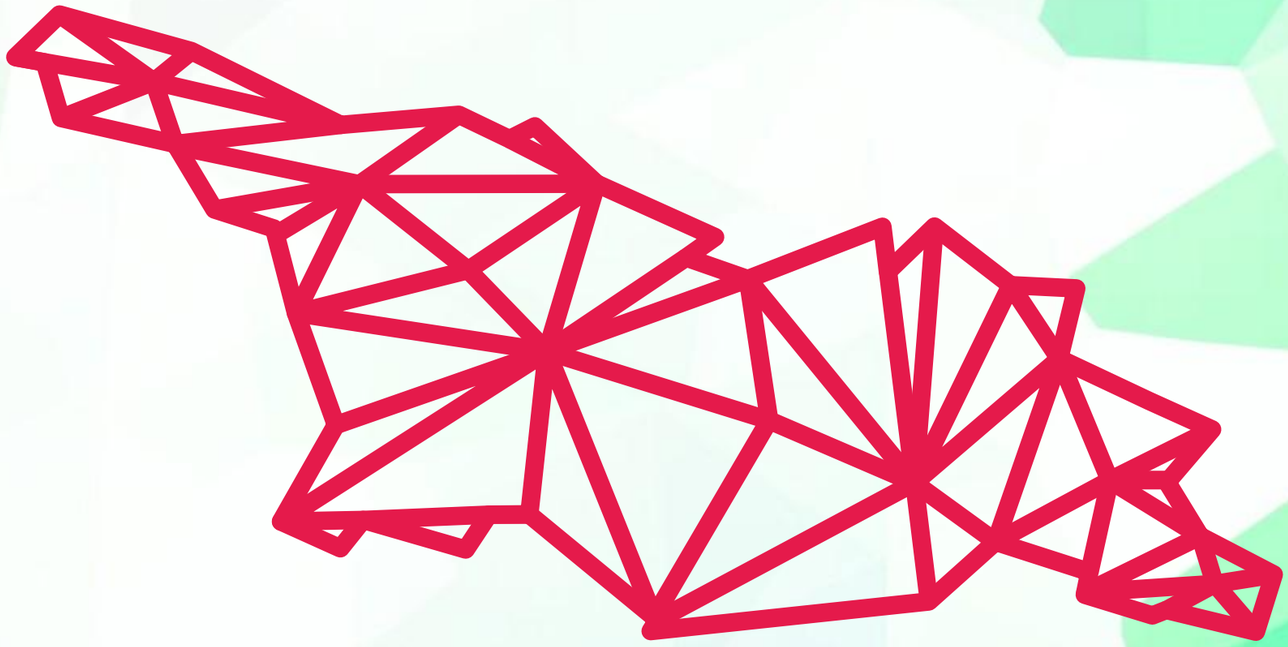
METRO KAPSUL

A NEW ELEVATED PUBLIC TRANSPORTATION SYSTEM



Prof. Mulyo Widodo Kartidjo
Indonesia Electric Vehicle Network (IEVN)
Institut Teknologi Bandung

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INTRODUCTION

Whats makes a city today?

- overdeveloped urban areas
  - limited space to grow
  - traffic problems
- high energy requirements
  - waste on fuel by automobiles
  - costly old public transport operational

Urbanization creates a lot of problems for many big cities in the world. Some part of the city become so densely populated, with a lot of construction of high rise buildings. The area of the city that becomes so cramp, developing a new street to accommodate ever increasing number of cars and buses become a problem. Traffic jam become unavoidable, yield on inefficiency in time, energy and money.

A new public transportation system that can solve the problem have to be found. Building a new road is almost impossible, underground subway will cost a lot of money and time to build, the only solution is an elevated transportation system that can be build fast, affordable with enough capacity.

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INTRODUCTION

Whats makes a city today?

INTRODUCTION

New Concept of Public Transportation

- Cost efficient on development, construction and operational
- Adaptable for developed urban and sub-urban areas
- Using dedicated lanes for faster and undisturbed travel
- Ability to transports challenging amount of passengers

Based on those challenge for urban/city transportation system, a new public transportation system, the Metro Kapsul has been developed, that can be operated efficiently without doing modification on the city construction or landscape.

Metro Kapsul has been design based on 4 fundamental ideas: AFFORDABLE, ENOUGH CAPACITY, SMALL TURNING RADIUS, and CAN CLIMB STEEP SLOPE.

