



# The Indian EXPRESS

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JOURNALISM OF COURAGE

## LEADERS IN TRANSPORT INNOVATION

### What is SkyWay?

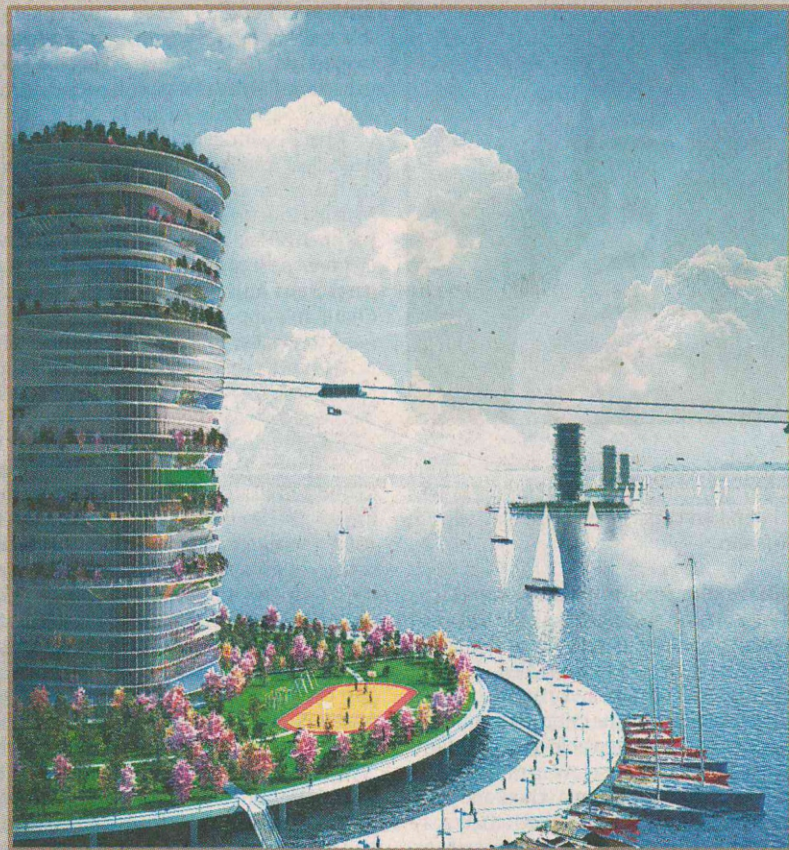
As it was reported earlier, the 12th edition of the International Railway Equipment Exhibition (IREE) has been launched and opens new names to the transport community and the whole India. One of them is SkyWay string transport, which successfully presents itself at the global transport exhibitions followed by the implementation of specific projects. SkyWay was demonstrated at Innotrans (Germany), Smart Cities (India), RailWayTech (Indonesia).

The philosophy of SkyWay transport is of continuous development and re-thinking. The development needs a thorough recording and description of achievements and ideas. Annually, quarterly, monthly. In addition to the already well-known and proven solutions for urban and intercity environment, SkyWay has started developing sea ports designed with the consideration of the requirements to modern infrastructure. All types of SkyWay systems are distinguished by energy efficiency, minimal adverse environmental impact and a high safety level of passenger and cargo transportation.

The base of SkyWay transport is a string rail – a universal standard, which is used for different types of roads. String roads enable travel speed up to 500 km/h as well as the operation of all types of cargo and passenger logistics. The rolling stock can be both public and private. The extension of the string roads network allows them to exist in the same logic as automobile roads do. However, a great advantage of string roads is their full automatization, which rises their safety level. SkyWay roads can connect not only countries, cities and districts, but also buildings – they can be integrated with skyscrapers.

The prototype of a city public and personal transport system operates even now as well as the system for bulk cargo transportation. A high-speed system (up to 500 km/h) will be demonstrated soon, and potentially may be built in India as well as in Belarus.

SkyWay string tracks are located above the ground surface, i.e. on the "second level", which is instrumental for the system's unique safety level. Being placed above the ground the transport simply cannot crash into a car or an animal. A light rail SkyWay is a future replacement of a personal car, where one does not need to carry driver's risks. The public intercity transport of rapid unicars allows to lower accident risks and opens the perspectives of reaching hard-to-reach places, where the railway



### OUR PHILOSOPHY IS CONTINUOUS DEVELOPMENT AND RE-THINKING

cannot be built.

