

DIGITALIZATION IN TRAINING OF PUBLIC ADMINISTRATION PERSONNEL



2023

Collaborative Study
ASPAA, INA, IPA, NAPA

Digitalization in training of public administration personnel

A collaborative study between institutions responsible with training of public administration personnel analysing challenges of digitalization due to globalization, European and international trends and involving concepts of training in public administration. It emphasizes setting precise objectives, investing in technology and human resources, and fostering international cooperation for improved public services and sustainable development.

Keywords: public administration digitalization, training, training tools, e-learning, digitalization, collaboration, transparency.

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This study was developed at the initiative of the analysed institutions following a joint, voluntary effort and using their own internal resources. The opinions expressed in the texts published are the author's own. The authors assume all responsibility for the ideas expressed in the materials published.

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Introduction

In today's fast-paced world, public administration faces a multitude of challenges stemming from globalization, demographic shifts, migration, and climate change. To effectively align public administration services with societal needs, a clear roadmap and objectives must be established, encompassing all social dimensions impacted by technological advancements. This requires a focus on utility, quality, efficiency, reliability, and accountability. To build a foundation of reliable and accessible public services, competent and versatile human resources must be cultivated. This involves conducting honest assessments of public servants' competencies, identifying training needs, and creating specialized programs that align with emerging technologies.

While these challenges may seem daunting, they also present new opportunities. Technological advancements offer citizens unprecedented access to tools that, if integrated responsibly and coherently, can improve public services and enhance the quality of life and of work across society.

At international level, there are a number of initiatives and measures that focus on the development of digital infrastructure, digital capacities and interoperability. Examples of such initiatives and measures that focus on the development of digital technologies in areas of public interest and focus on key issues of the future can be found in the Digital Europe Programme (2021-2027)¹.

States are beginning to develop core capabilities in artificial intelligence, cybersecurity, the development of advanced digital skills in cloud computing, blockchain technologies, and big data analytics. Even through the Coordinated Plan on Artificial Intelligence², it is shown the importance of cooperation between states for the preparation of socio-economic changes in the context of increasing international economic competitiveness in the field of implementing modern technologies.

In order to get a clearer picture of the current state of public administration digitalization at regional level, focusing on civil servants'/adults' training, the public institutions responsible for professionalizing the public administration human resource in the Balkan's region, namely: Albanian School of Public Administration (ASPA), the Bulgarian Institute of Public Administration (IPA), National Academy for Public Administration Serbia (NAPA) and the National Institute of Administration Romania (INA), joined efforts in a collaborative endeavour for elaborating the present study.

The purpose of this study is to offer a succinct presentation of all four training institutes, in terms of approaches on delivering high quality training programs for public administration personnel, in today's technological and digital context, sharing their expertise and good practices.

The 2030 Agenda for Sustainable Development under the United Nations Development Programme³ is another example of an initiative aimed at implementing modern technologies to enhance sustainable development and improve problem-solving solutions with effects at national and international level, including the field of education and knowledge exchange.

¹ (European Parliament and the Council of the European Union, 11.5.2021)

² (European Commission, 7.12.2018)

³ (United Nations Development Programme, 2023)

The Open Government Partnership⁴ promotes the use of digital technologies at country level to better satisfy the public interest by promoting inclusive digital innovation, maximizing the potential of digital technologies for the transparency and communication of information to citizens, being at the same time a tool in the open act of governance through which reforms are catalysed.

As structure, the study opens with an overview of each institution and the legal framework within which it operates, following up with presenting their approach on training, the lessons learned, and finalizing with their glimpse of the future, in terms of expectations for soon-to-come changes with strong impact on public administration.

In the context in which OpenAI⁵ conducts research and develops products based on AI technologies that have a real impact, sometimes emerging in the global economy, it is necessary to adapt the processes in the public administration and their digitization to respond to contemporary realities. The use of information systems does not guarantee reform in a field, they are a tool that allows state administrations to face the current realities and challenges, allow the provision of a quality public service that needs to be constantly adapted and updated to the international socio-economic context.

These are just some of the premises from which we start in this endeavour, namely that through collaboration we can share information and good practices in our fields of activity, develop concepts and produce know-how, which, applied in our work, ensures the quality of public services and keeps us synchronised with the ongoing globalization process.

The methodology applied in this comparative study followed rigorous methodological principles. The objectives were initially outlined in order to have a better image of how the four institutions integrated digitalization in training activities, highlighting the similarities and differences in their approaches. Through an exhaustive questionnaire, relevant data was collected for each institution, providing vital information on the particularities through the analysis of internal documents, giving us insight on their performance.

The relevance in the context of literature has been strengthened by appropriate research, while the addition of descriptions provided by the analysed institutions, on specific activities in the context of digitalisation and training, resulted in a valuable subjective perspective. The interpretation of data was carried out in a contextual framework, allowing conclusions and recommendations to be outlined with sensitivity for the specifics and diversity of each entity. In essence, the adopted methodology highlighted the defining features of each institution in a collective effort to conduct sound benchmarking.

⁴ (Open Government Partnership (OGP), 2023)

⁵ (OpenAI LP Delaware Limited Partnership, 2023)

Chapter 1

Overview & Legal framework



1.1 Overview

ASPA – Republic of Albania

The Albanian School of Public Administration (ASPA) is a central public institution, with administrative and academic autonomy, with the mission of training the civil servants of central government, local government, independent institutions as well as other individuals outside the civil service. ASPA has been operating since 2000, initially organized as the Training Institute of Public Administration (TIPA) and since 2013 as the Albanian School of Public Administration.

The Albanian School of Public Administration (ASPA) operates based on articles 8 and 9 of Law no. 152/2013 "On Civil Servants", as well as the Decision of the Council of Ministers no. 138, of 12.04.2013, "For the organization and functioning of the Albanian School of Public Administration, training of civil servants and other individuals outside the civil service."

ASPA provides various services in the framework of classroom-based training programs, Trainer of Trainers Programs, internship programs, e-learning programs, etc. Every year ASPA trains approximately 5,000 public officials, based on more than 100 didactic Training Modules. ASPA collaborates with trainers of rich experience coming from the Academia, Public Administration, and local expertise in various fields⁶.

During 2022, ASPA trained 5397 individuals with the presence of 20780 participants. In total, 665 training days were held, of which 139 were in collaboration with projects.

INA – Romania

The National Institute of Administration (INA) is tasked with implementing the government's strategic directions to improve the efficiency of central and local public administration. To achieve this, INA identifies key aspects that must be addressed to support the development of a modern, citizen-oriented public administration.

INA operated previously, specifically from 2001 to 2009, playing an important role in training public servants in Romania. In December 2009, INA was merged by absorption into the National Agency of Public Servants (ANFP), as part of a larger reorganization initiated by the Romanian Government.

The Institute was re-established by Government Ordinance no. 23/2016 on the establishment of the National Institute of Administration, with subsequent modifications and completions. The re-establishment of INA - an institution dedicated to the training, research, and development of public administration - represents a recognition of the importance of training and developing human resources for the modernization of public administration in Romania. Having INA back on the training market is also a recognition of the need for a benchmark institution in the field of professional training and research in public administration.

The National Institute of Administration (INA) is responsible for coordinating and implementing training programs for public servants, including developing curricula and ensuring the quality of training. The Government sets requirements and standards for public administration training. Romania has also ratified the European Qualifications Framework (EQF), which aligns public administration training with European standards and allows for recognition and validation of qualifications. Overall, the legal framework aims to ensure the professional development of public servants and promote excellence in public service delivery.

IPA – Republic of Bulgaria

The Bulgarian Institute of Public Administration (IPA) was established in 2000 with the Civil Servant Law as part of the reforms of the Bulgarian public administration implemented during the negotiation process for Bulgaria's accession to the European Union. The main mission of IPA is to help strengthen the capacity of the public administration to develop and implement modern public policies. IPA is a leader in the training of the civil service by using modern

⁶ (Albanian School of Public Administration, 2023)

technologies, methods and training programs. At the end of each calendar year, IPA publishes a training Catalogue, which the Institute distributes among administrative structures. In 2019, with the start of the project "Digital Transformation in Training - Digital Competence and Learning" (which has a duration of 50 months and will end at the end of September 2023), funded by the Operational Program "Good Governance", co-financed by the EU, through the ESF - the emphasis of the training programs of IPA, has been placed on a wider application of digital forms of learning in the Bulgarian public administration and increasing the digital competence of the Bulgarian civil service through training. Several new and modern digital training programs were developed, and more are in the process of being developed.

NAPA – Republic of Serbia

Based on the Law on the National Academy for Public Administration (NAPA) was established as the central institution of the professional training system in the public administration of Serbia - with the status of a publicly recognized organizer of non-formal adult education activities.

NAPA performs professional and related executive and other tasks of the state administration related to: systematic collection and processing of data related to the improvement of the work and professional capacities of the public administration and data that are important for the development, preparation, implementation, verification and evaluation of the professional development program and management of the appropriate documentation information base; creation and development of methodology and standard instruments for the preparation and implementation of professional training programs; accreditation of professional development programs in public administration; accreditation of training providers in public administration; preparation, implementation and development of general professional development programs and managers' training programs; provision of professional assistance and coordination of tasks related to the preparation and implementation of special professional development programs to holders of the obligation to prepare and implement those programs; implementation of other professional training programs, determined in accordance with the law, which will be entrusted to it; preparation and implementation of training programs for lecturers, mentors, coaches and other implementers of professional development programs, as well as their selection and accreditation; monitoring the effects of the implementation of professional training and development programs; cooperation with the service, i.e. the body responsible for personnel management, i.e. professional development of employees in autonomous provinces and local self-government units; research and analytical work and cooperation with scientific organizations; participation in the establishment and maintenance of cooperation with domestic, foreign and international institutions, organizations and associations and management of international support projects in connection with the work performed; taking care of the storage of materials prepared as part of the professional training program (deposit), organizing and storing library and information material and media library, literature, lectures, didactic materials, presentations and other relevant documents that arise during the professional training; issuing publications and performing other publishing activities; other jobs established by law.

1.2 Legal framework

ASPA – Republic of Albania

The Albanian School of Public Administration (ASPA) operates based on articles 8 and 9 of Law no. 152/2013 "On Civil Servants", as well as the Decision of the Council of Ministers no. 138, of 12.04.2013, "For the organization and functioning of the Albanian School of Public Administration, training of civil servants and other individuals outside the civil service".

INA – Romania

The legal framework is primarily governed by the Administrative Code (GO no. 57/2019), which establishes the legal basis for public administration in Romania, while Government Decision 1066/2008 establishes a framework for the training of civil servants and public officials in the country. The decision sets out the rules and procedures for the organization and management of training programs, categories of training providers, financing of training programs, certification, assessment of training needs, and monitoring of training plans implementation, aiming to improve the quality and effectiveness of public services in Romania by ensuring that civil servants and public officials have the necessary knowledge, skills, and competencies to perform their duties in an efficient and professional manner. As training provider, it is important to align training programs with these standards to ensure the professional development of public servants and improve the quality of public service delivery in Romania.

The training programs may be organized by public institutions themselves or by training providers, in accordance with the priority training domains and topic established at national level. The training programs may be delivered through various methods, such as classroom instruction, e-learning, workshops, seminars, and on-the-job training. In addition, the law requires public institutions to establish a training plan for their employees, which should be developed based on the needs of the institution and the skills and knowledge required for each job position. The training plan should be updated annually and should be approved by the head of the institution. The legal framework for the organization, management, assessment, and evaluation of training programs for civil servants and public officials in Romania is established by Government Decision 1066/2008. In accordance with this decision, public institutions are required to develop training plans that take into account the unique needs of the institution, job requirements, and the skill sets of employees. These training programs are reviewed and updated on an annual basis.

In Romania, continuous training is mandatory for public administration personnel, and the training programs are designed to provide the skills and knowledge necessary for the effective performance of their responsibilities. The programs cover a wide range of topics related to public administration, such as management, leadership, communication, public policy, and legal issues. These training programs can be delivered through various methods, including classroom instruction, e-learning, workshops, seminars, and on-the-job training. The legal framework requires the programs to be assessed and evaluated, and the outcomes are used to further enhance the quality and relevance of the training programs. By following the legal framework, training providers can align their programs with the government's standards and contribute to the professional development of public administration personnel.

The Romanian Government has established a legal framework for the organization and development of public servants' careers through Government Decision 611/2008. This decision highlights the significance of career development, performance evaluation, rewards and incentives, professional ethics and integrity, and effective human resource management

in public administration. The framework promotes professional growth and development, as well as ensuring that public servants are motivated and rewarded for their contributions towards the effective delivery of public services. Additionally, the decision emphasizes the importance of maintaining high ethical standards and integrity among public administration personnel to strengthen public trust and confidence in the government. Overall, the decision provides a comprehensive framework to facilitate the management and development of public servants' careers in Romania.

Romanian Government decision 1269/2021 provides a comprehensive and ambitious anti-corruption strategy for the period 2021-2025 in Romania. It emphasizes the importance of prevention, investigation, prosecution, asset recovery, and international cooperation in the fight against corruption, as well as ensuring transparency, accountability, and integrity in public institutions. INA has the responsibility of developing and implementing training programs in the prevention and fight against corruption for leaders of public institutions and civil servants in Romania, as part of the ongoing National Anti-Corruption Strategy. Furthermore, INA plays a crucial role in developing training programs for ethics counsellors in public authorities and institutions, aimed at strengthening integrity and ethical values among civil servants. These programs are tailored to the specific needs of authorities and public institutions and based on the best international practices. By developing and implementing this training programs, INA plays a critical role in promoting integrity and ethics among civil servants.

Romanian Government decision 645/2020 provides a comprehensive legal framework for the organization and functioning of the National Institute of Administration in Romania. It emphasizes the importance of providing high-quality training and professional development for public servants, as well as conducting research and analysis on issues related to public administration.

Romanian Government's Strategy regarding professional training for public administration 2016-2020 aimed to improve the quality and effectiveness of the public administration system by providing comprehensive training programs for public servants.

