





BYD SkyRail


Elevate Your Commute, Elevate Your Life >>

BYD COMPANY LIMITED


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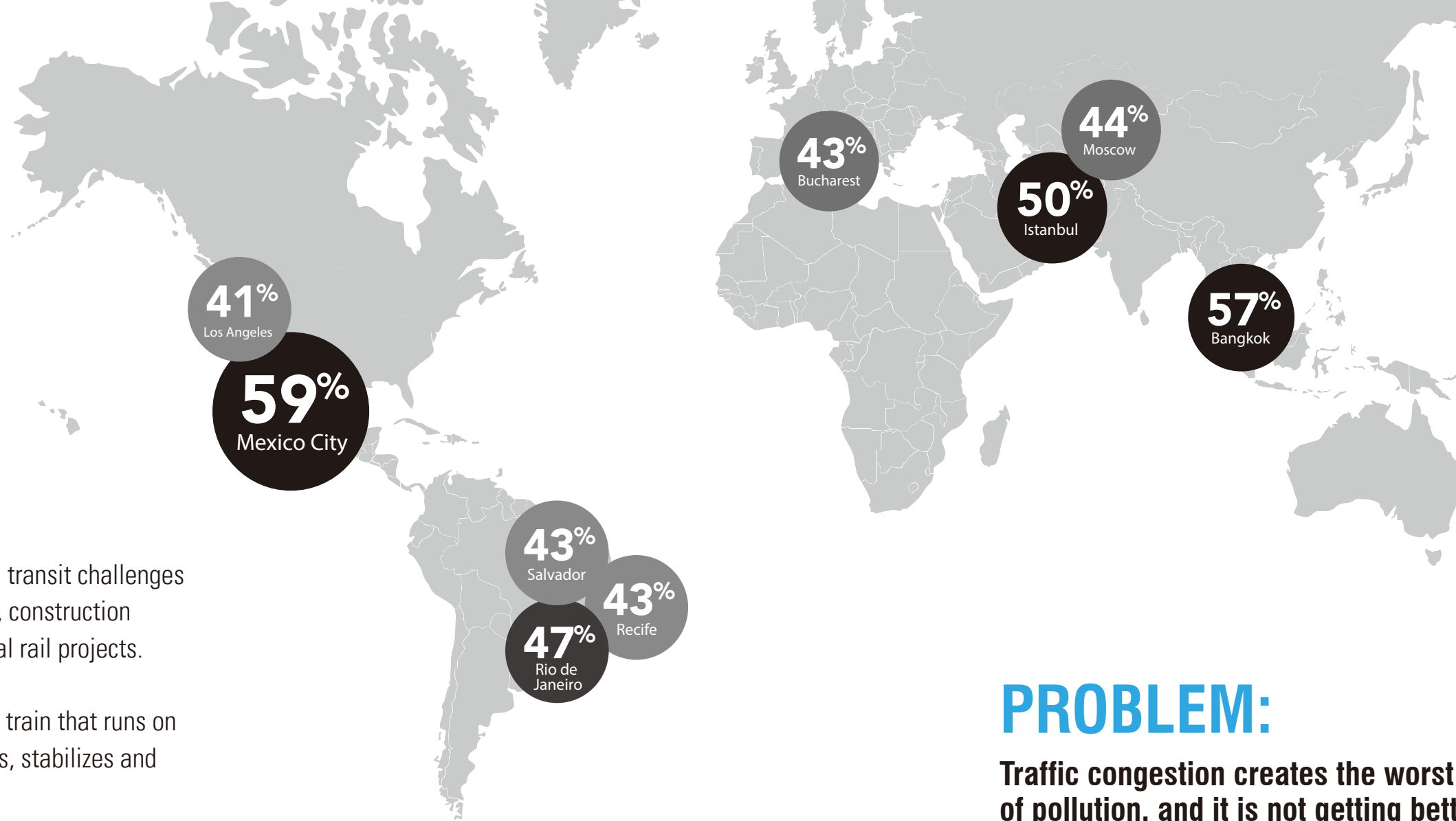
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BYD SKYRAIL

BYD's SkyRail solves urban congestion and transit challenges without the significant infrastructure costs, construction timelines, or traffic strains caused by typical rail projects.

