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Choosing the Optimal Digital Solutions to Optimize the Financial Processes of a Commercial Bank

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Abstract: We considered approaches to the optimization of financial processes based on the use of digital technologies, work with BigData - data analytics, including the formation of an automated reporting system, the development of digital process monitoring, data analysis using mathematical statistics and other DataScience tools. You have reviewed BI solutions as tools for analyzing financial processes. Financial processes are an integral part of the resource management methodology. The operations themselves are classified according to various criteria. The term, interest rate, type of market and instrument are taken into account. Redistribution of financial resources between different entities of the system is considered as the main type of activity.

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1 INTRODUCTION

The efficiency of financial processes directly affects the bank's competitiveness, customer satisfaction and reduced operating costs. In the context of digital transformation, it is important to choose technological solutions that will significantly improve the process of issuing credit cards, making it faster, more convenient and secure.

The following solutions seem to be the most correct to optimize the process of issuing cards at the bank:

• Improve data security;

• Optimization of delivery logistics;

• Improved customer experience;

• Automation and optimization of the internal process.

Based on current conditions, when companies, especially banks, devote a large amount of funds and resources to information security, initiatives for its development can be very specific, requiring innovative technological solutions that are suitable for a specific company and processes. Therefore, the article considers more universal optimization methods that can be scaled and used within the framework of the activities of different companies, in particular, working with BigData, which can bear fruit in optimizing logistics, in improving the convenience of processes for the client, as well as in automation and digitalization of internal processes.

2 METHODS

The article uses general scientific research methods, such as comparison, analysis, generalization, classification. A review of scientific articles and literature in the field of digitalization of the economy was carried out.

3 RESULTS

The most common way to work with BigData is data analytics, which includes, like the formation of an automated reporting system, the development of digital process monitoring, data analysis using mathematical statistics and other DataScience tools.

Process monitoring and automated reporting can have different frequency in terms of data updates, as well as a different format for providing to the customer. One of these formats is visualization in a dashboard, which is the best way to provide a large amount of data in a user-friendly format. This article considers this particular tool as a priority in the analysis of financial processes.

Before detailing the process of creating and using a dashboard, it is worth noting that the field of BI analytics offers many solutions that satisfy the individual requirements of the company and the processes taking place in them, so special attention is paid to choosing a tool for a specific task. In banks, Tableau is the most common tool for visualizing financial and business processes. For a clearer understanding, we should highlight the capabilities of this tool and the advantages that set it apart from many other solutions by comparing it with other popular solutions on the market.

Let's compare the tools by their positive and negative sides:

1.MicrosoftPower BI. Positives: easy to use and intuitive interface, rich data visualization capabilities, integration with multiple data sources, including Excel, SQL Server, and cloud services, regular updates and improvements to functionality, mobile device support. Negatives: limited data capacity, some features are only available in the paid version, limitations on customization of visualizations compared to competitors.

2.Tableau. Positives: powerful and flexible data visualization capabilities, support for large amounts of data, interactive dashboards and reports, integration with multiple data sources, programmable extensions and scripts support. Negatives: high license cost, more sophisticated interface for novice users, limited functionality in the free version.

3. QlikSense. Positives: an associative data model that simplifies relationship analysis, interactive and easily customizable dashboards, powerful self-service BI capabilities, extensive integration with various data sources. Negatives: high cost for large organizations, steep learning curve for new users, limited support on select mobile devices.

4. SAP BusinessObjects. Positives: deep integration with SAP ERP and other SAP systems, extensive reporting and analysis capabilities, supports complex business scenarios and processes, powerful analytics and tools. Negatives: high implementation and support costs, difficult to set up and manage, need significant technical skills to fully utilize.

5. IBM CognosAnalytics. Positives: powerful analytics and predictive analytics, interactive dashboards and reports, integration with different

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data sources, support for business processes and enterprise systems. Negatives: high license and implementation costs, difficult to set up and use for novice users, the need for significant resources for full use.

6. Looker. Positives: cloud-based platform that simplifies deployment and scaling, powerful data visualization capabilities, flexible and customizable analysis reports, multi-data source support and easy integration. Negatives: high cost for SMBs, limited support for local deployments, the need for training to take full advantage of the platform.

7. Oracle BI. Positives: integration with Oracle ERP and other systems, powerful analytical and predictive capabilities, flexible reporting and dashboard tools. Negatives: high license and support costs, difficult to set up and manage, need for significant technical skills for the job.

A large lending company with many different business processes is more profitable to use Tableau, as it offers some of the most powerful and flexible data visualization tools on the market. This allows you to create highly informative and visual dashboards that can display complex business processes and metrics in an understandable form. For large companies, where it is important to interpret large amounts of data quickly and efficiently, this is a significant advantage.

Tableau is capable of efficiently processing and analyzing large amounts of data from various sources. Large companies tend to generate huge amounts of data, and the ability to analyze them quickly and accurately helps make more informed decisions.

