

# Process and Data-Driven Management of Publicly Funded Organizations through a Shared Services Center

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**Abstract:** An innovative approach to improving the efficiency of public finance management is the implementation of process- and data-driven service management in publicly funded organizations. These organizations, primarily operating in healthcare, social care, education, culture, and transport, are not profit-oriented but focus on providing quality public services. Decentralized management of such entities often leads to duplicative activities, inconsistent procedures, and limited possibilities for systematic efficiency control. This paper analyzes the introduction of process- and data-driven management through a Shared Services Centre (SSC), defined as a centralized organizational unit providing standardized support services to publicly funded organizations. The study focuses on the application of Business Process Management (BPM) and BPMN notation, as well as on the use of Key Performance Indicators (KPIs) for measuring service efficiency and benefits. Selected areas suitable for centralization include central purchasing, payroll and accounting support, energy management, and IT services. The results suggest that integrating process modeling with performance measurement and data tools enhances transparency, reduces administrative burden, and strengthens adherence to the 3E principles (economy, efficiency, and effectiveness) in public administration.

**Keywords:** business process management; data portal; key performance indicator; publicly funded organizations

**JEL Classification:** H83; D73; H61

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## 1. Introduction

The effective functioning of public administration entities, which ensure the development of their territories and services for citizens through publicly funded organizations established by regional or local governments, depends on the responsible management of public funds (Portal VZ, 2019). Public institutions are required to maintain a high level of transparency, ensure high-quality control processes, and adopt a responsible approach to management, especially in reducing operating costs and spending funds (Pollitt & Bouckaert, 2017). These requirements need to be reflected in the individual management processes of publicly funded organizations, which, in addition to their core activities, provide a large range of support and administrative agendas

(OECD, 2025). Practice shows that decentralized provision of these activities often leads to duplication, inconsistent procedures, and limited possibilities for systematic control of cost-effectiveness. One possible response to this situation is the Shared Services Centre (SSC) model, which enables the systematic centralization of selected services and agendas, the standardization and optimization of processes, and their effective management based on process- and data-driven principles (World Bank, 2020). The aim of the paper is to demonstrate that process and data-driven shared services constitute a modern model of corporate management. There is a connection between process management, services, data, and ensuring the principles of economy. The aim of the paper is to analyze SSC as a process- and data-driven model that contributes to more efficient public administration and better management of public finances.

## 2. Methodology

This paper applies a qualitative analytical approach based on literature synthesis and conceptual modelling of processes using BPMN notation.

### *2.1. Corporate Governance in Public Administration*

Modern corporate governance in public administration is based on the principles of efficiency, economy, and effectiveness, known as the 3E principles (Act No. 320/2001 Coll.). This Act addresses the conditions of financial control while establishing definitions for these basic principles. According to this Act, to ensure the economy, public funds must be used to the minimum extent necessary while maintaining the appropriate quality (Act No. 320/2001 Coll.). Efficiency is determined by achieving the highest possible scope, quality, and benefits relative to the volume of funds allocated for this purpose. (Act No. 320/2001 Coll.). Effectiveness is defined as the optimal level of achievement of objectives in the case of the use of public funds (Act No. 320/2001 Coll.).

These principles highlight the need to control how public funds are spent while also emphasizing the active management of processes to deliver measurable benefits. Publicly funded organizations are managed primarily in accordance with legislative requirements and budgetary rules (Act No. 250/2000 Coll., 2000). Systematic management of performance indicators and financial costs is a current challenge for the application of corporate management tools (Wirtz et al., 2022). The introduction of a SSC represents an innovative solution and a managerial tool that enables the establishment of structured and measurable processes for managing selected agendas (Rosenbloom et al., 2022).

