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Outsourcing of information services

ABSTRACT

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The dissertation consists of an introduction, three chapters, a conclusion, a list of references. The work is in the volume of 190 pages, of which the introduction is 6 pages, the main text is 168 pages, the conclusion is 4 pages, the sources used are 8 pages. The dissertation includes 6 tables and 1 figure. The list of references is compiled from a total of 154 pcs. literary sources in Cyrillic and Latin (35 in Bulgarian).

The defense of the doctoral dissertation will be held on July 1, 2026 at 3:00 p.m. in the Rectorate Conference Hall of D. A. Tsenov Academy of Economics – Svishtov.

The materials on the defense are available to those interested on the website of D. A. Tsenov Academy of Economics – Svishtov and in the Department of "Doctoral Studies and Academic Development" of D. A. Tsenov Academy of Economics – Svishtov.

I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance of the topic

In today's era of digital transformation and globalized economy, information technology (IT) is becoming a key factor in the effective functioning of both the private and public sectors. The Bulgarian public administration, as part of this environment, faces the challenge of meeting growing public expectations by modernizing its information systems, increasing the efficiency and security of its services, and sustainable resource management.

In the context of dynamically developing information technologies and increasing competition, organizations are increasingly resorting to outsourcing information services as a strategic tool for cost optimization, efficiency gains and access to highly specialized expertise. However, the management of outsourcing processes and the assessment of the quality of the services provided remain a serious challenge for many companies. This study is aimed at developing a methodology for quality assessment and optimization in outsourcing of information services in large organizations.

Information systems are not only a means of communication and data exchange, but also a major driver of innovation, efficiency and competitiveness. In this context, outsourcing is establishing itself as a strategic approach that allows organizations to focus on their core activities while gaining access to highly qualified professionals and advanced technology.

The Importance of Outsourcing in the Global Economy

Outsourcing is the process by which an organization outsources certain functions or tasks. This model of work has deep roots in the industrial revolution, when companies began to delegate the production of parts and components to external suppliers. However, with the development of information technology, outsourcing is taking on new dimensions and is becoming more and more common in various areas of business.

One of the main reasons for the popularity of outsourcing is the ability to reduce operating costs. By outsourcing tasks, companies can save significant costs related to hiring and training staff, purchasing equipment, and maintaining infrastructure. In addition, outsourcing provides access to specialized knowledge and skills that may be lacking internally within the organization. This is especially important in the field of

Informatics, where technologies are developing at a rapid pace and require constant investments in training and updating software and hardware.

Outsourcing in the Bulgarian Context

Bulgaria is known for its qualified IT specialists and competitive prices, making it an attractive destination for information technology outsourcing. Many international companies choose to establish their development and support centers in Bulgaria, thanks to the availability of well-trained staff and a favorable business environment.

However, outsourcing is not limited to international companies. The Bulgarian state administration can also take advantage of this model. In the context of growing public expectations and the need to modernize information systems, outsourcing offers an effective way to achieve these goals without the need for significant capital investments.

2. Object and subject of the research

The subject of this research is the process of outsourcing information services with an emphasis on the regulatory environment, institutional practices, technical infrastructure and interaction with external service providers.

The subject of the research is the current trends, technological challenges and good practices in the implementation of outsourcing of information services in public sector organizations.

3. Goals and tasks of the dissertation

The aim of the development is to propose a conceptual concept for sustainable, transparent and effective management of the process of outsourcing information services in public administration through the identification of potential undesirable consequences and risk factors.

To achieve this goal, the following **main tasks have been set**:

- *in theoretical aspect:*

1. Conceptualization of forms, application models, development trends and standards for outsourcing of information services in the context of digital and administrative transformation of private and public sector organizations.

2. Identification of the main technological challenges from the outsourcing of IT services, as well as the mechanisms for their management.

- *in the practical and applied aspect:*

3. Justification of the applicability of outsourcing of information services as an effective tool for modernization and sustainable management of public information systems through the case of the Bulgarian Revenue Administration.

4. Identification of potential undesirable consequences and risk factors of outsourcing of information services in public administration;

5. Proposing a conceptual concept for improving the application of the standards for infrastructure and management of dedicated information services.

4. Research thesis statement

The main research thesis statement of the dissertation posits that the outsourcing of information services can be an effective tool for modernization and digitalization of public administration, including the Bulgarian one, **only if it is subordinated to clearly defined strategic goals, supported by an adequate regulatory and standardization framework and managed with a high degree of institutional capacity, transparency and control**.

5. Research methodology

A number of research **methods and approaches** are used in the research in the dissertation, including system analysis, comparative analysis, systems approach, economic analysis, conceptualization method and case study. The research focuses mainly on the outsourcing of information services in the public sector of the Bulgarian state administration. This area, but there are still challenges that need to be overcome.

6. Limiting parameters of the research

For the purposes of this dissertation**, we limit** the study of the application of outsourcing of information services in public sector organizations of the economy. The consideration of information services (briefly referred to as "IT services" in some places

in the text) as a component of information technologies determines the use in the following presentation of the terms "outsourcing of information services" and "IT outsourcing" as interchangeable.

II. STRUCTURE OF THE DISSERTATION

1. General description

The dissertation consists of an introduction, three chapters, a conclusion, a list of references. The work is in the volume of 190 pages, of which the introduction is 6 pages, the main text is 168 pages, the conclusion is 4 pages, the sources used are 8 pages. The dissertation includes 6 tables and 1 figure. The list of references is compiled from a total of 154 pcs. Literary sources in Cyrillic and Latin (35 in Bulgarian).

A declaration of originality and authenticity is attached.

2. Content of the dissertation

Introduction

Chapter One. Determination of outsourcing as a concept

1.1. Theoretical foundations of the outsourcing concept

1.1.1. Definition and basic principles of outsourcing

1.1.2. Features of the different types of outsourcing

1.1.3. Evolutionary development of outsourcing

1.1.4. Classification of outsourcing by type of criteria

1.2. Types of information technology outsourcing

1.2.1. Internal and external outsourcing

1.2.2. Functional outsourcing

1.2.3. Transformational outsourcing

1.3. Outsourcing of information services

1.3.1. Technological aspects of information services

1.3.2. Necessity and main reasons for using outsourcing services

1.3.3. Stages in the process of outsourcing services

Chapter Two. Technological challenges to the delivery and management of

information services

2.1. Features of technological management of information services

2.1.1. IT Service Management (ITSM)

2.1.2. IT service management models and frameworks

2.1.3. Main problems and risks in ITSM implementation

2.1.4. Factors for successful ITSM implementation

2.2.Technical, organisational, legal and economic challenges to the outsourcing of information services

2.2.1. Technical inadequacy of the services provided

2.2.2. Need for additional qualification of the supplier's staff

2.2.3. Risks of non-compliance with the service supply agreement 2.2.4. Hidden costs and poor assessment of the benefits of hiring services

