Velaro RUS Maintenance in St. Petersburg

Project Introduction

Siemens Mobility | December 2019

“Sapsan” high-speed train
Velaro RUS project history

2006	Delivery contract concluded for 8 “Sapsan” trains (Project Velaro RUS 1)
2007	30-year contract concluded for maintenance of “Sapsan” trains
2008	First train arrives to Ust-Luga port, Russia
2009	December 17 - First Moscow-St. Petersburg run with passengers
2011	Delivery contract concluded for 8 extra “Sapsan” trains (Project Velaro RUS 2)
2013	First train delivered under Project Velaro RUS 2
2014	Start of double train set operation
2018	Connection to Nizhniy Novgorod
2019	Delivery contract concluded for 13 extra “Sapsan” trains (Project Velaro RUS 3)

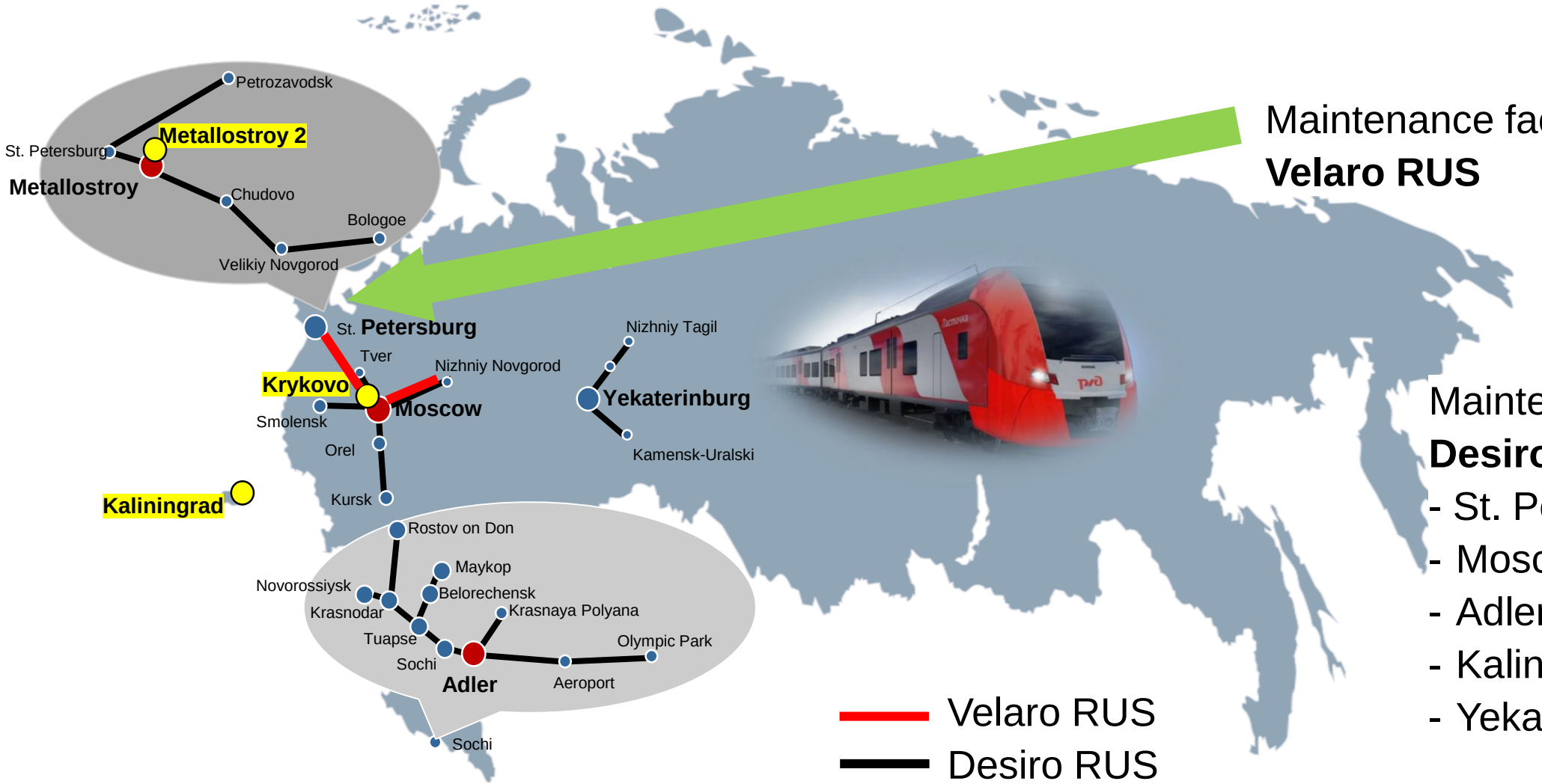
- Currently 16 “Sapsan” trains are in operation. average yearly run – 490.000 km per train.
- 13 “Sapsan” pairs, including three double train sets, perform their daily run between Moscow and St. Petersburg, 670 km in less than 4 hours
- “Sapsans” currently account for more than half of passenger flow between St. Petersburg and Moscow. Occupancy of seats in express trains is close to 100%.
- as end of July 2019, total run exceeds 52 million km,
- Around 12 million km without delay due to Siemens fault (Feb 2018 - August 2019)

