the procurement of the ICT equipment was initiated.

The Agency also implemented a revamp of its backup infrastructure to improve data protection and retention requirements. With the new configuration, the backup and restore functions will be performed with maximum reliability and efficiency.

1.7.6. **Communication**

External communication

In 2021, eu-LISA's external communication focused on providing visibility to the Agency's achievements, and increasing public awareness about how eu-LISA serves the interests of EU citizens. Due to ongoing COVID-19 restrictions, the formats were adjusted accordingly.

This year, the Agency put additional emphasis on its **online presence**, both through its website and also on social media channels, in line with the objectives of fostering transparency, increasing public awareness, reaching out to broader audiences, and increasing overall engagement. These communication efforts lead to a marked 20 % growth of both social media and website audiences. The 2021 web analytics for 2021 indicate a clear positive evolution compared to 2020, exceeding the annual target (Figure 29). Thus, compared to 2020, eu-LISA enjoyed a significant increase in the number of followers, and also in the level of engagement across all social media platforms.

Figure 29. Social media audience growth
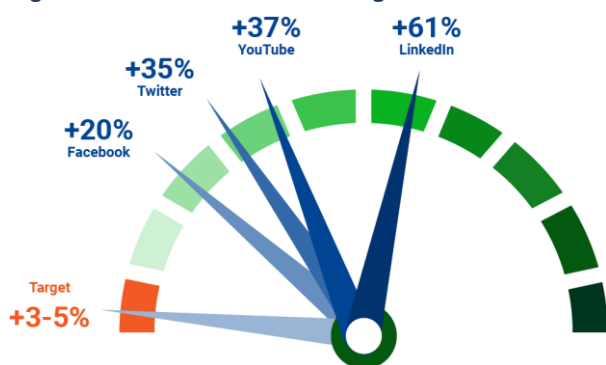
In 2021, the Agency's public website registered a 16 % increase of unique visitors, and the bounce rate was 51 % (vs. 47 % in 2020). During the year, eu-LISA contributed to 11 external **online/social media campaigns** including *#EuropeDay*, *#EUGreenDeal*, *#DigitalEU*, *#SecurityUnion*, as well as *#WomenInTech* or International Women's Day, which were carried out either by solely the Agency or jointly with other EU institutions and agencies to provide visibility to joint efforts.

In addition, eu-LISA successfully launched the **carrier registration campaign for EES and ETIAS**, setting up a repository of frequently asked questions, and preparing various information materials and dedicated visual communication which were shared across online platforms.

What is more, the Agency introduced its **new visual identity**, modernising eu-LISA's corporate image to a considerable degree. The project was rolled out with a dedicated communication campaign across more than 20 platforms, including active two-way communication with stakeholders to manage their questions and information requests.

Finally, the Agency implemented **special communication plans** to increase visibility and engagement with its annual highlight events, achieving successful outreach:

- **eu-LISA's 8th Annual Conference** in October, which was livestreamed via the Agency's YouTube channel, generating 41 142 views and close to 2 200 interactions; and

- two editions of **eu-LISA Industry Roundtable**, one in June, and 4 weekly sessions in November. The outreach was notable, with 42 463 views, and close to 1 400 interactions for the sessions held in November (which were not streamed).

The Agency's external communication has been performed in line with the legal requirements for providing objective, accurate, reliable, comprehensive and easily understandable information in a timely manner, with the aim of increasing overall awareness and visibility. The positive results were achieved largely due to the effective use of innovative formats and additional channels.

Internal communication

Internal communication activities were performed and adjusted to the pandemic conditions, which were still impacting the professional working environment and modalities.

During the year, the Agency's internal communication continued to be largely focused on crisis communication. As a result, over 130 situational reports and guideline documents were prepared and shared with employees across all eu-LISA sites. The effort put into internal crisis communication activity paid off as shown by the 90 % staff satisfaction rate for COVID-19 communication updates.[46]

In 2021, eu-LISA made further efforts to meet the needs and expectations of the staff for regular information updates and two-way communication between employees and management. To that end, an updated format of the weekly internal newsletter was introduced via a dedicated SharePoint tool. Altogether, 46 weekly newsletters, 2 special bi-annuals, 6 staff assemblies, and special briefing sessions were provided to keep staff updated on administrative, operational and governance matters. This facilitated two-way communication and allowed staff to contribute to strengthening the corporate culture, for example, by sharing their team achievements. The 93 % overall satisfaction rate and the 55 % response rate registered by internal communication satisfaction survey, well above target, give credit to the work done in 2021 to inform and engage eu-LISA staff.

Figure 30. Overall satisfaction with internal communication

Target
+70%

+93%
Overall
satisfaction

In addition, the Agency ran several internal communication campaigns (e.g., naming contest of the Illkirch meeting rooms, World Clean-up Day, EU Green Initiative/eu-LISA Green Month, etc.), and introduced over 90 newcomers in order to boost staff engagement and intra-agency business partnerships.

The end-of-the year social event to recognise and motivate eu-LISA's teams was organised online, attracting more than 200 participants from across the Agency.

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46 eu-LISA Internal Communication Satisfaction Survey 2021

PART II

MANAGEMENT

2 Management

2.1. Management Board

In 2021, eu-LISA continued its **close, transparent and constructive collaboration** with its Management Board. Alongside the items approved under its mandated functions, the Agency also regularly updated the Board on all significant risks and issues identified, including the mitigation measures implemented.

The Management Board was regularly updated on the status of implementation and reports from the EES, ETIAS, Interoperability, and ECRIS-TCN Advisory Groups and Programme Management Boards. These reports covered the risks and issues associated with the operational management of the systems, and the overall evolution of the programmes, requiring the Board to repeatedly address the need for stronger involvement and efforts from the Member States to better manage the constraints related to system testing to ensure the timely delivery of the programmes. The SIS, VIS and Eurodac Advisory Groups also reported to the Board on the status of their work, including the risks and issues associated with the operational management and evolution of the systems in question.

The Audit, Compliance and Finance Committee (ACFC) of the Management Board contributed to providing assurance with respect to the Agency's risk management and internal control arrangements. In addition, the Board received regular updates on the status of the negotiations regarding the budgetary and financial management. Furthermore, the Board also closely followed the progress on implementing the Agency's transformation programme, the second extension of the eu-LISA technical site in Strasbourg, and the status of implementing audit recommendations.

Figure 31. The 32nd meeting of the eu-LISA Management Board in Ljubljana, on 16–17 November 2021

In 2021, the **Management Board covened for four meetings** as scheduled, although mostly online due to COVID-19-related restrictions. The last Board meeting of the year was arranged as a hybrid event in Slovenia under the auspices of the Slovenian Presidency of the Council of the EU, emphasising the Agency's close cooperation with the Member States. In addition, the Agency organised two extraordinary meetings. To further improve transparency and contribute to raising public awareness of its activities, the Agency began **publishing summaries of regular Management Board meetings**.

2.2. **Major developments**

The legal landscape in the areas of relevance for eu-LISA's mandate continued to evolve in 2021 with several revised/amending regulations entering into force, as well as new legislative proposals and policy initiatives launched by the Commission.

Revised/Amending regulations

One of the most important developments of 2021 was the adoption of the **revised VIS Regulation**[47], adding a significant amount of new functionalities to the system. In particular, the scope of VIS was extended to include long-stay visas and residence permits, the integration of the system with the carrier gateway, and to allow for the live capture of facial images. Work continues at the Committee level with the drafting of implementing and delegated acts, further laying down the rules for technical development of the system. Related to the revised VIS, Regulation (EU) 2021/1133[48] was adopted, establishing the conditions for accessing other EU information systems for the purposes of the VIS, essentially enabling the Interoperability of JHA information systems.

Throughout 2021, negotiations continued on the proposal launched in December 2020 for **amendments to the SIS Regulation**[49] with a view to introducing a new category of alerts to the system. The proposal enables Europol to issue 'information alerts' on suspects and criminals as a new alert category in SIS, and sets out the applicable procedures and safeguards. In 2021, co-legislators established their mandate and negotiated the proposal in trilogue format. The formal adoption of the proposal is expected in 2022.

On 7 July 2021, the **ETIAS Consequential Amendments**[50] were adopted, providing the legal base for interoperability between ETIAS and other JHA information systems, as well as further specifying access rights and exchange of information. In conjunction with the ETIAS amendments, the **Implementing Regulation for verification queries by carriers**[51] was adopted on 26 July 2021, and a similar **Implementing Regulation for EES**[52] was adopted on 27 July 2021, specifying the detailed rules for the use of the web service by carriers.

New legislative proposals and policy initiatives

In December 2021, the European Commission launched the **legislative package on the digitalisation of justice** with a view to modernising European justice systems, making them more efficient and accessible in order to meet the 'digital by default' priority set out in the Commission's 2020 Communication on the digitalisation of justice in the EU.[53] The legislative package includes the following two proposals:

- a proposal for a **Regulation on the digitalisation of judicial cooperation and access to justice in cross-border civil, commercial and criminal matters;**[54]

- a proposal for a **Regulation on establishing a collaboration platform for Joint Investigation Teams (JITs).**[55] The proposed JITs Regulation foresees the creation of a dedicated IT platform comprising both centralised and decentralised components, and it is scheduled to go live in 2026.[56] The purpose of the collaboration platform is to provide technological support to joint investigation teams for the purposes of increasing the efficiency and effectiveness of cross-border investigations and prosecutions. When adopted, its design, development, technical management, and maintenance will be entrusted to eu-LISA.

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47 Regulation (EU) 2021/1134, OJ L 248, 13.7.2021, p. 11–87.
48 Regulation (EU) 2021/1133, OJ L 248, 13.7.2021, p. 1–10.
49 COM/2020/791 final, 9.12.2020.
50 Regulation (EU) 2021/1150, OJ L 249, 14.7.2021, p. 1–6; Regulation (EU) 2021/1151, OJ L 249, 14.7.2021, p. 7–14; Regulation (EU) 2021/1152, OJ L 249, 14.7.2021, p. 15–37.
51 Commission Implementing Regulation (EU) 2021/1217 OJ L 267, 27.7.2021, p. 1–11.
52 Commission Implementing Regulation (EU) 2021/1224, OJ L 269, 28.7.2021, p. 46–57.
53 COM (2020) 710 final.
54 COM (2021) 759 final.
55 COM (2021) 756 final.
56 As per the Legislative Financial Statement accompanying the proposal.

Also in December 2021, the Commission launched a **legislative package on reinforcing police cooperation across Europe for enhanced security.**[57] Among others, the package includes the proposal for a Regulation on automated data exchange for police cooperation – **Prüm II**[58]. The Prüm II proposal aims to reinforce and modernise the existing Prüm framework[59] by enabling interoperability with relevant JHA information systems. Ultimately, the aim is to provide the foundation for a new architecture that would facilitate easier and faster data exchange between Member States, while also ensuring a high level of protection of fundamental rights. The proposal states that a Prüm II Central Router, scheduled to go live in 2027, shall be developed and managed by eu-LISA while the tasks related to the development and operational management of the router shall be carried out at the technical site in Strasbourg, with the backup site installed in Sankt Johann im Pongau.

As part of the digitalisation effort to modernise European justice systems, the **e-CODEX (e-Justice Communication via Online Data Exchange) Regulation,**[60] launched by the Commission in December 2020, reached the final stages of formal adoption. The Council and the European Parliament concluded the requisite political agreement in December 2021, stating that in view of its specific nature and characteristics, it was considered appropriate for eu-LISA to develop and operationally manage e-CODEX in Tallinn, Estonia. Following the adoption of the proposal, the operational management of e-CODEX is scheduled to be handed over to the Agency in the second half of 2023.

In the area of artificial intelligence (AI), the Commission published, on 21 April 2021, a legislative package, which includes a **proposal for a Regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)**[61], and a review of the Coordinated Plan on Artificial Intelligence.[62] The proposed regulation introduces a set of harmonised rules applicable to the design, development and use of certain high-risk AI systems, as well as restrictions on certain use of remote biometric identification systems. Although the 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 before 12 months after the date of its application, the regulatory requirements will be taken into account in the evaluation of each large-scale IT system managed by the Agency, where applicable. Further, any significant change in the design or intended purpose of the AI system or component concerned will trigger the full application of the Regulation.

Finally, on 2 June 2021, together with the **new Strategy on the Schengen area,**[63] the Commission submitted to the Council a proposal to modify the **Schengen evaluation and monitoring mechanism (SEMM)**[64] for the purposes of increasing synergies with the relevant mechanisms and platforms operated by EU agencies and national administrations. The formal adoption of the proposal is scheduled for 2022.

> **In December 2021, the Commission launched a legislative package on reinforcing police cooperation across Europe for enhanced security.**

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57 More information on the EU Police cooperation package available on: https://europa.eu/!FnYXp4
58 COM (2021) 784 final.
59 Council Decisions 2008/615/JHA and 2008/616/JHA. The Council Decisions are based on the 2005 Prüm Convention. More information on the Prüm framework available on: https://europa.eu/!G94N7x
60 COM (2020) 712 final.
61 COM (2021) 206 final.
62 More information on the Coordinated Plan on Artificial Intelligence 2021 Review available on: https://europa.eu/!Yj39jQ
63 More information on the new Strategy on the Schengen area available on: https://europa.eu/!UrUb89
64 COM (2021) 278 final.

2.3. Budgetary and financial management

2.3.1. Financial management

The Agency's budget for the financial year was financed through different funding sources[65], with the main revenue coming from the annual contribution from the EU budget — Commission section, Chapter 11 10 'Border Management – Decentralised Agencies' — as adopted by the budgetary authority.[66] Additionally, eu-LISA receives contributions from associated countries as well.

As part of its annual reporting framework, the Agency publishes its budget execution rates and performance indicators, demonstrating efficiency and effectiveness in the management of spending during the reporting period.

2.3.2. Budgetary implementation

The final statement of the revenue and expenditure for 2021 was adopted by eu-LISA's Management Board.[67]

As at the end of 2021, eu-LISA's budget implementation rate remained high:

- 100.0 % for commitment appropriations,
- 99.1 % for payment appropriations, including the carry-forward of administrative expenditure to 2022.

Of the total budget, a proportion was subject to the adoption of a legal basis and/or implementing acts for new tasks assigned to the Agency, as indicated in Table 4. This includes administrative expenditure, to be allocated according to the budgetary nomenclature in Title 1, 'staff expenditure'.

Table 4. Commitment appropriations for new tasks (in EUR million)

New tasks/systems	Commitment appropriations
Legislative financial statement (LFS) VIS recast	17.227
Total budget subject to new legal basis	**17.227**

Amending Budget No 1

An amendment of the budget was required for two reasons:

- The Agency's voted budget for the financial year 2021 included commitment and payment appropriations for the VIS recast, which had been adopted on 7 July 2021 by the co-legislators. In agreement with the European Commission, these appropriations were returned from the 2021 to be made available in 2022.;
- the progress of activities for EES and ETIAS development, and Wide Area Networks required additional payment appropriations to honour existing commitments.

The Management Board approved one amendment to the budget addressing the issues highlighted above by:

- returning EUR 17.227 million in commitment appropriations;
- receiving EUR 42.290 million in payment appropriations.

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65 In accordance with Article 46(3) of Regulation (EU) 2018/1726
66 See Article 45(5) and 46(3) of Regulation (EU) 2018/1726. The EU contribution relates to C1 commitment and payment appropriations (voted credits for the current budgetary year).
67 In accordance with Article 45(7) of Regulation (EU) 2018/1726.

Table 5 provides a detailed breakdown of the amending budget by budgetary title.

Table 5. Breakdown of 2021 amending budget (in EUR million)

Budgetary title	System/task	Amending budget	
		Commitment appropriations	Payment appropriations
A01 Staff expenditure		−0.983	−0.0983
of which	**VIS recast**	−0.983	−0.983
B03 Operational expenditure		−16.244	43.273
of which	**VIS recast**	−16.244	−16.244
	Wide Area networks		1.523
	EES		35.928
	ETIAS		22.066
Total 2021 amending budget		**−17.227**	**42.290**

Execution of commitment appropriations

The commitment credits (C1) finally accepted for 2021 were divided among the different titles as follows:

- 74.98 % for the operational budget (Title 3),
- 9.3 % for infrastructure and operating expenditure (Title 2),
- 15.71 % for staff expenditure (Title 1).

Figure 32 and Figure 33 show the budget implementation by title as at the end of the year.

Figure 32. Consumption of C1 commitment appropriations (in EUR millions)
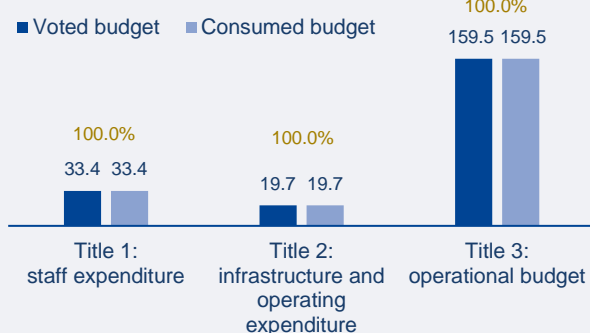
Figure 33. Trends in consumption of funds committed and budgeted during the year (in EUR million)
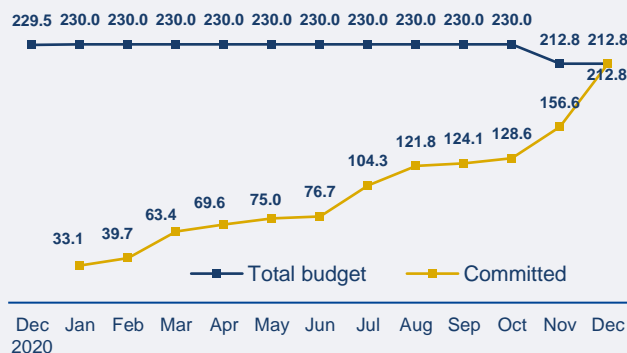
With regard to Title 3, owing to the multiannual nature of the contracts used to support core operations, EUR 140.066 million of open commitment appropriations foreseen for 2021 were automatically carried forward to be used in 2022, and also in the following years. For a detailed breakdown, please refer to Annex II.

The operational budget, amounting to EUR 159.527 million, was implemented 100 % as shown in Figure 34 by chapter.

In 2021, the Agency cancelled EUR 14.94 million of commitment appropriations carried forward from previous years, representing 4.19 % of the total appropriations carried forward under Title 3 – operational expenditure. The de-commitments are summarised in Table 6 by year of origin of the underlying legal commitment.

Figure 34. Execution of Title 3 commitment appropriations (EUR million)
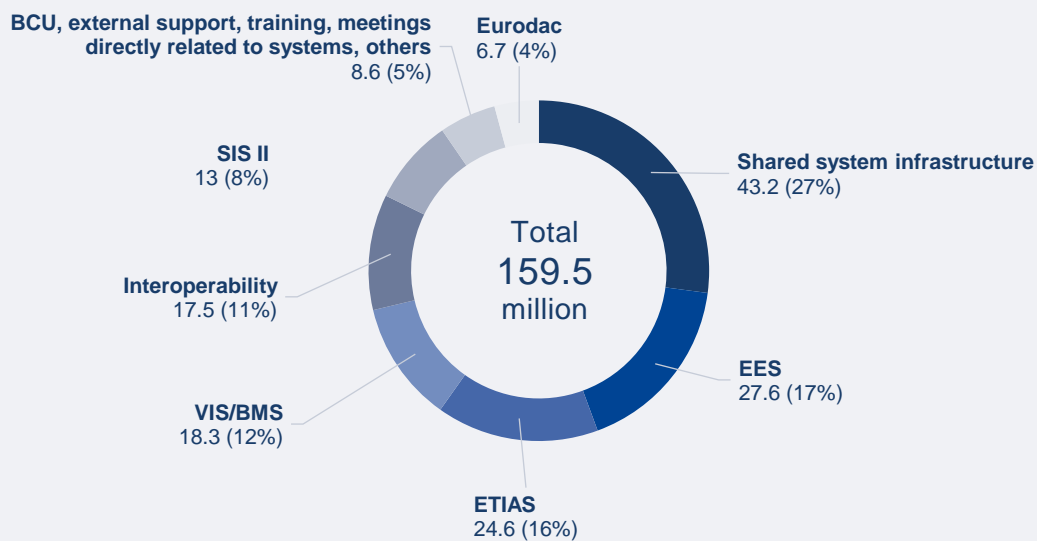
Table 6. 2021 de-commitments of budgetary commitments by year of origin (in EUR million)

Budget Chapter	Budget Article	2017	2018	2019	2020	Total
Infrastructure	Shared system infrastructure/ Wide Area Network	—	−3.453	−6.611	−0.737	−10.801
Applications	SIS II	—	—	−0.160	−0.102	−0.261
	VIS	−0.002	—	−0.000	—	−0.002
	EES	—	−0.037	−0.999	−0.000	−1.036
	ETIAS	—	—	—	−0.736	−0.736
	ECRIS	—	—	—	−1.580	−1.580
Operational support	Operational support	—	—	—	−0.524	−0.524
Total		**−0.002**	**−3.490**	**−7.771**	**−3.677**	**−14.940**

Under operational support, EUR 0.524 million 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).

Overall, 67.36 % of cancellations refer to appropriations transferred to the Agency for VIS and SIS II communication infrastructure for the services which were not used, and 10.6 % to appropriations carried forward as global commitment reserved in the scope of ECRIS. A detailed overview of the respective global commitment is provided in Table 7.

Table 7. 2021 de-commitment of global (L1) commitment (in EUR million)

Budget Article	Global (L1) commitment	Year of origin	Carried forward amount	Consumption amount	De-commitment amount
ECRIS	ECRIS-TCN Projects	2020	7.532	−5.953	−1.579
Total			**7.532**	**−5.953**	**−1.579**

Execution of payment appropriations

The Agency's total voted final budget for payment appropriations amounted to EUR 263.943 million. At the end of 2021, the execution of payment appropriations for C1 credits reached 99.1 %, including the carry-forward of administrative expenditure to 2022. Figure 35 and Figure 36 show the breakdown of the total budget by title and overall consumption of funds and payment appropriations during 2021.

Figure 35. Consumption of C1 payment appropriations (in EUR million)
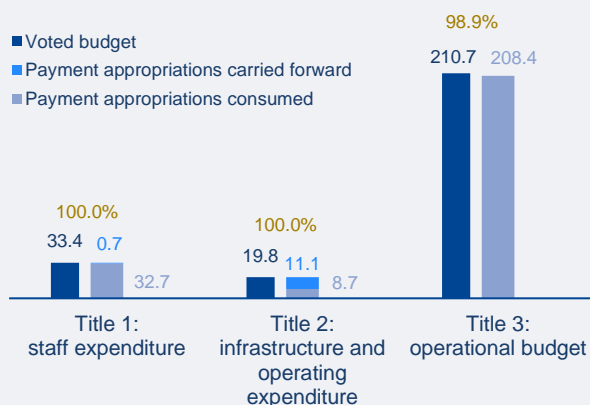
Figure 36. Trends in consumption of funds paid and budgeted during the year (in EUR million)
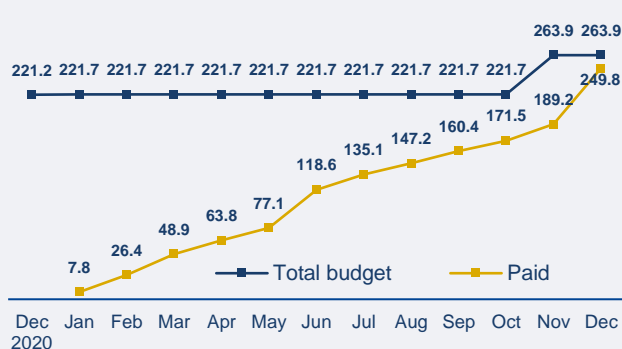
92.9 % of the payment appropriations carried forward from 2020 to 2021 in administrative expenditure were executed.

Commitment appropriations under Title 1 (staff expenditure)[68] amounting to EUR 0.697 million, and under Title 2 (infrastructure and operating expenditure) amounting to EUR 11.104 million, not yet paid in 2021 and for which a valid legal commitment exists, were carried forward to 2022 together with the corresponding payment appropriations.[69] Under Title 3, the largest proportion of payment appropriations was spent on EES. The breakdown of executed payment credits for the operational budget are provided in Figure 37.

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

Figure 37. Executed payment appropriations under Title 3 (in EUR million)

BCU, external support, training, meetings directly related to systems, others
6.6 (3%)

Eurodac
4.9 (2%)

Interoperability
3.5 (2%)

ECRIS-TCN
0.1 (0%)

ETIAS
17.9 (9%)

Total
208.4
million

EES
90.1 (43%)

VIS/BMS
20.6 (10%)

SIS II
28 (13%)

Shared system infrastructure
36.6 (18%)
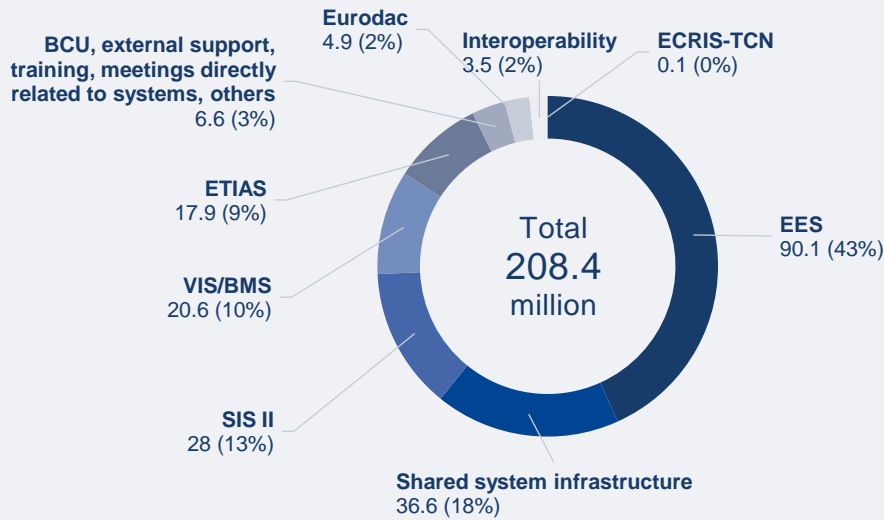
Performance indicator: Time to Pay

In 2021, eu-LISA executed altogether 2 124 payment transactions with payment time limit, a decrease of 8.53 % compared to 2020, including:

- 2 034 transactions with maximum payment time of 30 days,
- 37 with maximum payment time of 60 days,
- 24 with maximum payment time of 45 days,
- 29 with maximum payment time of 90 days.

The average time to pay for all types of payments remained far below the stipulated time limits: 14.7 days for 30-day payments, and 15.7 days for 60-day payments.

