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**PROJECT MANAGEMENT OF THE CREATION OF AN ONLINE PLATFORM FOR THE EXCHANGE AND SALE OF USED IITEMS "ECOCHANGE HAVEN"**

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# ABSTRACT

Zhang Xinyang. Project Management of the Creation of an Online Platform for the Exchange and Sale of Used iItems "EcoChange Haven"

Master's Thesis for an Education Degree "Master" in Specialty 073 "Management". Lesia Ukrainka Volyn National University. Lutsk, 2024.

The master's thesis examines the project management of the creation of an online platform for the exchange and sale of second-hand items EcoChange Haven. In the context of the general growth of interest in electronic commerce and the development of the second-hand goods market, the research of this project is of practical importance. The first chapter explores theoretical and methodological aspects of project management in the field of e-commerce, including an overview of concepts and approaches to project management in the field of e-commerce, analysis of modern trends in the use of online platforms for the exchange and sale of second-hand goods, as well as project management methods in the e-commerce industry commerce and trade. The second chapter examines aspects related to concept development, technical analysis of the project, and budget development. Important aspects such as the development process and technology stack selection, design and user interface, testing and launch of the platform are covered. In the third section, management of the project schedule and team, risk management and evaluation of the effectiveness and prospects of expanding the online platform are considered. The work is based on the analysis of current sources and methods of project management and is aimed at developing an effective strategy for creating and managing an online platform for the exchange and sale of used things, which has significant potential for market implementation. The significance of projects lies in their ability to promote sustainable development and reduce environmental impact. They provide an opportunity for the efficient use of resources through the reuse and resale of used goods, reducing waste and fostering the development of a circular economy. Additionally, such platforms contribute to economic growth by providing new opportunities for small businesses and individual sellers, as well as increasing consumer awareness of environmental issues and solutions.

*Keywords*: project management, e-commerce, business strategies for the online market, project management methodology, project risk management.

# АНОТАЦІЯ

Чжан Сіньян. Управління проектом створення онлайн платформи для обміну та продажу вживаних речей "EcoChange Haven"

Магістерська робота на здобуття ступеня "магістр" за спеціальністю 073 "Менеджмент". Волинський національний університет імені Лесі Українки. Луцьк, 2024.

Магістерська робота розглядає управління проектом створення онлайн платформи для обміну та продажу вживаних речей "EcoChange Haven". В умовах загального зростання інтересу до електронної комерції та розвитку ринку вживаних товарів, дослідження цього проекту має практичне значення. В першому розділі досліджено теоретичні та методичні аспекти управління проектами в галузі електронної комерції, включаючи огляд понять та підходів до управління проектами у сфері e-commerce, аналіз сучасних тенденцій використання онлайн платформ для обміну та продажу вживаних речей, а також методи управління проектами в індустрії електронної комерції та торгівлі. В другому розділі вивчаються аспекти, пов'язані з розробкою концепції, технічним аналізом проекту та розробкою бюджету. Розглядаються важливі аспекти, такі як процес розробки та вибір технологічного стеку, дизайн та інтерфейс користувача, тестування та запуск платформи. В третьому розділі розглянуто управління графіком та командою проекту, управління ризиками та оцінка ефективності та перспективи розширення онлайн платформи. Робота базується на аналізі актуальних джерел та методів управління проектами та спрямована на розробку ефективної стратегії створення та управління онлайн платформою для обміну та продажу вживаних речей, що має значний потенціал для впровадження на ринку. Значення таких проектів полягає в їх здатності сприяти сталому розвитку та зменшенню екологічного навантаження. Вони надають можливість ефективного використання ресурсів через повторне використання та перепродаж вживаних товарів, що зменшує кількість відходів та сприяє розвитку економіки замкнутого циклу. Такі платформи сприяють економічному зростанню, надаючи нові можливості для малого бізнесу та індивідуальних продавців, а також підвищуючи рівень обізнаності споживачів про екологічні проблеми та рішення.

*Ключові слова:* управління проектами, сфера e-commerce, бізнес-стратегії для онлайн ринку, методологія управління проектами, управління ризиками проекту.

# CONTENT

# INTRODUCTION

*Relevance of the Research Topic*. In today's world, e-commerce is becoming increasingly popular, especially in the context of buying and selling used goods. Therefore, creating an online platform for the exchange and sale of used items, such as "EcoChange Haven", becomes a relevant task. This meets consumers' needs for convenient and eco-friendly ways to restore the value of used goods, while contributing to waste reduction and resource conservation. Managing such a project involves developing the technical aspects of the platform, planning business strategies, risk management, and project effectiveness assessment. Researching such a topic has significant practical implications as it allows uncovering key aspects of successful implementation of an internet platform for exchanging and selling used goods, meeting the needs of the modern market and consumers.

Project management has been studied in the works of such scientists as: J. Heagney, J. Jia, T. Seymour, S. Hussein, Y. Pan, L. Zhang, S. Jiang, G. Ma, A. Walker D. Wang and others.

*The purpose* of the master's thesis is to study and analyze the project management process of creating an online platform for the exchange and sale of used things "EcoChange Haven", to establish effective strategies, methods and tools of project management for the purpose of successful implementation.

To achieve the goal, the following *tasks* have been defined:
- to analyze concepts and approaches to project management in the field of e-commerce and exchange of goods;
- to analyze current trends in the use of online platforms for the exchange and sale of used items;
- to explore project management methods in the e-commerce and trade industry;
- to analyze the development of the concept, goals and objectives for the project to create the online platform "EcoChange Haven";
- to research the technical analysis of the project;

- to justify the development of the budget of the project of creating the online platform "EcoChange Haven";
- to analyze schedule and project team management;
- to analyze project risk management;
- to investigate the evaluation of the effectiveness and prospects for the expansion of the online platform.

*The object* of research of the master's thesis is the project management process of creating an online platform for the exchange and sale of used things.

*The subject* of research is the methods, strategies and tools used for successful project implementation, including technical aspects of the platform, business strategy planning, risk management and performance evaluation.

Concepts and methods of project management in the field of e-commerce and trade, especially taking into account the specifics of the creation and functioning of online platforms for the exchange and sale of used things, became the theoretical basis for writing the master's thesis. The work is based on the study of modern trends in the use of Internet technologies for trade and exchange of goods, as well as on the analysis of project management methods used in the e-commerce industry. Also, an important component of the theoretical base is the study of means of measuring the effectiveness of projects and strategies for the development of online platforms.

*Research Methods*. The following methods were utilized in writing the master's thesis: analysis of literary sources and scientific-theoretical works related to project management in the field of e-commerce and trade; methods of analyzing practical experience in implementing similar projects, observation of e-commerce development, and analysis of strategies; methods of systemic analysis and synthesis, as well as comparative and logic-structural methods.

*Practical significance* lies in the fact that specific recommendations and conclusions formulated in the master's research can be directly applied in the educational process when studying and teaching disciplines of the relevant field.

*Structure of the Thesis*. The master's thesis consists of an introduction, three chapters, conclusions, and a list of references.

# CHAPTER 1.

# THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF PROJECT MANAGEMENT FOR CREATING ONLINE PLATFORMS FOR GOODS EXCHANGE AND SALES

## 1.1. Review of concepts and approaches to project management in the field of e-commerce and goods exchange

In recent years, an increasing number of companies and consumers are turning to online platforms for buying and selling goods. E-commerce and online trading are gaining popularity as a way of conducting business and making purchases by consumers, hence it is important for companies to implement effective project management strategies to remain competitive and meet the constantly evolving market demands.

Project management in the e-commerce and retail sector involves effective planning, execution, and monitoring of various projects related to online retail, digital marketing, supply chain management, and logistics. These projects may include the development and maintenance of e-commerce websites, implementation of digital marketing campaigns, optimization of inventory and delivery processes, as well as integration of secure payment systems. The complexity and scale of these projects require a structured approach to project management to ensure timely implementation and successful outcomes [44].

Effective project management in e-commerce and commodity exchange also requires a deep understanding of the technologies and tools used in online commerce. Project managers should be well versed in e-commerce platforms, content management systems, customer relationship management software, and data analysis tools. In addition, they must stay abreast of the latest trends and advancements in e-commerce technology in order to make informed decisions and provide recommendations for project implementation.

Project management in the e-commerce and commodity exchange sector requires a clear focus on customer experience and satisfaction. Projects that improve the online shopping experience, improve order fulfillment processes, or simplify product returns and exchanges have a direct impact on customer satisfaction. Project managers must coordinate their efforts to ensure a seamless and convenient shopping experience for the end user, thereby contributing to the overall success of the e-commerce business [40].

The e-commerce and sharing industry is dynamic and rapidly evolving, with market trends and consumer behavior constantly changing. Project management in this sector must be flexible and adaptable to rapid changes and unpredictable challenges. Flexibility in project planning and the ability to change strategies based on market feedback and performance data are critical to achieving and sustaining success in this area.

Project managers must maintain clear and open channels of communication between all stakeholders, foster collaboration, and ensure that all team members are aligned with project goals and schedules. Project management in e-commerce and commodity exchange involves effective collaboration and communication between cross-functional teams, from IT professionals and web developers to marketing specialists and supply chain managers.

The decisive role in project management in the field of e-commerce and goods exchange is played by risk management and security. With the increasing cyber threats and data breaches, project managers must prioritize the implementation of reliable security measures to protect customer information, financial transactions, and business data. Additionally, they should proactively assess and mitigate potential risks associated with supply chain disruptions, inventory management issues, or technological vulnerabilities that may impact project execution [6].

*Project management in e-commerce* encompasses a set of strategies, methods, and tools aimed at successful planning, execution, and control of projects in the e-commerce sphere. It involves several key aspects specific to e-commerce that require special attention and effective management (Figure 1.1).

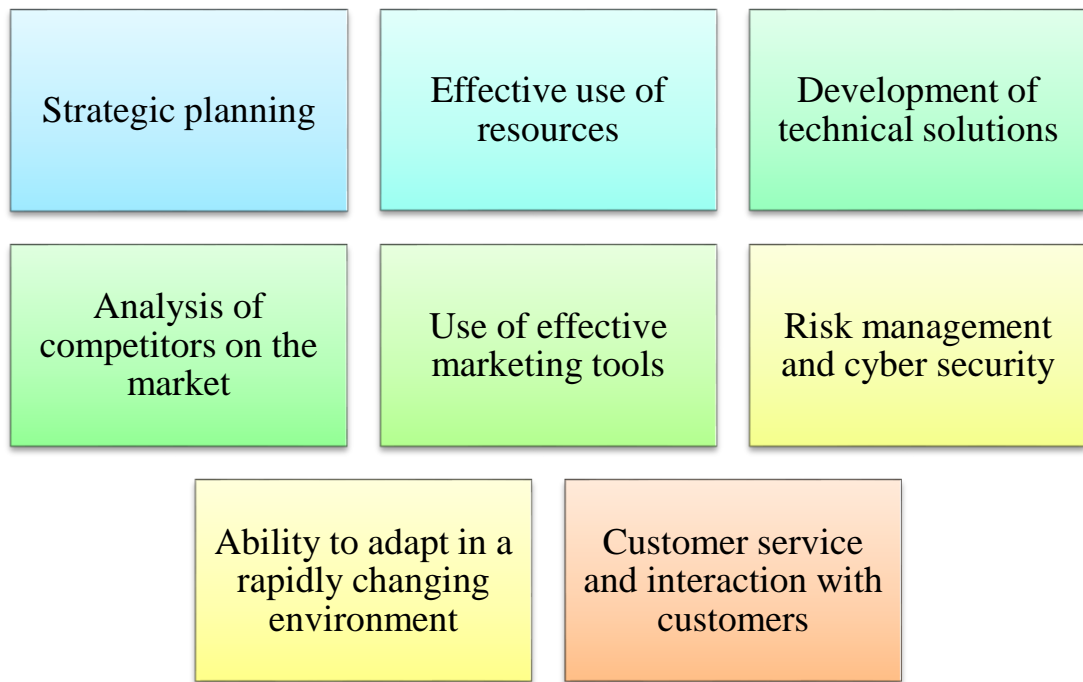| Strategic planning | Effective use of resources | Development of technical solutions |
|---|---|---|
| Analysis of competitors on the market | Use of effective marketing tools | Risk management and cyber security |
| | Ability to adapt in a rapidly changing environment | Customer service and interaction with customers |

Fig. 1.1. Elements of project management in e-commerce*

*According to [16; 23]

One crucial aspect of project management in e-commerce is *strategic planning*. This includes defining the project's purpose, setting specific objectives, and developing strategies and tactics to achieve these goals. Considering market dynamics and competitive environment is a key element of strategic planning in e-commerce. Given the rapid pace of technological advancements and changes in consumer preferences, having a clear strategic vision is essential for the successful implementation and development of projects in e-commerce.

Marketing strategies in e-commerce involve various methods and approaches to attract customer attention, increase sales, and enhance audience loyalty. To effectively implement marketing strategies in e-commerce, companies utilize various approaches (Table 1.1).

Another critical aspect is *resource management.* Successful project execution in e-commerce requires efficient utilization of various resources such as finances, human resources, technologies, and material assets. Effective management of these resources helps ensure project completion within schedule and budget.

Table 1.1

Types of Marketing Strategies in E-commerce*

| Marketing strategy | Description | Examples |
|---|---|---|
| Digital marketing | Using online channels such as SEO, contextual advertising, social media, email and content marketing. | Creation of advertising campaigns on Facebook, optimization of the site for search engines, sending of regular emails. |
| Personalized marketing | Using data analysis to create personalized offers and advertising campaigns. | Sending personalized offers based on the customer's purchase history, product recommendations based on their interests. |
| Marketplaces and affiliate programs | Participation in marketplaces and partner programs to expand the audience and attract new customers. | Placement of products on Amazon or eBay, participation in affiliate marketing programs with popular brands. |
| Using feedback and ratings | Collecting and using positive feedback to increase trust in the brand and products. | Displaying customer reviews on the site, creating video reviews of products, highlighting positive reviews in advertising campaigns. |
| Mobile marketing | Sending special offers via mobile apps or SMS, and optimizing websites for mobile devices. | Sending personalized SMS messages with offers, creating mobile applications for shopping with discounts and special offers. |

* According to [49; 64]

Furthermore, *the development of technical solutions* is crucial. Successful e-commerce projects often require the development and implementation of various technical solutions such as e-commerce platforms, content management systems, analytics tools, among others. It's important to select and utilize technical solutions that best align with the project's needs and goals [49].

Successful project management in e-commerce also involves *competitor and market analysis*. Conducting market research to identify potential competitors, their strengths and weaknesses, as well as opportunities for project development and improvement is essential.

