

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY
ECONOMICS AND MANAGEMENT FACULTY**

Accounting and Taxation

QUALIFICATION WORK

Education Degree - Master

**on: Strategic management and innovation at incorporation: a cross-
sector analysis and case study**

Completed:

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SUMY NATIONAL AGRARIAN UNIVERSITY

Faculty Economics and Management
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Education degree «Master»
Field of Study 073 «Management» (EP «Administrative Management»)

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TASK

on qualification work for student
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1. Theme of Strategic Management and Innovation at Incorporation: A Qualification work: Cross-Sector Analysis and Case Study

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2. Deadline for student completed project (work)

September, 5 2024

3. Background to the project (work):

The success of companies and large corporations increasingly depends not only on the product and economic indicators that enterprises manage to achieve as a result of their core business, but also on the quality of strategic management, business innovation, environmental and social aspects of their activities. This qualification work examines the economic, organizational and legal aspects of the formation of a system of strategic management and innovation of a modern high-tech corporation, conducts an intersectoral analysis and practical study of this issue in the Apple Corporation.

4. Contents of settlement and explanatory notes (the list of issues to develop):

This study will outline the objectives and significance of the research, review the relevant literature, and describe the methodology used. Based on the results of the analysis of the internal and external development environment, an assessment of strategic management and innovation in Apple Corporation is carried out: an organizational and economic characterization of the enterprise is carried out, the organization of strategic management and innovation in the corporation is assessed, the policy of strategic management and competitiveness is detailed. The introduction of innovative approaches to the organization of strategic management in Apple Inc. is proposed: environmental initiatives in the strategic management system of the corporation are analyzed, the possibility of implementing global innovation standards in the company's activities is considered, the effectiveness of the proposed business development measures for the company and its stakeholders is evaluated.

5. Date of assignment: June, 19 2023

CALENDAR PLAN

№	Title the stages of the degree project (work)	Date of performance project stages	Note
1	Definition and approval of the thesis, preparation of the plan - schedule of work	<i>June, 2023</i>	
2	Selection and analysis of literary sources, the preparation of the first theoretical chapter	<i>September - December, 2023</i>	
3	Preparation and presentation of draft of the first chapter of the thesis	<i>January 2023</i>	
4	Collection and processing of factual material, synthesis analysis of application issues in the enterprise	<i>March 2024</i>	
5	Making the theoretical part of the thesis, summarizing the analytical part	<i>April 2024</i>	
6	Design options improve the research problem	<i>May 2024</i>	
7	Completion of the project part of the thesis, design chapters	<i>May 2024</i>	
8	Previous work and its defense review	<i>July 2024</i>	
9	Checking the authenticity of the thesis	<i>August, 2024</i>	
10	Deadline for student completed the thesis	<i>September, 02 2024</i>	
11	Defense of the thesis	<i>September, 11-12 2024</i>	

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ABSTRACTS

Zhang Zhi Chao Strategic Management and Innovation at Incorporation: A Cross-Sector Analysis and Case Study - Manuscript

Qualification work on specialty 073 «Management» EP «Administrative management» Sumy National Agrarian University, Sumy, 2024.

This qualification work investigates the economic, organizational and legal aspects of the formation of a system of strategic management and innovation of a modern high-tech corporation, conducts an intersectoral analysis and practical study of this issue in the Apple Corporation.

Nowadays, the success of companies and large corporations increasingly depends not only on the product and economic indicators which enterprises manage to achieve as a result of their core business, but also on the quality of strategic management, business innovation, environmental and social aspects of their activities which they somehow direct to society. This situation reflects a wide range of views on the place and role of business in the future: performance, its obligations to consumers, employees, shareholders and other stakeholders, which makes this research topic relevant.

The value of the study lies in identifying and implementing ways to improve the theoretical and methodological aspects of strategic management and corporate innovation in the context of intersectoral analysis and practical research: the economic essence, value and types, regulatory and legal framework for strategic management and innovation of high-tech corporations are studied; diagnostics of the financial and economic activity of the studied company with the use of the latest analytical methods; the policy of functioning of strategic management and innovation in Apple Corporation is considered; an analysis of environmental initiatives in the strategic management system of Apple Inc; the possibility of applying world innovation standards in the company's activities is substantiated; the effectiveness of the proposed business development measures for the company and its stakeholders is evaluated.

Keywords: high-tech corporation, environmental initiative, innovation, cross-sectoral analysis, strategic management.

АНОТАЦІЯ

Чжан Чжі Чао. Стратегічне управління та інновації корпорації: міжгалузевий аналіз і практичне дослідження – Рукопис

Кваліфікаційна робота на здобуття ОС «Магістр» за спеціальністю 073 «Менеджмент» ОП «Адміністративний менеджмент», Сумський національний аграрний університет, Суми, 2024.

У даній кваліфікаційній роботі досліджено економічні та організаційно – правові аспекти формування системи стратегічного управління та інновацій сучасної високотехнологічної корпорації, здійснено міжгалузевий аналіз і практичне дослідження даного питання в Корпорації Епл. Визначено основні шляхи вдосконалення стратегічного управління компанії.

На сьогоднішній день успіх компаній та великих корпорацій все частіше залежить не лише від продукту та економічних показників, яких підприємствам вдається досягати внаслідок своєї основної діяльності, а й від якісної побудови стратегічного управління, інноваційності бізнесу, екологічних та соціальних аспектів їхньої діяльності, які вони так чи інакше спрямовують на суспільство. Така ситуація відображає широкий спектр поглядів на місце та роль бізнесу на перспективу: результати діяльності, його зобов'язання перед споживачами, працівниками, акціонерами та іншими зацікавленими сторонами, що робить дану тему дослідження актуальною.

Цінність дослідження полягає у визначенні та реалізації шляхів удосконалення теоретико-методичних аспектів стратегічного управління та інновацій корпорації в розрізі міжгалузевого аналізу та практичного дослідження: досліджено економічну сутність, значення та види, нормативно-правові засади стратегічного управління та інновацій високотехнологічних корпорацій; проведено діагностику фінансово-господарської діяльності досліджуваної компанії із застосуванням новітніх аналітичних методів; розглянуто політику функціонування стратегічного менеджменту та інновацій в корпорації Apple; проведено аналіз екологічних ініціатив в системі стратегічного менеджменту корпорації Apple Inc.; обґрунтовано можливість застосування світових інноваційних стандартів у діяльності компанії; здійснено оцінку ефективності запропонованих заходів з розвитку бізнесу для компанії та її стейкхолдерів.

Ключові слова: високотехнологічна корпорація, екологічна ініціатива, інновація, міжгалузевий аналіз, стратегічне управління.

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INTRODUCTION

Relevance of research on this topic. Today, the success of companies and large corporations increasingly depends not only on the product and economic indicators that enterprises manage to achieve as a result of their core business, but also on the quality of strategic management, business innovation, environmental and social aspects of their activities, which they somehow direct to society. The analysis of the existing theoretical postulates and practical approaches of the relevant concept emphasizes the diversity of interpretations of its foundations, which indicates the complexity and multifaceted nature of the concepts of “strategic management” and “innovation”. This situation reflects a wide range of views on the place and role of business in the future: performance results, its obligations to consumers, employees, shareholders and other stakeholders, which makes this research topic relevant.

The following scholars have studied the formation and development of strategic management and corporate innovation and their features: Barney J. [16], Dyvik H. [18], Grant, R. [21], Hesterly W. [16], Johnson G. [22], Makos J. [28], Nelson R., [30], Porter M. [33], Scholes K. [22], Schilling M. [34], Teece D. [34] and others.

The purpose of the thesis. Based on the preliminary literature study and analysis of relevant cases, the author hopes to put forward some realistic proposals for strategic management and corporate innovation in the new era by studying the peculiarities of Apple's functioning and to contribute to relevant theoretical research.

Research objectives. To achieve this goal, the master's thesis solved the following tasks:

- to investigate the economic essence, importance and types, regulatory and legal framework for strategic management and innovation of corporations, to conduct an intersectoral analysis;

- to diagnose the financial and economic activity of the object of study;

- to consider the policy of functioning of strategic management and innovation in Apple Corporation

- to evaluate environmental initiatives in the strategic management system of Apple Inc.;
- to investigate the possibility of applying world innovation standards in the company's activities;
- to assess the effectiveness of the proposed business development measures for the company and its stakeholders.

Object of research. Financial and economic activities of Apple Corporation.

The subject of research. Strategic management and innovation of modern high-tech corporations.

The following research methods were used in this paper:

(1) Literature method. By collecting a large amount of literature and relevant theoretical framework, this paper laid a good theoretical foundation for empirical research in the future.

(2) Inductive analysis. Based on the empirical research, this paper summarizes some common issues. Through analysis, we can find common ground.

(3) Research method of strategic management tools

Using various strategic management tools and models, such as PEST analysis, SWOT analysis, key factor analysis, and internal and external factor evaluation (IFE/EFE) matrix, we will comprehensively study the internal and external environment of Apple Corporation. This analysis will help identify the company's strengths, weaknesses, opportunities, and challenges. After a thorough summary of the results, we will formulate a development strategy tailored to the unique circumstances of the business entity. In addition, we will develop appropriate preventive measures, based on the real situation in the corporation, to facilitate the implementation and execution of the strategy, ensuring its successful implementation.

The information base includes international laws and regulations, textbooks on management, financial analysis, domestic and foreign monographs, manuals, scientific publications, economic and financial reports, etc.

The novelty of the study. The scientific novelty of the study is to identify and implement ways to improve the theoretical and methodological aspects of strategic

management and corporate innovation in the context of intersectoral analysis and practical research. Based on the results of the study, a number of provisions have been formulated that are characterized by scientific novelty:

- the economic essence, significance and types, regulatory and legal framework for strategic management and innovation of high-tech corporations are studied;
- diagnostics of the financial and economic activity of the studied company with the use of the latest analytical methods;
- the policy of functioning of strategic management and innovation in Apple Corporation is considered;
- an analysis of environmental initiatives in the strategic management system of Apple Inc;
- the possibility of applying world innovation standards in the company's activities is substantiated;
- evaluated the effectiveness of the proposed business development measures for the company and its stakeholders.

Practical value of the work. The validity of the research results lies in the application of the obtained managerial knowledge in practical work. To implement the technical and economic proposals outlined in this paper in the company, as well as to check whether the system of strategic management and innovation of the corporation has been optimized and improved after the implementation of these proposals.

Own publications. The main theoretical provisions and practical results of the master's work were positively evaluated at two international scientific and practical conferences.

Structure and scope of the work. The master's thesis consists of an introduction, three chapters, conclusions and suggestions, a list of references of 41 titles. The main text is presented on 69 pages of computer text, the work contains 9 tables and 6 figures.

CHAPTER 1

THEORETICAL AND METHODOLOGICAL FUNDAMENTALS OF STRATEGIC MANAGEMENT AND INNOVATION IN CORPORATION

Strategic management and innovation are pivotal for the success of corporations, particularly during the incorporation phase. This critical period in a company's lifecycle involves not just laying down the foundation for future operations but also setting the strategic direction that will influence its long-term success [21]. As companies establish themselves, the ability to strategically navigate complex markets while fostering innovation can significantly influence their trajectory and competitive advantage (Barney & Hesterly, 2018). This dual focus on strategic management and innovation ensures that companies are not only reactive to current market conditions but also proactive in shaping their future [33].

This article explores the intersection of strategic management and innovation across various sectors, emphasizing their importance in establishing a competitive edge (Teece, 2010). Strategic management involves a systematic process of planning, monitoring, analyzing, and assessing everything that is necessary for an organization to meet its goals and objectives [22]. On the other hand, innovation is the lifeblood of any forward-thinking company, encompassing the creation and implementation of new ideas, processes, or products that can enhance performance, increase value, and provide a unique position in the market [34].

By analyzing key strategies and innovations in diverse industries and presenting a detailed case study, this paper aims to provide a comprehensive understanding of how businesses can leverage these elements for sustainable growth. The objective is to offer insights into how strategic management frameworks can be integrated with innovative practices to foster an environment where continuous improvement and creative problem-solving are the norms.

The importance of this topic cannot be overstated. In today's fast-paced and highly competitive business environment, the ability to innovate and strategically manage

resources and operations is crucial. Companies that excel in these areas are better positioned to adapt to changes, meet customer needs more effectively, and achieve superior performance. This paper will delve into various strategic management models and innovation processes, demonstrating how their integration can lead to remarkable business success.

Understanding the synergy between strategic management and innovation is particularly relevant for start-ups and newly incorporated businesses. These entities often face significant challenges, including limited resources, intense competition, and the need to build a market presence from scratch. By effectively combining strategic management principles with innovative practices, they can overcome these challenges and create a strong foundation for growth.

For established companies, the continuous alignment of strategic management and innovation is equally important. It ensures that they remain competitive and relevant in their industries. Firms that fail to innovate risk becoming obsolete, while those that neglect strategic management may find their innovations poorly executed or misaligned with market demands.

This article will explore various sectors, including technology and healthcare, to illustrate how strategic management and innovation are applied in different contexts. Through detailed analysis and case studies, we will highlight the strategies that have led to success in these industries and provide actionable insights that can be applied across other sectors.

In summary, this paper aims to underscore the critical role of strategic management and innovation in business success, particularly during the incorporation phase. By examining key strategies and innovations across various industries and presenting a comprehensive case study, this article seeks to provide valuable knowledge that can help businesses leverage these elements for sustainable growth. The integration of strategic management and innovation is not just a best practice but a necessity in today's dynamic business landscape. Companies that master this integration will be better equipped to navigate the complexities of the market, achieve long-term success, and maintain a competitive edge.

The significance of strategic management and innovation cannot be overstated, particularly for businesses in their nascent stages. As organizations embark on their journeys, strategic management provides the structured framework necessary for navigating the complexities of the business environment. It involves setting clear objectives, formulating strategies to achieve these goals, and continuously monitoring progress to ensure alignment with the company's vision. This process is essential for optimizing the use of resources, mitigating risks, and capitalizing on opportunities.

Simultaneously, innovation acts as a catalyst for differentiation and growth. Innovation involves the introduction of new ideas, products, services, or processes that add value and drive competitive advantage. For newly incorporated businesses, the ability to innovate is crucial for establishing a unique market presence and capturing the interest of customers and investors alike. By embracing innovation, companies can distinguish themselves from competitors, create new markets, and drive industry evolution.

Incorporating innovation into strategic management ensures that organizations are not only prepared to respond to current market demands but are also positioned to anticipate and shape future trends. This dynamic interplay between strategic planning and innovative thinking can lead to the development of groundbreaking products and services, fostering long-term success and sustainability. Therefore, understanding how to integrate strategic management with innovation is essential for any business aiming to thrive in today's competitive landscape.

The incorporation phase represents a critical juncture where strategic decisions and innovative practices can set the trajectory for a company's future. It is during this phase that businesses lay the groundwork for their operational and strategic frameworks, making it an ideal time to embed a culture of innovation. By doing so, companies can ensure they are not only meeting immediate market needs but are also positioned for long-term growth and adaptability.

For start-ups and newly incorporated businesses, leveraging innovation can be particularly advantageous. These companies often operate with limited resources and face significant competition from established players. Therefore, innovation becomes a means

of leveling the playing field. By introducing novel solutions and disruptive technologies, start-ups can carve out niches, attract a loyal customer base, and secure vital investments.

Moreover, the synergy between strategic management and innovation can provide a powerful foundation for sustained success. Strategic management ensures that innovative ideas are aligned with the company's goals and capabilities, facilitating a coherent approach to growth and development. This alignment helps to optimize resource allocation, enhance operational efficiency, and maximize the impact of innovative initiatives.

