Strategy for Development of FMIS	Ministry of Finance
Version 2004-2008 - updated	

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MINISTRY OF FINANCE

STRATEGY FOR BUILDING-UP FINANCIAL MANAGEMENT INFORMATION SYSTEM IN BUDGET SECTOR UPDATED VERSION FOR PERIOD 2004-2008

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			FMIS on FMIS functionality
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			FMIS to add procurement plan

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1 INTRODUCTION

FMIS implementation is an important phase in the budget reform carried out currently, directed towards achievement of efficient budget resource management. The reform process started in 1998, when Law on Budget of the Republic of Bulgaria for 1999 included substantial improvements and simplification of the budget structure. These improvements are continued and further extended every year through the respective laws on state budget.

As a part of the budget reform process, the Government of the Republic of Bulgaria took a decision on establishment of FMIS in the budget sector. The system will be fully integrated and computerized and will make use of the best practices of the developed economies. Ministry of Finance is in charge of the system's development and implementation. FMIS building-up is also approved and supported by the International Monetary Fund, European Commission and other international organizations and financial institutions.

For support of the budget reform process strategic planning should be undertaken which should encompass integration of the long-term and short-term goals. Planning is dedicated to the issues following below.

Short-term. Encompasses a period of 6-12 months, during which the activities directed towards meeting the immediate requirements should be undertaken. These plans have to be well-formulated, include detailed break-down of required resources, interdependencies and a sample schedule.

Mid-term. The implementation of the long-term goals and the integration of the short-term activities are managed using planning within a term of 1 to 3 years. These plans are developed in the context of the long-term plans, as a tool for their performance. The resource and time planning should be developed to a satisfactory level, especially for next year. In many organizations mid-term planning serves as a foundation for development of next year's draft budget.

Long-term. Refers to a period of 3 to 5 years and provides goals for infrastructure development directed towards meeting the newly arising requirements. These plans are developed in broader categories and set the framework of mid-term planning.

The different levels of the Strategy form a process of gradual implementation of the targeted environment. Short- and mid-term planning should be performed entirely in the context of the long-term goals. In case undertaking of some tactical measures for meeting immediate needs is needed, this should be grasped as a deviation from the long-term plan and should be treated as such.

2 GOALS AND SUBJECT OF STRATEGY FOR BUILDING-UP FMIS

This Strategy represents a strategic plan for development of integrated state information system for finance management (FMIS) in the budget sector of the Republic of Bulgaria.

This Strategy represents the current status of the FMIS project and recommends a plan for a period of 3 to 4 years, providing clear vision about the directions of development of the system, including its adaptation to the EU requirements. The plan sets the specific priorities and with the achievement of each priority group specific results are accomplished that will mark the advancement in the automation of finance management and will contribute to the implementation of the overall strategy.

The plan includes structure and sample schedule of the major priorities and activities/tasks which should be performed and should reduce to a minimum the risks inherent to the implementation process of large-scope technical infrastructures and complex business computer systems. The plan is intended to ensure full resourcing of the working systems and usage of the technology in a maximum capacity and in an economic manner, thus guaranteeing successful application of the working strategy and elimination of the inefficient systems.

FMIS Strategy will lead MF in the further development of its technological plans and ongoing encompassing and grasp of the information resource planning process.

This document has a wide scope and is focused on the requirements to FMIS, including the requirements from management and executive level, while evaluating the connection of the organization to external institutions and organizations of local authority and European Union.

This document will be regularly updated so as to reflect the computerization progress advancement and change of business requirements, as well as the ISFM Strategy changes. These updates will be recorded in the corrections section above.

3 DOCUMENT STRUCTURE

This document is structured in 12 sections divided in sub-sections and enclosure.

Section 1 INTRODUCTION – describes the approach in document preparation

Section 2 GOALS AND SUBJECT OF THE INFORMATION STRATEGY FOR FINANCIAL MANAGEMENT – describes the goals and scope of the document.

Section 3 DOCUMENT STRUCTURE – describes the document structure.

Section 4 ABBREVIATIONS – it contains the abbreviations and terms used in the document

Section 5 GOALS AND CONDITIONS OF FMIS IMPLEMENTATION IN THE BUDGET SECTOR – it defines the major goals and conditions for FMIS implementation.

Section 6 KEY FEATURES OF FINANCIAL MANAGEMENT – defines the major financial management processes in the Republic of Bulgaria and the organization and major roles and responsibilities of the participants in the financial management process.

Section 7 BUDGET REFORMS.STRATEGIC DIRECTION – defines the key elements of financial management at which budget system reforms are focused:

Section 8 STRUCTURE AND COMPONENTS OF FINANCIAL MANAGEMENT INFORMATION SYSTEM – the section is divided in two basic parts:

Sub-section 8.1 CURRENT FMIS ARCHITECTURE – it describes the current condition of technical architecture; the currently used – operational systems, databases, communications architecture and the functions of the applications implemented and operational as of today.

Sub-section 8.2. FMIS FUTURE ARCHITECTURE – indicates the trends of future development of technical and communications infrastructure, possible changes to used databases and operational systems, development stages of future software applications, including links to other systems and the building-up of interfaces to financial systems external to FMIS.

Section 9 PLANS AND PROSPECTS – it provides a description of the major priorities and tasks as well as the succession of their fulfillment in time.

Section 10 FINANCIAL EVALUATION – it sets indicative targets for implementation of the key priorities and tasks to these.

Section 11 MANAGEMENT OF THE FMIS BUILDING-UP PROCESS – it defines the project organization and management; key principles and standards for quality management and methodology, the overall strategy for FMIS development, milestones in the security policy and system maintenance policies.

Section 12 SUMMARIZED PLAN FOR FMIS BUILDING-UP – it provides structured description of the major priorities and tasks as well as the succession of their fulfillment in time.

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4 ABREVIATIONS

ESA	European System of National and Regional Accounts	
GFS	Government Financial Statistics	
LAN	Local Area Network	
SAP R/3	Software system for integrated resource management of the enterprise,	
	developed by the German company SAP AG	
SIGMA program	Program for governance and management support in the Central and	
r · g ··	Eastern European countries	
WAN	Global network	
AGIFC	Agency for Government Internal Financial Control	
AEAP	Agency for Economic Analyses and Prognostications	
ATM(ARDT)	Asynchronic Regime of Data	
()	Transfer	
BAS	Bulgarian Academy of Sciences	
BANKNET	Network for electronic data exchange between BNB and the	
· · -	commercial banks	
GDP	Gross Domestic Product	
BNB	Bulgarian National Bank	
BNR	Bulgarian National Radio	
BNT	Bulgarian National Television	
BULSTAT	Unified Register of Economic Subjects in the Republic of Bulgaria	
SLSU	Second-Level Spending Units	
VAT	Value Added Tax	
UBC	Unified Budget Classification	
UEROSTAT	Statistical Office of the European Union	
EU	European Union	
FMIS	Financial Management Information System in the budget sector	
CFP	Consolidated financial program	
IMF	International Monetary Fund	
ME	Ministry of Economy	
MLP	Materially Liable Person	
MRDW	Ministry of Regional Development and Welfare	
CM	Council of Ministers	
MLSP	Ministry of Labour and Social Policy	
MoF	Ministry of Finance	
NAMDA	National ATM network of state administration	
NRA	National Revenue Agency	
NHIF	National Health Insurance Fund	
NSSI	National Social Security Institute	
NA	National Assembly	
SC for FMIS	Steering Committee on Financial Management Information System	
ITSC	MoF Information Technology Steering Committee	
NSI	National Statistical Institute	
FLSU	First-Level Spending Units	
BCE	Budget credit executor	
RSDM	Relational system for database management	
SEBRA	System for electronic budget settlements	
SNA	System of the national accounts	
DMS	Database management system	

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TDBCE	Third-degree budget credit executor
СВ	Central budget

5 GOALS AND CONDITIONS OF FMIS IMPLEMENTATION IN THE BUDGET SECTOR

5.1 Goals of FMIS implementation in the budget sector

The goal of FMIS implementation in the budget sector is to establish one unified information system meeting the contemporary financial management requirements, in correspondence to the existing regulations, open to modifications in case of changes to the legislation or the financial management structure in the budget sector.

FMIS building-up in the budget sector is a tool for achievement of the strategic goals of Bulgaria and especially of MF for improvement of the reporting on budget activities, financial management of the state and the separate budget units.

The targets to be achieved by FMIS after its implementation are:

- Establishment of up-to-date and fully integrated financial management system in the budget sector:
 - o Unified standardized graphic user interface at every level;
 - o Single logical structure of the database and the work flows;
 - Unification of the used application and development tools;
 - o Minimization of the costs for maintenance and integration of the application systems;
 - o Global communication environment for delivery of data flows.
- Documenting and keeping of up-to-date, accurate and reliable information on all effected financial activities;
 - o Data flow from the location of arising to the headquarters;
 - o Formalizing the input, output and standard enquiries and implementation of automated procedures for their performance;
 - o Validation of the incoming and outgoing information.
- Providing of timely and efficient access to reliable information, related to the financial management on demand by internal or external users through:
 - Automation of the working flows related to the collection, accumulation and reporting of the information;
 - o Introduction of technologies, improving communications between the units in the system;
 - o Provision of new methods and tools for analysis of the accumulated information.
- Assisting analysis and financial management in implementation of financial policy by:
 - Providing a flow of regular standard information based on detailed and consolidated data;
 - Performance of preliminarily defined analyses by type of the data ordering, exceptions, comparative analyses by selected parameters and others:
 - o Ensuring the performance of preliminarily defined information;

- o Implementation of opportunities for programming of specific user information requests and analyses, which are not defined in advance;
- O Holding statistical analyses over various sub-multitudes of parameters and information subjects;
- o Implementation of functionality for exploring trends and making projections based on time periods;
- o Facilitation of training and improvement of personnel.

Providing an example of professional, efficient and transparent implementation of complex information system which will be useful to the next projects in the Bulgarian public sector.

5.2 Success factors of the building-up and implementation process of FMIS in the budget sector

For the successful implementation of FMIS an important factor is the awareness that such projects are large, long-term and expensive which has been proved worldwide. Specific results may not be achieved within a short span of time and without proper planning and supply of resources. That's why the main goal is the preparation of one strategic plan for the necessity of establishment of regular sub-projects and planning of resources, including attraction of additional funds and partners in the building-up.

The total duration of the project is evaluated at about 5-7 years and the building-up and implementation of the system should be performed following a strictly defined and reasonable plan. At the beginning of planning one overall plan will be worked up about the time needed, and all the activities in the respective phases shall be based and described in a detailed work plan. The main part of the plan is a definition of the anticipated results and their quality characteristics as well as regular control measures for evaluation of these characteristics and review of the current project status. It is required that each control check be reflected in order to contribute to the quality improvement of the process.

A certain number of critical factors are required to be taken in consideration in FMIs building-up, and some of these are outlined hereafter:

Work tasks. The main direction of the financial management information system (FMIS) is linked to working functions and processes servicing financial management. Hence, the main requirements FMIS infrastructure and architecture should meet, have to be formulated and documented as a reflection of the strategic direction of financial management and specifically, of Ministry of Finance. They should include also operative requirements (such as the need to reduce the complexity of the system to achieve reduction of maintenance costs). The requirements which have already been formulated and documented must be reviewed and upgraded in view of their expediency.

Systems currently used. The systems already accepted and in use should undergo review and analysis of their strong and weak points. In this analysis the correspondence should be examined between the functionalities offered by the system and the benchmark sought. Each system should also be assessed from the aspect of its capacity to reflect changes; in case its maintenance up-to-date turns out expensive and difficult the probability for such system to become a part of FMIS in the long run is minute.

Planned activities. The activities held and planned will affect FMIS infrastructure and architecture. These may be purchases, expansions or modernizations satisfying immediate needs or activities, directed towards the achievement of larger-scope benefits. Each one of these activities should be taken in consideration in the overall planning process, as their results will affect FMIS future work.

Technological capacity. The on-going evolution of software and hardware in IT offers new solutions to problems. However, the search of appropriate technologies should be restricted to those components already achieved or anticipated in the nearest future to achieve large-scope production, rather than experimental, exploitation.

The different parts of FMIS have to be combined to the purpose of accomplishment of better compliance between working needs and practical implementation. This is going to be a cyclical process to include compromises between the working tasks and the other components, and the participation of representatives of users in it is essential. In the planning process, analysis is required of the approaches by which the desired FMIS functionality and architecture shall be attained, bearing in mind the planned activities and the capacity of the existing systems to satisfy the future needs. Probably the realization of the strategy will result in changes to the current plans, as their management may turn out difficult for the Ministry. Sticking to hitherto work approaches could damage the capacity of the establishment to perform substantial changes as all available resources will be used for insignificant improvements.

During the FMIS building-up process, the following external conditions may influence it;

Dynamically changing legislation;

Functional and structural changes in the financial management process;

Further clarification of the working processes and procedures, etc.

Not established, but in the process of establishment, links to external systems and registers;

others.

The presence of these conditions necessitates that the analysis, projecting and building-up of the specific details of the system be performed gradually, with establishment and achievement of relative stability in the external conditions, influencing the specific detail. This approach does not hinder the basic projection of the system as for the basic project principle and relatively unchangeable facts are utilized connected to the functioning of administration. However, the practical building-up and functioning of some parts of the system will be very difficult or impossible in case the following factors and pre-conditions are not present:

an agreement in principle at Government and political level for maintenance of the process;

provision of the necessary financial resources;

preparation of an overall unified model of financial management, incl. Ministry of Finance;

maintenance and participation of the interested functional directorates of MF and outside the establishment:

participation of competent partners experienced in building-up and implementation of large information systems;

discipline, observation of the national and international standards in the area of financial management,

documenting of the building-up and implementation process;

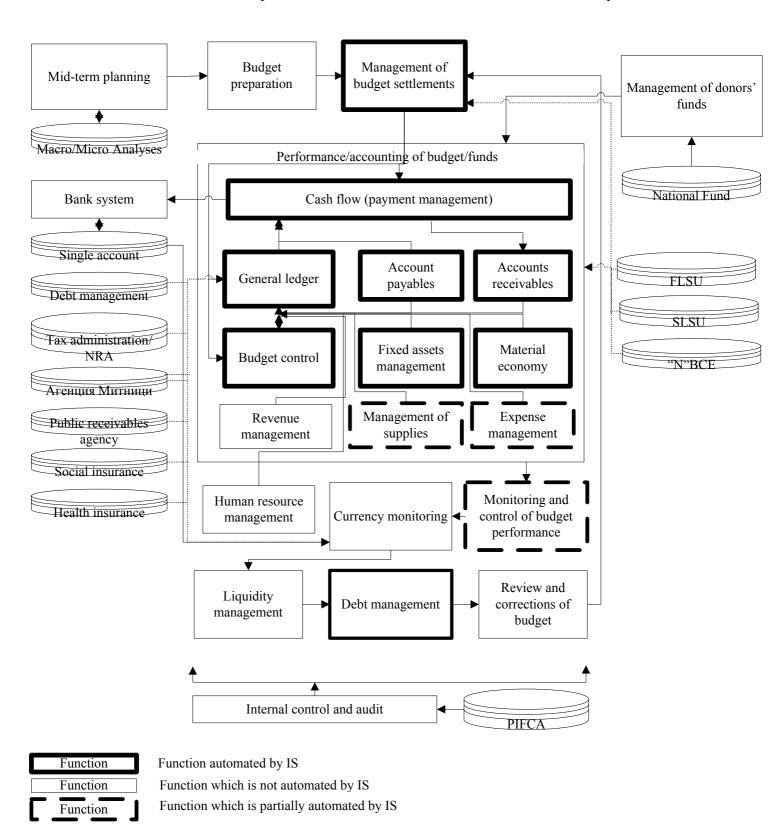
achieving harmonization of the long-term targets and strategies with short-term planning and tasks;

training of personnel and its active participation in FMIS building-up.

6 KEY FEATURES OF FINANCIAL MANAGEMENT

6.1 Conceptual model of financial management

A conceptual model is presented below of the major processes of financial management. The model is intended to represent the main functions that should be automated by FMIS.



6.2 Legislative and regulatory foundation of financial management

The enactment wherein the main units and functions of the financial management process are regulated, is the Law on Structure of State Budget and Law on State Budget which is accepted every year.

6.2.1 Consolidated financial program (CFP)

CFP includes the state budget, the budgets of the health and social insurance, the autonomous budgets (BNT, BNR, universities and BAS), municipal budgets as well as extrabudget accounts and funds at a central and local level.

According to the Law on Structure of State Budget, the National Assembly approves only **the state budget**, which consists of the republican budget and the budget of judicial power.

In turn, the republican budget consists of:

- Central budget;
- Budgets of ministries and other state establishments;
- The budget of the Chamber of Accounts.

The budget of the judicial power is presented at the National Assembly in the Law on Annual Budget and includes information on the budgets of the courts, the Procurator's Office and investigation offices.

The other budgets in CFP are represented at the National Assembly in the following order:

• Budgets of social insurance funds

The budgets of NII and NHIF are presented at the National Assembly and are put to vote there separately from the annual budget law.

• Autonomous budgets

These are the state universities and Bulgarian Academy of Sciences, which perform their budgets outside the state budget from 1998 as well as BNT and BNR from 2000. By the indicated years the information about these institutions was integrated in the budgets of the ministries or other state organizations. Now the National Assembly approves only transfers from the central Government, and the revenues, costs, transfer of funds and the financing of these institutions is regulated by separate laws.

• Municipal budgets

The Law on Municipal Budgets contains the regulatory framework for the development of the budgets of local self-government. The National Assembly approves only the interrelations of the municipalities with the central budget.