Effective project management in e-commerce involves the use of *efficient marketing tools*. Marketing approaches in this sphere can vary from online advertising to utilizing social media and implementing content marketing strategies. Understanding these tools and their impact on the project helps in engaging the target audience and increasing sales volumes.

*Risk management* is a crucial element of project management in e-commerce. Due to rapidly changing markets and technologies, there is a risk of failure or unexpected events that may affect the project's success. Therefore, it's important to conduct risk analysis and develop risk management strategies to ensure the successful completion of the project [59].

Attention to practical aspects of project management in e-commerce is essential. Businesses engaged in online trading must *adapt to a fast-paced environment* and consumer demands. This means that projects in this field often require flexibility and quick response to changes.

Aspects such as *customer service and interaction with clients* need to be considered. E-commerce places special emphasis on customer interaction through online channels such as chats, emails, and social media. Project management in this sphere also involves the development and implementation of effective customer service strategies to ensure customer satisfaction and retention of their loyalty.

*The project lifecycle* in e-commerce comprises several stages characterized by a specific sequential order and features (Figure 1.2). The project lifecycle is a sequence of stages and processes that a project undergoes from its inception to completion. This includes all project phases, from initial planning and development to execution, monitoring, completion, and evaluation of results. The project lifecycle can be divided into different phases depending on the project management methodology, but common stages include initiation, planning, execution, control, and project closure. Proper management of the project lifecycle helps ensure its successful execution and goal achievement.
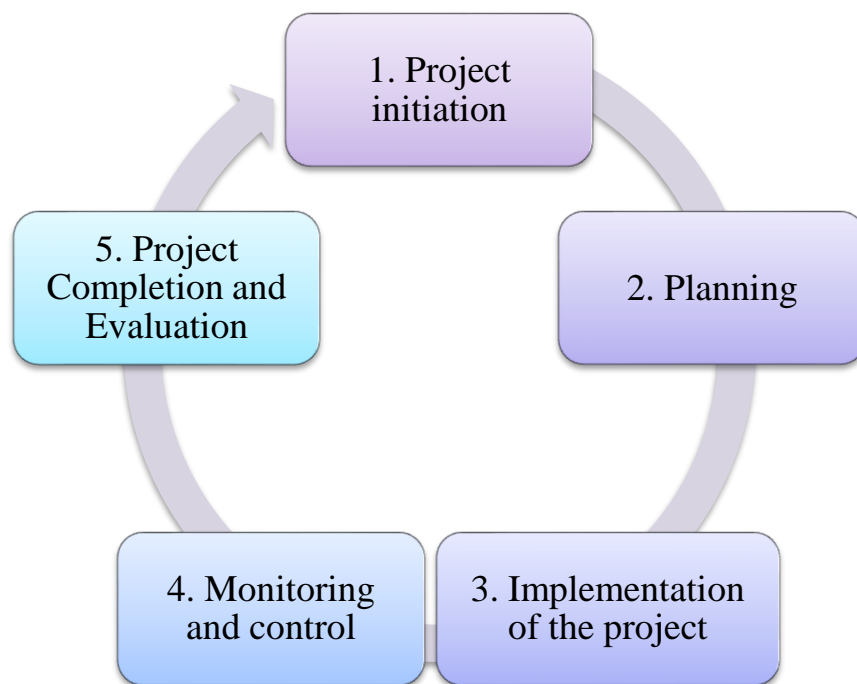
Fig. 1.2. Project life cycle in e-commerce *

*According to [9]

At the *project initiation* stage, the necessity of creating a new e-commerce project is determined. This may involve market analysis, identifying opportunities, and defining business goals.

After project initiation, its detailed plan is formed. During the *project planning* stage, tasks, resources, work schedule, marketing and sales strategies, as well as potential risks are identified.

During the *implementation stage*, all planned actions are implemented according to the project plan. This may include the development and configuration of information systems, creation of a website or mobile application, establishing communication with suppliers and clients, etc.

Throughout the entire process of design and implementation, it is crucial to conduct *monitoring and control* over task execution, expenditures, product quality, and other key performance indicators.

Upon completion of all tasks, an *evaluation of the project's outcomes* is conducted. This includes assessing alignment with defined business goals, analyzing costs and efficiency, as well as evaluating client satisfaction.

This cycle may be iterative, especially in the context of e-commerce, where technologies, market conditions, and consumer needs are constantly evolving. Therefore, upon completion of one project, initiation of a new project or modification of existing ones may begin.

Facilitating the exchange and sale of used items has significant social, economic, and environmental impacts. It contributes to reducing waste and environmental burden on the ecosystem. By refurbishing, reusing, and recycling used goods, we reduce the amount of waste going to landfills and diminish the need for manufacturing new products, which requires a large amount of energy and resources. The exchange and sale of used items promote economic development and reduce costs for consumers. Selling used goods allows people to access quality items at a lower price, which is particularly important for those with limited budgets. Additionally, exchanging and selling used items create new opportunities for small businesses and entrepreneurs involved in refurbishing and selling second-hand goods. Furthermore, it fosters social interaction and community. The exchange and sale of used items often occur through online platforms or local markets, creating opportunities for people to find common interests and communicate with each other. This also fosters a sense of community and mutual assistance among residents of different areas and countries [11].

The use of platforms for the exchange and sale of second-hand items provides several advantages (Figure 1.3).

Let's consider these advantages in more detail.

*Expanded range for product selection.* Second-hand sharing and selling platforms allow users to find a wide range of products, including rare or unique items that may be difficult to find in brick-and-mortar stores.

For example, on a platform for the sale of used clothes, users can find a wide range of products, including items of famous brands that may already be removed from the collection or are no longer available for purchase in stores. People can find one-of-a-kind items from past seasons that are no longer sold in stores, or exclusive items that are limited edition. This gives consumers the opportunity to upgrade their

wardrobe or find stylish items at a more affordable price, which can be significantly lower than the cost of new clothes.



- Expanded range for product selection
- Saving money
- Generating additional income
- Promoting an eco-friendly lifestyle
- Social interaction and mutual assistance
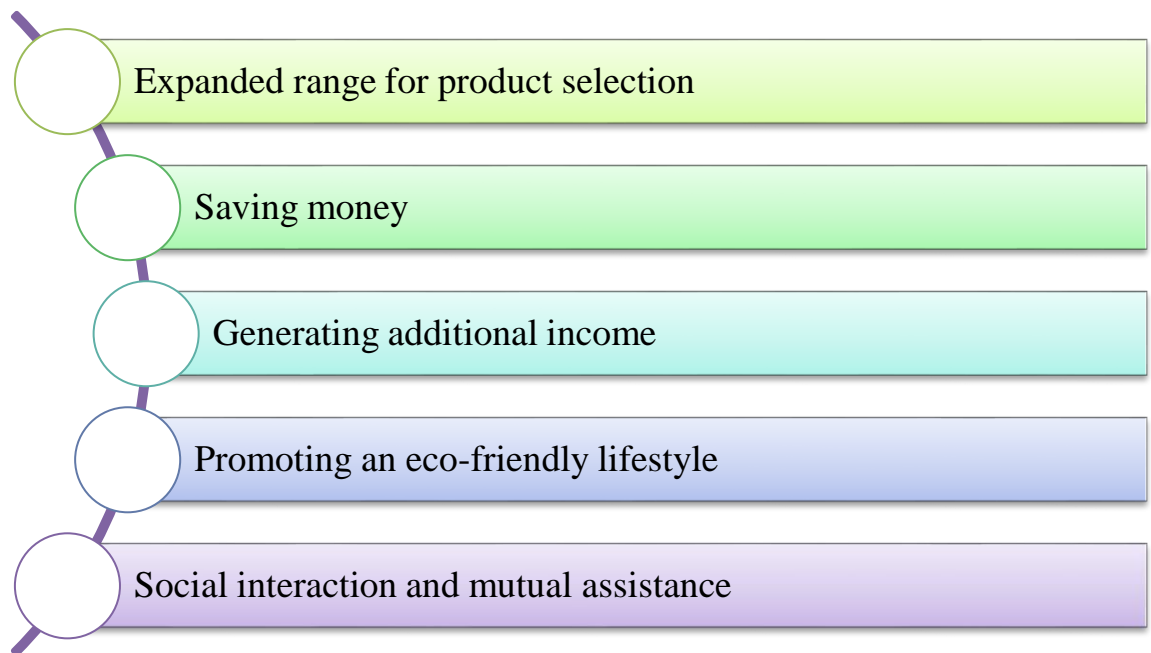
Fig. 1.3. Advantages of using platforms for sharing and selling used things*
*Compiled according to [19]

On book sharing platforms, users can find a wide selection of books of various genres and authors. This may include rare or hard-to-find books that may be difficult to find in local bookstores. Collectors can find first editions, signed copies, or exclusive limited editions. This gives readers the opportunity to expand their library and access books that they would be interested in reading but have not been able to find in stores.

The use of platforms for the exchange and sale of second-hand goods gives consumers more opportunities to choose and satisfy their needs, facilitating a more diverse and personalized shopping experience.

*Saving money* is one of the significant advantages of using exchange and resale platforms for used goods. Purchasing used items typically costs less than their new counterparts, which can be beneficial for consumers.

For example, on a platform for selling used electronics such as eBay or Craigslist, users can find a wide variety of electronic devices, including smartphones, laptops and tablets, at significantly discounted prices. Users can sell their previous models of smartphones or laptops for a fraction of the cost of new devices, allowing buyers to get quality devices at a much lower price than in stores. On a used clothing sharing platform, such as Poshmark or Depop, users can purchase fashion items in good condition at a significantly reduced price compared to new ones. People can sell their rarely worn or unwanted items, such as jackets, dresses or shoes, at a price that is much lower than in retail stores [19].

The use of platforms for the exchange and sale of used items allows consumers to save money by buying quality products at discounted prices. This can be especially beneficial for those looking for quality products but on a tight budget.

*Generating additional income* for both users and other ecosystem participants (platforms themselves, sellers, intermediaries, etc.) is another advantage of platforms for sharing and selling used goods. These platforms make the process of selling used goods simple and accessible to everyone, enabling users to earn money by selling things they do not need or need [42].

A large number of used electronic equipment such as smartphones, tablets, laptops, etc. can be found on trading and selling platforms. If the user bought a new smartphone and no longer needs his old one, he can sell it on the exchange platform and get a certain amount of money for it. Another example can be the sale of used clothes and accessories. Many people have unnecessary things in their closets, such as clothes, shoes or accessories that they no longer wear. Exchange platforms give them the opportunity to sell these things and make money. For example, a user can sell his old coat or bag on such a platform and receive additional funds for it.

Additional income is created not only for users, but also for all other participants in the ecosystem.

The platforms themselves for sharing and selling used goods usually make money from sales commissions or from advertising services. For example, a platform may charge a fee for each successful transaction that occurs on its platform.

Other members of the ecosystem, such as middlemen or couriers, can earn money from the delivery of goods or other services related to the processing and delivery of orders. For example, delivery services can cooperate with platforms to ensure fast and reliable delivery of goods [23].

In addition, manufacturers and sellers can earn money by selling used goods or their components through the platforms. For example, manufacturers can restore or recycle used goods and sell them on the platforms, earning a profit from those sales.

*Promoting an eco-friendly lifestyle* through platforms for sharing and selling used goods is reflected in several aspects. First of all, it helps to reduce the amount of production of new goods. For example, when people decide to buy a used smartphone or clothes through such a platform, it means that fewer new devices or clothes will be produced, which in turn reduces the use of natural resources and CO2 emissions during production.

In addition, the use of platforms for the exchange and sale of used items stimulates recycling and secondary use of goods. For example, if one user sells his old furniture through such a platform, another can buy it and use it instead of buying a new one. This contributes to the reduction of waste and the use of already available resources [22].

Some platforms are also actively working to increase their environmental responsibility. For example, they can implement recycling programs or recommend used products to consumers over new ones by providing relevant filters and recommendations on their websites.

Therefore, the use of platforms for the exchange and sale of used things contributes to the formation of a more ecological and sustainable consumption, where resources are used more efficiently and waste is minimized.

*Social interaction and mutual assistance.*

Social interaction, community, and mutual aid are important aspects of participating in second-hand trading platforms. These platforms create a community of people with similar interests and values, which facilitates mutual assistance, exchange of advice and experiences. Many second-hand trading and selling platforms

have their own forums, chat rooms or communities where users can discuss their purchases, share tips and experiences, and seek help or advice. For example, on a book-sharing platform forum, you can find discussions about your favorite books, reading recommendations, or exchange ideas with other community members. Platform users can share their experiences and advice with other community members. For example, people can share their selling strategies, product browsing tips, or tips on finding unique items. This creates an atmosphere of mutual assistance and promotes community development.

*Sharing platforms* are online services or applications that allow users to exchange goods, services or resources with other users. This concept is based on the idea of sharing resources to ensure greater efficiency and savings.

Examples of sharing platforms may include car-sharing services (such as Uber or Lyft), bike rentals (such as Lime or Jump), co-working spaces (such as WeWork), home-sharing (such as Airbnb), and sharing of things (such as Freecycle) [61].

These platforms create a community of users who have a common interest in maximizing the use of resources and reducing unnecessary consumption. They allow people to make efficient use of resources they might not use full-time, such as cars, apartments or tools. In addition, sharing platforms contribute to savings by reducing the cost of purchasing new goods or services. They can also have a positive environmental impact by reducing the production of new goods and reducing waste. Sharing platforms are an important tool for creating a more efficient and environmentally educated consumer culture. They promote economy, community and environmental responsibility, making consumption more sustainable and intelligent.

Sharing platforms also help create new opportunities for entrepreneurship and additional income. They allow people to earn money by offering their services or resources to other users through the platform. For example, car owners can earn money by providing car sharing services, and property owners can rent out their premises for short-term accommodation [13].

Sharing platforms often facilitate the development of flexible and innovative business models. They stimulate competition and innovation, as new companies can

quickly enter the market with new ideas and services. For example, the development of electric scooters for rent or mobile applications for sharing services such as cooking or pet care.

Sharing platforms have a significant impact on consumer culture, the economy, and social relationships, contributing to a more efficient, environmentally literate, and socially connected society.