SkyRail is an advanced straddling monorail train that runs on an elevated single track beam that supports, stabilizes and guides the carriage.

The innovative design optimizes energy efficiency, safety, comfort and cost-effectiveness, and the sleek, modern design enhances the urban landscape.



Extra Travel Time Caused by Congestion

Source: TomTom Traffic Index 2016

Most Congested Cities

Congestion Level (Extra Travel Time)

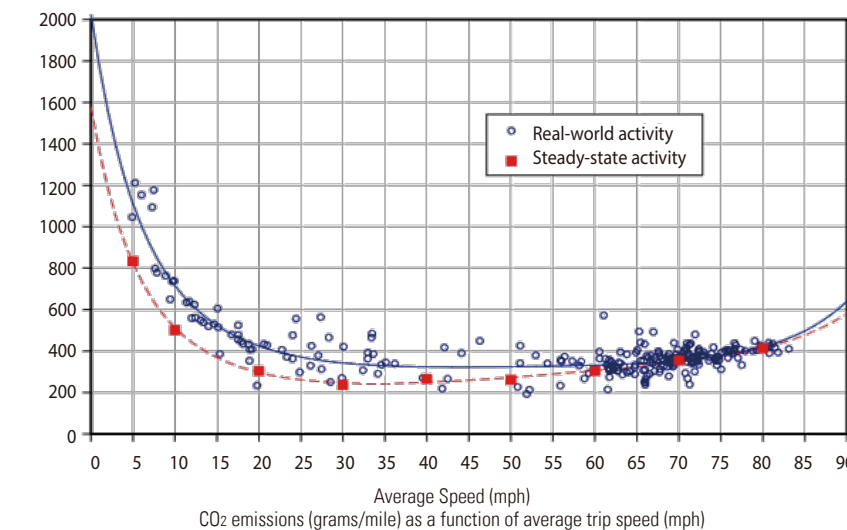
PROBLEM:

Traffic congestion creates the worst kind of pollution, and it is not getting better.

Historical data indicates that traffic congestion is up by 13% globally since 2008. Today, drivers in Mexico City spend 59% more time in traffic during the day, and up to 103% more time during peak periods. This means up to 219 wasted hours each year.

High Energy Consumption & Pollution Emissions

Stop-and-go traffic produces significantly higher tailpipe emissions.



Substantial Financial Loss

Traffic congestion cost Americans \$124 billion in direct and indirect losses in 2013, this number will rise to \$186 billion in 2030." — FORBES (2014).

Country	Sector	2013	2020	2025	2030	2013-30% change
UK	Direct costs (value of fuel & time wasted)	12,649	15,865	18,264	20,937	66
	Indirect costs (increased cost of doing business)	7,883	9,565	10,928	12,473	58
	Total	20,532	25,430	29,191	33,410	63
France	Direct cost (value of fuel & time wasted)	12,881	14,780	15,984	17,158	33
	Indirect costs (increased cost of doing business)	9,630	10,668	11,517	12,430	29
	Total	22,510	25,448	27,501	29,589	31
Germany	Direct cost (value of fuel & time wasted)	21,684	24,224	25,929	27,702	28
	Indirect costs (increased cost of doing business)	11,796	13,116	14,517	16,137	37
	Total	33,480	37,341	40,446	43,838	31
USA	Direct cost (value of fuel & time wasted)	78,519	97,099	109,550	120,695	54
	Indirect costs (increased cost of doing business)	45,639	54,157	60,151	65,526	44
	Total	124,158	151,257	169,701	186,221	50

Source: The Future Economic and Environmental Costs of Gridlock in 2030 Report for INRIX