Budgets of the extrabudget accounts and funds

Reviewing the extrabudget accounts and funds at a central level, Minister of Finance approves the budgets of the extrabudget accounts and the Council of Ministers accepts the budgets of the extrabudget funds. Extrabudget accounts and funds at a local level are approved by the Municipal Councils. The number of extrabudget accounts and funds at a central and local level was very large in the period 1991 - 1998. In the last years the majority of these accounts and funds were included in the respective budgets or registered according to the Commercial Act. The number of the extrabudget accounts and funds was decreased to 4 at a central and 3 at a local level with the Law on 2003 Budget. Government intends to close down all extrabudget accounts and funds, except for the funds for social and health insurance. From the point of view

of budget management they are a special position. Their management is performed in compliance to the Law on Structure of State Budget or the Law on Municipal Budgets, as well as to other specific laws or international agreements, regulating their activities.

6.2.2 Financial reporting

Methodology of reporting of the budget organizations

The reports on budget performance are prepared based on the national Unified Budget Classification (UBC), developed according to the requirements of the International Methodology for State Finance GFS 1986 of the IMF. The classification is obligatory for all budget organizations and is developed in a several parts. It contains about 100 paragraphs, which reflect the revenues, expenses and financing by economic type. These paragraphs are grouped in aggregated indicators in the report on budget performance, prepared by the MF. The report on performance of consolidated state budget prepared by MF by separate compound budgets follows the main principles contained in this guide, for presentation of the revenues, expenses, financing and consolidation of the budget transfers between the different levels of management. According to the national methodology, the revenues from privatization, and from 2002, also the acquisition of financial assets and the onerous funding of non-financial enterprises, are represented as a part of the funding and represent an exception from or GFS 86.

The functional representation of the revenues in nine major functions, consisting of groups and activities, provides an insight about the government policies in the different areas such as education, health care and social insurance. For instance, the expenses for function "education" within the framework of the consolidated state budget include the educational services provided by the respective ministries and agencies by sector as well as by the municipalities. This allows for an analysis at a national level.

Periodical reports on the cash performance of consolidated state budget

Ministry of Finance prepares the data on the cash performance of the consolidated financial program and the republican budget two times monthly (at 1st and 17th day of the month after the month of the report) based on the BNB data on the status of the revenue and expenditure accounts of the central budget, sector ministries and agencies, judicial power, social insurance funds, autonomous budgets, municipalities and extrabudget accounts and funds.

Monthly reports on budget performance are prepared at program Excel and are presented on a CD and as a paper copy to the MF within 12 days after the end of the respective month. In practice the sector ministries which have more budget executors from a lower degree as well as the municipalities, usually do not keep the deadline and that is why MF prepares the monthly report on the consolidated state budget by separate compound budgets some 20-25 days after the end of the respective month which is due to the non-observance of budget discipline by the budget executors or municipalities themselves. The monthly data on the performance are distributed 30 days after the reporting period.

The monthly report does not provide information on the expenses of the budget funds by functions; it only contains aggregated economic indicators as follows:

I. Revenues and Aid

Tax revenues

Non-tax revenues

Aid

II. Expenditure

Salaries and remuneration of personnel

Social and health insurance instalments

Current allowance

Interest on sovereign debt

Social expenses, grants

Subsidies

Capital expenditure, growth of the state reserve and buy-out of agricultural production

III. Transfer /provided(-); received(+)/

Transfers (subsidies/instalments, interim loans) from/to CB (net)

Other transfers (net)

IV. Deficit/Surplus

V. Funding

External funding - net

External credits and repayment instalments net

Repayment instalments on credits provided to other states (+)

Operations with securities and financial assets

Deposits (net) abroad

Internal funding - net

Non-bank - net

Bank - net

Privatisation, acquisition of shares and stocks and onerous funds – net, inlc. Privatisation revenues

Three-month reports are prepared following the single budget classification and are presented for certification by the Chamber of Accounts within 1 month after the end of the reporting month. MF receives the data and processes them at a data center 45 days after the reporting period. Three-month financial data are published 2,5 months after the reporting period.

Annual reports on the cash budget performance are also presented according to the Single Budget Classification within 45 days after the end of the reporting period and are also certified by the Chamber of Accounts. MF prepares the consolidated state budget before the beginning of March and completes the report on the cash performance by the end of May. The preliminary annual financial data are published 3 months after the reporting period. In June Minister of Finance presents the paper and the report on budget performance for review to the Council of Ministers, after which the Government presents it for approval to the National Assembly. The annual data about the budget, presented by the Council of ministers to the National Assembly, are published and disseminated by MF 6 months after the reporting period.

6.3 Organizational and functional structure of the financial management process. Main tasks and functions

The main organizational units, participating in the financial management process and their roles are regulated in the Law on Structure of State Budget.

The main participants in the financial management process are the National Assembly, Council of Ministers, the ministries and institutions, municipalities and other organizations, identified by law.

The bodies administering revenues in the state budget are: state bodies and budget organizations, which are assigned by law or by an act of the Council of Ministers, to collect and report budget revenues.

Council of Ministers identifies the primary and secondary budget credit executors.

The primary budget credit executors are: ministers and heads of state bodies, identified by the Council of Ministers by proposal of the Minister of Finance; the head of the Supreme Court Council, municipal mayors.

Secondary budget credit executors are the heads of separate structural units, which by function, organization and funding are subject to a primary budget credit executor and are identified by the Council of Ministers – by proposal of the respective primary budget credit executor or the municipal mayors – for the local self-government bodies.

The lower-degree executors are the heads of separate budget units which are directly subject to the secondary budget credit executor and are identified by the Minister of Finance following the provisions of a law – for the state bodies and the judicial authorities and by the municipal mayors – for the local self-government bodies.

Within their competencies, control over creation and performance of budget, is exercised by: National Assembly, Council of Ministers, Minister of Finance, the heads of ministries and institutions and the bodies of the tax and customs administrations.

6.3.1 National Assembly

National Assembly is the legislative body in Bulgaria, which has the power to determine and permit all expenses, revenues and credits of the state. National Assembly has provided Council of Ministers with great powers in the management of the state funds, as the chief executive body, together with the Ministry of Finance. National Assembly exercises control over the budget policy performed and the performance of specific parameters adopted by the Law on State Budget, by acceptance of the Government's report on budget performance and of the Chamber of Accounts.

National Assembly accepts the state budget and the reports on its performance, sets the taxes and determines their amounts, gives consent on conclusion of contracts for sovereign credits, ratifies and denounces with a law international contracts containing financial obligations to the state, selects the Chamber of Accounts which exercises control on budget performance.

Besides, National Assembly authorizes Council of Ministers to conclude contracts for performance of certain activities, the payment of which is going to be entirely or partially effected in the next years.

6.3.2 Council of Ministers

Council of Ministers (CM) is the chief executive body taking decisions on the basic budget parameters – revenues, expenditure, deficit, funding.

By a proposal of the Minister of Finance CM discusses and adopts the main policies and fiscal targets, sets expenditure priorities of the Government. CM is the institution which coordinates and balances the interests of the different ministries and institutions and thus ensures financial discipline in the budget system.

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CM organizes the performance of republican budget through MoF and the state bodies – PBCE. Within one month after the publication of the annual law on budget, it adopts an ordinance on performance of state budget, prepared by MoF.

CM is in charge of the preparation and entry of the draft state budget in the National Assembly.

The role and responsibilities of CM are:

• In drawing up budget:

- Reviews the draft state budget and if needed makes changes to it;
- Is not entitled to make changes in the draft budgets of the judiciary power and Chamber of Accounts and enters them in the NA as these are presented by these establishments;
- Settles disputes on draft budgets between MoF and FLSU;
- Puts forward the draft budget in NA not later than two months before the beginning of the budget year;
- Determines the order and way of creation and putting forward to NA for adoption of the war-time budget of RB.

• Regarding budget performance:

- Organizes performance of republican budget through MoF and state bodies FLSU;
- Passes an ordinance on state budget performance, specifying the values and natural indicators of the budgets of state bodies and budget organizations;
- May use monthly a state credit amounting to not more of the average monthly amount of the preceding year in case state budget has not been adopted by the beginning of the budget year;
- Enters a proposal to NA for changes to the state budget;
- Permits the use of the reserve from the republican budget, by approving additional budget credits from the reserve in case of incidental expenses;
- Adopts the extrabudget funds on proposal of the respective FLSU, in coordination with Minister of Finance;

In budget reporting:

Reviews the annual report on state budget performance and puts it forward to the NA by the indicators by which it was adopted.

6.3.3 Ministry of Finance

Ministry of Finance participates in the management of the budget funds with two roles: as an executive body of the state, responsible for the methodology of budgeting and the performance of budget and as a normal first-level spending units (FLSU).

The main responsibilities of MoF as an executive body of the state, responsible for the budgeting methodology and budget performance, are:

- Preparation of the mid-term fiscal framework and preparation of mid-term financial plans for draft budget, which is presented to Council of Ministers and National Assembly;
 - Coordinates the preparation process for annual budgets;

- Prepares guidelines for creation of budget of budget credit executors;
- Reviews and analyses the budget demands of the various ministries and establishments;
 - Prepares draft budget and enters it for discussion in CM;
- After adoption of the annual law on state budget from NA, it observes the performance and keeping of the law;
- Fulfilment of the amendments and supplements to the budget, approved by NA within the budget year.
- Monthly allocation of the annual budget and extension of budget funds to FLSU, including municipalities.
- Prepares plans of the needs for financial resources and short-term management of the bank accounts of the budget organizations;
 - Prepares a report on the budget performance to CM and NA;
 - Observes for the extended and borrowed funds by Government;
- Financial reporting and presentation of financial information to the National Assembly, Council of Ministers, National Statistical Institute, Bulgarian National Bank (BNB), international financial institutions, including IMF and the World Bank, and to the general public.

The roles and responsibilities of MoF are:

• In drawing up budget:

- Drafts budget prognostication in compliance to performed by other establishments and itself economic research and analyses of the dynamics of GDP, prices, income, credit and foreign currency policies and on the key financial results from activities of the state, municipal and private economic objects;
- Prepares and sends budget directions to the state bodies for drawing up draft annual budgets and determines the terms for their presentation;
- Reviews and prepares a position on the draft budgets of Chamber of Accounts and Supreme Court Council;
- Analyzes the draft budgets presented by the separate ministries and establishments and clarifies the amount of the various revenues and expenditures by checking on the legal compliance of the planned revenues and expenditure;
- Draws up a draft state budget;
- Prepares a draft CM ordinance for performance of state budget;
- Consolidates and approves three-month allocation of the funds in the budget of primary budget credit executors.

• In budget performance:

- Issues a regulation, together with the BNB, on the cash performance of state budget;
- Periodically allocates and directs the incoming revenues in compliance to the quarterly allocation of expenses;

- The expenses are performed up to the amount of the received revenues on bank accounts of the republican budget and the budget credit executors;
- Extends or uses non-interest loans at the expense of vacant budget or extrabudget funds in certain cases;
- In some cases transfers credits from one budget to another when this does not violate the balance of budget;
- Permits additional credits when they are covered by overperformance of own revenues and by discovery of new sources of revenues;
- Suspends transfers of certain subsidies and blocks accounts of budget organizations in cases on non-performance in compliance to the provisions of effective legislation or in case of found violations of financial discipline;
- Sets forth the order for closing the bank accounts, together with the BNB;

• In budget performance:

- Draws up a report on the performance of state budget following the full budget classification based on the reports on the central budget, judiciary power and PBCE, including municipalities, certified by the Chamber of Accounts;
- Represents the report to CM for review, approval and entry to NA;
- Determines, in coordination with the Chamber of Accounts, the order and terms for working up and representation of the reports to PBCE, including municipalities;
- Determines the order for collection, utilization and reporting of other funds, together with BNB;
- Prepares and presents the reports of the extrabudget accounts and funds together with the reports on performance of the respective budgets and budget funds.

6.3.4 First-Level Spending Units

FLSU include the ministries, establishments and other budget organizations. FLSU receive their funds from the central budget and from own revenues and bear the total responsibility for the management of their budgets. Within the framework of the annual law on state budget, they reallocate funds for the units in their system on a monthly basis. FLSU receive the reports from the units under them and prepare consolidated reports which they submit to the Ministry of Finance. The financial-accounting departments of the budget executors prepare financial-accounting reports on a calculated base, as well as cash reports on budget performance. Cash reports are presented for each month, quarter and on a yearly basis, and the financial reports on calculated base – per quarter and per annum. All FLSU have their accounting systems with core standard software for reporting of budget and accounting operations and data generation for the preparation of reports on Excel worksheets. The FLSU number is currently 37 minstries and state establishments and 264 municipalities.

6.3.5 Second-Level Spending Units

SLSU represent a broad sprectrum of organizatins and establishments. They perform their annual budgets by using budget funds through extended monthly limits for payments from FLSU through a special system for electronic budget settlements – SEBRA. The system is developed and introduced in order to manage and exercise computer control over the payments ordered by budget executors from all levels. SLSU are responsible for the management of these funds, for the reporting of revenues and expenditure and for the reporting to FLSU. Some of SLSU have

organizations subject to them. SLSU have their own departments for accounting and financial management. The structure and procedure of these departments differ among themselves to a considerable degree. Currently there exist about 1400 SLSU. Over 700 of them are in the sphere of education. It is planned that the number of SLSU will decrease in the future. SLSU are the main operative units in the area of each FLSU. SLSU are located throughout the country. Several of them (mostly schools) still do not have available software accounting systems and maintain their accounting on paper.

6.3.6 Lower-degree budget credit executors

The lower-degree budget credit executors are the heads of separate budget units, which are directly subject to the secondary budget credit executor and are identified by the Minister of Finance when this results from a law – for the state bodies and the judiciary authorities and by the municipal mayors – for the bodies of local self-government.

6.3.7 Chamber of Accounts

Chamber of Accounts is an independent control body performing checks in compliance to its audit competences. Chamber of Accounts performs a subsequent audit which is in compliance to the international audit standards, and:

- Exercises control on the performance of state budget, the budgets of the municipalities and other budgets and extrabudget accounts;
- Checks the conditions for arising and servicing sovereign debt;
- Checks the interrelations of the BNB with the state budget;
- Certifies the reports of the budget and extrabudget accounts and funds;
- Presents a report to NA on the performance of state budget, etc.

6.3.8 Agency for Government Internal Financial Control

Agency for Government Internal Financial Control performs check on the correct application of the financial management systems.

Control of budget credit executors encompasses:

The financial activity of the budget credit executors under the republican budget, the bodies, administering revenues in the republican budget; the extrabudget account and funds executors, included in the fiscal reserve; budget credit executors under municipal budgets and funds, state social insurance, "Occupational qualification and unemployment" fund and Health Insurance Fund.

6.3.9 Administrations responsible for the revenue part of the budget

The major organizations for collection of revenues in the republican and municipal budget in the MF system in the Republic of Bulgaria are General Tax Directorate, Customs Agency and the Public Receivables Agency. These organizations have their projects developing systems for financial management of the revenue part of budget in their areas of responsibility.

The National Social Security Institute is also a leading administration for collection of state revenues. Apart from its own revenues, NSSI collects funds on behalf of the National Health Insurance Fund and the Employment Agency.

In Bulgaria a National Revenue Agency was established just recently for collection of tax and social insurance revenues which are currently collected by General Tax Directorate and NSSI. The World Bank supported the project for a reform in revenue collection and this project aims to introduce economically efficient system for state revenue collection and to establish

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automated systems: accounting and information, which will correspond to the international standards.

Other revenue sources are:

- Revenues from privatisation;
- Separate fees collected by some of the establishments;
- Aid, etc.

7 BUDGET REFORMS. STRATEGIC DIRECTION

From 1998 Bulgarian Government implemented an extensive program for improvement of the budget resource management. The reforms play a significant part in the stabilization of economy and the stimulation of economic development and growth. They contribute to the consolidation of budget processes and the information related to these, increase financial transparency and strengthen financial discipline as a whole. Reforms are also directed at improvement of efficiency and qualification in the identification of the priorities in the spending of the limited budget funds as well as at reduction of expenses in budget performance.

Budget reforms include the following main components:

- Development and improvement of a management system for all budget expenses and revenues through the single account system at the BNB;
- Creation of a <u>new accounting framework</u>, through which the information will be summarized from all budget organizations and will provide up-to-date and reliable data with reference to budget performance;
- Introduction of a computerized <u>financial management information system</u>, which should facilitate the reporting of the budget activities and financial management in the state and in the different state establishments;
- Improvement of the budget planning and preparation process, including optimization of the budget cycles, development of mid-term budget projections and introduction of a programmed budgeting and budgeting based on achieved results;
 - Modernization, simplification and rationalization of budget structure.

7.1.1 Improvement of the budget settlement procedures by the Single Account System

An important moment in the budget reform is the consolidation of the budget funds by the single account system with the BNB and the improvement of the budget payments and bank servicing through the utilization of the computer system for settlements SEBRA. The main objective is the centralization of the budget funds in the single account system and the rationalization of payments by their concentration in the system of FLSU as well as the exercise of aggregated control by MoF on the expenses by identification of expense limits on the accounts of FLSU which are with the BNB.

The reform process was initiated at the beginning of 1999, when the FLSU accounts were connected to the central budget account with the BNB. Paragraph 18 of the Transitional and Final Provisions of the Law on Budget for 2000 regulates the gradual introduction of the single account for all budget executors who have accounts with the BNB. In June 2000 all BGN budget, extrabudget and temporary accounts with the BNB were centralized in the single account.

Budget organizations included in the single account system are entitled to holding two accounts with commercial banks – a transit or a zero-balance account for accumulation of the revenues from the accounts of all budget organizations in the BNB as a part of the single account, as well as an account for minute currency settlements.

Accounts in foreign currency are still not a part of the single account system as well as the accounts of the extrabudget funds and budget organizations with autonomous budget outside the BNB.