The main objectives of the strategy were to:

- Improve the skills and competencies of public servants in order to provide better public services to citizens;
- Ensure that all public servants receive regular training that is relevant to their job responsibilities;
- Develop a culture of continuous learning within the public administration system;
- Improve the quality of training programs by using modern training methods and technologies;
- Promote the exchange of best practices and knowledge-sharing among public administration institutions.

The strategy emphasized the importance of identifying the specific training needs of various categories of public servants, such as managers, technical staff, and administrative staff. It also highlighted the need to involve external experts and trainers in the training process to ensure that training programs are up-to-date and relevant. Overall, the strategy aimed to create a more efficient and professional public administration system by investing in the development of human resources through comprehensive training programs. Currently, the General Secretariat of the Government is working on a new Public Administration Training Strategy for 2023-2029, which will focus on the role of the leader, professional competencies acquired by personnel, and a greater emphasis on managing and professionally developing human resources based on performance criteria and competency frameworks.

IPA BG – Republic of Bulgaria

The most important strategic documents that impact digitalization and training in the Bulgarian public administration, and direct IPA's objectives in the area are: the framework strategic document National Development Programme BULGARIA 2030⁷. The strategic document Digital Transformation of Bulgaria for the Period 2020-2030, and the Strategy for the development of e-government in the Republic of Bulgaria 2019-2025⁸ that elaborate on issue of digital transformation of society and the specifically public administration. We should also mention the Public Administration Development Strategy 2014-2020⁹, which, although not current at the present moment, set the strategic direction of IPA for the period 2014-2020. And so, we will present a summary of these strategic documents in the mentioned order.

"NATIONAL DEVELOPMENT PROGRAMME BULGARIA 2030" (adopted by Protocol No. 67 of the Council of Ministers of 02.12.2020) is the most important framework strategic document that defines the vision and general goals of development policies in all sectors of the public administration of the Republic of Bulgaria. The document defines three key strategic goals – accelerated economic development, demographic upswing and reduction of inequalities. For their implementation, the areas of impact are defined, sorted by priorities and accompanied by indicators of results, indicative financial resources, sources of funding, relevance to the UN development goals. Out of the 13 defined key national priorities Digital connectivity and Institutional framework are most relevant for IPA's strategic goal: enhancing the efficiency of the civil service through training. In addition, the priority related to Education and skills is of particular importance to IPA, and in particular sub-priorities: 1.4 Lifelong learning, and 1.5 Digitalization and innovation in education.

"DIGITAL TRANSFORMATION OF BULGARIA FOR THE PERIOD 2020-2030" defines the vision and objectives of the digital transformation policy of the Republic of Bulgaria for the period up to 2030, as a generalized political framework of various strategic documents such as: the National Program "Digital Bulgaria 2025", the priorities of the "National Development Programme BULGARIA 2030", and other national documents with a technological component. The strategy takes into account the goals of the United Nations 2030 Agenda for Sustainable Development and the use of new technologies to achieve them, as well as the strategic documents of the European Commission "Europe fit for the digital age", "Building Europe's digital future", "New industrial strategy for Europe" and others. The document emphasizes the importance of digital transformation for creating conditions for innovation and business growth, increasing the efficiency of the workforce, a competitive digital economy and a high standard of citizens. It is emphasized that Bulgaria must build a functioning and secure environment to unlock the full potential of digital technologies for the digital transformation of all key sectors, reaching the average European value of the DESI index for the implementation of digital technologies in the economy and society.

The document describes the principles, goals and areas of impact of the digital transformation in the Republic of Bulgaria. In carrying out its' work, IPA takes into account the field of "Education and training", in which the vision of massive use of all new technological trends in training and technological renewal of educational institutions, which is able to qualitatively change the process of education development, is based – including the provision and maintenance of high-speed and secure communication connectivity as a basis for offering educational services, digital management and network interaction between participants in the educational and scientific process, the use of modern ICT equipment and software and the provision of distance learning, the provision of an appropriate environment

⁷ (Ministry of Finance - Republic of Bulgaria, 2020)

⁸ (Ministry of e-Governance, 2022)

⁹ (The Council of Ministers, 2020)

for management, control and data analysis systems, the development of the “human factor” - encouraging participants in the educational process to acquire and improve digital skills and the use of innovative teaching and learning methods, including supporting and promoting lifelong learning.

“STRATEGY FOR THE DEVELOPMENT OF E-GOVERNMENT IN THE REPUBLIC OF BULGARIA 2019-2023” identifies two of the strategic objectives carried out by the Institute of Public Administration to fulfil the following two strategic goals in 2023 which are related to the digitalization of training:

According to Strategic objective 1: Transforming the administration and public institutions into digital ones - Specific objective 1.4: Optimization of work processes in the administration and change of the data model for the provision of electronic services by default (Digital by default) - IPA annually updates the training Catalogue according to the current needs for increasing administrative capacity, and provides the opportunity for timely re-training of civil servants throughout their career through alternative training forms: podcasts, webinars, virtual classrooms, etc. IPA develops and offers a wide range of digital resources for self-education of civil servants in various spheres of activity, including skills for implementing E-Government, interoperability and using ICT.

According to Strategic objective 2: User-oriented electronic administrative service and Specific objective 2.1: Facilitating interaction and building trust between the user and administrations, public institutions, persons performing public functions and organizations providing public services - IPA promotes the increase of efficiency in the administration through training in all spheres of activity under the “Executive Capacity” pillar of IPA’s strategic activities. Special attention is directed to training in the field of management skills, as well as training for the realization of specific goals by engaging all interested parties, and implementing cooperation with citizens and businesses with the help of digital technologies. Now turning our attention to the “PUBLIC ADMINISTRATION DEVELOPMENT STRATEGY 2014-2020”, we cannot stress enough the importance of this document for the detailed description of the activities related to the reform of the Bulgarian public administration, and especially for the improvement of skills of the civil service. Related to IPA’s strategic objectives was Strategic objective 4: Professional and expert development - Priority 4.4: Improving skills of the Strategy.

As of 2023, IPA fulfils the function of a leading educational institution, and meets the goal set in 2014 in the Strategy, namely: the consolidation of IPA as an information and coordination centre, providing unified management of the training of civil servants. Analyses of training needs in the administration are periodically prepared, as well as analyses supporting the development of policies in the field of human resources and administrative reform. According to the guidelines in the Strategy, the training programs at the Institute are adaptable to the changing conditions in the Bulgarian administration and is aimed at enhancing practical skills. A special focus is placed on improving the technical competence of the employees and the effective use of new technologies in the business processes of the organizations.

The goal of IPA to create an online library - a “bank of knowledge” with educational and informational materials with free access has been fulfilled, and new opportunities for combining face-to-face, remote and hybrid forms of training and self-education of civil servants are being sought and implemented in a timely manner, through digital technologies.

NAPA – Republic of Serbia

The new Public Administration Reform Strategy (PAR) adopted by the Government in April 2021 builds on the results achieved in the period from 2014 to 2020 and is focused on service provision policy, HRM and capacity management, as well as improving coordination in the implementation and monitoring of public administration reform. As an utmost document, this strategy was developed in parallel with three hierarchically lower public policy documents, i.e.,

programs in the area of planning and coordination of public policies in the area of public financial management and in the area of local self-government systems, while the areas of HRD, service provision and responsibility and transparency were elaborated through the Action Plan of the PAR Strategy.

The general goal that must be achieved by the PAR Strategy is to further improve the work of public administration and the quality of creating public policies in accordance with the European Principles of Public Administration and to ensure high quality services to citizens and business entities, as well as professional public administration that will significantly contribute to economic stability and increase the standard of living. standards.

Special goal 4 of the PAR Strategy is aimed at establishing and implementing a developed functional and innovative system of professional training and professional exams in public administration based on the analysis of the needs for improving competencies, that is, knowledge, skills and abilities of employees. This implies further development of the system of professional development in all parts of public administration, respecting the specifics and needs of each of the bodies and organizations in that system, as well as its connection with areas that interfere with the concept of lifelong learning and the education system. At the same time, the reform process extends to the field of professional examinations in the system of state administration in the Republic of Serbia, which until now has been unjustifiably excluded from development processes and improvements that can contribute to the desirable competence of employees in public administration. A further process of modernization of training programs and their adaptation to the needs of the system for which they are intended and of the employees is expected, as well as the standardization of the process.

To achieve Special Goal 4, the following measures will be implemented: improvement of the unified system of professional development in state and LGU bodies, professional training programs, and the normative framework governing professional training in public administration; standardization of processes and quality systems with full application of ICT; establishment of a system for lifelong professional development with a master plan, and cooperation instruments with relevant institutions; introduction of unique criteria and standards in professional exams; and development of cooperation with higher education institutions to provide additional education for public administration personnel.

Measure 4.4 includes the following activities related to the application of digitization in professional development: Preparation of a study on the optimization of business processes in the field of professional training - analysis of business processes and reorganization proposal for the purpose of standardization and digitization of the professional training process in public administration, as well as improvement of the supervisory function and application of ICT in this area; Development of ICT systems and network infrastructure for the implementation of standardized business professional training's processes in public administration and Development of a distance learning platform, with the application of multimedia and interactive online learning methods (group work with live sessions, forums, joint exercises in blackboard systems – virtual classrooms, work on joint projects, learning in a "face to face" environment, at the end of the training "mandatory socializing") and ensuring the conditions for the application of this form of professional development in all segments of professional development in public administration (a single platform that can be used by all authorities).

Program for the Reform of the System of Local Self-Government in the Republic of Serbia for the period from 2021 to 2025 and the Action Plan for implementation for the period 2021-2013, Measure 3.2: Improving the process of professional development of employees in LGU bodies, Activity 3.2.12. implies Providing support to state bodies and bodies of local self-government units in the preparation and implementation of training programs using e-

learning, in order to ensure equal access to the right to professional training for a representative number of civil servants and employees in LGUs.

The Republic of Serbia has developed several programs to enhance its electronic administration, information security, and digital skills, with action plans for implementation during various periods. These programs include a range of measures and activities aimed at enhancing digital knowledge, skills, and capacities among public officials, civil servants, and citizens. These activities include developing online courses, conducting training sessions, raising awareness, and improving cooperation between relevant institutions.

Measure 1.1 of the Program for the Development of Electronic Administration focuses on improving the digital capacities of public administration officials through a range of activities such as conducting trainings for officials on information security and providing online courses on e-government. Measure 1.2 aims to provide effective protection of the rights of users of electronic administration through activities such as training judiciary employees to work with electronic documents and data. Measure 1.3 aims to raise awareness among public officials and citizens about the importance of digitization through activities such as developing a methodology for managing changes in the field of e-government.

Similarly, the Strategy for the Development of the Information Society and Information Security aims to raise awareness, knowledge, and cooperation among various stakeholders. The strategy's measures and activities include developing and implementing training programs aimed at increasing the digital competencies of employees in public administration and ICT systems of particular importance for the application of protection measures. The strategy also aims to improve cooperation between relevant institutions and raise awareness about the importance of information security through organizing national and international meetings and round tables.

Lastly, the Strategy for the Development of Digital Skills aims to improve digital skills among public officials and civil servants at all levels. The strategy's measures and activities include implementing training programs, creating pilot online courses, analysing the needs for professional development of public servants, and establishing an expert coalition for digital skills. The strategy also focuses on improving the digital skills of ICT experts and promoting lifelong learning through the development and implementation of professional development programs.

In addition, the Strategy of Scientific and Technological Development of the Republic of Serbia for the period from 2021 to 2025 "The Power of Knowledge" should be mentioned, which is a strategic instrument for improving the quality of life of Serbian citizens through science and technological development. The strategy is based on the belief that Serbia will be strong, prosperous and respectable in proportion to the knowledge it has as a community of thinking people. In the face of numerous global challenges, this strategy recognizes knowledge as a reliable foundation for future economic progress and the growth of citizens' standards, the development of education and the preservation of health, safety and national identity in Serbia.

Chapter 2

Training cycle



ASPA – Republic of Albania

Based on ASPA legal framework, the inner decisions of the General Director of the school and the council of ASPA for online training, and E-learning Methodology, the training services provided by us consist of three broad categories:

Classroom-based training

The most common way in which ASPA's comprehensive training services are offered is traditional classroom-based training. In our courses we provide both education (as in acquiring knowledge) and training (as in practicing learned concepts and receiving instruction).

Online-based training

ASPA provides a variety of online-based training courses delivered through video conferencing platforms such as Microsoft Teams and GoToMeeting. Based on their purpose and duration, these courses are categorized as:

- Short-term training (Webinar) – Consisting of information sessions delivered to a large audience through Microsoft Teams and dealing with a very specific topic.
- Online courses with certification – Consisting of several synchronous sessions delivered through GoToMeeting during the span of several weeks; delivered to smaller audiences (max. 25 people).
- Induction to the Public Administration – Standard obligatory training course for Public Administration employees who wish to join the Civil Service; consists of 6-10 long-form sessions (6 hours/each) delivered through GoToMeeting.

E-learning courses

- ASPA's E-learning service is specifically built to provide easily accessible, asynchronous, self-paced learning to participants.
- E-learning courses are delivered through a Learning Management System.
- E-learning curricula are created by trainers in collaboration with ASPA staff to ensure that they conform to the guidelines of instructional design.
- E-learning curricula is structured in such a way as to take participants through all four steps of Kolb's experiential learning cycle.
- According to the ASPA E-learning Methodology, E-learning curricula include quizzes and self-assessment questions, built with a high degree of interactivity and testing participants' understanding on various levels of Bloom's Taxonomy.

Moreover, on 6 November 2020 ASPA announced the winner of the Public Administration Award 2020 in the Western Balkans for e-Learning category organized by the Regional School of Public administration and OECD/SIGMA¹⁰.

Synchronous and asynchronous online training services

Based on our documents and the methodology of E-learning, we will provide you with detailed information regarding the cycle of designing and implementing synchronous and asynchronous online learning.

Synchronous vs asynchronous

Synchronous learning is online learning where the learning process happens in real time. This means that at some point in time, students and the teacher meet online on a platform that supports live learning activities.

In practice, this is usually done in a virtual classroom where the lecture is live streamed, and the students can instantly ask questions and communicate with other students. Students and

¹⁰ (Albanian School of Public Administration, 2023)

teacher can use various online tools to achieve various types of live interaction (live video stream, shared whiteboards etc.). This means, that all participants can have a live debate, similar as in traditional classroom.

