String Transport Unitsky Ltd

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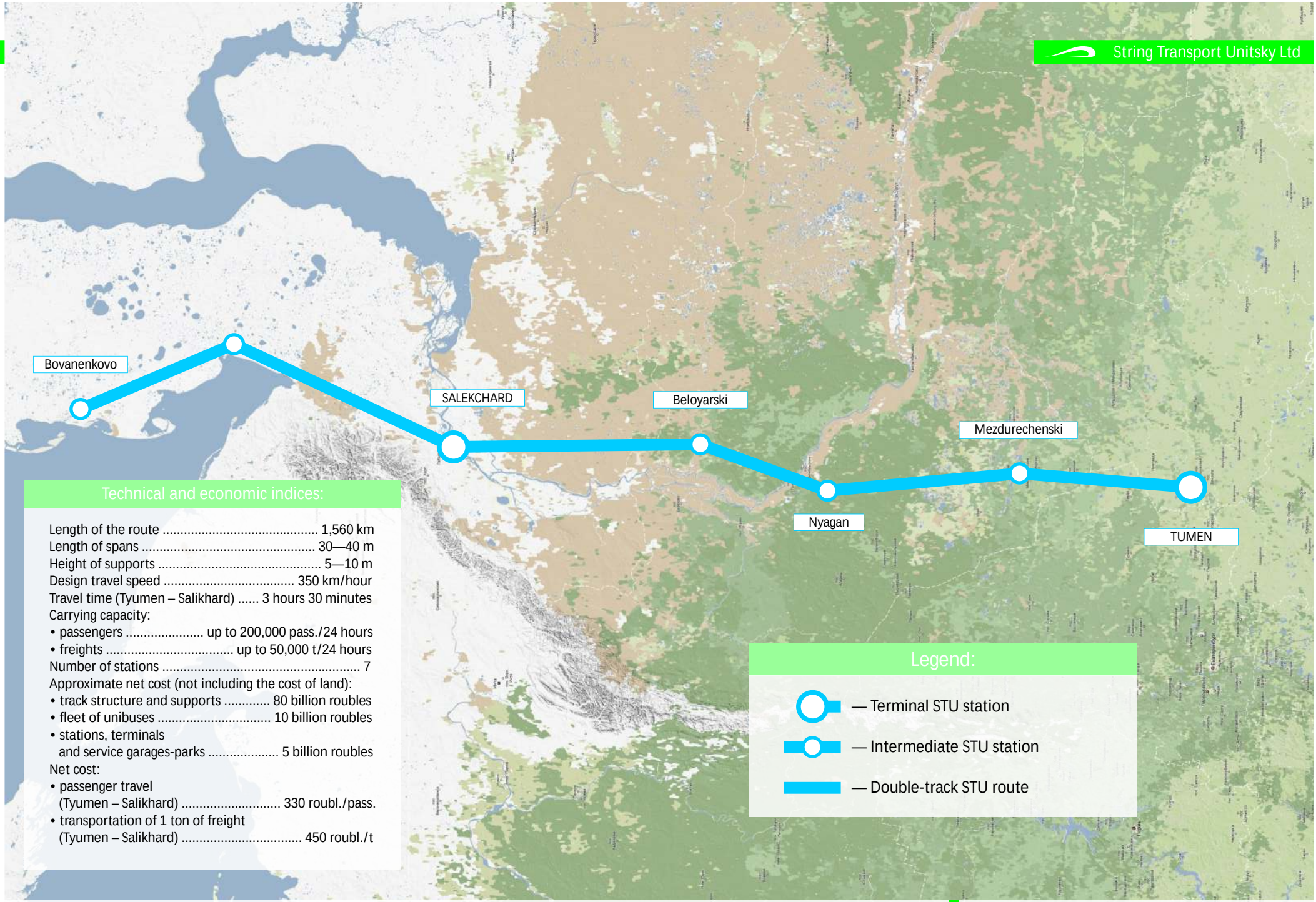
High-speed freight-passenger STU route «Tyumenskaya Vertical»

