



# Application of artificial intelligence in the railway industry

The use of artificial intelligence in the railway industry contributes to a significant increase in transport efficiency.

"Улучшение эффективности"

Introduction to the application of artificial intelligence in the railway industry.

## 2. Introduction



The main tasks and problems that are solved with the help of artificial intelligence in the railway industry.

Train traffic control.

### 3. Current AI Applications in Railways



Data analysis to improve service.



Diagnostics of the state of railway infrastructure.



Personalization of passenger service.

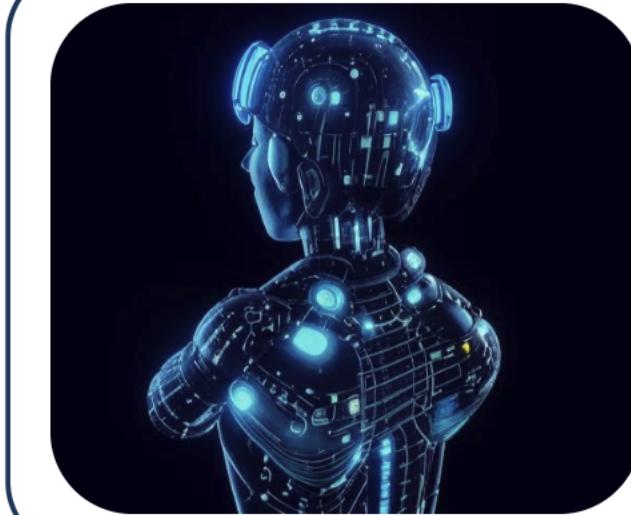


Optimization of transportation logistics.

Постепенное внедрение AI.

## 4. Gradual AI Integration

Smooth transition to the use of AI.



### **AI integration step by step.**

The integration of AI into the railway industry is happening gradually, step by step, introducing new technologies and improving processes.



### **Phased implementation of AI.**

The gradual introduction of AI into the rail industry ensures a smooth transition and maximum efficiency.



### **Gradual inclusion of AI.**

The gradual introduction of AI into the rail industry ensures a smooth transition and maximum use of the technology's capabilities.

Использование ИИ для  
оптимизации движения поездов.

## 5. Current Use Cases by Russian Railways



Using AI to predict breakdowns and maintenance.

## 6. Future Prospects



Using Artificial Intelligence to Improve Train Traffic Management.



Creation of intelligent systems for monitoring the state of infrastructure to prevent accidents.



Developing unmanned vehicles to improve the efficiency of cargo transportation.

### **Improving the safety and efficiency of transportation.**

Implementation of virtual reality technologies for training railway personnel.

#### **Virtual reality for staff training.**

Virtual reality can be used for effective training of personnel in the railway industry.

Development of automatic train control systems to improve transportation safety.