Figure 38. Monthly evolution of overall Time to Pay

Average values: Jan 17.2, Feb 13.6, Mar 11.7, Apr 13.5, May 16.7, Jun 16.0, Jul 15.4, Aug 17.7, Sep 13.4, Oct 14.0, Nov 17.5, Dec 12.2

Legend: A1 Staff Expenditure ■ A2 Infrastructure and Operational Expenditure ■ B03 Operational Expenditure — Average
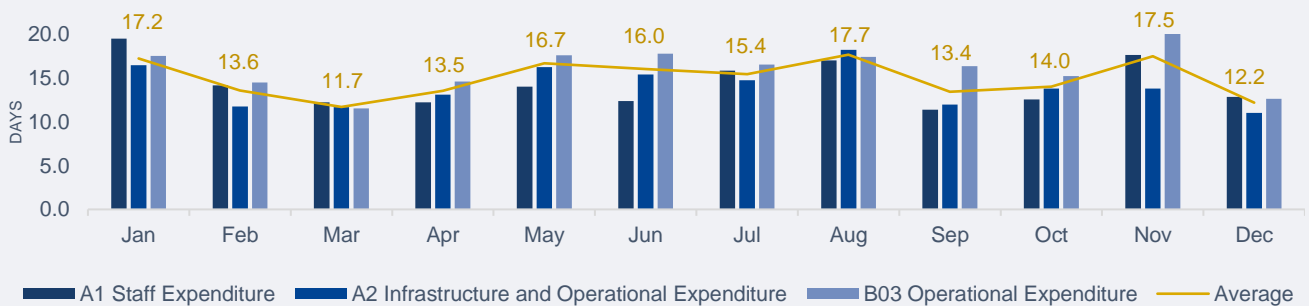
Figure 39. Payments within time limit of 30 days

Average 2021 = 14.7

| | Q1 | Q2 | Q3 | Q4 |
| 14.02 | 15.31 | 15.47 | 14.21 |

■ Time to Pay in days ── Average

Average 2021 = 15.7

| 15.27 | 11.50 | 21.29 | 15.00 |
| Q1 | Q2 | Q3 | Q4 |

■ Time to Pay in days ── Average
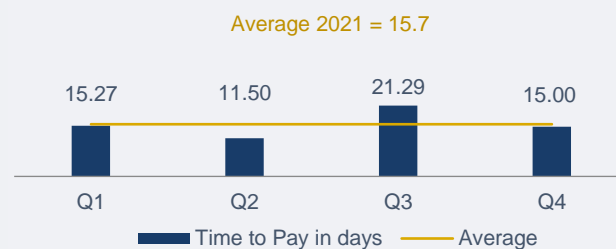
Figure 40. Payments within time limit of 60 days

Overall, 98.59 % of all transactions were made within the contractual time limit. Altogether 30 payments were delayed, of which three resulted in late interest, amounting to EUR 3 191.76 payable to creditors.

2.3.3. Procurement procedures

Figure 41 shows the results of a synoptic volume analysis performed by examining the number of transactions (i.e. contracts) during the period from 2014 to 2021. The volume analysis highlights the need to strengthen procurement functions across the Agency. Despite the persisting COVID-19 pandemic, overall procurement activity increased in 2021, compared to 2020 and 2019. 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 41. Procurement activity 2014–2021

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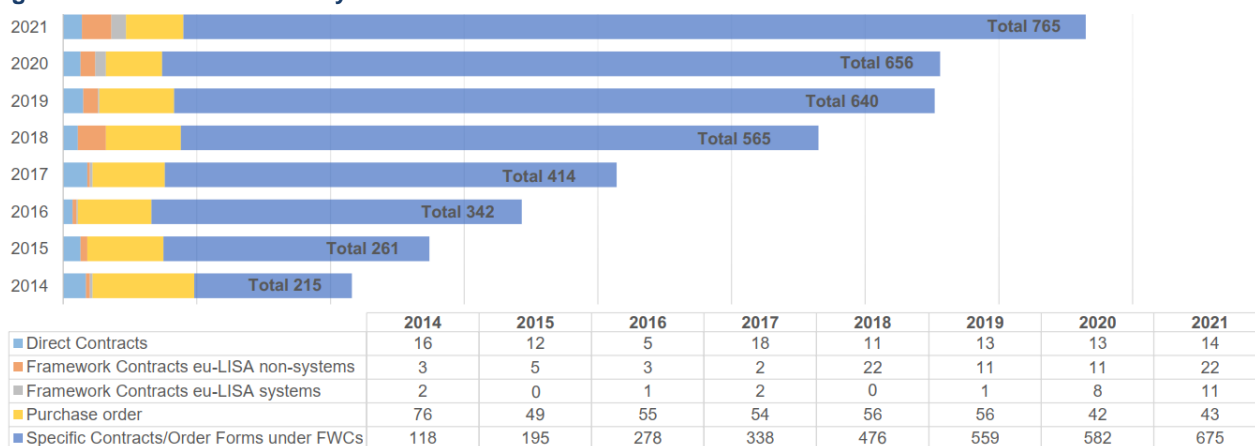
2.4. Delegation and sub-delegation of budget implementation powers to Agency staff

In accordance with eu-LISA Financial Rules, in particular with Articles 41 and 46, budget implementation powers are delegated by the Authorising Officer to designated Authorising Officers. The delegation of powers are exercised in accordance with the Charter for Authorising Officers by Delegation, listing the tasks and responsibilities of the Authorising Officers by Delegation. These delegations are applied based on the budget ownership matrix, which is 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 is provided at the level

of budget line for all fund sources, and are 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**

Recruitment activities continued at a fast pace in 2021. In 2021, **the Agency launched 15 new selection procedures**, and received altogether 1944 applications in the framework of 18 recruitment procedures[70], as several selection procedures started in 2020 were concluded in the first quarter of 2021. A number of procedures launched in 2021 are expected to be concluded in the second quarter of 2022.

The average number of applications per procedure was 108. The maximum number of applicants for a closed procedure was 352 applications for the post of Liaison Officer (FG IV), and the lowest number of applicants for a procedure was 40 applications for a short-term post in the Test and Transition Unit (CA – FG III).

For the pruposes of streamlining and accelerating the recruitment process, **eu-LISA piloted the 'Agile Recruitment' process**, reducing overall process duration to 2.5 months (incl. publication of vacancy notices). Although this led to fewer applications in total, the targeted candidates were more motivated than average.

In June, eu-LISA participated in an online global career fair **Women in Tech,**[71] along with several other leading employers in the technical field, such as the European Organization for Nuclear Research (CERN), and the European Space Agency (ESA). This event, targeting experienced technology professionals, helped attract a diverse pool of candidates, and improve the Agency's image as an attractive employer.

Recently, the Agency has seen a quantitative and qualitative rise in applications largley due to **publishing vacancy notices beyond the eu-LISA's website** (e.g. European Personnel Selection Office website, EU Agency Network, LinkedIn etc.). This is particularly true for LinkedIn, where eu-LISA's vacancy notices have attracted 173,976 unique views, resulting in an almost 3% increase compared to 2020.

Where possible, the Agency used such practices as the grouping of profiles and longer **reserve lists** to cover several posts under one recruitment procedure. In other cases, the Agency used existing reserve lists for equivalent grade/function groups and profiles. The use of these methods generated significant efficiency gains, enabling the Agency to fill more vacancies with fewer procedures.

In 2021, eu-LISA extended considerable effort to fill in the posts authorised in the Establishment Plan. The ongoing COVID-19-related travel restrictions continued to pose challenges for recruitment, which had to be conducted fully remotely. In order to digitalise and streamline the recruitment process, the Agency started using a **video recruitment platform** (Cammio) for asynchronous interviews, to offer more flexible participation options for candidates and members of selection committees, while also improving the overall experience and satisfaction with the recruitment process.

The Agency managed to successfully meet the **staff occupancy rate KPIs** set for 2021. For the posts authorised in the 2021 Establishment Plan, and where the respective LFS has been adopted, the Agency reached 95.2 % for TA posts, and 94.2 % occupancy rate for all posts (TA, CA and SNE). The 2021 Establishment Plan included posts for which the legal base was pending, hence not available for recruitment. In this context, the overall occupancy rate reached 90.6 % for TA posts (92.5 % if issued job offers are included) and 87.1 % for all posts (TA, CA, SNE), 91.3 % if issued job offers are included.

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70 Reserve list established.
71 Women in Tech 2021 https://www.globalcareersfair.com/campaign/women-in-tech

Table 8 provides an overview of the recruitment progress in comparison to the number of authorised posts.

Table 8. Status of recruitment in 2021

TA positions in Establishment plan 2021	TA posts filled	TA posts filled and job offers accepted	Authorised for 2021 (TA, CA, SNE)	Filled posts (total)	Posts filled/job offer accepted
213	193	197	**356**	310	325
	90.6 %	92.5 %		87.1 %	91.3 %
207[72]	193	197	**345**	310	325
	93.2 %	95.2 %		89.9 %	94.2 %

2.5.2. Learning and development

In 2021, eu-LISA's **Cultural Transformation Programme** continued with a focus on the soft elements by surveying the existing organisational culture, and setting aspirational goals for the future (see 1.7.1). Additionally, the Agency mapped out the current situation regarding resources on knowledge, skills and attitudes by analysing the **eu-LISA Competency Framework**, which led to the updating of existing role descriptions and respective competencies with a view to developing a **Competency-based Human Resources Management Strategy** (see 1.7.1).

Throughout the year, eu-LISA invested a lot of effort to further develop its leadership by offering a spefical development programme to three cohorts of senior and middle managers. The Agency's dedicated **Leadership Development Programme** included a series of group coaching sessions on creating action plans. In addition, all eu-LISA managers underwent a **360 degree performance reviews** in order to better support their further development. The preliminary results of the 360 review indicated that previous learning interventions have contributed positively to the overall development of eu-LISA's leadership.

To analyse its **response to the COVID-19 pandemic**, eu-LISA conducted an internal survey focusing on the specific challenges faced by our staff, in particular, pandemic-induced adaptations in working conditions. The findings helped us assess the impact of the pandemic on eu-LISA's staff, and identify critical areas in order to address them accordingly. Our most important follow-up action was to prioritise staff well-being by offering a **mental health programme** to deal with the various changes brough about by the COVID-19 pandemic. The programme was designed to actively support not only our staff but also their families, incl. individual counselling sessions with qualified psychotherapists.

What is more, in order to reinforce a culture of respect, the Agency, in collaboration with an external expert, launched a series of training sessions for the staff and managers on the topic of **preventing psychological and sexual harassment**.

In 2021, eu-LISA introduced a **new staff reclassification procedure** to ensure a more clear, sound, transparent, efficient and data-driven process.

Throughout 2021, eu-LISA organised **altogether 159 training sessions** for a total of 2 737 participants. This included several rounds of **onboarding awareness sessions for newcomers** in collaboration with in-house subject matter experts. During these sessions newcomers were able to interact with colleagues from eu-LISA's various units and get a better understanding of the Agency's work across all areas.

 Additionally, the **e-onboarding programme** was updated to reflect the most recent organisational changes, update existing modules and improve overall functionality. As a result, future newcomers will be welcomed with a comprehensive, interactive and visually appealing set of e-learning modules.

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72 The number of posts available for the Agency. Does not include posts for which the legal base was not adopted, therefore not possible to recruit.

2.5.3. Establishment plan and headcount

In eu-LISA's establishment plan for 2021, authorised posts comprised 213 Temporary Agents (TA), 132 Contract Agents (CA), and 11 Seconded National Experts (SNE), for a **total of 356 authorised posts**, an increase of 32 posts compared to 2020. The number of CA posts increased by 21, from 111 to 132, due to the budget authorisation for the new tasks entrusted to the Agency (VIS recast, Eurodac, ETIAS, and Interoperability). The number of SNE posts did not change during this period.

In 2021, the **occupancy rate** was 90.6 % of the establishment plan[73], and 92.5 % if we include issued job offers. The overall occupancy rate for all types of posts was 87.1 %, and 91.3 % including the issued job offers, showing a slight improvement compared to 2020 (+2.5 % for the establishment plan headcount). This level of occupancy was reached despite COVID-19-related restrictions.

At the end of December 2021, eu-LISA had **310 full-time staff members**: 193 TAs, 107 CAs, and 10 SNEs (see Table 9). Additionally, six interns were invited to undergo a professional internship at the Agency.

Table 9. Distribution of eu-LISA staff by sites and types of contract

31 December 2021	TA	CA	SNE	TOTAL
Tallinn	51	26	5	**82**
Strasbourg	141	79	4	**224**
Brussels	1	2	1	**4**
Total	**193**	**107**	**10**	**310**

Compared to 2020, there were no changes in the **distribution of staff between eu-LISA's three sites** – the headquarters in Tallinn, Estonia, technical site in Strasbourg, France, and liaison office in Brussels, Belgium. Almost one-third of the staff (27 %) were employed at the eu-LISA headquarters in Tallinn, and 72 % at its technical site in Strasbourg. The eu-LISA Liaison Office in Brussels represents 1.3 % of the Agency's staff. The Agency does not have staff permanently employed at the backup technical site in Sankt Johann im Pongau, Austria.

The Agency's staff includes people from 23 EU member states. Compared to 2020, there was a slight improvement in **gender balance** (0.3 %), with women constituting 30.6 % of the staff (95 persons), while men comprised 69.4 % (215 persons).

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 a 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 5.5 %, above the target of 5 %, due to seven employees leaving the organisation in 2021. At the Tallinn headquarters, the staff turnover was 3.5 %, while at the operational site in Strasbourg it reached 6.3 %.

The percentage of staff submitting their **declarations of interest** on time was 89 % (target: > 80 %), a clear improvement compared to 2020, when this indicator stood at 82%.

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73 The Agency's establishment plan for 2021 included 11 posts which were not available for recruitment due to delays in the adoption of the relevant legislative instruments.

The **talent retention index**, assessing the average performance of people leaving the Agency compared to the average performance of staff, reached 0.2 (target: >0), compared to 0.9 in 2020.

Compensatory leave schemes

Pursuant to the European Parliament's 2011 Discharge Report,[74] 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.[75] 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, compensation for overtime worked under flexitime or during stand-by duty interventions is an integral feature of the Agency's daily operations.

Table 10 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 2020, there was an increase incompensated flexitime which led to an increase of 1.8 days (from 5.6 to 7.4) in the overall average number of compensatory leave days.

Staff benchmarking exercise

In accordance with the requirements of the Framework Financial Regulation, and the methodology agreed by the Heads of Administration of the European 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 % to operational activities, 20 % for administrative support and coordination tasks, and 10 % to neutral (financial) activities. The results of the 2021 benchmarking exercise indicated that eu-LISA's staff distribution is as follows: 74.2 % in operational duties, 16 % in administrative and coordination tasks, and 9.8 % of posts are neutral. For a more detailed overview of the 2021 benchmarking exercise results, please refer to Annex IV.

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74 2011 discharge: performance, financial management and control of EU Agencies (P7_TA(2013) 0134). 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)).
75 Commission decision on Working Time of 15 April 2015, C(2014) 2502 adopted by the eu-LISA Management Board on 15 April 2015.

Table 10. Compensatory leave breakdown per type of leave and grade of staff in days

Functional group and grade	Compensated overtime	Compensated stand-by duty	Compensated flexitime
AD05	0.0	0.0	301.0
AD06	4.0	0.0	130.5
AD07	5.0	0.0	263.5
AD08	4.0	0.0	211.5
AD09	0.0	0.0	67.5
AD10	0.0	0.0	47.0
AD11	0.0	0.0	16.0
AD12	0.0	0.0	0.0
AD13	0.0	0.0	0.0
AD14	0.0	0.0	0.0
AD15	0.0	0.0	0.0
AD16	0.0	0.0	0.0
AST01	0.0	0.0	0.0
AST02	0.0	0.0	0.0
AST03	0.0	0.0	95.0
AST04	0.0	0.0	0.5
AST05	0.0	0.0	20.0
AST06	0.0	0.0	28.5
AST07	0.0	0.0	28.5
AST08	5.0	0.0	24.0
AST09	0.0	0.0	2.0
AST10	0.0	0.0	0.0
AST11	0.0	0.0	0.0
Total number of days	**18.0**	**0.0**	**1235.5**
Number of people	**4**	**0**	**147**
GFIII09	0.0	0.0	8.0
GFIII10	0.0	0.0	42.5
GFIV13	0.0	0.0	30.0
GFIV14	0.0	0.0	50.0
GFIV15	0.0	0.0	120.0
GFIV16	0.0	0.0	51.0
GFIV17	0.0	0.0	66.5
GFIV18	0.0	0.0	6.0
Total number of days	**0.0**	**0.0**	**374.0**
Number of people	**0**	**0**	**70**
SNE	0.0	1.0	64.5
Total number of days	**0.0**	**1.0**	**64.5**
Number of people	**0**	**1**	**7**
TOTAL number of days:	18.0	1.0	1674.0
TOTAL number of people:	4	1	224
Average number of days per type of leave	4.5	1.0	7.5
Overall average number of compensatory leave days	**7.4**		

2.6. Strategy for efficiency gains

To achieve its policy objectives set for 2021, 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**.

The Agency continued working on a **Sourcing Strategy** to explore different approaches for reducing the gap in human resources. This was done primarily by identifying the key services that need in-house staff, and areas where the Agency could use external contractors or apply a mixed model. 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 the area of staff recruitment, eu-LISA managed to achieve efficiency gains by **using existing reserve lists** created during previous selection procedures, which were used for 30 recruitments in 2021. In addition, the Agency used the grouping of profiles and longer reserve lists to cover several posts within one recruitment procedure. This generated significant efficiency gains as it allowed, among other things, the Agency to fill more available posts with fewer publications of vacancy notices. What is more, eu-LISA also started using a **video recruitment platform** for asynchronous video interviews, increasing the flexibility of the recruitment process for candidates and selection panel members alike.

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. Additionally, eu-LISA also progressed on its Enterprise Content Management programme, with the objective of improving and streamlining corporate processes.

The Agency also pursued several initiatives to lay the groundwork for achieving further efficiency gains in the upcoming years, such as the objectives set in the eu-LISA 2.0 organisational transformation programme. Going forward, eu-LISA is working on drafting its **Efficiency Gains Strategy**, which will address improvements in the areas of process management, use of human resources, and the optimisation of organisational structure and governance.

2.7. Assessment of audit and ex-post evaluation results

2.7.1. Internal Audit Service (IAS)

There were no reviews conducted by the Commission's Internal Audit Service (IAS) at the Agency in 2021.

2.7.2. European Data Protection Supervisor (EDPS)

In 2021, the Agency focused on following-up on several EDPS inspections and recommendations made in the preceding years regarding eu-LISA's compliance with relevant data protection regulations as the management authority of the EU's large-scale IT systems:

- the **audit on SIS II and VIS**, conducted in November 2018, culminated in a final report containing 43 recommendations, which was received by the Agency in April 2020;

- the **inspection of Eurodac** was conducted in December 2019. The Agency received the draft report on 18 November 2020. In accordance with eu-LISA's Establishing Regulation, the eu-LISA Management Board adopted formal comments on the audit report on 18 January 2021, and most of the comments were taken into consideration by the EDPS. The Agency received the final report containing 29 recommendations in March 2021.

In all instances, the Agency drafted corresponding action plans, incorporating the recommendations put forward by the EDPS. The implementation of these action plans is monitored by **eu-LISA's Data Protection Officer (DPO),**[76] who organises quarterly follow-ups with responsible staff. Additionally, the DPO proactively updated the EDPS on a quarterly basis on the progress and status of implementing the recommendations. The Agency received additional feedback from the EDPS on 22 November 2021, and has incorporated these comments into the ongoing implementation of relevant action plans.

2.7.3. Internal Audit Capability (IAC)

Audit Risk Assessment and Assurance Plan for the ETIAS Implementation Project[77]

In 2021, the Agency's Internal Audit Capability (IAC) carried out an audit risk assessment for the ETIAS Implementation project, and prepared the corresponding assurance plan.

The **audit risk assessment** is built around the seven general control objectives (themes) in accordance with the PRINCE2® methodology: (1) business case, (2) organisation, (3) quality, (4) plans, (5) risk, (6) change, and (7) progress. From March to July 2021, the IAC interviewed select stakeholders and collected relevant information about the project, completing the risk assessment of the general control objectives in July 2021 with the following results:

- the IAC reasonably identified the inherent risks threatening each of the seven objectives, and the expected specific controls, while also assessing the perceived residual risk on a scale from low to very high;

- the IAC recommended that the Smart Borders Programme Board, together with the programme and project managers, should closely monitor the following general control objectives: (a) business case (assessed residual risk: high), (b) organisation (assessed residual risk: medium), and (c) quality (assessed residual risk: high).

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76 eu-LISA DPO Annual Work Report 2021 available on: https://europa.eu/!7rpQ6G
77 IAC Report, Ref. Ares (2021)5947940 – 30/09/2021.

The primary objective of the prepared **assurance plan** is to add value and increase the likelihood that ETIAS is developed on time, in accordance with quality requirements, and within budget. The plan also incorporates lessons learned from the implementation of previous similar projects (e.g. EES, SIS II).

Annual Review of the Management of ABAC Access Rights[78]

To support its financial circuit, the Agency uses the accrual accounting system ABAC (Accrual Based ACcounting)[79]. In the EU, the development and maintenance of ABAC falls under the purview of the Commission's Directorate-General for Budget (DG Budget), which is also responsible for granting ABAC access rights (incl. the specification of the user's role) based on corresponding service-level agreements.

The Agency's IAC, as the Neutral Verifier, carried out the annual review of the management of ABAC access rights as recommended by DG Budget.[80] The review was conducted for the purposes of providing independent and objective assurance on the management of ABAC access rights in eu-LISA, focusing on the following activities:

- conducting / updating the risk assessment regarding granted access rights in function of the context, applicable procedures and control standards, in particular in relation to segregation of duties;

- performing the periodic validation of ABAC access rights (i.e. ABAC workflow, accounting, and reporting) against the responsibilities entrusted to the users in accordance with the standing procedures.

The review identified the following **good practices at eu-LISA**:

- the procedure of requesting access, implementing the rights in ABAC, assessing the request for access;

- the description and communication of ABAC roles.

Based on the results of the review, the Head of Internal Audit Capability and Neutral Verifier concluded that eu-LISA's internal controls for the management of ABAC access rights are adequate and effective, while also providing reasonable assurance of appropriate risk management. Additionally, the review validated the compliance of ABAC access rights against responsibilities entrusted to the user in accordance with eu-LISA's standing procedures. Subsequently, the Agency validated a list of corrections and prepared a corresponding action plan, which were both included in the final audit report.

Monitoring of Internal Control Framework and Annual Audit Risk Assessment[81]

In line with responsibilities laid down in the decision of eu-LISA's Executive Director, the IAC advised the Agency's Manager in charge of Risk Management and Internal Control (MRMIC), and contributed to the **annual assessment of eu-LISA's internal control system** with a view to enhancing the likelihood of achieving organisational objectives outlined in the Single Programming Document (SPD) 2021–2023.

In 2021, the IAC carried out the **annual audit risk assessment** in line with its Internal Audit Plan, employing appropriate methodology and the Agency's corporate risk assessment to capture and assess risks and issues related to the objectives outlined in the SPD 2021–2023. Risk considerations, together with the risk profiles of eu-LISA units concerning the achievement of the objectives set in SPD 2021–2023 were communicated to the Agency's management.

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78 IAC Report, ref. Ares (2021)4232751 - 29/06/2021.
79 ABAC (Accrual Based ACcounting) is the corporate information system for the daily execution and monitoring of all budgetary and accounting operations by the Commission directorates-general, as well as other EU agencies and institutions. The system, developed by the Commission, includes a complete set of features to ensure compliance with the Financial Regulation and Implementing Rules.
80 P.11 Financial Systems Roles & Responsibilities ref. Ares (2017)3437526 – 07/07/2017
81 IAC report, ref. Ares (2021)6646141 - 28/10/2021;

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

In 2021, the European Court of Auditors (ECA) finalised the **regular audit of eu-LISA's annual accounts for the financial year 2020**.[82] As usual, ECA audited the Agency's accounts, which comprise the financial statements,[83] and the reports on the implementation of the budget,[84] for the financial year that ended 31 December 2020, while also analysing the legality and regularity of the transactions underlying those accounts.

As per ECA's report, eu-LISA's annual accounts for 2020 present the Agency's financial position fairly, in all material respects, including the results of its operations, its cash flows, and the changes in net assets, in accordance with its Financial Regulation and with the accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector. In addition, the revenues underlying the accounts were also found to be legal and regular in all material respects.

With regard to payments, ECA identified payments in the total amount of EUR 10 405 074,69 which it considered not to be compliant with the provisions of the relevant framework agreement, representing 4,1 % of the payment appropriations available in 2020, thereby exceeding the materiality threshold set for the audit and resulting in a qualified opinion on the legality and regularity of payments underlying the accounts.

Additionally, ECA made the following comment regarding budgetary management that does not call the above opinions into question: *The excessive amount of carry-overs for Titles II and III is indicative of various structural issues affecting compliance with Articles 9, 12 and 28 of the Agency's Financial rules.*

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82 European Court of Auditors (2021) Annual Report on EU Agencies for the financial year 2020, p. 230–236 https://europa.eu/!GrRTwT
83 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.
84 These comprise reports, which aggregate all budgetary operations and the explanatory notes.

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

Pursuant to the decision of eu-LISA's Executive Director[85], the **Agency's Internal Audit Capability (IAC)** is responsible for monitoring the progress on the implementation of audit recommendations. To that end, the IAC collects updates from recommendation's owners and compiles monitoring reports. In 2021, the IAC delivered the following status reports:

- Implementation of audit recommendations as at 31 December 2020, document under agenda point A.22 of the 27th Management Board meeting on 16 March 2021;

- Progress with the implementation of outstanding audit recommendations as at 30 April 2021, document under agenda point B.22 of the 29th Management Board meeting on 29 June 2021;

- Progress with the implementation of outstanding audit recommendations as at 31 October 2021, document under agenda point A.23 of the 32nd Management Board meeting on 16 November 2021;

- Progress with the implementation of outstanding audit recommendations as at 31 December 2021, document under agenda point A.20 of the 34th Management Board meeting on 23 March 2022.

In 2021, the **implementation rate of audit recommendations[86] was 77 %,** with 24 recommendations implemented, and 37 recommendations due. The status of eu-LISA's progress on implementing audit recommendations as at 31 December 2021 is summarised in Table 11.

Table 11. Progress on implementing audit recommendations

IAS, IAC and ECA recommendations by rating	Total open for 2021	In progress	Implemented	Past due	Closed in 2021	Total open at the end of 2021
Critical	0	0	0	0	0	0
Very important	26	8	13	5	6	20
Important	21	8	11	2	9	12
Total	**47**	**16**	**24**	**7**	**15**	**32**

Notes:

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 in the audited process that is detrimental to the whole process. For monitoring purposes, all recommendations made by ECA are designated as 'very important'.
Important: significant weakness in the whole process or a fundamental weakness in a significant part of the audited process.

