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Financial and Technological Trends in the Operation of Electric Vehicles by Enterprises

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Abstract.

Modern development of electromobility is characterized by profound technological and organizational transformation of the automotive industry. The expansion of electric transport creates new operating conditions for enterprises, changing approaches to management, investment, and financial planning. The article examines current trends in the development of the electric vehicle market and their impact on the transformation of financial and managerial processes of enterprises. It is substantiated that the commercial use of electric transport generates a comprehensive positive financial effect and serves as an important driver of microeconomic change. The study identifies key technological trends in the further development of electric vehicles and determines the financial outcomes of their commercial application. It is established that the degree of transformation of an enterprise's financial and managerial processes depends on the share of electric vehicles in the fleet, ranging from minimal changes at 1–10% to full digital and autonomous transformation at 76–100%. It is demonstrated that with the growth of electric vehicle penetration, such technological trends intensify as the extension of battery service life, integration into enterprise energy systems, software-oriented usage models, autonomous control, IoT integration, development of car-sharing, and environmental neutrality. It is determined that the commercial operation of electric vehicles ensures revenue growth, cost optimization, reduced personnel and maintenance expenses, minimized tax burden, and increased investment attractiveness of enterprises. Thus, the development of electromobility drives a comprehensive transformation of enterprises' financial and managerial processes, leading to improved resource efficiency and enhanced economic performance. The continued expansion of electric transport creates new opportunities for innovative business models and requires the adaptation of management and accounting systems. It is shown that further technological development of electric vehicles will generate new financial effects of their use, which necessitates further scientific research.

Keywords: *electric vehicles, finance, accounting, management, technological development, enterprise financing.*

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Фінансово-технологічні тренди експлуатації електромобілів підприємствами

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Анотація.

Сучасний розвиток електромобільності характеризується глибокою технологічною та організаційною трансформацією автомобільної галузі. Поширення електричного транспорту формує нові умови функціонування підприємств, змінюючи підходи до управління, інвестування та фінансового планування. У статті досліджено сучасні тенденції розвитку ринку електромобілів та їх вплив на трансформацію фінансово-управлінських процесів підприємств. Обґрунтовано, що комерційне використання електричного транспорту формує комплексний позитивний фінансовий ефект та виступає важливим драйвером змін на мікрорівні. У ході дослідження виокремлено технологічні тенденції подальшого розвитку електромобілів та ідентифіковано фінансові результати їх комерційного використання. Встановлено, що ступінь трансформації фінансових і управлінських процесів підприємства залежить від частки електромобілів в автопарку: від мінімальних змін при 1–10% до повної цифрової та автономної трансформації при 76–100%. Доведено, що зі зростанням частки електромобілів посилюються такі технологічні тренди, як подовження строку служби акумуляторів, інтеграція в енергетичні системи підприємств, програмно-орієнтовані моделі використання, автономне управління, IoT-інтеграція, розвиток каршерінгу та екологічна нейтральність. Визначено, що комерційна експлуатація електромобілів забезпечує зростання доходів, оптимізацію витрат, зниження витрат на персонал і обслуговування, мінімізацію податкового навантаження та підвищення інвестиційної привабливості підприємств. Таким чином, розвиток електромобільності формує комплексну трансформацію фінансово-управлінських процесів підприємств, що супроводжується підвищенням ефективності використання ресурсів і зростанням економічної результативності. Подальше поширення електротранспорту створює нові можливості для інноваційного розвитку бізнес-моделей і потребує адаптації систем управління та обліку. Подальший технологічний розвиток електромобілів формуватиме нові фінансові ефекти їх використання, що зумовлює необхідність подальших наукових досліджень.

Ключові слова: *електричні автомобілі, фінанси, облік, управління, технологічний розвиток, фінансування діяльності підприємств.*

Introduction. The development of the electric vehicle market has driven a transformation of the entire automotive industry. The introduction of new automotive products has led to the emergence of a distinct ecosystem associated with the operation and maintenance of electric transport. The production of specialized spare parts and components, the expansion of charging infrastructure, the proliferation of electric vehicle servicing, and the adaptation of urban infrastructure have collectively given rise to related sectors of economic activity.

