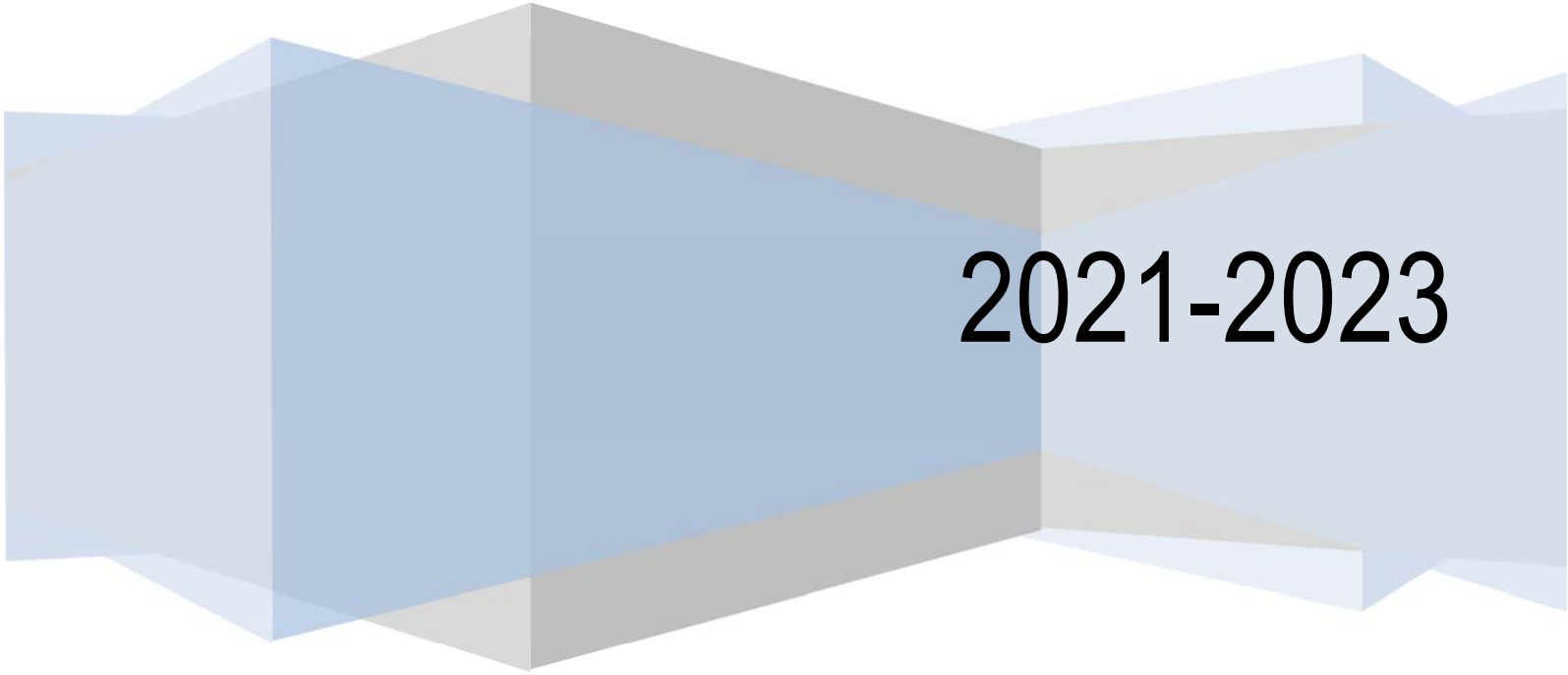
Montenegro
Ministry of Justice

Judiciary ICT Development Programme



2021-2023

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List of Abbreviations

AECS - Administration for Enforcement of Criminal Sanctions

BI - Business Intelligence

CEPEJ - European Commission for the Efficiency of Justice

DMS - Document Management System

DR - Disaster Recovery

DWH - Data Warehouse

EC - European Commission

ESB - Enterprise Service Bus

EU - European Union

EURoL II - EU Support to the Rule of Law II

GSB - Government Service Bus

IBM CMS - IBM Case Manager System

ICT - Information-communication Technologies

IPA - Instrument for Pre-Accession Assistance

IPS - Intrusion Prevention System

ISMS - Information Security Management System

ISO - International Organization for Standardization

IT - Information Technologies

JC - Judicial Council

JIS - Judicial Information System

LAN - Local Area Network

LURIS - IT-system for Registration and Monitoring of Mutual Legal Assistance Cases

MEST - Montenegrin Standard

MPA - Ministry of Public Administration

PC - Prosecution Council

PKI - Public-Key Infrastructure

PRIS - Judicial Information System (the existing JIS)

PT - Penitentiary

RCR - Registry of Criminal Records

ROF- Registry of Fines and Misdemeanours

SAPA - Standardized Software Application for the Prison Administration

SCB - Self-supporting cable bundle

SSO - Single Sign-On

SW - Software

TD - Technical Documents

ToR - Terms of Reference

UAT - User Acceptance Test

UN - United Nations

UNDP- United Nations Development Programme

VPN - Virtual Private Network

WAN - Wide Area Network

INTRODUCTION

Committed to developing a justice system with an easier access to justice, based on simplified underlying procedures in all branches of law, but also to enhancing cooperation between judicial and administrative bodies in different countries, Montenegro has been continually working over the past decade towards developing information technologies for judicial bodies. The use of information technologies is one of the key prerequisites for an effective and efficient administration of justice. Today's technological advance opens up new possibilities that were beyond imagination only a few years ago. Accessibility of information services, possibility for electronic exchange and processing of data, and keeping of all forms of judiciary statistics and archives make it possible to improve efficiency, save time, and enhance transparency and accountability of the judicial bodies, thus creating conditions to provide the citizens with the services they need.

The development of information-communication technologies is part and parcel of the justice reform, set to build an independent and autonomous justice system, enhance its efficiency and strengthen its connections with the networks within the European justice systems. The priorities that are set high in the reform agenda are increasing citizens' trust in the judiciary and developing human and technological capacities in all the judicial institutions. The endeavours to develop and introduce information systems and thereby enhance data exchange and analytics and statistics capacities in the judiciary are the cornerstone of the entire justice reform. An important pillar of these efforts is the work towards developing a modern information system, designed to respond to all the identified needs, and featuring the tools that enable its further progress, i.e., future upgrades of the existing framework to address any future needs of its users.

The Judiciary Information-Communication Development Programme for 2021-2023 comes third in a series of strategic documents addressing this field. It follows the Strategy for Information-Communication Technologies for the Judiciary for 2016-2020, and the ICT Strategy for the Judiciary for 2011-2014.

The primary focus of the Judiciary Information-Communication Development Programme is to develop and upgrade the judicial information system, as an integrated system comprising the systems for the courts, State Procecution Service, Administration for Enforcement of Criminal Sanctions, and the Ministry of Justice. The Working Group for the development of the Judiciary ICT Development Programme 2021-2023 and the accompanying Action Plan was tasked with drafting this strategic document. The Working Group includes the representatives of the Ministry of Justice, Judicial Council Secretariat, Supreme State Prosecution Service, and the Administration for Enforcement of Criminal Sanctions.

Public policy design and implementation of this strategic document has enjoyed considerable financial support through various donor programmes, including:

- IPA 2018,
- UNDP project "Improving efficiency of the justice system", funded by the Government of the Kingdom of Norway,
- The US Embassy, and
- EUROL II Project.

The primary role of the Judicial Information System (JIS) is to ensure automation of the key business processes in the four main segments within the justice system: the Ministry of Justice, courts, State Prosecution Service, and the Administration for Enforcement of Criminal Sanctions. The system needs to ensure full independence and functionality of the respective segments by engaging all the necessary subsystems to enable processes within each individual segment. JIS needs to ensure electronic access to data and automation of the business processes for each individual institution of the justice system, restricted to only those areas that they are eligible for under the law, and in line with their respective powers and duties. Incorporating electronic services in the administration of justice will expedite official communication exchange between judicial institutions, but also between them and their service users, increase case resolution efficiency, thereby making financial savings for judicial institutions and their service users alike. The workload will be significantly reduced for the court staff engaged in communication with litigants. All of these are the primary stakeholders in the public policy at hand and it is their contribution that will decide whether the expected results will be achieved within the implementation period envisaged for the strategic document.

1.1 ICT Policy Stakeholders

The reform activities over the past four years have primarily concerned the development and implementation of software solutions for the integrated JIS, building analytics and statistics capacities of the judicial bodies, and the exchange of data with external systems. It is particularly important to point to the efforts thus far to implement infrastructural projects, set up electronic services for legal and physical persons, institutions and international organisations, strengthen the existing information infrastructure and security, as well as improve the existing management infrastructure and human capacity.

The Judiciary ICT Development Programme 2021-2023, as an integral part of the justice reform, is a way ahead for the activities described herein over the next three years, designed to see that a functional and sustainable judicial information system is set up.

Strategic framework

Justice reform, one of the major reforms to be implemented, including through the development of information-communication technologies for the judiciary, is recognised in a series of national umbrella and sectoral strategic documents. In this regard, special reference must be made of the **Medium-term Work Programme of the Government for the period 2018-2020**, where its **Priority No. 2** "Montenegro – a state of the rule of law and good governance", points out the intention to continue working towards increasing access to justice for its citizens and legal persons. Especially relevant is Objective 11 referring to the "Creation of efficient and service oriented public administration characterised by an increasing level of trust of its citizens", with one of its steps targeting the development of a functional and sustainable system of information-communication technologies for the justice sector. For these objectives to be achieved, a coherent system must be introduced to bring together all the stakeholders that take part in creating the conditions for a functional, modern and digitalised public administration, primarily by ensuring a high level of harmonisation between all umbrella and strategic documents that address e-government. Therefore, in what follows all strategic documents that are significant for the ICT policy in the justice sector are presented, and mutual links and compliance between closely related policies described.

The Judiciary ICT development plan is harmonised with **Montenegro Development Directions 2018-2021**, as one of the umbrella strategic documents, specifically its chapter on Smart Growth, and its Objective **4.1.7 Information-communication Technologies**, with the focus on improving information society and creating a fast, transparent and citizen-friendly justice system, mainly through:

- Improving overall environment for using information-communication technologies in everyday private and business life;
- Improving electronic identification and increasing trust in electronic transactions; and
- Improving information security.

The ICT Programme takes into account all the commitments under the **Montenegro EU Accession Programme for 2020-2022**, as set out in Chapter 23 "Judiciary and Fundamental Rights". It serves as an umbrella strategic document for the EU accession negotiations and is adjusted annually to reflect the dynamics of the negotiation process and the enactment of national legislation and strategic regulations.

This strategic document is also harmonised with the relevant parts of the **Smart Specialisation Strategy 2019-2024** addressing digital transformation of public administration, primarily through the development and promotion of the digital services aiming to improve the efficiency and quality of the services provided by the public administration, but also through increasing the number of ICT users among citizens, cyber security, and data exchange between state institutions, all serving as basis for a technological development of the justice sector. All of these are vital to further improvement and development of ICT in the justice sector. When implemented, the efficient information system in the justice sector will greatly facilitate e-filing, i.e., filing of documents in the digital format, primarily through improving interoperability of the state administration bodies. Another positive example is certainly shorter court proceedings thanks to the possibility for an indictment to be electronically submitted by the prosecution service, which significantly shortens overall length of the proceedings. Greater digitalisation in the justice system will eventually benefit both citizens and the economy because significant savings in time and financial resources will be made possible.

The need for the development of information-communication technologies is recognised in the **Strategy for the Reform of the Judiciary 2019-2022**, as an umbrella strategic document for the entire justice sector. In chapter **3.2 Strengthening the efficiency of the judiciary**, the need to develop and promote information system in the judiciary is identified as one of the main pillars for improving efficiency in the justice sector as a whole. A particular attention is given to the Judiciary ICT Development Programme 2021-2023, with emphasis on notable achievements so far and the plans for future development in the field. The Strategy for the Reform of the Judiciary 2019-2022 places a special emphasis on the need to continue developing the information system of the judiciary, with special focus on:

- development of a new web portal of the judiciary,
- development of an electronic archives system,
- introduction of ISO 27001 data security standard,
- upgrading of the new information system of the State Prosecution Service, and
- the fact that in 2018, the work started on designing a new case management information system for the courts. This activity and its objective is very much in line with the strategic objectives as set out in the existing Strategy for the Reform of the Judiciary 2014-2018, with the main priorities continuing on to the new strategic document for the justice reform.

The ICT Programme is also harmonised with the **Strategy for the Information Society Development 2016-2020**, whose main priorities are to set up a legal, organisational and technical framework for the development of Montenegro's information society, with primary focus on the following three components:

- Infrastructure,
- Information security, and
- E-economy, including e-business, e-education, e-health, e-inclusion, e-government and ICT research, innovation and development.

