



URBAN PASSENGER TRANSPORT

under SKYWAY technology



SkyWay –

elevated transport system

Location above the ground provides several global benefits:



High speed



Safety

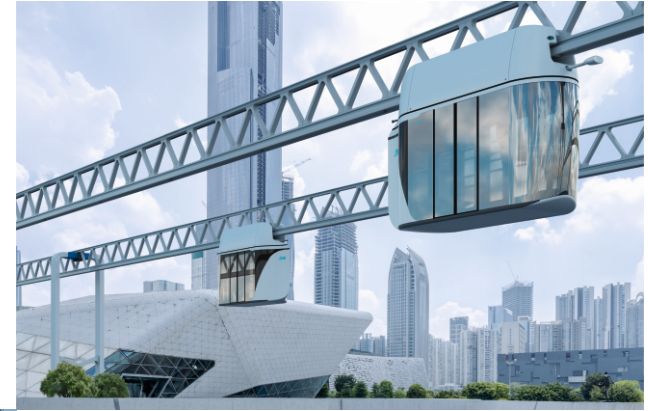


Sustainability

Comprehensive Solutions **SkyWay** for the City



LIGHT TRACK
(in parks, recreation areas)



SUBURBAN TRACK
(connection with satellite cities)



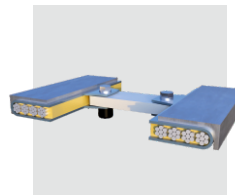
URBAN TRACK
(intracity transportation)

COMPONENTS OF SKYWAY COMPLEX

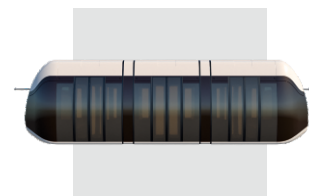
Complex components have a range of design variants; their choice is made with regard to the specific terrain and the planned capacity (volume of transportation per year, per day, in peak periods).

It is possible to integrate different track types and to use various rolling stock models.

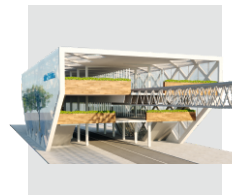
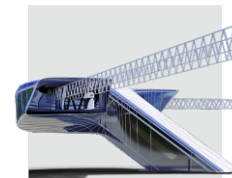
Transport overpass



Rolling stock



Infrastructure



Automated control system (ACS)



– comprehensive solution SkyWay



- String rails and supports (anchor and intermediate) form a rigid structure of the SkyWay transport overpass
- Lighter and cheaper than a conventional beam trestle dozens of times
- Relative structure rigidity
1/1,000–1/10,000
- Track structure curve radius
5,000–50,000 m

Overpass



- A solid roadbed adds more load on supports and has a high cost



- String rails and supports (anchor and intermediate) form a rigid structure of the SkyWay transport overpass
- Lighter and cheaper than a conventional beam trestle dozens of times
- Relative structure rigidity
1/500–1/2,000
- Track structure curve radius
500–5,000 m

Overpass



- A solid roadbed adds more load on supports and has a high cost



- String rails and supports (anchor and intermediate) form a rigid structure of the SkyWay transport overpass
- Lighter and cheaper than a conventional beam trestle dozens of times
- Relative structure rigidity
1/100–1/500
- Track structure curve radius
100 (on support)... 2,000 m

Overpass



- A solid roadbed adds more load on supports and has a high cost



Rolling stock

Unibus U4-210



Basic parameters	Values
Curb weight	2,450 kg
Gross weight	3,500 kg
Overall dimensions, L x W x H	5.1 x 1.34 x 3.2 m
Number of passengers	14
Number of seats	2
Design speed	150 km/h
Noise	max 75 dB
Km run in autonomous mode	200
Electric energy (fuel) consumption with climatic control unit off / on	kW-h/100 km (l/100 km)
– at 50 km/h	7.5 (1.88) / 13.5 (3.88)
– at 100 km/h	9.9 (2.48) / 12.5 (3.13)
– at 150 km/h	15.9 (3.98) / 17.9 (4.48)
Characteristics when moving in SkyWay urban transport system	Values
Safety headway between unibuses	2 s
Safety distance at 90 km/h	50 m
Performance in the rush hour (round-trip)	50,000 passengers/hour