2.3. Leading global IT service management providers and solutions

2.4. Case Study: IT outsourcing to the National Revenue Agency

Chapter Three. Outsourcing of information services in public administration

3.1. Analysis of the state of the Bulgarian outsourcing industry

3.1.1. Trends in the development of IT outsourcing in Bulgaria

3.1.2. Outsourcing of information services in the Bulgarian public administration – application models, allocation of resources, tasks and processes, provision of IT infrastructure

3.2. Methodology for risk assessment of outsourcing of information services in public administration

3.2.1. Identification of potential unintended consequences of outsourcing information services

3.2.2. Identification of risk factors in outsourcing of information services

3.2.3. Relationship between risk factors and adverse outcomes

3.3. Application of ITIL v.3 and ITIL v.4 standards in the management of IT services in public administration

3.4. Conceptual concept for improvement of public sector information service infrastructure standards

Conclusion

References

Applications

Declaration of originality and authenticity

III. BRIEF EXPOSITION OF THE DISSERTATION

Chapter One discusses the theoretical foundations of the outsourcing concept, the types of outsourcing of information technologies, the need and the main motives for using outsourcing services, as well as the advantages and disadvantages of outsourcing services to external companies and organizations.

Outsourcing is a strategic practice in which an organization outsources the performance of certain activities, processes or functions to an external supplier instead of carrying them out with its own resources. The main idea is for the company to focus on its key competencies, which bring the greatest added value, and the rest of the tasks that are not essential for its main activity to be provided to a partner with the necessary expertise and technological capabilities. This practice allows not only to reduce operating costs and optimize work processes, but also provides access to modern technologies and highly qualified specialists without the need for significant investment in its own infrastructure.

Successful outsourcing is based on clearly defined contractual relationships, which define responsibilities, quality requirements, deadlines and control mechanisms, as well as the building of long-term and trusting partnerships. It gives organizations flexibility and adaptability to market changes, allowing them to expand or shrink the scope of services according to current needs. Although some of the functions are transferred outside the company, maintaining strategic control and implementing effective risk management mechanisms are key to ensuring sustainability and high quality of the final result. At its core, outsourcing is a tool to achieve greater economic efficiency and competitiveness through optimal allocation of resources and the use of external advantages.

The principles on which outsourcing is based include not only a focus on core competencies, but also the creation of a symbiosis between the client and the contractor, where both parties share both benefits and responsibilities. To be effective, the process

requires clearly structured contracts and controls to ensure that the external partner fulfils its obligations in accordance with pre-defined quality standards and indicators. In addition, outsourcing allows for faster implementation of innovations, as external suppliers are often more flexible and more willing to experiment with new technologies and working methods.

In economic terms, this practice leads to cost optimization by reducing the need to maintain large internal teams, investments in expensive equipment or infrastructure. The released resources can be directed to research and development, marketing or expanding market presence. At the same time, outsourcing provides companies with access to global markets and talent, allowing them to work with partners from different countries and cultures, which often leads to increased creativity and innovation in business processes.

Despite the many advantages, this approach is not without risks related to the quality of services, dependence on external partners and potential communication problems. Therefore, outsourcing management must be done carefully, with an emphasis on transparency, accountability and trust building. When properly planned and executed, outsourcing becomes a powerful tool for strategic development, allowing organizations to increase their efficiency, flexibility, and ability to adapt to a dynamic market environment.

In the literature sources on the topic of this dissertation, there are different **definitions** of the term "outsourcing". All authors emphasize that outsourcing involves the implementation of certain functions or activities of external organizations. The following table shows a comparative characteristic of the definitions of outsourcing:

Author	**Main focus**	**Strategic orientation**	**Suitable for the public sector**	**Main Highlight**
Quinn & Hilmer (1994)	Core competencies	High	Average	Strategic choices
Greig & Collins (2000)	Partnership	High	High	Long-term relationships

Author	Main focus	Strategic orientation	Suitable for the public sector	Main Highlight
Kotler & Armstrong (2001)	Cost and efficiency	Medium	Average	Economies of scale
Lendsey (1999)	Operational efficiency	Low	Low	Cost reduction
Kingsley & Ryder (2003)	Management efficiency	Medium	High	Transfer of responsibilities
Thomas & Hubbard (2008)	Innovation and flexibility	High	High	Adaptability and transformation

Table 1. Comparative characteristics of outsourcing definitions.

Source: Own analysis

In theory and practice, different types of outsourcing have been distinguished according to the scope of the classification criteria used. Depending on the object of outsourcing, three main varieties of outsourcing are considered, but they are further developed and specified by the possible areas for its application in the organization. The emphasis in this study is placed on outsourcing of business resources (BRO) in order to analyze the opportunities for improving the activities of modern businesses organizations through the effective use of the outsourcing of certain processes.

The different types of outsourcing are determined depending on the classification criteria used, with the main reference being the object of outsourcing of the activities. According to this approach, three main varieties are distinguished: Business Resource Outsourcing (BRO), Information Technology Outsourcing (ITO), and Application Services Outsourcing (ASP). In a business context, BRO encompasses activities related to the management of business processes that are not part of the core competence of the organization, but are critical to its effectiveness. ITO is aimed at outsourcing technical and IT functions, while ASP focuses on providing specific software applications as a service.

These varieties also include subcategories such as resource outsourcing (outsourcing the management and maintenance of tangible or intangible assets), task

outsourcing (delegation of specific project or routine tasks) and outsourcing of management functions. The specific configuration of the outsourcing model depends on the strategic goals of the organization, the available resources and the need for specialization or technological renewal.

This variety of forms enables companies to choose the most appropriate outsourcing option depending on their scale, sector and strategy, and the goal is always to achieve an optimal combination of cost, quality and flexibility.

Depending on the site and scope of the activity, outsourcing can be classified according to which functions, processes or resources are outsourced to an external provider and at what scale they are outsourced:

Type of outsourcing	Object	Degree of control	Suitable for public administration
Functional	Separate function	High	High
Production	Manufacturing operations	Medium	Limited
BPO	Whole process	Medium	High
Operating	Routine tasks	High	Very high
Transformational	Structural changes	Low	Medium (with strong control)

Table 2. Classification of outsourcing according to the site and management depth.

Source: Own analysis

Outsourcing as a management practice is distinguished by a variety of forms and manifestations, which requires systematization through the use of certain classification criteria. The literature establishes a model according to which the distinction of the different types of outsourcing is carried out according to four main groups of characteristics: according to the client, according to the supplier, according to the object of export and according to the number of participants and the relationships between them.

In today's dynamically developing world of IT, outsourcing plays a key role in optimizing business processes and increasing efficiency. Sub-paragraph 1.2. "Types of Information Technology Outsourcing" looks at the different forms of outsourcing that companies can use to achieve their strategic goals. From local outsourcing to offshoring, each form has its own unique advantages and challenges that need to be carefully analyzed and managed. This paragraph provides an in-depth analysis of the different types of IT service outsourcing, highlighting their characteristics, benefits, and potential risks. The aim is to provide a comprehensive view of the opportunities and limitations of each type of outsourcing to support informed decision-making in IT resource management.