So, the specificity of e-commerce is that projects in this field are often characterized by fast implementation times, high competitiveness and the constant need to adapt to changes. The rapid growth of technology and constant changes in consumer preferences create unique challenges for project management in the field of e-commerce and exchange of goods. Strategic planning, resource management, development of technical solutions, analysis of competitors and the market, as well as effective use of marketing tools are important. Particular attention is paid to data security, product quality assurance, and customer attraction and retention. By applying project management best practices and keeping abreast of industry developments, companies can effectively navigate the complexities of e-commerce and commodity exchange, ultimately achieving their strategic goals and delivering value to their customers. Facilitating the exchange and sale of used items has a significant positive impact on the environment as well as on the economy and the social sphere. This helps reduce waste, lower costs for consumers and develop communities.

## 1.2. Contemporary trends in using online platforms for exchanging and selling used items

Using online platforms to trade and sell used items is becoming increasingly popular. These platforms offer people a convenient and cost-effective way to declutter their homes, earn extra cash, and find unique items at discounted prices.

One of the main trends in the use of online platforms for the exchange and sale of used items is the growth of specialized trading platforms. Instead of relying on general online marketplaces like eBay or Craigslist, consumers now have access to platforms that specifically cater to used clothing, furniture, electronics and other categories. This specialization provides a more targeted and efficient buying and selling experience as users can browse a curated selection of products that meet their specific needs and preferences [14].

The integration of mobile applications has greatly contributed to the popularity of online platforms for sharing and selling used items. With the rise of smartphones, consumers can easily take a photo of an item they no longer need, upload it to a selling platform and contact potential buyers in minutes. This level of accessibility has facilitated a seamless process of selling and buying on the go, making it more convenient than ever for individuals to participate in the secondhand economy.

The trend of sustainable development and environmental awareness have played a significant role in stimulating the use of online platforms for the exchange and sale of second-hand items. As more people become aware of the environmental impact of consumption and the textile industry, there is a growing desire to extend the life of products and reduce waste. By buying and selling used items, consumers can contribute to a circular economy and minimize their environmental footprint, thus aligning their purchasing habits with environmental values.

In addition to these trends, the use of online platforms to share and sell used items has also influenced consumer behavior in terms of value perception. With so many used items available for purchase, consumers are becoming more open to the idea of buying used items instead of always opting for brand new products. This shift in thinking is driven by a desire to save money, find unique or vintage items, and support sustainable practices. As a result, the perception of second-hand items has changed from being associated with lower quality to being able to access high-quality goods at an affordable price.

Current trends in the development of online platforms for the exchange and sale of goods are systematized in Table 1.2.

Table 1.2

Current trends in the use of exchange and sales platforms*

| Trend | Description |
|---|---|
| Growing popularity of exchange platforms | Instead of throwing away unnecessary things, people increasingly choose the option of exchanging or selling used goods. This leads to the growing popularity of platforms where you can find goods to exchange or sell. |
| Mobile application development | Mobile apps are becoming increasingly popular for sharing and selling used goods. They provide convenient access to platforms at any time and from any place, which helps increase user activity. |
| Focus on sustainable consumption | Consumers are becoming increasingly aware of environmental issues and the impact of consumption on the environment. They prefer platforms that promote sustainable consumption by allowing the exchange or sale of used goods. |
| Expanding the assortment of goods | Platforms for the exchange and sale of used goods are becoming more and more diverse. In addition to clothes and shoes, you can find electronics, furniture, books, toys and other goods on such platforms. |
| Support of local communities | Some platforms actively work to support local communities, promoting the exchange and sale of goods between residents of the same region. This contributes to the development of the local economy and the reduction of long-distance transport emissions. |

*Compiled according to [39]

Despite these positive trends, there are also challenges associated with using online platforms to share and sell used items. One of the main challenges is the issue of trust and reliability, as buyers and sellers must rely on digital communication and often transact with strangers. Ensuring the authenticity of items, accurately reflecting their condition, and navigating the logistics of payment and delivery can be difficult for some second-hand market participants. In addition, competition from other sellers and fluctuating demand for certain items can create challenges for people who want to sell their used items at a reasonable price.

Platforms for exchange and joint use (Sharing platforms) – a model built on the exchange or joint use of goods or assets. Platforms for interaction between product users (individuals or organizations) are promoted, thereby increasing the level of its use.

This business model is interesting for manufacturers with low product utilization or capacity underutilization. It has led to significant changes in the sphere of consumer-to-consumer (C2C) and business-to-consumer (B2C) relations, and has significant potential in the business-to-business (B2B) sphere. Sharing model platforms enable potential competitors to collaborate in order to share fixed costs, increase asset utilization, and increase overall efficiency.In the implementation of the C2C relationship model, consumers directly interact with each other on an online platform.This model includes sharing resources by transport: BlaBlaCar is the world's largest international online service for finding car companions, RelayRides is a car rental service, Airbnb is the world's most popular platform for letting and renting private housing, etc. [3].

Within the B2C model, the 3DHubs platform – connects industrial designers with 3D printer owners; Tool Library is a library in which there is no book, but every visitor can find many different tools: from a screwdriver to a serious industrial machine used in furniture factories.

In the field of B2B relations, the On-demand staffing service provides assistance to companies in finding a workforce. MachineryLink Solutions' online leasing platform provides farmers with shared use of expensive agricultural machinery and equipment; the Yard Club startup makes it possible to use construction and other heavy equipment more efficiently. DHL Spaces and Flexe digital platforms make it possible to implement the concept of joint warehousing, based on the allocation of excess warehouse space to the category of a multi-client site [53].

Let's take a closer look at examples of the functioning of Sharing platforms, their features and advantages. Examples include Rheaply, thredUP, Vestiaire Collective and others.

*Rheaply* provides efficient exchange of valuable resources. The history and idea of creating Rheaply are interesting.

Back in 2014, neuroscience student Harry Cooper, founder of Rheaply, sitting in his lab at Northwestern University, posed himself a question: "How could university research departments be so underfunded when these same departments were generating large volumes of unused equipment and waste?" Harry persuaded the resource-rich managers of his neuroscience department to allow him to gather unused laboratory equipment, machinery, shelves, and other items. He then loaded it onto a cart and distributed it to less affluent departments of his university in need of equipment. This cart became a regular Friday ritual for Harry. In the years leading up to his doctoral dissertation defense, he redistributed 55 items, ranging from antibodies and glassware to research equipment, saving campus labs over $25,000 and keeping these resources out of landfills. Many years after leaving Northwestern University, now developing supply chain solutions with Ernst and Young, Harry still received emails inquiring about his cart and they sparked a question that shifted his focus. The question arose: what could a platform for asset redistribution and recovery look like, one that would allow users to better visualize, quantify, and utilize surplus resources [51].

Rheaply makes underutilized resources more visible with its asset exchange management software. B2B software unlocks exchange opportunities for the global economy, allowing organizations to make the most of tools and equipment that would otherwise sit idle. By identifying and sharing unused assets between and within businesses and institutions, the value of facilities is preserved and more attention is paid to maintenance and repair. In turn, there is less demand for new, often expensive things that are used only once or twice in a lifetime.

Rheaply's asset exchange manager allows users to track inventory, sell, donate, or lease items; provides data analysis to create a picture of asset utilization with a visualized waste diversion report. If a piece of equipment is not being used, a

Rheaply user can quickly and easily locate the asset on the platform and place the items in another part of the business, campus, school or city.

The platform is filled in three different ways:

1. Individual users or groups of users can post messages directly on the site (administrators and teams).

2. Through batch processing and loading of inventory data (for example, through integration with ERP (enterprise resource planning) or AMS (automated manifest system).

3. For cleaning of large facilities through the company's concierge team.

Enabling the seamless transfer of assets is why Rheaply has earned a reputation as a circular economy company. However, what often seals the deal for a wide range of organizations, including Google, Abbvie, MiT and the US Air Force, is Rheaply's ability to access data. With just a few clicks of a computer mouse, users can access the volume, model number, condition and other details of hundreds of millions of dollars worth of items.

The success of companies like Rheaply clearly demonstrates not only the economic and environmental benefits of moving to a circular economy, but also the *social benefits*. One way Harry Cooper sees Rheaply's role in helping to do this is by supporting poor neighborhoods in his hometown of Chicago. The Covid crisis has also drawn attention to many social inequalities. Higher incidence rates among blacks and Hispanics mean that business owners from these communities have had to protect themselves and go out of business. The Rheaply platform helps connect these vulnerable groups to the wider community, allowing them to safely participate in their local markets. By taking into account Rheaply's experience, companies can develop a culture of inclusion, equality and belonging by applying the principles of the circular economy [51].

Since its inception, Rheaply's technology has enabled organizations (including higher education institutions, federal and state governments, and Fortune 100 companies) to divert more than 14.5 metric tons of material waste and save $1.5

million through the internal use of valuable resources. In particular, the following advantages have been obtained:

- Massachusetts Institute of Technology (MIT) saved more than $44,000 in the first 6 months of the platform in a pilot project with approximately 800 users.

- A partnership with the City of Chicago resulted in 2,100 new businesses and nonprofits signing up on Rheaply within the first week of the platform's launch to purchase PPE (personal protective equipment) for the city's phased recovery plan.

- The University of Chicago saved ~$300,000 by eliminating one endocrinology lab [51].

thredUP has developed a modern resale experience on one of the largest online platforms for women's and children's clothing. With its curated marketplace, thredUP has created a smarter and easier way to buy and sell used clothing [35].

ThredUP sellers can send their favorite clothing items from any brand for free. thredUP then processes these items, conducting quality checks, detailing, price analysis, storage, and listing for resale. thredUP buyers have access to a constantly changing assortment of high-quality clothing at low prices from over 35,000 brands.

Extending the lifespan of used clothing as long as possible is a central strategy for sustainable fashion development. Analysis of the positive impact of re-commerce on the environment indicates benefits for the entire resource spectrum. thredUP calculated that if every U.S. resident bought one used item in 2020 instead of new, it would have saved: 3.6 million tons of CO2e (equivalent to planting 66 million trees); 100 billion liters of water (1.25 million Olympic swimming pools); 200 million kilograms of waste (equivalent to 18,700 full garbage trucks).

Currently, thredUP receives thousands of items per day and has the capacity to process up to 100,000 items daily, redirecting clothing back into use. It is projected that by 2025, the resale market, currently valued at around $9 billion USD, will grow to over $47 billion USD. The projected growth in resale is driven by an increasing number of sellers listing great products. Between 2000 and 2015, the number of

clothing items sold annually more than doubled to 100 billion units. At the same time, according to the New Textile Economy report, the utilization rate of clothing items ("utilization coefficient") decreased by nearly 40% [35].

In the US, clothing is only worn a quarter of the world average, and some items are worn only seven to ten times. The result is that vast amounts of clothing are landfilled or incinerated each year, wasting not only the material but also the energy, water, nutrients, land and many other resources used to produce textiles and clothing.

The low level of use of clothing affects not only the environment, but also the economy. Globally, consumers lose $460 billion due to the clothes they throw away. Digital fashion companies are taking advantage of the opportunity to capture some of that value.

ThredUP uses a *managed resale (B2C) marketplace*. Customers who want to sell their clothes receive a free "Clean Out Kit" with a prepaid label for thredUP. After receiving the elements, thredUP performs this process.

1. thredUP sorts the items, selects them and processes them for further sale - this includes photographing, evaluating and evaluating each garment. About 1,500 people process clothes six days a week in a network of distribution centers.

2. For items sold on thredUP, sellers receive cash, thredUP Online Credits, select partner credits, or charitable donation receipts.

3. thredUP does not yet have the ability to clean or repair the products, so it undergoes a strict 12-point quality inspection to provide buyers with a high-quality resale experience, just like buying new.

4. Items that are not on the market are sent to second-hand clothing stores (thrift stores) and textile processing enterprises. Sellers can also use thredUP's return guarantee service to return any unaccepted items to them for a flat fee.

*Resale as a Service for Brands and Retailers* (B2B). In 2018, thredUP expanded its platform with Resale-as-a-Service (RaaS), which allows brands and retailers to connect to thredUP's operating platform:

- Brands can offer thredUP Clearance Kits to customers who can send used clothing of any brand to thredUP and get paid in the form of brand store

credit (eg gift cards). Examples include the Gap x thredUP Clean Out Kits, which allow Gap customers to earn credit toward purchases that meet thredUP quality standards;

- Sellers can convert their thredUP credits into cash or vouchers from existing brand and thredUP partners (eg Athleta or Reformation);

- thredUP supports both brand resale pop-ups in their brick-and-mortar stores (eg Madewell) and online resale shops where thredUP restocks second-hand items on their online platforms (eg Walmart);

- Brands accept returns of worn items that cannot be resold as new, and thredUP resells these worn items through its marketplace.

*Benefits for consumers, brands and retailers*. thredUP buyers and sellers can access brands they otherwise couldn't afford. They also make money on clothing they no longer wear and feel good about reducing their negative impact on the environment. In addition to reducing the amount of clothing sent to landfills, brands and retail sellers integrating resale into their operations can increase revenues. According to thredUP's 2021 Resale Report, the value of the U.S. resale market was $36 billion USD in 2021 and is forecasted to double over the next five years, reaching $77 billion USD by 2025. Retail sellers can also attract new customers and encourage loyalty by offering vouchers through Clean Out Kits in partnership with thredUP, engaging a younger demographic with lower prices, and increasing store or website traffic by continually refreshing their inventory and offering new products.

ThredUP's revenue was $129.6 million USD in 2018, increased to $163.8 million USD in 2019, and reached $186 million USD in 2020, as reported by Market Watch [35].

The global designer fashion resale platform *Vestiaire Collective* was founded in 2009 to allow individuals to buy and sell pre-owned fashion items. The Vestiaire platform was created to enable a global community of fashion enthusiasts and environmentally conscious users to circulate items they no longer wear or use.

Sellers list their items on the market, and after verification by the Vestiaire curation team, they become available for sale. Originally named Vestiaire de Copines

and available only in France, Vestiaire Collective quickly expanded to meet demand and now boasts 11 million members in 80 countries. By early 2021, the platform had over 3 million items with 550,000 new listings per month.

Vestiaire leveraged digital technologies to connect unused clothing items with new customers, thereby increasing the number of uses, giving second, third, or even fourth lives to existing products. They also aim to promote cyclical thinking, encouraging users to buy better quality and take good care of their items to maximize their resale value. By bringing people together, Vestiaire creates a sense of community among those who share common values and actively seek to support sustainable development, and those who are looking for unique items or new ways to access the latest trends. 60% of sellers report they wouldn't give a second life to products without the existence of the resale market.

