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Article

The Impact of the Modern Trends on the Complexing of the Business Model of High Tech IT Company

Denis S. Pashchenko[1,*]

[1] SlavaSoft, Spain; e-mail: denpas@rambler.ru
* Correspondence

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Abstract: This article explores the critical transformation of IT firms into high-tech companies (HTC) amid rapidly evolving industry trends, including sector-wide digitalization, the shift toward full virtualization of production processes, and the increasing integration of artificial intelligence (AI) tools in software engineering. These trends are fundamentally reshaping the competitive landscape, necessitating a proactive response from IT companies seeking to maintain and enhance their market positions. The article introduces an innovative model for high-tech companies, placing the production function at the core of a company's competitive strategy. This model emphasizes the need for companies to adopt digitalized, automated processes across all phases of the software lifecycle, fully embrace remote and hybrid work models, and develop unique products driven by digital management systems. Additionally, the article presents a comprehensive set of strategic elements and tactical steps that IT companies can implement to achieve HTC status. These include fully virtualized production functions, geographically distributed teams that enable continuous product support and development, and the deployment of AI tools to enhance operational decision-making, sales forecasting, and customer support. A key focus is on maximizing value creation from intellectual property rather than traditional revenue streams such as outsourced software development or service provision. The study also highlights the need for companies to integrate predictive models and AI tools in various business areas, including marketing, sales, and product management, to strengthen their market position.

Keywords: Digital Transformation; Software Development; Business Model; High Tech Company, AI.

1. Introduction

The economic activity of companies within the information technology (IT) sector represents a complex and dynamically active interaction of business functions, where the dominant position (from the perspective of value creation) belongs to the production function responsible for delivering services or products. The high margin nature of this business is inherently tied to the innovative nature of the offered products or services, forcing IT companies to proactively innovate across all production and sales processes. The significant capital and operational expenditures required for innovation within IT companies, combined with record global investments in the IT sector (including consumer demand), and an extraordinary level of "human capital," contribute to the rapid development of efficient competitive models within the industry. At the core of these competitive models lies a set of tactical and strategic elements of corporate development, with a key focus on innovations directed at production processes.

High-tech IT companies (HTCs) serve as prime examples of how competition has intensified within the "new economy" industries [1]. On the one hand, these companies readily adopt and improve the most effective business development models from traditional industries; on the other hand, they generate impressive technological and organizational innovations, which have already become the "engine" for transforming many other sectors (e.g., retail, finance, government services, and transportation). Modern trends in enhancing the competitiveness of IT companies are inextricably linked to the formalization of business processes, the development of complex partnership models, and the total automation and digitalization of operations. However, the organizational and production paradigm shift that began during the COVID-19

pandemic has opened new opportunities for competitive development in the IT sector [2]. This shift was driven by the significant rise in the influence of the following trends:

1) Digitalization of IT company production processes;
2) The establishment of IT companies without physical offices, with teams distributed across countries or the globe;
3) The active use of artificial intelligence (AI) in all business functions of IT companies.

It is essential to consider these trends and the associated organizational and technological innovations when redefining the business models of HTCs [3]. Proactive analysis of how these trends impact the success of competitive strategies is necessary, along with adjusting their individual elements. For certain segments of the IT industry, a substantial modification of general approaches to organizing the production function may be required.

According to [3], among the changes in business influenced by digitalization in the IT industry, the following should be highlighted:

- Organizational changes in management and production;
- Increased efficiency in production processes;
- Enhanced product value for users/customers.

Organizational changes in software development companies are mainly tied to ensuring "agile" responses to external environmental shifts. Historically, the last significant increase in the efficiency of production processes in IT companies was associated with the agile transformation, which is now largely complete in the IT industry [4]. At first glance, the vague requirements of "agile" software development paradigms seem to be at odds with a structured business approach to the impact of digitalization trends. However, upon closer examination, it becomes evident that in numerous practical parameters, agile methodologies provide a significantly more precise and truly digital approach to management. This advantage can be built upon the use of digital data in management, and in this article, the primary aspects of the impact of digitalization on the construction of competitive industry models will be defined.

