# **QUALITY STANDARDIZATION: GUIDELINES AND REQUIREMENTS**

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#### ABSTRACT

At the example of a business unit «Passenger transportation» interdependent objectives of Russian Railways holding in respect of improving quality of customer service based on standardization of services are represented. Three matrices of management systems are shown. They describe passenger transportation, services of station complex, information and preparation for a trip. The purposes of international and federal standards, own regulatory framework of Russian Railways, approaches to systematic assessment of quality of services are commented. The latter defines, according to the authors, the selection by a potential customer of a priority mode of transport.

<u>Keywords</u>: railway, passenger transportation, standards, quality of service, quality management system, consumer demand, client, service matrix.

Background. Provision of quality services rendered the primary task for any transport company, especially of such a large-scale company as holding Russian Railways. The quality of passenger transportation is of strategic importance because it determines the choice of a potential client in favor of rail transport. Passenger unlike cargo can assess the level of comfort of transportation and depending on it to decide on the use of one or another mode of transport. But this kind of choice is just a tip of an iceberg, in the underwater part of which flows a huge number of business processes that have a direct impact on the quality of the final product (Pic. 1). The degree of influence of each process on the final result is different, so some inconsistencies of service quality with customers' expectations can be quickly eliminated, others require a long time to resolve them.

**Objective.** The objective of the authors is to consider guidelines and requirements for service guality standardization.

**Methods.** The authors use general scientific methods, comparative analysis, statistical method, evaluation, building of matrices.

**Results.** In particular, those technical and technological requirements for infrastructure and perspective rolling stock, that are now being laid at the design stage, will affect the quality of passenger transportation, and hence their customer focus and competitiveness for decades. It is important to understand that the process of creating high-quality services for passenger in rail transport involves, many business units, including business unit «Passenger transportation».

Passenger business unit of Russian Railways holding is a center of responsibility for providing client-

### Table 1

Service matrix «Passenger transportation»

	Basic	Economy	Business	Lux
High-speed		$\checkmark$	$\checkmark$	
Long distance	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Commuter	$\checkmark$			
Commuter express		$\checkmark$	$\checkmark$	
Transfer		$\checkmark$	$\checkmark$	
Urban	$\checkmark$			

 $\checkmark$  – developed standard.



Pic. 1. The quality of transport services.

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## Table 2

Table 3

## Matrix «Services of station complex»

	No class	I class	II class	III class	IV class	Main premises	Platforms
Reference and information service	~	~	~	$\checkmark$	✓	~	✓
Ticket service	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Waiting rooms	$\checkmark$	$\checkmark$	1	$\checkmark$	$\checkmark$		
Services of sanitary rooms	1	$\checkmark$	1	1	$\checkmark$		
Medical services	1	1					
Cloakrooms	1	1	1	1			
Communication services	1	1	1				
Rooms of enhanced comfort	~	~					
Rooms for long rest and rooms for mothers with children	1	1					
Services of service centers	$\checkmark$	$\checkmark$					
Luggage displacement service	1						

 $\checkmark$  – standardized service.

## Service matrix «Obtaining information and preparation for a trip»

	Service matrix «e			F			-r	1
Information cha	nnel	Obtaining simple information	Logistics and trip planning	Booking of services	Payment for services	Check-in for a trip	Obtaining travel documents	Non-trip registration
Personal communication	Information at ticket desk	1	$\checkmark$	$\checkmark$	Services of station complex			
	Information at information desk	✓	✓					
Electronic services	Information in transactional self- service terminals and ticket-printing automated devices	✓	√ 	✓	✓ 	✓ 	✓	
	Information terminals	1	✓					
Telephone services	Unified information and service center	√	$\checkmark$	✓		~		
	SMS and MMS notification	1		✓		1		
	Concierge service	1	1	✓	1	1	1	1
Internet- services	Website rzd.ru and its mobile services	1	1	✓	✓	1	1	1
	Notification by e-mail	1		✓		✓		
	web-messengers	$\checkmark$	$\checkmark$			$\checkmark$		