### *2.2. Shared Services Center and Specific Areas of Shared Agenda*

SSC represents an organizational mechanism for implementing the principles of modern management. It may be established within a public administration entity and subsequently provide methodological support and expertise to its publicly funded organizations. These activities provide a wide range of support activities. Among the most common areas that can be shared between organizations is central purchasing for a specific group of goods or services (Lotti et al., 2024). These include the purchase of office

supplies, printers, computers, and mobile phones or inventory readers. This also includes the purchase of electricity or telecommunications services. In case a unified financial or payroll information system is in place, the SSC can provide methodological support in accounting and payroll processes and can also centralize energy management across organizations (IEA, 2022). Legal support is also possible at the central level. For organizations that operate technical equipment, e.g., kitchens, elevators, and central boiler rooms, there is the possibility of offering professional technical support through the SSC. The SSC can coordinate regular service and inspections, provide service contracts, and consult on the renewal or modernization of equipment. In this way, it is possible to reduce the risk of failures, extend equipment life, and better manage operating costs. An interesting area for SSC is shared operational services related to the operational security of buildings and facilities, which are usually handled separately for each publicly funded organization. Sharing these capacities reduces personnel costs and increases flexibility. This makes it possible to solve, for example, repairs to doors, locks, and blinds, minor masonry, painting or electrical work, servicing of windows and blinds, replacement of fluorescent lamps, or minor construction interventions. The advantage of such a service is that the publicly funded organization does not have to maintain its own maintenance schedule; instead, it uses the SSC's capacity as needed, e.g., in the ordering system. There are many areas related to the purchase, installation, and management of HW and SW, including laptops, computers, printers, servers, and routers. This includes information system setup, antivirus, software management, and remote and physical assistance depending on the type of problem (Wirtz et al., 2022). All of this can be implemented provided that individual processes are mapped and responsibilities are determined (Dumas et al., 2018).

Centralization of purchases enables aggregation of demand and savings across consumables, office supplies, energy, and information technology (Lotti et al., 2024). Ensuring payroll and accounting agendas from a methodological perspective reduces error rates, unifies methodologies and data, and improves preparedness for legislative changes (Richter & Brühl, 2016). Based on the settings of these processes, the SSC can systematically monitor consumption within individual organizations, identify deviations, and ensure control processes, including proposals for central savings measures (Pour et al., 2018).

### *2.3. Data and Information Management Tools in Public Administration*

The aim of corporate governance in public administration is to ensure the transparent and efficient operation of organizations managing public funds (Rosenbloom et al., 2022). Unlike the private sector, the aim is not to maximize profit, as the priority is to provide quality services to citizens in accordance with the 3E principles (Act No. 320/2001 Coll.).

The basic tool for effective management is the establishment of a management strategy (Barney & Hesterly, 2018). It is used to define long-term objectives, set priorities, and to identify the benefits of these procedures. From the SSC perspective, it is necessary to translate these strategic objectives into operational measures and measurable indicators.

To support effective organizational management, it is necessary to use performance measurement tools. This involves monitoring KPIs (Parmenter, 2010). These indicators can indicate the effectiveness of the services provided, and results can be compared over time. This can also be implemented for comparisons between individual organizations, allowing identification of areas suitable for improvement (Parmenter, 2010). For the management of quality central services, it is proposed to use KPIs to measure costs per unit of service, processing time for agenda items, and compliance with contractually established service levels when resolving operational incidents under the service contract. KPIs can be visualized in data reports and dashboards that support decision-making and control processes (Sherman, 2014). Financial control and management of financial flows are very important for public administration organizations. This includes determining the budgets of publicly funded organizations, preparing financial plans, and setting up an internal control system in accordance with legal regulations (Act No. 250/2000 Coll.). For publicly funded organizations, it is important to include the financing of non-teaching staff and the management of operating costs. Here, the centralization of selected agendas and services through SSC appears to be highly beneficial, as it is in this area that it delivers measurable savings in public finances (Richter & Brühl, 2016). In modern organizational management, data and information tools play a crucial role (Dumas et al., 2018). These are unified information systems, communication portals for publicly funded organizations, and data platforms that ensure the collection, unification, and analysis of data across organizations. An example of a communication portal for publicly funded organizations is shown in Figure 1. These communication portals ensure two-way communication between the founder and the organization and serve as an audit trail (Wirtz et al., 2022). Communication portals ensure the rapid transfer of information and data for multiple organizations, their collection, and subsequent processing. The portals also include data reports that are available to each organization for an overview of their management (Pour et al., 2018).