In essence, strategic management and innovation are intertwined processes that collectively drive business success. Strategic management provides the roadmap, guiding companies through the complexities of the business environment, while innovation fuels the journey, propelling organizations towards new horizons. This article aims to delve deeper into this relationship, examining how businesses across various sectors can harness the power of strategic management and innovation to achieve lasting competitive advantage and sustainable growth. By presenting a detailed case study and analyzing key strategies and innovations in different industries, this paper seeks to offer valuable insights and practical guidance for businesses at the incorporation stage and beyond.

Strategic management comprises several core components that collectively drive organizational success. The first component, Environmental Scanning, involves identifying and analyzing external and internal factors that impact the organization. This process includes examining market trends, competitive dynamics, regulatory changes, and technological advancements. It involves collecting data and insights that inform strategic decisions. Environmental scanning is crucial as it helps organizations understand the broader market landscape and anticipate potential challenges and opportunities. By staying informed about external influences, companies can make proactive decisions that align with their strategic goals.

The second component, Strategy Formulation, involves developing comprehensive plans to achieve organizational goals. This stage includes identifying target markets, setting objectives, and determining resource allocation. Strategy formulation is critical for outlining the paths to success and establishing measurable targets. During this phase,

companies analyze their strengths, weaknesses, opportunities, and threats (SWOT analysis) to create strategies that leverage their capabilities and mitigate risks. Effective strategy formulation ensures that organizations have a clear roadmap to follow, guiding their efforts towards achieving long-term objectives.

The third component, Strategy Implementation, is the execution phase where formulated plans are put into action. This phase requires effective communication, coordination, and resource management. Strategy implementation involves translating strategic plans into operational activities, ensuring that every department and team member understands their role in achieving the company's goals. This phase also includes establishing timelines, allocating resources, and setting performance indicators to track progress. Successful strategy implementation ensures that strategic plans are executed efficiently and effectively, leading to the desired outcomes.

Finally, Evaluation and Control involves monitoring the outcomes of implemented strategies and making necessary adjustments to ensure alignment with organizational goals and respond to changing market conditions. This continuous feedback loop is essential for maintaining strategic relevance and effectiveness. Evaluation and control processes include performance measurement, reviewing strategic goals, and identifying areas for improvement. By regularly assessing the effectiveness of their strategies, organizations can make informed decisions to refine their approaches and stay competitive in a dynamic business environment.

In the technology sector, strategic management is characterized by a focus on rapid innovation and market adaptability. Companies such as Apple and Google exemplify this approach by continuously innovating their product lines and business models. For instance, Apple's strategic management involves a seamless integration of hardware, software, and services, creating a cohesive ecosystem that enhances user experience and loyalty. This ecosystem strategy allows Apple to lock in customers by providing a range of interconnected products and services that work together seamlessly, thereby increasing customer retention and brand loyalty.

Google's strategic approach emphasizes investing heavily in research and development (R&D) to drive innovations in search algorithms, artificial intelligence (AI),

and cloud computing. This commitment to R&D has enabled Google to maintain its dominance in the search engine market, while also expanding into other areas such as autonomous vehicles, smart home devices, and healthcare technology. Google's ability to anticipate market trends and invest in cutting-edge technologies allows it to meet evolving customer needs and sustain its competitive advantage in a fast-paced industry.

Furthermore, technology companies often adopt agile management practices to enhance their innovation capabilities. Agile methodologies emphasize iterative development, collaboration, and flexibility, allowing companies to quickly respond to changes in the market and technological advancements. By fostering a culture of continuous improvement and rapid prototyping, technology firms can accelerate their innovation cycles and bring new products to market faster.

The technology sector also benefits from strategic partnerships and acquisitions. Companies like Microsoft and Amazon have pursued strategic acquisitions to expand their capabilities and enter new markets. For instance, Microsoft's acquisition of LinkedIn enhanced its position in the professional networking and enterprise solutions markets, while Amazon's acquisition of Whole Foods provided a foothold in the grocery retail sector. These strategic moves allow technology companies to diversify their offerings, tap into new revenue streams, and strengthen their market positions.

Healthcare Sector

In the healthcare sector, organizations prioritize innovation in medical technologies and patient care processes. Strategic management in this sector involves navigating complex regulatory landscapes, securing funding for research and development, and adopting cutting-edge technologies to improve patient outcomes. Companies like Johnson & Johnson and Medtronic exemplify strategic management by investing in the development of advanced medical devices, pharmaceuticals, and digital health solutions.

Johnson & Johnson's strategic focus includes expanding its portfolio of innovative medical devices and pharmaceuticals through continuous investment in R&D. The company aims to address unmet medical needs and enhance patient care by developing new treatments and technologies. Additionally, Johnson & Johnson actively collaborates

with academic institutions, startups, and other healthcare organizations to drive innovation and accelerate the development of new solutions.

Medtronic, a leader in medical technology, adopts a similar strategic approach by investing heavily in R&D to develop groundbreaking medical devices and therapies. The company's innovations include advanced cardiac devices, minimally invasive surgical tools, and digital health platforms that monitor and manage chronic diseases. By integrating these technologies into their strategic plans, Medtronic improves patient outcomes, reduces healthcare costs, and enhances the efficiency of healthcare delivery.

The innovation development management system is a set of interrelated elements, including management bodies at different structural levels, goals, functions, principles, structures, resources, management measures (methods and tools), which are in a certain sequence and function as a whole, and have an impact on increasing innovation activity at all levels of the national economy.

The innovation development management system is considered at the following levels (Table 1.1):

- country (macro level),
- regions and local territories, economic sectors or industries (meso-level),
- business entities (micro level).

Table 1.1 - Levels of the innovation development management system and consequences

Levels	Result of action
Innovative development at the macroeconomic level (country)	achieving a sustainable increase in the welfare of citizens, ensuring national security, strengthening the country's position in global economic competition, and increasing the country's competitiveness
Innovative development at the mesoeconomic level (economic sectors, regions, local territories)	Ensuring regional (sectoral, territorial) security, strengthening the position of the region and industries in economic competition in the country, increasing the competitiveness of economic sectors and the region
Innovative development at the microeconomic level (enterprises)	Changing the direction of enterprises towards the production of high-tech goods and the provision of intellectual services, increasing the competitiveness of goods (services) and enterprises

The development of innovation infrastructure and various organizational forms of innovation activity contributes to the intensification of innovation activity at the macro-,

meso- and microeconomic levels. The effectiveness of innovation development is determined by the state of development of the innovation infrastructure, which is the main element of the innovation economy. Innovative infrastructure determines the outstripping pace of development of the state's economy and the growth of the welfare of its residents.

According to foreign experience, innovative entrepreneurship (technology parks, clusters, etc.) is an effective mechanism for regional development, allowing simultaneously solving a large number of tasks, including increasing the competitiveness of the country, regions, economic sectors (industries) and enterprises, developing new high-tech areas of activity, attracting investment, and creating joint ventures in the regions.

The first level (macro-level) reveals the state of functioning of the concepts of innovative development that shape the country's competitive orientation and innovation policy at the macro-level for the development and implementation of the state's innovation development strategy. This level defines the mechanism for setting priorities, national programs for the development of innovation, supporting innovative projects of national importance, and creating a national innovation system. The conditions for the functioning of innovative entrepreneurship are determined by the model of innovative development, relevant strategies and programs. Usually, success in competition is due to the competitive advantages of the state, which are created in accordance with the innovation development strategy. However, this success depends on the ability to use these advantages.

The second level (meso-level) is defined by the developed and implemented innovation policy, strategy of innovative development of regions, economic sectors (industries), and local territories. Particular attention should be paid to such components as innovation activity and activities of enterprises, their innovation potential, demographic potential of the region, domestic demand and its characteristics, level of education, technological support of enterprises, forms of cooperation, etc.

The third level (micro-level) takes into account the basic standards that influence the behavior of business entities, the formation and implementation of an innovation strategy by specific enterprises, the directions of project development for the creation of new products, services, technologies, business models, etc.

The levels of the system for managing the innovative development of enterprises, economic sectors, regions, and states are independent, have their own goals, objectives, management methods, etc. All levels are interconnected, interdependent and, at the same time, develop independently of each other through the independent choice of management options by management entities, which may not coincide. Innovative development and the creation of competitive advantages at the lower level make it possible to form a vertical of competitiveness up to the highest level and obtain new qualitative characteristics. The functioning of enterprises, industries and regions is inextricably linked to a well-thought-out, effectively implemented and periodically updated innovation policy of the country, and the implementation of the innovation strategy of the state.

The main tasks and conditions of the innovation development management system faced by the management entities are presented in Table 1.2. Innovation development at the state level is conditioned by the conditions of participation of all sectors of the national economy, which aim to realize investments in the best possible way, create innovations and enable all participants to interact.

Table 1.2 - Objectives and conditions of the innovation development management system

Tasks and conditions for managing innovation development at the macroeconomic and mesoeconomic levels	Tasks and conditions for managing innovation development at the micro level
Creation of a state innovation policy that defines priority areas for innovative development of economic sectors, types of economic activity, industries, and regions	Creation of an innovation policy that supports promising areas of the business entity's activities
Formation of the state innovation development strategy (national innovation strategy) and regional strategies	Formation of a strategy for innovative development of a business entity
Creating a favorable investment and innovation climate (environment) for the economy as a whole	Creating an innovative climate for the implementation of the program and the organization's portfolio of innovative projects
Implementation of the state program for innovative development of economic sectors, types of economic activity, industries, and regions	Implementation of the program, innovative projects at the enterprise
Increasing the level of innovation activity, innovation potential of economic sectors, regions, and the country	Increasing the level of innovation activity and innovation potential of organizations

Innovative development is relevant at all levels of governance, while:

- 1) at the macro level, national priorities for innovative development are being identified, a system for managing innovative development at the national level, an innovative environment, conditions and a set of measures to stimulate business entities to create innovations are being formed;
- 2) at the meso-level, a system of innovative interaction (business, state, society) and development of innovative activities in the regions is formed;
- 3) at the micro level, the activation of innovation processes at enterprises and the formation of a system for stimulating innovative developments.

The management of innovation development at each level has a phased form of implementation and includes various tools that allow its realization.

Innovative development should be ensured by the implementation of a set of procedures to address the development of innovation infrastructure, innovation activities at the micro, meso and macro levels.

The state determines the priorities of the country's innovative development, the most promising areas of the economy, the progress of which can stimulate the efficiency of the economy as a whole.

State programs (state targeted research and development programs) are the main platform for managing the innovation activities of business entities. These programs are focused on the implementation of projects in economic sectors (industries) that are of priority importance to the state. State programs can be of different levels: national programs (national level), state regional and district programs (meso-level).

At the micro level, there is the formation and implementation of the innovation policy of enterprises, which defines the goals and priorities of innovative development; creation and implementation of the strategy of innovative development of enterprises; formation of programs for innovative development of enterprises; selection of innovative projects at the enterprise.

Modern scientific literature uses the following terms “strategy of innovative development”, ‘innovative development strategy’ or as a functional strategy of the enterprise - ‘innovation strategy’. The term “innovation strategy” is often used as a

synonym for ‘innovation development strategy’ when it comes to the development of innovation activities at the country level. Let us consider in more detail the economic content of the innovation development strategy.

The main feature of an innovation development strategy is the combination of two areas of influence:

- The first direction is aimed at the international environment and contributes to the country's competitiveness among other players in the global market;
- The second direction is focused on ensuring the internal optimization of the national economy.

The innovation development strategy is the main strategy for the qualitative growth of a country, region, economic sector (industry) or enterprise, defines the overall goal, objectives, priorities and mechanisms of development; interaction of economic actors in the implementation of the strategy (for the strategy of the state's innovation development).

At all levels of management (macro, meso, micro), the innovation development strategy is characterized by originality. The following strategies of innovative development are distinguished by levels of government:

- 1) central (national, at the country level) - a method of promoting economic development, when the external conditions of functioning of business entities are influenced in such a way that allows accelerating technical development and increasing the level of economic efficiency;
- 2) regional (at the level of a region, territory, economic sector (industry), cluster, etc;)
- 3) institutional (at the level of business entities, enterprises).

The purpose of the national strategy for innovation development is to create conditions for sustainable economic growth, launch of innovative products on the domestic and foreign markets, and substitution of imported products on the domestic market due to the high technological level and competitiveness of production.

One of the important tasks in the state policy in the innovation sphere is the need for interconnection and coherence of innovation development strategies at different levels of government.

The harmonization of legislation is expected to reduce the number of business inspections, abolish licensing and certification of most activities, as this implies not only the abolition of duties and the removal of technical barriers, but also mutual access to service markets, the possibility of opening branches, creating joint projects, etc.

Also, in managing innovation development at the national level, it is advisable to

- take into account the results of the analysis of the country's level of innovation development (results of assessments of measuring the level of innovation development) conducted by international institutions;

- monitor new methods of innovation management, developed strategies of innovation development and types of innovation policy that are successfully applied by advanced countries;

- collect and analyze information on the financial situation of innovative entrepreneurship and the results of innovative activities.

In the course of formulating and adopting strategic documents (strategies, target programs) and regulatory acts, proposals of innovative enterprises on the issues of perspective development of innovation activities should be taken into account. At the same time, enterprises are required to carefully comply with the state regulations.

At the national level, the goals and directions of socio-economic and innovative development are being formed. Identification of priorities and prospects for development, adequate formulation and coordination of socio-economic and innovation development goals, taking into account available resources and organizational capabilities, requires the introduction of strategic and systematic approaches to state regulation.

Coherence of actions at the macro-, meso- and microeconomic levels involves the following areas:

- 1) harmonization of long-term and medium-term strategic documents (strategies, programs) of national and regional (sectoral) importance;

- 2) streamlining the timing of preparation of strategic documents at the macroeconomic and mesoeconomic levels, and coordinating budget policy measures with each other;

3) linking long-term and medium-term documents of state national and regional (sectoral) importance by goals and priorities, regulating the frequency of their development and adjustment;

4) balancing planned activities requiring significant expenditures in terms of resources and organizational capabilities;

5) clear orientation of innovative entrepreneurship to activities that meet the interests of the country in accordance with the goals of socio-economic and innovative development of the country;

6) defining long-term benchmarks for innovative entrepreneurship, which will help reduce risks in the process of making long-term investment decisions.

In the conditions of coherence of the process of development and implementation of the innovation development strategy at all levels of management, it is possible to ensure the effective functioning of the innovation development management system.

CHAPTER 2

EVALUATION OF STRATEGIC MANAGEMENT AND INNOVATION IN CORPORATION

2.1. Organizational and economic characteristics of Apple Inc.

Apple Inc. is an American manufacturer of personal computers, smartphones, tablet computers, computer and software, which includes the following main products: iPhone smartphone, AirPods headphones, Macintosh computer, iPad tablet, Apple Watch smartwatch, Vision Pro augmented reality glasses HomePod music speaker, , iOS software, WatchOS, MacOS, Apple Music, iPadOS Apple TV, Apple Pay, iCloud, App Store, Shazam, and more.

The company's official website can be found at [3]: <https://www.apple.com/>.

Apple was founded by Steve Jobs, Steve Wozniak and Ronald Wayne on April 1, 1976 in California. And since then, according to statistics, this company has become one of the largest and most recognizable brands in the world [27]. In addition, on August 2, 2018, Apple became the first public company in the world to reach a market capitalization of 1 trillion US dollars. In August 2020, it reached the USD 2 trillion mark as the first American company to reach this valuation. And on June 30, 2023, it became the first company in the world to reach USD 3 trillion [29]. The fact of reaching such levels of capitalization has become a symbol of Apple's enormous influence on the global market and the technology industry.

In Ukraine, Apple Inc. officially opened its first office on June 30, 2021. At the same time, the company received support in Ukrainian. Previously, the distribution of original Apple equipment in Ukraine was carried out through official resellers (also known as resellers) Citrus, Allo, Comfy, and others.

To conduct an economic assessment of the company, the market, total revenue of Apple Inc., company profits, number of employees, research and development costs for

the period 2010-2023 were studied. This information will further serve to analyze the corporate social responsibility of Apple Inc.

