Digital Public Administration factsheet 2020

Croatia

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1 **Country Profile**

1.1 Basic data

Population: 4 076 246 inhabitants (2019)
GDP at market prices: 53 937 million Euros (2019)
GDP per inhabitant in PPS (Purchasing Power Standard EU 27=100): 65 (2019)
GDP growth rate: 2.9% (2019)
Inflation rate: 0.8% (2019)
Unemployment rate: 6.8% (2019)
General government gross debt (Percentage of GDP): 73.2% (2019)
General government deficit/surplus (Percentage of GDP): 0.4% (2019)
Area: 56.5 km²
**Capital city**: Zagreb
Official EU language: Croatian
Currency: Croatian Kuna HRK

Source: Eurostat (last update: 26 June 2020)

1.2 Digital Public Administration Indicators

The following graphs present data for the latest Generic Information Society Indicators for Croatia compared to the EU average. Statistical indicators in this section reflect those of Eurostat at the time the Edition is being prepared.

Percentage of individuals using the internet for interacting with public authorities in Croatia
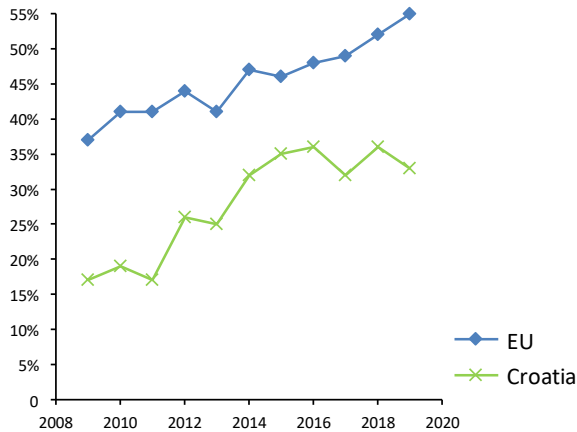
Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for obtaining information from public authorities in Croatia
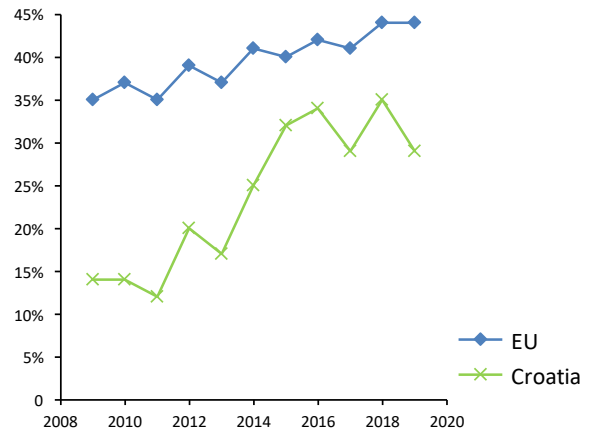
Source: Eurostat Information Society Indicators

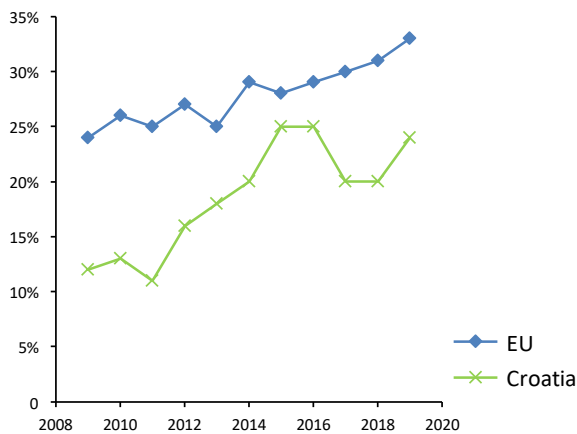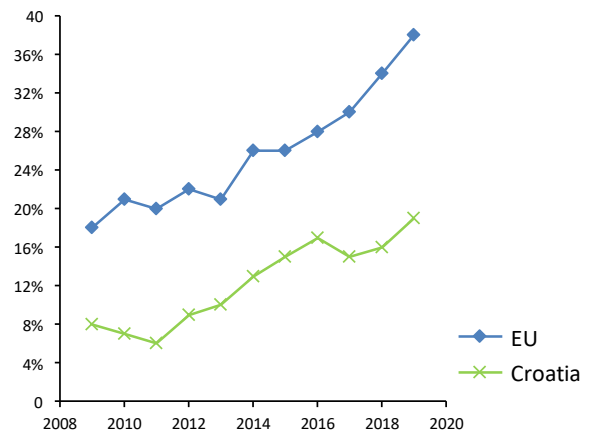Percentage of individuals using the internet for downloading official forms from public authorities in Croatia

Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for sending filled forms to public authorities in Croatia
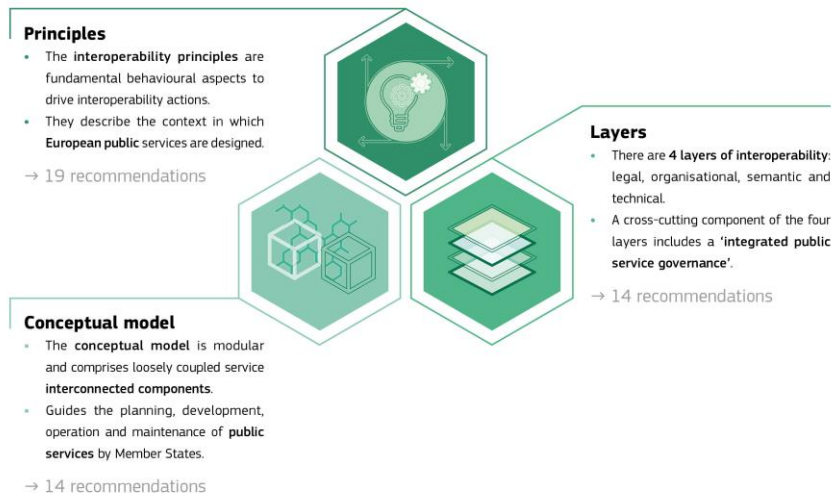

Source: Eurostat Information Society Indicators

1.3 Interoperability State of Play

In 2017, the European Commission published the European Interoperability Framework (EIF) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations. The picture below represents the three pillars of the EIF around which the EIF Monitoring Mechanism was built to evaluate the level of implementation of the EIF within the Member States. It is based on a set of 68 Key Performance Indicators (KPIs) clustered within the three main pillars of the EIF (Principles, Layers and Conceptual model), outlined below.

Principles
- The **interoperability principles** are fundamental behavioural aspects to drive interoperability actions.
- They describe the context in which **European public** services are designed.

→ 19 recommendations

Layers
- There are **4 layers of interoperability**: legal, organisational, semantic and technical.
- A cross-cutting component of the four layers includes a 'integrated public service governance'.

→ 14 recommendations

Conceptual model
- The **conceptual model** is modular and comprises loosely coupled service **interconnected components**.
- Guides the planning, development, operation and maintenance of **public services** by Member States.

→ 14 recommendations

Source: European Interoperability Framework Monitoring Mechanism 2019

For each of the three pillars, a different scoreboard was created to breakdown the results into their main components (i.e. the 12 principles of interoperability, the interoperability layers and the components of the conceptual model). The components are evaluated on a scale from one to four, where one means a lower level of implementation, while 4 means a higher level of implementation. The graph below shows the result of the first EIF Monitoring Mechanism data collection for Croatia in 2019. It is possible to notice an overall good performance of the country, with particularly positive results within the second scoreboard (Interoperability layers). The areas of improvements are related to the principle of security and privacy and technological neutrality and data portability.
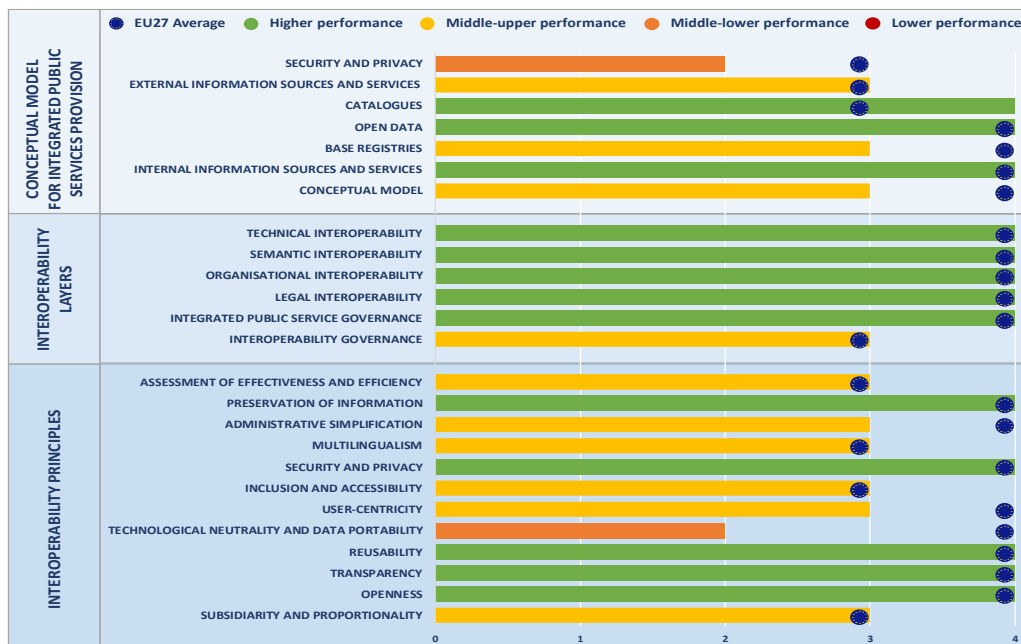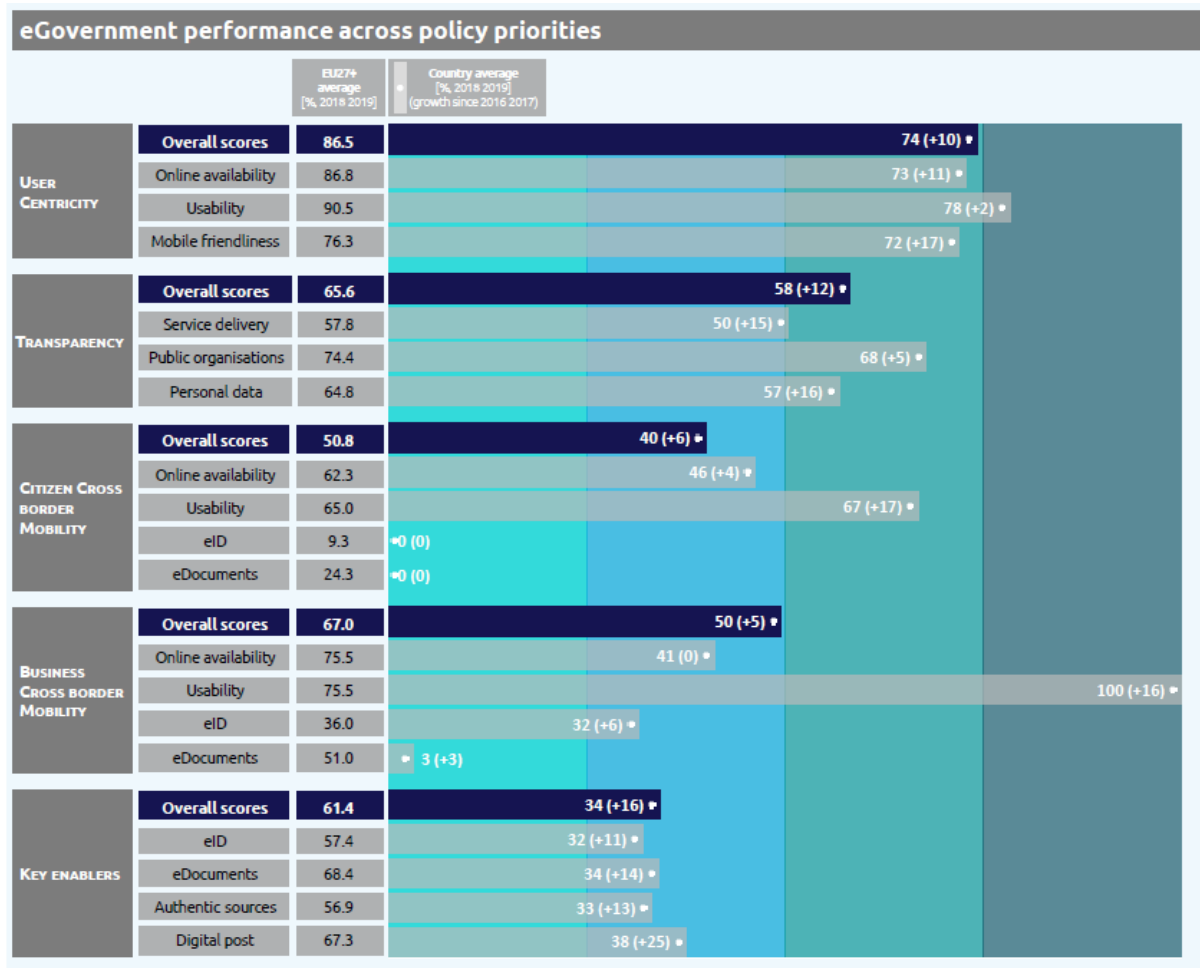

Source: European Interoperability Framework Monitoring Mechanism 2019

1.4 eGovernment State of Play

The graph below is the result of the latest eGovernment Benchmark report, which evaluates the priority areas of the eGovernment Action Plan 2016-2020, based on specific indicators. These indicators are clustered within four main top-level benchmarks:

- **User Centricity** – indicates the extent to which a service is provided online, its mobile friendliness and usability of the service (in terms of available online support and feedback mechanisms).
- **Transparency** – indicates the extent to which governments are transparent about (i) the process of service delivery, (ii) the responsibilities and performance of public organisations and (iii) the personal data processed in public services.
- **Cross-Border Mobility** – indicates the extent to which users of public services from another European country can use the online services.
- **Key Enablers** – indicates the extent to which technical and organisational pre-conditions for eGovernment service provision are in place, such as electronic identification and authentic sources.

