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Delegations will find attached the eu-LISA Consolidated Annual Activity Report for 2019 adopted by the Agency's Management Board.

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eu-LISA Consolidated Annual Activity Report 2019



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Abbreviations and acronyms

AFIS	Automated Fingerprint Identification System
AG	Advisory Group
ARES	Advanced Records System
BCU	Backup Central Unit (backup centre in St Johann im Pongau)
BMS	Biometric Matching System
CA	contract agent
CAAR	Consolidated Annual Activity Report
CEPOL	European Union Agency for Law Enforcement Training
CIR	Common Identity Repository
CRRS	Central Repository for Reporting and Statistics
CSI	Common shared infrastructure
DAPIX	Working Party on Information Exchange and Data Protection
DG DIGIT	Directorate-General for Informatics
DG JUST	Directorate-General for Justice and Consumers
DG HOME	Directorate-General for Migration and Home Affairs
DPO	Data Protection Officer
DubliNet	communication network for Eurodac
EASO	European Asylum Support Office
ECA	European Court of Auditors
ECRIS-TCN	European Criminal Records Information System — Third Country Nationals
ED	Executive Director of eu-LISA
EDPS	European Data Protection Supervisor
EES	Entry/Exit System
EMPACT	European Multidisciplinary Platform against Criminal Threats
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
eu-LISA	European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice
Eurodac	European Asylum Dactyloscopy Database
Eurojust	European Union's Judicial Cooperation Unit
Europol	European Union Agency for Law Enforcement Cooperation
FG	function group
Frontex	European Border and Coast Guard Agency
FTE	full-time equivalent
HR	human resources
IA	Impact assessment
IAC	Internal Audit Capability
IAS	Internal Audit Service of the European Commission
ICAO	International Civil Aviation Organization
ICD	interface control document

ICF	internal control framework
ICT	information and communication technology
IO	interoperability
IT	information technology
ITIL	IT Infrastructure Library
ITSM	IT service management
JHA	Justice and Home Affairs
KPI	key performance indicator
MB	Management Board
MFF	Multiannual financial framework
MID	Multiple-Identity Detector
MRMIC	Manager in charge of risk management and internal control
MS	Member States
MWO	maintenance in working order
OJ	<i>Official Journal of the European Union</i>
PD (also SPD)	Programming Document (also Single Programming Document)
PMB	Programme Management Board
sBMS	Shared Biometric Matching Service
SIRENE	Supplementary Information Request at the National Entries
SIS	Schengen Information System
SIS II	second-generation Schengen Information System
SIMS	Single Integrated Monitoring Solution
SLA	service-level agreement
SNE	seconded national expert
SPoC	Single point of contact
TA	temporary agent
TAP	Turnkey access point
TEF	Transversal engineering framework
TESTA-ng	Trans European Services for Telematics between Administrations — new generation
TTS	technical tender specifications
VIS	Visa Information System
WAN	Wide-area network
WP	Work Package

Assessment by the 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 has analysed and assessed the Consolidated Annual Activity Report of the Agency on the achievements and results for 2019. The Board acknowledges the Agency's performance and notes the following observations.

General observations

The Management Board:

- considers that in 2019 eu-LISA achieved its objectives set out in the Agency's establishing regulation, progressed towards the goals and objectives established in the Agency's long-term strategy for 2018-2022, and achieved the results defined in the 2019 annual work programme included in the Agency's Programming Document for 2019-2021, both in terms of outcomes and performance;
- acknowledges the strong contribution of eu-LISA to the functioning of the Schengen area, to the freedom of movement, and to the implementation of EU policies in the area of freedom, security and justice;
- highlights the challenges faced by the Agency in 2019, with the implementation of its new establishing regulation, its organisational transformation and in parallel the development of EES, ETIAS, ECRIS-TCN and of the interoperability components; the Board notes with satisfaction that the Agency nonetheless maintained the required level of service towards the Member States in the operational management of SIS, VIS/BMS and Eurodac, and at the same time made substantial progress with the implementation of the new initiatives entrusted to it;
- acknowledges that in 2019 the Agency grew significantly, in terms staff size, budget and scope of activities, welcomes the successful roll-out of the eu-LISA 2.0 transformation programme, and notes that the Agency is managing the change with agility, high level of control and commitment from the managers and staff;
- acknowledges that, in addition to successfully delivering its activities in 2019, the Agency demonstrated agility and flexibility throughout the year, facing considerable challenges with the number of large new initiatives being implemented in parallel (EES, ETIAS, Interoperability, SIS Recast, ECRIS-TCN) and the ongoing organisational transformation, with regards to optimal use of available human and financial resources;
- acknowledges the low turnover rate of the Agency's staff and emphasises the need for eu-LISA to continue its commendable efforts to ensure staff retention and professional development in the Agency;
- emphasises the need for the Agency to enlarge the capacity of its facilities in Strasbourg to accommodate the additional human and technical resources needed in the coming years;
- in the wake of the negotiations of the new Multiannual Financial Framework (MFF) for 2021-2027, expresses its concerns over the risk for the Agency not to be able to guarantee the uninterrupted availability of the systems under its management and the timely implementation of the new tasks entrusted to it, should financial resources allocated be insufficient;
- acknowledges the progress of the Agency in the implementation of its new Internal Control Framework and in the growth of its capabilities for risk management, quality management, contract and vendor management and programme and portfolio management;



*Zsolt Szolnoki, Chairman of
the Management Board*

Credit: Zsolt Szolnoki

- acknowledges the efforts of the Agency in the systematic and regular monitoring and follow-up of audit recommendations, and the progress made with their implementation;
- notes with satisfaction the discharge granted by the European Parliament for the budget year 2018.

Observations on the Agency's operational achievements

The Management Board:

- acknowledges that the Agency successfully ensured the uninterrupted availability of SIS, VIS/BMS and Eurodac;
- considers that the actions performed by the Agency to manage the SIS, VIS/BMS and Eurodac are adequate to its mandate and successfully contributed to the delivery of the tasks set out in the systems' legal instruments;
- congratulates the Agency on its ability to continuously improve its operations, as evidenced by the positive results of the stakeholder satisfaction survey;
- notes with satisfaction the timely progress made by eu-LISA in the implementation of the SIS Recast Regulation;
- emphasises the importance of the Automated Fingerprint Identification System (AFIS) for SIS, and notes the progress that the Agency made with the implementation of the second phase of the project;
- welcomes the successful deployment of the latest systems releases, in particular for SIS, providing Europol, Eurojust and Frontex with access to SIS alerts, and the capacity increase of VIS database to 100 M records;
- notes with regret the substantial delay in the adoption of the Eurodac Recast Regulation which prevented the Agency to implement the necessary evolutions of the system, substantial to increase its efficiency, and led to the complete loss of allocation for implementation of the Recast budget;
- recognises that eu-LISA met completely the expectations of its stakeholders in providing strong and consistent leadership in the implementation of EES and ETIAS;
- emphasises the great importance of EES and ETIAS for strengthening border management and internal security in the EU, expresses its great satisfaction for the substantial progress in 2019 with their implementation and encourages the Agency to continue its efforts towards the full implementation of the systems, in strong collaboration with the EES and ETIAS governing bodies, the Member States and the EU institutions and agencies;
- emphasises the great importance of the timely implementation of the Interoperability regulations and of the ECRIS-TCN regulation and acknowledges the substantial progress made by the Agency to prepare the development of the required systems and components, in particular with the establishment of the necessary governance bodies;
- welcomes the further development of the internal capabilities of the Agency with regard to budget planning and the proactive management of budget execution to ensure the sound management of the Agency's financial resources, and acknowledges that the overall execution levels of commitments and payments were respectively 99.7 % and 99.3 % , against a target of 95 %;
- notes with satisfaction the structured approach taken by the Agency for the implementation of its internal transformation programme and the importance of its successful implementation for the Agency's long-term success;
- Expresses satisfaction with the efficient functioning of the internal control system of the Agency, as acknowledged in regular external and internal audits.

Assessment of the management of the Agency

The Management Board, acknowledging the results delivered by the Agency in 2019 and considering the positive outcomes of the internal and external audits performed during the year, expresses its satisfaction with the quality of the management of the Agency in 2019.

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

The Management Board:

- considers this report to provide sufficient assurance that resources (staff and budget) are used by the Agency in line with their intended purpose as set out in the 2019 Annual Work Programme included in the Programming Document 2019-2021;
- considers that the variations in the use of resources are not significant and are justified, given the results achieved by the Agency and the outcomes of the audits that have been performed through the year;
- emphasises the importance of achieving the right balance between the human and financial resources allocated to the Agency in the next programming period 2021 – 2027 and the tasks assigned to it.

Performance indicators

The Management Board acknowledges the levels of the key performance indicators of the Agency for 2019.

Risk and control environment

The Management Board:

- 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;
- welcomes the implementation of the new Internal Control Framework, takes notes of the first report on its implementation, and invites the Agency to continue with the implementation and monitoring of the ICF;
- welcomes the appointment of the Manager in charge of risk management and internal control;
- acknowledges that the main risks to the organisation, which might have jeopardised the delivery of the tasks set out in the Programming Document 2019-2021, have been identified and assessed, and adequate response plans have been put in place;
- considers that the Agency has taken appropriate measures to manage these risks and to avoid them turning into issues that might negatively affect its activities.

Recommendations

The Management Board, considering the information provided in this report, encourages the Agency in 2020 to:

- deliver on all obligations stemming from its mandate and with sustained efficiency and effectiveness;
- continue the implementation of the EES, ETIAS and interoperability components without delay, establishing synergies in use of allocated human and financial resources where possible;
- proceed with the project of extension of the technical site of the Agency in Strasbourg, both in terms of office space and data centre;
- progress with the implementation of the SIS Recast Regulations;

- progress with the implementation of ECRIS-TCN;
- continue its close collaboration with the Member States, the European Commission and the relevant EU Agencies to ensure the timely implementation of the new systems and the interoperability components;
- finalise the recruitments for all posts provided in the establishment plan of the Agency without delay;
- continue to further evolve and strengthen the corporate governance framework with particular attention to portfolio and programme management, contract and vendor management and activity-based budgeting;
- finalise without delay the development of the Agency's sourcing strategy;
- implement the updated set of corporate KPI to reflect the evolution of eu-LISA's organisation.

Assessment of assurances 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 highly satisfied with the overall performance of eu-LISA in 2019 and with the achievements of the Agency through the year. They are in line with the goals and objectives set out in its 2019 Annual Work Programme. The Management Board is also satisfied by the level and adequacy of the utilisation of the available human and financial resources. The Board emphasises that considerable pressure of work remains a concern, especially in the horizontal and cross-organisational functions.

The Management Board invites the Agency to continue its commendable efforts for the implementation of the new initiatives entrusted to it, namely EES, ETIAS, Interoperability and ECRIS-TCN, as well as the recasts of the legal instruments governing the existing systems. At the same time, the Board acknowledges the interdependencies between the work of the Agency at central level and that of the Member States at 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 new systems implementation.

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

The Management Board expresses its appreciation to the Executive Director and to the Agency's management and staff for their commitment and achievements throughout the year, and wishes to thank them for their professional and pleasant collaboration.

Zsolt Szolnoki, Chairman of the Management Board

Foreword



Krum Garkov, Executive Director of eu-LISA

The free movement of people is one of the tangible symbols of the European integration. However, at the time of writing this report in April 2020, it has been put to test. The EU, as rest of the world, has almost come to a standstill in the wake of the COVID-19 outbreak. Temporary restrictions and protective measures have been introduced and limited the free movement of people in the Schengen area and through EU external borders. This crisis has an impact on all citizens and organisations in the EU, including eu-LISA. Nonetheless, the Agency, considering the importance of its services for the normal functioning of the Schengen area, demonstrated its high agility and resilience and sustained its operations. This has been achieved mostly owing to eu-LISA's strong and committed team. eu-LISA has become an integral part of the Schengen architecture. And in a time of crisis, the services of the Agency are essential for the normal functioning of the EU and its ability to continue to provide the necessary levels of protection and security to its citizens.

But real achievements are measured in the long run. Learning from the progress made in the past to achieve goals set for the future help organisations to keep their focus and direction, particularly in times of uncertainty. It is with this mindset that the Agency presents its 2019 achievements and its progress towards the delivery of its annual activities and long-term goals.

The year 2019 was very important and successful for eu-LISA. To start with, it was the first full year of implementation of the Agency's new mandate, bringing new responsibilities and additional resources. eu-LISA's annual activities have been built around three priorities:

- **First**, to stay focussed on its core operations, considering the importance of the systems entrusted to the Agency for the internal security, border and migration management in the EU;
- **Second**, to progress with the implementation of the new tasks entrusted to the Agency (namely the development of EES, ETIAS, interoperability and ECRIS-TCN);
- **Third**, to continue with the organisational transformation as the main enabler of the long-term success of the Agency.

The evolution of political priorities in Justice and Home Affairs domain through the year, combined with the large number of activities to be done in parallel and the high expectations of Agency's stakeholders created a very complex and challenging operational environment for eu-LISA. Nevertheless, I am confident that this report provides solid evidence that eu-LISA was successful through the year in addressing this challenge, to mention a few of them:

- the Agency ensured uninterrupted availability of the systems entrusted to it for the Member States and the relevant EU Agencies;
- substantial progress has been made with the new tasks entrusted to the Agency. The development of EES commenced in May and the preparatory work for the implementation of ETIAS, interoperability and ECRIS-TCN progressed substantially;
- the Agency achieved the key milestones planned for 2019 in its transformation programme;
- eu-LISA proved itself as trusted partner and advisor to the EU Institutions, being involved in many meetings at different levels;
- Cooperation with the other JHA Agencies has been further developed in the context of implementation of EES and ETIAS.

These achievements provide to the Agency's stakeholders assurance on the ability of eu-LISA to deliver its objectives, and serve as a solid foundation for its future success. However, all this has not been achieved in isolation. Hence, I use this opportunity to thank the Member States, and in particular the governments of the countries hosting the Agency's sites, the European Commission, the European Parliament and the Council of the European Union, as well as our partner EU Agencies for their continuous support and constructive cooperation through the year. I would like to also thank all eu-LISA's team members for their dedication and hard work through 2019 in delivering the objectives of the Agency and meeting the expectations of its stakeholders.

2020 and the following years will not be less demanding than 2019. The Agency will continue to operate in a very challenging and dynamic environment. Nevertheless, rest assured that irrespective of the challenges and the circumstances, eu-LISA will not lose sight of its purpose: to contribute through its services to the efforts of the Member States to make Europe safer and stronger. To be successful in this endeavour, the Agency will keep its stakeholders and their needs at the heart of everything it does, ensuring that it delivers services to stakeholders efficiently, with a passion for excellence, agility, flexibility and commitment.

Krum Garkov, Executive Director

Executive summary

The Consolidated Annual Activity Report (CAAR) 2019 gives a structured overview of the activities performed and objectives achieved in 2019 by eu-LISA. In accordance with eu-LISA's establishing regulation, the CAAR is assessed by the Management Board after prior consultation with the Advisory Groups, in particular by comparing the results achieved with the objectives set out in the 2019 Annual Work Programme, included in the Programming Document 2019-2021. The CAAR must be adopted by the Management Board, sent by 1 July of each year to the European Parliament, to the Council, to the Commission and to the Court of Auditors, and published.

eu-LISA's 2019 achievements demonstrated again that the Agency is a strong and reliable partner in the Justice and Home Affairs domain, with solid structure and operations and highly qualified staff. Through the year, eu-LISA proved itself to be an indispensable element of Schengen architecture and enabler of one of the fundamental rights of the EU citizens – freedom of movement. Agency performed well through the year and despite the challenges it faced managed to deliver its objectives.

In a rapidly changing environment, the volatile situation outside of the EU borders, international terrorism and cross border crime continue posing significant challenges to the internal security, law enforcement and border management in the EU. eu-LISA is at the service of European citizens and with its work in 2019 proved to be instrumental to the EU response to these challenges.

Evolution of the legal framework

The year 2019 brought significant changes to the legal environment in which eu-LISA operates.

On 11 December 2018, eu-LISA's new establishing regulation¹ entered into force. With the strengthening of its mandate, the Agency now has increased responsibilities pertaining to design, development, interoperability and operational management of existing and new systems in the area of security, border management, migration and asylum. The new mandate broadens the scope of the Agency's work providing it with a greater role in the area of research, assurance of data quality in systems as well as regarding pilot projects, proofs of concept and testing activities directly related to its mandate.

Three new regulations aiming at strengthening further the SIS entered into force on 28 December 2018. The revised legal framework is also geared towards ensuring full interoperability of SIS with other EU systems for migration, border management and security.

On 11 June 2019, the ECRIS-TCN Regulation entered into force. eu-LISA is responsible for the development and the operational management of ECRIS-TCN, the first large-scale IT system designed and developed by eu-LISA that serves primarily justice purposes.

On the same day, two Regulations establishing a framework for interoperability between EU information systems in the areas of (1) police and judicial cooperation, asylum and migration; and (2) borders and visa entered into force. The development of interoperability technical components, namely the Common Identity Repository (CIR), the European Search Portal (ESP), the shared Biometric Matching Service (SBMS), the Multiple Identity Detector (MID) and the Central Repository for Reporting and Statistics (CRRS), is an iterative process and its complete establishment requires first the implementation of EES and ETIAS.

Operational management of the existing systems

eu-LISA maintained the uninterrupted operation of **SIS**, **VIS/BMS** and **Eurodac**, and throughout the year, within legal requirements and agreed service levels. The availability of SIS was 99.95 %, that of VIS was 99.65 % and that of Eurodac

¹ Regulation (EU) 2018/1726, OJ L 295, 21.11.2018, p. 99-137.

was 99.55 %. The annual eu-LISA stakeholder satisfaction survey for 2019 showed that over 93.4 % of Member States were satisfied or very satisfied with eu-LISA's services.

In line with the new legal instruments, the **SIS II** Release 9.3.0 was successfully deployed in January 2020. This release included new access control features that enable Europol, Eurojust and Frontex to query all relevant types of alerts in the system along with performing fingerprint. The **SIS AFIS phase 2** was kicked-off. Its objective is the implementation of additional biometric requirements stemming from the SIS recast. To answer the needs of the Member States and the continuous increase in the number of searches, the Agency started a project for the increase of queries capacity. A major evolution of the system with the implementation of the new ICAO transliteration rules has been delivered in October 2019. The Agency supported the integration of new users (Cyprus, Ireland and Frontex).

The evolutions of **VIS/BMS** in 2019 aimed to ensure its sufficient capacity to meet the growing needs of the Member States, stemming from the implementation of the EU Common Visa Policy. The capacity of **VIS** was successfully increased to 100 million applications, ensuring sufficient capacity for the Member States. The **VIS/BMS** test environment was improved with the completion of several projects. The Agency also worked on the integration of new users (Europol, passive access for Bulgaria and Romania). The evolutions of **VIS/BMS** have been strongly influenced by the future interconnection between **VIS** and **EES**.

Pending the adoption of the new Eurodac Regulation, functional evolutions of **Eurodac** were put on hold. One new release was deployed, including adaptive and correctives changes.

In 2019, the Agency implemented a new monitoring solution for the management of the systems. It generated efficiency gains in the daily tasks of Agency staff and improved their working environment.

Implementation of new systems

In 2019, eu-LISA continued its work on the implementation of the new systems entrusted to it (**EES**, **ETIAS**, interoperability and **ECRIS-TCN**). Considering the scale of these initiatives, they have been organised as internal programmes to ensure synergies and efficiency in the use of available human and financial resources.

On 17 May 2019, eu-LISA kicked off the execution of the framework contract for the development of the **EES** system. At the end of 2019, the programme setup phase was close to completion. The requirements and specifications phase, in which the detailed technical requirements for the system and its architecture are developed, was progressing at full speed. The development phase was initiated with the signature on 23 December 2019 of two specific contracts, covering the **NUI** delivery and installation at central and national level, and the procurement of necessary licences for the automation of the release deployment. The phase 2 of the **EES BMS** (including **sBMS**) tender was launched on 15 August 2019 and ended on 20 December 2019.² In line with the indicative planning, eu-LISA started working on the **VIS-EES** interoperability as well. A decision was taken that the biometric data for **VIS** will immediately use the **sBMS**, without migration for the **EES** onto an intermediary system, resulting in an overall saving of approximately EUR 30 million.

The Agency established the necessary **ETIAS** governance bodies, the **ETIAS** Programme Management Board, and the combined **EES-ETIAS** Advisory Group. The preparation phase of the **ETIAS** programme has progressed as planned, with the recruitment of the team, the contribution to the preparation of delegated and implementing acts, and the preparations of the tender technical specifications. A new approach for procurement was prepared, the transversal engineering framework (**TEF**), aiming at setting up a contractual shell for the design, development, testing and implementation of new systems, starting with **ETIAS**.³

Following the entry into force of the **interoperability regulations**, the Agency put in place without delay the necessary internal arrangements and initiated the preparatory work for their implementation. It has been organised in three work streams: recruitment of new staff, preparation of the procurement procedure, and support to the European Commission

² The evaluation of the offers started in January 2020, and a framework contract was signed in April 2020.

³ The **TEF** was launched on 29 January 2020.

and the Member States for the preparation of the required delegated and implementing acts. The Agency anticipated the development of interoperability components within other new developments. In particular, the sBMS and the CRRS will be developed as part of the EES programme, the ESP and the CIR will be developed as part of the ETIAS programme and the MID will be developed separately.

Similarly, following the entry into force of the **ECRIS-TCN** regulation, the Agency progressed with the recruitment of the new staff allocated to the development, started the preparation for the procurement procedure and initiated a close collaboration with DG JUST to assist with the preparation of implementing and delegated acts.

Evolution of infrastructure and networks

During the reporting period, the SIS and VIS communication infrastructure using the TESTA-ng services framework contract performed in accordance with the legal and operational requirements. The SIS II second encryption layer ensured the security of the SIS II and SireneMail business data and reached an availability of 100 % during the reporting period.

The upgrade of the VIS communication infrastructure progressed and is planned to be completed in July 2020. Once upgraded, the VIS communication infrastructure will have a capacity almost seven times higher than before, and will be ready to support the entry into operations of EES and ETIAS. During the reporting period, a second encryption layer pilot on the VIS communication infrastructure was carried out. However, a full roll-out of the VIS second encryption layer to all Member States was put on hold, until the EES second encryption layer is designed, as both need to use the same communication infrastructure.

The upgrade of TESTA-ng SIS communication infrastructure started in 2018 and continued during the reporting period. Starting in November 2019, upgrades have been deployed for three sites per month. When the upgrade is completed all Member States will increase their bandwidth from 10 Mbps to 50 Mbps, with an option to upgrade to 100 Mbps.

During the reporting period, the Agency ensured the operational management and daily operation of its infrastructure, both at the main technical site in Strasbourg and at the backup site in St Johann im Pongau, Austria.

Cooperation with stakeholders

eu-LISA abided by its commitment to a very close, transparent and constructive collaboration with its Management Board (MB) and the Advisory Groups (SIS, VIS, Eurodac, EES-ETIAS, IO and ECRIS-TCN). Following the entry into force of the ETIAS regulations, the Agency initiated the ETIAS PMB and extended the EES AG remit to cover ETIAS (joint EES-ETIAS AG). Their first meetings were subsequently held on 1 February 2019 (ETIAS PMB) and on 13 March 2019 (EES-ETIAS AG). Three Working Groups (WG) worked under the umbrella of the EES-ETIAS AG: the WG for ICT Solutions for the MS with external land and sea borders, the Carriers WG (jointly organised with the European Commission) and the WG on Biometrics. Similarly, following the entry into force of the interoperability (IO) and ECRIS-TCN regulations, the preparatory work was completed to organise their first respective AGs and PMBs meetings: the first IO PMB took place on 30 October 2019, and the first IO AG meeting took place on 21 January 2020, the first ECRIS-TCN AG and PMB meetings took place respectively on 24 and 30 January 2020.

eu-LISA continued its involvement in the Schengen evaluation mechanism by contributing to the monitoring of the application of the Schengen acquis. In 2019, the Agency supported ten Schengen evaluation missions and four common visa policy evaluations following requests from the European Commission.

The Annual Conference – ‘The New information architecture as a driver for efficiency and effectiveness in internal security’ - was organised in October 2019 under the auspices of the Finnish Presidency of the Council of the EU and brought together close to 200 delegates representing the Member States, EU institutions and fellow Agencies, as well as practitioners from industry and academia. Two industry roundtables, with a total turnout of over 190 participants,

provided valuable fora for focused discussions about the practicalities and solutions for architectural design and development of the future large-scale IT systems entrusted to the Agency.

Organisational transformation

The Agency launched in 2019 a corporate transformation programme with the aim to align the Agency's organisation with its new mandate and responsibilities. The programme, named 'eu-LISA 2.0', aimed to ensure that the reorganisation process was delivered in an open and transparent manner, engaging actively the Agency's staff. A key element of the programme was the new organisational structure of the Agency. It has been rolled out as of 1 September 2019. A completely new organisational matrix structure has been designed and implemented for the Operations Department. The organisation of corporate functions was also redesigned.

Sites

The Agency has started a project to extend the size of its technical site facilities in Strasbourg. Following an ex-ante check with the European Commission and the French representative of the Management Board, it was agreed that the Ministry of Interior of France will support the Agency for the design and implementation of the project. At the end of 2019, the Agency signed a contract for a programmers' service to prepare the preliminary design and technical conditions for a technical design service which should start at the end of 2020.

Budget implementation

In 2019, eu-LISA managed a budget of EUR 288.4 million in commitment appropriations and EUR 138.1 million in payment appropriations received from the EU general budget. The Agency retained a high budget implementation rate, in particular:

- 99.7 % for commitment appropriations, taking into account the non-automatic carry-over of commitment appropriations authorised by the Management Board in February 2020;
- 99.3 % for payment appropriations including the carry-forward of administrative expenditure to 2020.

Main risks and issues reported to the Management Board

The major risks and issues reported to the Management Board through the year were related to implementation of the new tasks entrusted to the Agency, the budget implementation and the planning of the next Multiannual Financial Framework 2021–2027.

The Agency provided regular monthly reports to the Management Board concerning the progress of implementation of EES and ETIAS. They included detailed status of the work and identified risks and issues. Regular reports from the proceedings of the EES/ETIAS AG were provided as well.

These reports were used by the Management Board to formulate 15 decisions and recommendations related to the implementation of EES and ETIAS at central and national level. The Board was also regularly informed about the progress of the major procurement procedures launched by the Agency.

The Agency provided regular information concerning its needs for the new MFF period 2021-2027 and the associated risks. In this respect, in June 2019 the Management Board expressed its concern about the difference between the financial resources requested and allocated to the Agency and emphasised the negative effects and risks would that difference not be resolved.

The MB was also regularly informed and, together with the Agency, closely followed the project for the second extension of the Strasbourg technical site, and the risk associated with the lack of facilities to host new systems, staff and on-site

contractors.⁴ In order to mitigate the risk in a cost-efficient manner, the Agency pursued the lease of temporary office space and the setup of an on-site temporary infrastructure for the extension of the primary data centre.

The MB was regularly updated on the status of implementation of the transformation programme of the Agency (eu-LISA 2.0), which is closely connected to an identified corporate risk (organisational instability).

Assessment of internal controls by the Management

The management of the Agency has reasonable assurance that appropriate internal controls are in place and that they are functioning as intended. Throughout the year, the major risks were appropriately identified and managed. This assurance is further confirmed by the results of the internal and external audits performed.

Audit results

No critical recommendations were made to the Agency during audits performed in 2019 by the European Court of Auditors, independent external auditors, the Commission's Internal Audit Service or the Agency's Internal Audit Capability. All other recommendations were addressed in related action plans and in 2019 the Agency made further progress with their implementation.

Risks

In 2019, eight major corporate risks were identified. A corporate risk response plan was established to address them. None of the identified risks materialised through the year.

⁴ Preliminary information on the project was submitted to the budgetary authorities on 2 April 2019.

Introduction

The purpose of the Consolidated Annual Activity Report of the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice is to give a structured overview of the activities performed and objectives achieved in 2019.

Background information

The European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice was established in 2011 by Regulation (EU) No 1077/2011 and became operational on 1 December 2012. The Agency was established to provide a long-term solution at the EU-level for the operational management of present and future large-scale IT systems in the area of freedom, security and justice. On 11 December 2018, the Regulation (EU) 2018/1726 on the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA)⁵ entered into force and replaced and repealed the previous eu-LISA establishing regulation. Regulation (EU) 2018/1726 expanded the Agency's mandate. This new mandate strengthens the Agency's capacity to improve and develop information systems for European security, border management and migration, and broadens the scope of the Agency's work on research and innovation.

eu-LISA currently manages the Schengen Information System (SIS),⁶ the Visa Information System (VIS)⁷ and the European Asylum Dactyloscopy Database (Eurodac).⁸ These systems are essential for the smooth functioning of the Schengen area. At its external borders, these IT systems are critical to the efficiency of border management and ensure the implementation of common EU asylum and visa policies. Within the Schengen area, the availability of these systems is crucial to guarantee the freedom of movement of EU citizens.

The Agency is at the same time developing the Entry/Exit System (EES),⁹ the European Travel Information and Authorisation System (ETIAS),¹⁰ the centralised system for the identification of Member States holding conviction information on third-country nationals and stateless persons (ECRIS-TCN),¹¹ and the new components that will shape the framework for the interoperability of the systems entrusted to the Agency, as per the interoperability regulations.¹²

Our mission, vision and core values

The Agency's mission is based on its legal mandate provided in Regulation (EU) 2018/1726 and focuses on *continuously adding value for Member States by supporting through technology their efforts for a safer Europe*.

This mission is delivered through the Agency's vision, which is to *provide high-quality and efficient services and solutions to stakeholders, to earn their trust through continuously aligning the capabilities of technology with the evolving needs of Member States and to grow the Agency as a centre of excellence* in the Justice and Home Affairs (JHA) domain.

The Agency's mission and the vision are translated into operational activities through the core values of eu-LISA. They drive and underpin all operational activities and the strategic development of the Agency. These values are:

⁵ Regulation (EU) 2018/1726 of the European Parliament and of the Council of 14 November 2018 on the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA), and amending Regulation (EC) No 1987/2006 and Council Decision 2007/533/JHA and repealing Regulation (EU) No 1077/2011, OJ L 295, 21.11.2018, p. 99–137.

⁶ Regulation (EU) 2018/1860, Regulation (EU) 2018/1861 and Regulation (EU) 2018/1862, OJ L 312, 7.12.2018, p. 1–106, Regulation (EC) No 1986/2006 and Regulation (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.

⁷ Regulation (EC) No 767/2008, OJ L 218, 13.8.2008, p. 60–81.

⁸ Regulation (EU) No 604/2013, OJ L 180, 29.6.2013, p. 31–59.

⁹ Regulation (EU) 2017/2226, OJ L 327, 9.12.2017, p. 20–82.

¹⁰ 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.

¹¹ Regulation (EU) 2019/816, OJ L 135, 22.5.2019, p. 1–26.

¹² Regulation (EU) 2019/817 and Regulation (EU) 2019/818, OJ L 135, 22.5.2019, p. 27–135.

- **Accountability:** deploying a sound governance framework, sound financial management and cost-efficient operations.
- **Transparency:** communicating regularly and openly with the Agency's key stakeholders and engaging them in a continuous dialogue to define the long-term strategy for the development of the Agency.
- **Excellence:** having the right organisational structure, the right people and the right processes in place to ensure service continuity to the Member States.
- **Continuity:** ensuring that the Agency makes the best use of expertise, knowledge and investments made by the Member States and continues to develop expertise and knowledge.
- **Teamwork:** seeking to empower each individual team member to make the best use of his or her knowledge and experience, contributing to the Agency's success.
- **Customer focus:** ensuring that the Agency is aligned at all times with the needs and demand of its stakeholders.

Where we are located

The seat of the Agency is in Tallinn, Estonia, while the operational management of the systems entrusted to the Agency is carried out in Strasbourg, France. eu-LISA also has a technical backup site in St Johann im Pongau, Austria, and a liaison office in Brussels, Belgium.

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 Consolidated Annual Activity Report 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 Consolidated Annual Activity Report for the previous year comparing, in particular, the results achieved with the objectives of 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 and to ensure that the Annual Activity Report is published.

1 Achievements of the year

The Agency's Strategic Goals have been defined with the Member States and the European Commission in the eu-LISA long-term strategy 2018-2022.¹³ The Strategic Goals reflect the mandate of the Agency and provide the structure on which the Agency sets its multiannual strategic objectives. The activities undertaken by the Agency contribute to achieving its four Strategic Goals:

Strategic Goal 1: continue to grow as a contributor to and implementing partner for the relevant policies in the EU;

Strategic Goal 2: maintain and extend the role of the Agency as an EU information and communication technology (ICT) centre of excellence and service provider;

Strategic Goal 3: continue growing as the principal EU ICT technology hub;

Strategic Goal 4: continue to develop an efficient and agile organisation in compliance with the EU regulatory framework.

1.1 Strategic Goal 1

CONTINUE TO GROW AS A CONTRIBUTOR TO AND IMPLEMENTING PARTNER FOR THE RELEVANT POLICIES IN THE EU

1.1.1 Operational management of the systems

The core operations of the Agency in 2019 were aimed at maintaining a continuous 24/7 operations of the large-scale IT systems under its mandate: SIS II/AFIS, VIS/BMS and Eurodac. It was therefore a key success for eu-LISA to achieve this objective, within legal requirements and agreed service levels, and with a high level of customer satisfaction.

The systems overall performance in 2019 was good and comparable to that of 2018. More specifically:

- the SIS II central system availability was 99.95 % (KPI 6) and the SIS II central system response time was 99.84 % (KPI 7);
- the VIS central system availability was 99.65 % (KPI 8) and the VIS central system response time was 97.79 % (KPI 9);
- the availability of Eurodac central system was 99.55 % (KPI 3) and the Eurodac central system response was 99.91 % (KPI 4).

The 2019 results of the eu-LISA Stakeholder satisfaction survey also showed very positive results, with a consolidated result of 93.4 % satisfied or very satisfied users (KPI 20). In addition, the performance of the Member States systems helpdesk (KPI 22) reached 90 %, exceeding the target (80 %). eu-LISA stakeholder satisfaction survey is a regular feedback procedure developed to obtain MS users' feedback regarding the support provided by the Agency. Measuring stakeholder satisfaction helps the Agency identify whether its performance meets the needs and expectations of the Member States. This feedback is collected for SIS, VIS and Eurodac through the annual satisfaction survey procedure. The survey covers the overall eu-LISA service desk performance, the incident and problem management, the operational communication, the technical assistance for national activities and the release management. The replies are collected from the Member States, consolidated and reviewed by each of the process owners.

SIS

Operations

During the reporting period, the SIS central system overall performance was within the agreed service-level agreement (SLA). The maintenance in working order (MWO) transition process has been finalised. Continuous

¹³ <https://www.eulisa.europa.eu/Publications/Corporate/eu-LISA%20Strategy%202018-2022.pdf>

support for Member States was adequately provided within the Agency's IT service management (ITSM) framework. Monthly reports were delivered on time and accepted. The availability of the SIS II central system was 99.95 % (KPI 6, slightly below the 99.99 % green target, 99.5 % amber target achieved¹⁴) and the SIS II central system response time was 99.84 % (KPI 7, 99.5 % green target achieved). Events preventing the system from behaving appropriately were managed in a timely manner so that performance remained within the SLA with end-users. The Agency carried out corrective, adaptive, perfective and preventive maintenance tasks to achieve this objective and deployed in total two releases to this extend.

In late July, after a switchover to the BCU, Member States and eu-LISA detected a significant degradation on queries performance that caused many rejections of central queries. The Agency took the immediate decision to switch back to the CU, which was effective on the same day. A very large number of central queries due to the holiday period was identified as the root cause. Together with the MWO contractor, eu-LISA decided to increase the memory on BCU servers. Switchovers done in Q3 and Q4 2019 confirmed that the BCU is ready to handle an increased load of central queries. This event also highlighted the need for an increase of SIS capacity.

The biometric search capabilities of SIS, SIS-AFIS, was also heavily used in 2019, proving its worth to the European law enforcement community. Once biometric fingerprint information is added to a European Arrest Warrant, SIS AFIS allows for a much quicker identification of a wanted person. The SIS AFIS was also operated and successfully maintained, with no major incident. Nineteen Member States are now using AFIS.

eu-LISA continued its value adding support to both Member States as well as the JHA agencies with access to the SIS (Europol, Eurojust and Frontex). A dedicated support team from eu-LISA supported these 35 stakeholders in carrying out compliance tests on new national systems, Sirene workflow systems and in the qualification of new message-oriented middleware.

Statistics

2019 statistical data confirm that SIS II remains the largest information sharing system for security and border management in the Member States, and its usage keeps steadily increasing (Figure 1).

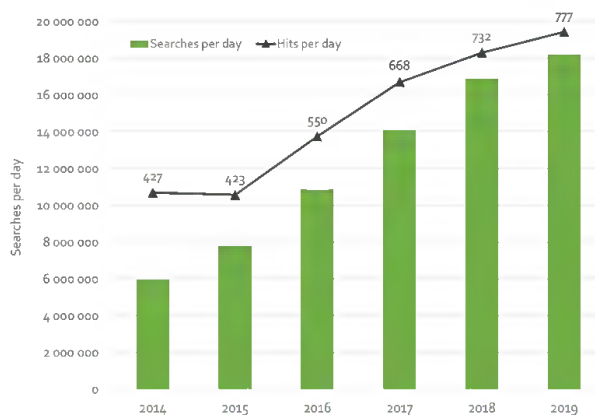


Figure 1: Average number of SIS II searches and hits per day (2014 – 2019)

A progressive upward trend in the system is observable since 2014, when annual statistics were first published. Back in 2014, SIS II was searched on average almost 6 million times per day, whereas in 2019, competent authorities all over Europe searched SIS II 18 million times on average per day. Important factors that have

¹⁴ Key performance indicators are summarised in Annex I

increased the usage are new users, namely the UK since 2015 and Croatia since 2017, as well as new use cases (e.g. systematic checks).

In 2019, SIS II was accessed more than 6.6 billion times by Member States and associated countries, 8 % more than in 2018 (Figure 3).

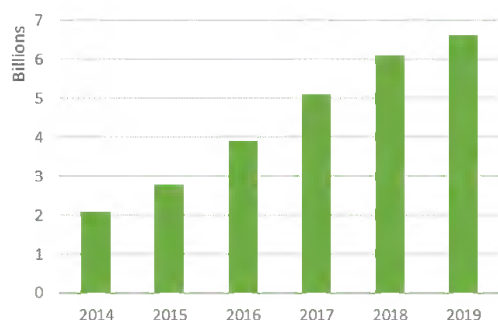


Figure 3: Number of SIS II searches per year (in billion, 2014 – 2019)

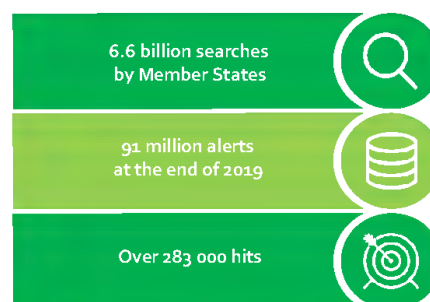


Figure 2: Key 2019 statistics for SIS II

On 31 December 2019, SIS II contained over 91 million alerts (Figure 2), an 11 % increase compared to 2018.

