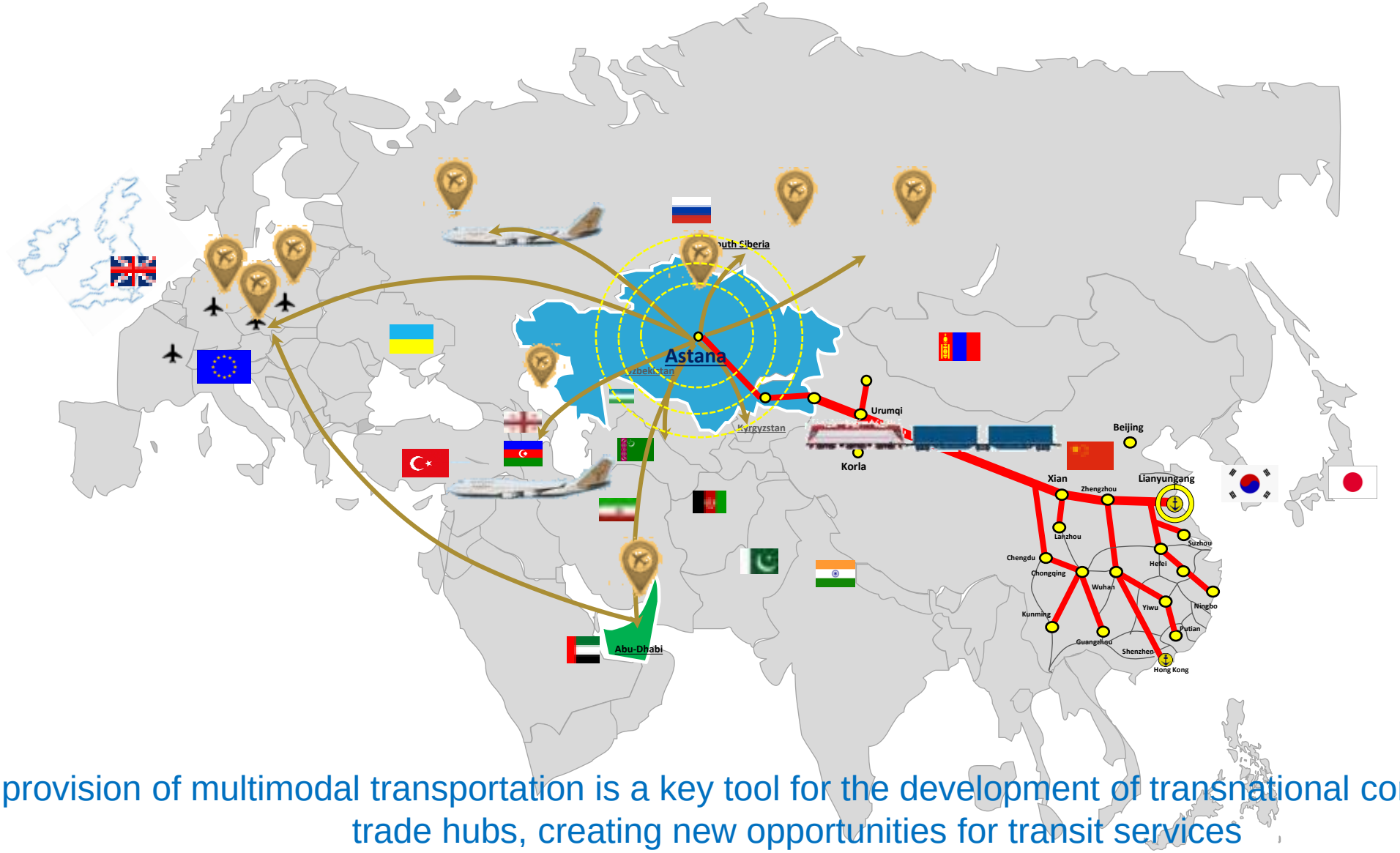
ҚАЗАҚСТАН ТЕМІР ЖОЛЫ

"Progress and Challenges: Innovations in Kazakhstan's Railway Transport"