The emergence of new segments within the automotive industry, along with the expansion of electric vehicle applications, has contributed to the growing adoption of electric transport for commercial purposes. The integration of electric transport technologies for freight and passenger transportation into business operations has enhanced the system of financial relationships among market participants in the electric mobility sector. Preferential customs clearance regimes, subsidies for electric transport operators, leasing programs, the abolition of certain environmental taxes, and preferential electricity tariffs have shaped the specific features of the financial system at both macro- and microeconomic levels for enterprises utilizing specialized electric transport.

The transformation of the financial environment in which business entities operate necessitates the development of accounting and control systems governing the use of electric transport for economic purposes. The formation of a unique electric mobility ecosystem directly affects accounting and control processes as the foundation for generating economic information. The integration of electric vehicles into business activities is transforming data collection technologies and methods of information processing. Therefore, a key component of the further development of the financial environment for electric transport operators is the improvement of accounting and control systems for business entities engaged in freight and passenger transportation.

Analysis of research and publications. The global electric vehicle market demonstrates a persistent growth trend. Across all regions, the number of vehicles with electric powertrains produced increased during the period 2020–2025. However, European Union countries are gradually losing their leadership in the automotive industry. In particular, in 2024, production volumes in Europe declined from 2.4 million to 2.3 million electric vehicles, against the backdrop of steadily increasing output in other regions (Fig. 1) [1].

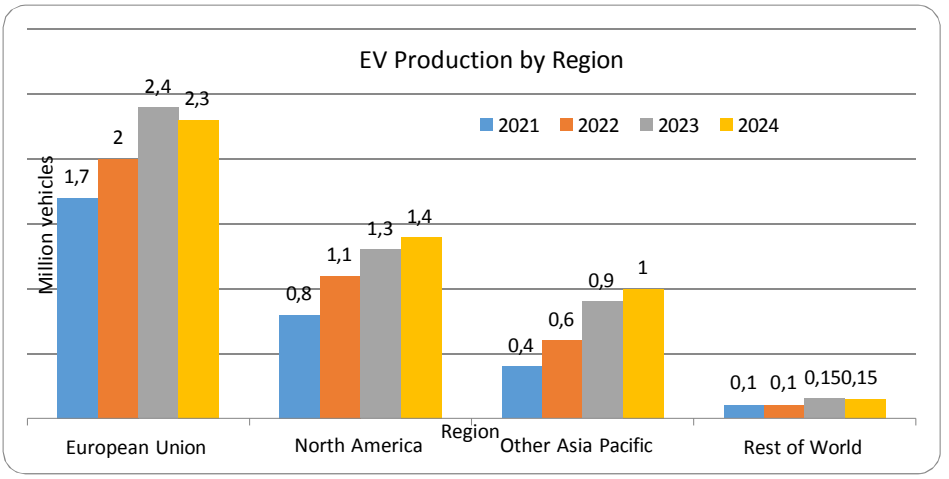

Fig. 1. Statistical indicators of electric vehicle production by region (millions, 2021–2024).
Source: compiled by the authors based on [1].

The underlying cause of these adverse developments in the European market is the lag in adopting innovative trends in electric mobility. Leadership in the implementation of advanced technologies in the electric transport sector is gradually shifting to American and Chinese automotive manufacturers. Therefore, consideration of the most advanced trends in the development of the electric vehicle industry is a crucial driver of sectoral leadership. At the same time, innovative electrification trends must be aligned with the financial and technological aspects of the commercial use of electric vehicles. The adaptation of electric vehicle utilization processes to enterprise-specific needs can maximize the economic benefits derived from the commercialization of their advantages over internal combustion engine vehicles.

Innovative trends in electric transport development are actively discussed within the academic community. Among the most significant and systematic studies is the work of Lomte Vinay, who conducted a comprehensive review of the current state and future prospects of electric vehicles, with a focus on electric vehicle typologies, advanced battery technologies, the evolution of charging infrastructure, global market trends, technological constraints, and prospective solutions shaping the future diffusion of electric mobility and the transformation of the global automotive industry [2].