Moscow, 2010

String Transport Unitsky Ltd



Technical and economic indices:

Length of the route ..... 1,560 km
Length of spans ..... 30—40 m
Height of supports ..... 5—10 m
Design travel speed ..... 350 km/hour
Travel time (Tyumen – Salikhard) ..... 3 hours 30 minutes
Carrying capacity:
- passengers ..... up to 200,000 pass./24 hours
- freights ..... up to 50,000 t/24 hours

Number of stations 7
Approximate net cost (not including the cost of land):
- track structure and supports ..... 80 billion roubles
- fleet of unibuses ..... 10 billion roubles
- stations, terminals and service garages-parks ..... 5 billion roubles

Net cost:
- passenger travel (Tyumen – Salikhard) ..... 330 roubl./pass.
- transportation of 1 ton of freight (Tyumen – Salikhard) ..... 450 roubl./t

Legend:

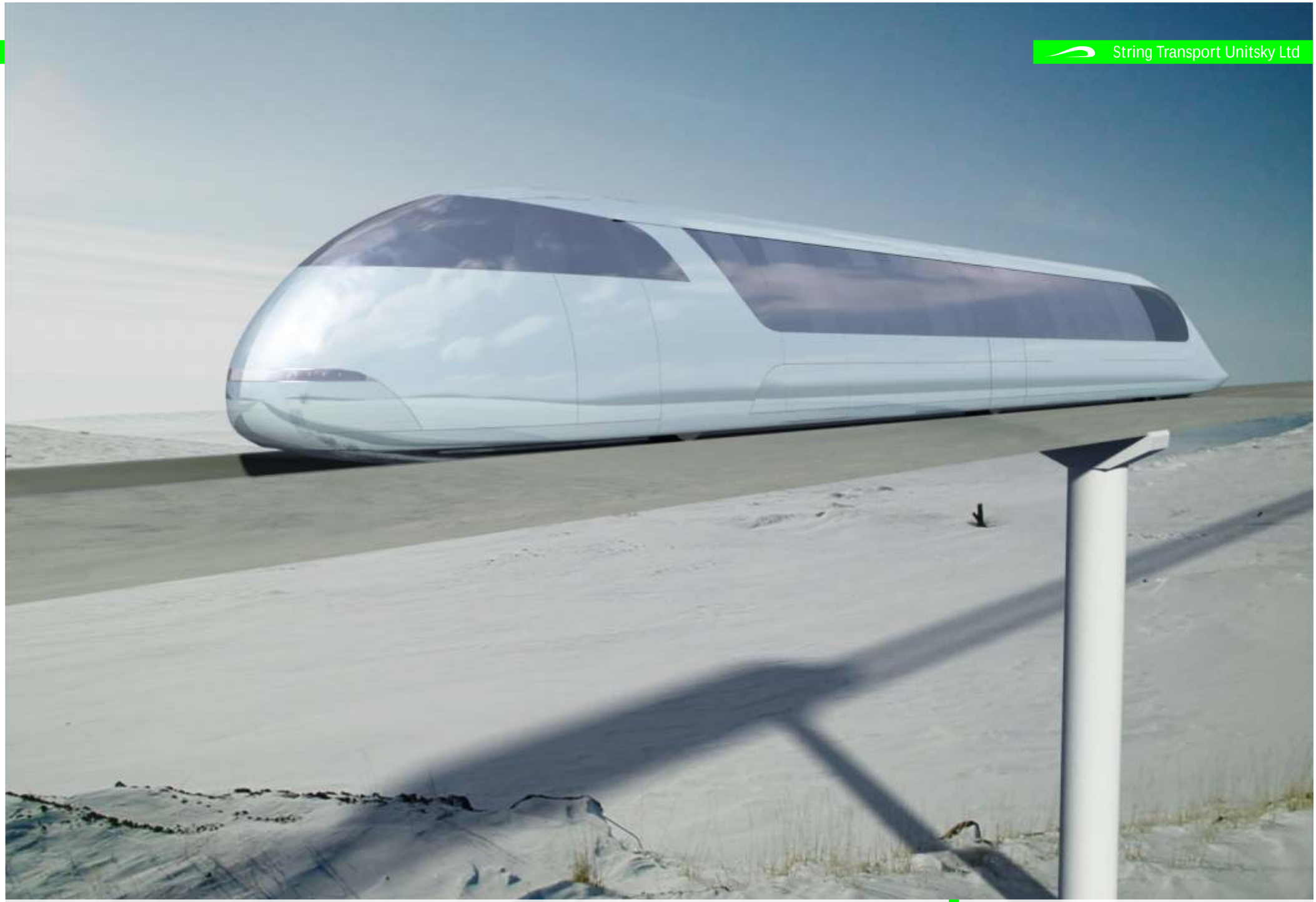
— Terminal STU station
— Intermediate STU station
— Double-track STU route