The plan for the way forward is to place special emphasis on achieving better connectivity between the information systems of the judiciary and of the state administration, primarily through enhanced cooperation between the Ministry of Public Administration and the Ministry of the Interior on the following issues:

- Setting up the Government Service Bus (GSB), a data exchange system currently in production in Montenegro. It facilitates insight to all the data available for exchange between institutions, digital filing of the request for access to such data, and digital issuance of permits for such data to be used.
- Use of digital certificates for authentication and a qualified electronic signature from new, third generation IDs. To that end, cooperation will be established with the Ministry of the Interior through the use of the Ministry of the Interior's authentication (new IDs), which will then allow access to the judicial information system. This will give access to court cases to all the users who have gone through the authentication described above. An important novelty is also the option to submit digitally signed documents.
- Establishing a connection with the electronic payment system
- Establishing a connection with the national Identification and Authentication System.

It is important to point to a set of e-services that the Ministry of Justice is providing through the e-government web portal, which reflects a high level of cooperation and a connection already established between the Judicial Information System and the public administration digitalisation process, which is managed by the Ministry of Public Administration. The set includes the following services, which can be accessed via the e-government web portal:

No.	Name of the service provided by the institution	THE service is intended for physical persons	THE service is intended for legal persons	description	electronic service already in place
1	Application to sit for a second level professional exam (with higher or associate university qualifications) in the field of security for detained and convicted persons	DA			YES
2	Application to sit for a second level professional exam (with secondary school qualifications) in the field of security for detained and convicted persons	YES			YES
3	Request for a transcript of professional exam certificate	YES			YES
4	Request for additional legalisation of certificates	YES			Information Only
5	Request for apostille certification				Information Only
6	Application to sit for an exam for a bankruptcy trustee	YES			YES
7	Application to sit for an exam for apprentices in courts and state prosecution service	YES			YES
8	Application to be included in the list of examiners from which the commission for apprenticeship examination for 2017 will be formed	YES			Information Only
9	Application to sit for a bar examination	YES			YES
10	Application to be appointed as a court interpreter	YES			Information Only
11	Application to be appointed as an expert witness	YES			Information Only
12	Application to sit for a bailiff examination	YES			Information Only
13	Application to sit for a public notary examination	YES			YES
14	Request for issuance of an excerpt from criminal records for legal persons		YES		YES
15	Request for free access to information held by the Ministry of Justice	YES	YES		YES
16	Request for issuance of an excerpt from criminal records for physical persons	YES			YES
17	Request for issuance of an excerpt from misdemeanour records for legal persons		YES		YES
18	Request for issuance of an excerpt from misdemeanour records for physical persons	YES			YES
19	Request for issuance of a mediator licence	YES			YES
20	Request for issuance of a licence to persons supporting a child in family proceedings	YES			YES
21	Request for renewal of a licence to persons supporting a child in family proceedings	YES			YES
22	Request to cancel a licence for persons supporting a child in family proceedings	YES			YES
23	Request for renewal of a mediator licence	YES			YES
24	Request to cancel a mediator licence	YES			YES
25	Request to open/cancel/modify user account in the information system: Registry of fines and misdemeanour records	YES			YES
26	Form for launching the initiative for supervision over the work of a public notary, an application, or a complaint – PHYSICAL PERSONS	YES			YES
27	Form for launching the initiative for supervision over the work of a bailiff, an application, or a complaint – PHYSICAL PERSONS	YES			YES
28	Form for launching the initiative for supervision over the work of a public notary, an application, or a complaint – LEGAL PERSONS		YES		YES
29	Form for launching the initiative for supervision over the work of a bailiff, an application, or a complaint – LEGAL PERSONS		YES		YES
30	Request to open an account for access to the Registry of fines and misdemeanour records				YES
31	Request for assignment of identification numbers of misdemeanour orders in the Registry of fines and misdemeanour records - LEGAL PERSONS		YES		YES
32	Application for appointment as a notary public	YES			YES
33	Request for assignment of identification numbers of misdemeanour orders for PHYSICAL PERSONS	YES			YES

At the international level, the **UN Sustainable Development Agenda 2030**, which primarily addresses eradication of poverty and a shift towards sustainable inclusive development, includes 17 global sustainable development goals, with **Goal 9 Industry, innovations and infrastructure** recognising the need for the development of information-communication technologies, and identifies the following as one of the expected outcomes:

"Considerably increase access to information-communication technologies and make efforts to ensure universal and affordable access to the internet in the least developed countries by 2020."

Additionally, set as one of the expected outcomes under Goal 16 **Peace, justice and strong institutions** is:

"Development of effective, accountable and transparent institutions at all levels".

Montenegro works hard to reach the goals that have been set and meet its international commitments, with the development of judiciary information technologies as their integral part.

Negotiations with the European Union

The judiciary information system is recognised as having special significance to the Montenegrin society and its progress in the EU integration process, with information-communication technologies addressed under **Chapter 23 "Judiciary and fundamental rights"**.

At the EU level, judiciary information technologies now primarily address the issue of technical and technological connectivity within the judiciary, serving to enable access to and exchange of information between individual national systems, and a direct access by citizens and businesses from one EU member state to the judicial bodies of another state. This significant initiative **(e-Justice Portal)** sets considerable technological, financial and organisational challenges before all the countries participating in the project. Such a new integral approach is expected to guide the European judiciary towards completely new solutions and processes, and candidate countries must therefore actively seek to follow these trends with great care.

In addition, a mention must also be made of the **European Commission Digital Strategy**, enacted in 2018 and setting out a vision of developing a transformed and digitalised system of administration, underpinned by the principles of development of digital solutions with a view to supporting the effective and coherent use of data at the EU level. The digital strategy is based on the following principles that are directly linked to the development of a justice system that includes all the elements of digitalised tools, tailored to the citizens' needs:

- People-friendly technologies
- Fair and competitive digital economy
- Open, democratic and sustainable digital society

These principles have been elaborated further through the 2018 **Western Balkans Digital Agenda**, with a special emphasis on:

- Investment in network connectivity
- Building trust in cybersecurity and industry digitalisation
- Strengthening digital economy and society
- Investment in research and innovation

As for Montenegro's EU accession negotiations, the development of information technologies is recognised in the following three documents:

- European Commission Report for 2019
- Interim benchmarks for Chapter 23
- Action Plan for Chapter 23

Of crucial importance is to point to the European Commission's (EC) Report for 2019, which addresses, under **Chapter 23**, the information-communication technologies in the justice system. The Report finds that the instructions for collecting statistical data in compliance with the European Commission for the Efficiency of Justice (CEPEJ) guidelines are yet to be fully implemented. Issues of primary concern that are identified in the report are that the data on the total length of proceedings is still not available, and that statistical information on the performance of the judicial system is not systematically analysed. Montenegro, a Council of Europe member state, takes part in numerous committees through the representatives of the Ministry of Justice, the Supreme Court of Montenegro and the Supreme State Prosecution service. One such committee is CEPEJ, which is particularly relevant in this context as it requires that reports are based on the data from the judicial information system. The obligation to provide a track record for the judiciary, fight against corruption and organised crime is yet another obligation arising from Montenegro's EU integration process.

The EC's Progress Report points out in particular that the existing judicial information system (PRIS) is not yet fully functional, with special emphasis on the shortcomings in PRIS implementation within the misdemeanour courts. It is also stated that the previous strategic document envisaged the replacement of PRIS with a new IT system, and that the implementation was facing delays due to financial issues. The establishment of the Directorate for Judicial ICT and Data Security within the Ministry of Justice is recognised as an important step forward as it is actively engaged in searching for alternative solutions until the new IT system becomes operational.

The weak points identified in the EC's progress report are addressed by the Action Plan for Chapter 23. It sets out a large number of recommendations and activities relating to the development of the judiciary information system. Montenegro has already met a number of recommendations, and continues to work resolutely on the remaining recommendations, focusing on:

1.2.1. Recommendation: Improve the system of random case assignment, possibly also through modernisation of the court network
Activity 1.2.1.1: Introduce in all courts the system for random case assignment within PRIS, in line with applicable regulations – This activity has been implemented
Activity 1.2.1.2: In basic courts with three judges, enable random case assignment within PRIS through their annual workload distribution plans
1.4.1. Recommendation: Ensure reliable and consistent judicial statistics and introduce a system for monitoring the length of proceedings
1.4.1.1: Establishing reliable and consistent judicial statistics according to CEPEJ guidelines on judicial statistics In the previous period, capacities in courts have been developed for statistical monitoring of the length of court proceedings on the basis of the year as indicated on the case inception document and of any related cases. Given that misdemeanour courts are not covered by the information system, the collection of statistical data is still done manually. An integrated statistical system for the misdemeanour courts and other courts is not in place yet.

2.2.5. Recommendation: Improve uniform statistical data on corruption.
2.2.5.1: Explore whether it would be possible to use the existing judicial information system (PRIS) for statistical monitoring of all the stages of criminal cases with elements of corruption, from filing a criminal report through to final judgment.
2.2.5.2: Introduce a functionality in PRIS that would set up uniform statistical data for monitoring criminal cases with elements of corruption.

ICT is also addressed in the **Interim Benchmarks for Chapter 23**, where the focus is placed on the need to strengthen autonomy and independence of the judiciary through improvements in the random case allocation system in all the courts with three or more judges through PRIS application. It is also envisaged that the planned analysis of rationalisation of the court system should guarantee a minimum of three judges per court as that would allow for an effective random case allocation. At present, it is only misdemeanour courts that are without the information system, which means that cases are still allocated manually. In courts that use PRIS, the algorithm for case allocation has been in use for over seven years. To comply with the principle of random allocation, the courts with three or more judges must assign the cases from one register to at least two judges. There is emphasis on the need to build statistics capacities so that PRIS can be used to monitor the workload and performance of individual judges and courts, as well as measure, inter alia, the average length of court proceedings by case type, the inflow of cases, the number of pending cases, the rate of repeat offending, as well as the length and cost of enforcement procedures. Montenegro analyses such statistics in order to identify backlog cases, exceeding of the deadlines for decision drafting, delays in proceedings, as well as the human and financial resources engaged in the work on a specific type of case. Montenegro is making good use of such data for management purposes and is taking appropriate measures when needed.

Legislative framework

The Judiciary ICT Strategy for 2011-2014 laid the foundation for IT development. The implementation period saw a whole series of laws enacted in various fields of judiciary, with certain provisions drafted in such a way as to respond to the reform of the judiciary information system. This includes the following laws:

- Criminal Procedure Code,
- Law on Misdemeanours,
- Law on State Prosecution Service,
- Law on Special State Prosecution Service,
- Law on Courts,
- Law on Judicial Council and Judges,
- Law on Mutual Legal Assistance in Criminal Matters, and
- Law on Enforcement of Prison Sanctions, Fines and Security Measures.

The legislative framework governing information society is in place and enables full implementation of information technologies in the judiciary. In the period before the ICT Strategy for 2016-2020 was passed, also enacted were the following laws, fully aligned with the EU Acquis:

- Law on Electronic Identification and Electronic Signature,
- Law on E-Commerce,

- Law on Electronic Document,
- Law on Information Security, and
- Law on Electronic Government.

In the previous period, an initiative was launched to amend and harmonise the Law on State Archives with the Law on Electronic Identification and Electronic Signature. The Law on Electronic Identification and Electronic Signature („Official Gazette of Montenegro", Nos. 31/17 and 72/19) was enacted on 3 January 2020 for immediate implementation and is aligned with:

- Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (eIDAS),

The plan of the Ministry of Public Administration for the fourth quarter of 2020 is to additionally regulate the use of and transactions made with an electronic document by amending the Law on Electronic Document („Official Gazette of Montenegro", Nos. 5/08 and 40/11).

The electronic archiving of documents is not a service identified under the Law on Electronic Identification and Electronic Signature as an electronic trust service, but the storage of electronic signature, electronic seal, or the certificates relating to them is however directly linked to the electronic archiving service. Amendments to the Law on Electronic Document will definitely include document digitisation. At present, everything is stored in its original paper format. Digitisation will enable conversions from the paper to the electronic format. To make sure the amendments to the Law are properly made and facilitate its implementation, the Ministry of Public Administration will establish cooperation with other state administration bodies and organise public consultations during the drafting process.

It is worth noting that the internal Rulebook on using and developing the Ministry of Justice subsystem within JIS has already been adopted, while the procedure is now underway for the adoption of other Rulebooks on the use and development of JIS for the subsystems of the AECS, State Prosecution Service and the courts.

Next, the procedure is now underway to adopt the umbrella document "Information Security Policy of the Judicial Information System" with accompanying documents arising from the implementation of MEST ISO/IED 27001:2014 standard, a project launched in the judiciary in 2018, as one of the measures envisaged by the Action Plan for 2019.

SITUATION ANALYSIS

An overview of implementation of the Strategy for Information-Communication Technologies for the Judiciary for the period 2016-2020

The Strategy for Information-Communication Technologies for the Judiciary for the period 2016-2020 was adopted in 2016 with the aim of furthering the development of a modern and user friendly integrated information system for the Montenegrin judiciary. The system is designed as a tool to support the judiciary in its efforts to enhance its administrative capacities, increase its efficiency, including in providing data and services to the institutions and citizens, ensure more efficient cooperation with other justice systems, EU institutions, institutions of EU Member States and international organisations. However, the implementation for quite a few measures and activities whose deadlines were defined in the initial documents of 2016 and 2017 was not supported by appropriate budget allocations, and donor support had not yet been mobilised. As a result, many activities were not implemented as planned, with many of the measures and activities postponed until 2018 and 2019. In the ensuing period, owing to an intensified cooperation with donors and applications to different donor programmes, the funding was secured for the implementation of activities that had been past due. The Action Plan was revised accordingly and the Government adopted the revised Action Plan for the implementation of the Strategy for Information-Communication Technologies for the Judiciary for the period 2016-2020 on 1 August 2019, together with the Annex to the budget for the implementation of the Action Plan. The revised Action Plan identifies the measures, implementing bodies, deadlines, performance indicators, and sources of the funding needed for the implementation of the strategic guidelines as set out in the Strategy.