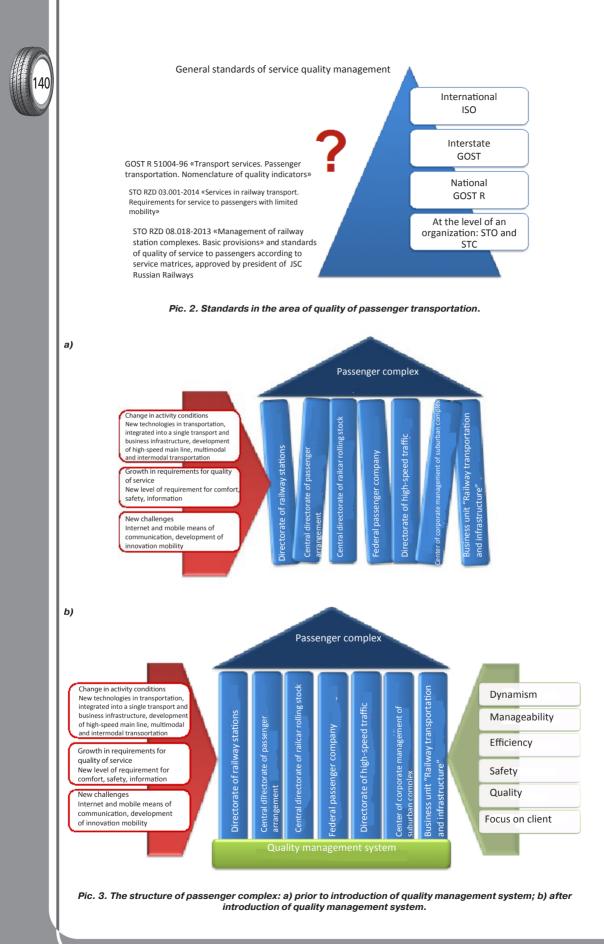
- standardized service.

focused passenger service with quality parameters corresponding to world standards.

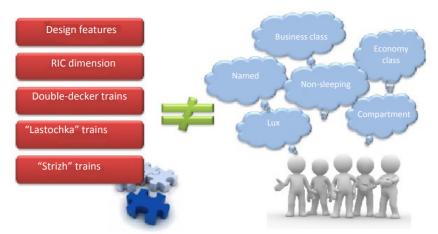
Basic requirements for quality of services are engineered according to three matrices: «Passenger transportation», «Services of station complex», «Obtaining information and preparation for a trip» (approved by the protocol of 17.06.2013  $\mathbb{N}^{\mathbb{E}}$  KUB-1) (Table 1–3).

By the beginning of 2016 more than 20 industry standards have been developed and implemented. That set requirements for quality of services, including a separate standard that focuses on improving quality

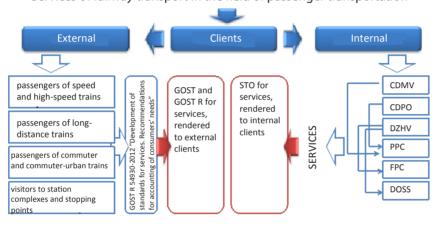




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Pic. 4. Example of classification of services in terms of producer and in the customer's view.



## Services of railway transport in the field of passenger transportation

Pic. 5. Structure of passenger transportation quality system.

of service to people with limited mobility – STO RZD03.001–2014 «Services in railway transport. Requirements for service to passengers with limited mobility».

The standards contain consumer requirements for parameters of the main service which is passenger transportation: time in transit, frequency of passenger trains, punctuality of schedules, etc., great attention is paid to quality of related and additional services provided to passengers.

Creating a regulatory framework at the level of JSC Russian Railways has a number of advantages, one of which is a quick process of alignment, approval and entry into force of the document, but a significant disadvantage is detachment of the regulatory framework from external customers. Therefore, for developing with potential passengers of a positive image of volume and quality of rail services the development of national or interstate standards is also required.