The Agency's **outstanding audit recommendations** can be summarised as follows:

- finalisation of deployment of **Sourcing Strategy**, and design of **Contract Management process** (2015),

- organisation of IT asset management process (2018).

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85 Decision of the Executive Director on the Adoption of a system of compulsory reporting to the Executive Director and the Head of the Internal Audit Capability on the subject of the progresses made in the area of audit recommendations and/or findings, ref. Ares (2018)6152498 – 30/11/2018.
86 Details are available in the Monitoring Report on the status of implementation of the outstanding audit recommendations as at 31 December 2021 (ref. Management Board document 2021–075).

To confirm closure (see items under header 'Closed' in Table 12), the IAS[87] and the IAC[88] carried out annual follow-up on action plans declared as 'Implemented'. The ECA also followed-up on the implementation of its audit recommendations from previous years.[89]

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

With regard to the implementation of audit recommendations made by ECA in previous years, the Agency's progress is outlined in Table 12.

Table 12. The implementation of audit recommendations made by ECA

Year	ECA's observations	Status of actions taken	Actions taken by the Agency
2017	Currently, eu-LISA manages three separate, non-integrated large-scale IT systems – SIS II, VIS and Eurodac – in the EU's domain of freedom, security and justice. This approach may prevent the Agency from achieving economies of scale and synergies between the different systems.	**Ongoing (not under the Agency's control)**	The Agency will continue integrating all the systems under its management to the level allowed by the relevant regulations by deploying, for instance, common shared infrastructure or setting architectural standards.
2018	The Agency increased the prices of a framework contract without amending it, and extended one specific contract after its expiry.	**Ongoing**	The Agency set up a dedicated Vendor and Contract Management Sector under the Operations Department, that works closely with the Procurement Sector under the Corporate Services Department to monitor contract validity/expiry, succession planning, and follow up on operational needs and regulatory framework. In addition, they also oversee contract management and accountability to ensure correct, timely and regular succession of contracts. In 2021, the Agency adopted a guidelines document on procurement and contract management.
2018	The evaluation formula stipulated in the tender specifications for the MWS contract was different from the one communicated in the questions and answers document for bidders. The Agency should strengthen procurement-related internal controls.	**Completed**	
2018/ 2019	Budget implementation was less than planned. The Agency, together with the Commission, should improve alignment of budgetary planning with the timing of the related legislative acts.	**Ongoing**	The inscription of resources in the Agency's budget for legislation that is pending adoption by the co-legislators introduces significant risks to sound financial management. Such risks have been systematically reported to the Management Board. However, the EU's legislative process is beyond the Agency's control.

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87 Follow-up on outstanding recommendations from the audit on IT Operations in eu-LISA – IAS Note, ref. Ares (2021)2841375 – 28/04/2021; Follow-up on outstanding recommendations from past audits in eu-LISA – IAS Note on audit conclusions, ref. Ares (2021)6353176 – 18/10/2021; and Follow-up on outstanding recommendations from past audits in eu-LISA – IAS Note on audit conclusions, ref. Ares (2022)810155 – 03/02/2022.
88 IAC Memo on Audit Follow-up Results for the year 2020, ref. Ares (2021)1582348 – 02/03/2021; and IAC Follow-up Results for the year 2021, ref. Ares (2022)1548233 – 02/03/2022.
89 European Court of Auditors (2021) Annual Report on EU Agencies for the financial year 2020, p.230-236 https://europa.eu/!GrRTwT

| 2019 | The Agency made a payment of € 284 000 for services provided during a time period not covered by the underlying framework contract. | Ongoing | The Agency's dedicated Vendor and Contract Management Sector, under the Operations Department, works closely with the Procurement Sector under the Corporate Services Department to monitor contract valditiy/expiry, succession planning and follow up on operational needs and regulatory framework. In addition, they oversee contract management and accountability to ensure correct, timely and regular succession of contracts. In 2021, the Agency adopted a guidelines document on procurement and contract management. |
| 2019 | The Agency did not always assess applications rigorously enough, leading to the unequal treatment of candidates in one recruitment procedure. | Completed | |

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

In 2021 one OLAF investigation related to case OC-2020-0441-A2 was concluded and the final report transmitted to the Agency at the end of December 2021. Recommendations from the report were addressed in the first half of 2022.

2.10. Follow-up on observations from the discharge authority

On 4 May 2022, the European Parliament granted the Executive Director of eu-LISA discharge in respect of the implementation of the Agency's budget and approved the closure of the accounts of eu-LISA for the financial year 2020.[90]

The European Parliament set out its observations in a resolution that was shared with eu-LISA. The responses and measures taken by the Agency to follow-up on the observations from the European Parliament are listed in the Table 13.

Table 13. eu-LISA's responses to the observations of the Discharge Authority

Observation of the Discharge Authority	Response and measures taken by the Agency
BUDGET AND FINANCIAL MANAGEMENT	
1. Regrets that budget-monitoring efforts during the financial year 2020 resulted in a budget implementation rate of 75,61 % which, although it represents an increase of 31,10 % compared to 2019, is still well below the target; notes, furthermore, that the payment appropriations execution rate was 96,24 %, representing an increase of 3,96 % compared to 2019;	The legal requirement for the Agency budget to align to the EU general budget determined in 2020, as well as in the previous years, the allocation of the budget for new tasks, but was not fully aligned with operational needs. This trend was reversed in 2021 where the Agency reached full implementation without need to carry over operational budget by Management Board decision.

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90 Discharge 2020: European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice, 4.5.2022, texts adopted by the European Parliament P9_TA(2022)0185

2. Notes the observations of the Court on the high amount of carry-overs for Titles II and III of the Agency's budget, notes that the Agency used automatic carry-overs of non-differentiated appropriations for Title II of EUR 10 200 000 (59,4 %) of a total amount of automatic carry-overs of EUR 17 200 000; notes that the Agency also used non-automatic carry-overs of commitment appropriations for Title III of EUR 56 300 000 (23 % of the appropriations in the final budget), mainly related to the European Criminal Records Information System (ECRIS), the European Travel Information and Authorisation System (ETIAS) and the interoperability system, and that those non-automatic carry-overs are significantly lower than the EUR 159 000 000 of non-automatic carry-overs in 2019 (55 % of appropriations in the final adopted budget) while still representing a substantial amount compared to the total budget; notes the Court's conclusion that, although the nature of the Agency's operations may spill over to the following year, the excessive amount of carry-overs for Titles II and III is indicative of various structural issues that affect compliance with Articles 9, 12 and 28 of the Agency's Financial Rules; calls on the Agency to address those issues;

The carry-overs of Title II expenditure mainly relate to external support service provider contracts supporting the Agency in the implementation of its mandate and here especially administrative tasks with regards to the new tasks assigned to the Agency, addressing systematic understaffing. Corrective actions have been designed in 2022 to improve the governance and use of external support services. At the same time, it should be emphasised that timelines of individual specific contracts are not aligned with calendar year but with the nature of the services provided and their necessary duration. The corresponding budgetary commitments are annual. The provisions of Article 12(6) of the Agency's Financial Rules were respected in all cases, as legal commitments were existing at year-end.

In Title III, the legal requirement for the Agency budget to align to the EU general budget determined, in 2020 as well as in previous years, the allocation of budget for new tasks was not fully aligned with operational needs in particular for ECRIS, ETIAS and interoperability. No non-automatic carry overs were performed in 2021.

3. Regrets the fact that the budget implementation was less than planned; calls on the Agency, together with the Commission, to improve the alignment of budgetary planning with the timing of the related legal acts; acknowledges that the Agency has taken steps to improve the situation;

The Agency and the Commission agreed that the budget for the VIS recast in 2021 would instead become available in 2022 due to the updated calendar for the adoption of the legislation.

STAFF POLICY

9. Notes that, on 31 December 2020, the establishment plan of the Agency was 89,6 % implemented, with 181 temporary agents appointed out of the 202 temporary agents authorised under the establishment plan (compared to 172 authorised posts in 2019); notes that, in addition, 83 contract agents and 10 seconded national experts worked for the Agency in 2020, out of 111 contract agents and 11 seconded national experts authorised under the establishment plan;

For the posts authorised in the 2021 Establishment Plan and where the respective LFS has been adopted, the Agency reached 95.2 %, and 94.2 % of occupancy rate. Overall occupancy rate (the Agency had in the Establishment Plan posts where legal base was pending and posts were therefore not available for recruitment) reached 90,6 % for TA posts (92,5 % if issued job offers included) and 87,1 % for all posts (TA, CA, SNE), while including the issued job offers, the figure is 91,3 %. This shows improvement compared to 2020, despite the COVID-19 restrictions in 2021 that affected the selection procedures. The Agency continued recruitment at a fast pace in 2021. The Agency received 1944 applications for 18 recruitment procedures.

10. Notes with concern the composition of the Agency's senior management with respect to gender (two men (100 %) and no women), of the Management Board (44 men (81,5 %) and 10 women (18,5 %)), and within the staff overall (184 men (69,7 %) and 80 women (30,3 %)); asks the Agency to ensure gender balance at the management and staff levels in the future; asks the Commission and the Member States to take into account the importance of ensuring gender balance when nominating their members to the Agency's management board;

The composition with respect to gender has remained the same in eu-LISA Management Board (MB). On 16 May 2022, the composition of the MB counts 60 persons: 49 men (81.7 %) and 11 women (18.3 %). If only EU Member States and Commission are taken into account, the composition is 57 persons: 46 men (80.7 %) and 11 women (19.3 %). Notwithstanding the European Parliament's position, it remains a Member State's own responsibility and freedom to appoint persons to the Management Board irrespective of their gender. For the European Commission's delegation in the Management Board, the appointment is directly linked to the function fulfilled in DG HOME.

eu-LISA is an equal opportunity employer and strives to recruit the best candidates for the positions offered, without distinction on the grounds of gender, colour, racial, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, nationality, age, sexual orientation or gender identity. The Agency is conscious of the need to diversify its staff. In 2021 there was a slight improvement in gender balance, with women constituting 30,6 % (95 women) while men comprised 69,4 % (215 men). The composition of senior management remains the same (two men (100 %) and no women).

Where a reserve list with multiple candidates has been established, and with small differences between the candidates on this list, the Executive Director may decide to offer a position to a candidate from an under-represented nationality. The Agency has organised in 2022 meetings with EIGE and ECA to learn from best practice in diversity and inclusion and participated in online global career fair for women interested in technical positions to attract a diverse pool of candidates.

PROCUREMENT

14. Welcomes the signature of the TEF, the largest tender ever signed by the Agency; notes that the Agency presents the TEF as a significant innovation to the operational sourcing model of the Agency that is expected to generate important gains in the vendor and contract management process, including better value for money, economies of scale and faster procurement processes, while also reducing the Agency's dependence on a relatively small number of vendors; welcomes the innovative approach, encourages the Agency to continue with that approach and calls on the Agency to inform the discharge authority of whether the gains are materialising and on how the risks, inherent to the innovative approach, are being managed by the Agency;

The Transversal Engineering Framework (TEF) has proven viable for several key operational activities, including the sourcing of the development of new systems (e.g. ETIAS). At the same time, as anticipated, coordination and orchestration of the inputs of different contractors across several projects is needed by eu-LISA operations in order to maximise the benefits of transversal procurement. Similarly to capabilities required for the operational management of procurement and contract management, transversal sourcing skills and expertise need reinforcement in the Agency's Operations Department.

16. Notes that the Court found that the Agency signed a specific contract for software that was different from the software offered by the contractor in its tender for the associated framework contract; notes that the Agency did not modify the framework contract; notes that, according to the Court's observation, acquiring a different product that is not included in the price offer, at a different price than the product originally offered, is a deviation from the framework contract; notes the Court's conclusion that the specific contract is non-compliant with the framework contract as is the associated payment of EUR 10 399 834; notes that the Agency acknowledges the Court's observations and underlines that following the issuance of the Court's observation, the Agency responded promptly, signing an amendment to the framework contract in order to rectify the initial omission; notes that the Agency states that the non-compliance did not result in any prejudice to the financial interests of the Agency or the Union as it considers that the expenditure was justified; regrets that the Agency did not follow the appropriate procedures, especially given the substantial amount concerned; notes the extensive considerations that the Agency's executive director presented in a hearing with Parliament's Committee on Budgetary Control on 29 November 2021, stating that the decision to acquire the software in question was a conscious decision of the Agency's management with the purpose of reducing the duplication of training and support efforts, ultimately reducing the overall operational costs for the Agency; emphasises that, even though cost-saving opportunities can be assumed, the applicable procurement rules must be followed at all times to ensure that the Union taxpayer gets full value for money through transparent and competitive procurement procedures; calls on the Agency to make sure that procurement rules are respected at all times;

Article 2 of eu-LISA Regulation sets the objectives that the Agency shall deliver, one of them being to ensure 'the efficient and financially accountable management of large-scale IT systems'. With this in mind, the Agency systematically works towards standardisation and unification, where possible, of its ICT infrastructure as one of the key drivers for efficiency, both from financial and operational point of view.

The particular contract examined by the European Court of Auditors contributes to this effort. The need to change one of the auxiliary software products used to build and operate the Shared Biometric Matching System (sBMS) was of a pure operational nature. Its purpose was to avoid use of different software products for one and the same purpose that would have imposed particular operational problems like duplication of training and operational efforts, and higher operational costs for the Agency. eu-LISA would like also to point out that while commercially both software products are different, the underlying functionality remains the same. Furthermore, the Tender Technical Specifications attached to the framework contract allowed the Agency to perform such change. Moreover, the decision was taken after recommendation of the Agency's Architecture Review Board followed by a cost/benefit analysis.

While, as pointed out by the Court, the Agency omitted the merely formal administrative act of amending the framework contract before signing the specific contract, such omission is related to a non-substantial amendment under the financial rules and the consolidated case law. After the issuance of the Court observation, the Agency signed an amendment to the framework contract, to re-confirm that the requirement of the original framework contract was satisfied by the specific contract, and that the Agency shall not proceed with the acquisition of the original software through another specific contract in the future. With this act, the Agency considers the formal omission to have been fully resolved.

The Agency revised its controls in the procurement processes to strengthen its capacity to identify potential compliance issues resulting from change management. At the same time, the Agency cannot delay the launch of its procurements until all operational elements are known because this would compromise its ability to achieve its mandate.

17. Points out that shortage of dedicated administrative positions may have a negative impact on the functioning of the procurement procedures within the Agency; invites the Commission and the Agency to engage in an active dialogue about improving the Agency's establishment plan, especially about the level at which posts are allocated;

As with all other compliance-critical functions, procurement and contract management continue to be negatively affected by understaffing. This is true at the corporate services level (Finance and Procurement Unit), but increasingly at the operational level, where creation and retention of specialised contract management and procurement expertise continues to be critical among technical staff. Both recruitment and retention of staff have become increasingly challenging, as the level at which posts are allocated is not compatible with the competencies and skills required.

18. Notes that the Court found that the Agency signed an order form for maintenance services covering the period from 7 November 2020 to December 2024 (four years), contravening the provisions of the related framework contract that allowed services to be invoiced in advance for one year; notes that the Court concluded that the amount of EUR 5 241 paid to the contractor for services to be provided after 7 November 2021 is irregular; notes that, although it concerns a relatively small amount, the reputational risks of non-respect of procurement rules should be taken into account;	The Agency acknowledges the observation and would like to highlight that measures have already been taken to strengthen the alignment of the evolutions of the Agency IT architecture with its contractual framework. The Agency would like to emphasise that the non-compliance did not result in any prejudice to the financial interests of the Agency or the Union, as the expenditure was justified.

PREVENTION and MANAGEMENT of CONFLICTS of INTEREST, ETHICS and TRANSPARENCY

20. Notes with appreciation that for the members of its management board and its senior management, the Agency publishes the declarations of interest on its website; regrets, however, that CVs for the members of its Management Board are not presented on its website; recalls the call by the discharge authority in the 2019 discharge for the Agency to publish those CVs on the Agency's website in order to increase transparency;	The CVs of the members of eu-LISA Management Board are being collected by the Agency and they will be published soon on eu-LISA's website.
21. Calls on the Agency to take measures to ensure full compliance with Union transparency rules as well as with fundamental rights and data protection standards	The Agency ensures full compliance with the Charter of Fundamental Rights and the Union data protection standards. In June 2022, the Agency adopted a transparency register. The purpose of the register is to promote transparency on all contacts between eu-LISA representatives and economic operators. For this purpose, eu-LISA will record information on meetings or contacts with economic operators, review the information and publish it regularly on the Agency's public website.

INTERNAL CONTROL

22. Welcomes the Agency's annual assessment of its internal control system that concluded that its internal control system is present, functioning and effective, although some improvements are needed; calls on the Agency to incorporate the Court's observations regarding non-respect of procurement procedures in its assessment and to evaluate the impact of the identified weaknesses on the internal control principles and components;	In order to improve its procurement procedures, the Agency, operating in a context of complex operations, has taken consistent measures, in particular: – the adoption of detailed procurements guidelines acknowledged by the Internal Audit Service of the European Commission; – the preparation of a contract management policy, and related procedures and guidelines including checklists, which. are finalised and to be formally adopted by the end of June 2022. The definition of the contract management took longer time than expected, due to the complexity of the contractual environment of the Agency; – the adoption of an internal 'Sourcing strategy', that aims to harmonise and optimise the way eu-LISA makes decisions on the human resources mix (i.e., the ratio of in-house staff to external service providers) to be used for delivering its tasks and guide the Agency's sourcing decisions at the operational and strategic levels. The strategy draws a clear distinction between the functions and services that must be maintained and developed internally versus those that may be sourced from external service providers. The sourcing strategy will also serve as an essential input for the Agency's procurement activities by ensuring better predictability and reliability of information for procurement needs, while also facilitating advanced planning of procurement procedures. The implementation and follow up of these important evolutions of the internal control system of the Agency have been reflected in the regular monitoring report of the Agency's internal control framework. The Agency is confident that they address sufficiently the recommendations of the Court.

23. Notes that at the end of 2020 the implementation rate of audit recommendations was 65 % (24 recommendations implemented and 37 recommendations due); notes that in total 31 recommendations were open at the end of 2020 out of which none were 'critical'; notes with concern that 13 recommendations were past their due date, meaning that the implementation of the recommendation was ongoing though the deadline for implementation had lapsed;	As a result of the latest regular monitoring exercise carried out in May 2022, the Agency has reduced the number of past due audit recommendations to eight (i.e. a reduction of 38 %). eu-LISA is determined to reduce it further to four (i.e. a reduction of 50 %) by the next monitoring exercise in October 2022, and to zero by the end of 2022.
24.Welcomes the progress made regarding the Court's observations and Parliament's discharge resolutions from previous years and the fact that the Agency has correctly implemented the Court's recommendation concerning the proper assessment of applications in recruitment procedures; recalls that work with regard to four remaining observations are still ongoing; calls on the Agency to step up its efforts to implement corrective measures regarding the Court's outstanding observations.	The Agency is committed to swiftly finalise the implementation of corrective measures addressing the Court's observations to the possible extent. However, the implementation of several audit recommendations is complex and lengthy as they have a significant impact on the operational model of the Agency, which requires additional staff or is not under the Agency's full control.

2.11. Environment management

The Agency is committed to putting in place an internal **environmental management system (EMS)**, in compliance with the Eco-Management and Audit Scheme (EMAS). This will ensure that eu-LISA's activites are **in alignment with the European Green Deal**[91] initiative to reduce CO_2 emissions in all business areas. In 2021, the Agency prepared an environmental statement report for 2020, detailing objectives, monitoring and progress. The report also includes a summary table outlining the sources of environmental impacts, action plans, and performance indicators for all environment-related aspects.

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 2021, major risks were identified and managed, as further confirmed by the results of both internal and external audits performed throughout the year.

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

2.14. **External evaluation**

Pursuant to eu-LISA's establishing Regulation, the Commission was tasked with carrying out the first evaluation of the Agency within three years after start of operations. The **first evaluation of eu-LISA**, covering the period from 1 December 2012 to 30 September 2015, lasted from March 2015 to March 2016.[92]

The evaluation was conducted in collaboration with an external contractor, and in close cooperation with eu-LISA's Management Board and the Agency itself. The evaluation examined the way in which eu-LISA implemented its mandate, and focused on four areas: efficiency, effectiveness, coherence, and added value. It also analysed the Agency's contribution to the establishment of a coordinated, effective and coherent IT environment for the management of large-scale IT systems to support the implementation of the EU's policies in the JHA domain.

The evaluation concluded that the Agency is fulfilling its mandate effectively. After consulting with eu-LISA's Management Board, the Commission put forward a number of recommendations regarding changes to the Agency's establishing Regulation. These recommendations, together with the opinion of the Management Board, were provided to the European Parliament, the Council and the European Data Protection Supervisor. Out of the 30 recommendations listed in the evaluation report, 28 have been implemented successfully, and 2 became obsolete in the wake of the Agency's revised mandate.

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92 European Commission (2016) Independent external evaluation of the European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice – eu-LISA. Final evaluation report. Available on: https://op.europa.eu/s/o1dR.

PART III

ASSESSMENT OF THE EFFECTIVENESS OF THE INTERNAL CONTROL FRAMEWORK

3 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 accordance with the principles and characteristics adopted by the Board.[93]

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 take into account the specific governance arrangements established in the Agency. These internal control principles and characteristics constitute the minimum standards referred to in Article 45(2) of eu-LISA Financial Rules.

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. To that end, the Agency's Deputy Executive Director was appointed to serve as the **Manager in charge of Risk Management and Internal Control (MRMIC)** to support with the setting up, monitoring, implementation, assessment and reporting on eu-LISA's ICF.

The **annual assessment** of the ICF comprises the establishment of monitoring criteria for each internal control principle, the identification of strengths and areas of improvement, the assessments 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 results of the assessment indicate that eu-LISA **achieved or partially achieved 81% of internal control monitoring criteria** in 2022, compared to 79% in 2021 (Table 14).

Table 14. Internal control monitoring criteria (2021–2022)

Internal control monitoring criteria	2021	2022
Total number of indicators	62	79
Achieved	45 (73%)	55 (70%)
Partially achieved	4 (6%)	9 (11%)
Not achieved	12 (19%)	15 (19%)
Not available	1 (2%)	0 (0%)

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93 Management Board's decision No 2019–042 of 19 March 2019 on the Adoption of the revised internal control framework for eu-LISA

Internal control strengths and deficiencies

In 2021, the assessment identified altogether 23 internal control deficiencies, with three of them major, and 20 moderate.

Figure 42. Status of deficiencies in 2021
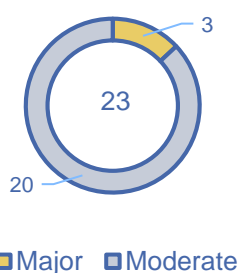
☐Major ☐Moderate

Figure 43. Status of deficiencies in 2022

☐Major ☐Moderate ☐Minor
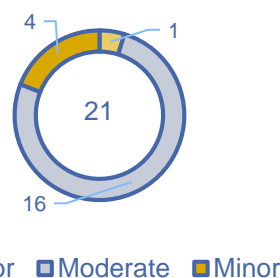
Throughout 2021, the Agency conducted various activities to implement remediation plans and remove internal control deficiencies, in particular:

- 5 moderate deficiencies were closed,
- 2 major deficiencies were downgraded to moderate,
- 4 moderate deficiencies were downgraded to minor,
- 2 moderate deficiencies were merged.

In the 2022 assessment, three new deficiencies were identified, leading to a total of 21 internal control deficiencies, with one major deficiency, 16 moderate, and 4 minor deficiencies.

Table 15. Main internal control strengths and deficiencies identified during the 2022 assessment

ICF components	Strengths	Deficiencies
I Control environment	Increased oversight of internal controls by the Management Board, and its Audit, Compliance and Finance Committee (ACFC) Improved appraisal and reclassification processes	Continue with efforts on ethics and integrity trainings Increase enforcement of accountability
II Risk assessment	eu-LISA Strategy for 2021-2027 finalised Improvements to risk management, in particular risk identification, and risk reporting (Planview)	Increase ex-ante controls to better align planning and implementation Ongoing work on the transparency register
III Control activities	Implementation of the Capability Maturity Model Integration (CMMI) methodology Implementation of audit recommendations	Finalise the Control, Risk and Compliance strategy Finalise the procedure for assessment of the cost of controls (ongoing)
IV Information and communication	New policies on record management and document management Ensuring business continuity during the pandemic	Increase internal communication on internal control
V Monitoring activities	Improved ICF assessment process in 2021	Strengthen the process of declaration of assurance and assessment of reservations (ongoing)

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, are set by the Management Board, the Executive Director, and the rest of the top management.

As per the most recent assessment, the control environment component of the Agency's ICF is **present and functioning, but some improvements are needed (Category 2)**.

The Agency remains committed to integrity and ethical values, continuing with its efforts in terms of directive and detective controls to achieve its objectives. In 2021, the Management Board and the Audit, Compliance and Finance Committee (ACFC) increased their oversight, and the Agency strengthened its controls over the assessment of the ICF, focusing on addressing significant weaknesses. To that end, eu-LISA ensured that its structure, reporting lines, authorities and responsibilities were well established and reviewed as needed.

In 2021, the Agency succeeded in strengthening the governance of programmes. The Agency managed to recruit a large number of new talents, and continued to dedicate a considerable amount of resources to staff development. The staff turnover rate was kept under close scrutiny by the management, leading to the introduction of targeted policies for compensating the gap in some units. Futhermore, eu-LISA launched its revised process for staff appraisal and promotion. The Agency also identified the need to reinforce individual accountability for internal control responsibilities.

Table 16. ICF component assessment: Control environment

Principle	Assessment
1. Demonstrates commitment to integrity and ethical values	The principle is present and functioning but some improvements are needed (category 2)
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.

As per the most recent assessment, the risk assessment component of the Agency's ICF is **present and functioning, although some improvements are needed (Category 2)**.

In 2021, eu-LISA strengthened several elements of the risk assessment component. The Agency's new strategy for 2021-2027 was adopted in November, and work commenced on the strategy roadmap to better align strategic and operational objectives, and to improve the monitoring of strategy implementation.

The reporting to the different stakeholders continued in accordance with the statutory requirements. The Agency continued its efforts to improve the identification of risk tolerance and risk materiality for programme management. Significant progress was made on risk identification, closing two deficiencies, with work set to continue in 2022, focusing on unit level. By the end of the year, eu-LISA achieved an implementation rate of 92% for its Anti-Fraud Strategy, covering the period from March 2019 to November 2021. The Agency concluded that additional work is needed to assess the impact of changes on the internal control system.

Table 17. ICF component assessment: Risk assessment

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 but some improvements are needed (category 2)
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.

As per the most recent assessment, the control activities component of the the Agency's ICF is **present and functioning, but some improvements are needed (Category 2)**.