The previous strategic document defines the following seven strategic areas to be addressed by policy development:

- Development and implementation of software solutions for the integrated information system;
- JIS to serve for enhancing of analysis and statistics capacities of the Montenegrin judiciary;
- Data exchange between JIS and external systems;
- Setting up electronic services for the citizens, legal persons, institutions and international organisations;
- ICT infrastructure;
- JIS security; and
- Management structure and human resources.

The budget allocated for the implementation of the defined activities within the outlined objectives in 2020 is €372,800.00.

In the previous period, €1,596,001.00 from the budget was allocated for the implementation of 2018 strategy objectives, and €1,449,822.00 for 2019 strategy objectives, or a total of €3,418,623.00 in budgetary allocations.

Through IPA 2018 programme for 2020, the Ministry of Justice allocated €2,327,840.00 for the following components:

- Development and implementation of JIS software solutions: €1,070,240.00
- ICT infrastructure: €355,600.00
- JIS security: €850,000.00
- Human capacity development: €152,000.00

The table below outlines the ICT activities as part of IPA 2018:

No.	IPA 2018 COMPONENT	Budget
1	Development and implementation of software solutions for the integrated Judicial Information System (JIS) • eFile (Electronic filing system) for JIS – €220,240 (Certificate Authorities-CA for the system, development, system security, maintenance for the period of 3 years) • Implementation of the system and training for JIS users – €200,000 • Case Law information system for the Supreme Court – €225,000 (development, system security, maintenance for the period of 3 years) • Software for Disaster Recovery (DR) location with double licences for system software for DR - €100,000 • Notification system/email and SMS – €100,000 (hardware, licence and software) • System for judicial registers - €225,000 (development of software, procedures, consulting, training, security, maintenance)	1,070,240
2	ICT Infrastructure • Procurement and installation of the equipment needed to upgrade the server, storage and network infrastructures in the Data centre and DR location -€255,600.00 • Upgrade of the Local Area Network (LAN) in institutions - €100,000.00	355,600

3	Security of Judicial Information System • Data loss prevention system – €250,000; • Physical, IT and personal security measures – €130,000; • Log management system – €100,000; • Procurement of equipment and implementation of Disaster Recovery location for the needs of ISP – Network and security segment - €200,000; • Support to implementation of international standard for information security management (MEST ISO/IEC 27001) -€100,000.	780,000
4	Human resources development • Development of capacities of existing ICT departments in the Montenegrin judiciary – €70,000 • Continuing, standardised and appropriate ICT training – €52,000	122,000
TOTAL: €2,327,840.00		

In addition to the above funding, the United Nations Development Programme (UNDP) and the Government of Montenegro signed the Agreement on joint financing of the project "Improving efficiency of the justice system", implemented with the joint funding coming from the budget and the donor funds of the Government of the Kingdom of Norway. The total value of the project is €1,826,515.00, of which budget co-financing accounts for €1,041,139.00, while donor participation accounts for €785,376.00. The implementing agent is the UNDP Office in Podgorica.

The main project objectives are to implement the key measures/activities defined in the ICT Strategy Action Plan:

1. Subsystem for the courts,
2. Electronic exchange of data between courts and other judicial institutions - – **E**nterprise **S**ervice **B**us (ESB) platform,
3. **B**usiness **I**ntelligence (BI system) – Analysis and statistics capacities of the judiciary, to generate complete and reliable reports, in line with the recommendations from CEPEJ guidelines, and
4. Subsystem for the AECS.

The project activities relating to the procurement of the courts subsystem and the electronic exchange of data were implemented in June 2019. The development of these systems is expected to finish in the second quarter of 2021, with implementation to follow at the same time. The Project also includes the development and implementation of software solutions for the AECS subsystem, as part of the integrated JIS, to be designed in line with the European recommendations and guidelines. To that end, the Ministry of Justice of Montenegro and the Ministry of Justice of the Republic of Serbia signed the "Protocol on the provision of the source code for the establishment of the information system for the AECS Montenegro" on 5 November 2019. It should be noted that the customisation and implementation of the AECS subsystem is being implemented. The process is expected to end by the end of 2020, with the system put in production in the second quarter of 2021.

As regards the enhancement of human capacity, two ICT consultants have been recruited under the UNDP project to help develop institutional capacities of the Ministry of Justice for JIS implementation. The current staff numbers are not sufficient for its mandate. Yet, as the budget is scarce, quality ICT professionals are not interested in employment with the public administration, and at present, it is therefore not possible to further enhance human capacity.

The plan is for the kernel of the future JIS to be located in the Supreme Court Data Centre. In 2019, the equipment was procured and installed to upgrade the Data Centre's server, storage and network infrastructure, and €500,000.00 worth licences were procured and delivered for virtualisation purposes. In addition, a high capacity storage system was procured as part of the procurement of services for the development of the electronic archiving software module, which expanded the system capacity for data storage and archiving.

In the prevous period, optical WAN infrastructure was set up to connect all the judicial institutions in the territory of Podgorica into an optical ring (speed 1 Gbps), with the locations in the northern and coastal regions still having insufficient bandwith because their WAN links are unstable. The completion of the entire optical WAN infrastructure is expected by the end of 2020 thanks to the funding provided by the US Embassy. Also, misdemeanour courts, just like a significant number of other institutions, currently do not have an adequate LAN infrastructure or adequate technical conditions for JIS implementation. Thanks to the opportunities opened through the above mentioned project, conditions will be put in place for the installation of optical infrastructure for all the judicial institutions, primarily the courts and the prosecution service.

Through EURoL II project, €250,000.00 worth computer equipment has been procured for the courts, Ministry of Justice, and AECS. During the implementation period, thanks to a budgetary allocation of €220,720.00, computers and computer equipment were installed. In addition, regular budget allocations intended for the ICT Directorate and ICT service/departments of other institutions are used to regularly renew computer equipment, to an extent and within a time framework that the allocations permit. Further, a videoconferencing system has been implemented, including also the staff training and system promotion activities. Stage 1 focused on the installation of equipment, and Stage 2 on the procurement of additional equipment, training for the users in the judiciary, and promotion of the system as a whole.

Montenegro is one of the first countries in the region to launch the project "Implementation of information security and Montenegro's judicial information system" in accordance with the international and national standard MEST ISO/IEC 27001:2014. An analysis was conducted to look into the current security of the existing information systems, and the risks to information security were identified, evaluated and classified. A risk management plan has also been made, including the list of controls, i.e., organisational and technical measures to be taken to address the mitigation and elimination of any risks identified. The "Policy of information security of the judicial information system" has been designed and is awaiting adoption by the line institution. Also in place is the Business Impact Analysis, which includes the necessary procedures on the basis of the existing business processes, IT infrastructure and security policy, as well as the business continuity plan.

As part of this project, officers in the judicial institutions were issued the certificates for the implementation of this standard, including the certificates of lead implementor, internal auditor, risk manager, and Certified Data Protection Officer (GDPR). To increase transparency and introduce electronic services (e-services), a new web portal of the judiciary was developed to which the existing data was migrated.

The lists of categories of register material, together with the indications of retention deadlines, were harmonised at the level of the judiciary so that, once scanned, they would make a uniform archive digital material. In order to harmonise the legal framework relevant to the electronic archiving and digitisation of archives in the judicial institutions, the Law on State Archive will be amended and harmonised in the coming period with the Law on Digital Signature and Law on Digital Document which address these issues. The Methodology for the digitisation of archives in judicial institutions is in place and greatly facilitates the archiving and storage of case files once the case is closed, resulting in a completely electronic case file, which is digitised and archived.

For reasons of complexity of some of the pending measures concerning the amendments and harmonisation of the legislative framework that are expected to take place alongside the implementation of the new JIS, EURoL II provided expert asistance and the expert is now working on these measures together with the Working Group members. With expert assistance, the Working Group, which includes the representatives of all the judicial institutions, has prepared the drafts of the four Rulebooks on the use and development of the JIS subsystems, that are now awaiting adoption by the competent bodies in 2020.

In 2019, the work on defining priority measures, preparing technical documents and specifications for the necessary equipment and software licences for the implementation of physical, information and personal security measures was not completed because the Information Security Policy for JIS was not yet in place. In 2020, however, all the priority measures have been defined and the funding secured from IPA funds, so that it is now expected that all the measures will be implemented by the previously agreed deadlines.

Subsystems of the judiciary

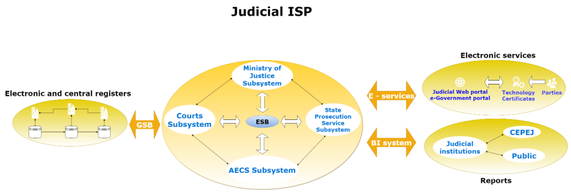
The Judicial Information System (JIS) is an integrated information system primarily designed to improve business processes of the key units in the judiciary. JIS development is designed to integrate information systems of every individual organisational unit, while observing all the legislative procedures and regulations that set out the activities, powers and responsibilities of the Ministry of Justice, courts, State Prosecution Service and the Administration for Enforcement of Criminal Sanctions (AECS). The integrated judicial information system is envisaged as a modern information system with the following four main subsystems:

- the Ministry of Justice Subsystem,

- the courts Subsystem,
- the State Prosecution Service Subsystem, and
- the AECS Subsystem.

The primary significance of JIS is that it ensures interoperability of the four subsystems in a way which does not hamper the principle of independence of the different branches of power. JIS aims to set up a centralised and efficient system for data organisation, i.e., a system which is free of any redundant or duplicated data, a system which defines the standards for data entry, generates reports and records, and has a transparent structure of processes and data flows within and between institutions, which enables further upgrades and improvements in the judicial system. What is needed is a functional and integrated information system which saves time and whose implementation is supported by both the necessary financial resources and the officers with required qualifications. Further, JIS seeks to achieve a maximum automation of the procedures and thus reduce the impact of the human factor on efficiency, application of the "Paperless Judiciary" concept, and the electronic exchange of data and documents between judicial institutions and other state and international institutions. Apart from the automation and optimisation of processes, the system hopes to improve the quality of data given that the process of multiple manual entries of the same data through different systems will be eliminated. This is in line with the so called "once-only" principle: data should be entered only once in only one location, with other systems using them through data exchange without the need for repeat entries. This principle now makes the official European Commission recommendation to be implemented through the development of state information systems. For this reason, a number of functionalities has been defined as requiring automation through the exchange of data between different JIS subsystems, as well as between JIS and other registers:

1. Establishing a connection with the following registers of the Ministry of the Interior and the Police Directorate
   1.1. Central population register
   1.2. Register of identity cards and travel documents
   1.3. Register of motor vehicles and driver's licences
   1.4. Register of border crossings
   1.5. Register of firearms
2. Establishing a connection with the Central Companies Register of Montenegro
3. Establishing a connection with the Central Register of Insurees
4. Establishing a connection with the Registry of criminal sanctions to cover the following two directions
   4.1. Access to data from the registry of criminal sanctions for physical persons, minors and legal persons
   4.2. Entry in the registry of criminal sanctions for physical persons, minors and legal persons
5. Establishing a connection with the Registry of fines (ROF)
   5.1. Access to ROF data
   5.2. Entry in ROF
6. Establishing a connection with the subsystems for the prosecution service and the courts to cover the following two directions:
   6.1. Automation of case formation in the courts based on prosecution files.
   6.2. Delivery of the rendered decision by the courts to the prosecution service
7. Establishing a connection with the probation system for automated entry of final judgments with fines, subject to control by probation officer
8. Establishing a connection with the subsystem for AECS to cover the following two directions:
   8.1. Insight into AECS register of imprisoned persons
   8.2. Automatic entry of data on final judgments including a prison sanction



Mutual connection between the JIS subsystems, connection with external systems, and electronic services

A special emphasis is placed on the need to achieve maximum transparency in the work of the judicial institutions and ensure their availability to the citizens and the public, primarily by improving electronic and multimedia communication channels. Online accessibility of legal information for judicial office holders and the wider legal community, and application of modern learning methodologies, such as distant learning, for example, will help improve the quality of their work.

JIS ensures automation of key business processes in these judicial institutions, including: electronic processing and access to cases, creation of electronic case files, and exchange of data both within the subsystems through the ESB platform, and between the judiciary and other institutions through the GSB platform, developed for this purpose by the Ministry of Public Administration, as well as consistency and backup of all the databases within the system.