The main advantages of synchronous learning are:

- students are part of a live group, so there is no sense of loneliness.
- greater learning dynamics.

However, there are also some disadvantages:

- there is no flexible schedule.
- tools that support live collaboration can be technically complex, so the risk for something to go wrong is higher.

Asynchronous learning is quite the opposite from synchronous learning. It does not require the learner to be online at a scheduled time, because the learning process does not happen in real-time because each individual student can make his own schedule when to learn. This means that he can study at his own pace.

In practice, the teacher prepares the relevant learning material and gives instructions to students where and how to get it.

The learning material may consist of various learning materials, such as pre-recorded video lectures, learning files, discussion boards (forums), etc. The student can receive these materials in different ways (web, e-mail, virtual classroom etc.).

The main advantages of asynchronous learning are:

- students can choose when to learn.
- students can study at their own pace.

Of course, there are also some disadvantages:

- each student is alone, no live interaction with teacher or other students.

Therefore, each type of learning has some strong and weak points. Ideally, the learning process should include both aspects of these learning activities.

Development of ASPA online course

Technology has played a significant role in each phase of the training process cycle, from training needs, training design, and training delivery to quality assurance and training impact assessment. Here are some examples of how technology has helped us in each phase of the training process cycle:

1. Training Need Assessment
2. Training Design
3. Training Delivery
4. Quality Assurance and Training Impact Assessment

1. Training Need Assessment

The training needs assessment (TNA) is the most essential process within our institution that identifies the training needs of employees of public administration in Albania and determines the training programs required to meet those needs. Through TNA, we ensure that the training programs we provide are relevant and effective and establish a clear connection between the identified training needs, and meet the learning objectives.

The TNA conducted in 2019-2020 was performed at a large scale, covering state employees from the central government, independent institutions, and local administration. The assessment was done on three major categories of training needs, including support for the implementation of functional duties, support for the European Integration process, and support for communication in foreign languages. This shows the importance of identifying and addressing the training needs of employees at different levels of government to ensure their development and contribution to the country's progress.

To collect the data required for the TNA, the Albanian School of Public Administration used editable questionnaires distributed through public administration. This approach allowed for the efficient collection of data and the analysis of the results through different programs. The use of digitalization in the TNA process helped to streamline the data collection and analysis process, making it more efficient and effective. The use of technology for us is becoming increasingly important in the training needs assessment process and moreover in training delivery.

Tools: Questioners, Google Forms, Excel, Pivot Table, etc.

2. Training Design

Technology has enabled more innovative and interactive training designs, such as e-learning platforms, simulations, and virtual reality training. These technologies allow for more engaging and personalized training experiences and can be accessed from anywhere, at any time.

The recruitment process for trainers and experts is a crucial part of the training design phase, and technology has made this process more efficient and streamlined.

Here are some ways that technology has helped in this phase:

- **Posting Job Announcements:** Instead of relying on traditional methods, such as newspapers or bulletin boards, technology has made it easier for ASPA to post on official communication channels, such as social media, and web pages, creating a wider reach and attracting qualified candidates.
- **Application Process:** Online application forms are customized and standard, offering to us relevant information about candidates. Google Forms is one such tool that we use to create customized online application forms.
- **Candidate Evaluation:** Technology has made it possible to evaluate our candidates based on objective criteria. Exactly, Google Forms is an important tool that we use and has helped to assess a candidate's knowledge and skills in the area in which the candidate has shown interest. In addition, based on their responses to application questions are generated scores, important to be used during the recruitment process, allowing for an objective evaluation of each candidate's qualifications.
- **Online Interviews:** Technology has made it possible to conduct interviews online, using various platforms such as Zoom, Skype, or Google Meet. This saves time and money, as it eliminates the need for candidates to travel to the interview location. Also, interview recordings and the possibilities to be reviewed later, have given the school a comprehensive evaluation of each candidate.

Tools: Questioners, Google Forms, Excel, Zoom, Google Meet, GoToMeeting.

Curricula designing

Having clear rules and templates for experts/trainers to follow, has ensured consistency in the quality of training material, and makes it easier for the participants to understand and navigate the materials, improving the efficiency, effectiveness, and quality of training delivery. Certainly, the Albanian School of Public Administration has been able to ensure consistency in the quality of training material produced by trainers and experts. In terms of the specific components that experts are expected to include in their curricula design, there are four main areas: theoretical materials, a didactic matrix, a question bank, and the training module passport.

- **Theoretical materials:** The School has drafted rules regarding the content and technical aspects of the theoretical materials, which serve as the foundation for the training. This includes guidelines on topics to be covered, level of detail, and required sources or references,

ensuring that the theoretical materials are comprehensive, accurate, and consistent across different training programs.

- **Didactic matrix:** The didactic matrix is an important tool used to structure the training and ensure that it is delivered in a logical and effective manner. The matrix defines the learning objectives, outlines the main topics or modules to be covered, and identifies the methods and materials to be used for each topic, ensuring that the training is engaging, effective, and achieves the desired learning outcomes.
- **Question bank:** These are questions used to assess participants' knowledge gained in training. We have a standardized set of questions, ensuring that all learners are assessed on the same topics and at the same level of difficulty, this helps to ensure consistency in the evaluation of participants and in the feedback provided by them.
- **Training module passport:** The training module passport is a summary document that outlines the key details of the training program, including its purpose, learning objectives, target audience, delivery method, and assessment methods. By having a standard template for the training module passport, the school can ensure that all training programs are clearly defined and that key information is provided to learners and stakeholders in a consistent manner.

Tool: Word template, Excel template, Pivot table.

3. Training Delivery

Technology has transformed training delivery by providing remote access to training materials and resources. Online learning management systems and virtual classrooms allow for flexible, self-paced learning that can be accessed from anywhere with an internet connection. Additionally, video conferencing and live streaming technologies enable real-time interaction between trainers and learners, regardless of their physical location.

Registration process: The registration of participants in the training offered by the school is a completely digitized process. Also digitized is the evaluation process of the services offered by the school by the participants as well as by the coaches. So, every participant who receives the services offered by the school has the opportunity to evaluate the school according to a standard procedure, the same logic also applies to the trainers recruited by the school and who deliver training.

Tools: Questioners, Google forms

4. Quality Assurance and Training Impact Assessment

Technology has made it easier to measure the effectiveness of training programs and assess their impact on organizational performance. Through performance metrics that we use, we can track learner progress and measure the impact of training on key performance indicators. Additionally, we have implemented survey tools and feedback mechanisms to gather feedback from participants, and trainers to analyse this feedback and identify areas for improvement.

Tool: Questioners, Google Forms, Excel, Pivot Table, etc.

Overall, technology has significantly improved the efficiency, effectiveness, and impact of the training process by providing innovative tools and platforms for each phase of the production cycle.

Development of ASPA E-learning course

The development of e-learning courses is tightly connected to instructional design. The instructional design namely provides guidelines and frameworks for the development of e-courses and helps all the involved team members to have an overview of the activities. There

are several instructional design methodologies available, however, based on the ease of use and wide usability, we have decided to focus on the ADDIE model.

ADDIE model is a 5-step design process model:

1. Analysis (Defining needs and goals, Defining target audience, Overview of the content, E-learning vs. Classical training);
2. Design (Defining learning goals and objectives for each topic, Structuring the content, Content preparation, Storyboards for multimedia and interactive elements, Quizzes and final test preparation);
3. Development (E-course development, Multimedia development, Additional elements)
4. Implementation (defining learning groups, organizing learning groups, performing an e-learning course, Reporting);
5. Evaluation (Surveys, Feedback from the users, Reporting).

Eventually ASPA provide only three of five steps of ADDIE model of ASPA E-learning Methodology, (Analysis, Designing and Development), then the e-curricula it is uploaded into Joomla LMS.

Interactivity in ASPA Online Learning

In the interest of boosting participant engagement, facilitating the learning process and improving information retention, ASPA uses a variety of software for added interactivity during its online training sessions.

In the context of online training courses delivered through Zoom or GoToMeeting, the following software are used during sessions:

1. Google Classroom – a free-to-use platform developed by Google to enable the exchange of materials and information between teachers and students;
2. Mentimeter – an application that enables the creation and sharing of polls and quizzes to increase audience participation;
3. Jamboard – an application provided by Google that allows real-time collaboration between participants through a shared workspace;
4. Prezi – an application that enables the creation of visually appealing presentations.

In the context of E-learning curricula development, ASPA uses the following software as part of the design and production of e-material:

1. iSpring Suite – a PowerPoint-based toolkit used to create slide-based courses, quizzes, dialog simulations, video lectures, and other interactive learning materials;
2. Articulate 360 – a suite of authoring tools specifically designed for the creation of visually engaging E-learning content;
3. Vyond – a user-friendly platform for the creation of instructional animated videos.

INA – Romania

The National Institute of Administration (INA) offers innovative professional training programs to meet the needs of modern and efficient public administration. These programs aim to develop skills and abilities that keep up with the requirements of the field. INA provides organized, distance, and mixed format training, with a focus on practical applications, case studies, and problem-solving. The trainers are experienced and knowledgeable in the target groups. Upon completion, participants receive certificates accompanied by a descriptive supplement of the acquired competencies. INA invests in the development of its trainers, partnerships, and innovation to meet expectations and provide the best training methods and techniques.

INA uses an open-source platform based on Moodle (Modular Object-Oriented Dynamic Learning Environment), which is one of the most widely used open-source Learning Management Systems (LMS). The platform gives access to the latest plugins and specifications that provide INA one of the best environments for learning. Using Chat or Forum tools, Moodle allows for rapid and efficient communication between platform users (administrators, trainers, trainees, and program coordinators). Moodle enables collaborative training, where trainees working in groups to solve case studies or debate on certain topics of interest can share their experiences with other trainees and learn from each other.

In order to meet the training needs of professionals in the central and local public administration, INA has adapted the Moodle platform by implementing a modern blended learning system.

To streamline the organization and implementation of specialized training and development programs, INA uses the Moodle platform for:

- ✓ Developing, publishing, and accessing training resources;
- ✓ Facilitating quick and efficient communication between program coordinators, trainees, and trainers;
- ✓ Evaluating trainers by trainees and vice versa.

Moodle offers a variety of tools for organizing and managing professional training programs, including activities like lectures, seminars, case studies, debates, self-assessments, and evaluations. Trainers can also create interactive and multimedia training materials using Moodle. It provides features to manage resources, like course frameworks, auxiliary teaching materials, and audio or video files. Additionally, it includes a range of evaluation tools to analyse the impact of the training process on public administration.

For INA, Moodle is an effective tool for managing and delivering professional training programs. Its collaborative and interactive features enable effective communication and knowledge sharing among trainees, while its evaluation and management tools provide valuable insights into the effectiveness of the training process.

Identification and analysis of training needs

- ✓ Analysis of the training needs of the beneficiaries (public authorities and institutions, their staff), by applying quantitative and qualitative methods of data retrieval and processing (interviews, questionnaires, consultations, focus-group, etc.).
- ✓ Analysis of relevant legislative novelties in the areas of training addressed.
- ✓ Analysis of official documents on the training needs of civil servants developed by the National Agency of Civil Servants.
- ✓ Elaboration of internal documents on the identified training needs.

Development of quality standards

Elaboration of own quality standards for professional training programs organized by INA, through:

- ✓ Analysis of institutional needs regarding quality standards.
- ✓ Documentation of the legislation applied in the field of training.
- ✓ Establishing the main objective of satisfying the training needs by qualitatively applying the principles and activities from the public sphere, of the resources, norms, and trends in the field of training, in conditions of maximum efficiency and effectiveness.
- ✓ Analysis of the procedural framework and internal rules available at the level of the INA in order to ensure the organizational framework of the training programs in accordance with the developed quality standards.

Quality standards are developed with the aim of directly and explicitly contributing to fulfilling INA's legal obligations, as well as INA's strategic objective, concerning the organization of relevant, practical, and innovative training programs for the public administration. New technologies are utilized in the training field, with the objective of increasing professional performance by strengthening the necessary competencies, meeting the needs of professional development through the qualitative application, in conditions of efficiency and effectiveness, of the principles, norms, and trends in the field of professional development in the public sector.

Ensuring an optimal and sustainable learning framework, the quality standards can be updated whenever necessary by reviewing the procedural components.

Elaboration and approval of the Grid of training programs as well as the establishment of participation fees

The fields of training (according to the strategic priorities), the titles of the training programs, their topics are established and the target group specific to each training program is defined. The administrative costs of operation and organization of the training activity are substantiated.

The entire Grid and the proposed participation fees shall be endorsed by the INA Coordination Council.

The participation fees are subject to approval by the relevant ministry (Ministry of Development, Public Works, and Administration), to which INA is subordinated, and then published in the Official Gazette of Romania.

Identification and establishment of locations for conducting training programs

It analyses potential locations for carrying out training programs: INA headquarters, locations made available by other public authorities and institutions, or it is decided to run the programs online.

Fixed locations are usually in spaces owned by INA and online.

There are situations in which certain spaces are made available to the INA free of charge for the period of carrying out a certain training program or are provided by the beneficiary public authorities/institutions for the training programs organized at their request for their own staff or their own institutional needs.

Development and online publication of the Training Offer

The Training Offer is drawn up by mocking and distributing the training programs by fields, describing their topics, establishing the professional competences, establishing the program manager from the INA, establishing the minimum number of participants for organizing the program, establishing the duration and the calendar of organization and the program fee.

The INA offer announcement is published and officially promoted on all communication channels available to INA.

After the approval of the Offer, the training programs are configured online both on the INA training platform and on the INA website, by publishing all the relevant information, as well as the individual registration links configured for each program.

QR codes are configured and inserted in the promotional materials for quick access to the Offer.

The program managers are allocated on the INA training platform according to the approved training offer, so they are automatically distributed in real time on all INA platforms and their contact details.

Promoting the Training Offer

Messages promoting the Training Offer are published on the INA platforms.

Invitations to participate are sent through online communication channels to public authorities and institutions.