In 2023, Apple Inc. was ranked first in terms of capitalization not only in its own sector “Information Technology - Consumer Electronics” but also among all public companies in general [18]. According to statistics, in 2023, Apple Inc. had a capitalization of \$2,746.21 billion (i.e., more than \$2.7 trillion), which is 18.89% more than Microsoft, which ranked second with a capitalization of \$2,309.84 billion, and 475.27% more than Visa, which ranked tenth. A detailed graph is shown in the figure (Figure 2.1).

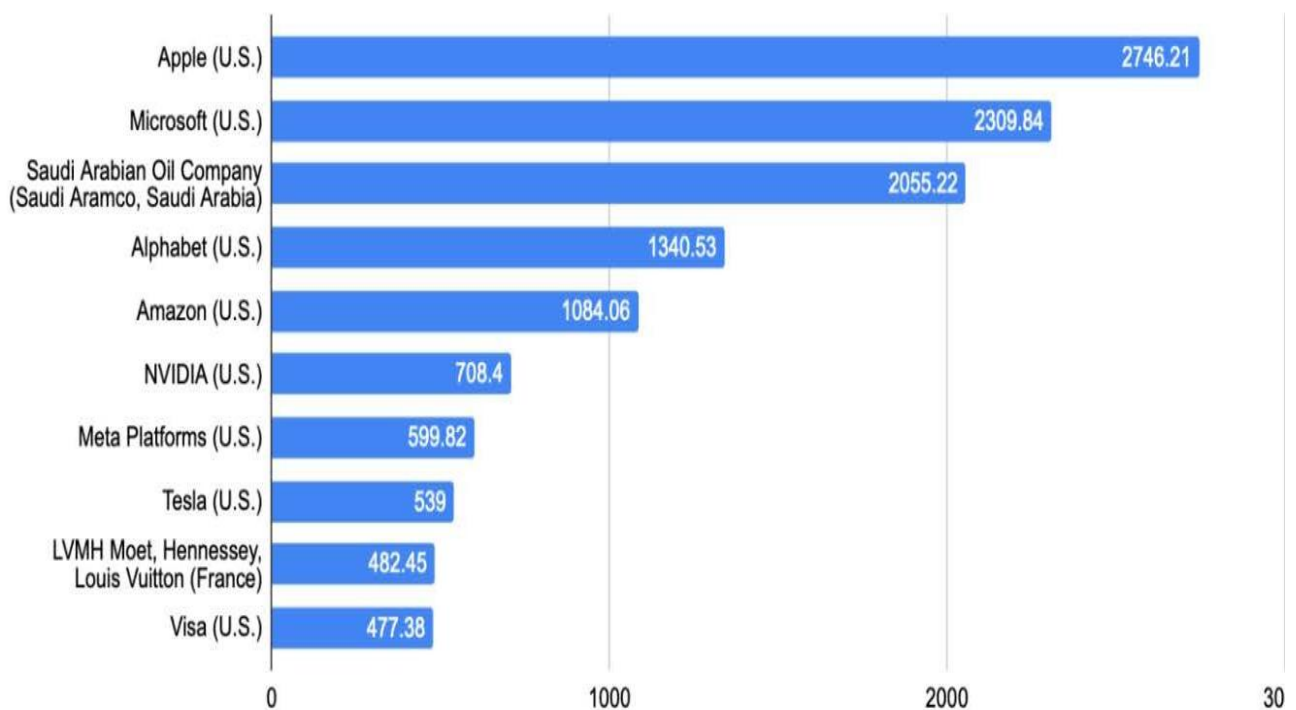


Figure 2.1 - The world's largest companies by capitalization in 2023, billion dollars (based on [18])

Between 2010 and 2023, Apple Inc.'s annual revenue increased from \$65.225 billion to \$383.285 billion [13,14]. The figure shows the annual revenue for this period (Figure 2.2).

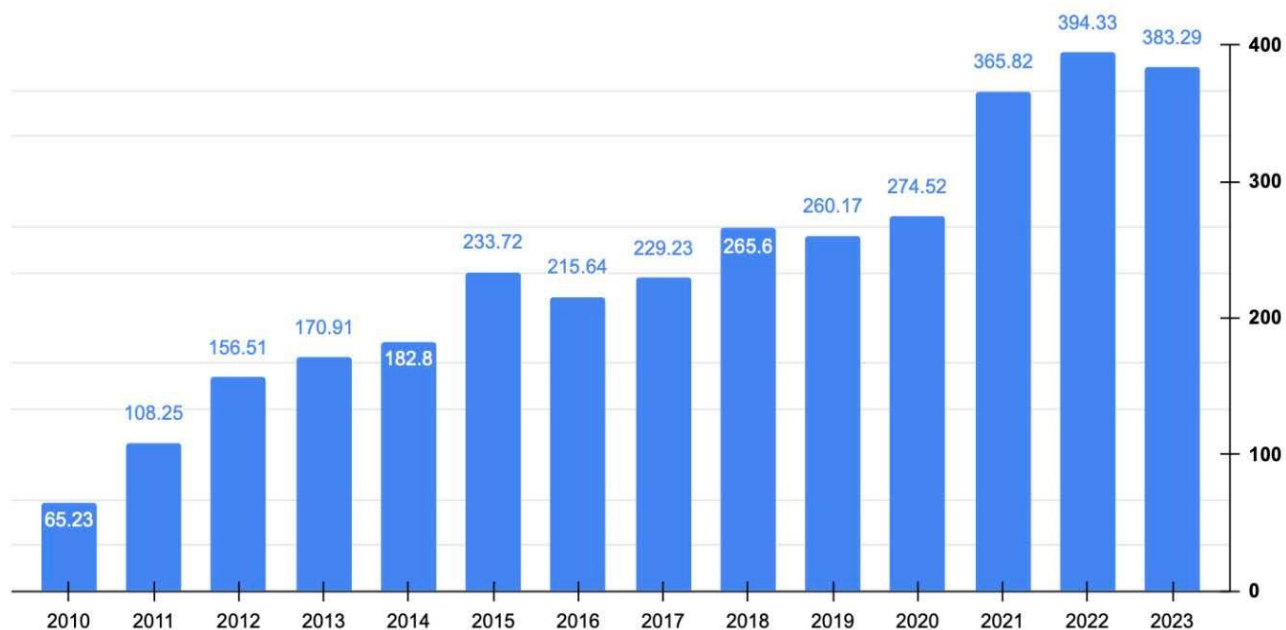


Figure 2.2 - Apple's total revenue from 2010 to 2023, billion dollars

The overall dynamics of the company's annual revenue is positive. Even despite a slight decline in revenues in 2016, 2019 and 2023 compared to the previous years (2015, 2018 and 2022, respectively), Apple has been growing for 13 years, which reflects the company's success.

Let's consider the volume of Apple Inc.'s annual profit for the period from 2010 to 2023 (Fig. 2.3) [24].

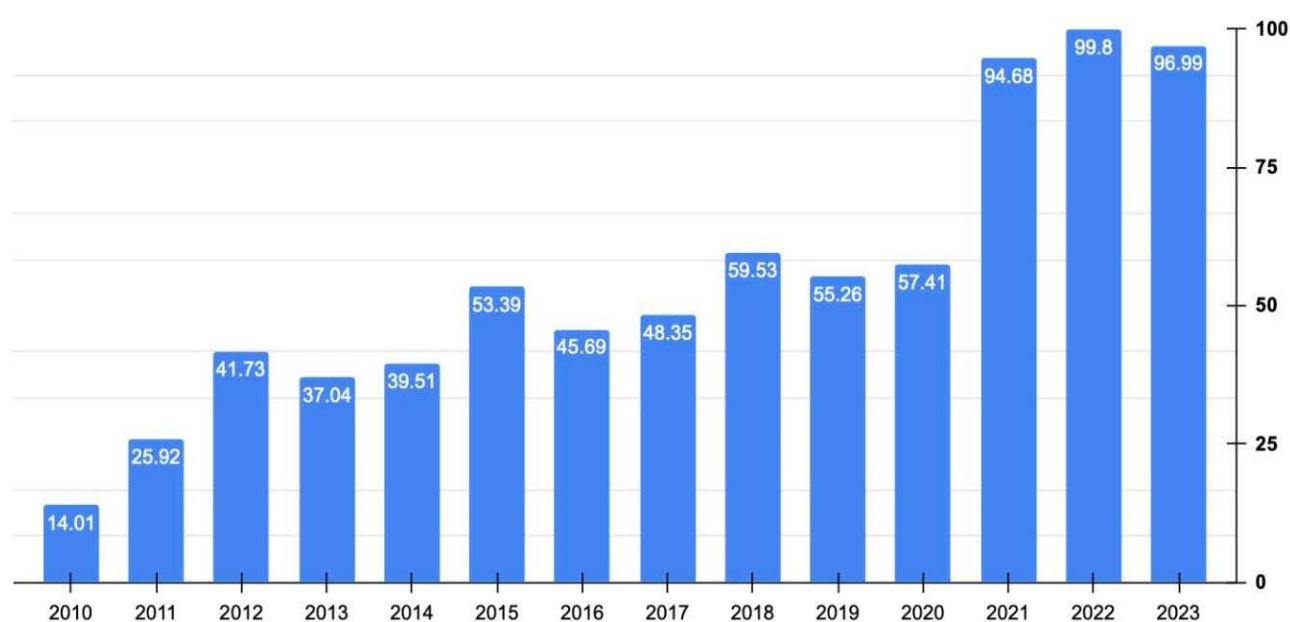


Figure 2.3 - Apple's total profit from 2010 to 2023, billion dollars

The maximum profit was achieved in 2022, which amounted to \$ 99.8 billion, while the minimum profit for this period was recorded at the beginning - in 2010 - \$ 14.01 billion. The overall profit dynamics is also positive. Every three years (2012, 2015, 2018, 2021) there is a surge, which is expressed in record values, followed by a slight decline in the following years (2013, 2016, 2019).

Let's analyze the number of employees for the period from 2010 to 2023 according to Macrotrends (Figure 2.4) [11].

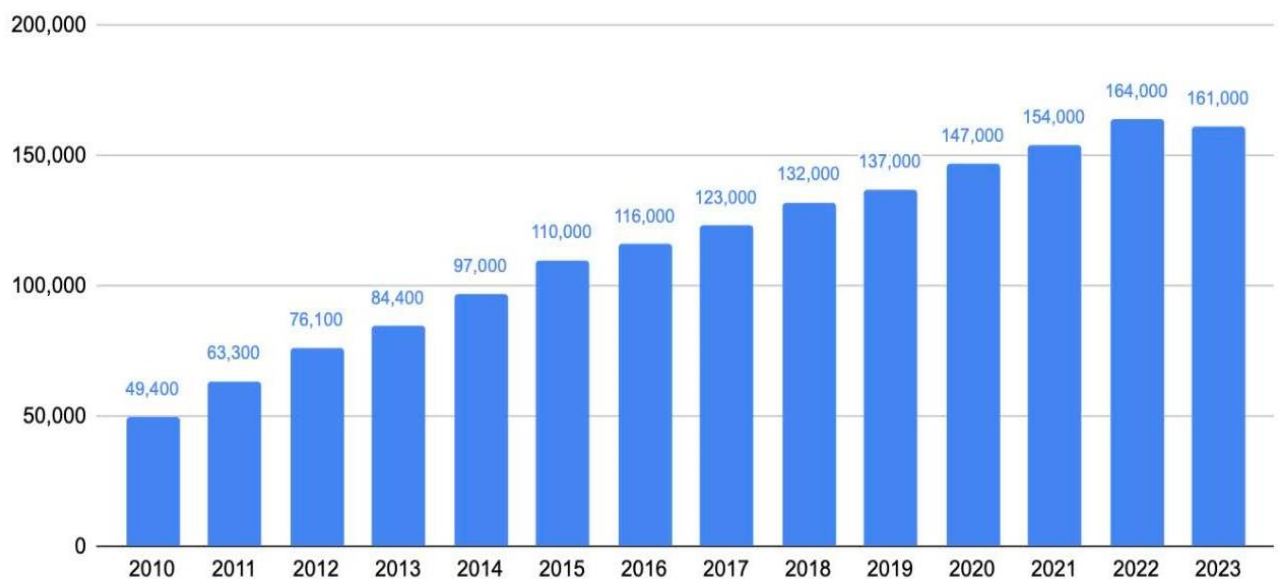


Figure 2.4 - Number of Apple employees from 2011 to 2023, thousands of persons

The overall dynamics is positive, as the number of employees increased every year from 2010 to 2022. The average growth rate for this period was 9.76%. The maximum number of employees was in 2022 and amounted to 164,000, and in 2023 it decreased for the first time and amounted to 161,000, which was the result of a slight decrease in mostly freelance employees due to economic conditions [12,26].

Research and Development (R&D) expenditures for analyzing a company's investments are critical for technology companies like Apple, as they reflect the company's commitment to innovation and long-term development. This category of expenditures includes developing new products, improving existing products, researching new technologies, developing and implementation of new technologies that also have a positive impact on society and the environment. The expenditures on research and

experimental development of Apple from 2010 to 2023 are demonstrated (Figure 2.5) [42].

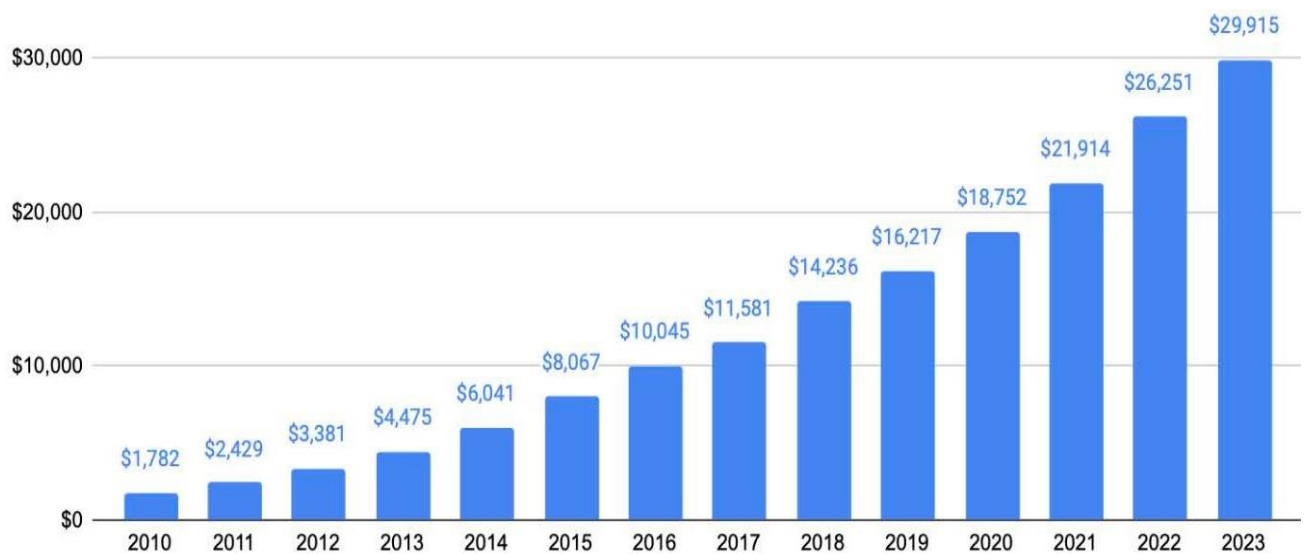


Figure 2.5 - Apple's research and development (R&D) expenditures from 2010 to 2023, mln. dollars

Based on the data on Apple Inc.'s research and development (R&D) expenditures from 2010 to 2023, there is a stable trend of growth in investment in this area, which indicates the company's commitment to innovation and development of new technologies.

