

potential faults in vehicles and infrastructure, the applications of ITS are as diverse as they are transformative.[2]

Moreover, the proliferation of mobile technologies and internet connectivity has ushered in a new era of on-demand mobility services, revolutionizing the way people access and utilize transportation resources. Ride-hailing platforms, car-sharing schemes, and micro-mobility solutions have proliferated, offering consumers unprecedented flexibility and convenience while simultaneously fostering more sustainable and efficient modes of transportation.[2]

In conclusion, the integration of information technologies into the realm of transportation represents a pivotal juncture in the evolution of modern society. By harnessing the power of data, connectivity, and intelligence, we have the opportunity to transcend the constraints of conventional transportation systems and forge a future characterized by unprecedented levels of efficiency, accessibility, and sustainability. As we navigate the complexities of the information age, let us seize this momentous opportunity to chart a course towards a more interconnected, resilient, and prosperous future for all.[2]

DEVELOPMENT OF TRANSPORT TECHNOLOGY

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Transportation has always been an essential aspect of human civilization, enabling the movement of people and goods from one place to another. Over the years, advancements in technology have revolutionized the way we travel, making transportation faster, safer, and more efficient. From the invention of the wheel to the development of high-speed trains and electric vehicles, transportation technologies continue to evolve, shaping the future of mobility ,

One of the most significant advancements in transportation technology is the rise of electric vehicles (EVs). With concerns about climate change and air pollution on the rise, EVs offer a cleaner and more sustainable alternative to traditional

gasoline-powered vehicles. Major automobile manufacturers are investing heavily in EV technology, developing more efficient batteries and charging infrastructure to support widespread adoption [1].

Autonomous vehicles (AVs) represent another transformative technology that is poised to revolutionize transportation. AVs use a combination of sensors, cameras, and artificial intelligence to navigate roads without human intervention. While fully autonomous vehicles are still in the testing phase, they hold the promise of reducing accidents and congestion on the roads, as well as providing greater mobility for the elderly and disabled .

In addition to EVs and AVs, smart transportation systems are also playing a crucial role in shaping the future of mobility. These systems leverage data and connectivity to optimize traffic flow, manage congestion, and improve the overall efficiency of transportation networks. For example, intelligent traffic management systems use real-time data to adjust traffic signals and reroute vehicles to avoid congestion hotspots, reducing travel times and fuel consumption. Furthermore, the integration of intermodal transportation systems is enhancing connectivity and convenience for travelers. Intermodal hubs, which allow seamless transfers between different modes of transportation such as trains, buses, and bicycles, are becoming increasingly common in urban areas. This integration not only improves the efficiency of transportation networks but also encourages the use of more sustainable modes of travel.

Looking ahead, emerging technologies such as hyperloop and flying taxis have the potential for further revolutionizing the modes of transportation. Hyperloop, a proposed high-speed transportation system that uses vacuum tubes to propel pods at speeds of up to 700 mph, could dramatically reduce travel times between cities. Similarly, flying taxis, which are being developed by companies like Uber and Volo copter, promise to provide a fast and efficient means of urban transportation.

Electric cars play a significant role in changing the world, as they contribute to reducing pollution and reducing dependence on oil resources. Here are some of the ways in which electric cars impact our society and features:

1. Eco-friendly: Electric cars do not emit harmful emissions into the air, so they contribute to reducing air pollution and improving air quality.

2. Energy efficiency: Electric cars have a higher efficiency than cars with internal combustion engines, allowing for more efficient use of energy.

3. Noise Reduction: Electric motors are much quieter than internal combustion engines, which helps to reduce noise levels in cities and improve the quality of life of residents.

4. Infrastructure development: The proliferation of electric vehicles drives the development of charging station infrastructure, which helps to create a more comfortable environment for electric vehicle users.

Overall, electric cars play an important role in the transition to more sustainable and environmentally friendly transportation, which contributes to improving people's quality of life and preserving the environment.

The electric car appeared before the internal combustion engine.

In 1881, at the First International Exhibition of Electricity in Paris, Gustave Trovet's first three-wheeled electric car was unveiled, which reached a speed of 12 km/h with a range of 14–26 km. In 1888, the Flocken electric car was first developed in Germany.

The very first electric electric car in the United States can be considered the electric four-wheeled carriage of the Morrison Electric company, created in 1891. The crew was equipped with a Siemens electric motor with a capacity of 4 horsepower, with which it could reach speeds of up to 32 km/h and was designed for 6-12 passengers. Electric batteries provided a range of up to 80 km. The car was controlled by a steering wheel with a patented rack and pinion mechanism. Throughout its history, the company has produced 11 of these carriages.

