

Using Umbrella to Efficiently Manage IT Projects and Programs in the Banking Sector

Zhuldyz Bekenova, Kateryna Kolesnikova

International IT University, Manas 34/1, Almaty, Kazakhstan

Abstract

The article explores the problems of managing portfolios of IT projects and programs in the banking sector. The complex nature of IT project management in the banking sector is shown, requiring the introduction of effective tools for allocating resources, tracking project progress, and ensuring the timely completion of critical tasks. As a tool for solving such problems, it is proposed to use Umbrella as one of the IT project management tools. The authors showcase Umbrella features such as a customizable dashboard and real-time project status data that can help project managers make informed decisions and identify issues in project portfolios. It is also shown that Umbrella can help banks meet regulatory requirements and meet customer expectations, which is very important for banks to remain competitive in the industry. Examples of the successful use of the proposed technologies in the banking sector are given and the prospects for their use to improve the banking system are considered. The scientific novelty of this study lies in the use of the Umbrella tool as a set of measures aimed at introducing innovative technologies in the banking sector and increasing their competitiveness. The practical significance of the study lies in the fact that the proposed recommendations can be used in the practical activities of banking specialists.

Keywords ¹

Umbrella, IT-project, program and portfolio management, Kanban, banking sector, proactive management

1. Introduction

In 2020, the pandemic in the first half of the year dramatically increased IT budgets, which means that the speed and range of projects that have started have increased: the transition to remote work, building financial ecosystems and marketplaces, robotization of routine business processes and the introduction of AI elements in the financial sector.

Today, the role of digital in the activities of financial organizations is difficult to overestimate, if only because most of the world's major banks call themselves IT companies and massively rely on digital ecosystems. The financial sector can indeed offer developers of IT solutions and system integrators many areas for cooperation.

In today's world, the banking sector is becoming increasingly dependent on technology. A serious breakthrough in the development of information technology has greatly simplified the work of banking institutions, making the internal structure and system of relationships more convenient for employees, and the banks themselves - more accessible and comfortable for customers. In the banking sector, information technology is used in various forms, as in any organization. The simplest of them are technologies for internal interaction of personnel because, for the efficient operation of departments, instant communication between bank employees is necessary. This allows any employee to freely resolve any issue of the client, even if this

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EMAIL: bzhe250300@gmail.com (Zhuldyz Bekenova); kkolesnikova@iitu.edu.kz (Kateryna Kolesnikova);
ORCID: 0009-0001-3861-824X (Zhuldyz Bekenova); 0000-0002-9160-5982 (Kateryna Kolesnikova);



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requires contacting another branch or head office. To keep up with the ever-changing market, it is essential to implement efficient IT projects and programs.

The banking sector is a complex corporate structure. In this regard, the problems of managing such structures are relevant. It is known that the long-term development of such organizations is possible only with the use of project management methodology. Despite this, many banks, even with a well-defined project management strategy, do not always manage to achieve their goals. This can happen for various reasons - from management errors to incorrectly chosen tools for achieving goals. Therefore, such a tool for implementing the strategy of organizations as project portfolio management remains relevant. This tool allows you to systematize the work of managing numerous related and unrelated projects, use resources more efficiently, and balance the various interests of participants, creating conditions for obtaining synergistic effects in the implementation of the strategy. However, managing multiple projects and programs simultaneously can be challenging.

2. The Purpose and Objectives Of The Research

The research aims to improve the efficiency of proactive IT project management in the banking sector through the introduction of new tools for managing the structure and the scope of the project.

To achieve this goal the following tasks are defined:

- analyze the problems of IT project management in the banking sector;
- offer tools to improve the efficiency of IT project management.

The object of study in the work is the processes of IT project management

The subject of the study is the Umbrella tool, which is used to support decision-making in the management of IT projects in the banking sector.

The scientific novelty of this study lies in the use of the "Umbrella" tool as a set of measures aimed at introducing innovative technologies in the banking sector and increasing their competitiveness.

The practical significance of the study lies in the fact that the proposed project-oriented tools and methods can be effectively used in the activities of banking specialists for the successful management of IT projects in the banking sector.