“Lastochka” express train
Desiro RUS project history

“Lastochka” is an express train developed by Siemens and intended for suburban and intercity transportation.

2009	First contract for delivery of 38 trains from Krefeld has been signed
2010	Contract for delivery of 16 more trains has been concluded.
2011	Contract for manufacturing of 240 trains (1,200 rail cars) in Russia
2013	Trains are being produced by Ural Locomotives near Yekaterinburg
2013	Passenger operation of first “Lastochkas” in Sochi in scope of the Olympic games preparation.
2015	40-year contract for maintenance of “Lastochka” trains.
2016	“Lastochka” trains are in operation with Moscow Central Ring.

Velaro and Desiro in Russia incl. maintenance locations

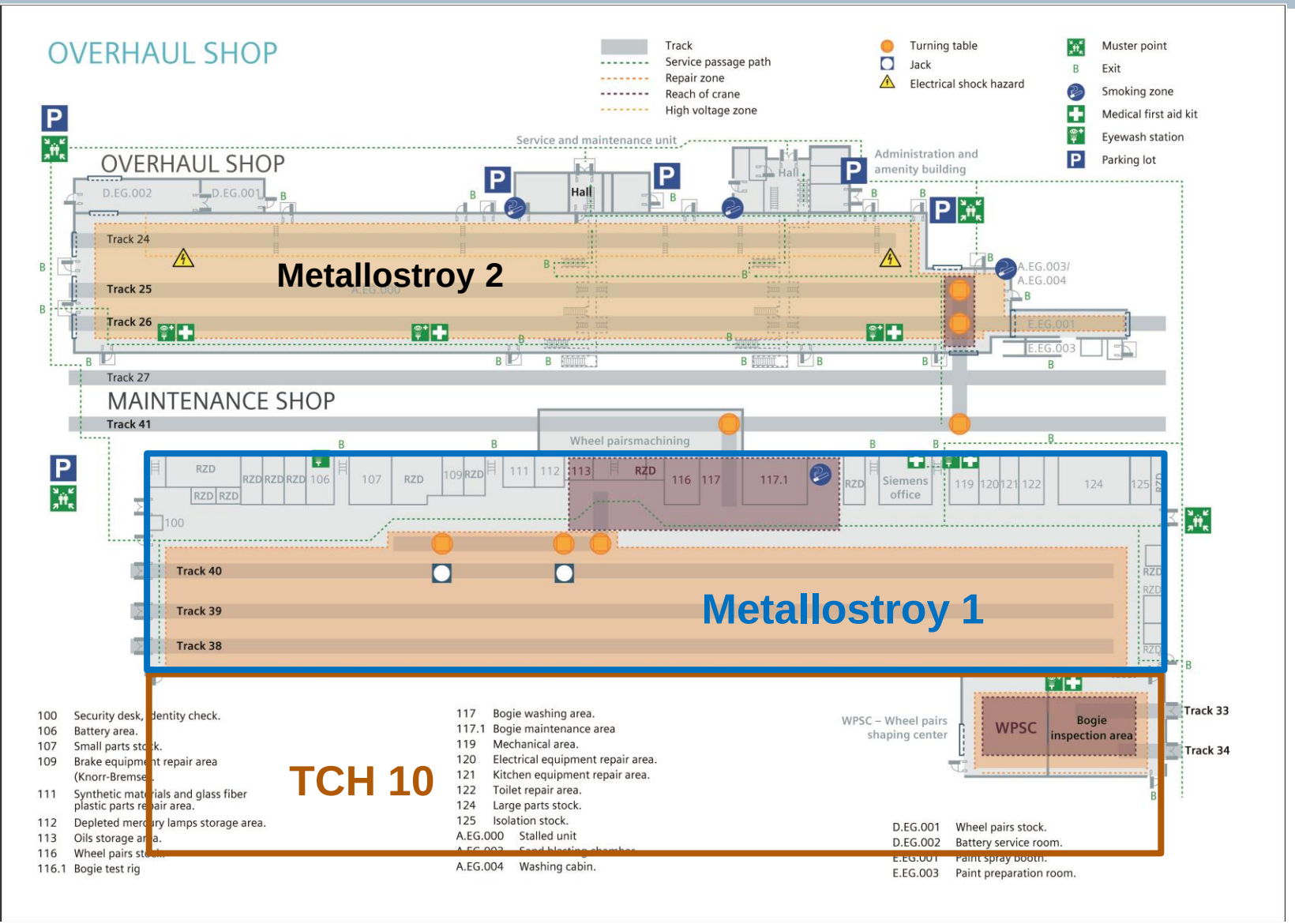


Maintenance of “Sapsan” and “Lastochka” trains

- The depot was established in 2000 to provide maintenance to “ER-200” and “Sokol” express trains.

- In 2009, “Sapsan” electric trains maintenance shop was commissioned after refurbishment in order to achieve maximum availability of electric trains (24/7). The depot provides train maintenance (including monitoring and troubleshooting) and repair.
- On 28 April 2015, Metallostroy-2 overhaul shop foundation stone laying ceremony took place.
- On June 16, 2016, the depot officially opened its new shop to performs overhaul of “Sapsan” trains (Velaro RUS) and maintenance of “Lastochka” trains (Desiro RUS). The shop is equipped to lift a complete train for quicker work.