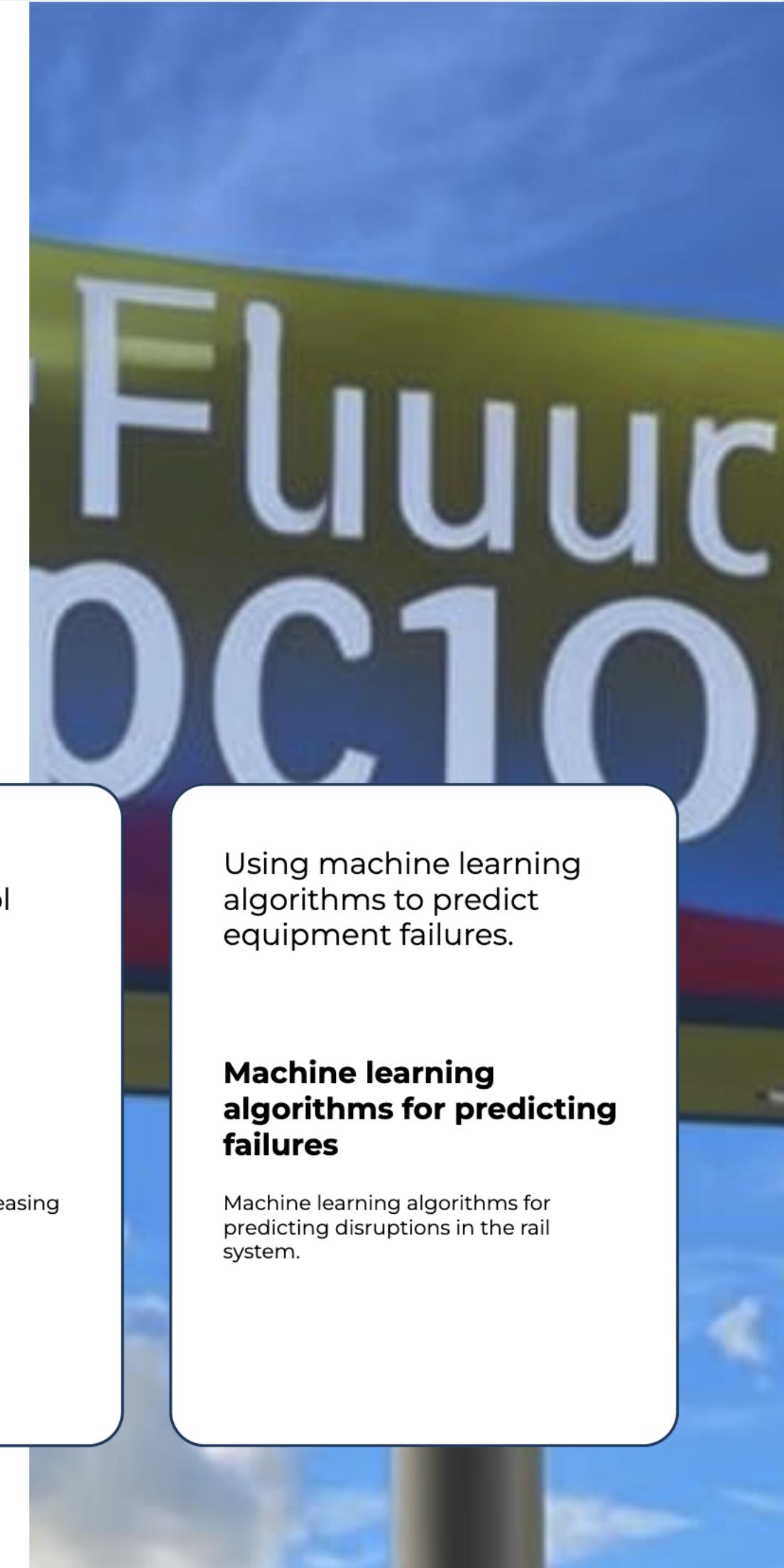
#### **"Automation of train control"**

Automation of train control: increasing the efficiency and safety of rail transport.

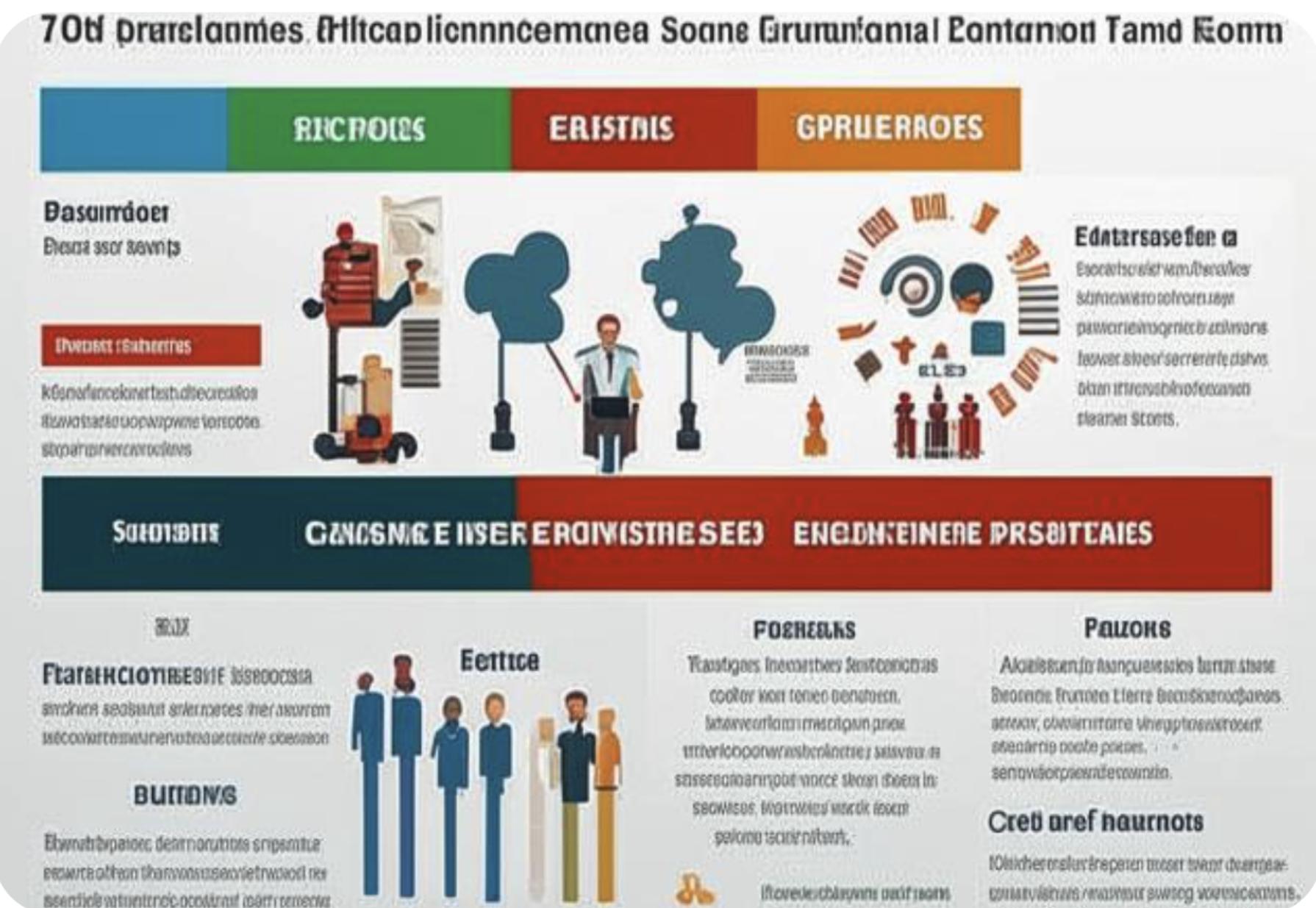
Using machine learning algorithms to predict equipment failures.

#### **Machine learning algorithms for predicting failures**

Machine learning algorithms for predicting disruptions in the rail system.



# 7. Challenges & Considerations



✓  
High demands on computing resources

✓  
Security and privacy issues

✓  
Regulatory restrictions

✓  
Lack of qualified specialists

## 8. Conclusion

Artificial intelligence is revolutionizing the railway industry with its advanced technologies and applications.

"Artificial Intelligence"