Since 2010, when R&D spending amounted to \$1.782 billion, it has increased almost 17-fold by 2023, reaching \$29.915 billion. Even in 2020-2021, in the midst of the global COVID-19 pandemic, Apple continued to invest heavily in innovation and the development of new technologies, which demonstrates the company's strategic focus on long-term growth and strengthening of its competitive advantage.

Increased R&D spending is a key factor in maintaining Apple's competitiveness in the dynamic technology sector, as well as in the development of corporate social responsibility.

The next stage of the study of the organizational and economic characteristics of Apple Inc. is the analysis of the external environment of Apple Inc. To conduct it, a PESTLE-analysis was developed, which identifies the political, economic, social,

technological, legal and environmental aspects of the external environment that affect the company's business and is formed in the form of a table (Table 2.1).

Table 2.1 - PESTLE-analysis of Apple Inc.

P (political factors)	E (economic factors)
- Changes in the tax laws of the countries in which Apple operates; - Political instability in the countries where Apple operates; - Trade wars between countries; - Changes in intellectual property laws; - Political boycotts of products in certain countries.	- Currency fluctuations in different countries [32]; - Changes in interest rates; - Changes in the unemployment rate; - Changes in the inflation rate; - Changes in consumer spending; - Changes in personal income; - Fluctuations in raw material prices, supply chain and cost structure; - Dependence on electricity prices.
S (social factors)	T (technological factors)
- Changes in consumer preferences and consumer behavior; - Demographic changes; - Cultural differences of consumers; - Raising consumer awareness of ethical issues and social responsibility; - Impact of social networks and social media on the company's brand.	- Development of new technologies; - Threats to cybersecurity and data integrity; - Development of its own ecosystem of products and operating systems; - Impact of the development of technology using artificial intelligence; - Development of research and experimental development (R&D).
L (legal factors)	E (environmental factors)
- Changes in data privacy and data protection legislation; - Protection of intellectual property; - Changes in the legislation of the countries in which the company operates; - Antitrust laws relating to Apple's activities.	- Climate change; - Environmental sustainability of the company; - Efficient use of energy; - Compliance with environmental regulations; Rules for waste recycling and disposal [28].

Source: Compiled by the author

Political factors affecting Apple's operations include changes in the tax laws of the countries in which the company operates. These changes could have a significant impact on the company's financial performance. In addition, political instability in the countries where Apple operates could disrupt the company's supply chain and overall business operations. Trade wars between countries are another factor that affects Apple's business and may lead to changes in product prices and complicate the supply chain. Changes in intellectual property laws are also important for the company and have a direct impact on Apple's competitiveness.

Economic factors include global economic conditions or conditions in certain markets, which are a large part of Apple's business. Given the fact that Apple operates

globally, it may be subject to currency fluctuations, which affects production costs, product pricing and overall profitability. High inflation rates can lead to higher production costs and reduced consumer purchasing power, which has a direct impact on Apple's sales and overall profitability. Changes in interest rates also have an impact on Apple's business, as the company borrows money to finance its operations. And if interest rates rise, it will mean more expensive loan servicing for Apple. In addition, economic conditions may affect the company's supply chain costs and overall cost structure, as well as its ability to invest in research and development to innovate and maintain a competitive edge in the market.

Social factors include changes in consumer preferences and consumer behavior, which may include: lifestyle changes; changing attitudes towards technology in the post-pandemic world; rethinking the need to own the latest devices due to the growing popularity of the concept of “sharing”; increased demand for products that allow you to work effectively remotely and communicate with your family; increased interest in products that support a healthy lifestyle through built-in health monitoring functions; increased demand for products that help increase productivity and organize workflow, etc. All these changes have a certain effect on the company's operations and determine its product development and marketing strategy. The image and reputation of the Apple brand play a crucial role in its success, and social factors such as public opinion can affect consumer perception and loyalty. Cultural differences require the company to consider different cultures in product design and marketing strategies.

Rapid technological advances require a company to invest in research and development to remain competitive in the market and to meet consumer expectations. The development of new technologies, such as artificial intelligence, creates new opportunities for Apple. Along with the rapid development of technology, Apple faces the challenge of continuously improving cybersecurity to protect its customers' data. Supply chain automation, sustainable technologies, and digital payment systems are key aspects that affect production efficiency and consumer habits.

Among the legal factors, it is worth highlighting the protection of intellectual property, which allows the company to protect its products and innovations from being

copied by competitors. To this end, Apple actively uses legal means to protect its intellectual property through lawsuits for patent and trademark infringement. Also important are data privacy rules, which are regularly improved by many countries and become stricter. Accordingly, Apple has to update its privacy policy to comply with the established rules and legislation. The company is also subject to laws governing data protection, antitrust and consumer rights, the violation of which could affect the company's market position and financial performance.

The environmental factors that affect Apple's business include climate change, the company's environmental sustainability sustainability and compliance with environmental regulations. Using renewable energy sources and reducing the carbon footprint in the production of products is becoming a necessity. The company focuses on environmental sustainability by using renewable energy and reducing the use of recycled materials. Compliance with environmental regulations, including regulations on disposal, recycling and waste management, are also among the key aspects. A company's responsibility to preserve the environment for consumers plays a big role in their purchasing decisions.

Thus, an extensive analysis of the company's external environment was conducted and a number of factors that affect the activities of Apple Inc. were identified.

Using the above-mentioned and analyzed information about the external environment of Apple Inc. we also formed a SWOT analysis, which identifies the strengths and weaknesses of Apple, as well as its opportunities and threats. The results are presented in the form of a table (Table 2.2).

Apple's strengths include its market position, as it is the most valuable company by capitalization (over \$2.7 trillion) at the end of 2023, which also indicates a high level of investor confidence in the brand. The company's high total revenue and profitability over the past 13 years demonstrate its financial stability and effective management. Apple also has a wide network presence, with more than 500 offline Apple Stores in the world by the end of 2023.

A wide range of products allows the company to have a large target audience and satisfy a wide range of needs. Apple has a significant number of loyal customers who

regularly buy and use Apple products. In addition, Apple is actively implementing various innovations within the framework of corporate social responsibility, focusing its efforts on reducing the impact of its activities on the environment and developing social initiatives.

Table 2.2 - SWOT-analysis of Apple Inc.

Strengths	Weaknesses
1. The most expensive company by capitalization as of the end of 2023; 2. High overall profitability and profitability of the company, which has been positive over the past 13 years; 3. More than 161,000 employees worldwide as of the end of 2023 [11]; 4. More than 500 offline Apple Stores in the world as of the end of 2023 [10]; 5. Millions of loyal consumers who trust the brand by purchasing and updating their equipment regularly; 6. A wide range of products that the company regularly updates and improves; 7. A high level of corporate social responsibility; introduction of innovations in the environmental sphere to reduce the impact of its activities on the environment; 8. The company supports social initiatives: fights for human rights, inclusiveness and education; 9. Investments in research and development are steadily increasing.	1. High price segment of products; 2. High dependence on the main product - Apple iPhone; 3. High dependence on suppliers of components for its own products; 4. Low compatibility with other software and devices; 5. Decreased innovation pace, which is reflected in the small number of innovative products in recent years; 6. Great attention from the antimonopoly committee.
Opportunities	Threats
1. Implementing innovative technologies in its products, investing in artificial intelligence technologies; 2. Expanding the geography of markets and increasing the number of Apple Stores; 3. Reducing dependence on the main product by diversifying product sales; 4. Reducing the harmful impact on the environment (through the introduction of the latest technologies and renewable energy sources); 5. Use of new and more environmentally friendly materials for the production of devices.	1. The risk of a decrease in demand for certain products of the company due to the emergence of alternative devices and technologies or an economic downturn; 2. The risk of an increase in counterfeit products of high quality of the company's products; 3. Increased competition in the technology market; 4. Changes in the legislation of the countries in which Apple operates, which may affect the company's activities in them; 5. Cybersecurity and data storage

Source: Compiled by the author

The weaknesses of Apple Inc. include a high dependence on the success of the iPhone, which jeopardizes financial stability in case of a decrease in demand for this

product. Moreover, Apple depends on suppliers of components for its products, which is a vulnerable link in the supply chain in case of supply problems. The high price segment of its products is a deterrent for a certain range of potential consumers. An additional weakness is the low compatibility with devices and software from other manufacturers, which limits users' choices. In addition, the slowdown in innovation may affect the company's competitive positioning, and the attention of antitrust authorities may lead to restrictions on its operations in certain countries.

In accordance with the strengths and weaknesses of Apple, the opportunities that the company can realize for business development have been formed. The introduction of innovative technologies into its products and investments in artificial intelligence, which has reached its peak over the past two years, will contribute to the company's significant further development. This will help make the use of the company's products more efficient for consumers, which will be another advantage for choosing Apple products. Expanding the geography of markets and increasing the number of official Apple Stores will also increase the availability of products for consumers and increase their trust and loyalty. An equally important opportunity for the company is the diversification of product sales, which will help reduce dependence on the main product and allow it to increase its resilience to market changes and the risk of loss of profitability in the event of a decline in demand for iPhones. In addition, improving its corporate social responsibility practices and launching more initiatives could increase consumer confidence, which would have a positive impact on overall sales.

Threats to Apple include the risk of a decrease in demand for its products, which can be caused by various factors: from increased competition and the emergence of alternative technologies to the global crisis and economic downturn. This could lead to a loss of market share and reduced profitability. The growth of counterfeit products may become a big problem for consumers in countries where there is no official Apple representative office and no official Apple Store. Accordingly, they will be forced to give preference to products of other companies, which will negatively affect Apple's sales. Equally important is the threat of changes in the legislation of the countries where Apple is present in relation to technology companies, which may lead to restrictions on activities

or increased costs for the relevant requirements. It is also worth considering the risk of increased cyberattacks and the potential risk of breach of consumer data confidentiality, which could negatively affect the reputation and consumer confidence in the brand.

Apple has identified four fundamental principles [9] on which its business is based. They include:

1. Demonstrate honesty and high ethical standards in all business relationships;
2. To treat customers, partners, suppliers, employees and other persons with respect and courtesy, regardless of their social status and position;
3. Protect the confidential information of Apple customers, partners, suppliers and employees;
4. Ensure that business decisions comply with applicable laws and regulations.

As of 2023, Apple Inc. employs 161,000 people around the world [11], and the team is the backbone of Apple's business. From the first day of work, each member of the team has the resources and opportunities to develop new skills and realize new hobbies. This approach is aimed at increasing employee motivation and creating a field for creativity and new non-standard solutions.

Companies that actively strive for diversity are more attractive to potential employees and consumers, which has a positive impact on their reputation and brand, as Apple confirms. Since 2017, the company has achieved and maintained gender and racial equality in employee compensation worldwide.

A comparative table has been compiled to assess the dynamics of progress in Apple's gender and race equality activities in 2021 and 2020. The data is presented in the form of a table (Table 2.3).

Thus, in 2021, Apple showed positive dynamics in the field of gender equality and representation of less represented groups in management. The percentage of open management positions held by women increased from 37% to 47%, indicating an increase in the representation of women in management positions worldwide. There was also a significant increase in the percentage of open positions in the United States that were filled by people from underrepresented groups, from 43% to 59%.

Table 2.3 - Comparative table of Apple's gender and race equality results for 2021 and 2020

Description.	2020	2021
Open leadership positions around the world held by women	37%	47%
Open R&D leadership positions globally that have been filled by women	26%	34%
Open executive positions in the United States that have been filled by people from “underrepresented communities”	43%	59%
Opened R&D management positions in the United States, which were taken by people belonging to “underrepresented communities”	29%	39%

Source: Compiled by the author

There have also been positive changes in research and development (R&D): the percentage of open R&D management positions held by women has increased from 26% to 34%, and for representatives of less represented groups in this area - from 29% to 39%. This progress demonstrates the growing level of gender equality and the inclusion of underrepresented groups in corporate governance and research.

A safe environment free of discrimination is an integral part of unlocking the potential of team members. Apple believes in this right and is committed to equality in its workforce, regardless of race, origin, social status, age or gender. As of 2024, the number of men and women in non-advisory roles in leadership positions is equal. Apple opposes any form of discrimination in the workplace and makes every effort to ensure the safety and equality of employees, no matter where they are, while doing their job at Apple.

According to the second principle of Apple's work, the company treats its customers, partners and other stakeholders with respect, but it is also important to note that it provides a high level of service and customer focus in its developments. The SOS function, which aims to simplify the process of notifying emergency services of urgent assistance to owners of Apple devices, is a confirmation of this fact.

Other fundamental Apple principles are aimed at protecting confidential information about Apple's customers, partners, suppliers and employees and ensuring that business decisions comply with applicable laws and regulations. There is more and more information in the world, and it is becoming an increasingly powerful resource that can be used to influence people and their decisions

Apple's fourth principle is to ensure that business decisions comply with applicable laws and regulations. For Apple, it is important to conduct its business ethically, honestly and in full compliance with the law, as this is as important to success as creating the best products in the world. At the beginning of 2024, the document “Business Conduct The way we do business” was updated on the website, which describes in detail all the rules established by Apple and which are important for the company to follow. Every employee who joins Apple must read and acknowledge that they have read and understood this policy. In addition, employees must repeat this every year. Violations of this policy are taken seriously by the company and may result in disciplinary action, up to and including termination.

2.2 Evaluation of strategic management and innovation in Apple Corporation

Apple has a short but very interesting history. Over the years, the company has become the largest technology company in the world by capitalization. Apple produces very high-quality products, including many different hardware, software, and services that are combined into one ecosystem.

Apple uses a broad diversification strategy. The main product characteristics that serve the purpose of diversification are excellent and high-quality product design, user-friendly features, customization, and advanced programs. This means that the company does not limit its marketing and product development to one customer segment. Apple phones are suitable for both beginners and advanced users who want to make the most of their devices. The high quality is reflected in the price, and due to the high brand value, the price is justified among customers.

From the above competitive analysis, it is clear that the main strengths of Apple that have the ability to create a competitive advantage are: high profits, strong customer loyalty and brand reputation, innovative capabilities and cost-effective production. However, at the same time, it has also been identified that Apple is losing market share compared to its competitors by diversifying on price. As customers become increasingly aware of the tools available to them to compare product features, prices, and offerings, to

remain competitive in the 21st century and maintain a strong market position, marketing and corporate communications companies must focus on innovative features, product uniqueness, and design superiority. While Apple can still leverage its innovation expertise and resources to develop new products, it also needs to analyze the market behavior of its competitors to determine how to position the brand and products in the future. Innovation is still the main opportunity for Apple, but it needs to work on developing products that solve customer problems better than competitors' devices.

The company's human resource management policy is aimed at increasing labor productivity and increasing the share of intellectual products in the company's finished product.

In 1996, Apple's president Michael Spindler was replaced by Gil Amelio. He made many changes in the company, including massive temporary layoffs. After many failed attempts to improve the Mac OS, Amelio wanted to buy NeXT and its NeXTSTEP operating system. On July 9, 1997, Gil Amelio was fired by the board of directors after three years of overseeing a record low stock price and financial losses. A restructuring of the company's high-productivity production line began.

In 1997, Steve Jobs announced the creation of a Macintosh version of Microsoft Office. On November 10, 1997, Apple introduced the Apple Store, an online store that signified a new production strategy in the face of competition.

In 2006, the Mail on Sunday reported on the working conditions that existed in factories in China where subcontractors Foxconn and Inventec produced iPods. The article states that in one complex of factories, in a competitive environment where iPods (among other products) are assembled, more than 200,000 workers lived and worked in the factory and consistently worked more than 60 hours a week. The article also reported that the workers were paid about \$100 per month and were required to pay the company for rent and food, which in total amounted to just over half of the workers' earnings.

