



Course Name: Financing and economics management

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Topic: T17**Information systems in the financing system
and economic management ACR****Course Objectives:**

The aim of this theme is to describe IT and particular IS. We will focus on general knowledge of IT useful in economic management. We meet with IS, both in the general concept and focusing on the Ministry of Defence of the Czech Republic. We mention basic IS Ministry of Defence of the Czech Republic, for example. ISL, ISSP and detail will be devoted to the FIS and IISSP as part of the economic management of the ACR.

Content:

Introduction

0. Selected terms under OMD No. 72/2012

1. Information technology (IT) and information system (IS)

2. Structure of the information system

3. Information and management system

4. Information Systems MoD

5. Financial Information System (FIS)

6. Subsystem Economy

7. Budget Agenda

8. Integrated Information System of State Treasury (IISST)

Conclusion

Introduction

The present time is the age dominated by information technology. There is virtually no profession, where a man would be it more or less did not get into contact with computer technology. Although it does not seem, society is increasingly reliant on the use of information technology. Information and communication technologies along with information systems become the cornerstone not only in the management of companies in the private sector, but also in the management of organizations in the public sector. Supply and especially developments in information technology is growing exponentially, but this progress has increased the number of pitfalls that we need to overcome if we want to control these technologies.

At present it is the ability to correctly decide on the deployment and use of information and communication technology part of successful management of companies and organizations. The development, which leads to the convergence of information and communication technologies along with multimedia, encourages the creation of new opportunities that will soon play a key role both in the economy and in the ordinary public life.

The essence of successful work of managers should be able to work with large volumes of data to be able to find their way, and above all of them deduce important conclusions on the basis of which will be able to make better decisions. In this activity, assisting them information systems, supplemented by information and communication technologies, which substantially changed the way data and information, as well as methods of making and last but not least communication

0. Selected terms under OMD No. 72/2012

According to the OMD No. 72/2012 eighth part of Article 54 **Characteristics and classification of financial information system** are basic concepts related to the issue of an information system explained in the following manner, i.e., for the purposes of this order means:

- **FIS** provides comprehensive **information support** financial management and financial security.
- The **individual subsystems FIS**, which are designed to promote areas of financial management and financial security and its processes, the Heads of subsystems. Subsystems consist of modules. Each module focuses on a comprehensive system support area. The modules use a common data base. Data introduced into FIS in any module can be used by other modules. Through FIS can be user defined, generate reports, which are in the nature of statistical reports.

Furthermore, **according to OMD 72/2012** in part nine, which regulates the responsibilities and tasks of actors in the financial management and financial security, are in Art 65 above tasks organs of economic services (ES) organizational unit (OC), which is necessary for the interpretation of this cost center (NS), which are also related to the use of the IS and the following:

The authority of economic services organizational unit is the leading professional body for the implementation of the organizational unit of financial security and ensuring conjunction with the

Agency financial. In the allocation and use of funds and property resources it manages directly leading organizational unit. Professionally authority is subordinate to a superior degree of economic services. It provides support for the principal operations in the area of financial security and financial management. It provides professional management of economic services at the organizational unit.

The authority of economic services organizational unit performs the following tasks:

- In the **budget process**:
 - The processes in conjunction with managers of objectives and presents evidence superior organizational unit as a cost center to prepare the draft budget of the following calendar year;
 - Monitors and evaluates the status of implementation of the appropriations for their own organizational entity and proposes measures to the economic, efficient and effective utilization of budget allocation;
 - During the calendar year, the budget proposes changes competent budget for its own organizational unit;
- In the realization of **personal expenses**:
 - The processes and transmits data for the realization of personal expenditure (cash requirements) and checks the progress of this process in the organizational unit;
 - Provides for the realization of their scope of responsibilities of the employer in legal financial issues (e.g. regression compensation claims and their management, compensation for damage caused soldier in active service on the property of the Czech Republic, which is the Ministry of Defence, compensation for injuries and occupational diseases precipitation, execution and insolvency), duty-law, labour, and in health and social insurance;
 - Implements the management of the fund for cultural and social needs;
 - Implements the principle of pay continuously monitors utilization volume salary funding and realizes his directing;
- In the area of **financing**:
 - Prepares and submits the documents for the payment and recovery, including the provision of advances to suppliers;
 - Ensures the operation of the treasury services;
 - By providing, records and acquires advances granted to employees;
 - Checks the status of the coverage of the commitment of funds;

