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Г.КАРАГАНДА
www.academic-journal.kz



“Международный научный журнал АКАДЕМИК”

№ 1 (105), 2021 г.

Май, 2021 г.

Караганда
2021 г.

ANALYSIS ON MULTIPLE BUSINESS PROCESSES FOR VISUALIZATION DASHBOARD REPORT FOR IMPROVING THE BUDGET PLANNING PROCESS

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Abstract

A business process is a horizontal structure of interaction elements, in which the release of products or individual components becomes a realizable goal. In addition, it is a set of various interconnected operations, which give an idea of the essence of the activities of an organization. The complexity of the structure, state and dynamics of the development of this phenomenon is often difficult to imagine due to numerous transformations, interweaving and modifications. Based on this provision, it can be imagined that business processes, like the organization itself as a whole, are exposed to many internal and external factors, which can lead to instability or the termination of the existence of the system. The article presents the identification, analysis and development of business processes in the system that can affect budget planning. Budget allocation has been studied for decades in traditional business, nowadays online business brings muchmore challenges due to the dynamic environment and complex decision-making process.^[1]

Introduction

Budget analysis: involves examining and explaining the components of budget expenditure and revenue. The use of budget indicators (ratios) can help to improve understanding of issues such as the level of implementation of expenditure and revenue budgets or the structure of the budget.^[2] The process approach to management is one of the most effective enterprise management mechanisms. The result of managing the system of business processes is their regulation, putting things in order in the company's management structure, and reducing the levels of hierarchy. To improve business process management performance used information technologies. Since it can provide clear information about the company infrastructure and can represent the full ecosystem of the organization. This work will present examples of automated business processes for the formation of a visualized report.

Methods

This article is based on empirical research and experimental methods.

All business processes of the organization are divided into four groups:

1. Managing business processes that control the functioning of the system. An example of a governing process is corporate governance and strategic management;
2. Operational business processes that constitute the main business of the organization;
3. Supporting business processes that serve the core business. For example, accounting, recruiting, technical support;
4. Academic processes, which include student applications, as well as part of academic work.

All four groups of processes are interrelated and separately from each other cannot bring high efficiency.

In this work we will use business processes from the third step, supporting business processes to the first step, managing business processes for improving Budget planning. To provide this uses a methodology which consists of several steps.

1. Identify all possible business processes that can affect the budget planning process
2. Developing business processes in system
3. Data collection and analysis
4. Identifying how Business processes will affects on the Budget planning

Results

Budgets – previous work on so-called budget allocation in similar contexts have only focused on the selection of a subset of influencing nodes. In particular, the allocation of budget among nodes was not treated.^[3] In this article, Business processes were identified that can have an impact on budget formation. There are Monthly payment, Syllabus formation, Business trip, Cost types, Salary payment, Service provision process, Hiring new Staff, Purchase of goods, Event process, Teacher’s Individual plan and report. Stages in analyzing business processes to choose useful ones are: defining boundaries, collecting data and conducting interviews to describe the process itself. Identify the disadvantages and advantages of the process and generate a report based on the analysis. Search for optimization solutions and implementation of changes. As a result, the following business processes will be useful to improve Budget planning are:

1. Purchasing Goods Process
2. Monthly payments
3. Business trip
4. Salary payment

5. Service provision

6. Hiring new Staff

7. Event process

One of the example of the useful process is process Purchasing Goods Business process, which consists of the following stakeholders:

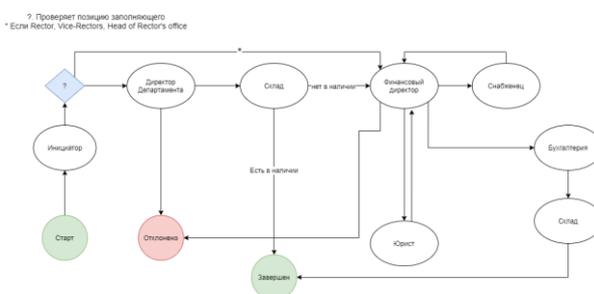


Figure 1. Stakeholders in process Purchasing Goods

List of the stakeholders involved in Purchasing goods are, initiator, Department Director, Warehouse , Financial Director, Lawyer, Supplier and Accounting. Business processes which improve the budget planning were developed and optimized many times in the system and all step performers in any business process are automatically assigned by the system. In Document Management System formation of any business processes contains from the form of the request and flow. While developing the form and flow of the process, analyzed information from all stakeholders will be represented in electronic format and will be automated.