The largest alert category was 'Issued document', making up 75.5 % of the total alerts. The SIRENE Bureaux processed 283 713 hits, an increase of 6 % compared to 2018. A total of 983 124 alerts on persons represent over 1 % of the total number of alerts, while triggering over three quarters of the total hits recorded.

VIS/BMS

Operations

The Agency operated VIS and BMS through regular and comprehensive maintenance during the reporting period. Reports were provided to the Member States, detailing the incident resolution times. Overall, the VIS system performed well, in line with the SLA. There were some issues with the BMS but the performance of the systems remained at a satisfactory level. The availability of VIS central system was 99.65 % (KPI 8, 99.5 % amber target achieved¹⁵) and the VIS central system response was 97.79 % (KPI 9, 90 % amber target achieved). Reaching the high availability green target (99.99 %) will either require an overhaul of the system, to be done during the VIS recast, or an active-active setup, as the current architecture with an active-passive site setup prevents the full achievement of the high availability target.

The virtualisation of BMS was deployed with the 2018 release 3 and fully implemented in production, both on CU and BCU, in April 2019. The objective of this release was to align BMS with the new test environment. This release however led to an incident, which occurred on BMS in June, when a performance degradation and a large amount of asynchronous transactions started occurring, generating error messages. The issue appeared to vary depending on the time and traffic intensity. A thorough investigation was launched. The Agency and the MWO contractor engaged significant resources on the investigation and resolution of this issue, to find and eradicate the root cause. This behaviour was never observed during the load, soak and stress tests, therefore replaying its occurrence in the test environments was challenging. During the period, the Member States were regularly informed about the evolution of the situation. Implementing remedial actions have alleviated the overall situation before the solution could be found. The issue was solved successfully with the contractor. A workaround was initially used to fix the issue. A patch for middleware components was deployed in September.

¹⁵ Key performance indicators are summarised in Annex I

The medium-term solution to the issue will involve a reconfiguration of the middleware database and application, which will be implemented with the 2020 releases 1 and 2.

Owing to this issue with BMS, no other release was implemented in 2019. The planned BMS virtualisation step², initially planned in Q4 2019, was postponed to Q1 2020.¹⁶

Statistics

In 2019, over 294 million VIS operations and 17 million visa applications were processed, an increase respectively of 7.3 % and 6.6 % from 2018 (Figure 5 and Figure 4).

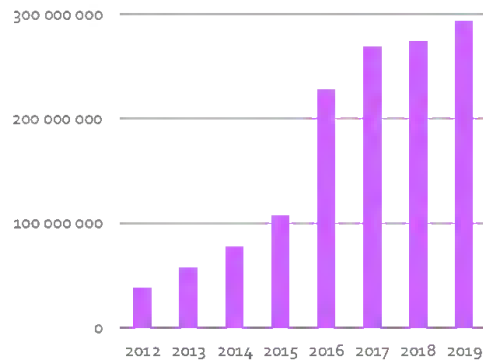


Figure 5: Number of VIS operations per year (2012 – 2019)

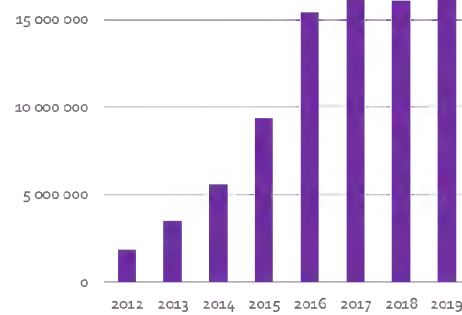


Figure 4: Number of visa applications per year (2012 – 2019)

In June 2019, an all-time high peak was reached with 139 000 operations per hour. For VIS, the maximum throughput without performance deterioration is currently 450 000 messages per hour.

On 1 January 2020, there were 77.07 million visa applications, 77.04 million facial images and 68.74 million fingerprint sets in the VIS database (Figure 6). By comparison, there were 11.6 million visa applications and 9 million fingerprint sets in the VIS database in 2014. The five biggest VIS users were France, Germany, Italy, Spain and Greece. The five most active VIS regions were the Russian Federation, East Asia, North Africa, India and Pakistan, and the Gulf region. The average time between visa application and issuance was 8.9 days.

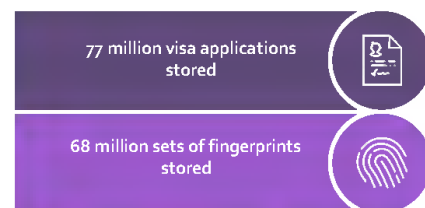


Figure 6: Key 2019 statistics for VIS/BMS

Eurodac

Operations

During the reporting period, the Eurodac system's performance was according to the agreed SLA. Overall, continuous availability was ensured, along with all necessary services to ensure the normal functioning of the system. The availability of Eurodac central system was 99.55 % (KPI 3, 99.5 % amber target achieved¹⁷) and the Eurodac central system response was 99.91 % (KPI 4, 99.45 % green target achieved).

¹⁶ As of March 2020, the release is implemented in the production at the BCU, but the installation at the CU was further postponed due to the limitation that appeared with the COVID-19 outbreak.

¹⁷ Key performance indicators are summarised in Annex I

In March, an incident happened following the installation of a new certificate, and the Eurodac central system remained unavailable during the night. To fix the incident, a rollback operation was performed, followed by a new installation of the certificate.

Between May and July, Eurodac experienced some short outages due to the malfunctioning of one component. Following thorough analysis by both eu-LISA and the MWO contractor, a technical resolution was found and implemented by mid-July.

As part of the ITSM framework integration, all Member States (with the exception of the UK) migrated to the new 'Single point of contacts' (SPoC), and a majority of Member States started using the Service Manager 9 (SM9) tool, streamlining and harmonising the interactions with all MS across the systems.

The update of the Eurodac operator manual (version 1.35), detailing the operational procedures for both Member States and eu-LISA, was distributed to the SPoC by mid-December, following the presentation of changes to the Eurodac AG.

In November, a Eurodac security exercise was executed. The main goal was to test the security, the business continuity and the disaster recovery capabilities of Eurodac. Six countries were involved: Finland, Italy, Latvia, the Netherlands, Portugal and Switzerland. ENISA and the Commission supported the preparations and the execution.¹⁸ This exercise yielded valuable information on how to further optimise the internal and external processes and policies for the continuous operations of the system.

From 02 to 04 December, EDPS audited the Eurodac system. In accordance with the legal instruments, EDPS conducts a data protection audit on Eurodac central system every three years. During the audit, eu-LISA answered all questions from the auditors, provided the requested evidences and presented live examples during hands-on sessions.

Statistics

In 2019, the Member States successfully transmitted 916 536 sets of fingerprints to the Eurodac central system (Figure 7). Compared to 2018, the total number of transactions to Eurodac in 2019 increased by four per cent. The last peak was reached in 2015 with a record traffic of almost two million transactions. By the end of

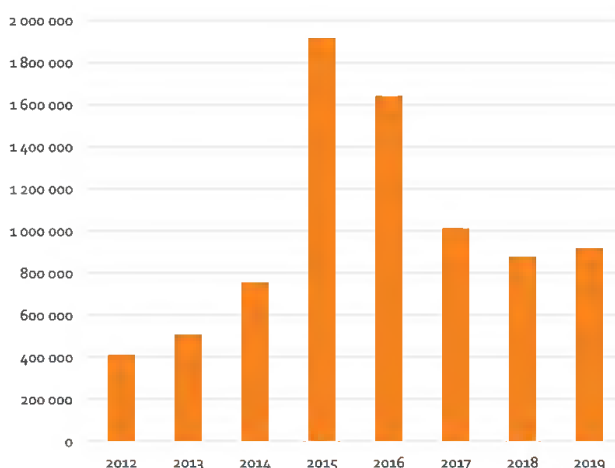


Figure 7: Eurodac data transmitted per year (2012 – 2019)

¹⁸ The final report was adopted by the Eurodac AG in February 2020.

December 2019, the Eurodac central system was storing 5.69 million fingerprint sets (a 6 % increase compared to 2019).

More specifically, the Eurodac central system processed 592 691 sets of fingerprints of applicants for international protection (Figure 8) aged 14 years or older (category 1) and 111 761 sets of fingerprints of persons aged 14 years or older apprehended when irregularly crossing the external border of a Member State (category 2). Further 211 635 sets of fingerprints of persons aged 14 years or older illegally present on the territory of a Member State were sent under category 3. Member State law enforcement designated authorities sent 449 sets of fingerprints for the purpose of prevention, detection or investigation of terrorist offences or of other serious criminal offences (category 4). Europol did not send any set in 2019 (category 5). The numbers of datasets per category are shown in Figure 9.



Figure 8: Key 2019 statistics for Eurodac

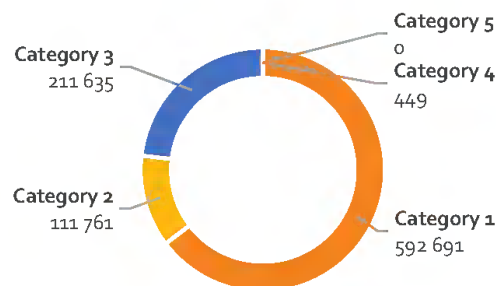


Figure 9: Breakdown by category of datasets sent to Eurodac central system in 2019

DubliNet operations

During the reporting period, the maintenance of DubliNet was provided by ensuring that the network and certificate services were continuously available to the Member States.

In June, Cyprus was facing connection issues with other Member States, which in turn impacted the exchange of DubliNet emails. The instability of the connection lasted for four weeks before a solution was found and implemented locally by the Cypriot team.

Between 28 September and 05 October, the TESTA-ng operator performed a failover exercise on their mail relay service. All email traffic handled by the primary TESTA-ng mail relay was switched over to the secondary mail relay. As a result, a few Member States (for both Eurodac and DubliNet) could not send and receive any email. The root cause was identified as an improper configuration in affected Member States. After TESTA-ng switched back to the initial configuration, all Member States traffic went back to normal.

IT service management

Systems operation support

To ensure the continuous availability of its systems, eu-LISA operates a 24/7/365 systems support, staffed by a workforce operating in shifts. The performance of the systems service desk in 2019 was very good and reached 90 %, exceeding the target (80 %). It is measured by the corporate KPI 22 'MS systems service desk performance'. This indicator measures the ability of the Agency to provide end users with support for help requests and incident resolution. The indicator measures the availability of support (time to respond) and the performance of support (time to resolve). As a result, the indicator shows the percentage of requests completed

within the criteria set in the service level agreement (SLA) between eu-LISA and the Member States. In 2019, the Agency handled more than 5 100 tickets: 3 854 incidents and 1 329 service requests (Table 1). More than 1 168 tickets were submitted by the Member States, and 4 015 were submitted internally, either from monitoring events or from the MWO contractors.

Table 1: Number of incidents and service requests handled in 2019

	SIS	VIS	Eurodac	Total
Incidents	869	1 719	481	3 069
<i>Opened by the MS</i>	384	258	190	832
<i>Opened internally</i>	485	1 461	291	2 237
Service requests	789	270	270	1 329
<i>Opened by the MS</i>	241	85	57	383
<i>Opened internally</i>	548	185	213	946

Out of 3 069 incidents handled in 2019, 40 were of critical priority: 14 for SIS II, 8 for VIS and 18 for Eurodac (Table 2).

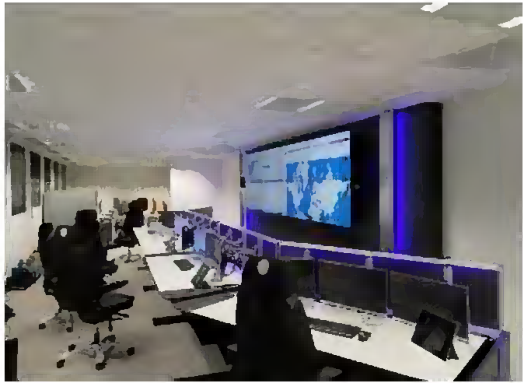
Table 2: Breakdown of incidents by priority and system

Priority	SIS	VIS	Eurodac	Total
<i>Low</i>	122	455	86	663
<i>Moderate</i>	386	676	147	1 209
<i>High</i>	347	580	230	1 157
<i>Critical</i>	14	8	18	40
Total	869	1 719	481	3 069

Deployment of the Single Integrated Monitoring Solution

In 2019, the Agency worked intensely on the design and implementation of the next-generation solution used by its first and second level support functions for the monitoring of the large scale IT systems. This solution, called Single Integrated Monitoring Solution (SIMS) was deployed in a newly created 24/7/365 monitoring room in the refurbished data centre building of the Agency's technical site in Strasbourg (Figure 10). The installation allows the monitoring of current and upcoming large-scale IT systems in the same way, bringing about significant efficiency and effectiveness gains. The solution has delivers an overview of the functionality of all systems and facilitates the early identification and investigation of irregularities in their functionality.

The SiMS features five fully equipped 24/7 monitoring desks with a 5 m long video wall containing eight 46-inch screens, which can be interconnected or pooled together in a so called 'big picture' (Figure 10). All 90 workstations from the three different systems environments are combined into one central tool, without being connected to each other, enabling the first level or second level officer to easily select the source (environment) they need to work on from their workstations. Every workstation is only equipped with monitors, a mouse and a keyboard; all the other hardware is safely and securely mounted into racks inside the data centre. In terms of ergonomics, the room is equipped with a full thought through solution for 24/7 use. This includes an automated night/day light management of all screens and personally adjustable furniture. Touchpads enable quick and easy selection of the needed environment and can be forwarded to other offices, or even into the interconnected meeting room.



Credit: Dominik Schubert, eu-LISA

Figure 10: The Single Integrated Monitoring solution deployed in Strasbourg

In a second phase, the SiMS will be deployed to the backup technical site, on a smaller scale. The planning phase has already started, and the installation and implementation is planned for 2020.

Change management

The Change Management process for large-scale IT systems managed by eu-LISA, was launched after the endorsement of the Advisory Groups and the approval of the Management Board in 2013. After almost seven years, the Change Management process has reached a level of maturity recognised by all stakeholders. The systems entrusted to eu-LISA have also reached a high level of stability. Consequently, fewer changes requests have been submitted by the Member States or the Commission. The complexity of the submitted change requests however increased, requiring significant efforts for their assessment. In this process, the Change Management Group is in charge of identifying and agreeing on the way to implement the requested changes. The changes then have to be approved by the respective Advisory Groups and the relevant Committees. Whenever possible, changes were implemented within a planned release. When these changes required more complex test activities, or had dependencies with other changes, they have been planned for implementation within the forthcoming recasts of each applications. This approach mitigates the impact of the implementation, testing and validation of these changes for both the Member States and the Agency.

For **SIS**, eight new change requests were managed for enhancements and updates of existing functionalities. Three requests were classified as major, and five as minor. The main focus was on solving the issue related to the implementation of ICAO 2015 transliteration rules. A task force was established to identify a solution, to agree on the way to implement this change and to finally coordinate and align the activity with MS to fill the gap discovered in the application. The change was implemented with the first SIS release of 2019. Four changes are planned for implementation in 2020, and three are planned for the SIS recast.

For **VIS**, the work of the Change Management Group focused on the assessment of the impact of VIS-EES interconnection. This was a very significant task, requiring a strong involvement of the Agency and the Member States. A task force was established; three dedicated meetings and four remote meetings took place to carry out a thorough assessment of the changes to VIS stemming from the EES Regulation, and identify the way to implement them. More than 30 changes were listed and will have to be implemented in VIS ICD to ensure the

interconnection with EES. In addition, three new change requests were managed, all classified as major. One was an emergency change, and two are planned for the VIS Recast.

For **Eurodac**, six new change requests were managed. All change requests were usability enhancements, classified as minor but of significant importance for the Member States. The main change request pertained to the increase of the platform capacity, needed to face the additional workload due to the increased number of asylum seekers. Other enhancements related to MS operational and usability needs.

Thanks to the continuous work and cooperation with the Member State experts, the majority of change requests have been swiftly implemented. To date, all changes implemented or planned for implementation have been supported by all Member States. This is a major achievement of the Change Management process, demonstrating its ability to unite MS experts for the assessment and drafting of the proposed enhancements.

Testing, release and deployment management

Before the deployment of releases, extensive testing was performed. eu-LISA progressed towards the implementation of an end-to-end testing platform for the large-scale IT systems. After the selection of the solution, the implementation and training phases were concluded. The solution is currently ready to be used for the EES development, and it will be gradually extended to all other systems, following a cost benefit analyses.

The deployment of SIS II, VIS and Eurodac releases is defined in the Release and Deployment Management Policy. The deployment and release activities are planned and performed in a way to minimise the impact on operational activities of the systems, with a special attention paid to their performance and availability. In 2019, the following releases were deployed.

SIS II: one release was implemented in production environment. Apart from adaptive and corrective items, this release contained the implementation of ICAO 2015 specifications, which was a business change, impacting the Member States' data. A second release was completed on 8 January 2020, containing mainly changes allowing the integration of Frontex as new SIS user and the extension of the access for Europol and Eurojust.

VIS: three releases were implemented in production environment. The first release of 2019, postponed from 2018, contained the virtualisation of BMS. The second release contained adaptive and corrective items as well as the VIS capacity upscale to 100 million records. Finally, the last release of 2019 contained the integration of Europol as a new user.

Eurodac: one release was implemented in production environment. This release was focused on implementation of corrective and adaptive technical changes. The entry into operation of the second planned technical release was postponed to 2020.¹⁹

The Agency launched a holistic approach for 'Application lifecycle management' (ALM) to deliver faster and in a more agile way IT components and applications. The reuse of common components, the interconnectivity and the interoperability of new systems bring additional complexity over the application lifecycles. The ALM approach fulfils the purpose of lifecycle management process automation and ensures better traceability throughout reporting, analysis, development, testing, deployment and quality assurance, by enabling a coherent and comprehensive application lifecycle governance. As an initial step, a study was kicked off in December 2019 to identify the existing capabilities and gaps and define a roadmap for the implementation of the application lifecycle governance. The study is planned to be executed during the first half of 2020.

¹⁹ It was deployed in February 2020

1.1.2 Evolution of the systems

SIS

In 2019, the main efforts of eu-LISA concerning SIS were focused on the timely implementation of the SIS Recast Regulation, alongside the continuous of the SIS AFIS development. To answer the needs of the Member States and the continuous increase in the number of searches, the Agency started a project for the increase of queries capacity. The 2015 ICAO transliteration rules were implemented, and the Agency supported the integration of new users (Cyprus, Ireland, and Frontex).

SIS Recast

Following the entry into force of the SIS recast regulations on 28 December 2018, a number of activities started. The SIS subgroup of the Expert group on information systems for borders and security (SIS Expert Group) started meeting on 29-30 January under the new SIS legal framework. This initiated the first round of discussions on the description of new functionalities and technical requirements for the central system, the possible and preferred options for implementation and their technical and operational implications. During 2019, the SIS Expert Group met on a regular basis, to address topics such as new requirements concerning object alerts, new statistical requirements or the use of SIS for the return of illegally staying third country nationals. As part of the SIS recast, several review cycles of the interface control document (ICD) and of the detailed technical specifications (DTS) took place until the end of 2019.

A successful SIS II Release 9.3.0 was deployed in January 2020. Adhering to the new legal base, this release included new access control features that enabled Europol, Eurojust and Frontex to query all relevant types of alerts in the system along with performing fingerprint and extended search queries. In addition, AFIS functionality has been enriched with search on slap fingerprints. The use of the features for Eurojust and Frontex will be fully enabled once the validation and the connection of their systems are done.

AFIS phase 2

Several MS (Belgium, Czech Republic, Spain, Iceland and Lithuania) progressed with the validation and connection to AFIS phase 1.

The AFIS phase 2 was officially kicked-off by the Agency in Strasbourg on 16 April. eu-LISA proposed during a SIS AFIS PMF to combine the AFIS Phase 2 with the additional biometric requirements stemming from SIS recast, considering the tight schedule for the design phase of AFIS Phase 2. The objective of AFIS Phase 2 project is to identify the requirements and the corresponding design for the improvement of the performance of the system and for the extension of biometric search capabilities with dactyloscopic data on palms and latent fingerprints. This extension of the biometric system will be available for border checks (first-line) and at police stations (second-line). This new feature will also be used in the framework of police investigations. Following the AFIS Phase 2 design phase (September – December), the user requirement document was approved by the different stakeholders.²⁰

ICAO transliteration rules

On 9 October 2019, after 6 months of development, the Agency completed the deployment to SIS II of the 2015 ICAO transliteration rules. This was an important milestone for SIS II, and was the most challenging and complex enhancement of the system since its entry into operations in May 2013.

The transliteration of special national characters is a basic functionality of SIS II, and facilitates the creation of alerts and their retrieval when the system is queried. In 2018, owing to an incident reported by some Member States, the Agency discovered the SIS II did not contain values that are foreseen in the latest ICAO

²⁰ The implementation phase started in January 2020.

Specifications. ICAO updated the specifications for Machine Readable Travel Documents in 2015, with new transliteration tables. This successful evolution of SIS II demonstrates the excellent collaboration of the Agency with the experts of the Member States, who contributed to the assessment of the issue and the definition of the solution.

Increase of queries capacity

On 1 April, the project for the increase of SIS queries capacity was kicked-off. The increase of queries capacity is a major evolution of the SIS central system, and is needed to match the increasing use by Member States and the exponential growth of the amount of alerts. The alert capacity will eventually reach 130 million. The project was divided into three main stages: the first release was deployed and included an upgrade of the WebLogic application software.²¹ The second release will address the search engine. Finally, the third release will deploy an upgrade of the database.

Integration of new users

eu-LISA continued its support to the part of the SIS community not yet connected to the production system. In Q3 2019, the project of connecting the Republic of Cyprus was started. eu-LISA worked together with representatives of the Ministry of Interior and its police force for the kick-off of the project and a training session. Significant progress was made towards the integration of the Republic of Ireland: in December 2019 the final Test Summary Report was adopted, leading to technical readiness for the integration into SIS in 2020. In Q4 2019 the connection of Frontex to SIS was established, as a key aspect stemming from the SIS recast.

VIS/BMS

The evolutions of the system in 2019 aimed to ensure that it has sufficient capacity to meet the growing needs of the Member States, stemming from the implementation of the EU Common Visa Policy. These evolutions included VIS and BMS as well as test environments made available to the Member States. The Agency also worked on the integration of new users (Europol, passive access for Bulgaria and Romania). The evolutions of VIS/BMS have been strongly influenced by the future VIS-EES interconnection.

Capacity increase

Projections are regularly computed by eu-LISA in the context of capacity management to anticipate the appropriate actions for preventing any shortage and critical impact on the operations. The first version of VIS, which entered in production in 2011, was planned to manage up to 100 million applications. An in-depth analysis in 2015 showed that the average size of a visa applications was significantly higher than expected, resulting in a storage capacity lower than the target number of applications. Actions were taken from that point in order to bring the storage infrastructure to the necessary level. As a final result, in June 2019, a new release was deployed increasing the storage capacity of VIS to 100 million records. This capacity level is expected to cover the long-term business needs, with some margin to cope with potential future decisions or events that would lead to an increasing use of VIS and a need for additional capacity.

The capacity increase of the BMS database also progressed with the detailed design of the technical solution, the configuration of the environments and the execution of the project test campaign. The project was technically ready to be completed, and the release was ready for deployment in Q4 2019. However, following the incident that occurred in Q2, the BMS production system required additional tests during the second half of the 2019. In the meantime, a decrease in the number of new visa applications was observed, which reduced the short term priority of this capacity increase. It was then evaluated that postponing the deployment of this

²¹ The first release was deployed in Q1 2020.

release was feasible from a business perspective. The deployment to production of the release was therefore postponed to the first half of 2020.

Test environment

Following the evolutions of the VIS/BMS systems and their increase of capacity, new background databases have been successfully developed for testing purposes. These new background databases needed to be bigger, to match the new capacity of VIS and BMS. They also needed to be more representative, to increase the quality of tests, and linked together, to enable end-to-end testing. The completed project also included some test quick wins, for example automation of some test phases or documentation of tools used for performance test.

The implementation of VIS/BMS end-to-end testing platform was concluded in Q1 2019. The objective of this project was the creation of a non-proprietary end-to-end test solution leveraging industry standard tools (covering functional and non-functional aspects) for VIS and BMS. As part of the project, a proof of concept of a test execution monitoring tool was performed as well. The new test management platform is now up and running.

The test environment upscale to 100 % of the pre-production capacity was planned, in order to align the test conditions with the production ones, resulting in more accurate performance and endurance tests. However, in the meantime, the allocated budget and resources had to be reprioritised in order to launch the VIS-EES interconnection project, which is of higher priority and generates stricter planning constraints.

Following a critical incident in 2019 on all test platforms during two weeks, Member States expressed the need to introduce a dedicated SLA and less failure prone test environments. A dedicated project was therefore launched in order to make the VIS test infrastructure more resilient, with improved monitoring and reactivity in case of failure.²²

VIS/BMS resources optimisation

In order to efficiently use the VIS/BMS computing resources, the Agency planned to improve the VIS/BMS front-end configuration to align the distribution of transactions with the actual use of the Member States. In 2019, the analysis report on the tuning of VIS/BMS transactional throughput was delivered and accepted. It was however assessed in the meantime that the introduction of the VIS-EES interconnection would have a significant impact on the VIS/BMS transactions usage and distribution. As a result, no implementation could be planned for the tuning of the transactional throughput. As soon as the EES final usage forecasts will be released, the analysis will be performed once again, based on the same model, and the implementation will be initiated. On the other hand, the virtualisation of the BMS, which was a technical prerequisite for the transaction throughput tunings, was implemented and released in the production and non-production environments.

This VIS refactoring for flexible transaction tuning project, initiated in 2017, aimed at conducting a proof of concept in order to improve the flexibility of VIS capacity and performance by using a dynamic service-based model. But the VIS-EES interconnection project introduced new requirements and technical constraints not aligned with this project. In addition, the critical requirement of "zero downtime" was not met. As a result, it was evaluated that the output of this proof of concept could not be used for further evolutions of the VIS.

Integration of new users

A special contract was signed in August 2019 to prepare for the passive access to the system for Bulgaria and Romania, as well as potentially for Croatia, should a decision be made in the European Council. This passive access (the right to query the VIS) is a pre-requisite for Member States to be able to implement and use the EES. For all those Member States, eu-LISA continued to provide support in testing and training. The

²² The project is in the review process and is planned to be implemented by Q2 2020.

implementation progressed with a slight delay due to additional testing required for the full validation of the functionality. The related VIS release is planned to be deployed in June 2020.

On the side-line of the SIS accession meeting in Cyprus, the eu-LISA delegation also visited the Cypriot Ministry of Foreign Affairs to discuss training roadmaps for their central operations.

The project for the integration of Europol continued: the change request contract was signed and the compliance test campaign started in the end of June. The functionality was implemented in production in October 2019. However, as the national interface is not fully ready yet, Europol might not use its access before Q1 2020.

Eurodac

In 2019 all projects planned for Eurodac were related to particular technical evolutions. Regrettably, the recast of the Eurodac Regulation was still not adopted by the co-legislators and all functional evolutions of the system were put on hold.

Communication model

The Agency had planned in 2019 to change the Eurodac communication model to web services. The goal and scope of the project have been presented to the Eurodac AG, which gave a negative opinion on the implementation of this development before the Eurodac recast. According to the Eurodac AG, a costly change on National Access Point (NAP) would not bring any added value from the business point of view. Web services would be required after the recast implementation, when a larger amount of data will be exchanged between Member States and the Eurodac central system. Additionally, the Eurodac infrastructure design is no longer state of the art, and does not meet the requirements identified in the Interoperability Regulations. It is therefore planned to completely rebuild Eurodac, including its communication model based on web services, when implementing new functionalities coming from the new Eurodac legal instruments.

The first meeting of the UMF (universal message format) Eurodac Experts Group took place in March. This group has been initiated by the Agency, in view of the changes of the communication model to web services, as well the future format of the data exchange under Interoperability. The purpose of this group is to drive, under the coordination of eu-LISA, the preparatory work for the UMF/Asylum extension and to provide the link between the Eurodac AG and the established UMF project governance. The group will also provide input for future DubliNet evolutions, such as the switch from PDF (Portable Document Format) forms to UMF compliant web forms. Other stakeholders, such as EASO, were also involved in the process. In September, a second expert group meeting took place. All Eurodac use cases (based on the initial Eurodac Recast proposal) were drawn and analysed.

Integration with the shared backup infrastructure

Aiming at efficiency gains, the integration of Eurodac with the shared backup infrastructure continued during the reporting period. The first phase, the migration to the physical storage of the backup data within the CSI infrastructure, was achieved in June. The second phase, the upgrade of application backup mechanism, was cancelled due to the technical limitations of the current Eurodac infrastructure. For this reason, a decision was taken to migrate instead to the CSI Backup-as-a-Service, which will be available in 2020.

Multispectral imaging study

In April and May, eu-LISA carried out a study to assess whether the use of multispectral imaging (MSI) devices for the scanning of fingerprints would affect the performance of the Eurodac central system. This study was conducted with the support of Sweden and Norway, under the mandate of the Eurodac AG. The study concluded that MSI use does not degrade the performance of Eurodac. Moreover, Eurodac is able to process

faster fingerprint images captured with the MSI scanners, in comparison with optical live scanners. It means that on high volumes of transactions, the use of MSI may decrease waiting times on hit replies. In addition, the use of MSI technologies would not decrease the current level of accuracy of the Eurodac central system. Based on the results of the study, eu-LISA concluded that the use of MSI scanning technologies may be implemented in parallel with other technologies, depending on the need and budget of each Member State. A report summarising the findings of this study was published on eu-LISA's website.²³

High-availability of the large-scale IT systems

Systems entrusted to the Agency are of critical importance for border controls, internal security and migration management in the EU. Thus, the Agency shall ensure their uninterrupted availability to the Member States and relevant EU Agencies. At the same time, SIS, VIS and Eurodac have been developed at different time and are based on different architecture which do not completely enable their high availability.

Article 10 of the Agency's establishing regulation provides that "Where the Union legal acts governing the systems require the Agency to keep those systems functioning 24 hours a day, 7 days a week and without prejudice to those Union acts, the Agency shall implement technical solutions to meet those requirements. Where those technical solutions require a duplication of a system or a duplication of components of a system, they shall only be implemented where an independent impact assessment and cost-benefit analysis to be commissioned by the Agency has been carried out and following the consultation of the Commission and the positive decision of the Management Board."

Furthermore, Art. 4(4) of the new SIS Regulation adopted in November 2018 provides that "eu-LISA shall implement technical solutions to reinforce the uninterrupted availability of SIS either through the simultaneous operation of SIS central system (CS-SIS) and the backup CS-SIS, provided that the backup CS-SIS remains capable of ensuring the operation of SIS in the event of failure of CS-SIS, or through duplication of the system or its components. Notwithstanding the procedural requirements laid down in Article 10 of Regulation (EU) 2018/1726 eu-LISA shall, no later than 28 December 2019, prepare a study on the options for technical solutions, containing an independent impact assessment and cost-benefit analysis".

eu-LISA initiated work on the impact assessment (IA) in 2019. However, to ensure the consistency of its results across all systems and to maximise operational benefits, the IA has been designed into two phase. The first phase aimed to deliver an overarching independent impact assessment and cost-benefit analysis of the different capacity-oriented options for uninterrupted availability of all systems entrusted to the Agency. It was concentrated on the performance and high availability of the systems, examining in detail the existing and future needs that the technical solutions would create, in terms of hosting capacity at the technical sites, the risks related to the current operational setup, assessing and comparing high-level options to extend capacity and site redundancy. The first phase of the IA was finalised in March 2020.

In order to further fulfil the legal requirement for an independent impact assessment and cost-benefit analysis for technical options to reinforce uninterrupted availability, the Agency will continue with the second phase of the IA in 2020. It aims to detail the technical and architecture solutions for uninterrupted availability for the systems entrusted to the Agency, including a further refined technical analysis and a cost-benefit analysis. The outcome of the second phase of the IA will provide the Agency with a comprehensive comparison of the identified technical solutions that will facilitate the identification of the preferred way forward, taking into account and leveraging the new systems' architecture (EES, ETIAS, interoperability components), which is de facto designed to support uninterrupted availability (active/active mode). The final results of the IA will be presented to the Management Board of the Agency in November 2020.

However, the practical implementation of the new high availability architecture for these systems may only start in 2022 and depends on the availability of necessary budgets under the new MFF 2021–2027.

²³ <https://www.eulisa.europa.eu/Publications/Reports/Eurodac%20MSI-Optical%20Test%20Study.pdf>

1.1.3 Development and implementation of new systems

EES

In 2019, the Agency continued its work on the implementation of EES in close cooperation with the Member States and the European Commission. Considering the complexity of the implementation activities, the work has been organised as a programme including the following projects:

- EES central system;
- EES BMS and sBMS;
- EES web service;
- The interface of EES to the Common Repository for Reporting and Statistics;
- VIS-EES Interoperability;
- Network (including the VIS communication infrastructure).

At the end of 2019, the progress of implementation efforts was according to the schedule with minor deviations, which did not affect the general timeline and the key milestones. Detailed information concerning the status of individual projects is provided below.

EES central system

On 17 May 2019, eu-LISA kicked off the framework contract for the development of the EES system. The tender was won by a consortium of three companies: IBM Belgium, Atos Belgium and Leonardo. The overall ceiling of the EES framework contract is slightly over EUR 142 million for a maximum period of six years. The first specific contracts for the implementation of WP 1 and 2 were signed on 3 June 2019.

As of end of December 2019, the programme setup phase (WP 1) is completed. All the deliverables have been submitted and reviewed by the Agency according to schedule. The requirements and specifications phase (WP 2) contains several complex deliverables related to detailed requirements for the system and its architecture. They include the functional specifications of the system, its detailed technical design and the interface between the central system and the Member States and Europol systems as well as with VIS. As of the end of December 2019, the work is progressing at full speed, although some delays have been observed. Nevertheless, there is no impact on the planned availability of the central system to start testing with Member States at the end of 2020 nor on the planned entry-into-operation date in February 2022. The development phase (WP3) has also begun with the signature on 23 December of two specific contracts, to cover the NUI delivery and installation and to procure licences for the automation of the release deployment.

EES BMS and sBMS

The phase 1 of the EES BMS restricted call for tender was launched on 20 June 2018. The submission date for tenders was 1 October 2018, and it was followed by the evaluation, which was subsequently finalised. The Agency was ready with the tender technical specifications by the middle of February 2019. Considering the substantial progress achieved by then with the interoperability regulations (which eventually entered into force on 11 June 2019), eu-LISA and the Commission considered it beneficial to discuss available options to reflect that progress into the EES BMS tender. After several rounds of bilateral discussions, eu-LISA and the Commission concluded in a joint note that the scope of the tender should be expanded to cover the migration to sBMS of VIS, SIS II, Eurodac and ECRIS-TCN. This option required the cancellation of the procedure LISA/2018/RP/02 EES BMS, which happened on 08 April 2019. With this approach, while extending the timeline for the procurement procedure for EES BMS/sBMS, the Agency has estimated that 9 to 12 months will be saved for the implementation of the interoperability regulations. In line with the expanded scope of the tender, a decision was taken that the biometric data for the VIS will also immediately use the sBMS, without having its biometric data migrated for the EES onto an intermediary system, resulting in an estimate saving of

EUR 30 million. The new call for tender was launched (Phase 1) on 7 May 2019, with a submission date on 26 June 2019. The phase 2 of the tender was launched on 15 August 2019 and ended on 20 December 2019.²⁴

The EES User Software Kit (USK), a tool needed to ensure the quality of biometric data, is also part of the sBMS call for tender scope. An internal requirement consolidation exercise for the USK was completed with the involvement of the EES, VIS, SIS and Eurodac teams.

EES web service for carriers and third country nationals (reusable in the ETIAS context)

Together with Frontex, eu-LISA contributed to the preparation by the Commission of the Implementing Regulation on carriers, covering the obligations for carriers through the use of the carrier interface (EES web service and ETIAS carrier gateway), as well as the preparation of the Implementing Act for the public website and the application for the mobile websites.

The first informal meeting of the Working Group for Carriers, jointly organised by eu-LISA and the Commission, took place on 4 June 2019 in Brussels. The Working Group for Carriers aims to provide awareness to the carrier associations concerning their obligations stemming from the EES and ETIAS Regulations as well as the Schengen Convention. It also monitors and discusses the status of carriers' preparation to implement the aforementioned legislation, including any relevant operational/technical considerations. Forty participants, from 17 carrier representative entities, attended the first meeting and have been invited to react and provide their initial feedback. The second meeting of the working group was held on 20 September, and the third meeting on 19 December. The ad-hoc carrier technical group was formed as a spin-off of the carriers WG, and held its first meeting on 6 November, focusing on the technical elements needed for the implementation of the web services of EES and ETIAS.

At the same time, eu-LISA is performing several activities necessary for developing the full package of the EES/ETIAS web services foreseen evolutions technical specifications, in order to launch the relevant work package under the existing EES implementation framework contract.

All these activities will generate input that will be used to finalise the EES/ETIAS web services technical specifications.

Interface to Common Repository for Reporting and Statistics

EES has to produce reports and statistics for the Member States according to the requirements set in Article 63 of the EES regulation. In parallel an interoperability-oriented wider initiative for the creation of a common reporting and statistics repository of all eu-LISA systems is ongoing, and a technical study was delivered in December 2019 (see the interoperability section page 38). The study defines technical specifications and proposes a budget and a schedule for the interface of eu-LISA information systems with the common repository, including EES. Based on the specifications, a project in the context of the EES framework contract will be launched in Q2 of 2020 to create the EES interface with the repository.

VIS-EES interoperability

In line with the indicative planning, eu-LISA started working on the VIS-EES interoperability. The Agency in cooperation with the VIS contractor assessed the impact of EES regulation on VIS. The definition of the functional specifications has been initiated in April 2019, and Member States were requested to participate in the ICD review. In order to ensure timely progress, three Change Management Group meetings were organised, in April, May and June 2019. The document was formally endorsed by the VIS formation of the SIS/VIS Committee in September 2019 and delivered to the Member States by the end of the same month. In order not

²⁴ The evaluation of the offers started in January 2020, an award decision has been made in March and a framework contract was signed in April 2020.

to impact the sBMS tender procedure, the BMS related changes will be addressed as soon as the sBMS contract is in place.

Network (including the VIS communication infrastructure)

The network project is conducted in three phases: the first phase entails a feasibility study to determine the technical and financial feasibility of the upgrade and the second phase entails the testing of the newly developed technical elements into a sandbox environment and with pilot Member States. The third phase consists in a roll-out of the necessary changes on the existing VIS communication infrastructure to accommodate the EES.

The first phase of the project was successfully finished. The second and third phase are ongoing and on track. The update of the VIS communication infrastructure is covered in further details in the Infrastructure and networks section (see page 40).

ETIAS

With the entry into force of the ETIAS Regulation, eu-LISA progressed with its implementation, starting with the necessary governance structures and the organisation of the work on the system's development.