Another emerging trend relates to the creation of IT companies that have adopted the organizational and production paradigm of fully remote work, wherein practically all employees operate in geographically distributed teams. This software development paradigm assumes that a significant portion of each project team works "outside the office" on a continuous basis, and some team members may never meet in person. The paradigm also entails active participation by contractor teams and freelance specialists in joint software development projects. While geographically distributed software development had already taken a leading position globally before 2020 [5], the COVID pandemic and its lockdowns in 2020-21 fully shaped all the processes and characteristics of completely remote software development, cementing its place within the structure of the global digital economy. Office-less IT companies have already exerted considerable influence on changes in the labor market within the industry and continue to substantially alter optimal digitalization models for production processes in their sector.

Another significant trend in the development of the IT industry is the growing influence of artificial intelligence tools. The rising application of AI tools in software development is practically realizing the long-predicted concept of "AI-augmented software engineering," forecasted by Gartner. This innovative direction in the evolution of IT companies is currently in its active formalization stage [6], sparking significant interest in the industry. The potentially enormous impact on software production and the IT business in general makes this concept a subject of wide-ranging discussion and a pressing scientific topic. In Europe, there are diverse views on the future of AI tools in software engineering. Some international banks have prohibited their developers from using certain AI tools (such as different types of Copilot), while leading educational institutions have already incorporated disciplines on AI use in software engineering into their curricula. Furthermore, many companies are actively integrating AI features into their software products, and a significant portion of IT companies have already implemented AI tools into their production and business processes. Without a doubt, the practical use of large language models (LLMs) and other AI tools calls for identifying best practices in AI-augmented software engineering. It is already apparent that IT companies and their engineers who master these best practices will gain significant advantages in the IT market. Alongside these opportunities, it is also essential to highlight the accompanying threats and risks related to the implementation and operation of AI tools, ranging from labor and economic aspects to information security concerns.

It should be noted that the high pace of IT industry development and the complex nature of innovation diffusion, as in other sectors, leave many companies "out of the innovation wave" and far from new organizational and production paradigms. For them, this implies a long-term reduction in some competitive advantages, which may still align with their business strategies. Thus, the post-pandemic IT market is significantly influenced by three global trends, the collective impact of which cannot be ignored, and the shift in the organizational and production paradigm of the IT sector has already begun [3]. The main problem is clear: this shift should be managed and leads to additional efficiency in software production. It defines the one of the central ideas of this article – how to examine the multifaceted impact of these three trends on the ability of IT companies to achieve global competitiveness through the development and application of innovative business strategy elements. The research sets the scientific goal of

identifying corporate strategy (or tactical) elements that result from managing timely corporate changes in alignment with industry trends: digitalization of production processes, the growing adoption of fully remote work paradigms, and the active use of AI tools.

The main scientific task of this article is to determine the level of influence these trends have on the European IT market and explore opportunities for incorporating them into corporate strategies to achieve global competitiveness. The proposed elements of corporate strategy should become part of the model for a high-tech, highly competitive IT company [3]. Based on the proposed analysis, a fundamental route should be defined for achieving and maintaining this global level of competitiveness for HTCs. The IT industry is undergoing a significant transformation, driven by three major global trends. These trends are reshaping organizational structures, enhancing production efficiency, and changing the economy of IT products. High-tech IT companies, as key players in this evolving landscape, must adapt by leveraging these trends to maintain and enhance their competitive edge on the global stage. Agile methodologies, digital technologies, AI-augmented software engineering, and innovative approaches to remote work are central to this adaptation. However, alongside the opportunities come new challenges, including potential risks related to labor practices and information security.

To remain competitive, IT companies must proactively incorporate these trends into their business strategies, refining both tactical and strategic elements to ensure sustained global competitiveness in this rapidly evolving sector.

The article has the following structure:

- Introduction with scientific problem and goal of research,
- Theoretical framework and literature overview about 3 main trends in IT industry,
- Main results of research with model of HTC and corresponding corporate strategy elements,
- Conclusion.

2. Methodology, theoretical framework and literature overview

Research Methodology is typical for such kind of studies. This study employs a qualitative and mixed-method research approach to examine the impact of three key industry trends—digitalization of production processes, the transition to fully remote organizational models, and the adoption of artificial intelligence tools—on the competitiveness of IT companies in the European market. The goal as it was mentioned before is to identify strategic and tactical corporate elements that enable IT companies to achieve and sustain the characteristics of high-tech IT companies (HTCs).