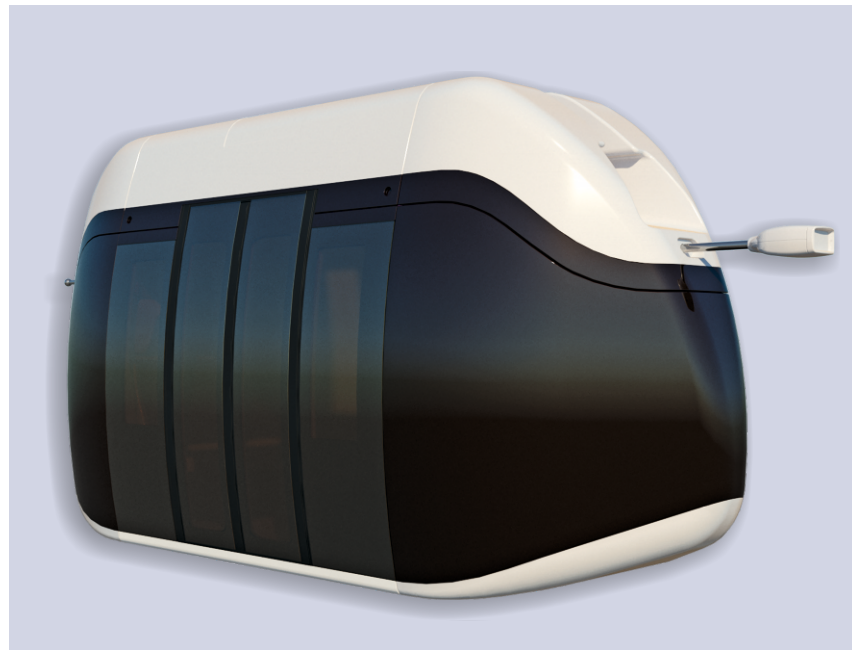


Unibike U4-621



Basic parameters	Values
Curb weight	820 kg
Gross weight	970 kg
Overall dimensions, L x W x H	4.23 x 0.8 x 2.09 m
Number of passengers	2
Design speed	150 km/h
Noise	max 75 dB
Km run in autonomous mode (with CCU off /on at 100 km/h)	100/60
Electric energy (fuel) consumption with CCU off / on	kW-h/100 km (l/100 km)
– at 50 km/h	2.4 (0.6) / 6.2 (1.55)
– at 100 km/h	3.2 (0.8) / 5.2 (1.3)
– at 150 km/h	5.4 (1.35) / 6.8 (1.7)
Characteristics when moving in SkyWay urban transport system	Values
Safety headway between unibikes	2 s
Safety distance at 90 km/h	50 m
Performance in the rush hour (round-trip)	7,200 passengers/hour