The assessment of the control activities component concluded on an improvement of effectiveness, from category 3 to category 2. This is largely due to the Agency's efforts in the implementation of remediation action, leading to the closing or downgrading of audit recommendations.

Throughout 2021, control activities have been carried out at different levels as part of existing processes, procedures and governance mechanisms in the Agency's different departments and units. The integration of controls into an overarching 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 drafting the **internal control strategy**, which will include a list of main internal control activities and processes, as well as their owners.

Additionally, with the introduction of the CMMI (Capability Maturity Model Integration) methodology, the Agency is increasing its control of compliance with project management methodology, although improvements are still needed. New directive controls have been implemented in various important areas, such as contract management, procurement and sourcing. The Agency continued to increase its control over technology and IT security. What is more, eu-LISA also prepared new directive and detective controls for the reporting of exceptions. The Agency also identified areas of improvement with controls for its new horizontal operating model.

Table 18. ICF component assessment: Control activities

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.

As per the most recent assessment, the information and communication component of the Agency's ICF 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 2021, the Agency strengthened its controls on information management with the **adoption of two new policies on record management and document management**. As a result, information relevant to the functioning of internal controls is available and generally of the required quality.

Throughout 2021, eu-LISA continued to manage its internal communication successfully, although due to the COVID-19 pandemic the period continued to be challenging. To improve the business continuity of the communication function, new measures were implemented, such as standby duties. External communication was also conducted in line with the relevant plan, and the Agency made progress on the communication related to internal controls. Going forward, eu-LISA remains committed to improving its internal and external communication on the topic of internal controls, especially after adopting the internal control strategy.

Table 19. ICF component assessment: Information and communication

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 assessed and deficiencies are communicated and corrected in a timely manner.

As per the most recent assessment, the monitoring activities component of the Agency's ICF is **present and function and but some improvements are needed (category 2)**.

Thtoughout 2021, the Agency continued to strengthen the assessment of its internal controls. These are based on self-assessments by designated staff within their area of responsibility, e.g. reporting activities, analysis of exceptions and non-compliance events, implementation of the anti-fraud strategy, and audits (both internal and external), and on the corporate risk register. The 2022 annual assessment of the effectiveness of the ICF was improved, using the lessons learned from the previous assessment. Throughout the year, the MRMIC followed-up on the identified internal control deficiencies and ensured the Agency's continued efforts on the implementation of remediation actions.

Table 20. ICF component assessment: Monitoring activities

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**

As part of its internal control system, the Agency is committed to maintaining a proactive approach in the process of monitoring identified corporate risks. The Management Committee is regularly updated on the summary status of corporate risks status (i.e. evolution of the impact and probability, and progress of respective action plans).

The 2021 list of corporate risks (Table 21) is based on the backlog of open items from the previous years, and also includes two new risks identified during the year. During the reporting period, as per management decision, one risk was demoted, and three materialised risks were upgraded to corporate issue status.

Table 21. Corporate risks for 2021

Risk ID	Corporate Risk Title	Probability	Impact	Owner
2017-1	Targeted and successful external cyber attack on eu-LISA infrastructure	3 – High	3 – High	Head of Security Unit
2018–1	Measures already taken might not be sufficient to ensure that the sizing of the data centre capacity will enable the Agency to host future systems	1 – Low	3 – Medium	Head of Infrastructure Management Unit
2018–3	Threat of significant increase of costs related to communication infrastructure	4 – Very High	3 – High	Head of Infrastructure Management Unit
2018–6	Breach of confidentiality: accidental public exposure of sensitive procurement information	2 – Medium	2 – Medium	Head of Security Unit
2019–3	Potential non-compliance with Health and Safety requirements, and relevant regulations, due to lack of Health and Safety risk assessment	3 – High	3 – High	Head of Corporate Services Unit
2019–5	Insufficient physical space available on time to accommodate the Agency's critical needs	3 – High	4 – Very High	Head of Corporate Services Department
2019–7	The Agency might be insufficiently prepared for the new Transversal Procurement paradigm that requires increased effort to manage the different types of vendor relationships	3 – High	3 – High	Head of Vendor and Contract Management Sector
2019–8	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	2 – Medium	4 – Very High	Head of Systems Operations Unit
2019–9	Management of numerous people onboarded at once	3 – High	2 – Medium	Head of HR Unit
2020-1	Insufficient legal checks	2 – Medium	3 – High	Head of Operations Department
2020-2	The Agency's capacity/ability to check contracts and assess that we are not charged twice. If the Agency is unable to perform the necessary checks, it may result in time overlapping and double charging of the same expert under different contracts	3 – High	3 – High	Head of Vendor and Contract Management Sector

2020-4	Risk for compliance with Service Level Agreements because of the OLAs (Operational Level Agreements) Management in the transversal procurement ecosystem where the coordination of effort for projects/systems will be agreed between multiple contractors	2 – Medium	3 – High	Head of Vendor and Contract Management Sector
2020-5	Retained organisation is not aligned with the outsourcing model	3 – High	3 – High	Head of Vendor and Contract Management Sector
2020-6	Challenge to hire resources aligned with Agency's needs - Risk of not finding the "right fit" for eu-LISA	3 – High	3 – High	Head of HR Unit
2020-7	Delay with cultural transformation and leadership	4 – Very High	3 – High	Head of Learning and Development Sector
2020-8	MWOs (Maintenance in Working Order) not efficient enough for end of lifecycle hardware and software	2 – Medium	3 – High	Head of Planning and Standards Unit / Product Management Sector
2020-9	Insufficient enforcement of the existing Quality Management System (QMS) might hinder it from being the key enabling factor for achieving eu-LISA's strategic objectives	3 – High	2 – Medium	Head of EPMO Sector
2020-10	Insufficient integration of stakeholders within the collaboration model required by the Transversal Procurement approach	2 – Medium	3 – High	Head of Vendor and Contract Management Sector
2021-1	Misalignment between project scope and test plan as executed by the contractor (scope assurance)	3 – High	4 – Very High	Head of Planning and Standards Unit / Product Management Sector
2021-2	System documentation not kept in the eu-LISA central repository	3 – High	4 – Very High	Head of Planning and Standards Unit / Product Management Sector

From this list, two items, No 2020-6 regarding outsourcing, and No 2020-9 related to quality management, were proposed to be included in the peer reviewed risk assessment exercise conducted by the EU Agencies Network (EUAN).

3.1.4. **Implementation of the Anti-Fraud Strategy Action Plan for 2021**

In December 2021, eu-LISA's Internal Audit Capability (IAC) completed the third and final monitoring of the implementation of the Anti-Fraud Strategy Action Plan. For the 2019-2021 period, the final implementation rate of the strategy reached 92 %.

The **revised Anti-Fraud Strategy** comprised three strategic objectives for the period 2019–2021:

- reinforcement of anti-fraud culture in the Agency,

- setting and maintaining a high level of ethics in line with eu-LISA's activities,

- developing intelligence for prevention and detection purposes.

Based on the evidence collected and the information provided by managers and action owners, none of the identified fraud risks appeared to have materialised in 2021. However, due to the importance and potential reputational, budgetary and operational impact, eu-LISA continues to monitor these risks in order to mitigate any instances of fraud in the future.

The eu-LISA Anti-Fraud Strategy Action Plan for 2021 comprised altogether 15 actions, each aimed to mitigate one or several identified fraud risks. In December 2021, the results of the monitoring exercise showed that the Agency implemented 12 out of 13 actions (two actions were 'in progress' and one 'past due'), resulting in the implementation rate of 92 %.

Table 22. Anti-fraud strategy objectives and indicators

Objectives	Indicators	Results
1. Reinforcement of anti-fraud culture in the Agency	% of financial actors (i.e. OIA, OVA, AOD, FIA, FVA) who correctly respond to questions on prevention / detection of fraud issues (source: statistics from mandatory awareness trainings – Human Resources Unit)	Data not available. The indicator needs to be revised in the next update of the Strategy. Trainings on ethics, integrity and anti-fraud are mandatory. In 2021, there was one awareness session with participation rate of 67 % (incl. in person and online).
2. Setting and maintaining a high level of ethics in line with eu-LISA's activities	Annual trend of ethical issues (source: statistics from register of administrative inquires – Legal Officer)	One in 2019, two in 2020, three in 2021
3. Developing intelligence for prevention and detection purposes	% transactions (i.e. procurement procedures, commitments, payments) detected with potential fraud (source: statistics from list of commitments, payments, procurements vs for instance ECA findings and/or sample ex post checks - FPU)	1.77 % of transactions (i.e. 33 payments) were identified as having potential fraud risk, and were subject to further review. Based on the review of these 33 transactions, and related supporting evidence, IAC concluded that there is no factual indication of potential fraud that would warrant reporting to OLAF. The IAC identified opportunities for improving internal controls and recommended several new measures.

During the 2019-2021 period, the overall quantitative implementation of the eu-LISA Anti-Fraud Strategy Action Plan reached a satisfactory level, a testament of the Agency's consistent efforts to improve its internal controls designed to mitigate the risk of fraud.

As a result of the monitoring, the following recommendations were made:

- the planned actions that are yet to be implemented, and new actions should be included in the new Action Plan to the updated Anti-Fraud Strategy for the 2022-2024 period;
- guidelines on whistleblowing should be revised to ensure that:[94]
  - internal channels for reporting wrongdoings and potential fraud are properly defined and clearly communicated,
  - protection of whistleblowers is effective and in compliance with EDPS guidelines,
  - statistics on whistleblowing are available to enable further decision-making.

3.2. Conclusions of the assessment of the effectiveness of the ICF

The results of the assessment confirm that the Agency's internal control system is present, functioning and effective, although some improvements are needed (category 2).

In particular, eu-LISA has a well-established and functioning **control environment**, comprising a set of standards of conduct, processes and structures, that provide the basis for carrying out internal control activities. To improve the effectiveness and efficiency of its control environment, the Agency reviews and updates it on a regular basis. In 2021, eu-LISA focused on reinforcing the Management Board's involvement with internal controls. Additionally, the Agency also continued its efforts to attract and develop its talents, and is maintaining focus on the individual responsibility for internal controls.

eu-LISA can rely on its strategy and **risks assessment** processes to effectively specify its objectives, while also identifying and analysing risks. In 2021, the Agency reinforced several elements of its risk assessment component, from the adoption of a new strategy for 2021–2027 to the development of risk identification at unit level. Year 2021 was also a milestone with the end of the 2019–2021 anti-fraud strategy, and the assessment showed that 92 % of planned actions have been implemented. The Agency also identified that additional work is needed to assess the impact of changes to the internal control system.

The Agency uses strong **control systems** to ensure the mitigation of risks related to the achievements of its objectives, in particular its operational business objectives. Within these frameworks, control activities are performed at all levels of the organisation, at the various stages of business processes (e.g. systems development, systems operation), and many of them are automated. In 2021, eu-LISA successfully strengthened a number of control activities, closing several remediation actions that were identified in the previous assessment, in particular in the area of control over technology, IT security, policies and procedures. Going forward, the Agency will continue to deliver improvements where needed, starting with the preparation of the Control, Risk and Compliance strategy.

In 2021, eu-LISA strengthened the **information and communication** component of its ICF with new policies on record management and document management. The Agency's external communication aimed at stakeholders (including the general public) is effective, providing assurance about the achievement of its policy objectives. Despite challenges related to the COVID-19 pandemic, eu-LISA continued to manage its internal communication successfully as well.

The Agency continued to strengthen its **continuous and specific monitoring** and assessments of its internal controls. In 2022, the annual assessment of the effectiveness of the ICF was improved, using the lessons learned from the previous assessment. Throughout the year, the Manager in charge of risk management and internal control (MRMIC) followed-up on the identified internal control deficiencies and ensured the Agency's continued efforts on the implementation of remediation actions.

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94 The eu-LISA Management Board adopted the revised eu-LISA Guidelines on Whistleblowing on 3.3.2022.

3.3. Statement of the Manager in charge of Risk Management and Internal Control

I, the undersigned,

Manager in charge of Risk Management and Internal Control within 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 Manager in charge of Risk Management and Internal Control, I declare that, in accordance with the eu-LISA Internal Control Framework, I have reported my advice and recommendations on the overall state of internal controls in the Agency to the Executive Director.

I hereby certify that the information provided on the internal control system in the present Annual Activity Report and its annexes is, to the best of my knowledge, accurate, reliable and complete.

Luca Tagliaretti

PART IV

MANAGEMENT ASSURANCE

4 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, the Agency's management recognises the need to maintain a high level of effectiveness in its internal control framework, and to ensure a high level of monitoring and assessment of the implementation of ICF principles and components to ensure the achievement of the objectives set out in eu-LISA's establishing Regulation and its long-term strategy.

Register of exceptions and non-compliance events

The Agency's formal procedure for the registration of exceptions was established in 2013, and the guidelines for the registration of exceptions and non-compliance events were most recently updated in 2021. The overall objective of this procedure is to establish appropriate measures to ensure that any exceptional circumstances or significant instances 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 must be documented, justified and approved at the appropriate level before any action is taken.

In 2021, altogether 10 exceptions and 15 non-compliance events were registered at eu-LISA, and these instances were analysed by the Agency's management at the beginning of 2022. This analysis was also used to identify deficiencies as part of the ICF effectiveness assessment.

↘ BUILDING BLOCK 2: RESULTS OF EXTERNAL AUDITS

The European Court of Auditors issued the following statement of assurance to the European Parliament and the Council:

Opinion on the reliability of the accounts: *In the Court's opinion, the accounts of the Agency for the year ended 31 December 2020 present fairly, in all material respects, the financial position of the Agency at 31 December 2020, 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.*

Opinion on the legality and regularity of revenue underlying the accounts: *In the Court's opinion, the revenues underlying the accounts for the year ended 31 December 2020 are legal and regular in all material respects.*

Opinion on the legality and regularity of payments underlying the accounts: *Concerning the payments, the Court identified a total amount of payments of EUR 10 405 074,69 which it considered not to be compliant with the provision of the relevant framework agreement, representing 4,1 % of the payment appropriations available in 2020, thereby exceeding the materiality threshold set for the audit and resulting in a qualified opinion on the legality and regularity of payments underlying the accounts.*

The declaration of assurance provided by the Authorising Officer in the Consolidated Annual Activity Report for 2020 did not contain any reservations.

Conclusion

Based on this report's chapters 3 and 4, 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 did not issue any reservations.

PART V

DECLARATION OF ASSURANCE

5 Declaration of assurance

I, the undersigned,

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 (the audits of the Internal Audit Service of the European Commission, the audits of the Internal Audit Capability of eu-LISA 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.

Krum Garkov

ANNEXES

Annex I. **Core business statistics**

Operational management of the systems

Systems availability

No	CORPORATE KPI	TARGET	2020	2021	STATUS
3	**Eurodac central system availability**	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.87%	99.80%	Amber target achieved
6	**SIS central system availability**	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.94%	99.98%	Amber target achieved
8	**VIS central system availability**	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.93%	99.98%	Amber target achieved

AVAILABILITY OF THE CENTRAL SYSTEMS SIS, VIS, EURODAC
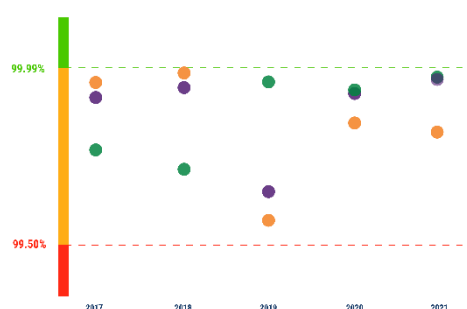
The availability targets are not precisely defined in the legal instruments governing the systems. The green target of 99.99 % was established by the Agency because the systems it manages are defined as high availability systems.

Response time

No	CORPORATE KPI	TARGET	2020	2021	STATUS
4	**Eurodac central system response time**	Green ≥ 99.45 % 99.45 %> Amber ≥ 90 % Red < 90 %	99.95%	100.00%	Green target achieved
7	**SIS central system response time**	Green ≥ 99.5 % 99.5 %> Amber ≥ 99 % Red <99 %	99.86%	99.85%	Green target achieved
9	**VIS central system response time**	Green = 100 % 100 %> Amber ≥ 90 % Red <90 %	99.98%	99.90%	Amber target achieved

RESPONSE TIME OF THE CENTRAL SYSTEM SIS

RESPONSE TIME OF THE CENTRAL SYSTEM VIS

RESPONSE TIME OF THE CENTRAL SYSTEM EURODAC
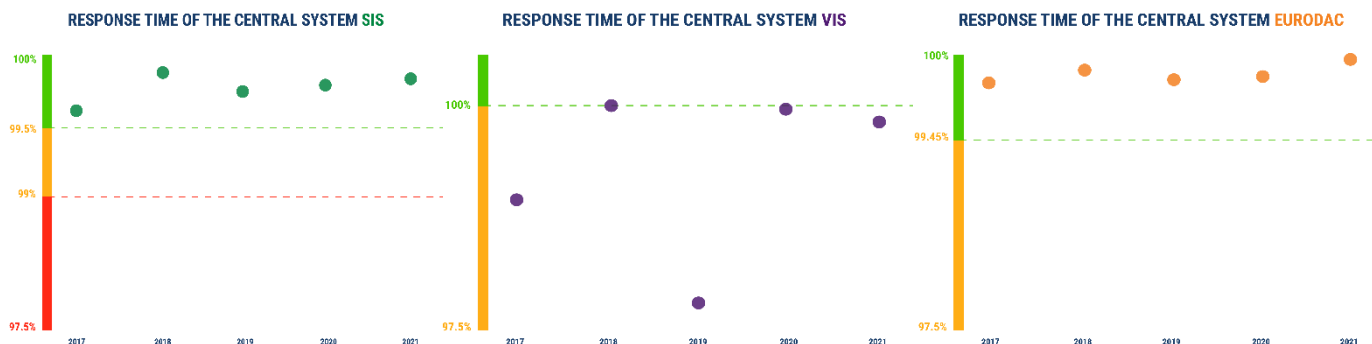
SIS central system response time. Standard queries are split into categories. Category 1 represents all single and multiple queries classified as 'exact', because exact information is provided in search fields. Inexact or fuzzy queries are excluded from category 1. The standard response time for category 1 queries is 1 second. For other queries, the standard response time is 3 seconds. The response time for category 1 queries is the core indicator to assess performance as it is the most representative query. The KPI 7 indicator is green if more than 99.5 % of category 1 queries have a response time within 1 second, amber if between 99.5 % and 99 % of category 1 queries have a response time within 1 second and red if fewer than 99 % of category 1 queries have a response time within 1 second.

VIS central system response time. The indicator value is the share of total response time within the contractual limits for each business group (asylum, border, consular, law enforcement and territory). There are three contractual limits for the VIS: the peak per hour indicator, the SLA breach indicator and the records indicator. KPI 9 is the result of the calculation for all business groups and all contractual limits. The indicator is green if the value equals 100 %, amber if the value is between 90 % and 100 %, and red if the value is below 90 %.

Eurodac central system response time. System critical business functions are grouped into two categories: high-priority transactions and normal transactions. The standard response time for high-priority transactions is 1 hour, for normal transactions it is 24 hours. For each category, an indicator is monitored. KPI 4 is the average of the indicator for high-priority transactions and the indicator for normal transactions. The indicator is green if 99.45 % of transactions are within the standard response time, amber if between 90 % and 99.45 % of transactions are within the standard response time, red if fewer than 90 % of transactions are below the standard response time.

Availability of the communication infrastructure

No	CORPORATE KPI	TARGET	2020	2021	STATUS
5	**Wide Area Network (WAN) availability (for SIS and VIS)**	Green ≥ 99.99 % 99.99 %> Amber ≥ 99.50 % Red <99.50 %	99.9931%	99.9988%	Green target achieved

AVAILABILITY OF WIDE AREA NETWORK (WAN)
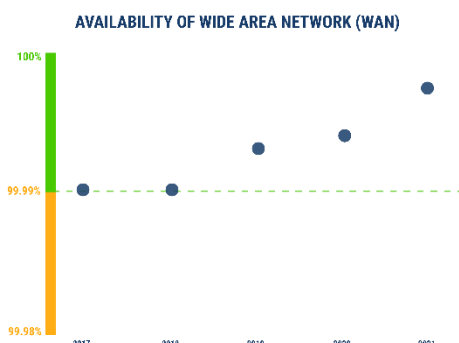
Operation support and training

No	CORPORATE KPI	TARGET	2020	2021	STATUS
16	**Training for Member States on core systems**	> 4	4.5	5.4	Achieved
19	**Customer satisfaction: % of MS users satisfied or very satisfied with the eu-LISA Service Desk**	≥ 80 %	95%	95%	Achieved
20	**eu-LISA Service Desk performance**	≥ 75 %	99.90%	95.00%	Achieved

Security

No	CORPORATE KPI	TARGET	2020	2021	STATUS
1	**Percentage of security objectives implemented as defined per the legislation**	100 %	100 %	100%	Achieved
2	**Number of emergency drills/security and business continuity related exercises performed annually**	2	2	2	Achieved (1 per site)

Governance and compliance

No	CORPORATE KPI	TARGET	2020	2021	STATUS
21	**Assessing completion of projects against a baseline of defined quality/cost/time parameters and taking into account the project tolerances**	< 10 %	9.19%	15.75%	Not achieved. All projects were affected by the restrictions to work on-site, in particular for the installation of hardware supplies.
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 %	Partially achieved (1 small project, 6 medium and 0 large projects closed in 2021)
		Medium projects: > 80%	71%	76.2 %	
		Large projects: > 85%	73.5%	N/A	
23	**(A) Percentage of audit recommendations implemented within stipulated deadlines**	Critical = 100 %	N/A	N/A	Partially achieved (no critical audit recommendation)
		Very important ≥ 90%	67%	72%	
		Important ≥ 80 %	60%	85%	
	(B) Number and age of outstanding recommendations				Partially achieved
		Recommendations past due for less than six months: ≤ 4			
		Recommendations past due between six months and one year: ≤ 2	2	1	
		Recommendations past due for more than one year: ≤ 1	1	0	
			10	6	

Administration and general support

No	CORPORATE KPI	TARGET	2020	2021	STATUS
10	**Cancellation rate of payment appropriations**	< 5 %	13.60%	7.00%	Not achieved
11	**Rate (%) of budgetary commitments implementation**	95-99 %	99.10%	100.00%	Achieved
12	**Rate (%) of payment implementation**	> 95 %	99.00%	99.00%	Achieved
13	**Ratio (%) of administrative resources and ratio (%) of operational resources compared to all human resources (staff and SNEs)**	Administrative: 20 %	16.50 %	16.90 %	Achieved
		Operational: 70 %	72.50 %	73.20 %	Achieved
14	**Ratio (%) of payments completed within statutory deadlines**	> 87.5 %	95.90%	99.00%	Achieved
15	**Environmental indicator: carbon footprint**	baseline	341.04 tons	401 tons	
17	**Efficiency of the procurement process**	< 25 %	11 %	21.40%	Achieved
18	**Acquisition management: procurement projects on schedule**	> 60 %	163.6 %	80.10%	Achieved
24	**Absenteeism rate within the reporting period: a) average number of sick days per staff,**				Achieved
	b) % of staff on a long sick leave,	< 15 days per staff	5.6 days	4.1 days	
	c) % of staff who didn't use sick leave	< 10 %	4.4 %	3.2 %	
		> 15 %	52.9 %	51.6 %	
25	**Annual percentage staff turnover**	≤ 5 %	3.70%	5.48%	Not achieved
26	**Annual percentage occupancy rate**	> 94 %	91%	94.2%	Achieved
27	**Talent retention index**	> 0	0.9	0.2	Achieved
28	**Staff engagement level**	≥ 63 %	7.4 (index)	7.3 (index)	Achieved
29	**eu-LISA external communication impact**	Social media: +200 followers per platform per year	+477 (Twitter), + 1 888 (LinkedIn), + 332 (Facebook)	+20% (Facebook) +35% (Twitter) +37% (YouTube)	Achieved
		Engagement events: satisfaction > 90 %	84 %	80 %	Partially achieved Online format of events put limitations on the engagement of participants (based on their feedback)
		Participation at events: > 95 %	105 %	95 %	Achieved
30	**eu-LISA internal communication impact:**				Achieved
	a) survey participation				
	b) general satisfaction with internal communication channels and actions	> 51 % > 70 %	52 % 93 %	55 % 93 %	

Annex II. **Statistics on financial management**

Initial budget, transfers and amending budgets

The table below summarises at chapter level the internal budgetary transfers operated by the Agency for C1 funds in 2021 in EUR million. The Management Board approved one amendment to the budget.

Budget Chapter		Commitment appropriations				Payment appropriations			
		Initial budget	Transfers	Amending budget	Final budget	Initial budget	Transfers	Amending budget	Final budget
A-11	Salaries and allowances	35.344	-3.639	-0.983	30.721	35.344	-3.639	-0.983	30.721
A-12	Expenditure related to recruitment	0.926	-0.845		0.081	0.926	-0.845		0.081
A-13	Mission Expenses	0.600	-0.475		0.125	0.600	-0.475		0.125
A-14	Socio-Medical Infrastructure	2.541	-0.839		1.702	2.541	-0.839		1.702
A-15	Training for Staff	1.433	-0.631		0.802	1.433	-0.631		0.802
TITLE 1 - STAFF EXPENDITURE		**40.844**	**-6.429**	**-0.983**	**33.432**	**40.844**	**-6.429**	**-0.983**	**33.432**
A-20	Expenditure for premises	2.070	0.827		2.897	2.070	0.827		2.897
A-21	Corporate IT & Telecom	2.900	-0.044		2.856	2.900	-0.044		2.856
A-22	Movable Property and Associated Costs	0.289	-0.212		0.077	0.289	-0.212		0.077
A-23	Current Administrative Expenditure	1.033	-0.126		0.907	1.033	-0.126		0.907
A-24	Postage	0.036	-0.021		0.015	0.036	-0.021		0.015
A-25	Management Board	0.520	-0.499		0.021	0.520	-0.499		0.021
A-26	Information and Publications	1.735	-0.348		1.387	1.735	-0.348		1.387
A-27	External Support Services	4.291	4.194		8.485	4.291	4.194		8.485
A-28	Security	2.840	0.308		3.147	2.840	0.308		3.147
TITLE 2 – INFRASTRUCTURE AND OPERATING EXPENDITURE		**15.714**	**4.078**		**19.792**	**15.714**	**4.078**		**19.792**
B3-0	Infrastructure	74.962	-13.468		61.494	68.170	-28.501	1.523	41.192
B3-1	Applications	85.611	20.887	-16.244	90.254	85.810	36.103	41.750	163.663
B3-8	Operational support activities	12.847	-5.068		7.779	11.115	-5.251		5.864
TITLE 3 – OPERATIONAL EXPENDITURE		**173.420**	**2.351**	**-16.244**	**159.527**	**165.095**	**2.351**	**43.273**	**210.719**
TOTAL		**229.978**	**0.000**	**-17.227**	**212.751**	**221.653**	**0.000**	**42.290**	**263.943**

Implementation of the budget for the year (funding source C1)

As far as the 2021 appropriations (funding source C1) are concerned.