The Training Offer is promoted through online or telephone promotion campaigns/actions and also through organised promotional campaigns (media event, press releases/interviews, launching conferences, etc.).

Invitations/addresses signed holographically or electronically with a qualified digital signature by the INA president are officially sent by e-mail to the beneficiary public authorities and institutions and through INA training platform to potential beneficiaries and former participants (alumni) in INA training programs.

The training offer is promoted on all available communication channels.

Some public authorities and institutions acquire training services using the national online procurement platform <https://e-licitatie.ro/>, this practice giving INA an additional channel for promoting its training programs.

Creating accounts on the training platform and monitoring registrations

The selection of participants for training programs is regulated by a methodology approved by the minister of public administration, and follows specific criteria such as the registration deadline, meeting the target group requirements, obtaining the participation agreement from the institution (if applicable), and adhering to the maximum number of participants for each program.

The application instructions for applicants intending to participate in the training programs organized by the INA, respectively instructions for training officers and trainers, shall be drawn up and published.

Video tutorials created with INA's own resources on steps and examples for creating the online account on the INA training platform, enrolling in training programs, uploading documents online, accessing resources, etc., are developed and published.

The creation of the accounts is done as standard through the INA training platform, filling in personal identification data such as name, surname, position, employer, identity card data, contact details: phone and e-mail; contact details: phone and e-mail.

The access levels are defined by roles on the account, these roles are allocated by the administrator of the training platform for the INA staff and the specialized staff recruited and selected, respectively for the participants by the program managers, based on the instructions in force, after checking the documents necessary for enrolling in a certain training program. The supervision of the activity in the online training environment is ensured by the platform administrator, the directors of the training departments responsible for monitoring the training and certification, respectively by the INA president who signs the digital graduation certificates and the descriptive supplements.

Recruitment, selection and contracting of specialized personnel (trainers)

Specialized staff (trainers) are recruited and selected based on an internal procedure, in compliance with selection criteria covering experience and expertise in the field concerned and in the training process. The specialized staff (trainers) recruited and selected is highlighted in the INA database created prior to the vocational training process.

The training officer contacts after the establishment of the minimum number of participants the specialized staff in the database, according to the internal rules and based on the selection criteria established at procedural level, which confirms availability and for which the contract is drawn up according to the internal circuit of the documents at INA level. This stage involves

the compliance with a Methodology for the recruitment and selection of specialized personnel for the professional training programs organized by INA, as well as approved internal procedures.

Furthermore, INA has implemented a digitalized process for recruiting and selecting trainers, which facilitates enrolment regardless of the applicant's location. All necessary documents are uploaded online in separate sections on the INA training platform and are considered authentic. Verification of document authenticity is done randomly during recorded interviews with each applicant.

Digital graduation certificates and descriptive supplements receive a series of their own coding and a QR Code for verification by interested persons of the validity and compliance of documents directly in the INA training platform.

Organizing the training program

The specialized staff prepares the training materials: course support, case studies, other training materials and delivers the content throughout the training program (both for the training programs organized in physical format and for the training programs organized in online format).

Through the INA training platform, the training materials be available to the participants in digital format, forum/chat sections are used to answer specific questions and/or to collaborate outside the schedule to solve certain practical applications. The training materials made by trainers in electronic format can be transposed according to the specifics of the training program in interactive format, through the INA training platform: quiz, flip-flop slides, etc. This approach helps to deliver the theoretical training material, to assimilate it more quickly and an important emphasis on the practical/ applicative part of the training program.

Evaluation of the training process

Through the INA training platform, a Feedback questionnaire filled in by the participants, covering aspects such as the organization of the program, its usefulness, the training methods applied, etc.

Through the INA training platform, the final assessment test on the competences acquired because of the training program is supported, by automatically and randomly extracting a set of 10/20 questions for each participant, from a question bank previously established by the trainer. The sets of questions are drawn randomly, automatically, and distinctly for each participant. The final score is showed automatically.

Certificates issued

The issuance and management of graduation certificates and their accompanying descriptive supplements are regulated by the Minister with responsibilities in the field of public administration, by means of an order. These certificates are issued in digital format to graduates who have obtained a minimum grade of 7.00 in the training programmes organized by INA. Each certificate has a unique QR code that enables its authenticity to be verified. Evidence of the issuance of these certificates is recorded in the certificate registry, the participant evaluation catalogue, and other documents that are automatically generated by the INA platform. The digital certificates and descriptive supplements are generated in standard PDF format, electronically signed, automatically transmitted to participants, and subsequently archived online.

The way of issuing and managing digital graduation certificates and descriptive supplements are regulated by a normative act issued by the relevant ministry, under whose subordination the INA is located, of a Methodology on the way of managing the graduation certificates of

the professional training programs organized by INA, which provides for the online format and the model of the documents, as well as their way of management and storage.

IPA – Republic of Bulgaria

The information technology infrastructure is the foundation for creating and implementing high quality e-learning education. In this manner, one important milestone in the development of e-learning in IPA is the construction of a special platform for public administration employees under the project "IPA Capacity Building for Research, Training and Application of Innovative European Practices in Good Governance".

The platform itself is multifunctional, it contains an integrated web-based system for conducting online training, webinars, and consultation, tools for communication in a both synchronous and asynchronous way. One of the main benefits of BigBlueButton, is to compensate for most of the limitations of asynchronous learning. The IPA platform has high efficiency, is easy to administer and to moderate. In its development, good practices (functionalities) from other related e-learning environments have been studied and taken into account.

Along with the construction of the technological infrastructure, we have taken the following measures to ensure a professional approach and high quality of the electronic learning process:

- In accordance with the European and world quality standards for e-Learning, IPA developed: "Quality Standards for e-Learning" (intended to be a guide for lecturers, managers and administrators in the development of an e-course), along with "Internal rules" (governing the activities of planning, organizing and conducting e-learning);
- We prepared our lecturers for the challenge that lies ahead of them through training that helped them acquire the competencies needed for ensuring the quality of designing and conducting online learning. Both then and now - at each stage of their work, the lecturers are actively consulted by specialists in conducting online training, design of online learning activities; system administrating etc.

With the new platform and with the established concept of conducting e-learning in IPA, in the period in between July 2015 and December 2015 ten pilot courses were held in different topics. The total number of trainees was 157, and the trainings themselves were highly rated as well.

In the following years, IPA has set goals to increase the number of e-courses, introduce new alternatives such as short self-learning modules, and different types of hybrid learning, and improvement of the technological infrastructure in line with the rapidly developing technologies. As in all these activities, we strive to expand the choices faced by the users of our services so that they can find the most effective and convenient way for them to learn and improve throughout life.

The following graph shows the percentage increase of trained civil servants in online form in the Institute from 2016 to 2022.

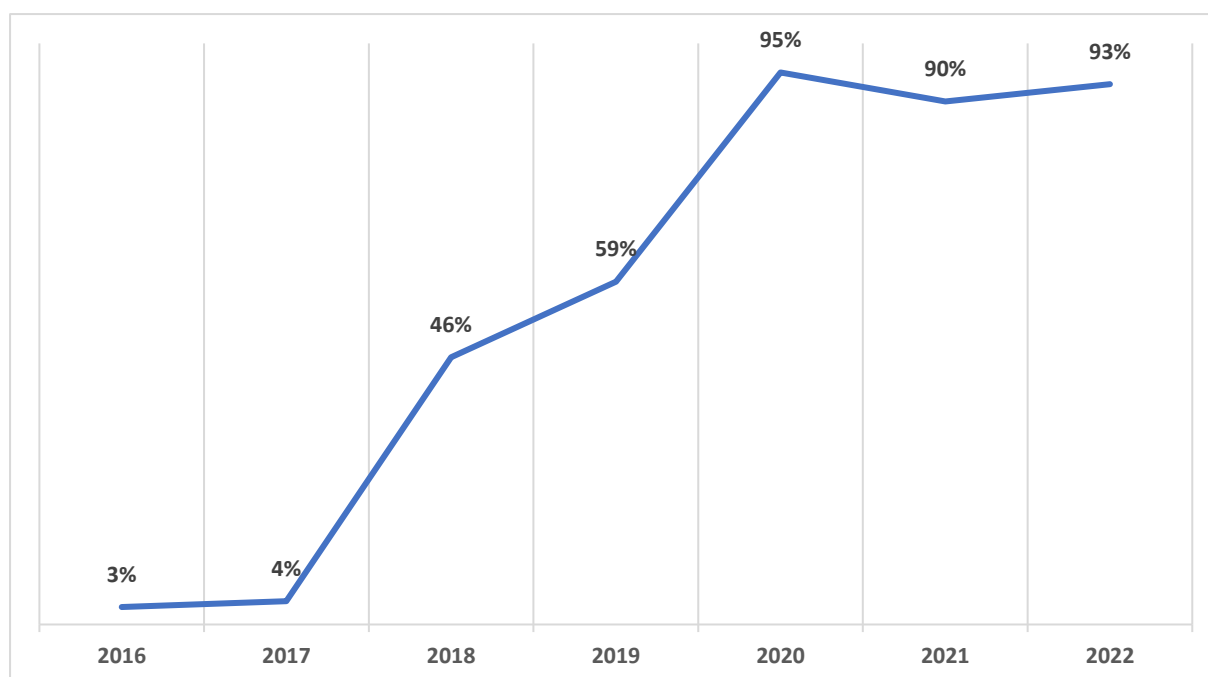


Figure 1: Trend of civil servants trained in online format (2016-2022)
Source: IPA Bulgaria

The COVID-19 pandemic in 2020 and the restrictions imposed on face-to-face training also played role in the significant increase of online training. The situation in which the pandemic crisis put the training organizations in the past year forced even more our creativity and skills for adaptation in order to effectively perform our professional activities. Learning in an electronic environment at that time was not an alternative, but the only option. As such it became an object of increased public and scientific research interest. Thanks to the experience gained in the past years in organizing and conducting e-trainings, IPA was relatively quick to adapt to the new reality. Almost all courses, both in face-to-face or hybrid form, were redesigned and conducted in entirely electronic form. The lecturers were provided with methodological support and assistance in conducting online sessions.

The figures for 2020 are as follows:

- ✓ 25 e-modules for self-study;
- ✓ 50 e-trainings with a lecturer, of which 28 adapted courses, from face-to-face to online form;
- ✓ 20227 people who have undergone various e-trainings in IPA.

This way, the amount of training in fully electronic form in 2020 exceeded 95% (compared to the 65% planned). Since 2015, when a limited number of pilot e-courses were held, the number of e-trainings offered by IPA in different varieties and thematic areas has increased numerously.

Schematically, the types of e-courses according to the format offered and conducted at IPA are presented here:

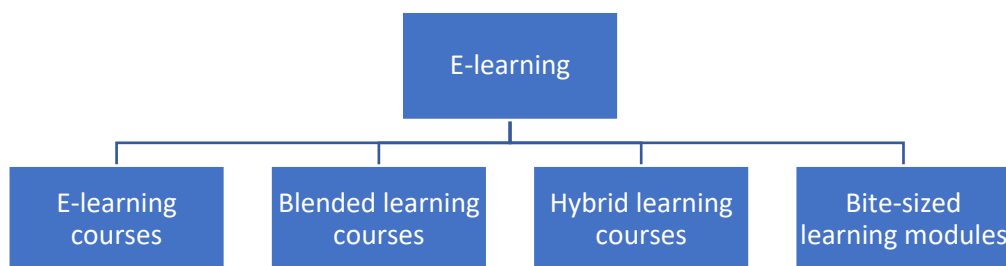


Figure 2: E-learning programs offered
Source: IPA Bulgaria

“Digital transformation in training – digital competence and learning” project

IPA’s project “Digital transformation in training – digital competence and learning” started in September 2019 with the main objective of providing professional and expert governance by improving the knowledge, skills and qualifications of civil servants. In addition, among the most important project goals are to digitalize the working process in IPA, to increase the efficiency and effectiveness of the training process, and increase the research and analytical capacity of the Institute. Within the implementation of the activities IPA has conducted a study of the level of digital competence of the civil servants, organized trainings, academies, forums, conferences, competitions and developed courses on current topics related to the development of competences of the employees. In addition, IPA has published several analytical documents on the topic of digitalization and digital training. Among them are [“Digital Forms of Education and Opportunities for their Application in Public Administration”](#) and “Models for Assessing Digital Competence”.

Newly developed training courses:

- *The principles of circular economy*
- *Social networks in the public sector – development and management*
- *Organizing video conferences and webinars*
- *Spreadsheets (by ECDL) - for advanced students*
- *Analysis and visualization of databases - basic*
- *Database Analysis and Visualization - Advanced*
- *Information and media literacy*
- *Introduction to Digital Rights*
- *Collaboration in the digital environment*
- *Working skills with presentation software*
- *Promotion of the activities of public institutions in social networks*
- *Interactive video and online presentations with Prezi*
- *Protection of personal data in a digital environment*
- *New technologies in management: Internet of Things, cloud technologies, the world of data, artificial intelligence and machine learning, Blockchain, and many more.*

Until the beginning of 2023 more than 51,000 civil servants have passed IPA’s trainings, more than 50 new and modern training courses were developed, and a new Learning Management

System (LMS) is to be implemented later this year. In addition, IPA's online library - a "bank of knowledge" with educational and informational materials with free access has been fulfilled. IPA will continue its efforts to improve the e-learning model for civil servants. We believe that achieving quality professional training of human resources in the modern world is possible through the use of modern technology and educational innovations based on them. Along with achieving success on this path, we inevitably face challenges, identify weaknesses or gaps in some of our e-courses. We solve these problems by outlining priority tasks both to eliminate the identified gaps and weaknesses in individual courses and to refine the requirements for the development of new e-courses. At the same time, IPA assists and encourages its employees to continuously improve and develop their competencies related to the development of digitally based training in accordance with modern practices and quality standards.