Following the analysis of the state of play in its information system, the judiciary identifed further directions for the development of JIS for the courts and the Ministry of Justice, primarily through the development of new software solutions, while for the AECS, the plan is to modify/customise SAPA software solution developed for the penitentiary system in the Republic of Serbia. The subsystem for the State Prosecution Service was already operational as a separate information system at the time when the Action Plan for the Strategy for ICT in the Judiciary for 2016-2020 was adopted. Therefore, the sofware licences were purchased and the existing IBM Case Manager System was upgraded, which will increase the interoperability of the IBM solution with other JIS subsystems.

All the subsystems of the Montenegrin judiciary have separate software solutions for data processing and analysis. A need has therefore been recognised to implement Business Intelligence (BI) system to allow the processing and analysis of the data generated from the databases from all the four subsystems. The project incorporates the implementation of business intelligence solutions and data warehousing solutions (DWH), which includes the following

1. Hardware and licence
2. Meeting functional requirements
3. Meeting technical requirements
4. Testing
5. Training
6. Putting the system into production

It is important to note that since JIS software solutions are not implemented yet, the deadline for implementation of the measure on developing **B**usiness **I**ntelligence (BI) system has been postponed to late 2021. The process of developing BI system is highly interrelated to the process of developing other judiciary subsystems that serve as basis that BI draws data from. Only after all the four subsystems have been developed and made operational, the conditions will be in place for the implementation and development of the BI system. As each of the subsystems has separate software solutions for processing and analysis, there is a need to implement BI system to allow processing and analysis – aggregation of the data generated from the databases of all the four subsystems. This would enable generation of complete statistical reports to meet both the recommendations of the European Commission for the Efficiency of Justice (CEPEJ), and the needs of the judicial institutions and other institutions in Montenegro. What follows is a number of examples of aggregated data:

- Monitoring of quantity and efficiency indicators for the work of judicial institutions (especially with regard to old and backlog cases, monitoring of predictable timelines for resolution of cases, control list to check time management, etc);
- Monitoring the quality of work of the judicial institutions - structure of the human resources, staffing levels in the judicial institutions, monitoring time benchmarks for their work, and evaluation of their work.

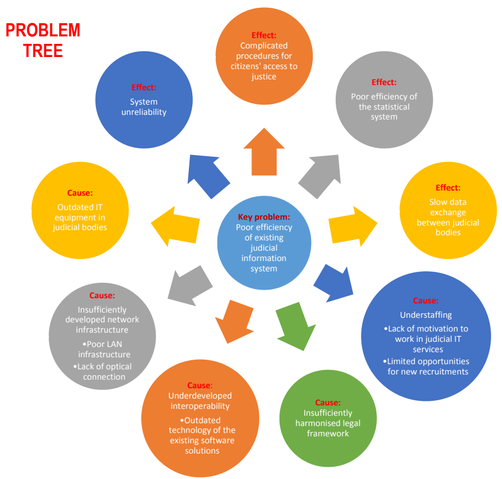
In 2020, a series of technical procedures has been implemented to set up a quality technological foundation for the development of JIS. This primarily includes the technical specifications for the equipment to upgrade the server, storage and network infrastructure in the Data Centre and DR location, as well as technical specifications for LAN/WAN network of judicial institutions. It is important to point out that all the prerequisites are in place for the preparation of the technical documents and specifications of the necessary equipment and software licences for the implementation of physical, information and personal security measures, i.e., a need has been identified to implement physical security measures and improve physical protection in DR location on the premises of the Basic Court in Niksic. In addition, technical documents and the required specifications of the equipment and software licences for the procurement and implementation of Log Management System have been prepared. The Ministry of Justice has prepared the Business Continuity Plan and DR Plan, that need to be brought in line with the umbrella document that will refer to the entire JIS. Apart from that, activities are underway in order to:

- prepare technical documents and specification of the necessary equipment and software licences for Disaster Recovery Location of JIS.
- prepare and adopt Catalogue of Sensitive Data, as part of JIS
- prepare "Rulebook on categorisation, storage and use of JIS data"
- prepare technical documents for the procurement and implementation of the system for data loss prevention.

The next sections of the Programme will address all the subsystems, with emphasis on the current state of play, results achieved, existing problems, and the steps that will be taken over the next three years.

As regards the problems identified, it must be pointed out that in respect of all the four subsystems of the judiciary, in addition to the problems specific to each individual system, a number of problems have been identified that are common to all the subsystems and that require as high level of interoperability as possible. The focus is on:

- Procurement of new and replacement of existing computer equipment
- Upgrading of WAN network – a need identified for introduction of optical connection in courts and prosecution services.
- Upgrading of LAN network – a significant number of courts, prosecution services and AECS does not have a LAN that is developed to a satisfactory level, which calls for special attention in the coming period.



Ministry of Justice Subsystem

The key role in the implementation of the 2021-2023 ICT Programme belongs to the Ministry of Justice, as the body coordinating the entire judicial reform. In this regard, the organisational structure of the Ministry of Justice was changed by establishing a new organisational unit at the MoJ - Directorate for Judicial ICT and Data Security, whose main task is centralised ICT management. The basic competences of the Directorate are to coordinate the entire process of development and implementation of the Judicial Information System (JIS). The Ministry of Justice is the leading institution of the process. It is especially important to emphasise the role of the Directorate in the process of continuous provision of the necessary funds for the implementation of planned activities, which is why it is very important to point out successful examples of cooperation with international donors. The Directorate for ICT is heading the entire process of drafting all strategic documents and analyses of information technologies in the judiciary, as well as managing the process of monitoring the implementation and reporting on the implementation of strategic documents.

The Ministry of Justice is responsible for several information systems, most of which relate to criminal and misdemeanour records of physical and legal persons, as well as criminal sanctions against minors:

- Registry of fines and misdemeanour records - ROF
- Registry of criminal records of physical persons - RCR
- Application for mutual legal assistance - LURIS
- Application for probation
- Criminal records of legal entities and records of criminal sanctions for minors

These information systems have been developed on different IT platforms, so there is a technical need to develop a new SW application that will include all registers, to cover the existing business processes, optimize and improve current functionalities, and to make the Ministry of Justice subsystem fully interoperable with the rest of the JIS. As the development of this item is covered by the IPA 2018 programme in the amount of €225,000.00, the technical documents and ToR were sent to the EU Delegation. It is expected that the development will begin by the end of 2020. In order to exchange data, a number of web services have been defined as necessary for the connection with both other JIS subsystems, and with other registers.

Given that the UNDP Office in Montenegro is the implementing partner of a part of the JIS for which direct implementation support was requested from the Government of the Kingdom of Norway, the Ministry of Justice prepared an information paper in 2019 proposing that the Government of Montenegro ensure continuity of the project co-financing by transferring to the UNDP Office the amount of €210,000 obtained under the 2019 Budget Law, which was missing for the development of the AECS software application. The proposal was accepted by the Government of Montenegro and the funds were transferred to the UNDP office. The implementation of that project element has started, with a special emphasis on the improvement and adaptation of SAPA solution to the needs and organisation of the AECS in Montenegro, data migration from the existing application, implementation and training of users in the Montenegrin AECS. The project is currently in the implementation phase and is expected to be completed by the end of the second quarter of 2021. That will mark the beginning of a one-year maintenance period under the warranty.

Web portal

A breakthrough was achieved in the previous period towards creating conditions to use e-services in the judiciary, in accordance with the Law on Electronic Government, which stipulates that e-government portal www.euprava.me serves as a centralised portal through which electronic services are provided to citizens in one place. In this regard, the Ministry of Justice has developed a centralised Web portal, a single URL address for access to all the judicial bodies, which contains a system of portals integrated into a single unit, at the address – www.pravosudje.me. The new web portal has significantly increased the level of public openness, transparency and accessibility. It works in a faster, simplified way, with an improved visual identity and a more advanced search functionality (e.g. search of indictments, court decisions and trial schedules). In addition to the above, the web portal is a complex system of applications whose purpose is to present information, but also provide a dynamic access to published documents intended for use by the citizens, lawyers, legal entities, institutions and international organisations, i.e., the entire interested public.

Further development of the web portal will lead to improved functionality and provision of e-services, primarily through:

a) possibility for physical and legal persons to submit applications to the courts for the issuance of certificates within the scope of their jurisdiction;

b) examination of cases for all participants in the procedure;

c) submission of digitally signed documents in already existing cases:

d) initiating cases before courts and delivering court decisions electronically, etc.

Electronic archiving

A significant progress has been achieved through the development and implementation of a software application/module for electronic archiving, the purpose of which is electronic archiving and digitisation of archives in judicial institutions. The system has been installed and is in the production phase. The first group of users has been trained and a test sample of 400,000 pages of archival material has been scanned.

Owing to the introduction of electronic archiving, judicial institutions are greatly facilitated in the process of archiving and storing cases upon their completion, thus obtaining a completely electronic case file which is digitised and archived. The archiving module enables the generation of archival material, consolidation of documentation, conversion into an integrated archived PDF file, signing with a digital certificate, storage in a database, as well as enabling subsequent examination/search of digitally archived cases. Additionally, as part of the public call for the procurement of electronic archiving software module development services, a higher capacity storage system was provided, thereby expanding the resources of the system for data storage and archiving in the Supreme Court Data Centre.

Staff training

Employees of the judicial institutions have attended a number of specialised training sessions in 2019, as follows:

- Basic database training - 7 participants
- Computer ethical hacking - 2 participants
- Database administrator - 3 participants
- ITIL V4 Foundations (SM2188) – 2 participants
- Training for software/system engineers - 7 participants
- ECDL (European Computer Driving License) Beginning of training sessions and certification of employees of judicial institutions, by the accredited ECDL test centre - 73 participants

In the coming period, the training of employees in charge of the JIS will be actively pursued with the aim of further building the human resources capacity in judicial bodies. In this regard, additional funding needs to be provided to give staff the opportunity to be trained to work on the new technologies and with the new tools.

Courts Subsystem

The development of PRIS application, which is still in use today, began in 2000 and was first introduced in courts and the IECS in 2001. PRIS was rolled out at the level of all judicial institutions in 2009. This application was developed in Oracle Forms and Reports technology, which is considered to be an outdated technology, with a number of security flaws. Planning and roll out of a new information system for court activities started at the beginning of 2016, which resulted in a tender jointly conducted by the Ministry of Justice and UNDP, as part of the donations from the Government of the Kingdom of Norway. In this regard, the Government of Montenegro adopted an information paper on the project *Improving the Efficiency of Justice through the Use of ICT* and signed an Agreement on joint project financing between the United Nations Development Program (UNDP) and the Government of Montenegro. The total value of the project is €1,826,515.00, of which budget co-financing amounts to €1,041,139.00, while donor participation is €785,376.00. The project is implemented by the UNDP Office in Podgorica.

The main objectives of the project are the implementation of the key measures/activities from the Action Plan accompanying the Strategy related to the courts subsystem:

1. Development of the courts subsystem and electronic data exchange between the courts and other judicial institutions - **E**nterprise **S**ervice **B**us (ECB) platform
2. Development of a new information system for courts

During the validity of the 2016-2020 Judicial ICT Strategy, within the activities defined by the Action Plan accompanying the Strategy, two important software applications were developed: a new web portal of all the judicial institutions and the Electronic Archiving System.

- The new web portal is a huge improvement compared to the old portals that existed in the judicial institutions and enables the implementation of advanced electronic services.
- As regards the archiving system, which is implemented at a satisfactory level, most court archives are overcrowded and it is therefore necessary to start extracting the material, classifying and digitising the archival material into the material which will remain in the courts permanently and the material which will be retained for a long term. Following that, the plan is for the courts to perform regular annual material extraction on their own, and for the new court information system to be connected to the digital archive in the future, so that the cases are automatically transferred to the archiving system.

The project activities related to the court subsystem and electronic data exchange started in mid-2019. Adoption of the Business Process Analysis is expected in July 2020, to be followed by implementation. This phase will be followed by testing and implementation of the system in the courts. It is expected that the system will be fully implemented by the end of 2022.

In addition to the systems envisaged by the Strategy, the Judicial Council Secretariat, in cooperation with the Commercial Court, has implemented a new project of the Pledge Register IS for the needs of the Commercial Court.

The following activities are planned in the coming period:

- Continued activities to develop and implement a new software application for the court information system
- Development of central records for judicial office holders (this includes data on judicial office holders, training sessions conducted, statements of personal property, promotions, information of the Code of Ethics Commission, disciplinary proceedings, and other information on judges that have to be kept by the Judicial Council)
- Development of a pilot voice recognition and dictation system project
- Development of a case law system for users outside the courts
- Development of email and SMS notification system
- eFiling system - electronic submission of documents
- Improving the reporting system and implementing the BI system

Data centre and security

A particularly important security issue is the provision of digital data within the courts' data centre, which houses the servers and storage system, which house the PRIS application, all data, as well as all other systems used daily in the courts. In addition, this is a central point of system security and a security breach of the devices found here would have severe consequences for the system. For these reasons, it is necessary to continue the development of the data centre and strengthen the security aspects of the system. In the past, servers and storage systems, fire extinguishing systems and other devices that were lacking for the optimal functioning of the data centre were procured regularly. Plans for the next period of the public policy implementation include the purchase of additional server equipment in order to develop the system further: expansion for the storage system, additional blade servers, backup network devices and modules for communication via optical cables, device licenses and other equipment necessary for the data centre's operation and maintenance.