The Metro Kapsul that has been developed since 2007, focus on Elevated Transportation System.

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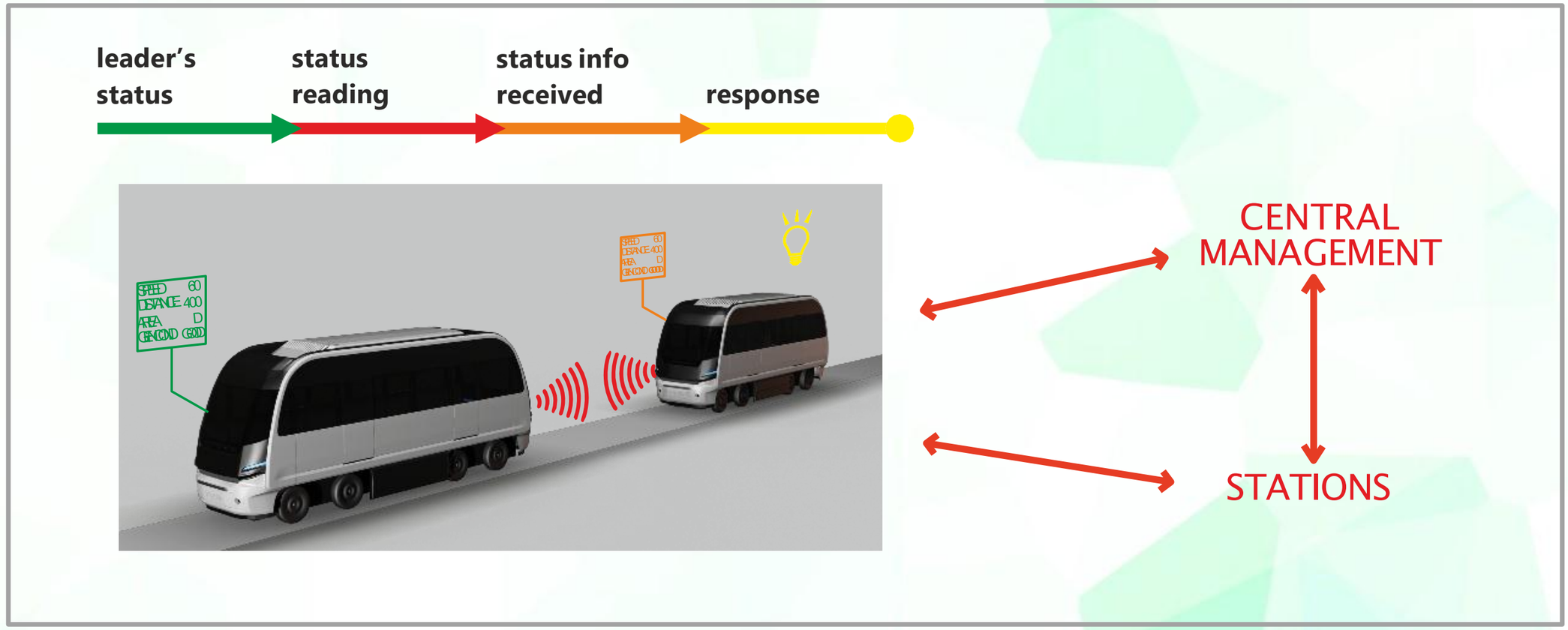
Individual Cars Running In Group



MetroKapsul, a new elevated public transportation system for big city based on the patented automatic train movement has been developed in Indonesia.

A system where several cars in a predetermined number, operate together in a group. Each car has a set of sensors capable of communicating with each other while operating.

A set of high tech sensors works to ensure the distance between the cars, arranging **only one car to be within two columns** of the track. Sensors also regulate the car's to speed up and slow down, also the speed in certain areas of the track.