SEBRA connects Ministry of Finance, primary budget credit executors, commercial intermediary banks and the BNB through the nerwork BANKNET. SEBRA and BANKNET are maintained by an independent company Bankservice Jsc, which is owned by the BNB and by

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about 35 commercial banks. Pursuant to an agreement with MoF, certain commercial banks participate in the effecting of budget payments and collect revenues in the country.

Ministry of Finance identifies currency limits in the SEBRA system for each primary budget credit executor. These limits are aggregated and do not follow the budget classification. In turn, primary budget credit executors set, by SEBRA, limits to their lower-degree budget credit executors. The budget credit executors submit their demands for payment to the commercial intermediary banks and they introduce these to SEBRA. The system for authorization of individual payment transactions is fully centralized. The primary budget credit executors approve or decline (through SEBRA) the payment demands from the lower-degree executors from their structure. In case of exceeding the limit for a certain executor (subject of the general limit for the respective ministry), FLSU declines the payment demand which exceeds the total limit set for FLSU.

In June 2003 BNB introduced a new interbank settlement system: RINGS (system for online settlements). It is meant for amounts over BGN 100,000. The current interbank settlement system BISERA is a sub-system of RINGS for payments amounting to less than BGN 100,000.

7.1.2 New accounting framework

Due to the necessity for the accounting procedures to be harmonized to these of the European Union (EU) and the requirements of the international financial institutions, the modernization of the current accounting system in the budget sphere is an important part of the budget reform. The accounting system is of great significance to the preparation and performance of the state budget, the ensuring of financial discipline and the proper application of the fiscal policy set by the Government.

The harmonization of the accounting procedures according to the requirements of the Guide for State Financial Statistics 2001 (GFS 2001) of the IMF and the European System for National and Regional Accounts (ESA 95) prompted the budget reform and the modernization of the accounting system which is a part of the former.

The milestones of the three-year stand-by agreement with the IMF (1999-2001) contained the requirement to develop a new charter of accounts of the budget organizations, which was introduced in 2001. This has to also contribute to the fulfillment of the commitment undertaken by Bulgaria to the European Commission for improvement of the budget funds management, strengthening financial discipline and increased transparency in budget planning and budget performance.

Budget and State Treasury Directorate developed a new single charter of accounts for the budget enterprises. The structure of the charter of accounts was discussed with consultants from the Technical Assistance Mission of the IMF, the SIGMA Program and EUROSTAT.

By paragraph 44 of the Transitional and Final Provisions of the Law on Budget of the Republic of Bulgaria for 2001 and the instruction of the Ministry of Finance BDS № 07/09.02.2001 г. the introduction was started of the new charter of accounts in the budget sector. In view of facilitation of the transition to the new charter of accounts a transitional guide and transitional table were developed.

The structure of accounts as well as the principles and regulations of the acknowledgement, evaluation and classification of assets, liabilities, revenues and expenditure as a whole were based on the concepts and system of the new GFS 2001, harmonized with the System of National Accounts (SNA 93) and the European System for National and Regional Accounts (ESA 95). The provision of financial information for the purposes of macroeconomic and financial analysis is underlined, and this is a requirement of the basic users of financial information related to the budget sector. The GFS 2001 system was selected for speeding up the

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harmonization and coordination of the reporting data for the budget sector with those from the other three macrostatistics: SNA, monetary statistics and payment balance.

Another reason for the choice made was the necessity for taking in consideration specific requirements during the pre-accession period, such as economic indicators in the budget sector – budget deficit, level of leverage, etc., which are calculated following the methodology of ESA 95. These are the indices on which the accounting and statistics of the budget sector are focused.

The transition to the new charter of accounts allows not only consolidation of financial reports on a calculated base, but also use of this information for analysis of the structure of assets and liabilities, of payables and receivables, of management decisions, budgeting, etc.

In the future the accounting methodology of the budget sector will be focused on the provision of information about macroeconomic targets in compliance to the abovementioned requirements of the international institutions.

7.1.3 Information system for financial management

With reference to the reforms held, the Government of the Republic of Bulgaria decided to introduce financial management information system (FMIS) in the budget sector in 1999. The new system has to be fully computerized and built up on the basis of the best practices in the advanced economies. The project for FMIS building-up is led by Ministry of Finance and includes several stages.

- 1. Development, pilot phase and introduction of the core functions of the system in FLSU, as well as in some SLSU.
 - 2. Introduction of the system to SLSU, instalment of some additional functions.
 - 3. Introduction of system to other budget executors.

Table 1 shows the core functions of the software package for FMIS, Phase 1.

Functional area	Core functions	
	Phase 1	
Management and control of budget	Budget management and control	
Financial accounting	General Ledger	
	• Receivables	
	• Payables	
Management of cash flows (funds)	Management of liquidity and payments	

Table 1: Core functionalities of FMIS, Phase 1.

At completion of Phase 1 a central server in MoF was launched in operation and three modules of SAP R/3 were configured, namely "Financial Accounting", "Payments management" and "Budget management". These modules were installed and connected to the central server in all FLSU and 6 SLSU in the system of the Ministry of Finance.

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After the completion of Phase 1 the project was subject to re-evaluation so as to guarantee that the approach used in implementation of FMIS is still expedient and corresponding to the best practices. In the revaluation the experience and findings from the first phase were analyzed. The following three problem areas were outlined:

- The time, required for attraction of users to use the system, was longer than initially planned and as a result, the completion of the user tasks was hindered and influenced the keeping of the terms.
- It is difficult to manage and control a system covering such a large number of users and legally independent organizations.
- It is necessary for the project to have the wholehearted support of the senior management as their committed participation is critical to the success in the system implementation in real operation.

As a result of the revaluation, a decision was taken that the second phase of the project should be directed at further development and launching into operation of the foundation of FMIS in a well-defined and controllable selection of organizations at a level "pilot project", after which to undertake extension of the system and its implementation in other budget executors in the MF system.

In 2001 the performance of the project of PHARE Program BG 9909-02-01 "Support for implementation of the mid-term strategy and restructuring of the Ministry of Finance" started. One of the activities of the project was the providing of assistance in the performance of Phase 2 of the project for FMIS implementation.

Within the above-mentioned project of PHARE, it was consented that the following new functionality be added at a level pilot project in the budget credit executors under the control of the Minister of Finance.

Functional area	Core functions Phase 2-1
Financial accounting	Accounting of the long-term assets
	Material economy

Table 2: Core functionalities of FMIS, Phase 2-1.

It was decided to select units at MoF for the pilot project, which should encompass the full information chain, i.e. from a third-degree executor to the organization preparing the consolidated reports. The selected units in MoF were as follows:

- Budget and State Treasury Directorate it was responsible for the reporting of the budget organizations (from 01 May 03 State Treasury Directorate).
 - Financial-accounting Department in MoF FLSU.
 - General Tax Administration SLSU.
 - Teritorial Tax Directorate Sofia City TDBCE.

Parallel to Phase 2-1 a project started for implementation of two modules for the purposes of EU fund management.

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Functional area	Core functions Phase 2-2
Cost accounting	Project Management Cost management

Table 3: Core functionalities of FMIS, Phase 2-2.

The units of MoF, where the functionality will be introduced as planned in phase 2-2 as a pilot project, are the following:

- National Fund Directorate central treasury body managing the aid provided to the Republic of Bulgaria by the pre-accession funds of the EU.
 - Executive Agency "Central Financing and Contracting Unit" at MoF.
 - Executive Agency at Ministry of Regional Development and Welfare.

For the following phase 3 and phase 4 adding of the following functionalities of FMIS is planned:

Functional area	Core functions Phase 3	Core functions Phase 4
Planning	Planning and preparation of budget	 Macroeconomic analyses and prognostications
Budget performance	Accounting and management of the cash flows of the central budget	
Observation and control	 Observation and control of the budget perofrmance Management information and analyses 	
State treasury	Observation of the currency fundsLiquidity management	
Cost accounting	• Cost management (Program budgeting)	 Management of EU funds (structured funds and Cohesion Fund)
Auxiliary functions	• Providing interfaces between FMIS and SEBRA	• Human Resource Management

 Providing interfaces between the financial supplies 	of
systems of BCE and Management of colorie	20

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FMIS functions, serviced according to the regulatory framework by external establishments, such as management of the revenue part of the budget, internal audit and control, bank systems, the systems of social and health insurance will be built up outside FMIS and are not planned in terms of resources and funds.

As of the current moment the present technological support of FMIS, and in compliance to the new trends of the up-to-date FMIS applications are based on technology "client-server". The industry for information technologies recently launched a change to more centralized decisions, where a larger part of the processing is performed in a central server. One of the opportunities is that all applications and data be located in a central server and that access to it is provided to all users by browsers. This decision will ensure sharp reduction of the number of installations which should be serviced and maintained and may increase the productivity of these functions, but on the other hand, this requires very high quality and reliability of the communications and in some cases significant investments.

The MF strategy is to stimulate centralized technical decisions when this is appropriate and efficient. The strengths of the centralized system have to be balanced with the quality of the communication networks.

The work capacity that FMIS should ensure is shown in the table below:

	Installation at MF	Other installations
The work capacity of the system (except for the planned switch-offs for maintenance)	99,9 %	99 %
Average time for performance of standard transactions	3 seconds	5 seconds

All applications and components of FMIS have to be integrated with the existing and planned equipment and applications in MoF and in the budget credit executors.

Application software should provide standard interface with other core financial management information systems in the budget sector of Bulgaria. This opportunity has to ensure unproblematic and efficient integration of the information flows and should provide MoF with full and reliable picture of the state finance at any moment in time.

The intergration of the applications has to be achieved at a functional level. The applications serving different functions should be standardized enough in terms of core data and terms, so as to accomplish integration at a business level. Thus, they may be included in logical datawarehouses and provide the opportunity for sharing information resources transparently to the user.

FMIS should concentrate on the use of standardized tools for work in the technological environment – operational systems, DMS and applications, wich ensure high level of reliability, opportunity for resource sharing and are in compliance to the IT policies of the Government and

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especially that of the Ministry of Finance.

7.1.4 Planning and preparation of budget

Development of a new approach is planned in the budget planning in Bulgaria, which will result in a more efficient management within the limited resources accompanied by evaluation of the mid-term and long-term results from the implemented and offered budget decisions as well as higher transparency to the general public. In the reform plans for budget preparation a couple of unsolved issues stand out:

- The optimization of the budget cycle has to find its best time shedule;
- Reorientation of the budget process to program analytical and mid-term prospects with increased capacity for the implementation of the new budgeting method;
- Redefinition of the functions and responsibilities of all parties taking part in the planning and preparation of budget, including decentralization of the budget process with stronger financial discipline at a level of FLSU;
- Effective prioritization of the state expenses in compliance of the adopted strategic priorities of Government;
 - Achievement of higher economies in the provision of public services.

In case the reform measures are successfully implemented, this will result in substantial improvements in the budget process:

- The budget preparation process will be rationalized.
- Efficient prioritization of the budget expenses will be achieved in compliance to the overall policy of Government.
 - Budget policy decisions will remain valid in a longer time horizon.
- The time for contracting the amount of the budget funds extended to FLSU will be diminished. The latter will gain a more realistic idea of the limitations within the framework of which they have to prepare their budgets at an earlier stage of this preparation.
 - State expenses will become more efficient and economical.
- Parliament will have available more time for an adequate and comprehensive review of the Government's policies.
- Higher transparency will be ensured for the politicians regarding the measures and programs applying for state financing.

Bulgaria has already started working on reforms, budget planning and preparation. Work groups were established in different areas of reform with the support of external consultants; pilot projects will be implemented alongside in the sphere of program budgeting. Software systems may assist and speed up the performance of budget planning and preparation, but it is necessary to also have well defined and experienced in practice processes for budget working up. Bulgaria needs a couple of years for the introduction of such processes. It is recommended not to undertake computer automation in this area, while a clear consent is not reached about the directions of the work.

8 STRUCTURE AND COMPONENTS OF THE FINANCIAL MANAGEMENT INFORMATION SYSTEM

The goal of FMIS is to provide automation to the financial management functions, including capacity for reporting, control and analysis. The main challenge for the technology is to maintain the strategic work directions. The overall technical solution has to fully support the work functions and besides, should provide an integrated solution eliminating the duplication of data, tiresome manual procedures, it diminishes operative risk and improves control environment as well as transparency.

All described functions of FMIS arise from the conceptual model of financial management. The core functions of FMIS do not define the final number of applications or modules object of the system. They aim only to give a strategic direction and scope in view of their subsequent acquisition, development and maintenance.

FMIS, as application environment and functions is divided into two: core and auxiliary applications.

FMIS core applications included the key functions of the financial management such as Budget management and control, Financial Accounting (General Ledger, Receivables, Payables, Fixed Assets and Material Economy), Cash flow management, Debt Management. etc.

The auxiliary applications are those servicing some specific functions of financial management, and are built up or were established as distinct independent applications, such as System for electronic budget settlements, Human Resource Management, Management of Supplies, etc.

To both of these parts of FMIS separate applications may be added depending on the strategic development of the system and the financial management functions. As the building-up process for FMIS continues, the structure and functionality of FMIS may and will be upgraded according to the priorities and development of the process.

The structure and components of FMIS are split in a couple of main parts in accordance to their use. These are: technical environment (technical tools, operational systems, DMS, networks and communications), application environment (core and auxiliary applications), management tools and methods, tools for connection and information exchange with external systems.

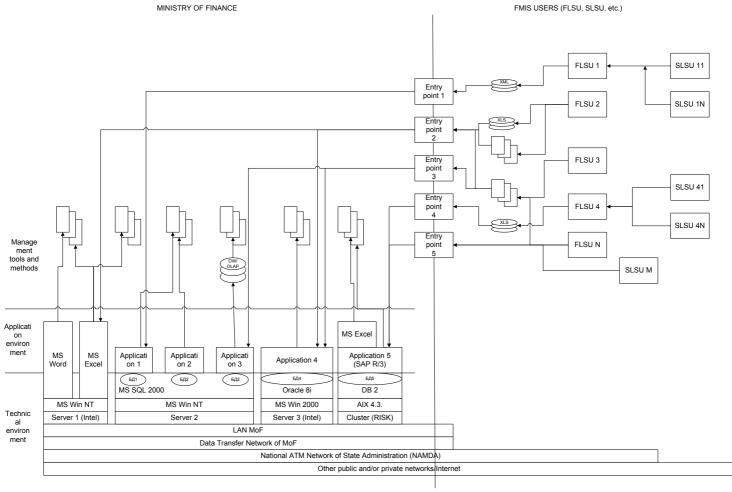
8.1 Current architecture of FMIS

Hereunder an overall scheme is provided of the current architecture of FMIS, and the main components of FMIS are described.

The architecture does not aim to describe in detail the existing elements of the different parts of the architecture, but rather gives insight about the most important points focusing on the delivery of one integrated strategic vision on the existing organization and the ways of interrelation and exchange of information among the separate participants in the financial management process.

In the description of the architecture itself details will be provided about it as long as they matter for the overall development of FMIS.

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Фиг. 1. Current architecture of FMIS

8.1.1 Information and technical architecture

Currently FMIS is built up as a centralized system whose data are entirely concentrated and managed in the Ministry of Finance.

8.1.1.1 Technical infrastructure

The workstations operating at MF and servicing functions of financial management are about 600 as of present. The workstations operating for end users exceed several thousand units.

The workstations are of different classes and have different manufacturers. The parameters of the workstations of the users are not standardized, but as a minimum the following features are guaranteed:

Elements	Features
Processor	Intel Celeron 600 MHz
Memory	128 MB RAM
Hard Disc	1 x 4 GB
Floppy disc device	1.44 MB
Monitor	15 ", TCO 95, min. 85 Hz (800x600)
Keyboard	BG/Latin
Mouse	1
Operational system	MS Windows 9X/NT/2000

The workstations of FMIS clients are divided basically in two groups: such performing only the functions related to the presentation of data (presentation layer) and such, working as clients and taking over a part of the data processing functions.

The first type workstations service mainly the Internet-based applications or those part of SAP R/3 environment. These functions are performed between the user workstation and the central system and the entries from the keyboard are made through hthe standard Internet Explorer or SAP GUI (Graphical User Interface).

For work of the components from SAP R/3 at the user workstations SAP GUI is installed for all workstations at budget credit executors, included in phase one. The clients are standard PC, Intel-based.

The servers used for the financial management purposes are grouped in two categories according to their architecture:

- Intel-based servers
- RISC servers
- Intel-based servers have as a minimum the following parameters:

CPU: PENTIUM II – 600 MHz – Upgradable to 2CPU

RAM: 256 MB SDRAM ECC Memory Upgradable to 2GB

HDD: Nx9 GB Wide Ultra SCSI

For ensuring the functionality which is the base for FMIS and services a part of the functions on budget performance, central multiprocessor cluster server with high accessibility is used, which consists of two separate servers IBM RS/6000 7017-S7A under management of the operational system AIX 4.3 and management system HACMP 4.3 from highly accessible multiprocessor clusters.

Multiprocessor cluster consists of two duplicated servers IBM RS/6000-S7A with common disc sub-systems. Each one of these systems has the following characteristics:

Processors:

4 x 262MHz RS64 II 64-bit RISC processors with 8MB L2 cash. It is possible to enlarge to up to 12 processors.

Memory:

16 GB ECC (with check and correction of errors).

External memory:

- 3 x Ultra SCSI PCI-Bus adaptors two duplicated for access to system discs and one for access to the peripheral devices.
- 2 x upgraded series adaptors RAID for duplicated access to the unit where the data base is located

Internal discs 4 x 18.2 GB 1" Ultra SCSI Hot Swap for installation of AIX, DB/2 and SAP R/3. For the purpose two discs are enough, whike for the other two duplicated copy is maintained. 12-slot bearing panel SCSI Hot-Swap for additional internal discs. Disc sub-system with 8 discs Hot Swap x 18.2 GB SSA and reserve power supply for saving the database.