The results of the study can be useful for bank managers involved in IT project management, as well as for project management specialists who work in the banking sector. The implementation of the proposed tools and methods can help improve the planning, control and management of IT projects, increase the efficiency of resource use and reduce project implementation time.

Also, this study can become a starting point for further research in the field of IT project management in the banking sector. Perhaps in the future, new tools and methods will be developed that will even more effectively help solve the problems of managing IT projects in the banking sector.

Thus, a study aimed at improving the efficiency of proactive IT project management in the banking sector is relevant and important for the development of this industry.

3. Literature review

One of the main goals of banks is to maintain and increase their competitiveness in the market, and effective IT project management can be one of the key factors in achieving this goal. Banks are actively using information technology to improve the quality of their services and products, as well as to optimize business processes and reduce costs.

However, as practice shows, IT project management can become a serious problem for banks, especially if the projects are of large scale and complexity. Often banks face problems in planning, monitoring, and managing projects, which can lead to delays in project implementation, budget overruns, and low-quality results [1, 2].

Therefore, the development and implementation of new tools and methods for managing IT projects can significantly improve the situation in the banking sector. The use of innovative technologies such

as Umbrella can help project managers make informed decisions throughout the project life cycle, leading to more efficient use of resources and achieving goals.

In the banking industry, IT projects and programs are critical to the success of a bank and customer satisfaction. However, the management of such projects may face several challenges that may make it difficult to achieve the objectives of the project.

Let us consider a few of them:

The complexity of management: Banking IT projects and programs can be extremely complex, involving a large number of participants, technologies, and processes. Managing such projects can be a difficult task requiring high qualifications and experience on the part of the management staff.

Lack of alignment between business and IT strategies: Often, IT projects do not align with business strategy, which can lead to inefficient use of resources and failure to achieve goals. Addressing this challenge requires greater collaboration between IT and business departments and clearer links between IT and business strategies.

Lack of budget: in the banking industry, as in any other, there is often a problem of lack of budget to finance IT projects. To solve this problem, it is necessary to use cost optimization methods, such as choosing more efficient technologies, redistributing the budget, outsourcing some functions, etc.

Time/Budget Mismatch: Projects can run past time and budget, which can result in delays in launching products and services, as well as increased costs. There is a need to set more realistic timelines and budgets, manage risks and reallocate resources [2, 3].

Insufficient involvement of stakeholders: Stakeholders may not be sufficiently involved in the project, which may lead to an insufficient understanding of the goals and requirements of the project by clients, employees, and other stakeholders. To solve this problem, it is necessary to ensure closer interaction between project participants and ensure their active participation at all stages of the project.

Inadequate Change Management: Changes to the project may not be adequately assessed and the necessary actions to manage them may not be taken. This can lead to undesirable consequences in the project and lead to failures. To solve this problem, it is necessary to establish change management processes and take measures to manage risks.

Lack of experience: Some banks may not have sufficient experience in managing IT projects, which can lead to inefficient use of resources, missed deadlines, and poor project outcomes. To solve this problem, it is necessary to develop and maintain competencies in the field of project management, and provide education and training for staff.

Techniques and tools for addressing these challenges include using modern project management techniques such as Agile, Scrum or AI, establishing closer collaboration between business and IT departments, using risk and change management tools, ensuring active stakeholder engagement, and using optimization techniques, costs and resources [3 - 5].

IT project and program management are two related but distinct disciplines that involve the planning, execution, and control of projects and programs within the IT industry.

IT project management refers to the practice of leading a team to achieve specific goals and meet specific success criteria, within a specified time frame and budget. IT projects can include software development, hardware implementation, network upgrades, cybersecurity initiatives, and more. The project manager is responsible for overseeing the entire project lifecycle, from initiation to closure, and ensuring that the project is completed on time, within budget, and to the satisfaction of stakeholders. This involves creating a detailed project plan, allocating resources, identifying and mitigating risks, and monitoring progress against established metrics [5, 6].

IT program management involves the coordination and management of multiple related IT projects to achieve specific business objectives. Programs typically involve a series of interdependent projects that are coordinated and managed in a unified way to achieve a common goal. Program managers are responsible for managing the entire program, which may involve managing multiple project managers and teams, developing program-wide strategies and plans, and overseeing budget and resource

allocation. Program management also involves identifying and mitigating risks, tracking progress against established metrics, and ensuring that the program is aligned with business objectives.