The 2020 report presents the biennial results, achieved over the past two years of measurement of all eight life events used to measure the above-mentioned top-level benchmarks. More specifically, these life events are divided between six 'Citizen life events' (*Losing and finding a job*, *Studying*, *Family life*, all measured in 2012, 2014, 2016 and 2018, and *Starting a small claim procedure*, *Moving*, *Owning a car*, all measured in 2013, 2015, 2017 and 2019) and two 'Business life events' (*Business start-up*, measured in 2012, 2014, 2016 and 2018, and *Regular business operations*, measured in 2013, 2015, 2017 and 2019).

eGovernment performance across policy priorities		EU27+ average [%, 2018 2019]	Country average [%, 2018 2019] (growth since 2016 2017)
USER CENTRICITY	**Overall scores**	86.5	74 (+10)
	Online availability	86.8	73 (+11)
	Usability	90.5	78 (+2)
	Mobile friendliness	76.3	72 (+17)
TRANSPARENCY	**Overall scores**	65.6	58 (+12)
	Service delivery	57.8	50 (+15)
	Public organisations	74.4	68 (+5)
	Personal data	64.8	57 (+16)
CITIZEN CROSS BORDER MOBILITY	**Overall scores**	50.8	40 (+6)
	Online availability	62.3	46 (+4)
	Usability	65.0	67 (+17)
	eID	9.3	0 (0)
	eDocuments	24.3	0 (0)
BUSINESS CROSS BORDER MOBILITY	**Overall scores**	67.0	50 (+5)
	Online availability	75.5	41 (0)
	Usability	75.5	100 (+16)
	eID	36.0	32 (+6)
	eDocuments	51.0	3 (+3)
KEY ENABLERS	**Overall scores**	61.4	34 (+16)
	eID	57.4	32 (+11)
	eDocuments	68.4	34 (+14)
	Authentic sources	56.9	33 (+13)
	Digital post	67.3	38 (+25)

Source: eGovernment Benchmark Report 2020 Country Factsheets

2 Digital Public Administration Highlights

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Digital Public Administration Political Communications

Digital Public Administration Political Communications have been focused on the Croatian Presidency of the Council of the European Union. The four priorities of the Croatian Presidency are: A Europe that develops, A Europe that connects, A Europe that protects and An influential Europe.

Additionally, there is a special focus on interoperability between information systems and internal security as well as on ensuring the comprehensive and effective application of the interoperability legislation.
The Presidency will continue to work on the application and impact assessment of new technologies and on a comprehensive approach to internal security.

Special emphasis will be on further deepening of the single market and on developing the EU's long-term sustainable industrial policy strategy that will contribute to the increased productivity and competitiveness of EU business entities. At the 2020 Digital Assembly conference in Zagreb, the Presidency intends to start discussions on the ethical, legal and social aspects of the use of artificial intelligence.
Regarding the area of cyber security, the Presidency will continue working on the implementation of the Directive concerning measures for a high common level of security of network and information systems across the Union, and the Cybersecurity Act, as well as continue discussions on the establishment of the European Cybersecurity Industrial, Technology and Research Competence Centre, and the Network of National Coordination Centres.

Digital Public Administration Legislation

The Regulation on electronic communications (NN 005/2020) has introduced a new way of communication that enables participants in court proceedings electronic communication with courts.

The Act on Amendments to the Companies Act (NN 40/2019) introduced the possibility of registering a company via Internet. Subordinate legislation that regulates this area is Regulation on the taking of actions in the procedure for the registration of company via Internet (NN 65/2019).

In the health domain, the Act on health data and information (NN 14/2019) was adopted, which provides the basis for a harmonised legal framework on the management of health data and information and also provides the basis for a comprehensive and efficient use of information technologies within the framework of eHealth.

Regulation on the provision and use of trust services (NN 060/2019), lays down the measures, procedures and forms of protection of electronic trust services.

Digital Public Administration Governance

In July 2019, the new Minister of Administration Ivan Malenica was appointed.

Digital Public Administration Infrastructure

The National Shared Services Centre (SCC), which presents government cloud IT infrastructure, is in production status since 25 November 2019. The state cloud has five main objectives. The first is to standardise digital services, the second is to better connect the database in all state administration bodies, the third is to make the entire information and communication infrastructure system more favourable, i.e. cheaper, the fourth is that all data stored are safer and the fifth is to centrally manage it.

With the realisation of this project, all public sector bodies will be able to reliably exchange information and documentation according to the cloud paradigm, and the goal is to integrate 300 institutions into the State Cloud by 2022.

Nevertheless, activities in the next period will be directed towards the improvement of interoperability between national Base Registries and IT systems.

3 Digital Public
Administration
Political
Communications

3 Digital Public Administration Political Communications

3.1 Specific political communications on digital public administration

The Croatian Presidency of the Council of the European Union

Many Political Communications in 2020 have been focused on the Croatian Presidency of the Council of the European Union. The Croatian Presidency has 4 priorities: a Europe that develops, a Europe that connects, a Europe that protects and an influential Europe.

- **A Europe that develops** wishes to promote a further deepening of the single market, encouraging the digitalisation agenda, investment in research and innovation, greater accessibility to high-quality and lifelong learning and developing new skills adjusted to the jobs of the future as guarantees for the Union's competitiveness.
- **A Europe that connects** focuses on a networked economy and on making full use of its infrastructural and human potential. The existing differences within the European Union in terms of the quality of infrastructure and the availability of transport, energy, telecommunications and digital networks hamper its development and global competitiveness. In order to achieve full social, economic and territorial cohesion, transport, energy and digital infrastructure and interconnection need to be further developed. The Croatian Presidency will encourage policies which strengthen the infrastructural connectivity of the Union and bring together its citizens, primarily through education, culture and sport.
- **A Europe that protects** considers the security of its citizens to be an issue of utmost importance. Hence, the Croatian Presidency will work on strengthening internal security, providing more effective control of external borders, ensuring full interoperability of IT systems, and strengthening resilience to external threats, as well as hybrid and cyber threats.
- **An influential Europe** focuses on further developing capacities and instruments for common action, which is the only way to strengthen the Union's leading role on a global scale.

Additionally, the General Affairs Council will promote efficient, responsible and digitalised European public administration that will be able to provide a timely and high-quality response to the challenges the Union is facing, while consistently applying principles of excellence, balanced geographical representation and equality between women and men.

The Justice and Home Affairs Council will focus on interoperability between information systems and internal security. In fact, the Croatian Presidency will pay special attention to ensuring a more efficient use of the existing and improved information systems (SIS II, VIS and EURODAC) and their upgrade with new systems (EES, ETIAS and ECRIS-TCN), as well as to ensuring the comprehensive and effective application of the legislation on interoperability.

The Presidency will continue to work on the application and impact assessment of new technologies (drones, artificial intelligence, encryption and 5G networks), in cooperation with national authorities in charge of legislative implementation and with the competent EU agencies. A comprehensive approach to internal security includes strengthening resilience to cyber-attacks, hybrid threats and the dissemination of fake news.
In the Justice area, special attention will be dedicated to the further development and promotion of eJustice, digital platforms and modern technologies so that the work of the

judicial authorities can be made more efficient, and access to justice for citizens and economic operators can be improved.

The Competitiveness Union Council places special emphasis on further deepening of the single market and on developing the EU's long-term sustainable industrial policy strategy aligned with the requirements of the digital era. Croatia will continue discussions on the digital transformation of European industry, which should contribute to the increased productivity and competitiveness of EU business entities. In the context of the European Commission's announced activities, the Presidency intends to start discussions on the ethical, legal and social aspects of the use of artificial intelligence, so that the EU can make optimal use of the potential offered by new technologies. This topic will be discussed at the 2020 Digital Assembly in Zagreb.

The Transport, Telecommunication and Energy Council promotes, among others, the measures aimed at ensuring a swift deployment of 5G networks, and raising awareness about the possibilities they offer, as well as the measures for ensuring cybersecurity in 5G networks. Consequently, the Presidency will support the measures aimed at developing the digital component of 'smart cities'. The Presidency will continue working on the implementation of the Directive concerning measures for a high common level of security of network and information systems across the Union, and the Cybersecurity Act.

In line with the agreement between the Member States, it will continue discussions on the establishment of the European Cybersecurity Industrial, Technology and Research Competence Centre, and the Network of National Coordination Centres. Encouraged by the Cybersecurity Competence Community, the two centres will implement technology development projects, and thus facilitate cooperation within the research community, as well as cooperation between the research community and industry in the field of cybersecurity. The Presidency will continue working on documents that ensure connectivity, the establishment of the functional digital single market, and a breakthrough to new areas, such as Artificial Intelligence, Internet of Things and the related data economy. Work on legislation that is important for the reduction of the digital gap and for the development of digital skills, as well as ensuring the increased inclusion of women in the digital sector, will also play an important role in this process.

The Presidency will continue the discussion on the obstacles associated with the proposal on the ePrivacy Regulation and will seek to offer adequate solutions. Blockchain technology can lead to significant improvements for both the industry and public administration, and the Presidency will be ready to accept all initiatives in this segment and to work on their adoption.

The eCroatia 2020 Strategy

In May 2017, the eCroatia 2020 Strategy was adopted with its corresponding Action Plan. The strategy was a strategic document written with the intention of improving the quality of life of the citizens of Croatia by building the competitiveness of the economy through the stronger involvement of ICT and by providing high-quality electronic public services to society. The strategy was made in accordance with already applicable strategies and Croatian laws, professional recommendations and directives from the European Union, primarily from the Digital Agenda for Europe (DAE), as the first of the seven flagship initiatives within the Europe 2020 programme.
The aim was to create a coherent, logical and efficient information system of the state by providing high quality and cost-effective eServices both at national and European levels. It ensured interoperability between existing and new ICT systems in the public administration, while at the same time eliminating the duplication of their functionality. The achievement of its objectives will be measured based on the percentage of citizens and businesses using public eServices and the level of customer satisfaction.

In addition to national resources, the strategy partly relied on European Union funds reserved for the 2014-2020 period.

The Programme of the Croatian Government for the Period 2016–2020

The Programme for the period 2016-2020, developed by the government of the Republic of Croatia, represented a systematic and methodical overview of instruments the government used to achieve political stability, legal security, economic growth and social solidarity. As part of the Programme, efforts were made to achieve a functional and accessible public administration and further digitisation. Moreover, for the purpose of increasing the efficiency of institutions, measures included the simplification of rules and the acceleration of the work of the administration through the digitisation of all processes with a view to expanding eServices to citizens and businesses, interconnecting all state administration bodies and establishing a uniform manner of communication between citizens and state administration bodies.