Regardless of the training type, be it e-learning or face-to-face, **the training cycle in IPA is comprised of five phases:**

1. Training Needs Analysis (conducted every 3 years);
2. Planning of training schedule (conducted yearly);
3. Training preparation;
4. Conducting the training courses according to schedule;
5. Reporting and assessment of training;

The training activities involve the following actors/participants:

1. Training Managers – part of IPAs' staff who are responsible for the planning, content preparation and evaluation of the training courses;
2. E-Learning Development Managers – part of IPAs' staff who are members of the training quality team;
3. Training organizers – part of IPAs' staff who are responsible for the organizational and technical delivery of the training courses;
4. Lecturers/trainers – experts in different subject areas with relevant professional expertise and adult learning skills;
5. Trainees/Learners – civil servants from all levels of the public administration who participate in IPAs' courses.

IPA has developed "Quality Standards for e-Learning", and "Standards for the Development of Bite-Sized Learning Modules". These provisions include rules for the course design, training content, activities, and resources, a definition of the ways communication between the Lecturer/s, IPAs' staff, and the Learners should be conducted, and rules for training assessment. IPAs' "Standards for the Development of Bite-Sized Learning Modules" define them as short, well-planned, and well-prepared learning units that have a clear thematic focus and enable the learner to achieve specific learning objectives at her own pace. The standards define the design requirements for bite-size learning modules development, their training content structure, and the requirements for the preparation of PowerPoint type presentations intended for video recording.

IPAs' Training quality team is in charge of quality control of all training courses (incl. face-to-face training) throughout the full training cycle. Part of IPA's staff is assigned to the Training quality team by the Executive Director of the Institute. Part of the duties and obligations of the team are described below.

Training Needs Analysis (TNA)

The first phase of the training cycle is the preparation of TNA. Its main purpose is to identify any discrepancies between the current level of competence for different professional groups

or for the administration as a whole; to identify any existing issues in the public administration, which can be resolved through training; to identify current/hot training topics; to identify content highlights for the training programs; to identify training target groups among the civil service; to identify the appropriate training forms for the civil service.

TNA can be carried out via different methods and techniques, such as:

1. Study of strategic and operational documents, reports;
2. Filling in questionnaires;
3. Conducting interviews with stakeholders;
4. Consulting managers from different levels in the administration;
5. Focus groups and discussions in different professional communities within the public administration;
6. Consulting experts from academia, NGOs, international organizations;
7. Analysis of training evaluation questionnaires;
8. Analysis of the results of national and international studies and projects.

The latest TNA in the Bulgarian public administration was conducted in late 2021, and its results are applicable for the period 2022-2024. A [Methodology for conducting TNA](#) in public administration is published on IPAs' website. The main purpose of the Methodology is to establish uniform rules, principles, and standards for the TNA in Bulgarian public administration. The TNA is the basis for the preparation of the annual training Catalogues of IPA. The Methodology is used in all subsequent TNAs in the public administration carried out by IPA and the administration of the Council of Ministers in order to ensure continuity and comparability of results.

Planning of the training courses in IPA is done in accordance with the results from the TNA. *It is conducted in three steps, and done yearly:*

1. Preparation of the Annual Catalogue of Training Programmes;
2. Identification/selection of speakers/lecturing teams;
3. Preparation of training schedule for two training cycles: 1) April - August and 2) September – December.

E-learning is defined as a learner-centred approach using new multimedia technologies and the Internet to improve the quality of learning and facilitate access to resources and services. E-learning at IPA is delivered through a dedicated e-learning platform available at <https://iis.ipa.government.bg/>

The e-learning training types in IPA are:

1. E-learning with a lecturer with a duration of up to sixteen training hours (45 minutes = 1 training hour) conducted through a virtual classroom, using the BigBlueButton software;
2. Bite-sized learning modules with a duration of up to four training hours;
3. Blended - a combination of e-training and face-to-face training;
4. Hybrid - all or part of the training is delivered in both face-to-face and e-format.

The duration of the e-learning process is defined as the time required for the learner to be familiarised with the learning resources included in the course, and to complete the learning activities. The course period is the time within which the e-course is active and must be completed by the learner/s. Responsible for the preparation and delivery of the e-learning training are the Training Manager, the E-Training Development Manager, the Lecturer, and the Training Organiser.

The Training Manager has the following duties:

- Drafts the civil contract/s with the lecturer/s, except in cases where a framework contract has already been concluded;
- Is responsible for posting the course on the e-learning platform, including the syllabus, training materials, participant information, etc. no less than eight calendar days prior to the first date the training begins;
- Oversees the delivery of the training in accordance with the syllabus, the conditions for successful completion of the training, and the Internal Rules for Training Activities. Informs and encourages participants to complete a learning evaluation survey in IPA's e-platform, after the course has finished;
- Provides organizational and technical support for the training, including the management of the Virtual Classrooms;
- Notifies the participants that the course certificate is available in the e-learning platform profiles after the course has finished.

The E-Learning Development Manager has the following duties:

- In conjunction with the Training Manager, assist the lecturer in developing and publishing a new e-course in the e-platform;
- Assists the lecturer/s in the process of creating training audio and video materials, interactive presentations, hypertexts, etc.;
- Is responsible for ensuring compliance with the Quality Standards for e-Learning by inspecting and giving opinions on new e-courses, and e-course materials;
- Coordinates with the Training Manager on new and/or updated e-learning courses.

Lecturers have the following duties within e-learning:

- To develop the course design, learning materials (resources), and learning activities in compliance with IPAs' Quality Standards for e-Learning;
- To develop the learner performance assessment system;
- To conduct the training according to IPAs' requirements.

Finally, *the Training Organiser* provides the organizational and technical support required for the delivery of the face-to-face part of the blended type training or hybrid training.

Fourteen and seven calendar days prior to the start of each training course, course participants receive automatic e-mail notifications. The notifications are sent via the IPA e-platform informing them of the upcoming training course, and that they should register in the e-platform, or if already registered, that they can access the course via a personal profile in the e-platform.

E-learning structure and components

All e-learning has standard structure and components, such as:

- Introduction and description of the course - an introductory audio and/or video presentation which introduces the lecturer, and the course and provides other useful information;
- A general forum where participants could introduce themselves and discuss issues of common interest during the duration of the course (the forum only for e-course with a lecturer);
- Learning resources organized by key themes, i.e., the core structure of the training;
- Final test or in some cases a practical task to evaluate the skills and knowledge of the participants;
- An evaluation questionnaire for learners' feedback.

Development and updating a new e-course is coordinated by the *Training Manager*, who:

- Arranges a meeting between the lecturer/s and the E-Learning Development Manager. The Training Manager coordinates the timeline for developing/updating and delivering the training, briefs the Lecturer/s on IPAs' Quality Standards for e-Learning
- Drafts a civil contract to develop/update the e-course, in cooperation with the E-Learning Development Manager;
- Monitors timelines for developing/updating the e-course, and assists the Lecturer/s and the E-Learning Development Manager as needed; including posting the e-course on IPAs' e-learning platform;
- Checks the completed e-course for compliance with the Internal Rules for Training Activities and Quality Standards for e-Learning. If corrections are needed, inform the E-Learning Development Manager and the Lecturer/s in a timely manner;
- No less than fourteen calendar days prior to the start of the e-course, the Training Manager informs the head of the Training quality team (with an e-mail copy to the E-Learning Development Manager) that a new or an updated e-course has been published on IPAs' e-learning platform, that requires a "training quality statement" to be drafted;
- The Training quality team issues a "training quality statement", and gives any recommendations in a timely manner. The E-Learning Development Manager discusses the recommendations with the Lecturer/s if such are listed in the statement. The Training quality team must have at least two work days to draft the "training quality statement";
- No less than ten calendar days prior to the start of the e-course, the Training Manager must submit the prepared "training quality statement", along with the Lecturers' training materials, to the Director of the "Training, International activities, and Projects" Directorate for approval;
- Approved "training quality statements" and training materials for new or updated e-courses must be stored by the head of the Training quality team;
- The Training quality team briefs and advises the Training Manager on the preparation and delivery of the e-course in accordance with IPAs' Quality Standards for e-Learning.

Subsequent assessment of e-training courses

The training assessment in IPA is divided into two types – 1) direct or immediate assessment, and 2) follow-up or ex-post assessment. This division is defined by the types of result that is being assessed (evaluated).

The direct or immediate assessment covers the following result:

- Knowledge or skills acquired;
- Degree of achievement of the training objectives;
- Learner satisfaction with the training content and training materials;
- Satisfaction of the participants with the teaching style and professional competence of the lecturer/s – applicable only for the e-learning with a lecturer.

This type of assessment is based on the final test/practical task results, direct observations by the Training Manager during the course period, feedback from the Lecturer/s, and mainly the feedback assessment questionnaire (different templates are used for the different types of learning).

The follow-up or ex-post assessment of training is applied only to part of IPAs' courses and is conducted by the Training quality team. This type of assessment evaluates the lasting outcomes and effects training has had on learners, such as increased professional

competence of the learners, which leads to a more effective and better-quality job performance; Increased employee motivation.

The follow-up/ex-post assessment must be conducted no earlier than three months, and no later than six months after the completion of all e-learning courses. The assessment must be based on questionnaires completed by the learners. The questionnaires are completed online. The Training quality team prepares an annual summary report, that describes and analyses the evaluation of the training. The reports are submitted to the Director of the “Training, International Activities, and Projects” Directorate within one month after the end of the respective evaluation period.

NAPA – Republic of Serbia

The National Academy, as the central institution of the system of professional development of civil servants, is responsible for a large target group, including civil servants at the level of state administration as well as employees in local self-government. The only sustainable solution in training a large target group, NAPA saw in digitalisation of all training processes. Bearing in mind all phases of the training cycle, the National Academy is very committed to the digitization of the process in all its phases. The impact of digitization is reflected in the fact that the process is faster, with fewer errors, and all participants in the process have accurate information, easy access to resources, and reporting is error-free.

As a result of the Covid-19 pandemic, when most of the population had to work remotely during the lockdown, the digitalization of the training process was accelerated. Participants became used to online training and webinars, as well as the use of new technologies in training.

Starting from the training needs analysis, which is carried out annually, the collection of needs from the authorities is done digitally and carried out through the LimeSurvey online platform. LimeSurvey is a free web application for online open-source statistical research. As a web server-based software, it allows users to use a web interface to develop and publish online surveys, collect responses, create statistics, and export the resulting data to other applications.

In the process of gathering needs, the National Academy also provides professional support to authorities and makes its resources available for gathering individual needs for professional development of each employee.

Furthermore, **in the phase of the training program development**, the Academy also uses the advantages of digitalization for these purposes. In this sense, a SharePoint shared folder is used, so that all team members have an overview of the documents and can update them or create new ones.

The **trainer accreditation process is completely paperless**. Candidates submit applications electronically through the e-Government Portal. Decisions are signed and stamped electronically and then delivered to the candidates via the e-Government Portal, in an electronic mailbox.

After the process of accreditation and adoption of the annual programs by the Government, the Academy conducts an internal competition for hiring trainers. That process is also digitalized and is carried out through the LimeSurvey online platform where coaches upload their applications.

For training, NAPA uses the Learning Management System platform (NAPA LMS) developed for the needs of the Academy. The platform is award-winning and contains a lot of options. The largest part of the system is an offline module that is intended for easier coordination of trainings that take place in classrooms or trainings in the form of webinars. The offline module gets data from several databases: users, institutions, contact persons from institutions, programs, program areas, themes (subjects), accredited trainers, locations, accredited training providers. Every accredited training provider has the option to carry out and record his own trainings through LMS.

Description and functionality of the LMS

The LMS (<https://lms.napa.gov.rs>)¹¹ is based on MySQL database and PHP as the programming language. The operating system is CentOS. Servers are located in the State Data Centre. LMS is web application that is available all the time, for all screen sizes, on all devices, with various web browsers.

Users are registering online. Registration instructions have been prepared. The contact person from the institution confirms the status of the employee in the mentioned. After that, the user accesses the system with data saved during registration (My Account), the list of available trainings, the list of completed trainings and online trainings are available. Registration is done by choosing a topic and clicking on the button Registration. The user receives an email with the details of the application. An API was created that enables the display of published trainings on the NAPA website in real time. All training materials, certificates and certificates are available to users in the Completed training section after the training.

Developed modules:

1. System

Administrators – management of accounts with greater authority: full access and limited access where it is possible to set the access level in detail for each part of the system module. The access level of NAPA coordinators and other institutions is also set here. Each coordinator sees only assigned events.

Settings – layout of the front page, logo, links to social networks, appearance, and size of fonts for each part of the system.

Change tracking – all changes in the system are recorded and can be undone. The time, user, type of action, change and a comparative view of the previous and current state are displayed.

Number of active users per month – graphical representation of the number of active users of the system per month.

Language settings – the system is fully available in the Cyrillic and Latin alphabets of the Serbian language. It is possible to add an unlimited number of languages. The translation is done by exporting all terms to Excel, doing the translation, and loading everything back into the system. The option we use is to include the language, but it is not displayed as available, and it allows us to include subtitles for the video files for the trainings for which we have translated into the languages of national minorities.

Backups – creating backups of the entire system including the database.

2. Users

List of user accounts – display of all users and the information they entered in their profile. User accounts are managed in this section. All users can be filtered and sorted by the following: Name, Surname, Authority/Institution, User ID, Group. Each user can be assigned a

¹¹ (The National Academy of Public Administration, 2017)

group, and in the trainings, it is set which group has access to which training. In this way, it can be set that, for example, only users to whom we have assigned the IT group can apply for some IT training. For each user, it is possible to view system access statistics and online training access statistics.

User groups – management of user groups.

User import – mass import of users from a predefined Excel file.

Additional fields – management of fields used during registration where we do not need programmer intervention to, for example, add a new title in "DU" or "JLS", but simply add it through the options in this section.

3. My training sessions

Courses – management of topics with all the elements that are provided (the name, whether it is published, whether it is an online or classic training, which group in which period of time is allowed to see trainings on a certain topic, setting in online trainings which material is required to be viewed in order to "unlock" other material, setting notifications for participants of a certain topic, for classic trainings: topic code, program, target group, topic area, planned number of participants, minimum number of participants, duration in hours, duration in days, time required for training preparation, competencies, form of implementation, methods and techniques, purpose/reason for adopting the topic, goal of the topic, learning outcome, connection with other topics, technical conditions, method of verification of participation, adaptation to persons with disabilities). For each topic, it is possible to create a certificate that will be available to participants. The layout of certificates is created within the system. The data is searchable and can be sorted and filtered by name, group, code, whether the topic is available for creating training, whether it is online or classic. The LMS platform enables the creation of tests with alternative, multiple choice, and essay type tasks. Examinations (test) can be imported into the system using a predefined Excel file. Simpler surveys/evaluations can also be created. Themes can be imported. For online Training, there is a Coach and Share section (mini forum).