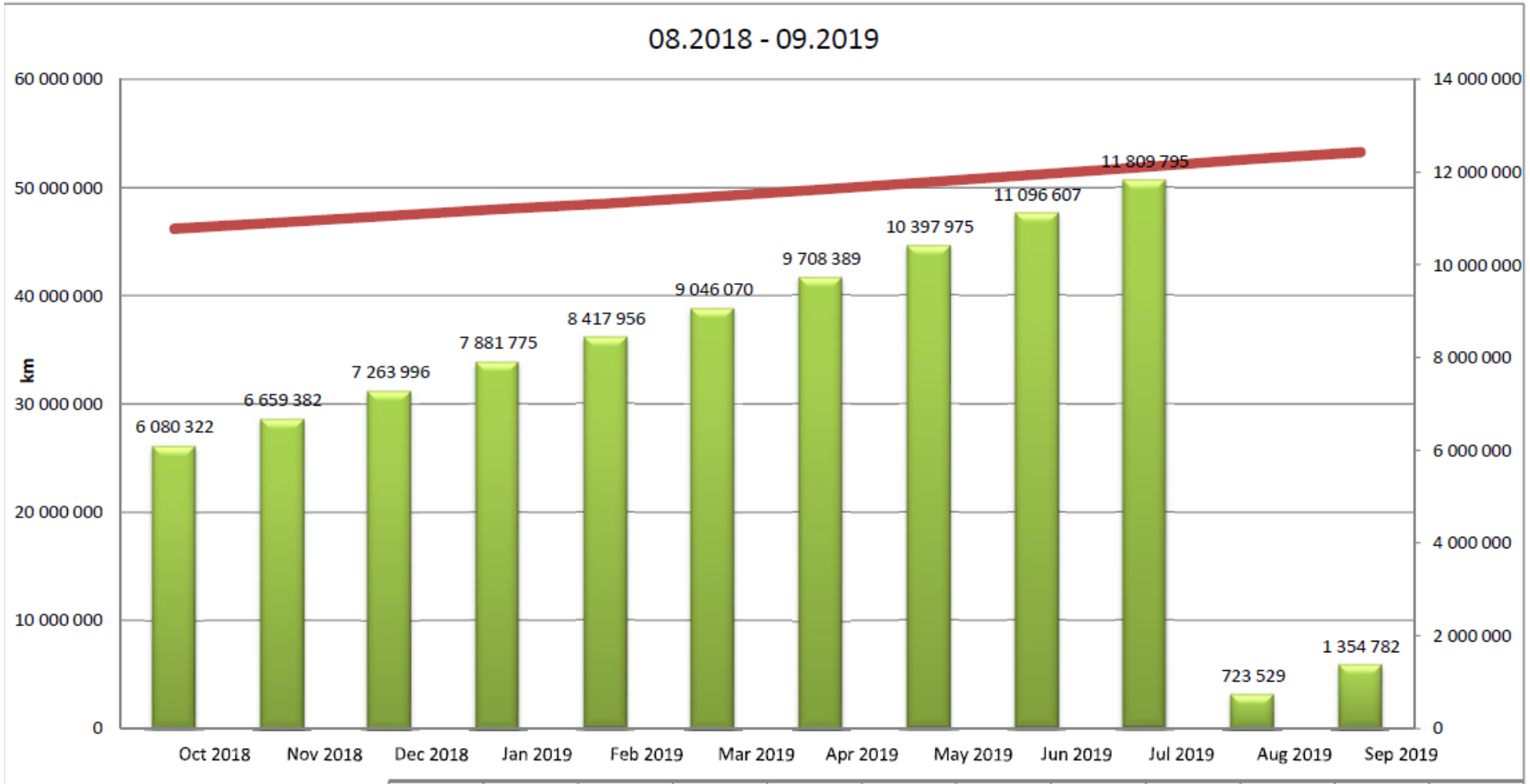
Metallostroy depot



Key facts

- 16 Velaro RUS and 33 Desiro RUS trains
- Light and heavy maintenance
- 4 shifts
- Six tracks for troubleshooting, commissioning and electrical testing
- Component repair area
- Wheel pair and bogie frame
- Washing and sandblasting area
- Wheel pairs shaping center
- Painting booth.

“Sapsan” express train
Velaro RUS project quality



	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019
Количество опозданий > 5 минут / Number of delays >5 min	0	0	0	0	0	0	0	0	0	0	1	0
Надёжность, КМ / Reliability, km	6 080 322	6 659 382	7 263 996	7 881 775	8 417 956	9 046 070	9 708 389	10 397 975	11 096 607	11 809 795	723 529	1 354 782
Суммарный пробег парка поездов, КМ / Total mileage, km	46 177 246	46 756 306	47 360 920	47 978 699	48 514 880	49 142 994	49 805 313	50 494 899	51 193 531	51 906 719	52 630 248	53 261 501

Winter Challenges

Inside the washing hall

Snow and Ice removed from bogies with

- warm air and
- warm water (40 - 65°C under pressure 0,2 - 0,35 Mpa).

Average time for one train around 2 hours

Result

Winter Challenges - Nordic Anti-Icing System

- Automatic / easy to handle
- Environment-friendly
- Modern Software for diagnostic and supervision
- Effizient related to time and costs (for power..)
- Standard time per train: 5 minutes
- Not used liquids will be collected, cleaned and reused

Thank you for your attention!