Zvarych R. Ye. and Farion D. I. identified key trends in the innovative transformation of the automotive industry within the context of the global green transition, including transport decarbonization, the development of electromobility, and digitalization. Their study emphasizes technological trends, structural changes in the global market, infrastructural and resource challenges (such as charging networks and critical battery materials), and future industry prospects through enhanced international cooperation [3]. Akinsooto, O., Ogunnowo, E. O., and Ezeanochie, C. C. traced the evolution of electric vehicles, focusing on the historical development of the industry, major technological advancements (including battery technologies, charging infrastructure, and vehicle

design), demand drivers (environmental policies, consumer preferences, and decarbonization), national and global adoption models (the United States, China, and European countries), as well as key barriers to large-scale deployment (infrastructural limitations, driving range, and production capacity) and promising development directions (integration, autonomy, and battery innovation) [4]. Lasya Sirigiri et al. analyzed the current state and diffusion trends of electric vehicles, emphasizing the role of public policy in promoting electromobility, adoption dynamics across transport segments (two-wheelers, three-wheelers, and passenger vehicles), as well as the development of charging infrastructure and domestic manufacturing [5].

Considerably fewer studies directly address the financial aspects of using electric transport technologies for commercial purposes. In particular, Milev George, Hastings Astley, and Al-Habaibeh Amin, in their study of Scotland's full transition from internal combustion engine vehicles to electric vehicles, identified additional electricity demand, positive environmental effects, and associated economic costs [6]. Based on quantitative survey data and structural modeling, Ansab K. V. and Kumar S. demonstrated that financial incentives influence purchase intentions primarily indirectly – through shaping positive attitudes toward electric vehicles and enhancing perceived behavioral control among consumers [7].

Rajmal and Gupta, Kirti, found that the diffusion of electric vehicles, particularly passenger EVs, is highly dependent on the availability of public charging infrastructure and the price gap between electric and conventional vehicles. This underscores the importance of targeted public financial policies to stimulate demand [8]. Among financial incentives, tax and environmental instruments are considered the most effective for optimizing enterprise performance, as noted by Bernykov Vasyl [9]. Zadorozhnyi Z.-M. et al. substantiated the economic effects of the digitalized management of passenger and freight transport based on data generated by electric vehicles, particularly through mechanisms of cost accounting digitalization and transport service costing [10]. Rana Rachna, Bhambri Pankaj, and Kautish Sandeep generalized the prospects for electric vehicle diffusion through the lens of financial instruments and digital innovations, including the application of the metaverse to stimulate adoption and enhance consumer engagement. They identified key barriers to market development – high costs, insufficient charging infrastructure, limited driving range, and battery-related issues – and proposed strategic pathways to overcome them through financial-technological solutions, government support, and public–private cooperation [11].

Kovtsur Ekateryna and Olenchuk Illia provided a financial justification for organizational models of car-sharing as a tool for sustainable urban mobility in Ukrainian cities, using Ternopil as a case study. They developed an approach to estimating startup costs, identified optimal station locations, and demonstrated the economic, environmental, and social feasibility of electric vehicle use in car-sharing services [12]. Eszter Maklári conducted a comprehensive comparative analysis of electric vehicles and conventional internal combustion engine vehicles, focusing on cumulative economic effects, which are most pronounced in commercial applications regardless of the sector of economic activity [13]. The positive impact of integrated digitalization of transport, goods, and financial flows in the management of transport enterprises has also been substantiated in prior research [14]. Albuquerque Valentina and Rodrigues Tonny analyzed the motivations of private and corporate buyers of hybrid and electric vehicles from the perspective of consumer behavior and online interaction. Their findings indicate that economic benefits are the primary motivation for purchase; however, active participation in environmental initiatives enhances consumer awareness and fosters more sustainable consumption patterns among both individual and corporate buyers [15].

Existing studies on the financial, social, and environmental performance of electric vehicles are primarily focused on the macroeconomic level. However, structural transformations occur at the enterprise level, reshaping the financial and managerial dimensions of the commercial use of electric

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vehicles. The interconnection between financial and managerial aspects of enterprise operations and accounting systems justifies the need to develop methodologies for the digitalization of accounting information processing related to electric transport operations [16]. The activation of microeconomic transformations driven by emerging technological trends in electric mobility underscores the relevance and objective of further research into the commercial use of electric vehicles for passenger and freight transportation.

The purpose of this article is to identify key technological trends in the further development of electric vehicles and to determine the financial outcomes of their commercial use. The article hypothesizes that additional financial benefits can be achieved by enterprises through the incorporation of innovative electric vehicle development trends into their commercial operations.