Existing international standards relate to quality of customer service as a whole, without considering peculiarities of rail transportation in our country, its climatic, geographic, geopolitical, socioeconomic and other differences (Pic. 2). And it is difficult to accomplish tasks set by the holding company Russian Railways.

Individual units of passenger complex in 2010 attempted development and use of local regulations in the area of quality of services and methods of its assessment, which confirms the relevance of standardization. At the same time, local practices and regulations did not allow to form a single system understanding of customer service quality.

Existing and emerging standards, as a rule, take into account only parameters of quality of services provided to external customers - passengers. However, for a number of business units (Directorate of railway stations, central directorate of passenger arrangement, for example) external customers may be tenants of their areas. In addition, some structures of business unit «Passenger transportation» provide services to internal clients (for example, the central directorate of railcar rolling stock leases rolling stock to commuter companies, directorate of railway stations and central directorate of passenger arrangement leases areas to provide ticket-cash and information services). Differences arising from conclusion of contracts for such services are explained particularly by a lack of regulatory



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Standardization of services, rendered to passengers in trains and passenger infrastructure facilities

SET and PARAMETERS OF SERVICES, rendered to passengers in cars of different comfort level and at facilities of different class

CRITERIA OF QUALITY of assessment of SERVICES, rendered to passengers in cars of different comfort level and at facilities of different class

CONTROL VALUES OF CRITERIA of quality of assessment of services, rendered to passengers in cars of different comfort level and at facilities of different class

# Rules for assessment of quality of services, rendered to passengers

UNIFIED METHOD FOR ASSESSMENT OF QUALITY of services, rendered to passengers in cars of different comfort level and at facilities of different class

PROCEDURE and RULES FOR CONTROL and ASSESSMENT of quality of services, rendered to passengers of railway transport

ANALYSIS and WORK WITH RESULTS of assessment of quality of services, rendered to passengers of railway transport

Pic. 6. Requirements for documents of passenger transportation quality management system.

framework, prescribing clear standardized requirements for quality of processes, operations that directly affect quality of the final product offered to the external client (passenger).

The service quality management system of passenger complex of Russian Railways holding should equally take into account the interests of internal and external customers, as well as of any other business units, in particular of «Rail transportation and infrastructure». It is particularly difficult to provide a high level of quality in ever-changing external economic and political conditions. Transient development of technical capabilities of the Internet and mobile operators sets also new challenges. And certainly a large number of service actors does not improve the situation.

A well-built quality management system can be a solid foundation for high-performance and customeroriented work, and will improve the manageability of its individual sections (areas) and all the activities of the holding (Pic. 3).

The development of standards must be preceded by cataloging services and determination of the main parameters and criteria for quality assessment of each of them. Complexity of cataloging stems from the fact that, for example, technical classification of trains (for example, passenger trains by types of rolling stock, speeds, etc.) does not coincide with their marketing classification (from the client perspective) (Pic. 4).

From the standpoint of technical parameters the rolling stock requires a different service, and hence requirements for quality of these works are different, but at the same time their quality affects consumer characteristics of transportation starting from traffic safety, required speed, smoothness of movement and ending with comfort of a passenger seat. In addition, the large number of «product offerings» in the same transportation segment (for example, long-distance trains) does not allow potential passengers to clearly understand characteristics of services that he gets.

In order to ensure compliance with requirements of standards and control over characteristics of service the system of evaluation of their quality should include not only formal sets and criteria, differentiated by class of comfort, but also a common methodology, rules and procedures for controlling actions (Pic. 5, 6). Together with the client orientation of the approach, it will provide, we think, the possibility of systemic evaluation of quality of services.

**Conclusion.** Based on standardization, quality management system will create a unified environment for provision of services and parameters of their assessment, understandable to all participants: business units, passengers, authorities and population in the regions. This will bring rail passenger transportation to a completely new customer-oriented level.

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