Information services are a complex of activities related to the creation, collection, processing, storage, transmission and provision of information in order to meet the specific needs of users – natural or legal persons. They are a key element in the modern economy, as information becomes a strategic resource that determines the competitiveness of organizations and the effectiveness of their processes. In the context of digitalization and global connectivity, information services are seen not only as a supporting element, but as an integrated part of the core business functions, which can be both internally managed and outsourced.

At their core, these services aim to provide organisations with timely access to reliable and relevant information to support decision-making, process optimisation and innovation implementation. These may include technology support, database management, software development and implementation, cybersecurity, system integration, and other specialized activities. Their importance is growing in proportion to the complexity of the business environment and the need to process large volumes of data in real time.

According to the types of information services, they can be technological **services** (hardware and software maintenance, network administration, cybersecurity), **analytical services** (data processing and analysis, business analysis, forecasting) and **consulting services** (IT strategies, platform selection, process optimization). They can be **local** (carried out on-site at the client's site), **remote** (via online access) or **cloud** (through centralized server platforms).

The characteristics of information services are distinguished by their intangible nature, which requires a high level of trust between supplier and customer, since value is created through expertise, technology and reliability, and not through a physical product. They are characterized by a high degree of personalization – the solution adapts to the specific needs of the client; dynamism – technology and methods of work are developing rapidly and require constant renewal; and measurability through key performance indicators (KPIs) that ensure that expected results are achieved.

The decision to implement outsourcing is strategic and is related to risk management. Managers' attitude to risk is capable of influencing the decision-making process to use an external provider, to manage the outsourcing project, as well as to extend or terminate the outsourcing contract. Risk can be defined as a situation in which decision-makers are aware of the likelihood of certain events occurring, as well as their possible consequences.

The need is also due to economic considerations – by transferring certain functions to an external supplier, companies can turn fixed costs into variables, optimize the budget and free up funds for investments in innovation and development. In addition, external partners often have large-scale resources and expertise that allow them to carry out activities faster, with higher quality and at lower costs than what an organization would incur in internal implementation.

Last but not least, the need for outsourcing is associated with the increasing complexity of technology and the market environment. To remain competitive, organizations need to react flexibly to changes and implement new solutions, which is often difficult to achieve without the support of external experts.

The motives for using outsourcing services are the result of a complex interaction between strategic, economic and organizational factors that direct companies to outsource certain activities. In modern literature and practice, several key groups of motives stand out, which determine the decisions of management in this direction.

One of the leading motives is **to reduce and optimize costs**. Through outsourcing, organizations can transform fixed costs into variables, paying only for the services and resources actually used. This allows for the release of capital, which can be channeled into innovation, marketing or other strategic initiatives (Lacity &

Willcocks, 2014).

The second essential motive is **the focus on core competencies**. When organizations outsource supporting or secondary functions, they can focus their resources and attention on the strategically relevant activities that form their competitive advantage (Prahalad & Hamel, 1990).

A third motive is **access to specialized expertise and technology**. Many companies, especially small and medium-sized enterprises, do not have the internal capacity to perform highly specialized tasks.

Another significant motive is the **increase in the flexibility and adaptability of the organization**. In the context of unpredictable market changes, outsourcing allows for rapid expansion or contraction of capacity, introduction of new services or reorientation to different markets without the need for long-term capital investments (Dibbern et al., 2004).

Risk management is also an important motive. Outsourcing certain functions to a specialized vendor distributes responsibilities and reduces risk to the organization, especially in processes related to data security, regulatory compliance, or critical infrastructure maintenance (Willcocks, Cullen & Craig, 2011).

The advantages of outsourcing services to external companies and organizations are associated with both increased efficiency and optimization of resources, as well as the long-term strategic development of the client. One of the most significant advantages is the possibility of reducing costs, as external suppliers often provide services at a lower cost, thanks to economies of scale, higher automation and specialization in the specific activity (Lacity & Willcocks, Lacity & Willcocks, 2014).

Another significant plus is access to specialized expertise and technology. Many companies, especially small and medium-sized enterprises, cannot maintain an in-house team with deep knowledge in every area.

Outsourcing services also contributes to increasing the flexibility and adaptability of the organization. Under changing market conditions and dynamic demand, a firm can quickly increase or decrease the volume of services used without carrying out complex internal restructurings (Dibbern et al., 2004).

The quality of execution is often higher with external suppliers, as they are focused entirely on a particular activity and implement standardized processes, methodologies and control systems. This results in a lower error rate, shorter turnaround times, and better results for the end customer (Kakabadse & Kakabadse, 2005).

Last but not least, outsourcing distributes and reduces the risk to the contracting authority. The supplier assumes some of the responsibilities and obligations related to process management, maintenance of technological infrastructure, and regulatory compliance (Willcocks, Cullen & Craig, 2011). This allows the company to concentrate on its main business goals without being tasked with managing secondary, but complex and resource-intensive activities.

Despite the many advantages that outsourcing offers as a strategic tool for efficiency gains and cost optimization, it comes with a number **of drawbacks and risks** that should be carefully analyzed before making a decision to outsource activities.

One of the main disadvantages is the loss of control over the processes. When business-critical activities are outsourced to an external partner, the contracting authority reduces its ability to exercise direct supervision and react quickly when changes are needed.

Another significant risk is the decline in the quality of services. Although external suppliers are usually specialists in their field, their business objectives do not always fully align with the priorities of the contracting authority. Under strong pressure to reduce costs, the supplier may use cheaper materials, reduce the number of specialists involved, or optimize processes in a way that leads to compromises on quality (Kakabadse & Kakabadse, 2005).

A significant disadvantage is supplier dependence. Long-term partnerships, especially when they involve specific technological solutions or know-how, can lead to so-called "renewables". "vendor lock-in" – a situation in which a change of supplier is associated with high costs, technological complications and a significant risk of disruption of the normal functioning of the business (Quinn & Hilmer, 1994). This makes the contracting authority vulnerable to price increases, changes in the terms of the contract or a decrease in the quality of services.

Another important issue is the risk to information security. Outsourcing almost always involves the sharing of sensitive information – trade secrets, customer data, internal processes. In case of insufficient protection measures or in case of bad faith behavior of the provider, data leakage can occur, which would lead to serious financial and reputational damage. as well as legal consequences for the contracting authority (Willcocks, Cullen & Craig, 2011).

Differences in language, time zones, business etiquette, and organizational values can create misunderstandings, delays, and tensions between partners. In some cases, this leads to the need for additional intermediaries or focal points, which increases costs and decreases efficiency (Dibbern et al., 2004).