Processes developed in Document Management System by using C# programming language to add code in form and flow. In form of the business process C# code used to connect to the Database to use data from another process or from tables from different databases. We connected to the database to select the Budget Code of the Department by Department ID. To select the data used Oracle SQL. In flow of the business process C# used for exporting form of the request to the PDF format with watermark of the organization and path to the Document Management Systems internal memory, and to send exported PDF file to the stakeholders as an attachment file.

Also, for business processes in the system, separate reports are developed for analyzing and checking processes. In this step, checked optimizational changes to the process and detected for future applying to the process. There are, Checking Budget Coding format, bug fixing and preparing data for more structured format.

PROCESS NAME	FLOW_STAR...	DEPARTMENT	START_DATE	RESPONSE...	APPROVER	FLOW_STATUS	FLOW_STATE	FINISHED	DELETED
Бюджет жоспары	Ramis Akhmedov	Department of Alumni and Career Development	4/30/2019, 11:29 AM	9/22/2019, 11:49 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0
Бюджет жоспары	Assem Kuanishbayeva	Educational and Methodical Center	8/27/2019, 12:15 PM	9/22/2019, 11:48 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0
Бюджет жоспары	Zhaslyk Abdrashev	Finance and Budget Planning Department	5/3/2019, 5:59 PM	9/25/2019, 12:28 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0
Бюджет жоспары	Alzhan Korbayeva	Department of Jurisprudence	6/3/2019, 1:09 PM	9/25/2019, 12:10 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0
Бюджет жоспары	Madiyar Saudbayev	Department of Social Sciences	5/31/2019, 1:17 PM	9/22/2019, 11:42 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0
Бюджет жоспары	Elmira Merekeyeva	Scientific Library	4/30/2019, 4:30 PM	9/22/2019, 11:38 PM	Zhaslyk Abdrashev	Бекіту	Financial board	1	0

Figure 2. Report of the business process from DMS

An example of one process was given in the article before. in approximately this format, the rest of the business processes were analyzed and implemented in the Document Management System. Business processes which were chosen as processes which affect the creation and analyzing process of the budget planning process will affect the correctness of the collected data. Collected information from all presented before processes will be the core of the Budget planning process.

Discussion

The main actions which have been done in this article for build the core of the Budget planning:

1. Identify all possible business processes that can affect the budget planning process
2. Developing business processes in system Coordinating supporting business processes that serve the core business. Business processes as Monthly payment, Business trip, Cost types, Salary payment, Service provision process, Purchase of goods, Event process increases the organization's performance and will build the core of the planning process.

Conclusion

The main directions for improving the budgeting process should be reducing the planning horizon, excluding some functions from the budgeting process and optimizing automated business processes for proper budget planning. Article provides analysis on the processes, which will affect the Budget planning process and build solutions which will be the core of the Budgeting.

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“Международный научный журнал АКАДЕМИК”

№ 1 (105), 2021 г.

Май, 2021 г.

В авторской редакции

мнение авторов может не совпадать с позицией редакции

Международный научный журнал "Академик". Юридический адрес:
M02E6B9, Республика Казахстан, г. Караганда, ул. Университетская 21

Свидетельство о регистрации в СМИ: KZ12VPY00034539 от 14 апреля 2021 г. Журнал
зарегистрирован в комитете информации, министерства информации и общественного
развития Республики Казахстан, регистрационный номер: KZ12VPY00034539

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