Apple immediately began investigating and working with its manufacturers to ensure acceptable working conditions. In 2007, Apple began an annual audit of all its suppliers on workers' rights, slowly raising standards and weeding out non-compliant suppliers. Annual progress reports have been published since 2008. In 2010, workers in

China decided to sue contractors producing iPhones for poisoning from a cleaner used to clean LCD screens. One worker claimed that he and his colleagues were not informed about possible occupational diseases. After a spate of suicides at Foxconn factories in China, where iPads and iPhones are assembled, workers were forced to sign a legally binding document guaranteeing that they would not kill themselves.

Workers in factories that produce Apple products are exposed to n-hexane, a neurotoxin that is a cheaper substitute for ethylene to clean products in a competitive environment.

In 2013, China Labor Watch found violations of the law and Apple's promises about working conditions at Pegatron-owned facilities, including discrimination against ethnic minorities and women, withholding of workers' wages, excessive working hours, poor living conditions, safety and health issues, and environmental pollution.

The amount of Apple's taxes compensates for the negative impact on the socio-economic situation in the world and uncomfortable conditions for some employees who consider the company's support and social packages insufficient.

The projects implemented by the company around the world are an example of socially responsible and socially ethical marketing that influences the culture of consumption, shaping it properly and forming a new important superstructure over the social levers that form the economic basis of productivity.

To reduce the taxes the company pays worldwide, Apple has set up subsidiaries in low-tax jurisdictions such as Ireland, the Netherlands, Luxembourg, and the British Virgin Islands. According to the New York Times, Apple was one of the first tech companies to start selling on other continents on behalf of subsidiaries, avoiding income taxes. In the late 1980s, Apple pioneered a technique known as accounting technique known as “Double Irish with a Dutch Sandwich”, which reduces taxes by channeling profits through Irish subsidiaries to the Netherlands and then to the Caribbean [30].

British Conservative Party member Charlie Elphicke released a study on October 30, 2012, showing that some multinational companies, including Apple, made billions of pounds in profits in the UK, but paid only 3 percent of the effective tax rate to the UK Treasury, which is significantly lower than the standard income tax. With the publication

of the study, Elphicke called on Chancellor of the Exchequer George Osborne to force multinationals, including Google and the Coca-Cola Company, to disclose the effective tax rate they pay on their UK profits. Elphicke also said that government contracts should be denied to multinationals that do not pay their fair share to the UK [31].

Over the years, Apple has repeatedly acquired various companies operating in the IT market. Among the largest such deals are the purchase of NeXT (1996, for \$430 million), PA Semi (April 2008, \$280 million), Quattro Wireless (January 2010, \$274 million), Siri (April 2010, \$200 million), Anobit Technologies (January 2012, \$400-500 million), and others.

As of October 31, 2021, the company's value was \$2.41 trillion. As of December 8, 2021, the company's market value reached \$2.86 trillion.

On June 5, 2023, the value of Apple's shares reached a new all-time high amid the presentation of a virtual reality headset, according to the New York Stock Exchange. It was noted that the company's shares rose by \$3.24 (1.79%) to \$184.19. The previous record was set in January 2022. In general, since the beginning of 2023, the value of Apple's securities has increased by 40%.

Labor productivity is defined as the ratio between the amount of output and the time spent by an employee on its production. Productivity is measured in relative terms that are directly or indirectly related to time. Apple's productivity is one of the highest in the world, which is due to the high quality of management, significant goodwill, which creates an independent basis for high productivity without direct participation in the creation of added value.

Apple's productivity is driven by a high level of added value, which is formed by macro factors created by the company over the decades of its existence and reputational benefits that take place in the environment, relevant and related industries.

Apple's mission and vision - what it is, definition and concept.

Apple's mission clearly reflects what kind of business it is engaged in, competing in the market, and the type of consumer it targets. While your vision statement defines the goals you hope to achieve in the future.

The most important thing about Apple's mission and vision statement is that it helps all employees of the company to follow the goals. And also to follow and execute the company's strategies so that what is said is consistent with what is done.

In addition to encouraging your employees' engagement, it also stimulates enthusiasm in all your users. Offering them the best possible experience with all the products they sell on the market.

Without a doubt, Apple's mission is clearly user-centered. As it expects every user to have the best computing experience in a personalized way when using its products. Regardless of the type of user, the main thing is to offer everyone an innovative solution using software and hardware. The company is valued worldwide for the reliability and high quality of its products.

Apple's mission is stated as follows: provide its customers with the best possible experience through innovative hardware, software, and services.

Apple's vision, on the other hand, expresses the company's desire to do things well and thereby get great results in the future. It hopes to succeed by offering products based on continuous innovation. Incorporating advanced technology and high quality into them. Not forgetting to offer excellent customer service.

Apple's vision is as follows: “We believe that we are on the face of the earth to make great products, and that's not going to change.” The main points that should be highlighted when analyzing Apple's mission and vision are as follows:

1. Satisfaction and empathy with your customers

Firstly, one of the priorities of Apple's mission and vision is to satisfy the needs of its customers. Offering the best personalized experience for your consumers while using your products.

Indeed, its goal is to develop products that are fundamentally easy to use, but add security and high-tech features to them. Which helps to improve the user experience in real terms.

First of all, the company cares about the smallest details of its products. To meet the real needs of its users and give them a concrete solution to their problems. This generates great empathy with your customers.

2. Innovation.

Secondly, the principle of innovation remains another main goal of Apple's mission and vision. The entire organizational structure of the company is focused on innovation.

Obviously, this company is considered one of the most important references when it comes to technology and innovation in the global market. Perhaps the most important products developed and introduced to the market by the brand are the iPod music player, the iPhone phone, and the iPad tablet.

Of course, the company is always looking for innovative products to meet the needs of consumers around the world.

3. Quality and excellence

Third, Apple's mission and vision is that the company always expects to deliver the best quality products. This requirement drives its employees to create and develop quality products and excellence in both product design and execution.

Of course, quality and excellence are achieved through the company's constant innovation, which makes its users perceive these products as very high value-added products.

4. Teamwork

Fourthly, teamwork is an important pillar of the company's success and performance. Teamwork facilitates decision-making and improves overall business management.

Naturally, ideas are exchanged and suggestions are made within the work team. This is to increase the efficiency of the company and improve the quality of life for all employees.

5. Individual rewards

At the same time, each individual's contribution to the company is recognized and rewarded. For this reason, the company considers it important to financially recognize its employees, which comes from their contribution and performance.

2.3 The policy of functioning of strategic management and competitiveness on the materials of Apple Inc.

In the global environment, the level of competitiveness of transnational corporations is determined primarily by the scientific and technological excellence of their activities. Under such conditions, it is quite natural that corporate management is increasingly focused on reducing the duration of the innovation-production-profit cycle and increasing its efficiency. The phenomenon of technological progress and its result - commercial innovations - is becoming a key factor in international competition. The successful use of scientific and technological factors of competitiveness is illustrated by the activities of Apple Inc.

Apple Incorporation is an American corporation that produces personal and tablet computers, audio players, phones, and software. The popularity of Apple products is growing every year. Preferring Apple's perfect design and functionality, consumers maintain a stable demand, which allows the company to constantly increase production capacity.

In August 2021, the company's value increased to \$2.48 trillion, and it remains the most valuable company in the world. The growth in sales of Apple phones

over the past year was more than 50%, driven by strong demand for new and more expensive iPhones with 5G technology. In the second quarter, the company's profit increased by 48% year-on-year to \$16.6 billion with total revenues of \$77 billion. The tech giant has become one of the biggest beneficiaries of the US economic recovery this year.

The company is pursuing an active policy of expanding its network of official representative offices around the world. In 2021, there are 515 stores in 25 countries. Most of them are in the United States, China, and the United Kingdom. This policy of the TNC not only improves the quality of services provided to consumers, but also creates a virtual space for management to communicate with its users. It also reduces the level of smuggling of the company's products, which are popular and desirable. The importance

of official representative offices is also due to the fact that they independently clear customs and, of course, control sales.

The European Union has also felt the negative impact of TNCs' policies. In 2021, the European Commission accused Apple of monopolizing the music app market. The company, according to the Vice President of the European Commission, not only controls access to applications on its own devices, but also offers its own streaming services using Apple Music, which competes with other similar applications.

Today, the Apple brand is one of the most reputable and strongest IT brands in the world, with a large number of loyal customers who stand up for it. This strong loyalty means not only that the company is increasing the number of new customers, but also that it is retaining them. In the new conditions of the global technology-intensive economy, the importance of price factors of competitiveness is decreasing and the weight of factors of flexibility in ensuring the conditions of consumption of a particular product, service, or intellectual product is sharply increasing. This significantly increases the role of effective management based on the principles of modern international marketing.

There are several types of competitive strategies that foreign TNCs use in the markets of their host countries. They can be divided into the following groups:

strategy of strengthening market positions (increasing market share, attracting customers from competitors) and strategy of market development (new market segments).

“Apple Inc. is a company that has embraced these two strategies at once.

“Apple Inc. is the world's largest information technology company by revenue, the world's largest technology company by assets, and the world's third largest mobile phone manufacturer. Apple became the first company in the United States to exceed \$700 billion in value [20].

Apple is the most successful company on the planet. As recently as September 2018, it was worth more than any other company - \$1.1 trillion - and generated \$56 billion in net profit. It generated \$56 billion in net profit for the 2017-2018 fiscal year [2].

As of September 2021, the value of shares of the American company Apple reached a new record high of \$153.12 per share. Apple's share price has increased by 18.325% since the beginning of 2021. Thus, Apple's capitalization reached \$ 2.53 trillion. The

company's capitalization has reached \$2.53 trillion. In 2020, Apple Inc. became the first American company with a market value of USD 2 trillion. The company's market capitalization is estimated at USD 2 Trillion. In 2020, according to the Fortune 500 list, the company made a profit of USD 57.411 billion. In terms of revenue, it ranks only 6th among TNCs with a value of USD 274.515 billion. The company ranks 6th among tncs with a value of \$244.15 BILLION.

During 2017-2021, the company annually spends at least USD 1 billion on online advertising, which is about 7% of its revenue. Apple's product advertisements attract a lot of attention due to their stunning graphics and catchy songs. Apple owns a YouTube channel where they publish advertisements, tips, and presentations for their devices. In 2018, the company lost about 1.8 million USD on the creation of New Year's Eve animated commercials for the New Year. This price was due to the cool sound design of the video, which featured a custom-made city model and animated 3D characters.

Apple Inc. is an innovative company that challenges the status quo and established standards. The company's mission has been and remains to simplify technology for everyday life.

Characterizing the profits, according to the Fortune 500 list, the company received the largest profit in the world in 2020 - \$57.411 billion, but in terms of revenue, it ranks only 6th among TNCs with a value of \$274.515 billion.

The largest source of revenue remains smartphone sales, which for the 12-month period ended September 25, 2021, amounted to \$191.97 billion. (for comparison, in 2019-2020 - 137.78 billion USD. USD, which is 54.19 billion USD less. USD 54.19 billion less). Sales of Apple computers also increased over the year - from USD 28.62 billion to USD 35.19 billion. USD to 35.19 billion USD. US DOLLARS. Positive dynamics was also noted in the tablet market: here, the American corporation's revenues in the 2021 reporting year increased to 38.37 billion dollars. USD from 30.62 billion USD a year earlier. USD a year earlier.

The main market for Apple remains the countries of North and South America (mainly the United States), where the company earned about \$ 153.31 billion in fiscal 2021. US DOLLARS. In fiscal year 2020, this figure was equal to USD 124.56 billion.

IN FISCAL 2020, THE FIGURE WAS \$124.56 BILLION. In Europe, Apple's turnover for fiscal 2021 reached USD 89.31 billion. This is up from USD 68.64 billion in the previous year. In China, sales increased by USD 28 billion, and in Japan by USD 7 billion. In China, sales increased by USD 28 billion, and in Japan - by USD 7 billion. IN JAPAN - BY 7 BILLION US DOLLARS. In the Asia-Pacific region, excluding China and Japan, the company's revenue in FY2021 amounted to USD 26.36 billion, up 6.6% from USD 28.64 billion. USD, an increase of USD 6.77 billion. USD. USD 6.77 billion compared to the previous year. Net profit in 2021 amounted to USD 94.68 billion. USD.

It should be noted that the volume of sales of games and content in them in the App Store in 2020 amounted to approximately USD 45 billion. Most of it (31%) came from the Chinese market, while in the United States it amounted to 26%. In total, in 2020, Apple made a profit of USD 13.5 billion from game sales. This corresponds to 5% of the corporation's total turnover. iPhone sales account for approximately 50% of the company's revenue, and in 2018 - 62%. Apple's sales volumes for 2004-2019 are shown in Appendix C. The company's sales decreased due to a decline in demand for iPhones, but sales of certain types of services increased significantly.

Thus, one of the most important revenue streams today is the sale and provision of Apple services, namely Apple Music, Apple TV+, Apple Podcasts, Apple Books, and Apple Arcade.

Apple Inc. uses the following strategies in the markets of its host countries:

- product development strategy (introduction of innovative products, modification of the assortment, improvement of product parameters);
- strategy of broad differentiation (providing goods with specific features that distinguish them from the goods of competitors);
- strategy of concentric diversification (search for new types of the same level: production of not only smartphones, but also tablets and portable media players on the operating system of the previous ones);
- pure diversification strategy (development of completely new activities).

Apple's competitive strategy is differentiation in the industry. Apple prides itself on innovation more than any other company and is known for its unique first-class products.

By using differentiation as their main source of competitive advantage, they have reached the top of their industry while maintaining profits above the industry average.

Apple pioneered product differentiation by integrating hardware and software. This distinguished Macintosh computers from other PC manufacturers who simply produce hardware and rely on Windows operating systems to run it. This set Apple apart from its competitors and gave them full control over creating the user experience. The beginning of Apple's new differentiation strategy was the launch of iTunes in 2001. The company opened its own stores and with iTunes became the largest digital retailer in the world. Then Apple introduced the iPod. The high quality of Apple's design distinguishes its products from competitors.

The iMac line of computers was the first to not have a disk drive, which was considered mandatory. The success of the model proved that Apple products were designed to be ahead of the curve. Their design philosophy is based on minimalism and creating the best user experience. By using differentiation to promote their products, Apple has gained a reputation for innovation, offering a range of easy-to-use products that cover a wide range of segments. Apple's design philosophy and product differentiation create higher profit margins than their competitors.

Apple's products are unique and difficult to imitate, which allows them to target high profit margins. Apple does not compete on price like its competitors with small profits. Developing new products is expensive, so Apple uses higher prices when releasing a product to increase profits. The design quality and uniqueness of their products allow them to do this successfully.

Apple topped the tech rankings for the sixth consecutive year, rising two spots on the overall list as rising demand in China helped iPhone sales shatter expectations and lifted annual profits to a record \$63.9 billion, making Apple the most profitable company in the world. According to Global 2000 estimates, the corporation's market value is almost 2.3 trillion US dollars (Table 2.4).

In the third quarter of 2021, the company posted record revenue of USD 81.4 billion, up 36% from 2020. Apple has focused on its innovation strategy. During this period

operating cash flow amounted to USD 21 billion, almost USD 29 billion was paid to shareholders, and the rest of the profit was invested in business development [15].

Table 2.4 - The world's largest technology companies in 2021

№	Company name	Country of origin	Sales, billion US dollars	Market value, billion US dollars
1	Apple	USA	293,9	2 300
2	Samsung Electronics	South Korea	200,7	510,5
3	Alphabet	USA	182,4	1500
4	Microsoft corporations	USA	153,3	2000
5	Tencent Holdings	China	70	773,8
6	Facebook	USA	86	870,5
7	Intel corporations	USA	77	263,7
8	IMB	USA	73,6	119,4
9	Taiwan Semiconductor Manufacturing Co.	Taiwan	48,1	558,1
10	Oracle Corporation	USA	39,7	227,7

Compiled by the author.