The Vestiaire resale platform creates potential benefits for citizens, businesses, and the environment:

- The "High-Class Effect" – 85 % of Vestiaire clients report transitioning from fast fashion to trading to fewer but higher-quality second-hand items.
- Less resources, less waste – On average, one used purchase saves: 1 kg of waste, 3040 liters of water, 22 kg of $CO_2$ (Farfetch 2020)
- Affordability – Lower prices make luxury brand items accessible to a wider range of customers.
- Attracting new customers – 48 % of second-hand buyers admit they bought a brand that was new to them, and almost all would consider buying these brands again.

Following consumer trends, it is expected that by 2027, resale clothing will account for 11 % of the average citizen's wardrobe. Vestiaire Collective founders were motivated by the fact that on average, people only use half of their clothing. This means there are hundreds of millions of unused items whose potential is not being realized. Materials and resources used to make them are wasted, and consumers buy a new version of the same item, further depleting resources [1].

Acting on these findings, Vestiaire Collective has developed and operates a 100% digital e-commerce platform that aims to keep clothes in use for longer. Here's how the process works.

1. Sellers themselves list items online, take photos and upload key information such as price, description and condition.

2. Vestiaire's curatorial team standardizes photos, checks items and makes them available on the platform.

3. When ordering goods, buyers can choose one of two options: Direct delivery - the seller sends the goods directly to the buyer. This is available for most items under $1,000 (USD, EUR, GBP) and select items over $1,000 (USD, EUR, GBP) sold by experienced sellers (ie "Trusted Sellers"). Delivery with authentication. The seller sends the product to one of three regional Vesiaires centers for authentication and quality control before the product is sent to the buyer.

4. Vestiaire charges sellers an average commission of 20 %, which covers all fees including shipping. This commission varies depending on the price of the product.

Users can also subscribe to the premium service, which offers additional benefits such as "priority seller" status or early access to new products. [1]

Thus, current trends in the use of online platforms for the exchange and sale of second-hand items reflect a shift towards more sustainable, convenient and valuable consumer behavior. The specialization of trading platforms, the integration of mobile applications, the emphasis on environmental friendliness and the change in the perception of value – all this contributed to the growth of the popularity of second-hand goods. While there are challenges to be addressed, the overall impact of online platforms for sharing and selling used items has been transformative, offering people new opportunities to engage in a more mindful and cyclical approach to consumption.

## 1.3. Project Management Methods in E-commerce and Retail Industry

As the e-commerce and retail industry continues to thrive and grow, effective project management practices are essential to succeed in this competitive market. The unique challenges and fast-paced nature of this industry require specialized project management approaches to ensure the successful implementation of various initiatives.

Project management in the field of electronic commerce (e-commerce) and exchange of goods is a complex and dynamic field that requires careful analysis and the use of specialized strategies and methods.

Table 1.3

Project management methods in the e-commerce and trade industry*

| Method name | Description | Application examples |
|---|---|---|
| Agile methodology | Agile is a popular approach to project management, especially in fast-changing and innovative industries such as e-commerce. It allows you to quickly respond to changes in customer requirements and market conditions and develop the product iteratively. | Let's say a company is developing a mobile application for e-commerce. With Agile, they can release new versions of the app quickly, adding new features and fixing bugs during each sprint. |
| Waterfall methodology | Waterfall is a traditional project management method where each phase of development is done sequentially, starting with the definition of requirements and ending with implementation and support. | The company plans to implement a new inventory management system. In the Waterfall methodology, they first identify all the requirements, develop a plan, implement the system, test it and finally put it into operation. |
| Lean Project Management | Lean is a methodology aimed at minimizing costs and maximizing value for the customer. This is especially important in e-commerce, where speed and efficiency are key. | The online store decides to improve the process of ordering and delivering goods. They use Lean techniques to identify and correct redundant steps in the process to increase efficiency and reduce costs. |

| Scrum | Scrum is a specific use of Agile that is based on working in iterations known as "sprints". In e-commerce, this method can be useful for rapidly developing and implementing new features or products. | An online clothing company uses Scrum to develop a new collection. Each sprint can focus on developing a specific range of products to bring to market quickly. |
|---|---|---|
| Kanban | Kanban is a method of visual task management that allows you to control the process of product development and implementation. In e-commerce, it can be useful for tracking the status of various stages of development and support. | An electronic market uses Kanban to track orders and production processes. Each order can be represented as a card on a Kanban board that moves from the initial order to shipment to the customer. |
| PRINCE2 | PRINCE2 is a project management methodology that provides a structured approach to managing projects of any size and complexity. In the field of e-commerce, it can be used to implement large projects or initiatives. | The company plans to introduce a new electronic payment system. They use PRINCE2 to create a project plan, define roles and responsibilities, and ensure effective risk and quality management. |

*Compiled according to [16; 36]

A traditional approach to project management, commonly known as the waterfall method, is widely used in the e-commerce industry. This approach assumes a linear and sequential process, where each stage of the project must be completed before proceeding to the next. While this method offers a structured and well-defined framework for project execution, it may not be the most suitable for the dynamic and rapidly evolving nature of e-commerce and online commerce. Rigid adherence to pre-defined requirements and limited flexibility can hinder businesses' ability to adapt to market changes and customer preferences.

In contrast, an agile approach to project management has gained popularity in the e-commerce sector due to its adaptive and iterative nature. Agile methodologies such as Scrum and Kanban emphasize collaboration, flexibility, and continuous

improvement throughout the project lifecycle. This approach allows e-commerce businesses to quickly respond to market changes, consider customer feedback, and prioritize features based on their impact and value. By applying agile project management, companies can improve their ability to deliver high-quality products and services that meet the dynamic needs of online consumers. Agile project management emphasizes iterative development, collaboration, and continuous improvement, which is especially useful in a dynamic and rapidly changing industry. By breaking down projects into smaller, manageable tasks and incorporating stakeholder feedback throughout the process, businesses can respond more effectively to market changes and customer demands. This approach allows for faster adaptation to developing trends and the ability to provide high-quality products and services in a timely manner [55].

In addition to traditional and agile approaches to project management, the use of lean principles is becoming increasingly common in the e-commerce and commodity exchange industries. *Cost-effective project management* focuses on maximizing value while minimizing waste, allowing businesses to optimize processes, reduce inefficiencies, and optimize resource allocation. With its emphasis on continuous improvement and customer centricity, lean project management aligns well with the customer-centric nature of e-commerce and online commerce.

With the help of economic project management in the field of e-commerce and exchange of goods, enterprises can achieve significant advantages and optimize their activities:

- One of the main principles of economic project management is to focus on maximizing value for the client. In e-commerce, this means designing and implementing products and services that best meet customer needs and expectations. For example, the possibility of fast delivery, convenient returns and a personalized approach can significantly increase customer satisfaction.

- Economic project management is aimed at identifying and eliminating any excessive or wasteful processes. In an e-commerce context, this can mean

optimizing logistics, reducing order processing times, and using automated systems for inventory management and payment processing.

- Focus on continuous improvement of processes is one of the key ideas of economic management. In the e-commerce industry, this may include improving the website, increasing page loading speed, introducing new user-friendly features, etc.

- Optimizing the allocation of resources, such as human, financial and material. For example, this might include allocating the budget between advertising campaigns, product development and customer support according to their importance to the project.

Cost-effective project management helps e-commerce and commodity exchange businesses improve the efficiency of their operations, ensuring maximum value for customers and optimal use of resources.

*Advances in technology and digital tools* have changed the way projects are managed in the e-commerce sector. Today, integrated project management solutions such as Asana, Trello and Jira have become an integral part of the workflow for many companies in this sector. These are popular project management tools widely used in the e-commerce and commerce industry. They enable teams to effectively organize and manage projects, collaborate on tasks, track progress, and interact with each other.

Asana allows you to create tasks, projects, and to-do lists, assign them to your team, and set deadlines. Users can track the progress of tasks, send comments, and collaborate on files [58].

Trello is based on a system of boards, cards, and lists. Users can create cards for each task, move them between lists (for example, "In progress", "Under review", "Completed"), and assign responsibilities to them. Trello also supports nested cards, comments, deadlines, and other useful features.

Jira is typically used for managing more complex projects and large teams. It provides a wide range of tools for task management, progress tracking, risk

management, and reporting. Jira can be integrated with other software development tools such as Bitbucket or GitHub for greater efficiency in software development [4].

These tools allow you to plan, track, and collaborate on projects in real time, regardless of geographic boundaries. For example, a development team may work on the functionality of an e-commerce website in the US, while web designers are in Europe and marketers are in Asia. They facilitate seamless communication, task allocation and progress monitoring. For example, a project manager can create tasks for each project phase, assign them to team members, set deadlines, and track the progress of tasks.

The use of such integrated solutions increases the overall efficiency and transparency of the project. This allows e-commerce teams to manage time, resources and costs more effectively, which in turn helps them achieve their goals and develop their business processes.

*The concept of DevOps (Development and Operations)* is an approach to software development that emphasizes collaboration and communication between software developers (development) and IT operations (operations). The primary goal of DevOps is to facilitate the rapid and reliable delivery of high-quality software.

This approach arose with the recognition of the need to strengthen the interaction between developers and system administrators, as well as to automate the processes of software deployment and monitoring. DevOps helps reduce the time to develop and implement software, reduce the risk of errors, and increase responsiveness to changing business and market demands. The core principles of DevOps include automation, collaboration and interoperability, version control, monitoring and traceability, and stability and security. This approach allows to improve the productivity of the development team, reduce the time for the deployment of new functions and improve the quality of the software [21].

The concept of DevOps has also influenced project management in the field of e-commerce and exchange of goods. By integrating development, testing, and deployment processes, DevOps enables e-commerce companies to accelerate the

delivery of new features and updates, improve product quality, and get to market faster.

Let's consider a scenario where the electronic market plans to introduce a new payment system for orders. With DevOps, developers and IT operators can collaborate in a single process, starting from the development and testing of new functionality to its implementation in an industrial environment. This allows to reduce the time required to implement changes and has a positive effect on the speed of response to changing market requirements.

DevOps facilitates the automation of deployment and monitoring processes, making project management processes more efficient and reliable. For example, with the help of automation tools that are part of DevOps, you can automate the testing and deployment of new functionality, which reduces the risk of introducing errors and facilitates rapid correction of defects.

Therefore, DevOps is becoming a necessary component of project management in e-commerce and commodity exchange, helping companies to implement their projects faster and more efficiently and achieve greater success in the market.

Thus, project management in the e-commerce and commodity exchange sector requires a holistic, adaptive and customer-centric approach. E-commerce businesses must be aware of the dynamic nature of the industry and the changing needs of online consumers, and use project management methodologies and tools that allow them to effectively respond to these changes. By implementing elements of an agile, cost-effective and technology-driven approach to project management, e-commerce companies can expand their ability to deliver innovative solutions, optimize operational processes and drive sustainable growth in the digital marketplace.

# CHAPTER 2.
# IMPLEMENTATION OF THE PROJECT TO CREATE AN ONLINE PLATFORM FOR EXCHANGE AND SALE OF USED ITEMS

## 2.1. Development of the concept, goals, and objectives for the project of creating the online platform "EcoChange Haven"

Developing a project concept is a crucial step in the project management process. It is at this stage that the project's goals, scope and results are defined, and the general direction of the project is determined. Without a clear and well-defined concept, the project is likely to fail or at least face significant challenges.

Above all, a well-defined concept ensures a clear understanding of the project's goals. When project goals are clearly defined, all stakeholders are on the same page and everyone knows what is expected of them. This clarity helps prevent misunderstandings and ensures that everyone is working toward the same goal. For example, if a construction company is building a new apartment complex, a clear concept will outline the number of units, type of amenities and target market. This ensures that architects, engineers and contractors are working towards the same goal [46].

The project concept helps define the scope of the project. The scope of the project defines what is included and what is excluded from the project. A clear concept helps define project boundaries, preventing scope creep and ensuring the project stays on track. For example, if a software company is developing a new mobile app, a clear concept will outline the app's features and functionality, preventing the development team from adding unnecessary features that could cause delays and cost overruns. Also, a clearly defined concept helps to define the final results of the project. Outputs are the tangible results of a project, and a clear concept defines what those results are and when they will be delivered. This ensures that the project team knows what they need to do and when, helping to prevent delays and ensuring that the project stays on schedule. For example, if a marketing company is

launching a new product, a clear concept will outline the marketing materials, advertising campaigns, and promotional activities that need to be offered and when they need to be offered.

The concept also helps determine the project's timeline and budget. When project goals, scope, and deliverables are clearly defined, it is easier to establish a realistic schedule and budget. This ensures that the project is completed on time and within budget, avoiding costly delays and cost overruns. For example, if a construction company is building a new highway, a clear concept will outline the project's timeline and budget, ensuring that the project will be completed on time and within budget.

Another important benefit of a well-defined concept is that it helps identify and mitigate risks. When project goals, scope, and deliverables are clearly defined, potential risks and obstacles can be identified and mitigated. This ensures that the project team is prepared for any unexpected events that may occur during the project, reducing the risk of project failure. For example, if a software company is developing a new software system, a clear concept will identify potential risks, such as technical difficulties or changes in market conditions, and develop contingency plans to mitigate these risks [30].

*Justification of the concept of the project to create an online platform for the exchange and sale of used items EcoChange Haven*

The advent of online marketplaces has revolutionized the way we shop, interact and live. In recent years, awareness of the importance of a sustainable lifestyle and waste reduction has been growing. Against this background, the concept of creating an online platform for the exchange and sale of used things "EcoChange Haven" is a timely and necessary innovation. The EcoChange Haven online platform project is a viable and environmentally friendly solution that can reduce waste, promote sustainable consumption and develop a sense of community among users.

First of all, EcoChange Haven solves an urgent environmental problem - waste management. The alarming rate at which we consume and throw away goods has led to overflowing landfills and pollution. By providing a platform to share and sell used

items, EcoChange Haven encourages reuse and recycling of products, thereby reducing waste. This approach not only helps conserve natural resources, but also reduces the carbon footprint associated with the production of new products. For example, a study by the United Nations Environment Program showed that the fashion industry alone creates more than 12 % of global greenhouse gas emissions. By promoting the reuse and recycling of clothing and other items, EcoChange Haven can significantly reduce the environmental impact of the fashion industry.

Another significant benefit of EcoChange Haven is its potential to promote sustainable consumption. The platform encourages users to think creatively about the life cycle of products, from production to disposal. By promoting the exchange and reuse of goods, EcoChange Haven supports a culture of sustainable development and reduces the demand for new resource-intensive products. This change in consumer behavior can have a profound impact on the environment, as it reduces the extraction and processing of raw materials that contribute significantly to greenhouse gas emissions.