Peripheral devices:

Floppy disc device 1.44 MB

32-speed CD-ROM

Band syub-system 4mm DDS-3 Autoloader with capacity: 48/96 GB

Network adapters:

Adapters 3 x Ethernet 10/100, two for duplicated network access and one on a stand-by regime.

Asynchronic adapter 1 x 8-port for exchange of Heartbeat between the two servers.

UPS (non-stop power supply device): 10 KVA UPS:

Each of the systems is developed for performance of approx. 63 138 Flds transactions per hour. UPS guarantees 30 min. Work of the system after energy supply is stopped.

The application system SAP R/3 is installed on one cluster. The distribution of processing, application of business-logic and administration of the applications is done centrally.

Apart from the the production system located on the central highly accessible cluster for the needs of FMIS at MF a system for development, testing and training of the users of one of the servers, known as "test" is established.

The technical characteristics of the "test server" are considerably lower than those of the rpduction environment. This is an independent system which does not need high accessibility. It is provided with UPS, guaranteeing 10 min. work of the system after stopping of energy power supply.

<u>Test server configuration is as follows:</u>

- Processors: 4 x 340MHz RS64 II 64-bit RISC processors with 8MB L2 cash.
- Memory: 4 GB ECC (with check and error correction).
- External memory: 2 x Ultra SCSI PCI-Bus adapters one for access to the system discs and one for access to the peripheral devices.
- Internal discs 5 x 18.2 GB 1" Ultra SCSI Hot Swap for installation and data testing for AIX, DB/2 and SAP R/3.
- 6-slot bearing panel SCSI Hot-Swap for additional internal discs.

Peripheral devices: Floppy disc device 1.44 MB, 32-speed CD-ROM

- Band device 4mm DDS-3 with capacity: 12/24 GB
- Network adapters: 1 x Ethernet 10/100
- **UPS: 5 KVA UPS**

The product SAP R/3 is installed also on the test server as 4 separate clients as follows:

- Development client
- test client
- client QAS (quality control)
- client for user training

QAS system, the user training system and the production system are maintained with the same status through the transportation environment of SAP R/3.

The central highly accessible cluster and the test server are configured in a virtual private

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network within the framework of the LAN of the MF. The user enquiries reach each of the systems passing through the identification of SAP-router, and for the user outside the MF and through the identification of Fire-wall of the Ministry.

8.1.1.2 Operational system

The used operational systems of the workstations are mainly Windows NT4 and Windows 2000. Partially workstations are used with Windows 95/98 or Windows XP.

All Intel-based servers work with Windows NT4 or Windows 2000 operational systems.

All RISC servers in MF, servicing the functions on budget performance (SAP R/3) work with operational system AIX 4.3.3.

8.1.1.3 Database Management Systems

Data in FMIS, generated as a part of the budget performance modules and which are a part of SAP R/3 are kept in a central database in a relational system for database management DB/2, issue Enterprise. The management and administration of the data are effected in a centralized manner.

For all the other applications, located in MF and servicing financial management functions MS SQL 2000 is used. All databases in MF are centralized.

SEBRA is the exception, where Oracle technologies are used.

For processing and saving of the data in the separate end users (PBCE, SBCE, etc.) of FMIS mainly relational systems for database management are used (RSDM).

8.1.1.4 Networks and communications

The access to the system and its fuctions for users at MF and its SBCE is provided through the National ATM Network of the State Administration (NAMDA), the Network for data transfer of MF and the LAN of the Ministry. The access to all other users is provided through one of the following schemes depending on the establishment where the user operates:

- State administration network;
- Telephone system (ISDN);
- Public networks for transfer of data in the country;
- Any combination among the above options.

The access to the systems and their functions for the user at MF is provided by the MF LAN. The provision of information for all the other users is ensured by especially developed interfaces for data standardization forming the necessary selection of data in XML, TXT or XLS formats. The data so formed are provided to MF on paper or electronically (by e-mail), where they are processed.

Still a considerable part of the information is provided on paper. This part of the information is entered manually by the MF employees.

8.1.2 Applications (modules) servicing financial management

FMIS is subdivided into basic applications servicing the basic functions of financial management and additional applications servicing some specific financial management functions.

FMIS basic applications cover key financial management functions defined and executed as part of projects during the 1999 – 2004 period, namely: Budget management and control; Financial accounting (General Ledger, Receivables, Payables), Cash flow management, Fixed Assets, Tangible Assets, Project/Program Management, Cost Accounting, Debt Management etc.

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A detailed description of individual applications' functions is provided below.

8.1.2.1 Management and Control of Budget Payments

SEBP is a web-based centralized system automating budget payments and bank servicing of budget credit executors. SEBP provides a centralization of budget funds within the system of the main account and rationalization of payments through their concentration in the system of first level budget credit executors and exercising aggregated control by the Ministry of Finance on expenditures by defining spending limits on first level budget credit executors' accounts with the BNB.

SEBP was established and has been serviced since 1999 by BANKSERVICE pursuant to the State Budget Act.

Providing an interface between SEBP and FMIS is important for achieving the FMIS objectives. No such interface has been developed, but it is planned for phase 3.

8.1.2.2 Budget Execution

The current functionality of the module provides for the budget execution of budget credit executors.

8.1.2.2.1 Budget Control

The functionality of the FMIS for budget control and management should assist the monitoring, analysis and reporting of budget execution. It includes both the revenue and the expenditures side of the budget. The proposal is closely related to the General ledger of the FMIS.

The budget control functionality is capable of extracting the necessary data from all parts and levels of the system. The first level budget credit executors are able at all times to receive accurate, full and updated picture of the budgets, limits, contracts, expenditures and payments in their working area. The Ministry of Finance is in a position to get a detailed picture covering all budget executors.

The module includes mechanisms for the allocation and sub-allocation of annual budgets by organizations, functional areas, expenditure items and periods. There are no limitations as to the number, the structure and duration of budget allocation periods in the course of the year. The system executes verifications of the integrity of limits by organizational levels, functional areas, expenditure items and periods. The Ministry of Finance is given the opportunity to monitor and manage the control system.

The system functionalities need to provide budget organizations with the opportunity to apply for re-confirmation of financial liabilities, expenditures and payments. Mechanisms should be in place providing first level budget executors and the Ministry of Finance with the opportunity to assess and approve such requests. The process of assessment and approval should be subject to automation according to the selection criteria defined by the user or according to decision-making algorithms.

The system should include standardized queries and reports functions related to comparisons between budgeted and actual values, including in terms of financial liabilities, expenditures and payments.

The system also provides mechanisms for consolidation and presentation of such information. It enables the generation of user-defined queries and reports. The report generator should provide tools for creating graphic and digital presentations.

Such a module was introduced in 1999 and is part of the FMIS kernel. It was introduced on SAP R/3.

8.1.2.2.2 Accounting

The accounting modules have been developed and supported since 1999 as part of phase 1 of the development of the FMIS. They were implemented through SAP R/3.

8.1.2.2.2.1 General Ledger

The general ledger presents a full and authentic picture of all activities conducted by budget organizations. It covers all phases of the activities from the initial allocation of budget funds to the issuance of payment orders and payment of goods and services. The ledger can include payments and payables, cash and accrual accounting and reporting. This functionality gives thorough representation of the state assets and liabilities as well as of the cash flow.

The General Ledger is highly integrated into all elements of the SAP R/3 system. All activities should be accounted automatically and in parallel into the accounts of the General Ledger and in all relevant sub-accounts, including the expenditures and assets accounting functionality. This relates both to the primary accounting operations and to operations which ape the result of internal accounting procedures. The operational codes of the General Ledger are similar to these of the sub-accounts. The General Ledger includes the chart of accounts, the structure of consolidation and the accounting calendar of the Bulgarian government. Budget-financed organizations have been provided with some flexibility with respect to the lowest classification levels in view of their specific needs and interests. They can also adapt or use other parameters of the General Ledger system in compliance with their specific needs, for instance those related to differences in their tax or legal status. The Ministry of Finance is in charge of defining the authority of budget-financed organizations in this respect. The system provides the means for monitoring and control of corrections in the classifications at the lower levels. These tools are used both by budget organizations and at the central level. The Ledger of each organization is consolidated in the General Ledger of the Ministry of Finance.

The system includes standardized types of operations facilitating the entering and processing of data. Users are authorized to define specific types of operations with specific processing rules. Data may be entered both online and by batches. The module provides automation capabilities for specific functions and operations. The system provides tools for real-time simulation and assessment of the results of entering certain data in the form of display of accounts or pro forma financial reports.

The Ledger is able to process all accounting requirements which budget organizations are obliged to adhere to according to the Bulgarian legislation including provisions related to VAT and tax levying, refund and payment (with the exception of the functions which are efficiently processed by existing independent management systems for pay-rolls and human resources).

The Ledger supports multi-entry, adaptable budget calendars. It is capable of keeping accounting records for two different years. The system allows for corrections at the end of the preceding year after the accounts for the current year have been activated.

The system provides control and verification capabilities. This includes mechanisms for comparison between the General Ledger, sub-accounts, bank accounts and government systems for revenue collection and debt management. Mechanisms include both manual and automated adjustment procedures which generate corrections for incorrect data.

The General Ledger generates and provides the following chart of accounts reports: data on the original account entries; payrolls; journals; lists of operations; error reports; cash flow reports; operational accounts; annual and quarterly reports; financial reports by months, weeks and days; accounted and cash accounts and reports; aggregated and detailed accounts and reports; accounts and reports by sectors and consolidated accounts and reports; other information required by the regulatory framework.

8.1.2.2.2.2 Receivables Accounts

The FMIS provides a function for tracking and processing of budget organizations' receivables. It is able to process all kinds of payments in the organization's favor, including non-tax revenue such as sale of goods and services, as well as fees and commissions. Receivables are entered into a sub-account of the ledger, which is connected with the functionality for management of turnover and revenue and is supported by it.

This functionality should contain all tools needed for effective tracking, management and analysis of the budget organization's receivables. Also available are functions for providing for the correct coordination of payments and receivables as well as tools for the deletion of uncollectible receivables. The system provides functions for documenting operations related to receivables. It provides an option for adapting documents related to these operations in view of the specific requirements of the budget organization. This holds also for the confirmation of payments, confirmation of balances, bank statements and interest calculation. It provides mechanisms for the centralized defining and management of clients of various budget organizations. There is also a mechanism for avoiding duplication and coordination of the cooperation with these clients. The functionality operates with key data identifying a person such as: name of client; address and telephone number; BULSTAT etc.

The functionality supports online visualization of the condition of individual accounts; condition of group accounts; statements on the movement under the accounts for specific contracts and clients; classification of accounts by clients, contract deadlines, amounts etc.

Receivables accounts generate standardized reports on: budget proceeds by months and years; actual revenues, sale of goods and services; accumulations for a given period; payments for a given period; monthly and annual balances; indicators on the collection of revenues, for example as a percent rate of planned revenues; calculated interest and fines;

The functionality provides extensive capabilities for control and auditing of documentation, processes, functions and actions which are part of the revenue collection of budget organizations. The management of these tools is within the MoF's authority which could delegate such authority to internal control and auditing structures within the budget organizations where appropriate.

8.1.2.2.2.3 Payables Accounts

The FMIS contains a modern, full-fledged module for monitoring and processing of budget organizations' payables. This module is able to process all kinds of payments made by organizations. It represents a sub-account of the General Ledger.

The payables module contains a number of tools and functions for tracking and management of payables by a most effective methodology to avoid delays and payment of interests and fines. It provides mechanisms for the centralized defining and management of suppliers making deliveries to various budget organizations. Also required are means for avoiding the duplication and coordination of the cooperation with these suppliers.

The primary documents for suppliers include the following data: name; address and telephone number; BULSTAT; other identification numbers; bank data etc.

The module enables the introduction of incoming invoices. It provides options for the registration of payment orders, financial payables and purchase orders. All incoming invoices are attached to the respective contract and expenditure document. The system can process various types of discounts and credit statements. It can also levy VAT and the remaining types of taxes.

The payables module supports the standardization and automation of payments. It supports all standard methods of payment with ready-made forms. The module has the capacity to process

various types of foreign currencies for one budget item both in Bulgarian leva and in foreign means of payment.

The module provides extensive options for queries and reports on an active.

The module includes extensive capabilities for control and audit of all documents, processes, functions and actions representing a part of the reporting of invoices and payments in budget organizations.

8.1.2.2.3 Cash flow management

The payment functionality of the FMIS supports all types of payments, currently or expectedly practiced in Bulgaria. Extended capacities are needed for electronic payments. The functionality should support payments in BGN, as well as in foreign currencies.

The payment module is fully integrated with the FMIS and particularly with the applications for receivables and payables. Procedures and functions are automated to the highest possible degree.

The means for control should be available in the Ministry of Finance as well as on first level budget execution. Control schemes are automated. The functionality should monitor and control budget revenue. This function interoperates with and supports the receivables functionality.

Mechanisms are available for equalization of authorized payments with bank statements and accounts in liabilities. These mechanisms are automated. The functionality generates reports with basic data.

The module has been developed and supported since 1999 as part of phase 1 of the development of the FMIS.

8.1.2.2.4 Fixed Assets Management

The module is a standard application, integrated with the other accounting modules. It contains procedures for registration, accounting, management and control of fixed assets.

The module can enter the value of assets, acquired by building or bought with own budget, depreciation, re-evaluation, discharge of assets as well as data as to who performed the accounting operation and its place (room N, store-house, department)

The module supports accounting entries in the event of additional acquisition of assets, disposal of assets, re-valuation and depreciation.

The accounts for depreciation of fixed assets will be used after the decision for the calculation of depreciation in the government sector is made. For the time being the Ministry of Finance is not planning to introduce the calculation of depreciation and use of these accounts by budget organizations.

The fixed assets functionality includes a detailed register of all fixed assets and properties of the budget organization. The fixed assets register contains the entire key information related to fixed assets in budget organizations. It includes the following items: designation of asset; asset identification; short and detailed description of asset; classification codes; number of account; code of the expenditure centre; month and year of installation of the asset; original value of asset; expiry date of asset; residual period before expiry date of asset and many others.

The fixed assets register provides information regarding: depreciation orders; amount of annual depreciation; net value; accumulated depreciation amount.

The application supports the control of deliveries and inventory lists and provides information on the location, use, depreciation and value of individual assets. The application

supports the consolidation of the assets value in compliance with the chart of accounts as well as the general management of accounts and assets codes.

The module generates queries and reports in connection with the entire information on each separate asset, on assets classified according to the account number, the types, groups of fixed assets with specific location, and on the time-frame of purchase or construction. The application generates an inventory list for fixed assets.

The system also generates all reports and statements related to fixed assets which are submitted to NSI or the Ministry of Finance. This requires the generation of monthly and quarterly cash flow reports, annual reports, and draft budgets.

The module has been introduced and supported since 2003 as part of phase 2 of the development of the FMIS.

8.1.2.2.5 Tangible Assets

The application provides full and detailed information regarding the tangible assets of the budget organization. The materials are grouped using 8-letter code classifications. They can be additionally identified by a 4-letter code for tracking of their movement.

The module can issue standard storehouse documents, tax and non-tax invoices, debit and credit statements, documents for store availabilities and pro forma invoices. The following operations are available: initial storage data, delivery of goods, transfer of stocks between different warehouses, return of goods from deliveries, inventory list.

Reports are generated according to combinations of different criteria, such as: type of operation, period, groups of document numbers, contract of party, warehouse, monetary units, operators, room, department, accountable person, type of asset.

The module enables carrying out comparative analysis of goods on stock, planned receipt and delivery of goods on a given date. If inadequate supply on stock is identified, a draft delivery request should be generated.

After each movement of goods a verification of available stocks is automatically carried out thus preventing the unauthorized use goods and negative balance of stock categories.

The application provides information as regards the date of delivery, discrepancies in delivery dates, discrepancies in the quantity of supplies and approximate deadlines of procurement.

The system registers the number of the document at the time of inventorying the stock and the release of the stock from the warehouse.

The application generates inventory lists for stocks.

The module generates reports and statements on stock supplies which are submitted to the NSI and MoF. This is necessary for the generation of data for monthly and quarterly reports, and also for annual accounting reports according to the reporting organization and the type of report which enables drafting a budget.

The module has been introduced and supported since 2003 as part of phase 2 of the development of the FMIS.

8.1.2.3 Overseeing and Control of Budget Execution

The budget control application is capable of extracting the necessary data from some parts of the Financial Management process at the Ministry of Finance. The Ministry of Finance is given information on the budget execution using mostly data in Excel format.

Based on the information from budget credit executors the execution of the annual budget is being monitored. The standard functions of Excel are used to draft requests and statements related to the comparison of amounts under the budget and the actual amounts, including those on commitments, expenditures and payments, mechanisms for consolidation and provision of such information.

Some modules of the application, performing functions of overseeing and control over budget execution and public investments, have been partially developed. Apart from the functions of the modules serving the activity of the Ministry of Finance, there are also interfaces for preparing and supplying data to the modules' users – municipalities and budget credit executors.

Further development of the module is planned as part of phase 3 of the development of the FMIS.

8.1.2.4 Debt Management

The debt management system was established as early as 1999. It provides automated tools for entering information gathered from various sources and related to debt monitoring.

The application provides methods and means for drafting standard statements and reports on debt management.

Reconsideration should be given to the information requirements related to debt management.

Within this reconsideration, analysis should be made of the means for optimal integration and co-ordination of the exchange of data between structural units, participating in the management of the debt/assets. Those basic structural units are Government Debt Directorate, State Treasury Directorate, National Fund Directorate and Ministry of Finance External Finance Directorate, as well as the BNB.

Further development of the module is planned, related to analysis and definition of requirements for exchange of data about functions of uniform treasury. This further development is planned as part of phase 3 of the development of FMIS.