In 2021, iPhone sales revenue continued to decline, but revenue from digital services grew significantly. Mac computers and devices set a new sales record. As we can see, Apple's net profit in fiscal 2021 amounted to USD 94.68 billion, which is 40% more than in the previous year. The company's gross revenue increased to USD 365.82 billion. The product that has contributed most to Apple's success is the iPhone, which generated US\$52 billion in sales in the first quarter of 2019 alone.

Revenues generated from iPhone sales have consistently accounted for about 60% of Apple's total revenue in recent years. Other major products of the company that provide additional revenue are Mac computers, iPad, Apple Watch, and HomePod. Apple's service products, such as the iTunes Store and iCloud, are becoming an increasingly part of the company's business [35].

Businesses use a product differentiation marketing strategy to distinguish their own products from those of their competitors. Since the 1980s, Apple Inc. has successfully used product differentiation to separate its products from those of other electronics manufacturers. From its MacIntosh home computers to its iPod music players to its

iPhone and iPad mobile devices, Apple has used a differentiation strategy to target a portion of the consumer market and send a powerful message that its products stand out from the crowd.

Product design. A key aspect of a product differentiation strategy is product design. Products that demonstrate a different visual style, incorporate different features, or solve different problems stand out from the competition. Apple has made product design a distinctive feature of its differentiation strategy since the company's inception. When Apple introduced the iPod, iPhone, and iPad, there were no similar consumer electronics products that contained so many features in one distinctive, iconic package [5].

Pricing strategy. Another factor in product differentiation plans stems from the company's pricing strategy. Steve Jobs, co-founder of Apple Computers, sought to create a first-class product with a price proportional to its level of quality, while maintaining a high profit margin. Apple's lowest-priced products consistently fall into the mid-range, but customers are willing to pay that price for a high quality user experience. This pricing strategy is at odds with conventional laptop, tablet, and mobile phone manufacturers, who sell low-cost devices and rely on high volumes to counteract their low profit margins. The relatively higher cost of Apple's versions gives consumers a sense of high value and exclusivity of their products [5].

Retail outlets. Apple's pricing strategy extends to its differentiation in the retail electronics market. While users can buy computers, tablets, and mobile phones at almost any electronics store, Apple stands out by providing a limited number of large retailers and focusing its efforts on its Apple Stores. For its third-party retailers, Apple sets a minimum pricing policy to prevent retailers such as Walmart and Best Buy from undercutting prices in Apple Stores.

Brand loyalty. Apple has been one of the most successful tech companies in developing brand loyalty. Loyal Apple customers will stand in line to buy the latest iPhone, download music through iTunes, watch their favorite TV shows on Apple TV, and play games on their iPads. The company's efforts to build brand loyalty have allowed Apple to stand out from Microsoft, Samsung, and other competitors in various arenas.

The concept of brand differentiation has allowed Apple to create a virtual split in the world of electronic devices: Apple devices versus all others. This has created a vision of exclusivity that gives Apple a market advantage, helping them keep their products at the top of countless lists every year [5].

Premium pricing strategy. Apple sets premium prices for its products and minimizes discounts for wholesalers to keep prices in the market unchanged. The company strives to offer customers a high-quality product with unique features and uses high prices to enhance the perception of added value and maintain profitability. The high-price strategy also sets a benchmark for competitors, who must offer equivalent features to match Apple's value without losing money [5].

CHAPTER 3

IMPLEMENTATION OF INNOVATIVE APPROACHES TO THE ORGANIZATION OF STRATEGIC MANAGEMENT AT APPLE INC

3.1 Analysis of environmental initiatives in the strategic management system of Apple Inc.

Apple is very responsible about the social responsibility initiatives it implements in its operations and has separate sections on its official website that list each of the company's contributions depending on the area and describe in detail the essence of the initiative, goals, methods of achievement and results that the company has achieved. At its annual presentations, the company allocates a separate time to share updates and its own progress in this area. In addition to listing each innovation and the benefits of new products, the company places additional emphasis on the environmental friendliness of each product [19].

Rapid changes in the company's environmental direction began in 2015, when Apple joined the White House's American Business Climate Commitment Act after COP21 (Conference of the Parties) in Paris. COP21 - The Paris Climate Conference is officially known as the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations climate body located in Bonn, Germany [37].

To achieve its internal goals of reducing its carbon footprint and impact on the planet over the next 15 years, Apple has set out key areas of focus, which include

- transition to renewable electricity;
- use of recycled aluminum in products;
- ensuring clean water resources;
- reducing the use of plastic in packaging;
- reducing exposure to harmful chemicals.

To successfully achieve its goals, the company cooperates with other businesses that help Apple make more progress and provide additional opportunities. By cooperating with other companies and implementing its own initiatives, Apple is becoming a significant contributor to environmental issues and positioning itself as a responsible player in this area.

The article analyzes Apple's initiatives in each of the above areas. To analyze the goals and successes of Apple Inc. the corporate social responsibility reports of Apple Inc. for 2022 and 2023 were analyzed [1, 6, 7, 8].

The company's long-term development strategy in the field of ecology is aimed at ensuring business sustainability, introducing more environmentally friendly work standards and compliance with regulatory requirements. And one of its main focuses is to reduce emissions and switch to renewable energy.

In 2018, Apple managed to switch to 100% renewable electricity for the first time, and 2 years later, the company achieved carbon neutrality for corporate operations, including direct emissions and employee business travel. Moreover, 213 suppliers in 2022 and more than 250 in 2023, at the request of Apple Inc. have committed to using electricity from 100% renewable sources to produce Apple products, which accounts for the majority of costs. The company realizes that every component in the creation of a product, its transportation and sale has an impact. That is, switching to 100% renewable energy in its own production is not enough to completely reduce its carbon footprint, as a large percentage also depends on suppliers.

Global warming is another issue that the world is concerned about today, and it requires drastic action from major campaigns right now. The most harmful to the planet's atmosphere is the carbon footprint, which contributes to a 1.5°C increase in the average temperature on the Earth's surface compared to pre-industrial levels. The natural properties of trees, plants and soils of the planet Earth include the removal and storage of carbon from the atmosphere. Therefore, to meet Apple's global goal of reducing its carbon footprint by up to 75%, the company invests in forestry and carbon sequestration through projects such as Forest Investor [4].

Such initiatives contribute to environmental and social benefits, such as biodiversity conservation and local community development. In addition, the Forest Investor initiative provides an additional source of revenue for Apple, helps to achieve its environmental goals, and promotes the wider dissemination of similar projects around the world.

Thanks to the initiative, Apple managed to reduce its total emissions by 40% in 2022 (compared to 2015), and in 2023 this percentage increased to 45%. In 2022, the company avoided more than 23 million metric tons of emissions in all areas of its operations by implementing an emissions reduction initiative, switching its supply chain to renewable electricity, and using recycled materials for product manufacturing. In 2023, Apple managed to increase this figure to 28 million. In addition, the amount of corporate waste sent to landfill in 2023 was reduced by 71%, compared to 40% in 2022.

Reducing emissions in production is also facilitated by the use of 100% recycled aluminum in some products, namely in the cases of such Apple products as: iPad, Apple Watch, MacBook Air, and MacBook Pro. According to Apple's latest reports, the total percentage of recycled aluminum products increased from 8% in 2022 to 20% in 2023. Thanks to the introduction of new technologies using low-carbon electricity sources rather than fossil fuels, in 2022, the company managed to reduce carbon emissions associated with the use of aluminum by 68%. The company's global goal for the next decade is to make 100% of Apple's products from recycled aluminum by 2030 and reduce carbon emissions to zero.

Another important goal of Apple is to completely eliminate plastic in its packaging by 2025. In 2022, the company managed to reduce the amount of plastic in packaging by 75% compared to 2015, and in 2023 this figure increased to 96% [8,27]. So Apple almost managed to achieve its goal.

In 2022, Apple has set strategic goals to reduce its impact on water resources, as water is one of the most valuable resources on the planet. The main aspects of activities within the framework of these goals include: production of products, provision of services and operation of facilities. In order to achieve this goal, Apple Inc. plans to look for ways to reduce water consumption, implement efficient water treatment and reuse systems.

These actions will help reduce water discharges and improve the quality of water after production. Another important initiative is to switch to alternative water sources, such as extraction of water from renewable sources or search and implementation of water-saving technologies. In 2023, the company expanded its water plans, which demonstrates the importance of this goal and its attitude to the sustainable use of water resources.

In 2023, Apple Inc. for the first time clearly defined a new goal to avoid exposure to chemicals that can be harmful to human health and the environment. The global goal that the corporation seeks to achieve is to reduce the use of harmful chemicals to 0, as they can pose health risks to users, including allergic reactions or other health problems. In the same year, the company committed to regularly compile comprehensive reports on the chemicals used in the supply chain to manufacture its products, which should ensure transparency in finding information for users and other stakeholders and allow them to track progress.

In addition, Apple has committed to integrating smart chemistry innovations into the product design and manufacturing process. This is necessary in order to reduce the harmful impact on the environment, as well as to optimize production and reagent costs, and to redirect the budget to redirect the budget for further development and innovation. Given the strict regulatory requirements and standards for the use of chemicals in production, it is the integration of smart chemistry innovations that can help Apple avoid fines and negative reputational impact.

In order to proactively assess and eliminate potentially harmful substances from its products, the company conducted a toxicological assessment of more than 1,300 materials in 2023. This was the beginning of a move toward more environmentally friendly chemicals. In the same year, Apple led an IPC working group that helped develop and publish a new IPC industry standard for the use of safe detergents. IPC standards are “the most widely recognized acceptance codes in the electronics industry for standards for nearly every stage of the electronic product development cycle, including design, procurement, assembly, packaging, and more” [17].

Apple understands that in order to achieve its own goals, it also needs to team up with other corporations that are an important part of their development. It is cooperation

that helps businesses become stronger and provides more opportunities, makes the brand's voice more powerful. Apple, as a technology company, does not have the resources to implement 100% renewable energy on its own. That's why it has partnered with RE100, an energy initiative aimed at scaling zero-carbon networks by bringing together the world's most influential companies that are committed to shifting their electricity consumption to fully renewable energy sources.

According to the World Economic Forum, industry accounts for nearly 40% of global energy consumption and more than 30% of global greenhouse gas emissions [38]. Transforming these sectors is crucial to achieving zero emissions. That's why Apple has joined the First Movers Coalition, a global initiative that leverages the purchasing power of companies to decarbonize seven industrial sectors that account for the largest percentage of emissions and are particularly difficult to reduce [39]. As part of the First Movers initiative, Apple Inc. has committed to switching to clean jet fuel for 5 percent of its passenger air travel and purchasing at least 10 percent of its annual aluminum with near-zero emissions.

In 2022, Apple, along with Meta and Google, publicly advocated for a significant expansion of renewable generation to achieve a 70 percent reduction in emissions in the United States.

In general, since 2015, the company has been a voice for the world and regularly speaks at global and local forums to support environmental issues. In 2021, Apple became the first company to express support for the adoption of the Clean Energy Standard (CES), which will allow the energy system to be decarbonized by 2035. In addition, the company publicly and financially supports other countries in their ambitious plans for energy development and transition to clean energy and 100% alternative sources.

Over the past two years, Apple has been actively fighting for transparency in companies' information on global emissions. For example, in 2021, “Apple became one of the first large, publicly traded U.S. companies to call on the Securities and Exchange Commission to require disclosure of global greenhouse gas emissions in all areas of its operations” [8, 25].

From all the public statements of recent years, we can conclude that the company is actively fighting for environmental issues around the world. Apple representatives not only take actions within the company, but also conduct an in-depth analysis of the next steps to help the whole world. In 2022, they spoke at a conference on carbon neutrality and called on Korea to set more global renewable energy targets by 2030. This particular market is highly competitive and can serve as an example for other companies and countries around the world.

To summarize the main results of Apple Inc. in the field of corporate social responsibility as of 2022 and 2023, a comparative table was formed (Table 3.1). For the purpose of analysis in dynamics, the comparative table also includes a list of Apple's goals, which it aims to achieve by 2030.

Table 3.1 - Comparative analysis of Apple's environmental progress as of 2022 and 2023 and goals for 2030

Year 2022	Year 2023	Target by 2030
1. Reduced emissions by 40% compared to 2015 2. Avoided more than 23 million metric tons of emissions in all areas of activity 3. Committed 213 suppliers to using renewable energy for Apple production 4. 8% of Apple products are made from 100% recycled aluminum 5. Reduced energy consumption at Apple facilities by 28 million kilowatt-hours 6. Reduced plastic content in packaging by 75% compared to 2015 7. Reduced the amount of waste sent to landfill by 40%	1. Reduced emissions by 45% compared to 2015 2. Avoided more than 28 million metric tons of emissions in all areas of activity 3. Committed 250 suppliers to using renewable energy for Apple production 4. 20% of Apple products are made from 100% recycled aluminum 5. Reduced energy consumption at Apple facilities energy consumption at Apple facilities by 69.4 million kilowatt-hours 6. Reduced plastic content in packaging by 96% compared to 2015 7. Reduced the amount of waste sent to landfill by 71% 8. A comprehensive plan and targets for the use of chemicals have been defined	1. Reduce emissions by 75%. 2. Avoid more than 50 million metric tons of emissions in all areas of activity 3. Transform the entire supply chain into clean electricity 4. Manufacture 100% of Apple products from 100% recycled aluminum 5. Switch to 100% renewable energy sources at energy consumption facilities 6. Refusal from plastic in packaging 7. Reduce the amount of waste sent to landfill by 100%. 8. Reduce the use of harmful chemicals to 0

Source: compiled by the author

Thus, it was found that over the past two years, Apple has significantly reduced its greenhouse gas emissions, reducing them by 45% in 2023 compared to 2015, and by 12.5% compared to 2022. Compared to 2015, the company managed to reduce the use of plastic in the packaging of its products by 96%, energy consumption at its facilities by 69.4 million kilowatt-hours, and the amount of waste sent to landfill by 71%. In addition, the company has been successfully working with suppliers to switch to renewable energy and use recycled aluminum in production. These results put Apple on track to achieve its ambitious goals by 2030, including reducing emissions by 75% and converting its entire supply chain to clean energy.

3.2 Implementation of global innovation standards in the company's activities

The world has always been changing, with new inventions and innovations that revolutionize established approaches and views. But the current time is unique in terms of the lightning speed with which transformations are taking place. The consequences of such changes have been compared to the tsunami effect - institutions, the labor market, even legislation cannot keep up with them, and they leave no time for adaptation. Those who hesitate are left behind.

Sustainable development and innovation were the key topics of the World Economic Forum in Davos. The event proclaimed the beginning of the Fourth Industrial Revolution, which is expected to blur the boundaries between physics, electronics, and biotechnology.

Technologies that allow to print a spacecraft engine on a 3D printer (NASA), diagnose more accurately than doctors (IBM Watson, artificial intelligence), drive a car without a driver (cars from Tesla and Google), produce solar energy on Earth (Wendelstein 7-X reactor, fusion physics), trusting people without knowing them (Ethereum platform, decentralized blockchain technology), and refueling cars with hydrogen (Toyota Mirai, hydrogen energy) mean the birth of a new era. And in this era, innovation and creativity are becoming key skills for businesses and individuals.

Employees from Doblin (Deloitte's innovation consulting division) wondered whether it was possible to assess a company's innovation. After all, it affects business prospects and its market value. The book 10 Types of Innovations was created as a result of the search for an answer to this question and a thorough research. It contains criteria that can be used to assess the innovativeness of each business and to compare innovative solutions of different companies with each other.

“The 10 Types of Innovations can be used as a basis for international standards that will make innovations understandable to everyone. The 10 standards will allow companies to present and investors to evaluate and compare the innovation potential of any company, regardless of the country or type of business activity. At the same time, they are the only intuitive rules:

- 1) defining sustainable innovations rather than one-time inventions
- 2) assessing the complexity of an innovation; and
- 3) disclosing and comparing innovative solutions of different companies with each other. These are standards that do not describe history but rather provide a vision of the company's future.