While the price may seem reasonable at first, there may be additional fees for overtime services, changes in the scope of work, the need for additional licenses or staff training. This can increase the overall cost of the project and reduce the cost-effectiveness of outsourcing (Parashkevova & Parashkevova, Parashkevova, Parashkevova, Parashkevova, Parashkevova, 2008).

The disadvantages of outsourcing are significant and require a systematic approach to risk management. To minimize negative effects, careful process planning, detailed specification of requirements, selection of a reliable partner and continuous monitoring of performance are necessary. Only with a well-balanced strategy and a clear distribution of responsibilities can outsourcing bring sustainable benefits without compromising key aspects of the organization's operations.

The **second chapter** of this paper discusses the technological challenges to the delivery and management of information services. The specifics of the technological management of these services, including the models and frameworks for the management of IT services (ITSM), are analyzed in detail.

The technical, organizational, legal and economic challenges to the outsourcing of information services are also extensively examined. The world's leading providers and solutions for information services management are presented, focusing on their strengths and capabilities to address the above-mentioned challenges. The practical case study presented at the end of the chapter illustrates the real application of IT outsourcing at the National Revenue Agency.

IT Service Management (ITSM) is a discipline that focuses on maintaining and improving the quality of IT services provided to customers. ITSM includes processes such as incident management, problem management, change management, configuration management, and more. Especially in outsourcing, technological management of information services is extremely important, as it requires not only quality control, but also reliability and compatibility with the requirements of the organization. Outsourcing these services adds another layer of complexity because coordination is required between the internal IT team and the service provider.

The relationship between outsourcing and ITSM is expressed in the following:

- **Improving the quality of services**. When an organization decides to outsource its IT services, it usually chooses a provider with proven experience and competence in the field of ITSM. This means that outsourcing can lead to better management of IT services by applying best practices and standards.
- **The ITIL (Information Technology Infrastructure Library) model**. It is one of the most well-known IT service management frameworks. It offers a range of best practices that can be implemented by both in-house IT departments and outsourcing companies.
- **COBIT (Control Objectives for Information and Related Technologies)**. This framework provides guidance for the management and control of IT processes, including outsourcing. COBIT focuses on risk and IT service management, which is especially important in outsourcing.

Criterion	Outsourcing of information services	IT Service Management (ITSM)
Definition	Outsourcing IT functions or services to an external company	Discipline to maintain and improve the quality of IT services
Purpose	Reducing costs, improving efficiency, freeing up internal resources	Improving the quality and reliability of IT services

Criterion	Outsourcing of information services	IT Service Management (ITSM)
Processes	Includes all stages of service delivery from the external provider	Includes managing incidents, issues, changes, configurations, and more.
Control and management	It is carried out by the external provider, which must comply with the agreed SLAs (Service Level Agreements)	It is carried out internally by the IT department of the organization
Technologies and tools	Modern technologies and tools provided by the outsourcing company are often used	May vary depending on the needs of the organization and its IT processes
Risks	Risk of loss of control over data and processes, dependence on external providers	Risk of insufficiently qualified staff, lack of flexibility in the face of changes
Benefits	Reduction of operating costs, access to specialized skills and knowledge, focus on core business activities	Improving the quality of services, better management of incidents and problems, increased customer satisfaction
Examples of frameworks and standards	ISO/IEC 20000, CMMI	ITIL, COBIT, ISO/IEC 27001
Example scenario	A company that outsources its IT infrastructure to a cloud provider	An organization that implements ITIL processes to manage its IT services

Table 3. Consistency between outsourcing and ITSM to ensure effective and quality management of IT services.

Source: Own analysis

Implementing IT Service Management (ITSM) systems can bring significant benefits to organizations, but it also involves a number of challenges and risks. These issues can affect both the technical and organizational parts of the process.

One of the main problems in implementing ITSM is the lack of commitment and support from the organization's senior management. The implementation of such a system requires significant resources, both human and financial, and without clear

support from management, it is difficult to achieve success. According to Axelos (2021), the success of ITSM depends on strategic support to provide the necessary resources and promote cultural change within the organization. Resistance to change is another significant issue that can arise when implementing ITSM. Employees, especially those who are accustomed to previous methods of managing IT services, often express resistance to new processes and technologies.

Often, organizations implement ITSM without clearly defined goals and expectations about what value the system should add. A lack of clear focus can lead to wasting resources and focusing on incorrect priorities. According to the ITSM Academy (2022), organizations need to set measurable goals for ITSM implementation that are consistent with overall business goals. One of the main risks in implementing ITSM is the lack of effective incident and issue management. If adequate processes for tracking and resolving incidents are not implemented, the system can lead to delays and dissatisfaction among service users. According to a study by Gartner (2021), poor incident management can lead to significant losses related to service interruptions and disruption of business processes. ITSM frameworks, such as ITIL and COBIT, provide standardized processes, but organizations often have difficulty adapting them to their specific needs. If the implementation of ITSM is not aligned with the business processes and culture of the organization, there is a risk of creating bureaucratic and inefficient procedures that make it difficult for IT departments to work (ISACA, 2022).

The successful implementation of an IT Service Management System (ITSM) depends on a combination of strategic and tactical factors that support the integration of new processes into the existing infrastructure and culture of the organization. Studies have shown that change initiatives often fail if leadership is not proactive enough in the process (Kotter, 2012). Management support provides the necessary resources and employee engagement, which significantly increases the chances of successful implementation.

Technical inadequacy and outdated information technology (IT) outsourcing can lead to significant challenges for customers and reduce the efficiency of the services provided. In order to be competitive and meet rapidly changing technological

requirements, it is crucial for outsourcing providers to keep up-to-date technology and invest in innovation.

- **Outdated technologies.** According to a study by Patanakul and Milosevic (2009), if an outsourcing service provider does not invest in upgrading its technology base, it can lead to inefficient workflows and lower productivity. For example, the use of older versions of software platforms or hardware can reduce the speed of systems and cause more frequent technical problems. To address the problem of technological obsolescence, customers must require outsourcing providers to regularly update their technology infrastructure. Including a clause in the outsourcing contract that obliges the provider to keep the systems up to date is an effective method of managing this risk (Patanakul & Milosevic, 2009).

- **Low system integration**. Another significant challenge is the low level of integration between the customer's and those of the supplier. Lack of integration can lead to communication delays and lower efficiency.

- **Weak cybersecurity**: One of the most critical aspects of outdated technologies is their vulnerability to cyberattacks. Cybersecurity is a fundamental element of IT outsourcing, especially in the context of data protection.

- **Lack of innovation and adaptability.** Innovation plays a key role in maintaining competitiveness in the IT industry. Outsourcing service providers that do not implement new technologies and solutions risk falling behind the market.

In information technology outsourcing, **the qualifications of the supplier's staff** are of utmost importance for the successful delivery of services. When the supplier's staff does not possess the necessary skills and knowledge, this can lead to a number of problems, including difficult communication with the customer, inefficiencies of processes and reduced quality of services.