- Requires the personnel and professional body logistics synergies to verify the accuracy and admissibility upcoming expenses (income);
- In the area of **Accounting**:
 - The accounting department prepares and submits the underlying accounting records;
 - Keeps records of damage to state property in the **FIS**;
 - The resulting additional evidence;
 - The task is to inventory assets and liabilities for the cost center within the meaning of RMO no. 55/2011 Bulletin;
- In **other** areas:
 - On the basis of decisions made at the head of the organizational unit headquarters assets and services decentralized manner (procurement of small scale) for a cost center and provides the recording of public procurement, contracts and purchase orders in FIS and also secures the payment of related expenses;
 - The performance of tasks carried out in the state of emergency and war;
 - Requires the accounting department for processing and providing accounting reports, drawing on state funds and state property values and, if needed;
 - The processes and transmits data for statistical surveys;
 - The present head of the organizational unit for a declaration pay out authority, if required by the situation;
 - Fulfills the function of a pay-out authority unless the organizational unit pay out body intended;
 - Keeps records of debts in FIS;
 - Of professionally manages and supervises subordinate organs of economic services and payroll authorities;
 - For preparing documents to analyses and analyses dealing damage to the head organizational unit;
 - Implements the continuous and subsequent control of financial control in place of their competence and based on audit findings proposes measures to remedy the shortcomings identified, while compliance with the reporting obligation by the governing body of economic services;
 - The organizational unit trains employees to familiarize them with the new regulations on financial security;

- Implements the analytical, information and evaluation support to the Head of the organizational unit in the area of financial management and financial security.

1. Information technology (IT) and information system (IS)

This topic begins with defining the concepts of information technology and information systems. More details are described in different parts of the information system, as well as linkage information system to the organization's management and the basic types of information systems. Furthermore in this topic and focused attention on an information system in the Ministry of Defence of the Czech Republic. There are described systems linked to the financial information system, followed by a description of the individual modules of this system that are linked to the budgeting process.

Introduction to Terminology

Information technology (IT) and information systems (IS) are two terms that we encounter almost every step, but it is difficult to precisely define, since there is a large range of possible definition. IT in the narrower sense form a technical base IS, it is the technical resources (hardware) and software (software). In a broader sense, *"information technology indicates the progress status of processing of information for their wide use in practice, thus everything that participates in any way in the analysis, design, development, implementation and operation of information processing systems."*¹

*"The information system can be defined as a set of people, methods and technical resources to ensure the collection, transfer, storage, processing and presenting data with the aim of creating and providing information according to the information needs of the recipients employed in management systems."*²

*"The information system is generally supportive system for the control system. If we want to project management system as such, we need to know what are the goals and information system to solve, so that these objectives supported."*³

2. Structure of the information system

IS is normally composed of five basic components described below, but some authors dealing with IT, among these components more real world context as IS (legislation, standards). To be IS company or

¹ BUŘITA, L. a kol. *Učebnice Informačních systémy*. Brno: Univerzita Obrany, 2005. s. 1.

² TVRDÍKOVÁ, M. *Zavádění a inovace informačních systémů ve firmách*. Praha: Grada Publishing, 2000. ISBN 80-7169-703-6.

³ TIETZE, P. *Strukturální analýza – úvod do projektu řízení*. Praha: Grada Publishing, 1992.

organization effective, may not be in its development and implementation neglecting any of its components.⁴

The structure of the information system

- **Technical resources (Hardware - HW)** consisting primarily of computer systems of various types and sizes, with respective peripheral units, which, if necessary, connected through a computer network.
- **Software tools (Software - SW)** include the system programs that control the operation of the computer, ensure efficient data communication and computer system with the real world. There are also application programs aimed at tackling certain classes of problems specific groups of users.
- **Organizational resources (ORGWARE)** include a set of regulations, rules and recommendations, defining the operation and use of IS and IT.
- **The human component (Peopleware)** they are adapting well as the efficient functioning of a person in a computer environment in which it is located.
- **Data base (Dataware)** is a set of data files stored on storage media accessible to authorized users.