Development of transport and transit potential of TLC



The provision of multimodal transportation is a key tool for the development of transnational corridors and major trade hubs, creating new opportunities for transit services

Directions of transportation China-Europe-China and TITR route



Solutions of administrative formalities

Activities to reengineer business processes and automate the passage of goods on interstate butt lines



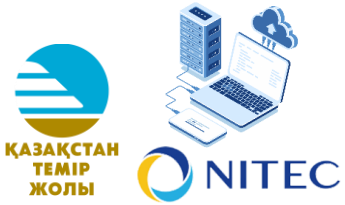
Business process reengineering by reducing the time of train clearance through the development of electronic data exchange with railway administrations and integration

- Automated data transfer to the information systems of the regulatory authorities of Kazakhstan
- Ensuring transparency of the process of registration of transportation documents
- Increasing the capacity of interstate butt lines
- Exclusion of the human factor



Formation of the Regulatory Framework for the Transportation of Goods Using Paperless Technology

- Accelerating the process of processing trains for acceptance and delivery to interstate butt lines
- Increasing the capacity of interstate butt lines
- Transition to a legitimate digital format of transportation documents
- Exclusion of risks of non-fulfillment of international obligations assumed by the Republic of Kazakhstan and NC KTZ JSC



Legitimacy of electronic digital signatures in the Republic of Kazakhstan and in the territories of neighboring states



Digital transport corridors

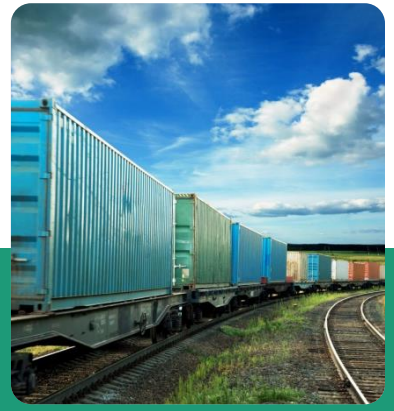
Digital infrastructure and technical solution definitions (services)

- Reducing transaction costs and reducing the cost of transit transportation
- Reducing unproductive downtime at cross-border crossings
- Accelerating integration processes and reducing delivery times
- Increasing the efficiency of the activities of control and supervisory bodies



Automation of loading and collection of goods-accompanying documents when forming an application for transportation

Key segments of transformation and digitalization



Freight transportation

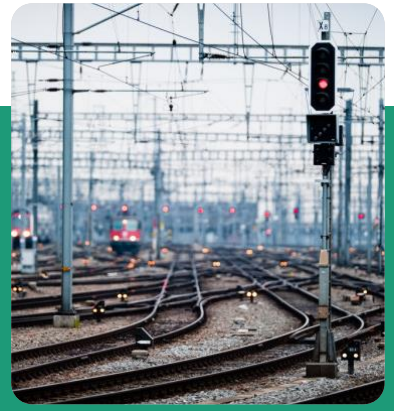




Passenger transportation



Cross-border transport management



Railway infrastructure



Corporate governance

Industrial and Information Security

52 information systems and more than 100 workstations

IT principles

Proven technologies

The technologies and systems acquired by the Company must be successfully applied in similar Companies in the world

Ensuring standardization

Ensure maximum transparency and standardization of approaches in the provision of services by the Company

Ensuring competition

The services provided must be competitive in comparison with similar services on the market

Ensuring external needs

Provision of IT services in accordance with the expectations of the Company's customers

Ensuring domestic needs

The main priority will always be the need of the Company for the implementation of the main functions