During the first half of 2019, the Agency established the necessary ETIAS governance bodies. On 1 February 2019, the ETIAS Programme Management Board (PMB) convened in Strasbourg for the first of its monthly meetings. As per the ETIAS regulation, the remit of the EES Advisory Group was extended to cover ETIAS, and the first meeting of the combined EES-ETIAS AG took place on 13-14 March at the Agency's headquarters in Tallinn. In parallel, dedicated technical trilateral meetings were organised between eu-LISA, Frontex and Europol to ensure an effective technical cooperation and coordination between the three Agencies.

The work on the development and implementation of ETIAS has been structured into a programme with three distinct phases.

- i. The preparation phase began in 2018 and is scheduled to last until the end of Q2 2020, with the validation of the technical tender specifications (TTS), currently drafted by the Agency.
- ii. The procurement phase started in Q3 2019 with the setup of the transversal engineering framework procurement procedure, and will end with the signature of contracts and the kick-off of the design and development of the ETIAS in Q3 2020.
- iii. The implementation phase will comprise of three main tracks: firstly the detailed requirements analysis and design of ETIAS, secondly its development, and thirdly the system testing and entry into operation.

The preparation phase is currently on-going and comprises four parallel work streams: recruitment, legal, technical and transversal procurement.

Recruitment work stream

As part of its staff recruitment efforts, the Agency has identified the adequate profiles for the preparation, implementation and operations of the ETIAS on the basis of a capability gap assessment. The identified profiles have been grouped in order to speed up the recruitment process and aligned with the Agency's new organisational structure. As of the end of 2019, 10 positions out of 19 have been filled.

Legal work stream

The Agency has been supporting the European Commission and Member States in the framework of the Smart Borders Committee and Expert Group meetings, with the preparation of the relevant legal acts necessary for the drafting of the ETIAS TTS. Together with the ETIAS consequential amendments, stable versions of the legal acts are necessary for finalising the preparation of the TTS. Six implementing acts and six delegated acts are

considered stable. In parallel, there was limited progress on the Implementing Act for the encryption of the ETIAS watchlist. Four Implementing and Delegated Acts stemming from the Interoperability Regulations have been identified as having an impact on ETIAS. As such, work on these acts has been prioritised in the context of the Smart Borders (Interoperability format) Committee and the timeline for their stabilisation aligned (estimated Q1 2020). The impact assessment of the ETIAS consequential amendments was started at the end of October. As of the end of 2019, the consequential amendments are still pending adoption. Notwithstanding, the Agency anticipated and already took into account, for both EES and ETIAS, the requirements indicated in the documentation. In addition, eu-LISA is actively supporting the Commission with the drafting of the Carriers Implementing Regulation within the context of ETIAS development.

Technical work stream

In the technical work stream, the Agency progressed on the preparation of the TTS. A remediation plan was defined to increase the quality and completeness of the TTS, after a number of concerns were raised. A complementary expertise has been involved to cover the identified gaps and the remaining ETIAS TTS preparatory activities until the end of Q2 2020. The ETIAS Programme Management Board has been empowered to review the ETIAS TTS and validate the linkage between articles of ETIAS regulation and coverage in relevant sections of the ETIAS TTS documentation. The Agency prepared and presented the ETIAS architecture overview, as part of TTS documentation.

The Agency prepared the testing strategy for ETIAS and addressed it at the AG level. The aim is twofold: from planning perspective, fine-tune all associated activities, especially the ones involving MS and Agencies; from coverage perspective, ensure that the EiO preparations are properly covered. The latter also covers the business end-to-end testing, where the Agency shared with the AG members numerous testing scenarios. It is expected that the MS, Frontex and Europol will provide timely feedback to allow completion of the activity by the end of 2020. This activity will also help the MS redesign their business processes, per business area (visa, immigration, law enforcement and border) and thus, test them together with the new national ICT solutions before the EiO of ETIAS. It will also help them perform capacity building and train their end users accordingly, also before the ETIAS EiO.

Transversal procurement

Transversal procurement, the fourth work stream, has been introduced in the preparation phase and complements the initial scope of the ETIAS preparation activities to address the challenges from a growing, interoperable system landscape and adapt to eu-LISA's new transversal organisation. Its objective is to setup a contractual shell for the design, development, testing and implementation of new systems, starting with the ETIAS. Following this decision, the preparation of the specifications for the call for tenders related to the transversal engineering framework (TEF) has been launched in January 2020.²⁵ It is expected to be completed by the beginning of July 2020, with the award of the contracts for each of the TEF lots: design, coordination, quality assurance and integration support (lot 1); development (lot 2); infrastructure - hardware, software, related services (lot 3); testing and qualification (lot 4).

ECRIS-TCN

On 11 June 2019, the Regulation establishing a centralised system for the identification of Member States holding conviction information on third-country nationals and stateless persons (ECRIS-TCN) entered into force. According to this regulation, eu-LISA is responsible for the development and the operational management of ECRIS-TCN, which is the first large-scale IT system to be designed and developed by eu-LISA that serves justice purposes primarily. In this regard, this project is the first formal engagement of the Agency towards the EU justice community and new

²⁵ The procedure was launched on 29 January 2020.

stakeholders for the Agency, such as DG JUST and the European Public Prosecutor's Office. Similar with what has been done in the context of development of other new systems, eu-LISA started its work within three work streams for ECRIS-TCN: the preparation of procurement, the recruitment of new staff and the support to the preparation of implementing acts and delegated act. Concerning recruitment, one contract agent joined the ECRIS-TCN team in 2019, and four additional will be recruited in 2020. Within the context of the legal work stream, eu-LISA worked in close cooperation with the Commission (DG JUST) and the Member States on the preparation of the necessary IAs and DAs. In addition, the Agency provided its support to the ECRIS-TCN Committee and Expert Group meetings. The Agency also started to prepare for the handover of ECRIS Reference Implementation (RI) from DG JUST. Once this is finalised, eu-LISA will be in charge of the maintenance of ECRIS RI and of its further development. Preparations were ongoing to organise the first ECRIS-TCN AG and PMB meetings in January 2020.

1.1.4 Interoperability

The Regulation (EU) 2019/817 on establishing a framework for interoperability between EU information systems in the field of borders and visa, and the Regulation (EU) 2019/818 on establishing a framework for interoperability between EU information systems in the field of police and judicial cooperation, asylum and migration entered into force on 11 June 2019.

Following the entry into force of the regulations, the Agency took the necessary actions to organise the implementation of the interoperability architecture as a programme with three distinct phases:

- i. The preparation phase began immediately after adoption of interoperability regulations. It is scheduled to last until the end of Q2 2020, with the validation of the technical tender specifications.
- ii. The procurement phase started in parallel in Q3 2019 with the setup of the transversal engineering framework procurement procedure, and will end with the signature of contracts and the kick-off of the design and development of the interoperability components in Q3 2020.
- iii. The implementation phase will comprise of three main tracks: (1) the detailed requirements analysis and design of interoperability components, (2) their development, and (3) their implementation and integration with large-scale IT systems.

At the end of 2019, the preparation phase was on-going and comprised of four parallel work streams: recruitment, legal and technical and transversal procurement. Their status at the end of 2019 is outlined below.

To facilitate the integration of existing and new large-scale IT systems into the new interoperability architecture, the Agency completed the feasibility study on "Elaboration of a future architectural framework for interoperable IT systems at eu-LISA: impact assessment and migration and integration plan". Its results were incorporated in the requirements related to separate interoperability components.

eu-LISA established as well the required governance bodies: the Interoperability Program Management Board (IO PMB) and the Interoperability Advisory Group (IO AG), to provide oversight and coordination of implementation activities. The first IO PMB meeting was organised at the end of October 2019. The first IO AG meeting took place in January 2020.

Recruitment work stream

As of the end of 2019, 11 positions out of 27 have been filled.

Legal work stream

The Agency has been supporting the European Commission and Member States with the preparation of the relevant legal acts in the framework of the Interoperability Committee and Expert Group meetings. The Commission, together with the Agency, identified the implementing and delegated acts required as priorities to launch the necessary procurement activities in line with the implementation timeline. As a result, it was decided to produce six acts before the end of 2019, five more in the first half of 2020, two in the first quarter of 2021. The acts pertaining to the entry into operations will be produced once there is clear information that the

respective system can enter in production. Two acts extending the transitional period for the ESP and MID, respectively, will be produced only if needed.

As planned, by the end of 2019, six acts had reached a stable form following discussion in the Interoperability Expert Group and Comitology Committee, where a general agreement was reached. The acts are the following:

- Delegated act laying down detailed rules on the operation of the CRRS;
- Delegated act laying down the procedures to determine the cases in which identity data can be considered to be the same or similar;
- Implementing act on the procedure for the ESP to query the information systems and the format of replies;
- Implementing act on the technical details of the ESP profiles;
- Implementing act on the performance monitoring of the shared biometric matching service and implementing act on the technical rules for linking data from different information systems.

Technical work stream

The objective of this work stream is to prepare the technical tender specifications for interoperability components. The progress for each of them is provided below.

European Search Portal (ESP)

At the end of 2019, the tender technical specifications for ESP were under preparation. According to the planning of the Agency, they will be finalised at the end of June 2020. After their review by the Management Board, in accordance with Art. 54 of Regulation (EU) 2019/818, the development is expected to start in the second half of 2020.

Shared Biometric Matching Service (sBMS)

At the end of 2019, the procurement procedure for the sBMS development was still in progress.²⁶ The development of sBMS will be done in parallel with the development of EES, thus saving substantial amount of time and effort.

Central Repository for Reporting and Statistics (CRRS)

At the end of 2019, the tender technical specifications for CRRS were under development. They are based on a feasibility study about 'Core business systems unified reporting solution'. It was delivered at the end of 2019 and defines the architecture of the technical solution on which CRRS will be based. It will provide comprehensive toolset for statistical reporting and analytics.

At the time of preparation of this report review of technical specifications in accordance with Art. 54 of Regulation (EU) 2019/818 was in progress. The development of CRRS is expected to start in the second half of 2020.

Common Identity Repository (CIR)

At the end of 2019, the tender technical specifications for CIR were under preparation. According to the planning of the Agency, they will be finalised by the end of June 2020. After their review by the Management Board, in accordance with Art. 54 of Regulation (EU) 2019/818, the development of CIR is expected to start in the second half of 2020.

Multiple-Identity Detector (MID)

At the end of 2019, the tender technical specifications for MID were under preparation. According to the planning of the Agency, they will be finalised by the end of June 2020. After their review by the Management

²⁶ It was finalised in April 2020 and the execution of the awarded contract was initiated in May.

Board, in accordance with Art. 54 of Regulation (EU) 2019/818, the development of MID is expected to start in the second half of 2020.

1.1.5 Infrastructure and networks

Operational management of the communication infrastructure

During the reporting period, the SIS and VIS communication infrastructure using the TESTA-ng services framework contract performed in accordance with the legal and operational requirements. The performance of the communication infrastructure exceeded its green target (KPI 5). The VIS communication infrastructure had an overall availability of 99.990 % while the SIS communication infrastructure had an overall availability of 99.995 %.

The SIS II second encryption layer ensured the security of the SIS II and SireneMail business data and reached an availability of 100 % during the reporting period.

To enhance the operational management of the communication infrastructure, a system capable of measuring network statistics has been successfully deployed in CU (in both production and pre-production environments). It allows the Agency to report and analyse better various areas of the network traffic. It also improves the capabilities of the Agency during troubleshooting activities.

Contractual aspects of the communication infrastructure networks

During the reporting period, the handover of the tasks related to the implementation of the budget, acquisition and renewal and contractual matters of the SIS and VIS communication infrastructure was completed. The handover from the Commission to the Agency started in 2018 and the activity was successfully completed in March 2019 with the last budgetary transfer of the SIS line.

Once the handover was completed, the contracts related to maintain and operate the SIS and VIS communication infrastructure were further executed, while new contracts to increase the network bandwidth have been negotiated and initiated. Bandwidth upgrades are required to accommodate the EES and ETIAS systems on the VIS communication infrastructure. Bandwidth upgrades on the SIS communication infrastructure are required to accommodate the AFIS features of the SIS II system.

The renewal of the EuroDomain contracts in CU and BCU, for the Eurodac application, have been successfully executed.

Finally the Agency contributed to the preparations of the renewal of the TESTA framework contract, led by the Commission (DG DIGIT) as the owner of the contract.

Evolution of the communication infrastructure

The evolution of the communication infrastructure was executed in several areas during the reporting period.

Upgrade of the VIS communication infrastructure

A feasibility study on the upgrade of the VIS communication infrastructure to satisfy additional bandwidth needs for EES and ETIAS was kicked-off in March 2019 and was finalised in June. In July, the inception phase of the upgrade started. The upgrade will be achieved through a combination of line upgrades and replacement of the turnkey access points (TAPs) by new models at the sites where lines upgrade only would not be sufficient. A survey of the situation in the MS was carried out during Q3 2019, including whether new equipment would be required for the line upgrades. The sandbox deployment of the new TAPs started in December 2019, following two pilot deployments. By the end of the upgrade in July 2020, the VIS communication infrastructure will have a capacity almost seven times higher than before, and will be ready to support the entry into operations of EES and ETIAS.

Upgrade of the SIS communication infrastructure

The upgrade of TESTA-ng SIS communication infrastructure started in 2018 and continued during the reporting period. The primary sites for Switzerland, Poland and Portugal were already upgraded to 100 Mbps in 2018. For the primary

sites of Austria, Germany and the Netherlands, the upgrades have been done in 2019. Following the completion of this first step, the overall upgrade of the remaining MS to accommodate SIS II AFIS requirements was initiated. The central SIS II CU and BCU TAPs and lines have been upgraded from 1 Gbps to 2 Gbps. Sandbox testing of the model 2 TAP, to be deployed in the MS, was successfully completed. The model 2 TAP was then deployed at two MS for further testing, and was subsequently accepted for further deployment with all MS. Starting in November 2019, upgrades have been deployed for three sites per month, the slow-pace solution opted for by the Commission and eu-LISA for budgetary reasons. The contract provides for all MS first an upgrade to 50 Mbps, with the possibility to extend to 100 Mbps at a later stage, depending on the needs. When the upgrade is completed all MS will increase their bandwidth from 10 Mbps to 50 Mbps with an option to upgrade to 100 Mbps.

Upgrade of the EuroDomain communication infrastructure

The Eurodac application uses the EuroDomain communication infrastructure to ensure connectivity between the Eurodac central system and national systems. The tasks related to EuroDomain budget implementation and contractual matters are the competence of the Commission (DG DIGIT), however budget implementation and contractual matters for the EuroDomain TAPs in CU and BCU are managed by the Agency. The upgrade of the EuroDomain CU and BCU TAPs has been postponed until the Eurodac recast regulation is approved. The Eurodac bandwidth upgrade would only be required if the Eurodac Recast regulation would require a network upgrade.

Second encryption layer evolution

While the SIS communication infrastructure has a second encryption layer to ensure that a third party cannot have access to clear-text data, the VIS communication infrastructure has no second encryption layer. During the reporting period, a second encryption layer pilot on the VIS communication infrastructure was carried out. The pilot was successfully conducted by implementing the solution for three MS on the preproduction network.

However a full roll-out of the VIS second encryption layer to all MS was put on hold. The second encryption layer of the VIS and EES need to co-exist since they use the same communication infrastructure, while at the same time they need to adhere to the requirements of the legal provisions (i.e. logical separation of data). Therefore more clarity on the design of the EES second encryption layer is required before rolling out the VIS second encryption layer to all MS to avoid the risk of additional cost and unavailability if both second encryption layer solutions are not designed in parallel.

UWAN evolutions

Started in 2017, a proof of concept project was carried out to prepare the requirements for a unified wide area network (UWAN) for the large-scale IT systems entrusted to the Agency. The second phase of the work, carried out in 2018, led to the recommendation to test SD-WAN (software-defined wide-area network) solutions. The scope of the final phase, concluded in May 2019, was to test the identified solutions. The output of the study showed that the solutions could be compatible with the Agency's needs. The outcome of the study will be used for future development and improvements of the WAN for the large-scale IT systems.

The unified wide area network perimeter study was planned to start in 2019. The objective of this study is to improve the way the large-scale IT systems are connected to the communication infrastructure, particularly with focus on security, scalability, flexibility, availability and throughput. The study was postponed until the baseline of the EES is known with regards to perimeter design. This baseline would then be used to align with other existing systems.

Common shared infrastructure

To improve the infrastructure lifecycle management, the Agency is running a common shared infrastructure (CSI) programme. The aims of the programme are to centralise and simplify technical services, and to maintain and further develop a common infrastructure used by the large-scale IT systems entrusted to the Agency, in accordance with the provisions of the systems legal instruments.

During the reporting period, the Agency ensured the operational management and daily operation of the infrastructure of the systems by incident management, request fulfilment, problem management, change and release deployment.

The operational management and daily operation of the infrastructure were also performed at the backup site in St Johann im Pongau.

In 2019, one of the most important artefacts created within the CSI programme was the finalisation of a harmonised 'Technology standard and technology portfolio catalogue', which sets the core foundation for the common shared infrastructure, and in particular for the interoperability. Based on the standard, several technical services have been developed: 'Storage-as-a-Service' was completed, while 'Database-as-a-service' and 'Backup-as-a-service' were started.

As part of the CSI programme, the 'Testing Infrastructure' project has implemented a large part of its scope during 2019, including a full testing suite that has been deployed and is available since November 2019. The test suite is comprised of a complete set of integrated tools able to support end-to-end the eu-LISA test process from requirements management to test planning, design, execution and reporting. The project will continue in the beginning of 2020 in order to complete its scope and implement additional modules, which will offer almost real-time observability of an application and its infrastructure during performance and stress testing.

Another project of the CSI programme was the built of a technical common shared infrastructure platforms in the different environments, which will be used in the future to migrate the existing systems. The new developed applications will be hosted on this newly built CSI environment.

1.1.6 Security

Security is a core element of all activities undertaken in an IT-focused organisation such as eu-LISA, not only for legal reasons but also given its role as a centre of excellence in the provision of IT services, including the security of systems and information.

During 2019, the Agency's security function continued to maintain and upgrade measures concerning physical and personnel security to create a safe and secure working environment, in particular in regards to its premises and their accesses.

The KPI 1 represent the number of identified critical shortcomings during security tests, with a target set at zero. The 2019 value of KPI 1 is one. The Agency identified during security testing one category of vulnerabilities that were treated in accordance with the risk management process. The KPI 2 is the percentage of identified security risks treated by assured controls, and its 2019 value was 90 %. The security function is implementing further corrective actions to manage the effective exposure of the systems to the 10 % remaining classes of vulnerabilities.

As a core element of its information security management framework, the Agency established, operated and continuously developed its Information Security Management System, in compliance with the relevant standards and international best practices. The security policies and procedures were further developed and improved, incorporating the relevant policies of the European Commission, in particular in regards to the protection of sensitive non-classified and classified information, in line with the Agency Regulation (EU) 2018/1726. As part of the development of the EES, relevant documentation was developed pertaining to the security and business continuity aspects of the system.

In line with the legal requirements, the Agency initiated the review and update of the security plans for SIS, VIS and Eurodac.

To ensure that the central systems of Eurodac, VIS and SIS continue to comply strictly with the requirements of their legal instruments in terms of data protection and security, the Agency continued to strengthen and upgrade the security framework and procedures for the organisation itself, the systems and the relevant communication networks. Continuous monitoring and management of the residual risks took place throughout the year to provide assurance that the appropriate security controls for the IT systems have been properly implemented and managed. All critical issues identified were treated through a combination of corrective actions and compensating controls. For VIS and SIS II, the Agency is on track to implement the recommendations coming from the 2017 and 2018 security exercises (Table 3).

Table 3: Implementation status of security exercises recommendations

	Completed	Partially completed	Not started	Not applicable
VIS exercise recommendations	36	28	5	—
SIS II exercise recommendations	24	30	7	1

For Eurodac, a similar operational exercise took place in 2019 with the participation of eu-LISA and six Member States for the testing of security, business continuity, disaster recovery, incident management and other IT operations-related aspects. The exercise report will be presented for adoption to the Management Board in 2020. A multi-system security and business continuity exercise is planned for 2020.

In terms of information security, 2019 saw the introduction of a three-pronged approach to improving the security posture of the systems: 1) continued efforts to update and improve the Agency's security policy framework; 2) evolving the security risk management approach; and 3) consolidating the development of the technical security architecture.

In accordance with the Agency's technology strategy to consolidate the development of security controls at the CSI level, the Agency executed a number of projects, including the implementation of the Security Information and Event Management System (SIEM) and new Public Key Infrastructure, which was initiated in 2019 and is planned to be completed in 2020. In 2019, the Agency also planned to implement an enhancement of the privileged access management capabilities as part of an identity and access management project. However, this project was not initiated. Owing to the limited budget ceiling for the CSI contract, a common decision was made to cancel the service request and look for an alternative way to deliver this project. As a remediation, this service will be deployed and implemented within the EES implementation programme.

Further implementation of the specific controls of the Business Continuity Management System has been in line with the planning. This includes the development of corporate business continuity procedures, implementing rules on business continuity and the implementation of recommendations from business continuity exercises.

Cooperation with the Member States and other EU agencies has been maintained at the level of exchange of knowledge and best practices through the biannual meeting of the Security Officers' Network. The group of experts, chaired by eu-LISA, addressed topics such as system security, data protection, incident management, and resilience of the current and upcoming large-scale IT systems. In the context of preparation for the EES, the Security Officers Network was involved in the preparation of recommendations for the security and business continuity plans to be used by the Member States as a baseline for their controls.

In the context of exchange of best practices, in May 2019 eu-LISA also hosted the Business Continuity Network, gathering business continuity experts from EU institutions and agencies. This forum targets solutions for enhancing the preparedness for disruptions through exercising, business continuity awareness, training, as well as analysis of new technologies that can support the EU agencies and institutions in their resilience.

1.1.7 Data protection

The Agency must ensure a high level of data protection, in accordance with the EU data protection law and the specific provisions defined for each large-scale IT systems (Article 2 of eu-LISA establishing regulation). Since December 2018, the Agency must follow the Regulation (EU) 2018/1725,²⁷ laying down rules on how EU agencies should treat personal data they hold on individuals, especially the right to protection of personal data and the right to privacy. This new

²⁷ Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the EU institutions, bodies, offices and agencies and on the free movement of such data, OJ L 295, 21.11.2018, p. 39–98

regulation aligned the rules for EU agencies with those of the General Data Protection Regulation (GDPR), which have been in application since May 2018.

The Agency planned and started the implementation of the new requirements and obligations stemming from this new regulation. Following the completion of a gap analysis, a number of actions were undertaken, starting with the preparation of new 'eu-LISA DPO Implementing Rules', which were subsequently adopted by the Management Board on 9 October. A summary of the main findings of this gap analysis and recommended actions were also presented during the Management Board meeting in November 2019.

The new data protection clauses were incorporated to new and existing contracts. The Agency developed new templates for records of data processing activities, for compliance checks, risks screenings, threshold assessments and data breaches. A comprehensive template was also prepared for Data Protection Impact Assessment (DPIA) reports. To raise awareness on the new regulation, the DPO organised information sessions for eu-LISA staff and on-site contractors and communicated regularly within the Agency via the various internal communication media. Individual coaching sessions were offered for staff requiring specific advice and guidance to comply with their obligations as data controllers under the new regulation. To support data controllers in documenting data processing operations, templates and step-by-step instructions were prepared. Similarly, a 'Data Breach To-Do List' was created. It explains in details the steps and actions to follow should a data breach occur.

In addition to the implementation of the new regulation, the Agency decided to focus available resources to the provision of data protection guidance and support to the teams preparing the evolution of existing systems and the development of new systems. Another priority was the inspection of Eurodac central system by the European Data Protection Supervisor (EDPS) during the second half of the year. As a result of the reprioritisation exercise, the planned data protection annual survey was put on hold.

The Management Board was regularly informed on the status of data protection compliance and activities in the Agency by means of interim reports presented in March by the – then – acting DPO, and in November by the newly appointed DPO. The DPO is required to prepare and transmit to the Management Board an annual report on the status of compliance of eu-LISA with the applicable data protection regulations. The DPO Annual Work Report 2018 illustrates the work performed by the DPO during that year. Exceptionally, due to the resignation of the former DPO, this report was completed and presented to the Management Board before the end of 2018. It was subsequently published on the Agency's website.

In January 2019, the acting DPO organised an awareness session to celebrate Data Protection Day. This session offered to all Agency staff a general view on data subjects' rights, records of processing activities, data protection impact assessments, data breaches and the role of Data Protection Officer and the European Data Protection Supervisor.

On 24 May, a new training session was organised on video-surveillance and data protection-related aspects. eu-LISA DPO also promoted training sessions organised by EDPS, open to all Agency staff. Four training sessions took place for Heads of Unit/Heads of Sector in 2019.

In addition, data protection information are shared in the Agency's weekly internal newsletter, sent to all staff and on-site contractors. The weekly newsletters includes a dedicated section on data protection that the DPO prepares. The purpose of this section is to update staff on the latest guidelines, available training sessions and recent developments in the field.

1.1.8 Reporting and statistics

eu-LISA prepared and published in 2019 several reports on Eurodac, SIS II and VIS, in accordance with the systems' respective legal instruments. For each published report, the Agency prepared a factsheet illustrating the main facts and

figures, to increase the transparency and visibility of the systems' utilisation. Reports and factsheets are publicly available on the Agency's website.²⁸

Eurodac – 2018 statistics²⁹

The 'Eurodac – 2018 statistics' report was submitted in March 2019 to the EU institutions and published on the Agency's website. The Eurodac AG adopted the report beforehand. This report presents statistical data on the work of the Eurodac central system, specifically the amount of datasets transmitted and the amount of hits, broken down by category and by Member States and associated countries.

Annual report on the activities of the central system of Eurodac, including its technical functioning and security³⁰

This report was submitted in June 2019 to the EU institutions and was published on the Agency's website, following its adoption by the MB on 14 June. The report provides an insight into the main developments of the system, and an overview of annual statistics, in perspective with previous years.

Updated list of designated authorities which have access to data recorded in the central system of Eurodac³¹

The document was adopted by the MB on 17 April, and was then published on the Agency's website.

SIS II – 2018 statistics³²

The 'SIS II – 2018 statistics' report was submitted in March 2019 to the EU institutions and published on the Agency's website. The SIS AG adopted the report beforehand. This report presents SIS II statistics on the amount of records per category of alerts, the amount of hits per category of alerts and how often SIS II was accessed.

Third report on the technical functioning of the central SIS II and its communication infrastructure³³

The report was adopted by the MB on 24 October. It was subsequently submitted to the EU institutions and published on the Agency's website. This report covers the period from 1 January 2017 until 31 December 2018. It describes the activities performed to ensure the operational management of the central system of SIS II, including its security, together with the statistics collected annually.

Updated list of competent authorities for the SIS II, Updated list of National SIS II Offices and national Sirene Bureaux

Both documents were published in the *Official Journal of the European Union*, C 222, 02 July 2019.

Fourth report on the technical functioning of VIS

Towards the end of the year, the Agency started preparing the new report, covering the period from October 2017 until September 2019.

1.1.9 Trainings for Member States

During the reporting period, eu-LISA started the delivery of the planned 2019 training activities. Twenty-five training courses of various scope and format were delivered. Face-to-face sessions represent the majority of eu-LISA training courses (64 %), followed by webinars (36 %) and e-learning courses. The majority of courses were delivered in the field of SIS (60 %), followed by VIS (12 %), Eurodac (12 %) and horizontal training courses (12 %).

The second cycle of the VIS development training programme for IT operators continued with the delivery of an intermediate level (L2) training session on 6 March in Strasbourg. The aim of the course was to introduce the VIS operational system principles and technical aspects, and to provide a detailed overview of the operations to the target audience of Single Point of Contact (SPoC) managers and senior operational staff. The VIS development training

²⁸ <https://eulisa.europa.eu/our-publications/reports>

²⁹ <https://www.eulisa.europa.eu/Publications/Reports/Eurodac%20-%202018%20statistics%20-%20report.pdf>

³⁰ <https://www.eulisa.europa.eu/Publications/Reports/2018%20Eurodac%20Annual%20Report.pdf>

³¹ <https://www.eulisa.europa.eu/Publications/Reports/2019%20Eurodac%20updated%20list%20of%20authorities%20-%20asylum.pdf>

³² <https://www.eulisa.europa.eu/Publications/Reports/SIS%202018%20statistics.pdf>

³³ <https://www.eulisa.europa.eu/Publications/Reports/Central%20SIS%20II%20Report%20technical%20functioning%202017-2018.pdf>

programme for IT operators finished with an advanced level (L3) training session, which was held in Tallinn on 3-4 April. Training sessions were also organised for VIS newcomers from Bulgaria, Romania, Croatia and Europol.

The Eurodac development training programme for IT operators 2019 started with the delivery of entry level (L1) training on 9 April in Strasbourg, introducing the Eurodac operational system principles, technical aspects and providing an overview of its operations. The intermediate level (L2) training was held on 6 May in Strasbourg, and provided a comprehensive overview of SPoC channels of communication with eu-LISA Service Desk, introduced related best practices in exercising SPoC's responsibilities, and gave an overview of the roles of respective entities. The advanced level (L3) training was organised on 12 June 2019 in Tallinn, aiming at the improvement of general usage of Eurodac system by providing the latest and most detailed information and experience on Eurodac technical/business topics.

In the SIS context, a series of webinars dealing with updated statistics and results of data consistency checks for countries undergoing Schengen evaluations were delivered during the year. SIS II SPoC profile course was delivered on 4-5 June in Strasbourg, and was designed to provide a comprehensive explanation of the operational concepts that are necessary to adequately perform the role of SPoC at the national level in day-to-day tasks. A group courses on SIS II for SIRENE (the business oriented course delivered jointly with CEPOL and the technical one) were delivered as well. Finally, on SIS, series of newcomer programmes for Ireland, Frontex and Europol were also delivered during the year.

In the e-learning field, eu-LISA made strides in strengthening its learning management system and the e-learning component of eu-LISA training portfolio. Twelve e-courses were developed and eleven e-courses were updated. Development and implementation of a fully self-directed e-learning module SIS & SIRENE Essentials was an important milestone.

In 2019, the Agency continued its fruitful cooperation with the Member States through the activities of the Network of National Contact Points, the European Commission and partners from EU JHA Agencies (in particular CEPOL, Frontex and Europol). The delivery of joint trainings was continued in 2019, mainly in partnership with CEPOL and Frontex. In the framework of eu-LISA's involvement with EMPACT,³⁴ the Agency organised an awareness raising session on the relevant roles of Eurodac and SIS II. eu-LISA also participated in the work of the Training Contact Group of the JHA Agencies coordinating the definition and management of the future Interoperability trainings. Proposed actions will be followed up on during 2020.

Finally, in the EES context, the Agency continued with its preparatory activities for Member States training, in particular working towards the design of a pre-deployment training scheme on the technical use of the EES. A training needs analysis exercise, focusing on a definition of target audiences, training topics and expected outcomes of trainings was completed in March 2019. Following this, the EES target groups were specified and relevant training curricula designed. Initial steps in development of ETIAS curricula also started during 2019. The first on-line training session on EES was delivered in December 2019, focusing on high-level architecture and implementation roadmap.

1.1.10 Research and technology monitoring

In line with its establishing regulation, the Agency performed research and technology monitoring activities throughout 2019. In addition to the publication of research and technology monitoring report, the Agency continued work on the definition of the roadmap, including the development of a methodology for defining priorities for research and technology monitoring.

The research and technology monitoring function continued to explore relevant developments in research and technology all along 2019, in accordance with the mandate. Some of the priorities for research and technology monitoring were carried over from previous years due to their continuing relevance, as for example biometrics, distributed ledger technologies, new architecture and artificial intelligence.

³⁴ European multidisciplinary platform against criminal threats

The key output of the research and technology monitoring activities for 2019 was the publication of the report 'Distributed Ledger Technologies and Blockchain for Large-Scale IT. Perspectives for eu-LISA' in December.³⁵ Although the report was initiated in 2018, most of the work, including data gathering, analysis and drafting, was performed in 2019.

Substantial activities were also carried out on artificial intelligence (AI), due to its increasing relevance in the domain of Justice and Home Affairs. In particular, the Agency presented a high-level concept paper 'Artificial Intelligence in the Operational Management of Large-Scale IT Systems. Perspectives for eu-LISA' at the Standing Committee on Operational Cooperation on Internal Security (COSI) meeting in November 2019.

In addition, a research and technology monitoring report on AI in the operational management of large-scale IT systems was initiated in Q4 2019, with the aim of publishing it in Q2 2020. The work on the report was performed while supporting, in parallel, a dedicated study led by DG HOME on AI in the areas of border, migration and security. The Agency contributed to the aforementioned study, by participating in discussions, providing inputs regarding relevant use-cases, as well as reviewing deliverables. Moreover, since spring 2019, the Agency supported the discussion on AI for security and law enforcement in a series of workshops coordinated by DG HOME.

Another important line of activity was informing eu-LISA stakeholders on the developments in technology, as well as ensuring effective information exchange necessary for capability building. To this end, the research and technology monitoring function contributed to a number of events aimed at relevant stakeholders, including:

- Two industry roundtable events, with the first one being held in Bucharest with the support of the Romanian EU Council Presidency and the second held in Tallinn;
- The Agency's annual conference, held in Tallinn under the auspices of the Finnish EU Council Presidency;

In addition, the research and technology monitoring function contributed to a number of events organised by eu-LISA stakeholders, which included: the Border Security Conference held in Milan in February 2019; the European Police Congress held in Berlin in February 2019; the Passenger Terminal Conference held in London in March 2019; the Connect:ID Conference held in Washington, D.C. in April 2019; the Identity Week Planet Biometrics event held in London in June 2019; and the International Summit on Borders held in Washington D.C. in June 2019.

The scope of the research mandate was expanded significantly with the adoption of the revised eu-LISA establishing regulation in November 2018. The new mandate, in addition to technology monitoring, includes the responsibility for the implementation of parts of the EU Framework Programme (FP) for Research and Innovation. The Agency has initiated a dialogue with the Commission's (DG HOME) unit responsible for the coordination of the respective part of the EU FP. The dialogue will continue in 2020 with the aim to explore initial opportunities for the Agency to engage with the relevant projects and to consider pathways towards contributing to the definition of future thematic priorities.

Those discussions will be carried out hand in hand with the elaboration of the new strategic vision of the Agency on research and innovation in the course of 2020 in line with the extended mandate and the stakeholders' expectations.

1.2 Strategic goal 2

MAINTAIN AND EXTEND THE ROLE OF THE AGENCY AS AN EU ICT CENTRE OF EXCELLENCE AND SERVICE PROVIDER

1.2.1 Enterprise Project Management

Art. 2(a) of eu-LISA's establishing regulation provides that eu-LISA shall ensure 'the development of large-scale IT systems using an adequate project management structure for efficiently developing such systems'. eu-LISA's Enterprise project management office (EPMO) was established in 2017. Its mission is to integrate and monitor all projects undertaken by the Agency, and to contribute to the internal governance to ensure transparency and accountability.

³⁵ <https://www.eulisa.europa.eu/Publications/Reports/DLTs%20and%20blockchain%20report.%20Dec%202019.%20Key%20findings.pdf>

In 2019, EP MO continued the implementation of its roadmap, addressing several key areas and strengthening internal controls on the implementation of Agency's project management methodology.

Intake List

In 2019, the Agency formalised its approach for the new projects intake process. Following the Executive Director (ED) Decision to adopt an 'Intake List' of projects, an initial list of projects to be implemented by eu-LISA in 2019 was established. The baseline Intake List was approved by the end of April 2019.

The Intake List ensures that each project is linked with a proper financing decision. Amendments to the Intake List are only possible with an approval by the Corporate Steering Committee.

Corporate Steering Committee

The Corporate Steering Committee (CSC) was established on 17 of October by ED Decision in place of the Programme Steering Committee (PSC). The remit of the CSC is the governance of portfolios, programmes and projects, whereas the PSC ensured steering and oversight of eu-LISA's programmes and projects.

Development programmes' progress reports

During the reporting period, the Agency prepared the reports on the state of play of the developments of new systems, as required by the respective legal instruments. These reports are prepared every six months and are sent to the European Parliament and to the Council. The Agency also drafted the monthly reports used by the PMBs to report on the progress of the respective development programmes to the MB.

Project management

The projects' performance is followed-up on a regular basis through the analysis of the dashboards and the 'End of project report' presentation required from the project managers at projects' closure.

Project compliance checks are organised yearly as part of the Agency's effort to continuously monitor the compliance of its activities with the established project management methodology. Following the compliance check performed end of 2018 on the project management products, improvement actions have been put in place, one of them being coaching and awareness sessions on the Enterprise Project Management tool.

The 2019 compliance check started in November. The projects compliance check was performed based on the project information available in the enterprise project management tool, the 2019 intake list and the financial actors' list. The scope of the check included both active and closed projects. The output data were aggregated and at the beginning of 2020 the results were presented together with an action plan.

Programme and portfolio management

The role of the EP MO entity is to provide and maintain an organisational project management environment at the enterprise level. In support of this objective, the Agency decided to create a project and portfolio management capability (PPM). A market research was carried out in 2019 to identify potential PPM solutions. As a result, 'Planview Enterprise One' was identified as the most suitable out-of-the box software solution to manage portfolios, programmes and inter-dependencies with other projects. The contract was signed in Q4 2019, the implementation project started and will be completed by the end of 2020.

Ex-ante evaluations

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. In 2019, the Agency's EP MO, as an independent organisational entity, performed the ex-ante evaluations. In addition, and in accordance with the ex-ante policy established in 2017, the ex-ante procedure was revised to introduce a two-step approach:

Opportunity assessment (step 1): This assessment must be completed two years before project start. The assessment covers the methodology documentation, the initial business justification and the supporting project documentation, when available.

Feasibility assessment (step 2): This assessment must be completed one year before project start. The assessment covers the key project methodology documentation, the final business case, evidence collected during interviews with key stakeholders and the supporting project documentation for large project proposals. The project category (small, medium, large) is determined in line with agreed classification criteria.

Following this new approach, two large projects identified for initiation in 2020 were subject to an ex-ante feasibility assessment, fourteen projects identified for initiation in 2021 qualified for an ex-ante opportunity assessment. Two summary reports were presented to the Management Board in November 2019.

Audit of EES contractor

Following a workshop on quality assurance organised in August for the EES LIA consortium (Leonardo, IBM Belgium, Atos Belgium) representatives, the Agency identified the need for a verification of the adequate application of project governance processes by the LIA consortium. A compliance check was therefore carried out by the EPMO in the third quarter of 2019 on work packages 1 and 2 of the EES implementation project, with the objective of verifying the fulfilment of contractual obligations related to three main transversal processes: project management, quality management and requirements management. The compliance check was based on evidences provided by the LIA consortium and led to the detection of 36 findings, 22 of which classified as highly critical. The results have been released in January 2020 and delivered to eu-LISA's internal stakeholders.

1.2.2 ITSM framework maintenance and development

ITSM framework and continued development towards a centre of excellence in ICT services and corporate governance

In order to further strengthen its operations in line with international best practice, the Agency continued the development of its service and process model based on the Information Technology Infrastructure Library (ITIL)/ITSM implementation. The eu-LISA ITSM Process Model, established in 2016, includes 12 processes already in place. The Agency maintained its service catalogue, reviewing and updating the existing services, and defining new ones when needed, as part of the development of the new systems.