In addition, it is necessary to strengthen the overall security framework, taking into account that the importance and amount of information in the system is growing, as is the risk of attacks that could cause data loss or alteration. On the other hand, hacker tools and their destructive power are growing every day, so new threats to information systems are being created every day. Therefore, it is important to provide a budget every year for the introduction of new security solutions. In order to boost the system security, measures will be taken regarding:

- Implementation of SSO and PKI
- Introduction of intrusion prevention and detection systems (IPS/IDS system)
- Improving the web filtering system

- Implementation of ISO standards (e.g., ISO 27001 and ISO 9001) at the Judicial Council Secretariat with certification

Disaster recovery - securing data in case of catastrophic events

In case of catastrophic disasters (fire, earthquake, terrorist act, floods, etc.) and destruction of equipment in the data centre, data would be lost permanently. In order to overcome this risk, it is necessary to build a Disaster Recovery Site. In the previous period, the Judicial Council Secretariat prepared the project documents, while the premises for this purpose were provided at the building of the Basic Court in Niksic. It was agreed that this DR site would be a joint site for the entire JIS, by allocating specific resources to each of the judicial institutions. To this end, part of the funds for the works and equipment was provided by the Judicial Council Secretariat, while the major part of the funds was obtained under the IPA 2018 programme. The completion of project implementation is expected in the near future.

Network infrastructure

In the previous period, activities were carried out to improve the WAN segment and to procure active equipment for all the courts, and the LAN network was reconstructed at the building of the Basic Court of Podgorica, the Misdemeanour Court of Podgorica and the Basic State Prosecution Service in Podgorica. Designs were also developed for other facilities in which the judicial institutions are located. Since 2014, all the courts in Podgorica have been connected by optical cable. Therefore, the main problems are the speed and stability of connections to the courts outside Podgorica, which is why it is necessary to take measures to:

- introduce optical cables in all courts in cooperation with Crnogorski Telekom and the Ministry of Public Administration,
- procure redundant links,
- procure network equipment that will serve as backup equipment for all locations,
- continue reconstruction of LAN networks by courts in accordance with the developed designs.

IT equipment in courts

In the past 4 years, over 400 computers have been installed in courts (both for new users, and as a replacement for outdated equipment), as well as over 200 printers and multifunctional devices, etc. The total value of the equipment purchased is over €500,000.

However, outdated IT equipment is still used, which is an issue. A significant number of devices older than 10 years must be urgently replaced (according to estimates, about 500 computers, which were purchased in 2009). It is especially necessary to work on ensuring reserve IT equipment, so that we can respond to the requests of courts as soon as possible.

Also, in the last decade, activities have been undertaken on the implementation of the Smart Courtroom project. Two courtrooms at the High Court in Podgorica and one courtroom at the High Court in Bijelo Polje were equipped with multimedia equipment. They have associated utility rooms and rooms for protected witnesses. Due to the increased volume of work and the unsuitability of the room for protected witnesses in the building of the High Court in Podgorica, a decision was made to equip the courtroom of the Basic Court in Podgorica (the largest and most spacious courtroom in Montenegro) with the necessary equipment and to construct the associated utility room and rooms for accommodation and hearing of protected witnesses, as well as victims of sexual violence, minors and other vulnerable groups. This project is a product of cooperation between the US Embassy and the Judicial Council Secretariat, and its implementation is expected to continue, especially in terms of increasing the number of smart courtrooms.

In the coming period, it is necessary to secure the funds for the replacement of outdated equipment (about 450 computers, more than 150 printers, photocopiers in almost all courts, high-speed scanners, etc). Around €200,000 is needed annually to replace the equipment in the courts and the Judicial Council. This allocation has a growing significance with the introduction of new systems, because courts are unable to maintain the existing work process without computers and other IT equipment in place.

State Prosecution Service Subsystem

The PRIS subsystem for the prosecution was implemented in the State Prosecution Service as part of PRIS overall implementation in the Montenegrin judiciary in 2009. The business processes covered by the PRIS were implemented on the basis of the then competence, the Criminal Procedure Code and the Rulebook on the internal organisation of the State Prosecution Service. The need to change the existing functionalities and add new ones arose from amendments to the Criminal Procedure Code and the transfer of pre-investigation and investigative actions to the competence of state prosecutors, the establishment of the Special State Prosecution Service in 2015, as well as the fact that the PRIS subsystem for the State Prosecution Service could not be used as an analytical tool, but instead served only for the recording of data to generate statistics. Because both the funds for purchasing new equipment and qualified IT staff were lacking, the entire system entered a stage of stagnation for many years. In other words, all the existing resources, such as software, hardware and network infrastructure were not upgraded. The first significant steps in the development of information-communication technologies within the State Prosecution Service were taken in 2015. It is important to mention the European Commission's EURoL 1 project through which the State Prosecution Service received a significant €80,000 worth donation in computer equipment, as well as expert assistance through which the then state of play was analysed, with special emphasis on:

- PRIS functionality and the necessary changes,
- state of outdated technology in which PRIS was developed,
- measures from the Action Plans for Negotiating Chapters 23 and 24 relating to information technologies and security, and
- measures to introduce an information system in the State Prosecution Service by the end of 2015, which will be connected to databases of other bodies for law enforcement purposes.

After conducting an expert analysis and presenting the system to the heads of units, state prosecutors and administration of the State Prosecution Service, the proposal was accepted to customise the information system of the State Prosecution Service, adapt it to the needs of the State Prosecution Service and introduce the off-the-shelf IBM Case Manager System. The creation of technical conditions for the implementation of the State Prosecution Service information system began with the installation of the donated computer equipment and a centralised domain controller with a corporate antivirus software. The IBM CMS was established in all prosecution offices in July 2016, and it is used in day-to-day work to record and manage all types of cases, create electronic cases, and scan documents. In the previous period, within the maintenance and upgrade of the IBM CMS, web services were developed to establish a connection with the criminal records of the Ministry of Justice, records (civil status) of the Ministry of the Interior, as well as the records of state border crossing and criminal charges of the Police Directorate. The work on establishing these connections and exchanging data with bodies and institutions is a continuous process and the system will be continually upgraded in the future as well. The development and implementation of the ECB communication platform and the court subsystem will create conditions for data exchange between the State Prosecution Service and the courts, which is a big step towards the achievement of "paperless judiciary".

In the coming period, the State Prosecution Service will improve the information system by introducing an adequate and compatible IBM BI system in order to improve the quality of data analysis and statistical reporting.

Owing to the donation of the IPA 2014 project *International Cooperation in Criminal Justice: Prosecutors' Network of the Western Balkans* a system was developed for monitoring mutual legal assistance cases (LURIS), which includes all state prosecution offices. The system was fully rolled out in early 2016.

In the previous period, a DMS was rolled out for the Prosecutorial Council Secretariat (a system for recording cases and documents within the competence of the Prosecutorial Council and the Secretariat), followed by a system for recording information about state prosecutors (employment history, promotions, training, etc), as well as an accounting and finance system at the Prosecutorial Council Secretariat, which will be developed further, according to dynamics of recruiting accountants for state prosecution offices.

However, it is especially important to point out that the State Prosecution Service and the Prosecutorial Council Secretariat do not have the office space available for the establishment of a data centre. The hardware (servers and storage) of the information system is for that reason located at the data centre of the Ministry of Public Administration, while LURIS was rolled out as a subsystem, and exists as a separate instance on the equipment and in the Ministry of Justice data centre.

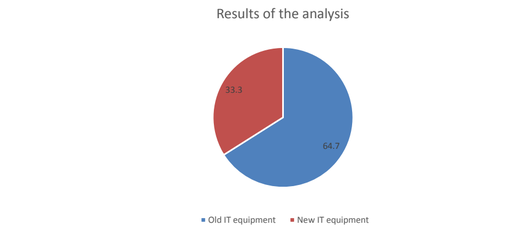
With the implementation of its IS, the State Prosecution Service also faced the problem of network infrastructure security and stability. In cooperation with the Ministry of Public Administration, optical cabling was introduced in state prosecution offices in Podgorica. The donation of the US Embassy in Podgorica in the amount of €42,582.00 was used to procure active network equipment for all state prosecution offices, thereby introducing protected VPN tunnels between the state prosecution offices and the ministries of justice, public administration and the interior, which significantly improved the network's WAN segment.

As for the LAN network, the reconstruction works at the building of the Basic Court in Podgorica also included the premises of the Podgorica Basic State Prosecution Service which are located there, while the Supreme State Prosecution Service, in cooperation with the Property Administration, started to reconstruct the LAN network at the Supreme State Prosecution Service building which also accommodates the Special and High State Prosecution Service in Podgorica. These works are nearing completion.

The WAN and LAN segments will be further upgraded by introducing optical links in all state prosecution offices, reconstructing the LAN network in accordance with the developed designs, as well as by continuously upgrading and procuring active network equipment (in most municipalities, state prosecution offices and courts are in the same buildings, so that WAN/LAN networks will be upgraded and reconstructed under the designs already mentioned in the previous chapters).

In order to increase the security of the State Prosecution Service subsystem, and in accordance with the JIS Information Security Policy, the State Prosecution Service Subsystem Security Policy, Business Continuity Policy, and Disaster Recovery Plan will be developed and finally ISO Standard 27001 will be implemented in one state prosecution office or the Prosecutorial Council Secretariat.

The analysis of the current condition of computer equipment at the State Prosecution Service was conducted in 2017 and the results are shown in the following graph:



The average of equipment older than six years, at the level of all state prosecution offices, is 64.79%. Taking into account both the available own budget funds, as well as the funds of the ICT Strategy for these purposes and the process of filling in planned positions in prosecution offices, the possibilities for replacing outdated computer equipment are very limited, so that the percentage of outdated equipment (older than 5 years) has been only slightly reduced

In the previous period, the hardware (servers and storage systems) that the IBM CMS and other software applications are located on was purchased and replaced, and some outdated computers were also replaced.

Taking into account that at the end of 2020 the equipment donated by EURoL1 in 2015 will have been used for full 5 years, as well as that the state prosecution service still has computer equipment older than ten years, the equipment procurement needs over the next three years amount to about 120 computers, 40 printers, about 30 high speed scanners, at least 5 photocopiers, about 10 laptops for the purpose of making crime scene records. For these purposes, the State Prosecution Service needs €50,000 per year.

The subsystem of the State Prosecution Service is also included in the implementation of the project establishing the DR site (already described under the part on the court subsystem).

In 2011-2012, the state prosecution offices received donations in the devices for audio-visual recording of interrogations of adult suspects and the devices for recording minors who are either victims or witnesses of crimes. Over the years, these devices have become outdated, with most of them no longer operational. The State Prosecution Service has opted for a technical design solution of an integrated system that can meet the legal and technical requirements for audio-visual recording of both adults and minors and thus reduce the costs of procurement, installation and training of audio & video operators in state prosecution offices. For now, one such system has been installed and another one is planned in 2020. Given the need for a faster pace of replacement and procurement of the missing systems for audio-visual recording of interrogations, a priority for the coming period is to provide funds for the procurement needs of at least five state prosecution offices, which totals around €100,000.

The following was achieved through the ICT Strategy projects:

- A modern, technologically advanced integrated web portal for all the judicial bodies has been created and is available online. The subportal for the State Prosecution Service and the Prosecutorial Council contains individual websites for all state prosecution offices and the Prosecutorial Council, which has significantly increased the level of transparency and accessibility of the prosecutorial organisation to citizens. State prosecution offices and the Prosecutorial Council have been given new office space to serve for publishing current events, announcements, information, results of work and other information of importance to the general public.
- A digital archiving system has been developed and introduced. The software application is functional and meets the needs, but state prosecution offices have huge archives and the work of archivists is usually performed by one employee or one of the registrars as an additional activity. It is therefore necessary to perform a mass digitisation of archival material which is kept permanently and thus create conditions for regular and daily digitisation of newly created archived documents.

Administration for Enforcement of Criminal Sanctions Subsystem

In the previous period, significant steps were made to upgrade the information system and equipment at the Administration for Enforcement of Criminal Sanctions (AECS). It is especially important that over 20 new network devices were put into operation, and that oracle VM manager virtualisation with several servers for services and protection systems at the AECS level was introduced. Moreover, as regards security, a redundant firewall device has been introduced to support the existing systems. As part of separate infrastructure for the video surveillance system, 6 servers were added in accordance with the recommendations of the Milestone platform for the IP video surveillance system. AECS Data Centre is equipped in accordance with the best practices in the field of physical and technical protection, which means that it has an antistatic floor, gas fire extinguishing system, separate generator unit, access control, fire rated doors and video surveillance. Many workstations have been replaced over the past 4 years, and, as a result, the average age of workstations has dropped from 9 to 4 years.