One of the programme's objectives relating to public administration was the accomplishment of the digitisation of public services. The plan involved establishing a Central Government Information System, the optimisation of resources, the centralised management of all information systems and services in one place, and the introduction and use of eIDs for all citizens.

Although there have been no new specific political communications in 2019, Croatia has started drafting the strategic document concerning its National Plan for the digital transformation of the economy. The National Plan aims to create the pre-conditions for the optimal use of digital capacity in all economic areas, and to enable and facilitate access to technology, knowledge and experience for all businesses, especially SMEs. The National Plan for the Digital Transformation of the Economy wants to ensure the following:

- clear vision, goals and priorities for the development of the Croatian digital economy;
- coherence of objectives, priorities and development measures in the field of economic digitisation with relevant strategies at national and European level;
- promotion and support of the digital development of the Republic of Croatia's economy through the proposed measures; and
- access to available sources of funding for their implementation of each proposed measure (EU funds, state budget, local self-government budget, etc.) or link the proposed measures with available sources of financing.

3.2 Interoperability

The eCroatia 2020 Strategy

The Croatian Interoperability Framework was developed in accordance with the European Interoperability Framework 1.0, i.e. in line with the EIF version 1.0, and in its subsequent development. In all its actions, account will be taken of the principles of the European Interoperability Framework. Special attention will be paid to the political context as well as legal, organisational, semantic and technical interoperability.

The eCroatia 2020 Strategy also focuses on the insurance of interoperability between the current and the new ICT systems in public administration, including the elimination of duplicated functionalities. The process of informatisation in the Republic of Croatia has so far been characterised by partial solutions, which met the needs of various domains of public administration, without interoperability of the whole system, which has negative consequences on the provision of eServices. For this reason, the adoption of the Law on State Information Infrastructure, the eCroatia 2020 Strategy and the related Action Plan, first established the legislative framework, and subsequently the objectives of the new electronic administration activities. Priority was given to customer satisfaction, rationalisation of administrative procedures and the preparation and provision of modern eServices in order to improve the quality of life of citizens and the consequent further

growth of the Croatian economy. Such integrated informatisation supports the implementation of an optimal state model by creating and developing new public services as well as enabling citizens, entrepreneurs and the public administration to access electronic services as useful, simple, accessible and secure tools, compatible with different technologies.

The National Information Infrastructure Act is the basis for interoperability, implementing the eCitizens system as a one-stop shop for eServices in the virtual world and a portal providing access to public sector information.

In the framework of the 2030 National Development Strategy, the Ministry of Administration has been designated as the holder of the "major project" currently in preparation, under the working title "ePublic administration and State information infrastructure". The project aims to increase the level of digitalisation of services provided by state and public administration bodies, as well as local and regional self-government units, to enable digital transformation of public administrations in the period from 2023 to 2030 by digitising internal processes, upgrading the State information infrastructure with new technologies and increasing the number of complex public services (with the need to define the owners of processes and services) and guarantee the interoperability of existing systems.

3.3 Key enablers

3.3.1 Access to public information

Open Data Policy

On 19 July 2018, the Government of the Republic of Croatia adopted the Open Data Policy. The Open Data Policy provided the strategic direction for further development of the policy of openness and transparency of public administration. Its implementation seeks to create the preconditions for opening up new jobs in the context of open data economies, to make better use of EU funds in planned projects and to increase the added value of the open data economy in the Republic of Croatia.

3.3.2 eID and Trust Services

Electronic Identification Croatia (ePIC)

In May 2018, Croatia's Financial Agency (FINA) organised the first visibility event of the Electronic Identification Croatia (ePIC), a project funded by the Connecting Europe Facility EU Programme. The project's goal is to promote the uptake and speed up the use of the eID Digital Service Infrastructure (DSI) among citizens and public bodies established in Croatia. It aims to integrate the eID DSI in all existing public eServices of the country.

The coordinator of the ePIC project is the Financial Agency (FINA) and project partners are the Ministry of the Interior, the Ministry of the Sea, Transport and Infrastructure, the Ministry of Justice, the Ministry of Construction and Physical Planning, and the Official Gazette. The total value of the project is EUR 505 407 of which 75% (EUR 379 055) are co-financed by the Connecting Europe Facility.

The project was completed in December 2019 and the result of the project is that EU/EEA citizens are now able to access the following 8 Croatian pubic electronic services:

- **ePermit** – Dealing with Construction Permits – This service enables all applicants to submit the building permit plan online and upload their documentation. For authorised users, an online review and approval process is available.
- **Real Property Registration and Cadastre Joint Information System** – JIS OSS – It allows users to submit their land registry (LR) extracts from the main book or books of deposited contracts for real estate rights. Digitally signed documents are created and downloaded in the OSS system upon payment of fees;

▪ **Registration of a company via internet** – This service enables the submission of requests and documents for registering a limited liability company via the internet. The service will provide the founders with the registration decisions and other documents in electronic form via a notice sent to an eCitizen Personal Mailbox or per e-mail.

▪ **Consent in the procedures under the jurisdiction of the Ministry of the Interior** – According to the law, in the Republic of Croatia both parents must participate in the process of issuing passports or identity cards for minors. Also, both parents have to agree on the minors' address of permanent residence. This new eService offers the possibility for one parent, EU/EEA citizen, to give his/her consent to the other parent to complete the process of issuing ID documents (ID card or passport) for their child or to change the child's address of permanent residence. eServices also offer the possibility for EU/EEA citizens, who are owners or part-owners of real estate on the territory of the Republic of Croatia, to give their consent to another adult person for registration of permanent residence at the address of that real estate property. eServices require high-level electronic identity credential.

▪ **eNautics** – This service enables online arrival notifications of a foreign vessel or a Croatian boat in Croatian territorial waters, in view of the payment of the safety or navigation fees, and the download of the electronic receipt as proof of payment.

▪ **eSeafarer** – This service enables submission of applications for boat skipper exams. Upon passing the exam, the candidate will receive a certificate of competency as a boat skipper.

▪ **eVessels** – This service is intended for owners of Croatian flagged vessels and provides the possibility to search and view data from the Register of Ships; it enables owners of vessels insight into complete information about their vessels, such as applicable fees and charges, conducted technical inspections , and it enables owners of vessels to submit an application for a regular technical inspection.

▪ **Electronic Public Procurement System of the Republic of Croatia** – The system (EOJN RH/EPPS) is a platform for conducting public procurement procedures in accordance with the Public Procurement Law and announcing procedures in accordance with the Law on Concessions. EPPS gives all interested entities unrestricted and immediate access, and enables them to search, view and download public procurement notices and related tender documents. EPPS enables economic operators to prepare and submit bids. Contracting authorities and economic operators may communicate and exchange information by electronic means through EPPS.

All eight services are published and available through the eCitizens Platform for EU/EEA citizens.

3.3.3 Security aspects

National Strategy on Cyber Security

Recognising the importance of security of cyberspace as a shared responsibility of all segments of society, in October 2015 the Croatian government adopted a Cybersecurity Strategy together with an Action Plan. Its purpose was a systematic and coordinated implementation of activities necessary to raise the capacity of the Republic of Croatia in the field of cybersecurity, in order to build a safe society in the cyberspace. The general aim of this strategy was also to exploit the market potential of the information society, in particular of cybersecurity products and services. Since it was the first comprehensive strategy in the Republic of Croatia in the field of cybersecurity, the primary objective was to identify organisational problems in its implementation and raise awareness in society about the importance of this issue. It was necessary to encourage the coordination and

cooperation of all State bodies and public authorities, but also other sectors of society, in order to establish new functionalities, raise the efficiency of relevant stakeholders, use existing resources more effectively and better plan usage needs. A new Cybersecurity Strategy and Action Plan are expected in 2020.

In 2017, the government of the Republic of Croatia renewed its National Security Strategy. The new strategy recognised the importance of security within cyberspace as a common responsibility of all the segments of society. The main purpose of the strategy was to achieve a systematic and coordinated implementation of the activities necessary for improving Croatia's capabilities in the area of cybersecurity, with a view to building a safe society in the cyberspace. The goal of the strategy was to take advantage of the full market potential of information society as a whole and especially of cybersecurity products and services.

3.3.4 Interconnection of base registries

No political communication has been adopted in this field to date.

3.3.5 eProcurement

No political communication has been adopted in this field to date.

3.4 Domain-specific political communications

The Public Administration Development Strategy 2015–2020

The Public Administration Development Strategy 2015–2020 was adopted by the Croatian Parliament in June 2015. The strategy presented a strategic framework for public administration development and an orientation towards enhancing administrative capacities and a better organisation of public administration. The development of a modern public administration was conducted in three main directions: the simplification and modernisation of administrative procedures to ensure the reliable and fast support of public administration to citizens and economic entities, the improvement of the development and management of human resources with the aim of creating a modern public service and reforming the administrative system to align it with European standards.

Taking into account the need to harmonise the Action Plan with the 2015–2020 Public Administration Development Strategy, the 2016–2020 Government Programme and the prerequisites for the fulfilment of ex-ante conditionalities, the Croatian government adopted the Action Plan for the implementation of the 2017–2020 Public Administration Development Strategy in December 2016.

2012-2020 National Healthcare Strategy

The 2012-2020 National Healthcare Strategy is the umbrella document determining the context, vision, priorities, goals and key measures in healthcare in the Republic of Croatia in the period. The time horizon until 2020 was selected because it provides sufficient time for implementation and evaluation of the strategic measures, and it coincides with key strategic documents of the European Union (EU) and World Health Organisation (WHO). Part of this strategy focuses on the informatisation and eHealth within the Central Healthcare Information System in Croatia (CEZIH). CEZIH, with more than 17 000 users and a large number of information systems makes a good basis for the informatisation of the entire healthcare system in Croatia. On 2 January 2011, the ePrescription was introduced and complete national coverage was achieved, which was a significant step towards achieving a "paperless office". On 15 January 2011, full national coverage of eReferral was achieved for biochemical laboratories, and since then millions of electronic referrals and results of laboratory examinations have been exchanged through the system. Another effect of modernisation was the increase in information technology

literacy among healthcare workers. Overall, there were five key purposes of the informatisation of the healthcare in Croatia:

- To contribute directly to the improvement of healthcare service quality, safety and consistency.
- To provide better communication between all participants in the healthcare sector through central management of patients' data, in primary, secondary and tertiary care (electronic medical record), centralised process management in the healthcare system (e.g. eAppointment) and connecting all healthcare registers.
- To achieve complete availability of healthcare to patients through quick and secure access to their own health records, as well as to information on health services and the quality of healthcare.
- To enhance the efficiency of the administration and improve the management of the healthcare system by building an advanced reporting system, including all data in the healthcare system. This would support healthcare authorities and decision makers and allow for a more efficient spending of resources.
- To align the health system with the political goals of digitalisation of the public sector and provision of electronic services to the population, in coordination with other state administration bodies and in accordance with the strategy of the Republic of Croatia and eCroatia.

Since 2019, Croatia can send and receive ePrescriptions across borders and receive patient summaries of citizens coming from other European countries. The ePrescription service allows any EU citizen to obtain medicines or other types of medications in any pharmacy located in another Member State. In addition, the patient summaries provide background information on important health-related issues that a patient could have, such as allergies, treatments, previous surgeries, etc. making it accessible to all doctors in case of a medical emergency in another Member State.

eJustice

Strengthening the efficiency of the judiciary was one of the objectives in the Strategic Plan of the Ministry of Justice for the period 2019-2021, emphasising the use of solutions based on complex algorithms and artificial intelligence in order to increase the efficiency of the proceedings. Also, electronic communication in courts is advancing and all commercial courts are now equipped for eCommunication with lawyers, notaries and prosecutors. Online payment of court fees is incentivised by offering a 50% discount in case of immediate payment and online submission of a claim. As of 2019, personal and corporate insolvency documents should be delivered from the Financial Agency to the courts electronically. A pilot project is testing the central postal delivery of court documents.

eSchool: Establishment of the Digital Maturity Schools Development Programme (pilot project)

As part of a new curriculum in 2018, obligatory ICT classes were introduced in the 5th and 6th grades of primary school. eSchool: Establishment of the Digital Maturity Schools Development Program (pilot project) was a successful pilot project in the Republic of Croatia in the field of eEducation which was completed in August 2018. Through the pilot project, the schools were equipped with LAN, digital classrooms and tablets. Digital educational content and drafts for STEM subjects were made for primary schools and high schools. Several eServices were created, including digital repositories of educational content, education organisation applications, classroom management systems, and an IT system for the digitisation of the institutions. The framework for the digital maturity of schools and the digital competence of principals, teachers and professional associates was developed. Due to the success of the first phase of the eSchool project, the second phase of the project is being rolled out for the remaining schools in 2019. By ensuring more advanced, transparent and interlinked administrative and teaching processes in schools, the necessary preconditions for the use of ICT were created.