Results. The automotive market is undergoing structural transformations. An increasing number of enterprises are reorienting their vehicle fleets toward electric vehicles. The significant growth in the share of electric vehicles necessitates a reconsideration of management and financing concepts for transport operations. The proportion of electric vehicles within a commercial fleet exerts a differentiated impact on enterprise management practices. When the share of electric vehicles is relatively low (in the range of 1-10% of the total commercial fleet), management may not yet prioritize fundamental transformations in organizational structure. However, an increase in this share to 11–25% requires a reassessment of the company's infrastructure. This includes investments in charging facilities, the recruitment of qualified personnel for the maintenance of electrical equipment, refinement of cost accounting methodologies for services involving electric vehicles, and the identification of strategies to minimize electricity costs.

If an enterprise is oriented toward a gradual expansion of electric vehicles to 26-50% of the fleet, a fundamental reorganization of business processes becomes necessary. Personnel are progressively reoriented toward the adoption of automated systems for management and maintenance. Enterprise management is increasingly заинтереced in the integration of electric vehicles into energy systems for electricity generation, exchange, and storage. To minimize energy costs, firms may pursue self-generation of electricity, which requires substantial additional investment.

The most systemic and profound financial and technological changes occur when the number of electric vehicles exceeds that of conventional internal combustion engine vehicles. These changes may include the transition to autonomous business models in which unmanned vehicles deliver goods and passengers; a significant reduction in personnel involved in vehicle operation and maintenance; the adoption of advanced cost accounting methods based on full-cost calculation; and the complete digital modeling and management of business processes.

Comprehensive changes in the financing and management of enterprise activities under conditions of an increasing share of electric vehicles in commercial fleets are presented in Table 1.

A specific component that distinguishes electric vehicles from conventional motor vehicles is the traction battery. Since the primary battery unit has a substantial initial cost, which significantly increases the overall production cost of electric vehicles, there is a need for separate accounting of vehicle components. An electric vehicle is no longer treated as a single, indivisible asset of the enterprise. A contemporary trend in the development of electric transport is the possibility of instant replacement of the main traction battery with a fully charged equivalent. In order to minimize downtime associated with charging – which depends on battery capacity and charging station power – rapid battery swapping solutions are being implemented. Electric vehicles with a low charge level can arrive at an enterprise facility for immediate battery replacement and promptly resume operational tasks.

Table 1

Transformation of management and financing of business activities depending on the share of electric vehicles in the fleet

Share of electric vehicles	Impact on financing activities	Impact on business management
1–10 %	• minimal capital investment in fleet adaptation, • pilot costs for charging infrastructure or outsourcing of charging, • partial adjustment of the maintenance budget, • assessment of fuel savings and tax benefits.	• electric vehicles are integrated without significant changes to business processes, • management decisions are local and test in nature, • initial accounting of costs and mileage of electric vehicles is formed, • control is carried out within the current operating model.
11–25 %	• investment in own or partner charging stations, • review of the cost structure with an emphasis on electricity, • formation of a budget for personnel training and electrical equipment service, • clarification of the cost calculation of transport services, • search for tools to reduce peak energy consumption costs.	• revision of logistics routes taking into account the charging infrastructure, • hiring or training of specialists in electric transport maintenance, • adaptation of KPIs for energy efficiency control, • implementation of digital monitoring of charge, mileage and technical condition, • partial change of maintenance regulations.
26–50 %	• significant investments in own energy infrastructure, • investment in electricity storage and generation systems, • transition to energy budgeting and load forecasting, • redistribution of costs from fuel to digital and energy infrastructure, • investment in dispatching and service automation.	• reorganization of business processes and transport logistics, • integration of electric vehicles into the energy system of the enterprise, • automation of dispatching, diagnostics and route planning, • reorientation of personnel to digital management and technical support, • strengthening the role of data analytics in decision-making.
51–75 %	• dominance of investments in digital and energy infrastructure, • reduction of fuel and traditional repair costs, • growth of investments in software, telematics and autonomous systems, • transition to full accounting of the life cycle of transport assets, • active use of leasing, ESG financing and green credits.	• deep transformation of the enterprise's operating model, • centralized digital fleet management in real time, • reduction of the share of manual management and routine operations, • integration of predictive maintenance, • strengthening cybersecurity and digital risk management.
76–100 %	• complete transformation of the financial model of transport activities, • the main investments are directed to autonomous systems, AI and energy management, • maximization of savings on operating costs in the long term, • transition to a full-cost and carbon accounting model, • monetization of energy assets through the accumulation and exchange of electricity.	• transition to autonomous and unmanned transportation models, • fully digital modeling and management of business processes, • radical reduction of personnel in traditional transport functions, • management based on artificial intelligence and scenario analytics, • full integration of transport, energy and IT systems of the enterprise.