High-speed freight-passenger STU route «Tyumenskaya Vertical»

Scheme of the route

High-speed freight-passenger STU route «Tyumenskaya Vertical»

General view of the route
(passenger alternative)

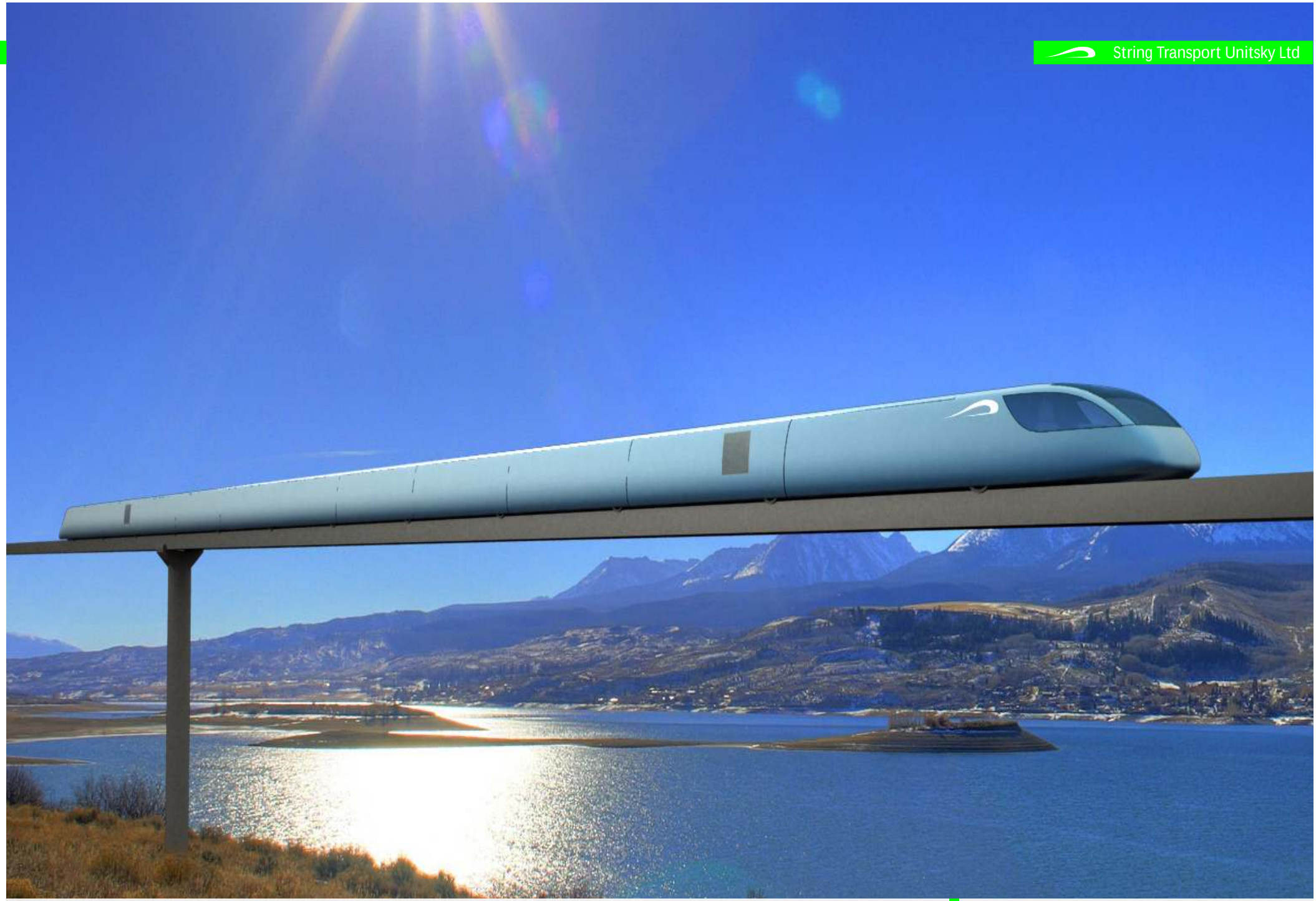