In addition, EcoChange Haven has the potential to foster a sense of community among users. The platform's social features, such as forums, reviews and ratings, allow users to interact with each other, share knowledge and build relationships. This community-driven approach can foster a more collaborative and collaborative environment where users can learn from each other and share best practices for sustainable living. In addition, the platform's focus on reuse and recycling can foster a sense of social responsibility among users, encouraging them to take an active role in reducing waste and promoting sustainability.

We systematize the problems that the project will contribute to solving, using the Problem Tree tool for this. The problem tree allows a comprehensive look at the problem that the project can solve.

In the center of the problem tree lies the main problem that the project must solve. Next, the tree is divided into two levels - upper and lower. The upper level is the negative consequences of the key problem. The lower level is the reasons [45].
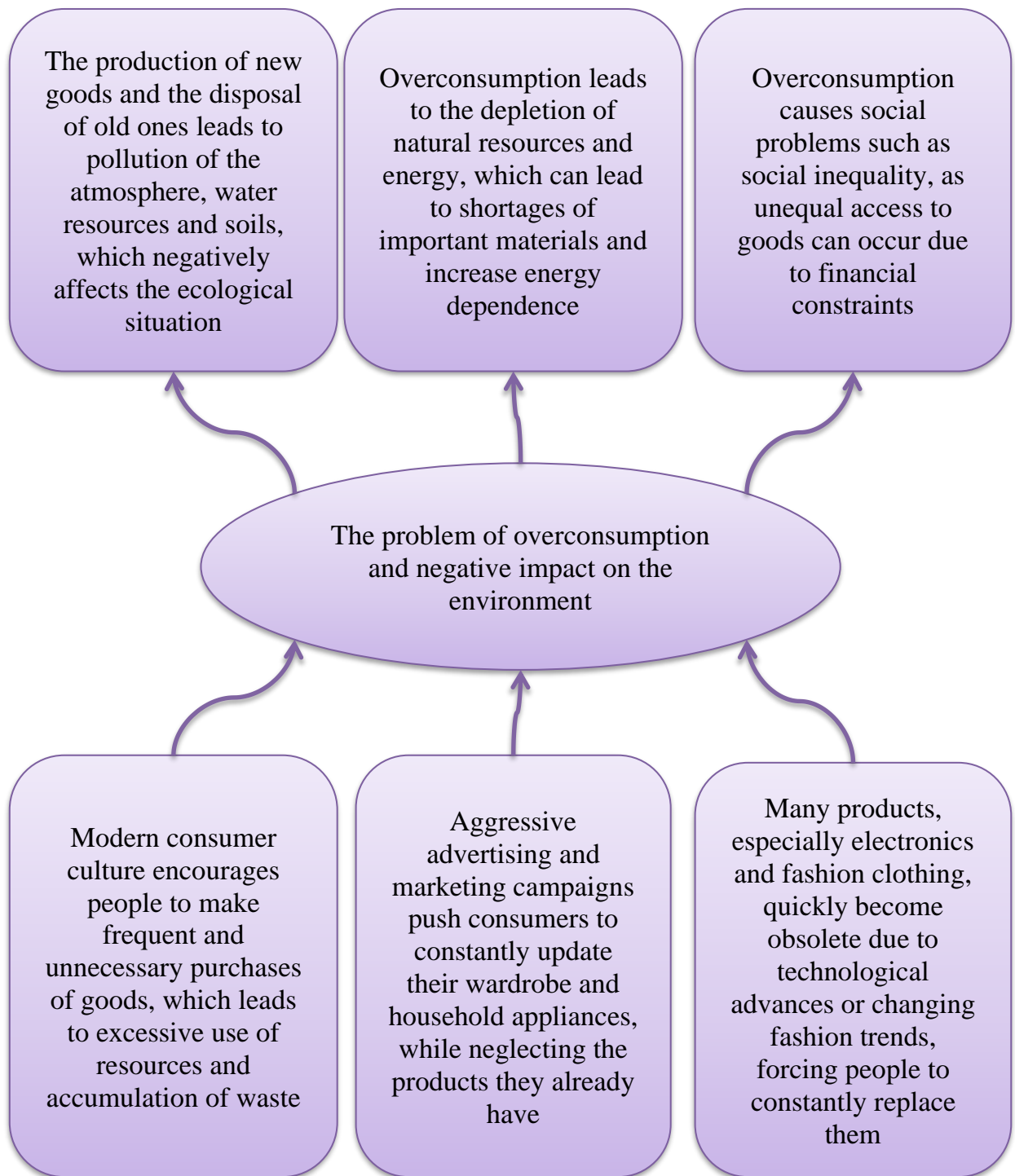
Fig. 2.1. Problem Tree*

*Compiled by the author

In addition to environmental and social benefits, EcoChange Haven also has economic benefits. By providing a platform for users to buy and sell used items, EcoChange Haven can help reduce waste and support the local economy. The

platform can also create new opportunities for entrepreneurs and small businesses, allowing them to tap into the growing demand for sustainable products and services. The economic feasibility of the project lies in the fact that it can provide additional sources of income for platform participants who sell their used things or exchange them for others.

One potential caveat about EcoChange Haven is that it may perpetuate a culture of overconsumption, as users may be inclined to buy more items, even if they are used. However, this argument ignores the fact that EcoChange Haven is designed to promote sustainable consumption, not mindless consumerism. The platform's focus on reusing and recycling, rather than new purchases, can actually help reduce overall consumption and promote more mindful and sustainable behavior.

EcoChange Haven is a concept that has the potential to revolutionize the way we shop, interact and live. By encouraging the reuse and recycling of products, developing a sense of community and encouraging sustainable consumption, EcoChange Haven can play an important role in reducing waste, promoting sustainability and supporting local economies. As the world grapples with the challenges of climate change, environmental degradation and social inequality, innovative solutions like EcoChange Haven are needed to create a more sustainable, just and environmentally conscious future.

This project responds to the growing demand for environmentally sustainable and sustainable products. In recent years, consumers are increasingly aware of the importance of environmental responsibility and have become more conscious about their own consumption. Such a platform will allow them not only to use their things efficiently, but also contribute to the further adaptation of ecological principles in their everyday life. The EcoChange Haven online platform meets modern trends in the consumer market, where more and more people prefer online shopping and exchanging goods via the Internet. The demand for used goods is also constantly increasing, as they are often available at more reasonable prices and also have a certain character of exclusivity and uniqueness.
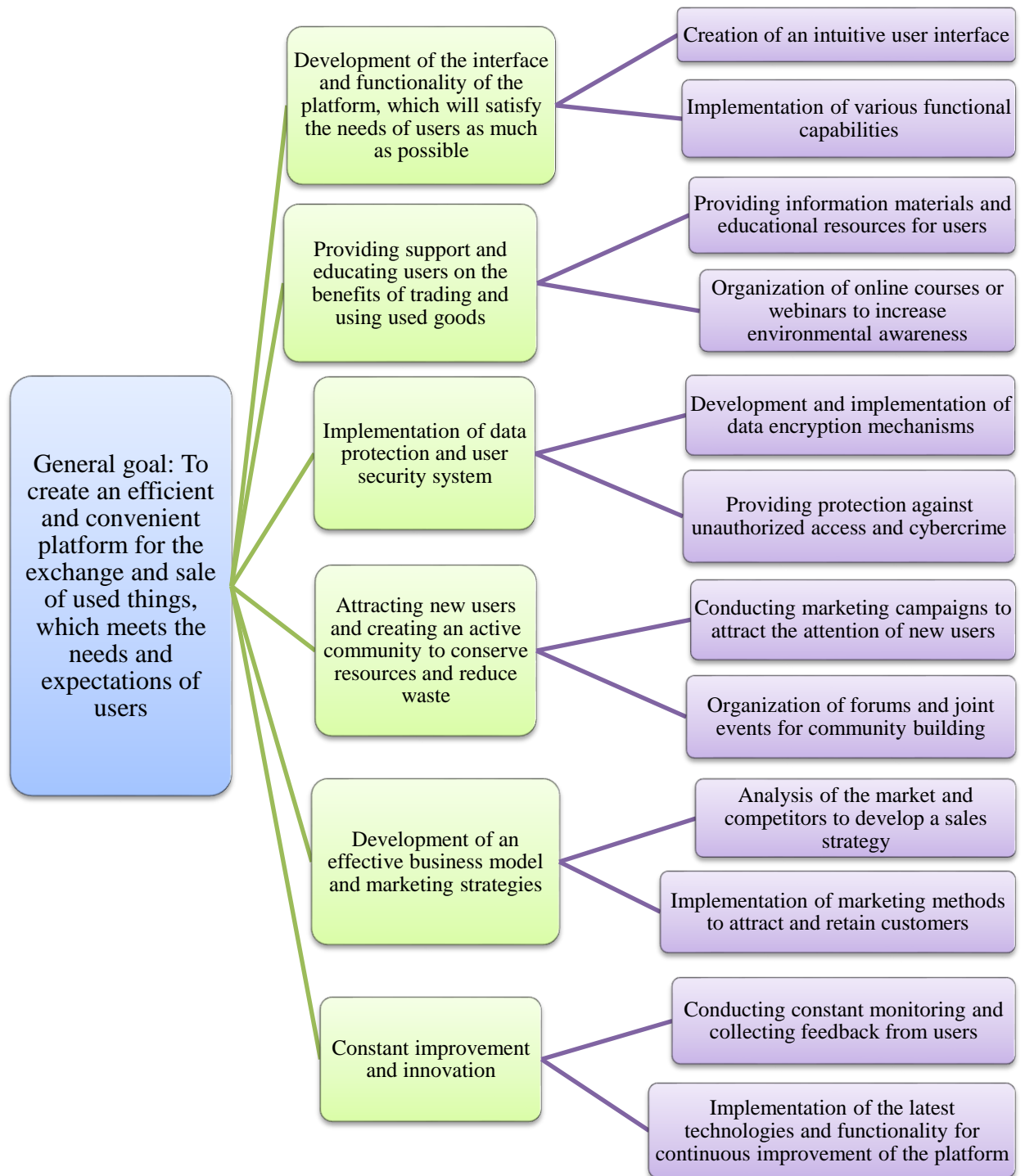
Fig. 2.2. Tree of goals for the project to create an online platform for the exchange and sale of used things EcoChange Haven*

*Compiled by the author

Tasks for the project to create an online platform for the exchange and sale of used things EcoChange Haven will include the following [15]:

- To conduct market research of e-commerce and platforms for sharing used things, determine the needs of the target audience and assess the competitive situation.

- Formulate the concept of EcoChange Haven, including the main functionality, design and user interface.

- Technical analysis and selection of the technology stack, determine the necessary technologies for the development of the platform, including the selection of programming languages, databases and infrastructure.

- Create a user interface design that will be convenient and attractive for visitors.

- Develop all the functionality of the platform, such as the user registration system, adding products for exchange or sale, filtering and searching for products, etc.

- Conduct testing of the platform to identify errors and shortcomings, as well as optimize its speed and performance.

- Prepare the platform for launch, including deployment on servers, setting up payment systems and conducting marketing activities.

- Provide platform support after launch, resolving technical issues and improving functionality as needed.

Hence, concept development is critical to project success. A well-defined concept provides a clear understanding of project objectives, establishes project scope, defines project deliverables, establishes project timelines and budgets, and helps identify and mitigate risks. Without a clear concept, the project is likely to fail or face significant challenges. It is therefore essential that project managers and teams take the time to develop a clear and well-defined concept at the start of the project. Concept development is a critical step in the project management process. Only by taking the time to develop a clear and well-defined concept can project teams ensure that their projects are completed on time, within budget and to the required quality standards. By doing this, project teams can increase the chances of project success and avoid the consequences of project failure.

## 2.2. Technical analysis of the project

Technical analysis ensures that the project meets the necessary technical specifications and standards. By analyzing the project's technical requirements, project managers can ensure that project deliverables meet the required quality and performance standards. For example, in a construction project, engineering analysis may reveal the need for special materials or equipment to meet safety requirements and building codes. Without technical analysis, projects may not meet the required standards, leading to costly rework or even project cancellation.

Technical analysis helps identify potential risks and problems that may arise during the project's life cycle. By conducting a thorough analysis of the project's technical requirements, project managers can anticipate and mitigate potential risks, ensuring that the project is delivered on schedule and within budget. For example, a technical analysis of a software development project can identify potential interoperability issues with existing systems, allowing the project team to develop contingency plans and avoid costly delays. Without technical analysis, projects may encounter unforeseen technical difficulties, which will lead to cost overruns and project delays [63].

Although technical analysis is a time-consuming and expensive task that can delay project timelines, the benefits of technical analysis far outweigh the costs. Although it may require additional time and resources up front, technical analysis can help avoid costly mistakes and delays. In addition, technical analysis can help identify opportunities for cost savings and efficiency gains, making the investment worthwhile in the long run.

The specifics of the technical analysis of the project to create an online platform for the exchange and sale of used items consists in taking into account a number of specific aspects of this industry [60]:
- it is necessary to carefully consider the technical requirements regarding the functionality of the platform, such as the ability to download, catalog and search for goods, user interaction, etc.;

- it is important to take into account the requirements for security and data protection, since the platform will collect personal information from users;

- in connection with the growing popularity of mobile devices, it is important to ensure compatibility and optimization of the platform for different types of devices and screen sizes;

- the technical analysis should also take into account the scalability needs of the platform to respond to the growing volume of traffic and users. For example, it is necessary to determine the optimal architecture of the database and select appropriate development technologies to ensure the efficient operation of the platform even in case of increased load.