Budget title	Commitments (c1)			Payments (c1)		
	Budgeted (in EUR million)	Consumed (in EUR million)	%	Budgeted (in EUR million)	Consumed (in EUR million)	%
Title 1 – Staff expenditure	**33.432**	**33.432**	**100.0 %**	**33.432**	**33.432**	**100.0 %**
of which, executed		*33.432*	*100.0 %*		*32.735*	*97.9 %*
of which, automatic carry-forward		*—*	*—*		*0.697*	*2.1 %*
Title 2 – Infrastructure and Operating expenditure	**19.792**	**19.792**	**100.0 %**	**19.792**	**19.792**	**100.0 %**
of which, executed		*19.792*	*100.0 %*		*8.688*	*43.9 %*
of which, automatic carry-forward		*—*	*—*		*11.104*	*56.1 %*
Title 3 – Operational expenditure	**159.527**	**159.527**	**100.0 %**	**210.719**	**208.403**	**98.9 %**
of which, executed		*159.527*	*100.0 %*		*208.403*	*98.9 %*
TOTAL EUR	**212.751**	**212.751**	**100.0 %**	**263.943**	**261.627**	**99.1 %**
of which, executed		*212.751*	*100.0 %*		*248.826*	*94.7 %*
of which, automatic carry-forward		*0.000*	*—*		*11.801*	*4.5 %*

Implementation of the budget from other funding sources

In addition to the budget for the year (funding source C1), the Agency implemented appropriations:

- from appropriations carried over to 2021 by an MB decision (funding source C3);

- from internal assigned revenue (funding source C4);

- 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 (funding source C8);

- from external assigned revenue, as a contribution from the associated countries pursuant to Article 46(3)(b) of the establishing regulation (funding source R0, Title 3 only):

Budget Title		Fund Source	Commitment			Payment		
			Budgeted (in EUR million)	Consumed (in EUR million)	%	Budgeted (in EUR million)	Consumed* (in EUR million)	%
A-1	Staff expenditure	C1	33.432	33.432	100.0 %	33.432	32.735	97.9 %
		C4	0.004	0.004	100.0 %	0.004	0.000	0.0 %
		C8	0.541	0.383	70.8 %	0.541	0.383	70.8 %
		Subtotal	**33.977**	**33.819**	**99.5 %**	**33.977**	**33.118**	**97.5 %**
A-2	Infrastructure and Operating Expenditure	C1	19.792	19.792	100.0 %	19.792	8.688	43.9 %
		C4	0.001	0.001	100.0 %	0.001	0.001	100.0 %
		C8	10.217	9.614	94.1 %	10.217	9.614	94.1 %
		Subtotal	**30.009**	**29.407**	**98.0 %**	**30.009**	**18.303**	**61.0 %**
B0-3	Operational Expenditure	C1	159.527	159.527	100.0 %	210.719	208.403	98.9 %
		C3	56.286	56.286	100.0 %			
		C8	356.889	341.949	95.8 %			
		R0	16.546	0.000	0.0 %	16.546	0.000	0.0 %
		Subtotal	**589.248**	**557.762**	**94.7 %**	**227.265**	**208.403**	**91.7 %**
ALL		**TOTAL**	**653.234**	**620.988**	**95.1 %**	**291.251**	**259.824**	**89.2 %**

* for Title 3 C1, EUR 24.926 million refer to payments of commitments of the year. The remainder, amounting to EUR 183.477 million was used to cover commitments from previous years

Budgetary transfers

During 2021, 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 table summarises the budgetary transfers performed in 2021.

Budget transfers between titles are indicated in full value in euros.

	Budget Title	Title 1 Staff expenditures		Title 2 Infrastructure and operating expenditures		Title 3 Operational expenditures	
Budgetary transfer	Reference	Commitment Appropriation	Payment Appropriation	Commitment Appropriation	Payment Appropriation	Commitment Appropriation	Payment Appropriation
1	LIS.3660						Transfer within budgetary title
2	LIS.3679	-3 000 000	-3 000 000	3 000 000	3 000 000		Transfer within budgetary title
3	LIS.3683			Transfer within budgetary title			Transfer within budgetary title
4	LIS.3686	Transfer within budgetary title				Transfer within budgetary title	
	LIS.3688						Transfer within budgetary title
5	LIS.3694	Transfer within budgetary title		Transfer within budgetary title			Transfer within budgetary title
6	LIS.3699	-1 083 500	-1 083 500	1 083 500	1 083 500		Transfer within budgetary title
7	LIS.3703			Transfer within budgetary title			Transfer within budgetary title
8	LIS.3713					Transfer within budgetary title	
9	LIS.3716	Transfer within budgetary title					
	LIS.3717	-35 869	-35 869	35 869	35 869	Transfer within budgetary title	
10	LIS.3724	-1 817 229	-1 817 229	-19 788	-19 788	1 837 017	1 837 017
11	LIS.3726	-492 273	-492 273	-21 469	-21 469	513 742	513 742
TOTAL		-6 428 871	-6 428 871	4 078 112	4 078 112	2 350 759	2 350 759

No transfer under Article 26(2) of the Agency's Financial Rules was performed.

Detailed list of budgetary transfers (all fund sources)

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
1	LIS.3660	26/01/2021	B03003 Interoperability	0.00	-10 000 000.00
			B03010 Wide area networks	0.00	-7 000 000.00
			B03100 SIS II projects	0.00	13 050 000.00
			B03102 SIS II recast	0.00	3 000 000.00
			B03111 VIS/BMS operational maintenance	0.00	-2 000 000.00
			B03120 EURODAC projects	0.00	700 200.00
			B03121 EURODAC operational maintenance	0.00	-7 000 000.00
			B03130 EES projects	0.00	19 555 800.00
			B03131 EES operational maintenance	0.00	-4 240 000.00
			B03140 ETIAS projects	0.00	9 000 000.00
			B03141 ETIAS operational maintenance	0.00	-14 066 000.00
			B03810 External Support	0.00	-1 000 000.00
2	LIS.3679	26/03/2021	A01110 CA salaries and allowances	-3 000 000.00	-3 000 000.00
			A02700 External Support Services	3 000 000.00	3 000 000.00
			B03003 Interoperability	0.00	-8 000 000.00
			B03110 VIS/BMS projects	0.00	-1 000 000.00
			B03130 EES projects	0.00	9 000 000.00
3	LIS.3683	15/06/2021	A02000 Expenditure for premises	300 000.00	300 000.00
			A02200 Other Technical Equipment and Installation	-120 000.00	-120 000.00
			A02210 Furniture and Office Equipment	-97 000.00	-97 000.00
			A02300 Office Supplies	-63 000.00	-63 000.00
			A02400 Postage	-20 000.00	-20 000.00
			B03001 System security and business continuity	0.00	-600 000.00
			B03002 Back-up site - running costs	0.00	-100 000.00
			B03003 Interoperability	0.00	-9 600 000.00
			B03010 Wide area networks	0.00	-2 000 000.00
			B03100 SIS II projects	0.00	-2 500 000.00
			B03101 SIS II operational maintenance	0.00	-1 500 000.00
			B03102 SIS II recast	0.00	3 000 000.00

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			B03110 VIS/BMS projects	0.00	-4 500 000.00
			B03130 EES projects	0.00	26 650 000.00
			B03150 ECRIS projects	0.00	-6 000 000.00
			B03811 Consultancies and studies	0.00	-500 000.00
			B03820 Advisory Groups	0.00	-1 000 000.00
			B03821 Other meetings and missions	0.00	-150 000.00
			B03830 Operational learning and development	0.00	-200 000.00
			B03831 Training for Member States	0.00	-1 000 000.00
4	LIS.3686	27/07/2021	A01100 TA salaries and allowances	876 160.84	876 160.84
			A01110 CA salaries and allowances	-399 015.00	-399 015.00
			A01120 SNEs and Trainees allowances	-140 000.00	-140 000.00
			A01400 Annual medical check-up	40 000.00	40 000.00
			A01402 European school	-377 145.84	-377 145.84
			B03000 Shared System Infrastructure	0.00	3 100 000.00
			B03100 SIS II projects	0.00	-3 100 000.00
			B03121 EURODAC operational maintenance	0.00	-1 000 000.00
			B03130 EES projects	5 300 000.00	0.00
			B03131 EES operational maintenance	-5 300 000.00	0.00
			B03140 ETIAS projects	0.00	-1 500 000.00
			B03150 ECRIS projects	0.00	-330 000.00
			B03810 External Support	0.00	-500 000.00
			B03811 Consultancies and studies	0.00	-59 675.00
			B03820 Advisory Groups	0.00	-600 000.00
			B03821 Other meetings and missions	0.00	-37 000.00
			B03822 Schengen evaluations	0.00	-27 000.00
			B03830 Operational learning and development	0.00	4 253 675.00
			B03831 Training for Member States	0.00	-200 000.00
	LIS.3688	27/07/2021	B03130 EES projects	0.00	4 303 675.00
			B03830 Operational learning and development	0.00	-4 303 675.00
5	LIS.3694	16/08/2021	A01120 SNEs and Trainees allowances	-2 000.00	-2 000.00
			A01400 Annual medical checkup	2 000.00	2 000.00

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			A02320 Legal Expenses	65 000.00	65 000.00
			A02500 MB Meetings	-200 000.00	-200 000.00
			A02700 External Support Services	135 000.00	135 000.00
			B03003 Interoperability	0.00	-500 000.00
			B03100 SIS II projects	0.00	-1 500 000.00
			B03111 VIS/BMS operational maintenance	0.00	2 000 000.00
			B03130 EES projects	0.00	2 500 000.00
			B03140 ETIAS projects	0.00	-2 500 000.00
6	LIS.3699	01/09/2021	A01200 Recruitment and Reassignment Expenditure	-150 000.00	-150 000.00
			A01301 Mission Expenses	-233 500.00	-233 500.00
			A01403 Social activities	-200 000.00	-200 000.00
			A01500 Training for staff	-500 000.00	-500 000.00
			A02500 MB Meetings	-100 000.00	-100 000.00
			A02700 External Support Services	1 083 500.00	1 083 500.00
			A02800 Corporate Security	100 000.00	100 000.00
			B03003 Interoperability	0.00	-1 000 000.00
			B03010 Wide area networks	0.00	2 000 000.00
			B03100 SIS II projects	0.00	-2 000 000.00
			B03102 SIS II recast	0.00	1 000 000.00
7	LIS.3703	15/10/2021	A02000 Expenditure for premises	30 000.00	30 000.00
			A02330 Other Running Costs	-30 000.00	-30 000.00
			A02600 Information and Publications	-210 021.04	-210 021.04
			A02800 Corporate Security	210 021.04	210 021.04
			B03002 Back-up site - running costs	0.00	239 000.00
			B03100 SIS II projects	0.00	-100 000.00
			B03101 SIS II operational maintenance	0.00	-100 000.00
			B03102 SIS II recast	0.00	274 505.15
			B03110 VIS/BMS projects	0.00	-74 505.15
			B03111 VIS/BMS operational maintenance	0.00	-239 000.00
			B03130 EES projects	0.00	25 588.15

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			B03140 ETIAS projects	0.00	-25 588.15
8	LIS.3713	17/11/2021	B03000 Shared System Infrastructure	0.00	658 300.37
			B03001 System security and business continuity	-216 012.96	0.00
			B03010 Wide area networks	10 231 402.66	0.00
			B03102 SIS II recast	0.00	3 538 274.44
			B03110 VIS/BMS projects	-8 211 226.52	0.00
			B03111 VIS/BMS operational maintenance	0.00	3 944 298.27
			B03121 EURODAC operational maintenance	-1 955 176.14	0.00
			B03130 EES projects	4 369 231.29	0.00
			B03140 ETIAS projects	0.00	-8 246 343.56
			B03810 External Support	-434 231.29	172 963.75
			B03811 Consultancies and studies	-663 765.00	0.00
			B03820 Advisory Groups	-1 510 000.00	0.00
			B03821 Other meetings and missions	-187 000.00	0.00
			B03822 Schengen evaluations	-27 000.00	0.00
			B03830 Operational learning and development	-61 964.37	0.00
			B03831 Training for Member States	-1 334 257.67	-67 493.27
	LIS.3716	07/12/2021	A01402 European school	-4 087.00	-4 087.00
			A01500 Training for staff	4 087.00	4 087.00
9	LIS.3717	07/12/2021	A01301 Mission Expenses	-35 868.96	-35 868.96
			A02000 Expenditure for premises	500 000.00	500 000.00
			A02100 Corporate IT & Telecom	-43 983.37	-43 983.37
			A02220 Documentation and Library Expenditure	-3.00	-3.00
			A02300 Office Supplies	-1 901.03	-1 901.03
			A02320 Legal Expenses	-5 310.00	-5 310.00
			A02330 Other Running Costs	-87 151.94	-87 151.94
			A02331 HR fees and charges	-3 721.19	-3 721.19
			A02400 Postage	-988.84	-988.84
			A02500 MB Meetings	-25 879.03	-25 879.03
			A02510 Other meetings	-157 900.00	-157 900.00
			A02600 Information and Publications	-136 110.35	-136 110.35

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			A02800 Corporate Security	-1 182.29	-1 182.29
			B03000 Shared System Infrastructure	102 652.25	500 000.00
			B03003 Interoperability	0.00	500 000.00
			B03100 SIS II projects	0.00	999 999.00
			B03101 SIS II operational maintenance	1 434 762.94	1 000 000.00
			B03102 SIS II recast	389.96	1 000 000.00
			B03111 VIS/BMS operational maintenance	-1 006 356.08	500 000.00
			B03121 EURODAC operational maintenance	0.00	520 000.00
			B03130 EES projects	0.00	-2 462 818.68
			B03140 ETIAS projects	0.00	-2 656 000.00
			B03810 External Support	-497 743.34	0.00
			B03820 Advisory Groups	0.00	32 977.68
			B03821 Other meetings and missions	-33 705.73	-53 000.00
			B03830 Operational learning and development	0.00	118 842.00
10	LIS.3724	15/12/2021	A01110 CA salaries and allowances	-500 000.00	-500 000.00
			A01120 SNEs and Trainees allowances	-50 500.00	-50 500.00
			A01200 Recruitment and Reassignment Expenditure	-669 282.81	-669 282.81
			A01301 Mission Expenses	-172 043.04	-172 043.04
			A01400 Annual medical checkup	-473.56	-473.56
			A01401 Nursery allowance	-148 000.00	-148 000.00
			A01403 Social activities	-155 056.22	-155 056.22
			A01500 Training for staff	-121 873.72	-121 873.72
			A02000 Expenditure for premises	-3 381.04	-3 381.04
			A02210 Furniture and Office Equipment	5 385.87	5 385.87
			A02700 External Support Services	-21 792.60	-21 792.60
			B03000 Shared System Infrastructure	0.00	1 431 273.14
			B03001 System security and business continuity	-454 967.28	0.00
			B03002 Back-up site - running costs	21 024.18	10 062.97
			B03003 Interoperability	-22 053 473.38	0.00
			B03010 Wide area networks	-907.71	2 293 548.48

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			B03100 SIS II projects	-1 655 486.89	5 346.14
			B03101 SIS II operational maintenance	-39 879.00	0.00
			B03102 SIS II recast	0.00	728 090.13
			B03111 VIS/BMS operational maintenance	-449 161.70	0.00
			B03121 EURODAC operational maintenance	-5 079 525.19	1 024 663.98
			B03130 EES projects	16 932 321.03	-5 521 199.95
			B03140 ETIAS projects	22 969 920.68	1 837 017.12
			B03150 ECRIS projects	-8 067 000.00	0.00
			B03810 External Support	-216 258.37	0.00
			B03820 Advisory Groups	-18 276.20	0.00
			B03821 Other meetings and missions	-26 776.55	0.00
			B03822 Schengen evaluations	-22 998.90	0.00
			B03830 Operational learning and development	-1 537.60	28 215.11
			A01100 TA salaries and allowances	-211 773.38	-211 773.38
			A01110 CA salaries and allowances	-139 149.62	-139 149.62
			A01120 SNEs and Trainees allowances	-72 948.70	-72 948.70
			A01200 Recruitment and Reassignment Expenditure	-25 660.00	-25 660.00
			A01301 Mission Expenses	-33 946.12	-33 946.12
			A01500 Training for staff	-8 794.80	-8 794.80
			A02100 Corporate IT & Telecom	-224.96	-224.96
			A02300 Office Supplies	-8.64	-8.64
11	LIS.3726	21/12/2021	A02500 MB Meetings	-15 362.39	-15 362.39
			A02600 Information and Publications	-2 139.08	-2 139.08
			A02700 External Support Services	-2 495.00	-2 495.00
			A02800 Corporate Security	-1 239.00	-1 239.00
			B03000 Shared System Infrastructure	0.00	94 821.83
			B03001 System security and business continuity	-114.37	-123 251.00
			B03002 Back-up site - running costs	-274 696.58	-231 063.31
			B03003 Interoperability	-822 587.95	-186 532.04
			B03010 Wide area networks	0.00	12 577.28
			B03100 SIS II projects	0.00	243 049.20

Budgetary transfer No.	Reference	Date	Budget Line	Commitment Appropriation	Payment Appropriation
			B03101 SIS II operational maintenance	0.00	-230 996.67
			B03102 SIS II recast	0.00	1 195 021.71
			B03111 VIS/BMS operational maintenance	0.00	-323 349.43
			B03120 EURODAC projects	0.00	-270 800.08
			B03140 ETIAS projects	1 643 765.63	513 741.69
			B03150 ECRIS projects	0.00	-19 252.44
			B03811 Consultancies and studies	0.00	-110 903.00
			B03820 Advisory Groups	-23 187.56	-10 529.62
			B03821 Other meetings and missions	0.00	-7 482.28
			B03822 Schengen evaluations	0.00	-22 998.90
			B03830 Operational learning and development	0.00	1 126.23
			B03831 Training for Member States	-9 437.48	-9 437.48

Annex III. **Organisation chart**

In 2021, the Agency's organisational structure remained unchanged.

Organisational structure – status on 31 December 2021
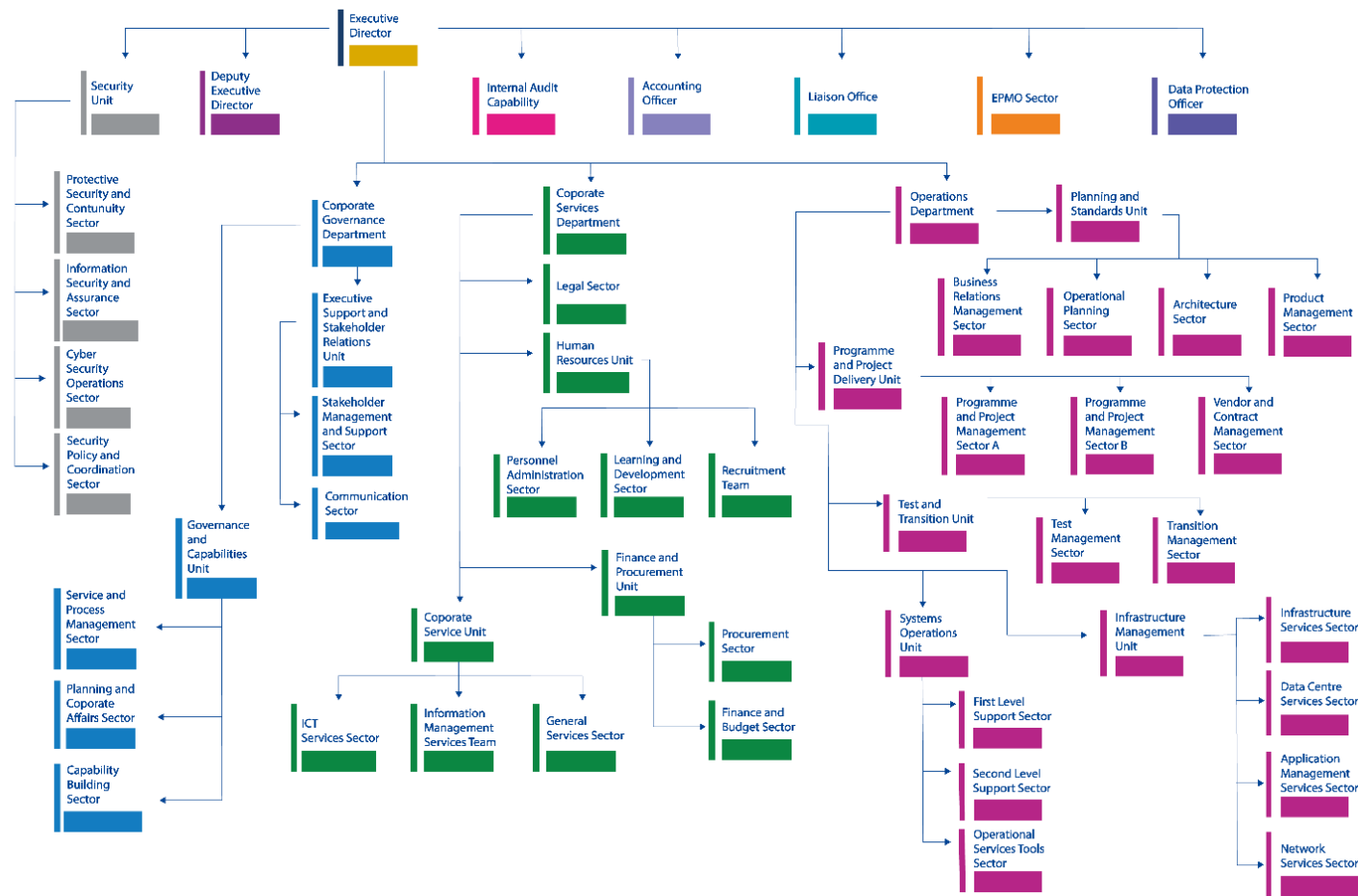
Annex IV. Establishment plan and additional information on human resources management

Establishment plan 2021

The 2021 establishment plan consisted of 213 posts for temporary agents.

Category and grade	Temporary agents
AD 16	0
AD 15	1
AD 14	1
AD 13	3
AD 12	4
AD 11	7
AD 10	10
AD 9	16
AD 8	26
AD 7	23
AD6	26
AD 5	43
Total AD	**160**
AST 11	0
AST 10	0
AST 9	1
AST 8	3
AST 7	4
AST 6	12
AST 5	12
AST 4	10
AST 3	11
AST 2	0
AST 1	0
Total AST	**53**
Total Establishment Plan	**213**

Information on entry level for each type of post: indicative table

The table below 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 are higher than the ones mentioned in Article 53 of the Conditions of Employment of Other Servants of the European Union are due to the recruitment organised during the start-up phase of the Agency when higher grades were allocated in eu-LISA's establishment plan.

Key functions (examples — terminology should be adjusted to each Agency's job titles)	Type of contract (official, TA or CA)	Function group (FG), grade of recruitment (or bottom of the brackets if published in brackets)	Indication of whether the function is dedicated to administrative support or operations (subject to definitions used in screening methodology)
Head of Department — level 2	TA	AD 12	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[95]/Assistant Assistant to the Head of Department or Assistant to the Head of Unit	TA, CA	AST 3, FG III	Administration/operations
Mail Clerk	n/a	n/a	n/a
Webmaster-Editor	n/a	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[96]	TA	AST 5	Administration

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95 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 the staff hired at grades AST 2 and AST 3 for the assistant's posts. At the same time, when necessary, external service providers (intra muros) perform the secretarial work.
96 This entry grade was established at the creation of the Agency in 2012.

Benchmarking exercise

At the end of 2021, eu-LISA conducted its benchmarking exercise in accordance with the methodology agreed by the Heads of Administration of the European Agencies in 2014. This methodology has been devised by adapting, refining and elaborating the Commission's screening methodology. The screening categorises the Agencies' 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 2021 benchmarking show a slight increase (1.7 %) in the proportion of operational posts (from 72.5 % to 74.2 %), where general operational activities increased by 3.9 %, mostly due to the need for the development of new systems, while programme management decreased by 0.5 % and top-level coordination decreased by 1.7 %. The percentage of administrative and coordination posts slightly decreased by 0.5 % from 16.5 % to 16.0 %. The number of neutral posts also decreased by 1.2% from 11% to 9.8%.

More services for administrative support and coordination were outsourced, from 52.2 % to 55.8 %, while they decreased for operational activities from 42.4 % to 40.4 %. The neutral posts outsourced has also decreased from 5.4 % to 3.8 %.

Results of the eu-LISA benchmarking exercise in 2021 - staff members' posts

Job type (sub)category	2019 (%)	2020 (%)	2021 (%)
Administrative support and coordination	**16.6**	**16.5**	**16**
Administrative support	11.5	12	11.1
Coordination	5.1	4.5	4.9
Operational	**72.4**	**72.5**	**74.2**
General operational	62.6	61.5	65.4
Programme management	3.1	4	3.5
Top-level operational coordination	6.7	7	5.3
Evaluation and impact assessment	0	0	0
Neutral	**11**	**11**	**9.8**
Finance and Control	11	11	9.8
Linguistic activities	n/a	n/a	n/a

The Agency also screened the posts occupied by external service providers (the on-site contractors' personnel), with the following results.

Results of the eu-LISA benchmarking exercise in 2021 – external service (on-site contractors)

Job type (sub)category	2019 (%)	2020 (%)	2021 (%)
Administrative support and coordination	51.2	52.2	55.8
Administrative support	47.8	40.2	37.5
Coordination	3.4	12	18.3
Operational	43.5	42.4	40.4
General operational	36.3	35.8	35.6
Programme management	2.9	2.2	1.5
Top-level operational coordination	2.4	2.2	1.9
Evaluation and impact assessment	1.8	2.2	1.4
Neutral	5.2	5.4	3.8
Finance and Control	5.2	5.4	3.8
Linguistic activities	n/a	n/a	n/a

Information on the list of HR implementing rules adopted in 2021

eu-LISA did not adopt any implementing rules to the Staff Regulations in the course of 2021.

Annex V. **Human and financial resources by activity**

Human Resources by activity

In 2021, out of total 310 available staff members, 226.85 FTEs[97] (73.2 % of staff) were used for operational activities and 30.85 FTEs (10 % of staff) for related procurement and financial activities. 52.3 FTEs (16.9 % of staff) were used for horizontal activities (general coordination and administrative support).

The table below presents an overview of staff per legislative proposal defining the area of activity.