Lack of specialized skills and knowledge in the context of outsourcing of IT services is one of the key challenges that can arise when outsourcing technological processes to external suppliers.

Low efficiency and productivity. Unqualified staff cannot handle complex tasks that require specialized skills, leading to a decrease in productivity and delays in project implementation (Chen & McQueen, 2020).

Complexity in the implementation of new technologies. New technologies, such as process automation, artificial intelligence, and blockchain solutions, require highly specialized skills. If staff do not possess the necessary knowledge, the implementation of such solutions may fail, reducing the effectiveness of the services provided and limiting innovation (Gupta & Chaudhary, 2021).

Difficulties in explaining technical problems. If the supplier's employees do not possess sufficient knowledge about the specific technology or system, communication with the customer becomes difficult and ineffective.

Ineffective solutions. Without the necessary knowledge and specialization, the supplier's staff may offer solutions that are not suitable for the specific needs of the customer.

Insufficient understanding of business processes. Specialization includes not only technical skills, but also an understanding of the client's business processes. A lack of knowledge of how technology supports a customer's specific business model can lead to the implementation of inappropriate solutions and an increase in operating costs (Westerman & Bonnet, 2020).

Non-compliance with service level agreements (SLAs) is one of the main **risks in information technology outsourcing**. This can manifest itself in a variety of ways and usually involves deviations from the agreed levels of quality and efficiency of the services provided. Service delivery agreements are designed to provide clarity and transparency between the supplier and the customer regarding expectations. related to the performance of specific tasks and their success indicators. When these agreements are not respected, it can lead to serious consequences, including loss of productivity, disruption of operations, and even financial losses for the customer.

Outsourcing of information technology is perceived as a solution to reduce costs and increase efficiency, but in many cases there are hidden **costs** that were not initially accounted for or foreseen. One of the most common mistakes in outsourcing planning is underestimating the costs of contract management and coordination between the client and the service provider. which includes monitoring the implementation, quality control of the services provided and solving problems that have arisen. Hidden costs may also include the **integration of software and hardware systems, staff training, the need**

for additional services or changes to existing ones, the correction of technical problems.

Outsourcing information services continues to be a key strategy for companies around the world seeking to streamline their business processes, reduce costs, and focus on their core competencies. In recent years, global IT service outsourcing providers have expanded their reach by offering advanced solutions in the fields of cloud technology, cybersecurity, automation and data analytics. outsourcing services, but also play an important role in the transformation of the digital economy. Some of the world's leading outsourcing service providers are **Accenture, Tata Consultancy Services (TCS), Cognizant**, **Infosys, IBM, Capgemini, Wipro, HCL Technologies.**

In the context of information technology outsourcing, out-of-the-box information service management solutions are key to optimizing business processes and increasing efficiency. These solutions are designed to facilitate the management of IT infrastructure by offering automation, monitoring, integration and cybersecurity. context, we look at and compare the leading out-of-the-box solutions that are widely used for information service management. Here are some of them: **ServiceNow, Microsoft Azure, Amazon Web Services (AWS), IBM Cloud, Google Cloud Platform (GCP), Oracle Cloud.**

When comparing different information service management solutions, it is evident that each platform offers specific advantages and disadvantages, depending on the needs of the business. For example, **AWS** and **Microsoft Azure** are leaders in cloud services and offer scalable and flexible solutions for large companies with high computing power requirements. **ServiceNow** and **IBM Cloud**, on the other hand, focus on enterprise customers and provide more specialized process management and security solutions. Depending on the size of the company, industry, and specific technology requirements, each of these platforms can provide different value. While **Google Cloud** is a leading choice for companies that need powerful data analytics and machine learning tools, **Oracle Cloud** is preferred for enterprises that require complex ERP and CRM systems. Costs also vary greatly between platforms, with solutions such as **IBM Cloud** and **Oracle Cloud** offering high-quality services but at a higher cost.

Case Study: IT Outsourcing at the National Revenue Agency

The National Revenue Agency of the Republic of Bulgaria occupies a central place in the public finance system of the Republic of Bulgaria. As an institution responsible for the administration and collection of tax and social security revenues, the NRA maintains and manages some of the largest and most sensitive information systems in the state administration.

Scope of the NRA's outsourcing services

First of all, the scope of outsourcing services includes the maintenance of IT infrastructure, including server systems, communication networks and system software. The external provider is responsible for ongoing technical support, load monitoring, implementation of updates, and preventive activities aimed at difficult disposal and loss of data.

Second, outsourcing covers the administration and maintenance of databases and information storage systems. This includes backup management, incident recovery, performance optimization, and technical support of data tools.

The scope of outsourcing includes activities related to monitoring systems and managing their availability. This implies possible monitoring of key parameters, early detection of anomalies and timely response to potential threats to the stability of systems.

Motives for choosing IT outsourcing

One of the main motives is the need to ensure a high degree of continuity and reliability of IT services. The NRA's large information systems operate 24/7 and serve a number of users, including citizens, business organizations and other state authorities.

An essential motive for outsourcing IT activities is also the need to increase the level of information security. The NRA also processes sensitive personal and financial data, which is of increased interest to malicious entities and cybercriminal groups.

In summary, the motives for choosing IT outsourcing at the NRA stem from the desire to achieve a sustainable balance between efficiency, security, quality and control.

Results and effects of the implementation of outsourcing

First of all, one of the most tangible results is **increasing the stability and reliability of information systems**. By outsourcing the maintenance and monitoring to

an external provider with the necessary capacity and specialization, better service continuity is achieved, the number of critical failures is reduced, the response time is shortened, and incidents are recovered.

Secondly, the implementation of outsourcing leads to **an improvement in the state of information security**. Access to specialized management expertise, international monitoring tools and established incident practices against incidents for earlier detection of threats and more effective response to risky events.

A significant effect of outsourcing is also **the optimization of the human resources product** . By transferring routine and highly technical activities to an external provider, the internal IT teams of the NRA can concentrate on more strategic tasks – requirements analysis, project management, implementation control and institutional capacity development.

From a financial point of view, the results of outsourcing are expressed not so much in a drastic reduction in costs, but in **better predictability and control over them**. The costs of IT services are structured in contractual frameworks and are linked to specific levels of service and results, allowing for more precise budget planning and reducing the risk of unforeseen costs related to emergencies or in-house capacity shortages.

From the point of view of the public interest, the effects of outsourcing are manifested through **better quality and more reliable public services**. When electronic systems work stably and securely, citizens and businesses receive better service, administrative burdens are reduced and trust in the state increases.

The conclusions from the case under consideration confirm that IT outsourcing can be an effective tool for modernization and sustainable management of public information systems when it is subordinated to a clear strategy, a well-structured management model and active institutional control. The experience of the NRA shows that the success of such projects does not lie in the very application of the services, but in the ability of the public institution to manage the partnership in a way that is consistent with the which guarantees security, quality and protection of the public interest.