**Rolling
stock**



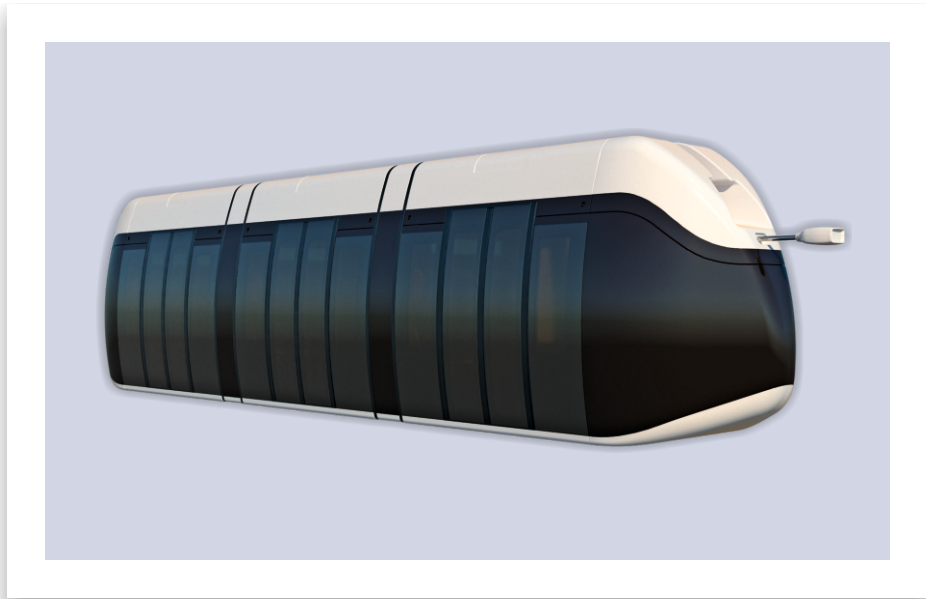
**Rolling
stock**

Unicar U4-430



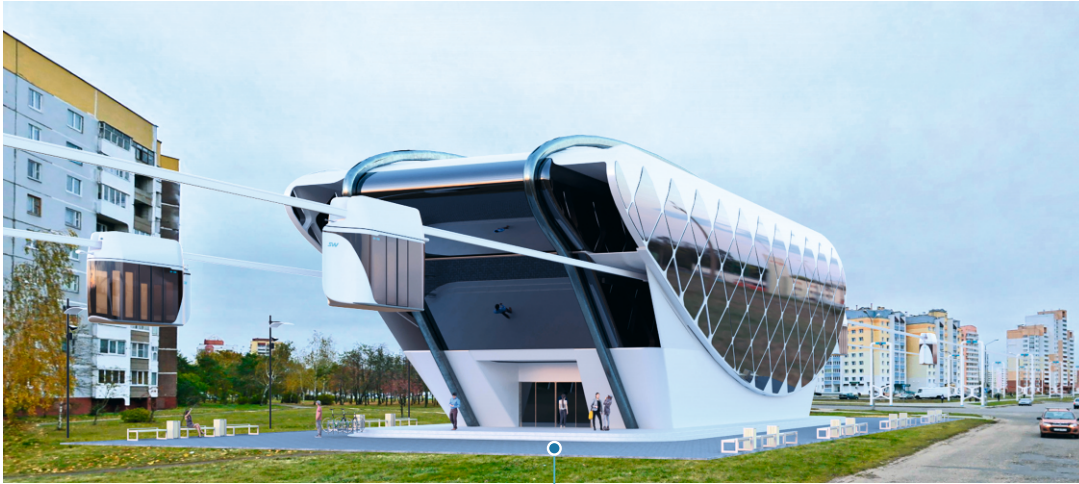
Basic parameters	Values
Curb weight	2,050 kg
Gross weight	2,050 kg
Overall dimensions, L x W x H	4.7 x 1.65 x 2.35 m
Number of passengers	6
Number of seats	6
Design speed	150 km/h
Noise	max 75 dB
Km run in autonomous mode	250
Electric energy (fuel) consumption with CCU off / on	kW-h/100 km (l/100 km)
– at 50 km/h	4.0 (1.0) / 8.0 (2.0)
– at 100 km/h	7.1 (1.78) / 9.1 (2.28)
– at 100 km/h	13.2 (3.3) / 14.5 (3.6)
Characteristics when moving in SkyWay urban transport system	Values
Safety headway between unicars	2 s
Safety distance at 90 km/h	50 m
Performance in the rush hour (round-trip)	21,000 passengers/hour