Libraries – creating a library of questions that are imported from a predefined Excel file. Test questions for online training are randomly selected from the library.

Saved questions – managing questions for tests.

Folders – management of folders for online trainings (can be units in which similar trainings are placed).

Documents – creation of default certificates. If certificates are not created in the courses section, then the certificates defined here shall be used. This gives us the opportunity to create the layout of certificates in one place, and to adjust that layout additionally in the Courses section if necessary. Certificates are created for all participants for all trainings because variables are created that automatically retrieve data such as name of training, name and surname, institution, date, program.

4. Notifications

Notifications – allows sending emails to all participants of a certain group for a certain training at a certain time. It is possible to set the automatic sending of emails before or after the end of the training.

Group email templates – create group email templates that can use variables such as training information, participant first and last name, date and more.

Sent group emails – overview of sent group emails. The emails sent by the system during registration and registration for training are also displayed here. With the Track Changes

section, it allows us to resolve problems that attendees have during registration and login and to determine the status of those actions.

5. Reports

Reports – review of reports related to online training: duration of training in days and hours, number of participants, total completed, passed, check of open-ended questions, overview, and statistics of answers to questions, detailed overview of activities for each participant, summary overview of activities. There is a data export option.

Reports for trainings – data on classic trainings, records of attendance, records of test results, number of participants for each training, download of certificates that are assigned based on predefined rules. Certificates are signed with a qualified electronic seal after download and imported into the system. Certificates are available to participants on their profiles only when they are electronically signed. Both versions, both signed and unsigned, remain saved in the system and are additionally stored in a secure location in NAPA. There is an option to export individual training data or data for all trainings. The certificates also contain the Individual Participation Identification Number (IBPU), which is automatically created based on the training code, the code of the implementer and the regular number of participants.

6. Offline module

Events – scheduling events, setting the date of implementation, locations, occupancy, resources needed for the implementation of the training, selection of the implementer, uploading the agenda, uploading the presentation and materials from the training, determining the maximum number of participants and sources of funding. By selecting the topic of the event, the system automatically pulls data from the My Training/Courses section. After entering attendance in the Training Reports section, the system automatically enters the number of participants. Trainees can see most of the above data on the NAPA website and on their LMS profile. The data on the site is displayed and updated through the API that was created. The executor, arranger, implementer is determined. In this part, the report of the expectations of the participants is downloaded. Various types of events are scheduled: classroom training, webinars, hybrids. If it is a webinar, it takes place in the Virtual Classroom (BigBlueButton) and attendance data is automatically filled in (the coordinator confirms it by clicking the button). If there is a test on the webinar, then it is done in the LMS test module. Test data is automatically filled. The presence of participants at the training must be confirmed by the contact person from the authority.

Resources – codebook of resources needed to conduct training (name, unit of measure).

Locations – codebook of locations for training. Data to be entered are Name, City, Address, Category, Active (Yes/No), List of available appointments by days and hours, Technical equipment, Maximum number of participants and Note.

Programs – codebook of programs and type of program with year of adoption and code.

Organizers – codebook of accredited program organizers.

Accredited lecturers – codebook with all data: Implementer, Program, Thematic area, Professional area, Gender, Title, First name, Surname, Unique citizen identification number (JMBG), Date of accreditation decision, Date of termination of accreditation, Trainer's Identification number, Number of accreditation decision, Points from the competition, Training of trainers Certificate, Method of accreditation, Municipality of work, Municipality of residence, Bank, Current account number, Telephone, Email, Address, Professional qualification, Employment status, Employer, Workplace. In this part, it is possible to download the Data for the contracting and report is in Excel format. Also, in this part the details of each contract for each trainer are entered. There are data export and import options.

Accredited Implementers (legal entities) – codebook with data: Thematic area, Professional area, Realizers, Name, identification number, tax identification number, Email, Address, Place, Dates of decision and termination of accreditation, Number of accreditation decision, identification number of the implementer, responsible person, Email and Telephone

User's institution – codebook of the body with basic data and contact persons. Authorities have two levels of categorization. The Show Unique citizen identification number (JMBG) option is used to include the JMBG information when sending an email to a contact person. The option is currently only included for Ministry of Interior due to the large number of users/employees. It is possible to export and import all authorities, as well as contact persons.

Registered users – a list of users who have filled out the online registration form and are waiting for their status to be confirmed by a contact person. The NAPA administrator can also perform the confirmation.

7. Gamification - Gamification and Badges

8. E-library (Infoteka)

A knowledge base or e-library is a modern environment for spreading knowledge and creating new necessary skills in an innovative and easy way. Content consists of educational videos, infographics, and other downloadable written material. The purpose of this knowledge base is to provide simple and quick access to topics that matter to users in a form that is short, concise and easy to understand. It also allows the user to find answers to a large number of questions from various fields, such as: The power of feedback, Tabular calculations, Protection from discrimination, Horizontal questions for horizontal function holders, Public policies, Labour legislation, Pework - post work activities, PowerPoint presentations, Application of the Law on Administrative Procedure in practice, Discover your best "YOU", Inspection supervision, Project cycle management, How to use pivot tables in excel, Stress management, Creativity development, Advanced word processing, Gender equality, Teams and teamwork, Irregularities in IPA context, Conflict management, Protection of personal data, IT security, PRAG goods procurement contracts, Successful conflict resolution, Towards more effective inspections.

The online trainings module represents the part of the platform that is intended for e-learning. We started with online courses on march 2020. and till now we have around 70 online trainings on LMS. The total number of registered employees in PA on LMS is more than 19.000 which is at the same time a total number of candidates for online trainings.

The modern LMS platform enables flexibility of time and space, individualized learning of participants, diverse educational material, interactivity in communication, possibilities of measuring the effects of learning and reduced costs during the implementation of trainings. Although on the one hand there are relatively high costs for the development of e-training, especially when it comes to preparing technical specifications and developing software and platforms for e-training, in the long run, creating such a platform will reduce the overall costs of organizing trainings at the National Academy.

The LMS interface is built and designed in a way that is very clear and understandable, so that employees can very easily register, log in and apply for one of the trainings. After choosing the online training they will attend, they have the option to read the text or watch a short video lesson, after which they are obliged to take a knowledge test.

In developing the LMS, the National Academy was guided by the following goals:

- ✓ Flexibility of time and place - During the professional development in NAPA so far, geographical matching was important for conducting the training/seminar/round table. For many reasons, the National Academy wanted to avoid just that and use the means for which it is not necessary that all participants in the education process are in the same place and at the same time. Accordingly, the LMS will enable various forms of e-learning: Self-paced and facilitated e-learning.
Self-paced e-learning - participants are offered e-learning on a platform without a clearly defined time frame, monitoring and control during the educational process. Trainees can learn at their own pace and materials of different types are available to them - texts, graphs, audio-visual materials that represent a certain type of support. In some situations, technical support via email is available to users.
Facilitated e-learning - e-learning is created in the form of a curriculum that has a chronological sequence. The course is time-organized and led by a moderator/facilitator. Content can be individualized through individual assignments and case studies and group assignments of several users. Trainees, facilitators and moderators can use communication channels such as email, forums, chat rooms, applications whose content can be shared with others, video conferencing and the like. At the end of each lesson there is an exercise or test to check the acquired knowledge of the user.
- ✓ Interactivity in communication - LMS should enable interaction between participants through various communication channels: discussion forums, e-mail, audio communication and simulations and animations.
- ✓ Individual approach to students - LMS should give the trainee a high degree of individualization of learning. The pace, dynamics of work and the amount of information in a unit of time should be adjusted by the trainee.
- ✓ Ability to measure learning efficiency - One of the standards of e-learning indicates the inevitability of monitoring user achievement. Therefore, this goal is reflected in the fact that the LMS provides an opportunity for formative and summative assessment of trainees in online training as well as an assessment of the time spent on learning.

For online training on LMS it is possible to upload materials in different formats: Word document, PDF documents, short descriptive HTML, video file in mp4 format with subtitles in VTT format (subtitles can be added for multiple languages), PowerPoint presentation. In addition to these types of materials, there is the possibility of adding SCORM packages, tests, surveys, and webinars as part of the online training.

The gamification module increases the motivation of the trainees, and results in a faster and better acquisition of knowledge. With the help of different types of games, points, badges, nicknames, and awards that are implemented in the learning process on the platform, the trainees are placed in a competitive environment that awakens their competitive spirit. With the help of gamification, the users have an additional motive in learning, but also in contributing to the knowledge to the entire community.

Coach & sharing (forum) module enables communication between all participants in the education chain in a creative and interactive way. During the training, each of the trainees/educators of one course is able to make a question in an intuitive way or make a comment/provide knowledge that will be available to all current and future trainees of the course.

Technically, on one part of the screen of a certain course, all questions/comments/contributions of knowledge will be displayed and grouped.

Thus, for example, in a part of theoretical training a trainee can offer an excellent solution from practice through his/her comment, and at the same time attach a document made for the solution of the mentioned situation.

For all comments/attachments, upvoting/downvoting can be enabled, which will enable hierarchical ranking of comments by their value.

Also, through the previously described gamification module, it is possible to stimulate participation in this module by giving points.

Hybrid events are also organized. Part of the participants is in the classroom together with the speakers, panellists or lecturers, while the larger target group follows the event via computer. For such events, we use different platforms, most often ZoomPro.

The evaluation of the webinar is also digitized. Evaluation sheets (e.g., happy sheet) are placed on the Lime Survey online platform.

The database of realized trainings is in excel format, and all evaluation reports by participants and trainers as well.

Chapter 3

Current state of digitalization & expected developments



3.1 Questionnaire

In order to coagulate a general image of the current state of digitalization of the public administration training process within the region, by means of the analysed institutions, a questionnaire was applied internally, the questions being structured based on general particularities, digital tools and capacity, perspective of top competencies identified for public administration.

General particularities

This first stage of the questionnaire aimed to identify common aspects of the four analysed institutions (ASPA, INA, IPA, NAPA) regarding training programs target groups, structure, financing and promotion.

As the questionnaire responses show, the regional approach is to address the same main target groups, which consist of local and central public administration civil servants in executive and management positions, high civil servants, high officials (mayors, ministers, state secretary), personnel established by strategic documents (trainers and contractual staff), and other interested individuals and organisations.

In terms of training program structure, we focused on duration, style and delivery method, considering these aspects relevant for revealing participants' preference for expanding their theoretical know-how and acquiring new practical skills or perfecting existing ones. Therefore, the received responses point out that throughout the year 2022, training programs with a shorter duration, up to one week in length, enjoyed a higher demand, meaning that the beneficiaries sought to update their information, knowledge and skills on specific problems and topics, in a practical rather than a theoretical manner, training programs with a shorter duration being generally oriented on practical and novelty aspects. However, coming in as a close second preference were training programs lasting more than 3 weeks, which usually deliver a more specialized training, pursuing both the theoretical part of developing and the gaining of new competencies and knowledge with practical application.

In our inquiry, we endeavoured to also examine the ***styles of organizing*** and the ***delivery methods*** of training programs, this exploration leading us to conclude that the most sought-after styles were online and classic delivery for both standard offered and tailor-made programs. Even though the hybrid organization style doesn't seem to have been among the preferred approaches by beneficiaries, collected responses show a considerable interest for them, while conferences and webinars close the circle of offered training programs, recording the lowest demand. Specific training programs, dedicated to particular target groups focused on certain type of training and organization profile, maintain a low demand level in the region, which is not surprising, considering that specialized or tailor-made training programs cover a very narrow niche, being developed mostly on demand.

As far as delivery methods go, it is no surprise that the public administration area remains loyal to the classic format, the most sought-after training programs being the ones with physical attendance. However, COVID-19 pandemic forced public administrations to adapt, being strongly stimulated by government law and social restrictions to develop capacities for online service delivery. Therefore, online training programs flourished in the year 2022, offering a strongly appreciated flexibility to participants in terms of attending remotely.

In terms of funding sources for running training programs between 2020 and 2022, the feedback on our inquiry shows that regionally they consisted primarily of participation fees

and government funds. Additionally, partially and entirely non-repayable loans as well as sponsorships contributed to funding the programs to a certain extent. Consequently, it can be inferred that government and beneficiary funds represent the primary fuel for running training programs.

Information dissemination and social communication has also benefited by current technological advancements, new ways of promoting public services being adopted and developed by authorities and institution of public administration. Keeping up with current digital trends, all training institutions analysed seem to rely mostly on official websites posts, social media platforms and organising specialised events when it comes to communicating and promoting their services. More straight forward approaches, like informing the HR departments from public administration institutions, direct marketing, newsletters and word of mouth still remain powerful instruments within their marketing arsenal. Therefore, it is safe to say that promoting and marketing of training programs provided by analysed institutions is ensured through digital tools while cultivating beneficiary loyalty.

Training tools and facilities

Our study examines the varied capabilities of different institutions to organize training programs, considering physical attendance, online formats, and hybrid approaches. Across the analysed institutions, there is a general provision of classrooms, computers, video projectors, interactive screens, flip charts, and other traditional training tools, thereby ensuring readiness to conduct conventional training programs. However, for specific training needs or newer programs, some institutions may require additional capacity.

In terms of physical attendance, there is an ample supply of classrooms and computers in most institutions, although a few more resources would be beneficial, such as back-up devices and the establishment of mobile classrooms for training at remote locations without adequate equipment. Furthermore, the availability of more spaces would enable the institutions to offer a wider range of activities to beneficiaries. Notably, certain institutions possess specialized computer rooms with multiple computers, presenting an opportunity to conduct training programs tailored to Information Technology and Communication (IT&C) areas. Overall, the existing training rooms and centres are well-equipped to facilitate a high-quality learning experience.