Source: generated by the authors.

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In the case of periodic battery replacement, there is a need for their identifiable accounting as well as monitoring of their current condition. For electric vehicle operators, it is essential to track the status of batteries (e.g., stored in a discharged state, awaiting charging, fully charged, awaiting installation, or in operation). The separate accounting of batteries and electric vehicles also enables monitoring of their wear level, which is particularly important for assessing degradation processes associated with this type of transport. This provides enterprise management with an effective mechanism for planning the service life of both vehicles and their key components.

For enterprises using electric vehicles for commercial purposes, the speed of recharging traction batteries is critical. Standard charging modules are often unable to meet operational requirements for rapid charging. Therefore, a current trend in the development of commercial electric transport is the acquisition of high-performance charging stations. The cost of such charging equipment can be substantial, prompting enterprises to acquire it through leasing or rental arrangements. The use of proprietary (or leased) charging infrastructure is generally more cost-effective than relying on public charging services, as electricity supplied directly for commercial use is typically less expensive than that provided by third-party charging operators. Consequently, enterprises are incentivized to seek more efficient models for electricity procurement and supply. In many cases, electricity tariffs are lower during nighttime hours, which necessitates adjustments to operational cycles. Accordingly, nighttime charging of vehicles is often the optimal strategy.

If intensive utilization of electric transport requires additional daytime charging, self-generation and storage of electricity become advisable. For this purpose, various energy generation technologies and high-capacity energy storage systems may be employed. Given the high cost of external battery storage systems, it is also advisable to integrate electric vehicles into the enterprise's energy network. Temporarily idle vehicles can be used as energy storage units for short-term electricity accumulation and supply. Each vehicle connected to a high-capacity charging network can both receive and return energy resources efficiently. The use of electric vehicles as supplementary energy sources is particularly valuable for enterprises facing unstable or interrupted electricity supply. This situation is especially relevant for Ukrainian enterprises operating under scheduled power outages.

However, such conditions impose significant requirements on accounting and control systems, particularly in terms of monitoring electricity reserves. Accounting systems can collect data on current energy levels and planned consumption volumes, which, together with electricity supply and outage schedules, form an integral part of energy management. Effective management of energy resources can ensure the uninterrupted operation of enterprises that utilize electric transport in their economic activities.

The modern automotive industry is transitioning toward a software-oriented business model. An acquired electric vehicle constitutes merely the technical hardware for an enterprise, while its full functional utilization – particularly for commercial purposes – requires specialized software. Such software products may be provided by manufacturers on a partially or fully paid basis, often in the form of subscription models. For instance, basic functionalities of an electric vehicle may be conditionally free of charge, whereas additional services or performance enhancements may require one-time or recurring payments to the manufacturer. In this context, the acquisition of an electric vehicle without the corresponding software constitutes incomplete capital investment. A one-time payment for a comprehensive software package is capitalized as part of the initial cost of the electric vehicle, whereas recurring subscription fees may be recognized as expenses of the current or future periods.

The software-oriented distribution model of electric transport reduces the share of upfront capital expenditures in favor of periodic annuity-type payments, allowing operators to spread acquisition and usage costs over time, thereby reducing the immediate financial burden while increasing the total cost of ownership of the integrated hardware-software system; however, enterprises become dependent on continuous software updates and the renewal of operational certifications. An additional

cost category may involve the acquisition of third-party software applications for the technological platforms of electric vehicles, enabling extended functionality or specialized commercial use; such software is separable from the vehicle and should be accounted for independently from its technical components. Consequently, the separation of hardware and software components transforms the electric vehicle into an expandable platform adaptable to the operational needs and financial capacity of its operator.

Electric vehicle manufacturers have been among the first to introduce autonomous driving systems. Enterprises using electric vehicles for commercial purposes may adopt various models of automated vehicle control. Most electric vehicles support cruise control and automated steering functions, which primarily simplify drivers' tasks and do not substantially alter the financial conditions of enterprise operations. However, a key emerging trend in the automotive industry is the gradual transition toward fully autonomous driving. Unmanned vehicles capable of transporting goods and passengers are actively being tested. The implementation of robotic logistics and autonomous taxi services redistributes the cost structure associated with fleet maintenance. In particular, reductions in the number of drivers and couriers – whose functions can be automated – lead to decreased labor costs and social contributions. Additional operating expenses linked to labor-intensive fleet management may also be reduced. At the same time, automated vehicle control requires real-time operational data that cannot be collected manually, thereby increasing requirements for data granularity and instantaneous transmission for monitoring vehicle location and task execution. Such data can be effectively utilized for financial control and management purposes in transport enterprises.