Unicar U4-430-T3



**Rolling
stock**

Basic parameters	Значения
Curb weight	4,750 kg
Gross weight	6,100 kg
Overall dimensions, L x W x H	10.6 x 1.65 x 2.35 m
Number of passengers	18
Number of seats	18
Design speed	150 km/h
Noise	max 75 dB
Km in autonomous mode	300
Electric energy (fuel) consumption with CCU off / on	кВт·ч/100 км (л/100 км)
– at 50 km/h	7,6 (1,9) / 15,6 (3,9)
– at 100 km/h	10,8 (2,7) / 14,8 (3,7)
– at 150 km/h	18,1 (4,5) / 20,7 (5,2)
Characteristics when moving in SkyWay urban transport system	Значения
Safety headway between unicars	2 s
Safety distance at 90 km/h	50 m
Performance in the rush hour (round-trip)	65,000 passengers/hour



GENERAL VIEW OF STATION

Possibility to locate trade
and service centres
at stations

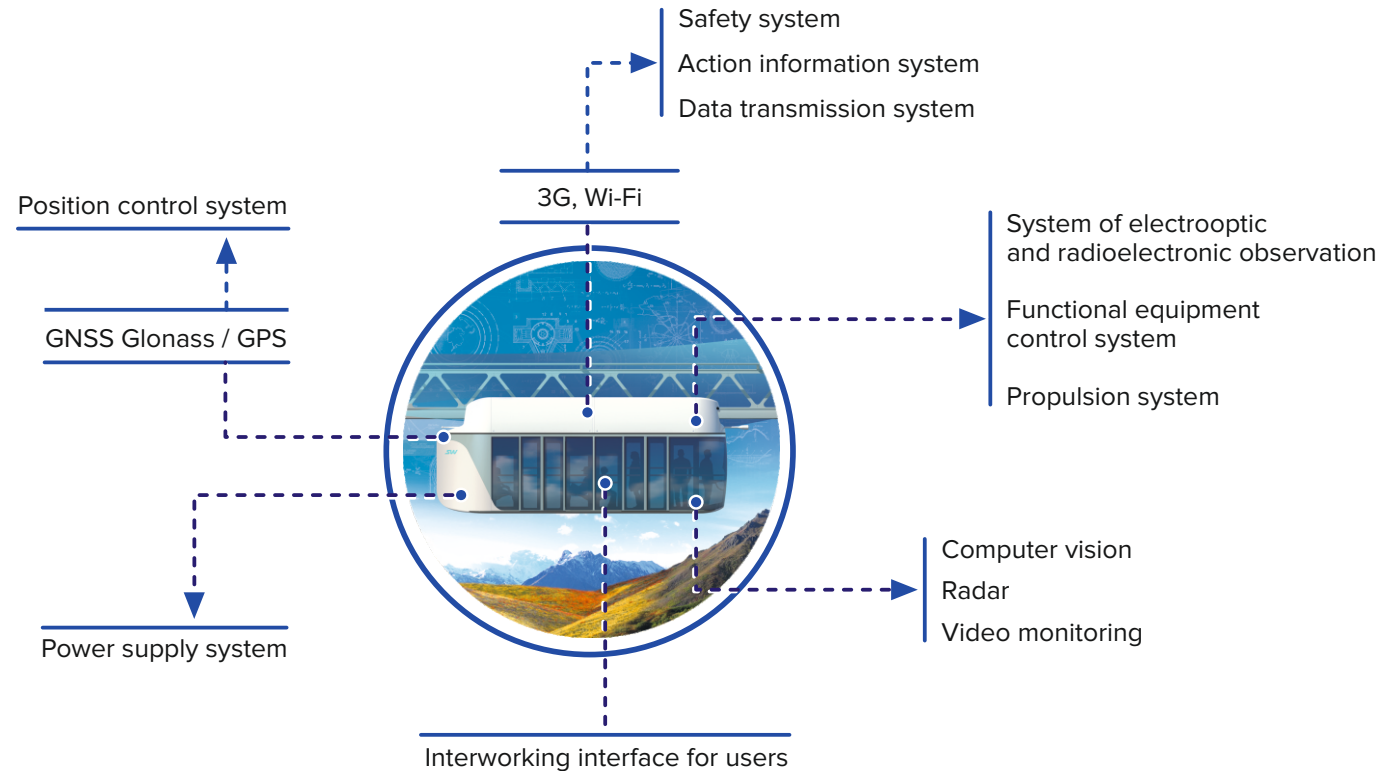
GENERAL VIEW OF TRACK

Possibility to locate fibre-optic
communication lines and cable
power lines



INFRASTRUCTURE

AUTOMATIC CONTROL SYSTEMS OF SKYWAY TRANSPORT COMPLEX



Carrying Capacity



Compact vehicle



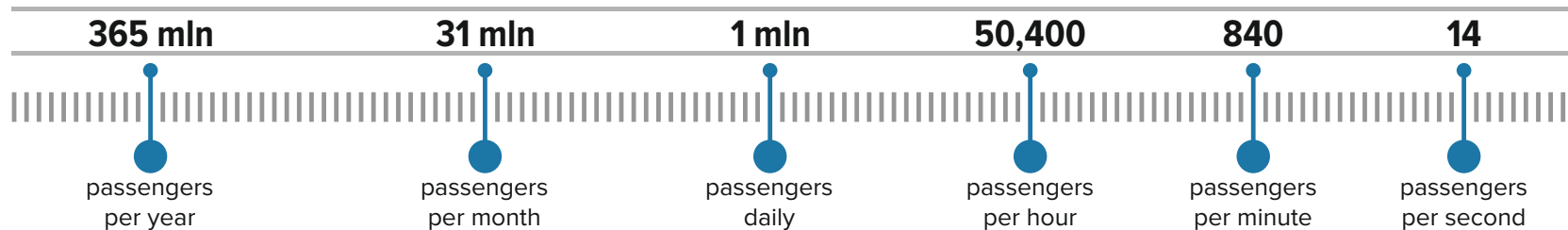
Headway from 2 seconds
(50 metres)



Automatic control
system



Traffic over
1 mln passengers per day



Carrying Capacity



Compact vehicle



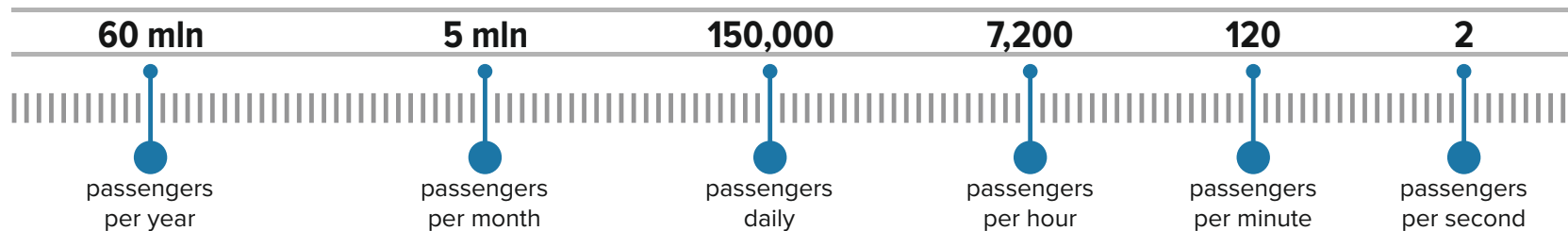
Headway from 2 seconds
(50 metres)