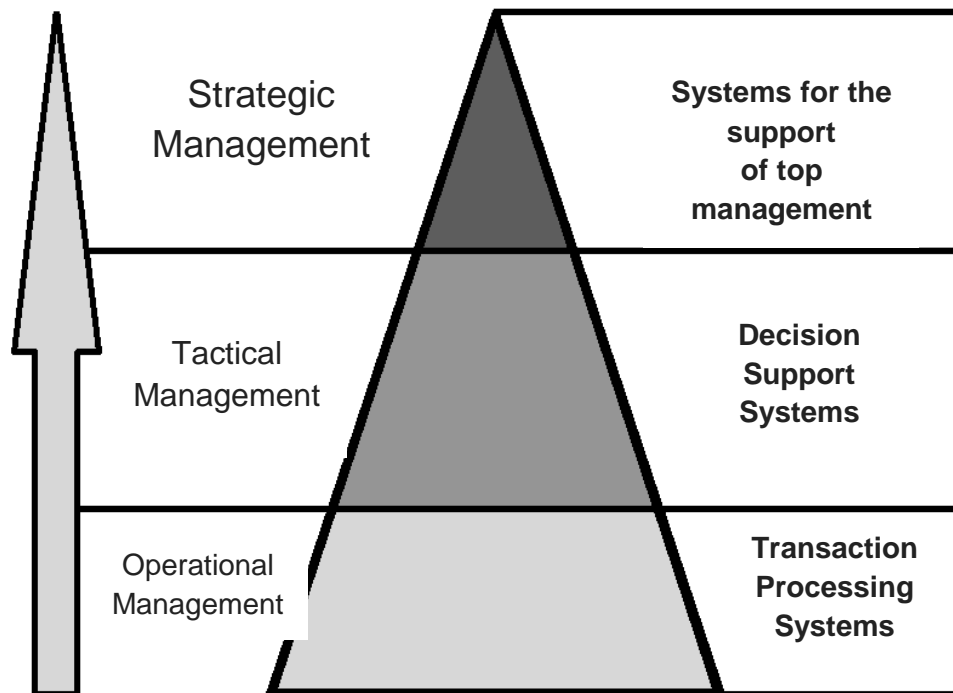
3. Information and management system

Information system (IS) can be divided into various aspects. With higher levels of management changes the basic requirements for IS and also reduces the volume of information due to the grouping and selection. At the same time an increasing need for substantial external information from around the organization or company. According to the management level can then IS divided into certain parts, each of which performs its function.

For any of these management levels then there are software applications that perform the desired function of the level. Many authors refer to these software applications for individual types of IS for management support. These views are wrong, since different parts of IS have a real sense if they are to be used as an integrated whole. Of course they can work independently, but become effective until the moment when they can connect, the progressive processing, transmission and full use of information at all levels of management.

⁴ TVRDÍKOVÁ, M. *Aplikace moderních informačních technologií v řízení firmy*. Praha: Grada Publishing, a.s., 2008. s. 19. ISBN 978-80-247-2728-8.

Figure 1 **Information Systems and detention management system**



Source: BUŘITA, L. et al. *Textbook information systems*. Brno: University of Defence, 2005. p. 2.

Transaction Processing Systems (TPS)

TPS are the successors of the classic batch systems for the automation of corporate agendas, such as calculations payroll, billing, accounting, inventory, records of persons, material accountancy etc. ⁵ Is primarily used for operational management level and are operating IS. Mainly provide basic processes in the organization. Their mission is to collect basic data of the company or institution.