The synchronization of all electric vehicles with transport management information systems is enabled through the Internet of Things (IoT). Each electric vehicle autonomously collects data on the status of its functional systems, location, and movement parameters. IoT technologies embedded in electric vehicles facilitate the transmission of these data to processing and storage systems, where they are subsequently used for accounting and managerial purposes. Furthermore, this information and communication technology enables interaction among vehicles and their integration into automated traffic management systems, significantly reducing the probability of road accidents. At certain moments, the control system may assume partial or full control over the vehicle to prevent accidents or violations of traffic regulations. The reduction in accident rates positively affects the financial performance of enterprises by mitigating potential losses related to property damage and harm to individuals. Communication among electric vehicles via advanced digital technologies also contributes to lower insurance costs for vehicles and third-party liability, as well as reduced health insurance expenses for personnel directly involved in transport operations. Enterprises utilizing modern autonomous electric vehicles are therefore able to minimize losses associated with emergency events.

The minimization of operating costs has facilitated the widespread adoption of the car-sharing business model. Car sharing involves providing electric vehicles for temporary use during periods when they are not required by the owner. Enterprises may lease idle fleet resources to external entities or individuals, generating rental income as compensation for temporary asset utilization. However, this approach entails a temporary loss of control and availability of vehicles, which may be required for operational needs. Car-sharing platforms address this issue by enabling efficient allocation of fleet resources while ensuring access when needed. Electric vehicles are particularly suitable for car sharing due to their lower wear and longer service life, as well as the absence of certain components typical of internal combustion engine vehicles. Since the primary traction battery degrades more with time than with intensity of use, electric vehicles are well suited for short-term rental during idle periods. This mechanism enables more efficient utilization of fleet assets and maximizes the economic return on ownership.

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Within a car-sharing framework, enterprises are advised to adopt innovative fleet management models. Information on vehicle availability and usage schedules should be integrated with car-sharing platforms, allowing incoming requests for short-term vehicle use from third parties. Enterprise management can approve or reject such requests based on operational requirements and fleet schedules.

In addition to economic incentives, environmental considerations further motivate the adoption of electric vehicles. Enterprises oriented toward electric transport benefit from reduced environmental taxation associated with fleet operations. Governments in various countries provide subsidies and financial incentives for the acquisition of commercial electric vehicles in order to reduce harmful emissions. Similar benefits have been extended to importers of electric vehicles through tax exemptions on import operations. In many countries (including Ukraine until January 1, 2026), electric vehicle imports have been exempt from value-added tax, customs duties, and related fees. These measures aim to reduce dependence on fossil fuels, positioning electricity as a cleaner energy source for transport.

Moreover, the large-scale adoption of electric vehicles aligns with ESG-oriented business practices. Enterprises disclose increases in the share of electric vehicles in their non-financial reports as part of their environmental and social responsibility strategies. The reduction of emissions is presented as a commitment to sustainable development. Participation in sustainability initiatives enables businesses to attract grants and investment, which may constitute a significant financial resource for further development. Consequently, enterprises are incentivized to increase the share of electric vehicles relative to conventional internal combustion engine vehicles. The growth in environmentally responsible enterprises serves as a positive indicator of national living standards, while both financial and non-financial ESG indicators influence the volume of foreign investment. International financial and regulatory institutions are more inclined to allocate resources to countries and companies demonstrating a high level of ESG governance. A synthesis of the key innovative technological trends in electric vehicle development and their positive impact on financial and managerial processes is presented in Fig. 2.