Based on the experience and results of these pilot projects, the Croatian Academic and Research Network (CARNet) started implementing the second phase of the programme 'eSchools: Development of a system of digitally mature schools (Phase II)' in September 2018; the programme's budget is worth HRK 1.3 billion.

In digitally mature schools, teachers use technology to improve teaching, develop their own digital content and support independent learning and development of critical skills among students who are at the core of the teaching process. Students thus actively participate in teaching with increased motivation to learn and continue their education and thus become more competitive in the labour market. The management of eSchools is efficient and transparent, and communication and exchange of eDocuments between the school, its stakeholders and founders are much simpler.

Like the pilot project, the second phase of the programme is financed by the European Regional Development Fund (ERDF) under the Operational Programme "Competitiveness and Cohesion" and the European Social Fund under the Operational Programme "Effective Human Resources".

Phase II of the programme is ongoing since 1 September 2018 and will last until 31 December 2022, and its purpose is to implement the comprehensive system into public schools in the Republic of Croatia.

3.5 Emerging technologies

Statement on Cooperation for Artificial Intelligence

In July 2018, the Minister of Economy, Entrepreneurship and Crafts signed a statement on cooperation in the field of artificial intelligence. In this way, the Republic of Croatia committed itself to cooperating on a comprehensive and integrated European approach to artificial intelligence and agreed to promote European technology and industrial capacity in artificial intelligence, including better access to public sector information.

Regarding the development of AI, the Centre for Artificial Intelligence was established in October 2019 and is the largest research centre in the field of artificial intelligence in Croatia, bringing together more than 100 researchers (faculty and doctoral students) from 18 research laboratories at the Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia.
The Centre for Artificial Intelligence (CAI) is a leading artificial intelligence research centre with three primary goals. The first one is to advance the theoretical foundations of artificial intelligence (AI) and to make progress in areas related to AI, such as machine learning, deep learning, natural language processing, computer vision, financial analytics, robotics, the Internet of Things, bioinformatics, cybersecurity, and referral systems. The second objective is to collaborate with industry through the transfer of AI technology to develop new innovative knowledge-based products and services. The third goal is to provide cutting-edge AI education at the undergraduate, graduate and doctoral levels, as well as continuing education for the industry.

As for high-performance computing, Croatia has signed the European High-Performance Computing (HPC) Declaration, aimed at developing European high-performance computers that will be among the three strongest computers in the world by 2022-2023. Currently, Croatia is working on the establishment of HPC competence centres that could be used by companies and public administration.
The Croatian Scientific and Educational Cloud (HR-ZOO) project is ongoing, with the objective of building a distributed national eInfrastructure consisting of computing, storage and network resources for the purpose of building the RDI capacity of the Croatian

A&R community. The total value of the project is EUR 25 895 058 (with an EU co-financing of EUR 22 010 799) over a timeframe from 1 July 2017 until 1 September 2021.

The main objective of the Croatian Scientific and Educational Cloud (HR-ZOO) project is building a core component of the national eInfrastructure. HR-ZOO is recognised as an important prerequisite for the development of the Croatian research and higher education area, as well as a common infrastructure for the needs of modern science and education and internationally relevant research, but also as an instrument of integration into the European Research Area (ERA) and the European Higher Education Area (EHEA).

The University Computing Centre (SRCE) coordinates the project. Other key institutions from the science & education sectors are involved in the project, such as: Josip Juraj Strossmayer University of Osijek, University of Rijeka, University of Split, University of Zagreb, Croatian Academic and Research Network – CARNet, Ruđer Bošković Institute.

4 | Digital Public Administration Legislation

4 Digital Public Administration Legislation

4.1 Specific legislation on digital public administration

Law on the State Information Infrastructure

On 15 July 2014, the Croatian Parliament adopted the Law on the State Information Infrastructure. The act established a central government portal system as a single point of contact in the virtual world. The act also introduced the communication of public sector institutions with citizens via a State-issued mailbox, a national identification and authentication system, a system of basic and public registers, a public register for the coordination of projects established for the State Information Infrastructure (ProDII) and a meta-register with all information needed for their interconnection, thus creating the preconditions for the "paperless government" project. The law also defined the body responsible for the development and implementation of ICT in the public sector and the instruments for coordination.

Croatia has a comprehensive framework of laws and regulations in place for exercising eGovernance, which is supplemented by the Electronic Document Act (OG 150/2005), the Information Security and Confidentiality Act (NN 79/2007), the Act on the Right to Access Information (NN25/2013) and the Law on Cybersecurity for Key Service Providers and Digital Service Providers (NN 64/2018).

4.2 Interoperability

Single Digital Gateway

The European Parliament and the Council adopted the Regulation on establishing a Single Digital Gateway to provide information, procedures, assistance and problem solving services. Its implementation officially started on 11 December 2018. The Central State Office for the Development of the Digital Society and the Ministry of the Economy, Entrepreneurship and Crafts were designated to carry out horizontal coordination of implementation in cooperation with all relevant bodies for the particular administrative areas and public policies necessary for the development of the Single Digital Gateway.

Decree on Organisational and Technical Standards for Connecting to the National Information Infrastructure

In July 2017, the new Decree on Organisational and Technical Standards for Connecting to the National Information Infrastructure (OG 60/2017) was adopted.

The decree laid down organisational and technical standards for connecting to the State information infrastructure, as well as the conditions and activities necessary for the launch, implementation, development and supervision of projects related to the State information infrastructure, its management, its development and other elements necessary for operating it.

It stipulated the organisational and technical standards, policies and activities necessary for the implementation, development and monitoring of projects related to the national information infrastructure, as well as the management and development of other elements necessary for the operation of the State information infrastructure.

4.3 Key enablers

4.3.1 Access to public information

Act on the Right of Access to Information (NN 25/13; 85/15)

Due to the change in the Croatian constitution in 2010 (Official Gazette 76/2010), the right of access to information became part of the catalogue of citizens' constitutional rights. The right of access to information is governed by the Act on the Right of Access to Information (Official Gazette 25/2013, 85/2015). The Act transposed the EU Directive on the re-use of public sector information 2003/98/EC, 2013/37/EU, and it also regulates the re-use of such information. The Act on the Right of Access to Information regulated the right of access to information and re-use of information held by public authorities, it laid down the principles, the restrictions and the procedure for the exercise of rights of access to information and the re-use of information, as well as the scope, the mode and the conditions for the appointment and dismissal of the Information Commissioner; it also governed the inspection of the implementation of this act, as well as the misdemeanour provisions related to the exercise of the right of access to information and other obligations of public authorities.

The act was amended in 2015 (OG 85/15), thus extending the obligation to publish open data as well as providing information on reuse. According to the Act on the Right to Access Information and in accordance with the PSI Directive, public authorities should not restrict the reuse of their data sets, and the terms of use should be minimal.

Re-use of Public Sector Information (PSI)

The obligation to provide data for reuse and to open data is regulated by the Law on the Right of Access to Information (Official Gazette 25/13, 85/15), which transposed the PSI Directive. The law put emphasis on proactive publishing of information by public bodies, including clear legal requirements concerning what must be published and additional by-laws on implementation, and enabled the reuse of information, with marginal costs, for any purpose (both non-commercial and commercial). Also, the information was available on request. According to the amended law, which came into force in August 2015, public sector bodies must make their documents available (where possible and appropriate) in open and machine-readable format together with their metadata. Croatia's Open Data Portal was launched in March 2015.

4.3.2 eID and Trust Services

eIDAS

In July 2017, 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 Council Directive 1999/93/EC was adopted.

The eIDAS Regulation of the European Parliament and the Council 910/2014 on electronic identification and trust services for electronic transactions in the internal market was released in order to enhance trust in electronic transactions in the internal market, by providing a common foundation for secure electronic interaction between citizens, businesses and public authorities, simpler and more secure transactions and mutual recognition of electronic identification.

Decree on the Provision and Use of Trust Services (NN 060/2019)

The Decree on the provision and use of trust services (NN 060/2019) was published in June 2019 and lays down the measures, the procedures and the forms of protection of electronic trust services, as well as other methods of identification that provide security equivalent to a physical presence in terms of reliability, and by which a qualified trust

service provider verifies the identity of signatories. The decree also establishes the preconditions and the rules for automated remote electronic signature and sealing, the general and specific operating conditions for trust service providers, the rules on temporary suspension of certificates for electronic signatures and certificates for electronic seals in cases where the certificate temporarily loses its validity, and the mandatory assurance of trust service providers.

Electronic Signature Act (NN 10/02/ NN 80/08/ NN 30/14)

Croatia was one of the first countries to include digital signatures in its legislation. The Electronic Signature Act (NN 62/17) (Law NN 10/02, amended by Law NN 80/08 and Law NN 30/14) has been supplemented by a series of ordinances and regulations, such as the Regulation on the scope of operations, content and responsible authority for operations of electronic signature certification for State administration bodies (NN 146/04).
The Law on the electronic signature was outdated and it was replaced by the Act on the Implementation of 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 (NN 62/2017).

4.3.3 Security aspects

Act on Cybersecurity of Operators of Essential Services and Digital Service Providers

Croatia fully and successfully implemented the NIS Directive in national legislation through the Act on Cybersecurity of Operators of Essential Services and Digital Service Providers, adopted in July 2018. The associated Decree on Cybersecurity of Key Service Providers and Providers of Digital Services was adopted in parallel.
The contact point for the implementation of this law is the Office of the National Security Council, and the body responsible for digital service providers is the Ministry of Economy, Entrepreneurship and Crafts.

General Data Protection Regulation

The EU General Data Protection Regulation (Regulation (EU) 2016/679), known as GDPR, entered into force in 2016. It replaced the EU Data Protection Directive. In Croatia, the Act on the Implementation of the General Data Protection Regulation was enacted in April 2018 and came into force in May 2018. It replaced the prior Croatian data protection law.

4.3.4 Interconnection of base registries

Decree on the Establishment of the Public Register for the Coordination of Projects on the State Information Infrastructure

On 13 November 2014, the Croatian government adopted the Decree on the Establishment of the Public Register for the Coordination of Projects on the State Information Infrastructure (ProDII Register). The decree was set up with the purpose of rationalising, developing a direction and coordinating all the activities and projects on the State information infrastructure, simultaneously increasing the quality of public services as well as preventing future planning and implementation of the same or similar projects in the public sector.

Central Electronic Registry

In May 2018, the Decree on Establishing the Central Electronic Registry of Development Projects was adopted (Official Gazette 42/2018), which regulated the establishment and the management of the Central Electronic Registry of Development Projects. Specifically, the decree laid down how development projects should be linked to strategic planning

documents, the obligation of entering data in the project registry, the type of data that should be entered and the ownership of the project registry.

Business Registry

The Court Register Act (001/1995) regulated the establishment, the structure, and the maintenance of the Business Registry (Court Register). The Court Register Act also defined the registration procedure. The decision on the means and conditions for Access to the Court Register (138/2002) determined the access to the data recorded in the Court Register via the Internet. The Ordinance on Entry in the Court Register (022/2012) governed various aspects, such as the form and the method for registering data, the protection and storage of registry data, the content and the form of the application for registration, the content of other prescribed forms and codes, as well as other issues relevant to the register and the use of information technology.
Amendments to the Court Register Act, published in the Official Gazette 40/2019, regulate the registration of a company via the internet. Subordinate legislation that regulates this area includes the Regulation on the procedure for the registration of a company via the internet (NN 65/2019).

Land Registry

As far as the Land Registry is concerned, the Law on the State Survey and the Real Estate Cadastre (16/07) regulates the State survey, the real estate cadastre, the spatial unit, the National Spatial Data Infrastructure, the jobs in the local government, geodetic works for special purposes, and the jurisdiction over the State survey and the real estate cadastre.
The act currently in force is the Law on the State Survey and the Real Estate Cadastre (112/18) which regulates the State survey, the real estate cadastre, the infrastructure cadastre, the register of buildings, the register of territorial units, the register of geographical names, the jurisdiction over the registers mentioned above and the performance of the related tasks, such as the tasks of the State geodetic administration, the preservation and the use of data, and the supervision of activities regulated by this Act.