8.1.2.5 Deliveries Management

The deliveries management module is entirely aimed to meet the requirements of the E-government Strategy. It only services deliveries which are below the thresholds defined by the Public Procurement Act. It is built as a web-based application and services the deliveries functions of the Ministry of Finance.

The deliveries module supports the following functions:

- Maintenance of registers of potential deliverers
- Central selection and management of general deliverers
- Central deliveries and contracting of goods and services
- Assessment of alternative deliverers, products and services
- Control and approval of delivery proposals
- Drafting of calls for offers, tender documentation, etc.
- Review and assessment of alternative offers
- Selection of purchases

There are plans for expanding the functionality by adding new functions and coordination with the amendments to PPA. In addition there are plans to expand the scope of procurement by including procurement procedures under the PPA and the Ordinance on the Act. The application will be in full compliance with the requirements of the regulatory framework and the requirements of the newly established Public Procurement Agency.

The remaining functionality of the module is planned as part of phase 4 of the FMIS.

8.1.2.6 Human Resource Management

The FMIS does not possess a functionality providing effective organizational management, staff administration, recruitment, training, event organization, definition of schedule and deadlines and payment accountancy. To automate such activities individual participants in the process of financial management employ applications used by the various deliverers which generally service key functions of the process, but not the entire process of human resources management.

Currently there are no unified requirements and a single application for human resources management as part of the process of financial management. As this activity is planned entirely as part of the Strategy for modernization of public administration, only after establishing the key requirements and strategy with respect to the human resources system the current strategy will be updated and plans will be made - or rejected - for building a single application and/or definition of single requirements regarding the management of human resources for the purposes of financial management.

The module is planned as part of phase 4 of the FMIS, taking into account the above prerequisites.

8.1.3 Analysis and Accountability of Different Management Levels

Currently the key sources for analysis and accountability used by the management are the ad-hoc analysis and statements intended for different management levels. Data is extracted in the form of paper reports or files in standard format of Excel from all available applications, part of FMIS, by combining them with information from other systems and sources. Partial databases have been established (for reporting budgets of municipalities, for the purposes of financial management of the real sector etc.).

Data from systems external to the Ministry of Finance, such as the tax administration, customs administration and the Economic Analyses and Prognosis Agency (EAPA) and NSSI and NHIF are delivered in most cases in paper form which is subject to additional processing in the form of Excel files or in the form of database excerpts.

There is no capacity for processing multidimensional combinations of classifications and aggregation levels or mechanisms providing the dynamic consistency of the historic database and the adaptation of time-framed data series reflecting the budget structure over the course of a user-defined base year.

The functionality is planned as part of phases 3 and 4 of the FMIS and the functions of providing specific reports and analyses to different levels of management are to be divided according to the needs and priorities of financial management.

8.1.4 Connectivity with other systems and institutions

For the purposes of integration between different applications various methods and capabilities provided by modern information technologies are implemented.

The basic method employed is the exchange of information through specific formats of tables and paper-based statements or through the sharing of information providing access to certain users.

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The key institutions, organizations and partners and their information systems with which participants exchange information in the process of financial management are provided in the model above.

These are:

- Institutions in charge of the revenue side of the budget the tax and customs administration, the State Receivables Agency and the social and health insurance systems;
- Budget credit executors having access to information on the spending of budget funds;
- External donors disbursing financial resources mostly the European Union etc.;
- Institutions providing analyses and forecasts related to macroeconomic indicators the Economic Analyses and Prognosis Agency, NSI etc.
- BNB and commercial banks on payments;
- Controlling bodies PIFCA and the Audit Office etc.

8.2 Future Architecture of the Financial Management Information System (FMIS)

Below is a general outline of the future structure of FMIS with a description of its basic components.

The architecture does not aim at describing the future elements of its different parts, but rather shows their basics, stressing upon providing an overall strategic vision for the future organization and channels for data relation and transfer among the participants in the process of financial management.

The description of the architecture will provide details about it as long as they are important for the overall development of FMIS.

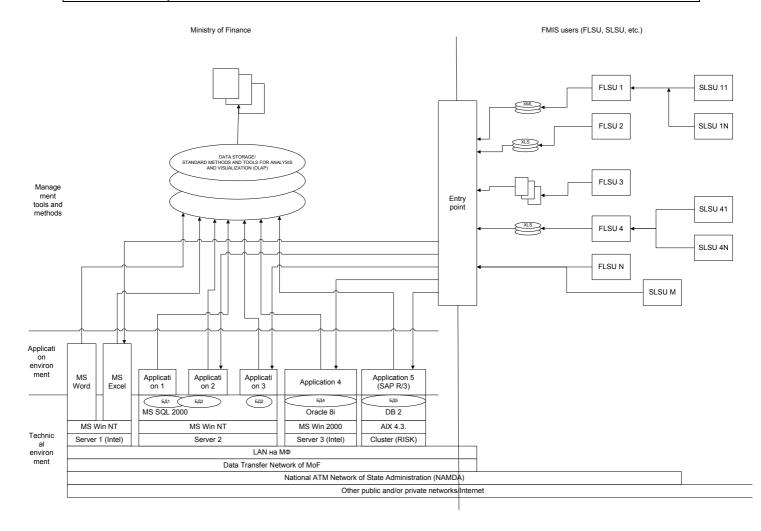


Fig. 2. Future Architecture of the FMIS

8.2.1 Information and Technical Architecture

The strategic objective of FMIS is to continue developing as a centralized system whose data is entirely concentrated and managed by the Ministry of Finance.

8.2.1.1 Technical Infrastructure

No radical change is planned in the required parameters of workstations. They remain the same as the minimums defined in 8.1.1.1:

Elements	Characteristics
CPU	Intel Celeron 600 MHz
Memory	128 MB RAM
HDD	1 x 4 GB
FDD	1.44 MB
Monitor	15 ", TCO 95, min 85 Hz (800x600)
Keyboard	Bulgarian/Latin
Mouse	1
OS	MS Windows 9X/NT/2000

As for servers used for financial management purposes, two groups will remain, which are used currently:

- Intel-based servers
- RISC servers

Intel-based servers will have the following minimum parameters:

- CPU: PENTIUM II 600 MHz Upgradeable to 2CPU
- RAM: 512 MB SDRAM ECC Memory Upgradeable to 2GB
- HDD: Nx40 GB Wide Ultra SCSI

The central multiprocessor cluster server with high accessibility, consisting of two separate IBM RS/6000 servers, will continue to provide the functionality, which serves as basis for the FMIS and performs part of the functions related to budget execution. Additional assembly of the available hardware is planned depending on the workload of the computers.

The technical specifications of the "test server" remain the same and additional assembly is only planned depending on the server's load.

8.2.1.2 Operational Systems (OS)

Workstations continue using Windows NT4 and Windows 2000, possibly replacing them with Windows XP.

All Intel-based servers continue using Windows NT4 or Windows 2000 operational systems.

All RISC servers in the Ministry of Finance, performing budget execution functions (SAP R/3) will continue using AIX 4.3.3 operational system.

8.2.1.3 Database Management Systems (DBMS)

The data in the FMIS, generated as part of the budget execution modules and part of the SAP R/3 will be stored in a central database under a relational database management system DB/2, Enterprise Edition.

All other applications in the Ministry of Finance, performing financial management functions, will continue using MS SQL 2000 or other DBMS available to the Ministry in view of effective usage of the resources available.

The System for Electronic Budget Payments (SEBP) will continue to be implemented and supported on Oracle-based technologies.

The Financial Management Information System does not require end users (first-level, second-level budget credit executors, etc.) to use a specific DBMS. The only requirement is that there is possibility for structured queries concerning the information needed for financial management purposes. Obtaining of DBMS by the participants in the process of financial management shall not be a function of the Ministry of Finance and will be done entirely according to the policies and strategies of the specific administration.

8.2.1.4 Networks and Communications

Ministry of Finance users, second-level budget credit executors and other participants in the process of financial management will continue accessing the system and its functions via one of the following channels:

- Ministry of Finance local network;
- Ministry of Finance data transfer network;
- State administration network:

- Telephone system (ISDN);
- Public data transfer networks in the country;
- Combination of the above.

8.2.2 Applications (functions) to be provided by the FMIS

8.2.2.1 Budget Planning and Drafting Application

Bulgaria has started work on reforming budget planning and drafting and should go through discussions, structuring, testing, evaluations and modifications before optimal procedures and processes can be defined and implemented. This process is evolutionary and takes time. The execution of well defined procedures for budget planning and drafting can be facilitated by software systems. However, this functionality is not critical within the context of the Bulgarian FMIS and practice needs to be made consistent before user requirements can be developed. The general requirements for the future applications for middle-term budget planning and drafting include:

8.2.2.1.1 Middle-Term Planning

In the future the FMIS may contain functionality supporting the development of middle-term economic frameworks with a special focus on state finances. The application should be able to process financial, as well as non-financial data. Moreover, the application should have the ability for middle-term planning of current non-interest expenditures and their automatic transformation into current expenditures implementing a mechanism, which accounts for the modifications in the macroeconomic framework, having in mind that middle-term forecast is prepared by first-level budget credit executors (FLBCE). It should be adapted for exchanging data with other applications for macroeconomic analyses and forecasts. It should have the capacity for development of multi-layer budgets and financial frameworks for state revenue and expenditures. The module should include possibilities for forecasts, simulations and analyses of different middle-term budget scenarios. It should provide data for the functionality for preparation of draft budgets of FMIS.

8.2.2.1.2 Budget Drafting

FMIS should include capacity for drafting of annual budgets. The module should be able to exchange data with other applications for macroeconomic analyses and forecasts, as well as with the software for middle-term budget planning. It should feed data to the modules for liquidity management, budget control and the General ledger. There should be mechanisms, allowing the Ministry of Finance to choose a specific version of the budget throughout the whole year and de-activate further changes in the selected budget. The module should facilitate the work on the budget process on aggregated level in the Ministry of Finance. It should work with draft budgets and budget resources with a different status and level of aggregation. There should be capacity for following the proposals for allocation of budget funds before their agreement and approval, as well as the proposals, depending on other income and expenditure positions. Enhanced tools are needed for monitoring and control of different budget versions. The application should support "what if" type simulations and analyses. There should be effective means for equalization and control on the sequence of drafting of budget and related documents. Mechanisms should be available for automatic consolidation of budgets of different organizations into a uniform consolidated budget. On request, the module should support the drafting of detailed budget on first and second execution level. It should contain mechanisms for simplifying users' work, including prolongation of past budgets based of fixed parameters, proposals for automatic values and functions of standardized calculations. Mechanisms should also be present, simplifying the itemization of the draft annual budget to three-month, monthly and weekly budgets. If a budget organization attempts to enter a budget, exceeding the funds in the budget framework, this draft should be rejected by the system.

The module should as well support the development of draft budgets for the Council of Ministers and the Act for the National Assembly Budget. It may support the generation of analytic reports and government documents on specific budget entries.

The module is planned as part of phase 3 in the development of the FMIS.

8.2.2.2 Management and Control of Budget Payments

SEBRA will continue to be the system for management of budget payments for the purposes of financial management.

For the purposes of the FMIS, it is important to have an interface between SLSU and the other budget planning and execution applications in the FMIS. No such interface has been developed, but it is planned for phase 3.

8.2.2.3 Budget Execution

As part of the existing functionality, the modules described below have been introduced, adapted and ready to work in the budget credit executors. A functionality for serving the central budget, including reporting and overseeing Bulgarian payments to the European Commission, so called own budget, is planned as part of the budget execution modules. This functionality will be implemented and supported by the Ministry of Finance, because the Ministry will manage those funds.

8.2.2.3.1 Budget Control

This part of the FMIS should strengthen the administrative procedures and practices in the field of budget execution. The functionality of the FMIS for budget control and management should assist the monitoring, analysis and reporting of budget execution. It includes both the revenue and the expenditures. The proposal should be closely related to the General ledger of the FMIS.

A detailed description of the functionality is provided in 8.1.2.2.1.

Such a module was introduced in 1999 and is part of the FMIS kernel (SAP R/3).

8.2.2.3.2 Accountancy

The accounting modules have been developed and supported since 1999 as part of phase 1 of the development of the FMIS (SAP R/3). A detailed description of the functionality is provided above.

8.2.2.3.2.1 General Ledger

The general ledger presents a full and authentic picture of all activities conducted by budget organizations. It covers all phases of the activities from the initial allocation of budget funds to the issuance of payment orders and payment of goods and services. The ledger can include payments and payables, cash and accrual accounting and reporting. This functionality gives thorough representation of the state assets and liabilities as well as of the cash flow.

8.2.2.3.2.2 Receivables Accounts

The FMIS has a functionality for tracking and processing of budget organizations' receivables. It is able to process all kinds of payments in the organization's favor, including non-tax revenue such as sale of goods and services, as well as fees and commissions. Receivables are entered into a sub-account of the ledger, which is connected with the functionality for management of turnover and revenue and is supported by it. This functionality should contain all

tools needed for effective tracking, management and analysis of the budget organization's receivables.

8.2.2.3.2.3 Payables Accounts

The FMIS contains a modern, full-fledged module for monitoring and processing of budget organizations' payables. This module is able to process all kinds of payments made by organizations. The payables module contains a number of tools and functions for tracking and management of payables by a most effective methodology to avoid delays and payment of interests and fines.

8.2.2.3.3 Cash flow management

The payment functionality of the FMIS supports all types of payments, currently or expectedly practiced in Bulgaria. Extended capacities are needed for electronic payments. The functionality should support payments in BGN, as well as in foreign currencies.

The payment module is fully integrated with the FMIS and particularly with the applications for receivables and payables. The functionality should guarantee the authorization of all payment orders before sending them to commercial banks or Bulgarian National Bank (BNB) for processing. It should not allow budget organizations to present unauthorized payment orders to banks to be accepted for payment. Capacities should be offered for validation and control of payment orders.

The means for control should be available in the Ministry of Finance as well as on first level budget execution. The mechanisms for control should be automated. The functionality should be able to pick certain payment orders for additional manual control, for example based on the sum, organization or type of expense, or randomly.

The functionality should monitor and control budget revenue. This function should cooperate and support the functionality for receivables. Instruments are needed for tracking of revenue with insufficient identification and its distribution to the right ledger accounts.

Mechanisms should be available for equalization of authorized payments with bank statements and accounts in liabilities. Those mechanisms should be automated. The functionality should generate reports with basic data, including:

- Lists of all payment operations within a certain period;
- Payment operations, selected or sorted by sums, budget organizations, expenditure entry or bank;
- Lists of unequalized positions.

The module has been developed and supported since 1999 as part of phase 1 of the development of the FMIS.

The upcoming expansion of the budget execution functions, related to serving the central budget, will pose new requirements to the current module and its functionality. In case expansion is needed for the functionality of the module, it will be implemented as part of phase 3 of the development of the FMIS.

8.2.2.3.4 Fixed Assets Management

The module is a standard application, integrated with the other accounting modules. It contains procedures for registration, accounting, management and control of fixed assets. The module can enter the value of assets, acquired by building or bought with own budget, depreciation, re-evaluation, discharge of assets as well as data as to who performed the accounting operation and its place (room N, store-house, department)

A detailed description of the module is presented above.

The module has been developed and supported since 2003 as part of phase 2 of the development of FMIS.

8.2.2.3.5 <u>Tangible Assets</u>

The application provides full and detailed information regarding the tangible assets of the budget organization. The materials are grouped using 8-letter code classifications. They can be additionally identified by a 4-letter code for tracking of their movement. The module supports several prices per material (upon delivery), as well as in different currencies. The module can issue standard storehouse documents, tax and non-tax invoices, debit and credit statements, documents for store availabilities and pro forma invoices.

The module has been introduced and supported since 2003 as part of phase 2 of the development of the FMIS.

8.2.2.3.6 Expenditures Management

This application performs the accounting for programs/projects or activities of organizational structures. The application supports the budget organizations with the control of their specific activities. The package should be standardized and closely related to all other accounting applications. It should have a function for defining of expenditure centers, elements and objects.

The application should support all generally used methods for accrual and distribution of expenditures. It should include:

- Accounting of actual expenditures;
- Normal calculation of expenditures;
- Static standard calculation of expenditures for programs/projects;
- Calculation of maximum expenditures;
- Accounting of social security expenditures.

The application should support or feed data to many programs/projects of budget organizations, including:

- Defining of programs/projects of budget organizations;
- Defining of distribution of production expenditures;
- Decisions concerning outside deliverers and the work of subcontractors;
- Defining of optimal production levels;
- Distribution of production expenditures by alternative locations or organizations;
- Development of budgets and plans for programs/projects;
- Comparisons and analyses of budgets and actual values by programs/projects;
- Analysis of effectiveness and productivity of different organizations or programs/projects.

The application should have extended capacities for online queries and reports.

The module has been partly developed and supported in 2004 as part of phase 2 of the development of the FMIS. The basic functionality is implemented for the purposes of EU funds management in the National Fund and its executive agencies.

Completion of the module for the purposes of reporting program budgeting of budget credit executors is planned as part of phase 3 of the development of the FMIS.

8.2.2.4 Overseeing and Control of Budget Execution

The application for budget control should extract the necessary data from all parts and levels of the FMIS. The first level budget credit executors should be able at all times to receive accurate, full and updated picture of the budgets, limits, contracts, expenditures and payments in their working area. The Ministry of Finance should be able to obtain such a picture for all budget credit executors. The Ministry should have means for overseeing and supervising of the control system.

The application should track the execution of the annual budget. Standardized functions for queries and reports should exist, related to the comparison of budget and actual funds, including proposals for capital expenditures of municipalities and other obligations, expenditures and payments of first level budget credit executors. The application should be able to register and track non-digital data, related to budget entries, for example information about the aims, expected results and performance indicators. Mechanisms should be available for consolidation and presentation of such information. There should be capacities for user defined queries and reports. The report generator should have abilities for graphic and digital presentation.