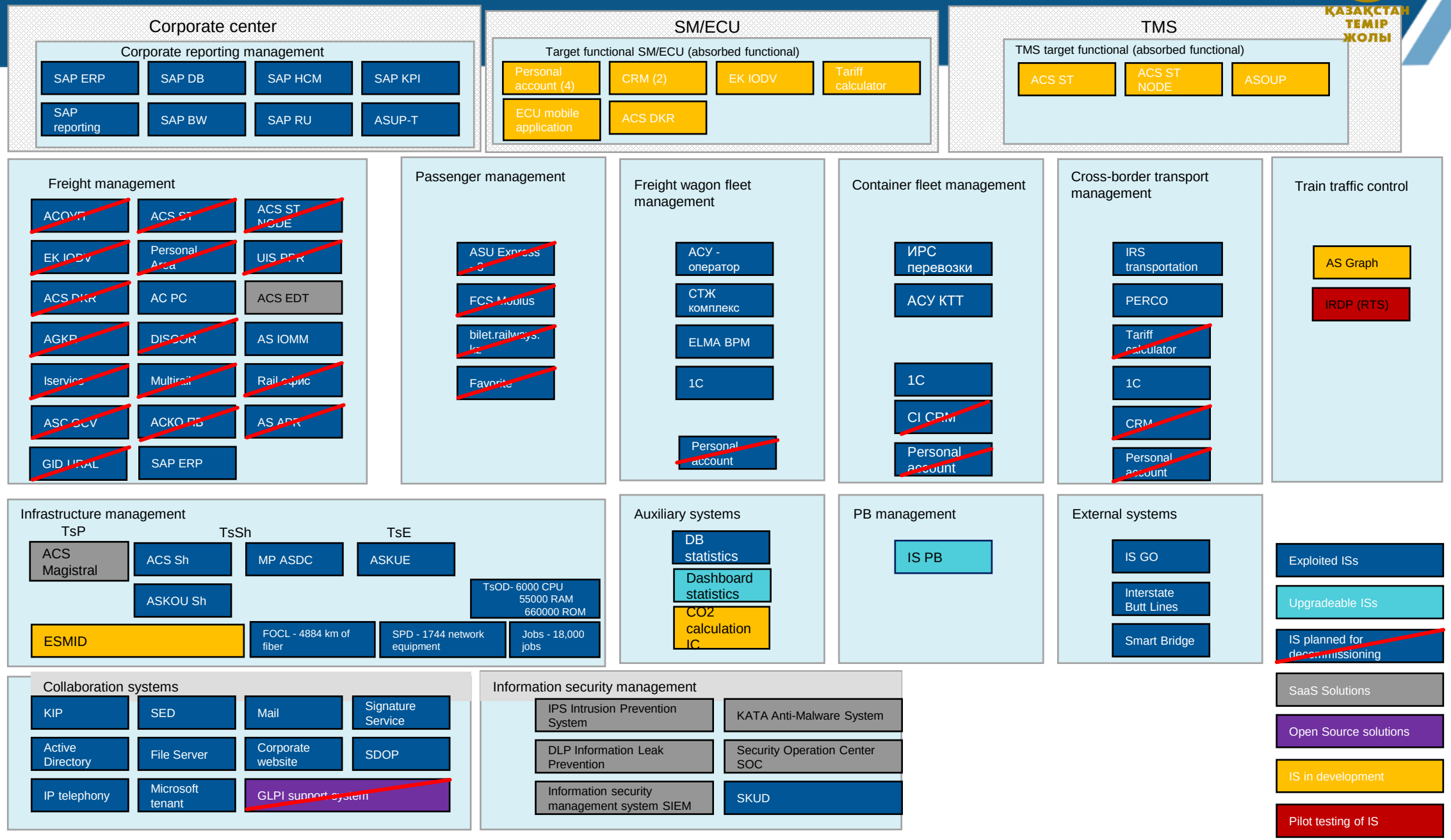
Internal expertise

The Company will retain internal IT expertise, even when outsourcing a significant amount of IT services to achieve the required solution functionality

Decision centralization

All implemented solutions for IT projects will be built on the principle of centralization to eliminate redundant systems

IT systems landscape



Information Technology Systems Security

Threat Management: Risk Assessment, Threat Monitoring, and Incident Response to Minimize the Impact of Cyberattacks and Other Threats.

Technical Security Measures:
Deployment of protective measures, such as antivirus software, firewalls, intrusion detection systems.

Information Security:
Development of policies and procedures for data protection, including encryption, access management, and user authentication.

Training and Awareness:
Training employees on security rules, informing about current threats, and practices for their prevention.

Security Audit:
Conducting regular audits and security system checks to identify weaknesses and potential vulnerabilities, as well as to maintain compliance with information security standards and legislation.