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Figure 1. Sample of the home page of the communication portal of publicly funded organizations of the Hradec Králové Region

### 3. Results

This section presents the main results of the proposed SSC model. It focuses on process management and its role in the standardization of shared services, followed by the analysis of performance measurement through Key Performance Indicators.

#### *3.1. Process Management and BPMN as the Basis for Service Standardization*

Quality management and effective provision of shared services for public administration organizations can be achieved by establishing basic principles of process management. This can be achieved by systematically describing, standardizing, and optimizing the processes within the publicly funded organizations (Dumas et al., 2018). These may vary depending on the organization's service focus. The use of Business Process Management (BPM) methodologies, including process modelling in BPMN notation, defines the roles, responsibilities, inputs, and outputs of individual activities within organizations. This sets a clear procedure for both SSC employees and the management of publicly funded organizations, directors, economists, energy managers, and other positions. BPMN diagrams can identify places where time delays and various forms of risk arise (Dumas et al., 2018). Process mapping is very important in the public administration environment, as there is an emphasis on auditability and transparency (Rosenbloom et al., 2022). In addition, these processes create a prerequisite for measuring performance indicators and subsequent economic evaluation of the benefits of the established central services (Parmenter, 2010). For SSCs, this means mapping processes across payroll, accounting, internal control systems, public procurement, contract disclosure, provision of GDPR services, audits, IT support, methodological activities, or energy management. This is a very effective tool for SSCs to set primary processes, ensuring services are not fragmented and maintain their own standards and system performance. The use of process management principles reduces duplication, improves service quality, enhances performance control, and optimizes financial costs (Richter & Brühl, 2016).

An example of BPMN process modelling is shown in Fig. 2. This is a central purchasing process implemented through an SSC for publicly funded organizations. The aim of the process modelled in this way is to ensure standardized, transparent, and economically efficient purchasing of goods and services in public administration. The process captures the interactions among the publicly funded organization, the shared services center, the external supplier, and the information system, including key decision points regarding the standardization of the requirement, the use of framework contracts, or the initiation of a public procurement, and the subsequent control of the delivery's conformity. The example of a central purchasing process shows how process management can standardize procedures across publicly funded organizations, reduce duplication, and increase transparency. The process also establishes a data foundation for updating KPIs and generating management reports that serve as a basis for the founder's decision-making. This demonstrates how process and data tools in public administration form an interconnected whole.