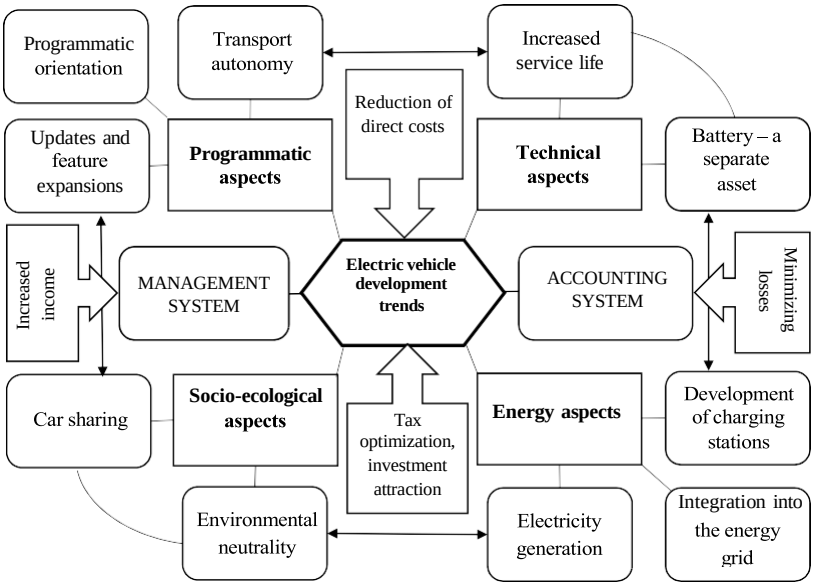

Fig. 2. Innovative technological trends in the development of electric vehicles and their impact on the functioning of enterprises.

Source: generated by the authors.

Generalization of innovative technological trends in the development of electric vehicles allows us to identify and systematize additional financial effects from the commercial operation of electric vehicles. First of all, improving the technological processes for manufacturing electric vehicles will significantly increase their useful life without significant loss of functionality (reducing the distance on a single battery charge, increasing the duration of battery operation, etc.), which allows the enterprise to receive greater income from the transportation of passengers and cargo. Also, the integration of electric vehicles into the enterprise's energy network allows us to form a holistic ecosystem that optimizes the costs of enterprises from generating, accumulating and using electricity, especially in conditions of a centralized power supply outage. The autonomy of electric vehicles allows us to optimize the payroll of personnel associated with the management and maintenance of vehicles. A software-oriented approach to updating electric vehicles helps to improve financial indicators from their use and reduce costs for software and technical maintenance of the rolling stock of the enterprise's fleet. The growth of the share of electric vehicles in the fleet minimizes taxes and fees for the import and use of enterprise vehicles, and also creates a positive business image of the environmentally friendly nature of the business, which potentially contributes to attracting additional financing and investments in the further development of an environmentally neutral business.

Conclusions. The current stage of development of the electric vehicle market is characterized by the emergence of advanced technological trends. In addition to technological changes, the use of electric vehicles contributes to positive financial shifts at the microeconomic level. The degree of transformation of financial and managerial processes directly depends on the share of electric vehicles within an enterprise's fleet: at a share of 1-10%, only minimal changes occur, with negligible impact on financial processes and predominantly localized management; at 11-25%, structural adaptation of financing begins through infrastructure investments and cost minimization, accompanied by partial managerial transformation with automated monitoring; within the range of 26-50%, a systemic transition toward energy planning and substantial investments in management automation takes place, supported by business process reorganization; at 51-75%, investments in digital and energy solutions dominate, direct costs are significantly reduced, and management becomes centralized, automated, and predictive; at 76-100%, a full transformation of the financial model occurs, with an emphasis on artificial intelligence, energy management, and long-term efficiency, while management shifts to autonomous, fully digital, and integrated systems.

As the share of electric vehicles used for commercial passenger and freight transportation increases, technological development trends become more pronounced. These include the extension of the service life of vehicle components (particularly the main traction battery), integration of electric vehicles into enterprise energy systems, software-oriented positioning enabling continuous updates and functional expansion, full autonomy of vehicle control, integration of vehicles into unified systems through the Internet of Things, the expansion of car-sharing models, environmental neutrality, and optimized interaction with the surrounding environment.

A synthesis of innovative technological trends in electric vehicle development indicates that their commercial utilization generates a comprehensive positive financial effect. This effect is manifested in increased revenues due to extended service life and improved operational efficiency, cost optimization through integration with energy infrastructure and automation, reduced personnel and maintenance expenses, minimized tax burdens, and enhanced investment attractiveness driven by the environmental orientation of business activities. Further technological advancement of electric vehicles may lead to the emergence of new financial advantages in their commercial application, which necessitates continued academic research.

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