In summary, IT project management involves managing a single project, while IT program management involves managing a portfolio of projects that are interrelated and designed to achieve a specific business goal [6, 7].

Importance of IT project and program management in the IT industry.

IT project and program management are essential in the IT industry for a variety of reasons:

Efficient use of resources: IT project and program management help organizations manage their resources effectively by planning and allocating them in a way that maximizes efficiency and productivity.

Cost-effectiveness: Effective IT project and program management help organizations optimize their budgets, reducing the risk of cost overruns and ensuring that resources are used in the most cost-effective way possible.

Improved project outcomes: IT project and program management help organizations to deliver high-quality projects that meet the requirements of stakeholders, are delivered on time and within budget, and achieve the desired outcomes.

Risk management: Effective IT project and program management help organizations identify, manage, and mitigate risks, ensuring that projects are delivered with minimal disruption or negative impact on the organization [8].

Alignment with business objectives: IT project and program management ensure that projects and programs are aligned with the strategic goals and objectives of the organization, helping to ensure that they contribute to the overall success of the organization [9].

Improved communication and collaboration: IT project and program management help to facilitate communication and collaboration among team members, stakeholders, and other groups involved in the project or program, reducing the risk of misunderstandings and ensuring that everyone is working towards the same goal.

Overall, IT project and program management play a critical role in ensuring that IT projects and programs are completed successfully, meet the needs of stakeholders, and contribute to the overall success of the organization. By optimizing resource allocation, reducing costs, managing risks, and ensuring alignment with business objectives, IT project, and program management can help organizations to achieve their goals and stay competitive in the rapidly evolving IT industry [10, 11].

4. Main part

Umbrella is a project and portfolio management tool that is widely used by project managers and program managers to manage complex projects and programs. Its flexible and customizable features make it ideal for the banking sector, where projects and programs can be diverse and require a variety of resources:

- The process of registration of new business requirements (applications) for the revision of banking systems has been implemented;
- The process of coordinating the application with other divisions of the Bank;
- A transparent reflection of the BT analysis process with deadlines;
- A transparent reflection of the process of finalizing the system with deadlines;
- A transparent reflection of the testing process with a reflection of all passed test cases and identified defects (bugs);
- The process of installing changes in production (in progress);
- Possibility to discuss issues with process participants and receive an answer with the preservation of history;
- Reporting on the number and status of applications;

One of the most significant advantages of using Umbrella in the banking sector is that it allows for better communication and collaboration among team members.

For all participants of the application (business customers, approvers, analysts, developers, testers, system administrators, etc.) full information about the application and the progress of its execution with the presence of comments and execution time (Fig. 1 – 2).