The ITSM phase 2 project was finalised in 2019, and successfully defined the following processes: Availability Management, Capacity Management, Knowledge Management and Continuous Service Improvement Management. They were gradually implemented during the year. Once implemented, they will significantly strengthen eu-LISA's Process Model, thus increasing the quality of the services provided. In parallel with the new processes definition and implementation, further automation and integration of the processes was carried out, aiming at an increased control, greater efficiency and opportunities for continuous improvement of services delivery.

The Continuous Service Improvement Management process is key for an efficient quality management. It establishes the practical means for identification of improvements. The continuous service improvement (CSI) register was launched and went live by the end of 2019. It will be used to register all the improvement initiatives related to services and processes, the results of their assessment, their level of priority and the respective agreed outcomes. The eu-LISA Measurement tree is another part of this process. It will guarantee that all the metrics and targets related to the Agency's goals and objectives are aligned, and will facilitate the measurement and monitoring of achievements.

The Knowledge Management process is used to structure the knowledge artefacts of first level support, second level support and those of the Member States. The process was implemented in 2019 using the functionality of the Service Manager tool. This will ensure the efficient re-use of the existing knowledge and its gradual quality improvement. It will also minimise the dependency on key personnel.

Necessary improvements to the integrated ITSM tool were introduced throughout 2019, addressing the new and updated processes' requirements. The tool was also updated to facilitate its use by the Agency's contractors, in order ensure a more efficient reporting of their performance, and in general to simplify everyday business.

Initially planned for 2019, the advanced reporting solution project and the integration between asset and configuration management were deprioritised and postponed to 2020.

1.2.3 Vendor and contract management

In its long-term strategy, the Agency identified vendor and contract management capabilities as a particular area of development. This involves the implementation of a sourcing strategy offering the required agility and the continuous improvement of processes and tools. It also includes the monitoring of the efficiency of the Agency's operations and the optimisation of the total cost of ownership.

As part of the eu-LISA 2.0 transformation programme, a dedicated sector for vendor and contract management was created and took up its duties in October 2019. The first activities were aimed at rightsizing the sector and its tasks, and at defining the processes and interfaces with other key internal stakeholders within the new organisation. Recruitment for relevant staff was launched and should be completed by Q2 2020. The new team contributed to the definition of the tender technical specifications of the transversal engineering procurement (see ETIAS section on transversal procurement on page 37) and supported the operations department units on specific contract management topics.

1.2.4 Enterprise architecture

In 2019, following the roll-out of the new eu-LISA 2.0 organisation, the Agency started with the preparation of the first phase towards setting up an Enterprise Architecture.

An Enterprise Architecture (EA) definition document was prepared. It describes the processes that will be established to define and evolve the eu-LISA EA. The EA framework is described in the eu-LISA EA Governance Framework. It describes the integrated approach for the development of the EA and the common process components, and it promotes the reuse of systems' artefacts. It also includes a 'Request for architecture' process. An EA evolution roadmap was prepared, starting from foundation to improvement and enterprise continuum. It also includes the EA implementation approach (plan, build and run) and the EA benefits and success factors. In addition, a mandate for the set-up of a eu-LISA internal architecture review board was prepared.

The work on EES and ETIAS architecture has progressed and the components listed for reuse and standardisation were identified and proposed for a Management decision. An Architecture Review Board of the Agency is currently being set up and one of its main activities will be to decide on standards and reused and shared components.

1.3 Strategic goal 3

CONTINUE GROWING AS THE PRINCIPAL EU ICT HUB

1.3.1 Partnerships with the Member States and EU institutions

Throughout the year, eu-LISA provided substantial contributions to the discussions held at the relevant Council Working Parties and participated in discussions held during the Justice and Home Affairs Council meetings. In addition, the Agency worked very closely with the Romanian and Finnish Presidencies of the EU Council by providing its expertise when requested and participated in different conferences and workshops organised by the Council Presidencies.

The contribution of the Agency for the preparation and during the various committees, experts meetings, workshops and high-level Forum organised by the European Commission has been, as well, quite substantial, especially taking into account that 2019 has been the year of implementation of the various legislative initiatives that entered into force in 2018 (e.g. SIS recast and ETIAS Regulation).

The Agency worked closely with the Romanian and Finnish Presidencies of the EU Council by providing its expertise when requested. With the European Parliament, the Agency consolidated its role as an important advisor on technical aspects directly linked with ongoing negotiations on different legislative proposals within the context of the mandate of the Agency, for example by providing its expertise to the co-legislators during technical trilogues. eu-LISA participated and contributed as well to formal committee meetings, as with the provision of regular reporting on the progress made with the implementation of EES and ETIAS, and also more informally at the level of technical meetings with the rapporteurs and the shadow rapporteurs.

Within the context of the implementation of SIS recast, EES, ETIAS and interoperability, the Agency continuously provided support to the European Commission and the Member States with the preparation of the implementing and delegated acts, supported complex technical discussions at operational and business level, and actively participated in the meetings of the Smart Borders Committee, Interoperability Committee, SIS-SIRENE Committee and all the respective Expert Subgroups.

The joint EES-ETIAS Advisory Group began its meetings on 13-14 March 2019. The *ad hoc* Working Group for ICT solutions for the Member States with external land and sea borders concluded its activities with the adoption of recommendations on 26 March 2019. The Working Group was convened under the umbrella of the EES-ETIAS AG. It met five times between November 2018 and March 2019 with the objective to identify a viable solution and a common architecture for the implementation of EES at the external land and sea borders. Following the completion of this Working Group's tasks, two other Working Groups were established under the umbrella of the EES-ETIAS Advisory Group, one for Carriers and one for Biometrics. The Working Group for Carriers aims to provide awareness to the carrier community concerning their obligations stemming from the EES and ETIAS Regulations as well as the Schengen Convention. It also monitors and discusses the status of carriers' preparation to implement the aforementioned legislation, including any relevant operational/technical considerations. The first session of the Working Group took place on 4 June in Brussels and was followed by two more meetings on 20 September and 19 December. The Working Group on Biometrics provides a platform for technical discussions between eu-LISA, the European Commission and Member States' biometric experts to share best practices and find appropriate technical solutions and standards for the respective biometric matching systems and the future overarching shared BMS. This working group held two meetings, on 15 October and 13 December.

The Eurodac, SIS and VIS AGs continuously provided platforms for Member States' experts and representatives of JHA Agencies and the European Commission, for exchanging technical expertise and support on various technical issues related to the evolution of these systems. The Agency continued its already established practice to prepare summaries of the AG meetings and disseminate them to its stakeholders. As of July, the summaries are also published by the Council on the Delegates Portal. These summaries provide timely and relevant information on the functioning of the large-scale IT systems to Member States' representatives beyond the members of the AGs, and contribute to raising awareness on the essential work of the AGs.

The Agency continued supporting the Commission with the preparation of relevant presentations and participation in the meetings of the High-Level Forum on interoperability that took place on 5 March and 15 November, in Brussels, as well as in the readiness study visits to Member States' capitals. In 2019, readiness study visits were organised to Denmark, Latvia, Lithuania, Cyprus, Malta, Romania, Czech Republic, Slovakia, Portugal, Switzerland, Slovenia and Croatia. The objective of these visits was to discuss the status of preparations and readiness at national level for the implementation of EES, ETIAS, SIS recast and interoperability.

In April, following the invitation of the Croatian authorities, eu-LISA and Frontex representatives participated in a field visit to Croatia at Bajakovo and Tovarnik border crossing points (BCPs). The visit aimed at assessing the current challenges faced by the BCPs, exploring possible solutions to ease the workload and at the same time preparing for the new systems. The Bajakovo BCP is located on the main highway between Zagreb, Croatia, and Belgrade, Serbia, on the corridor connecting central Europe with the Western Balkans and South-East Europe. Over 6 million passengers and

2 million vehicles per year use this BCP. eu-LISA and Member States representatives also went on a study visit to Washington D.C., USA, between 3 and 8 November 2019. The aim of the visit was to learn from the experience of the US authorities with the implementation of systems similar to EES and ETIAS. Participants visited the Customs and Border Protection Authority in Washington D.C., the sea border at Miami seaport and the air border at Washington's Dulles airport.

In line with the provisions of its legal basis and the expectations of its stakeholders, eu-LISA continued to contribute to the evolution and enhancement of the EU's internal security strategy. This included, among others, active participation in the ongoing discussions concerning the future of Prüm. The Agency participated and provided its input during the Prüm workshops organised by the European Commission, in Brussels on 27 March, 25 June and 12 December. eu-LISA also actively contributed to the discussions regarding the Advanced Passenger Information (API) and Passenger Name Record (PNR) Directives revision through participation and follow-up of the relevant Council Working Parties (DAPIX) as well as by following the proceedings of the 3rd OSCE-wide Seminar on Passenger Data Exchange and the Informal-Working Group (IWG) on PNR meetings held on 18-19 June and 3-4 September.

The Agency continued its active engagement in three EMPACT priorities, namely "Firearms", "Attacks against information systems" and "Facilitation of illegal immigration". The Agency participated in several meetings, mainly for Firearms and Facilitation of illegal immigration (e.g. annual kick-off meeting of EMPACT Firearms on 19-20 February, Strategic meeting of the EMPACT Firearms on 19 July and the EMPACT Facilitation of illegal immigration – OAP drafting session on 11-12 September) and actively contributed to the relevant discussions. In the framework of the facilitation of illegal immigration priority, eu-LISA contributed with an operational action by organising a training activity.

As an important element of stakeholder collaboration, the eu-LISA 6th Annual Conference "The new information architecture as a driver for efficiency and effectiveness in internal security" was organised with the support and engagement of the Finnish Presidency of the Council of the EU. The conference focussed on the future of internal security as well as opportunities presented by the new information architecture for the law enforcement and border management communities (see also page 60 for more details on the annual conference).

Other stakeholder events with cooperation partners were held to present the Agency's mandate, highlight business processes and exchange views on the activities and plans of the Agency. These events included in particular the meetings with the heads of diplomatic missions on 18 March in Tallinn, with the JHA counsellors on 2 April in Brussels and with the members of the Committee on Civil Liberties, Justice and Home Affairs (LIBE) on 18 September in Strasbourg and 29-30 October in Tallinn. On top of the planned visits and briefings, eu-LISA also held several high-level meetings, such as the meeting with the Director of the NATO Cooperative Cyber Defence Centre of Excellence, the Committee on the Civil Dimension of Security of the NATO Parliamentary Assembly, General State Secretary of the Romanian Ministry of Internal Affairs, Parliamentary State Secretary of the Federal Ministry of the Interior of Germany, Minister of the Interior of Estonia, delegation of the Estonian Parliament, Director-General for Justice and Home Affairs of the General Secretariat of Council of the EU and the Minister of the Interior of Hungary.

Schengen evaluations

In 2019, eu-LISA participated in ten Schengen evaluations:

- Six Schengen evaluations for SIS/SIRENE;
- Schengen evaluations for the Common Visa Policy including VIS;
- One unannounced Schengen evaluation for the Common Visa Policy including VIS targeting four Member States.

The Agency supported the Commission and the Member States in the SIS/SIRENE evaluation missions for the Czech Republic in March, the evaluation of Poland in April, the evaluation of Slovenia in June, the re-visit for the evaluation of France in June, the evaluation of Hungary in October, and the evaluation of Slovakia in November.

In relation to the Common Visa Policy including VIS evaluations, the Agency participated in the following evaluations:

- the evaluation of the Czech Republic in January carried out in Abu Dhabi and Chengu (China);
- the unannounced evaluation of Spain, the Netherlands, France and Switzerland carried out in September in Morocco;
- the evaluation of Hungary carried out in Almaty (Kazakhstan) and Mumbai (India) in October;
- the evaluation of Slovakia carried out in Minsk (Belarus) and Istanbul (Turkey) in December 2019.

1.3.2 Partnerships with other EU Agencies

Throughout 2019, close cooperation continued with partner agencies, in particular in the JHA community. Bilateral cooperation plans for the period of 2019-2021 were prepared with Europol and CEPOL. Draft cooperation plans for 2020-2022 were drawn up with FRA and EASO and will be concluded in 2020. The plans provide an overview of current bilateral cooperation and future initiatives.

Close cooperation at operational level was carried out with Europol and Frontex to ensure the implementation of the EES and ETIAS regulations, paving the way for successful implementation of the interoperability regulations. Cooperation in the field of training has been launched with Frontex, Europol, CEPOL and FRA to ensure the training of a wide range of stakeholders at national level. Other Agencies will be involved as needed.

eu-LISA extended its support to Europol and opened an access to SIS and the relevant alerts, following the set-up of the Europol SIRENE Office. eu-LISA also assisted Europol in the preparation for its connection to VIS. In addition, eu-LISA cooperated with Frontex to set up its connection to SIS and to ensure that the relevant teams deployed in operations can consult SIS.

On 9-10 July, the JHA Agencies, the European Commission and Eurostat convened for a meeting at eu-LISA in Tallinn on the implementation of the interoperability regulations, discussing the state-of-play of the development of the different components of the interoperability architecture, with a focus on setting up the CRRS.

The eu-LISA – Frontex Service Level Agreement on the Frontex Disaster Recovery Site entered into force on 10 October 2019. eu-LISA is now hosting the recovery sites of two agencies, EASO and Frontex, in its data centre in Strasbourg, aiming at creating synergies and saving costs among JHA agencies.

Throughout 2019, eu-LISA regularly attended the meetings of Frontex Management Board. eu-LISA also participated in the annual European Border and Coast Guard Day 2019 organised by Frontex in Poland. Europol invited eu-LISA on a regular basis to its Management Board's Working Group on Information Management, to provide updates on the implementation of the interoperability regulations. On 25-26 June 2019, eu-LISA participated in the annual meeting of JHA agencies Training Contact Points, organised by CEPOL, and in the Annual CEPOL Stakeholder Meeting, both held in Budapest. The meetings allowed to share updates on bilateral and multilateral cooperation initiatives among JHA agencies and contributed to joint planning of trainings for Member States as regards EES, ETIAS and interoperability.

The Agency continued its cooperation with ENISA, following the signature of a Working Arrangement in 2018 and the conclusion of a Service Level Agreement in April 2019 setting out the provisions for the support of ENISA to eu-LISA's security and business continuity exercise on Eurodac held in November 2019.

In the context of new systems, technologies and legislation, the eu-LISA Security Officers Network and Europol Security Committee had a joint meeting on 20 November to discuss security and business continuity aspects. The security experts exchanged best practices and knowledge on the matters.

eu-LISA actively contributed to the activities of the JHA Agencies Network, chaired in 2019 by Europol. The Agency contributed to inter-agency discussions on various topics, such as interoperability, innovation or ICT security. On the occasion of the 10th Anniversary of the Charter of Fundamental Rights of the European Union, the Heads of JHA Agencies endorsed a Joint Statement at the High Level Conference "Making the EU Charter of Fundamental Rights a reality for all: 10th anniversary of the Charter becoming legally binding" organised by FRA on 12 November in Brussels. On 22 November in The Hague, the Heads of JHA Agencies discussed their current and future cooperation with a focus

on the implementation of the new EU Strategic Agenda 2019 -2024, the MFF 2021-2027, the interoperability of IT systems and innovation. They also adopted a 'Joint Statement on Diversity and Inclusion'.

In 2019, eu-LISA also actively contributed to the activities of the EU Agencies Network and participated in thematic meetings in the field of communication, legal affairs, strategic planning, human resources, and ICT. Two high level meetings of both the Heads of Administration and the Heads of Agencies were held, respectively in February in Brussels and in October in Stockholm.

1.3.3 Partnership with the industry

Industry is a key stakeholder for the Agency, supporting its work in the delivery of high-quality technical solutions. Furthermore, monitoring the efforts of the industry in the research domain represents an important element of the general research monitoring efforts at the Agency, in accordance with its establishing regulation. Efforts to engage this group continued in 2019 as in previous years, with the tenets of community, transparency and constructiveness guiding the work.

Similar to previous years, in 2019 the Agency hosted two industry round table events. The 10th eu-LISA industry roundtable held on 24 April in Bucharest (Romania), with strong support from the Romanian Presidency of the Council of the EU, focused on requirements for integrated borders solutions for land and sea borders. Following the publication of the report of the Working Group on ICT solutions for external land and sea borders, the Agency called on the industry to contribute by identifying viable solutions and common architecture for the implementation of EES at the external EU sea and land borders. The event brought together almost 100 representatives of the global border management and security industry to discuss legislative requirements, process and technologies.

The 11th industry roundtable event was held on 17 October in Tallinn, and focused on the practical aspects of implementation of the new JHA information architecture. The main goal of the event was to engage with the industry in discussion of concrete proposals for the implementation of the new interoperability architecture, aligned with legal, functional and technical requirements. Following the publication of an extract of the feasibility study "Elaboration of a future architecture for interoperable IT systems at eu-LISA", the Agency called on the industry for their contribution. The event convened over 100 participants from 51 different organisations in 19 countries, representing the global border management and security industry, EU Member States, the United States of America, Canada, the EU institutions and JHA Agencies as well as academia.

1.4 Strategic goal 4

DEVELOP A MODERN, EFFICIENT AND AGILE ORGANISATION

1.4.1 Organisational transformation programme: eu-LISA 2.0

The Agency launched in 2019 a transformation programme with the aim to deliver a new organisational structure, fitted to the eu-LISA new mandate. This programme, named eu-LISA 2.0, has been designed to ensure that the reorganisation process is open, transparent and involves the Agency's staff.

With the organisational transformation the Agency strives in:

- Leaner and faster decision-making processes;
- More agility inside the job including more room for innovations;
- More empowerment and ownership through new centralised functions and harmonised profiles;
- Better positioning of the Agency leads to sustained success of the organisation.

To ensure the success of this transformation, the Agency put in place a change management plan. During the reporting period, this programme has progressed significantly. The new organigram of the Agency has been finalised. It includes

in particular a completely new structure for both the Operations Department and the Corporate Governance Department (former General Coordination Unit), with clearly mapped function-based sectors.

The work of the organisational transformation was split into four Working Streams:

- Transfer of existing staff into the new organisational structure;
- Recruitment of new staff;
- Implementation of the new competency model of eu-LISA;
- Revision of the functional descriptions of the units and departments and of the operational model of the Agency.

More information on the organisational transformation programme is available under the dedicated chapter 2.2.1.

1.4.2 Strategic and operational planning and reporting

The Agency is putting substantial efforts into continuous evolution of its internal planning and programming processes, including strategy planning, multiannual and annual programming and reporting. It continuously improves its corporate IT planning tools and provides the relevant training sessions. In 2019, all corporate reporting documents and programming documents were adopted and published within the timeframe set out in the legal instruments.

The Consolidated Annual Activity Report 2018 was adopted by the MB on 26 June 2019, after prior consultation with the AGs, and was subsequently sent to the European Parliament, to the Council, to the Commission and to the Court of Auditors. It was also published on the Agency's website and translated into 22 official languages (in addition to the adopted version in English).

The Interim report on the implementation of eu-LISA's Programming Document 2019-2021 was adopted by the MB on 30 August, after consultation with the Advisory Groups, and was subsequently sent to the European Parliament, to the Council and to the Commission.

In accordance with the MB Decision on delegation of powers to the Executive Director to make non-substantial amendments to the Annual Work Programme, the Executive Director decided on 29 March to include in the 2019 Annual Work Programme of the PD 2019-2021 a new activity pertaining to the implementation of the 2015 ICAO transliteration rules for SIS II. The decision followed a recommendation initiated by the SIS II Change Management Group, subsequently endorsed by the SIS VIS Committee. This recommendation also received a positive opinion from the SIS AG, and was authorised by the Management Board on 12 December 2018.

On 19 November 2019, the MB adopted an amendment to include in the 2019 Annual Work Programme of the PD 2019-2021 a study on the implementation of an application lifecycle management (ALM) process.

The draft eu-LISA Single Programming Document 2020-2022 was adopted by the Management Board on 30 January 2019 and was sent to the European Parliament, to the Council and to the Commission for formal opinion. The final version was then adopted by the Management Board on 19 November 2019.

The Agency submitted the first draft of its Single Programming Document 2021-2023 to the Advisory Groups in October and to the Management Board in November 2019 for their review. The draft Single Programming Document 2021-2023 was adopted by the Management Board on 31 January 2020, and was then shared with the European Parliament, the Council and the Commission.

Following the roll-out of the new organisation (eu-LISA 2.0), the Agency engaged a revision of its planning processes.³⁶

³⁶ The new approach is tested in 2020 for the drafting of the Agency's Single Programming Document 2022-2024.

As requested by the MB in June 2019, the Agency started the revision of its corporate KPIs. An updated set of corporate KPIs was presented to the MB in November. The Agency subsequently tested the new set of KPIs with the 2019 data, and presented the new sets with the data for adoption in 2020.³⁷

In the course of 2019, the Agency undertook an extensive revision of its Multiannual Financial Framework estimates taking into account the evolution in the global timeline for implementation of the new systems and their operational needs. The Agency's total request for the upcoming MFF 2021-2027 amounts to EUR 1.955 million. These appropriations will be required to finalise the implementation of EES, ETIAS, interoperability and the recasts of existing systems; to evolve the architecture of existing systems to ensure their high availability; to extend the Agency's operational capabilities; to migrate and integrate the existing systems into the new interoperability architecture; to implement the new secure network and to ensure the stable functioning of the Agency.

1.4.3 Governance framework

Internal Control Framework

The MB adopted on 19 March 2019 the revised eu-LISA Internal Control Framework.³⁸ In its decision, the MB tasked the Executive Director to implement the internal control principles and characteristics, and to define the internal control monitoring criteria. The MB also tasked the ED to appoint a Manager in charge of risk management and internal control. Following this decision, the Management of the Agency prepared the Internal Control Monitoring Criteria. These were adopted by a decision of the Executive Director and entered into force on 1 January 2020, together with the nomination of the Manager in charge of risk management and internal control. The ICF implementation, monitoring and its first assessment is described in chapter 3 (page 88).

Governance bodies

In relation to its governance bodies, the Agency continued to provide quality administrative and logistic support for the successful functioning of the Management Board, Programme Management Boards and Advisory Groups.

The Agency has a team fully dedicated to the activities of the governance bodies (the Management Board Secretariat). The Management Board Secretariat supports the Chairpersons in ensuring the smooth functioning of the groups. Their main responsibilities are to ensure that meetings are efficiently organised and documented, to record, keep track and follow up of all the decisions and deliberations of the groups, to check the legal compliance of the decisions and to monitor the legal obligations and to ensure permanent communication and correspondence with the members of the groups.

The Agency fully supported the creation and operation of the bodies related to the management of the new systems. From the beginning of 2019, the ETIAS Programme Management Board became functional. In March 2019, the remit of the EES Advisory Group was extended to cover ETIAS (EES-ETIAS Advisory Group).

In accordance with the EES regulations, the eu-LISA Management Board mandated the EES PMB to perform the assessment of the TTS (tender technical specifications) of the EES Central System (including the physical architecture and the Infrastructure of the NUIs). The EES PMB confirmed that the EES TTS are in line with the legal provisions, which contributed to the mitigation of risks related to the procurement procedure.

In addition, the Agency prepared well in advance the governance structures and processes related the new formations to start their activity, namely the Interoperability Programme Management Board, the ECRIS-TCN Programme Management Board, the Interoperability Advisory Group and the ECRIS-TCN Advisory Group.

At the same time, the Agency continued to strengthen its relationship with the existing Advisory Groups (Eurodac, SIS and VIS), involving them in planning and operational processes, in order to increase the transparency and to benefit from their extensive experience and knowledge.

³⁷ The updated set of corporate KPIs was adopted by the MB in April 2020

³⁸ Decision No 2019-042 of 19.03.2019, accessible at <https://eulisa.europa.eu/About-Us/access-to-documents/public-register>

Total quality management

Following the first implementation of the Common Assessment Framework (CAF) self-assessment exercise in 2017, an action plan was prepared. The status of implementation of these actions was reviewed in 2019, and an end of cycle report was prepared and subsequently adopted by the Management Committee of the Agency in Q4 of 2019. Out of 12 actions listed, 6 actions are completed or partially completed, 5 are ongoing and 1 was postponed. The report also confirmed the way ahead towards further implementation of CAF.

1.4.4 Finance and procurement

The Agency continuously developed and strengthened its internal financial processes and procedures, to ensure the transparent and effective management of its available financial resources.

Many efforts were made as well in order to digitalise further some significant tendering processes, via e-submission platform. With the support of the Commission, the Agency will be in a position to use, fully, the e-submission platform, allowing for a definitive shift from paper to electronic workflows in terms of tendering processes.

eu-LISA made a renewed effort to plan for the future, especially in the budget and procurement areas, and to embrace change in its processes: 2019 has seen a progressive shift from paper to electronic workflows — using the EU-wide Advanced Records System (ARES) — for most processes in the finance, budget, asset and procurement areas. The re-engineering of processes is a key factor in ensuring the continued success of the Agency, as it is becoming clear that the new tasks and consequently increased workload will not always result in a corresponding increase in staff, especially with regard to corporate functions.

The elements necessary for the future deployment of activity-based budgeting were established, along with continuous monitoring and development of the Agency's financial and procurement procedures.

1.4.5 Human resources

In 2019, human resources management activities were focused on three major areas: optimisation and sound management of HR, development and implementation of HR IT tools and staff training related to operations.

Optimisation and sound management of human resources

The top priority of the Human Resources Unit in 2019 was to support the organisation in the implementation of the eu-LISA 2.0 organisational transformation programme. Three out of the four working streams related to the programme were directly linked with Human Resources. The Agency launched in 2019 the transformation programme with the aim to deliver a new organisational structure, fitted to the eu-LISA new mandate, ensuring that the right people are in the right place.

The Human Resources Unit ensured that throughout the transformation programme, consultations were organised with staff and progress was regularly communicated through different channels, including a dedicated space. Furthermore, significant time and effort was put in listening and addressing potential concerns raised. This fostered the engagement of the staff in the transformation process, and contributed to the successful implementation of the new structure. All staff members impacted directly by the transformation also received updated job descriptions that informed them about their new tasks and responsibilities.

Development of HR IT tools and their implementation

In 2019, a project of connecting EU agencies to Sysper moved for eu-LISA from the development and analysis of user needs to the implementation phase. In June 2019, the first basic module on the organisational structure (ORG) was placed in production and in October the second one on staff and their career-related data (CAR). Transfer of staff data was finalised and the change of the organisational structure of eu-LISA was implemented as well.

The e-Recruitment tool based on Allegro system was fully implemented and updated for the submission and registration of the applications from the candidates. This contributed to the efficiency of the Recruitment team and reporting on the

received applications. Due to the extreme workload related to the recruitment efforts, any future changes to the system would require additional resources. However, the Recruitment team managed to introduce modernisation of the selection process by using online interview tools and online testing possibilities. This area will continue to be developed in future.

The eu-LISA Learning Management System (i-Learn) was further developed and processes link with learning and performance have been better streamlined through the tool. Furthermore, the digitalisation training requests reached a mature level with the aim to be launched early 2020. A new e-learning module on the prevention of harassment has been created and is available for all Agency staff for study.

Staff training related to operations

From September, numerous on-boarding sessions have been organised for all newcomers, covering all topics of importance for the Agency (e.g. systems, business relations, ethics and code of conduct).

More detailed information on the activities, achievements and indicators in the area of Human Resources Management are described in chapter 2.4.

1.4.6 Corporate services and facilities

General Services

The Agency's headquarters are located in Tallinn, Estonia, its main technical site in Strasbourg, France, its backup technical site in St Johann im Pongau, Austria, and its liaison office in Brussels, Belgium. Facing a significant increase in number of staff and on-site contractors, which started already in 2019 and will continue at least until 2021, the Agency has been engaging for several years in significant projects to enlarge the size of its facilities. The main objective for eu-LISA is to ensure that all people working for and with the Agency enjoy a functional, efficient and pleasant working environment.

The General Services team maintains an effective matching of demand for, and supply of, functional accommodation and associated support services to meet operational requirements. Furthermore, it maintains a constant and continuing interest in the improvement of occupational health and safety (H&S) performance and on the design, implementation and maintenance of an H&S Plan. A new environmental KPI has been introduced to support sound energy management and monitoring of the Agency's carbon footprint.

In addition, the Agency is outsourcing logistics and supply services, to qualified, efficient and competent providers. All services are timely provided, as a supporting business resource to the fulfilment of business objectives.

A new maintenance contract has been put in place for the operational site in Strasbourg, to ensure secure, efficient and functional building infrastructure according to business requirements. All equipment and assets are maintained according to a continuously optimised maintenance programme.

Furthermore, the Agency has decided to extend its current site in Strasbourg. Following an ex ante check with the European Commission and the French representative of the Management Board, it has been agreed that France, as host country, will support the Agency for the design and implementation of the project. At the end of 2019, the Agency signed a contract for a programmers' service to prepare the requirements and the technical conditions for a design service which should start at the end of 2020. The MB was also regularly informed and, together with the Agency, closely followed the project for the second extension of the Strasbourg technical site, and the risk associated with the lack of facilities to host new systems, staff and on-site contractors. A preliminary information on the project was submitted to the budgetary authorities on 2 April 2019. In the meantime, the Agency pursued the lease of temporary office space and the setup of an on-site temporary infrastructure for the extension of the primary data centre to mitigate in a cost-effective way the risk associated with the lack of facilities to host new systems, staff and on-site contractors. The temporary office space is expected to be occupied in Q4 2020.

The missions' management service was improved with the introduction of two ARES workflows, one for the travel requests and a second for the travel reimbursement, contributing to the efforts of the Agency moving towards a paperless environment.

Document management services

Following the requirement to create a long-term archive preservation strategy, the Agency recruited a Document Management Officer in August 2019. This facilitated the creation of 'eu-LISA Long term preservation policy' and 'eu-LISA Long term preservation procedures'. The implementation of this policy along with the procedures guarantees the Agency's compliance with any legal and regulatory obligations, as well as ensures that the records of eu-LISA are protected and preserved during their entire life cycle.

Information and communications technology (ICT) services

The Agency's ICT services ensure that all ICT systems and applications operate within optimal parameters, are reliable and available to Agency users as required, provide with end user support, and manage all ICT projects according to the Agency's needs.

During 2019, the ICT services, in order to support the internal needs of the Agency, provided improvements in the areas of Corporate IT applications, and the development of infrastructure in the areas of networks, systems, virtualisation and new storage technology.

In particular the main achievements in the areas of ICT systems were the replacement of the end-of-life videoconference/teleconference software offering better user experience, the migration to Windows 10 and Office 2016 ensuring consistent performance and security in our environment, the deployment of a new storage system to support the increased demand by eu-LISA users, the implementation of CERT-EU services in order to increase security of eu-LISA networks and a new backup software that was configured to backup all ICT components adding a new functionality, efficiency and scalability to Agency's backup operations.

Furthermore, the corporate applications were enhanced with workflows for internal procedures, improvements and extra functionalities in the SharePoint platform supporting corporate planning and reporting, and with the creation of a contract monitoring tool. In addition, the e-learning service continuity for staff and Member States was safeguarded during the year by maintaining e-learning's infrastructure according to eu-LISA's IT security policy.

Finally, in 2019 the ICT service desk received 7 824 tickets, acting as the single point of contact for all technology related questions and requests for all users within the Agency.

1.4.7 Communication

External Communication

The eu-LISA 2019 objectives for corporate communication aimed at increasing visibility, ensuring credibility and fostering mutually beneficial relations between the Agency and its stakeholders. The Agency took several steps towards improving its public information tools. These included an in-depth analysis of website needs, encompassing measures to ensure that future web developments are in line with both reliability and security requirements that will stem from EES and ETIAS legal instruments. The project to refresh the Agency's visual identity was started in 2019. It aims to update and streamline all design-related elements, and also consider providing sub-branding for the large-scale IT systems managed by eu-LISA, in the context of the future launch of EES and ETIAS, which will provide a far greater public exposure for the Agency compared to the past. A self-contained infographic-style micro-website has also been in development to showcase the systems, the interoperability programme, and the areas that have grown in prominence with the broadened mandate of the Agency – training, research and reporting and statistics. The launch is scheduled for Q2 2020. In 2019, the Agency's public website maintained its annual average of approximately 100 000 visitors, with visit duration averaging over 2 minutes. The bounce rate was at around 41 %, owing to the very specific nature of the Agency's activity, but shows definite growth trend. The job opportunity related pages sparked the most interest. New

content was added on the most recently created AGs, on the Working Group for Carriers and on Access to Public Documents. These new additions generated public interest and served the purpose of highlighting the Agency's dedication to transparency. The Agency focused proactively on efforts to share highlights and provide for transparency via social media channels, which all showed considerable growth of follower numbers (+ 33 % on Twitter, + 58 % on Facebook and + 99 % on LinkedIn). This is related to getting the required resources and tools, necessary for planned and targeted actions, available for regular communication activities.

eu-LISA communication made notable efforts to enhance eu-LISA's visibility, raise awareness and share relevant information with different stakeholder groups. The high points were the 6th eu-LISA Annual Conference and the two Industry Roundtables. The Annual Conference - "The New Information Architecture as a Driver for Efficiency and Effectiveness in Internal Security" - was organised under the auspices of the Finnish presidency of the Council and brought together close to 200 delegates representing Member States, EU institutions and Agencies as well as practitioners from industry and academia. The high satisfaction rate expressed by the participants (96.6 %) was a definite indicator of success. The two industry roundtables, organised in spring and autumn, with a total turnout of over 190 participants, provided valuable fora for focused discussions (more details on the roundtables on page 54). The Agency was also actively present at more than a dozen conferences and seminars, such as the European Police Congress, the Passenger Terminal Expo and Conference or the International Borders and Security Conference, to mention a few.

Internal communication

In 2019, the highest priority area for internal communication derived from the organisational transformation eu-LISA 2.0. Regular updates were shared about the transformation process throughout the year. These included staff assemblies to strengthen two-way communication and allow employees to address their concerns and questions directly to top management, a dedicated website, a special section in the weekly newsletter and other means of online and off-line communication. The Agency paid special attention to ensure transparency and make updated information easily accessible to all employees. A total of 79 meetings and events were covered by the internal communication team (with articles and photo galleries). In 2019, 44 issues of the weekly News and Info were published, a primary source of information for 89 % of employees.³⁹ In addition, 74 intranet posts were written and 6 staff assemblies (general and topic-specific "1 Hour with the Executive Director" meetings) were organised, when close to 100 questions gathered from staff were addressed by the management.

The Agency expanded its Crisis Communication Plan, contributing to the further development of the Crisis Management and Response Plan, as part of the Business Continuity Plan.

A special end-of-year publication, 'eu-LISA Highlights 2019', was produced and distributed to all employees to contribute to the building of an organisational culture within the newly transformed organisation.

According to the 2019 annual survey on internal communication, the overall satisfaction rate with internal communication channels and actions was 94 %. The share of very satisfied respondents increased by 5 % and the dissatisfaction rate decreased by 6 % compared to 2018.

1.4.8 Internal audit

The Agency's Internal Audit Capability (IAC) provides independent and objective assurance and consulting services to the Executive Director and the MB. The Agency continued its cooperation with the European Court of Auditors and the Internal Audit Service of the European Commission, hosting their audit missions and taking measures to respond to the resulting recommendations where necessary. The IAC coordinated work in this area, including with regard to the preparation of reports, missions and follow-up activities, and also ensuring general awareness among the Agency's management and staff of the principles, objectives and procedures of internal and external auditing.

³⁹ Internal Communication Satisfaction Survey 2019

The 2019 results of IAC's performance indicators are presented in Table 4.

Table 4: IAC 2019 performance indicators

Indicator	2019	2018	2017
Implementation rate of the annual internal audit plan. Target > 80 %	89 %	91 %	90 %
Staff training hours per year vs. budget. Target: baseline (IAC training budget is 64 hours per year per staff).	53 %	n/a	n/a
Audit topics delivered on time. Target > 80 %	42 %	70 %	67 %

The result of 42 % of the performance indicator 'Audit topics delivered on time' suggests that IAC needs to improve the time lag between draft report and final communication to the Executive Director and the Management Board. To this end, by June 2020, IAC will introduce a reporting template and a standard communication workflow with respective managers, reinforcing the emphasis on providing timely input to audit procedures (i.e. validation of findings and comments to audit report).

The following topics were added and delivered to the initial internal audit plan, which was adopted by the Management Board⁴⁰ in November 2018:

- Survey on the Programme Steering Committee effectiveness (consulting)
- ECA performance audit on EU Agencies (coordination)

The following topics were delivered on time:

- ECA audit on legality and regularity of 2018 Accounts of eu-LISA - final (coordination)
- ECA audit on legality and regularity of 2019 Accounts - interim (coordination)
- Monitoring and follow-up to audit recommendations (assurance & in coordination with IAS)
- Delivering awareness sessions on ethics & integrity (in coordination with HRU)
- Survey on the Programme Steering Committee effectiveness (consulting)

The following topics were delivered (i.e. final audit report communicated to the Management Board and Executive Director) with delays:

- Implementation of the new organisational structure of the Agency (consulting)
- Facilitation of deployment of the revised Internal Control framework of eu-LISA (consulting)
- ECA performance audit on Border Control – Information systems for Internal Security (coordination)
- Monitoring and reporting on the implementation of Agency's Anti-fraud Strategy (consulting)

The following topics were delayed and will be delivered in the first part of 2020:

- IAC review on the Entry Exit System (EES) project: Business and IT Alignment (assurance)
- IAS audit on Recruitment, management of SSPs, Ethics (coordination)

⁴⁰ Decision 2018-168, point B.6

- ECA Performance Audit on EU Agencies (coordination).

IAC regularly contributed to the agenda and assessments of the Audit, Compliance and Finance Committee of the Management Board (ACFC) as requested.

2 Management

2.1 Management Board

In 2019, the Agency continued its very close, transparent and constructive collaboration with its Management Board. In addition to the items approved by the MB in accordance with its functions, the Agency presented regularly to the MB all the significant risks and issues identified during the reporting period, alongside the implemented mitigation measures.

The status of implementation and the reports from the EES and ETIAS AGs and PMBs were regularly presented to the MB. This included the presentation of the programmes' risks and issues. In particular, the MB addressed on several occasions the need for a strong implication of the Member States to ensure the timely delivery of the programmes. The MB also assented to the relaunch of the EES BMS procurement to include sBMS.

The SIS, VIS and Eurodac AGs reported to the MB on the status of their work, including the risks and issues associated with the systems' operational management and evolution projects.

The MB was regularly informed on the status of the negotiations of the new Multiannual Financial Framework (MFF) for 2021-2027. In June 2019, the MB expressed its concerns that, if the financial resources allocated to the Agency are insufficient, eu-LISA may not be in a position to deliver on all tasks, jeopardising the ability to guarantee the stability and availability of the systems. The MB also followed closely the project for the second extension of the Strasbourg technical site, and the risk associated to the lack of facilities to host new systems, staff and on-site contractors. The MB was regularly updated on the status of implementation of the Agency's transformation programme (eu-LISA 2.0), which is closely connected to an identified corporate risk (organisational instability). The Agency consistently presented to the MB the Monitoring Report on the status of implementation of audit recommendations.

On 12 February, the MB appointed a new Data Protection Officer. On 20 March, the MB adopted the eu-LISA Internal Control Framework and the eu-LISA Anti-fraud strategy for 2019-2021. On 28 August 2019, the MB adopted the updated Financial Rules of eu-LISA. On 20 November, the MB appointed Mr Luca Tagliaretti as Deputy Executive Director of eu-LISA for a period of 5 years.