High-speed freight-passenger STU route «Tyumenskaya Vertical»

General view of the route
(passenger alternative)

High-speed freight-passenger STU route «Tyumenskaya Vertical»

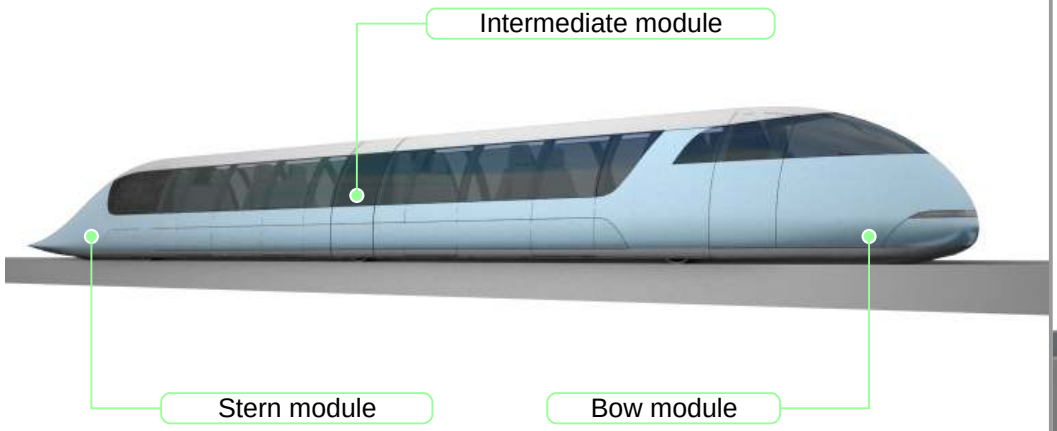
General view of the route
(freight alternative)