Human resources per area of activity in 2021

Activity area	2021 authorised			2021 actual situation on 31.12.2021		
	TA	CA	SNE	TA	CA	SNE
Posts authorised under 2020 budget (baseline)	113	30	9	113	30	8
EES	32			26		
Revised eu-LISA Regulation – additional staff	23	27	2	22	25	2
ETIAS	7	35		7	28	
ECRIS-TCN		5			4	
SIS return and SIS border		4			4	
Interoperability	32	26		25	16	
LFS Eurodac - subject to adoption of the legal instrument	2			0		
LFS SIS police recast - subject to adoption of the legal instrument		0[98]			0	
LFS VIS recast - subject to adoption of the legal instrument	4[99]	5[100]		0	0	
Total FTEs	**213**	**132**	**11**	**193**	**107**	**10**

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:

- **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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97 FTE stands for full time equivalent.
98 Two posts for CA that have been envisaged in the Commission proposal in 2021 have not been authorised in the 2021 budget due to the delayed adoption of the respective Regulation.
99 Due to the late adoption of the VIS recast Regulation, the staff numbers were moved forward to the following years without changing the establishment plan of eu-LISA.
100 Due to the late adoption of the VIS recast Regulation, the staff numbers were moved forward to the following years. Therefore, no recruitment could occur in 2021.

During the reporting year, the Agency implemented a budget of EUR 212.7 million, of which:

- 75 % was spent on operational activities,
- 25 % represented corporate horizontal costs.

The total system costs are summarised below:

Systems	Total costs (in EUR)
SIS II	30 375 222.9
VIS/BMS	41 320 274.8
Eurodac	16 047 590.1
EES	70 817 770.2
ETIAS	50 727 626.8
ECRIS-TCN	3 448 809.1
TOTAL	**212 737 293.9**

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 EUR million 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	13.00	16.90	7.17	34.04	17.94	3.45
Projects	1.84	1.79	0.00	27.60	24.61	0.00
Networks	4.33	6.09	2.21	9.17	8.18	0.00
Maintenance	11.19	16.54	6.67	0.00	0.00	0.00
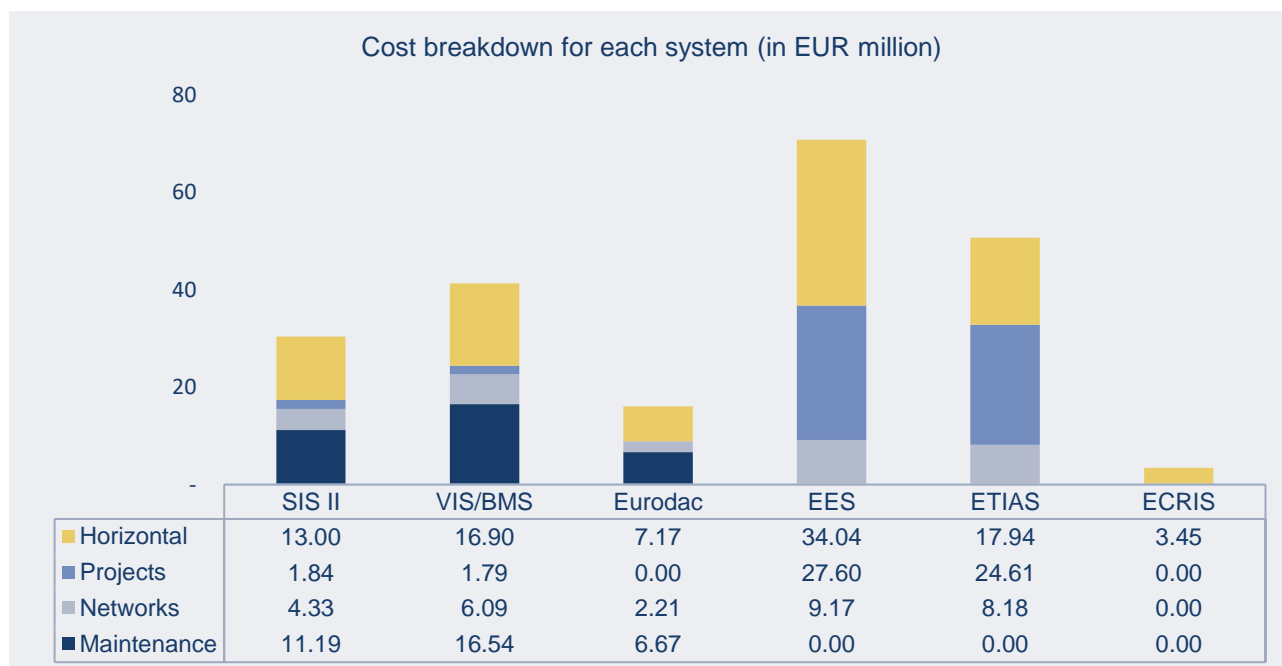
Expenditure related to the multi-site organisation

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.

Share of 2021 direct costs associated with the Agency's multi-site organisation (in EUR million)

Budget title		Total executed payments	Payments related to the Agency's multi-site organisation	Share (%)
A01	Staff Expenditure	32.735	0.043	0.13 %
A02	Infrastructure and Operating Expenditure	8.688	n/a	n/a
B03	Operational Expenditure	208.403	n/a	n/a
Total		249.826	0.043	0.02 %

Direct costs related to the Agency's multi-site organisation are mission expenditure for statutory staff travelling between the Agency's headquarters in Tallinn and the Agency's technical site in Strasbourg. In 2021, this represented 0.02 % of the total of payments executed.

Annex VI. **Contribution, grant and service-level agreements**

Not applicable to eu-LISA.

Annex VII. **Environment management**

The Agency's SPD 2021–2023 did not include a dedicated Annex VI identifying actions and targets to reduce the impact of its administrative operations on the environment.

Annex VIII. **Annual accounts**

	31/12/2021	31/12/2020	Variation	Var %
Computer software	53,422,918	45,915,100	7,507,818	16%
Intangible assets under construction	36,541,630	26,722,167	9,819,463	37%
Intangible assets	**89,964,548**	**72,637,267**	**17,327,281**	**24%**
Land and buildings	33,508,672	31,708,123	1,800,549	6%
Plant and equipment	283,462	473,914	(190,452)	-40%
Furniture and vehicles	159,164	102,817	56,347	55%
Computer hardware	76,478,883	64,992,434	11,486,449	18%
Other fixtures and fittings	694,708	953,733	(259,025)	-27%
Buildings under construction	-	600,000	(600,000)	-100%
Property. plant and equipment	**111,124,889**	**98,831,021**	**12,293,868**	**12%**
Non-current pre-Financing	**2,546,822**	**2,546,822**	**-**	**0%**
Non-current exchange receivables	**137,797**	**135,277**	**2,520**	**2%**
TOTAL NON CURRENT ASSETS	203,774,056	174,150,388	29,623,669	17%
Deferred charges	16,094,899	22,262,822	(6,167,923)	-28%
Other exchange receivables	29,232,321	23,488,844	5,743,477	24%
Current exchange receivables	**45,327,220**	**45,751,666**	**(424,446)**	**-1%**
VAT receivables	1,539,514	2,900,354	(1,360,840)	-47%
Accrued income	7,584,440	-	7,584,440	
Contribution from associated countries	24,405,313	3,763,102	20,642,211	549%
Non-exchange receivables	**33,529,267**	**6,663,456**	**26,865,811**	**403%**
TOTAL CURRENT ASSETS	78,856,487	52,415,122	26,441,365	50%
TOTAL ASSETS	**282,630,544**	**226,565,509**	**56,065,034**	**25%**
Accumulated surplus	**139,313,173**	**84,635,727**	**54,677,447**	**65%**
Economic result of the year (+ profit)	**61,874,238**	**54,677,447**	**7,196,792**	**13%**
NET ASSETS	201,187,412	139,313,173	61,874,238	44%
Current payables	34,654,276	56,299,740	(21,645,464)	-38%
Accounts payables with consolidated entities	3,075,730	3,610,513	(534,783)	-15%
Accounts payables	**37,730,007**	**59,910,254**	**(22,180,247)**	**-37%**
Accrued charges	**43,713,125**	**27,342,082**	**16,371,043**	**60%**
TOTAL CURRENT LIABILITIES	81,443,132	87,252,336	(5,809,204)	-7%
TOTAL LIABILITIES	**282,630,544**	**226,565,509**	**56,065,034**	**25%**

STATEMENT OF FINANCIAL PERFORMANCE 2021 (EUR)

	2021	2020	Variation	Var %
EU Contribution	260,867,265	229,773,830	31,093,435	14%
Contribution of EFTA countries	32,069,317	4,045,520	28,023,797	693%
Non-exchange revenue - transfer of asset	-	750,000	(750,000)	-100%
Non-exchange revenues	**292,936,582**	**234,569,350**	**58,367,232**	**25%**
Administrative revenues with consolidated entities	4,087	5,699	(1,612)	-28%
Miscellaneous income	618	14,535	(13,918)	-96%
Exchange rate gains	21	110	(89)	-81%
Exchange revenues	**4,726**	**20,345**	**(15,619)**	**-77%**
TOTAL REVENUES	292,941,308	234,589,695	58,351,613	25%
Operational expenses	**(132,513,317)**	**(113,925,007)**	**(18,588,310)**	**16%**
Staff expenses	(30,877,862)	(25,651,441)	(5,226,422)	20%
Finance costs on late payment	(3,192)	(22,393)	19,202	-86%
Administrative and IT expenses	(7,265,149)	(5,985,233)	(1,279,916)	21%
Other external service provider expenses	(4,575,529)	(3,571,376)	(1,004,153)	28%
Expenses with consolidated entities	(3,458,695)	(2,477,099)	(981,596)	40%
Fixed asset related expenses	(51,700,205)	(28,130,679)	(23,569,526)	84%
Operating Lease Expenses	(672,865)	(148,998)	(523,866)	352%
Exchange rate losses	(256)	(21)	(234)	1092%
Administrative expenses	**(98,553,753)**	**(65,987,241)**	**(32,566,512)**	**49%**
TOTAL EXPENSES	(231,067,070)	(179,912,248)	(51,154,822)	28%
ECONOMIC RESULT FOR THE YEAR	**61,874,238**	**54,677,447**	**7,196,792**	**13%**

CASH-FLOW STATEMENT 2021 (INDIRECT METHOD IN EUR)

	2021	2020
Economic result of the year - Profit/(loss)	61,874,238	54,677,447
Amortisation of intangible fixed assets	19,329,041	12,065,219
Depreciation and write off of tangible fixed assets	26,957,710	12,245,422
(Increase)/decrease in Long term Prefinancing/Deposits	(2,520)	(135,277)
(Increase)/decrease in Short term Receivables	(26,441,365)	(25,833,753)
Increase/(decrease) in Accounts payable and accrued charges	(5,274,421)	55,334,622
Increase/(decrease) in Liabilities related to consolidated EU entities	(534,783)	1,952,938
Net cash Flow from operating activities	75,907,900	110,306,618
(Increase) of tangible and intangible fixed assets	(75,907,900)	(110,306,618)
Net cash flow from investing activities	(75,907,900)	(110,306,618)
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	-	-

CAAR 2021 ref. number	SPD 2021-2023 ref. number	Annual activity	Planned outcome	Delivered outcome	Performance indicator	Status of performance indicator
1.1.1	2.1.1.7	**EES maintenance**	EES central system performs as per SLA	**Other** Activity has not yet started	Conformity with the EES SLA	**Other** Activity has not yet started
1.1.1	2.2.1.15	**EES project implementation**	Supporting the Member States in achieving smarter and more secure border management	**Ongoing** The Agency completed the delivery and installation of all NUIs in May updated all VIS TAPs. The EES Core software Factory Acceptance Testing tested version was delivered later than expected, since Factory Acceptance Testing was shifted from July to November. The EES contractor delivered reusable software components crucial for integrating VIS and BMS with delay. The Agency delivered various Interface Control Document (ICD) corrective versions to the Member States and corresponding Test Design Documentation. Central System Simulator aligned to this release was provided in August. In August, the Agency installed the intermediate release in the MS environments, but the application and platform issues emerged, blocking MS from testing. The Agency resolved the issue at the end of November. After the Agency completed the FAT testing in November, The Agency installed the final release in MS compliance testing environments in December. System solution testing started later than expected in December.	Cost, schedule and scope	**Below target** Cost: amber, schedule: red, scope: amber Delays are related to the low performance of EES contractor: late development of final EES software release due to internal delays of contractor, late development of final Integration Layer/Business Continuity Service, which affects also integration of VIS/sBMS with EES, late delivery of common platform components (automated deployment tool, containers SW management), instability of testing environments in September to November due to platform setup.
1.1.1	2.2.1.16	**EES BMS/sBMS implementation**	Supporting the MS and relevant JHA agencies in achieving smarter and more secure border management	**Ongoing** The Agency installed the BMS infrastructure and set up the testing environments. The Agency finished the FAT of intermediate releases; however, the Agency left the final FAT for Jan 2022 due to missing SW from the EES contractor. The BMS has not joined SST in Dec due to late FAT closure.	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: amber. BMS software and infrastructure part are timely developed. Delays have occurred due to dependencies from reusable components late delivered by EES contractor.
1.1.1	2.2.1.17	**Implementation of the ETIAS**	ETIAS is developed according to the covering regulation and provide Member States with a new system aiming at assessing the risk prior to the entrance into the Schengen area of visa-exempt third country nationals	**Ongoing** On 21 January, the Agency awarded the contract for the development services of ETIAS. The technical specifications of the ETIAS watchlist were approved by the eu-LISA Management Board on 15 June. The first version of the data protection impact assessment was completed and shared with the EDPS. A market research was conducted for the audio video tool.	Cost, schedule and scope	**Partially on target** Cost: green, schedule: amber, scope: amber The programme faced some challenges related to several external dependencies, in particular from the EES components.

1.1.1	2.2.1.18	**Implementation of the Regulations on establishing a framework for interoperability between EU information systems**	ESP, CIR, MID and CRRS fully implemented together with all interfaces to existing systems. Interfaces to future systems will be also taken into consideration	**Ongoing** ESP, CIR, MID and CRRS have entered their implementation phase. The eu-LISA Management Board adopted the technical specifications for CRRS in March, for ESP, CIR and MID in April. The development and integration started by the end of year.	Cost, schedule and scope	**Partially on target** ESP/CIR/MID: Cost: green, schedule: amber, scope: green CRRS: Cost: green, schedule: amber, scope: amber
1.1.1	2.2.3.1	**Feasibility study and implementation of a biometric toolset**	The Agency will have the capacity to build tools to independently test biometric algorithms; perform accuracy testing and create a facial images database	**Postponed** The project has not started yet due to delays with the eu-LISA efforts linked to creating a representative synthetic mated FP and FI sample database.	Cost, schedule and scope	**Other** Project delayed
1.1.2	2.2.1.19	**ECRIS-TCN implementation**	This centralised system will allow the Member State authorities to identify which other Member States hold criminal records on the TCN concerned so that they can then use the existing ECRIS system to address requests for conviction information only to these Member States.	**Ongoing** Preparation phase completed on 21 February with the finalisation of the tender technical specifications. Project initiation phase launched on 3 March. ECRIS-TCN data protection impact assessment is being finalised. Project set-up, analysis and design, and development and testing activities started at the end of the year.	Cost, schedule and scope	**Partially on target** Cost: green, schedule: amber, scope: green
1.1.2	2.2.1.20	**Integration between ECRIS-TCN and the interoperability components (CIR, SBMs, CRRS)**	The ECRIS-TCN data will be available on CIR and sBMS via the ESP.	**Ongoing** See above.	Cost, schedule and scope	**Partially on target** Cost: green, schedule: amber, scope: green
1.1.1	2.1.1.10	**Enterprise architecture continuum – establishing an interoperability architecture**	Definition the interoperability building blocks, requirements catalogue for interoperability, application/data matrix for mapping between business functions / applications, and data needs, patterns and standards for existing and new systems	**Ongoing** The Agency put in place the Architecture Review Board that continuously concentrates on ensuring the proper alignment of the IT architectural, design and development initiatives with the Agency's IT goals, corporate and technology strategy.	Conformity with the Enterprise Architecture plan	**On target** Conformity with the enterprise architecture plan
1.1.3	2.2.1.10	**Technical support for a project to develop a proof of concept and a prototype of the EU online visa application portal**	The project results should provide an important evidence basis for considering the feasibility of the EU online visa application portal and taking decisions on further steps, including possible legislative proposals	**Delivered** The Agency tested the feasibility of an EU online visa application portal and provided guidance on the technical, budgetary and legal requirements for an online visa application portal in time, quality and budget.	Cost, schedule and scope	**On target** Cost: green, schedule: green, scope: green The Commission confirmed the success of the pilot project and confirmed that the work on the prototype platform will be taken into account in the upcoming Commission proposal on digitalisation of visa procedures.
1.1.3	2.3.1	**Execution of annual research and technology monitoring roadmap and the research and technology monitoring strategy**	Dissemination of knowledge and provision of ad hoc advice boosts stakeholder awareness on technical matters, leading to improved collaborative possibilities. The Agency's profile as a centre of knowledge is raised and its image boosted	**Delivered** In March, the Agency signed the terms of reference with DG HOME for the formal engagement in the EU Framework Programme for Research and Innovation. The topic for the annual research and technology monitoring report for 2021 focused on seamless and contactless travel. The Agency organised two Industry Roundtable events. The Agency also contributed to the work of the EU Innovation Hub for Internal Security by drafting a proposal for the operational and financial frameworks and identifying the priorities for the Hub.	(1) Number of research reports prepared and published on eu-LISA website (2) Number of delegates at the Agency's two industry events and annual conference	**Partially on target** (1) Two reports have been prepared and are under finalisation (2) Two Industry Roundtables with more than 300 participants in each one (3) Implementation of the eVisa pilot project

1.1.3	2.3.1	**Integration of research findings into internal projects**	Advance planning for systems evolution is undertaken with full knowledge of trends and likely future possibilities, enabling more efficiency	**Delivered** The Agency achieved the outcomes through roadmaps, action plans and dedicated newsletters. The Agency published internal Research and Development newsletters. The Agency chaired the Working Group on AI.	(1) Number of briefs submitted to the management and operations teams upon request (2) Amount of engagement with system AGs to refine priorities and feedback into system evolution work	**On target** Technology briefs were not delivered as there were no specific requests for technology briefs. Instead, the following outputs were delivered: - Action Plan for the implementation of the Roadmap for Standardisation - Roadmap for Artificial Intelligence Initiatives at eu-LISA; - Four research newsletters
1.2.1	2.1.1.3	**SIS Maintenance**	SIS system available, as per SLAs, in 2021	**Delivered** The overall performance of the SIS central system was within the agreed service-level agreement, with no major incidents reported; only minor incidents affected the system's availability. Most of the incident and problems within the corrective maintenance were handled in time. The Adaptive maintenance deliverables however were not delivered on time or were delivered with delays.	Conformity with the SIS SLA and SIS-related corporate KPIs	**On target** Conformity with the SIS SLA and KPIs: KPI 6: SIS central system availability: 99.98% KPI 7: SIS central system response time: 99.85%
1.2.1	2.1.1.4	**SIS AFIS Maintenance**	SIS AFIS system available, as per SLAs, in 2021	**Delivered** The overall performance of the SIS AFIS was within the agreed service-level agreement, with no major incidents reported.	Conformity with the SIS SLA	**On target** Conformity with the SIS AFIS SLA
1.2.1	2.1.1.5	**SIS support to Member States**	Effective support for national systems	**Delivered** There were no deviations from the Member States integration testing plan. The Agency provided resolution for more than 800 support requests from the Member States and permanent dedicated real-time support to the Member States via chat. 30 out of 34 Member States participated in the campaign for the SIS's latest release's user acceptance test. The campaign required three cycles of execution. The Agency executed 80% of the campaign successfully. The Agency also successfully finalised a qualification campaign to implement fingerprint searches on the national systems. The Agency provided support to the SIS Member States and users in the scope of national system upgrades and free testing on eu-LISA's playground environments.	(1) Quality and time of Member States' integration (2) Adherence to the Member States' testing plan	**On target** Qualification of several upgrades of the NS (BG, CH, SK), and the qualification of the FPS biometric queries (IE, NO, RO). Heavy involvement on the Recast CTE campaign that started in end of August 2021, with more than 60% of pass rate.
1.2.1	2.1.1.6	**SIS unplanned evolutions**	New SIS central system release	**Ongoing** The project addressing the evolution of DCC progressed. The first step was ongoing, including the parallelisation of low-priority DCC. The Agency started a project to install at the CU an interconnection box similar to that used by the Member States. This will allow the Agency to conduct full end-to-end testing without requiring the help of the Member States.	Cost, schedule and scope	**Partially on target** Cost: green, schedule: amber, scope: green The DCC project is ongoing as planned. The interconnection box project is at risk of delay due to hardware supply shortage.
1.2.1	2.2.1.1	**New SIS legal framework implementation**	A new SIS central system release including the new SIS core functionalities identified in the recast legal instrument (return decision not included)	**Ongoing** Interface Control Document/Detailed Technical Specifications (ICD/DTS) v4.9.0.12 was approved on 2 November, five waves of CTE tests were conducted. Migration tests started towards the end of the year. The Central System simulator for SIS Recast was completed (not yet aligned with the final release).	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: green The schedule has been affected by the late delivery of the 130 MB database, required for the tests, and by dependencies with other SIS projects and delays in the delivery of hardware.
1.2.1	2.2.1.2	**SIS return decision**	A new SIS Central System release including return decision functionalities	**Ongoing** Project carried out together with the SIS new legal framework implementation.	Cost, schedule and scope	**Below target**: Cost: green, schedule: red, scope: green Schedule affected by the same factors as SIS Recast (above).

1.2.1	2.2.1.11	**New search engine and Oracle upgrade for SIS, improving availability and considering transcription aspects**	New SIS Central System cost efficient state of the art search functionalities, additional query and alerts capacity; prepare search engine module for National Systems	**Ongoing** The new search engine (Elasticsearch) was deployed at the end of the year but the migration to the Member States was postponed to 2022.	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: amber The project was delayed by quality issues in the development and testing.
1.2.1	2.2.1.3	**Core SIS generic interconnection module / interface to allow SIS connections to other systems and implementation of ETIAS inter-connection**	Operational SIS Central System platform/interface for interconnection to other systems in place SIS is in line with ETIAS legal provisions and allows, through automated searches, to assess if the entry of the applicant into the Union could pose a threat	**Ongoing** During the second part of the year, negotiations took place with the contractor on the offer to start this project in 2022.	Cost, schedule and scope	**Partially on target** The start of the project was postponed to early 2022.
1.2.1	2.2.1.4	**Implementation of SIS AFIS Phase 2**	This project will provide additional biometric capabilities to MS	**Ongoing** The Agency worked on the development and testing of both 2021 releases. Owing to the quality issues encountered in the testing, the deployments of both releases were postponed to 2022. Preparatory work at the CU was completed and the pre-production environments were fully installed at both CU and BCU.	Cost, schedule and scope	**Below target** Cost: red, schedule: red, scope: amber The schedule has been affected by significant delays. The cost increased due to the need to purchase additional hardware for the various test environments that were not foreseen in the original offer.
1.2.1	2.2.1.5	**SIS Pre-Production Environment (PPE) move from In the Mountain (ITM) to Out of the Mountain (OTM)**	Separation and movement of SIS II PPE Systems from ITM to OTM in BCU Premises. This will release valuable Data Centre footprint that can be used for PRD expansion.	**Ongoing** The move of the PPE was completed. The cleaning and decommission activities were under finalisation.	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: green The schedule was affected by quality and resource issues, as well as the pandemic.
1.2.2	2.1.1.2	**VIS/BMS Maintenance**	VIS/BMS behave as per requirements and events preventing the system to behave appropriately are managed in a timely manner so that performance remains within the Service Level Agreement with the end users	**Delivered** The overall performance of the VIS/BMS system was within the agreed service-level agreement, with no major incidents reported. Due to the closed borders, the system's usage was lower than the usual trends before the COVID pandemic. The Agency successfully implemented four releases: hardware replacements, a major update of system version, migration of VIS Oracle database on Exadata and outside of the release process, the migration of the VIS backup and archive solution was also successfully migrated to CSI.	Conformity with the VIS/BMS SLA and KPI	**On target** Conformity with the SIS SLA and KPIs: VIS Central System availability = 99.98% VIS Central System Response Time = 99.90%
1.2.2	2.2.1.7	**VIS Recast Development**	Modified CS-VIS and NS-VIS in line with the amended VIS legal base	**Ongoing** Following the significant delay in adopting the new VIS Regulation, the LFS will shift by one year. However, the Agency proceeded with the project preparation by the end of 2021 to be able to launch the first phase in January 2022, consisting of eliciting the requirements from the primary regulation and all associated implementing and delegated acts.	Cost, schedule and scope	**On target** As the whole LFS has been shifted by one year there was no budget available anymore in 2021 for VIS Recast, the preparatory activities allowed however to start more efficiently in 2022.
1.2.2	2.2.1.8	**ETIAS development – implementation of consequential amendments for VIS**	Increased functionalities of VIS system and legal compliance	**Other** Due to additional constraints introduced by late ETIAS implementing acts, the Agency needs to refactor the legacy VIS on the common shared platform before the implementation of VIS-ETIAS to meet the availability requirements and proceed with the implementation of the required Common Identity Repository. Consequently, the Agency merged this activity with the implementation of VIS Interoperability happening in 2022. This change does not affect the delivery time of VIS-ETIAS, which is still in line with the political deadlines.	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: red Activity postponed and merged with another activity implemented in 2022 due to a significant scope change introduced by a late Regulation

1.2.3	2.1.1.1	**Eurodac – DubliNET Maintenance**	The MS receive a reliable service of the Eurodac system and a secure and reliable DubliNET communication	**Delivered** The Agency ensured the continuous monitoring of the system operations and its components (Eurodac CS operational status and users connectivity and operations), provided communication and interacted with the end-user community to improve and stabilise operations and provide user 1st, 2nd, 3rd level support (incident, problem management activities). The Agency continuously monitored the system inventory and components to keep the system up to date and under continuous support from suppliers (licence renewal, patching etc. as part of Adaptive maintenance), implemented urgent technical changes and interventions coming from corrective or adaptive maintenance and other operational emergencies and security patching/remediation.	Conformity with the Eurodac, DubliNET SLA and Eurodac-related corporate KPIs	**Partially on target** Conformity with the SIS SLA and KPIs: KPI-3 Eurodac central system availability :99,80% (Amber target achieved) KPI-4 Eurodac central system response time:100% (Green target achieved)
1.2.3	2.2.1.6	**Eurodac compliance with CSI/CSS services**	The Central Eurodac system complies with the CSI requirements and takes advantage of the offered CSS, allowing harmonisation across applications, the creation of synergies and facilitating operational management, economies of scale, and a reduction of TCO	**Postponed** The Agency postponed this activity to implement this with Eurodac Recast. Full integration and synchronisation of Eurodac with CSI/CSS services will be possible when implementing Eurodac Recast only. The condition is to migrate the sBMS service. The current Eurodac design and required infrastructure (mostly AFIS) is incompatible with CSI.	Cost, schedule and scope	**Other** Project has been postponed.
1.2.4	2.1.1.15	**24/7 1st level support for Operational management of the systems - eu-LISA Service Desk**	Core business systems and Member State users receive efficient and reliable services as 1st level of support and communication via the agreed communication channels.	**Delivered** Despite the challenges due to COVID-related restrictions, the team successfully provided continuous, uninterrupted 24/7 services to customers, including monitoring the large-scale IT systems, detecting and resolving incidents, fulfilling customer requests, and providing regular business reporting.	(1) Service Desk Performance indicators (2) Annual Customer Satisfaction survey	**Above target** (1) KPI 19 = 95% (2) KPI 20 = 95%
1.2.4	2.1.1.17	**24/7 second-level application support for the operational management of the systems**	Core Business Systems and the Member States receive a reliable service in relation to applications, including databases	**Delivered** Despite the COVID-related restrictions, the Agency delivered a nonstop service to the Member States and all collaborators. There was no major outage of any systems, and the Agency successfully deployed planned releases to evolve the services and quality of the Central Systems.	Conformity with the operational service level agreement of the applications	**On target** Conformity with the service level agreement
1.2.4	2.2.1.9	**Integration of the Single Integrated Monitoring solution with the Event management process, covering all the systems in operation**	Based on the Event management process across the systems and the improved quality of the alarm generation, the required integration with the Single monitoring solution will substantially enhance the monitoring efficiency and effectiveness	**Postponed** The selected resource expected to start mid-June 2021 declined the offer two weeks before the starting date. The main reason is the unappealing contractual conditions of the short-term non-renewable post. The Agency had to restart the recruitment process and within temporary internal reallocation of staff, could start the activity before the end of the year.	Cost, schedule and scope	**Project postponed** Start of project postponed to Q1 2022. The whole project schedule was postponed because the required human resource could not be hired as planned due to the unattractive contractual conditions.