2.2 Major developments

2.2.1 eu-LISA 2.0

The Agency launched in 2019 a transformation programme with the aim to deliver a new organisational structure, fitted to the eu-LISA new mandate. This programme, named eu-LISA 2.0, has been designed to ensure that the reorganisation process is open, transparent and involves the Agency's staff.

With the organisational transformation, the Agency strives for:

- Leaner and faster decision making processes
- More agility inside the job, including more room for innovations
- More empowerment and ownership through new centralised functions and harmonised profiles
- Better positioning of the Agency, leading to a sustained success of the organisation

The programme was initiated following the assessment that the Agency would face a dual strategic challenge in the years 2019 to 2021 and beyond. On one hand, the Agency needs to continue delivering on its core operations, while on the other, it is significantly increasing its contribution to Member States, and the EU as a whole, through the development of new IT systems and services. In addition, eu-LISA has faced a significant increase of staff, a need for more leadership, and a need for the development of new working models.

To ensure the success of this transformation, the Agency put in place a change management plan. In 2019, this programme has progressed significantly. The new organisational structure of the Agency has been finalised. It includes

in particular a completely new structure for both the Operations Department and the Corporate Governance Department (formerly the General Coordination Unit), with clearly mapped function-based sectors.

The work of the organisational transformation was split into four work streams.

- 1) The transfer of existing staff into the new organisational structure
- 2) The recruitment of new staff
- 3) The implementation of the new competency model
- 4) The revision of the functional descriptions of the units and departments and operational model

To ensure ownership of eu-LISA 2.0 within the Agency, a Task Force 2.0 was formed to work on the description of the new duties and functions of the sectors and units in the transformed Agency. The Task Force also updated key corporate and operational processes, providing a full picture to the Management and contributing to the definition of the Agency's new operating model. The selection procedure for heads of newly created units was concluded in May for the Operations Department and in November for the Corporate Governance Department.

As of 1 September 2019, the organisation has put in place a new organisational structure, aiming to become a state of the art organisation and target a new way of thinking and operating.

Throughout the transformation programme, consultations were organised and progress was regularly presented to the staff of the Agency, at various levels, from individuals to Agency level. This fostered the engagement of the staff in the transformation process, and contributed to the successful implementation of the new structure. A dedicated information platform named "eu-LISA 2.0" was set up to host communication and discussions. It was continuously updated and promoted among the staff. Dedicated staff assemblies on the transformation of the Agency were regularly convened to report on the status and progress of the work performed. Questions and concerns raised by the staff were answered, which facilitated a two-way communication with the Management team.

The Agency organised change management training sessions with the topic "responding positively to change", both in Tallinn and Strasbourg. People in the Agency gained information on how to respond to change, on the importance of a positive approach to a changing situation and on the need to identify their role in the change process. Similar sessions have been organised for staff in a management role, to learn how to successfully lead change, use relevant models to implement change, explore potential reasons of resistance and help individuals work constructively through change.

Furthermore, the Agency created a branding around the organisational transformation (eu-LISA 2.0), supported by simple and impactful means such as videos, branded items or workshops with seasoned speakers. This contributed to the majority of the Agency staff feeling positive about the upcoming change. In the 2019 internal communication survey, 72 % of respondents answered that they had received regular information and updates about the Agency's transformation, 73 % felt that the communication channels used to inform about the transformation met their needs and 65 % answered that the quality and frequency of information related to eu-LISA's transformation process met their needs.

The Management Board was also regularly informed on the progress of the transformation programme.

Figure 11 presents the major milestones and timeline of the eu-LISA transformation programme. All milestones due during the reporting period have been met.

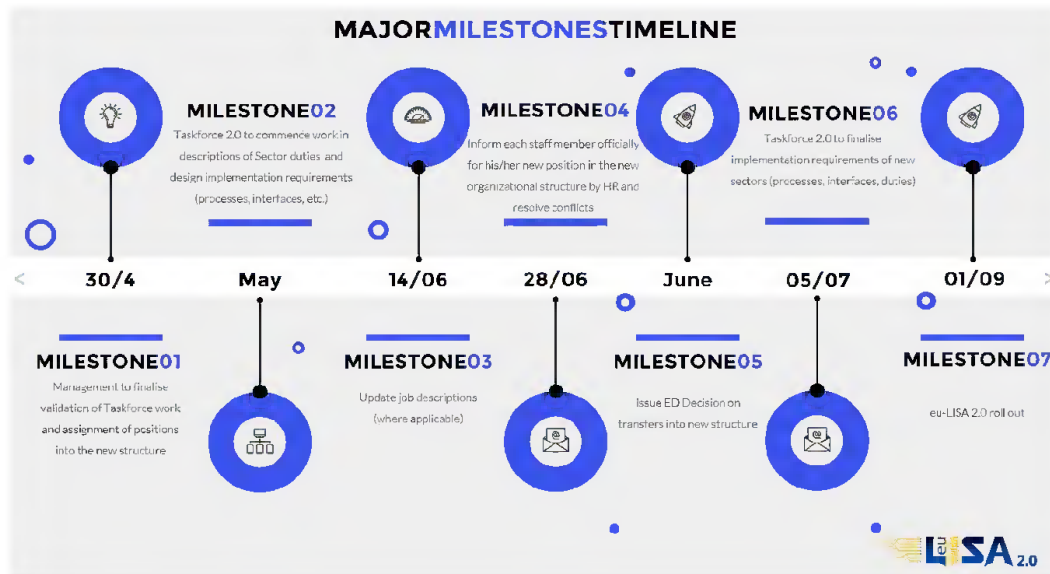


Figure 11: eu-LISA 2.0 - Major milestones timeline

While change brought new challenges to the Agency, it is giving the organisation a chance to reshape and reinvent itself. Shifting from a 'silo' model to a transversal operating model requires new ways of thinking and working. Stemming from eu-LISA 2.0 momentum, a transformation of the corporate culture will be instigated, fostering the "Together as one – we are making it happen" attitude.

2.2.2 New legislation

The year 2019 brought significant changes to the legal environment in which eu-LISA operates.

On 11 December 2018, eu-LISA's new establishing regulation entered into force. With the strengthening of its mandate, the Agency has now increased responsibilities concerning the design, development, interoperability and operational management of existing and new systems in the area of security, border management, migration and asylum. The new mandate broadens the scope of the Agency's work providing it with a greater role in the area of research, assurance of data quality in systems as well as regarding pilot projects, proofs of concept and testing activities directly related to its mandate.

Three new regulations aiming at strengthening further the SIS entered into force on 28 December 2018, setting the requirements to implement the various provisions within either one, two or three years from the entry into force of the respective legal acts. The revised legal framework is also geared towards ensuring full interoperability of SIS with other EU systems for migration, border management and security. The AFIS functionality has also been further enriched.

On 11 June 2019, the ECRIS-TCN Regulation entered into force. eu-LISA is responsible for the development and the operational management of ECRIS-TCN, the first large-scale IT system designed and developed by eu-LISA that serves primarily justice purposes.

On the same day, two Regulations establishing a framework for interoperability between EU information systems in the areas of (1) police and judicial cooperation, asylum and migration; and (2) borders and visa entered into force. The development of interoperability technical components, namely the Common Identity Repository (CIR), the European Search Portal (ESP), the shared Biometric Matching Service (sBMS), the Multiple Identity Detector (MID) and the Central Repository for Reporting and Statistics (CRRS), is an iterative process and its complete establishment requires first the implementation of EES and ETIAS.

2.2.3 Impact of the UK withdrawal from the European Union

From the agreement on the draft Withdrawal Agreement of the United Kingdom from the European Union in November 2018, the Agency constantly monitored the situation to identify potential new obligations. With regard to law enforcement and internal security, after the withdrawal on 31 January 2020 and the subsequent transition period ending on 31 December 2020, the UK will cease to have access to any Union information systems under the operational management of eu-LISA, more specifically SIS and Eurodac. Expecting the withdrawal to materialise in 2019, eu-LISA made all the necessary preparations to execute the disconnection of the UK and the possible deletion of the UK data from SIS and Eurodac as and when required by the legal framework. The Agency regularly discussed the technical details with the European Commission and the respective AGs, and participated in a dedicated working session on 'Brexit' organised by the Commission for the EU Agencies on 5 September. The Agency made the necessary preparations for the application of the provisions of the Withdrawal Agreement and the respective Commission guidelines regarding the UK participation in the Agency's governance bodies, human resources management, statistical reports and other relevant matters.

2.3 Budgetary and financial management

2.3.1 Financial management

eu-LISA's budget is financed through different funding sources.⁴¹ The main revenue comes from EU subsidy, received on an annual basis from the EU budget — Commission section, Chapter 18 02 'Internal Security' — as adopted by the budgetary authority.⁴² Additional contributions are received from associated countries.

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 2019 final statement of the revenue and expenditure was adopted by eu-LISA's Management Board⁴³ on 21 December 2018.

The Agency had a high budget implementation rate at the end of 2019:

- 99.7 % for commitment appropriations, taking into account the non-automatic carry-over of commitment appropriations authorised by the Management Board in February 2020 as summarised in Table 5.
- 99.3 % for payment appropriations including the carry-forward of administrative expenditure to 2020.

Table 5: Commitment appropriations (amounts in EUR million)

2019 budget implementation as of 31/12/2019			Budget implementation with carry-over by decision	
2019 final adopted budget	Executed commitments	Implemented (%)	Non-automatic carry over	Implemented taking into account non-automatic carry-over (%)
288.403	128.370	44.5 %	159.076	99.7 %

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 6.

⁴¹ In accordance with Article 46(3) of Regulation (EU) No 2018/1726.

⁴² See Article 45(5) and (6) of Regulation (EU) No 2018/1726. This subsidy relates to C1 commitment and payment appropriations (voted credits for the current budgetary year).

⁴³ In accordance with Article 45(7) of Regulation (EU) No 2018/1726.

Table 6: Commitment appropriations for new tasks (in EUR million)

New tasks/systems	Commitment appropriations
LFS SIS recast border/police cooperation	2.261
LFS SIS recast return	0.517
LFS ECRIS-TCN	4.116
LFS Interoperability	5.830
Total budget subject to new legal basis	12.724

Table 6 amounts include administrative expenditure, to be allocated according to the budgetary nomenclature in Title 1 'staff expenditure' and Title 2 'infrastructure and operating expenditure'.

Amending Budget No 1

The Agency's 2019 budget included appropriations as follows:

- For the development of new systems (Eurodac Recast, Dublin Allocation), the use of the budget was conditional on the adoption and entry into force of the relevant legal basis;
- For the development of EES, ETIAS, Interoperability, SIS recast and ECRIS-TCN: the legal basis was adopted but budget was not required at this stage, as procurement was ongoing;
- Payment appropriations received during the EU budgetary procedure establishing the Agency's budget, but which were not requested by the Agency.

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

- returning EUR 8.289 million in commitment appropriations;
- returning EUR 66.051 million in payment appropriations.

Table 7 provides a detailed breakdown of the amending budget by budgetary title.

Table 7: Breakdown of 2019 amending budget (in EUR million)

			Amending budget	
Budgetary title	System/task		Commitment appropriations	Payment appropriations
A01	Staff expenditure		-2.554	-2.554
	out of which	Interoperability	-2.006	-2.006
		Eurodac recast	-0.268	-0.268
		ECRIS-TCN	-0.280	-0.280
B03	Operational expenditure		-5.735	-63.497
	out of which	Interoperability		-1.688
		SIS recast		-0.299
		Eurodac recast	-5.600	-3.920
		Dublin Allocation	-0.135	-0.135
		EES		-23.523
		ETIAS		-6.643
		ECRIS-TCN		-3.766
		Additional payment appropriations not requested by eu-LISA		-23.523
Total 2019 amending budget			-8.289	-66.051

Carry over by decision

The ongoing procurement for EES, ETIAS, Interoperability, SIS recast and ECRIS-TCN allowed the Agency to carry over EUR 159.076 million in commitment appropriations from 2019 to 2020 by Management Board decision, in order to preserve these funds for use in the following years (Table 8).⁴⁴

Table 8: Breakdown of 2019 carry over (in EUR million)

Budgetary title	System/task	Non-automatic carry-over of 2019 commitment appropriations
Bo3 Operational Expenditure	Interoperability police cooperation/border	2.818
	SIS recast	7.328
	EES	131.415
	ETIAS	9.983
	ECRIS-TCN	7.532
Bo3 total		159.076

Upon the submission of a legal proposal to the budgetary authority the respective appropriations are inscribed in the budget. As a result of the delayed adoption of the legal proposals of all new tasks entrusted to eu-LISA, the Agency had to carry-over/forward the corresponding budget.

Commitment appropriation execution

The commitment credits (C1) voted for 2019 were split among the different titles as follows:

- 87.13 % for the operational budget (Title 3);
- 5.07% for infrastructure and operating expenditure (Title 2);
- 7.8 % for staff expenditure (Title 1).

Figure 12 and Figure 13 show the budget implementation by title at year end.

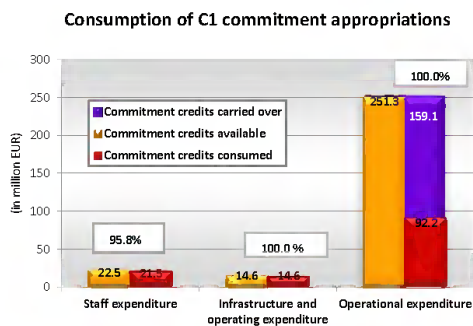


Figure 12: Consumption of C1 commitment appropriations

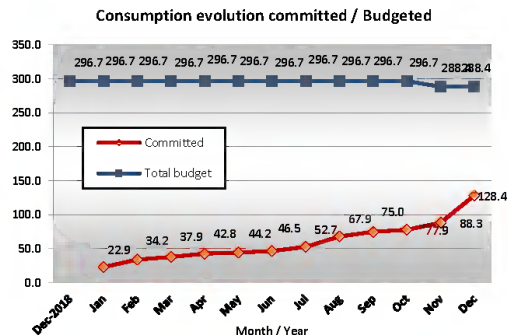


Figure 13: Trends in consumption of funds committed and budgeted

With regard to Title 3, owing to the multiannual nature of the contracts used to support core operations, EUR 78.7 million of 2019 open commitment appropriations were automatically carried forward and will be paid in 2020 and in the following years. EUR 159.1 million in commitment appropriations related to new tasks were carried over by Management Board decision.⁴⁵ A detailed breakdown is shown in Annex II.

⁴⁴ In line with Art. 12(3) of the Agency's financial regulation. Management Board decision was adopted before 15 February 2020.

⁴⁵ Management Board Decision 2020-19 of 07/02/2020

Of the operational budget, 100 %, amounting to EUR 251.3 million, was implemented (EUR 159.1 million carry-over and EUR 92.2 million of executed commitment appropriations). Figure 14 shows the breakdown of the operational budget by chapter, excluding the carry-over amounts, as listed in Table 8.

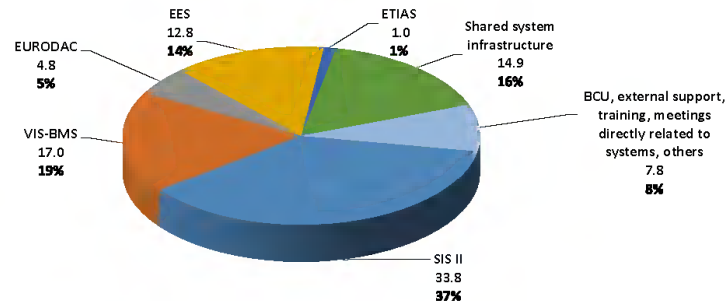


Figure 14: Title 3 executed commitment appropriations (EUR million)

In 2019, the Agency cancelled EUR 4.818 million of commitment appropriations carried forward from previous years, representing 2.1 % of the total carried forward appropriations in title 3 – operational expenditure. Table 9 summarises the de-commitments by year of origin of the underlying legal commitment.

Table 9: 2019 de-commitments of budgetary commitments by year of origin (in EUR million)

Budget Chapter	Budget Article	2016	2017	2018	2019	Total
Infrastructure	Shared system infrastructure/Wide area network	—	—	-3.317	-0.586	-3.903
Applications	SIS II	-0.183	-0.123	-0.040	—	-0.346
	VIS	—	-0.036	—	—	-0.036
	EURODAC	—	—	-0.002	—	-0.002
	EES	—	-0.030	-0.060	—	-0.090
Operational support	Operational support	-0.072	-0.107	-0.261	—	-0.440
Total		-0.255	-0.296	-3.681	-0.586	-4.818

80.3 % of the cancellations refer to appropriations transferred to the Agency as global commitments in the scope of the hand-over of the VIS and SIS networks from DG HOME. These appropriations were transferred without underlying legal obligations and were not required during the reporting year. Table 10 provides a detailed overview of the respective global commitments:

Table 10: 2019 de-commitments of global (L1) commitments (amounts in EUR million)

Budget Article	Global (L1) commitment	Year of origin	Carried forward amount	Consumption amount	De-commitment amount
Shared system infrastructure	Transfer of the contractual and financial responsibility related to the VIS network from DG HOME to eu-LISA	2018	5.695	-2.411	-3.284
Wide area network	Transfer of the contractual and financial responsibility related to the SIS network from DG HOME to eu-LISA	2019	2.451	-1.865	-0.586
Total					-3.870

EUR 0.948 million refer 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 referring to external support contracts, which included extra costs for overtime; de-commitments of remainders of advisory group meetings and training related to systems and Member States; de-commitments due to applied liquidated damages).

Payment appropriation execution

The total voted budget for payment appropriations amounted to EUR 138.1 million.

At the end of 2019, the execution of payment appropriations for C1 credits reached 99.3 %, including the carry-forward of administrative expenditure to 2020. Figure 15 and Figure 16 show the split of the total budget by title and the overall consumption of payments credits over 2019.

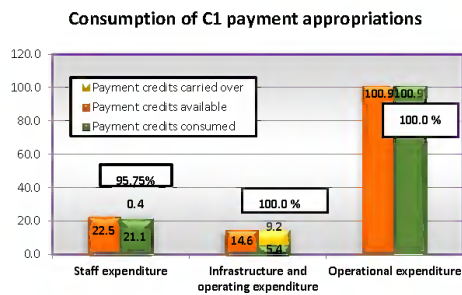


Figure 15: Consumption of C1 payment appropriations

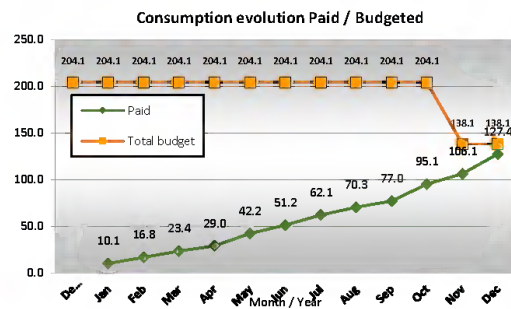


Figure 16: Trends in consumption of funds paid and budgeted

The total of 87.4 % of the payment appropriations carried forward from 2018 to 2019 in administrative expenditure have been executed.

Commitment appropriations in Title 1 (staff expenditure)⁴⁶ amounting to EUR 0.5 million and in Title 2 (infrastructure and operating expenditure) amounting to EUR 9.2 million, not yet consumed through payments in 2019, and for which a valid legal commitment exists, were carried forward to 2020 together with the corresponding payment appropriations.

Within Title 3, the largest proportion of payment appropriations was spent on VIS/BMS. Figure 17 shows the breakdown of executed payment credits for the operational budget.

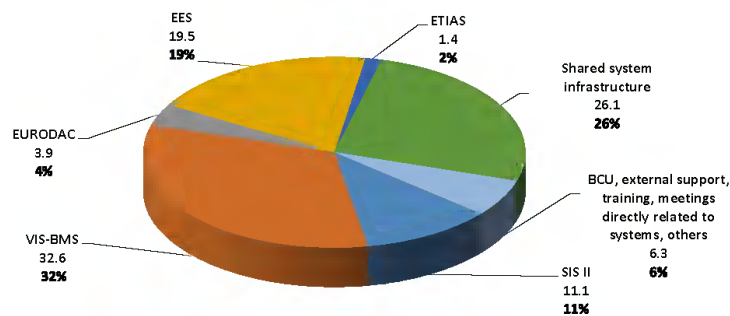


Figure 17: Title 3 executed payment appropriations (EUR million)

⁴⁶ Commitment and payment appropriations related to remuneration are not carried forward.

Performance indicator: time to pay

A total of 3 138 payment transactions were carried out in 2019, an increase of 17.53 % compared to 2018.

Of these:

- 2 957 transactions had a maximum payment time of 30 days;
- 1 transaction had a maximum payment time of 35 days;
- 132 had a maximum payment time of 60 days;
- 48 had a maximum payment time of 45 days.

The average time to pay for all types of payments remained far below the stipulated time limits: 17.6 days for 30-days payments; 38.3 days and for 60-days payments.

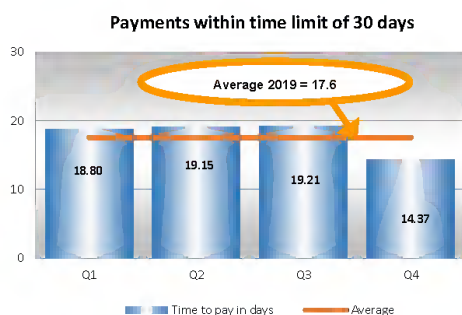


Figure 18: Payments within time limit of 30 days

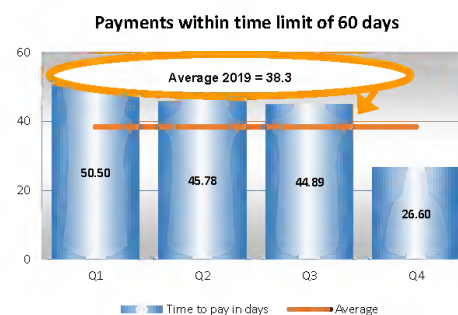


Figure 19: Payments within time limit of 60 days

Overall, 92.8 % of all transactions were done within the contractual time limit. 226 payments were delayed, out of which 12 resulted in late interests amounting to EUR 5 075.01 payable to creditors.

2.3.3 Procurement procedures

Table 11 present the results of a synoptic volume analysis performed by examining the number of transactions (i.e. contracts) in the period 2014-2019. The volume analysis highlights the need to strengthen procurement functions across the Agency.

Table 11: Volume of contracts (2014-2019)

Contracts	2014	2015	2016	2017	2018	2019
Direct contracts	16	12	5	17	9	12
Framework contracts eu-LISA (non-systems related)	3	5	3	—	6	11
Framework contracts eu-LISA (non-systems related) — amendments	—	—	—	2	16	0
Framework contracts eu-LISA (systems related)	2	—	1	1	1	1
Purchase orders	76	49	55	54	54	56
Specific contracts / order forms under framework contracts	118	195	278	337	476	558
Total	215	261	342	411	562	638

2.4 Human resources management

In 2019, key achievements in the area of Human Resources management included the implementation of “eu-LISA 2.0” described in chapter 2.2.1, the deployment of the first basic modules of Sysper (HR IT tool), the efficient use and further improvement of the e-Recruitment tool and the enhancement of the Learning Management System (i-Learn).

2.4.1 Recruitment

Recruitment was a major activity in 2019, following the evolution of the Agency. There were 20 external vacancy calls closed for applications in 2019 and 84 new contracts signed. The total number of received applications reached 1 751, with an average of 88 applications per call and a range from 44 to 196 applications for a single call. The Agency interviewed 385 candidates for the TA and CA posts.

Recruitment of the additional staff granted to eu-LISA in 2019 posed a challenge due to its scope and specific profiles, timing (with legal base adopted in the end of year) and the needed involvement of the Agency staff in the process. eu-LISA had to invest in enlarging the recruitment team and prioritise recruitments for the ETIAS, ECRIS-TCN, SIS, new establishing regulation and Interoperability, as well as for the replacement of the staff leaving eu-LISA during the course of the year due to turnover or end of the contract. Several selection procedures started in 2019 were concluded in Q1 of 2020, and the Agency expects to meet its recruitment target in 2020.

Where possible, grouping of profiles and longer reserve lists were used to cover several posts within one recruitment procedure. In other cases, the Agency used valid reserve lists already established for the same grade/function group and profile. The use of these sources methods generated significant efficiency gains. In 2019, 7 TAs and 10 CAs have been recruited (including accepted job offers until 31/12/2019) from existing reserve lists dated 2016 to 2018.

The Agency noted a quantitative rise of the number of applications following the introduction of the eRecruitment platform in December 2018 and the initiative to publish vacancies more broadly (e.g. on EPSO website, Eurobrussels, LinkedIn, etc.). The Agency is planning to continue on that path.

2.4.2 Learning and development

In the support of the organisational transformation, eu-LISA provided a series of training, workshops and discussion opportunities. The activities included face to face seminars, team game exercises to support engagement and effective organisation change, a selection of motivational high impact guest speakers, promotional videos and animations linked to eu-LISA's core values.

eu-LISA's values drive and underpin the operational activities and any strategic development. A learning intervention about sexual and other forms of harassment was introduced. The tailor-made learning solution was prepared in cooperation with the confidential counsellors and eu-LISA staff.

With the organisational transformation, new sectors, units and departments have been created. People moved internally to different positions and new functions were created. Moreover, the workforce of the organisation will continue to grow over the next years. To nurture this transformation, team development activities were organised, where teams described their mission/purpose, roles and responsibilities, intra-team relations, inter-team relationships and developed KPIs and action plans.

In addition, a total of around 40 training activities were organised in-house, in line with the annual training needs analysis, including more than 600 participants with an average general satisfaction at 80 %. In addition, a total of 185 individual training requests were processed and satisfied on specialised topics related to operations, IT, individual development, leadership and language.

At the end of 2019, a learning concierge service was launched in an effort to empower and provide personal advice to staff on how to address their own development and performance challenges, in the way that works best for them.

The library of specialised courses on the platform continues to grow in order to accommodate learning by staff members at their convenience. Furthermore, the digitalisation training requests reached a mature level has been launched at the beginning of 2020.

Competency framework

eu-LISA continued to evolve towards a competency-based approach in its core HR processes. In line with the Competency Framework Implementation Plan, the framework was included in recruitment processes and was also integrated in performance management activities, such as the 360 degree evaluation and the identification of learning needs.

Performance management

While moving towards a competency based approach, activities have been performed to further digitalise the entire objective setting and appraisal process. The objectives setting is now incorporated together with the appraisal in order to promote timely completion of the whole process. This also allows HR to monitor the process much more closely.

eu-LISA continued in 2019 with its non-financial rewards initiative of the "Colleague of the Year". The initiative has been established to acknowledge and celebrate the colleagues and teams whose contribution to the Agency is highly appreciated by their peers. eu-LISA staff was asked to identify the best colleagues and teams in different categories which are based on the eu-LISA values.

Leadership Development

An analytic 360 degree evaluation of all management levels was conducted with the aim to assess the current level of leadership and potential areas of improvement. The participation rate for this survey reached 88 %. The Competency Framework was used as a basis for this survey.

Aside from the resulting statistical reports, HR offered individual coaching sessions to all managers to support them in reflecting further on the results and advise how to use those findings for the benefit of their team. The information collected set the basis for the analysis and design phase of eu-LISA's Leadership Development Programme. This phase was successfully completed, leading to a high level description of the Leadership Development Programme which will be implemented in 2020.

Onboarding

A unified onboarding programme for all newly recruited staff was established through a blended approach between face to face sessions delivered by different subject matter experts, covering topics both on corporate and systems. The face to face sessions are combined with e-learning modules related to the governance, structure and rules of the organisation, and are run on a recurring basis to ensure a timely and effective knowledge acquisition by newcomers. The programme had a major positive impact on welcoming staff members.

2.4.3 Establishment plan and headcount

In 2019, the authorised posts of eu-LISA consisted of the following types of posts: 172 Temporary Agents (TAs), 88 Contract Agents (CAs) and 11 Seconded National Experts (SNEs), for a total of 271 authorised posts.

The number of posts in the establishment plan increased by 36 in comparison to 2018. Annex IV shows the 2019 Establishment Plan. The number of CA posts increased by 47, from 41 to 88 posts, owing to the budget authorisation for the new tasks entrusted to the Agency. The number of SNE posts increased by 2, from 9 to 11 posts.

In 2019, the occupancy rate was 89.5 % for the establishment plan headcount and 92.4 % including issued job offers. The occupancy rate for all types of posts was respectively 82.3 % and 85.6 %. This level of the occupancy rate was reached because the recruitment for the posts authorised in the establishment plan and budget 2020 could be performed only after the adoption of the new regulations (establishing regulation, ETIAS, interoperability, SIS recasts), and in a relatively short timeframe by a small number of HR officers. Additionally, the recast of the Eurodac, for which

the establishment plan of eu-LISA was increased by 2 posts, was not adopted in 2019, having a negative impact on the occupancy rate.

In terms of headcount, at the end of December 2019, eu-LISA had 223 full-time staff members: 154 TAs, 61 CAs and 8 SNEs. Four interns were offered a professional practice at the Agency. Table 12 shows the number of staff members per type of contract and split between the sites of the Agency.

Table 12: Distribution of staff by sites and types of contract

31 December 2019	TA	CA	SNE	TOTAL
Tallinn	45	23	5	73
Strasbourg	109	36	2	147
Brussels	0	2	1	3
TOTAL	154	61	8	223

One third of staff has been employed at the Agency's Headquarters in Tallinn and two thirds at its technical site in Strasbourg (Figure 20). The Liaison Office in Brussels represents 1 % of the Agency's staff. Three interns are located in Tallinn and one intern is placed in Brussels.

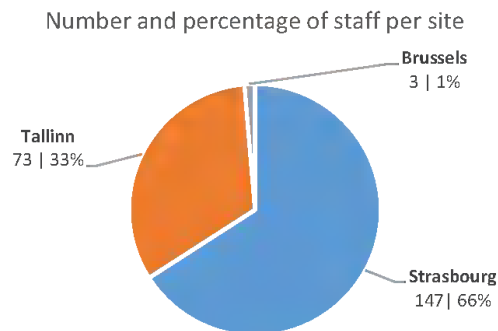


Figure 20: Distribution of staff between the sites (number and share of total staff)

The Agency staff represented 21 nationalities. Women constituted 29 % of the staff (65), while 71 % (158) were men. This shows a notable improvement (6 %) of the gender balance in comparison to 2018.

Organisational structure

The Management Board adopted in 2018 a proposal for the new organisational structure in anticipation of the growth of the Agency, due to the increased tasks following adoption of new Regulations, and the respective additional staff granted to perform these new tasks. As part of the eu-LISA 2.0 programme, the Agency concluded a change of its organisational structure on 1 September 2019. The organisational chart of eu-LISA showing the status on 31.12.2019 is presented in Annex III.

Performance indicators in the area of HR

The Agency set key performance indicators (KPIs) for areas related to Human Resources Management. They serve to measure the rate of absenteeism, staff turnover, staff performance index and staff engagement.

The absenteeism rate was 23 %, achieving the target to keep it below 25 %. The exit turnover of staff was 3.14%, due to seven employees leaving the organisation in 2019. This is below the target of 5 % set for turnover. The Tallinn headquarters was more strongly affected as the staff turnover reached 5.26 %. The staff performance index reached 99 % of completed appraisals. A few delays were caused by staff members who were on long-term absence due to medical reasons. All appraisal results were positive.

Staff engagement was measured by evaluating the percentage of staff responding to the 360 degree Evaluation Survey as a follow up of the 2018 Staff Engagement Survey. The response rate reached 88 % with a target value of 80 %.

Compensatory leave schemes

The Agency is required, in accordance with paragraph 28 of the Parliament's Discharge Report '2011 Discharge: performance, financial management and control of EU agencies',⁴⁷ to report on the number of days of leave authorised to each grade under the flexitime and compensatory leave schemes.

Flexitime is a default working pattern applied by analogy at eu-LISA in accordance with the Implementing Rule on working time.⁴⁸ The mandate of the Agency is to offer its services to Member States on a continuous basis (24/7); this implies that some of the staff work in shifts or on stand-by duty. The interventions to the IT systems managed by the Agency require, from time to time, that the work be performed outside regular office hours, including at night or on public holidays. Therefore, compensation for overtime acquired under flexitime or during stand-by duty interventions is an inherent feature in the operation of the organisation.

Figure 21 shows the total number of days of compensatory leave for overtime (CO), interventions during stand-by duty (SBD) and flexitime (FT) per eu-LISA site.⁴⁹

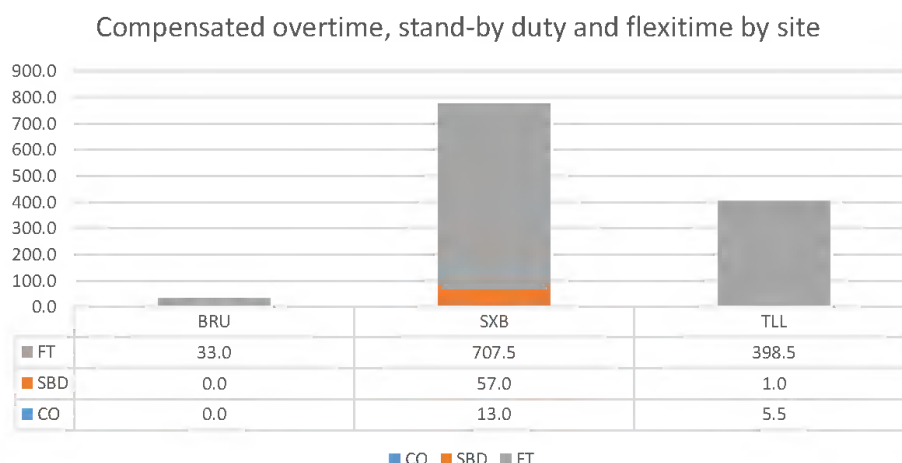


Figure 21: Number of days of flexitime, stand-by duty and overtime compensation in 2019, per site

⁴⁷ P7_TA(2013) 0134.

⁴⁸ Commission decision on working time of 15 April 2015, C(2014) 2502 adopted by the Management Board of eu-LISA on 15 April 2015.

⁴⁹ BRU stands for Brussels, SXB stands for Strasbourg and TLL stands for Tallinn.

Table 13 shows the number of leave days granted as compensation for overtime split per each function group and grade of staff member and the average number of days of those compensated.

Function group and grade	Compensated overtime	Compensated stand-by-duty	Compensated flexitime
ADo5	0.5	0.0	113.0
ADo6	0.0	0.0	23.5
ADo7	2.0	0.0	258.5
ADo8	0.0	0.0	94.5
ADo9	2.0	0.0	75.5
AD10	3.0	0.0	53.0
AD11	0.0	0.0	3.0
AD12	1.0	0.0	0.0
AD13	0.0	0.0	0.0
AD14	0.0	0.0	0.0
AD15	1.0	0.0	0.0
AD16	0.0	0.0	0.0
ASTo1	0.0	0.0	0.0
ASTo2	0.0	0.0	0.0
ASTo3	0.0	0.0	18.5
ASTo4	0.0	0.0	10.5
ASTo5	4.0	0.0	54.5
ASTo6	0.0	0.0	11.0
ASTo7	0.0	0.0	32.5
ASTo8	0.0	0.0	43.5
ASTo9	0.0	0.0	4.0
AST10	0.0	0.0	0.0
AST11	0.0	0.0	0.0
Total number of days	13.5	0.0	795.5
Number of people	11	0	109
Average number of days on leave	1.23	0	7.30
GFIIIo9	1.0	0.0	40.0
GFIII10	0.0	0.0	17.0
GFIV13	0.0	0.0	12.5
GFIV14	0.0	0.0	108.5
GFIV15	4.0	0.0	39.5
GFIV16	0.0	0.0	51.0
GFIV17	0.0	0.0	4.0
GFIV18	0.0	0.0	3.0
Total number of days	5.0	0.0	275.5
Number of people	2.0	0.0	52.0
Average number of days on leave	2.50	0	5.30
SNE	0.0	58.0	68.0

Total number of days	0.0	58.0	68
Number of people	0	4	10
Average number of days on leave	6.80	14.50	6.80
TOTAL number of days	18.5	58.0	1139.0
TOTAL number of people	13.0	4.0	171.0
Overall average	1.42	14.50	6.66

Table 13: Compensatory leave split per type of leave and grade of staff

Description of the results of the screening/benchmarking exercise

In accordance with the requirements of the Framework Financial Regulation (FFR) and methodology agreed by the Heads of Administration of the European Agencies, eu-LISA performed its annual benchmarking exercise to identify the ratio of administrative to operational staff.

The Agency considers that a 'healthy' ratio should remain at a level of approximately 70 % of operational posts and 20 % of posts for the administrative support and coordination (10 % being neutral).

The results of the 2019 benchmarking show a slight decrease (0.6 %) in the percentage of operational posts (from 73 % to 72.4 %) due to the reorganisation exercise, in which several additional operational posts added to its establishment plan were allocated to horizontal functions. At the same time and for the same reason, a percentage of administrative and coordination posts slightly increased by the same figure (0.6 %) from 16 % to 16.6 %. The share of neutral posts remained at the same level.

A further split of the type of posts into categories shows that in the operational posts there was a slight increase of the percentage of the general operational posts (from 59 % to 62.6 %), while the programme management and top level coordination posts decreased (respectively from 6 % to 3.1 % and from 8 % to 6.7 %).

The ratio of administrative support type of posts and of operational type of posts applied to external support that was almost equal last year (47.5 % and 48.5 % respectively) shows a remarkable change. More services of administrative support and coordination were outsourced, showing an increase from 47.5 % to 51.2 %, while for operational activities this decreased from 48.5 % to 43.5 %. The share of neutral posts in external services has increased from 4 % to 5.2 %.

Tables in Annex IV present the results of the 2019 screening exercise and provide the comparison of the results of benchmarking exercises undertaken by eu-LISA in 2018 and 2019 for both staff members and on-site contractors.

2.5 Assessment of audit and ex-post evaluation results

2.5.1 Internal Audit Service (IAS)

Audit on eu-LISA's Staff Recruitment, Management and Engagement of Structural Service Providers (SSPs) and Organisational Ethics

The objective of the audit was to assess the adequacy of the internal control systems put in place by eu-LISA for (1) staff selection and recruitment, (2) the management of structural service providers and (3) organisational ethics. The scope of the audit covered the following areas, processes and activities in 2018 and 2019:

- the selection and recruitment procedures and tools in place, including all recruitment-related policies and the completion of assessments such as the competency gap analysis that have an impact on recruitment decisions.
- the operational contract management of SSPs (financial contract management is out of scope) including the planning process and the procedures governing the effective use of the SSPs (as indicated in the framework and specific contracts for hiring of SSPs). Such procedures may include the use of management tools such as

timesheets that support the invoicing of SSP services and their effective monitoring by management. Procurement procedures relating to the hiring of SSPs are not within scope.

- the ethical framework, the policies and procedures in place and their application.

Preliminary interviews took place at Agency's headquarters in June 2019. Fieldwork visits took place at the headquarters and at the technical site in September 2019.

IAS delivered an audit conclusion and identified two 'very important' issues in the area of (1) human resources planning and (2) legal assessment on the use of structural service providers.

The Agency, in agreement with IAS, will put in place an action plan addressing the audit findings and recommendations.

2.5.2 Internal Audit Capability (IAC)

Summary of the internal audits conducted by the IAC.