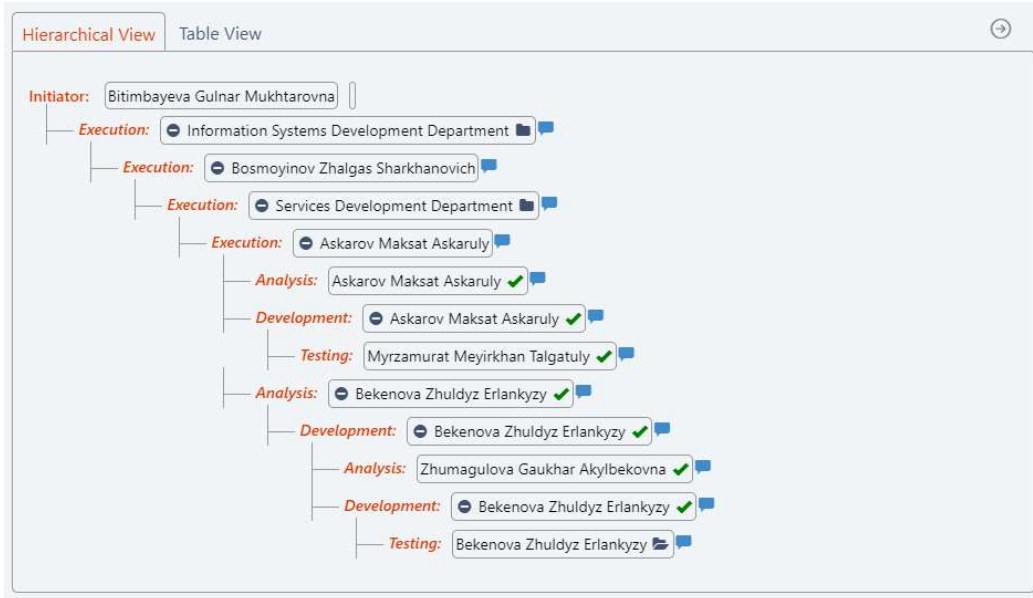


Figure 1: Hierarchical view of project stages.

Step creation time	Sender	Recipient	Status	Deadline	Actions/Comment		
					17.01.23 12:38	Fulfilled	
01.08.22 09:53	Askarov Maksat Askaruly	Askarov Maksat Askaruly	✓		01.08.22 09:53	Document receipt (For execution)	
					03.08.22 09:16	Opening a Document	
					19.06.22 18:00	Fulfilled	
05.01.23 17:05	Askarov Maksat Askaruly	Bekenova Zhuldyz Erlankyzy	✓		05.01.23 17:05	Document receipt (For execution)	10/09786 dated 04/29/2022 - Concerning the transfer of the operation of the pantry / cash register to the LF software within the framework of the Abyroy Project
					11.01.23 14:39	Opening a Document	
					13.02.23 15:05	Fulfilled	
13.02.23 15:07	Bekenova Zhuldyz Erlankyzy	Bekenova Zhuldyz Erlankyzy	✓		13.02.23 15:07	Document receipt (For execution)	implementation of the shift change process between cashiers through LF
					13.02.23 15:10	Opening a Document	
					16.02.23 09:45	Fulfilled	
13.02.23 17:40	Bekenova Zhuldyz Erlankyzy	Zhumagulova Gaukhar Akylbekovna	✓		13.02.23 17:40	Document receipt (For execution)	for intelligence
					14.02.23 11:51	Opening a Document	
					15.02.23 16:39	Fulfilled	
16.02.23 09:55	Bekenova Zhuldyz Erlankyzy	Bekenova Zhuldyz Erlankyzy	✓		16.02.23 09:55	Document receipt (For execution)	Refinement for lf by cashcont and cash, register mini ingot, 15202 and 15204
					16.02.23 09:58	Opening a Document	
					30.03.23 14:06	Fulfilled	
30.03.23 14:06	Bekenova Zhuldyz Erlankyzy	Bekenova Zhuldyz Erlankyzy	✉		30.03.23 14:06	Document receipt (For execution)	On the test together with URVS
					30.03.23 14:07	Opening a Document	

Figure 2: Table view of project stages.

By using a centralized platform, all team members can easily access project-related information and track progress. This feature is particularly important in the banking sector, where project teams may be spread across different locations and time zones (Fig. 3).

Analysis Integration of a new Partner "DNS Kazakhstan"

Task details

IS requiring improvement (KE): ABIS Colvir Status: **In work**

Module: Credits

Application number: CLR00003348 from 03/15/23

Task ID: 7966

Date of creation: 07.04.2023

Initiator: Askarov Maksat Askaruly

Subdivision: Services Development Department

Planned dates

Start date: 04/12/2023

Expiration date: 04/30/2023

Labor costs in h / d: 13

Actual dates

Start date: 28.04.2023 12:45

Expiration date: *Not completed*

Labor costs in h / d: 0

Executor

Executor: Izbasarov Abai Kairatbekovich

Subdivision: Services Development Department

Block: Information technology block

Formulation of the problem

Цели проекта.
Порядка взаиморасчетов с ТОО «ДНС Казахстан» (далее – ТО) при выдаче кредита/рассрочки

Attachments: *Missing*

Result Defects Extension requests (2) Activity log (4) Comments (0)

Executor	A comment	The attachment	Task receipt date	Task closing date	Status
Bekenova Zhuldyz Erlankyzy	at work for another employee of my department	Absent	07.04.2023	04/28/2023	Reassigned

Figure 3: Project details.