Decision Support Systems (DSS)

DSS are designed to perform a variety of data analysis without the need for complicated control. Its users are mainly middle management component of the organization. The basis is a computer aided decision analysis methods and operating system analysis. These systems also provide management and certain comfort in the sense that he allow almost immediately perform the calculations and

⁵ BUŘITA, L. a kol.: *Učebnice Informačních systémů*. Brno: Univerzita Obrany, 2005. s. 2.

manipulation of input data. Also provide the possibility of a graphical display of results, their presentation and also documentation form that has control of far greater explanatory value.⁶

Executive Information Systems (EIS)

EIS is located on top of the control pyramid. They are primarily intended for senior management of the organization, which is more interested in information with neighbourhood organizations (technical innovation, market, bank, political situation, etc.). They are technically designed so as to enable access to external data and were also connected to the IS business. From the basic data of operational nature generate data with high predictive value.

4. Information Systems MoD

Currently the information structure of the MoD made up of many separate information systems that have their own software, security policy and data base. But a certain individual IS integration. This integration is very complicated, as the systems were created independently and mostly consisted of different software companies, so there is multiplatform environment mutually not entirely compatible service. Therefore you cannot present all IS used in the resort MoD, therefore mention only the most **important information systems** that are in some way linked to the **Financial Information System (FIS)**, which belongs to the economic IS and its agenda Budget is used for budgeting.

Outside the FIS are used **further economic IS the Ministry of Defence** and that is:

- **Information system of program funding (ISPROFIN)**
- **Central registration of subsidies budget (CEDR)**
- **Electronic commerce support (SEPO).**

Information System for Logistics (ISL)

Czech Army has more than 25 years of experience in building information systems for logistics. All utilities were in the beginning created separately for different areas of military operations (logistics, financial services, personnel, etc.). Supply various kinds of material resources were previously divided into approximately thirty groups and in response to this division were separately constructed IS. A different way of managing supply included many disadvantages and primarily led to inefficient management material. Therefore Czech Army decided to create a new single information system (ISL) to build this system; it was decided in 1993 by the computerization of the Ministry of Defence.

⁶ TVRDÍKOVÁ, M. *Aplikace moderních informačních technologií v řízení firmy*. Praha: Grada Publishing, a.s., 2008. s. 22. ISBN 978-80-247-2728-8.

The main objective was to create a system that ensures compatibility with NATO in the area of modern logistics (eg. The NATO Codification System) and simultaneously enhance the efficiency of logistics by helping to conserve both material and human resources.

Functional structure ISL contain only basic functions or modules, whose main task is mainly to logistics in the areas of material and supply and maintenance and repairs. Apart from basic modules ISL also contains links to other organizations and IS the Army of the Czech Republic (ACR), Ministry of Defence, the state administration. These are mainly: Financial Information System (FIS), NAMSA (Agency NATO Maintenance and Supply Agency), Staff Information System (SIS), Information System and service personnel (ISSP), the State Information System and the Parliament of the Czech Republic.⁷

Information System and service personnel (ISSP)

The IS is developed on the basis of Government Resolution no. 1027 of 2001 on the unification of IS personnel in the administrative offices. Supplier for the entire solution, the company GORDIC a routine operation was launched in 2005. The development of this software was carried out in collaboration with FIS and subsequently originated common portal FIS / ISSP.

5. Financial Information System (FIS)

Intranet FIS was founded in 1998, its purpose is to provide information support for the management and implementation of the financial security of the MoD. FIS is among the economic IS, which include more Information System program financing (ISPROFIN) and the Central Registry of subsidies - register (CEDR). The basis Intranet FIS applications were (in brackets are Czech abbreviations):

- Accounting and Budget (UCR 98),
- The draft budget (SNR 99),
- Salaries and wages (PAM),
- Evidence of damage (ŠKO),
- Evidence of payables and receivables (ECL),
- Evidence of procurement (EVZ),
- Reports and Report (VYK).

Intranet FIS became obsolete and was replaced by the Portal FIS / ISSP, this is a new professional communication between users FIS respectively ISSP. The new portal brought a change in the concept of working with the information stored in the portal. It is divided into information for all users ([http:](http://)

⁷ CVIS [online]. [cit. 2011-03-24]. CVIS. Dostupné z WWW: < <http://www.cvis.cz/hlavni.php?stranka=novinky/clanek.php&id=95>>.