Report on the IAC's contribution to the revision of the functional descriptions of the units and departments and operational model of the Agency⁵⁰

The objective was to support and advise the Human and Resources Unit in the implementation of a new organisational structure at eu-LISA.

In the scope of this advisory engagement was the Revision of the functional descriptions of the units and departments and operational model of the Agency (work stream #3).

IAC delivered the following results:

- a contribution to the functional descriptions of the sectors for Programme and Project Delivery Unit;
- a contribution to the functional description of the Governance and Capabilities Unit;
- a contribution to the definition of critical processes: Planning;
- a contribution to the definition of critical processes: Contract management;
- an advice to management on the draft new organisational structure.

Report on the IAC contribution to the deployment of the revised Internal Control Framework of eu-LISA (Topic#2)⁵¹

The objective was to facilitate the deployment of the revised Internal Control Framework at eu-LISA (ICF) in line with the requirements stated in the MB decision.

In the scope of the engagement were the following:

- identify and validate the Internal Control Monitoring Criteria with eu-LISA business units, including performance indicators and the baselines,
- raise awareness on the principles, characteristics and practical implementation of the ICF across the Agency,
- provide advice to the governance set up over ICF,
- contribute to the preparation of ED Decision for the Adoption of Internal Control Monitoring Criteria and temporary appointment of the Manager in charge for Risk Management and Internal Control (MRMIC)

⁵⁰ IAC Report, ref. Ares(2019)7399609 - 02/12/2019

⁵¹ IAC Report, ref. Ares(2020)1058524 - 19/02/2020

IAC delivered the following results:

- Internal Control Monitoring Criteria identified and validated with eu-LISA management including performance indicators and the baselines,
- Management awareness raised as to internal control principles and characteristics of the ICF,
- Support provided to the Executive Director on making the decision to appoint a Manager in charge for Risk Management and Internal Control (MRMIC) together with task definition and cooperation requirements,
- Support provided to the Executive Director on making the decision adopting the Internal Control Monitoring Criteria (including performance indicators and the baselines).

2.5.3 European Court of Auditors (ECA)

The European Court of Auditors carried out the usual audit on the Annual Accounts of the eu-LISA for the financial year 2019. The Court audited:

- a) the annual accounts of the Agency, which comprise the financial statements⁵² and the reports on the implementation of the budget⁵³ for the financial year ended 31 December 2019, and
- b) the legality and regularity of the transactions underlying those accounts.

Opinion on the reliability of the accounts

In the Court's opinion, the annual accounts of the Agency present fairly, in all material respects, the financial position of the Agency at 31 December 2019, 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 the transactions underlying the accounts

In the Court's opinion, the revenues and payments underlying the annual accounts for the year ended 31 December 2019 are legal and regular in all material respects.

The Court made three preliminary⁵⁴ observations, which do not call the Court's opinion into question. Two observations were on the legality and regularity of transactions and one on budgetary management.

2.6 Follow up of recommendations and action plans for audits

The implementation rate of audit recommendations (KPI 24) for the year 2019⁵⁵ is 62 % (i.e. 21 recommendations implemented and 34 recommendations due).

To confirm closure (see header 'closed' in the summary Table 14), the IAC⁵⁶ and IAS⁵⁷ carried out the annual follow-up to those action plans declared as 'implemented' (i.e. auditor's assessment of evidence provided and collected). ECA also followed up its observations issued in previous audits⁵⁸.

The status of audit recommendations on 31 December 2019 is summarised in Table 14.

⁵² 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.

⁵³ These comprise the budgetary outturn account and the annex to the budgetary outturn account.

⁵⁴ The observations are preliminary at the time of writing this report. The Court and the Agency need to possibly agree on the final text prior official publication of the audit report, which is planned for Q4 2020.

⁵⁵ IAC Report to the Management Board on the status of implementation of audit recommendations as at 31 December 2019, ref. 2020-055

⁵⁶ Follow-up results for the year 2019 – IAC Memo, ref. Ares(2020)1230716 - 27/02/2020

⁵⁷ IAS Note on the Follow-up of one outstanding audit recommendation, ref. Ares(2020)1778243 - 26/03/2020

⁵⁸ ECA Annual Report on EU Agencies for the financial year 2018, paragraph 3.26. European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice (eu-LISA), Annex - page 221

Table 14: Status of implementation of audit recommendations

IAS, IAC and ECA recommendations by rating	Total open for 2019	In progress	Implemented	Past due	Closed in 2019	Total open at the end of 2019
Critical	0	0	0	0	0	0
Very important	36	10	16	10	13	23
Important	12	4	5	3	3	9
Total	48	14	21	13	16	32

Notes:

For monitoring purposes, recommendations issued by ECA are rated as "Very important"

In progress: Implementation proceeds according to the plan. Deadline not due or new action plan / deadline agreed with the auditor.

Implemented: This is an assertion by the recommendation owner. The issue is ready for the auditor's follow-up with a view to closure.

Past due: Implementation of recommendation 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.

Important: Significant weakness in the whole audited process or fundamental weakness in a significant part of the audited process.

Open significantly delayed very important and important recommendations - IAS⁵⁹

- Recommendation 2.3: Human resource (HR) planning and allocation (sub action: ascertain implementation Allegro project) (Very Important);
- Recommendation 1: Procurement procedures – definition and formalisation of controls (Very Important);
- Recommendation 2: Estimation of contract value, financial offer and related controls (Very Important);
- Recommendation 3: Controls before establishing specific contracts (Important);
- Recommendation 4: External support in the procurement process – important.

Open significantly delayed very important and important recommendations - IAC⁶⁰

- Recommendation #2015100924 - Definition and organisation of Contract management (Very Important);
- Recommendation #2018090562 - IT Asset Management governance (Very Important);
- Recommendation #2018090563 - Reception of assets and warehousing (Very Important);
- Recommendation #2018090564 - Staff responsibilities related to IT Asset Management (Very Important);
- Recommendation #2018090565 - Capacity to operate ABAC Assets (Very Important);
- Recommendation #2018090566 – Information flow and compliance with decommissioning procedure (Very Important);
- Recommendation #2018090567 – Configuration management and Software Register in Operations Department (Very Important);

⁵⁹ Report on significantly delayed very important and important Internal Audit Service recommendations 2019, ref. Ares(2020)1714318 - 23/03/2020

⁶⁰ Follow-up results for the year 2019 – IAC Memo, ref. Ares(2020)1230716 - 27/02/2020

- Recommendation #2018090569 - Handling of goods from delivery point to warehouse (Very Important);
- Recommendation #2018090570 - Hands-on maintenance procedure at business continuity site in SJP (Important).

The Agency will keep IAS and IAC informed about the progress of implementing these action plans. The Agency will take firm and urgent actions aimed at addressing the delayed recommendations, including providing revised target implementation dates.

2.7 Follow-up of observations from the discharge authority

Budget and financial management

1. *The Discharge Authority notes that budget-monitoring efforts during the financial year 2018 resulted in a budget implementation rate of 75,18 %; observes that the low implementation rate is due to outstanding commitments, mainly related to operational expenditure, which is subject to adoption of their legal basis; notes furthermore that the payment appropriations execution rate was 94,08 %, representing an increase of 2,55 % compared to 2017.*

eu-LISA establishing regulation requires the Agency to adjust its budget to reflect the level of subsidy approved in the EU general budget. The inscription of resources in the Agency's budget for the legislation not yet adopted introduces significant risks to sound financial management; such risks have been systematically reported to the Management Board. The Agency has been advocating the adoption of a more elastic approach to the planning of financial resources related to new tasks, as well as for a more timely and coordinated consultation in the preparation of the legislative financial statements.

2. *The Discharge Authority notes that the Agency registered statements of defence with the Court of First Instance in Strasbourg on 15 May 2018 and on 15 February 2019, and also that the decision of the Court of First Instance has not yet been issued; notes furthermore that talks aimed at reaching an out-of-court settlement were restarted in April 2019; calls on the Agency to inform the discharge authority without delay in the event that an out-of-court settlement is reached or, alternatively, as soon as the judgement of the Court of First Instance is issued.*

The Agency takes note of the observations of the Discharge Authority. The Agency highlights that the settlement discussions initiated in April 2019 have not led to an out-of-court settlement. In this context, on 12 November 2019, eu-LISA requested the schedule of hearings for the two ongoing proceedings in front of the Administrative Court of Strasbourg (financial claim and judicial take-over claim). Subsequently, the Administrative Court informed the parties on the possibility to submit a reply or new documents, due, in particular, to a modification of the elements of both cases. Thus, between December 2019 and April 2020, a second exchange of pleadings took place in both cases.

On 20 May 2020, the Administrative Court set a possible hearing date for the above-mentioned cases. On the same date, the Court has also confirmed that the pre-trial phase was over for both proceedings.

The Agency commits to inform the discharge authority immediately as soon as the first-degree judgement of the Administrative Court is issued.

3. *The Discharge Authority notes with concern that, according to the Court's report, the Agency's budget implementation rate was less than planned because of the late adoption or entry into force of legal acts (a matter which is outside the Agency's control), affecting both the evolution and the development of existing and new systems; notes that, in response, the Agency returned to the Commission EUR 74 000 000 in payment appropriations and carried forward EUR 49 000 000 of commitment appropriations, thereby calling into question the planning assumptions contained in the legislative financial statements prepared by the Commission; highlights that the inscription of budgetary resources in the Agency's voted budget in respect of legal acts not yet adopted introduces significant risks to sound financial management; calls on the Commission, together with the Agency, to improve the alignment of budgetary planning with the timing of adoption or entry into force of legal acts.*

As highlighted under observation No 1, eu-LISA establishing regulation requires the Agency to adjust its budget to reflect the level of subsidy approved in the EU general budget. The inscription of resources in the Agency's budget for the legislation not yet adopted introduces significant risks to sound financial management; such risks have been systematically reported to the Management Board. The Agency has been advocating the adoption of a more elastic approach to the planning of financial resources related to new tasks, as well as for a more timely and coordinated consultation in the preparation of the legislative financial statements.

Performance

6. *The Discharge Authority notes, in light of the observations and comments made in 2018 by the discharge authority, that the Agency manages three separate, non-integrated, large-scale IT systems in accordance with the respective legal instruments governing those systems, and that the different development timelines and constraints stemming from these legal frameworks have caused the IT systems to be built separately and in a non-integrated way; notes that the Agency recognises that this approach is neither sustainable nor efficient from an operational or budgetary perspective; welcomes the fact that the Agency has begun an initiative to streamline system architecture and design with the Commission's interoperability initiative as the main driver; encourages the Agency to further explore the possibilities of establishing common procedures and shared systems.*

The Agency, in its drive to pursue efficiency and economies of scale, prepared for a radical departure from the sourcing model described in the observation. These preparations resulted in the launch of the Transversal Engineering Framework (TEF) tender, which is under evaluation at the time of writing this report (June 2020).

The TEF is expected to deliver a significant increase in efficiency and economies of scale, as well as limit the possibility of a 'vendor lock-in'. As a sourcing model, it also more closely reflects the new organisational structure of the Operations Department.

The TEF tender is organised in four lots:

- Lot 1: generic design, quality assurance and integration support, covering the high-level design of systems and will assist the agency with scheduling and quality assurance.
- Lot 2: development provisioning, encompassing the detailed design, development and evolution activities for the core business systems as well as for the shared and reusable components (including interoperability components);
- Lot 3: infrastructure and platforms provisioning;
- Lot 4: test services, addressing testing across all systems.

As a complement to the sourcing vision of the TEF, a second call for tenders will comprise daily operations and corrective maintenance across all systems (Transversal Operational Framework).

7. *The Discharge Authority recalls (particularly in view of the fact that the Agency deals with the interoperability of sensitive data) the importance of data management and processing services and the need to internalise these services; highlights in this regard the importance of the protection and confidentiality of such data, and the potential risks that the current external IT services management system involves.*

The Agency would like to emphasise that since the beginning of its establishment, the systems under its management responsibility are operated in a way that does not provide access to any production data to any third party contractor. In this context the reference to "external IT services management" is misleading and not reflecting eu-LISA's operational model.

9. *The Discharge Authority welcomes the progress made regarding the Court's recommendations from previous years; notes, however, that the Agency still does not publish vacancy notices on the website of the European Personnel Selection Office (EPSO); calls, therefore, on the Agency to take steps to ensure the publication of vacancies through the EPSO website.*

As of the beginning of 2019, the Agency does publish the vacancy notices on the website of EPSO.

11. *The Discharge Authority stresses the importance of providing gender-based data in order to be able to analyse the evolution of the gender balance within the staff of the Agency and in its governing bodies.*

The gender balance improved between 2018 and 2019, when the percentage of women employed at eu-LISA increased from 22 % to 29 %. Statistics are included in the SPD on an annual basis (Table 15).

Table 15: Gender balance of Agency staff

31.12.2019	Administrators			Assistants		
Gender	TA	CA	SNE	TA	CA	Total
Male	88	27	7	29	7	158
Female	24	15	1	13	12	65
Total	112	42	8	42	19	223

Staff policy

13. *The Discharge Authority notes with concern the lack of gender balance on the management board (40 men and 6 women).*

eu-LISA takes note of this recommendation. Nevertheless, the Agency cannot influence the nominations of the members, alternates and observers of the Management Board. According to the establishing regulation of the Agency, Member States, Associated Countries and the Commission shall appoint their representatives in the Management Board of eu-LISA.

14. *The Discharge Authority notes in light of comments and observations made in 2018 by the discharge authority that the Agency acknowledges the significant risks for the continuity of its operations of having a small number of staff; highlights the fact that the Agency has requested additional staff in its programming documents; acknowledges that such staff increase is subject to approval by Parliament and Council, and that the Agency is trying to mitigate the risk through reprioritisation of tasks and speedy recruitment; points out that the current practice of recruiting the staff necessary for the implementation of a legal act only once such legal act is in force implies reliance on existing staff to conduct preparatory measures for the implementation of such legal act, stretching the Agency's core team capabilities and, therefore, carrying the risk of affecting the Agency's performance of its daily activities; calls on the Commission to allow for the frontloading of some of the staff foreseen in a proposal for a legal act in order to allow the Agency to efficiently prepare for the implementation of such legal act.*

eu-LISA takes note of this recommendation and confirms that front-loading of staff related to new or extended existing tasks assigned to the Agency will substantially improve the organisation's agility and will address some of the major risks related to the increased workload of the Agency's staff.

15. *The Discharge Authority notes that, according to the Court's report in relation to one particular recruitment procedure, the Agency's selection committee, to the detriment of the transparency of the procedure, deviated from the published vacancy notice and applied a higher minimum score than that published, for applicants to be placed on the reserve list; notes from the Agency's reply the commitment made to using a more stringent wording in the vacancy notices to be published in the future; welcomes the fact that the Agency has immediately re-adjusted its practice for ongoing procedures, and that the guidelines on recruitment procedures will include the principle that the threshold for the reserve list should be established ex-ante; calls on the Agency to ensure that published selection criteria are respected.*

The Agency confirms that the practice has been re-adjusted and the wording of the vacancy notices is more stringent to avoid different interpretations.

Procurement

17. *The Discharge Authority notes with concern that, according to the Court's report, two audited payments for the provision of 'corrective maintenance in working order of the Schengen Information System' (MWS) were partly irregular in that the Agency amended one specific contract by increasing monthly maintenance charges without amending the MWS framework contract to provide for the price increase, and subsequently extended that contract by 1,5 months after the date of expiry of the MWS framework contract; stresses that the additional amount paid in respect of the monthly maintenance and the payment for maintenance after the expiry date of the framework contract are partially irregular; notes the Agency's reply that delays occurred in the launch of the successor framework contract, that additional steps taken during the award process resulted in the requirement to ensure continuity of maintenance for the Schengen Information System in line with the Agency's legal obligations, and that the process of finalising the set of checklists and templates for procurement procedures and the creation of capabilities for planning support of operational activities and underlying procurement is ongoing; calls on the Agency to ensure compliance with public procurement provisions.*

The Agency acknowledges the observation. Delays incurred in the launch of the successor framework contract, and additional steps taken during the award process resulted in the requirement to ensure continuous maintenance for the system, in line with the legal obligations of the Agency. The Agency already undertook steps aimed at mitigating the risk highlighted in the observation, by strengthening contract and vendor management capabilities and re-assigning the staff responsible for the preparation and evaluation of the tender to other operational roles.

18. *The Discharge Authority notes further that, according to the Court's report, the formula stipulated in the tender specifications for identifying the best quality offer for the MWS contract was different from the one communicated in the question-and-answers document for bidders, and that other shortcomings in the quality, completeness and consistency of the information provided were identified; notes that the Agency acknowledges the need to improve and document consistency checks and comparability between the tender planning and the actual contracts to allow for ex-post assessment (something that is currently not deployed as a function within the procurement process due to lack of human resources); calls on the Agency to strengthen procurement-related internal control.*

The Agency acknowledges the observation. Consistency checks and comparability between the tender planning and the actual contracts will be improved and documented to allow for ex-post assessment.

Ex-post assessment is currently not deployed as a function within the procurement process due to the lack of allocated human resources. The Agency already undertook steps aimed at strengthening contract and vendor management capabilities, and re-assigning the staff responsible for the preparation and evaluation of the tender to other operational roles.

The preparation of the successor contract required timely and competent supervision by operational staff entrusted with these responsibilities. Substantial delays incurred in the preparation of the key components of the call for tender resulted in quality issues.

19. *The Discharge Authority notes with concern that, according to the Court's report, in the case of a contract for the provision of telecommunication services, the Agency awarded a contract to the sole economic operator who had submitted a tender with the value of the awarded contract amounting to EUR 144 000 as published in the initial contract notice; notes, however, that the financial offer submitted by the operator was EUR 45 700 only, resulting in the award of a contract for an amount exceeding the offer, something which is not in line with public procurement rules; notes the Agency's reply that the financial offer was intended merely as a non-binding scenario for the purpose of tender evaluation and the actual monthly payments are based on actual rendering of services according to the initially offered unit prices; calls on the Agency not to award contracts for prices which exceed tenderers' offers.*

The Agency acknowledges the observation. However, the Agency points out that the financial offer was intended as a mere non-binding scenario for the purpose of tender evaluation. The actual monthly payments are based on actual rendering of the services according to the unit prices initially offered, thus ruling out overspending.

20. *The Discharge Authority notes that, according to the Court's report, the Agency extended the duration of a direct contract for the provision of security and reception services from four to six years, increasing the contract value by 73 % (which is not in compliance with the Financial Regulation), thereby making payments executed after the initial period irregular; notes the Agency's reply that the situation occurred under exceptional circumstances which were reported in a timely manner and analysed in the register of exceptions; acknowledges that decisions were made in order to ensure the continuous provision of security services; calls on the Agency to ensure compliance with public procurement rules.*

The Agency acknowledges the observation. The Agency had no alternative than ensuring that security services were not interrupted. The exceptional circumstances requiring the extension of the contract were brought about by confidentiality concerns, potentially jeopardising the regularity of the tender procedure.

The Agency has improved the planning process, constantly monitors the consumption of the framework contract, and is in a timely manner initiating any new calls for tender procedures in order to prevent any irregular extension (beyond period or value). Under the new contract for security and reception services no exceptions have taken place.

21. *The Discharge Authority welcomes the fact that, in light of comments and observations from the discharge authority related to the extensive use of external contractors for the development and maintenance of IT projects, the Agency is working on a sourcing strategy to ensure the best use of its own resources; highlights the fact that the Court has identified a horizontal trend across agencies in the use of external staff hired as IT consultants; stresses that the Agency's dependence on external recruitment in this area needs to be urgently addressed; acknowledges that the decision to allocate sufficient staff resources lies with Parliament and Council as budgetary authorities.*

In order to address the observations of the Court, the Agency has undertaken the preparation of a 'Sourcing strategy', which reflects the current sourcing options, as well as a legal analysis on the contractual aspects of using external service providers in the countries where the Agency is located.

The desired solution would be in the direction of increasing the number of staff and decreasing the number of external service providers offering services that should be performed on long term by staff members. The implementation of such a solution would require a coordinated agreement from the Agency's budgetary authorities and the European Commission.

22. *The Discharge Authority urges the Agency to explore possibilities for sharing resources on overlapping tasks with other agencies with similar activities; encourages the Agency to start looking for ways of sharing non-expert staff in areas such as ICT and accounting, in particular with the Body of European Regulators for Electronic Communications based in Riga and the European Chemicals Agency based in Helsinki.*

The Agency takes note on the observations of the Discharge Authority. The Agency informs that it already collaborates with other EU Agencies in ICT area within the context of the ICT Advisory Committee of EU Agencies. The Agency will explore further ways of collaboration with the Body of European Regulators for Electronic Communications and the European Chemicals Agency. However, the Agency highlights the lack of ICT staff in its headquarters in Tallinn, where only two staff members are allocated for the function.

Prevention and management of conflicts of interests and transparency

23. *The Discharge Authority regrets, however, that the new model of declaration of interest has not been applied also to the executive leadership; notes with regret that only a declaration of absence of conflict of interest is available for the executive director.*

In June 2020 the Management Board of the Agency is going to adopt the new rules on Conflict of Interest under Article 110 of the Staff Regulations. These rules will apply to all staff members of the Agency, including its senior management.

notes that according to the Agency's reply there is no legal obligation to publish the CVs of the members of its management board; highlights in that respect that the Union agencies should set a model in terms of transparency and calls on the members of the management board to publish their CVs on the Agency's website

There is no legal obligation for this request and therefore the members/alternates/observers of the Management Board cannot be obliged to provide their CVs to be further published. Nevertheless, the Agency will continue to encourage the representatives of the Management Board to provide their CVs in order to increase the transparency of the group.

24. *The Discharge Authority notes, in the light of comments and observations from the discharge authority related to open audit recommendations, that the implementation rate of action plans put in place following various audit recommendations had a descending trend in 2018, and that the Agency adopted and deployed the revised internal control framework early in 2019;*
notes that the internal audit service has established a strategic audit plan for the period 2019-2021, based on the results of a risk assessment exercise carried out in February 2018 at both the headquarters in Tallinn and the technical site in Strasbourg, covering the Agency's major administrative and operational processes; calls on the Agency to report to the discharge authority on the implementation of the audit recommendations.

The Agency continuously monitors and reports on the implementation of audit recommendations. The monitoring report as of 31.12.2019 shows that there were no 'critical' audit recommendations open. The report also shows that 21 audit recommendations were implemented out of the 34 expected, an implementation rate of 62 %. The result (although still under the set target of 80 %) is a clear improvement compared with the implementation rate of 42 % recorded at the end of the year 2018. However, in 2020 the Agency took firm and urgent actions aimed at addressing the delayed recommendations, including providing revised target implementation dates. The Agency is confident that it will maintain the positive trend and will implement all outstanding recommendations without further delay.

Other comments

26. *Calls on the Agency to focus on disseminating the results of its research to the public, and to reach out to the public via social media and other media outlets.*

The Agency has published several research related reports via its corporate website, and made notable efforts in reaching out to the public via social media channels.

Given the sensitivity of some of the research findings, not all reports can be made publicly available but the Agency has disseminated all the reports that contain public information about research findings. They are the following:

- Eurodac Multispectral Imaging (MSI) Optical Test Study Report
- Distributed Ledger Technologies and Blockchain: Key Findings
- Elaboration of a Future Architecture for Interoperable IT Systems at eu-LISA
- Report of the Working Group on ICT Solutions for External Borders (sea/land)

The Agency has focused proactively on efforts to share highlights and provide for transparency via social media channels, which all show considerable growth of the audiences (+33 % on Twitter, +58 % on Facebook, +99 % on LinkedIn, +125 % on YouTube). The Agency also started working on new online awareness raising outlets, with the aim to reach out to even broader audiences and provide visibility for the tasks and responsibilities of the Agency.

2.8 Assessment by management

The management of the Agency has reasonable assurance that appropriate internal controls are in place and that they are functioning as intended; throughout the year, major risks were appropriately identified and managed. This assurance is further confirmed by the results of the internal and external audits performed throughout the year.

2.9 External evaluations

In accordance with eu-LISA's establishing regulation, the Commission carried out the first evaluation of the Agency within three years from the start of its operations, supported by an external contractor. The evaluation was carried out in close cooperation with the MB and the Agency itself. The evaluation was conducted over a period of one year (from March 2015 to March 2016) and covered the period from 1 December 2012 to 30 September 2015.

The evaluation examined the way in which eu-LISA implemented its mandate, as laid down in its establishing regulation, looking at four areas: efficiency, effectiveness, added value and coherence. It also examined the Agency's contribution to the establishment of a coordinated, effective and coherent IT environment for the management of large-scale IT systems supporting the implementation of JHA policies.

The evaluation came to the conclusion that the Agency effectively fulfils its mandate. On the basis of the evaluation, the Commission, after consulting the Management Board, issued recommendations regarding changes to the establishing Regulation of the Agency. These recommendations together with the opinion of the Management Board were provided to the European Parliament, the Council and the European Data Protection Supervisor.

On 20 November 2019, the Agency presented to the MB the status of implementation the recommendations, for the period November 2018 to October 2019. Out of 30 recommendations listed, 26 have been implemented, 2 have been partially implemented (R 4.1a: activity-based management approach to enhance eu-LISA's planning capabilities and reinforce transparency and accountability, R 3.12: The Agency should continue its commendable efforts to strengthen internal processes and procedures in line with ITIL v3 best practices). 2 recommendations are obsolete in the context the revised mandate of the Agency and won't be implemented (R 3.26: The impact of assuming the tasks related to Dublinet on the resources should be formally assessed, R 6.4: The Agency should ensure the adoption of a multi-annual work programme, also to guarantee the alignment of the Agency's activities with the multi-annual strategy in place).

The overall implementation rate of the plan for the reporting period increased from 75 % to 93 %. Table 16 provides further breakdown of the status of implementation by importance of individual recommendations. The Agency made good progress with further implementation of the plans in the reporting period. Most of the planned activities have been implemented while only two recommendations are partially implemented.

Table 16: Status of implementation of the recommendations stemming from the Agency's evaluation

	Critical	Very important	Important	Minor	Total	Share
Implemented	3	5	16	2	26	93 %
Partially implemented	1	—	1	—	2	7 %
No longer relevant	—	—	(1)	(1)	(2)	—
Total	4	5	17	2	28	100 %

3 Assessment of the effectiveness of the internal control framework (ICF)

3.1 Effectiveness of the ICF

3.1.1 Methodology applied for the assessment of the effectiveness of the ICF

Internal control is a process that helps an organisation to achieve its objectives and sustain operational and financial performance, respecting rules and regulations, and supports sound decision making, reducing risks to acceptable levels through cost-effective controls. Based on the Decision No 2019-042 of 19.03.2019 of the Management Board of eu-LISA, the Executive Director is tasked to implement the internal control principles and characteristics and to put in place an organisational structure and internal control system that is in accordance with the principles and characteristics adopted by the Management Board.

The internal control components at eu-LISA are the control environment, risk assessment, control activities, information and communication and monitoring activities. The five components are interrelated and must be present and well-functioning at all levels of the organisation for internal control over operations to be considered effective. The framework further specifies principles for each component and subsequent characteristics of each principle that are defined to take into account the specific governance arrangements in the agency. The internal control principles and characteristics set out constitute the minimum standards referred to in Article 44.2 of the Financial Regulation of eu-LISA.

The Executive Director appointed the Head of Governance and Capabilities Unit to serve as an interim Manager in charge of risk management and internal control (MRMIC) to support him with the setting up, monitoring, implementation, assessment and reporting on the Internal Control Framework. The Executive Director is mandated to conduct an overall assessment of the efficiency of eu-LISA Internal Control Framework annually. The first such annual assessment took place in Q1 of 2020 and provided inputs to the present Consolidated Annual Activity Report on the effectiveness of internal controls at eu-LISA in 2019.

The first annual assessment comprised an establishment of a baseline for each principle where feasible, assessments at principle and component levels and an overall assessment. The ICF principle baselines and indicators were defined in Annex 2 to the Decision of the Executive Director on the Adoption of Internal Control Monitoring Criteria and temporary appointment of the MRMIC. To inform the assessment, MRMIC and the Internal Control Coordinator at eu-LISA collected and analysed data based on the defined monitoring criteria from various data sources in the agency, including staff survey, register of exceptions and non-compliance events, internal and external audit reports, documentation on the development and monitoring of various business processes in the agency and others.

3.1.2 Results of the assessment of the effectiveness of the ICF

Control environment

The control environment is well established in the agency. Standards of conduct, processes and structures are in place and have been updated in a timely manner despite the significant recent organisational transformation. The MB, the Executive Director and other managers exercise their roles and responsibilities effectively.

Principle 1: eu-LISA demonstrates commitment to integrity and ethical values.

Status: fully implemented

The Agency carried out a number of actions in 2019 to update its internal framework related to the standards of conduct and to ensure that newcomer staff are adequately introduced to them. An internal audit on staff recruitment,

management and engagement of structural service providers and organisational ethics concluded that, within the challenging context of the agency's rapid growth, the internal control systems for organisational ethics are overall adequate. The rules on the prevention and management of conflict of interest concerning eu-LISA staff were amended, and the process self-declaration by the staff was successfully conducted.

Principle 2: The MB demonstrates independence from management and exercises oversight of the development and performance of internal control

Status: partially implemented

Processes and procedures are in place for the MB to oversee the Agency's governance and to take overall political responsibility for the management carried out by the ED. With the new implementation of the ICF and the appointment of the MRMIC, the role of the MB related to risk management and internal control practices will be further strengthened. The role of ED is well established for the development and performance of internal control. The appointment of the MRMIC will support the ED and as of 2020 will provide additional assurance regarding the completeness and reliability of management reporting and on reporting on operational performance. The ED, with the support of the MRMIC, will take further steps to ensure that the ICF is understood and that controls are followed-up at all levels, including by the heads of departments and units and by project managers.

Principle 3: the Management establishes, with the MB's oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives

Status: partially implemented

The management structure of the agency is well established and was successfully restructured during the organisational transformation in 2019. New units have been created and their managers successfully appointed with well-defined roles. Authorities, responsibilities and reporting lines are well established. Contract management and asset management remain areas which require additional efforts for the agency to develop, adopt and implement new processes, procedures and controls.

Principle 4: eu-LISA demonstrates a commitment to attract, develop and retain competent individuals in alignment with objectives

Status: implemented

An internal audit report confirmed that during the intense recruitment in 2019, the quality of the related processes was upheld.

Principle 5: eu-LISA holds individuals accountable for their internal control responsibilities in the pursuit of objectives

Status: implemented

Staff appraisal and promotion are carried out following established processes and procedures, involving review groups and offering to staff opportunities for comment or appeal to independent internal or external individuals or entities.

Risk assessment

eu-LISA has robust governance mechanisms and procedures for risks identification and assessment. Such measures exist at different levels and are regularly updated and revised.

Principle 6: eu-LISA specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives

Status: implemented

Objectives are consistently defined at every level and reviewed regularly. Objectives and performance indicators are defined for all activities listed in the SPD, and their achievements are reported in the CAAR. The high number of listed activities puts a high cost on the planning and reporting activities and would benefit from a revision. The programme and portfolio capability will contribute to these efforts once implemented. The governance structure for the programme

and portfolio management was updated with the intake list procedure and the establishment of the Corporate Steering Committee.

Principle 7: eu-LISA identifies risks to the achievement of its objectives across the organisation and analyses risks as a basis for determining how the risks should be managed

Status: implemented

Risks are identified for all activities at various levels and at different stages from planning to execution. Significant activities, in particular large projects, follow the Agency's project management methodology, which requires a regular assessment and monitoring of the project risks. For large new development programmes, risks are reported by the respective Programme Management Boards. Corporate risks are identified and reviewed yearly (see section 3.1.3).

Principle 8: eu-LISA considers the potential for fraud in assessing risks to the achievement of objectives

Status: implemented

The revised anti-fraud strategy 2019-2021 was adopted by the Management Board in March 2019. It includes an action plan and indicators on the achievement of objectives. The report on its implementation is described in the present CAAR in section 3.1.4. The rules on the prevention and management of conflict of interest concerning eu-LISA staff were amended, and the process of self-declaration by the staff was successfully conducted.

Principle 9: eu-LISA identifies and assesses changes that could significantly impact the internal control system

Status: partially implemented

The risks resulting from the many changes were appropriately considered, in particular in the fields of operational priorities connected to new legislations. Changes were implemented following procedures identified in the governance mechanisms of the different programmes (AG, PMB, MB). The shift from internal control standards to the internal control framework was a significant change with a risk of discontinuity. The impact of change on internal control was not entirely assessed.

Control activities

Control activities have been carried out at different levels as part of existing processes, procedures and governance mechanisms in the different departments and units.

Controls over IT systems are performed independently for the core business systems and for the corporate systems. The agency is investing significant efforts in the security of the systems, including business continuity and disaster recovery. Implementation of audit recommendations pertaining to contract management and integration of asset management with configuration management would reinforce the controls of the Agency over the acquisition and maintenance of systems and their infrastructure.

Principle 10: eu-LISA selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels

Status: partially implemented

Control activities have been carried out. However, they are not integrated into a control, risk and compliance strategy, which is yet to be developed. The integration of controls into a strategy would also facilitate the assessment of their effectiveness and their costs and benefits, as required by the Financial Rules.

Principle 11: eu-LISA selects and develops general control over technology to support the achievement of objectives

Status: partially implemented

Controls over IT systems are key activities for the agency. They are performed independently for the core business systems and for the corporate systems. The security of the systems, including business continuity and disaster recovery, are also activities in which the agency is investing significant efforts. Significant audit recommendations remain to be implemented (e.g. contract management, integration of asset management with configuration management). These

processes would reinforce the controls of the agency over the acquisition and maintenance of systems and their infrastructure.

Principle 12: eu-LISA deploys control activities through corporate policies that establish what is expected and in procedures that put policies into action

Status: partially implemented

Deviations and requests for overriding controls have been reported and recorded in a register through procedures involving several functions and management levels. An analysis and review of the register was presented to the ED and the Management Committee. Impact assessment and evaluations have been conducted and their outcomes have been used to prepare the intake list of projects and the annual work programme.

Information and communication

The agency's information and communication activities are following well established procedures and processes that support the achievement of broader organisational objectives. These procedures and processes could be mobilised to promote staff awareness on their responsibilities pertaining to internal control and foster understanding of related processes and approaches. New processes have been adopted and the Agency is improving its information and document management.

Principle 13: eu-LISA obtains or generates and uses relevant quality information to support the functioning of internal control

Status: partially implemented

New processes have been adopted and the Agency is improving its information and document management. The implementation of this principle would benefit from the adoption of the control strategy, which could list the data required for the functioning of internal control.

Principle 14: eu-LISA internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control

Status: partially implemented

A broad range of internal communication activities are in place, conveying messages on objectives and challenges, among others. Communication dedicated to internal control and related elements has not been set up.

Principle 15: eu-LISA communicates with external parties about matters affecting the functioning of internal control

Status: partially implemented

A broad range of external communication activities are in place, following established strategies and actions plans. Communication dedicated to internal control and related elements has not been set up.

Monitoring activities

The Agency is conducting continuous and specific assessments of its internal controls. They are based on self-assessments by staff within their area of responsibility, reporting activities, registration of exceptions and non-compliance events, implementation of the anti-fraud strategy, and on the findings of internal and external audits. The results of such assessments are shared with the relevant management levels and lead to recommendations and action plans for their implementation with specific roles, responsibilities and timelines.

Principle 16: eu-LISA selects, develops, and performs ongoing and/or separate assessments to ascertain whether the components of internal control are present and functioning

Status: implemented

The agency is using independent internal and external entities to regularly carry out assessments of the effectiveness of governance mechanisms, procedures and processes, including controls. The results of such assessments are shared with

the relevant management levels and lead to recommendations and action plans for their implementation with specific roles, responsibilities and timelines.

Principle 17: eu-LISA assesses and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including management and the Management Board, as appropriate

Status: partially implemented

The Agency carried out its first test assessment on the effectiveness of the ICF in 2020.

3.1.3 Major corporate risks during the reporting period

Table 17: Major corporate risks

Ranking	Risk description
RISK 1	The 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. The data centre footprint might be a limitation to host additional platforms supporting new projects such as EES and ETIAS and thus hampering the Agency to execute new entrusted activities. Qualitative Analysis Probability: 3.9 Qualitative Analysis Impact: 2.8 Risk Response: Mitigate
RISK 2	Organisational instability arising from the Agency restructuring. The reorganisation, while seeking to enhance the Agency's capabilities to deal with the challenges of the future, creates significant change in the short term which risks creating instability in terms of human resources and organisational processes. Qualitative Analysis Probability: 3 Qualitative Analysis Impact: 2.9 Risk Response: Mitigate
RISK 3	Threat of significant cost increase of communication infrastructure. As the Agency is bound to the DIGIT framework contract TESTA-ng, there is significant risk of increased costs due to the soon-to-be negotiated extension of TESTA-ng. This extension is required to bridge the gap to the successor contract FPEN (Future Pan European Network). Qualitative Analysis Probability: 2.7 Qualitative Analysis Impact: 3.1 Risk Response: Mitigate

RISK 4	Proper allocation and balancing of resources might be hampered by the lack of people, procedures and tools. Also, there is an increasing risk of discrepancies between statutory staff present and activities to be undertaken, which might negatively affect the Agency's work and possibly its business continuity. Year n-1 budget implementation/cancellation of appropriations. Lack of mature and efficient resource management tool and procedure to cope with the amount of projects and shortage in resources could lead to activities that could be significantly delayed and increases the rework of the planning. In addition, according to the financial regulation, the budget should comply with the principle of annuality. The carry-forward of commitment appropriations (via global commitments) for operational expenditures and the carry-over of payment appropriations for administrative expenditure from previous year budget (n-1) absorbs resources (in form of FTEs) required for the implementation of the current year budget (n) and increases the risk of cancellations of appropriations. Qualitative Analysis Probability: 2.9 Qualitative Analysis Impact: 2.8 Risk Response: Mitigate
RISK 5	Potential temporary loss of some external support functions due to transition to a new framework contract. The framework contracts under which external support contractors are provided to the Agency will end in the coming 12 month period. The contracts of most contractors end at this time, leading to a likely significant departure of contractors at the same time. Depending on the arrangements for a future framework contract, there may be a period in which the support services provided by these contractors are not offered. Given the key role played by many (see issue of dependence on non-statutory staff), there is a risk of significant impact on business continuity. Qualitative Analysis Probability: 2.9 Qualitative Analysis Impact: 2.5 Risk Response: Mitigate
RISK 6	Breach of confidentiality: accidental public exposure of sensitive procurement information. Accidental exposure of sensitive procurement information which can lead to creation of competitive advantage, facilitate bid rigging situations, may weaken the Agency's reputation and brings to tender cancelation or ex-post litigation issues. Qualitative Analysis Probability: 3.4 Qualitative Analysis Impact: 1.8 Risk Response: Mitigate

RISK 7	Agency's incapacity to marry future-oriented work and current system maintenance work with the structures and procedures already in place (learning, on-boarding etc.). The Agency is facing an upcoming period in which extensive systems development is foreseen. This will have to be accomplished alongside continued dedication to current system maintenance and evolution. Although the work is different, both strands will have to be integrated and knowledge obtained through operational management work utilised for new systems development. This brings challenges in terms of new staff integration, current staff training, adaptation to new processes, etc. Qualitative Analysis Probability: 2.2 Qualitative Analysis Impact: 1.8 Risk Response: Mitigate
RISK 8	Outsourcing of Corporate IT. The foreseen outsourcing plan of Corporate IT includes a level of confidentiality, integrity and availability risks that potentially result in negatively affecting performance, security and quality of services, e.g. large geographical distance between the site of service delivery and eu-LISA or lack of control over elevated privileged users. Qualitative Analysis Probability: 2 Qualitative Analysis Impact: 1.5 Risk Response: Mitigate

The source for the corporate risks for year 2019 was the annual risk collection and assessment phase, performed by the third quarter of year 2018 by eu-LISA's management (management committee members and heads of sector). The risks raised were assessed by the stakeholders in terms of qualitative analysis (outcome is average probability and impact) and quantitative analysis when possible (expected risk value). The corporate risks were discussed and confirmed during the annual corporate risks workshop end of 2018 and a risk owner was assigned.