The research methodology is based on three complementary components. First, a systematic review of academic literature and industry reports was conducted to establish the theoretical framework, covering innovation diffusion, digital transformation, remote work paradigms, and AI-augmented software engineering. This review provided a basis for identifying stable characteristics of IT business models and emerging post-pandemic trends.

Second, the study integrates empirical findings from industry research conducted between 2020 and 2024 involving approximately 100 European IT companies. The empirical data were collected through expert surveys and structured interviews and analyzed using comparative and descriptive methods to assess organizational changes, productivity dynamics, and the practical adoption of remote work models and AI tools in software development.

Third, a comparative analytical approach was applied to evaluate the influence of the identified trends on production functions, organizational structures, and value creation models. Based on this analysis, a model-based synthesis was used to extend an existing conceptual model of a high-tech IT company by incorporating new strategy elements driven by digitalization, virtualization, and AI integration.

The resulting framework provides a structured representation of corporate strategy elements and tactical measures required to enhance global competitiveness in an increasingly digitalized and AI-driven IT industry.

Research limits should be also defined here:

1) Theoretical framework is more aligned with Pan-European industry of software development than with any other markets (like USA or India);
2) Growing demand and practical value of AI tools are rapidly changing, especially from end of 2022. It means, that theoretical framework and main conclusions might underestimate the impact of corresponding AI technologies on software development industry in 2026-2027.

Current business models in IT industry are well-learned and clear for professionals [7]. Despite of main approach of money earning (out-sourcing, out-staffing, license's reselling, product development, etc) main characteristics for IT business had been estimated and analyzed many years ago [3], [8]:

1) All typical business development models and strategies (Merges and Acquisitions, Porter's competition forces, Marketing mix (4p theory), etc.) are well-established in IT;
2) The production and sales processes are crucial in constant economic success;
3) Competition depends on many factors, their impact on success constantly changing in time.

The foundation of the innovative model for high-tech IT companies is built upon the results of scientific research conducted between 2020 and 2023 in Europe on the following topics:

- Formalization and consolidation of the "hybrid" work model and fully remote software development in the IT industry [9]-[11];
- Digitalization of production processes in IT companies [12], [13];
- Utilization of AI tools in the production processes of high-tech companies [6].

The author's research from 2020 to 2023 [9]-[11] covered around 100 IT companies (primarily in Europe) and revealed a steady growth in the proportion of teams in the industry for whom fully remote software development has become a production standard, rising from 31% in 2020 [9] to 58% by 2023 [11]. There has also been an increase in companies using the "hybrid work format," while Europe has seen the emergence of organizations returning their employees to offices starting in 2023 (around 13% of teams in the study [11]). For 63% of teams, productivity levels remained unchanged after transitioning to fully remote (or even hybrid) models, while one in five teams saw a significant increase in productivity [11].

Another study [14], which involved several dozen IT companies from Scandinavian countries, confirmed that the "forced" measure—fully remote work in the IT industry due to lockdowns in 2020—formed a new production culture with a whole set of approaches and methods. These changes (formalization and automation of tasks, virtualization of processes, complex communications, etc.) have become the foundation for new process models that remain even after the pandemic risks have subsided. Production tools and team organization have proven adaptable to new working conditions, with corporate process technology levels sufficiently high, though requiring additional investment. Furthermore, the study [14] also confirmed that the perceived productivity of engineers working remotely increased by mid-2022 compared to the early lockdown period.

In their rapid adaptation to fully remote software development in 2020, experts from the [9] study identified the following key factors:

- Prior remote work experience before the COVID crisis (found in 85% of teams);
- Official transformation plans, projects, and leadership efforts (reported by 38% of teams).

Studies [10], [11] confirmed that fully remote work and the "hybrid" model are widely applied in the IT industry, stand-alone, and economically justified. Although some global corporations and banks attempted to "return to the office" with a 40-hour workweek in 2021-2022, the pandemic risks, organizational resistance from engineering teams, and the migration of specialists across Europe made these attempts isolated and largely unsuccessful on a broader scale in the European IT industry. However, for some IT companies and banks with strong "in-house" development, the hybrid model remains a significant choice, requiring some employees to spend certain days in the office. About a third of teams surveyed in the [11] study continue to operate within the hybrid model after the pandemic risks have subsided. At the same time, over 58% of experts in the same study noted that the majority of engineers in their teams are happy and motivated by the fully remote software development model, while the potential obligation to return to offices has become a long-term demotivating factor for some, including being a reason to consider changing jobs.