//www.fis.acr) and personalized section (<http://portal.fis.acr>). The basis of both parts is full text search information like, for example Google website. Personalized part is only accessible when the user logs under the account that accesses applications FIS / ISSP. This feature allows the user to create a portal solution within its own pages with their own information, which is often used, which does not have to search through the individual applications.⁸

Portal FIS / ISSP are part of the IS GINIS from GORDIC. This is a comprehensive solution IS organization. It includes economic agenda, management of document circulation through filing service, a number of registers and administrative duties including software solutions to administrative proceedings. The company GORDIC trying this IS evolve in line with the legislative environment of public administration and also with regard to the high level of security and authenticity. At the same time, this IS has a number of specific modules to support the activities of state and local government authorities. It also includes applications for e-government, including modern portal components.

Basic components IS GINIS:

- The core of the system GINIS,
- Subsystem Economy,
- Subsystem Record Service,
- Human Resources Management Subsystem,
- Subsystem Registry,
- Administrative Subsystem agenda.

6. Subsystem Economy

We will only deal subsystem Economy; this subsystem will explain the components agendas budget, since it is precisely this subsystem with an agenda.

The budget is the basis for the budgeting process. Individual agendas or functional areas of economic processes in the system are recorded in specialized modules (components). These modules allow comfortable, conclusive, transparent and powerful double-entry bookkeeping and budgeting, including the management of related operational records. All operations that realize the economic nature of the documents, the system carried over agenda's books and goal to be recorded in the diaries and journals entries budget.⁹

⁸ MO ČR - Sekce ekonomická. Portál FIS/ISSP : Příručka uživatele. v1.0, 2009. 7 s. str. 2.

⁹ GORDIC [online]. [cit. 2011-03-26]. GORDIC GINIS® Ekonomika. Dostupné z WWW: <<http://www.gordic.cz/portal/Default.aspx?tabid=142>>.

7. Budget Agenda

Agenda of the budget is comprised of a set of application components that are used to collect requests for budget while integrating them into different investment and non-investment activities. Administrators can use the budget to balance the needs of the breakdown of the approved budget. The vast majority of the processing operations budget and accounting processing has a direct link with the system sustained medium-term budget outlook.¹⁰

Key components of the agenda Budget modules are: (in brackets are Czech abbreviations)

- Balancing the budget (BAR),
- Classifications and acquisition budget calculations (CKR, PKR),
- Medium-term budget outlook (SRV),
- Acquisition of budget documents (ROZ).

8. Integrated Information System of State Treasury (IISST)

According to the Government Resolution dated September 21, 2009 no. 1217 budget chapters to cooperate in the next phase of the Integrated Information System Treasury government imposes a leading administrators chapters of the state budget of the Czech Republic to provide prompt MF cooperation of professionals for the area:

- Budget preparation,
- Implementation of the budget,
- Payments,
- Accounting
- IT - applications
- IT - Infrastructure (communication with IISST).

The basic objective of the State Treasury is to ensure quality, timely and consistent information necessary for proper and objective management of state finances.¹¹

This resolution Government commissioned the Ministry of Defence of the Czech Republic to the IS for economic management was also connected to the Treasury.

¹⁰ GORDIC [online]. [cit. 2011-03-28]. GORDIC GINIS® Agenda Rozpočet. Dostupné z WWW: <<http://www.gordic.cz/portal/Default.aspx?tabid=146>>.

¹¹ Usnesení vlády ČR ze dne 21. září 2009 č. 1217 k součinnosti rozpočtových kapitol v další fázi Integrovaného informačního systému Státní pokladna.

Preliminary point of the project to the State Treasury¹²

A comparison of the functioning of processes and public finance management systems in the Czech Republic with the processes and procedures that apply in developed countries of the European Union, and that the leadership and management of public finances recommended by the World Bank and the International Monetary Fund that the current level of use of modern information technologies in management of public finances or selected procedures do not fully satisfy the standards that would enable the Czech state to achieve in this area optima.