1. Block for displaying the status of the application and available operations (Fig. 4).



Figure 4: Project stages.

2. The block displaying information about the application (Fig. 5).

Development Regarding the mass update of client cards with a script that was not
17.04.2023

Task details

IS requiring improvement (KE): ABIS Colvir Status: **Fulfilled**

Module: Credits

Application number: CLR00003986 dated 04/18/23

Task ID: 8780

Date of creation: 04/24/2023

Initiator: Bekenova Zhuldyz Erlankyzy

Subdivision: Services Development Department

Figure 5: Detailed information about the creation of the project.

3. The block displaying detailed information about the required changes (Fig. 6).

Created To be agreed

date of creation: 28.04.23 17:36 | Document Number: CLR00004244 | Subdivision: Управление развития сервисов | Initiator: Бекенова Жулдыз Ерланқызы

IP to be finalized (KE): ASИС Colvir | Module: Кредиты | Urgency level: Средний | Priority: 4 | Project: Project

Subject: The Colvir database needs new stored procedures to replace the current Colvir bus methods.

Description: The Kolvir database needs new stored procedures to replace the current Kolvir bus methods.

Business Requirement: Example for dissertation.docx

Figure 6: Description of the project.

4. Block of tasks for this application (Fig. 7).

Request for an extension

	Coordinator	old date	new date	Status	A comment	File
1. Go	Askarov Maksat Askaruly	04/30/23	05/16/23	On approval		
2. Go	Askarov Maksat Askaruly	04/19/23	04/30/23	Agreed		

Document route

Task type	Route	Responsible	Task result
Appointed	1. DRIS Services Development Department	Bekenoza Zhuldyz Erlankyzy	Accepted for work
In work	2. DRIS Services Development Department	Bekenoza Zhuldyz Erlankyzy	

Figure 7: Project execution stages.

Another advantage of using Umbrella is that it provides real-time data on project progress. This information can help project managers identify potential issues early on and take corrective action (Fig. 8).

Спринт: 16 (17.04.23 - 28.04.23) | FULL NAME: Bekenoza Zhuldyz Erlankyzy | Control: Services Development Department | My tasks | Group Tasks

QUEUED: 0

PERFORMED: 4

- Analysis** | Deadline: 30.04.2023
CLR-BUS00003410 - VJ discrepancy Problem statement: Parsing logs.
- Analysis** | Deadline: 30.04.2023
CLR00003887 - making changes to existing processes in ABIS Kolvir by autom ...
- Deadline** | **Implementation** | Deadline: 28.04.2023
CLR00003893 - Optimization of asynchronous lending Issue Statement: Fix incorrect statuses after adding uniqueness to ...
- Testing** | Deadline: 30.04.2023
S00002770 - 10/09786 dated 04/29/2022 - Concerning the transfer of the pantry/ca... Task statement: On the test together with the URVS

COMPLETED: 3

- Analysis** | Deadline: 30.04.2023 completed: 04/24/2023
CLR00003284 - Adding the P_Z_011_KDNLVL field to the intermediate table for GKS asynchronous drawdown Problem statement: Under analysis
- Analysis** | Deadline: 25.04.2023 completed: 04/24/2023
CLR00003886 - Regarding the mass update of client cards with a script that was not updated due to errors in the battle on 04/17/2023 Task definition: "
- Development** | Deadline: 19.04.2023 completed: 04/24/2023
CLR00003886 - Concerning the mass update of client cards with a script that was not updated due to errors in the battle on 04/17/2023 Task definition: script

OTHER: 0

Figure 8: Kanban board for performers.

A Kanban board is a visual tool that helps teams manage their workflows by organizing tasks into different stages or columns. A card that moves across the board as it progresses through different stages

represents each task. Kanban boards are widely used in Agile methodologies like Scrum and Kanban, and they can be adapted to different types of work, including performing arts [12].

In an umbrella organization that manages multiple performers, a Kanban board can be used to track different tasks and projects for each performer. The board can be divided into columns that represent different stages of a task, such as “To Do”, “In Progress”, and “Done”. Each performer can have their swim lane on the board, which represents their work queue [13, 14].