In November 2019, the Regulation on electronic business operations of users and authorised users of the Land Registry system (NN 108/2019) was adopted, which regulates technical conditions, conditions of use and costs of electronic business transactions in land registers by users and authorised users of information systems in application in court operations.

4.3.5 eProcurement

Public Procurement Act (NN 110/07 / NN 125/08, 120/16)

The Public Procurement Act (NN 110/07) and the accompanying regulations and ordinances (NN 125/08) regulated the conditions of and procedures for public procurement to award contracts for the purchase of goods and services and works contracts, with the objective of securing the effective budget utilisation and encouraging a free market for tendering.

eInvoicing Legislation

In 2015, the Croatian Ministry of Economy, Entrepreneurship and Crafts participated in a CEF-funded project: the Croatian eInvoicing Business-to-Administration Exchange Project. Its objective was to promote and accelerate the uptake of eInvoicing in Croatia amongst public and private entities, by improving the existing invoicing technical and operational environment. The Ministry finalised the implementation of the project in May 2017.

From 28 February 2016 onwards, Decision 124/2015 mandated the reception and processing of electronic invoices (eInvoices) for all central contracting authorities and entities. In Croatia, economic operators submitted eInvoices to the central contracting authorities via the central government platform *e-Račun*. This platform worked as the national eInvoicing exchange hub to which all economic operators must connect.

It was not mandatory to establish bilateral contractual relations or agreements between all parties in the system: a simple registration was sufficient to exchange eInvoices with other registered users.

Based on a Public Key Infrastructure (PKI), *e-Račun* used digital certificates and ensured that every user had a registered identity and that sensitive information was encrypted.

The issuance and exchange of eInvoices in Croatia is governed by the following national laws and regulations, which reflect EU legislation: Value Added Tax Act (NN 73/13, 99/13, RUS, 148/13, 143/14, 115/16), Ordinance on Value Added Tax (NN 79/13, 85/13, 160/13, 35/14, 157/14, 130/15/1/17, 41/17), General Tax Code (NN 115/16), Accounting Act (NN 78/15, 134/15, 120/16), Electronic Document Act (NN 150/05), eIDAS Regulation 910/2014 (directly applicable in all Member States), Implementation Act on eIDAS Regulation EU/910/2014 (NN 62/17), Electronic Commerce Act (NN 173/03, 67/08, 36/09, 130/11, 30/14).

eInvoicing in Public Procurement

In October 2018, the Law on Electronic Invoicing in Public Procurement (NN 94/2018) was adopted.

The Regulation on technical elements, issuing and exchange of electronic invoices and supporting documents in public procurement (NN 32/2019) prescribes the technical elements of the electronic invoice, the obligations of users of the central platform, the registration of issuers of electronic invoices, contracting entities and information brokers, the issuing and exchange of electronic invoices and accompanying documents, the messages concerning the receipt and the submission of electronic invoices, as well as the inability to issue and exchange electronic invoices.

4.4 Domain-specific legislation

Accessibility of web pages

In February 2019, the Law on Accessibility of Web Pages and Mobile Software Solutions of Public Sector Bodies was adopted (NN 17/2019). According to the provisions of the directive, the Law on Accessibility prescribes the necessity of complying with international standards concerning the creation, the appearance and the structure of websites, as well as the navigation and search through their content.

eBusiness

In June 2018, the Decree on launching the eBusiness project was adopted (NN 53/2018). It enabled centralised access to information about public services for businesses, secure access to business data and electronic communications between business entities and the public sector.

eCash

The Law on eCash (NN 64/2018) was adopted in July 2018. It regulated electronic money and electronic money issuers, the conditions for establishing, operating and terminating the work of electronic money institutions established in the Republic of Croatia, and the conditions under which electronic money institutions established outside the Republic of Croatia can operate in the Republic of Croatia.

eMoney

In August 2018, the Decree on the regulatory capital of the institutions that operate with electronic money (NN 73/2018) was adopted.
In 2019, two decisions were adopted: the Decision on the register of payment service providers and electronic money issuers (NN 5/2019) and the Decision on the regulatory capital of electronic money institutions (NN 126/2019).

Establishing a business

In November, the Decree on conditions, methods and terms for establishing a system for starting a business (START) was adopted (NN 103/2018).

Law on Electronic Commerce (NN 173/03, 67/08, 36/09, 130/11, 30/14)

The Law on Electronic Commerce regulated the provision of information society services and the liability of IT services providers, and laid down the rules concerning the conclusion of contracts in electronic form. Its provisions did not apply to data protection, taxation, notarial activities and the representation of clients and protection their interests before the courts.
The law was first adopted on 15 October 2003 (NN 173/03) and then amended on 20 May 2008 (NN 67/08), while its last version was voted on 13 March 2009 (NN 36/09, NN 130/11, NN 30/14, NN 32/19).

Regulation on eCommunication

In February 2018, the Regulation on the electronic communication in proceedings with commercial courts was adopted (NN 12/2018).
In January 2020, the Regulation on electronic communications (NN 005/2020) was adopted, introducing eCommunication as a means for participants in court proceedings to present their submissions electronically, to receive court documents in a safe electronic mail box and to have remote access to court cases.

4.5 Emerging technologies

No legislation has been adopted in this field to date.

5 | Digital Public
Administration
Governance

5 Digital Public Administration Governance

5.1 National

5.1.1 Policy

Ministry of Public Administration

The Ministry of Public Administration is responsible for the harmonisation of the national policy on information society development and the promotion of the use of common interoperable solutions in collaboration with other countries at the European level. It participates in the preparation of normative and expert frameworks ahead of EU accession as far as the information society and media are concerned.

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Central State Office for the Development of the Digital Society

The new Central State Office for the Development of the Digital Society will perform administrative and professional tasks related to the development, standardisation, and security recommendations for the use of State IT infrastructure and participate in the promotion and systemic improvement of network infrastructure in the Republic of Croatia. The body is also mandated to propose a strategy to the government aimed at improving digital literacy in Croatia.

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5.1.2 Coordination

The Council for National Information Infrastructure

In June 2015, the Council for National Information Infrastructure was founded. The Council is composed of representatives of central State administration bodies and of the professional ICT community. The Council has the task of monitoring and coordinating the development of the State information infrastructure, supervising compliance of projects in the ProDII Register with the Law on Public Information Infrastructure. The Council also plans and coordinates projects on the State information infrastructure and makes recommendations on the merger of similar projects entered in the ProDII Register. Moreover, it assesses the goals and the possibilities of development of the State information infrastructure and the achieved quality and availability of information services.

Its activities include giving recommendations to the government of the Republic of Croatia, proposing strategies, plans and other measures to implement on the topic of the State information infrastructure and digital society. The Council's activities also include monitoring of the operations of the Shared Services Centre, evaluating the goals and possibilities of development of the State information infrastructure and providing guidelines for the future development of the State information infrastructure. Providing expert, administrative and organisational support to the Council is the task of the Central State Office for the Development of the Digital Society. The Council encourages research and development in the field of information technology in the public sector and makes recommendations for the future development of the State information infrastructure, with particular emphasis on its security.

Ministry of Public Administration

The Ministry performs administrative tasks related to the coordination of public administration body information systems. It coordinates the scientific development of State Administration, as well as the direction of its reform and modernisation process. Furthermore, it directs the eCroatia Programme.

Central State Office for the Development of the Digital Society

This new Office will perform administrative and professional tasks related to the development, standardisation, and safety recommendations for the use of State IT infrastructure and participate in the promotion and systemic improvement of network infrastructure in the Republic of Croatia. The Office is also in charge of drafting and monitoring the implementation of laws and other regulations in the field of ICT in the Republic of Croatia, as well as defining activities and the methodology for monitoring progress and assess the impact of policies linked to the development of a digital society in Croatia.

5.1.3 Implementation

Ministry of the Sea, Transport and Infrastructure

The Ministry performs administrative services and other professional actions related to the field of electronic communications representing the basic information-communication infrastructure.

Agency for the Protection of Personal Data

The Bureau is the central government body tasked with implementing the technical aspects of information security for government bodies. The technical areas covered include the following: standards for information systems security; security accreditation of information systems; management of crypto-material used in the exchange of classified information; and prevention and response to computer threats.

Ministry of Public Administration

The Ministry participates in the overall promotion and improvement of IT infrastructure in Croatia. Furthermore, it promotes the creation of the information society, public access to internet services and facilities, the development of ICT, eGovernment, eEducation and eBusiness. It is also responsible for driving the implementation of the eCroatia Programme.

Croatian Bureau of Statistics (CBS)

The CBS provides statistical data on economic, demographic, social, health and ecological conditions, activities and events. In addition, it fulfils the international commitments of Croatia related to the production and dissemination of official statistics.

Information Systems and Information Technology Support Agency (APIS IT)

The Agency has developed a document management information system to support the ongoing activities of the State administration and local government institutions. APIS IT also supports the State administration portal.

Financial Agency (FINA)

FINA is a Government-owned company competent for financial transactions. It streamlines the information-communication infrastructure, supports the State and public finances systems, as well as the registers and information services of the administration, regional and local self-government bodies. FINA was entrusted with the development of an IT network to communicate with State administration bodies (HITRO.HR).

National Council for Science, Higher Education and Technological Development, Ministry of Science and Education

The National Council for science, higher education and technological development is the highest expert body responsible for the development and quality of overall scientific activities and systems of science, higher education and technological development in the Republic of Croatia.

Central State Office for the Development of the Digital Society

The former Digital Information Documentation Office was integrated in December 2016 within the Central State Office for the Development of the Digital Society as an expert government service, which performs information, documentation and referral work. In addition, it promotes the use of official public domain data, information and documentation and ensures the use of additional information, data and documentation relevant to State bodies and institutions.

Council for State Information Infrastructure

The Council was established in May 2016. Its main activities include monitoring the implementation of all projects of the State information infrastructure (ProDII) and making recommendations for IT infrastructure investments in the central State administration bodies and other beneficiaries of the State budget and extra-budgetary users of the State budget. All investments in ICT exceeding the value of HRK 2.5 million have to be approved by the Council.

For the purpose of monitoring and coordinating the development of the State information infrastructure and preparing reports to the government of the Republic of Croatia, the State information infrastructure Council was established by the Decree on the establishment of the State Information Infrastructure Council (NN 5/2018).

Ministry for Regional Development and EU funds

The Ministry is in charge of preparing primary and secondary legislation, which regulates administrative procedures. Furthermore, it seeks to improve the legal and procedural framework towards fulfilling the requirements of eGovernment and electronic communication in line with EU regulations.

AKD

AKD is a company specialising in the production of high-security printed documents and smart cards, as well as the support for IT infrastructure and the implementation of integral solutions. AKD also provides shared services, including the identification of citizens, according to the Decree on organisational and technical standards for the connection to the State information infrastructure. AKD manufactures an array of products falling into three main brands:
- AKD Documents;
- AKD Cards & eSolutions;
- AKD Security Printing.

CARNet

The Croatian Academic and Research Network (CARNet) is a public institution that operates under the Ministry of Science and Education in the field of information and communication technologies and their application to education, ranging from network and internet infrastructure, through eServices, to security and user support. CARNet also provides shared services according to the Decree on organisational and technical standards for the connection to the State information infrastructure.

5.1.4 Support

Information Systems and Information Technology Support Agency (APIS IT LLC)

In the creation of the information environment in the Republic of Croatia, the role of APIS IT is to develop and monitor the implementation of eGovernment directives, laws and policies, to support public administration in developing its own IT strategies, to develop and support common ICT infrastructure, to promote the best practices for the development of information systems, including the protection of personal data, the use of shared services and access to the information resources of the government administration with corresponding authorization and authentication.

5.1.5 Interoperability coordination

Ministry of Administration

The main body responsible for interoperability activities in Croatia is the Ministry of Administration.

5.1.6 Base registry coordination

Metaregistry

The department for eCroatia in the Ministry of Public Administration is the central government body in charge of the Metaregistry. The main base registries in Croatia are the ones holding information on persons, companies, and land. Currently, Croatia does not have a complete catalogue of base registries. Croatia does, however, have an extensive list of public registries, which is available through the Metaregistry. The administration of base registries is handled by different public bodies in Croatia.

5.1.7 Audit

State Audit Office

The State Audit Office is the supreme audit institution of Croatia, whose authorities and responsibilities lie within the scope of the State Audit Act.