Innovations can be divided into three groups, depending on the degree of their remoteness from the end user.

- Business configuration is a “behind-the-scenes” innovation that takes place within the company and is the furthest from the client. They include four standards: profit model; network of partnerships; resource structure and business processes.

- Market offer - innovations that take place “on stage” and are related to a product or service. This group includes two types of innovations: the product/service and its characteristics and the eco-system.

- Customer experience is an innovation “in the auditorium”. They take place in direct interaction with the customer and include four standards: product service, sales channels, brand innovations, and customer engagement.

Here is a brief introduction to each standard and best practices for its application:

1. A profit model is a standard that describes how a company makes money. It is usually the most entrenched state of affairs in the industry.

There are more than 20 profit models - from auction (Second life) and free content for paid advertising (Google) to subscription (Netflix), license (Monsanto) and “membership fees” (Sportlife); from freemium (LinkedIn, a free basic service for posting resumes and paying for additional portal functionality), premium (Apple products are an order of magnitude more expensive than their analogues and competitors), “time reserve” (Dell starts production after ordering and paying for the goods) to “switch” (Uber and Airbnb), installed base (Gillette, Amazon) and pay-as-you-go (Zipcar).

In today's world, the tactic of “open innovation” is very effective, when companies provide others with access to their intellectual property

2. The network of partnerships is about how a company works with partners to create joint added value. Usually, the pieces of the “puzzle” of a true innovative solution are located in different organizations, and the success of the project depends on the ability to see the whole picture and collect all the details.

This standard includes more than 10 tactics for partner innovation: Crowdfunding (Pebble smartwatches and Kickstarter), franchising (Animaccord created the popular Masha and the Bear brand, which is joined by manufacturers of dairy products, toys, etc. for a franchise fee), side markets (Craiglist), mergers and acquisitions (Apple, realizing the potential of the rapidly growing premium music headset segment, bought Beats for \$3 billion), and others.

In today's world, the tactic of “open innovation” is very effective, when companies provide others with access to their intellectual property, experience, and processes to jointly invent new solutions for customers. For example, P&G has created a “connect and develop” program to engage partners in joint product development. This gives the company 35% of all innovations and billions of dollars in new business annually.

3. Resource structure - this standard is about how to organize and combine human resources, tangible and intangible assets in a unique way, how to get synergies from the combination of people and technology.

This may include asset standardization (e.g., Southwest Airlines uses only one model of airplane - Boeing-737), corporate university (McDonalds Hamburger University), outsourcing (Barclays outsources IT functions), etc.

4. Business processes describe how a company should use unique and competitive methods and processes to produce a product with maximum profit.

A prime example of this standard of innovation is Toyota and its lean production method. Minimization of production costs, waste, surplus and maximum concentration on what benefits the consumer and adds value to the business - at one time gave the company extraordinary advantages and pushed other businesses (Intel, Nike, Caterpillar) to optimize.

This standard of innovation also includes other powerful tactics: adaptive manufacturing (e.g., Zara adapts its production process to changing fashion trends in a few weeks), standardization (IKEA furniture is standardized worldwide), user engagement (Facebook and content created by its users), crowdsourcing (Kaggle and crowdsourcing of complex mathematical problems with the help of data scientists), intellectual property (the unique formula of Soda-Cola), process automation (Amazon's robotic logistics centers), prediction of the future (GE uses powerful analytics to predict the time and scope of aircraft engine repair in a timely manner and earns money on their maintenance), etc.

5. Product and its characteristics - such innovations relate to the unique features and functionality of your product, the creation of new products, applications, and updates to existing ones.

The key tactics in this standard are additional functionality (e.g., self-driving Tesla), ease of use (Dash smart Bluetooth headphones that measure various parameters of a person's physical condition), hassle reduction (Intuit's tax return automation), consumer safety (Volvo's innovations), style (iPhone), and cost savings for the customer (Toyota Prius).

A trendy tactic in this standard of innovation is environmental care. Mobile phones consisting of separate modules (display, processor, battery) that can be periodically upgraded to more functional ones without buying a new phone (Google's ARA project) are becoming increasingly popular. And old modular parts will be fully recyclable and will not pollute the environment.

6. Product ecosystem - defines how individual products are connected or grouped together to create a complete solution that can be quickly scaled. This is an innovation that builds an ecosystem around the product and partners, while attracting customers and protecting the business from competitors.

Zappos has created a new consulting business to help other companies implement wow customer service methods

This standard includes the following key tactics: ancillary product (for example, accessories for the Barbie doll), an integrated market offer (Deloitte's Business Transformation service, which combines a number of separate services from audit preparation to legal business restructuring into a single offer) grouping of products (Microsoft used to sell Word, Excel, Power Point and other office products separately, then the MS Office suite appeared), applications/plugin-ins (Firefox plugin-ins), modular system (Lego construction sets), product/service platform (AppStore and iTunes).

A platform is a very popular tactic chosen by most modern startups. It allows a product to compete on the global market, scale up quickly, and attract business partners. Apple once created a whole music ecosystem around the iPod with iTunes, and later invented the AppStore, a platform that connected millions of programmers and customers, creating new markets for accessories, devices, and services to serve them.

7. Product service is an innovation that relates to how you service your product and create additional services around it to enhance its appeal to the customer. This standard describes how to create a holistic customer experience for the customer that encourages repeat sales.

The most popular tactics here are concierge service (an example is the Lexus concierge app), loyalty programs (American Airlines launched a loyalty program with mileage counting), self-service (ShelfX and cashierless stores), added value (Toyota Assistance), top-notch service, and others.

Brand innovations help customers recognize your product, remember it and prefer it.

8. Sales channels - how you deliver your product or service to the consumer. This innovation standard helps customers to try or buy a company's product at the time they want to, and in the easiest way possible.

This standard includes the following key tactics: diversification (Nespresso has opened its own boutique and accepts orders online or by phone through its own Nespresso Club), central store (Niketown hypercenters have become a real mecca for brand fans, where the company experiments with product lines and fully controls retail sales), indirect distribution (Microsoft's global partner network), on-demand sales (Amazon Kindle), etc.

An interesting example of an unusual sales channel is the Amazon Kindle e-book. It allows millions of the company's customers to instantly download and purchase new books, which stimulates a significant increase in sales and customer loyalty.

9. Brand innovations help your customers recognize, remember, and prefer your product. These innovations turn ordinary products into valuable ones and communicate to the consumer why you are in business and what your global goal is.

The most common tactics of brand innovation are brand extension (Virgin has such a strong brand that even Virgin Cola is popular), co-branding (Friday's created a menu with Jack Daniels, which greatly increased its appeal to customers), private label (Novus and Marka Promo), component branding (Intel's Inside campaign), following values (SpaceX and the company's desire to colonize Mars), and others.

10. Involvement in the customer's life - with the help of these innovations, you take care of the customer and try to guess their hidden expectations and emotions, building an unforgettable consumer experience around them. They allow you to become a part of your customers' lives, not just another provider of a product or service.

The most famous tactics of this standard are autonomous consumption (iPhone - the Internet, games, music, always at hand), automation of consumer experience (Lending Club - fast algorithmic online loans), creation of a community of interest (various Facebook groups), etc.

The best innovations are not focused solely on the product, but are built on the basis of many standards and tactics.

For example, Foursquare is an online platform that helps people find interesting places. The company has created a series of unique icons that symbolize the user's status depending on the frequency of visits to a particular place (from “newbie” to “party king”, from “super fan” to “NASA researcher”). This initiative proved to be an extremely successful experience in implementing the “community of interest” tactic.

These ten standards are the basis for categorizing and strategically analyzing any innovative solution. The best innovations are not focused solely on the product, but are built on the basis of many standards and sets of tactics. The more of them you combine in a new market offer, the better it will be and the harder it will be for your competitors to copy it.

The 10 standards can also be used to find a new strategy:

- Analyze the innovations that already exist in your industry or the industry you are interested in and identify the standards and tactics that are used the least. This is a potential opportunity and a vector of movement.

- Make a strategic decision about the level of your ambition: do you want to create incremental innovations, play in adjacent markets, or do you plan to change the “rules of the game” altogether? The higher the level of your ambition, the more types of innovations you need to implement and the stricter the discipline in their implementation. For a basic level, one or two standards will be enough, while changing the “rules of the game” will require solutions with five or six at a time.

- Create a template for an innovative solution, determine what standards and tactics it will consist of. Your goal is to provide innovations that are not yet on the market and solve the most pressing customer needs.

- Through internal or external crowdsourcing, brainstorming, design thinking, and prototyping, find the innovation that best fits this template. Also, use it in reverse - if you find an interesting idea, use the template to optimally plan its development.

- Always turn the established state of affairs and innovations in your industry upside down, keep track of the biggest technology trends and “build” them into your innovation tactics. Leverage all external and internal resources and partnerships to come up with a

unique solution and fully understand your customer to create markets that don't even exist now.

Sustainable business development is impossible without innovation. Given the current dynamics of new technologies and changes, it is extremely important for a company to avoid chaotic movements. On the contrary, it is necessary to ensure a systematic approach. Only under such conditions can the answer to the question “where are we going?” be found. This is the only way to guarantee the safety and responsibility of a business that innovates. This is the only way to find our place in the economy of the future.

International Innovation Standards are a tool for companies to strategically find the right path and a basis for decision-making for investors. It helps businesses understand the “molecular nature” of all innovations, decompose various innovative “compounds” (solutions) of competitors or world leaders into separate simplest “substances” (innovation standards), and these into separate “molecules” (innovative tactics). And, finally, to synthesize from these elements one's own unique “chemical substance” with explosive innovation.

3.3 Evaluation of the effectiveness of the proposed business development measures for the company and its stakeholders

This section examines the effectiveness of the proposed measures in the form of the new Apple STEM Academy educational project for Apple Inc. and its stakeholders.

The Apple STEM Academy project will have a significant impact on the company's corporate social responsibility, as it aims to increase the accessibility and quality of STEM education for a wide range of students and students. Such projects help to improve the skills and competitiveness of future professionals in science, technology engineering, and mathematics, which will contribute to the development of innovations and improve the quality of life of citizens.

Given that Apple STEM Academy will have several learning formats: from online courses to real-life hands-on training in laboratories and hubs, it will be able to provide

access to quality education for millions of people. The project will allow students to study the material at their own pace and review the materials as many times as necessary to fully master it. The platform on which the online courses will be hosted is primarily aimed at maximizing the reach of the target audience to have the greatest possible impact. They open up wide opportunities for distance learning, providing access to the most up-to-date knowledge and skills anywhere in the world.

Adapting online courses for different age groups, from children as young as 8 years old and schoolchildren to students, will allow you to have an impact on several generations at the same time, ensuring quality education.

Virtual laboratories and interactive exercises that open up for students after they have watched videos and other supporting materials in the course, aimed at practical mastery of the skills acquired, have a number of advantages:

- they make classes accessible to anyone with an Apple device and an Internet connection;
- after completing a particular material, students will have the opportunity to experiment and observe the results, which will allow them to better absorb the knowledge and understanding of the material;
- virtual experiments are intended not only to make courses accessible to everyone, but also to make learning science, innovative and promising areas more attractive to study, which will increase their motivation.

This learning format aims to provide a complete course and mastery of certain skills depending on the chosen course. And those students who pass all the necessary tests and successfully complete the course will have additional opportunities to deepen their knowledge in real laboratories and hubs. In the initial stages of the project, a limited number of such laboratories and hubs are planned due to the inability to provide the required number of such institutions in every corner of the world, but this list will be constantly expanded in the future. The benefits of offline labs include:

- gaining practical experience with real equipment, tools, and materials. This is especially important for those students who plan to combine their chosen field with their future career;

- teamwork in groups in laboratories with other students helps to develop cooperation and communication skills. It is important to develop these skills from an early age;

Laboratory classes are designed to encourage students to analyze information, solve problems and make informed decisions, and thus stimulate them to conduct their own research and develop innovative ideas.

The Apple STEM Academy project will not only contribute to the company's social responsibility and benefits to society, but will also have benefits for Apple Inc. itself, including

- development of the company's own image, as educational initiatives and projects have a great impact on the development of society. This project also aims to improve Apple's reputation as a company that not only sells products but also invests in the future and development of society;

- increase the number of customers, as research shows that consumers' decisions are now also influenced by the social responsibility of the company of the product they are considering buying [23]. Successful implementation of the project will potentially lead to the fact that Apple technology and products will become even more attractive to the younger generation, their parents, and students.

- Increasing the number of partners, including educational institutions and organizations, which will help expand cooperation and opportunities for the company, and thus increase its own impact and contribution to society;

- identifying talented students who could potentially become part of the Apple team in the future. This advantage has a very large potential impact, as the company will have access to the best and most talented STEM professionals, which in turn will have a positive impact on Apple's innovation and competitiveness.

Through this project, Apple can become a leader in promoting modern education and supporting talented youth.

To implement the Apple STEM Academy project, Apple needs to develop a comprehensive online platform for Macbooks and iPads, which will include online courses, virtual workshops, and the opportunity to visit laboratories for real-world

experiments. The description of each component is summarized in the table below (table 3.2).

Table 3.2 - Necessary components for the implementation of the Apple STEM Academy project

Components	Description
Development of a platform for online learning	Development of a full-fledged online platform that will be available on Apple operating systems such as MacOS and iPadOS (to access the platform from MacBook and iPad). The development of the platform involves the design and implementation of a user-friendly and intuitive interface that will contain a list of courses, a personal account, necessary learning materials, video tutorials, and assignments.
Development of programs for virtual practice and experiments	Developing a program within a full-fledged online platform (the first component), which will essentially play the role of a virtual laboratory and provide access to interactive tools. This is a space for students to conduct real experiments in a virtual space from their own devices (exercises in programming, robotics, and other STEM disciplines).
Developing educational content with the best teachers	Developing courses and filling the online platform with educational materials. The video lessons will be developed in collaboration with the best teachers in a particular subject, using the best pedagogical practices and well-known methods of teaching STEM disciplines.
Preparation of offline laboratories and hubs for practical training	Arrangement of offline laboratories and hubs that can be accessed by the best students during their online studies. This process involves equipping laboratories and hubs with the necessary equipment to conduct practical classes in robotics, 3D modeling, and other STEM disciplines.

Source: Compiled by the author

Preparation of offline laboratories and hubs for practical training involves creating a real space for practical training. To do this, Apple is proposing to cooperate with various universities for several reasons:

- using existing laboratories and university spaces will allow for more rational use of the project budget, instead of allocating it to the construction of new facilities. In addition, the construction of completely new facilities and their equipment requires a lot of time. The use of existing laboratories will allow the project to be quickly deployed in different regions and scaled up in the future;
- universities have significant experience in research and education, which can help develop courses and laboratories for the project;
- cooperation with universities will help to deepen partnerships with the academic community and create a platform for further knowledge and research exchange.

The list of resources required to implement the Apple STEM Academy project is shown in the figure (Figure 3.1).