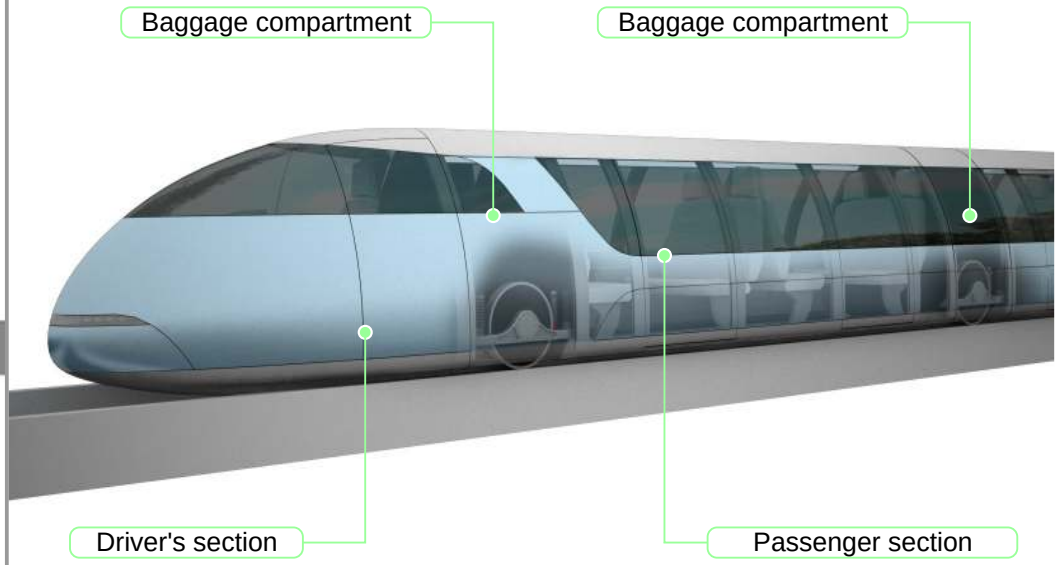


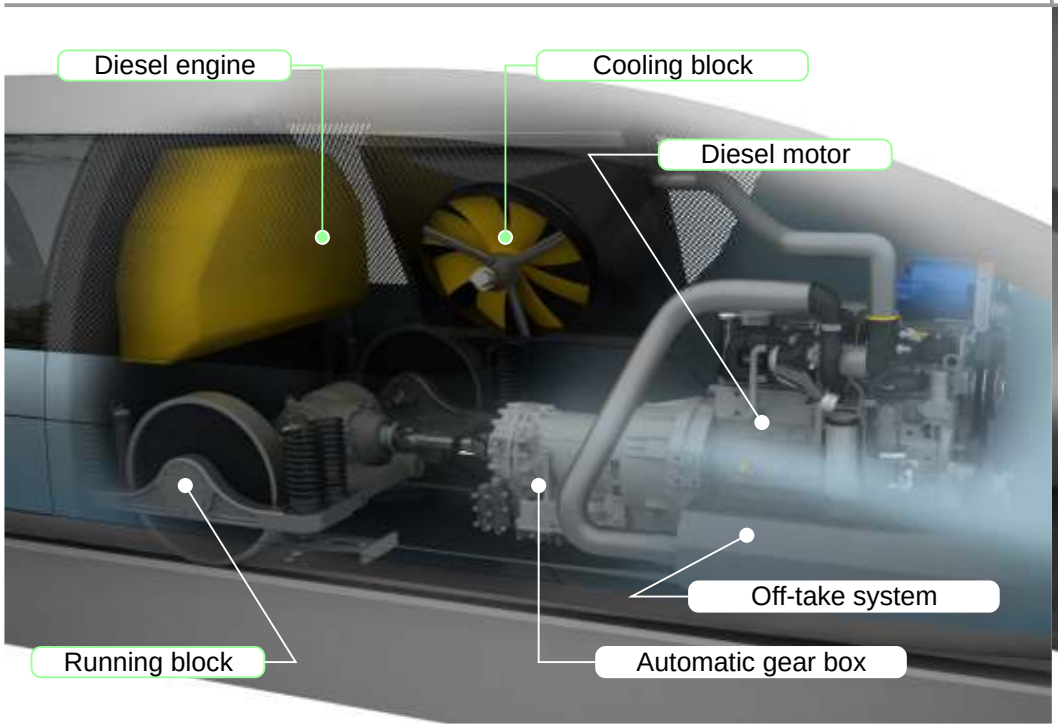
General view of the route
(freight alternative)