The development of cargo transportation technologies is impossible without improvement the process of delivery of packaged goods, which is the most common cargo not only on a city scale, but also on a national scale. These include both goods and the products of the manufacturing industries.

Transportation of packaged cargo provides complex mechanization and

automation of all loading and unloading and storage facilities operations. Many people have studied the effectiveness of these processes, both domestic and foreign scientists. However, the issue of logistics management provides for the theory and practice of managing the processes of movement of the aggregate material flows, which is, in this case, packaged and piecemeal cargoes that are not sufficiently scientifically developed. The technological process of delivery of packaged goods can be divided into three components: the process of forming the flow of goods in the warehouse distribution center, the process of its transportation to retail points network and the process of its consumption. Efficiency of logistics management of everything technological process depends on the effective organization of its work components.

Effective logistic management of the formation of cargo flows provides for the solution of the issue of the optimal number of distribution centers based on their location and optimal unit storage costs material flow. Choosing the optimal load capacity of vehicles for work on the delivery routes of packaged cargoes on the basis of the optimal size of the order, the parameters of the cargo and transportation costs affects the efficiency of the transportation process.

The efficiency of the retail network depends on the organization of its warehousing activities. You can increase the efficiency of the warehouse by accounting for determining the optimal size of the order, which is formed based on the need for inventory for a certain period of time, storage and transportation costs. Transportation costs depend on organization of the technological process of transportation of packaged cargo. Upon the formation of storage costs are influenced by procurement costs, replenishment and for the maintenance of stock. Logistic approach to managing the technological process of distribution of packaged cargo, which provides for the optimization of each of the components. This process will increase its efficiency as a whole. [3] Development of transportation technologies, from horse-drawn traction to self-driving cars.

The world of transportation has come a long way from the use of animals and simple carts to modern high-tech vehicles. Each stage of this development made changes not only in the speed and efficiency of transportation, but also in the structure

of society and the economy. Let's take a look at some of the key points of this evolution: From Antiquity to the Industrial Revolution: Animal draught power. For centuries, people have used horses, oxen, and other animals to transport goods and passengers. This limited the speed and distance of transportation, and also depended on the physical capabilities of the animals.

Sailing Ships. Sea transportation developed with the advent of sailing ships. This made it possible to transport large loads over long distances, opening up new trade routes and promoting the development of international trade.

The Industrial Revolution and its impact: Steam engine. The invention of the steam engine was a turning point in the development of transportation. Steam locomotives and steamships appeared, which greatly increased the speed and efficiency of transportation.

Internal combustion engine. In the twentieth century, the internal combustion engine became the main source of energy for cars, airplanes, and other vehicles. This made it possible to achieve even greater speed and flexibility of transportation.

Modern technologies and the future of transportation: Automation: Modern automation technologies, such as GPS navigation, traffic control systems, and autonomous vehicles, reduce human error and increase transportation safety and efficiency.

Electrification: Electric cars and hybrid vehicles are becoming increasingly popular, reducing the environmental impact of transportation.

Hyperloops and other innovations: New technologies are being developed, such as hyperloops, promising ultra-high-speed long-distance transportation.

Challenges and Opportunities. The development of transportation technologies creates new challenges, such as:

Safety: The adoption of autonomous vehicles requires addressing safety and liability issues.

Infrastructure. The development of new transportation technologies requires infrastructure modernization.

Environmental impact: Reducing transport emissions remains an important

challenge.

At the same time, the development of transportation technologies opens up new opportunities: Increased efficiency. New technologies allow you to optimize logistics and reduce transportation costs.

Increased accessibility: The development of public transportation and new modes of transportation, such as e-scooters and bicycles, makes getting around more affordable.

Reducing congestion: Intelligent transportation systems and autonomous vehicles can help relieve traffic congestion and reduce congestion.

In conclusion, the development of transportation technology is an integral part of human progress. New technologies open up new opportunities for us and require us to take a responsible approach to solving challenges related to safety, infrastructure and environmental impact.[4]

Conclusion. Transportation technologies are undergoing rapid evolution, because of the need for cleaner, safer, and more efficient mobility solutions. From electric vehicles and autonomous vehicles to smart transportation systems and intermodal hubs, these innovations are shaping the future of transportation and flagging the way for a more sustainable and connected world. As we continue to embrace these technologies, we can look forward to a future where transportation is not only faster and more convenient but also more environmentally friendly and equitable.

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THE USE OF DRONES IN LOGISTICS

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