Automatic control
system



Traffic over 150,000
passengers per day



Carrying Capacity



Compact vehicle



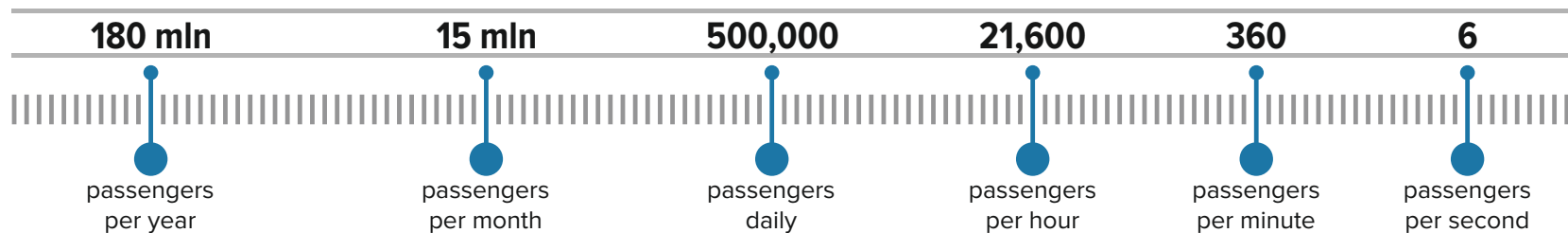
Headway from 2 seconds
(50 metres)



Automatic control
system



Traffic over 500,000
passengers per day



Carrying Capacity



Compact vehicle



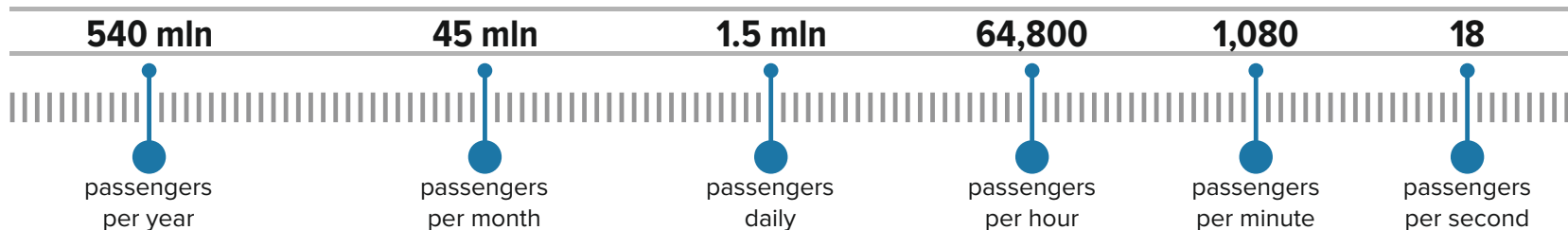
Headway from 2 seconds
(50 metres)