5.1.8 Data Protection

Agency for the Protection of Personal Data

The Croatian Personal Data Protection Agency carries out administrative and professional tasks regarding personal data protection. More specifically, it supervises the implementation of personal data laws and regulations, highlights alleged misuse of personal data, decides on the course of action to be taken in case of violation of personal data laws and centrally registers all the official personal data in Croatia.

5.2 Subnational (federal, regional and local)

5.2.1 Policy
No responsible organisations have been reported to date.

5.2.2 Coordination
No responsible organisations have been reported to date.

5.2.3 Implementation
No responsible organisations have been reported to date.

5.2.4 Support
No responsible organisations have been reported to date.

5.2.5 Interoperability coordination
No responsible organisations have been reported to date.

5.2.6 Base registry coordination
No responsible organisations have been reported to date.

5.2.7 Audit

No responsible organisations have been reported to date.

5.2.8 Data Protection

No responsible organisations have been reported to date.

6 | Digital Public Administration Infrastructure

6 Digital Public Administration Infrastructure

6.1 Portals

6.1.1 National Portals

Central Salary Calculation System

Croatia implemented the Central Salary System (COP) in all institutions that have salaries financed from the State budget. The COP is a web-based application, covering salary calculations for the whole public administration, which gives the government of Croatia the possibility to manage the system. It also provides exact data to the government over salaries paid by all bodies.
The centralised salary calculation system (COP) became fully operational in 2018 with 2 122 registered institutions of COP beneficiaries.

eCitizen portal

On 10 June 2014, the eCitizen platform was launched, where today 66 eServices are available to citizens. Bodies and institutions can send to the Personal User Boxes (OKPs) 66 kinds of personalised emails with various information and notifications, such as information about the expiration of personal documents, individual documents and about the status of individual proceedings. The platform represented a one-stop shop in the virtual world. It consisted of a central State portal, a National Identification and Authentication System (NIAS) and a government-issued personal mailbox dedicated to the communication of the government with the citizens. That platform enabled citizens, with only one identification and one authentication, to access the eServices provided by 28 public sector bodies through the eCitizen system. The NIAS functionalities were in line with the STORK project of the EU, ensuring authentication levels from one to four, depending on the security level required by the application.
The new electronic services implemented in the eCitizens system during 2019 were: My account - City gas; the registration of unmanned aircraft operators for categories B2 and C1; the procedures related to membership in the Croatian Chamber of Electrical Engineers; the procedures related to membership in the Croatian Chamber of authorised Geodetic engineers; the procedures related to membership in the Croatian Chamber of Construction Engineers; the procedures related to membership in the Croatian Chamber of Engineers; mandatory pension fund; the eRegistration form of the Ministry of Culture; the eConstruction permit; the submission of requests by Croatian veterans and their family members; eNautics; eVessel; and START - electronic start-up of business.
By setting up the eCitizens system, a major step was taken to modernise public services and to bring public administration closer to citizens.
Since the beginning of its operation until 31 December 2019, 811 582 people used at least one eService, and there were as many as 28 043 174 million logins to the available eServices.

State Administration Portal

The State Administration Portal "Central State portal" (My eGovernment Portal) was abolished after the introduction of the eCitizen portal. Prior to this, it represented an innovative development in terms of usage and availability of administrative information. It connected citizens and companies with the administration and made information available in one place and in a user-friendly manner. The portal provided information on government services intended for citizens and entrepreneurs. By giving access to all eGovernment services, it evolved into a single point of contact between the government and the citizens.

The portal remained in the first phase of its development in terms of building a unified synergy platform to integrate the overall Croatian public government system.

Pursuant to the Regulation on Organisation and Technical Standards for Connecting to the State Information Infrastructure (OG 60/2017), the Office of the Prime Minister of the Republic of Croatia coordinated the inclusion of the website of public sector bodies in central state portal gov.hr and delivered the Internet Sites Integration Plan. During 2019, activities were carried out to move central government bodies to the Central State Portal using a common content management system on the web pages (GOV.hr). Currently 18 out of 20 ministries, all 11 government offices, all four central State offices and 1 out of 7 State administrative organizations use the GOV.hr platform.

HITRO.HR portal

HITRO. HR portal is a service provided by the government to facilitate rapid communication between citizens and businesses, and the State administration. This eService infrastructure serves as a one-stop shop, as it enables citizens and businesses to enjoy quicker and simpler access to information and services in one location. Furthermore, it aims to improve service levels by increasing the speed, efficiency, flexibility and transparency of the State administration. It enables citizens and businesses to perform most of the necessary actions for starting a company, opening a craft business and registering changes in the Register of Business Entities for existing companies.

Through the use of smart cards and digital signatures, citizens have access to the following services:

- "How to start a limited liability company"; "How to start a craft business": entrepreneurs are able to carry out the process of business creation online.
- Registration in the Register of Business Entities at the Croatian Bureau of Statistics.

Judges Web Service

Judges Web is an interactive web service providing access to information on all Croatian courts, judges, lawyers, court experts and judicial practices, in order to render the judicial system more transparent and to provide a helpful tool to all actors. By publishing municipal and county courts' judicial practices, the portal enables transparent insight into court work and judicial practices.

Open Data Portal

In March 2015, the Open Data Portal was established. It provided access to data published by public authorities for re-use for commercial and non-commercial purposes. It was developed by the Ministry of Administration and since 2017 the Central State Office for the Development of the Digital Society has been in charge of maintaining the Open Data Portal.

Today, 589 datasets from 74 publishers have been published on the portal. They are completely free to use and education on the publication of open data is being provided to public authorities in co-operation with the Information Commissioner's Office.

Out of the 589 available data sets, 30% are in formats such as CSV, JSON and XML, which means they are consistent with the recommendations for adapting data sets for public publishing and reuse (a rating of three stars or more).

The Open Data Portal is linked to the eCitizens System and the National Identification Authentication System is used to access the portal. In July 2018, the Central State Office for the Development of the Digital Society proposed the Open Data Policy to the government of the Republic of Croatia, which adopted it. The Open Data Policy represented the strategic direction for further development of the public administration openness and transparency policy, whose implementation aims to create and foster a stimulating environment for opening up data to public authorities and re-using them to generate new social and economic value.

In May 2019, the grant contract for the project "Adjustment of public sector bodies' information systems to the Open Data Portal" was signed by the Central State Office for the Development of the Digital Society. The project was co-financed by the European Social Fund, under the Operational Programme "Effective Human resources 2014-2020", with a budget of HRK 5 778 300, representing 85% of the total value of the project (HRK 6 798 000), with a project implementation period of 24 months.

The purpose of the project is the functional, process and technological improvement of the Open Data Portal in order to increase: the quantity and quality of datasets published by public sector bodies, the number of applications using open data, the visibility of the Open Data Portal towards the European Open Data Portal.
The scope of the project includes the analysis of the existing open data situation and the identification of needs for improvement, technological, process and functional upgrade of the existing IT system for publishing open data, the implementation of an improved open data model in at least six public sector bodies, and the education of employees of public sector bodies.

Patient Portal

The Ministry of Health put in place a Patient Portal, i.e. an electronic health record available to patients for managing and keeping track of their personal medical and health-related data. The portal is part of the eGovernment project "eCitizen" and is available to all Croatian citizens via web browser. The records in the Patient Portal are created from data collected from their personal GPs, practitioners, gynaecologists, etc. and are stored in the Croatian Health Insurance Fund's central healthcare information network (CEZIH). The mobile version of the Patient Portal is currently in its pilot phase.
In May 2019, a project called "eMedicines - Integrated Medication Management Information System" was signed, with the purpose of integrating medication management at the national level to facilitate easy and secure exchange of medicines information among stakeholders in the healthcare system. The project will upgrade the existing eServices in the eCitizen system, which will enable the verification of the medication status information on the basic and supplementary list of the Croatian Health Insurance Institute, for medicines that the patient is taking or has taken in the last six months. The patient will also be able to easily report suspected adverse reactions to the drug, which is very important for the ongoing assessment of the safety profile of each drug on the market. The goal of eServices is to strengthen the patients' role in the healing process and the care of their own health and to promote health literacy.

Central Catalogue of Official Documents of the Republic of Croatia

The Central State Office for the Development of the Digital Society is responsible for managing the Central Catalogue of Official Documents of the Republic of Croatia, a tool available to the public providing permanent access to the documents published by the national administration. Such catalogue enables citizens to exercise their right of access to digital information.
There is an ongoing project for improving the Central Catalogue named "Establishment of an Integrated Management System for Official Documents of the Republic of Croatia", co-financed by the European Union, that will build a system for collecting, processing and publishing textual data using data-driven applications of artificial intelligence.
The project implementation deadline is January 2022.

6.1.2 Subnational Portals

No particular infrastructure in this field has been reported to date.

6.2 Networks

HITRONet and CARNet

HITRONet was established following the decision of the government of the Republic of Croatia on the establishment and provision of common services of computer and communication network of State administration bodies in 2002. The decision authorises the Financial Agency to set up a communication network of State administration bodies, and to provide common services (network and application) to them.

There are currently 624 public bodies connected through the HITROnet infrastructure. The network is regularly maintained and monitored based on its traffic load. This network also provides access to the internet and secure interconnection of the involved institutions. It also enables the institutions of the Republic of Croatia to joint EU-wide services provided through the latest generation of TESTAng networks as a common network of EU Member States. Through the HITRONet network, Croatian bodies use over 14 different services provided by the European Commission to Member States.

In addition to locations connected via HITROnet, some sites of public law bodies are connected to the CARNet network. The Croatian Academic and Research Network (CARNet) is under the responsibility of the Ministry of Science and Education. It is a private network of the Croatian academic and scientific research community, and institutions from the elementary and secondary education system, which connects 1 800 institutions in 3 700 locations. The CARNet facility owns part of the network infrastructure and it mainly leases lines from a range of telecommunications providers.

Additionally, several institutions are connected to the CARNet network, specifically: 147 within the competence of the Ministry of Demography, Family, Youth and Social Policy, 686 of the Ministry of Health and Public Health Institutions, 31 of the Ministry of Environmental Protection and Energy, 4 of the Ministry of Defence, 2 of the Ministry of the Interior and 124 of the Croatian Pension Insurance Institute.

eBulletin Board and Court Networking Project

This project was initiated to develop a single intranet and internet network for judicial bodies, which will create the prerequisites for the exchange of documents and information within the judiciary.

The eBulletin Board is a free and public service that enables the overview of electronic bulletin boards of courts and other competent authorities in the Republic of Croatia.

The central search engine enables to look for published decisions and other documents of municipal, county, commercial and administrative courts in the Republic of Croatia, as well as the enforcement proceedings of the Financial Agency and public notaries.

All notifications by the competent authorities are published without delay and automatically removed upon expiry.

The Ministry of Justice, as the highest judicial administration body, provides the technical preconditions for the information system described. All recorded information is within the jurisdiction of the courts in which the proceedings are conducted.

The StuDOM Project: a System of Local Computer Networks in Student Dormitories

Through the project sponsored by the Ministry of Science and Education, all student dormitories are connected to the broadband network. The StuDOM Network Infrastructure has 11 000 endpoints with a throughput up to 1Gbit/s and is the largest wired LAN infrastructure in Croatia. The StuDOM infrastructure covers 11 student dormitories in 7 Croatian cities.

Broadband infrastructure

In order to achieve the full potential of digital transformation, the Republic of Croatia has provided significant resources for the promotion of broadband infrastructure. With the aim of removing the existing barriers to investing in the mobile network market and enabling the increase of the investment potential of public mobile network operators, the Republic of Croatia has abolished one-off fees for the use of radio frequency spectrum for public mobile networks. Furthermore, the annual fee for the use of the radio frequency spectrum (1900 MHz - 1920 MHz) was abolished, thus opening up the possibility of new market investments and competitiveness. A mechanism was introduced by virtue of which an equal annual fee for the use of the unused radio frequency spectrum will apply to all operators of public mobile networks in the Republic of Croatia.

One of the key projects in the area of connectivity is the Framework National Programme for the Development of Broadband Infrastructure in areas where there is insufficient commercial interest to invest, managed by the Croatian Regulatory Authority for Network Industries (HAKOM). The aim of this framework programme is to develop the Next Generation Access Broadband Infrastructure (NGA) in areas where there is insufficient commercial interest for operators and market providers to invest. The programme is a national framework scheme, which follows a number of individual projects in a narrower local area. Individual projects are managed by public authorities at local and/or regional level (municipalities, cities and counties) as individual project promoters.