For online training programs, each institution operates its data-centre, computer servers, and internet and intranet connections. Additionally, various training platforms and online tools, including Learning Management System (LMS) integrated apps (Zoom, Canva, and Kahoot) are utilized to conduct online training. However, continuous efforts are being made to enhance the capacity of online libraries and knowledge databases to ensure up-to-date information is available across all institutions. This emphasis on perpetual updating is vital to maintain a comprehensive expertise across diverse fields.

Hybrid training programs, a relatively novel approach in the context of professional training for public administration, are conducted within the learning management systems of the institutions. These hybrid programs incorporate testing and evaluation tools, self-paced learning options, trainee support services, and pedagogical approaches like flipped learning. The integration of new technologies enables the creation of tailored content that addresses the specific needs of the public administration staff, focusing on essential skill development.

Certain institutions have interactive manuals and multimedia content, which are continually enhanced and upgraded, incorporating the latest innovations such as AI add-ons and gamification modules.

All analysed institutions demonstrate varying capabilities in organizing training programs, with some well-equipped for physical attendance, others actively expanding their online resources, all embracing hybrid approaches to training. The adoption of cutting-edge technologies and continuous improvement efforts underscores the commitment to offering comprehensive and effective training solutions for public administration professionals

In our training programs, we commonly employ a range of tools that can be categorized into traditional tools (e.g., black/whiteboards, flipcharts, printed materials), dynamic platforms (e.g., Moodle, WooClap, Kahoot), and interactive screens, which have become the prevailing norm in organizing training activities. However, within the region, certain institutions are experimenting with gamification and Virtual Reality (VR) in select training programs. Although integrated with existing technology, none of the institutions have yet explored the application of Augmented Reality (AR) or AI-generated instruments in their training initiatives.

For conducting training needs assessments, survey tools and various spreadsheet and database applications (e.g., Microsoft tools) are generally employed to efficiently collect and process the gathered data. While the prevailing approach in the region is not to rely on an extensive number of data sources, employing such sources, including legal frameworks, reports, studies, feedback from beneficiaries, consultations with stakeholders, and interviews with institutions, can significantly enhance the understanding of the analysed areas. With an increase in the volume of data collected, the adoption of machine learning and/or artificial intelligence methodologies becomes imperative to effectively process and comprehend the data.

Evaluation of training programs is primarily carried out through survey tools and the collection of feedback. The obtained data is then correlated with information from reports, related studies, and supplemented with data gathered from beneficiary interviews. Interestingly, three-quarters of the institutions in the region actively monitor the impact of their training programs. Some institutions are increasingly adopting Key Performance Indicators (KPIs) as a means to evaluate the effectiveness of their training initiatives, a practice more commonly seen in the private sector. This approach enables institutions to gauge the performance of their training programs, fostering competitiveness in the public administration training market and ensuring tailored training services that align with current requirements.

However, **the monitoring of training program impact** lacks a standardized approach among institutions in the region. The frequency of impact monitoring activities varies, with some institutions conducting evaluations every two months, quarterly, annually, or whenever the need arises. Additionally, while some institutions incorporate impact monitoring as part of surveying processes or training offer development, others are only just beginning to pilot impact assessment methodologies. This presents an opportunity for the future development of a common framework for monitoring the impact of training programs across the region.

Perspective of top competencies

In light of our expertise and experience, we identified a selection of relevant topics for the forthcoming period: artificial intelligence, business process modelling, process automation,

data privacy, and modern leadership. These subjects hold significant relevance in the context of the swiftly evolving technological landscape and the contemporary business environment. They encompass critical aspects such as advanced technologies like AI, process optimization through automation, concerns pertaining to data privacy and security, and the requisite leadership skills to effectively navigate the challenges posed by the emerging economy.

In conjunction with these topics, we acknowledge the necessity for a diverse pool of competencies to address the future demands associated with the most pertinent areas of skills development, which include:

1. Technological Skills:

- Database Skills
- Advanced Digital Skills

2. Critical Thinking and Problem Solving:

- Analytical Skills
- Critical Thinking
- Problem Solving
- Behavioural Skills

3. Communication and Collaboration Skills:

- Advanced Communication Skills
- Negotiations
- Emotional Intelligence
- Continuous Learning Capacity

4. Innovation and Innovativeness:

- Knowledge and Skills for Working with Data
- Evidence-Based Policy Making
- Strategic Foresight

This set of topics encompasses a comprehensive range of skills, including technological proficiency, critical thinking abilities, effective communication and collaboration skills, emotional intelligence, and a capacity for continuous learning and adaptability. These competencies are highly valuable and relevant across various professional contexts and are crucial for both personal and organizational growth and success.

Based on our reports from 2020-2022, the most requested training program areas were related to Communication and Human Resource Management, Leadership and Legislative Policy Making, Digitization, and Environmental Protection. These areas witnessed increased demand during the pandemic period. Considering this trend and other European developments that prioritize digitalization and green transition, we anticipate that for the timeframe 2023-2025, beneficiaries will predominantly seek competencies in Leadership, Communication, IT skills, Digitization, Artificial Intelligence, Human Resource Management, Policy Making, and Energy Efficiency. Consequently, in the region, it would be beneficial to adopt a unified approach focused on soft skills to enable the personnel in public administrations to better adapt to current realities, challenges, and perspectives in key areas such as IT&C, human resources, and communication, both at the international and European level. This approach will facilitate dealing with global trends and international approaches effectively.

3.2 Expected developments

ASPA – Republic of Albania

Lessons learned from the use of technology in the training cycle include the importance of careful planning and implementation of technology in the training process, the need for user-friendly and accessible technology platforms, and the value of ongoing evaluation and refinement.

Another lesson learned is the need for user-friendly and accessible technology platforms. Therefore, it is important to choose platforms that are easy to use and understand, that provide clear instructions and support for learners. For that reason, ASPA has built guidelines for user-friendly and accessible technology platforms, which they use and share with trainers, and participants. Moreover, the school has organized the Train of Trainers program, (ToT), to teach them how to use the functionality of the ASPA online training platforms and apps.

The impact of digitalization on the training cycle proved to be that it became more flexible and cost-effective than traditional in-person training, facilitating easy access to training materials and resources from anywhere, at any time, giving trainees the opportunity to interact with trainers and peers in real-time while also accessing online resources. The impact of digitalization on training has been significant, allowing for increased efficiency, flexibility, and accessibility.

Good practices in the use of technology for training consist of clear instructions and technical support, while designing the guidelines, the use of screenshots from platforms has been taken into consideration, thus engaging multimedia content and incorporating interactive elements to enhance learner engagement.

Strengths of technology in training include its ability to facilitate data collection and analysis, support standardized procedures, and provide flexible and innovative training delivery options through different apps used. Identified *weaknesses* consist in technical difficulties in using platforms, apps, and lack of knowledge from participants and trainers, the need for ongoing maintenance and upgrades, and concerns about data privacy and security.

INA – Romania

The training of public administration personnel plays a crucial role in ensuring the efficient functioning of government institutions and the delivery of quality public services. In Romania, the government has recognized the need for continuous improvement in this area and has developed a comprehensive strategy to enhance the training and development of public administration personnel.

Emphasis on Competency-Based Training – the government's strategy places a strong emphasis on competency-based training for public administration personnel. This approach focuses on identifying the key competencies required for different roles within the public sector and tailoring training programs accordingly. The expected development in this area involves the creation of competency frameworks for various positions, the design of training programs aligned with these competencies, and the implementation of assessment mechanisms to evaluate the effectiveness of the training.

Strengthening Leadership and Management Skills – recognizing the importance of effective leadership and management in public administration, the government's strategy aims to enhance these skills among personnel. To achieve this, specialized training programs will be developed to provide aspiring and existing leaders with the necessary tools and knowledge to lead their teams and implement successful strategies. The training will focus on areas such as decision-making, strategic planning, communication, and change management, enabling

public administration personnel to effectively navigate complex challenges and deliver results.

Incorporating Digital Skills – in line with the growing digitalization of public services, the government's strategy recognizes the need for public administration personnel to acquire digital skills. The expected developments in this area involve the integration of digital literacy and information and communication technology (ICT) training into the curriculum for public administration personnel. This will enable them to effectively use digital tools, leverage data for evidence-based decision-making, and adapt to emerging technologies in order to provide efficient and citizen-centric services.

Encouraging Continuous Professional Development – to ensure the ongoing growth and improvement of public administration personnel, the government's strategy promotes a culture of continuous professional development (CPD). The expected developments include the establishment of a structured CPD framework, which will encourage employees to engage in lifelong learning, attend relevant workshops and conferences, pursue higher education, and participate in mentoring programs. By supporting continuous learning, the strategy aims to foster a highly skilled and knowledgeable public administration workforce.

Collaboration with Educational Institutions and International Partners – to enhance the quality and relevance of training programs, the government's strategy emphasizes collaboration with educational institutions and international partners. This collaboration involves sharing best practices, exchanging expertise, and fostering research partnerships. By engaging with academia and international organizations, Romania aims to leverage global knowledge and experiences to improve the training of public administration personnel and align it with international standards.

Expected developments in the training of public administration personnel in Romania, as outlined in the government's strategy, demonstrate a commitment to improving the quality and effectiveness of public services. By focusing on competency-based training, strengthening leadership and management skills, incorporating digital skills, encouraging continuous professional development, and fostering collaboration, Romania seeks to build a highly skilled and adaptable public administration workforce capable of meeting the evolving needs of citizens and effectively managing the challenges of the 21st century. These developments hold the potential to enhance governance, increase transparency, and deliver better public services to the citizens of Romania.

IPA – Republic of Bulgaria

In terms of development plans, it should be noted that global trends related to the increasing application of various forms of digital learning show no signs of slowing down. E-learning will continue to play a key role in today's technology-dominated society. There are many reasons for this, but we will point to one main one - learning continues throughout life. It is not always possible to take time away from our work and lives to learn, and very often the training we need is not available in our area. Achieving quality professional training for public servants is possible through the use of a wide range of ICT and ICT-based educational innovations that promote staff development in the context of the concept of lifelong learning.

Over the last 10 years, IPA has gained solid experience in designing and implementing various forms of e-learning. Our plans are to continue in this direction, firstly by maintaining and developing the capacity of IPA staff and lecturers in terms of designing and delivering digital forms of learning; adapting new technological tools to engage learners, working collaboratively in digital environments, etc. Secondly, we highlight the need to upgrade IT infrastructure. Currently, IPA has a good base that provides a range of tools for creating and

publishing electronic resources, opportunities for learning activities and assessing learners' achievements, online communication, etc. However, in view of the dynamics of development in this area, certain updates and improvements will be needed in the future (with a view to introducing mobile learning, gamification, artificial intelligence, improved UI/UX).

From the analyses conducted, it is concluded that the most preferred and widespread form of e-learning in IPA is short-focused e-learning modules for self-study or so-called microlearning. This form of training has its advantages and disadvantages. The main advantage for users is that they have the possibility of flexible self-study. At the same time, the main disadvantage is the lack of permanent communication with the lecturer and other learners, timely support, and guidance in the learning process. IPA plans to further develop this form of training by introducing more opportunities for interaction between learners and the learning content, building on the knowledge and skills of learners who have undergone this type of training with other forms of e-learning - blended, fully e-learning, webinar, experience sharing networks.

At present, we report a relatively low use of learning resources such as computer simulations, e-learning games, dynamic visualizations. These are resources with proven pedagogical potential, and we plan to implement them more widely in the near future. However, this requires the investment of both financial resources and additional efforts to build confidence and methodological knowledge in lecturers for their application in the learning process.

AI-powered e-learning will become more prevalent in the near future. At IPA, we plan to explore the application of tools such as chatbots, tools for personalized learning, and adaptive learning. Along with this, we plan to develop a self-learning module that will present different, freely available AI tools that civil servants can use in their daily tasks.

Other tools we plan to implement in the learning process of civil servants are VR and AR (Virtual and augmented reality). VR allows learners to experience simulations of real-world scenarios, making for a highly immersive learning experience, while AR allows for a more flexible and contextual learning experience by overlaying digital content in the real world. There are areas in the work of administrative staff in which such tools would be highly suitable (public policy development, public procurement, human resources management).

An important addition to the development and improvement of the educational process at IPA is the digital library, which we are continuously enriching and upgrading. Together with this, we plan to further develop the IPA podcast section Digital Administration in the future. The latest episode of the column is dedicated to topics related to the green transition and sustainable development. An episode related to the possibilities of applying artificial intelligence in public administration is in preparation.

In terms of training areas, the IPA identified capacity development needs in key areas such as cyber security, data creation, storage, processing and management, and digital skills. Training in any form, accompanied by meetings to exchange experiences and ideas, and develop analysis and research in these areas, will continue to be a focus of the Institute's activities.

NAPA – Republic of Serbia

The plans for the further development of NAPA include the introduction of new educational curricula which would reflect contemporary challenges in public administration, using leading pedagogical, ICT and innovative technologies, engage high calibre professors, organizing comprehensive studies on international best practice in public sector management and design recommendations for further enhancement of the public administration system in Serbia.

NAPA introduced an information system to support on-site trainings shortly after its founding in 2018. Soon after, a separate LMS for online learning was developed. Most recently, a Knowledge Base system was created and integrated into the LMS. While functionally

adequate, the existing NAPA platform has reached its limits and cannot support NAPA's strategic direction in terms of integration of business processes (for on-site and online training), consolidated tracking of civil servant learning performance, application of gamification and artificial intelligence in the creation of personalized learning paths and ensuring the availability of multimedia and interactive educational content via mobile devices. All while ensuring system scalability and security, as well as easy extensibility and maintainability.

Simultaneously with the development of new applications and the introduction of changes in the field of digitization, the Academy pays special attention to the code of conduct in working with new technologies. In this regard, it is important for us to prescribe an ethical, security and cultural code of conduct during webinars, meetings, as well as during communication on the Internet.