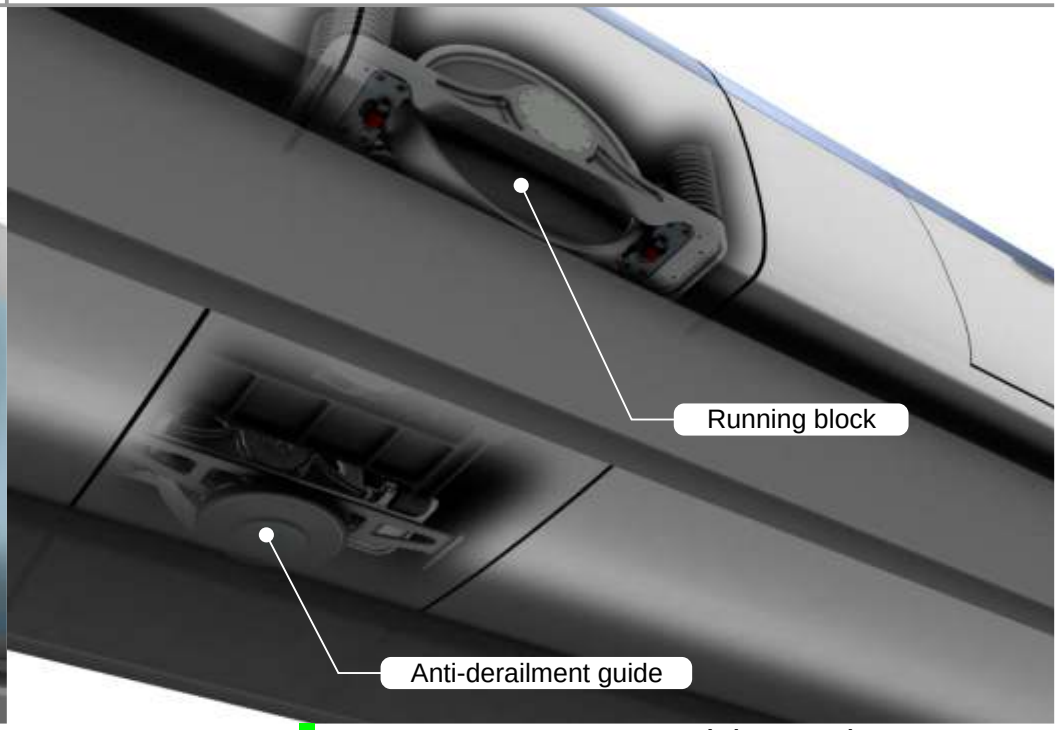
High-speed freight-passenger STU route «Tyumenskaya Vertical»

Changing station to change from the international STU route to the citywide STU route









High-speed freight-passenger STU route «Tyumenskaya Vertical»

High-speed passenger diesel-electric STU train

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High-speed diesel-electric STU train (model ЮО-328ГМ) is intended for intercity passenger traffic along a special track structure built on the basis of string technology. A high-speed STU train is designed on the basis of a module scheme. In the train design the following four types of unified modules are used: bow, running, passenger and stern modules. Bow module contains: driver's section with the necessary control equipment, power section, VIP-class section. Running module contains: traction-support block, power electric equipment, aggregates responsible for micro-climate in passenger sections and, if necessary, a toilet. Passenger module contains: passenger couches, tables and places for hand baggage. Stern module includes a VIP-class passenger section, power section, baggage section.

Technical characteristics of a train (model U-328GM)
for the alternative with three-passenger modules

1	Number of passenger seats	16
2	Equipped mass, kg	5,000
3	Maximal mass, kg	6,600
4	Standard-size dimensions, mm - length - width - height - gauge	 19,000 1,600 1,675 1,250
5	Maximal speed, km/hour	350
6	Wheel formula	6 x 2
7	Fuel consumption (350 km/hour, full mass) - kg/100 km - kg/100 pass. x km	 10 0.63
8	Smoothness of running along the rail-string track structure (W)	2.8