Another key project is the National Broadband Aggregation Infrastructure Development Programme in areas where there is insufficient commercial interest to invest (NP – BBI). The NP-BBI programme is focused on building the Next Generation Network (NGN) Broadband Infrastructure and is complementary to the Framework National Programme. The programme's feasibility study is currently in the approval phase by JASPERS. The design and construction activities are expected to last until the end of 2023.

Development of the 5G Network

Croatia is one of the first EU countries that tested the 5G network. The planned start of operation of the first fifth generation commercial networks is foreseen for 2020. At present, IoT technology is available in Croatia, and Ericsson Nikola Tesla opened a research and development centre in Osijek, where experts will be engaged in the development of the new 5G technology. The Internet of Things is used in intelligent smart cities solutions (for example, smart parking and more).

With the purpose of recognising the challenges and constraints of introducing the 5G network in Croatia, the Croatian Regulatory Authority for Network Industries (HAKOM) has set up a working group with electronic communications operators. The working group has the task of articulating the challenges regarding the introduction of 5G technology, as well as the involvement of all public and private stakeholders that can contribute to successfully carrying out the 5G action plan.

With the aim of solving the problems of paying large RF spectrum fees, amendments to the Regulation on the payment of fees for addresses, numbers and RF spectrum have been adopted, thus reducing RF spectrum fees in order to make the spectrum needed for 5G more accessible to all and to stimulate the investments necessary for a successful introduction of 5G.

Regarding the timely allocation of spectrum in the 5G bandwidth, the national action plan for the release of 700 MHz has been drafted, but has not yet been adopted by the government of the Republic of Croatia. In order to release the 3.4-3.8 GHz band, HAKOM has begun the re-planning process and conversation with the current holders of the RF spectrum usage license in that band. At the end of 2018, the public auction procedure took place and the remaining 2 x 15 MHZ parts of the paired spectrum were assigned in the frequency band 2110-2170/1920-1980 MHz. In 2019, a public call procedure was

held, which resulted in the assignment of the 2500-2690 MHz band of the paired spectrum: each of the three operators received 2x20 MHz. The national action plan still needs to assign 2x10 MHz of paired spectrum and 50 MHz of unpaired spectrum.

In March 2020 HAKOM postponed transition to DVB-T2/HEVC system and releasing of the 700 MHz band for at least 6 months due to consequences of force majeure caused by COVID-19 pandemic and earthquake in a densely populated area of capital Zagreb, on March 22, 2020. Release of the 700 MHz band is also largely conditioned by cross-border coordination (interference situation in 470-694 MHz) and demanding transition procedure as DTT is a dominant TV platform with 48% household's share.

To enable the introduction of 5G technology in already allocated frequency bands, Croatian operators A1 Croatia d.o.o. and Tele 2 d.o.o. signed the agreement on spectrum lease in order to secure the use of continuous frequency blocks in 1800 MHz and 2100 MHz frequency bands.

In January 2020 the Government of the Republic of Croatia has adopted a resolution on Osijek as the Croatian 5G City and Slavonia as the first Croatian region to operate 5G networks commercially. Commercial work on 5G technology in Osijek is expected by the end of 2020. 5G is a prerequisite for utilization of the potential of digital transformation as a key factor for economic growth. For the successful introduction of technology, it is necessary to encourage active co-operation between the relevant state bodies.

6.3 Data Exchange

Shared Service Centre

The National Shared Services Centre ("State Cloud") is one of the key projects that will integrate the State information infrastructure and enable the sharing of information and communication technologies as well as the same horizontal application solutions. All public sector bodies will be able to use shared, reliable and scalable ICT infrastructure according to the cloud paradigm. The goal of the project is to integrate 300 institutions into the State Cloud by 2022. Through the SCC, the State will gain faster access to the latest technologies that are the basis for providing more digital public administration services in the most efficient way and in the shortest possible time.

The project received a grant of HRK 306 644 668.87 from the European Regional Development Fund (ERDF) through the 2014-2020 Operational Program "Competitiveness and Cohesion". The total project value is HRK 360 758 433.97 and will last until 31 December 2023.

The project will result in the consolidation of the State information infrastructures, based on the principles of the shared services model. Moreover, it will aim at the implementation of an infrastructure for an interconnectivity and interoperability platform that will include key enablers required for Metaregister, Government Service Bus (GSB), distributed eServices architecture and State platforms. The development of shared services will also be pursued.

The project includes several platforms that have already been developed:

- IaaS: virtual servers, dedicated servers, long-term data storage (eArchive), ensuring business continuity and recovery of stored data (BCM / DR), secure data storage;
- PaaS: digital archive platform, multi-tenant databases and distributed database management system, multi-tenant central application layer, public sector collaboration and communication platform, business intelligence platform;
- SaaS: integrated document, case, workflow and archive management system, management and cost accounting and public procurement software support services;
- CaaS: business process modelling, business process optimisation, implementation of ICT standards and ICT technologies, system engineering support, IT strategy support and technical specification preparation for ICT procurement procedures, project management, IT project supervision and audit.

Improving the system of electronic services

The project "Improving the system of electronic services" is directly funded under Priority Axis 4 "Good Governance", Specific Goal 11.i.1 on Increasing Effectiveness and Capacity in Public Administration through Improving Service Delivery and Human Resources Management of the 2014-2020 Operational Programme "Effective Human Resources". The project implementation period is 18 months since 12 February 2019 and the value of the contract is HRK 1 800 000.

The project goals include defining and adopting the standard for eService development in order to improve the quality of existing eServices and to increase their usage. It will also aim to design and develop a standard set of eService elements and technology standards for system connectivity, define the eService implementation process and educate employees.

The project beneficiary is the Central State Office for the Development of the Digital Society.

National Spatial Data Infrastructure

For centuries spatial data have been interpreted and visualised on analogue maps, which until recently have been the main tool for the perception, understanding and orientation of objects and events in space. The appearance and development of Geographic Information Systems (GIS) opened up new possibilities of managing spatial data and their characteristics.

Standardised data can be more easily exploited by users, in order to promote a faster and more efficient regional economic development. In addition, the financial savings that can be achieved in the process place new demands on spatial data. Thus, in order to speed up development in this field, Europe has launched the INSPIRE initiative, linking together the national spatial data infrastructures.

For this reason, the National Spatial Data Infrastructure (NSDI) is defined as a set of technologies, measures, standards, implementation rules, services, human resources and other factors enabling efficient integration, management and maintenance of the sharing of spatial data, which will be an integral part of the European Spatial Data Infrastructure defined by the INSPIRE Directive.

NSDI gives the possibility to discover, view and use spatial data to government bodies, businesses, non-commercial and public sector entities, the academic community and citizens in general.

The Croatian NSDI will have to be harmonised with the development of spatial data infrastructures at the European (INSPIRE) and global (GSDI, UN-GGIM) level. Moreover, the infrastructure at national level will also need to influence the development of spatial data infrastructures at the local level.

Starting a business

Since December 2019, entrepreneurs in Croatia can start their business in just a few days, through this new eService. Several existing processes and systems are merged into a single process to start a business: registration of the company in the Court Register, registration of the craft business in the Craft Register, entry in the Register of Business Entities, registration in the Register of taxpayers and the VAT register and/or assignment of a VAT number, submission of a bank account request, registration in the Croatian Pension Insurance Institute system, electronic payment of fees and founding capital.

Digital Chamber

The Digital Chamber, a communication platform for businesses, public administration and citizens, is an output of the project of the Croatian Chamber of Economy. It represents a unique eServices communication platform that is accessible to CCE members, the business community, public administration and citizens.

The project implementation period was from 1 September 2017 to 31 December 2019.

The project outputs are: the establishment of a management model and the development of a platform for the Digital Chamber and an application-data infrastructure for the development of digital chamber applications and services; the digitalisation of CCE's public services with the digitisation of internal business processes to support work with members and the establishment of a CCE communication platform; the design and digitalisation of business development and business analysis systems to monitor economic and industrial development based on relevant indicators.

The long-term results of the project will be: the improvement of the business environment and the increase of the quality of public services provided; the increase of the competitiveness of Croatian entrepreneurs on the domestic and foreign markets; the increase of the efficiency and quality of CCE services; the contribution to the creation of an eBusiness platform within the objectives of the eCroatia Strategy; the increase in the level of digital internationalisation of the Croatian economy and the introduction of new opportunities for Croatian SMEs (eLearning, eLicenses, eApplications, etc.).

Establishment of a fully electronic service for enrolling in educational institutions

One of the most complex eServices that is being developed concerns the application and enrolment in educational institutions. This will digitalise the process of application and enrolment in early and pre-school education institutions, primary and secondary schools, student dormitories, higher education institutions as well as the registration in the State graduation register and the national adult education information system.

The main goal is to enable the citizens of the Republic of Croatia to easily and quickly enrol in the desired institution without any additional administrative burden that can be avoided by using already existing data from the basic registers of different State administration bodies. The electronic services developed by the project will be made available to citizens through the eCitizen system starting from 2020.

6.4 eID and Trust Services

Personal Identification Number (OIB) System

The OIB system offers safe infrastructural and functional services to all central and public institutions in charge of physical and legal entity registration, to all institutions obliged to use OIB for their official records, as well as to all citizens and legal entities that are able to use public web applications and SMS services to obtain information about their OIB.

eCitizens Platform

eCitizens is a platform for the interaction of State institutions with citizens through a single point of contact and one single identification and authentication process. The identification and authentication system (NIAS - National Identification and Authentication System) is in line with the EU STORK project and follows its recommendations. It supports 19 different credentials for identification and authentication.

Users are able to access all services through NIAS using the electronic identity card, as well as with other accepted credentials (e.g. eBanking tokens, etc.).

FINA eCard

The FINA (Financial Agency) eCard provides faster, simpler and more secure access to information and services for businesses. It offers unlimited access to the following eServices, among others: eTax, eVAT, ePension and ePayment. The SmartX university card is a multifunctional smart card intended for professionals and students at university level. It was created with the primary function of identifying natural persons in academia and to give them access to the required electronic services. The intention is to reduce

costs, to simplify administrative procedures in dealing with students and to facilitate mobility. The card contains the name of the university/faculty and the owner's name, photo and ID number printed on the surface. SmartX enables the identification of persons via the magnetic tape, the contactless interface and the contact interface. It has a certificate based on the PKI electronic signature infrastructure.

Since 2018, the use of an electronic identity card (eID) has been encouraged as a high security credential that enables citizens to use all eCitizen services, as well as other electronic services in Croatia, regardless of the provider. The benefit of the eID is the ability to electronically identify the owner and create an advanced electronic signature through the National Identification and Authentication System that delivers a personal data set (Personal Identification Number (PIN), name, last name, etc.).

Establishment of an electronic service platform for e/m-Signature and e/m-Seal

The project will develop and establish a platform providing electronic services, such as electronic and mobile signature, electronic and mobile stamping and electronic signature or seal validation, which will be used in electronic public services and will be available to State and public administration bodies.

The project will contribute to increasing the efficiency of communication within the State and public administration systems and improve the provision of electronic services as well as the interaction with the citizens and the business entities that use those public services. The project began on 20 November 2018 and will last until 20 November 2021, with a total project value of HRK 22 465 901.38.

6.5 eProcurement

Electronic Public Procurement Classifieds (EPPC)

EPPC is the national eProcurement platform and is managed by the Official Gazette (*Narodne Novine d.d.*). The publication on the platform of tenders above the threshold of EUR 25 000 for goods and services and EUR 67 500 for works is mandatory. The contracting authority must publish an invitation to tender on the standard forms used for this purpose in the EPPC of the Official Gazette. An eNotification service is available during the eProcurement pre-award process. The eSubmission module is available and obligatory pursuant to the Public Procurement Law, thus all bids need to be submitted via the EPPC platform.

Since December 2019, EPPC is available through the eCitizens Platform to EU/EAA citizens.

eInvocing Platform and Management Solutions

The Central Platform for the Exchange of eInvoices is a national platform for eInvoice exchange to which all intermediaries are obliged to connect (modified three-corner model of eInvoices exchange). The central platform, called *Servis eRačun za državu*, will be the access point that will connect public contractors (directly), sectoral contractors (directly) and information intermediaries with their clients/users. This model allows:

- The connection of all participants using only one connection point (connection with the access point), which saves significant resources needed for integrations.
- The standardisation of the exchange protocol because all participants make a single connection to the access point.
- A unique record of all participants (register) with easy switch of sectoral contractors from one information intermediary to another.
- A record and a single statistical analysis of all received messages/invoices, regardless of which information intermediary has chosen a sectoral contractor, which is a powerful tool for overseeing irregularities.