The technical analysis of the project to create the online platform EcoChange Haven includes the following aspects: the choice of technological stack, platform architecture, security and privacy, scalability and performance, integration with other systems, testing and validation (Figure 2.3).
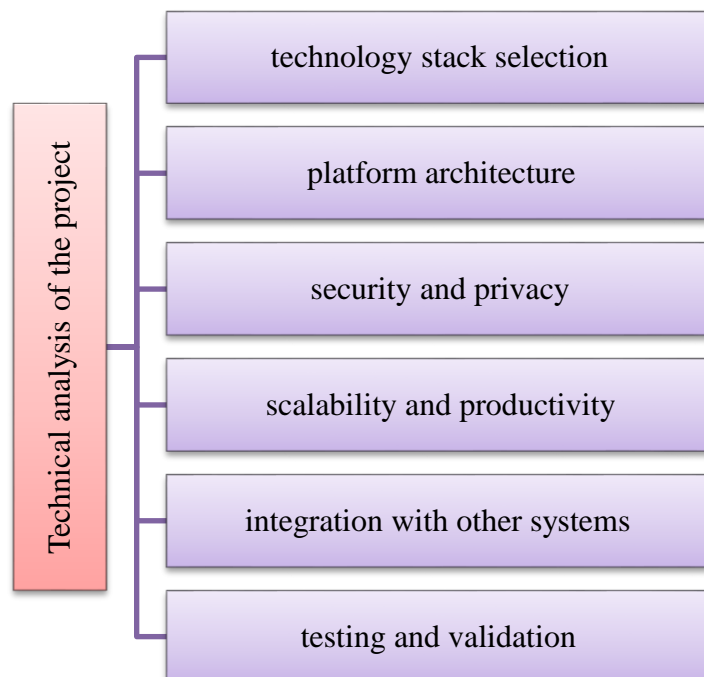


Fig. 2.3. Components of the technical analysis of the project to create an online platform EcoChange Haven*

*Compiled by the author

*Choosing a technological stack* is one of the first steps in the development of a project to create an online platform for the exchange and sale of used items. An effective technology stack is determined by a number of factors, such as project functional requirements, user needs, scalability, security, and others. This may include a programming language (such as JavaScript or Python), frameworks (such as React or Django), a database (such as MySQL or MongoDB), cloud service infrastructure (such as Amazon Web Services or Google Cloud Platform), and other technologies [ 27].

The choice of programming language can affect the speed of development, productivity and scalability of the project. For example, JavaScript is a popular choice for web development due to its extensive capabilities and the large number of frameworks such as React or Angular. Python is also widely used in web development, especially in conjunction with the Django framework.

A choice of frameworks and libraries can greatly facilitate the development and maintenance of a project. For example, using the React framework for the frontend and Django for the backend can ensure fast and efficient platform development.

The choice of the database determines the reliability, scalability and speed of the project. For projects with large amounts of data and high traffic, distributed databases such as MongoDB or Cassandra may be suitable.

The use of cloud services, such as Amazon Web Services (AWS) or Google Cloud Platform (GCP), allows you to quickly scale the infrastructure and ensure high availability of the service [25].

*The architecture of the platform* defines the structure, components of the system, their interaction and distribution of functions between them, the structure of the database. It is important for the EcoChange Haven platform to develop such an architecture that will ensure the efficient operation of all its constituent parts and ensure the satisfaction of users' needs. The components of the architecture are: frontend, backend, database, authentication and security system, analytics and reporting system.

The front end is the part of the system with which users interact. It includes a web interface and mobile applications that allow users to browse products, make purchases and interact with other users. For example, a web interface can be developed using HTML, CSS, and JavaScript. The backend is the server part of the system, which processes the logic of business processes, ensures the operation of the database and interaction with the frontend. For example, programming languages such as Python or Java and frameworks such as Django or Spring can be used for the backend [65].

The database stores data about products, users, transactions and other information necessary for the operation of the system. For the EcoChange Haven platform, it is important to choose an effective database that will ensure quick access to information and scalability of the system. The authentication and security system is responsible for the security of users and their data. It includes a system of authentication, authorization, protection against fraudsters and protection of personal information of users. The analytics and reporting system provides analysis of data about users, products and transactions, which helps to improve the operation of the platform and enter new markets.

*Security and privacy* are critical aspects of any online platform, especially for a system that processes users' personal data and carries out financial transactions. One of the main methods of data privacy protection is encryption. All data transmitted between the user and the server must be encrypted to avoid interception and abuse.

The use of encryption protocols such as HTTPS allows you to ensure the security of data transmission. SQL injection is one of the most common methods of attacking databases. To prevent this type of attack, parameterized queries and input filtering should be used. An important aspect of security is verifying the identity of users and controlling their available actions on the platform. The authentication system should include strong identity verification methods, such as two-factor authentication, as well as an effective access control mechanism.

To effectively protect the platform from potential threats, it is necessary to constantly monitor the system and detect possible attacks or security breaches in

time. The use of monitoring systems that analyze user activity and detect unusual behavior patterns helps to respond to threats in time. Ensuring data privacy also includes protection against leakage of sensitive information. The company must develop a data protection strategy, including limiting access to confidential data and using leak protection.

*Scalability and performance* involves designing a system that takes into account the potential increase in user volume and traffic. This includes optimizing page loading speed, data caching, horizontal scaling, and so on. Optimizing performance and the system's ability to operate efficiently under heavy load are essential to ensure the smooth operation of the platform.

Page loading speed is one of the factors that shape user experience. Using caching, minimizing the amount of data, compressing images and scripts, asynchronously loading resources - these are just some of the means to achieve fast page loading. The development of the system with the possibility of horizontal scaling allows you to expand the resources of the platform by adding new servers or nodes. This allows the platform to work effectively when the volume of users and load increases. Using caching allows you to store copies of frequently used data in the form of precomputed or stored query results. This allows to significantly reduce the response time to requests and ease the load on the server [26].

Constant monitoring of performance and load on servers allows identification and correction of efficiency problems. Optimizing code, databases, and infrastructure can improve performance and ensure a stable platform. The use of load balancing systems allows you to distribute traffic between different servers or nodes. This ensures stable and reliable operation of the platform even under heavy load.

*Integration with other systems* allows the platform to cooperate with other services and systems, which expands its functionality and provides a convenient and complete service for users.

Integration with payment gateways allows users to securely and conveniently pay for goods or services directly on the platform. This can include a variety of payment methods such as credit cards, e-wallets, bank transfers, etc. Integration with

delivery systems allows users to receive ordered goods quickly and reliably. The platform can automatically process delivery information, including cost, timing and delivery methods, and provide users with the option to choose the most convenient option. Integration with social networks allows users to easily share their shopping experiences and exchange products, as well as interact with other community members. This can help increase brand recognition, attract new customers and maintain relationships with existing users [57].

*Testing and validation* is the process of checking various aspects of a system to ensure its functionality, compliance and security before it is released to the market. The test planning stage includes developing a test strategy, determining the scope of testing, drawing up a test schedule, and determining success criteria. Functional testing involves checking the functionality of the platform, its capabilities and functions in accordance with the requirements of the specifications. For example, verification of user registration, creation of product lists, payment transactions, etc.

User interaction testing is performed to assess the user interface's usability and intuitiveness, to check the system's response to user actions and compliance with interaction requirements. Security testing is carried out to check the system for vulnerabilities, measures to ensure security and protect user data, and check compliance with security standards. Performance testing means evaluating the speed and performance of the system under load, determining the possibility of scaling and optimization to achieve optimal performance.

It also requires checking the compatibility of the system with different devices, browsers and operating systems, including mobile devices and tablets. Recovery testing is a check of the system for the possibility of recovery after failures or emergency situations, development and verification of data backup and recovery procedures. The testing process helps ensure the quality and reliability of the platform before it is launched on the market.

*The documentation* contains a description of the system architecture, including a description of the components, their interaction, and the structure of the overall system. This helps developers better understand how the platform works and which

components are responsible for which functions. If the platform has an API to interact with other systems or applications, the documentation contains a description of that API, including available endpoints, query parameters, and data formats [12].

The documentation provides instructions for installing and configuring the platform for developers and administrators. This may include installing dependencies, configuring the database, configuring the server, and other necessary steps to work with the system. The documentation also includes instructions for users of the platform to help them navigate and use all of its features. This may include registering, creating product listings, buying and selling, setting up a profile, etc. The documentation must be constantly updated and adjusted based on changes in the platform, new features or bug fixes. This allows ensuring the relevance of information for all interested parties.

Well-structured and clear documentation helps all project participants better understand the platform and facilitates its effective development, implementation and use.

Therefore, technical analysis is a critically important step in project planning and execution. By identifying potential risks and problems, ensuring compliance with technical specifications and standards, and identifying opportunities for cost savings and efficiency gains, technical analysis can help ensure project success. Although some may argue that technical analysis is a waste of time and resources, it is nevertheless an important investment in project planning and implementation. Project managers should prioritize technical analysis in their project planning and execution. Technical analysis of an online platform project requires detailed research and attention to all aspects of development, from functionality to security and scalability.

## 2.3. The development of the budget for the creation of the online platform "EcoChange Haven" project

When it comes to project management, one of the most crucial steps in ensuring project success is developing a comprehensive budget. A well-structured budget provides a clear understanding of the financial resources needed to complete the project, helps efficiently allocate resources, and enables project managers to make informed decisions. First, a budget helps project managers identify and prioritize project requirements. By estimating the costs of various activities and tasks, project managers can effectively allocate resources and ensure that the project is completed within the allocated budget. This approach helps to minimize waste, reduce costs and optimize the use of resources. For example, a construction project may require a significant amount of materials, labor, and equipment. A well-structured budget helps project managers determine the most cost-effective options, negotiate with suppliers, and ensure that the project is completed on time.

A budget provides a clear understanding of the financial implications of various risks and uncertainties, allowing project managers to develop contingency plans and mitigate potential risks. For example, a project may be affected by changes in weather conditions, supplier delays, or unexpected changes in market conditions. The budget must consider these risks in order to develop contingency plans and effectively allocate resources to mitigate these risks. By tracking actual costs against budgeted costs, project managers can identify areas of inefficiency, optimize resource allocation, and make adjustments to ensure project completion within the allocated budget. This approach helps to guarantee the implementation of the project on time, within the budget and compliance with the necessary quality standards [28].

A budget is not a restrictive document, but rather a tool that enables project managers to make informed decisions and allocate resources effectively. It provides a framework for decision-making, ensuring that project managers are held accountable for their actions and that resources are allocated in a transparent and efficient manner. By involving stakeholders in the budgeting process, project managers can ensure that

their needs and expectations are met and that they are committed to the success of the project. This approach helps build trust, ensures that stakeholders are aligned with project goals and objectives, and allows project managers to negotiate with stakeholders to ensure successful project completion.

Also, the budget provides a clear understanding of the return on investment (ROI) of the project. By evaluating the costs and benefits of various activities and tasks, project managers can identify areas of high ROI and allocate resources accordingly. This approach helps ensure that the project will deliver the expected benefits and that the organization will achieve its strategic goals.

Development of the budget for the project to create the online platform EcoChange Haven is a critically important stage, as it allows to ensure financial stability and efficient use of resources. Budgeting includes: cost determination, resource estimation, cost allocation and provisioning, monitoring and control.

Before starting the development of the budget, it is necessary to carefully analyze all costs associated with the implementation of the project. These can include software development costs, web design, marketing, server infrastructure, advertising, and other costs. The calculation of the approximate cost for the implementation of the project of creating the online platform EcoChange Haven depends on many factors, such as the scope of work, the cost of technical resources, staff salaries, marketing and advertising costs, taxes, etc.

It is necessary to determine what resources are required to implement the project, including human resources, equipment and software. Estimating resources helps determine what costs will be required to acquire or hire them. Costs must be distributed among the various components of the project, taking into account their importance and priorities. For example, most of the budget can be allocated to software development, since it is the main component of the project [8].

Software development is one of the most important aspects of the project, as the platform must be functional and user-friendly. The cost of software development can be significant, especially if you need to hire experienced programmers and developers.

An important part of the success of any online platform is its visual appearance and user experience. Developing an attractive and functional design can also be costly. To ensure the reliability and speed of the platform, you will need to choose a suitable hosting environment and provide the necessary infrastructure. To attract users to the platform, it will be necessary to invest in marketing campaigns, advertising on the Internet and other promotional activities. It is also important to provide a certain reserve for unforeseen costs and changes in the project. It is usually recommended to set aside a reserve of 10-20% of the total budget for unforeseen costs and changes in the project [31].

The total cost of the project can vary significantly depending on the selected technologies, scope of work and many other factors. The exact calculation of the budget should be carried out on the basis of a detailed analysis of all project components. Let's consider the cost of the project to create an online platform EcoChange Haven (table 3.1).

Table 3.1

Distribution of the budget for the EcoChange Haven online platform creation project*

| Budget component | Cost |
| --- | --- |
| Software development | $8,000 |
| Design and web development | $3,000 |
| Infrastructure and hosting | $500 (primary) $100/ month |
| Marketing and advertising | $3,000 |
| Reserve and unforeseen expenses | $1,500 |
| **The total cost of the project** | **$16,000** |

*Compiled by the author

Software development ($8,000). This section of the budget covers the costs of hiring programmers or developers who will be responsible for creating the code and implementing the functionality of the platform. This includes not only writing code, but also testing, fixing bugs, and ensuring that the product is of high quality. The right software is one of the key components of a successful online project, as it determines its functionality, efficiency and user experience. Therefore, investing in this aspect is done with great care to ensure the high quality and reliability of the

platform. Software development costs may include labor time, software resource and development tool costs, and budget increases to address possible challenges or contingencies that may arise during the project.

Design and web development ($3,000). This part of the budget includes the costs of creating the design and web development of the platform. An attractive and functional design is key to attracting users and ensuring their satisfaction while using the platform. Professionally developed interface contributes to ease of use and a positive impression of interaction with the platform. Also, the cost of web development includes the development of functionality, which can range from the display of product pages and catalogs to interactive features such as a shopping cart, payment system and order accounting. A qualitatively developed web interface will ensure the convenience of users when interacting with the platform and a positive experience of buying and exchanging goods.

Infrastructure and hosting ($100 per month). This clause describes the infrastructure and hosting costs required to ensure the availability and reliability of the platform on the Internet. The initial cost of $500 includes the setup and deployment of the necessary servers, databases, and other infrastructure components. The monthly cost of $100 is intended to pay for hosting services, which ensures reliable data storage and access to the platform from any device connected to the Internet. Reliable hosting is key to ensuring stable and fast platform operation, as well as protection against possible cyber attacks. Infrastructure and hosting play an important role in ensuring the availability and reliability of the service for users.

Marketing and advertising ($3,000). This component of the budget covers the costs of marketing activities such as online advertising, social media, SEO optimization, etc. Marketing is important to attract potential users and support the growth of the platform. Each of these marketing channels has its own advantages and can help attract different audiences. For example, online advertising such as Google Ads or Facebook Ads can help get the platform in front of a large audience of users quickly and efficiently. Social media allows you to communicate with potential users, build a community and interact with them directly, which helps to create interest and

attract an audience. SEO optimization is important to increase the platform's visibility in search engines, allowing users to find it when searching the Internet. A variety of marketing activities helps to ensure effective promotion and growth of the platform in the market.

Reserve and unforeseen expenses ($1,500). This part of the budget includes reserve funds in case of unforeseen situations or changes in project requirements that may appear during the implementation of the project. This helps to avoid unpleasant surprises and ensure the financial stability of the project even in the event of unforeseen circumstances.

So, the total cost of the project to create the EcoChange Haven platform is approximately $16,000. This amount is justified and takes into account the main costs necessary for the successful implementation of the project.