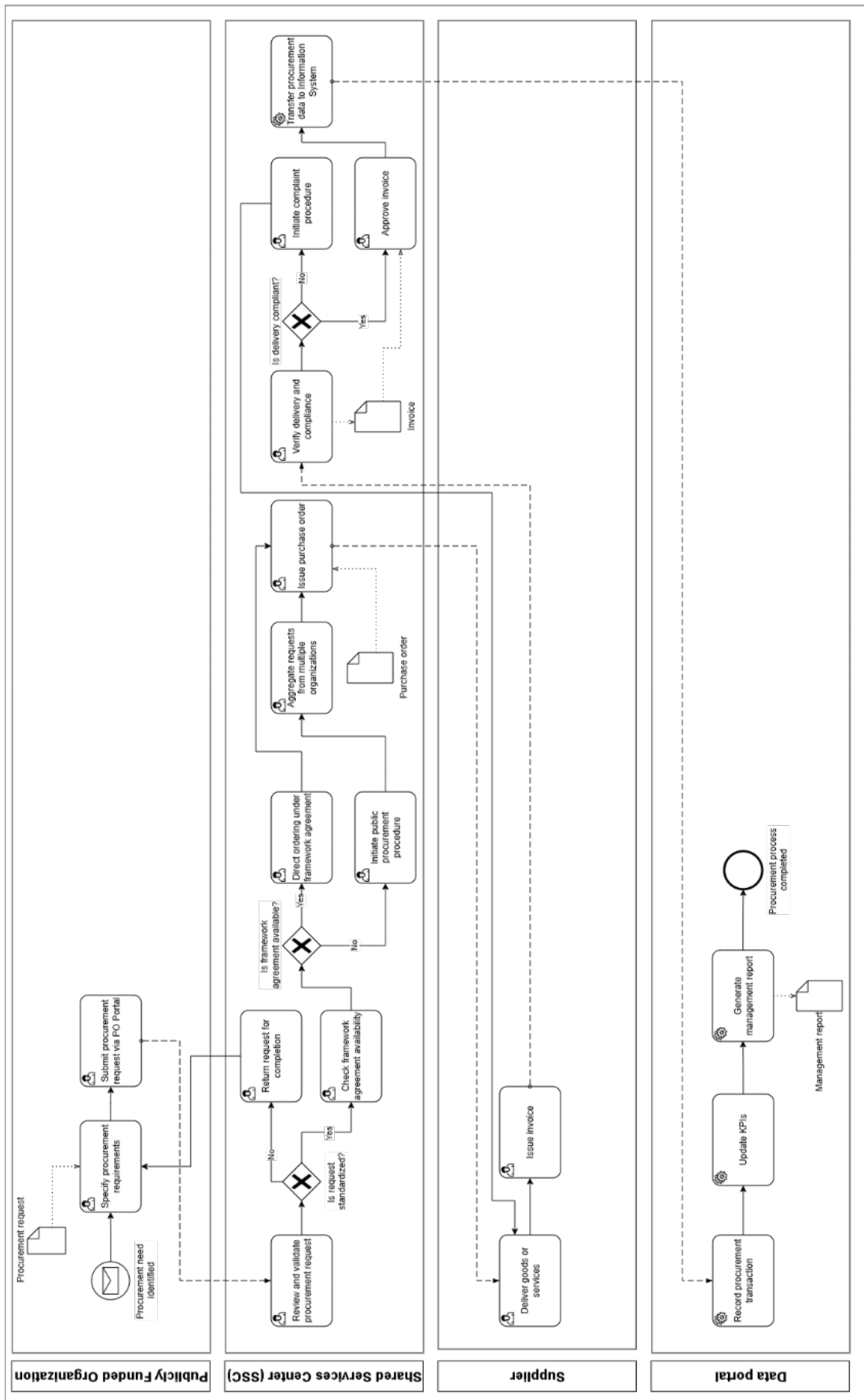


Figure 2. Model of the centralized procurement process within a Shared Services Center

### 3.2. Key Performance Indicators and Effectiveness Measurement

One of the main benefits of data- and process-oriented management in public administration organizations is the ability to systematically and regularly measure the performance of the services they provide. The established performance indicators serve to evaluate the volume of work performed over a given period and the associated financial costs (Parmenter, 2010). Through these indicators, the quality and economic efficiency of the activities and services performed can be determined.

In the payroll area, it is possible to monitor the number of processed wages per employee per month, or the number of complaints filed. By monitoring these indicators, it is possible to propose more efficient processes for all affected organizations through SSC. In public procurement, it serves to obtain an overview of the average time to implement contracts, the number of contracts implemented within the framework of framework contracts, or the price savings achieved through SSC. In the area of energy management, KPIs can identify year-on-year changes in energy consumption and the number of savings measures implemented. They can also detect inefficient energy use or technical deficiencies that are not obvious at first glance (Parmenter, 2010). These indicators provide specific data to the founder and management of the organization. Based on KPIs, it is possible to evaluate the efficiency of central services and the overall management of publicly funded organizations, and to make qualified decisions to ensure compliance with 3E (Act No. 320/2001 Coll.). An example of KPI proposals from the SSC to improve the management and management of publicly funded organizations is shown in Tab. 1.