Transformational City Transport

**Low
Construction
Cost**

**Short
Construction
Period**

**Easy City
Integration**

**No
Occupancy
of Roads**

**Safe
Mode of
Transit**

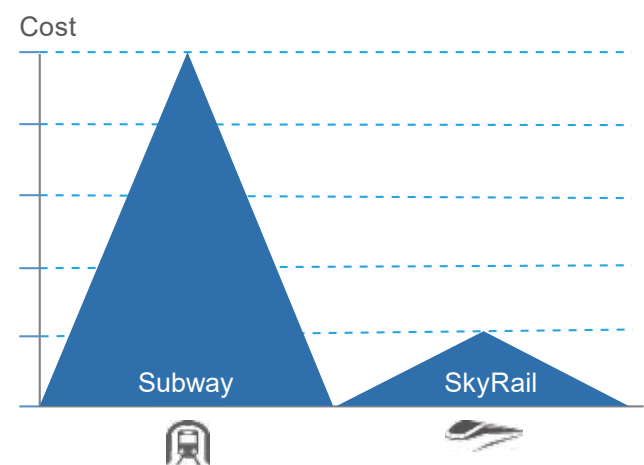
**Excellent
Topographic
Adaptability**

**Enjoyable
Rider
Experience**

BYD SKYRAIL HIGHLIGHTS

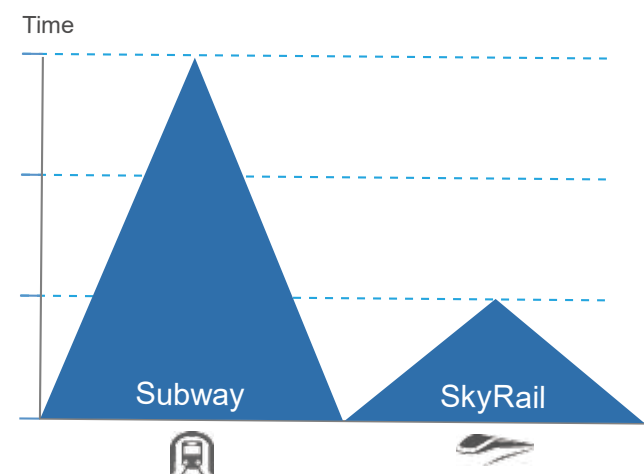
\$ Low Construction Cost

SkyRail is only one fifth the cost of subway, making it more profitable for operators with less tunneling, demolition and construction. For countries or cities who have concerns with the financial burden and high costs of building, operating and maintaining a subway system, SkyRail is an ideal choice.



🕒 Short Construction Period

The prefabricated track beams of the SkyRail result in a construction schedule as short as 2 years, only one third of the time to build a subway.



🛡️ Easy City Integration

With over three times the gradeability compared to conventional rail systems and a significantly tighter turning radius, SkyRail seamlessly integrates into the existing cityscape. This avoids unnecessary demolition and reduces the complexity and cost of construction.





No Occupancy of Roads

The SkyRail's narrow track beams and support pillars minimize land use, allowing the SkyRail to be installed in congested areas and alongside existing highways.