After drawing up a budget, it is important to systematically monitor and control costs. This helps to ensure that the project stays within the allocated funding and is executed efficiently. Monitoring includes checking actual costs compared to the planned, as well as identifying possible deviations from the budget. Control ensures timely response to detected anomalies and taking measures to correct them. It is extremely important to determine cost control mechanisms at the project planning stage. This may include establishing a reporting and accountability system, regular meetings with project participants to discuss financial issues, and the use of special software for cost accounting and budget monitoring [29].

Development of the project budget is an important step on the way to achieving the goals and objectives of the project. A budget helps project managers identify and prioritize project requirements, mitigate risk, make informed decisions, secure stakeholder buy-in, and ensure expected ROI. A budget is a critical tool that enables project managers to deliver successful projects. Therefore, it is important to develop a comprehensive budget that provides a clear understanding of the financial resources required to complete the project.

# CHAPTER 3.
# PROJECT PLANNING SYSTEM FOR THE CREATION OF AN ONLINE PLATFORM FOR EXCHANGING AND SELLING USED ITEMS "ECOCHANGE HAVEN"

## 3.1. Project schedule and team management

The rise of online marketplaces has revolutionized the way goods are bought and sold. The success of an online platform for the exchange and sale of used items depends largely on the effective management of the project schedule and the team.

A well-planned project schedule is essential to the successful launch and operation of EcoChange Haven. The project schedule defines the specific tasks, milestones, and timelines required to complete the project. Without a clear schedule, the project can easily fall behind schedule, leading to delays and increased costs. For example, if the development of the platform's user interface is delayed, it can negatively affect the entire project, causing other tasks to be delayed and ultimately delaying the launch of the platform. Therefore, it is extremely important to have a realistic and achievable project schedule that allows for flexibility and adjustments as needed [32].

Various tools and programs can be used to manage the project schedule (Table 3.1). These tools help developers and project managers effectively plan, execute, and track project work, leading to project success.

Work schedule for the EcoChange Haven project for 5 months (July-November 2024):

Month 1 (July 2024)

Conducting research on the e-commerce market and platforms for sharing used things; determination of the needs of the target audience and assessment of the competitive situation.

Formulation of the EcoChange Haven concept, including basic functionality, design and user interface.

Table 3.1

Project schedule management tools*

| Name | Description |
|---|---|
| Microsoft Project | It is a project management software that provides extensive capabilities for creating, planning and tracking work schedules. It allows you to add tasks, set their deadlines, allocate resources and track progress, generate reports on project status. |
| GanttPRO | It's an online Gantt charting tool that allows you to effectively plan and track project work. With the help of GanttPRO, the user can determine the sequence of tasks, set their deadlines, define dependencies between them and assign responsible persons for each task. The tool's interface is very intuitive, making it easy to customize and adjust graphs as your project changes. GanttPRO also has the ability to generate reports on project progress and highlight potential delays or issues that may arise. This tool opens up a wide range of possibilities for project management and helps to ensure their successful implementation. |
| Asana | It's a project management program that lets you create tasks, assign them to a team, set deadlines, and track progress. Asana allows you to create projects, group tasks into different categories, and create subtasks for greater granularity in the task process. Another important feature of Asana is the ability to collaborate and discuss. Users can discuss tasks, share thoughts and ideas directly in the middle of the platform, which improves communication and team collaboration. In this way, Asana helps ensure effective project management and achievement of set goals. |
| Trello | It is a project management tool based on a board and card system. It allows you to create tasks, categorize them and track their status |
| Smartsheet | It is an online tool that allows you to create different types of charts and tables for project management, including Gantt charts |
| Basecamp | It's a project collaboration tool that has features for creating tasks, discussions, and tracking progress |
| Jira | It is a project management tool often used by software developers. It allows you to create tasks, track their status and progress, and manage reports and analytics. |

* Compiled according to [20; 41; 48]

Month 2 (August 2024):

Technical analysis and selection of a technology stack for platform development.

Determining the required technologies, including the choice of programming languages, databases and infrastructure.

Month 3 (September 2024):

Development of user interface design, with the aim of making it convenient and attractive for visitors.

Beginning of development of all the functionality of the platform, such as the user registration system and adding products for exchange or sale.

Month 4 (October 2024):

Continuation of development of platform functionalities.

Conducting testing of the platform to identify errors and shortcomings, as well as optimizing its speed and performance.

Month 5 (November 2024):

Preparation of the platform for launch, including deployment on servers and configuration of payment systems.

Conducting marketing activities to attract users.

Launching the platform and providing post-launch support, resolving technical issues and improving functionality as needed.

To visualize the work schedule for the project, we will use the Gantt chart (Figure 3.1).

A cohesive team is vital to the success of EcoChange Haven. A team of people with diverse skills and experience is essential to developing a platform that meets the needs of its users. A team leader or project manager must be able to effectively communicate the project's vision and goals to the team, ensure that each member is aware of their responsibilities, and provide guidance and support when needed. A close-knit team can also help identify and mitigate risks, which is critical in a project like EcoChange Haven, which involves the development of a complex online platform. For example, a team with expertise in software development, marketing,

and user experience can work together to identify potential risks and develop strategies to mitigate them, ensuring a successful platform launch [5; 7].

| Tasks | July | August | September | October | November |
|---|---|---|---|---|---|
| • Conducting research on the e-commerce market and platforms for sharing used things. | | | | | |
| • Determination of the needs of the target audience and assessment of the competitive situation. | | | | | |
| • Formulation of the "EcoChange Haven" concept, including basic functionality, design and user interface. | | | | | |
| • Technical analysis and selection of technology stack for platform development. | | | | | |
| • Determining the required technologies, including the choice of programming languages, databases and infrastructure. | | | | | |
| • Development of the user interface design, in order to make it convenient and attractive for visitors. | | | | | |
| • Start of development of all functionality of the platform, such as user registration system and adding products for exchange or sale. | | | | | |
| • Continuation of development of platform functionalities. | | | | | |
| • Conducting testing of the platform to identify errors and shortcomings, as well as optimizing its speed and performance. | | | | | |
| • Preparing the platform for launch, including deployment on servers and setting up payment systems. | | | | | |
| • Conducting marketing activities to attract users. | | | | | |
| • Launching the platform and providing post-launch support, resolving technical issues and improving functionality as needed. | | | | | |

Fig. 3.1. Gantt chart for the EcoChange Haven project

To implement the project of creating an online platform for the exchange and sale of used things EcoChange Haven, a team of various specialists with different skills and experience is needed:

1) Project manager (the main project manager, responsible for planning, coordination and control over the implementation of all aspects of the project);

2) Software developer (a programming specialist who will be responsible for developing and testing software for the platform);

3) User interface designer (UI/UX) (a specialist who will provide a convenient and attractive design of the user interface of the platform);

4) Web developer (a specialist who will be responsible for the development and maintenance of the platform's website, including functionality and database integration);

5) Data analyst (an expert who will collect and analyze data on the use of the platform in order to improve its functionality and efficiency);

6) Marketer (marketing specialist who will develop and implement promotion and advertising strategies of the platform to attract users);

7) Communication manager (a specialist who will be responsible for internal and external communication within the project team and with stakeholders);

8) Tester (a specialist who will be responsible for testing the platform to identify errors and shortcomings before its launch).

To achieve the goals and objectives of the project, it is necessary to effectively manage the team's work process and ensure appropriate cooperation between all project participants [18; 56]:

- Each participant must be clearly aware of his duties and responsibilities;

- Communication should be open, transparent and systematic so that all participants are always on the same page and able to respond in time to any changes or problems;

- Stimulation and motivation of project participants to achieve the best results. This may include recognizing achievement, providing opportunities for professional growth and learning, and creating a positive and rewarding work environment;

- Effective conflict management, which consists in timely identification of problems, search for compromise solutions and support of constructive cooperation;

- Monitoring the progress of work and evaluating the performance of tasks in order to identify any delays or problems in a timely manner and take the necessary measures to solve them.

A well-planned project schedule and a cohesive team are critical to the successful launch and operation of the platform. Any deficiencies in these areas can lead to project delays, increased costs, and ultimately failure. Therefore, to ensure the success of EcoChange Haven, it is important to prioritize the management of the project schedule and team.

## 3.2. Project risk management

Risk can affect various aspects of a project, including budget, schedule, product quality, and company reputation. Given the complexity of today's business environment, risks can be diverse and unpredictable. For example, technical problems during software development, changes in legislation on e-commerce, negative user reaction to the platform interface – all this can cause delays in project implementation and losses for the company. Therefore, it is important to identify potential risks, their impact on the project and develop strategies to minimize or manage them.

During the preparation and implementation of the project to create an online platform for the exchange and sale of second-hand items EcoChange Haven, various types of risks may arise, which can be classified into different categories.

*Technical risks*. Technical risks in the project to create the online platform EcoChange Haven pose a serious threat to the successful implementation of the project. During the development and implementation of the software, numerous problems can arise, which can significantly complicate the process and lead to delays in the work schedule.

One of the main technical risks is the possibility of software errors. Even the most experienced programmers can make mistakes in the code, which may appear during testing or after the release of the platform. These errors can lead to incorrect operation of the platform functions or even to its crash [17].

Another significant technical risk is software incompatibility with different devices and browsers. Since users can use different devices (computers, smartphones, tablets) and different web browsers (Chrome, Firefox, Safari, Edge, etc.), it is important that the platform works equally well on all these devices and browsers.

Securing user data is also a key technical challenge. Since the platform will process users' personal data (such as name, address, contact information, etc.), it is important to ensure that this data is protected against unauthorized access, leakage or

loss. This requires the implementation of reliable methods of encryption, authentication and data access control.

*Business risks*. They cover a wide range of possible problems, including changes in the market environment, competitive activity, insufficient popularity of the platform among users or a failed marketing strategy.

Changes in the market environment may include changes in consumer preferences, technological innovations or regulatory changes that may affect demand for the product or service offered by the platform. Competitive activity can also be a big challenge, especially in the field of e-commerce, where competition is always high.

Insufficient popularity of the platform among users may arise due to low quality or inadequate functionality, unfavorable interface design or unsuccessful marketing strategies. For example, if users do not find the platform convenient or attractive, they may abandon its use in favor of competitors.

Marketing strategies can also be a source of risk, especially if they do not meet the needs of the target audience or do not effectively promote the platform in the market. For example, a bad marketing plan can lead to insufficient attention of users or the wrong direction of advertising efforts [2].

*Legal risks*. They are related to possible legal problems that may arise due to shortcomings in the implementation of legislation on the protection of personal data, consumer rights, taxation of e-commerce and other legal aspects. Failure to comply with data protection laws can lead to serious legal problems, including fines and lawsuits. Regulations related to consumer rights are also an important aspect, as improper enforcement can cause mistrust among users and negatively affect the platform's reputation. Taxation of e-commerce is a complex topic as it can involve taxation of trading transactions, income taxes and other aspects that vary by region and law. Misunderstanding or failure to follow these rules can lead to financial losses and legal problems.

Other legal aspects such as intellectual property ownership, contractual relationships with suppliers and partners, and compliance with industry-specific rules

and regulations are also important. Improper management of these aspects can lead to legal disputes and other negative consequences for the project.

*Financial risks*. May include project budget overruns, service delays, or losses from bad investments.

Budget overruns can result from underestimating the cost of various phases of a project or from unexpected costs, such as additional software development costs or marketing efforts. Delays in the payment of services can lead to an increase in the cost of the project and delays in its implementation, which can negatively affect the financial condition of the project and relations with suppliers and partners. Losses from unsuccessful investments can arise from the wrong choice of marketing or product development strategies, as well as from negative market acceptance of the platform. Such risks require careful analysis and management, including constant monitoring of the financial status of the project, regular updating of the budget and development of strategies to reduce the impact of financial risks.

*Human risks*. Associated with insufficient qualifications of project team members, conflicts between project participants, as well as changes in the team, which can lead to delays in the execution of works.

Inadequate qualifications of team members can lead to inefficiency and poor quality of tasks, increasing the risk of project schedule delays and budget overruns. In addition, conflicts between project participants can cause tension in the team, which can lead to poor cooperation and reduced productivity. Changes in the team can also affect the execution of the project, as new team members may need time to adapt and acquire the necessary skills. These risks require careful management, including careful selection and training of personnel, regular communication and conflict resolution within the team, and development of an action plan to minimize the impact of team changes on the project.

Risk management in projects includes various methods and approaches aimed at identifying, evaluating, managing and minimizing risks. These methods can be used separately or in combination with each other depending on the specific needs and features of the project.

Table 3.2

Risk management of the project of creating an online platform *

| Types of risks | Ways to eliminate and minimize risks |
|---|---|
| Technical risks | To minimize technical risks, you should perform a thorough analysis of the software requirements and develop a detailed development plan that takes into account the most likely problems.<br>Hiring experienced programmers and using proven technologies can help reduce the risk of software bugs.<br>Conducting regular code reviews and software testing at various stages of development will help identify and correct problems with sufficient speed. |
| Business risks | To avoid business risks, it is important to study the competitive environment and identify the unique characteristics of the platform that will ensure its competitiveness.<br>Careful planning of marketing activities and brand development will help attract the attention of the target audience and increase the popularity of the platform.<br>Analyze changes in the market and respond to them in a timely manner to reduce the impact of changes in the competitive environment. |
| Legal risks | To minimize legal risks, a detailed analysis of legal requirements should be carried out and legal advice should be used to ensure compliance with all legal regulations.<br>Drafting documents such as confidentiality agreements and privacy policies can help reduce the risks of users' rights being violated and their data being misused. |
| Financial risks | To manage financial risks, it is important to carefully plan the budget and take into account reserves for unforeseen expenses.<br>Constant monitoring of costs and assessment of the impact of changes in the budget will help to avoid exceeding the budget and ensure the financial stability of the project. |
| Human risks | In order to reduce human risks, it is necessary to conduct systematic trainings and education to improve the qualifications of personnel.<br>A mentoring and support system can help new team members adapt faster and acquire the necessary skills.<br>Systematic evaluations of the team's work and timely detection of conflicts will allow quick response to problems and ensure effective cooperation. |

*Compiled according to [38]

Risk identification involves the identification of all potential threats and opportunities that may arise during project implementation. This may include an analysis of internal and external factors that may affect the project, such as technological changes, changes in legislation, financial factors, etc.

After the identification of risks, their analysis and assessment is carried out, including the determination of the probability of occurrence and potential impact on the project. This analysis helps determine which risks require special attention and development of management strategies.