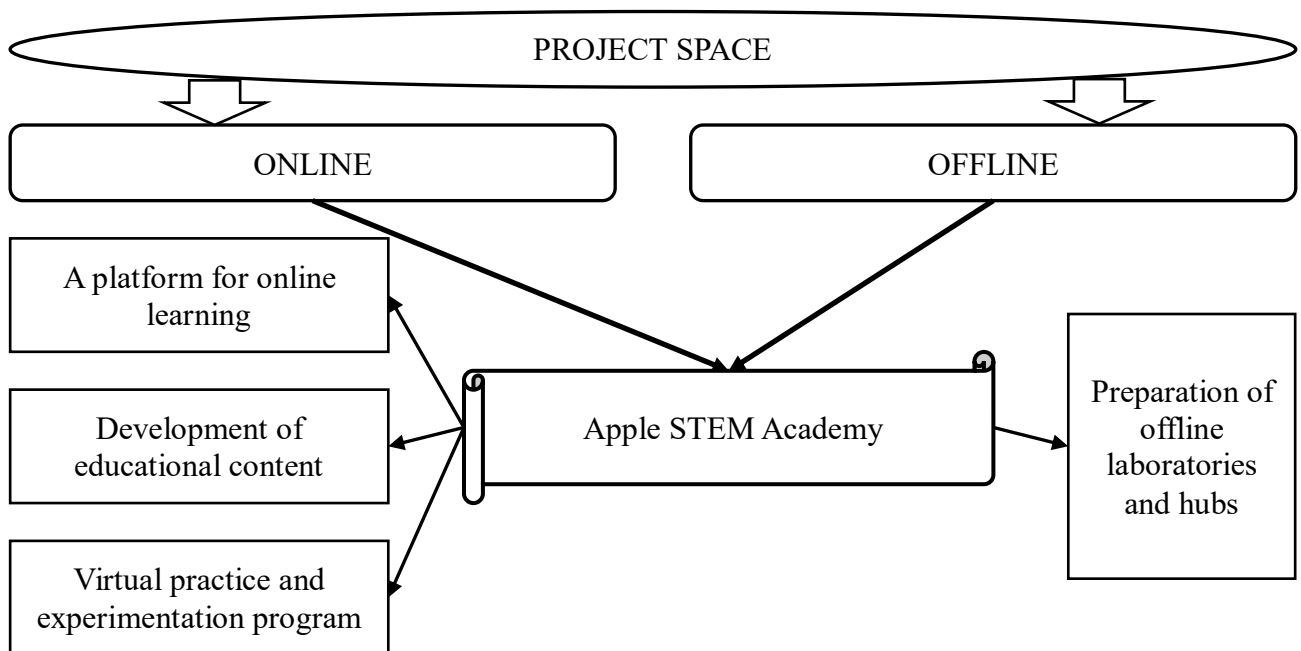


Figure 3.1 - Necessary resources for the implementation of the Apple STEM Academy project

(Source: Compiled by the author)

Given the fact that Apple is headquartered in the United States and has the largest presence in this country, it is proposed to start preparing laboratories and hubs for this project in the United States. Five states will be selected to reach different audiences and ensure maximum impact in the early stages of the project: California, Texas, New York, Illinois, and Massachusetts.

The optimal university for cooperation in each state must meet the following requirements:

- extensive experience and high reputation in STEM education;
- availability of laboratories that the university can provide for practical training within the framework of cooperation
- the university's willingness to cooperate and support Apple's initiatives in education.

According to these criteria, a list of universities in each state has been compiled with which it is proposed to start cooperation for the Apple STEM Academy project:

1. California - Stanford University;
2. Texas - University of Texas at Austin;
3. New York - Columbia University;
4. Illinois - University of Illinois;
5. Massachusetts - Massachusetts Institute of Technology;

This list of states and universities is initial and may be expanded in the future depending on the success and demand for the project. Expansion may include not only more universities in other regions of the United States, but also other countries, which will allow for more students and students to be involved and thus significantly increase the positive impact.

To implement the Apple STEM Academy social project, calculations have been made that demonstrate the necessary estimated costs. The results are presented in the form of a table (Table 3.3)

Table 3.3 - Estimated costs of implementing the Apple STEM Academy project

Cost item	Cost (USD)	Quantity (pcs.)	Total cost (USD)
Development of an online learning platform	130 000	1	130 000
Developing programs for virtual practice and experimentation	750 000	1	750 000
Development of educational content for one course	75 000	8	600 000
Payment for teachers and instructors for the course	50 000	8	400 000
Laboratory equipment	150 000	5	750 000
Unforeseen expenses	789 000	-	789 000
Total			3 419 000

Source: Compiled by the author

The costs include the cost of the main components for the project, including: development of an online learning platform, development of programs for virtual practice and experiments, development of educational content, including the entire course production process, payment for teachers and instructors for the course, and laboratory equipment. The costs also include 30% of the planned budget for contingencies in the amount of USD 789,000. The total cost of the program is estimated at USD 789,000. Thus, the total amount for the implementation of the Apple STEM Academy project, including contingencies, will be \$3,419,000. The total cost of the project is estimated at USD 3,419,000.

The projected budget for the implementation of the Apple STEM Academy project is realistic for Apple, given its financial performance for 2023, the company received a total profit of approximately \$96,990,000,000 (96.99 billion US dollars). Compared to these figures, the cost of implementing the STEM Academy project, estimated at \$3,419,000 (including contingencies), is a very small share of the company's total profit, namely 0.0035%.

CONCLUSION

As a result of the study “Strategic management and innovation of the corporation: cross-sectoral analysis and practical research”, theoretical and methodological aspects were investigated and practical recommendations were developed on strategic management and innovation as a component of business development on the example of Apple Inc.

In this master's thesis, a comprehensive study of various aspects related to the formation and functioning of strategic management and innovation of high-tech corporations was conducted. The results of the study demonstrate the importance and relevance of these aspects for ensuring the efficiency of a particular company, its financial stability and the trust of both financial and social partners.

The study of the regulatory framework for strategic management and innovation reveals that regulatory requirements are aimed at ensuring the accuracy and reliability of information. The study of the methodology of strategic management and innovation confirms the importance of proper implementation of these norms in the internal processes of a particular modern high-tech company.

It is found that Apple actively supports environmental initiatives at the global and local levels, in particular through participation in forums and support for the Clean Energy Standard (CES). Due to the company's efforts, Apple has managed to significantly reduce greenhouse gas emissions, plastic, energy, and waste consumption, as well as to make progress in cooperation with suppliers in the use of renewable energy sources, which indicates the effectiveness of its environmental strategies and movement towards the sustainable development goals by 2030.

The organizational and economic model of Apple Inc. as the largest public company by capitalization in 2023 is studied.

The results of the study show that the presence of and adherence to Apple's fundamental principles, including honesty and high ethical standards, respect for all stakeholders, protection of confidential information, and compliance of business decisions with legal requirements, have a significant impact on the company's overall

success. It is found that since 2015, Apple has been the voice of the world and regularly speaks at global and local forums in support of environmental issues, actively fighting for environmental issues around the world. It is established that, compared to 2015, Apple has achieved significant environmental results by 2023 and has ambitious goals for 2030, which also include the manufacture of 100% of Apple products from 100% recycled aluminum, the transition to 100% renewable energy at energy consumption facilities, a 100% reduction in the amount of waste sent to landfill, and a reduction in the use of harmful chemicals to 0.

The possibility of applying global innovation standards in the activities of Apple Corporation is substantiated. International innovation standards are a tool for strategic search for the right path for companies and a basis for decision-making for investors. It helps businesses to understand the “molecular nature” of all innovations, to decompose various innovative “compounds” (solutions) of competitors or world leaders into separate simplest “substances” (innovation standards), and these into separate “molecules” (innovative tactics). And, finally, to synthesize from these elements one's own unique “chemical substance” with explosive innovativeness.

The strategy of the socio-educational project Apple STEM Academy is proposed, the concept of which is to create a full-fledged online platform for teaching STEM disciplines and is aimed at different groups of students: children from 8 years old to students of technical specialties. An assessment of the resources required to implement the project concluded that USD 3,419,000 was needed. This amount is 0.0035% of the company's total profit for 2023 and is feasible for implementation.

REFERENCES

1. Apple. Apple's 2021 ESG Report -Apple. URL: https://s2.q4cdn.com/470004039/files/doc_downloads/2021/08/2021_Apple_ESG_Report.pdf (date of access: 11.08.2024).
2. Apple URL: <https://www.tadviser.ru/index.php/%D0%9A%D0%BE%D0%BC%D0%BF%D0%B0%D0%BD%D0%B8%D1%8F:Apple> (date of access: 11.08.2024).
3. Apple. Apple. URL: <https://www.apple.com> (date of access: 11.08.2024).
4. Apple. Apple's restore fund cultivates new roots in the atlantic forest. Apple Newsroom. URL: <https://www.apple.com/newsroom/2024/03/apples-restore-fund-cultivates-new-roots-in-the-atlantic-forest/> (date of access: 11.08.2024).
5. Apple Differentiation Strategy/By: Gerald Hanks/Reviewed by: Michelle Seidel, B.Sc., LL.B., MBA/Updated November 28, 2018 URL: <https://bizfluent.com/way-5815745-apple-differentiation-strategy.html> (date of access: 11.08.2024).
6. Apple. Environmental Progress Report 2021. Environment - Apple. URL: https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2022.pdf (date of access: 11.08.2024).
7. Apple. Environmental Social Governance Report 2022. Environment - Apple. URL: https://s2.q4cdn.com/470004039/files/doc_downloads/2022/08/2022_Apple_ESG_Report.pdf (date of access: 11.08.2024).
8. Apple. Environmental Progress Report 2022. Environment - Apple. URL: https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2023.pdf (date of access: 11.08.2024).
9. Apple Inc. Business Conduct The way we do business. URL: <https://www.apple.com/compliance/pdfs/Business-Conduct-Policy.pdf>. (date of access: 11.08.2024).
10. Apple Retail Store - Store List. Apple. URL: <https://www.apple.com/retail/storelist/> (date of access: 11.08.2024).

11. Apple: number of employees 2010-2023 | AAPL. Macrotrends | The Long Term Perspective on Markets. URL: <https://www.macrotrends.net/stocks/charts/AAPL/apple/number-of-employees> (date of access: 11.08.2024).

12. Apple research and development expenses 2010-2023 AAPL. Macrotrends The Long Term Perspective on Markets. URL: <https://www.macrotrends.net/stocks/charts/AAPL/apple/research-development-expenses> (date of access: 11.08.2024).

13. Apple revenue 1992-2024 - stock analysis. Stock Analysis. URL: <https://stockanalysis.com/stocks/aapl/revenue/> (date of access: 11.08.2024).

14. Apple revenue 2010-2023 | AAPL. Macrotrends | The Long Term Perspective on Markets. URL: <https://www.macrotrends.net/stocks/charts/AAPL/apple/revenue> (date of access: 11.08.2024).

15. Apple Reports Third Quarter Results URL: <https://www.apple.com/newsroom/2021/07/apple-reports-third-quarter-results/> (date of access: 11.08.2024).

16. Barney J., & Hesterly W. Strategic Management and Competitive Advantage: Concepts and Cases. Pearson. URL: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://students.aiu.edu/submissions/profiles/resources/onlineBook/j4N9K5_Strategic%20Management%20and%20Competitive%20Advantage%20Concepts%20and%20Cases%20-%20William%20Hesterly.pdf (date of access: 11.08.2024).

17. Contributors to Wikimedia projects. IPC (electronics) - Wikipedia. Wikipedia, the free encyclopedia. URL: [https://en.wikipedia.org/wiki/IPC_\(electronics\)](https://en.wikipedia.org/wiki/IPC_(electronics)) (date of access: 11.08.2024).

18. Dyvik H. Biggest E.com panies in the world by market cap 2023 | Statista. Statista. URL: <https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-capitalization/> (date of access: 11.08.2024).

19. Environment. Apple. URL: <https://www.apple.com/environment/> (date of access: 11.08.2024).

20. Financial Times Global 500 URL: <http://www.ft.com/intl/indepth/ft500> (date

of access: 11.08.2024).

21. Grant R. M. Contemporary Strategy Analysis. John Wiley & Sons. URL: https://books-google-com.translate.goog/books?id=6C_vCQAAQBAJ&printsec=frontcover&dq=inauthor:%22Robert+M.+Grant%22&_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc#v=onepage&q&f=false (date of access: 11.08.2024).

22. Johnson G., Scholes K. and Whittington, R. Exploring Corporate Strategy: Text and Cases. 8th Edition, Prentice Hall, Harlow. URL: <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=1242479> (date of access: 11.08.2024).

23. Kantar Group and Affiliates. New Report: Brand Purpose. Kantar. Shape your brand future. URL: <https://www.kantar.com/north-america/campaigns/brand-purpose> (Дата звернення: 11.08.2024).

24. Laricchia F. Apple net income 2005-2023 | statista. Statista. Website. URL: <https://www.statista.com/statistics/267728/apples-net-income-since-2005/> (date of access: 11.08.2024).

25. Largest tech companies by market cap. Companies ranked by Market Cap - CompaniesMarketCap.com. URL: <https://companiesmarketcap.com/tech/largest-tech-companies-by-market-cap/> (date of access: 11.08.2024).

26. Leswing K. CEO Tim Cook says layoffs are a 'last resort' and not something Apple is considering right now. CNBC. URL: <https://www.cnbc.com/2023/05/04/apple-layoffs-are-a-last-resort-tim-cooksays.html> (date of access: 11.08.2024).

27. Levy S. Britannica money. Encyclopedia Britannica | Britannica. Website. URL: <https://www.britannica.com/money/Apple-Inc> (date of access: 11.08.2024).

28. Makos J. Apple PESTLE Analysis (2024 Updated). PESTLE Analysis. URL: <https://pestleanalysis.com/apple-pestle-analysis/> (date of access: 11.08.2024).

29. Nover S. Apple has officially become the world's first-ever \$3 trillion company. QUARTZ. URL: <https://qz.com/apple-s-valuation-tops-3-trillion-1850595210> (date of access: 11.08.2024).

30. Nelson R. National Innovation Systems. A Comparative Analysis / R. Nelson. – Oxford, Oxford University Press, 2011. 184 p.

31. OECD. Innovation in Firms: A Microeconomic Perspective / OECD

Publications, Paris, 2011. 150 p.

32. Pereira D. Apple PESTLE Analysis (2024). Business Model Analyst. URL: <https://businessmodelanalyst.com/apple-pestle-analysis/> (date of access: 11.08.2024).

33. Porter M. E. Competitive Advantage: Creating and Sustaining Superior Performance. Free Press. URL: <https://www.hbs.edu/faculty/Pages/item.aspx?num=193> (date of access: 11.08.2024).

34. Schilling M. A. Strategic Management of Technological Innovation. McGraw-Hill Education. URL: https://www.researchgate.net/publication/298786885_Strategic_Management_of_Technological_Innovation (date of access: 11.08.2024).

35. Technology & Telecommunications>Consumer Electronics /Apple's net income 2005-2021/Published by Lionel Sujay Vailshery /Nov 22, 2021 Apple's net income in the company's fiscal years from 2005 to 2021(in billion U.S. dollars) URL: <https://www.statista.com/statistics/267728/apples-net-income-since-2005/> (date of access: 11.08.2024).

36. Teece D. J. Innovation in Dynamic Capabilities and Strategic Management. Oxford University Press. URL: https://www.researchgate.net/publication/227468288_Dynamic_Capabilities_and_Strategic_Management_Organizing_for_Innovation_and_Growth (date of access: 11.08.2024).

37. UN. COP21 – frequently asked questions. Un.org. URL: <https://www.un.org/sustainabledevelopment/wp-content/uploads/2015/10/COP21-FAQs.pdf> (date of access: 11.08.2024).

38. Weforum and Accenture. Net-Zero industry tracker 2022 edition. weforum. URL: https://www3.weforum.org/docs/WEF_NetZero_Industry_Tracker_2022_Edition.pdf (date of access: 11.08.2024).

39. Weforum. First movers coalition. Initiatives - weforum. URL: <https://initiatives.weforum.org/first-movers-coalition/home> (date of access: 11.08.2024).

40. Zhang Zhichao. Certain aspects of strategic management and innovation when setting up a company. Materials of the II International Scientific and Practical Conference "Restoration of Ukraine and its regions in the context of global trends: management, administration and provision" (Zaporizhzhia, May 23-24, 2024).

41. Zhang Zhichao. Peculiarities of strategic management formation in a high-tech corporation. Strategic priorities for the development of accounting, auditing and taxation in the context of globalization: materials of the II International Scientific and Practical Conference (Sumy, November 16, 2023) / edited by Prof. Nazarenko O.V. Sumy: SNAU, 2023. pp. 395-398