### SkyWay transport specification

SkyWay urban transport is designed for short distance passenger transportation. It fits harmoniously into the existing infrastructure of any megalopolis and solves transport problems of large cities. SkyWay transport offers a range of options for the rolling stock. The main models include Unibus (an analogue to public transport), Unicar (the one with enhanced comfort) and Unibike.

Unibike is a light and compact vehicle on steel wheels. It combines the features of a high-performance electric vehicle of the transport system and a sports and recreational facility. In addition to the built-in (and external) power sources, the unibike is equipped with a bicycle generator so that it can be driven by the muscular force of pas-

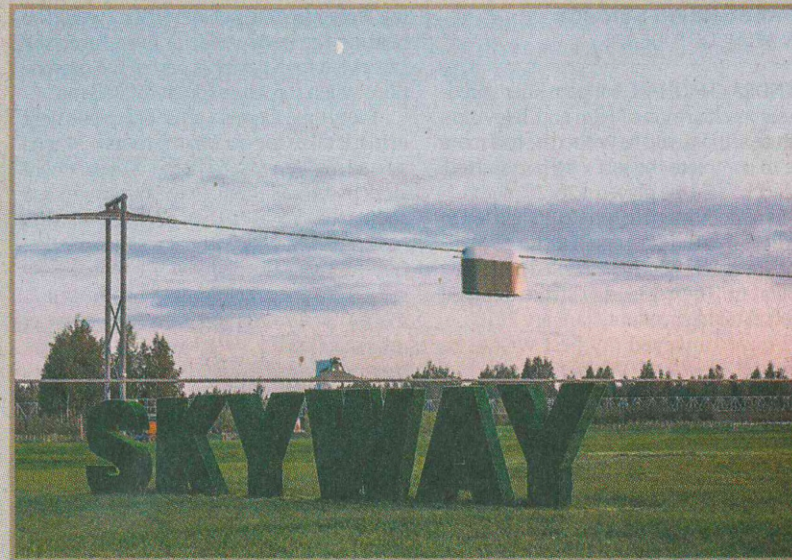
sengers.

SkyWay high-speed transport is a mounted vehicle on steel wheels, designed for intercity passenger and cargo transportation for distances up to 10,000 km. A high-speed unibus provides high speed due to the specially designed string-rail overpass and high aerodynamic efficiency of the vehicle.

SkyWay cargo transport is designed for cargo transportation over middle and high distances. A special range of containers has been developed to allow docking with maritime, railway and automobile containers for all types of cargoes. The rolling stock is based on suspended urban passenger unbuses. Containers for perishable goods are equipped with a thermal control system and air conditioning; containers for environmentally hazardous goods have a multi-layer high-strength body.

### SkyWay sea port system

Sea ports is the newest SkyWay direction of development. The SkyWay transport system enables delivery of goods for sea ports for the distance of 15-20 km from the shore without a significant cost increase. The crucial advantage is mooring of vessels, which does not require the creation of quay walls, dredging or shore reinforcement. It is possi-



ble to deliver goods to a sea port located in the natural depths (up to 50 m), whereas a port and the SkyWay transport system form a single logistics complex for the delivery of raw materials operating in an automatic mode. The transportation volume of bulk cargo is up to 200 mln tonnes/year; the transportation takes place from a mining enterprise to a bulk carrier's hold without intermediate stocking.

A Smart Linear City concept unites all directions of the Anatoli Yunitski's SkyWay system.

General designer of the development company, author of the project Anatoli Yunitski comments on SkyWay importance and prospects for India: "The road network in today's India covers more than 4.5 million kilometres. 'Rolled up' in asphalt and 'buried' under railway sleepers is fertile soil, equal in its area to the territories of three countries, such as Israel. On the territory ten times larger, soils along roads are degraded and contaminated with carcinogens.

The degradation can be avoided in a state with Smart Linear Cities (SLC). It is an entirely pedestrian city of a cluster type, about 1 km in diameter, with up to 10,000 inhabitants. Clusters are built in the logic of accessibility for pedestrians, within 500 m from the centre. In the centre, there is a dominating building, through which all communication lines pass. Interchange stations operate to transfer from urban tracks (up to 150 km/h) to high-speed intercity tracks (up to 500 km/h); underground hyperspeed tracks located in fore vacuum tubes (up to 1,500 km/h) are also placed in them.

Our group of companies is ready to implement this solution on the territory of India and we start from several initial transport projects".

After the Belarus-Indian business forum, SkyWay officials have signed three agreements – with the Maharashtra State, with a port and in the framework of the development program "Smart Cities". We will keep our eye on the project's development.