During 2016-2020, all the buildings were connected by optical cables with sufficient capacity, which is planned for all current and future services that will be used within the AECS. The main part of the completed self-supporting cable bundle (SCB) refers to the Remand Prison, the administrative building of the penitentiary and the penitentiary compound. The entire installation of self-supporting cable bundle networks is planned to be completed by the end of 2020, except in the women's penitentiary and the short sentences prison. During the construction of the self-supporting cable bundle network (SCB), a part of the telecommunication ducting for possible future projects was laid. Also, the security of passive network equipment is very much taken into account during the planning and execution stages. The self-supporting cable bundle network was designed and constructed in such a way as to satisfy both the integrity of the passive network video surveillance equipment and the rest of the network. The plan for the next period is to construct the self-supporting cable bundle network of the women's penitentiary and the short sentences prison, revise the self-supporting cable bundle design for the outer part of the fence which was done in 2007, and to plan and execute works on the redundant optical ring of the entire AECS.

Video surveillance

One of the goals defined as a priority during the validity of the previous strategic document was the introduction of centralised IP video surveillance. This was in response to the shortcomings noted in the earlier video surveillance system, such as:

- Existence of an analogue video surveillance system that was non-uniform, closed, obsolete, without the possibility of full management, out of sync and uneconomical for maintenance. A big problem was the quality of the videos themselves, which could often not be used to identify people or incidents.
- In addition to the network of active/passive infrastructure, the peripherals, i.e., cameras, DVRs, computer recording units, media converters and NVRs also represented an issue.

As a result, video material was of insufficient quality, and it was impossible to conduct effective monitoring, maintenance, or synchronisation, alongside a host of other problems linked to one of the main low current systems in AECS.

In order to address these shortcomings, connection of all prison units with optic cables into one compact unit has started, which is tightly coupled with the AECS's self-supporting cable bundle network. The second goal was to create a self-supporting cable bundle network for each prison unit separately. Camera positions were planned in accordance with the law and the AECS needs. The needs of network equipment, servers, monitoring devices and monitors have been defined. The basis of the video surveillance system largely depended on the quality planning and execution of AECS' self-supporting cable bundle network. At the beginning of 2019, the projects of connecting prison units to the optical ring and setting up a LAN network through the Remand Prison put the conditions in place to start the implementation of part of the IP video surveillance. In accordance with that, based on the Judicial ICT Strategy, budget and donations, funds were provided for active network and computer and server equipment. In the same year, the base software was procured, which led to

the establishment of up-to-date, scalable and modern platform for a central IP video surveillance system. Licenses were procured for the cameras installed, and the conditions for their introduction and system commissioning were met.

By the end of 2020, 60 IP cameras and licenses were procured so that the IP video surveillance system could be fully introduced in the Remand Prison. In addition, cameras were installed in one part of the penitentiary compound, which marked the start of using the IP video surveillance system within the penitentiary. In order to start the implementation of the video surveillance system at the penitentiary, the procurement and introduction of network devices and the additional server equipment is planned.

In 2020, the self-supporting cable bundle network has been procured for the prison units of F Pavilion and the semi-open unit.

In the upcoming period, it is planned to start installing IP video surveillance within the entire AECS, given that it is necessary to execute additional works and to procure:

- network, computer and server equipment
- cameras and licences to extend the centralised IP video surveillance system
- construction of an integrated monitoring centre for the entire AECS
- staff training to work on the platform introduced
- procurement of thermal cameras and their introduction into the existing system

In the upcoming period, a special emphasis needs to be placed on addressing the following identified technological shortcomings:

- Solving the issues related to mains power supply and generator power supply. Voltage drops are not uncommon; these can cause big problems on the devices that are not connected to UPS units. The generator power supply of the server room was resolved in 2019, while the problem of the generator power supply of pavilion F (4 technical rooms within that pavilion) was also resolved during 2020. In the upcoming period, it is necessary to develop a study of the current state of high current at the level of the entire AECS and based on that, methodically add back up generator power supplies further to the needs and budget.
- Over the previous years, the Administration for Enforcement of Criminal Sanctions used the existing module in PRIS for the registration of prisoners, but the said software was not owned by the AECS. Software upgrading and maintenance represents a significant problem, as it depends on other institutions and contracts with external associates. The AECS will receive new software for the life cycle of prisoners, aimed at improving its business processes, i.e., principles of its operation. A business plan for the above-mentioned SAPA application is currently being developed, with emphasis on data migration.
- It is not possible to properly implement the ISO 27001 standard in the AECS without a good consultant who is familiar with the business context of the AECS and who would fully dedicate him/herself to this task. This could not be implemented before because the AECS is understaffed, and the staff currently available has a big workload. There is currently no general incident response plan in the AECS or a business continuity plan. These 2 items are urgently needed for part of the information-communication technologies, but also for the rest of the AECS.

Jamming system at the AECS

In mid-2017, a system of jammers with omnidirectional antennas based on the jamming technology was installed in the AECS Remand Prison. Jamming antennas were installed on all floors. They operate on the principle of jamming signals in the appropriate frequency bands and thus block all services of mobile network providers in Montenegro. The system has also caused a number of additional problems, of which the following stand out:

- Geographical position of the Remand Prison and its proximity to the Spuz Mill cell tower, which is less than half a kilometre as the crow flies, resulting in a high incoming signal strength of -55dB.
- People who live in the immediate vicinity of the Remand Prison have problems with all mobile operator services. Eventually, following the results of RF spectrum measurements and the arrangements made with mobile operators, the transmitting power of jammers on the upper floors of the Remand Prison has been reduced so that the services on those floors are now not fully blocked.
- Inefficient and incomplete energy network through the Remand Prison, where constant voltage drops often lead to failures of the jammers' power supply units.

In order to eliminate the problems identified, a system of "smart" jammers has been selected. It is a modular system with manageable software that is an advanced technological solution with a simple roll out. The advantage of this system is that it does not affect communications outside the prison, that is, it prevents RF leakage, it is adjustable and scalable, which means that bands that need to be blocked can be easily added if any of the mobile operator services switch from one frequency band to another. This system allows for the creation of white and black lists needed for unimpeded business activities of employees within the system covered by jammers, allowing communication from the mobile devices on the white list. In addition, network infrastructure has been developed for the jamming system in the Remand Prison and within the penitentiary compound. The equipment for the penitentiary compound has been delivered and is stored at the AECS. Construction and high current works are currently being carried out to set up the system.

Lack of ICT staff

One of the biggest obstacles to further development of capacities of the judicial bodies is the lack of IT staff working with information-communication technologies. Lack of qualified staff is clearly identified as an issue in each of the four ICT subsystems. Thus, within the newly established Directorate for ICT at the Ministry of Justice, four out of the ten positions envisaged by the job systematisation scheme are filled at present. Also, the ICT and Multimedia Division within the Judicial Council Secretariat currently employs 21 people, which is not a sufficient number of employees for complex IT tasks. An additional issue is the lack of adequate office space for employees, especially given that out of 21 employees, 15 work at the Judicial Council Secretariat's 3 medium-sized offices (5 employees each). On the other hand, since more staff must be hired, the question is where the new employees will be accommodated, because additional office space cannot be provided. A possible solution is to relocate the ICT Division into separate rooms where more employees could sit, and give up the current office space to other sections of the Secretariat.

A potential obstacle to increasing human resources is a lack of interest among qualified IT staff in working in the public administration, especially in complex areas such as system management, programming, system engineering, business process analysis, etc. Such jobs are underpaid in the state administration, while the private sector offers 2 or 3 times more for a qualified staff. In order to retain the existing staff and attract quality people to move from other bodies or the private sector to ICT bodies, a solution must be found to increase their salaries, so that they can be more competitive in the market and be able to gradually create a better team.

Regarding the staffing needs of the AECS, it must be pointed out that the AECS has digitalised most of its processes in the previous 4 years. As the development of new technologies expands this segment, with the current job systematisation scheme and the existing number of employees, it will not be possible to respond to everyday obligations. This leads to the conclusion that the state-of-the-art equipment will not be used properly or will not be used at all if there are no operators to manage these systems. Another reason is that the systems used by the AECS or which will be used by the AECS must be monitored 24/7/365 because these are important systems that are being introduced for the first time not only in Montenegro but also in the region.

Building institutional and human capacity supporting ICT capacities of the Prosecution Service began with employments within the Information-Communication Technologies Service of the Supreme State Prosecution Service (thus fulfilling the AP 23 measure which says that the State Prosecution Service must employ at least two IT persons by the end of 2015), and by establishing an IT Service at the Prosecutorial Council Secretariat. However, the number of vacancies filled in both IT services is minimal, i.e., only four out of the ten employees as stipulated by the job systematisation scheme. It is important to note that within their competences, both services are in charge of all state prosecution offices and that this number of employees is not sufficient to meet all the ICT needs at the State Prosecution Service, taking into account that it is a body that works 24/7/365.

Another significant problem is that the State Prosecution Service cannot recruit or retain qualified IT staff, does not have adequate office space, and lacks funds for training staff in the IBM technology. As a result, the Prosecution Service has no other choice but to maintain and upgrade the system through public procurement. Consequently, the objectives and measures from the action plans for negotiating chapters 23 and 24 concerning automatic data exchange and statistical reporting in line with the

EU standards are not fulfilled in accordance with the expected timeline.

In this regard, what is required in the upcoming period is hard work towards putting the necessary financial and infrastructural conditions in place to recruit skilled and qualified IT staff. In addition to securing additional budgetary funds, efforts must be made to attract donor support that is needed to obtain expert support for further development of information-communication technologies.

As a summary of the overall analysis of the state of play in the field of Judiciary ICT technologies development, the SWOT analysis shows all the important factors and opportunities that have an impact on further development of the public policy at hand.

SWOT analysis

Strengths	Weaknesses
- Interagency cooperation (between: Ministry of Justice, State Prosecution Service, AECS, judiciary and stakeholders) - Donor support (funds obtained from: EUROL, US Embassy and the donations of UNDP and the Kingdom of Norway) - Development and implementation of a software application/module for electronic archiving - The new web portal is a great progress compared to the earlier portals - System for monitoring mutual legal assistance cases - LURIS was developed, including all state prosecution offices	- Partial non-functionality of PRIS and any necessary changes - Lack of staff for IT duties - Existing computer equipment outdated - Significant number of courts, prosecution offices and AECS do not have LAN satisfactorily developed - Lack of premises - Insufficient level of network infrastructure stability
Opportunities	**Threats**
- Increasing interoperability of the four judicial subsystems - Further development of the web portal will lead to improved functionality and provision of e-services - Development of central records for judicial office holders - Development of a pilot project of the voice recognition and dictation system - Development of a case law system for users outside the courts - Development of email and SMS notification system - eFiling system - electronic submission of documents - Improving the reporting system and implementing the BI system	- Insufficient level of the security protection of the judiciary - In case of catastrophic events (fire, earthquake, terrorist act, floods), and destruction of equipment at the data centre, data would be lost permanently. - The coming economic crisis caused by COVID-19 which may lead to reduced budgetary funds

OBJECTIVES

The 2021-2023 Judiciary Information-Communication Technologies Development Programme defines four objectives whose main line of action is the development and introduction of an integrated judicial information system.

Operational objective 1: Development of software solutions for an integrated information system and strengthening IT capacities in all the subsystems of the judiciary

The primary course of action of Objective 1 is the development and introduction of software applications in all the four subsystems of the judiciary (Ministry of Justice, courts, State Prosecution Service and the AECS). In order to use the JIS effectively, employees need to be given a training on the benefits and ways of using software applications. In addition, the implementation of this objective seeks to further enhance the existing IT capacities of the judiciary through the procurement of new software and IT solutions in all the judicial bodies. The aim is to ensure complete independence and functionality of these segments, by engaging all the necessary subsystems for the processes that take place within each individual segment. The goal is to provide each institution within the judicial system with electronic access to data, to automate processes, and to do so exclusively in accordance with the competences and business processes of the judicial institutions.

Performance indicator	2021	2022	2023
JIS software applications and BI system introduced in all the four judicial subsystems	Development and implementation of the Ministry of Justice subsystem and the AECS subsystem completed. Development of the judicial subsystem completed	Implementation of the judicial subsystem and BI system completed	JIS subsystems fully functional and interoperable

Operational objective 2: Analysis conducted and initiative launched for amendments to the existing legal framework and development of electronic services facilitating citizens' access to justice

Objective 2 aims to analyse the needs for a harmonisation of the existing legislative framework of the judiciary and for launching the initiative for amendments, all with the aim of introducing the necessary electronic services. The harmonisation would be primarily focused on internal rules/procedures of the judicial institutions. All the procedures and conditions regulating access by external users to judicial e-services need to be defined in the Rulebook on the development and use of the JIS subsystems. Full implementation of the three planned electronic services will speed up the official communication both between judicial institutions, and between them and their service users, increase the efficiency of case resolution, and make financial savings for both judicial institutions and their service users.

Performance indicator	2021	2022	2023
At least three electronic judicial services developed, tested and put into operation	Analysis performed and initiative for amendments to the existing legal framework submitted	All three electronic judicial services have been developed	Normative framework harmonised and electronic services put into operation

Operational objective 3: Development of new systems and upgrading of the existing judiciary ICT infrastructure, with the aim of setting up an efficient and digitalised judicial system

With the development of an integrated JIS, there is a need for all system users to communicate with a central location (Data Centre located at the Supreme Court) for storage and access to data, whose existing capacities will be further increased. This means that all organisational units are adequately connected to the kernel of the information system. Given that the intention is to automate business processes to an extent that will make the work without IT equipment unimaginable, for a proper functioning of the JIS, and thus for the efficient and quality work of employees in the judiciary of Montenegro, it is of crucial importance to ensure maintaining a coordinated planning process and securing the capacities for processing and storage of data and for network components in the data centre, as well as ensure increasing of LAN and WAN networks capacities, and replacement of computers and computer equipment.