In companies that have adopted the fully remote software development paradigm, production processes under this model have largely been consolidated, with all necessary changes and technologies long implemented. The [10] study showed that 2021 was a decisive year in terms of choosing, investing in, and solidifying the practice of fully remote software development; this year was marked by the most doubts and costs associated with the changes. Across Europe, the [11] study showed that two-thirds of surveyed teams had already implemented all improvements by 2022, and only minor details and changes are now being refined at the team level. In 20% of companies, top management continues to centrally improve the processes of fully remote employee work.

Thus, it can be concluded that the new paradigm of fully remote software development is highly in demand in the IT industry, and that changes in production and organizational models in IT companies, leveraging the advantages of remote work, have already been implemented. In large part, the fundamental technological feasibility of engineers working outside offices on a permanent basis was made possible by the significant development of technologies within the industry's digital transformation.

Digitalization is not merely an increase in numerical metrics in the management of the economy or production processes of IT companies. The high (total) level of automation already ensures the collection of data streams, while digitalization enhances the models for processing this data, accelerates the timely and partially automated decision-making process, and significantly simplifies optimal adaptation to changes in external conditions as well as business management [12]. Equally significant is the creation of complex numerical models, which are integrated into the assessment of company performance or success, both at the level of individual and group KPIs and across all process metrics. The total measurement of business process and result success is also a manifestation of digitalization, which rejects the dominance of "qualitative" assessments based on expert opinions or benchmarking.

The following examples of significant improvements in production processes during software development as part of digital transformation require classification by levels:

1) Internal automation - from software development environments to continuous deployment.
2) Long-term product development - from analyzing

its UI\UX (user interfaces / user experience) models to creating new functionality.

From the perspective of internal automation, the most significant advancements are observed in the digitalization of development tools, quality assurance models, and the implementation of continuous delivery and integration processes. Today, in software development environments (Software Development Environment - SDE), changes can be seen at every interaction with developers. Every action an engineer takes, from writing code to using the semantics of a programming language, is accounted for and met with feedback from the SDE. Moreover, every process, such as release builds, application launches, or emulator activations, is accompanied by detailed logging, providing clear insights into all steps of the process and the final outcomes. All debugging mechanisms in modern SDEs offer real-time data streams covering all aspects of the running application, from variable values to hardware behavior.

In addition to internal SDE tools, there are specialized software solutions that provide static code analysis in compliance with ISO/IEC 25010:2011 standards (and similar frameworks). The result of such analyses is a data stream on various software parameters, such as uninitialized variables, memory buffer overflows, format string errors, etc. With the development and integration of AI tools (e.g., Microsoft Copilot), the impact of data streams from SDEs has grown, contributing to the overall digitalization process aimed at reducing engineers' workload and automating routine tasks in development. Significant progress has also been made in the digitalization of testing processes (including automated testing environments) and the provision of continuous integration and deployment. While most relevant production processes are already automated, the growth of data streams from these tools facilitates the automatic handling of events (as seen in automated integration testing, release orchestration, etc.).

The digital data streams from automation tools in software development and testing can be used for decision-making in design and construction, as well as in project management activities in real-time, at various levels—ranging from individual productivity to team decisions about code refactoring and the use of additional hardware types and emulators during testing. Modern refactoring practices have also become "digital": engineers have moved from abstract assessments of function or process code refactoring to tasks involving quantitative forecasts of the benefits, such as code inheritance levels, software performance parameters, release cycle speed, or testing duration.

Digital models of product management have also become widespread - user interactions are now measurable at every level, from time-based parameters for interface actions to user satisfaction evaluations. This applies to all stages and types of users, from A/B testing of products to addressing complaints and inquiries from loyal clients and users. A modern software product development model must have a mathematical framework continually populated with digital data reflecting real usage experience. These results become the basis for managerial decisions regarding both product development and user engagement. A good example is Google Play Console for Android app developers. This product automates the entire lifecycle of release management, providing developers with vast amounts of data, graphs, and tables that offer detailed descriptions of all parameters related to the software's current operation and the corresponding user experience.