The third chapter of this paper examines the outsourcing of information services in public administration, focusing on the state of the Bulgarian outsourcing industry and

the risk assessment of information services outsourcing. The methodology for assessing the risk of outsourcing information services in public administration is presented as a critical tool for identifying potential undesirable consequences and risk factors. ITIL v.4 in the management of IT services in public administration is another important aspect discussed in this chapter. These standards provide an IT service management framework that can help organizations achieve a better level of service and meet the needs of their customers. The conceptual concept of improving public sector information services infrastructure standards offers an innovative approach to solving these challenges.

Trends in the development of IT outsourcing in Bulgaria

Over the past decade, Bulgaria has established itself as a key outsourcing hub in Southeast Europe, and information technology (IT) plays a leading role in this transformation. The trends in the development of IT outsourcing in Bulgaria are closely related to global economic and technological processes, but also to the specific competitive advantages of the country.

One of the most significant features of the development of IT outsourcing in Bulgaria is the sustainable growth of the sector – both in terms of revenue and employment. Data for 2023 show significant growth, with the industry projected to reach €6 billion in annual revenue by 2025 and employ around 120,000 employees. The two main segments – business process outsourcing (BPO) and information technology outsourcing (ITO) continue to develop at a high pace, with the latter gradually occupying an increasing share of the total volume of services (Parashkevova, 2025, p. 104).

Bulgaria manages to establish itself in the global value chain, thanks to the high quality of human capital, combined with relatively low labor costs. The country has well-trained IT specialists who speak foreign languages, which makes it a preferred destination for international companies when choosing a location for IT activities (Parashkevova & Parashkevova, 2008).

Another important trend is the diversification of outsourcing services, which are no longer limited to basic IT supports, but also include complex activities such as software development, system integration, data analysis, cybersecurity and cloud services. This shows the transformation from low to medium and high level of

technological expertise, which increases the competitiveness of the sector (Parashkevova, 2025, p. 105).

At the regional level, there is a formation of technology clusters, with Sofia, Plovdiv, Varna and Burgas being among the leading centers for IT outsourcing. These clusters offer infrastructure, academic training and access to a network of partners, which facilitates the construction of a sustainable ecosystem. In this context, the clustering model is a key factor in the development of innovation and the expansion of the scope of outsourcing activities (Porter, Porter, 1990; Todorov, 2011).

In the evolution of the outsourcing industry in Bulgaria, there is a clear trend of transition from traditional business process outsourcing (BPO) to knowledge and expert services outsourcing (KPO – Knowledge Process Outsourcing). This transformation reflects the industry's drive to move from performing routine and repetitive tasks to providing highly skilled, analytical and strategic services with higher added value.

With the increase in competition on a global scale and the desire of companies to increase their efficiency, quality and strategic development, many of them have begun to require more specialized services. This is how the need arose for KPO – a model that builds on BPO by including data analysis, business intelligence, research and development (R&D), patent research, fintech analysis, legal analysis, medical translations, content management, software architecture, etc.

Bulgaria, thanks to its intellectual capacity and educational infrastructure, has begun to meet these higher requirements, which has led to a natural transition from BPO to KPO services. This transition is supported by several key factors:

- availability of highly qualified personnel with skills for analytical thinking, logical modeling and use of complex software tools;
- good command of foreign languages, which allows processing complex documents, legal and business communication;
- availability of institutional support and training programs that are oriented towards analytics, artificial intelligence, machine learning and digital technologies;
- presence of international companies that transfer know-how and develop internal centers of expertise (e.g. SAP, Experian, Bosch Engineering Center Sofia, etc.);

- focus on innovation and technological entrepreneurship, which favors the transition to working with data and knowledge as a core asset.

The difference between BPO and KPO is not only in the content of the services, but also in the role played by the contractor in the process – while in BPO the provider follows clear instructions and procedures, in KPO he often takes the initiative, analyzes data, proposes solutions and participates in strategic decision-making. This increases responsibility, the need for high expertise and the need for a long-term partnership between the client and the outsourcing provider (Parashkevova, 2025, p. 107).

Outsourcing of IT services in the Bulgarian public administration is an increasingly current management practice, especially in the context of striving for digital transformation, effective management of public resources and provision of quality electronic services to citizens and businesses. The implementation of outsourcing models in the administration requires special attention, as they are based **on the delegation of public functions to external contractors** in compliance with the principles of security, transparency and accountability (Table 4).

Risk factor	Probability (1–5)	Impact (1–5)	Risk priority
SLA violation	4	4	High
Loss of control	3	5	High
Vendor dependency	4	5	Very tall
Hidden cost growth	3	4	Medium
Data security risks	2	5	Medium to High

Table 4. Main risks in IT outsourcing of services in the Bulgarian public administration.

Source: Own analysis

The application of IT outsourcing in the Bulgarian public administration reflects the desire for higher efficiency, cost reduction and digital transformation. Administrative authorities often do not have sufficient internal IT resources, which is

why they use **a variety of outsourcing models** that allow the delegation of technical and operational activities to external contractors while maintaining control over the main management processes. the degree of delegation, the nature of the activity and the strategic importance of the relevant information functions.

Functional outsourcing has established itself as the most practical form of outsourcing of IT services in the Bulgarian administration. It provides a balance between economic efficiency, operational stability and technological progress, provided that it is implemented with clearly structured contracts and effective internal controls. Through this approach, the public sector can increase the quality of its digital services and shorten the response time to technical incidents, without taking on unbearable commitments to support its own IT teams.

Process outsourcing in the context of the Bulgarian public administration is a more comprehensive and strategic form of outsourcing to external suppliers, in which not just individual IT functions are delegated, but entire information processes subject to systematic management and development. This includes the provision of services that have a complete logical structure – for example, electronic document management, electronic administrative services, servicing communication channels with citizens, technical support of internal users and others.

Transformational outsourcing is the highest and most strategically oriented form of outsourcing of IT services in public administration, where the goal is not just the performance of a certain function or process, but a **complete change, reorganization and modernization of the IT environment** in the respective institution. In this model, the external contractor not only provides services, but actively participates in the **the redesign of the information architecture, the implementation of new technological solutions and the adaptation of administrative activities to the modern requirements of e-government**. Transformational outsourcing implies a long-term partnership between the administration and the supplier, often covering several phases: analysis of the existing state, design of the target model, implementation, maintenance and training of personnel (Parashkevova, 2025, pp. 107–108).

Cloud outsourcing is a modern and increasingly widespread form of IT service provision in public administration, which is the transfer of various technological

resources – infrastructure, platforms or software – to remote data centers managed by external cloud service providers. in the cloud model, it gains access to flexible and scalable IT services provided in the form of a service – usually through models such as IaaS (Infrastructure as a Service), PaaS (Platform as a Service) or SaaS (Software as a Service) (Parashkevova, 2025, pp. 108–109).