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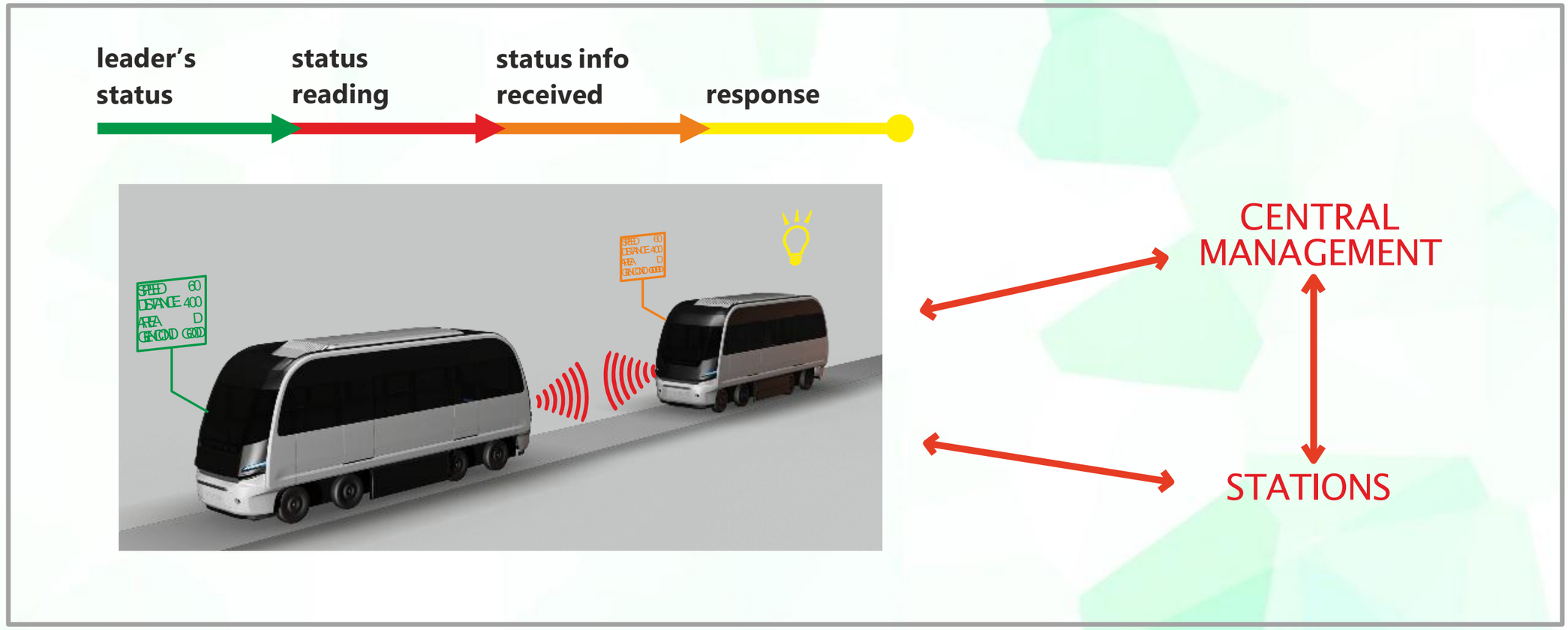
Individual Cars Running In Group



Every group can communicating to the central control management. Central control management can control how many cars and groups are needed at any given time.

Based on research, the use of group system can can increase the number of passengers capacity by 18,000 passengers by the number of 6 cars in operation, and 24000 passengers per hour during peak hours, with 8 cars operating.