Taking into account integration with many data sources, including databases, cloud services, Excel and many others, Tableau allows you to centralize the analysis of data from different systems and improve coordination between different business processes. Interactive dashboards that can be customized for the specific needs of various departments and business processes. This helps different departments of the company see the data that is most important to their work, and quickly respond to changes. Also, the advantages of this tool include powerful analytical functions, collaboration support, that is, the ability to work together by publishing dashboards on the server, flexibility and scalability, as well as ease of use and training, which allows you to quickly implement BI solutions and train employees.

Thus, choosing optimal digital solutions to optimize the process of issuing credit cards at the bank is a critical step that directly affects its competitiveness, customer satisfaction and lower operating costs. In the digital transformation of the financial sector, priority is given to technologies that can speed up, simplify and secure the process of issuing credit cards. Against the background of the increasing importance of information security and the need for innovative approaches, universal methods of working with big data (BigData) and analytics tools are becoming key elements of optimization.

BI data analytics, including automated reporting systems and digital process monitoring, such as data visualization in dashboards, can significantly improve the efficiency of financial process management. In particular, for banks, the optimal visualization tool is Tableau, which stands out for its powerful and flexible large data processing capabilities, interactive dashboards and integration with various data sources. Tableau also allows you to create customized analytical reports, which improves coordination between different business processes and departments of the company.

Comparison with other popular BI systems such as MicrosoftPower BI, QlikSense, SAP BusinessObjects, IBM CognosAnalytics, Looker and Oracle BI demonstrates that each has its own strengths and weaknesses, but Tableau has significant advantages for large organizations. It provides highly informative and visual dashboards capable of displaying complex business processes and metrics in an understandable form. This allows companies to analyze data faster and more accurately, make informed decisions, and respond to changes in the operating environment.

To optimize the process of issuing credit cards and improve the overall efficiency of financial processes in large companies, Tableau is the preferred tool. Its powerful analytical functions, collaboration support, flexibility, scalability and ease of use make it a valuable resource for achieving strategic goals in a digital transformation.

The use of dashboards in BI tools such as Tableau allows you to significantly improve the quality and speed of decision-making, providing in-depth and comprehensive data analysis. This is especially important in a rapidly changing market and highly competitive environment where responsiveness and accuracy of analysis are key. Thus, the introduction of such tools in the process of managing financial transactions becomes an integral element of successful business and strategic planning.

Dashboard provides analytical information on issuing credit cards. It consists of several key visualizations and metrics that help assess the effectiveness of credit card sales and usage. Below is the structure of the dashboard with a description.

1. Key indicators ("Factoids"):

• Total number of meetings held.

• Total number of credit cards sold

• Total number of credit cards disposed of.

• Average first purchase check.

2. Graphics and visualizations:

• Dynamics of meetings: a line graph showing the number of meetings held by months over the analyzed period.

• QC sales dynamics: a line chart showing the number of credit cards sold by month.

• 1st Check Allocation: Bar chart showing the allocation of first purchase amounts.

• Average 1st Purchase Check by Region: Horizontal barchart showing the average first purchase amount in various regions. The list of regions can be scrolled.

• Dynamics of sales conversion and disposal: composite bar charts showing percentages of sales conversion and disposal (1st purchase) by month.

• Credit Card Sales Funnel: A visualization of the funnel displaying the stages of the sales process - from meetings held to credit card disposal, with percentages at each stage.

3. Filters:

The ability to filter data by regions and cities, which allows you to analyze indicators on graphs in geographical sections.

Thus, the dashboard layout described above allows you to assess the effectiveness and effectiveness of meetings between a bank representative and a client from the point of view of selling credit cards as an upper level. And also, thanks to the use of additional information about card transactions, analyze the degree of primary involvement of the client in the product, which the bank representative must provide, that is, push the client to make the first purchase on the card.

When creating a dashboard, BI analysts usually think over scenarios for its use based on the needs and goals of the customer. So, it is necessary to build several scenarios for using the current dashboard, which will allow us to understand its effectiveness in analyzing the financial process under consideration - issuing/selling credit cards.

Thus, a detailed analysis of the data presented on the dashboard allows for a comprehensive analysis and improvement of credit card sales processes, providing both operational and strategic advantages for the organization.

Analysis of the data presented on the dashboard demonstrates its significant benefit in assessing and improving financial processes. Dashboard allows you to identify seasonal trends, analyze the effectiveness of marketing campaigns and conversions, and make informed decisions to improve overall sales efficiency. Importantly, dashboard provides an opportunity not only for retrospective analysis but also for predicting future trends based on current data. Thus, dashboard as a BI analytics tool acts as a useful tool for strategic and operational analysis of financial processes, in particular, the sale and issuance of credit cards.

Thus, the use of dashboards provides significant advantages for managing and optimizing processes in the banking sector. It helps increase business transparency, improve process control, and respond quickly to change. Companies can not only improve current processes, but also develop long-term strategies based on deep data analysis. Thus, dashboard becomes an integral part of modern BI analytics, providing the company with a competitive advantage in the market and contributing to its sustainable development.

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