Another level - long-term work on a software product within the digitalized IT industry must align with the key trend of the past decade—continuous improvement of positive user experiences (user experience, UX) with the software. There are many approaches to achieving this, one of the most modern being the creation of an emotional-logical connection between positive user experiences in the form of "feelings from use" and various forms of digital statuses in automated or virtualized processes. For financial systems, these might include color-coded parameters and icons (pictograms), for communication apps, emojis and animated GIFs, and for video games, controller vibrations, sounds, and visible markers in virtual space that correspond to user actions. Obvious elements, such as statuses or events in automated processes within the software, acquire emotional nuances, enriching the user experience and influencing the expected user behavior patterns.

One more illustration should be added when describing the digitalization of typical user behavior in software. Well-known trends in user adaptation to software—such as visualizations of user actions, demo modes, and built-in hint systems—have long been established. However, over the last decade, business application developers have begun evaluating the digital parameters of these functions: average new user registration time or the number of "hint button" presses during user sessions. These metrics also influence software design and development. Thus, the emotional imprint on the user experience, evaluations of the accessibility (understandability) of graphical interfaces, and the success of predicting user behavior in typical scenarios have become part of the competitive advantages of modern software. Overall, the digitalization processes in software development companies are ongoing and have already had a significant impact on their competitiveness in the global market [13].

Another significant trend, aligned with industry-wide digitalization and the shift in organizational and production paradigms, is the growing demand for applied artificial intelligence (AI) tools among software developers. Since autumn 2022, this trend has gained momentum due to the increasing availability of AI tools to a broad range of engineers and the rapid advancements in the versatility and performance of large language models (LLMs), such

as GPT-3. According to research [6], European IT companies in 2024 are actively updating their production functions by incorporating various AI tools into nearly all process areas of software development. Notably, the benefits of AI tools extend across different organizational and production paradigms in the IT industry, impacting 3 following levels:

1) At the corporate level, AI integration necessitates the transformation of key business processes with a focus on production functions.
2) At the project level, standard roles and areas of responsibility are being redefined.
3) At the individual level, engineers are required to upgrade their skill sets to effectively utilize AI tools.

The study [6] reveals that by 2023, a significant portion (20%) of teams and organizations had already implemented AI tools in real software production, with approximately 43% planning to do so in the near future. Around 23% of experts reported frequent use of AI tools in their daily work on software development projects, while 20% found AI tools valuable for specific tasks in their regular workflow.

An expert group from [6] identified the main advantages of using AI/LLMs in software development practice as follows:

- Automation of routine tasks and time savings (63% of experts),
- Acceleration of operations within teams or organizations (43%),
- Improvement of software products, including software quality, user experience, and documentation (31%).

By mid-2023, AI tools (e.g., Watson or ChatGPT) were not widely used for business and system analysis tasks in software projects. Over 70% of experts did not use these tools for such tasks, and only 14% employed them for business modeling and data analysis. However, AI tools proved to be more in demand for software development tasks. The most popular use cases for AI tools among experts were:

- Making software code (including unit tests, stored procedures, etc.) – 31% of experts,
- Code review (including optimization and refactoring) – 23% of experts,
- Rapid prototyping of features – 14% of experts.

According to this study, code-related tasks are the most common use case for LLMs. In the realm of software quality assurance, the demand is lower, with the most popular tasks for LLMs being:

- Bug and vulnerability detection in code (11% of experts),
- Writing automated tests (around 9% of experts),
- Non-functional testing (integration, load, stress testing, etc.) – around 9% of experts.

Approximately 77% of experts do not use AI tools in software quality management. Nevertheless, AI tools have been found useful for other activities in software development projects:

- Software documentation (user guides, video tutorials, etc.) – around 29% of experts,
- Product support processes (issue and defect tickets, user assistance, etc.) – 11% of experts,
- Project management processes – around 9% of teams use AI tools.

The study [6] confirmed that the implementation of LLMs represents a significant competitive opportunity for IT companies. By mid-2023, 15% of experts noted that their companies had already implemented a corporate plan for AI integration into software development processes, while around 20% of teams/IT organizations were in the process of discussing centralized AI adoption scenarios, with the process already evolving at the team level.

However, the adoption of LLMs presents its own challenges and associated risks. The expert group identified the main obstacles to the implementation of AI tools in software development in 2023 as:

- Lack of resources (money, time, knowledge, etc.) – 43% of experts,
- Organizational resistance from engineers and managers – 34% of experts.

The primary risks of using AI tools include concerns about information security and legal issues surrounding intellectual property rights.