Information Security at JSC NC "Kazakhstan Temir Zholy"



- Information security is a key aspect of operations.
- Implementing and maintaining security measures requires constant monitoring and analysis of threats and vulnerabilities.

TMS (TRANSPORT MANAGEMENT SYSTEM)

NOW	AFTER
Manual data entry at all levels of information systems	Replacement of obsolete systems
Multiple duplication of the same input forms and electronic documents and functions in different systems	Eliminate duplication, discrepancy and redundancy of data
Lack of a centralized (reference) database of reference information	Improvement of production indicators, such as transit potential, timely delivery of wagons at interstate points, efficient use of wagons, incl. wagons of other people's administrations, proper planning of train, locomotive work, etc.
Replacing obsolete systems and moving away from foreign dependence	

Digital Single Window (SM)

NOW

- Lack of a single digital information space for the client
- Lack of interaction between information systems of KTZ and its structures
- Intra- company competition
- Lack of unified databases and transparency of transportation

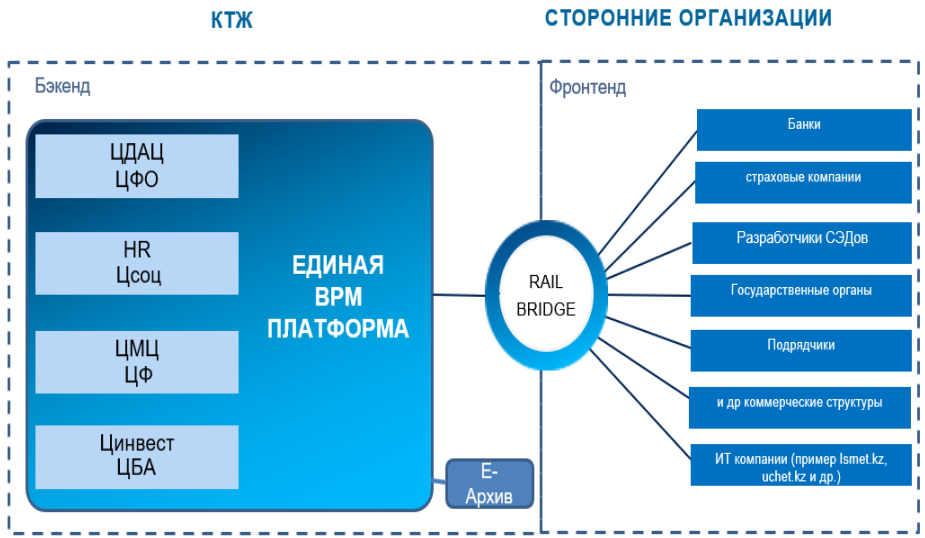
AFTER

- User management
- Maintaining the register of business partners
- Conclusion and accounting of commercial contracts, signing with an electronic digital signature
- Maintenance of reference information
- Recording user actions
- ECU External Web Portal
- Single contact center
- Accounting and control of transportation
- Financial document management
- Interaction with other IS
- Analytical dashboard / visualization of consolidated financial and operational indicators
- Customer Satisfaction Rating
- ECU mobile application

Corporate service

NOW

- Lack of automated corporate systems
- Long terms of approval and processing
- Lack of analytics of corporate business processes in the Company
- Low involvement of employees in the life of the Company
- Complexity of systems integration
- Limited electronic interaction
- High costs for processing requests from contractors, government agencies



AFTER

- Eliminate duplication of typical corporate services and save time
- Simplification of organizational procedures for integration, interaction with business and government agencies, development of a competitive environment
- Unification and updating of data. Formation of BIG DATA
- Optimization of the planning and budgeting process
- Transparent interaction with domestic IT companies according to the service model
- Uniform conditions with equal opportunities for interaction

EFFECTS

50% REDUCE TIME FOR SYSTEM DEVELOPMENT	30% RELEASE COMPUTING RESOURCES	for 30% INCREASING LABOR PRODUCTIVITY	
for 30% REDUCING THE LOAD OF THE OPERATION UNIT	70% REDUCED TIME TO PROVIDE ACCESS TO INTEGRATION		



THANK YOU FOR ATTENTION!