The problem is the low level of integration between yet to be developed and used by systems and incomplete support for key processes. Accompanying symptoms are:

- Data transfer takes place outside systems manually, fax or phone,
- occurring inconsistency between data from different systems deployed,
- Manual intervention in ongoing processes,
- Lack of flexibility in reporting and reporting
- A high proportion of the human factor, which can bring into the processes of inaccuracies and errors,
- Lack of linkage between the budget and accounting State
- Non-transparent accounting of the state.

Definitely recommended solution for addressing these shortcomings is the gradual introduction of the functions of the State Treasury.

Integrated Information System Treasury¹³

The aim of the Ministry of Finance platform project is to **implement the Integrated Information System of the State Treasury**, and thereby obtain an efficient, transparent, efficient and centralized tool for public finance management, centralization of state accounting information, the consolidation of selected economic indicators for governance and comprehensive, accurate and timely reporting for the entire public sector in accordance with international standards, which would allow:

- Effectively manage state finances and achieve transparency in the expenditure of state funds,

¹²O Státní pokladně. [online]. [cit. 2014-08-26]. Ministerstvo finanční ČR. *Úvodem k projektu Státní pokladny*. Dostupné z WWW: <<http://www.statnipokladna.cz/cs/o-statni-pokladne/statni-pokladna-sp>>.

¹³O Státní pokladně. [online]. [cit. 2014-08-26]. Ministerstvo finanční ČR. *Integrovaný informační systém Státní pokladny (IISPP)*. Dostupné z WWW: <<http://www.statnipokladna.cz/cs/o-statni-pokladne/statni-pokladna-sp>>.

- Implement the objectives of fiscal policy of the state,
- State liquidity to operate at minimum cost / highest yields
- Ensure the payment of public administration, including the "single state account"
- Support the management of state assets and liabilities,
- Effectively prepare the state budget,
- Transparently implement the state budget,
- Ensure accurate financial reporting,
- Introduce expenditure control ex-ante and ex-post.

Project objectives will be achieved if IISSP provide the following functions of the State Treasury:

Key comprising:

- Centralization of revenue,
- Expense management,
- Support for asset management,
- Cash management,
- Support for debt management.

Support comprising:

- Budgetary planning,
- Financial planning
- Payments,
- Accounting
- Financial control,
- Reporting

Those can also specify the following main objectives set for the project:

- Objective - Conclusive and verifiable results of operations, assets and liabilities of the state,
- Objective - Transparent flows of public finance,
- Objective - Central management of all state funds,
- Objective - Managing the availability of SR,
- Objective - Integration of management control,
- Objective - Process and data integration,
- Objective - Linking physical and financial management,
- Objective - introducing a central system of state accounting information.

The basic milestones of the project implementation IISSP:

- Starting the project - January / 2009
- Productive start functioning accounting information system of the Central State - January / 2010
- Productive start functionality, the budget and Payments - pilot operation - January / 2012
- Productive start budgeting functionality - July / 2012.

To fulfil the objectives of the State Treasury are used, these subsystem:

(in brackets are Czech abbreviations)

- **The central accounting system state (CSÚIS),**

CSÚIS is designed to gather accounting records from the selected entities.

- **Budget preparation (RISPR),**

Module Financial Information System (RIS) is an efficient, transparent and effective tool for the management of state finances. Preparation of the budget (RISPR) is a separate module of the financial information system (RIS). RISPR used to determine the parameters, breakdown and budgeting from MF levels (administrator of the state budget) down to a single OUS, SPO.

- **Implementation of the budget (RISRE).**

Implementation of the budget (RISRE) is a separate module of the financial information system (RIS). Implementation of the budget, i.e. the payment and collection of receivables will initially deploy IISSP used for recording of payments and receipts of individual OUS.

Conclusion

In this topic were presented basic information about IT and IS. We have described IS used by the Ministry of Defence of the Czech Republic, focusing on the FIS and its modules, which are used in the budgeting process. We assess that the shortcomings in the area of IT used by the Ministry of Defence of the Czech Republic, can be included, incompatibility of individual IS the Ministry of Defence of the Czech Republic. With that also relates to the lack of not imposing transversal IS (PRIS MO), and the slow development of a lengthy update IS and their modules.

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