Thus, the use of LLMs in software development is growing in demand, with more and more European engineers utilizing various AI tools to solve tasks in software projects [14]. Meanwhile, IT companies have already begun centralized transformations of production processes, formalizing the use of AI tools. The focus of AI tools remains on program code (in various forms) and project/product documentation. The continued growth of AI tools' functionality, accessibility, and demand will lead to an even greater strengthening of cross-functionality among engineers [15], enabling them to independently solve entire classes of simple tasks. In this context, AI integration in software engineering is aimed at further enhancing the competitive capabilities of IT companies that are actively advancing their own digitalization and operating with geographically distributed and fully remote teams.

3. Main results of research

The innovation model of a high-tech IT company fully reflects its nature as a complex and stable production-technological and organizational-economic system over time [3]. The primary emphasis in this model is placed on the production function, which serves as the key factor in the competitiveness of companies within the IT sector. This model aims for IT companies to achieve a set

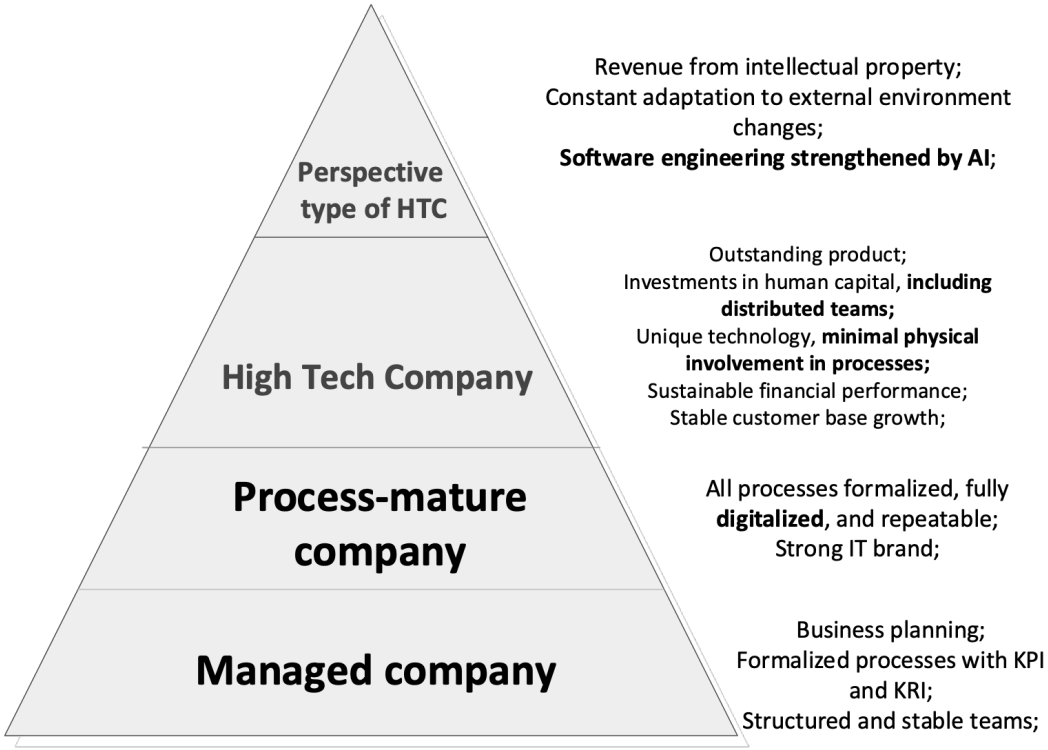

Figure 1. Development of IT company.

of process characteristics that, when combined, ensure a global level of competitiveness. These characteristics result from the company's overarching strategy and are typically tied to the adoption of innovations. The industry research findings discussed earlier necessitate the addition of new characteristics to the innovation model for achieving high-tech company (HTC) status in the short- and medium-term.

The following scientific task outlines the required elements of corporate strategy when:

- Implementing a "hybrid" or fully remote software development model,
- Digitizing and virtualizing technological processes to eliminate the need for physical presence or in-person meetings of engineers across all phases of the software or IT service lifecycle,
- Integrating AI tools into the business and production processes of an IT company.

The following table presents both previously identified HTC characteristics [3] and the necessary adjustments dictated by the increasing influence of the trends outlined above (bolded for emphasis).