Table 1. Proposed Key Performance Indicators for the Management of a Shared Services Centre

SSC Service	KPI	KPI Type	Link to 3E Principles
Training and Methodological Support	Cost per training session (CZK)	Financial	Economy
Training and Methodological Support	Percentage of complaints after methodological support (%)	Qualitative	Effectiveness
IT Support	Average request resolution time (hours)	Process	Efficiency
IT Support	Percentage of recurring incidents (%)	Qualitative	Effectiveness
IT Support	Cost per incident (CZK)	Financial	Economy
Publicly funded Organizations Portal	Percentage of active users (%)	Performance	Effectiveness
Publicly funded Organizations Portal	Average request processing time (days)	Process	Efficiency
Centralized Procurement	Savings compared to individual procurement (%)	Financial	Economy
Centralized Procurement	Percentage of procurements conducted under framework agreements (%)	Process	Efficiency
Centralized Procurement	Average unit price (CZK)	Financial	Economy
Energy Management	Year-on-year change in energy consumption (%)	Outcome	Economy
Energy Management	Cost savings on energy expenditures (CZK)	Financial	Economy
Energy Management	Number of implemented energy-saving measures (units/year)	Performance	Effectiveness

#### 4. Discussion - Impact on Public Finances and the Economy

From the perspective of public finances, the model of data- and process-oriented management of organizations is a highly effective tool for systemic management of publicly funded organizations. Based on the established processes and data models, it is possible to achieve direct and indirect savings, which are particularly important in the public administration environment, especially in maintaining the principles of economy, efficiency, and effectiveness. Direct savings include reducing operating costs, leveraging central purchasing, and optimizing energy consumption based on data and predictions (Lotti et al., 2024). Through them, it is possible to compare costs over time and across individual organizations, thereby optimizing them. Indirect savings can be achieved mainly by reducing the administrative burden and eliminating errors. This is facilitated by the innovative centralization of agendas and services, which are effectively set up based on mapped processes. This contributes to a noticeable reduction in duplicate activities. These savings can also be identified using data, as it is possible to monitor their development over time and propose and implement measures (Pour et al., 2018).

This model of a process- and data-driven shared services center enhances transparency in management and can deliver significant benefits. However, the success of this approach is not automatic. The basic factors are the mapping and setting of processes, the availability of high-quality data, and the ability to manage change (Dumas et al., 2018). The prerequisites are the definition of KPIs, their evaluation, and the adoption of measures. Communication with the organizations involved plays a significant role, as well as their perception of the SSC as a partner. If these conditions are met, this model can be sustained in the long term and further developed as a supporting tool for effective management of public finances.

#### 5. Conclusions

The paper highlights the importance of integrating process and data-driven management in the public administration environment, especially in the context of managing publicly funded organizations through a SSC. The presented model shows that systematically mapping processes in BPMN notation, standardizing them, and connecting them to measurable performance indicators creates a prerequisite for transparent and economically responsible management of public finances.

The proposed central purchasing process demonstrates how, through standardized procedures, clearly defined responsibilities and control mechanisms, duplication can be reduced, transparency increased, and a data foundation for managerial decision-making created. The integration of process modelling with data infrastructure enables not only the monitoring of service performance, but also its systematic evaluation in line with the principles of 3E.

The results suggest that implementing a process- and data-driven SSC model can reduce administrative burdens, better coordinate support agendas, and identify savings in operating costs. However, the success of this model depends on the quality of process design, the availability of relevant data, the willingness of organizations to cooperate, and the capacity to manage change within the institutional environment of public administration. Further

research should focus on empirically verifying the benefits of this model in specific conditions within public institutions, including quantifying the achieved savings and analyzing the impacts on service quality. The development of data analytical tools and their integration with process models to support strategic decision-making is also promising. In the context of increasing demands for the quality of public services and the optimization of public finances, this model represents an innovative direction for the further development of public administration.

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Conflict of interest: none

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