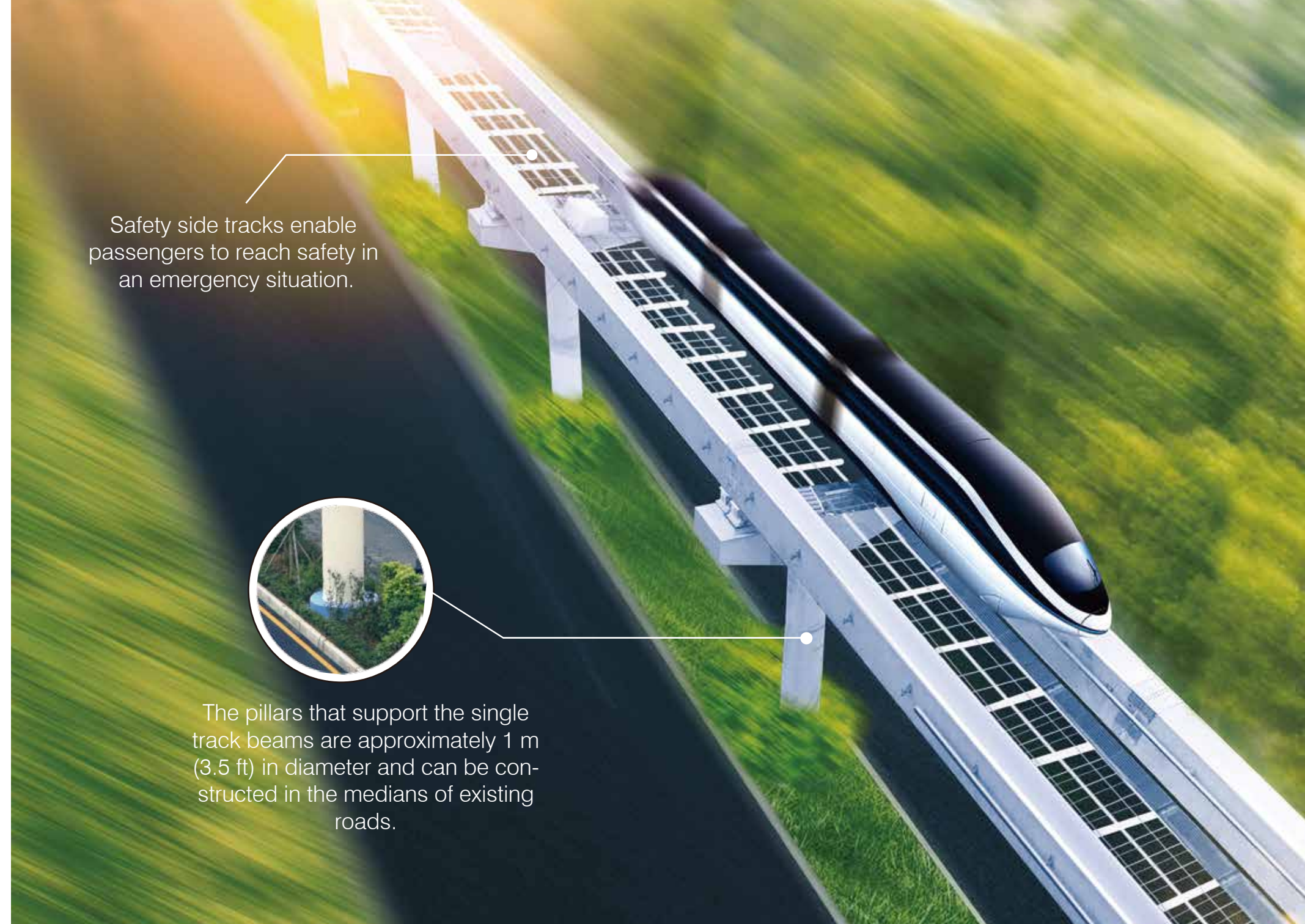
Safe Mode of Transit

- BYD proprietary technologies in electric motors, electronic controls, and batteries ensure the highest level of reliability. State-of-the-art power backup in each carriage keeps the monorail running, providing over 10 km (6 miles) of off-grid range in the event of a power outage.
- Flame-resistant materials are used to reduce the risk of onboard fires.
- SkyRail's larger train-to-rail-beam overlap ensures a higher level of stability. The independent elevated rail design eliminates opportunities for traffic collisions compared to Light Rail Vehicles and Streetcars operating on the same roads as passenger cars.
- Safety side tracks enable passengers to reach safety in an emergency situation.

Safety side tracks enable passengers to reach safety in an emergency situation.



The pillars that support the single track beams are approximately 1 m (3.5 ft) in diameter and can be constructed in the medians of existing roads.