Some modules of the application, performing functions of overseeing and control over budget execution and public investments, have been partially developed. Apart from the functions of the modules serving the activity of the Ministry of Finance, there are also interfaces for preparing and supplying data to the modules' users – municipalities and budget credit executors.

Further development of the module is planned as part of phase 3 of the development of the FMIS.

8.2.2.5 Overseeing of Monetary Funds and Liquidity Management

This functionality should be able to collect and process information from all components of the FMIS, as well as from the information systems for tax, customs and debt management, social security and health insurance, from BNB and commercial banks. The collection and entry of data should be as standardized and automated as possible. The functionality should contain a register for state bank accounts, including sub-accounts of the main account. It should support forecasts about the state cash flow and needs regarding liquidity. All cash flows are included here – those in BGN and in foreign currencies. There should be possibilities for development of various scenarios by user defined parameters. The functionality should process and present uncertainty, for example through simulations and risk adapted forecasts. Extended possibilities are needed for "what if" type analyses. The functionality should be able to identify critical factors and hypotheses while drafting the plans and outline possible consequences.

The functionality should propose strategies and algorithms for meeting the needs for liquidity according to user defined parameters. It should be able to outline the consequences of application of alternative strategies, including benefits, expenditures and risks.

Tools are needed for management of versions and scenarios and storing of forecast data. The module should track and compare the forecasts with the actual results.

Extended capacities should be available for online analyses and report generation. This includes extended possibilities for graphic and digital presentations.

The module is planned as part of phase 3 of the development of the FMIS.

8.2.2.6 Debt Management

Reconsideration should be given to the information requirements related to debt management.

Within this reconsideration, analysis should be made of the means for optimal integration and co-ordination of the exchange of data between structural units, participating in the management of the debt/assets. Those basic structural units are Government Debt Directorate, State Treasury Directorate, National Fund Directorate and Ministry of Finance External Finance Directorate, as well as the BNB.

The module has been developed as a separate application. Further development of the module is planned, related to analysis and definition of requirements for exchange of data about functions of uniform treasury. This further development is planned as part of phase 3 of the development of FMIS.

8.2.2.7 Deliveries Management

The module should provide basis for modern, professional and effective delivery functions, in accordance with Bulgarian legislation and best international practices. It should be closely related to the Payables Accounts module and the module for budget control.

The deliveries module should support the following functions:

- Maintenance of registers of potential deliverers
- Central selection and management of general deliverers
- Central deliveries and contracting of goods and services for all administrations
 - Assessment of alternative deliverers, products and services
 - Control and approval of delivery proposals
- Review of proposals, compared to the relevant budget limitations, including limitations on orders and contracts, expenditures and payments
 - Drafting of provisional purchase orders
 - Drafting of calls for offers, tender documentation, etc.
 - Review and assessment of alternative offers
 - Selection and contracting of purchases
 - Monitoring and control of deliveries
 - Subsequent assessment of deliveries procedure

The application should offer extended capacities for documentation and review of procedures. There should be possibilities for automated generation of all documents, required in the procedure, including purchase orders, calls for offers, tender documentation, confirmations and purchase contracts.

The functionality is planned as part of phase 4 of the FMIS.

8.2.2.8 Management of Sales/Revenue

This module should provide the basis for a modern, professional and effective function of collection of revenue from sales of products and services or collection of fees or other forms of non-tax revenue, correspondent to Bulgarian legislation and international practice. This module should be closely related to the Receivables Accounts module.

The management of sales/revenue module should support the following functions:

- Market research and analyses
- Development of market and pricing strategies
- Development of tariffs
- Income forecasts and budgets
- Processing of sales/revenue transactions
- Processing of revenue documentation
- Control and equalization of revenue

The application should provide extended capacities for documentation and review of procedures. There should be possibilities for automated generation of all documents, required in the procedure, including marketing materials, offers, invoices, cash receipts, confirmations and contracts.

The module is planned as part of phase 4 of the FMIS.

8.2.2.9 Human Resource Management

The FMIS should possess functionality, providing effective organizational management, staff administration, recruitment, training, event organization, time management and accountancy. Moreover, the functionality should offer quick and easy access and processing of human resource information in the specific administration, maintain electronic staff files and track public servants' ranks, annual evaluations and previous promotions in other organizations, if any. The functionality should be consistent with Bulgarian legislation, adapted in detail to the requirements of the specific budget organization and should apply good practice principles. It should be integrated to the accounting applications, cost accounting and budget management and control applications.

The module is planned as part of phase 4 of the FMIS, thoroughly corresponding to the requirements and solutions of the Strategy for State Administration Modernization.

8.2.2.9.1. Human Resource Management

The module should provide information about the current staff and future demands. The application should simplify and optimize the entry and maintenance of employees' data.

The module should have a capacity for comparing the requirements of a vacancy with the qualifications and abilities of employees, identifying deficits in qualification and generate training needs.

The module should contain detailed information about vacancies, which is a significant factor for effective planning of staffing needs and recruitment organization.

It should be able to foresee the results regarding the expenditures on all staff-related organizational events, thus forming basis for decision and policy making in budget organizations.

The module should support the adoption of an effective recruitment strategy, optimizing of recruitment procedures and decreasing of administrative expenditures.

The module should provide opportunity for comparison of the qualifications of applicants with the vacancy requirements.

The module should contain an easy-to-use tool for creation and support of staff individual plans. It should generate detailed long term and short term programs for employees corresponding to their individual needs.

The application should also support regular and formalized staff evaluations according to criteria set by the organization. The evaluations should be standard and uniform to reach maximum objectiveness in calculating their results.

The module should be able to plan, manage and assess data, related to the organizers of internal and external events. It should store information about the conditions, objectives, contents and schedule of events.

The module should propose resources for the implementation of events planned, such as trainers, location, equipment and visual aid. It should have invoice and budget planning functions.

The module should create a uniform budget or a detailed budget hierarchy representing the organizational structure by units. It should provide a full set of pre-defined assessment reports and analyses of human resource data. It should be able to modify the reports according to budget requirements.

8.2.2.9.2. Staff Salaries Payroll

This application should contain a modern module for staff salaries payroll, providing an effective and reliable method for accounting of salaries and reflecting all changes in the relevant legislation.

The module should contain a set of tools, assisting the functions of employees of remuneration department.

The module should maintain all payrolls for salaried employees, paid monthly or weekly for temporary employees, as well as in regular intervals for pensioners.

The module should track sick and maternity leaves. It should automatically determine whether an employee has a right to paid vacation in those cases and make accurate deductions from salaries and wages.

The module should include pension schemes and calculate and do social security and health insurance payments to the National Social Security Institute and National Health Insurance Fund.

It should be able to remodel payroll slips, as needed, and print notifications to specific employees or the whole staff.

The application should contain an effective data backup program in accordance with the legal requirements for payroll data storage.

The module should offer considerable capacities for simulations regarding the salaries within a certain period, for example:

- React to staff queries regarding their payment at a specific past moment;
- Establish the effect of schedule related data on a certain employee;
- Check whether salary-related accounting is well configured.

The module should be an important tool for control and audit of all documents, procedures, functions and actions, related to the accounting of salaries, giving the opportunity to check the accuracy of this accounting in the budget organization.

8.2.3. Analysis and Accountability of Different Management Levels

There is a need for increasing the accessibility and reliability of information for *ad hoc* analyses and reports, directed towards different levels of managers. For this purpose, a vertical upside down section is needed for the data, supported by the FMIS and other state administration systems. It is essential that data be extracted from all FMIS components and be combined with information from other systems and sources. This so called management information system (MIS) should contain modernized tools for processing and analysis of information. The MIS should use high-quality methods for information presentation and analysis, as well as for exchange of results with other systems.

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The MIS should be able to extract data from all FMIS modules, from the tax, customs administrations and from the Agency for Economic Analyses and Forecasts (AEAF), as well as to communicate and co-operate with outside systems, including National Social Security Institute and National Health Insurance Fund. It should have capacities for saving and storing of data in different formats, including qualitative data, assessment results and data sets, as well as connecting these components with components from the chart of accounts and the organizational structure

The MIS should have a capacity to process multi-dimensional combinations of classifications and aggregation levels. Flexibility should be given to managers as system users in the definition of charts of data combinations. The system should also have mechanisms for ensuring dynamic sequence of the database history, as well as for adaptation of time based data sequences, reflecting the budget structure in a user defined base year.

The MIS should be able to generate standardized and manager defined reports. Standardized reports should be generated automatically and be activated by dates, events and changes in specific parameters. The system should support customized queries and reports. The application should provide for automated data transfer, including feeding information to web addresses.

The functionality is planned as part of phases 3 and 4 of the FMIS and the functions of providing specific reports and analyses to different levels of management are to be divided according to the needs and priorities of financial management.

9 PLANS AND PERSPECTIVES

Based on the main characteristics of the financial management process, described above, this strategy for the development of the FMIS defines a set of priorities, covering a five-year period between 2004 and 2008. They form a high level plan, containing information requirements in middle term and long term perspective, needed for the successful implementation of the working strategy.

For the purposes of planning detailed plans will be preparaed when one stag was began. Detailed plans will specify the scope of the stage and regional distribution in phase of implementation in spending units.

The key priority in this subsection is to guarantee that the new technology will assist the Ministry of Finance in the meeting of its current and future business needs while drafting and managing financial information. Three priorities have been set for reaching that goal. The automated information requirements in view of the basic working guidelines and the specifics of the organization have been listed and prioritized below, based on the following criteria:

- **Priority 1** = it is of critical importance for the work of the organization that it be started immediately and finished quickly, if started already. (period 0-18 months) The fundamentals of the future development of the system should be built within that period.
- **Priority 2** = it is of significant importance for the work and needs to be implemented in middle-term perspective. In this period the control and monitoring functionality of the FMIS will increase.
- **Priority 3** = it is of significant importance for the work and will improve the effectiveness and efficiency while decreasing current system expenditures. Within the time frame for the Priority 3 tasks, the FMIS will expand and will be able to fulfill the information needs of the executive management.
- **Priority 4** = it is of significant importance for the work and will improve the effectiveness and efficiency while decreasing current system expenditures, but is not of critical importance for the financial management. Within the framework of the Priority 4 tasks, the FMIS will expand and be able to fulfill information needs of the executive management, along with some supporting functions.

A summary plan for the activities under FMIS is attached in Appendix 1.

9.1 Priority 1 – Setting Fundamentals for Future Work

9.1.1. Training and Methodological Assistance (January – December, 2004)

Finishing of the sub-project, currently providing training and on-site assistance to budget credit executors under the control of the Minister of Finance.

Training should be provided on the introduction of functionalities for EU funds management for the purposes of the National Fund and its executive agencies.

Implementation period: January – December, 2004

9.1.2. Finishing of Implementation of Functionalities in Phase 2 Pilot Organizations (January – December, 2004)

With the successful end of this phase, the Ministry of Finance will prove that SAP R/3 system is a reliable solution and basis for the development of the FMIS for the whole budget sector. Within the framework of that phase, the following elements will be introduced in the pilot organizations under the sub-project:

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• A functionality to include Tangible Assets and Fixed Assets Accountancy, as well as additional modules for special reports.

Implementation period: January - December 2004

9.1.3. Providing of Interfaces for Transfer of Accounting and Budget Execution Data (July 2004 – March 2006)

The introduction of new software, developed specially for automation of accounting and budget execution data from lower level budget credit executors to General Tax Directorate, will prevent the duplication of effort in several accounting products and will provide entry to the system to all budget credit executors from the General Tax Directorate system.

Implementation period: April - June 2005

9.1.4. Configuration and Installation of Functionality for Cost Accounting and Project and Program Monitoring (January 2004 – January 2006)

This functionality gives opportunity to organizations to do accounting and program and project monitoring, as well as other activities. The software should provide mandatory support to the functionality, so that budget organizations can improve their budget management and control their specialized activities. This software should be a standard application, fully integrated with the accountancy modules of the FMIS. It should include functionality for defining of expenditure centers, elements and objects. For the purposes of this sub-project, the following high level tasks should be performed:

- Configuration and implementation of the functionality in the selected pilot department National Fund suggested deadline: June, 2004
- Development of an overall set of working requirements suggested deadline: July, 2005
- Expansion of software and inclusion of other FMIS users within the system of the Ministry of Finance suggested deadline: January, 2006
- 9.1.5. Acquiring of Additional SAP R/3 Licenses for the Purposes of the National Fund (July 2004 June 2006)

A project has been developing up to the present moment, aiming at the introduction of project/program management and cost accounting functionality for the purposes of EU funds management in the National Fund Directorate and other executive agencies reporting to the Directorate.

Up until March 2004 the Ministry of Finance has 60 operative and 60 information SAP R/3 unused.

The National Fund has requested app. 95 operative licenses for the pilot project stage, i.e. for the introduction of the functionality at the National Fund of the Ministry of Finance, as well as in two executive agencies. According to the plans of the National Fund, the available functionality will be introduced in the rest of the executive agencies, such as MLSP, MI, etc., for which additional licenses are needed. Preliminary assessment shows that app. 60 more licenses will be needed until the end of 2004.

In phase of implementation of Material Management modul and Asset Accounting modul it is evaluated that approximately 60 SAP R/3 licences will be needed.

9.1.6. Preparatory Activities for the Development of Common Model of Financial Management, Particularly Ministry of Finance (July, 2004 – December, 2004)

As a key factor for the success in the development of the FMIS, the working functions and guidelines are to be defined and will assist in the investment into such a system. Therefore, the basic functions, processes and requirements to be met by the FMIS, should be laid down and documented as a reflection of the strategic vision of the Ministry. The requirements, which are already laid down and documented, should be reconsidered and updated by expedience. The overall description and identification of the basic functions, processes and models to describe them is the general uniform model for the financial management activity, in particular that of the Ministry of Finance.

The activity aims at ensuring the preparation of the task by implementing the organizational, technical and procedural activities needed for the formation of teams and defining of specific tasks and aims.

9.2 Priority 2 – Introduction of the System in Other Second Level Budget Credit Executors from Ministry of Finance Structure and Adding of New Functionalities

9.2.1 Introduction of FMIS Basic Functionality in Other Second Level Budget Credit Executors from MF Structure (January 2004 – July 2005)

After the successful implementation of priority 1 in the pilot organizations, expansion of functionalities is undertaken in phase 2 in all budget credit executors, controlled by the Minister of Finance. The tasks within that project should not be underestimated. In theory, all budget credit executors have requirements equivalent to the organization in which the system is already in use. In practice, however, all budget credit executors have their specific requirements, which should be analyzed and configured in order to be successfully met by the system. A plan needs to be developed for the introduction of phase 2 functionalities. It should provide for introduction into not more than 2 units at a time and, after successful installation and putting into operation, for further distribution of the system under the same scheme in all the other budget credit executors under the control of the Minister of Finance.

9.2.2 Configuration and Installation of Cost Accounting and Program/Project Monitoring Functionality in Budget Credit Executors (January 2005 – January 2007)

This functionality gives opportunity to organizations to do accounting and program and project monitoring, as well as other activities. The software should provide mandatory support to the functionality, so that budget organizations can improve their budget management and control their specialized activities. This software should be a standard application, fully integrated with the accounting modules of FMIS. It should include functionality for defining of expenditure centers, elements and objects. For the purposes of this sub-project, the following high-level tasks should be performed:

- Development of an overall set of working requirements suggested deadline: October, 2005
- Expansion of software and inclusion of other FMIS users within the system of the Ministry of Finance suggested deadline: January, 2007
- 9.2.3 Interface with the System for Electronic Budget Payments SEBRA (January 2006 January 2007)

The current SEBRA system allows first level budget credit executors to control expenditures of their second level executors by a process of authorization of payments, harmonized with 21 commercial banks. The same system gives the opportunity to the Ministry of Finance to oversee everyday expenditures. One of the main problems of the system is that it is a

separate, independent system, not connected with other systems related to public expenditure management. FMIS in its current version includes modules for budget execution, reporting and cash flow management, but has no connection with the SEBRA. To decrease operative risk and duplication of data and facilitate audit, an interface, through which the information from invoices and cash orders can be transferred from FMIS to SEBRA for payments, will be of significant importance.

9.2.4 Budget Overseeing and Control (September 2004 – January 2006)

The application should track the execution of the annual budget of budget credit executors. There should be standardized functions for queries and reports, related to comparing of budget funds with actual funds, including those for engagements, expenditures and payments. The application should register and track non-digital data, related to budget entries, for example information about the objectives, expected results and performance indicators. There should be mechanisms for consolidation and presentation of such information. Opportunities should be created for generation of user defined queries and reports. The report generator should include options for graphic and digital presentation.

9.2.5 Development of Uniform Financial Management Model, Particularly Ministry of Finance, and Documentation of Workflows (July 2005 – August 2006)

The activity will ensure the documentation of basic financial management models, in particular those of the Ministry of Finance, by identifying business processes, functions, information flows, data model and the technological model of the FMIS in view of simplification and avoiding duplication of activities and information.

9.2.6 Development of the Information System for Cash Flows Tracking and Management of Liquidity – State Treasury (July 2004 – September 2005)

During project phase 1, the basic functionality for payments management has been introduced. With the creation of the new State Treasury Directorate and the coordination of all cash flow management functions under the control of the state treasurer, the working requirements underwent significant changes. Hence, this area should be re-considered and a new functionality should be implemented for cash flow management, corresponding to the new requirements.

The information system should contain capacity for interface to the FMIS and all outside systems, containing financial management information, because its information is important for the budget planning and the forecasts for budget execution.

The information system will be developed in stages, providing at each stage a functionality corresponding to the priorities of state treasury. As stage 1, standardized tools will be provided for summarizing and presentation of information for the purposes of cash flows tracking and liquidity management. At stage 2, the development and implementation of State Treasury IS will be done.