Risk management can include developing action plans to avoid or reduce risks, transferring them to other parties, or accepting risks, provided that the potential benefits outweigh the negative consequences.

Risk monitoring and control allows timely response to any changes in the risk environment and taking appropriate measures to reduce the negative impact [52].

Risk insurance. In some cases, risks may be transferred to insurance companies. This allows you to reduce financial losses in the event of a risk and provides an additional level of protection for the project.

Considering different risk scenarios helps to understand their possible consequences and to develop action plans in case of their occurrence. This allows you to prepare for risks in advance and reduce their impact on the project.

Risk management in the project to create the online platform EcoChange Haven is an integral component of the successful implementation of the project. By analyzing various types of risks, such as technical, business, legal, financial and human risks, possible threats to the project were identified and ways to eliminate or minimize the risks were identified. To achieve successful results, it is necessary to carry out careful planning, analyze risks at various stages of the project, develop strategies for their management and take the necessary measures to reduce the impact of risks on project goals and results.

### 3.3. Assessment of effectiveness and prospects for expanding the online platform

Assessment of effectiveness of the project of creating an online platform for the exchange and sale of used items allows you to assess the achievement of the project's goal and determine how successfully it meets the company's strategic goals. In addition, the evaluation of efficiency helps to determine the financial profitability of the project, to compare the costs of its implementation with the expected revenues and gains. It provides information on the productivity and quality of work of the project team, as well as the satisfaction of platform users. Performance evaluation helps to identify the strengths and weaknesses of the project, identify problems and risks in time, and take measures to solve them. It is a key tool for making management decisions regarding the future development of the platform and optimization of the company's activities as a whole [10].

Evaluation of the effectiveness of the project to create an online platform for the exchange and sale of used items is carried out through various approaches and criteria:

1. Financial efficiency. The financial result of the project is one of the main criteria for evaluation. Such an assessment includes the calculation of costs for the development and implementation of the platform compared to the expected revenues from its operation.

2. Project performance indicators. It is important to measure the performance of the project, taking into account the time spent on development, the resources used to create the platform, and the quality of the result.

3. Level of customer satisfaction. A study of the satisfaction of platform users, their feedback and ratings is provided. This will allow you to determine how successfully it is possible to solve their needs and expectations.

4. Market competitiveness. Performance evaluation includes an analysis of the platform's competitiveness on the market, compared to other similar products. It is

important to determine how the platform differs from competitors and how this affects its success.

5. Strategic goals. The achievement of the company's strategic goals related to business development through the implementation of the platform is evaluated.

To evaluate the effectiveness of the project of creating an online platform, various indicators can be used, which cover various aspects of its implementation and impact on business (table 3.3). These indicators make it possible to evaluate various aspects of the project's success and the impact of its implementation on the company's business [47].

Table 3.3

Indicators for measuring the effectiveness of projects

in the field of e-commerce*

| A group of indicators | Types of indicators |
|---|---|
| Financial indicators | Project cost: the amount of estimated costs for the development and implementation of the platform.<br>Project profitability: the ratio of net profit to costs.<br>Return on Investment (ROI): The ratio of profit to cost, expressed as a percentage.<br>Customer Retention Cost: the average cost of retaining each customer after the project is completed. |
| User experience metrics | User satisfaction: survey results and user feedback on the functionality and usability of the platform.<br>Conversion: The percentage of visitors who take a specific targeted action, such as purchasing a product or signing up. |
| Technical indicators | Platform speed and performance: page load time, server response time, number of requests per page, etc.<br>The presence of errors: the number and types of errors detected during the testing and operation of the platform. |
| Business indicators | Market share: the percentage of the market that the company controls based on the implementation of the platform.<br>Number of users: the number of registered users and their activity on the platform.<br>Potential revenue: the projected amount of revenue that the platform can provide in the future. |

*Compiled according to [37; 62]

A SWOT analysis for the project to create an online platform EcoChange Haven will help identify its strengths and weaknesses, as well as opportunities and threats that may affect its success [50].

**Strengths**

The idea of creating an online platform for the exchange and sale of used items corresponds to the current trends of the consumer market and can attract the attention of the target audience
The project team consists of experienced specialists from various fields
The use of modern technologies in the development of the platform will allow to create a high-quality product with advanced functionality

**Weaknesses**

Implementation of the project requires significant financial costs for software development, design and marketing

There are already other platforms for the exchange and sale of used things on the market, which can become competitors of EcoChange Haven and make it difficult to penetrate it

**Opportunities**

The growing popularity of online shopping, consumers increasingly use the Internet for shopping, which creates a favorable environment for the development of the platform

Ability to attract new users by expanding the functionality of the platform and implementing marketing activities

**Threats**

Possible technical problems or security issues can affect the reputation of the platform and loss of user trust

Changes in legal regulations, especially regarding e-commerce and personal data protection, can potentially affect the operation of the platform and require additional costs to comply with the requirements

Fig. 3.2. SWOT analysis for the project

The prospects for the expansion of the online platform for the exchange and sale of used things EcoChange Haven can be significant, given the growth of environmental awareness, popularity and interest in the use of already used goods. *The following ways of expanding the online platform* for the exchange and sale of

used things have been identified: expanding the geographical reach, expanding functionality, partnerships and integration, marketing activities and advertising, implementing innovative technologies, developing mobile applications, introducing environmental initiatives.

*Expansion of geographic coverage.* The release of the online platform to new markets and regions will allow to attract more users and expand the customer base. This may include localizing the platform for different regions, as well as supporting international operations and shipping.

*Expanding functionality.* Adding new features and capabilities to the platform will increase its appeal to users. For example, it can be the expansion of the product range, the introduction of new payment methods or the implementation of additional services for users.

*Partnerships and integration.* Entering into partnership agreements with other companies or integration with existing platforms will help attract new users and expand the functionality of the platform. For example, it can be cooperation with logistics companies to facilitate the delivery of goods or integration with payment systems.

*Marketing activities and advertising.* Investing in marketing and advertising will attract new users and increase awareness of the platform. This can be implemented by conducting advertising campaigns in social networks, advertising on Internet platforms, participation in exhibitions and events, as well as studying and using marketing analytical tools. The influence of social media on the buying process is increasing, including customer reviews, influencer marketers and product promotions.

*Implementation of innovative technologies.* Innovations and trends in e-commerce are constantly changing in accordance with the development of technology and changes in consumer preferences. The use of artificial intelligence to personalize recommendations, analyze buyers and automate processes is also becoming increasingly popular in the field of e-commerce. The introduction of Augmented Reality (AR) and Virtual Reality (VR) technologies allows customers to try products

before they buy, increasing trust and reducing returns. The development of voice assistants, such as Amazon Alexa and Google Assistant, opens up new opportunities for shopping through voice commands, which simplifies the purchase process and increases convenience for users. Blockchain technologies are used to ensure security and transparency in transactions, as well as for the development of decentralized payment systems and logistics management [43; 54].

*Development of mobile applications.* The growing use of smartphones is contributing to the development of mobile commerce. Companies are actively optimizing their sites and applications to provide a convenient and effective mobile experience for users. This allows users to make exchanges and purchases more easily, providing greater convenience and accessibility [24].

*Implementation of environmental initiatives.* Growing awareness of environmental and ethical issues leads to an increase in demand for products that meet these criteria. Manufacturers and retailers adapt their strategies to these requirements. Given the growing attention to environmental issues, the platform can develop special programs and initiatives to support renewable resources, recycling and reducing environmental impact.

Attracting and retaining customers is important for the development and success of e-commerce. Existing strategies should be used to achieve these goals. Strategies that help companies effectively attract and retain customers in the field of e-commerce, creating a positive experience for customers and promoting business growth [33; 34]:

- Targeted advertising by creating an advertising campaign aimed at a key audience. This may include the use of social media, contextual advertising, retargeting and other methods to attract the attention of potential customers.

- Creating attractive content: It is important to regularly create interesting and useful content that attracts the attention of customers. This can be blog articles, video product reviews, infographics and other formats.

- Attractive offers, sales and discounts attract the attention of buyers and stimulate them to buy. It is important to develop proposals that will be attractive to the target audience.

- High quality customer service helps to retain existing and attract new customers. A quick response to inquiries, assistance in solving problems and a personal approach to each customer positively influence their opinion of the brand.

- Implementation of loyalty programs that provide discounts, bonuses and other benefits to regular customers can also help attract new customers and retain existing ones.

- It is important to regularly analyze the results of customer acquisition and retention strategies and make appropriate adjustments to improve performance.

Ensuring product quality in e-commerce projects plays a key role in ensuring user satisfaction and maintaining competitiveness in the market. The product must be technically reliable and functionally complete. This means compliance of all functions with specification requirements, absence of errors and ensuring stable operation under heavy load. The user interface should be convenient, attractive and intuitive for customers. This helps attract and retain your audience. Since e-commerce involves the storage and processing of users' personal data and financial transactions, ensuring a high level of security is critical. This includes protection against fraudsters, hackers and cybercriminals.

Responsiveness of web pages and operating systems, as well as efficient use of server resources, are essential to meet user needs and prevent lost revenue due to outages. Constantly testing the product and collecting feedback from users allows you to identify problems and quickly fix them, as well as grow by improving the product according to market needs. Providing efficient and prompt support to users, as well as regular updates to improve the product, are important factors for success in e-commerce.

In general, ensuring product quality in e-commerce projects requires a combination of technical knowledge, user preferences, and a responsible approach to security and support.

Performance evaluation is an important stage in the project life cycle. This process allows you to find out how successfully the set tasks and goals were achieved, as well as to determine the strengths and weaknesses of the project. Performance evaluation provides an opportunity to draw conclusions and make decisions regarding further development of the platform. Successfully addressing risks and taking into account expansion prospects, such as the expansion of the product range, the introduction of innovative technologies and the development of mobility, can contribute to increasing competitiveness and achieving success in the e-commerce market. In general, the prospects for the expansion of the online platform EcoChange Haven will depend on the success of its implementation, the ability to adapt to changes in market conditions and meet the needs of users. Careful planning and strategic decisions can help ensure the positive development and continued success of the platform.

**CONCLUSIONS**

1. The specificity of e-commerce is that projects in this field are often characterized by fast implementation times, high competitiveness and the constant need to adapt to changes. The rapid growth of technology and constant changes in consumer preferences create unique challenges for project management in the field of e-commerce and exchange of goods. Strategic planning, resource management, development of technical solutions, analysis of competitors and the market, as well as effective use of marketing tools are important. Particular attention is paid to data security, product quality assurance, and customer attraction and retention. By applying project management best practices and keeping abreast of industry developments, companies can effectively navigate the complexities of e-commerce and commodity exchange, ultimately achieving their strategic goals and delivering value to their customers. Facilitating the exchange and sale of used items has a significant positive impact on the environment as well as on the economy and the social sphere. This helps reduce waste, lower costs for consumers and develop communities.

2. Current trends in the use of online platforms for sharing and selling used items reflect a shift towards more sustainable, convenient and valuable consumer behavior. The specialization of trading platforms, the integration of mobile applications, the emphasis on environmental friendliness and the change in the perception of value - all this contributed to the growth of the popularity of second-hand goods. While there are challenges to be addressed, the overall impact of online platforms for sharing and selling used items has been transformative, offering people new opportunities to engage in a more mindful and cyclical approach to consumption.

3. Project management in the e-commerce and commodity exchange sector requires a holistic, adaptive and customer-centric approach. E-commerce businesses must be aware of the dynamic nature of the industry and the changing needs of online consumers, and use project management methodologies and tools that allow them to effectively respond to these changes. By implementing elements of an agile, cost-

effective and technology-driven approach to project management, e-commerce companies can expand their ability to deliver innovative solutions, optimize operational processes and drive sustainable growth in the digital marketplace.

4. Concept development is critical to project success. A well-defined concept provides a clear understanding of project objectives, establishes project scope, defines project deliverables, establishes project timelines and budgets, and helps identify and mitigate risks. Without a clear concept, the project is likely to fail or face significant challenges. It is therefore essential that project managers and teams take the time to develop a clear and well-defined concept at the start of the project. Concept development is a critical step in the project management process. Only by taking the time to develop a clear and well-defined concept can project teams ensure that their projects are completed on time, within budget and to the required quality standards. By doing this, project teams can increase the chances of project success and avoid the consequences of project failure.

5. Technical analysis is a critical step in project planning and execution. By identifying potential risks and problems, ensuring compliance with technical specifications and standards, and identifying opportunities for cost savings and efficiency gains, technical analysis can help ensure project success. Although some may argue that technical analysis is a waste of time and resources, it is nevertheless an important investment in project planning and implementation. Project managers should prioritize technical analysis in their project planning and execution. Technical analysis of an online platform project requires detailed research and attention to all aspects of development, from functionality to security and scalability.

6. Development of the project budget is an important step on the way to achieving the goals and objectives of the project. A budget helps project managers identify and prioritize project requirements, mitigate risk, make informed decisions, secure stakeholder buy-in, and ensure expected ROI. A budget is a critical tool that enables project managers to deliver successful projects. Therefore, it is important to develop a comprehensive budget that provides a clear understanding of the financial resources required to complete the project.

7. A well-planned project schedule and a cohesive team are critical to the successful launch and operation of the platform. Any deficiencies in these areas can lead to project delays, increased costs, and ultimately failure. Therefore, to ensure the success of EcoChange Haven, it is important to prioritize the management of the project schedule and team. Various tools and programs can be used to manage the project schedule. These tools help developers and project managers effectively plan, execute, and track project work, leading to project success.

8. Risk management in the project to create the online platform EcoChange Haven is an integral component of the successful implementation of the project. By analyzing various types of risks, such as technical, business, legal, financial and human risks, possible threats to the project were identified and ways to eliminate or minimize the risks were identified. To achieve successful results, it is necessary to carry out careful planning, analyze risks at various stages of the project, develop strategies for their management and take the necessary measures to reduce the impact of risks on project goals and results.

9. Performance evaluation is an important stage in the project life cycle. This process allows you to find out how successfully the set tasks and goals were achieved, as well as to determine the strengths and weaknesses of the project. Performance evaluation provides an opportunity to draw conclusions and make decisions regarding further development of the platform. Successfully addressing risks and taking into account expansion prospects, such as the expansion of the product range, the introduction of innovative technologies and the development of mobility, can contribute to increasing competitiveness and achieving success in the e-commerce market. In general, the prospects for the expansion of the online platform EcoChange Haven will depend on the success of its implementation, the ability to adapt to changes in market conditions and meet the needs of users. Careful planning and strategic decisions can help ensure the positive development and continued success of the platform.

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