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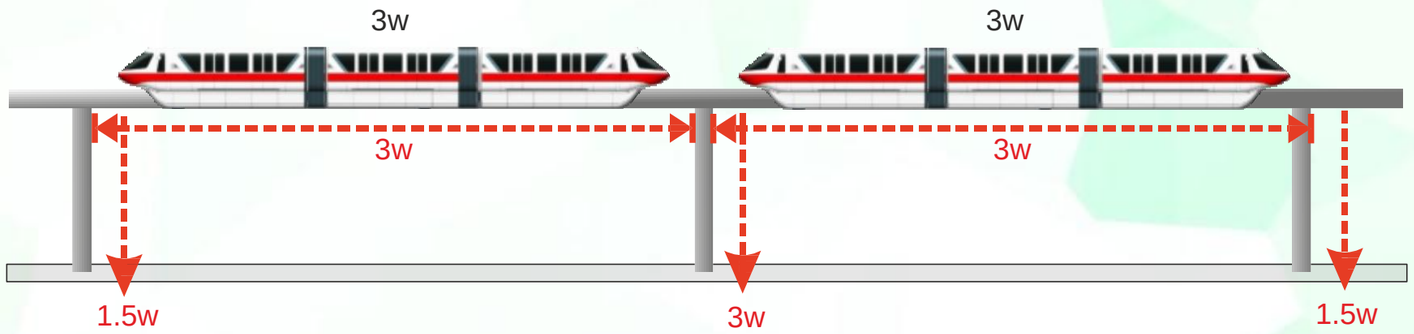
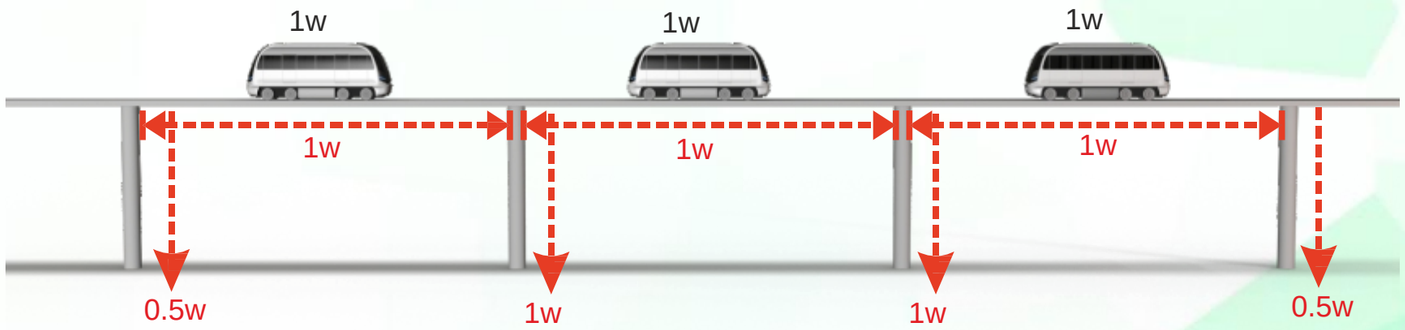
Cost Effective On Development.



a set of 3 cars weight simulation on elevated track



individual cars weight simulation on elevated track

An independent car system is used instead of a coupled car system. This system keeps the car weight lighter, and requires track construction that is also lighter than the tracks on conventional train modes. Lighter tracks will definitely make the construction cost cheaper as well.

The patented automatic cars movement will regulate the movement of a set of cars by controlling the distance between individual car on that set in such a way that only one car can be allowed on one girder of the elevated track. With this regulatory system, the target passenger capacity will be achieved, as each trip will include several cars in a group.

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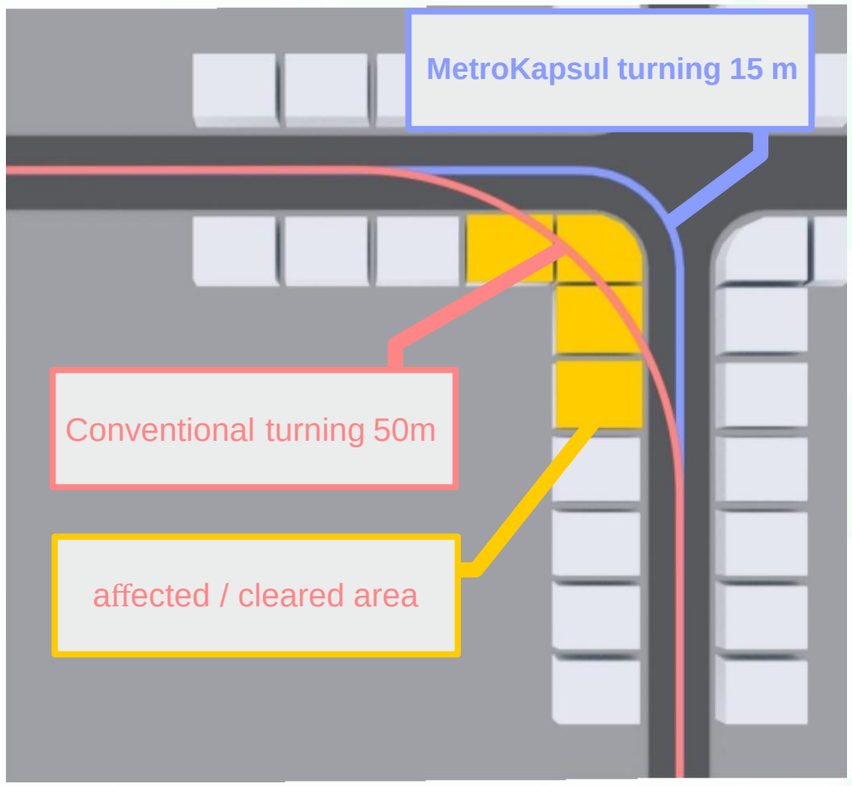
Cost Effective On Development.



