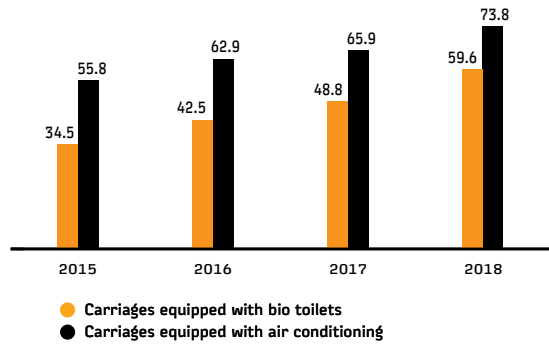


## UPGRADING THE CARRIAGES

In addition to the purchase of new rolling stock, FPC focuses on upgrading and improving the equipment of carriages built earlier.

### PERCENTAGE OF THE CARRIAGES EQUIPPED WITH BIO TOILETS AND AIR CONDITIONING, %



Sandwich frames have almost completely replaced wooden window frames in passenger carriages.

The carriages are being equipped with environmentally friendly toilet facilities.

In 2018, the percentage of carriages equipped with air conditioning units increased by 7.9%, and the number of carriages with environmentally friendly toilet facilities increased by 10.8% of the assigned fleet.

In 2018, the Company provided 1,696 carriages with power sockets for device charging bringing the share of such carriages in the fleet to 50%.

Berths and seats upholstery replacement was carried out in 447 carriages.

## ADOPTION OF INNOVATIVE SOLUTIONS AND TECHNOLOGIES

When developing a new rolling stock based on passenger feedback, the Company and the manufacturer create rolling stock that meets all requirements of Russian citizens as well as current trends in railway engineering.

**Following the analysis of passenger feedback on travelling by FPC's long-distance trains, conducted in 2016 via [opros.fpc.ru](http://opros.fpc.ru) website, the carriages built in 2018 were fitted with additional equipment:**

- ramps for boarding (disembarking) passengers with children or with a trolley case
- destination signs and information panels for displaying information about the train and carriage numbers, and route
- show-cases for souvenirs and food
- folding ladders for climbing to berths No. 2 and 36 in third-class open sleeping carriages
- a toilet with shower for passengers
- individual (local) lights at each table in dining carriages.

From a technology perspective, new carriages are equipped with train control and monitoring system (TCMS), with an upgraded geolocation function for each carriage to provide mileage and speed recording, and displaying the carriage location on the map in real time.

FPC completed the project on launching a high-speed data line on its branded trains. A total number of equipped carriages is 3,724. The data line is used to provide passengers with access to the Poputchik (Fellow Passenger) multimedia portal, as well as for technical purposes – the operation of the system for monitoring and diagnosing carriage equipment, the video surveillance system, and the passenger boarding control system.

The Company also plans to use the data line for providing voice communication for the train crew and for implementing software to replace the current equipment used in the passenger train security and communication monitoring control system.