Performance indicator	2021	2022	2023
The average age of computer equipment in the Montenegrin judiciary is under five years	7 years	5.5 years	4.5 years
Increasing the capacity of the storage system in the data centre and DR site (in %)	10%	20%	45%

Operational objective 4: Enhancing modern JIS security standards which guarantee a high level of sensitive data protection within the judiciary

Information system security mainly refers to the protection of data and information systems from unauthorised access, use, damage and destruction of data, and any type of modification. Information system security protection measures can be divided into three main categories: administrative, physical & technical measures and IT measures. Meeting the security requirements is important from the point of view of long-term system security and the data therein. Having in mind the speed at which malicious tools for breaching protection and manipulating data develop, it is necessary to constantly work on the roll out of new security products. Adoption of the Information Security Policies will create the basis for writing, adopting and implementing procedures that should ensure a high degree of data protection. Appointment of ISMS managers and the conduct of internal and external audit are the necessary steps towards the goal set for 2023 - certification of at least 3 judicial bodies according to the ISO 27001 standard.

Performance indicator	2021	2022	2023
Three judicial bodies certified in accordance with ISO 27001:2014 standard	Adopting the Judicial and Prosecutorial Information Security Policy	ISMS managers appointed, internal and external auditing in three judicial bodies conducted	Three judicial bodies certified

FUNDS

The following table gives an overview of the funding needs to cover the plans under the strategic document for the next three-year period. The main sources of funding include:

- Budget of the Ministry of Justice,

- Donor support from the Government of the Kingdom of Norway, and

- Financial resources received from IPA funds.

An overview of budgetary funds is made by years and sources of funding. The funds from the columns “IPA 2018” and “Government of the Kingdom of Norway - Ministry of Justice” have already been provided.

Year	IPA 2018	Government of the Kingdom of Norway - Ministry of Justice	Ministry of Justice	Total
2021	225,000	1,553,931	641,000	2,419,931
2022	352,000		2,238,500	2,590,500
2023	545,240		1,817,000	2,362,240
Total	1,122,240	1,553,931	4,696,500	7,372,671

MONITORING, REPORTING AND EVALUATION

Regarding the process of drafting, monitoring and reporting on the implementation of the 2021-2023 Judiciary Information-Communication Technologies Development Programme, it is important to mention the following three bodies:

- ICT Programme Development Working Group, with its mandate ending with the adoption of the Programme,
- Programme Implementation Monitoring Working Group, and
- ICT Programme Implementation Monitoring and Reporting Commission.

The Programme Implementation Monitoring Working Group is composed of representatives of the Ministry of Justice, Supreme State Prosecution Service, Judicial Council Secretariat, Administration for Enforcement of Criminal Sanctions (AECS), Ministry of Public Administration, Supreme Court and the Prosecutorial Council Secretariat. The Ministry of Justice is the umbrella institution responsible for coordinating the activities of the Working Group, drafting, implementing and reporting on the implementation of the strategic document. The Working Group adopts technical specifications for IT solutions and participates in their implementation. The strategic document in question follows the Action Plan for the entire period of three years covered by the strategic document.

Given that the Ministry of Justice’s Directorate for ICT and Data Protection is the umbrella institution in charge of developing information-communication technologies of the judiciary, that Directorate has the obligation to coordinate the entire monitoring, reporting and evaluation process.

As underlined several times already, the field of information-communication technologies in the judiciary includes four subsystems of the judiciary, and its implementation requires that all the stakeholder institutions be involved. Accordingly, these institutions will have the duty to report on the activities carried out within the Programme so that sufficient data can be collected in time for annual and final reports, and that output performance can be measured, and any challenges identified that may arise during the implementation of the planned activities.

As for the reporting obligations, the basic competences of the Working Group concern the development of two types of reports on the implementation of the strategic document:

- Annual report on the implementation of the ICT Programme Action Plan, and
- Final report on the implementation of the ICT Programme.

The Working Group will meet at least four times a year. It will hold at least one meeting in each quarter, but given the importance, scope and complexity of the field, more frequent meetings of the Working Group may be required. This will make it possible for the implementation process, as well as any possible obstacles and challenges that institutions may face in the process, to be examined at regular intervals throughout the implementation period. The data necessary for the development of reports will be collected throughout the year and will be submitted on a quarterly basis to the Ministry of Justice in its role as the coordinating body of the Working Group. At the final annual meeting, the above data will be reviewed and possibly supplemented to ensure good quality of the report. This will be a way to try to encourage institutions to submit the data in time and thus avoid one of the most common problems faced by institutions in the reporting process (i.e., that the institutions involved in the implementation of certain activities do not submit the necessary data in time; that there is a lack of interest among the institutions that are not the key stakeholders in dedicating their time to the reporting process, etc).

The Ministry of Justice will be in charge of collecting and compiling the data relevant to the development of the report, and of coordinating the work of the operational team. In addition, all possible problems and obstacles that may arise during the implementation of the Programme will be addressed by the Working Group at regular quarterly meetings.

The reporting process will go through several instances. In other words, Working Group members will submit the data to the Ministry of Justice at the end of each quarter, and the Ministry will consolidate them and draft a report before the last meeting of the operational team in any given year. Following the coordination with other Working Group members, the report (annual or final) will be sent to the ICT Programme Implementation Monitoring and Reporting Commission. The Commission is the second operational body established by a decision of the Government of Montenegro, composed of representatives of all the institutions involved in the implementation process (Ministry of Justice, State Prosecution Service, Judicial Council, Administration for Enforcement of Criminal Sanctions (AECS), and the Ministry of Public Administration). The Commission has the mandate to examine the reports received. After receiving an approval from the Commission, the report will be submitted to the General Secretariat of the Government of Montenegro for their opinion. Upon receiving a positive opinion of the GoM’s Secretariat, the report will be sent to the Government of Montenegro for adoption.

Reporting schedule

To ensure transparency in the strategy implementation process, the reports will be published on the website of the Ministry of Justice.

Evaluation

Because of its complexity and scope, but also because of the need to ensure a greater degree of objectivity, this strategic document will be subject to ex post evaluation to be carried out by external experts. The funds for its implementation will be provided from the budget of the Ministry of Justice. This process is planned to start in March 2023, and be completed by October of the same year, in order to obtain evaluation findings in time. They will be presented in the final report and may serve as an adequate basis for the preparation of a future strategic document. The development of information technologies in the judiciary is a long-term process that requires significant resources and ongoing technological modernisation. Therefore, the three-year implementation period of the programme is not sufficient for the measurement of the

actual effects, i.e., of the impact of the strategic document. The evaluation findings will provide a clear and precise view of the success of this policy's development through an integrated strategic document. This will help determine whether the expected effects are achieved through joint action, i.e., whether the implemented activities lead to an increased efficiency, time savings, transparency and accountability of the judicial bodies, thus creating the conditions to provide the citizens with the services that meet their needs, which is the main goal of the Judiciary Information-Communication Technologies Development Programme.

ACTION PLAN FOR THE JUDICIARY INFORMATION-COMMUNICATION TECHNOLOGIES DEVELOPMENT PROGRAMME FOR 2021-2023

The Action Plan for the Judiciary ICT Development Programme for 2021-2023 is a three-year action plan and makes an integral part of the Programme. The Action Plan has been designed and aligned with the requirements set out in the Methodology for Policy Design, Development and Monitoring of Implementation of Strategic Documents. The structure of the Action Plan reflects the four operational objectives of the Programme, namely:

- Operational Objective 1: Development of software solutions for the integrated information system and strengthening of IT capacities in all the subsystems of the judiciary
- Operational Objective 2: Harmonisation of the existing legal framework and development of electronic services facilitating citizens' access to justice
- Operational Objective 3: Development of new systems and upgrading of the existing judiciary ICT infrastructure, with the aim of setting up an efficient and digitalised judicial system
- Operational Objective 4: Enhancing JIS information security in line with international and national standards, which guarantee a high level of sensitive data protection within the judiciary

All the operational objectives include performance indicators and accompanying parameters that need to be achieved over the next three years. The Action Plan includes definitions of the respective activities, output indicators, implementing institutions, planned deadlines for implementation of activities, together with a complete overview of sources of the funding needed for implementation of the strategic document.

It is important to note that for reason of budgetary limitations, the needs for budgetary resources indicated here are in some cases smaller than the actual needs. It is intended to overcome these limitations through donor support, which applies in particular to the measures for renewal of computer equipment in judicial institutions and the process of archives digitalisation.

Operational objective 1:	Developing software solutions for the integrated information system and enhancing IT capacity in all the subsystems of the judiciary					
JIS software solution and BI system are implemented in all the four subsystems of the judiciary	2021 Development, coding and implementation of the Ministry of Justice subsystem and the AECS subsystem is completed. Development of the courts subsystem is completed.		2022 Implementation of the courts subsystem and BI system is completed.		2023 JIS subsystems are fully functional and interoperable.	
Activities	Output indicators	Responsible institution	Start date	Target end date	Funding planned for implementation	Source of funding
1.1.1. Development, testing and implementation of the software solution for the courts subsystem, together with user training.	-Courts subsystem developed according to the methodology, technical standards and functional specification - 1200 qualified staff trained in using software for the courts subsystem	Ministry of Justice Judicial Council	1st quarter of 2021	4th quarter of 2022	€1,076,931 €200,000	Government of the Kingdom of Norway – Ministry of Justice IPA
1.1.2. Development and testing of Enterprise Service Bus platform for exchange of data between the JIS subsystems	ESB system developed and implemented	Ministry of Justice Judicial Council	1st quarter of 2021	4th quarter of 2021	No additional funding required	Government of the Kingdom of Norway – Ministry of Justice
1.1.3. Development and implementation of the software solution for the Ministry of Justice subsystem	- Software solution for the Ministry of Justice subsystem implemented. - 100 users trained in working with the software solution.	Ministry of Justice	1st quarter of 2021	4th quarter of 2021	€225,000,00	IPA
1.1.4. Implementation of the software solution for the AECS subsystem	- SAPA software solution, which was developed for Serbia penitentiary, customised and implemented in AECS. -200 users trained in working with the software solution for the AECS subsystem .	Ministry of Justice AECS	1st quarter of 2021	4th quarter of 2021	No additional funding required	Budget of the Ministry of Justice

1.1.5. Procurement and development of the Notification system / email and SMS	Procurement of the service of system development completed, including: procurement of hardware, licences and software. The System enables notifications to all users (primarily judges and judicial personnel, but also to parties to proceedings and any other interested physical and legal persons	Ministry of Justice Judicial Council	2nd quarter of 2022 2nd quarter of 2022	3rd quarter of 2023	€100,000	IPA
1.1.6. Procurement and development of Case Law Information System for the Supreme Court	The service of development and implementation of Case Law software solution for the Supreme Court procured.	Ministry of Justice Judicial Council	2nd quarter of 2022	2nd quarter of 2023	€225,000	IPA
1.1.7. Procurement and development of a new system for court personnel records	Procurement and development of the system completed; implementation and user training completed	Ministry of Justice Judicial Council	4th quarter of 2021	4th quarter of 2022	€60,000	Budget of the Ministry of Justice
1.1.8. Procurement and development of the dictation and voice recognition system in a pilot court	Procurement and development of a centralised system for the pilot court completed; implementation and user training completed.	Ministry of Justice Judicial Council	2nd quarter of 2022	2nd quarter of 2023	€30,000	Budget of the Ministry of Justice
1.1.9. Procurement of a business intelligence system to enhance analytics and statistics capacities of the judiciary	Business intelligence system developed according to functional and technical specification; in production stage with trained users	Ministry of Justice	1st quarter of 2021	4th quarter of 2021	€250,000	Donation of the Government of the Kingdom of Norway - Implementing agency UNDP Office in Podgorica
1.1.10. Upgrading of web service platform for the exchange of data	Existing ESB platform upgraded and at least 3 additional web services developed	Ministry of Justice	2nd quarter of 2022	4th quarter of 2023	€20,000	Budget of the Ministry of Justice