9.2.7 Development of the Debt Management Information System (January 2005 – December 2007)

Government Debt Directorate in the Ministry of Finance uses a System for Government Debt Management, which has been functioning since 1999. It is based on Microsoft technology and supports all the available information for the government and government-guaranteed debt. Along with all conditions concerning credits and emissions, the system generates debt payments, including future cash flows. The system allows for different scenarios for debt and cash flow development depending on exchange rates and interest rates changes.

In order for the system to be developed, it is very important to analyze the information needs regarding debt and cash flow management. According to the new structure of the Ministry and the creation of a uniform state treasury, a need arises for integrated approach to the tasks in

the Directorates related to the debt and assets management in order to facilitate document management, avoid duplication of functions and data and provide information for decision making. The new initiatives in this area require that attention be paid to programmatic support of the active debt and assets management and risk assessment. The development of the system should be aimed at more active analysis of the debt management and support of state treasury analyses by providing history in various timelines about the debt, cash flows and budget execution. Access is also needed to the data in the Official Register for Government and Government-Guaranteed Debt through reports about its actual and prospective state.

9.2.8 Budget Planning (January 2006 – December 2007)

Financial budgeting allows for planning of payment flows (revenue and expenditure) for any needed period. For the purposes of planning, a planning model should be created or an existing one should be used. In practice, however, the information about the planned revenue and expenditures of the organization is subject to constant change. This requires more than 1 planning scheme. Cash budget management requires a flexible planning tool, which may create different versions of the payment flows. This information should feed data to the budget drafting process and should give opportunities for forecasts, simulation and analysis of different middle-term budget scenarios. It also requires functionality for drafting of multi-annual budget and structures of state revenues and expenditures. This sub-project requires that the following high level working tasks be completed:

- Development of an overall set of terms of reference;
- Configuration and implementation of functionality in the selected pilot area;
- Extension of the selected solution and covering of other FMIS users.

9.3 Priority 3 – Further Functionality for Management Decision Making

9.3.1 Human resource management applications (January, 2005 – December, 2005)

The FMIS should possess functionality, providing effective organizational management, staff administration, recruitment, training, event organization, definition of schedule and deadlines and payment accountancy. The functionality should be consistent with Bulgarian legislation, adapted in detail to the requirements of the specific budget organization and should apply good practice principles. The program should have a full interface to the FMIS functions, related to accounting, cost accounting, budget management and control. The sub-project will require the completion of the following high-level tasks:

- Development of a full set of business requirements according to the requirements and solutions of the Strategy for State Administration Modernization;
 - Configuration and implementation of the functionality in a selected pilot area;

9.3.2 Additional Management and Analytical Procedures (January, 2006 – December, 2007)

After the successful implementation of key operation processing systems, the next technological level in the automation of work follows – the development of integral storage for current data about the executive and management personnel, allowing for analyses and reports by easy-to-use graphic interfaces. Within the framework of that project, all systems, used in the management of state financial information, should be reconsidered and central data storage should be built. It should contain all financial data, including the information from state revenue collecting structures, so that a complete data set is formed on the basis of a uniform data storage, which will submit accurate and timely information, needed for the everyday work of the managers.

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9.3.3 Conducting of a Campaign to Encourage the Use of FMIS by All Field Ministries (January, 2005 – December, 2007)

After the successful implementation of the system in the Ministry of Finance, it may become a model for the other ministries. The ideal solution would be that all field ministries introduce the same product as the one in the Ministry of Finance, as this would increase the transparency, control, integration and would facilitate the generation of accurate and timely consolidated financial reports, which the Minister of Finance would present to the Council of Ministers. Such a solution could be difficult to achieve, because some of the ministries have already invested into alternative systems.

In the cases where a Ministry considers its own solution, different from the MoF FMIS, it should substantiate why it considers an independent solution and not the one approved and recommended by the Council of Ministers and explicitly show the ways of integration with the MoF FMIS. If the business substantiation is approved, the Ministry should adhere to certain standards in the selection of a solution regarding the methodology for budget organization reporting, developed by the Ministry of Finance, and the requirements in the appendices of this document, as well as the compatibility with the FMIS and the capacities for automatic transfer of data, required by the MoF FMIS.

It is proposed that the task not have an exact deadline, as its execution cannot be controlled by the Minister of Finance.

9.3.4 Development of Information System for the Uniform State Treasury (June 2006 – December 2007)

As second stage of the development of the state treasury system, functionality will be provided for the work of a uniform state treasury.

9.3.5 Configuration and Installation of a Functionality for Cost Accounting and Monitoring of Projects/Programs for Structural Funds and Cohesion Fund (July 2006 – December 2007)

In relation to Bulgarian EU Accession it is expected that the functionality should also cover the reporting and tracking of European funds, respectively structural funds and Cohesion fund.

9.4 Priority 4 – Introduction of Additional Functions in the FMIS

9.4.1 Management of Deliveries (January – December 2008)

The module should provide the basis for modern, professional and effective delivery functions, corresponding to Bulgarian legislation and best international practice. This module should be closely related to the Payables Accounts and Budget Control modules.

The application should ensure expanded possibilities for documentation and reporting of procedures. Capacities should be provided for automated generation of all documents, required in the procedure, including purchase orders, calls for offers, tender documentation, confirmations and purchase contracts.

9.4.2 Sales/Revenue Management (January – December 2008)

This module should provide the basis for a modern, professional and effective function of collection of revenue from sales of products and services, fees and other forms of non-tax revenue of financial management actors having such revenue, corresponding to Bulgarian legislation and international practice. This module should be closely related to the Receivables Accounts module.

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The application should offer extended capacities for documentation and reporting of procedures. There should be possibilities for automatic generation of all documents, required in the procedure, including marketing materials, offers, invoices, cash receipts, confirmations and contracts.

It should be noted that all the above deadlines are exemplary and should be updated according to human resources and finances, allocated to the FMIS project. The project could be considerably expedited if budget is increased and a special project team is recruited, relying on international support and the support of key business experts.

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10 Financial Estimate

Enough funds are needed for investments, as well as for system support for the purposes of the development of FMIS. Below is an expert estimate of the funds needed, which can be detailed and optimized during the work process. The financial estimate has the sole purpose to show the order of finances to be provided for the development and maintenance of FMIS.

The	financia	l estimate by	vears in	thousands	Rulgarian	leva a	s follows:
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Year	State Budget (thousands BGN)	Phare Programme (thousands BGN)	TOTAL (thousands BGN)
2004*	1 300	-	1 300
2005	1 400	190	1 590
2006	1 500	800	2 300
2007	1 700	50	1 750
2008	1 500	-	1 500
TOTAL:	7 400	1 040	8 440

^{* -} Fund are insured in 2004 budget

All the activities planned for the respective years, should be harmonized with the budget, allocated for the development of FMIS.

For implementation of FMIS planed activities a number of procedures for tendering and conracting are planned. All these activities will be coordinated with the Public Procurement Law and/or Phare Procedures.

A draft FMIS implementation procurement plan is given below. This plan will be update according to the readiness for implementation:

Activity	Procedure	20	04		20	05	2006			2007				2008					
		I I	I V	I	I I	I I	I V	I	I I	I I	I V	I	I I	I I	I V	I	I I	I	I V
		I				I				I				I				I	
PRIORITY 1																			
Additional licenses for SAP R/3 for	Public		С																
the purposes of the National Fund	Procurement	_	/																
	Law	T	I,																
			E																
	Phare		E			Т													
	1 1141 0			Т	Т	/	I	I	I	Е									
						С													
Providing of interfaces for transfer of	Phare						T												
accounting and budget execution data						T	C C	I	I	В	Е								
PRIORITY 2						<u> </u>	C		<u> </u>										
Applications for overseeing and	Public				T														
control of budget execution (for the	Procurement			T	/	I	I	E											
purposes of state expenditures)	Law				C														
Preparatory activities for the	Phare						Т												
development of a uniform financial						Т	/	I	I	I	Е								
management model, particularly Ministry of Finance							C												
Configuration and installation of	Phare																		
functionality for cost accounting and	1 marc									T									
monitoring of projects and programs								T	T	/	I	I	I	I	Е				
for the purposes of the National Fund										С									
Interface with SEBRA	Phare									T									
								T	T	/	I	I	Е						
										C									

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Budget planning and drafting	Phare					Т	Т	T / C	Ι	Ι	I	I	Е					
Development of debt management information system	Public Procurement		Т	T /	I	I /												
PRIORITY 3	Law			С		Е												
Additional management and analytic procedures	Phare				Т	Т	T / C	I	I	Ι	I	Е						
Providing of functionality for integrated state treasury	Phare					Т	Т	T / C	I	Ι	I	I	Е					
Configuration and installation of functionality for cost accounting and monitoring of projects and programs for structural funds and Cohesion fund	Phare				Т	Т	T / C	I	I	Ι	I	Е						
PRIORITY 4						•		•	•	•	•		•	•				
Deliveries management	Public Procurement Law										Т	Т	T / C	Ι	Ι	Ι	I	Е
Revenue management	Public Procurement Law										Т	Т	T / C	I	Ι	Ι	I	Е

Legend:
T - Tendering
C - Contracting
I - Implementation
E - End

11 Development of FMIS – Project Management

11.1 Approach

This section presents the solutions, procedures, means and methods, used in the development of FMIS. Not all specific phases of the project use the whole methodology, but every phase is implemented by a set of methods, adapted for its needs. To balance the project's three dimensions (expenditures, time and quality), relevant management procedures are used and adapted to the variety of tasks within the development of FMIS in its different phases:

- Definition of requirements for automation of business processes;
- Development/adaptation of software solutions;
- Purchase of software packages and technical equipment;
- Installation and setting of software/hardware;
- Entry and management of the modifications needed;
- Definition of the process of support of introduced applications.

The project for development of FMIS has one main objective and that is to develop and introduce an integrated information system for financial management, facilitating the reporting of budget operations and fiscal management in the government and various budget organizations. An important aspect of the project management is to assist the budget sector to lay down clearly the benefits of developing of FMIS and ensure their realization. The project has its aims, deadline and fixed budget for the current phases, as well as model budgets for future stages. The aim of the project management is to set realistic aims, to do relevant time and cost management and implement the project in such a way as to accomplish all results and minimize the resources spent within the context of the existing limitations and the general tasks. This requires good project control and continuous dialogue between project implementers and those who wait for results.

Resources are needed for the project management and control mechanisms need to be established, correspondent to the dimensions of the project. Although the project management expenditures could be considered as current, it is more reasonable to implement a well managed project which accomplishes the envisioned results, than to have a badly controlled project doomed to failure. The use of organizational and management tools in the implementation of the project should be based on common sense so that the current expenditures would not become excessive. If, for example, a specific phase in the implementation of FMIS is relatively small, its management and organization could be conducted informally, without creating a correspondent hierarchical structure. At the same time, the management of a large and complicated project like the FMIS requires that, until it is finished and transformed into a process, a managing body be formed to initiate, manage and control every step of its management cycle.

11.2 Methodology of the FMIS Development Project

The FMIS development project is large-scale, it has a vast geographic scope and puts the responsibility for the successful implementation of FMIS on organizations, which are outside the direct control of the Ministry of Finance. Those factors increase the risk for a project of such dimensions. To reduce to minimum and control them, it is of significant importance to select reliable management methodology and follow it firmly throughout the whole project implementation.

All projects related to the development and improvement of FMIS are led mainly on Ministry of Finance level, including end users in the planning, while the implementation and

support include, if needed, IT teams from the administrations where functions of the FMIS are installed and functioning.

Every sub-project is based on user requirements and is initiated by the creation of Terms of Reference. The TOR are prepared on Ministry of Finance level and, depending on the requirements, together with the respective teams from the competent Directorates in the Ministry and/or end users. The Supervisory Board (SB) of FMIS in the MF selects a Project Manager, who, along with the main users and other project participants, creates TOR based on user requirements. The TOR should be consistent with the international standards in the field.

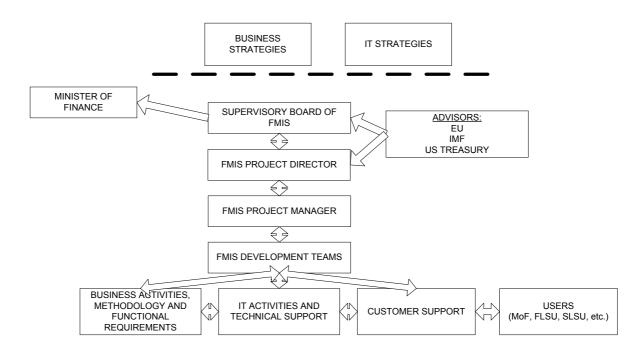
A tender is organized for the implementation of every sub-project, which includes the TOR in its documentation. So far, the Ministry of Finance has concluded the following contracts:

- A contract with AI Informatics for development of FMIS phase 1 (financial accounting, budget management, monetary funds management) and support of FMIS phase 1 until the end of 2006;
- A contract with Siemens Business Services for the development and support of FMIS phase 2 (fixed assets, property management) until the middle of 2007;
- A contract with SEMA group for adaptation and implementation of two modules: expenditures management and project management under SAP R/3 for the purposes of financial reporting of EU funds (PHARE, SAPARD and ISPA programs) until the middle of 2004;
- A contract with Information Services Plc for administration of technological environment and customer support until the end of 2006.

Below is a diagram, followed by a detailed description of the suggested methodology in the field of management, control and assessment of FMIS project results, based on established project management methodologies, such as PRINCE 2, TEMPO, ASAP, etc.

11.3 Organizational structure of the project for development and implementation of FMIS

STRUCTURE FOR MANAGEMENT OF THE DEVELOPMENT AND INTRODUCTION OF FINANCIAL MANAGEMENT INFORMATION SYSTEM (FMIS) IN THE BUDGET SECTOR



This management methodology will be used for the implementation, control and management of the whole project.

The main organizational structures within the framework of the methodology are:

FMIS Supervisory Board (SB)

The FMIS supervisory board is responsible for high-level decisions, for the harmonization of the project scope, for the authorization of project plans and providing of consultations on the main solutions related to the project.

The sessions of the SB of FMIS will be conducted once every three months or as needed. Standard information material about the development of the project, prepared by the project manager, will be presented to the Board. The material contains a resume of the project implementation to date, problems incurred and decisions to be made.

Project Director and Chair of the SB of FMIS:

It is of significant importance that the management of the organization assume responsibility and get involved in the FMIS. From the viewpoint of Bulgarian government, the main long-term result of the project will be the transparency, the timely and accurate presentation of information for the consolidated financial report, as well as the implementation of an integrated information system for financial management. The Secretary General of the Ministry of Finance or the respective deputy minister, who bears the main responsibility for the preparation of that information and its presentation to the Council of Ministers, will be the Project Director and will implement such processes and procedures as to ensure the security, timelines and accuracy of the data in the system. This responsible person has an interest in the successful ending of the project and provides general management, ensures communications and other aspects leading to success. The Project Director should also be the chair of the Supervisory Board. He/she appoints the Project Manager and delegates to him/her the responsibility of managing the everyday work on behalf of the Director.

The chair of the SB of FMIS reports every three months to the Minister of Finance, informing him/her about the advancement of the project.

Project Manager:

<u>The Project Manager</u> is responsible for the everyday management and organization of the project on behalf of the Project Director. The manager is responsible for the direct management; ensures the right relations between the project elements and the following of its general guidelines. The Project Manager is appointed by the Project Director. The latter delegates to him/her the responsibility for the operative management of the project on his/her behalf. The Project Manager has a direct access to the director and works in close co-operation with the project operative management group.

The main tasks of the Project Manager are:

- To be operative manager of the project on behalf of the director;
- To lead support and working groups;
- To develop and implement modifications in the FMIS development project plan;
- To propose human and financial resources to the Supervisory Board of FMIS;
- To manage the implementation of tasks;
- To organize communications and interfaces between the project and the other projects related to it;

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- To realize the project in a timely manner and within the allocated budget;
- To carry out relations with outside project deliverers.

FMIS Development Teams

Definition of Functional Requirements Team

Main responsibilities:

- To define the future strategy and methods of using the system, proposing them for approval to the SB of FMIS.
- To document the working requirements in relation to the FMIS-computerized processes.
- To participate in the work of system analysts and designers for the development of system requirements.
- To participate in the user testing and completion of the phase of system development.

Information Technologies Team

Main responsibilities:

- To support the information technologies, related to the development and functioning of FMIS and the system hardware.
- To draft and implement a plan for system expansion and system functions training.
- To work on the introduction of the system in the installation and configuration of new modules.
- To liaise and co-operate with other field ministries in the area of the design of the requirements for the interface between FMIS and other related systems.
- To systematically monitor the characteristics of the technological environment of the FMIS and the license requirements, related to it.

FMIS Customer Support Team

Main responsibilities:

- To support and control the usage of the system according to operative manuals and the Minister's orders.
- To ensure the compliance with the instructions of the Minister and the legislative acts of the Council of Ministers.
- To ensure the participation of various structural units in accordance with the user requirements defined, render help in the modeling of functions and conduct user tests of the system.
- To coordinate the introduction of changes every new system leads to changes in the working practices and it is of vital importance that changes be introduced properly.
 - Identification and escalation of faults during the direct use of the FMIS.

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Working Groups

The working groups with the FMIS are created with a decision of the Supervisory Board of FMIS for solving of specific problems or realization of certain stages in the FMIS.

Proper structure of project documentation:

Standardized project documentation is of significant importance for the structured approach towards the implementation of the project and the management requirements, related to it.

The system supports the following documents:

- Project authorization and putting into operation;
- Project plan;
- Quality plan;
- Reports of project implementation;
- Financial reports;
- Reports on current issues;
- Request for changes;
- Documents, generated during project implementation (e.g. specifications and documents, related to the developments);
- Documents about outside purchases (invoices, tender calls, etc.);
- Software (for deliveries and development);
- Scenarios for conducting of tests, criteria for understanding and results of tests;
- User and installation manuals, etc.
- Final reports of project/phases (at the end of the project/phase).