Integrated outsourcing, also called Shared Services or Co-sourcing, is a hybrid model of IT service delivery that combines internal administration capacity with external expertise. Unlike the classic forms of outsourcing, in which all responsibility is transferred to an external provider, here a structure of cooperation between the public institution and the private partner, where both parties share resources, responsibilities and process management (Parashkevova, 2025, p. 109).

Methodology for Risk Assessment of Outsourcing of Information Services in Public Administration

This subparagraph addresses the systematic approach to identify and manage risks associated with outsourcing IT services to public sector providers. This subparagraph analyses the process of identifying the potential unintended consequences of outsourcing information services, highlighting the importance of ex-ante risk assessment. In addition, the risk factors that may arise in outsourcing IT services are examined and the relationship between these factors and the undesirable outcomes is analyzed. This subparagraph provides a comprehensive overview of the risk assessment methodology, highlighting the importance of careful planning and management for successfully addressing potential challenges in public administration.

While IT outsourcing of information services offers significant benefits for public administrations – such as reducing costs, access to expertise and accelerating digital transformation – it also carries a number of potential undesirable consequences that, if not identified and controlled in advance, can lead to lasting problems in the management of IT systems, quality of services and information security.

One of the most significant threats is the loss of control and dependence on the external provider. When the administration transfers the management of key IT processes to an external organization, there is a real risk of a so-called vendor lock-in – a situation in which the institution becomes highly dependent on a particular vendor,

especially when the systems are built on proprietary or poorly documented technologies. This makes it difficult to switch suppliers in the future and can lead to higher vendor lock-ins costs and limited opportunities for development (Parashkevova, 2025, p. 111).

Another significant risk is the threat to information security and data privacy, especially when it comes to the processing of personal data, financial transactions or administrative registers. The external contractor has access to sensitive information, which creates the need for strictly defined contractual mechanisms, access and encryption protocols, as well as compatibility with Regulation (EU) 2016/679 (GDPR). there are security breaches, unauthorized access to data, or information leaks that have both legal and reputational consequences for the administration.

Instability in the quality of service is another possible negative consequence. With poorly formulated Service Level Agreements (SLAs) or lack of clear control over implementation, external providers may not meet expectations for response time, service level or security. This can negatively affect the continuity of public services, especially at critical times such as elections, crisis situations or administrative reporting campaigns.

The loss of institutional capacity and knowledge is also a serious long-term consequence. When the administration relies entirely on external experts for the maintenance and development of IT systems, it gradually loses its own skills, competencies and the ability to manage autonomously. This can compromise the resilience of the institution in the event of contract termination or change in political priorities. internal staff.

In addition, potential legal and financial consequences may arise if outsourcing contracts are not compliant with the current legal framework, including the Public Procurement Act, the Personal Data Protection Act, the e-Government Act and other special provisions. Irregularities in the award procedures, incorrect clauses or lack of transparency in the selection of a contractor may lead to administrative sanctions, appeals or even termination of projects.

The violation of institutional independence is one of the most serious and often underestimated consequences of outsourcing information services in the public sector. It occurs when the institution that has outsourced the management of IT infrastructure

or services to an external provider loses real control over key aspects of its activities, including their access to data, decision-making on the development of systems and their ability to react autonomously in critical situations. This is especially problematic for state and local authorities, whose function is not just to administer, but to guarantee sovereignty, law and order and protection of the public interest.

In addition to technological ones, this form of dependency also has political and legal dimensions. Institutions that do not have autonomy in the management of their information systems may be subject to pressure, manipulation or undue influence, especially in pre-election or crisis situations. give the external contractor a disproportionately large amount of power that can be misused, especially in the face of weak regulation or corruption risks.

Application of ITIL v.3 and ITIL v.4 standards in the management of IT services in public administration

The application of the ITIL v.3 and ITIL v.4 standards in IT service management represents an essential aspect of modern IT management both in the private sector and in public administration. The ITIL (Information Technology Infrastructure Library) standards were developed by the British agency AXELOS and have been adopted as a global methodology for managing the lifecycle of IT services, aimed at achieving efficiency, continuity, predictability and added value to the business or institution.

ITIL version 3 (v.3) focuses on the entire life cycle of IT services, viewing them as a continuous process that begins with strategic planning and ends with refinement and adaptation to the dynamic needs of users and the organizational environment. The methodology does not consider IT management as an isolated technical activity, but puts it directly dependent on business or institutional objectives, thus creating a comprehensive framework that integrates strategic, operational and organizational aspects of IT management (Office of Government Commerce, 2011).

The fundamental principle in ITIL v.3 is that IT services must be designed, implemented, maintained, and improved in a way that creates real value for the user. This is implemented through a structured model that traces the logical evolution of a service – from its strategic justification and design, through its implementation in the infrastructure, to its daily use and subsequent improvement. At the heart of this approach

is the idea that each service should be evaluated not only on technical indicators, but also on how well it meets the needs of business, institution or society, in the context of the public sector (AXELOS, 2013).

ITIL version 4 (v.4), introduced by AXELOS in 2019, represents a significant development over the previous version and reflects the new dynamics in IT service management, characterized by digital transformation, agile methodologies and growing user expectations. Unlike the linear model of ITIL v.3, version 4 offers a more flexible, adaptable and value-oriented framework that integrates principles from *Agile*, *Lean* and *DevOps* philosophies. At the heart of ITIL v.4 is value creation as a guiding principle that should guide all processes and interactions in IT service management (AXELOS, 2019).

The new concept introduces the Service Value System (SVS), a value system that brings together all the key components and activities needed to achieve effective value creation and delivery. SVS includes five main elements: guiding principles, governance, value streams, practices and continuous improvement. Instead of treating services as siloed units, ITIL v.4 promotes a systems approach where all parts of the organization are involved in co-creating value – not just IT teams, but also management, partners, and end users (Kisielnicki & Lojewski, 2020).

In the practice of public administration, ITIL v.4 provides an innovative approach to digital governance that meets modern requirements for transparency, accountability and efficiency. For example, the implementation of electronic registers, digital services for citizens or platforms for interaction with businesses can be organized in a way that implements the *value stream* thinking – i.e. to track how a public need turns into a specific service through coordination between different teams and units. This allows for process optimization, minimization of red tape and a better user experience (European Commission, 2021).

The benchmarking between ITIL v.3 and ITIL v.4 reveals a consistent evolution from strictly defined processes to a flexible, integrated and value-oriented framework adapted to the modern dynamics of digital transformation. The two versions are not mutually exclusive, but rather complementary, with ITIL v.4 building on and

reinterpreting the foundations laid down in version 3 by introducing new concepts, thinking methods and organizational approaches (AXELOS, 2019).

Conceptual Concept for Improvement of Public Sector Information Services Infrastructure Standards

The conceptual concept for improvement in the standards for information services infrastructure should reflect the modern challenges related to digital transformation, security, resilience and interoperability between different information systems, especially in the public sector. Such a concept should not only be seen as a technical upgrade of the existing infrastructure frameworks, but as asystematically rethinking the principles, architecture and management of IT services in the context of a rapidly changing environment.