It is obvious that having all the features of the HTC is a strategic task of the organizational and technological development of an IT company. Achieving a world-class competitiveness level requires significant time and financial resources, constant attention and control of management. As in other models of organizational and production development in the IT industry (CMMI, ISO), such strategic development can be carried out in iterations [3]. Guidelines for the dynamics of achieving the HTC by an IT company can be some levels of competitive development, the achievement of which gives a significant economic effect (Figure 1). At the same time, it should be understood that the development of the described trends continues, their influence on the industry increases over time.

From the point of view of the dynamics of this process, the proposed model of the HTC development has several levels:

- the first is a managed company capable of converting investments into profit and new market opportunities;
- the second is a process-mature company capable of ensuring the attractiveness of long-term cooperation with the best IT specialists [16];
- the third is a high-tech company that has received significant competitive advantages in the market [17];
- the fourth is a promising type of HTC, overtaking competitors in the speed of business development with the lowest possible capital investments in this process.

Big role on fourth level is playing automation via AI tools for all software development process areas – from working with requirements to coding and testing [18]. It's not only the set of tools that is changing the productivity of developer's teams or decrease the role of human mistakes [19], but a growing trend that is changing a lot of approaches in software production: from everyday professional learning to process organizations [6], [20].

The route described in Figure 1 for achieving a global level of competitiveness for high-tech IT companies is iterative. Completing each level in such a model is associated with achieving the key features of the HTC in the areas

Table 1. Key Indicators of Achieving High-Tech IT Company Status.

No	Process Area	Indicator
0	All Business Areas	Formalization, metric implementation, and automation of all business processes; audits of execution. Full digitalization of enterprise processes.
1	Human Capital Management	1.1. Building an HR brand with consideration of hybrid offices and fully remote work possibilities [21]. 1.2. Forming cohesive, stable engineering teams that continuously upskill and possess competencies to work without physical office presence.
2	IT Product (Service) Production	2.1. Creating an outstanding product fully managed based on a digital model (metrics, tools, environments). 2.2. Possessing unique production technology with total process automation and digital metrics for key parameters.
3	Marketing and Sales	3.1. Establishing a clear, recognizable, and attractive brand for the company \ product \ service. 3.2. Automating sales forecasting and operational issue management in customer service using AI tools [22].
4	IT Product \ Service Operations Support	4.1. Ensuring control (not just existence or measurability) of the customer satisfaction parameter. 4.2. Ensuring that service support outcomes for IT products \ services contribute to increased sales to both current and prospective customers. 4.3. Organizing support in a geographically distributed manner, covering the maximum number of time zones.
5	Economic Integrations	5.1. Flexibility in types of cooperation, interaction options, and product versions.
6	Risk Management for Key Areas	

indicated above in Table 1. Optimal compliance with the model level and achieving a set of key features is part of the design of the organizational development of an IT company, the accuracy of this process is an important parameter of the business transformation process. In the modern world, there are companies that have reached the level of HTC and above: they are the ones with full capabilities to create elements of national technological sovereignty. As part of solving the scientific problem, we will provide a set of elements of a corporate business strategy (and corresponding tactical steps) that should use the influence of significant industry trends - industry digitalization, a shift in the organization of team work towards a "hybrid" mode or completely remote work and the active use of AI tools (Table 2).

The corporate strategy elements from Table 2 and the corresponding steps in tactical development are a necessary addition to competitive organizational development in the IT industry. The desire to acquire a world-class competitiveness level implies the acquisition of the specified high-tech features (Table 2) and moving up the competitive development levels (Figure 1). To achieve the status of a high-tech company, the study proposes iterative development, and the planning of these iterations should take into account the need to manage various risks associated with the "challenges" of the constantly changing external environment. At the same time, the high dynamics in the industry presupposes constant investments in maintaining the achieved process maturity and competitive advantages, which implies the need for high financial stability of the IT company.

4. Conclusion

The trends identified in this article—industry-wide digitalization, the organizational and production shift toward full virtualization, and the adoption of AI tools in software engineering—have a profound and unavoidable impact on the IT sector. Proactive adaptation to these trends and timely adjustments at the level of corporate strategy are essential for IT companies seeking to strengthen their competitive position.