Automatic control
system



Traffic over 1.5 mln
passengers per day

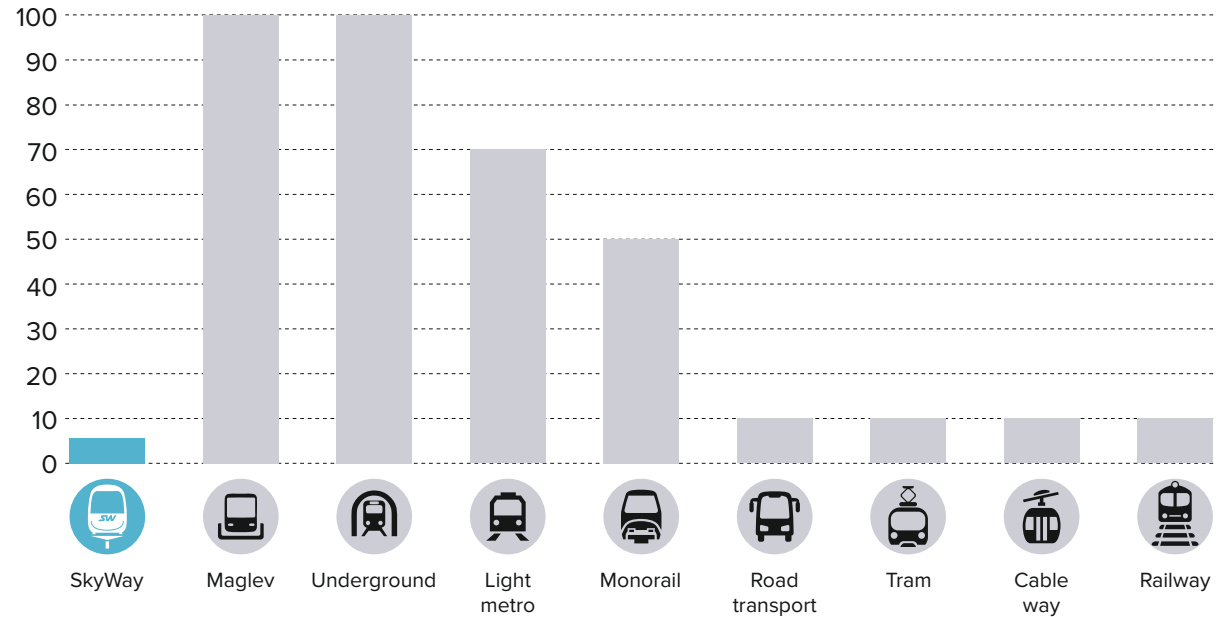


Low Capital Expenses



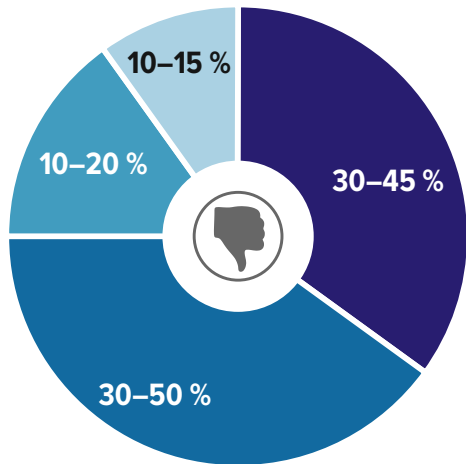
- a composite string rail – high-strength and durable
- a rail string overpass of special design is significantly lighter and cheaper compared to conventional solutions
- no need to build a solid roadbed

CAPEX, MLN USD/KM



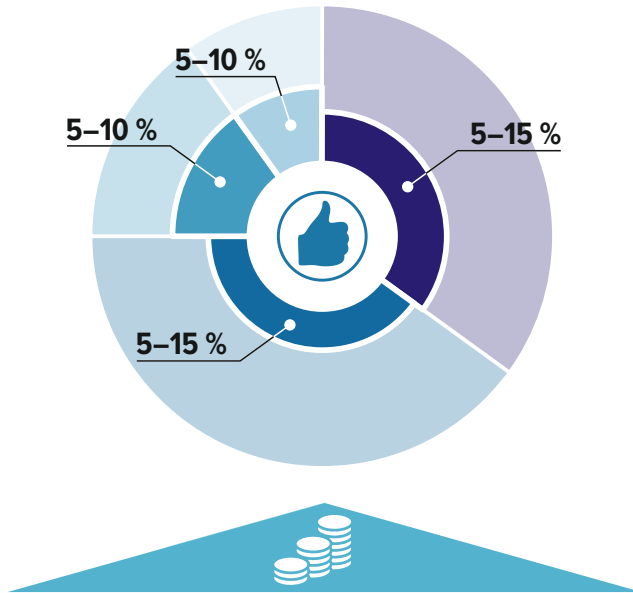
LOW OPERATING EXPENSES

COST BREAKDOWN FOR PASSENGER TRANSPORT



- Salary ●
- Fuel ●
- Depreciation ●
- Other ●

COST BREAKDOWN FOR SKYWAY TRANSPORT



OPEX SAVING BY 2-5 TIMES
 compared to conventional transport systems



- salary saving due to ACS
- saving due to the reduced power consumption
- lower expenses for maintenance and repair



Minimal footprint



Reduced emissions



Resource saving



Preservation of nature

SUSTAINABILITY





Benefits for the City



improved living standards



reduced hazardous emissions
into the atmosphere



absence of road accidents
involving public transport



growth of tourist flow



employment generation



increased economic potential
and investment attractiveness

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