For example, a performer may have tasks like practicing a new routine, attending a costume fitting, and attending a promotional event. A card on the Kanban board can represent each of these tasks. The card can include details such as the task description, due date, and any relevant notes or attachments [15, 16].

As the performer progresses through their tasks, they can move the cards across the different columns on the board. This provides a visual representation of their progress and helps them stay organized and focused on their work [17].

The Umbrella organization's management team to monitor the progress of different performers and projects can also use the Kanban board. They can use the board to identify bottlenecks or areas where performers may need additional support. They can also use the board to track key metrics such as lead times, cycle times, and throughput [18, 19].

It can be a useful tool for managing the tasks and projects of performers in an umbrella organization. It provides a visual representation of their progress, helps them stay organized, and enables the management team to monitor their performance.

Additionally, the tool provides detailed reports, which can help stakeholders get a better understanding of the project's status and make informed decisions. (Fig. 9).

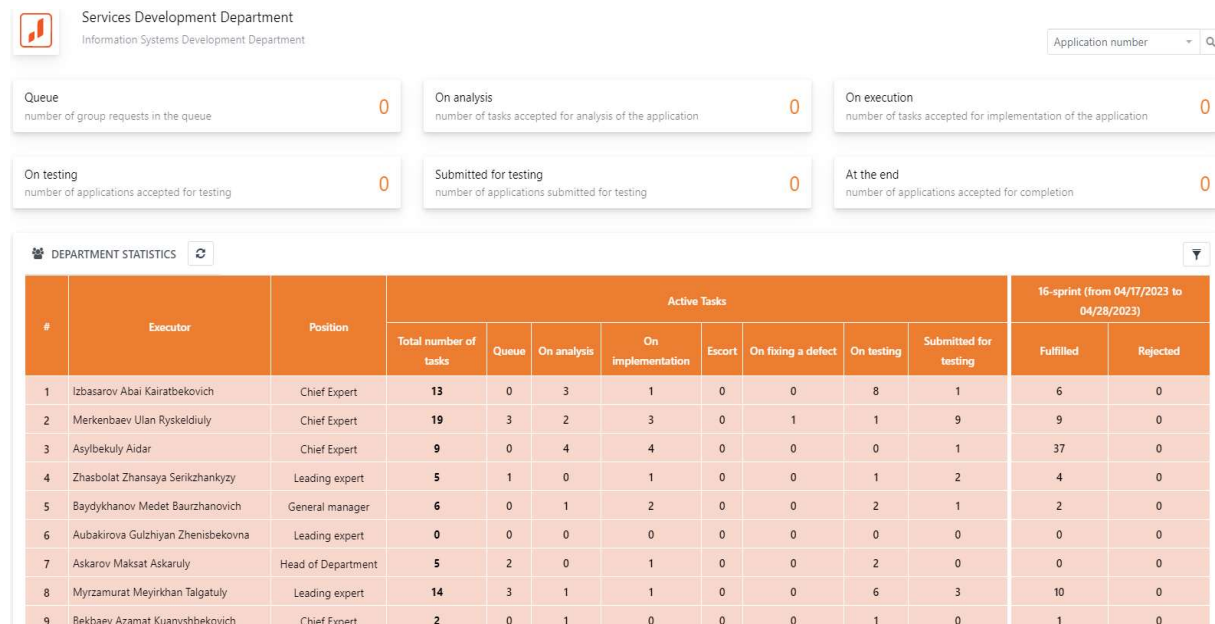


Figure 9: Overview of all active department tasks.

Umbrella also has powerful resource management features that can help project managers allocate resources efficiently. With the banking sector being highly regulated, it is essential to ensure that resources are utilized effectively to meet project objectives. Umbrella's resource management features can help project managers balance resource demand with resource availability and ensure that critical tasks are completed on time (Fig. 10).

Furthermore, Umbrella's customizable workflows and project templates can help streamline project processes and ensure consistency across different projects. This feature is particularly important in the banking sector, where there may be several projects with similar requirements.