The NAPA m-learning software, which is under construction, will be an always available resource intended primarily for civil servants. Using the software, they will, at any time, access NAPA new LMS content, current and practical information that helps them do their job better and improve their skills. Planned functionalities of the solution are:

- Consuming of service layer (REST API) provided by LMS
- The solution accessible on both iOS and Android platforms
- Only authenticated users can access the m-learning solution
- Display multimedia content from the LMS (mp4 videos, PDF documents and SCORM files)
- Integrate notifications system
- The solution will provide access to as many LMS features and content as possible.
- UI/UX will have a strong focus on simplicity, performance, and attractive design
- Provide access to Badges / Quizzes / Polls provided by LMS
- Support for the Learning Paths feature
- Support for the Like/Dislike/Favourite related to the content
- Ability to retrieve all courses that are started or in progress, ordered by date (latest first)
- Display progress on each course, based on the data stored in LMS

The application of Artificial Intelligence (AI) in public administration can bring numerous benefits to a country like Serbia. It is important for Serbia to develop a clear strategy for the implementation of AI in public administration, considering the ethical implications and ensuring that the technology is used to serve the public interest.

In the near future, it is planned to develop online training for civil servants, which will introduce concept of innovative technologies including Artificial Intelligence in the public administration.

Off-line AI courses for NAPA staff are planned as well. This course will introduce, utilize, and operate AI technologies. Overall goal is to ensure that NAPA and other relevant educators understand what AI is and how it can be applied to public administration.

Currently, NAPA preparing a project for the complete digitization of the training program development process. This process now takes place with the help of a SharePoint shared folder, and the plan is to develop an application with the help of which the process will be better planned and coordinated.

This year, a web site was prepared to display all training programs in order to better communicate them with potential participants. It is planned to automate the updating of the

display of these programs in the following period in accordance with the changes that await us.

With the support of the Council of Europe project a “180-degree assessment tool” was developed, which implies that trainers’ competencies are assessed by the same criteria by the trainer (who is being assessed), co-trainer and NAPA coordinator. In order to facilitate easier and more efficient collection and processing of data as well as visually better structured display of results, a questionnaire was developed on the NAPA LimeSurvey platform. This allows the trainer, co-trainer and NAPA coordinator to enter their competency assessments. Results of each of the three assessments are visible separately, but also as a combined score of all three assessments. In the following period, the plan is to pilot this tool with a certain number of trainers, co-trainers and coordinators.

The Interactive action Agenda (eiAA) is an innovative solution, which was created to support the evaluation of the Training programme for managers in local self-government units for 2021 implemented by National Academy for Public Administration. The eiAA enables easier monitoring of planned and implemented activities. It is based on an application that is filled out by all users individually, and then in the reporting section, different reports are generated. The eiAA will enable the NAPA’s team, prime minister and relevant ministries also to monitor and evaluate the application of acquired knowledge. The eiAA introduces an innovative, modern way of doing business that enables the involvement of all stakeholders and decision makers in the process of reporting on the achieved results, monitoring and decision making based on objective data. It is also a development tool because it contributes to supporting a culture of lifelong and peer to peer learning. The eiAA is easy to use and pleasant for eye. The eiAA is simple, the authorized person can easily log in to the portal with attractive main page and update the data or access to the report. This is the first G2G service in the Serbian Government. The launch of the application is expected in the next period.

Chapter 4

Conclusion



In a study developed by Williams & Valayer (2018, pp 17-19) for Digital Government Benchmark, it is shown that at European level, states adopt the digitization process at ecosystem level, the technologies adopted being Service-Oriented Architectures. This aspect is intended to facilitate the integration of services across agencies and provides the ability to assemble data and service elements in a way that allows organizations to balance demand, by means of composition and reuse of services, for agility and scalability of provided services. The leadership, in collaboration with specialized IT structures, takes strategic initiatives where technology teams primarily lead the implementation instead of administrative or business teams. Proactive service models are adopted, resulting in a more citizen-centric governance that emphasizes openness and transparency. With a focus on customer portals and social networks, the digital system revolves around citizens. While there is a genuine potential to utilize open data, governments are not yet equipped to fully capitalize on this opportunity. The ecosystem emphasizes service co-creation and involves external communities that can benefit from open public data, with clear identification of users and data suppliers. This benchmark is a good example for how we can extend our digital services, based on open data and collaboration between agencies at national and international level, to improve and extend our know-how on IT&C capabilities, management and leadership.

Yao Q. et. al (2022) highlights the moderating effects of cross-border search capability and managerial digital concerns, emphasizing the link between digital transformation and a sustainable growth. The study has been addressed for Chinese manufacturing and service industries, which are highly digitalized. That means the organizations must apply the trends in their field of activities to remain competitive and to adapt their activity based on international knowhow related to the current trend of digital transformation.

Dhaoui (2022, p. 2075) shows that e-government must be oriented to provide best services for citizens and should be value-driven instead of technology-driven. Other specialists mentioned “the concept of e-government by focusing the features of interactions between economic, political, and social actors”, allowing the social actors to work more efficiently, linked together in an easier way and with low cost. Even in the MENA countries it shows that the region suffers because of a lack of knowledge about technology, an adequate training and a lack of knowhow on how to implement it and used it in the best and appropriate way. Here we can find out why it is important to have a well-developed know-how and professionally trained human resources for implementing various technologies, and good strategies on how to benefit from modern trends.

In his work, Olso Dhaoui (2022) highlights the connection between skills, technology, and the advantages derived from IT&C dividends, particularly in terms of achieving tangible and widespread benefits. The objective is to provide improved accountability and foster a competitive business environment in which e-government plays a crucial role in promoting sustainable development and positively influencing good governance.

There is **no one-size-fits-all** approach to utilizing technology and achieving success in the digital transformation journey. It requires a diverse range of knowledge across various fields, well-prepared human resources, and effective training methods, particularly in the public sector, which faces frequent new challenges and must adapt to modern realities. Organizations must develop their own strategies to succeed in specific areas of their operations.

The OECD Digital Government offers a useful toolkit which outlines "*12 principles supporting the development and implementation of digital government strategies*", namely:

1. Openness, transparency and inclusiveness
2. Engagement and participation in policymaking and policy making and service delivery
3. Creation of a data-driven culture in the public sector
4. Protecting privacy and ensuring security
5. Leadership and political commitment
6. Coherent use of digital technology across policy areas
7. Effective organisation and governance frameworks to coordinate
8. Strengthen international cooperation with governments
9. Development of clear business cases
10. Reinforce ICT project management capabilities
11. Procurement of digital technologies
12. Legal and regulatory framework

Additionally, incorporating the key factors from the **E-Government Development Index (EGDI)**, a tool developed by United Member States, can be instrumental in driving digital transformation. The EGDI assesses the level of e-government development, encompassing the use of social media, mobile applications, and other technologies to engage citizens and enhance transparency in government operations.

The forward presentation includes an overview and a comparative analysis of the trend in the E-Government Development Index (EGDI) among the countries corresponding to the institutions discussed in the current study.

Table 1: Country Rank by state of digitalisation

Year	Country	EGR	EGDI	OSI	HCI	TII	EA EGDI	WA EGDI
2018	Albania	74	0,6519	0,7361	0,7877	0,4318	0,7727	0,5491
	Bulgaria	47	0,7177	0,7639	0,8106	0,5785		
	Romania	67	0,6671	0,6597	0,7944	0,5471		
	Serbia	49	0,7155	0,7361	0,7896	0,6208		
2020	Albania	59	0,7399	0,8412	0,8001	0,5785	0,8170	0,5988
	Bulgaria	44	0,7980	0,7706	0,8408	0,7826		
	Romania	55	0,7605	0,7235	0,7995	0,7586		
	Serbia	58	0,7474	0,7941	0,8280	0,6200		
2022	Albania	63	0,7413	0,8182	0,8022	0,6037	0,8305	0,6102
	Bulgaria	52	0,7766	0,7092	0,8221	0,7984		
	Romania	57	0,7619	0,6814	0,8090	0,7954		
	Serbia	40	0,8237	0,8514	0,8332	0,7865		

Source: Authors' processing based on data acquired from United Nations - Department of Economic and Social Affairs (2023)

Table legend:

EGR: E-Government Rank

OSI: Online Service Index

TII: Telecommunication Infrastructure Index

WA(EGDI): World Average

EGDI: E-Government development Index

HCI: Human Capital Index

EA(EGDI): European Average

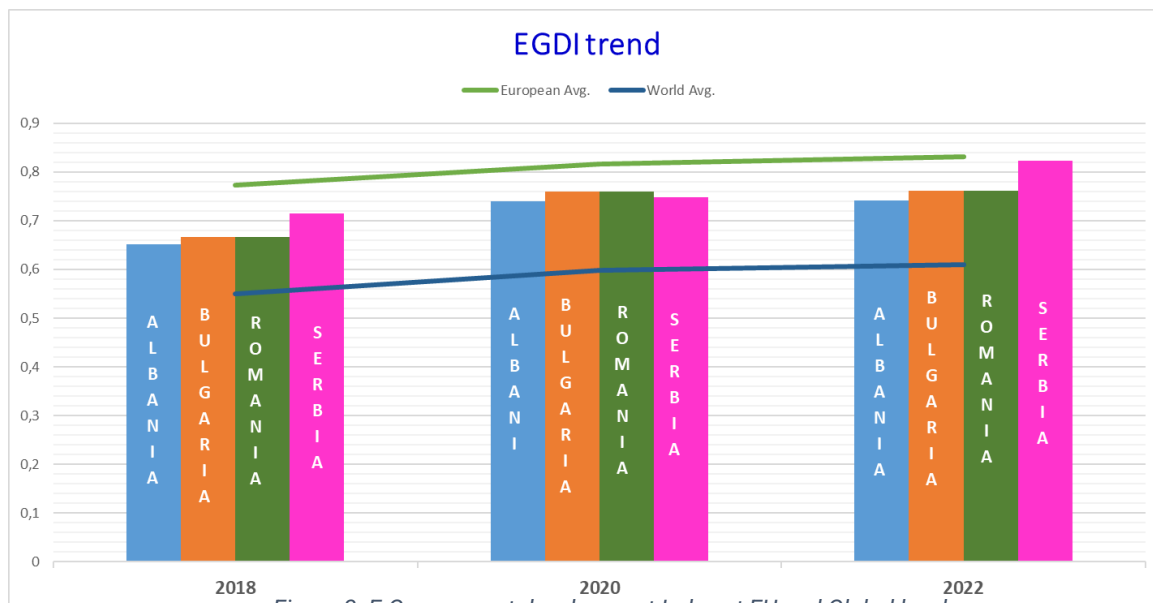


Figure 3: E-Government development Index at EU and Global level

Source: Authors' processing based on data acquired from United Nations - Department of Economic and Social Affairs (2023)

The graphical representation of the data clearly shows an ascending trend for all indexes taken into consideration throughout the 2018 – 2022 period.

Even though all four countries selected for the present study registered significant progress in digital transformation, surpassing world average levels, the Republic of Serbia is closest to reaching the European average.

In the five-year period, the Serbian society has incorporated digital technologies at a more accelerated pace, being followed by Bulgaria and Romania. Albania is keeping up with Bulgaria and Romania, allowing us to humbly estimate that in 2025 all three countries should have reached the European average, with Serbia well surpassing it.

Bearing in mind that digitalization is one of the main priorities of all four countries' governments, it is important to use an innovative approach in order to change the way of working at all levels. Innovations that are mostly supported by digitalization represent a new world view, which must be systematically nurtured, not only through the development of skills, but also a change in the work culture within institutions. Through their continuous work, the four training institutions presented within this study strive to foster a culture of innovation as public institutions. Through familiarization with the practice of other countries, facilitated by studies like the present one, the good practices of other countries can be reviewed, offering potential new approaches for the improvement of existing, as well as the inclusion of new processes and projects in the work of providing training programs, which would raise the capacities of civil servants and promote innovation and creativity in the public sector. The transformation of the state administration into a "service for citizens" is possible only by changing the way of "doing business" as well as by using new technologies. Digitalization modernizes the way public administration work and raises the service quality to the level of countries with the best practice. The essence is to enable a simpler, more open, transparent, safer and more efficient provision of services, while increasing the capacity of officials remains a key support for these processes.

We began our endeavour by identifying the subjects of our analysis, namely the public institutions responsible for training public administration personnel in Albania, Bulgaria, Romania and Serbia. Coming from similar historical backgrounds, we assert them together as

being a relevant pool sample for the region, in terms of strategic developments accomplished within the public sector. As our current study aims to offer a consolidated image of the regional approaches in keeping up with new technologies and implementing them in the process of professionalising the public sector human resource, considering that Bulgaria and Romania are EU member states and Albania and Serbia are EU candidate countries, we believe ASPA, INA, IPA and NAPA offer the relevant insight for painting a pertinent picture on the state of digitalization in public administration professional training for the region.

It is not surprising that the founding roots of the four training institutes have seeded from similar principles, as more and more societies have come to recognize the fact that *high-quality public services can be ensured only if provided by professionalised personnel, familiarised and accustomed with current tools and technologies that are put to use in the service of citizens, practicing strong values of integrity, dignity and accountability, while maintaining a firm grasp on the evolution trends of citizen needs.*

As we've shown in the previous chapters of this study, the analysed training institutions developed similar strategies for achieving the purpose of their establishment, starting with assessing the training needs of public administration personnel, in coordination and collaboration with specialised authorities of the central government, identifying competencies required to fulfil current needs of society in terms of public services, followed by training programs development, non-bias selection of trainers through publicly announced competitions, and concluding with training programs delivery.

Current capacities for delivering training programs to public administration personnel in the region cover with ease the minimum requirement, there being room to spare for improvements in terms of facilities for both face-to-face and online training, especially on the technological and mobility side.

In terms of the current study's scope, we can affirm that all four institutions embraced the digital approach, having already put in place and using online platforms and digital tools for each stage of their training cycles. Keeping in mind the fast-paced development of technologies and the impact they have on social dynamics, it's safe to say that continuous monitorisation of training needs development and training programs development upon newly identified competencies remain constant priorities for the analysed institutions.

Considering current similarities between ASPA, INA, IPA and NAPA, in terms of objectives, vision, methodology and functionality, while activating in countries affiliated one way or another with the European Union, it could make sense for them to become a platform for establishing a regional collaboration hub designated for optimizing the process of identifying training needs in public administration, impact analysis of training programs, testing new technologies and their unitary approach, identification and development of new skills, project development in the kind of training programs, IT solutions, specialized conferences, community acquis, financing solutions, exchange of best practices and experience.

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