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Escorts Railway, Equipment Division of Escorts Limited, is engaged in Design, Manufacture, Supply, Installation, and service of wide range of Equipment for

Indian Railways and Global projects for more than 50 years. Escorts is an INDIAN RAILWAYS approved source and supplier for several systems, including various types of Air Brakes System, Couplers for all type of passenger coaches and locomotives, Suspension Systems, Hydraulic Dampers/ Shock absorbers, various rubber components of both passenger and freight trains etc.

Our engineering competence has been consistently improved through series of technology collaborations with the world technology leaders such as Scharffenburg – Germany for Couplers, Honeywell – Germany for Friction products, TOYO TIRE

– Japan for air spring suspension, YUJIN machinery limited – South Korea for brake disk and Vulcanite – Australia for secondary suspension systems.

Currently we are exporting our products to Thailand, Malaysia, Indonesia, Myanmar, Bangladesh, Sri Lanka, Vietnam, Egypt, Tanzania, Senegal, Ghana, Spain, New Zealand etc. We have a state of the art ISO 9001 – 2008 and IRIS Rev -02 certified manufacturing facility and our products comply with UIC, AAR and Indian Railways standards.

We develop products of international technological standards at competitive prices.



### INTERVIEW | Kiryl Badulin,

Head of Business Projects Division, Business Development Department, SkyWay Technologies Co

**K**iryl Badulin, Head of Business Projects Division, Business Development Department, SkyWay Technologies Co. in a free-wheeling conversation with Geetmala Sarkar tells us of the innovative transport-related technological solutions and products they are bringing to India, how these have a possibility to bridge the lacunae witnessed at multiple levels in creating sufficient infrastructural facilities, how technological know-how can seamlessly travel to transcend roadblocks, the eco-friendly nature of their vehicles in general.

### What does SkyWay hope to achieve in India?

We are a new transport solutions provider engaged in creating a transport system that occupies space un-trammelled by any kind of traffic. We provide technology and vehicles on the "second-level" above the ground. Our vehicular movement will happen on specially designed rail-string overpass.

### What are your expectations from participating in International Railway Equipment Exhibition 2017?

We want to promote our technology to the Indian market. We have solutions for both passenger and cargo transportation. As India is becoming technology driven, the high demand of innovations can lead us to more potential customers here. Of course, we want to find and foster relevant business partnerships for the long haul.

### How do you view the Indian market?

It has a huge demand and needs innovative solutions due to scarce resources. And



we are ready to fill in this space. We see our market in India in high-speed transportations that can provide speed up to 500km/hour, as well as urban passenger and cargo transportation and do not confront with existing manufacturers.

### What are you working on in India?

Currently we are working in different directions in India. One is passenger transport in cities and cargo transport for transport companies or sea-ports (container transport). The other transport solutions

that we are working on are urban transport, unibike (a light & compact vehicle on steel wheels; in future, an alternative to a car, bicycle or motorcycle), high-speed transport (mounted vehicle on steel wheels) too.

### What kind of support have you received from the government of India?

Our founder Anatoli Yunitski has already met the Union Transport Minister of India, Nitin Gadkari who has extended his support to us. As per my understanding, the optimality, the effectiveness and the safety that SkyWay brings is what was appreciated by the Minister to support us. We are in discussion with the state of Maharashtra for developing public and cargo transportation there.

### What technologies are you offering?

We are promoting SkyWay technologies designed in Be-

larus. There is the innovative un-cut string rail over pass to provide a light yet rigid track structure. Secondly, rolling stock with low aero-dynamic resistance. This technology has no analogues in the world, it is driverless and has built-in automated control systems. Also, compared to

### WE SEE A MARKET IN INDIA IN HIGH-SPEED TRANSPORTATIONS THAT CAN PROVIDE SPEEDS UPTO 500KM/HOUR

traditional technologies, they are much cheaper, ecological and safe.

### What makes your transport systems safe?

Our safety mechanisms include high resistance to vandalism and acts of terrorism. As track structure is located above the ground it enhances safety in a simple way: there is no object to get crushed.

The anti-derailment system increases traffic safety by at least 10 times.

### Who are your competitors?

They are basically Innovative Transport; hyperloop by Elon Musk, Metrino and SkyTran from Israel.

### Do you have an edge over them?

Our advantage points are that we already have a test site in Belarus, where industrial prototypes of rolling stock are presented. Our overpass solutions are 15 to 20 times less costly compared to standard ones. It is cheaper than Japanese and even Chinese solutions. These facts, I believe, leverage us.