1.1.11. Drafting and adoption of a document on administrative procedures and other functional and organisational rules for JIS maintenance and development	A document on administrative procedures and other functional and organisational rules for JIS maintenance and development prepared and adopted	Working group of the judiciary Ministry of Justice Judicial Council Prosecutorial Council AECS	2nd quarter of 2021	4th quarter of 2021	€3,000	Budget of the Ministry of Justice
1.1.12. Continuous, standardised and appropriate ICT education	Required specialisation training conducted for the personnel in ICT Directorate and Services across the judiciary, public procurement procedure completed and an accredited examination centre selected for ECDL Start training for JIS end-users.	Ministry of Justice	1st quarter of 2021	4th quarter of 2022	€52,000	IPA
Operational objective 2:	**Harmonisation of the existing legislative framework and development of electronic services facilitating citizens' access to justice**					
Develop, test and make functional a minimum of three judicial electronic services	2021 Analysis conducted and initiative launched to amend the existing legislative framework	2022 All three electronic services of the judiciary developed	2023 Legislative framework harmonised and electronic services put in production			
Activities	Output indicators	Responsible institution	Start date	Target end date	Funding planned for implementation	Source of funding
2.1.1 Conduct an analysis of the existing legislative framework for the development of electronic services and an analysis of the need for amendments to the framework necessary to allow for introduction of electronic services in the judiciary.	Analysis conducted of the existing primary and secondary legislation relevant to the development of electronic services. Based on the findings of the analysis, initiative may be launched to adopt new and amend existing primary and secondary legislation necessary for the introduction of electronic services in the judiciary.	Working group of the judiciary Ministry of Justice Judicial Council Prosecutorial Council AECS Ministry of Public Administration	1st quarter of 2021	4th quarter of 2023	€5,000	Budget of the Ministry of Justice

2.1.2. Preparation of proposed amendments to the Law on Court Fees	Proposed amendments to the Law on Court Fees adopted	Ministry of Justice Judicial Council	1st quarter of 2021	4th quarter of 2021	No additional funding required	Budget of the Ministry of Justice
2.1.2. Harmonisation of the legislative framework necessary for electronic archiving and digitisation of archives in judicial institutions	Amendments of the legislative framework necessary for electronic archiving and digitisation of archives in judicial institutions adopted.	Working group of the judiciary Ministry of Justice Judicial Council Prosecutorial Council AECS Ministry of Public Administration	1st quarter of 2021	4th quarter of 2021	No additional funding required	Budget of the Ministry of Justice
2.1.4. Procurement and purchase of SW solutions for e-filing system (eFile) for JIS	Service of developing and implementing e-filing system procured. This enables filing of submissions by persons who are not the primary JIS user group (lawyers, expert witnesses, court interpreters, but also physical and legal persons having the right of access to JIS cases.	Ministry of Justice Judicial Council	1st quarter of 2023	4th quarter of 2023	€220,240.00	IPA
Operational objective 3:	**Development of new systems and upgrading of the existing ICT infrastructure in the judiciary in order to set up an efficient and digitalised judicial system**					
Increase the capacity of the storage system in the Data centre and DR Locations (in %)	2021 10%	2022 20%	2023 45%			
Average age of computer equipment in the Montenegrin judiciary is under five years.	2021 7 years	2022 5.5 years	2023 4.5 years			

Average age of computer equipment in the Montenegrin judiciary is under five years.	Average age of computer equipment in the judicial institutions is 7 years.		Average age of computer equipment in the judicial institutions is 6 years.		Average age of computer equipment in the judicial institutions is 4.5 years.	
Activities	Output indicators	Responsible institution	Start date	Target end date	Funding planned for implementation	Source of funding
3.1.1. Procurement and installation of the equipment necessary for LAN network upgrades in courts and prosecution offices	Capacity and speed of LAN/WAN infrastructure meets the requirements for the courts subsystem to function properly. Through the installation of the equipment, 100/100 Mbs optical infrastructure will be set up for institutions with a bigger number of users, and 50/50 Mbps for locations with fewer users. For the Data centre and DR location, the speed will be 1 Gbps/1Gbps	Ministry of Justice Judicial Council Prosecutorial Council	1st quarter of 2021	4th quarter of 2021	€250,000	Budget of the Ministry of Justice
3.1.2. Procurement of computer equipment for all the judicial institutions – Maintenance and replacement of outdated equipment – stage 1	The plan for renewal and standardisation of configuration of the computers and computer equipment is made. The equipment is procured and installed at the end-users' facility.	Ministry of Justice Judicial Council Prosecutorial Council AECS	1st quarter of 2021	4th quarter of 2021	€233,000	Budget of the Ministry of Justice
3.1.3. Procurement of computer equipment for all the judicial institutions – Maintenance and replacement of outdated equipment – stage 2	The equipment is procured and installed at the end-users' facility.	Ministry of Justice Judicial Council Prosecutorial Council AECS	1st quarter of 2022	4th quarter of 2022	€233,000	Budget of the Ministry of Justice
3.1.4. Procurement of computer equipment for all the judicial institutions – Maintenance and replacement of outdated equipment – stage 3	The equipment is procured and installed at the end-users' facility.	Ministry of Justice Judicial Council Prosecutorial Council AECS	1st quarter of 2023	4th quarter of 2023	€234,000	Budget of the Ministry of Justice

3.1.5. Upgrading of the technical component in investigations and trials through the introduction of technical equipment for recording proceedings, presentation of digital evidence, distance hearing of witnesses, suspects, victims of crimes and of other similar witness groups.	With the upgraded technical component in investigations and trials in place, distant witnessing, presentation of digital evidence and distant hearing of protected witnesses, recording of proceedings, etc. is now possible.	Ministry of Justice Judicial Council Prosecutorial Council	3rd quarter of 2021	3rd quarter of 2023	€400,000	Budget of the Ministry of Justice
3.1.6. Procurement and installation of equipment for the system of electronic monitoring of convicted persons	Specialised equipment is procured and installed.	Ministry of Justice	1st quarter of 2021	4th quarter of 2021	€100,000	Budget of the Ministry of Justice
3.1.7. Expansion and upgrading of the existing Data centre at the Supreme Court	New server and network communication equipment is procured and installed. Outdated systems – power generators and the cooling system are replaced and expanded	Ministry of Justice Judicial Council	1st quarter of 2022	4th quarter of 2022	€700,000	Budget of the Ministry of Justice
3.1.8. Upgrading the existing storage system in the Supreme Court Data Centre, purchasing additional scanners, and upgrading the software in order to digitise judicial archives - phase 1	Upgrading the existing system in the Data Centre completed, thereby enabling the digitisation of all old cases, their classification and setting their retention periods, preparation for the destruction of old cases whose retention periods have expired, digital signing of scanned cases, etc.	Ministry of Justice Judicial Council Prosecutorial Council	1st quarter of 2021	4th quarter of 2022	€500,000	Budget of the Ministry of Justice
3.1.9. Upgrading the existing storage system in the Supreme Court Data Centre, purchasing additional scanners, and upgrading the software in order to digitise judicial archives - phase 2	Upgrading the existing system in the Data Centre completed, thereby enabling the digitisation of all old cases, their classification and setting their retention periods, preparation for the destruction of old cases whose retention periods have expired, digital signing of scanned cases, etc.	Ministry of Justice Judicial Council Prosecutorial Council	1st quarter of 2023	4th quarter of 2023	€400,000	Budget of the Ministry of Justice

3.1.10. Developing a current state analysis of the existing network and server equipment of the AECS Data Centre	Analysis of the existing network and server equipment completed and used to develop technical specifications defining the expansion and operation of all systems whose operability is based on IT equipment.	Ministry of Justice AECS	1st quarter of 2022	1st quarter of 2022	€1,000	Budget of the Ministry of Justice
3.1.11. Procurement of network devices and server equipment in order to upgrade the AECS Data Centre	New server and network communication equipment procured and installed.	Ministry of Justice AECS	1st quarter of 2022	3rd quarter of 2022	€50,000	Budget of the Ministry of Justice
3.1.12. Enhancing AECS access control system by developing a design and necessary technical specifications	Access control system developed in accordance with the existing habits and practices in the AECS, as well as by documenting all privileges and procedures related to the above. The enhanced system allows to monitor the movement of AECS staff, as well as to establish responsibility in cases of misuse.	Ministry of Justice AECS	1st quarter of 2023	4th quarter of 2023	€4,000 €1,500 €60,000	Budget of the Ministry of Justice
3.1.13. Designing and installing an anti-intrusion and fire fighting system in the AECS	The design developed in accordance with the technical specification; anti-intrusion and fire fighting systems installed. Systems reduce the risk of fire and of unauthorised access to all facilities within the AECS.	Ministry of Justice AECS	1st quarter of 2023	4th quarter of 2023	€5,000 €150,000	Budget of the Ministry of Justice
3.1.14. Implementing an IP telephony pilot project in courts (phase 1 - Podgorica)	Pilot project for IP telephony introduction in courts implemented. The project saves significant funds on an annual basis while providing better customer service in courts.	Ministry of Justice Judicial Council	1st quarter of 2022	4th quarter of 2023	€200,000	Budget of the Ministry of Justice

3.1.15. Implementation of the AECS video surveillance project Analysing the current state of video surveillance of the entire AECS and developing a design aimed at its upgrading	- Analysis of the current state was developed, including the state of LV current, HV current, IT equipment and current and planned camera positions. - Design developed for the video surveillance system upgrade, clearly defining system possibilities and functionalities in terms of security and easier monitoring. Equipment procured and installed.	Ministry of Justice AECS	2nd quarter of 2021	4th quarter of 2023	€6,000 €1,500 €300,000	Budget of the Ministry of Justice
3.1.16. Adaptation of AECS office space for video conferences - Developing an analysis and technical specifications for the adaption of office space, necessary equipment and construction works	- Analysis and technical specification developed and used for determining the number of video conferencing rooms necessary in the AECS, allowing for testimony to be given by prisoners during court proceedings. - Adaptation of office space and purchase of the necessary equipment completed, enabling giving of testimony remotely from all parts of the AECS in order to reduce costs and eliminate the risk of prisoners escaping during transport.	Ministry of Justice AECS	3rd quarter of 2021	2nd quarter of 2022	€500.00 €1,000 €50,000	Budget of the Ministry of Justice
3.1.17. Procuring generators, backup power supply and uninterruptible power source (UPS) for the AECS: Developing an analysis and technical specifications of required backup power supply units and executing works on system installation	- Analysis and technical specification developed for improving the existing backup power supply at the level of the AECS Design of the necessary generators, UPSs and their capacities developed and implemented, including the planned consumption of energy products needed for the operation of generators. - The AECS covered with backup power supply and uninterruptible power supply	Ministry of Justice AECS	1st quarter of 2022	4th quarter of 2022	€2,000 €1,000 €150,000	Budget of the Ministry of Justice

3.1.18. Critical components rehabilitation design of the AECS energy system: Developing an analysis, technical specifications and rehabilitation of all high current critical elements	- Analysis of the current state of high current with thermal imaging developed and technical specifications prepared in order to rehabilitate critical components of the AECS energy system - All high current critical elements rehabilitated in order to reduce the risk of self-ignition and endangering the operation of IT and other equipment	Ministry of Justice AECS	1[st] quarter of 2021	4th quarter of 2021	€4,000 €1,000 €50,000	Budget of the Ministry of Justice
Objective 4:	**Improving information security in the JIS according to international and national standards which guarantee a high level of sensitive data protection within the judiciary**					
Three judicial bodies certified in accordance with the ISO 27001:2014 standard	2021 Adopting the Judicial and Prosecutorial Information Security Policy		2022 ISMS managers appointed, internal and external auditing in three judicial bodies conducted		2023 Three judicial bodies certified	
Activities	Output indicators	Responsible institution	Start date	Target end date	Funding planned for implementation	Source of funding
4.1.1. Introducing information security standard MEST ISO/IEC 27001 in judicial institutions and aligning the security policy with this standard	Continuity in the implementation of the MEST ISO/IEC 27001 standard, activities carried out to certify judicial institutions and ICT services/ divisions in the judiciary, in accordance with the above standard	Ministry of Justice PC JC AECS	1st quarter of 2022	4th quarter of 2022	€100,000	IPA
4.2.2. Developing additional documentation and redefining the existing procedures arising from ISO 27001 standards in the AECS	Continuity in the implementation of the MEST ISO/IEC 27001 standard, which began in 2018 and whose implementation requires further work. Existing procedures and rules amended and redefined in all segments of the AECS business processes	Ministry of Justice AECS	1st quarter of 2022	4th quarter of 2022	€10,000	Budget of the Ministry of Justice
4.2.3. Developing the AECS Business Continuity Plan	Expert hired to draft a document related to the Business Continuity Plan.	Ministry of Justice AECS	3rd quarter of 2022	4th quarter of 2022	€5,000	Budget of the Ministry of Justice

4.2.4. Developing the AECS incident response plan	Expert hired to draft a plan of responding to incidents that may occur at the level of information- communication technologies of the AECS	Ministry of Justice AECS	3rd quarter of 2022	4th quarter of 2022	€5,000	Budget of the Ministry of Justice
4.2.5. Authentication system of external and internal users for the IS of courts	Better identification of external and internal users, which will be based on SSO and PKI infrastructure in order to increase the overall security of user accounts, services, network devices and other infrastructure. - Facilitating the work of users and access to necessary services through the implementation of SSO, while increasing the security of the entire system	Ministry of Justice JC	3rd quarter of 2021	4th quarter of 2022	€470,000	Budget of the Ministry of Justice
4.2.6. Establishing and updating system documentation of all the key JIS components (technical documents of all subsystems, technical documents of server resources, technical documents of network and communication infrastructure)	System documentation updated and available to all responsible persons in accordance with the provisions of the Information Security Policy of the Judicial Information System.	Ministry of Justice PC JC AECS	1st quarter of 2022	4th quarter of 2022	No additional funding required	Budget of the Ministry of Justice