Today, all employees of the IT Block use as the main software, these are analysts and developers of the IP Development Department (116 employees), the IP Maintenance Department (58 employees), the Operations Block, the Digital Development Department, the Risk Management Block, etc.



No.	Initiator	Executor	Application statuses													Completed for -quarter	Completed in a year (since 01/01/2023)
			Total	To be agreed	Queue	On analysis	On implementation	On testing	At the end								
1	Information technology block	Information technology block	508	33	6%	21	4%	17	3%	28	6%	28	6%	376	74%	42	338
2	Information technology block	Subsection reporting to the Board of Directors	1	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%	0	0
3	Department of Human Capital Development	Information technology block	4	0	0%	3	75%	1	25%	0	0%	0	0%	0	0%	0	3
4	Retail Business Block	Information technology block	45	5	eleven%	1	2%	2	4%	5	eleven%	8	18%	24	53%	3	29
5	Corporate business block	Information technology block	33	1	3%	2	6%	1	3%	3	9%	7	21%	19	58%	3	23
6	Operating block	Information technology block	202	10	5%	27	13%	9	4%	33	16%	48	24%	65	32%	62	225
7	financial block	Information technology block	42	2	5%	eleven	26%	5	12%	7	17%	7	17%	10	24%	eleven	37
8	Security block	Information technology block	5	0	0%	0	0%	0	0%	0	0%	1	20%	3	60%	0	0
9	Recovery block	Information technology block	4	0	0%	1	25%	0	0%	1	25%	2	50%	0	0%	3	4
10	Risk Management Block	Information technology block	25	2	8%	4	16%	0	0%	0	0%	7	28%	9	36%	10	28
eleven	Subsection reporting to the Board of Directors	Information technology block	23	2	9%	0	0%	5	22%	0	0%	4	17%	12	52%	2	17
12	Block Private Banking	Information technology block	15	0	0%	0	0%	3	20%	3	20%	6	40%	3	20%	2	16
13	Department of Data and Machine Analysis. training	Information technology block	3	1	33%	0	0%	0	0%	0	0%	0	0%	2	67%	0	7
14	Marketing Department	Information technology block	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0
15	Block of development and process control	Information technology block	8	1	13%	1	13%	1	13%	0	0%	3	38%	2	25%	1	45
16	Internal Control Service	Information technology block	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	1

Figure 10: Dashboard of managers.

The formula used for the calculation of savings based on Jira Software license can be expressed as follows:

$$\text{Monthly savings} = \text{Number of users} * \text{cost per user};$$

$$\text{Yearly savings} = \text{Monthly savings} * 12,$$

where:

- Number of users: The total number of Jira Software users in the organization
- Cost per user: The cost of Jira Software license per user per month

Using these formulas, the monthly and yearly savings for the Bank can be calculated as follows:

For 174 workers:

$$\text{Monthly savings} = 174 * \$7 = \$1218$$

$$\text{Yearly savings} = \$1218 * 12 = \$14616$$

When transferring employees of other Blocks of the Bank:

$$\text{Monthly savings} = 427 * \$7 = \$2989$$

$$\text{Yearly savings} = \$2989 * 12 = \$35868$$

It is possible to adapt the system to the Bank's business areas, implement the necessary tools for monitoring the progress of projects and tasks.

5. Conclusion

In conclusion, managing IT projects and programs in the banking sector can be complex and challenging. With the increasing demands for innovative technology solutions and digital transformations, project managers need effective tools to manage multiple projects and programs effectively. Umbrella is a project and portfolio management tool that can help banks manage their IT projects and programs efficiently.

Umbrella offers a range of features that can help project managers allocate resources effectively, track project progress, and make informed decisions. With its customizable dashboard and real-time data on project status, Umbrella can provide a holistic view of project portfolios, making it easier for managers to identify issues and take corrective actions.

In addition to providing efficient project management, Umbrella can also help banks comply with regulatory requirements and meet customer expectations. By ensuring the timely completion of critical tasks, banks can improve their operational efficiency, reduce costs, and deliver high-quality services to their customers.

Overall, Umbrella can be an invaluable tool for managing IT projects and programs in the banking sector. Its features and capabilities can help banks stay competitive, innovate, and meet the ever-increasing demands of their customers.

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