11.4 Project Planning

All the phases in the FMIS development project, whether introducing software or hardware, follow a methodologically determined life cycle. The model of life cycle presents the stages within the project phase – formulating objectives, assessment of effectiveness, financing, implementation, assessment of implementation, planning of next phases.

The general policy of the Ministry of Finance is to assign the projects for development and support of IT systems to outside contractors. The strategy of the Ministry of Finance is to identify and manage the projects.

The Ministry of Finance manages the contracts for development and support. When the Ministry does the contracting, using outside donor funds (PHARE program, World Bank, etc.), the requirements and procedures of the respective donor are followed, if there are specific ones, otherwise the Public Procurement Act is observed.

The strategy of the Ministry of Finance is to develop and introduce a system, using best international practices in the field of financial management of budget sector. The FMIS will be developed as a logical sequence of phases and the end of each one of them will lead to specific measurable results, assisting the work process in the administration. At the start of the development of every phase a detailed plan is drafted, including all organizational and technical components to be ensured, the functionalities and the administrations or organizations, included in the realization. Those plans are reviewed and approved by the parties, as well as by the Supervisory Board of the FMIS.

Every separate phase of the project may include some or all of those 6 stages:

Laying down of requirements: this stage requires understanding of user needs and the working process, documentation of those needs and reaching agreement with the users, as well as with those responsible for the introduction.

Development (project, design): based on the requirements laid down, a combination is developed of manual processes, hardware and/or software, which will fulfill those needs. This stage might include reconsideration and re-phrasing of requirements and assessments of alternative methods for meeting them. At the end of this stage, there should be harmonized specification for the development and calculation of general expenditures. In some cases there may be need for a tender dossier to be prepared for the supplying of software and/or hardware.

Applications: there is a harmonized development, which should be applied into practice. That may require the development of software, purchase of hardware and/or software and creation of user procedures for the system. This is also the moment for detailed training of the users.

Integration and testing: this stage seeks the unifying of different solution components and ensuring of their work together. Testing is usually in two stages: IT-experts get the system into the expected working mode and users conduct their own tests to guarantee the compliance with their needs according to the definition from stage 1.

Working mode and support: At this stage the system is put to work. Ideally, it should be finished and work impeccably, but in practice there are often problems when systems are put in operation. The support solves those problems, together with the faults, appearing during actual work, as well as the modifications, required by the changing environment. At this stage, the support team takes full responsibility for the support of the FMIS.

Withdrawal from work: This component is related with withdrawal from work of an outdated system, archiving of its information and safe neutralization of its components. The stage is implemented by the working group of the respective directorate/ministry, assisted by IT specialists.

The length of all the above stages depends on the character of the project phase. For example, the introduction stage may turn out shorter if a ready package is purchased rather than develop a new one.

The activities under the FMIS project will be presented by month at a high level as a summary and this summary will be supplemented with related plans about sub-project phases, divided into smaller project activities.

The project activities will often turn out to be dependent on other projects' activities, implemented in other Ministries and administrations. For the high-level plan, it is enough to just outline those dependencies and not seek the development of a uniform program.

Project management activities: These are the meetings and other events, used for overseeing and control of project advancement.

Management reviews: A plan is needed for regular sessions of the SB of FMIS. In principle, they are conducted once a month or in case of a significant event, for example, passing of a project landmark.

Support groups: A plan is needed for regular meetings of the working groups. In principle, they are conducted every two weeks.

Quality reviews: The accomplished basic results should be subjected to quality checks and those should be programmed as part of the project's main plan and should be conducted by the support groups.

Resource planning: The resource planning includes an account and schedule for the involvement of workers, specialists and other resources in the accomplishment of project objectives. In theory, the resource planning should be an easy task, related to the identifying of the character and quality of resources; in practice, it is much complicated by the real settings. The first task when defining the needs for human resource is to forecast the amount of work, needed for a certain activity. This amount is divided into man-days, it is defined by the Project Manager and approved by the SB of the FMIS.

During conducting of the planned amount of work, the time spent may turn longer or shorter depending on the number of people actually taking part, their qualifications, motivation, and abilities for team work. The work plans are subject to regular audit by the Project Director and the plan is updated according to the observations made.

After every activity in the project plan is calculated in amount and a tentative schedule is made for accomplishing its results, a work plan of the project can be drafted with general timing of project activity. It is done for every FMIS phase, based on hypotheses on the access to different resources, needed for the implementation of the project.

Re-planning: with the expansion of the project work, it may prove necessary to do re-planning, due to the change in circumstances. Re-planning should be done with attention, so that initial goals could not be disguised under new tasks. In order for such a large project to succeed, the Ministry should maintain a clear vision as to the accomplishment of the initial goals of the project, while at the same time balance the changes in the environment and working procedure. This process could be assisted by the introduction of a project plan, containing the basic guidelines for assessing changes. Microsoft Project software is a suitable tool for documenting of the basic line and registering all the changes in the initial schedule. The FMIS project will standardize Microsoft Project as the project planning tool.

11.5 Project Accountability

Every project contains a certain amount of work, limited in time and budget. The Ministry should control the projects so that they do not turn into an end in itself. The FMIS project control may be accomplished by the introduction of basic mechanisms at the beginning and at the end of project phases and the introduction of an accountability system.

Procedures:

Projects are implemented, based on resource spending, regardless of whether those are man-days or funds for outside contracts. IT-equipment and qualified specialists are expensive and should be used precisely. The procedures, described in this section, contain the basic mechanisms for control of project expenses.

- Accountability system;
- Authorization mechanisms;
- Ending of a project.

Accountability System:

The project reporting will be done with the accounting and other reporting and result tracking systems available to the Ministry of Finance. Along with that, the standard built-in tools of the software for planning and management of projects will be used, e.g. MS Project.

Authorization Mechanisms:

Every phase in the implementation of the FMIS adopts a procedure, with which the allocation of funds is authorized. This will be an official approval procedure by the SB of FMIS.

There will also be an official procedure for the approval of analysis for costs and benefits, where the funds needed will be assessed according to the expected results by the SB of FMIS. This requires an analysis of expenditures in the specific phase to reach an approximate assessment of expenditures and expected results.

Ending of a Project:

All the project phases have deadlines, when it is expected that the initial goals would be achieved. The sense of the ending procedures is to give a clear signal to all interested parties that the project activities under the specific phase are finished. Regardless of the duration of the phase, such a formal ending mechanism is needed, especially for project accountancy. One should not forget that projects or certain stages do not always end up due to ending of activities, but sometimes due to circumstances which outdate the goals set. In such cases the ending of project activities prevents from unnecessary expenditures.

A final report is created to mark the ending of the phase and cease of expenditures. It is approved by the SB of FMIS and is sent to the interested parties. The report contains the basic information about the project – the name of the phase, name of the manager, etc. and presents the expected and actual expenditures related to it, including the off-balance expenditures (capitalized). Those capitalized expenditures (with accrual), e.g. the expenditures on finished outside commissions with pending invoice payments, should be duly documented so that the respective funds would be left into the project account. For management purposes, it is advisable to mark the extent to which the expected results have been accomplished and to do an assessment of the level of aims achievement as compared to the expenditures incurred.

11.6 Project Organization

For proper project management, organization is needed as regards to the participating specialists, as well as the achievement of project results. In case of smaller scale projects, the Project Manager and the operative team are responsible for the organization. In case of projects like the FMIS, specialists need to be appointed for the administration and updating of project plan and documentation.

11.7 Project Documentation

Every project and its separate phases generate certain amount of documents and other materials to be stored and distributed, as needed. Creation of a special lot of the project/phase ensures a formal mechanism for dealing with documentation. This lot should contain:

- The authorization and start of the project/phase;
- Plan and financial reports of the project/phase;
- Quality plan;
- Resumes for current state of affairs;
- Requests for changes;
- Current documentation of the project/phase (e.g. specifications, development documents);
 - Outside delivery documents (invoices, calls for tender, etc.);
 - Software documentation (for the purposes of delivery and development);
 - Scenario for testing, criteria for accepting and test results;
 - User manuals, installation manuals, etc.
 - Final report of the project/phase (on completion of the project/phase).

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Keeping of a lot is useful even for shorter phases – the project manager is responsible for it.

The documents, contained in the lot, should be kept for the whole duration of the project. Outdated documents should be archived. The project lot is stored even after the project is finished and sometimes maintenance keeps on. For example, those are the user manuals and the development documentation which can be updated as a result of the improvement and support of the project.

11.8 FMIS Support

Organizational and technical measures are needed leading to constant and reliable support of the system, so that FMIS is functioning and is used successfully. For the purpose of preventing all system failures, the system, developed for providing effective support, will be constantly improved.

The main goals of the support is to provide a timely solution of every problem which end users encounter using the system. Support activities will be described in detail in the document *FMIS Support*.

The conditions of a user environment working according to the criteria for productivity of FMIS determine the main functions of support. The criteria for productivity of FMIS, as well as the concept of working user environment will be described in detail in the document *FMIS Support*.

The organization of effective support is directed towards solving problems, related to:

- system software and technical environment;
- networks and communications;
- applications.

A special team is formed in the Ministry of Finance for the purposes of FMIS support, whose basic roles and responsibilities correspond fully to the aims of the FMIS – a detailed description of the team and specific support parameters are found in the document *FMIS Support*.

The usage of national information systems is an important process which requires a fast a reliable reaction to every problem. The creation of a knowledge database is needed for the improvement of the effectiveness and efficiency of the FMIS support system. For this purpose, a support system is created on several levels depending on the level of competency and the administration, interested in solving a certain problem.

- Level 1: Support system operators handle requests for solutions of problems, analyze the incident through appropriate questions and attempt to solve it during the telephone conversation;
- Level 2: End user support computer specialists who solve the incident or problem on site;
- Level 3: System administrators (operational systems, LAN, WAN, databases, protection of information, applications) consult the system operators and end user support specialists or solve the incident themselves depending on its complexity. Apart from solving incidental refusals, related to requests for end user support, administrators at this level conduct current, periodic and separate activities for the administration of operational systems, LAN, WAN, databases, applications and protection of information;
- Level 4: technical components service, manufacturers of system and application software, outside companies, supporting hardware and software.

11.9 Security Policy

Information, information systems and service are basic and vital areas for the Ministry of Finance. The Ministry of Finance, as owner of information resources, requires security, reliability and appropriate safety in the process of covering, support and administration of data. The raising of respect and reputation of financial management and Ministry of Finance in particular is directly related to the manner of management of information and information systems. Maintaining of adequate level of security is one of the most important aspects both of information and information systems management.

To achieve effectiveness, the system of Information Security should be developed with the common efforts, including participation, understanding and support, of all Ministry of Finance officers and end users, working with the information and/or information systems.

All participants in the process of development and introduction of FMIS, including end users, are obligated to adhere to the Information Security Policy, approved by the SB of FMIS.

The aim of the Information Security Policy is to define preventive measures and reactions to different types of threats to information and information systems, which may include unauthorized access; hackers' attacks; malicious actions; loss, copying or theft of information; modifying, destruction or deletion of data; modification, unauthorized use or failure of programs.

The policy is valid for all computer and network systems, part of the FMIS. It is also valid for all platforms (operational systems), all types of computer systems (from PC to big servers or mainframes) and all application systems (regardless of whether they are internally developed or outsourced).

All participants and end users of FMIS, regardless of their status (directors, inspectors, specialists, consultants, outside experts, etc.) should know, agree to and implement the information security policy, presented in this document and related documents. Officers with multiple and intentional violations of those and other provisions for information security are disciplined, including discharge.

The Ministry of Finance adopts a system for classification of information. All the information is controlled by the Ministry of Finance, regardless of the fact whether the information is property of the Ministry or has been submitted by an organization or end user.

The FMIS Security Policy will contain detailed information classification.

The access to information and its processing in the Ministry of Finance and in other end users is implemented according to the "need to know" principle. This means that the information is supplied only to people, who have a legitimate need for that information, ensuing from their official duties. At the same time, officers cannot be refused access to any kind of information, if the owner of the information has advised of granting access. To realize the "need to know" concept, the Ministry of Finance adopts a procedure for requesting of information and approval of request by the owner. Officers and outside experts do not have access to confidential information, except in cases where access is granted by the owner of the information. In cases where an officer has had his/her duties modified (discharge, transfer to another department, promotion or temporary leave), his/her system administrator implements the Security Policy in accordance with that change. Rights to access to information granted to all officers will be regularly reconsidered, so that owners and "keepers" can be sure that the information is provided only to those who need it.

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12 FMIS - PERSONNEL AND USER IMPACT

The quality of a system cannot exceed the quality of people, who work with it, and its success requires man time on every level, from high management to the line data entry operator.

During its life cycle, the FMIS will require different amount of time from its users. At the initial stage of its introduction, users will be required to spend more time than during its subsequent everyday operation, when the resources will be balanced. The time consumption of the system should be planned and managed just like the other resources needed for its support.

During its introduction in the budget credit executors, the FMIS will require considerable amount of user time. The employees should support and co-operate with the introduction teams, at the same time continuing performing the rest of their official duties. This could put a significant burden on every employee as well as on the budget executor as a whole. Depending on the time requirements, the organization may be compelled to hire additional temporary personnel. The task of the latter would include supporting key users in the performance of their everyday duties so that they can spend more time working with the FMIS team. To attach temporary personnel to the project instead of having it substitute users in their daily duties is a common mistake. This mistake should be avoided by all means. It is vital that the project be worked upon by the main users who will use the system in the performance of their duties and not by temporary employees. In this way, the users will get accustomed to the system and will use it more confidently and willingly after it gets into full cycle. The hiring of temporary personnel to work on the project will decrease the burden of the main users and will give the project resources, much needed for its successful completion. However, the internal knowledge and skills, acquired during the work with the introduction team, will be lost with the expiry of contracts of temporary personnel. It is extremely important that budget credit executors keep and use those qualifications. In the case of a project like the FMIS, comprising several physical locations and management structures, constituting different budget credit executors controlled by different ministries, it is of significant importance to approve an official decision and standards to be adhered to by all participants. Those standards and management decisions should guarantee the clear division of responsibilities and the practical co-operation among different field ministries. This is especially important in the provision of resources for the projects to ensure the discharge of employees with the purpose of working on the project and taking of responsibility. The process should be lined with a special document, negotiated and approved by the Minister. This document will initially be harmonized between the chair of the SB of FMIS and the manager of the organization, providing the resource. The document will contain the tasks, responsibilities and time, required in the specific case. Social and political problems may arise during the implementation of a large-scale project like the FMIS and those should be reviewed and solved by the higher management. Let us take for example the employees in operative departments, like monetary funds management, taxation or accountancy, who are responsible for the timely and accurate conducting of operations in the specific area. Those employees usually have positive attitude towards the introduction of computer processing of information, as this facilitates their work, but computer systems introduce transparency, and hence accountability in the everyday operations which sometimes might be unwelcome and may create obstructions to the project.

It should also be noted that the introduction of an integrated FMIS may require fundamental reforms in functional processes, e.g. the introduction of an adapted budget classification or a structure of accountancy codes. Computer systems should be seen as a tool for supporting changes and action should be taken to reform working practices wherever possible. It would be a mistake to attempt to change an established software package, consistent with international standards, to adapt it to local working procedures instead of changing them, if needed.

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The training needs of personnel in using and supporting information systems, covering the whole state administration, are significant and often underestimated. The professional qualification needed for the introduction and support of such system is usually missing in the government sector. This is mainly due to the salaries, lower than those in the private sector. That is why most projects rely on external consultants to render such professional skills. The qualification, needed for the successful introduction of FMIS, includes:

- Project management: skills, needed for managing a complex project in the government sector with a large number of mutually dependent project activities. The ensuring of co-operation with high-ranking government officials is an important component of the work. The project needs a foreign specialist, meeting the requirements set in the management section, to be employed as Project Manager. This specialist should assume the role of a respected mentor for the other employees and work in co-operation with the Ministry of Finance Project Manager. The international consultant might not serve full time, but he/she will be expected to devote at least 10 working days a month to the project.
- Defining and laying down of high level user requirements: requires the skills and management experience of the key specialists in the working areas in the conceptualization of the general working requirements, as well as in the development of documents, in which those requirements are phrased in such a way as to become a basis for the development of the information system solution. Those skills are missing in the ministries currently. The performance of those functions is extremely important and it can be achieved either by hiring at least two employees or by outsourcing the activity to two local consultants subcontractors, who have knowledge in the respective professional area, as well as IT knowledge and combine them in the drafting of such documents. Those functions also include the drafting of documents for public tenders and organization of the tender process to provide the expert services, needed to fulfill the requirements.
- Customer support skills: this support is conducted on two level, the higher being the organization of a consulting center, problem solving and organization of an editing board for the FMIS bulletin, as well as official conducting of special training courses for groups of users. Currently, those activities are conducted by an outside contractor, a private company Information Services Plc, 96% property of the Ministry of Finance. The other level of support is internal for every budget executor and is the main tying component to the higher level. This lower level includes the skills for training and on-site help, informal consulting of new employees about the using of FMIS. Those activities are conducted by the customer support employees of the budget organization. They have the additional obligation to participate in the work on new pilot projects, related to the FMIS. Those officers should work in close co-operation with the financial and accounting department, so that they can reconsider constantly the usage of the system, to develop requirements for *ad hoc* reports and define problems to be transferred to the higher level support team for solution. Every field ministry/budget organization should designate at least two employees for performing that function.

The solution of customer problems requires significant amount of work and the overcoming of some of the social, political or resource-relater problems require the intervention of the higher management. It is extremely important that the project be taken at a very high level and higher managers in as many functional areas as possible be involved in it. Without such unreserved support on the part of managers, the problems in the work of the system will not be solved and the project is doomed to failure.

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13 Appendix 1 – Summary Plan for the Development of FMIS