The fundamental model of organizing a high-tech IT company (HTC) constitutes the basis of its long-term competitiveness. The proposed model adopts an integrated approach to production, technological, and organizational aspects of company operations, with particular emphasis on the production function as a key determinant of success in the IT industry. Achieving global competitiveness requires consideration not only of the core characteristics of an HTC, but also of the new dynamics introduced by current industry trends (Table 1), including the formalization and automation of business processes, the development of an HR brand supporting hybrid and remote work, digital product management, and the integration of AI tools into marketing, sales, and customer support.

Table 2. Strategy Elements on the way to HTC.

No	Target Level	Corporate Strategy Element	Set of Tactical Steps	Notes
1	Process-mature Company	Digitalization of all production processes across all phases of the software or IT product lifecycle	Implementation of concepts such as "Data-Driven Decision Making," "Cloud Infrastructure," "Infrastructure as Code," "Continuous Deployment and Integration," and similar approaches	Instead of fully abandoning proprietary equipment or data centers, transformation is envisioned following a service model with its own performance metrics
2	HTC	Fully virtualized production function of the company	Implementation of concepts like "Fully Remote Software Development"	Routine work of project teams on core products/services should not depend on the physical location of engineers
3	HTC	Ability to perform most key company processes without in-person meetings between engineers and managers	Implementation of "Fully Remote Software Development" concepts, complete automation and digitalization of all business processes, HR policy shifts towards creating geographically distributed development teams	It is unlikely that 100% of company processes can be virtualized, but the hybrid and fully remote work model is crucial in attracting top engineers from the European market
4	HTC	Effective 24/7 support for the company's products/services	Organization of multiple distributed support teams whose active time zones collectively cover all necessary client time zones to provide real 24/7 support	This approach overcomes the main challenge of off-hours support and partly eliminates the outdated practice of "on-call night shifts"
5	HTC	Product development – digitalization of product management	Development, implementation, and automation of a digital model for managing the core product/service of the IT company	This digital model is based on incoming digital data streams regarding product operation and digital metrics of product development
6	HTC	Technological development – digitalization of production processes	Development and implementation of production technologies that enable data-driven operational decision-making	Digitalization of software production processes involves both total automation and the creation of digital metrics for key indicators (e.g., build time, quality levels)
7	Prospective High-Tech Company	Technological development – integration of AI tools	Identification and fulfillment of key IT company needs for AI tool usage across process areas, with a focus on production functions and sales forecasting/operational issue predictions	The implementation of AI tools appears promising in nearly all activity areas of an IT company. Investment strategies and prioritization remain debatable

The attainment of HTC characteristics is the result of effective corporate strategy implementation aligned with these trends. At the practical level, this involves a set of tactical measures for innovation adoption (Table 2). The analysis indicates a growing complexity of internal processes in modern high-tech IT companies as they pursue global competitiveness.

A key economic direction of this transformation is the shift toward maximizing revenue from intellectual property rather than traditional project-based services or outsourcing. This shift is closely linked to the virtualization of business processes and the expanding use of AI tools. The transition to an HTC is therefore a long-term, iterative, and capital-intensive process that requires strategic management and careful business planning.

The article identifies several critical strategic elements supporting this transition (Table 2), including full digitalization and virtualization of production processes, the elimination of mandatory in-person interactions, the organization of 24/7 product support through distributed teams, and the implementation of AI-driven product and process management. Fully virtualized software development also plays an important role in attracting highly qualified engineers, particularly in the European labor market. In addition, the digitization of production enables data-driven decision-making and enhances the ability to

predict and manage operational and market risks.

The use of geographically distributed teams for continuous support allows companies to overcome the constraints of traditional working hours and improve responsiveness to customer needs. AI tools further amplify this transformation by enabling automation and predictive analytics across marketing, production, and product lifecycle management, thereby increasing efficiency and anticipating operational challenges.

Overall, the transition to a high-tech IT company requires a holistic and iterative approach combining technological innovation with investment in human capital. Although this process is complex and resource-intensive, the strategic framework and tactical steps proposed in this study provide a structured pathway for navigating industry transformation and sustaining competitiveness in a rapidly evolving, AI-driven IT landscape.

5. Declarations

5.1. Author Contributions

All done by Denis Pashchenko.

5.2. Institutional Review Board Statement

Not applicable.

5.3. Informed Consent Statement

Not applicable.

5.4. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

5.5. Acknowledgment

Not applicable.

5.6. Conflicts of Interest

The authors declare no conflicts of interest.

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