The agreed response plans for the risks identified in 2018 have been followed-up during 2019 and are maintained until the risk is closed.

The annual corporate risks workshop took place on 28 November 2019. It has been decided to keep open all the risks identified in 2018, except risk 7 that has been merged with a risk identified during the 2019 exercise.

3.1.4 Report on the implementation of the Action Plan to the Anti-fraud Strategy⁶¹

The revised Anti-fraud Strategy comprises three strategic objectives for the period 2019 - 2021:

- Reinforce anti-fraud culture in the Agency
- Set and maintain a high level of ethics in line with the activities of eu-LISA
- Develop intelligence for prevention and detection purposes

IAC carried out the regular monitoring of the implementation of the action plan attached to the strategy. The report summarises responses received from action owners following several meetings between IAC and action owners. IAC, based on the assertions of the action owners, performed an assurance procedure and gathered evidence in order to define the status of implementation.

The action plan had initially 12 actions, each of them aimed at mitigating one or several of the fraud risks identified. The Agency implemented six out of twelve of the actions planned, which gives an implementation rate of 50 %. This result

⁶¹ IAC Report, ref. Ares(2020)1109829 - 21/02/2020

could be qualified as sufficient for the year 2019. However, intensified efforts are expected from the action owners in the upcoming years in order to achieve full implementation.

IAC identified the following recommendations to improve the effectiveness of the monitoring:

- Ensure that data needed for the calculation of performance indicators of the Strategy is available,
- In November 2019, during the annual corporate risk management exercise, the Agency identified two new potential fraud risks. The action plan should be updated with mitigating actions addressing these two risks (already done),
- Due to the complexity of the action plans marked as "In progress", revised deadlines for the implementation of these action plans are proposed.

3.2 Conclusions of the assessment of the effectiveness of the ICF

The findings of the first assessment of the effectiveness of internal control at eu-LISA indicate that the internal control framework of the agency is functioning effectively. At the same time, the intensive implementation timeline of the key initiatives entrusted to the agency, and related management of substantial financial and human resources will require continuous improvements to the level and effectiveness of controls. In this regard, the agency would benefit from explicit and detailed integration of objectives, risks and controls, including definition of risk appetite at relevant levels to define an appropriate level of controls. Such efforts would facilitate the assessment of the effectiveness of control, the identification of possible gaps and prioritisation of follow-up actions, as well as support staff accountability and promote transparency in the implementation, monitoring and reporting activities.

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,

Declare that in accordance with eu-LISA Internal Control Framework, I have reported my advice and recommendations on the overall state of internal control in the Agency to the Executive Director.

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

Tallinn, 17 June 2020



ANNA PLATONOVA

Anna Platonova

4 Management assurance

4.1 Review of the elements supporting assurance

The building blocks of assurance underpin the reasonable assurance given by the Authorising Officer in his declaration of assurance in the Annual Activity Report. These are summarised below.

Building block 1: Assessment by management

Assessment by management

The management of the Agency has reasonable confidence that, overall, suitable controls are in place and are working as intended; risks are being monitored and mitigated appropriately and the necessary improvements and reinforcements are being implemented.

Furthermore, the management of the Agency recognises the need to maintain a high level of efficiency in its internal control framework and to pursue the monitoring and assessment of the implementation of the ICF principles and components to ensure the achievement of the objectives set out in Agency's establishing regulation and Long-term Strategy.

Register of exceptions

The Agency has had a procedure in place for the registration of exceptions since 2013. At the beginning of 2015, a formal procedure for the registration and management of exceptions was adopted. Its overall objective is to establish appropriate arrangements to ensure that any exceptional circumstances of significant instances of overriding controls or deviations from the established regulatory framework are well explained, registered and reported in accordance with the principle of transparency. An exception must be documented, justified and approved at the appropriate level before any action is taken.

In 2019, 25 exceptions and 8 non-compliance events were registered. A review of the exceptions and non-compliance events register was conducted and presented to the Authorising Officer in January 2020. The Authorising Officer has determined that these exceptions do not require a formal reservation in the declaration of assurance on the basis of materiality. In the light of the implementation of the ICF and drawing from the conclusions of the exceptions register review, the standard operating procedure for exceptions and non-compliance events will be updated in 2020.

Building block 2: External audit results

IAS opinion

In 2019, the Commission's Internal Audit Service (IAS) carried out one assurance audit on Agency's Staff Recruitment, Management and Engagement of Structural Service Providers (SSPs), and Organisational Ethics. IAS concluded that, within the challenging context of rapid growth, overall the Agency's recruitment procedures comply with the regulatory frameworks in place and the internal control systems for managing the selection and recruitment of staff and organisational ethics are adequate. The Agency also manages its structural service providers in compliance with the conditions laid down in the respective framework service contracts. However, very important weaknesses still exist with regard to the processes for assessing human resource requirements and the lack of (national) legal assurances regarding the engagement of structural service providers.

ECA opinion (Preliminary observations with a view to a report on the annual accounts of eu-LISA for the financial year 2019)

Opinion on the reliability of the accounts

In the Court's opinion, the accounts of the Agency for the year ended 31 December 2019 present fairly, in all material respects, the financial position of the Agency at 31 December 2019, 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 the transactions underlying the accounts

In the Court's opinion, the transactions underlying the annual accounts for the year ended 31 December 2019 are legal and regular in all material respects.

Building block 3: Follow-up of reservations from previous reporting periods

The declaration of assurance of the Authorising Officer in the Annual Activity Report 2018 did not contain any reservations.

Conclusion

Based on chapters 3 and 4, the conclusion can be drawn 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 reservation.

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,

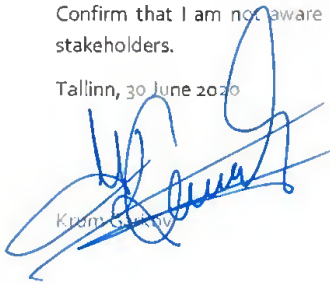
Declare that the information contained in this report gives a true and fair view⁶².

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 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.

Tallinn, 30 June 2020



Krum Guevov

⁶² True and fair in this context means a reliable, complete and correct view on the state of affairs in the Agency.

Annex I. Corporate key performance indicators

KPI	Corporate key performance indicator	Target	Actual 2019
1	Number of critical shortcomings identified during security tests	0	1
2	Percentage of identified security risks treated by assured security controls	100 %	90 %
3	Eurodac central system availability	Green ≥ 99.99 % 99.99 % > Amber ≥ 99.50 % Red < 99.50 %	99.55 % (Amber)
4	Eurodac central system response time	Green ≥ 99.45 % 99.45 % > Amber ≥ 90 % Red < 90 %	99.91 % (Green)
5	Wide Area Network availability (for SIS II and VIS systems)	Green ≥ 99.99 % 99.99 % > Amber ≥ 99.50 % Red < 99.50 %	99.9926 % (Green)
6	SIS II central system availability	Green ≥ 99.99 % 99.99 % > Amber ≥ 99.50 % Red < 99.50 %	99.95 % (Amber)
7	SIS II central system response time	Green ≥ 99.5 %, 99.5 % > Amber ≥ 99 % Red < 99 %	99.84 % (Green)
8	VIS central system availability	Green ≥ 99.99 % 99.99 % > Amber ≥ 99.50 % Red < 99.50 %	99.65 % (Amber)
9	VIS central system response time	Green = 100 % 100 % > Amber ≥ 90 % Red < 90 %	97.79 % (Amber)
10	Cancellation rate of carried-over payment appropriations	< 5 %	12.7 %
11	Rate (%) of budgetary commitments implementation	95-99 %	98.70 %
12	Rate (%) of payment implementation	> 95 %	99.30 %
14	Ratio (%) of administrative resources to operational resources	Administrative: 20 %	16.61 %
		Operational: 70 %	72.38 %
15	Ratio (%) of payments completed within statutory deadlines	90-100 %	92.8 %
16	Average square metres of office space per full-time equivalent member of staff	10 m ²	11.27 m ²
17	eu-LISA training course external participant satisfaction	> 3	4.39
18	Procurement compliance with the Agency's procurement and acquisition plan	0.5-1.5	1.12

19	Procurement project management: % of main procurement projects on schedule	> 60 %	58 %
20	Customer satisfaction: % of Member State users satisfied or very satisfied with the overall service provided by eu-LISA Service Desk	> 80 %	93.40 %
21	Ratio (%) of activities identified in the annual work programme met or on schedule	90 %	82 %
22	Member State systems service desk performance	> 80 %	90 %
23	Project management: assessing completed projects against defined quality/cost/time parameters	< 10 %	8.57 %
24	Percentage of audit recommendations implemented within stipulated deadlines	80-100 %	62 %
25	Percentage of uncertified to certified absence days from work within reporting period	< 25 %	30 %
26	Annual percentage staff turnover	≤ 5 %	3.14 %
27	Staff performance index	Completed appraisals: 100 %	99 %
		Low performance: < 5 %	0 %
		High performance: > 10 %	56 %
28	Staff engagement level	≥ 80 %	88 %
29	External communication: eu-LISA web-based visibility	Unique visitors: open	95 570
		Average visit duration: open	2.24 minutes
		Bounce rate (left after one page): open	41.75 %
		Actions per visit (average): open	3.32

Notes on the KPIs

KPI 13 Has been deleted by Management Board decision.

Security

KPI 1 The critical issues relate to the timeliness and application of the patching of identified vulnerabilities on system due to operational impact from incompatibilities and technical issues. Compensating controls are implemented to minimise the effective exposure of the core business systems to these sort of vulnerabilities.

KPI 2 The issues identified in the control implemented to treat the identified risks are reflected in the findings resulting from KPI 1. Corrective actions plans have been implemented to address the identified issues.

Systems availability

KPI 3, 6, 8 The system availability target is not precisely defined in the legal instruments governing the systems. The green target of 99.99 % has been established by the Agency considering that systems managed by it are defined as high-availability systems.

Response time

KPI 4 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 99.5 % of transactions are below the standard response time,

amber if between 90 % and 99.5 % of transactions are below the standard response time, red if less than 90 % of transactions are below the standard response time.

KPI 7 Standard queries are split in categories. Category 1 represents all single and multiple queries classified as 'exact', because exact information are 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 category 1 queries response time is the core indicator to assess the performance as it is the most representative query. The KPI 7 indicator is green if more than 99.5 % category 1 queries have a response time below 1 second, amber if between 99.5 % and 99 % category 1 queries have a response time below 1 second and red if less than 90 % category 1 queries have a response time below 1 second.

KPI 9 The indicator value is the share of total response time within the contractual limits for each business group (asylum, border, consulates, law enforcement and territory). There are three contractual limits for 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 %.

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 2019 in millions of euros. 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	24.4	-2.8	-2.6	19.1	24.4	-2.8	-2.6	19.1
A-12	Expenditure related to recruitment	1.1	-0.7		0.4	1.1	-0.7		0.4
A-13	Mission expenses	0.4	0.1		0.6	0.4	0.1		0.6
A-14	Socio-medical infrastructure	1.7	-0.1		1.5	1.7	-0.1		1.5
A-15	Training for staff	0.9			0.9	0.9			0.9
TITLE 1 — STAFF EXPENDITURE		28.5	-3.5	-2.6	22.5	28.5	-3.5	-2.6	22.5
A-20	Expenditure for premises	2.6	-0.9		1.7	2.6	-0.9		1.7
A-21	Corporate IT and telecom	2.0	1.2		3.2	2.0	1.2		3.2
A-22	Movable property and associated costs	0.2	0.6		0.9	0.2	0.6		0.9
A-23	Current administrative expenditure	0.8	0.0		0.8	0.8	0.0		0.8
A-24	Postage	0.0	0.0		0.0	0.0	0.0		0.0
A-25	Management Board	0.6	-0.3		0.4	0.6	-0.3		0.4
A-26	Information and publications	1.7	-0.5		1.2	1.7	-0.5		1.2
A-27	External support services	3.4	0.1		3.5	3.4	0.1		3.5
A-28	Security	2.7	0.2		2.9	2.7	0.2		2.9
TITLE 2 — INFRASTRUCTURE AND OPERATING EXPENDITURE		14.2	0.4		14.6	14.2	0.4		14.6
B3-0	Infrastructure	37.6	-19.0		18.6	49.8	-1.7	-21.2	26.9
B3-1	Applications	211.5	19.9	-5.7	225.7	107.1	3.7	-42.3	68.5
B3-8	Operational support activities	4.8	2.1		6.9	4.4	1.1		5.5
TITLE 3 — OPERATIONAL EXPENDITURE		254.0	3.1	-5.7	251.3	161.4	3.1	-63.5	100.9
TOTAL		296.7	0.0	-8.3	288.4	204.1	0.0	-66.1	138.1

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

As far as the 2019 appropriations (funding source C1) are concerned, the Agency reached a high level of budget implementation of 99.7 % in commitments and 99.3 % in payment appropriations, taking into consideration the automatic and non-automatic carry-over of commitment appropriations related to new tasks.

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	22.5	21.5	95.7 %	22.5	21.5	95.7 %
of which, executed		21.5	95.7 %		21.1	93.7 %
of which, automatic carry-forward		—	—		0.5	2.0 %
Title 2 — Infrastructure and operating expenditure	14.6	14.6	100.0 %	14.6	14.6	100.0 %
of which, executed		14.6	100.0 %		5.4	36.8 %
of which, automatic carry-forward		—	—		9.2	63.2 %

Title 3 — Operational expenditure	251.3	251.3	100.0 %	100.9	100.9	100.0 %
<i>of which, executed</i>		92.2	36.7 %		100.9	100.0 %
<i>of which, non-automatic carry-over</i>		159.1	63.3 %			
TOTAL	288.4	287.4	99.7 %	138.1	137.1	99.3 %
<i>of which, executed</i>		128.4	44.5 %		127.4	92.3 %
<i>of which, automatic carry-forward</i>		—	—		9.7	7.0 %
<i>of which, non-automatic carry-over</i>		159.1	55.2 %			

Implementation of the budget for other funding sources

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

- from appropriations carried over to 2019 by 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 contribution from the associated countries pursuant to Article 46(3)(b) of the establishing regulation (funding source Ro, Title 3 only).

Budget title		Funding Source	Commitment			Payment		
			Budgeted (in EUR million)	Consumed (in EUR million)	% Commit	Budgeted (in EUR million)	Consumed* (in EUR million)	% Payment
A-1	Staff expenditure	C1	22.5	21.5	95.7 %	22.5	21.1	93.7 %
		C8	0.4	0.4	81.8 %	0.4	0.4	81.8 %
		Subtotal	22.9	21.9	95.5 %	22.9	21.4	93.5 %
A-2	Infrastructure and operating expenditure	C1	14.6	14.6	100.0 %	14.6	5.4	36.8 %
		C4	0.0	0.0	100.0 %	0.0		
		C8	5.1	4.5	87.8 %	5.1	4.5	87.8 %
		Subtotal	19.8	19.1	96.9 %	19.8	9.9	50.0 %
Bo-3	Operational expenditure	C1**	251.3	251.3	100.0 %	100.9	100.9	100.0 %
		C3	49.2	49.2	100.0 %			
		C4	0.0	0.0	100.0 %	0.0	0.0	100.0 %
		C8	229.2	224.4	97.9 %			
		Ro	9.4	0.7	7.8 %	9.4	0.4	4.4 %
		Subtotal	539.1	525.6	97.5 %	110.4	101.4	90.1 %
		TOTAL	581.8	566.6	97.4 %	153.1	132.7	86.7 %

* For Title 3 C4, EUR 13.6 million was used for payments for commitments for the year. The remainder, amounting to EUR 87.4 million was used to cover commitments from previous years

** Commitments consumed include non-automatic carry-over of EUR 159.1 million.

Budgetary transfers

During 2019, the following internal transfer operations were performed under article 26 of the Agency's Financial Regulation. The rationale of the transfers was to ensure optimal budget allocation of commitment and payment appropriations.

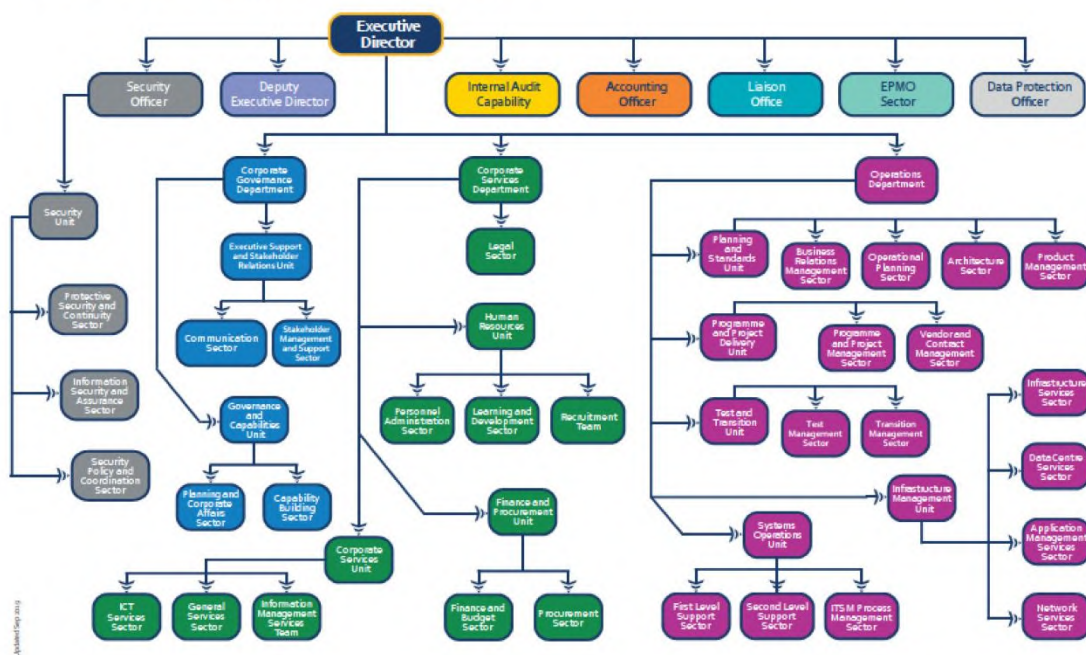
The Agency performed 11 transfers ex article 26.1 of the Agency's financial regulation. The table summarises the budgetary transfers performed in 2019. The majority of transfers were internal to the same budgetary title (as evidenced by a zero value for the operation). Budget transfers between titles are indicated in full value in euros.

Complete details on the transfers are provided in Annex V.

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.2384			0	0	0	0
2	LIS.2399			0	0	0	0
3	LIS.2402					0	0
4	LIS.2407			0	0	0	0
5	LIS.2417	-1 000 000	-1 000 000	1 000 000	1 000 000	0	0
6	LIS.2419			0	0	0	0
7	LIS.2421	0	0	0	0	0	0
8	LIS.2443			0	0	0	0
9	LIS.2450			0	0	0	0
10	LIS.2453	-2 498 505	-2 498 505	-551 872	-551 872	3 050 377	3 050 377
11	LIS.2456					0	0
Total		-3 498 505	-3 498 505	448 128	448 128	3 050 377	3 050 377

No transfer ex article 26.2 of the Agency's financial regulation was performed.

Annex III. Organisational chart



Annex IV. Establishment plan

Establishment plan 2019

eu-LISA's 2019 establishment plan consisted of 172 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	5
AD 10	8
AD 9	16
AD 8	17
AD 7	31
AD 6	14
AD 5	29
Total AD	129
AST 11	0
AST 10	0
AST 9	1
AST 8	2
AST 7	4
AST 6	9
AST 5	12
AST 4	12
AST 3	3
AST 2	0
AST 1	0
Total AST	43
Total establishment plan	172

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 where there are differences between the Commission's and the Agency's terminology. It should be noted that the entry grades that are higher than those mentioned in Article 53 of the Conditions of Employment of Other Servants of the European Union are a result of recruitments processes organised during the start-up phase of the Agency, when the higher grades were specified in eu-LISA's establishment plan.

Key functions	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, AD 10	Administration/operations
Head of Sector — level 4	TA, CA	AD 5, AD 7, AD 8, AD 9, AD 10, FG IV	Administration/operations
Senior Officer	TA	AD 8, AD 9	Administration/operations
Officer	TA, CA	AD 6, AD 7, AD 8, FG IV	Administration/operations
Junior Officer	TA, CA	AD 5, FG IV	Administration/operations
Senior Assistant	n/a	n/a	n/a
Junior Assistant	TA, CA	AST 3, FG III	Administration/operations
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	n/a	n/a	n/a
Secretary ⁶³ /Assistant	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 ⁶⁴	TA	AST 5	Administration

Benchmarking exercise

At the end of 2019, 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 on the Commission's screening methodology. The screening categorises the Agencies' human

⁶³ eu-LISA's 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 assistants in a particular field (HR, IT etc.) or the administrative assistants. In addition, when necessary, external service providers (on-site contractors) perform secretarial work.

⁶⁴ This entry grade was established on the creation of the Agency in 2012.

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 the eu-LISA posts. The results of this screening are presented in the tables below.

Results of the eu-LISA benchmarking exercise in 2019 — staff members

<i>Job type (sub)category</i>	<i>2018 (%)</i>	<i>2019 (%)</i>
Administrative support and coordination	16	16.6
Administrative support	12.5	11.5
Coordination	3.5	5.1
Operational	73	72.4
General operational	59	62.6
Programme management	6	3.1
Top-level operational coordination	8	6.7
Evaluation and impact assessment	0	0
Neutral	11	11
Finance	11	11
Control	n/a	n/a

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

Results of the eu-LISA benchmarking exercise in 2019 — external service providers (on-site contractors)

<i>Job type (sub)category</i>	<i>2018 (%)</i>	<i>2019 (%)</i>
Administrative support and coordination	47.5	51.2
Administrative support	44.5	47.8
Coordination	3	3.4
Operational	48.5	43.5
General operational	41	36.3
Programme management	3	2.9
Top-level operational coordination	2.5	2.4
Evaluation and impact assessment	2	1.8
Neutral	4	5.2
Finance	4	5.2
Control	n/a	n/a

A more detailed report on allocation of human resources to activities will be possible in future, once the activity-based reporting system is implemented.

Annex V. Human and financial resources by activity

Human resources

In 2019, of a total of 223 full-time equivalents (FTEs) staff members available, 157.85 FTEs (70.8 % of staff) were used for operational activities and 23.85 FTEs (10.7 % of staff) for related procurement and financial activities. 41.3 FTEs (18.5 % of staff) were used for horizontal activities (general coordination and administrative support). Owing to the structure of the activities of the Agency, most of which are not repetitive, further breakdown cannot be given at the time of writing.

Expenditures according to Activity-based Costing

In 2018, eu-LISA developed an activity-based costing methodology, making it possible to identify the total costs of each system managed by the Agency.

The total system expenditures consist of:

- direct expenditure, covering maintenance and project costs;
- network expenditure;
- horizontal expenditure, including operational costs for shared infrastructure and system security, as well as corporate and horizontal expenditures, mainly staff and running costs.

The re-allocation of corporate and operational horizontal expenditure is based on the following cost drivers:

- direct system expenditures;
- time allocated to the systems (cost of human resources).

During the reporting year, the Agency implemented a budget of EUR 128.4 million, of which:

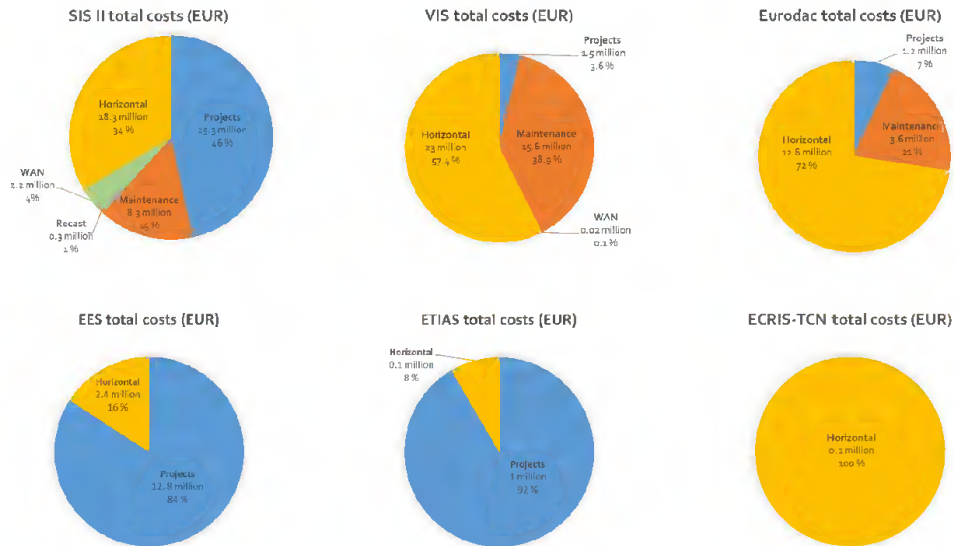
- 72 % was spent on operational expenditure (56% direct expenditure on the systems and 16% operational horizontal costs);
- 28 % represented corporate horizontal costs.

The total system costs are summarised in the table below:

Systems	Total costs (in EUR million)	Share of total costs
SIS II	54.3	42 %
VIS/BMS	40.0	31 %
Eurodac	17.4	14 %
EES	15.2	12 %
ETIAS	1.1	0,8%
ECRIS-TCN	0.2	0,2 %
TOTAL	128.4	100 %

It should be noted that the most of the core activities of the Agency are not repetitive, but project-based. Therefore, their costs cannot be standardised as in a standard process based business model.

The following figures provide the cost breakdown for each system in millions of euros and as percentage of the total system costs.



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 2019 direct costs associated with the Agency's multi-site organisation (in EUR million)

Budget title		Total of payments	Payments related to the Agency's multi-site organisation	Share (%)
A01	Staff Expenditure	21.075	0.264	1.25 %
A02	Infrastructure and Operating Expenditure	5.392	n/a	n/a
B03	Operational Expenditure	100.944	0.136	0.14 %
Total		127.411	0.400	0.31 %

Direct costs related to the Agency's multi-site organisation are mission expenditures for statutory staff travelling between the Agency's headquarters in Tallinn and the Agency's technical site in Strasbourg. In 2019, this represented 0.31 % of the total of payments executed.

Detailed list of budgetary transfers

BUDGETARY TRANSFERS in 2019					
Budgetary transfer No.	Reference	Date	Budget line	Commitment appropriation	Payment appropriation
1	LIS.2384	08/02/2019	A02000 Expenditure for premises	-300,000.00	-300,000.00
			A02210 Furniture & office equipment	300,000.00	300,000.00
			B03101 SIS II operational maintenance	-1,000,000.00	0.00

			B03111 VIS/BMS operational maintenance	-1,500,000.00	0.00
			B03121 EUODAC operational maintenance	-500,000.00	0.00
			B03810 External support	1,500,000.00	0.00
			B03812 Quality assurance	1,500,000.00	0.00
2	LIS.2399	05/04/2019	A02000 Expenditure for premises	-359,412.50	-359,412.50
			A02100 Corporate IT & telecommunication	-279,412.50	-279,412.50
			A02320 Legal expenses	143,825.00	143,825.00
			A02331 HR fees and charges	80,000.00	80,000.00
			A02700 External support services	615,000.00	615,000.00
			A02800 Corporate security	-200,000.00	-200,000.00
			B03100 SIS II Projects	0.00	-1,000,000.00
			B03101 SIS II operational maintenance	0.00	-2,000,000.00
			B03121 EUODAC operational maintenance	0.00	3,000,000.00
			B03810 External support	-200,000.00	-200,000.00
			B03820 Advisory groups	200,000.00	200,000.00
			B03001 System security and business continuity	0.00	2,256,000.00
3	LIS.2402	23/04/2019	B03120 EUODAC projects	0.00	-2,256,000.00
			A02300 Office supplies	21,370.26	21,370.26
4	LIS.2407	19/07/2019	A02400 Postage	20,000.00	20,000.00
			A02700 External support services	-41,370.26	-41,370.26
			B03000 Shared system infrastructure	0.00	-431,070.24
			B03010 Wide area networks	0.00	-3,350,000.00
			B03100 SIS II Projects	0.00	-1,000,000.00
			B03110 VIS/BMS projects	0.00	3,350,000.00
			B03810 External support	-57,106.33	1,000,000.00
			B03811 Consultancies and studies	500,000.00	0.00
			B03812 Quality assurance	-773,963.91	0.00
			B03820 Advisory groups	281,070.24	281,070.24
			B03821 Other meetings and missions	50,000.00	50,000.00
			B03830 Operational learning and development	0.00	100,000.00
5	LIS.2417	13/09/2019	A01100 TA salaries and allowances	-1,000,000.00	-1,000,000.00
			A02100 Corporate IT & telecommunication	1,000,000.00	1,000,000.00
			A02220 Documentation & library expenditure	-9,000.00	-9,000.00
			A02500 MB Meetings	-140,000.00	-140,000.00
			A02600 Information & publications	-300,000.00	-300,000.00
			A02700 External support services	-104,715.36	-104,715.36
			A02800 Corporate security	553,715.36	553,715.36
			B03000 Shared system infrastructure	0.00	-1,000,000.00
			B03100 SIS II Projects	0.00	-500,000.00
			B03101 SIS II operational maintenance	0.00	1,000,000.00
			B03110 VIS/BMS projects	0.00	600,000.00
			B03111 VIS/BMS operational maintenance	726,036.09	0.00
6	LIS.2419	25/10/2019	B03120 EUODAC projects	0.00	-600,000.00
			B03810 External support	0.00	500,000.00
			B03812 Quality assurance	-726,036.09	0.00
			A02320 Legal expenses	52,650.00	52,650.00
			A02330 Other running costs	-52,650.00	-52,650.00
			B03001 System security and business continuity	0.00	-300,000.00
			B03010 Wide area networks	0.00	-2,000,000.00
			B03100 SIS II Projects	0.00	-1,300,000.00
			B03110 VIS/BMS projects	0.00	1,300,000.00
			B03111 VIS/BMS operational maintenance	0.00	2,000,000.00
			B03120 EUODAC projects	0.00	-300,000.00
			B03130 EES projects	-116,000.00	600,000.00
7	LIS.2421	22/11/2019	B03820 Advisory groups	116,000.00	0.00
			A01301 Mission expenses	130,000.00	130,000.00
			A01401 Nursery allowance	-130,000.00	-130,000.00
			A02000 Expenditure for premises	-329,000.00	-329,000.00
			A02100 Corporate IT & telecommunication	498,602.46	498,602.46
			A02200 Other technical equipment & installation	-64,500.00	-64,500.00
			A02210 Furniture & office equipment	393,500.00	393,500.00
			A02330 Other running costs	-192,452.52	-192,452.52
			A02700 External support services	-206,149.94	-206,149.94
			A02800 Corporate security	-100,000.00	-100,000.00
			B03001 System security and business continuity	0.00	-92,000.00
			B03010 Wide area networks	-2,604,522.24	0.00
7	LIS.2421	22/11/2019	B03102 SIS II recast	0.00	60,000.00
			B03111 VIS/BMS operational maintenance	0.00	1,000,000.00
			B03120 EUODAC projects	0.00	-300,000.00
			B03121 EUODAC operational maintenance	2,571,000.00	0.00
			B03130 EES projects	0.00	1,767,000.00
			B03140 ETIAS projects	0.00	-1,827,000.00
			B03810 External support	0.00	-447,000.00
			B03811 Consultancies and studies	18,022.34	0.00
			B03820 Advisory groups	15,500.00	-151,000.00
			B03821 Other meetings and missions	0.00	-10,000.00
			B03830 Operational learning and development	0.00	50,000.00

8	LIS.2443	11/12/2019	B03831 Training for Member States	0.00	-50,000.00
			A02100 Corporate IT & telecommunication	-10,000.00	-10,000.00
			A02210 Furniture & office equipment	18,547.33	18,547.33
			A02400 Postage	-8,547.33	-8,547.33
			B03000 Shared system infrastructure	403,000.00	867,339.21
			B03002 System security and business continuity	-818,721.99	-200,000.00
			B03002 Back-up site - running costs	0.00	-155,000.00
			B03010 Wide area networks	-15,225,110.45	-500,000.00
			B03100 SIS II Projects	17,916,623.99	-300,000.00
			B03101 SIS II operational maintenance	-534,947.44	200,000.00
			B03102 SIS II recast	0.00	-3,300.20
			B03110 VIS/BMS projects	-1,602,461.72	1,023,300.20
			B03111 VIS/BMS operational maintenance	0.00	-100,000.00
			B03120 EURODAC projects	-125,000.00	-296,000.00
			B03121 EURODAC operational maintenance	-382.39	-15,000.00
			B03130 EES projects	0.00	296,000.00
			B03140 ETIAS projects	0.00	-767,339.21
			B03810 External support	-98,730.02	0.00
			B03811 Consultancies and studies	85,730.02	-50,000.00
9	LIS.2450	18/12/2019	A02000 Expenditure for premises	100,972.00	100,972.00
			A02200 Other technical equipment & installation	-0.40	-0.40
			A02220 Documentation & library expenditure	-782.00	-782.00
			A02400 Postage	-20,453.67	-20,453.67
			A02510 Other meetings	-40,000.00	-40,000.00
			A02700 External support services	-39,735.93	-39,735.93
			B03000 Shared system infrastructure	0.00	560,627.51
			B03002 System security and business continuity	0.00	-170,000.00
			B03002 Back-up site - running costs	0.00	-100,000.00
			B03010 Wide area networks	0.00	-640,840.95
			B03100 SIS II Projects	0.00	-156,008.27
			B03101 SIS II operational maintenance	0.00	506,721.71
			B03102 SIS II recast	0.00	65,866.46
			B03110 VIS/BMS projects	0.00	4,668.86
			B03111 VIS/BMS operational maintenance	0.00	130,986.95
			B03120 EURODAC projects	0.00	-1,400.00
			B03121 EURODAC operational maintenance	0.00	-197,716.63
			B03130 EES projects	0.00	128,581.31
			B03140 ETIAS projects	0.00	-380,908.90
			B03810 External support	0.00	-4,275.10
10	LIS.2453	20/12/2019	B03811 Consultancies and studies	0.00	254,197.05
			A01100 TA salaries and allowances	-551,638.52	-551,638.52
			A01110 CA salaries and allowances	-987,030.59	-987,030.59
			A01120 SNEs and trainees allowances	-229,660.65	-229,660.65
			A01200 Recruitment and reassignment expenditure	-730,175.24	-730,175.24
			A02000 Expenditure for premises	-5,297.32	-5,297.32
			A02100 Corporate IT & telecommunication	-1,712.33	-1,712.33
			A02300 Office supplies	-20,262.07	-20,262.07
			A02330 Other running costs	-68,609.59	-68,609.59
			A02331 HR fees and charges	-12,624.83	-12,624.83
			A02500 MB Meetings	-49,480.15	-49,480.15
			A02510 Other meetings	-53,211.73	-53,211.73
			A02600 Information & publications	-183,774.72	-183,774.72
			A02700 External support services	-129,682.27	-129,682.27
			A02800 Corporate security	-27,217.71	-27,217.71
			B03000 Shared system infrastructure	1,425,324.19	1,425,324.19
			B03002 System security and business continuity	0.00	-110,258.08
			B03002 Back-up site - running costs	-161,617.58	-33,016.83
			B03010 Wide area networks	625,052.83	2,223,643.26
			B03100 SIS II Projects	-512,738.91	-122,076.91
11	LIS.2456	23/12/2019	B03102 SIS II recast	1,854,000.00	0.00
			B03110 VIS/BMS projects	-3,001,956.10	-3,114.54
			B03111 VIS/BMS operational maintenance	-630,444.94	432,551.89
			B03121 EURODAC operational maintenance	0.00	-183,699.76
			B03130 EES projects	0.00	-57,513.63
			B03150 ECRIS projects	3,766,000.00	0.00
			B03810 External support	-130,766.05	-129,590.82
			B03820 Advisory groups	-4,189.40	-123,553.58
			B03821 Other meetings and missions	-18,838.47	-58,035.88
			B03822 Schengen evaluations	-12,000.00	-24,941.39
			B03830 Operational learning and development	-144,321.88	-27,202.06
			B03831 Training for Member States	-3,626.67	-58,138.84
			B03000 Shared system infrastructure	-861,119.05	0.00
			B03010 Wide area networks	-1,759,546.64	0.00
			B03102 SIS II recast	3,260,783.58	0.00
			B03110 VIS/BMS projects	-640,117.89	0.00

Annex VI. List of training sessions delivered to Member States

The following training sessions were delivered in 2019 (in chronological order):

1. VIS Operational Training — Intermediate level (L2)
2. Webinar Schengen Evaluation (Czech Republic)
3. Webinar Schengen Evaluation (Poland)
4. VIS Operational Training — Advanced level (L3)
5. Eurodac Operational Training — Entry level (L1)
6. Eurodac Operational Training — Intermediate level (L2)
7. Webinar Schengen Evaluation (Slovenia)
8. SIS II Target group course — SPoC Technical Profile
9. SIS Newcomer Training Programme: Ireland (visit to eu-LISA)
10. Webinar Schengen Evaluation (France-revisit)
11. Eurodac Operational Training — Advanced level (L3)
12. SIS II for SIRENE (joint course with CEPOL)
13. Train the Trainer — SIS II, VIS, Eurodac for IT Operators (joint course with CEPOL)
14. SIS II target Group Course- SIS II Technical Profile
15. Webinar Schengen Evaluation (Hungary)
16. SIS II Target Group Course — SIRENE Technical Profile
17. Webinar Schengen Evaluation (Slovakia)
18. International Law Enforcement Cooperation and Information Exchange (contribution to CEPOL course)
19. Schengen evaluation — SIS and SIRENE (contribution to CEPOL course)
20. SIRENE Officers — level 1 (contribution to CEPOL course)
21. VIS Newcomer Training Programme (visit to eu-LISA): Bulgaria/Romania/Croatia/Europol
22. Eurodac and SIS II: role of large-scale IT systems in combatting facilitation of illegal immigration
23. SIS II Target group course — SPoC Technical Profile
24. SIS Newcomer Training Programme: Frontex and Europol
25. EES Webinar: EES High-Level architecture and implementation roadmap

Annex VII. Financial accounts

Balance sheet (EUR)

NON CURRENT ASSETS	2019	2018	Variation
Computer software	15,712,271	22,419,631	(6,707,360)
Intangible assets under construction	20,154,328	9,879,120	10,275,208
Intangible assets	35,866,599	32,298,751	3,567,848
Land and buildings	32,105,388	33,291,494	(1,186,106)
Plant and equipment	542,320	856	541,464
Furniture and vehicles	141,620	127,473	14,147
Computer hardware	16,439,276	11,020,577	5,418,699
Other fixtures and fittings	377,108	447,069	(69,961)
Property, plant and equipment	49,605,712	44,887,469	4,718,243
Non-current pre-Financing	2,546,822	—	2,546,822
TOTAL NON CURRENT ASSETS	88,019,133	77,186,220	10,832,914
CURRENT ASSETS			
Current pre-financing	—	2,546,822	(2,546,822)
Deferred charges	3,134,058	1,631,816	1,502,242
Sundry receivables	19,364,524	12,528,534	6,835,989
Other current receivables	7,193	665	6,528
Current exchange receivables	22,505,775	14,161,015	8,344,760
Receivables from Member States (VAT)	348,861	466,023	(117,161)
Contributions from associated countries	3,726,733	2,242,936	1,483,797
Non-exchange receivables	4,075,594	2,708,959	1,366,635
TOTAL CURRENT ASSETS	26,581,369	19,416,796	7,164,573
TOTAL ASSETS	114,600,503	96,603,016	17,997,487
NET ASSETS			
Accumulated surplus	77,119,638	65,085,597	12,034,041
Economic result of the year (+ profit)	7,516,088	12,034,041	(4,517,953)
NET ASSETS	84,635,727	77,119,638	7,516,088
CURRENT LIABILITIES			
Current payables	4,722,680	2,810,192	1,912,488
Accounts payables with consolidated entities	1,657,575	920,267	737,308
Accounts payables	6,380,255	3,730,459	2,649,796
Accrued charges	23,584,521	15,752,918	7,831,603
TOTAL CURRENT LIABILITIES	29,964,776	19,483,377	10,481,399
TOTAL LIABILITIES	114,600,503	96,603,016	17,997,487

Statement of financial performance (EUR)

REVENUES	2019	2018	Variation
Subsidy from the Commission	136,405,325	92,718,169	43,687,156
Contributions from EFTA countries	3,726,733	2,242,936	1,483,797
Non-exchange revenue — transfer of assets	—	12,868,730	(12,868,730)
Non-exchange revenues	140,132,058	107,829,835	32,302,223
Fixed asset-related revenues	—	146	(146)
Miscellaneous income	52,475	35,158	17,316
Administrative revenues with consolidated entities	—	22,664	(22,664)
Exchange rate gains	46	22	24
Exchange revenues	52,521	57,990	(5,469)
Total revenues	140,184,579	107,887,826	32,296,754
EXPENSES			
Operational expenses	(67,177,585)	(46,394,721)	(20,785,863)
Staff expenses	(19,389,591)	(16,230,091)	(3,159,500)
Finance costs on late payment	(5,075)	(5,695)	620
Administrative and IT expenses	(16,296,919)	(5,538,753)	(10,758,165)
Other external service provider expenses	(3,015,030)	(2,986,458)	(28,572)
Expenses with consolidated entities	(1,939,934)	(1,747,654)	(192,280)
Fixed asset-related expenses	(24,720,218)	(22,847,458)	(1,872,760)
Operating Lease Expenses	(123,473)	(105,937)	(17,535)
Exchange rate losses	(668)	(17)	(651)
Administrative expenses	(65,490,907)	(49,462,063)	(16,028,844)
Total expenses	(132,668,491)	(95,853,784)	(36,814,707)
ECONOMIC RESULT FOR THE YEAR	7,516,088	12,034,041	(4,517,953)

Cash flow statement — indirect method (EUR)

Cash flows from ordinary activities	2019	2018
Surplus/(deficit) from ordinary activities	7,516,088	12,034,041
Operating activities		
Amortisation of intangible fixed assets	13,258,514	15,258,740
Depreciation of tangible fixed assets	8,550,030	5,513,004
(Increase)/decrease in Long term Pre-financing	(2,546,822)	—
(Increase)/decrease in Short term Receivables	(7,164,573)	3,449,809
Increase/(decrease) in Accounts payable and accrued charges	9,744,091	2,546,494
Increase/(decrease) in Liabilities related to consolidated EU entities	737,308	(421,224)
Net cash flow from operating activities	30,094,635	38,380,864
Cash flows from investing activities		
(Increase in) tangible and intangible fixed assets	(30,844,635)	(38,380,864)
Net cash flow from investing activities	(30,844,635)	(38,380,864)
Net increase/(decrease) in cash and cash equivalents	—	—

Annex VIII. Annual activities and indicators

Note for projects' performance indicators: project performance is monitored and reported according to the Agency's project management methodology. In line with this methodology, project performance indicators retained for the Agency's corporate reporting are cost, schedule and scope. For reporting on performance indicators, the Agency uses a 'RAG' (red, amber/yellow, green) traffic light rating scale. This scale indicates whether costs, schedule and scope deviations are within agreed tolerances (green), at risk of getting outside agreed tolerances (amber) or outside agreed tolerances (red).