First of all, **the central focus should shift from technology to end-user value**, adopting a service-oriented architecture (SOA) and a microservice approach. This will allow for greater flexibility, scalability and adaptability when introducing new functionalities without disrupting the overall operation of the system. should rely on open, modular, cloud-oriented solutions that support continuous improvement and easy integration with external platforms (European Commission, 2021).

Second, **infrastructure standards must comply with the principles of "zero trust" security**, which require verification of every connection and user within the network, regardless of location. This includes the implementation of multi-factor authentication, encryption of data in transit and storage, as well as behavioral analysis to detect anomalies. which processes sensitive personal and administrative data, and often becomes subject to cyberattacks (ENISA, 2023).

Thirdly, **interoperability between different administrative systems should be improved** by introducing common interface standards, API libraries, and centralized metadata repositories. The aim is to achieve 'one language' between institutions, which will speed up the exchange of information, reduce duplication and increase the quality of public services. compatible with the EU Interoperability Framework (EIF) and the Digital Services Architecture in the European Data Space (European Interoperability Framework, 2017).

The fourth **pillar of the concept is related to sustainable infrastructure management**, which implies the use of green technologies (Green IT), optimization of energy efficiency in data centers, and the promotion of virtualization and cloud platforms. This is in line with the environmental objectives of the European Green Deal and can be implemented by standardizing carbon footprint and sustainability indicators in IT infrastructure (OECD, 2022).

Fifth, **it is necessary to introduce dynamic, automated mechanisms for managing IT infrastructure through intelligent monitoring platforms, AIOps (Artificial Intelligence for IT Operations), and integrated DevSecOps practices**. They achieve not only higher efficiency and speed in infrastructure maintenance, but also reduce human errors, improve diagnostics and predictability of problems (Gartner, 2021).

Last but not least, **the new concept should provide for an educational and institutional framework for capacity building so that the administration has specialists capable of implementing, managing and developing modern IT infrastructure models**. This includes the creation of certification programs, in-house training modules and the involvement of the public sector in innovative partnerships with academia and industry.

In conclusion, the outsourcing of information services to public administration is a complex and multi-layered process that requires careful planning and management. By applying appropriate methodologies and standards, as well as by continuously improving the infrastructure, we can achieve significant improvements in the efficiency and quality of the services provided. A revolutionary approach to these challenges will contribute to the modernisation of the public sector and provide better services to society.

CONCLUSIONS

The dynamics of the global economy, digital transformation and the pressure for higher efficiency and cost optimization are pushing institutions and organizations to seek external IT resources, expertise and infrastructure. From the analyzed models – functional, process, transformational, cloud and integrated outsourcing – it becomes

clear that their implementation must be precisely adapted to the specific needs and strategic goals of the organization. The Bulgarian administration is gradually starting to move from basic BPO services to more complex KPO solutions that include innovation, data analytics and technological leadership.

Despite the many advantages of outsourcing, such as saving time and resources, as well as access to specialized knowledge and technology, the potential drawbacks should not be overlooked. These include loss of control over processes, risks related to data privacy, and dependence on external providers. The relationship between information services management and outsourcing requires careful planning and coordination to avoid negative consequences and achieve maximum efficiency.

This paper examines the technological challenges to the delivery and management of information services. The importance of successful ITSM integration is emphasized, which can lead to significant improvements in the efficiency and quality of the services provided. However, there are numerous issues and risks associated with ITSM implementation that need to be carefully addressed. The technical inadequacy of the services provided and the need for additional qualification of the supplier's staff are among the main problems that may arise. The risks of non-compliance with the service delivery agreement and hidden costs, which often go unnoticed, also pose serious challenges. These factors require careful planning and monitoring to ensure the successful implementation of outsourcing projects.

The practical case study presented at the end of the second chapter illustrates the real application of IT outsourcing at the National Revenue Agency. This example demonstrates how the theory can be put into practice and what results can be expected in the successful management of outsourcing processes.

The third chapter of this paper examines the outsourcing of information services in public administration, focusing on the state of the Bulgarian outsourcing industry and the risk assessment methodology. Analyzing the trends in the development of IT outsourcing in our country, it becomes clear that Bulgaria has significant potential in this area, but there are still challenges that need to be overcome. The Risk Assessment Methodology for Outsourcing Information Services in Public Administration is

presented as a critical tool for identifying potential unintended consequences and risk factors.

The application of ITIL v.3 and ITIL v.4 standards in the management of IT services in public administration is another important aspect discussed in this chapter. These standards provide an IT service management framework that can help organizations achieve a better level of service and meet the needs of their customers.

The conceptual concept of improving public sector information services infrastructure standards offers an innovative approach to solving these challenges. It involves the integration of new technologies and practices that can increase the efficiency and security of the services provided. This concept is aimed at creating a sustainable and flexible infrastructure that will meet the dynamic needs of public administration and ensure high quality services for citizens.

Human capital also plays a significant role – without the availability of highly qualified IT personnel in the administration, even the most advanced technological solutions remain insufficient. Education, training and the promotion of digital skills must go hand in hand with technological transformation. Only in this way can Bulgaria establish itself not just as a user of external IT resources, but as an active participant in building a new, sovereign and sustainably digitized public environment.

IV. DISSERTATION CONTRIBUTIONS REFERENCE

The theoretical and practical significance of the work and its main contributions are expressed in the following:

- *in theoretical aspect:*

1) Theoretical statements regarding the essence, models of application and forms of outsourcing of information services are systematized and generalized.

2) The main technological challenges in the implementation of outsourcing solutions in the field of information technology are analyzed.

- *in the practical and applied aspect:*

3) The applicability of the outsourcing of information services as an effective tool for modernization and sustainable management of public information systems through an analysis of a specific institutional case is substantiated.

4) A methodology for risk assessment in outsourcing of information services in public administration has been developed, which allows identifying and managing potential negative consequences.

5) A conceptual model for improving the infrastructure and management of information services, based on international standards and good practices, is proposed.

V. LIST OF DISSERTATION PUBLICATIONS

1. Gerganov, M. (2024, May). Application of outsourcing of information services in agriculture. *Theory and Practice for Sustainable Management and Development of Rural Territories in Bulgaria,* 316-322. Svishtov: Tsenov Academic Publishing House.
2. Gerganov, M. (2024, May). The ITIL v.3 and ITIL v. 4 Information Services Outsourcing Standards in Support of Agriculture. *Theory and Practice for Sustainable Management and Development of Rural Territories in Bulgaria,* 323-329. Svishtov: Tsenov Academic Publishing House.
3. Gerganov, M. Impact of Information Technology Outsourcing on the Digital Transformation of Business Organizations. Annual Almanac "Scientific Research of Doctoral Students", Book 20, Issue XVII, 254-266.