It is not necessary to establish bilateral contractual relations or agreements between all parties in the system; a simple registration to *Servis eRačun za državu* is sufficient to

exchange eInvoices with other registered users. The platform is operated by the financial agency (FINA), a State-owned service provider under the supervision of the Ministry of Economy, Entrepreneurship and Crafts.

6.6 ePayment

eFee project

The Ministry of Labour and Pension System, which acts as the operational programme manager for the Effective Human Resources programme, announced the call for proposals for the eFee project, to be financed by a non-refundable direct contribution of the European Social Fund (ESF) under Priority Axis 4 - Good Governance (UP.04.1.1.14). The Ministry of Administration applied and the project financing decision was issued as the basis for signing the grant agreement in the amount of HRK 50 523 857.45, of which up to 85% is co-financed by the ESF.
By executing the eFee project, electronic billing will be introduced for administrative fees and fees in other regulated procedures, which will enable further development of more complex electronic services in the eCitizens and eBusiness systems. Through eFees, payments for other types of fees should be available in the future as well. The eFee system will increase the availability and improve the management of public services. The system will enable the end user to pay the total cost of the service with just one payment, and the system will then distribute the amount to the applicable entities.
This project will also introduce card payments in the State Administration Office.

Currently, one electronic service is being tested and will be integrated soon into the eFee system. The project implementation will last until 26 October 2021.

6.7 Knowledge Management

The Central State Office for the Development of the Digital Society

Following the Law on the Organisation and Scope of Ministries and Other Central Government Bodies, which entered into force in November 2016, the Digital Information Documentation Office became a part of the Central State Office for the Development of the Digital Society.
The former Digital Information Documentation Office was the official government service for the dissemination of information, documentation and referral. It provided a central information and documentation portal for public official information and documents. The documentation included laws, regulations, State documents, official studies and other similar data. The storage was permanently allocated in DAMIR, the Digital Archives of Web Sources of the Republic of Croatia. The Digital Information Documentation Office ensured the availability of public official data, information and documents while promoting their use.

Higher Education Institutions Information System - Undergraduate Studies (ISVU)

ISVU is a network-oriented system intended for the informatisation of all student services at higher education institutions that offer graduate education. It offers access via the internet, regardless of user data and location, and serves as a powerful integration solution at tertiary level through the creation of a data warehouse. The Ministry of Science and Education provides funding for the development and the daily operations of ISVU, and monitors the system performance.

The EUROVOC thesaurus

EuroVoc is a multilingual, multidisciplinary thesaurus covering the activities of the EU in general, and the European Parliament in particular. It contains over 6 600 structurally organised and controlled terms (descriptors) in 22 EU languages, including Croatian. The Croatian equivalent (*CROVOC*) was translated by the Digital Information Documentation Office for subject indexing of official documentation in the Republic of Croatia.

The Digital Information Documentation Office and the Library of the Croatian Parliament have developed a Croatian Addendum, which includes:

- a glossary of the names of Croatian government bodies, political parties and geographic terms, accompanied by the special designation *CROVOC* added to the end of the hierarchical structure of the thesaurus as a separate field;
- descriptors incorporated into the structure of the original accompanied by the special designation *CROVOC*.

Croatian National Educational Standard (CNES)

The CNES was created to foster change in the teaching programme and work methods of the elementary school system, in order to develop schools tailored to pupils. The purpose of the CNES is to reduce the workload by abandoning redundant educational programmes, and to introduce modern teaching methods based on research-based classes and individual and group work, as well as applicable knowledge and skills.

Project for the establishment of integrated systems for the management of official documents

The project is carried out by the Central State Office for the Development of a Digital Society. The implementation of the project includes the establishment of an integrated system to manage the official documentation of the Republic of Croatia, the availability of documents to end users, the development of the search engine Cadial and better awareness of civil servants' legal obligations under the Law on Access to Information.

The project is directly funded under Priority Axis 4 "Good Governance", Specific Goal 11.i.1 "Increasing effectiveness and capacity in public administration through improved service provision and human resources management" of the 2014-2020 Operational Programme "Effective Human Resources".

The project aim is to ensure a higher level of openness, transparency and availability of official documents through permanent availability, and the possibility to re-use public official documents and information for all interested parties under equal conditions, impartially and free of charge.

Project for process informatisation and establishment of an integral electronic service for admission in education institutions

The project was prepared in collaboration with the Ministry of Labour and Pension System for the purpose of applying for co-financing through the European Social Fund within the 2014-2020 Operational Programme "Effective Human Resources". The start of implementation is expected at the beginning 2019 and the whole project should be completed within three years.

The goal of the project is to digitise processes in educational institutions and enable Croatian citizens to enrol in programmes that these institutions offer through electronic services, entirely without the need to fill out forms. The data required for admission in education institutions will be obtained electronically from the bodies responsible for these data, in accordance with the regulations of the State Information Infrastructure Act.

The service will digitalise the processes of application and enrolment in institutions of early and pre-school education, in primary schools, in secondary schools, in dormitories, in higher education institutions, as well as the registration in the State graduation register and the national adult education information system.

The electronic services developed by the project will be made available to citizens through the eCitizens system with the first visible deliveries in 2020. The project implementation

period is from 12 March 2019 until 12 March 2020, with a total project value of HRK 40 002 019.64.

6.8 Cross-border platforms

Cooperation Network

Regarding the eID, the process of eIDAS notification (application) of the National Identification and Authentication System (NIAS) with the Croatian Electronic Identity Card (eOI), as a national scheme for other Member States via the Cooperation Network, is successfully completed. This provided a tool for the recognition of the electronic identities of Croatian citizens to access online cross-border public services in the EU.
In this way, all the prerequisites for Croatian citizens to log in to public eServices in other Member States using the Croatian Electronic Identity Card (eOI) are fulfilled. Currently, the technical connection of the infrastructure is in progress, but all prerequisites, including a detailed check of the technical security criteria, have been met. German services will be among the first cross-border services that Croatian citizens can access with their eID card, and will soon be followed by the services of the countries (Sweden, Italy, Spain, Estonia, Luxembourg and Belgium) which have successfully configured their systems for providing electronic public services.
It is also possible for some EU citizens (from countries which have completed the notification process) to access the electronic services of the Croatian administration.

6.9 Base registries

Metaregistry

The Metaregistry is a public register which is part of the SII and is used to control the system of all public registers. It contains detailed information on public registers, the data they hold, and communicates this to users through a single point. In this way, it provides an overview of the structured public registers, the type of data that is collected and hosted, as well as how to connect with other systems. The Metaregistry is in compliance with the applicable regulations on personal data protection, data confidentiality and the right to access information. As previously mentioned, the Metaregistry is still not fully operational, but Croatia's increased efforts in recent years should ensure its functionality as soon as possible.
The Metaregistry is a prerequisite for a country aiming for a paperless administration and the implementation of the "once-only" principle. A paperless State creates a single administrative location with connected registration systems to ensure the availability of data. This relieves the administrative burden on citizens, who do not have to transfer documents between different institutions themselves.

Shared Services Centre (SSC)

According to the decree, the SSC is an organisational business model for providing shared services to public sector bodies and other users, consisting of a normative framework and a governance structure in accordance with the regulation and the acts adopted pursuant to this decree. The SSC provides common business solutions and common information communication technology (ICT) services, and its establishment, extension, maintenance and management is within the competence of the central State administration body responsible for eCroatia affairs.
The SSC aims to increase the use of ICT in communication between citizens and public administrations through the establishment of an ICT coordination and software solution. The expected outcome is to increase the use of eGovernment services by citizens, which is assessed in terms of the frequency of use of eGovernment services by individuals, and to increase the number of residents communicating with public institutions. Specific results to be achieved include the functioning of the State cloud and the strengthening of

the use of eServices in specific sectors defined in the digital strategy, i.e. the increase in the percentage of public institutions integrated in the cloud and the number of complex eServices provided to users.

Cadastral data browser

The cadastral data browser provides insight into the central cadastre database of Croatia, which incorporates all cadastral offices. The eCadastre service enables control over cadastre plots, authentication of data entries, as well as the latest data changes and documentation based on the modifications performed.

eCourt registry

The eCourt registry contains all existing entities, including trading companies, co-ops and institutions. Through automation of certain administrative and accounting judicial operations and access to criminal and minor offence records, it enables simpler registration of business entities (full online company registration) and simpler access to court registry data.

eCREW

The eCREW system enables all legal and natural entities who rent yachts and boats to register their crew and passengers via the Internet, prior to putting out to sea, using smart cards with a digital certificate based on acquired user rights. The aim is to expedite business processes at the Ministry of Maritime Affairs, Transport and Infrastructure with business subjects (charter companies) relating to charter vessels, to secure a complete monitoring over the procedure of renting vessels by all authorised bodies of the State administration, and in that way, prevent illegal chartering.

Central Database Registry on Personal Data

Registry offices in the country keep national records on registries of births, marriages and deaths. Data on citizens' personal status is entered into local databases and replicated into the central registry at the Ministry of Public Administration.

Personal Identification Number (OIB/PIN) Registry

Personal identification numbers are given to natural and legal persons. The Personal Identification Number (OIB/PIN) Registry receives updates on natural persons from the registry of births, deaths and marriages, and about legal persons from the registries of non-profit institutions (8 registries) as well as from the court registry on legal entities. The data exchanged gives a clear indication of changes in the life events and status of Croatia's citizens. This information is then shared (upon request or by submitting a notification) with other relevant registries, such as the Pension Registry or the Tax Administration. All relevant government bodies involved in the implementation of the OIB/PIN project update their information systems whenever necessary to include processes related to the personal identification number. The Tax Administration (which also performs the duties of a Tax Registry), the Land and the Commercial Registries are centralised by default.

HITROnet

HITROnet is the communication system that represents the backbone of the public administration network. By linking public authorities at national level, it is the core of a comprehensive communications system, which fulfils the needs associated to eGovernment and is also an indispensable infrastructure for its further development. Access to the network is enabled by a virtual private network model through an internet communication environment. In addition, HITRONet is connected to the STESTA network (Secured Trans-European Services for Telematics between Administrations), a separate EU network, which is Croatia's point of connection to the European Union.

7

Cross-border Digital Public Administration Services

7 Cross-border Digital Public Administration Services for Citizens and Businesses

Further to the information on national digital public services provided in the previous chapters, this final chapter presents an overview of the basic cross-border public services provided to citizens and businesses in other European countries. Your Europe is taken as reference, as it is the EU one-stop shop which aims to simplify the life of both citizens and businesses by avoiding unnecessary inconvenience and red tape in regard to 'life and travel', as well as 'doing business' abroad. In order to do so, Your Europe offers information on basic rights under EU law, but also on how these rights are implemented in each individual country (where information has been provided by the national authorities). Free email or telephone contact with EU assistance services, to get more personalised or detailed help and advice is also available.

Please note that, in most cases, the EU rights described in Your Europe apply to all EU member countries plus Iceland, Liechtenstein and Norway, and sometimes to Switzerland. Information on Your Europe is provided by the relevant departments of the European Commission and complemented by content provided by the authorities of every country it covers. As the website consists of two sections - one for citizens and one for businesses, both managed by DG Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) - below the main groups of services for each section are listed.

7.1 Life and Travel

For citizens, the following groups of services can be found on the website:
- Travel (e.g. Documents needed for travelling in Europe);
- Work and retirement (e.g. Unemployment and Benefits);
- Vehicles (e.g. Registration);
- Residence formalities (e.g. Elections abroad);
- Education and youth (e.g. Researchers);
- Health (e.g. Medical Treatment abroad);
- Family (e.g. Couples);
- Consumers (e.g. Shopping).

7.2 Doing Business

Regarding businesses, the groups of services on the website concern:
- Running a business (e.g. Developing a business);
- Taxation (e.g. Business tax);
- Selling in the EU (e.g. Public contracts);
- Human Resources (e.g. Employment contracts);
- Product requirements (e.g. Standards);
- Financing and Funding (e.g. Accounting);
- Dealing with Customers (e.g. Data protection).

The Digital Public Administration Factsheets

The factsheets present an overview of the state and progress of Digital Public Administration and Interoperability within European countries.

The factsheets are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from Ana Jovičić, Sector Coordinator for the Development of the Digital Society.

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