1.2.5	2.1.1.12	**Release and deployment management activities**	Better coordination and follow-up of all the activities related to the release and deployment management on all the phases: planning, build, test and validation, deployment, review and closure	**Ongoing** The Agency shared the release plans of SISII, VIS/BMS and Eurodac with Advisory Groups. The Agency respected the release and deployment management lifecycle for all the releases managed. Following the process, the quality issues discovered during the test phases led to delays for some releases on Eurodac and SIS, the latter having releases re-scheduled for 2022. The Agency coordinated and deployed the VIS releases as planned. The Agency also integrated Ireland successfully as planned. The release and deployment management lifecycle has been respected for all the releases managed by eu-LISA. Following the process, the quality issues discovered during the test phases led to delays for some releases on Eurodac and on SIS II. The latter having releases re-scheduled for 2022. VIS releases have all been coordinated and deployed as planned.	Delivery of the release plans Implementation of the releases for the Core Business Systems	**Below target** VIS Release Plan was created and accepted in Q1 2021. The Agency deployed 4 corrective and adaptive releases on VIS system, as per Release Plan. Eurodac Release Plan created and accepted in Q1 2021 with one corrective and adaptive release, based on the Security Patching and Security Remediation projects. The release has been implemented with significant delay due to quality issues discovered during test and during the deployment. SIS II Release Plan 2021 has been accepted in Q2 2021 due to quality issues discovered during testing and Covid-19 situation that impacted the project and led to several updates of the planning. The disconnection of UK and the integration of Ireland have been executed on time. 20_R1 release (new search engine) was deployed end of the year with significant delay. The migration of the National Systems to the new search engine, the 21_R1 release (AFIS) and the 21_R2 release (Recast, AFIS) have been rescheduled to 2022.
1.2.5	2.1.2.1	**Improvements to the application lifecycle management (ALM)**	Quicker delivery of releases	**Postponed** The Agency needed to postpone the implementation of the process and the integration of the tools for the Application Lifecycle Management to take into account the need to set up a System Development Lifecycle (SDLC) in the frame of the Transversal Engineering Framework and thus avoid performing duplicate work and unnecessary implementation not adapted to the new model. The implementation of automation with build pipelines and deployment pipeline and testing tools has started in 2021 with the development of the new systems.	Time to market (compared to previous year)	**Other** As the improvements are only at the early phases and on the new systems, the expected benefits cannot be seen yet.
1.2.5	2.1.2.2	**Support of application lifecycle management (ALM) platform**	Ensuring continuity and well-functioning of the ALM platform which is supporting the management of the applications (tests, release, maintenance, ...)	**Ongoing** The Agency supported the existing tools of the ALM platform to ensure their availability. With a slight delay, the Agency delivered the work package that included tools related to the building and deployment pipelines (GitHub, SonarQube, Jenkins, Artifactory) and testing tools (qTest, Tosca). The platform is available, and the work persists with continuous improvements and on-boarding new projects (i.e. new CBS releases).	Platform continuously available to support the activities on ALM, no project or release activity impacted due to the availability of the tools and the data	**On target** The platform has continuously been available, and supported activities related to integrated contractor deliveries of CBS. No project delay linked to existing ALM tools in the project reports.
1.3.1	2.1.1.16	**Network services delivery and regular operational management of the communication infrastructure contracts (budget execution, acquisition, renewal, contract management)**	Core Business Systems and Member States receive a reliable service from the communication infrastructure, related communication systems are as per requirements, and are managed proactively so that performance is per the SLA	**Delivered** The communication infrastructure and communication infrastructure systems (VIS Mail, SIS Mail) were available within the agreed service-level agreements. In particular, the Agency successfully renewed, as per intended schedule, 100% of the SIS Certes encryption infrastructure, located at Member States and eu-LISA locations, to support the increased capacity stemming from SIS AFIS. The Agency also migrated the SireneMail and VISMail systems to the Common Shared Infrastructure to ensure third party and manufacturing support.	Conformity with the communication infrastructure SLAs	**On target** Conformity with the CSI SLAs

1.3.1	2.2.1.13	**Transition to new TESTA network**	Supported smooth and secured communication exchange between National Systems and Central systems and among Central system instances for several years to come	**Ongoing** The European Commission (Directorate-General for Informatics) is managing the signature of the new TESTA contract. eu-LISA, together with other agencies and institutions, helped in the technical evaluation of the offers. The technical evaluation was 100% completed by the end of 2021.	Cost, schedule and scope	**Below target** Delay in the signature of the contract The new TESTA framework contract will be awarded Q1 2022 instead of Q1 2021.
1.3.1	2.2.1.23	**Implementation of the Secure Network Access service (SERENA)**	Reduce on-site presence limitations due to the limited office space with access to the secure administration network. Allow for scalability on the different ongoing initiatives. Modernise and further improve the existing access from contractors	**Ongoing** The project was approved by the MB in December. The project initiation started.	Cost, schedule and scope	**On target** Project started in December 2021.
1.3.2	2.1.1.11	**CU and BCU operational activities, evolutions and improvements**	Data centre up and running	**Ongoing** 2021 achievements at the CU include: - 30% capacity extension through a containerised Mobile Data Centre; - relevant decommissioning of several legacy systems' assets; - infrastructure alignment towards standardised CSI requirements - implementation of DCIM tool; - 90 % decrease on data centre access requirements;	Availability of data centre services	**Below target** Operational integration and collaboration of information technology and facility management disciplines is not yet achieved.
1.3.2	2.1.1.14	**Backup Central Unit daily operation management**	The data centres (BCU) perform as required, providing the Agency with this necessary functionality.	**Ongoing** 2021 achievements at the BCU Data Centres include: - site agreement amendment to update the Agency's identified requirements; - capacity extensions; - creation of a new CSI PPE environment with 36 racks aligned with CU CSI PPE; - renewal and increase of the entire power infrastructure, aligned with the CSI infrastructure; - complete implementation of structured pre-cabling according to CSI standards; - Improvement connectivity by deployment of new fibres.	Availability of data centres resources (including cooling and power)	**On target** - availability rate and on-duty shifts kept at all times despite the pandemic and the travel restrictions; - scheduled and required switch-over activities were undertaken:
1.3.2	2.2.1.12	**Continuation of data centres reorganisation activities**	Date centres will meet the new requirements in terms of high density to achieve bigger hosting capacity to cope with the business needs	**Other** This activity was conducted as part of the activity 'CU and BCU operational activities and evolutions'.	Cost, schedule and scope	**Other** This activity was conducted as part of the activity 'CU and BCU operational activities and evolutions'.
1.3.2	2.2.1.14	**Central systems wide area network connections move**	Improving the data centre capacity and increasing the physical resiliency of the network	**Ongoing** Preparation of a procurement launched in Q1 2022.	Compliance with the SLA for the network contract	**Below target** The schedule was affected by delays.
1.3.3	2.1.1.13	**Licence management**	Licences used at eu-LISA are supported in accordance with the SLA required by the different Core Business Systems	**Delivered** The Agency monitors and assesses the licence management regularly against standards set in service-level agreements, allowing for detection and resolution of possible deviations. Core Business Systems and SM9 use Oracle for the database processing, and the Agency renewed the necessary Oracle licenses in time.	Amount of licences having their support contract managed centrally	**On target** All Oracle, backup software and Linux OS licences were managed centrally, and the renewal of licences was organised without issues.

1.3.3	2.1.1.8	**CSI maintenance**	Mandatory maintenance within FWC CSI including programme management. Platforms aligned with CBS requirements through a cost-effective, reliable and automated technology stack	**Delivered** The overall maintenance, operations and second-level support was provided for the infrastructure and fully complied with the agreed service-level agreement. The Agency maintained the central infrastructure with the necessary operations of incident management, problem and change management. The Agency continued with the CSI programme with good progress by completing the VIS and SireneMail migration and the VIS backup and archive hardware migration to CSI. The storage migration of SIS and the database migration of VIS to CSI are in progress. At the end of the year, the Agency also completed implementing a central backup system for all Core Business Systems.	Conformity with maintenance SLAs and CBS performance indicators	**On target** Full compliance with the SLAs.
1.3.3	2.1.1.9	**Operational management/daily system management coordination and shared tasks**	Both CBS and Member States receive a reliable infrastructure in line with agreed SLAs	**Delivered** The Agency provided the maintenance, operations and second-level support of the infrastructure for the Core Business Systems in full compliance with the service-level agreements, including handling a large number of incidents, requests, problems and changes. The Agency also deployed several CBS releases.	Conformity with CBS and CSI SLAs	**On target** Conformity with CBS and CSI SLAs
1.3.3	2.2.2.1	**Integration of the asset management with configuration management**	A single, centralised and relational repository for contract, financial, operational status of the IT components and assets	**Ongoing** A policy for asset and configuration management was defined that will align financial asset management and technical configuration management. The implementation is ongoing and has been started for the centralised infrastructure. For about 20 % of the financial asset of the centralised infrastructure the link has been created. The implementation will continue and expanded also for legacy systems where possible. New systems will follow the approach from the beginning.	(1) Percentage of assets and configuration items covered by the integration model; (2) Number of incidents reported where the underlying cause of the incident is the result of inaccurate configuration management information (3) Number of unauthorised changes detected automatically (4) Number of unauthorised changes identified as a result of audits performed using automatic configuration update software	**Below target** The activity has been delayed due to the underestimation of efforts needed to backtrack the data from the previous years.
1.4.0	2.1.1.18	**Delivery of the information security and assurance service for the core business systems**	Assurance that information security risks will be managed down an acceptable level	**Delivered** The Agency updated security and business continuity plans for SIS and VIS systems and information security framework by adopting several security standards and guidelines on the matter, in alignment with international best practices. The Agency also worked on preparing the security and business continuity plans for Eurodac, EES, sBMS, CSI and communication infrastructure. The Agency also prepared for the technical specifications and developed a secure architecture for the new systems. The Agency actively involved security experts via the Security Officers Network (SON). The Agency and the Member States initiated the creation of the Cooperation Group, preparing the procedures and platform used for operational response in case of security incidents affecting the interoperability components.	(1) Percentage of security risk assessments done against systems (design, development, production) (2) Percentage of security incidents during the year handled within the response target (3) Number of vulnerability scans performed on the information system portfolio (4) Percentage of security objectives implemented as defined per legislation (5) Number of Cyber Security Exercises performed annually	**On target** (1) 100% (2) 100% (3) 8 (4) 100% (5) 1
1.4.0	2.2.1.21	**Executing a study on improving the Cyber security monitoring and incident response capabilities and maturity for the Core Business Systems**	Proposed improvement for the artefacts, processes, actors and roles required for the CSIRT framework, Security monitoring and incident response process and playbooks and the Security Operations and Analytics Platform Architecture and solutions landscape	**Ongoing** The Agency launched a project to assess and provide an analysis, recommendations, and proposed improvements to the cyber security monitoring and incident response capabilities and maturity level for the Core Business Systems.	Cost, schedule and scope	**On target** Cost: green, schedule: green, scope: green

1.4.0	2.2.1.22	**Implementation of CBS Identity and Access Management Service**	Increased compliance with regulatory framework; Improved maturity of cyber security profile; Enhanced Identification and detection of malicious or suspicious user actions; Better time and resource effective management of user accounts and user access	**Postponed** The Agency needed to postpone the execution due to resource constraints and other overarching priorities, and a significant change in the project scope due to broader requirements for identity management and federation for MS and Agency users, which means broader scope as originally intended.	Cost, schedule and scope	**Postponed** Project not started
1.4.0	2.3.8	**Delivery of the information security and assurance service for the corporate infrastructure**	Assurance that information security risks will be managed down an acceptable level	**Delivered** The Agency worked on its cybersecurity posture, on strengthening the cyber defences and ramp up the capabilities to quickly detect and react to cyber operations by specific state-sponsored threat actors. To enhance the Detect and Respond capabilities, the Agency continued to implement enhancements to the Splunk Security Information and Event Management and Malware Information Sharing Platform integrated with CERT-EU. The Agency conducted a cybersecurity exercise for the corporate IT infrastructure to test its resilience and response to cyber threats. The exercise resulted in a Corporate Infrastructure Security Plan.	(1) Percentage of security risk assessments done against systems (design, development, production) (2) Percentage of security incidents during the year handled within the response target (3) Number of vulnerability scans performed on the information system portfolio (4) Percentage of security objectives implemented as defined per legislation (5) Number of Cyber Security Exercises performed annually	**On target** (1) 100% (2) 100% (3) 8 (4) 100% (5) 1
1.4.0	2.3.8	**Maintaining and improving the security policy framework and deliver reports**	The Agency has a governance framework and outreach capability that satisfy the internal users and the external stakeholders (including the European Commission and the Council of the European Union)	**Delivered** The Agency continued to maintain and upgrade the security measures, strengthened the security policy framework and adopted several internal corporate documents The Agency continued the security monitoring of corporate and Core Business Systems to facilitate detection and prompt response to increasing cyber attacks. The Agency concluded the Multi-system security and business continuity exercise in 2020 with the exercise report and recommendations. The Agency also implemented specific measures in the COVID-19 pandemic, including awareness sessions for the Agency personnel under the teleworking regime.	Organisation of Security Officers Network (SON) and other security and BC related meetings	**On target** Closure of several IAS and EDPS audit recommendations Organisation of 2 SON meeting, 1 JHA SON meeting, recurrent IT Security Working Group meetings and participation in security outreach initiatives such as the Inter-Institutional Security Training and Awareness Group and the Business Continuity Network. Participate in the preparation of the interoperability implementing acts on cooperation in case of security incidents and initiation of the creation of the Cooperation Group.
1.4.0	2.3.8	**Operate, plan and develop the Business Continuity/Disaster Recovery/Emergency Response parts from the Security and Continuity Management and for the large-scale IT systems**	The resilience of the large-scale IT systems managed by eu-LISA is in place to ensure the expected level of services provided to stakeholders	**Delivered** The Agency has all business continuity controls as foreseen for the large-scale IT system into operations. The Agency initiated the drafting of the specific risk management and business impact analysis processes and business continuity plans. The Agency tested the business continuity plans for the large scale IT systems and the corporate IT systems as part of the internal eu-LISA business continuity exercise executed in November 2021. Following the update of the business continuity policy, the adoption of the new business continuity implementing rules and the appointment of staff foreseen to fulfil the business continuity specific roles, eu-LISA ran business continuity training and awareness sessions adapted to the specificity of those roles.	(1) The BC controls cover all the large-scale IT systems managed by eu-LISA and the dedicated network infrastructure (2) The BC plans are tested and the tests demonstrate the effectiveness of the BC controls in place (3) The Agency's staff receive specific training and awareness sessions as needed	**On target** Specific BC awareness sessions for all eu-LISA staff and external support services providers were performed in 2021, as well as dedicated trainings for the specific BC roles were run, involving more than 200 participants in total.

1.4.0	2.3.8	**Operate, plan and develop the protective elements of the Security and Continuity Management**	The Agency ensures the appropriate level of safety and security of the people and assets in its premises	**Delivered** Based on the continuous risk management process, eu-LISA has prepared a list of the specific physical security measures needed to be put in place and upgraded to ensure the security of the premises, activities and assets. In parallel, the Agency also implemented the specific physical security measures for the new premises in Strasbourg to allow the site to be used by the Agency as needed, starting with September 2022. The Agency implemented the specific health and safety measures as foreseen, focusing on the COVID-19 situation. The Agency run two fire emergency drills in 2021 to test the preparedness to protect the staff and assets in case of such scenarios. The Agency provided dedicated reports of the outcomes of the drills, together with specific recommendations for the identified gaps.	(1) Protective security measures comply 100% with the risk assessment, eu-LISA rules and regulations and the ISO standards (2) KPI 1: Percentage (%) of security objectives implemented as defined per legislation (3) KPI 2: Number of emergency drills/security and business continuity-related exercises performed annually	**On target** (1) The physical security of eu-LISA's premises and the protective security for eu-LISA missions, activities and personnel were ensured at the expected level according to relevant rules and regulations, and risk assessment outcomes. (2) KPI: 100 % (3) Two emergency response drills were run in 2021, in order to test the Agency's preparedness to response in case of specific emergency situations.
1.5.1	2.3.1	**Contribution as an observer to Schengen evaluations in the fields of SIS/SIRENE and Common Visa Policy (including VIS) and ensure better use of SIS and VIS by Member States**	EU Member States apply implement the Schengen acquis in the fields of SIS/SIRENE and Common Visa Policy and ensure better use of SIS and VIS	**Delivered** Owing to COVID-related travel restrictions, the Agency decided to limit its support to the Schengen evaluations in the first half of 2021 to desk support, and cancelled its participation in Common Visa Policy missions. The Agency supported the SIS/SIRENE evaluation teams who carried over the evaluation of France, the Netherlands, Belgium and Ireland. In the second half of the year, the Agency participated as an observer in three SIS missions organised in Italy (September), Malta (September/ October) and Greece (November).	eu-LISA staff participation in evaluation missions when required and contribution to evaluation reports	**On target** eu-LISA carried out coordination, and actual participations on on-site evaluations took place from experts. Exchanges with the Commission followed planned deadlines.
1.5.1	2.3.2	**Policy monitoring, coordination and development to represent eu-LISA at the EU Institutions, Agencies and other fora; stakeholder management in the JHA domain within the mandate of eu-LISA, and acting as a translator between technical and legal communities**	In-depth and high-quality policy analysis, coordination and development to implement the objectives set by the legislator to eu-LISA	**Delivered** The Agency delivered the briefing notes, position papers, speeches, policy analyses and other input to all Agency's stakeholders in regards to policy papers in areas in eu-LISA's competence. The Agency has performed on a regular basis policy analysis and coordination as well as extended support to policy development at the level of EU Institutions. eu-LISA is in close contact with EU Institutions and EU Agencies to implement the objectives set to the Agency by the legislator.	Quality and timeliness of the policy documents	**On target** The objectives of this activity have been fully implemented. The implementation as well as coordination of these matters is carried out across the organisation based on respective competences and tasks.
1.5.3	2.1.1.19	**Implementation of the Training plan for provision of training to the MS on the technical use of the IT systems managed by the Agency**	Member States users are trained on the functioning of the systems	**Delivered** The Agency delivered, in total, 34 training activities to Member States (20 webinars, two face-to-face courses, nine online courses, two online modules and one online programme) addressing SIS, SIS Recast, VIS, Eurodac, EES, ETIAS, ECRIS-TCN and Interoperability. There were 3898 participants with an average satisfaction rate of 89% (5.4/6, with a KPI threshold of 4.5/6). With most of the training activities delivered online, the eu-LISA welcomed 604 new accounts and 1348 new enrolments in online training activities.eu-LISA delivered eight Schengen Evaluation webinars to support the SIS/SIRENE Schengen Evaluation missions.	Satisfaction rate of the training sessions participants	**On target** 5.4 out of 6 (scale 1 - 6).

1.5.3	2.3.1	**Drafting reports on the technical functioning and aggregating statistics**	Fulfilment of all reporting obligations in accordance with the Agency's and systems legal instruments	**Delivered** The Agency published statistics reports in line with legal requirements. The Eurodac publications included the annual statistics report and annual report on the activities for 2020 and corresponding factsheets, and for 2021, the updated list of designated authorities that have access to data recorded in Eurodac's central system. The Agency also addressed the statistics recommendations of the EDPS Eurodac Audit Report. Concerning SIS, the Agency published the annual statistics report for 2020 and corresponding factsheets, and the updated list of designated authorities for the SIS and 2021 list of National SIS Offices and national SIRENE Bureaux for 2021 and started the work for the report on the technical functioning of Central SIS (covering years 2019-2020).	Timely submission and publication of the reports	**On target** Reporting and statistics obligations complied with the systems regulations obligations with timely submissions.
1.6.1	2.1.4.1	**ITSM framework processes run and regular reporting**	Core business systems and MSs receive reliable services, based on the eu-LISA ITSM Framework	**Delivered** The Agency reported on 37 KPIs out of 58. The remaining 21 were neither measured nor provided. The Agency agreed and updated the KPIs for processes as needed to mitigate this risk. The Agency runs regular process reviews to support the registration and follow-up of the CSI Register's improvement initiatives. In 2021, the stakeholders registered 15 new improvement initiatives. The Agency established the efficient running and maintenance of the CSI register by updating the CSI Register sub-process documentation.	Conformity with the processes KPIs	**On target** Conformity with the process KPIs
1.6.1	2.1.4.2	**ITSM tools improvements and customisation, addressing the new initiatives, as well as the outcome from the regular process and services reviews**	Strengthen process effectiveness and successful onboarding of the new systems in the eu-LISA ITSM process model as well in the respective tools	**Ongoing** Following the ITSM process review cycle, the Agency collected and assessed new requirements from functional and feasibility perspectives and created the Statement of Work document, including the technical specifications for implementation. The Agency also signed the contract with the SM9 vendor (Micro Focus) to start the implementation.	Respective KPIs and SLAs for the processes	**Other** The foreseen KPIs and SLAs will become significant only after the implementation is finished (which is planned for second half of 2022 only) and with an additional observation period.
1.6.1	2.1.4.3	**New service and process definitions as part of the ITSM framework**	Serving eu-LISA stakeholders more efficiently	**Ongoing** The Agency started with identifying the list of corporate processes in March. After several workshops with the Management, the Agency complemented, consolidated and delivered the final consolidated list consisting of 57 corporate processes divided into three priority groups. The current progress of the work on the description of priority group 1 processes is at 76%, with some processes already finalised, and the Agency initiated all processes from priority group 2. Several ones are also close to completion by the Agency.	Cost, schedule and scope	**On target** Cost: green, schedule: green, scope: green No major delays. All risks are mitigated
1.6.1	2.2.4.1	**Continual service improvement services and processes reviews**	Continuous service improvement (CSI) validation of the existing ITSM processes as well as the provided services in order to serve better eu-LISA internal and external stakeholders	**Delivered** In September, the Agency issued an updated package Service and process Framework and, in cooperation with all process owners, prepared a roll-out plan, which covered process awareness sessions for informing users about each of these 22 Processes, focusing on their scope, objective, key artefacts (inputs, outputs, triggers), key roles, the current status of the process and plans. The updated package included a definition of eight completely new and 14 updated processes.	Continuous service improvement (CSI) process KPIs	**On target** Project was successfully finished within agreed process KPIs.
1.6.1	2.3.1	**Expanding Agency's capacity for in the area of strategic and performance management**	The Agency will have up-to date strategic management capabilities to better serve its stakeholders and to support its governance bodies	**Other** The Agency changed the specific output of the activity due to overlapping with another activity. The Agency updated its corporate strategy and developed a roadmap for its implementation.	Project implementation indicators	**Other** The indicator is not valid for the changed scope of the activity.

1.6.1	2.3.1	**Implementation of an enterprise quality management exercise**	The Corporate Governance Model, consisting of Risk Management, Internal Control Management and Quality Management is implemented and operated at the Agency according to its definitions and requirements	**Ongoing** Common Assessment Framework (CAF) exercise is well underway. The Agency expects to complete the first phase of the cycle by July 2022 (Self-Assessment and Improvement Plan phase) and the second by December 2022 (successful award of the CAF Effective User label by external audit). The Agency also is implementing the Quality Policy coordination measures and actions (nomination of the Quality Board, preparation of operational guidelines and sessions of the Quality Board).	A self-assessment report is delivered to the Management of eu-LISA	**On target** The self-Assessment report and the Improvement Plan will be prepared according to the reviewed timeline approved by the ED and the Management Committee in September 2021.
1.6.1	2.3.1	**Planning and reporting**	eu-LISA provides its stakeholders with sufficient information on the planning and execution of the tasks entrusted to the Agency and its performance, thus ensuring high level of confidence and fulfilling the legal requirements	**Delivered** The Agency prepared and adopted the mandatory planning and reporting documents according to the regulatory requirements (SPD 2022-2024, draft SPD 2023-2025, CAAR 2020 and Interim Report 2021). The Agency continuously improved the planning and reporting processes and the quality of the documents produced.	Documents and reports adopted and published in accordance with the legal requirements	**Partially on target** Draft SPD 2022-2024 adopted by the MB on 9 February 2021. SPD 2022-2024 adopted by the MB on 17 November 2021. CAAR 2020 adopted by the MB on 29 June 2021. Interim Report 2021 adopted by the MB on 15 October 2021.
1.6.1	2.3.1	**Providing Governance and Compliance Management Capabilities**	The Agency applies elements of good governance in its compliance management practices	**Delivered** The Agency carried out the ICF effectiveness assessment following the methodology recommended by the European Commission. The MRMIC presented the assessment results to the Audit, Finance and Compliance Committee of the Management Board in May 2021 and further to the Management Board itself in June 2021. The Agency also maintained the exceptions and non-compliance register, initiated the Common Assessment Framework self-assessment exercise and created a quality policy.	The overall assessment of the effectiveness of eu-LISA ICF is conducted in the context of the CAAR 2020	**On target** The summary of the assessment of the effectiveness of the ICF was included in the CAAR 2020. The conclusion of the overall assessment was that the internal control system of eu-LISA is present, functioning and effective, but some improvements are needed.
1.6.1	2.3.2	**Timely administrative support for the Advisory Groups**	The Advisory Groups are sufficiently supported to perform effectively their duties	**Delivered** The Agency organised and delivered all of the 48 Advisory Group meetings foreseen to take place in 2021 on time as web meetings.	(1) Meetings delivered as planned (2) Stakeholder overall satisfaction rate as measured in stakeholder satisfaction survey	**On target** The Advisory Group meetings were delivered as planned. In addition to planned Advisory Group meetings, three extraordinary meetings were delivered.
1.6.1	2.3.2	**Timely administrative support for the Management Board**	The Management Board is sufficiently supported to perform its duties effectively	**Delivered** In 2021, the Agency foresaw four Management Board meetings, and the Agency organised and delivered all foreseen regular and two extraordinary meetings on time as web meetings.	(1) Meetings delivered as planned (2) Stakeholder overall satisfaction rate as measured in satisfaction survey	**On target** The MB meetings were delivered as planned, in addition, two extraordinary meetings were also delivered.
1.6.1	2.3.6	**ITIL Implementation in Corporate IT Services**	Providing the end-users with the right service, ensuring the business benefits by providing that service and utilising the lifecycle from start to finish to track the service every step of the way	**Ongoing** The Agency identified the user-oriented service catalogue items and is formalising the first batch of ICTS processes related to those items.	Cost, schedule and scope	**On target** The project has been rescheduled and is on target. The project has an Agile approach, and activities in the first iteration are scheduled in order to address the urgent needs and standardise the most commonly used processes.