OTHER BENEFITS

Superior Energy Efficiency

- Regenerative braking further powers the BYD Iron-Phosphate batteries with around 30% improved efficiency.
- The high-torsion, all-aluminum body greatly reduces energy consumption and tire wear.
- The BYD permanent magnet electric motor shaft drives the wheels directly, greatly increasing efficiency.

State-of-the-Art Driverless Control Technology

- State-of-the-art automated control technology.
- Modern and sleek design of both the body and rail system adds to any urban city environment.



High Capacity Flexibility

- Multiple carriages can be connected to provide flexibility to adjust to a variety of transportation capacity needs.
- SkyRail has an adjustable passenger capacity with the ability to move 10,000-30,000 passengers per hour each way.

1,000 ENGINEERS
5 YEARS OF R&D DEVELOPMENT
\$1 BILLION (USD) TECHNOLOGY INVESTMENT

BYD SKYRAIL PROJECTS :

- Shenzhen BYD Headquarters: 4.4 km/2.7 mile track, 7 stations
 Anticipated Completion: June 2017 (Initial two stations completed in September 2016)
- Strategic cooperation agreements with China's biggest real estate developers - Wan'ke & Country Garden
- **Cities with Skyrail Contracts:**
Shenzhen; Shantou (250 km/156 miles with 5 years); Xi'an (>100 km/60 miles); Bengbu; Guang'an; Jilin; Tianjin etc.;

Diversified Applications

- An effective complement to large cities' subway networks.
- The primary mode of public transit for small and medium-sized cities.
- Connections between suburban neighborhoods or main commuting lines linking large cities with surrounding townships.
- Exhibitions, conventions and scenic sightseeing routes.

Specifications

Items	Model	
	Mc (end car)	M (mid car)
Rated Voltage (V)	750	750
Car Length	12 m (39.3 ft)	12 m (39.3 ft)
Car Width	3.15 m (10.3 ft)	3.15 m (10.3 ft)
Width of Rail Beam	0.7 m (2.3 ft)	0.7 m (2.3 ft)
Wheelbase (centreline to centreline)	9.12 m (30 ft)	9.12 m (30 ft)
Seats per Carriage (passenger)	16	18
Full Load Capacity (passenger) (AW3)①	190	204
Curb Weight	14,000 kg (30,865 lbs)	14,000 kg (30,865 lbs)
Full Load	30,000 kg (66,139 lbs)	30,000 kg (66,139 lbs)
Design Top Speed	85 km/h (53 mph)	85 km/h (53 mph)
Operational Top Speed	80 km/h (50 mph)	80 km/h (50 mph)
Max. Gradeability	10 %	10 %
Min. Turning Radius	45 m (148 ft)	45 m (148 ft)

Note: ① AW3: Stand Passengers 9 / m² + All Seats

② All information based on the latest data at the time of printing. Final specs subject to change at production.

BYD AT A GLANCE

- Over 220,000 employees and 33 industrial parks worldwide.
- 4 core businesses: Electronics, New Energy, Auto, Rail Transit.
- 2016 group revenue: over \$15 billion (USD).
- Over 20 years of experience in battery research and development.
- Manufactures the world's safest rechargeable long cycle life batteries.
- World-leading Solar Manufacturer.
- World's Largest EV manufacturer.

33 industrial parks worldwide

220,000 employees

\$15 billion
2016 group revenue: over \$15 billion (USD)

**A PIONEER IN PROVIDING
A NEW ENERGY ECOSYSTEM
FROM POWER GENERATION TO STORAGE TO USAGE**

Solar

BYD solar projects
in almost 30 countries
on 6 continents.



Battery Storage

Battery storage captures generated solar power and makes it available 24 hours/day, rain or shine.
Covering over 50% of the U.S. energy storage market for frequency regulation in 2015.

Electrified Transportation

Largest passenger EV market share worldwide.
The first and only company in the world to provide
7+4 Full Market EV solutions.



BUILD YOUR DREAMS