CAAR ref.	Annual activity	Outcome	Outcome status	Additional comment on outcome	Performance Indicator (PI)	PI status	Additional comment	PD2019-2021 ref.
1.1.1	SIS II maintenance	SIS II system available and within SLAs in 2019	Delivered		Conformity with the SIS II SLA and corporate KPIs	KPI 6: 99.95 % (Amber) KPI 7: 99.84 % (Green)		2.2.1.6
1.1.1	SIS II AFIS maintenance	SIS II AFIS system available and within SLAs in 2019	Delivered		Conformity with the AFIS SLA	Achieved		2.2.1.7
1.1.1	VIS/BMS maintenance	VIS/BMS behaves as per requirements	Delivered		Conformity with the VIS/BMS SLA and corporate KPI	KPI 8: 99.65 % (Amber) KPI 9: 97.79 % (Green)		2.2.1.5
1.1.1	Eurodac Maintenance	The Member States receive a reliable and uninterrupted Eurodac services	Delivered		Conformity to the Eurodac SLA and Eurodac-related corporate KPIs	KPI 3: 99.55 % (Amber) KPI 4: 99.91 % (Green)		2.2.1.3
1.1.1	Dublinet maintenance	The Member States are receiving reliable and uninterrupted Dublinet services	Delivered		Conformity with Dublinet operational SLA	Achieved		2.2.1.4
1.1.1	24/7 first-level support for operational management of the systems	Members States users receive efficient and reliable services at the first-level of support	Delivered		Customer satisfaction (KPI 20) Helpdesk performance (KPI 22)	KPI 20: 93.40 % (achieved) KPI 22: 90 % (achieved)		2.2.1.1
1.1.1	24/7 second-level application support for operational management of the systems	Member States receive a reliable service of the applications, including databases	Delivered		Conformity with systems KPI and SLAs	Achieved	See KPI 3 to 9	2.2.1.2
1.1.1	Single integrated monitoring solution	Improved systems monitoring, with a higher level of automation, significantly minimising the risks for underestimation of any potential issue	Delivered		Cost, schedule, scope	Green, amber, green		2.3.1.4
1.1.2	New SIS legal framework	New SIS central system releases including the new SIS core functionalities identified in the recast legal instrument (return decision not included)	Ongoing	Multiannual project	Cost, schedule, scope	Green, green, green		2.3.1.5
1.1.2	SIS return decision	A new SIS central system release including return decision functionalities	Ongoing	This is a multi-annual project, the ICD/DTS updates are ongoing	Cost, schedule, scope	Green, green, green		2.3.1.6
1.1.2	Implementation of SIS II AFIS Phase 2	This project will provide additional biometric capabilities to the Member States	Ongoing		Cost, schedule, scope	Green, amber, green	Slight delay, design phase planned to be closed during Q2 2020	2.3.1.22

1.1.2	New search engine and Oracle upgrade for SIS II, improving availability and considering transcription aspects	New cost efficient and state-of-the-art search functionalities, additional query and alerts capacity, prepare search engine module for national systems	Ongoing	The WebLogic/Java upgrade was postponed from end 2019 to January 2020, owing to the findings of issues	Cost, schedule, scope	Green, amber, green	Upgrade deployed in January 2020 instead of end of 2019	2.3.1.11
1.1.2	Deployment of automated batch processes for the adaptation of existing CS-SIS alerts	SIS application will provide better accuracy for queries using machine readable zone (MRZ)	Delivered		Cost, schedule, scope	Green, green, green		2.3.1.12
1.1.1 - 1.1.2	SIS II support to Member States (including integration of new users)	Support to national systems properly delivered	Delivered		Quality and time of Member States integration Member States testing adherence to the plan	Achieved	Status described in section 1.1.2	2.2.1.8
1.1.2	VIS capacity increase to 100 million visa applications	VIS system is able to manage up to 100 million visa applications	Ongoing		Cost, schedule, scope	Green, amber, amber	The project faced a scope reduction and closure was delayed owing to contractual issues	2.3.1.13
1.1.2	BMS database increase (Phase 1)	Appropriate continuation of an existing service provided by eu-LISA to Member States	Ongoing		Cost, schedule, scope	Green, amber, green	Release was postponed to stabilise first the production environment	2.3.1.9
1.1.2	VIS-BMS background database and test quick wins	A new upgraded VIS background database and a new BMS noise database is available	Delivered		Cost, schedule, scope	Green, amber, green	The project was extended for 6 months owing to deliverables quality issues	(2018) 2.4.1.5
1.1.2	Implementation of VIS/BMS end-to-end testing platform	VIS and BMS are improved with a set of end-to-end test tools allowing consistent, adaptive and transparent test campaigns	Delivered		Cost, schedule, scope	Green, amber, green	Overall duration was extended by 4 months, owing to a dependency with another project using the test environment	2.3.1.7
1.1.2	Test environment upscale to 100% of pre-production environment (Phase 1)	The new test environment has the same capacity as the pre-production environment	Postponed	This project has been postponed to 2020 in order to prioritise the VIS-EES interconnection	Cost, schedule, scope	Project postponed		2.3.1.10
1.1.2	Tuning of VIS transactional throughput	VIS is improved and upgraded to adapt to business needs and legislative changes	Delivered	Report delivered but no implementation	Cost, schedule, scope	Green, amber, green	Delay in project closing	(2018) 2.4.1.11
1.1.2	Tuning of BMS transactional throughput	BMS is improved and upgraded to adapt to business needs and legislative changes	Delivered	Report delivered but no implementation	Cost, schedule, scope	Green, amber, green	Delay in project closing	(2018) 2.4.1.12
1.1.2	VIS new users integration: Europol	Europol can connect and use VIS system as per legal basis	Ongoing		Cost, schedule, scope	Green, amber, green	Delay in national interface readiness	2.3.1.14
1.1.2	Granting of passive access for Bulgaria and Romania to VIS	Bulgaria and Romania can use the VIS system as per legal basis	Ongoing	Project outcome has been delayed owing to additional required test campaigns	Cost, schedule, scope	Green, amber, green	Final release planned for June 2020	2.3.1.15

1.1.2	USK renewal	Delivery of a fingerprint quality standard document to which all Member States using custom acquisition tools will have to comply and delivery of a customised kit with required central support for its national release	Cancelled	Project put on hold in order to address the issue in the framework of sBMS development	Cost, schedule, scope	Project incorporated into the sBMS development	2.3.1.8
1.1.2	Eurodac recast Phase 1: search storage of CAT1,2,3, new biographical/biometric data, capacity upgrade and face recognition study	Eurodac systems is in line with the recast provisions and sized properly to allow compliance of the Member States with the new legal basis.	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.16
1.1.2	Eurodac Recast Phase 2.1 - inclusion of passport and identity documents copies	Eurodac support Member States with the establishment of the identity of irregular migrants, and with the compliance with European return policies	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.17
1.1.2	Eurodac Recast Phase 2.2: managing resettlements	The Member States can handle resettlements (under EU and national schemes) through Eurodac and can act in compliance with the legal basis (Eurodac recast 2014 resettlements proposal)	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.18
1.1.2	Eurodac recast Phase 2.3: alphanumeric searches	Eurodac in line with the new legal provisions, enabling the Member States to perform alphanumeric searches and better exploit the data registered in Eurodac for law enforcement purposes.	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.19
1.1.2	Eurodac Recast Phase 3: implementation of face recognition	Eurodac in line with the new legal provisions and providing increased matching accuracy through multimodal biometric capabilities	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.20
1.1.2	Dublin automation system	New system operational in line with the new legal provisions, allowing the Member States to implement the European asylum policies	Project inactive	Activity is pending adoption of Dublin Recast legal instruments	Cost, schedule, scope	Project inactive	2.3.1.33
1.1.2	Change Eurodac communication model to web services	The central Eurodac and the national systems are technologically aligned. The Member States are able to efficiently communicate with Eurodac and comply with the new legal requirements and new types of transactions	Postponed	Project postponed until adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project postponed	2.3.1.21
1.1.2	Impact assessment and cost benefit analysis for the active-active configuration	Ability of systems and the CSI to meet the high availability target as specified in the legal instruments	Ongoing	First part of the study delivered as planned	Cost, schedule, scope	Green, green, green	2.3.1.24
1.1.3	EES implementation	EES is developed in accordance with the legal instruments	Ongoing	The programme is progressing	Cost, schedule, scope	Green, green, green	2.3.1.34
1.1.3	ETIAS implementation	ETIAS is developed in accordance with the legal instruments	Ongoing	See section 1.1.3	Cost, schedule, scope	Green, green, green	2.3.1.35

1.1.3	ECRIS-TCN implementation	ECRIS-TCN is developed in accordance with the legal instruments	Ongoing	See section 1.1.3	Cost, schedule, scope	Green, amber, green	Schedule is delayed pending adoption of the implementing regulations	2.3.1.36
1.1.4	Implementation of the interoperability regulations	Reduced total cost of ownership of the systems, better service for the stakeholders, increased usability, enhanced access control and new capabilities for the systems	Ongoing	The programme is progressing	Cost, schedule, scope	Green, green, green		2.3.1.23
1.1.4	CRRS implementation to improve automated reporting and statistics generation Phase 2- unification of the reporting of all systems	The Member States, Commission and management of eu-LISA and teams of eu-LISA having more information on the use and functioning of the application through an easy interface. Efficient solution for developing quickly new reporting solutions.	Ongoing	Core business systems unified reporting study project has been delivered	Cost, schedule, scope	Green, red, green	Deviation of 31 % in schedule owing to changes introduced by the organisational change	2.3.1.37
1.1.5	Operational management of the communication infrastructure and the related communication systems	The communication infrastructure, and the related communication systems, between the core business systems and Member States, is reliable	Delivered		Conformity with the communication infrastructure KPI 5	KPI 5: 99.9926 % Achieved		2.2.1.11
1.1.5	Introduction of advanced network statistics	Increased efficiency of the communication infrastructure supervision. Provision of the information needed to make decisions based on the performance of the communication infrastructure	Ongoing		Cost, schedule, scope	Green, amber, green	Slight delay due to dependencies with another project	2.3.1.30
1.1.5	Handover of the activities related to implementation of the budget, acquisition, renewal and contractual matters of the VIS and SIS II communication infrastructure	The Agency possesses is able to perform contract management for the communications infrastructure	Delivered		Cost, schedule, scope	Green, green, green		2.3.1.31
1.1.5	Regular operational management of the communication infrastructure contracts	Communication infrastructure behaves as per requirements	Delivered		Adherence to communication SLAs and KPIs	Achieved	See KPI 3 to 9	2.2.1.12
1.1.5	Eurodac network bandwidth upgrade	The Eurodac communication infrastructure enables smooth and uninterrupted transaction flow as per SLA, allowing the Member States to fulfil their legal obligations	Project inactive	Activity is pending adoption of Eurodac Recast legal instruments	Cost, schedule, scope	Project inactive		2.3.1.28
1.1.5	TESTA-ng VIS second encryption layer implementation	Second encryption layer is implemented in TESTA-ng VIS network VIS and SIS II Mail services support is arranged and transferred from sTESTA provider	Delivered	Sirenmail and VISmail systems have been transferred to eu-LISA in 2017. Pilot of VIS second encryption layer was deployed successfully in 3 Member States	Cost, schedule, scope	Green, amber, green	The pilot of the VIS second encryption layer remains running until there is more clarity on the EES 2nd encryption layer solution	2.3.1.32

1.1.5	Conducting a unified network test phase	Provide the management of the Agency with understanding of the possible improvements and possible changes in regulation	Delivered		Cost, schedule, scope	Green, green, green		2.3.1.29
1.1.5	Unified wide area network perimeter - study and design	The communication infrastructure and related communication systems is more reliable service. The integration of new systems is faster and easier	Postponed	The project is postponed until the baseline design for EES is known with regards to perimeter design	Cost, schedule, scope	Project postponed		2.3.1.27
1.1.5	Operational management/daily system management operations	A reliable infrastructure is available for the operation of the systems and services, in conformity with the SLA	Delivered		Conformity with systems KPI and CSI SLAs	Achieved	See KPI 3 to 9	2.2.1.9
1.1.5	Operate, manage and maintain the backup data centre and backup operational site	A reliable infrastructure is available for the operation of the systems and services, in conformity with the SLA	Delivered		Conformity with systems KPI and CSI SLAs	Achieved	See KPI 3 to 9	2.2.1.10
1.1.5	CSI second phase implementation maintenance, including reorganisation of the data centres	Mandatory maintenance within the CSI framework contract, including programme management. Mandatory reorganisation of the data centres for new infrastructure accommodation. CSI maintained 24/7, in line with eu-LISA agreed SLAs.	Delivered		Maintenance SLAs met Systems performance indicators	Achieved	See KPI 3 to 9	2.3.1.1
1.1.5	CSI second phase implementation	Common shared services, on top of a common shared infrastructure with virtualisation foundations, affecting the core business systems by offering a more efficient and effective operational management, by eliminating the current 'silo approach' mode.	Delivered		Cost, schedule, scope	Green, green, green		2.3.1.2
1.1.6	Physical security improvement of the Agency's site (Strasbourg, Tallinn)	The agency ensures the safety and security of the people and assets in its premises in Tallinn.	Ongoing	The full delivery of some of the improvements have been postponed to Q1/Q2 2020 owing to delay in signature of the framework contract	Physical security measures compliance with the risk assessment outcomes and eu-LISA security rules	Partially achieved	Complete implementation delayed	2.1.6
1.1.6	Operate, plan and develop the business continuity/disaster recovery/emergency response parts from security and continuity management	The Agency improves its resilience in its horizontal activities.	Delivered		The BC controls cover all the business areas of eu-LISA. The BC plans are tested and the tests demonstrate the effectiveness of BC controls in place. The Agency's personnel is subject of the specific training and awareness sessions as needed	Partially achieved		2.1.6

1.1.6	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		Protective security measures comply 100% with the risk assessment, eu-LISA rules and regulations and ISO standards	Partially achieved		2.1.6
1.1.6	Delivering the information security and assurance service	Ensuring that information security risks are managed to an acceptable level	Delivered		% of business processes and their services covered by the information risk management process % of staff that have completed the security awareness e-learning training % of security controls implemented in each Information System Security Plan	Achieved		2.2.1.14
1.1.6	Implementation of the Security CSI Phase 3 identity and access management for the core business systems	Improved user management in accordance with the standards of European Commission information security standards on user access management	Postponed	Owing to CSI contractual ceiling, the project was postponed and will be implemented within the EES implementation programme	Cost, schedule, scope	Green, red, green	The project was postponed and will be implemented within the EES implementation programme	2.3.1.38
1.1.6	Security and business continuity exercise for Eurodac	The Agency ensures that the business continuity and security controls in place comply with the risk assessment results, business continuity and disaster recovery plans and security plans	Delivered		Goals and objectives of the exercise	100% (achieved)		2.3.1.39
1.1.6	Implementation of the recommendations coming from the security and business continuity exercises	Ensuring the continuous improvement of the security and business continuity of the systems	Delivered		Percentage of the implementation of the action plan	Partially achieved	Status of implementation in section 1.1.6	2.2.1.13
1.1.7	Drafting the annual Work Report 2018 and reporting the intermediate status of DP compliance to MB	MB is informed on the level of compliance as regards data protection.	Delivered		Deliverables provided according to the agreed deadlines	Achieved	List and dates of reports in section 1.1.7	2.1.4
1.1.7	Increasing data protection awareness	Staff comply with data protection requirements	Delivered		Number of sessions carried out on data protection and personal data breaches Number of DP newsletter issued	2 general sessions + numerous dedicated team and coaching sessions (achieved) DP section in the 44 weekly newsletter issues (achieved)		2.1.4
1.1.7	Transposition of the new regulation repealing the Regulation 45/2001	Ensure compliance of the internal rules with the applicable legal framework	Delivered		New Decision on implementing rules adopted by eu-LISA's MB	Achieved	Decision No 2019-185 REV 1 of 09.10.2019	2.1.4

1.1.7	Perform the annual Data Protection Survey	Recommendations on data protection compliance to be implemented to increase data protection compliance of the Agency.	Delivered	The content of the activity was updated to reach the expected outcome taking into account the change in the legal framework. A gap analysis for the new Regulation was conducted.	A gap analysis and action plan to comply with the new DP Regulation prepared and presented to ED and MB.	Achieved	The most representative findings of the gap analysis and recommended actions were presented during the MB meeting in November 2019.	2.1.4
1.1.8	Drafting technical reports and aggregating statistics	Fulfilment of all reporting obligations as outlined in the legal basis.	Delivered		All reports published.	Achieved	List and dates of publication in section 1.1.8.	2.1.1
1.1.9	Providing training on the technical use of the systems to the Member States	A responsive and tailored systems training programme in place that meets in full the needs of stakeholders.	Delivered		KPI 17: Satisfaction rate (scale 1-5, 1 lowest, 5 highest)	KPI 17: 4.39 (achieved)		2.1.1
1.1.10	Execution of externally-directed activities delineated in the annual research and technology monitoring roadmap for 2019 and the research and technology monitoring strategy 2019-2021	Dissemination of accrued knowledge of relevance boosts necessary 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		One research and technology monitoring published. Two industry events and annual conference take place within the calendar year and have strong attendance from diverse stakeholders.	Achieved	List and dates of publication and events in section 1.1.10.	2.1.1
1.1.10	Monitoring of research and technological developments and input of learning into internal projects focusing on system evolution, new system implementation, Agency capability enhancement and new service provision	eu-LISA's large-scale IT systems are maintained and evolved utilising the best available technologies.	Delivered		Submission of internal technology briefs upon request. Engagement with system AGs to refine priorities and feedback into system evolution work. Research and technology monitoring staff are part of the project teams for the most technologically-involved projects.	Achieved		2.1.1
1.2.1	Develop and deploy processes and training programs, evaluate projects, perform project quality assurance reviews, appraise processes, and report 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		Achieving objectives agreed in the EPMD roadmap.	Achieved		Not included
1.2.1	Official appraisal based on capability maturity model integration (CMMI)	Agency officially rated against CMMI model.	Postponed	The Agency did not have sufficient resources to implement the CMMI model.	Readiness of the procurement documentation.	Activity postponed.		Not included
1.2.1	Project portfolio management capability	The major outcome of this project is made of two components: 1. process model for portfolio management 2. IT Roadmap for implementing the PPM (Project Portfolio Management) process model.	Delivered		New process and IT roadmap approved within time, scope and budget.	Achieved		Not included

1.2.1	Corporate Risk Management Evolutions	1. Process Model for Corporate Risk Management 2. IT Roadmap for implementing the Corporate Risk Management process model.	Ongoing	The Corporate Risks and Issues were collected and prioritised during the third quarter of 2019.	Corporate Risk Management process model and IT Roadmap delivered.	Behind	The re-definition of the Corporate Risk Management Policy and the design of the Corporate Risk Management Process Model will be carried out in 2020.	Not included
1.2.1	Develop a quality management system for the smart borders programme (EEE implementation programme)	The smart borders programme meets its quality objectives.	Delivered		Readiness of the QMS by the date of signature of the Smart Borders Programme.	Achieved	The Quality Management System for projects and programmes was ready by the time of the EES contract signature.	Not included
1.2.2	eu-LISA ITSM framework maintenance and development	Efficient review, support and further development of eu-LISA processes and service model.	Delivered		ITSM KPI, new processes documentation.	Achieved		2.2.2.1
1.2.2	Integration of asset management with configuration management	A single, centralised and relational repository for contract, financial, operational status of the IT components and assets.	Postponed	Owing to lack of resources this project has been postponed to 2020.	Percentage of assets and configuration items covered by the integration model; Number of incidents reported; Number of unauthorised changes detected automatically.	Project postponed.		2.3.1.3
1.3.1	Further development of enterprise architecture	A holistic view of IT and business interrelationship is defined at enterprise level.	Delivered		Cost, schedule, scope.	Green, green, green.		2.1.5
1.3.2	Stakeholder engagement and policy coordination	Enhanced cooperation with eu-LISA's external stakeholders and internal engagement within the Agency.	Delivered		High quality stakeholder relations and comprehensive policy coordination.	Achieved	Status described in sections 1.3.1 and 1.3.2.	2.1.1
1.3.2 - 1.3.3	Stakeholder engagement and policy coordination	Systematic and well-functioning cooperation with eu-LISA's stakeholders, thorough policy analysis, internal coordination and appropriate outreach to relevant stakeholders.	Delivered		High quality stakeholder relations and comprehensive policy coordination.	Achieved	List of activities in sections 1.3.2 and 1.3.3.	2.1.1
1.3.3	Contribution as an observer to Schengen evaluations in the fields of SIS/SIRENE and Common Visa Policy and ensure better use of SIS II and VIS by Member States	EU Member States apply correctly the Schengen legislation in the fields of SIS/SIRENE and common visa policy and ensure better use of SIS II and VIS.	Delivered		Participation to the evaluation when and where needed.	Achieved	List of evaluations attended in section 1.3.3.	2.1.1
1.4.2	Planning and reporting	eu-LISA provides its stakeholders with sufficient information on the planning and execution of its tasks and its performance.	Delivered		SPD 2020-2022 adopted on time without major amendments from MB. Timely submission of the interim report. CAAR 2018 adopted on time without major amendments from MB.	Achieved	List of reports and dates of adoption in section 1.4.2.	2.1.1

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1.4.3	Providing governance and compliance management capabilities	The Agency sufficiently applies elements of good governance in its compliance management practices.	Delivered	Internal control register and monitoring reports are produced in time, scope and quality as required	Achieved	Status described in chapter 3	2.1.1
1.4.3	Timely administrative support for the Management Board	The MB is sufficiently supported to perform effectively its duties	Delivered	Meetings delivered as planned KPI 20: Stakeholder overall satisfaction rate as measured in satisfaction survey	3 MB meetings organised (achieved) KPI 20: 93.4% (achieved)		2.1.1
1.4.3	Timely administrative support for the AGs	The AGs are sufficiently supported to perform effectively their duties	Delivered	Meetings delivered as planned. KPI 20	All AG meetings organised as planned KPI 20 achieved		2.1.1
1.4.4 - 2.3	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	A comprehensive and coherent set of procedures cover the main business processes in the financial and procurement area	Achieved		2.1.2
1.4.4 - 2.3	Timely delivery of services related to budgetary, procurement, financial and asset management	High-quality and timely services of budgetary, procurement and financial services are provided throughout the year. Processes are continuously revised to improve efficiency and effectiveness, wherever possible through dematerialisation	Delivered	No major disruption of services attributable to internal organisational issues KPI 10: Cancellation rate of payment appropriations KPI 11: Rate (%) of budgetary commitments implementation KPI 12: Rate (%) of payment implementation KPI 15: Ratio (%) of payments completed within the statutory deadlines	Achieved KPI 10: 12.7% (above target) KPI 11: 98.7% (achieved) KPI 12: 99.30% (achieved) KPI 15: 92.8% (achieved)		2.1.2
1.4.4 - 2.3	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	KPI 18: Procurement compliance with the Agency's PAP KPI 19: % of main procurement projects on schedule	KPI 18: 1.12 KPI 19: 58 %		2.1.2
1.4.4 - Annex V	Introduce for the first full financial year an activity-based management model (including costing, budgeting, reporting)	The Agency is capable of precisely measuring its performance in the execution of its main business processes in accordance with an activity-based management model	Delivered	The Agency is capable of implementing an ABB system	Achieved		2.1.2

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1.4.5 - 2.4	Optimisation and sound management of human resources in terms of organisational structure, processes and practices in compliance with the relevant rules and decisions	The Agency's and HRU's organisational structure reflect the organisational development and accommodate future growth eu-LISA fulfil its obligations towards staff in accordance with the regulatory framework	Ongoing	The revision of the recruitment guidelines is ongoing Procurement of risk assessment in the field of health and safety is ongoing Procurement of the medical service in Tallinn was concluded; for Strasbourg, no offer was submitted	KPI 14: Ratio of administrative resources to operational resources KPI 25: Percentage of uncertified vs certified absence days from work KPI 26: Annual Percentage Staff Turnover KPI 27: Staff performance index KPI 28: Staff engagement level	KPI 14: 16.61 % / 72.38 % (achieved) KPI 25: 30 % (above target) KPI 26: 3.14 % (achieved) KPI 27: 99%, 0%, 56% (almost achieved) KPI 28: 88 % (achieved)	KPI 25 is above the target (< 25%), owing to the difficulty to reach a doctor on short notice, therefore the number of uncertified days is increasing KPI 27 is just below target for the first element (100%) KPI 28 Staff engagement was measured by evaluating the percentage of staff responding to the 360 degree Evaluation Survey	2.1.3
1.4.5	Development of the HR IT tools and their implementation	eu-LISA human resources management will be optimised in terms of performance efficiency, resources allocation, systematisation of data structure and auditable records	Delivered		Cost, schedule, scope	Green, green, green		2.1.3
1.4.5	Staff training related to operations	Staff perform better and are acquainted with the best practices in the field of technology	Delivered		Number of training days per year General satisfaction level	40 training activities involving more than 600 participants (achieved) average general satisfaction of 80 % (achieved)		2.2.4.1
1.4.6	Facility operations to enable full and effective use of the new HQ building in Tallinn	Improved working conditions for staff and ability to effectively use the new HQ	Delivered		Conformity with applicable standards	Achieved		2.1.5
1.4.6	Implementation of logistics and supplies services in the new HQ	Improved working conditions for staff and ability to effectively use the new HQ	Delivered		Cost, schedule, scope	Green, green, green		2.1.5
1.4.6	Maintenance activities of all equipment and assets at the technical site	The facilities provide all necessary conditions	Delivered		Number of corrective actions Number of preventive measures Number of technology or other developments Number of faults	Achieved	Monthly internal reports approved	2.1.5
1.4.6	Extension of the operational premises to host current and future projects	Adequate working and operational conditions as well as implementation of technical, logistical and operational best practices	Ongoing	The acceptance of the project is planned for Q1 2026	Cost, schedule, scope	Green, green, green		2.1.5

1.4.6	Mission portfolio and creation of an internal mission guide	Improved effectiveness of the mission's portfolio.	Partially delivered	Implementation of ALEGRO was cancelled. eu-LISA is going to use the EC's mission management tool MIPS. The implementation will take place after the deployment of SYSPER II in the Agency. Estimated launch of the tool is Q4 2020. In the meantime, two ARES workflows have been implemented for the mission orders and mission reimbursements contributing to the improved effectiveness of the mission portfolio.	Number of missions accomplished timely when requests submitted on time.	Achieved	Internal report	2.1.5
1.4.6	Long term archive preservation strategy of the Agency	Provide services in the field of effective document and archive management. Improved working conditions for staff	Delivered		Adherence to legal obligation	Achieved with slight delay	eu-LISA Long Term Preservation Policy and Long Term Preservation Procedures were adopted by ED Decision in March 2020.	2.1.5
1.4.6	Maintenance and evolution of the corporate network architecture	Sufficient support for corporate IT management, improved working conditions for staff, enhanced communication abilities	Ongoing	Proxy modernisation: ongoing, delay occurred because of reprioritisation. Conference room in Strasbourg: postponed to 2020	Cost, schedule, scope	Green, amber, green	Implementation will be completed by Q2 2020	2.1.5
1.4.6	Maintenance and evolution of corporate system and storage architecture	Services provided in the field of corporate IT management. Enhanced communication abilities	Ongoing	Slight delay occurred in some activities	Cost, schedule, scope	Green, amber, green	The delayed activities are planned to be completed by Q2 2020	2.1.5
1.4.6	Corporate applications enhancement	Enhanced capabilities of the SharePoint, document management and HR platforms.	Delivered		Cost, schedule, scope	Green, green, green		2.1.5
1.4.6	Evolution of eu-LISA e-learning environments	Improved e-learning and information conditions for staff and Member States. Enhanced communication abilities	Delivered		Cost, schedule, scope	Green, green, green		2.1.5
1.4.7	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	Delivered		KPI 29: external web-based visibility. The satisfaction rate of the participants with the event management is measured through evaluation sheets	KPI 29: Achieved. Satisfaction rate: 96.6% (achieved)	number of followers on social media platforms increased 1,5 times	2.1.1
1.4.7	Website hosting and evolution	Provide services in the field of web hosting and content reposition	Delivered		Cost, schedule, scope	Green, green, green		2.1.5

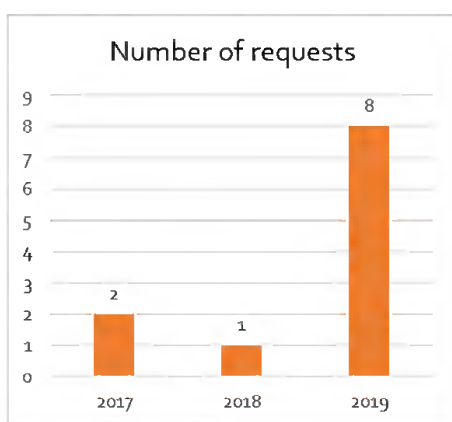
1.4.7	Implementation of eu-LISA Internal Communication Action Plan	The staff at all the sites of the Agency is informed and engaged on the corporate level, allowing informed decisions to be made regarding their professional tasks and having access to internal communication tools for information sharing and feedback	Delivered		Compliance of the Annual Internal Communication Action Plan with the set milestones and time-schedule	Achieved		2.1.1
1.4.8	Implementation of the annual internal audit plan	Effective, efficient risk management and control and governance processes and procedures are in place to enable eu-LISA to achieve its objectives.	Delivered		% level of implementation of annual internal audit plan.	89% (achieved)		2.1.7
Annex VII	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		Timely delivery of provisional, consolidated, final accounts to the Budgetary Authority and ECA	Achieved		2.1.2
Not referenced	Providing legal advice to eu-LISA	Compliance by eu-LISA with the applicable regulations	Delivered		Percentage of cases of litigation either in court or prior to the court where a timely reply is provided	100% (achieved)		2.1.5

Annex IX. 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 the Regulation (EC) No 1049/2001 on access to documents, and in accordance with Article 34 of the Agency's establishing regulation, a report on access to documents shall be annexed by eu-LISA to the 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 access to documents requests during 2019

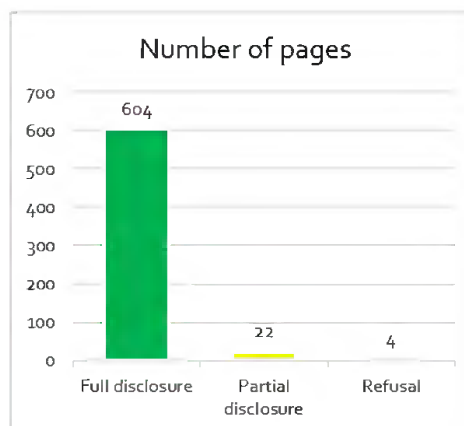
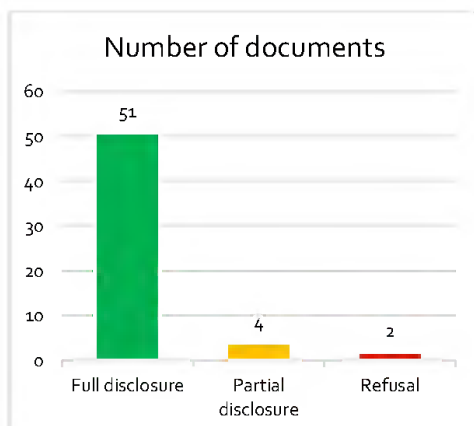
The Agency strives to guarantee transparency within its processes, including access to documents procedure. In 2019, the Agency observed the highest levels of good administrative conduct and respected all deadlines specified by the Regulation (EC) No 1049/2001.



During 2019, the Agency received eight requests to access documents, which corresponds to an increase compared to 2018 (one single request for access to documents) and 2017 (two requests). In addition, the Agency received one confirmatory application requesting eu-LISA to review its early decision.

The Agency's decisions on access to documents have not been challenged before EU Courts. Additionally, the Agency did not receive any complaints related to access to documents in front of the European Ombudsman.

Throughout 2019, eu-LISA analysed 57 documents, out of which 51 were fully disclosed, and 630 pages, of which 604 were fully released.



One of the requests to access documents referred to the decisions of the Executive Director to amend the composition of the selection committee for one recruitment procedure. After assessing this request in light of the principles and conditions defined by Regulation (EC) No 1049/2001, the Agency refused to grant access to the requested documents.

since the decision-making process was still ongoing (recruitment process). As a result, the Agency refused to grant access to two documents, which comprised four pages. The applicant did not lodge a confirmatory application.

Furthermore, another request related to the presentation given by eu-LISA to the Council Working Party DAPIX on Interoperability between EU Information systems on 17 April 2018. Initially, the Agency decided to grant partial access to the requested document because it considered that the full disclosure would undermine the protection of the public security on the grounds of the exception foreseen by Article 4(1)(a) of the Regulation (EC) 1049/2001, and in lights of the fact that the decision-making process on this subject was still ongoing, in accordance with Article 4(3) of the same Regulation. However, after receiving a confirmatory application, the Agency, having consulted the relevant third-parties, decided to grant full access to the requested document.

The partial redactions of documents performed 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 EU legislation regarding the protection of personal data),⁶⁵ protection of the public interest as regards public security, and protection of the Agency's decision-making process.

Other activities related to access to documents performed during 2019

Since the beginning of 2019, the Legal Sector is striving to guarantee the full compliance with the legal requirements and to improve the practice of handling the requests on access to documents.

In May 2019, the Legal Sector created a functional mailbox for the public access to documents, namely PAD@EULISA.EUROPA.EU.

Furthermore, following a dialogue between the Legal Sector and an interested party, on 8 July 2019, the Agency added a section on public access to documents to its website, with all the necessary information about the applicants' rights, in line with the legal requirements and practice of other EU Agencies (such as Frontex and FRA). This section can be accessed through the following link: <https://www.eulisa.europa.eu/About-Us/access-to-documents>.

In addition, during 2019, the Legal Sector, after the dialogue with the interested party, took the initiative to, in compliance with the provisions of eu-LISA's establishing regulation and Regulation (EC) No 1049/2001, create a public register of documents. In February 2020, the register of documents was finally established under the following link: <https://www.eulisa.europa.eu/About-Us/access-to-documents/public-register>. This register of documents displays all publicly available documents of eu-LISA and is regularly updated.

Since the end of 2019, the Legal Sector is preparing a new Management Board Decision on the practical arrangements regarding public access to the documents held by the Agency. This Management Board Decision will foresee a higher role of the Legal Sector in the coordination of the public access to documents requests as well as the creation of the role of 'contact persons' on access to documents within the Agency.

⁶⁵ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39–98).