1.6.1	2.3.9	**Developing and deploying processes and training programmes, evaluating projects, performing project quality assurance reviews, appraising processes, and reporting on project performance**	Improved alignment between Agency's strategy and project execution, through the integration of main processes: Project Management, Programme Management and Portfolio Management	**Delivered** The Agency organised and provided management support for all Corporate Steering Committee meetings and prepared 48 Programme Management Board meetings and eight progress reports according to the statutory requirements. The Agency achieved a 100 % participation rate in all programme boards with the regular promotion of the culture of compliance. The Agency finished the compliance check for the re-entry plan of 2022 by May. The Agency also delivered about 30 hours of classroom/virtual training to a group of 28 distinct individuals and about 200 hours of bilateral coaching sessions to project managers to better plan, monitor and control the projects. The Agency also executed the ex-ante evaluation of SPD (opportunity assessment) and the annual corporate risk management cycle.	Achieving objectives agreed in the EPMO Roadmap	**On target** All recurrent tasks have been performed within the time limit and in quality. The Agency set up new tasks and capabilities according to the EPMO implementation roadmap.
1.6.1	2.3.9	**Official Appraisal based on CMMI model**	Agency officially rated against CMMI model	**Delivered** The project was re-scheduled and officially launched in June 2021. The Agency completed the project on schedule and approved the related deliverables.	Maturity level of relevant process areas	**On target** CMM Evaluation appraisal provides clear indications of strengths and weaknesses but not a formal Maturity Level in terms of a numeric value. The actual project performance indicator has therefore changed to the standard set of time, budget and scope. The project has been carried out within the expected time (officially rescheduled), budget and scope.
1.6.1	2.3.9	**Setting up the eu-LISA's Project Management Career Centre**	Alignment of the training capability with defined job profiles/roles within the eu-LISA Competency Development Framework. - Increase retention rate	**Ongoing** The Agency presented the charter and the PPM certification programme internally during this period and defined three main roles for this certification program: Project Manager, Programme Manager and Portfolio Manager. For each of these roles, the Agency delivered the draft definition and competencies and, taking into account these new roles, updated the Project Management methodology.	(1) Number of job profiles being supported by training programmes (2) Number of defined careers/certification paths (3) Number of individuals trained	**Partially on target** (1) The following three job profiles were defined: Project Manager, Programme Manager and Portfolio Manager (2) Draft certification paths were defined for Project Manager and Programme Manager. (3) As the content and the tool for the training certifications are still under discussion, actual training will be carried out in 2022.
1.6.2	2.3.10	**Implementation of the annual internal audit plan**	Obtaining transparency for key stakeholders on the adequacy and effectiveness of the system of internal control. Trust-building in operations, confidence in the achievement of the Agency's objectives, and an understanding of residual risk	**Delivered** Following the internal audit plan, the IAC reviewed the management of ABAC access rights (assurance), legality and regularity of 2020 accounts (coordination) and monitored the audit recommendations (assurance and coordination). The IAC also advanced with implementing the ETIAS project with the audit risk assessment and assurance plan (assurance) and monitoring of Internal Control framework implementation & IAC audit risk assessment (coordination).	(1) Percentage of compliant processes meeting performance targets (2) Percent of processes being objectively reviewed (3) Number of critical and serious internal control breaches (4) Number of critical non-compliance issues identified per year (5) KPI 23: (A) Percentage (%) of audit recommendations implemented within stipulated deadlines and (B) number and timeline of outstanding recommendations	**Other** The first four performance indicators in the SPD 2021 could not be computed due to insufficient data available. IAC continued to apply the following performance indicators: (5) A: 77%, of which: Critical = n/a Very Important = 72% Important = 85% B: zero overdue recommendations (overdue by six months to one year); six overdue recommendations (overdue by over one year).
1.6.2	2.3.3	**Internal control, procedures, audits related to finances and procurement**	The Agency avails itself of a comprehensive set of procedures and checks which are fit for purpose to promote sound financial management and internal control	**Delivered** All checklists and workflows for financial transactions are in line with the Agency's Financial Rules. The guidelines on procurement have been approved and have entered into force during Q2/2021	A comprehensive and coherent set of procedures cover the main business processes in the area of finance and procurement	**On target** The Agency avails itself of a comprehensive set of procedures and checks that are fit to promote sound financial management and internal control.

1.6.2	2.3.5	**Continue with the process of implementation of Data Protection principles derived from EU Regulation 2018/1725**	Compliance of the internal rules with the applicable legal framework is ensured	**Delivered** The Agency adopted 'Internal rules concerning restrictions of certain rights of data subjects concerning the processing of personal data in eu-LISA' at the highest management level. The Agency also updated the existing 'Policy on Personal Data Breach' to the new Data Protection Regulation. This closed two EDPS recommendations on the Eurodac audit. The Agency's DPO supported controllers to convert old notifications under Regulation 45/2001 into Records under Regulation 2018/1725. The DPO provided support and feedback to the teams in charge of carrying out DPIAs for the EU Large-Scale IT Systems and keeping the register of processing operations up to date.	(1) New Decision on internal rules according to article 25 of EUDPR, adopted by eu-LISA's MB (2) Number of DPIAs supported by DPO (3) eu-LISA public register of processing operations updated and compliant	**On target** (1) Adoption of internal rules concerning restrictions of certain rights of data subjects in relation to the processing of personal data in eu-LISA at the highest level of management. (2) 7 (3) Register of processing activities is kept up-to-date and published.
1.6.2	2.3.5	**Drafting the Annual Work Report 2021 and reporting the intermediate status on DP compliance to MB**	MB is informed about the level of DP compliance	**Delivered** The Agency published the Annual Work Report 2020 on the eu-LISA website. The DPO presented to the Management Board the intermediate status report on data protection and updated the VIS, SIS and Eurodac Supervision Coordination Groups (SCGs) on the state of play of the systems.	Report adopted and published in accordance with the legal requirements	**On target** Annual Work Report 2020 was adopted and published.
1.6.2	2.3.5	**Increasing Data Protection Awareness**	Staff complies with data protection requirements	**Delivered** All staff in the Agency got direct information and training on the new data protection obligations, rights and penalties on the Data Protection Day awareness session, Newcomers awareness sessions, webinars or one-on-one coaching sessions. The Agency also informed all staff of the latest developments and news on data protection through the weekly eu-LISA newsletter and DPO Intranet, which the DPO regularly updated, including news items, templates, and step-by-step instructions. In particular, the DPO created two new sections: one on "Restriction of data subjects' rights", which explains in detail steps and actions to follow in case of a potential restriction of data subject's rights under Article 25 of the Regulation, and the second on "Documenting Data Processing Activities as a Processor" when the Agency carries out data processing activities on behalf of one or more controllers.	(1) Number of DP general awareness notifications disseminated via internal communication tools (2) At least two awareness sessions delivered to all staff during the year	**On target** (1) 27 DP news items were published in 2021. (2) Number of sessions carried out on data protection and personal data breaches. - DP Day on 28 January (130 participants). - Awareness Session for Newcomers on 18 February (31), on 2 July (18) and on 15 October (10). - 17 coaching sessions (71) - one coaching sessions to product and service owners of SISII, VIS and Eurodac in November 2021 in the context of the Project 'Records of processing activities as Processor' - May: Webinar 'Privacy and Data Protection by design' jointly organised with DPO of ENISA (93, 52 from eu-LISA). - One-on-one coaching sessions to comply with their obligations as data controllers under the new data protection Regulation.
1.6.2	2.3.5	**Perform the Annual Data Protection survey**	Recommendations on data protection compliance to be implemented in order to increase data protection compliance of the Agency	**Delivered** The Agency updated the scope of the activity to take into account the EDPS SIS and VIS 2018 Inspection Report the Agency received in April 2020 and Eurodac 2019 Inspection Report in March 2021. The first report contains 43 and the last 29 recommendations, which the Agency transposed into action plans. The DPO monitors the progress of its implementation and, to this extent, organises quarterly follow-ups with responsible staff. In 2021, several such internal follow-up meetings took place. The EDPS launched a survey with all EUIs to understand how EUIs comply with the data protection requirements under Article 8 of the Charter of Fundamental Rights and Regulation 2018/17251. The DPO drove this exercise and supported data controllers in eu-LISA to complete this survey within the deadline.	Report presented to the eu-LISA ED	**On target** 1. Internal follow-up sessions organised quarterly by DPO with owners of the EDPS recommendations: February, April-May, July and October 2021. 2. ED, Management Board and ACFC updated on the progress of the implementation of EDPS Recommendations during presentations in the different meetings. 3. On behalf of eu-LISA, the DPO liaises with EDPS every quarter to proactively update on the progress and status of the recommendations. EDPS provided his feedback on 22 November 2021 to eu-LISA. This feedback is taken into account by the Agency in order to continue implementing EDPS recommendations.

1.7.0	2.3.6	**Providing Legal Advice to eu-LISA**	Compliance by eu-LISA with applicable regulations	**Delivered** The Legal Sector provided advice to the different services on a wide variety of topics and assured constant compliance with the applicable legislative framework on time. The Legal Sector handled one complaint under Article 90(2) of the Staff Regulations and three administrative inquiries. The Legal Sector also oversaw the two litigation cases pending in front of national courts (in France) and the six requests in front General Court of the European Union – and finalised one of such cases in mid-2021. Finally, the Legal Sector assured compliance with the regulatory provisions and handled fourteen requests and nine consultations on public access to documents.	Provision of legal advice and opinion	**On target** In 2021, the legal advice and opinion was provided in a timely manner and in compliance with the applicable legislative framework. The Legal Sector provided legal advice and opinion in a variety of topics, such as staff matters, procurement, corporate governance, public access to documents and large-scale IT systems.
1.7.1	2.3.4	**Consolidation of the Agency following change, growth and transformation with focus on capabilities development**	The Agency's organisational structure will reflect development and accommodate for a continued growth. eu-LISA will fulfil its obligations towards staff in accordance with the regulatory framework. The new staff will be integrated in the organisation	**Delivered** The Agency recruited 61 new staff members, terminated contracts for 16 staff members, renewed eight contracts and changed 12 contracts. One staff member retired. The Agency also reviewed or evaluated internally human resource management processes. The Agency completed the implementation of the new Implementing Rule (IR) on the prevention and management of conflicts of interests. The Agency also successfully enabled the connection between SYSPER and NAP (the IT applications used by the Agency and the Commission for staff data and payroll), concluded the testing of the ethics module of SYSPER and advanced on the testing of the ticketing tool.	(1) KPI 13: Ratio (%) of administrative resources and ratio (%) of operational resources compared to all human resources within the Agency (staff and SNE) (2) KPI 24: Absenteeism rate within reporting period (3) KPI 25: Annual Percentage (%) of the staff turnover	**Partially on target** (1) 16.9% of administrative resources and 73.2% of operational resources (2) Average number of sick leave days per staff: 4.1 days. Percentage of staff on a long sick leave: 3.2%. Percentage of staff who did not use a sick leave: 51.6%. (3) 5.5%
1.7.1	2.3.9	**Cultural change and transition to eu-LISA 2.0 Operational Model**	1)Leaner and faster decision-making processes; 2) More agility inside the job; 3) More empowerment and ownership through new centralised functions and harmonised profiles; 4) Better positioning of the Agency leads to sustained success of the organisation	**Other** The Agency merged this activity with other initiatives, given that the baseline effort and the timeline estimated by the contractor was deemed unrealistic. Because of wrong assumptions, the short pilot launched focused on assessing a sample of two processes, which did not only did appear insufficient concerning industry quality standards but also confirmed the non-viability of the plan. The completion of the scope on its full process catalogue would have multiplied by 50, implying a heavy involvement of internal human resources, given the latent contractor's misunderstanding of internal processes and the complex assessment methodology envisaged. Hence, the Agency decided to continue the project internally by reducing project scope and merging it with ongoing project initiatives of corporate processes mapping and EU competence framework setup.	Cost, schedule and scope	**Below target** Cost: green, schedule: red, scope: amber Only partial scope than anticipated has been delivered in 2021, but with significant budget saving due to corresponding reduced payments.
1.7.2	2.1.4.4	**Training for eu-LISA staff on operations (technical training to staff) and knowledge management**	eu-LISA's staff will be able to better perform; eu-LISA will be acknowledged as a hub of expertise and knowledge	**Delivered** The Agency organised and delivered a high number of training sessions (total 91), and increased the general satisfaction (79% in 2020 vs 81% in 2021). Regarding the COVID-19, the Agency corresponded effectively in switching to a fully remote delivery with a blended approach, initiated an onboarding programme revamp, enabled access to the all material online (iLearn) at any time. The installation of a training lab has not yet started due to the pandemic, and the Agency organised all training remotely with remote technical labs. The Agency also organised a series of awareness sessions on the various ITSM processes. The Agency has not yet developed the certification process for staff as it requires the Agency to finalise the Competency Framework first.	(1) Number of training activities organised (2) General satisfaction level (3) Increase awareness about Knowledge Management Database (4) 100% newcomers have followed the technical onboarding programme (5) Number of staff passing the certification process	**Partially on target** (1) 91 (2) 81% (3) 1 (4) 85% (5) n/a (competency framework update and relevant ED Decisions update ongoing)

1.7.2	2.3.4	**Further development of the learning culture, developing HR function towards business partnership and strengthening staff development and retention**	eu-LISA staff take more active role in sharing their knowledge, providing constructive feedback to colleagues and discussing openly mistakes and achievements	**Delivered** The Agency identified and consolidated the key areas and elements of the cultural ambition in the form of a Cultural Ambition Map. Based on the input collected from the COVID survey, the Agency also identified the need to prioritise the well-being of our people. Therefore, the Agency initiated a mental health programme that actively supports both the people and their families.	(1) Number of informal learning activities taken place (2) Staff Engagement survey results increased (3) Roadmap followed for IT tools (4) KPI 27: Talent retention index (5) KPI 28: Staff engagement level	**On target** (1) 111 training sessions organised at a team and organisation level and 2737 participants in organisational level trainings. (2) Staff Engagement rate: 74% (3) iLearn migration project ongoing (4) KPI 27: 0.2 (5) KPI 28: 7.4/10 (index)
1.7.3	2.3.3	**Execution of the Procurement and Acquisition Plan**	The Agency's acquisition needs are addressed in compliance with statutory obligations and within the budgetary framework	**Delivered** The Agency provided all procurement and acquisitions on time and complied with statutory obligations and within the planned budgetary framework.	(1) KPI No 17: Efficiency of the procurement process (2) KPI No 18: Acquisition management: % of procurement projects on schedule	**On target** (1) KPI 17: 21.4%. (2) KPI 18: 80.1%.
1.7.3	2.3.3	**Timely delivery of services related to budgetary, asset and financial management**	The Agency's budgetary, asset and financial services are managed in compliance with statutory obligations	**Delivered** The Agency reached a budget implementation for commitment appropriations of 100% and payment appropriations of 99% (including the carry-forward of administrative expenditure to 2022). The budget implementation was timely followed-up, and the Agency provided all services as per defined standards.	(1) KPI No 10: Cancellation rate of payment appropriations (2) KPI No 11: Rate (%) of budgetary commitments (3) KPI No 12: Rate (%) of payment implementation (4) KPI No 15: Amount (%) of payments completed within the statutory deadlines (5) No major disruption of services attributable to internal organisational issues	**Partially on target** (1) 7% (2) 100% (3) 99% (4) 99%
1.7.4	2.3.6	**Administration and Maintenance of Corporate IT Applications**	Modification of the applications to correct faults; to improve performance; and to adapt the applications to a changed environment or changed requirements	**Delivered** The Agency properly maintained the SharePoint platforms, configured subsites and collaboration spaces' rights and permissions in due time and developed the new tools addressing the stakeholders' needs.	Agreed service level	**On target** (1) The Agency solved tickets related to critical or urgent issues in due time (2) The availability of the applications was higher than the requested uptime
1.7.4	2.3.6	**Administration and maintenance of corporate IT networks and communications**	Capability to administer and maintain the networks and communications in order to correct faults; improve performance and availability; and adapt them to a changed environment or changed requirements	**Delivered** The Agency delivered the related services, keeping the infrastructure updated and upgraded, based on needs and best practices, planning a revamp in the Networking and Security modernisation study and starting its implementation based on the available resources.	Availability of services	**On target** (1) The availability of the infrastructure was higher than the performance indicator value. (2) The Agency treated critical and urgent incidents with celerity.
1.7.4	2.3.6	**Administration and Maintenance of Corporate IT Systems and Storage**	Maintenance of the systems & storage to correct faults; to improve performance and availability; and to adapt the systems and storage to a changed environment or changed requirements	**Delivered** The Agency maintained the infrastructure delivering ICT Systems services, upgraded and delivered updates as needed, improved the backup and storage capabilities and implemented a corporate mobile devices management.	Agreed service level	**On target** (1) Tickets related to critical or urgent issues were solved in due time, with celerity (2) The availability of the ICT Systems infrastructure was higher than 99%
1.7.4	2.3.6	**Corporate IT Infrastructure and Applications Migration to Cloud**	IT Operational costs' savings; Streamlined IT processes; Defined Resource Usage consumption. Increased scalability and reliability	**Postponed** During the reporting period, the Agency conducted a Digital Workplace Study, and selected a Cloud Solution Architect.	(1) Corporate IT Infrastructure successfully migrated to the Cloud (2) All Applications successfully migrated to the Cloud	**Below target** Project was postponed due to lack of resources.
1.7.4	2.3.6	**Facility operations and services**	Improved working conditions for staff and ability to effectively use the premises of all Agency sites	**Delivered** The Agency ensured a secure, efficient and functional building infrastructure. The Agency concluded a set-up of additional office space in the Illkirch to provide its workforce with a modern, comfortable and user-friendly working environment. The Agency also completed all necessary warranty works, and extended the lease contract for the Brussels office.	Conformity to applicable standards	**On target** Conformity with the applicable standards
1.7.4	2.3.6	**Implementation of a Document Management System for eu-LISA**	A documents management system and related policies are in place and are used by the personnel of the Agency. Security and safety of documents, preventing unauthorised access to documents and allowing recovery from physical damage or loss of documents	**Ongoing** In 2021, the Agency organised several workshops to collect high-level business requirements, analysed the feedback, and finalised the procurement documentation based on the input.	Documents and Records Management system available to the Agency	**On target** The project continued on track.

1.7.4	2.3.6	**Logistics and Office Supplies Services**	Improved working conditions for staff and ability to effectively use the facilities in all the Agency's locations	**Delivered** The Agency completed the project of urgent provision of workplaces for MWO contractors, and the Illkirch building is ready, including its services, and ready to be used.	Agreed service level	**On target** Services and related support delivered within the agreed budget and in time
1.7.4	2.3.6	**Management and Support of Missions' Services**	Efficient and effective management of missions covering staff in all locations and external experts	**Delivered** The Agency implemented the MIPS within the Agency and tested and underwent the related training to support eu-LISA mission performers.	Number of missions accomplished timely when requests submitted on time via mission tool	**On target** eu-LISA staff members started to use the Commission's missions management tool. All missions accomplished on time via mission tool.
1.7.4	2.3.6	**Management of document/records/archives services**	A holistic information management approach, from Enterprise Content Management to data and archives management	**Delivered** The Agency kept all activities relating to documents, records and archiving on track. The Agency also completed mapping the physical archive in the Tallinn office and the workshops for ARES revision.	Agreed service level	**On target** Services and related support delivered within the agreed budget and in time
1.7.4	2.3.6	**Procurement of Corporate ICT Equipment, Infrastructure and Services**	Purchase of all necessary corporate ICT software, hardware, equipment, services and licences to support corporate IT applications, systems, networks and communication, and end-users	**Delivered** The Agency procured all necessary corporate ICT software, hardware, equipment, services and licenses to support corporate IT applications, systems, networks, communications and end-user computing and support.	Agreed service level	**On target** Services and related support delivered within the agreed budget and in time
1.7.4	2.3.6	**Provision of End-users with IT Support (Service-Desk)**	End-users satisfaction increased connectivity, improved communication, and enhanced efficiency benefitting Agency-wide productivity	**Delivered** By the end of 2021, the Agency increased end-user satisfaction.	End-user satisfaction	**On target**
1.7.4	2.3.7	**Second extension of eu-LISA operational premises in Strasbourg**	Adequate premises and facilities to host additional systems infrastructure and members of staff. Appropriate operational and working conditions in line with technical, operational, safety and security regulations, best practices and standards	**Ongoing** The Agency revised the project to include the experience of the current pandemic situation with a new way of working (activity-based workplace and teleworking) in the scope. The Agency decided on a full-containerised approach for the future DataCentre and a phased construction works approach. The Agency also optimised timeline with an acceptance of the buildings in 2028.	Cost, schedule and scope	**On target** The project is in the planning phase: the Project Board approved the way forward and the related updated timeline and scope of the project. The acceptance is still expected in Q2/2028 in line with the revised project baseline.
1.7.5	2.3.2	**Implementation of eu-LISA's Internal Communication Action Plan**	The staff at all the sites of the Agency is informed and engaged on the corporate level allowing to make informed decisions regarding their professional tasks and having access to internal communication tools for information sharing and feed-back	**Delivered** The Agency delivered all activities planned in the internal communication action plan on time and met the objectives, in particular, reaching the 93% overall satisfaction rate. The Agency provided regularly updated information, including internal crisis communication related to the COVID-19 pandemic, organised several social campaigns and facilitated staff engagement and intra-agency business partnerships.	Compliance with the Annual Internal Communication Action Plan (including milestones and timetable) KPI 30: eu-LISA internal communication impact	**On target** The response rate to the 2021 staff satisfaction survey on internal communication was 55% (KPI 30 target 51%). The overall satisfaction rate with internal communication actions and channels was 93% (KPI 30 target 70%).
1.7.5	2.3.2	**Implementation of the external communication and Information action plan**	Better knowledge and improved awareness of the primary stakeholders on the role and tasks of the Agency in providing the added value for the benefit of the citizens	**Delivered** The Agency delivered all activities planned in the external communication action plan on time and met the objectives. The Agency increased social media and website audience numbers, successfully launched carriers' registration campaign, provided regular coverage to the main stakeholder events (Annual Conference, Industry Roundtables) and introduced its new Visual Identity, which substantially modernised its visual look.	(1) Content production follows the editorial workflow and quality standards in compliance with Annual External Communication Action Plan (2) The online visibility and engagement-level measurements (3) The satisfaction rate of the participants with event management (4) KPI 29: eu-LISA web-based visibility	**On target** (1) Achieved (2) KPI 29: LinkedIn: +61% followers and +75% engagement; Twitter: +35% followers and +84% engagement; Facebook: +20% followers and +22% engagement. (3) 80 % (4) The public website registered a 16% increase in unique visitors, the bounce rate was 51% (vs 47% in 2020).
1.7.5	2.3.6	**New eu-LISA Website**	Standardise and align the new Website with the future ETIAS and EES related websites and increase awareness for the Agency	**Ongoing** The Agency mapped the high-level requirements for the website and initiated both economic and technical evaluations of available market solutions.	The project is delivered within agreed scope, budget and within the time frame	**On target** Key project milestones – procurement, requirement collection and evaluation of market solutions – completed on time.
Annex VIII	2.3.3	**Maintaining the accounts of the agency**	Presenting the annual accounts so that they represent fairly and transparently the financial position of the agency facilitating the discharge procedure	**Delivered** The Agency delivered the 2020 annual accounts on time.	Timely delivery of provisional, consolidated, final accounts to the Budgetary Authority and ECA	**On target** Annual accounts 2020 were submitted by official due date (1/7/2021) following MB adoption.

Annex X. **Report on public access to documents**

According to Article 17 of the MB Decision of 28 June 2012, which reflects the wording of Article 17 of Regulation (EC) No 1049/2001 on public access to documents,[101] and in accordance with 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.

Report on requests for access to documents in 2021

The Agency is committed to guarantee transparency in all of its activities, processes and decision-making, including the procedure for public access to documents. In 2021, the Agency observed the highest levels of good administrative conduct and respected all deadlines specified by Regulation (EC) No 1049/2001.

During 2021, the Agency received 14 requests to access documents, an increase from the previous years. In 8 out of the 14 requests, 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 five 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.

In the course of 2021, eu-LISA analysed 34 documents, of which 19 were fully disclosed to the applicants, 6 partially disclosed with parts of the documents redacted, and 9 for which the request of access was refused. These documents consisted of a total of 824 pages, out of which 190 were fully released, 60 partially released, and access to the remaining 574 pages was refused.

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101 Regulation (EC) No 1049/2001, 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),[102] public interest as regards public security, and ongoing decision-making processes.

It is noteworthy that all the nine documents for which the Agency refused access to the applicants in 2021 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. For six of the same documents, the exception of being part of ongoing decision-making processes was also applicable.

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 2021, the Agency also received nine consultations for access to documents from other EU entities, in accordance with Article 4(4) of Regulation (EC) No 1049/2001.

Other activities related to access to documents performed in 2021

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, the Agency 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.

In June 2021, the Legal Sector organised a training on public access documents for eu-LISA personnel, which was held by an expert from the European Institute of Public Administration. Further trainings will be planned in 2022.

Finally, a member of the Legal Sector made a presentation on '*Transparency Policy and Access to Documents of eu-LISA*' during an online seminar on Access to Documents in the European Union organised by ERA-Academy of European Law on 18 November 2021.

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102 Regulation (EU) 2018/1725, OJ L 295, 21.11.2018, p. 39-98.

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