Adaptable for any urban area

Independent car system has better maneuver on a tight corner than conventional coupled one. MetroKapsul able to turn at 15 metres radius, while other system on average only able to turns at 50 metres radius. this ability ensure MetroKapsul to be operated in a high density area.

The ability to be operated on this high density area without causing deconstruction to the area itself, would decrease the cost on the construction of the system. Less building to be cleared off and more direct routes can be established. As we know, conventional train has more indirect routes, it has to circling around from already developed area to prevent area clearing.

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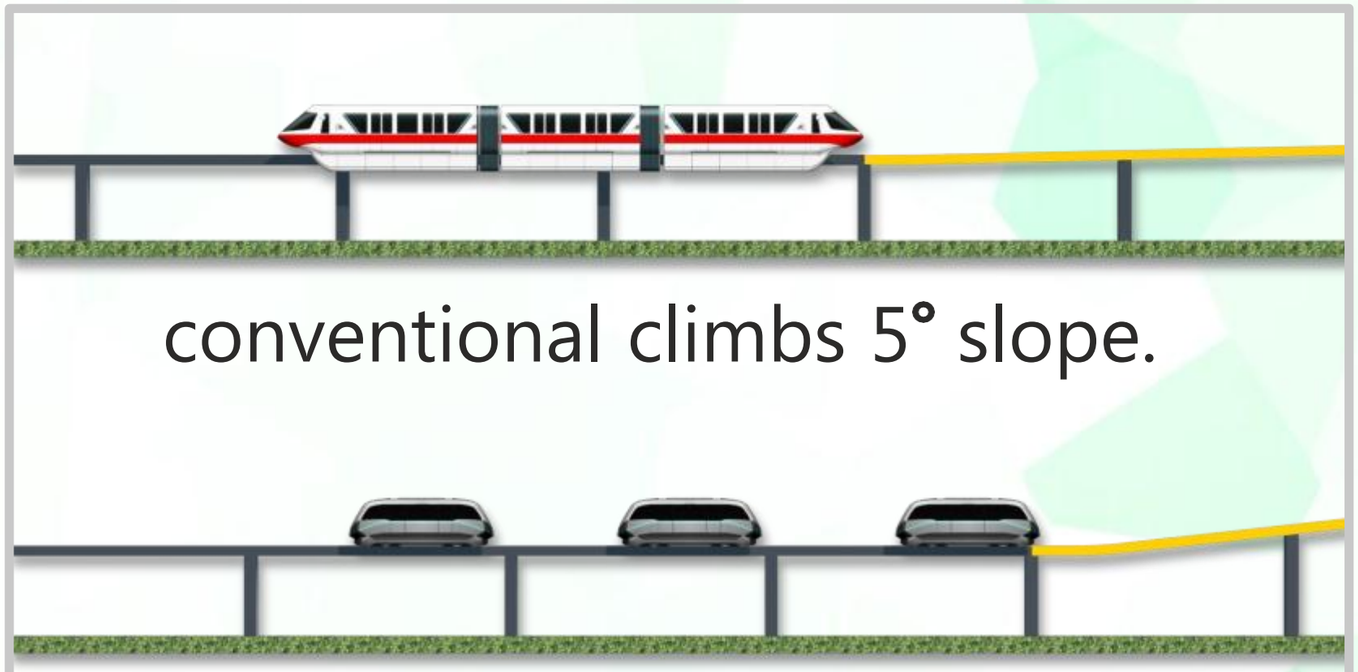
Cost Effective On Development.



conventional climbs 5° slope.

Metro Kapsul climbs 8 ° slope.

Independent car system could climb greater slope than conventional coupled one. MetroKapsul able to turn at 15 metres radius, while other system on average only able to turns at 50 metres radius. this ability ensure MetroKapsul to be operated in a high density area.

Better climbing ability will make the track ramp becomes shorter. this can make the cost of construction becomes less expensive. Shorter ramps require fewer column height differences.

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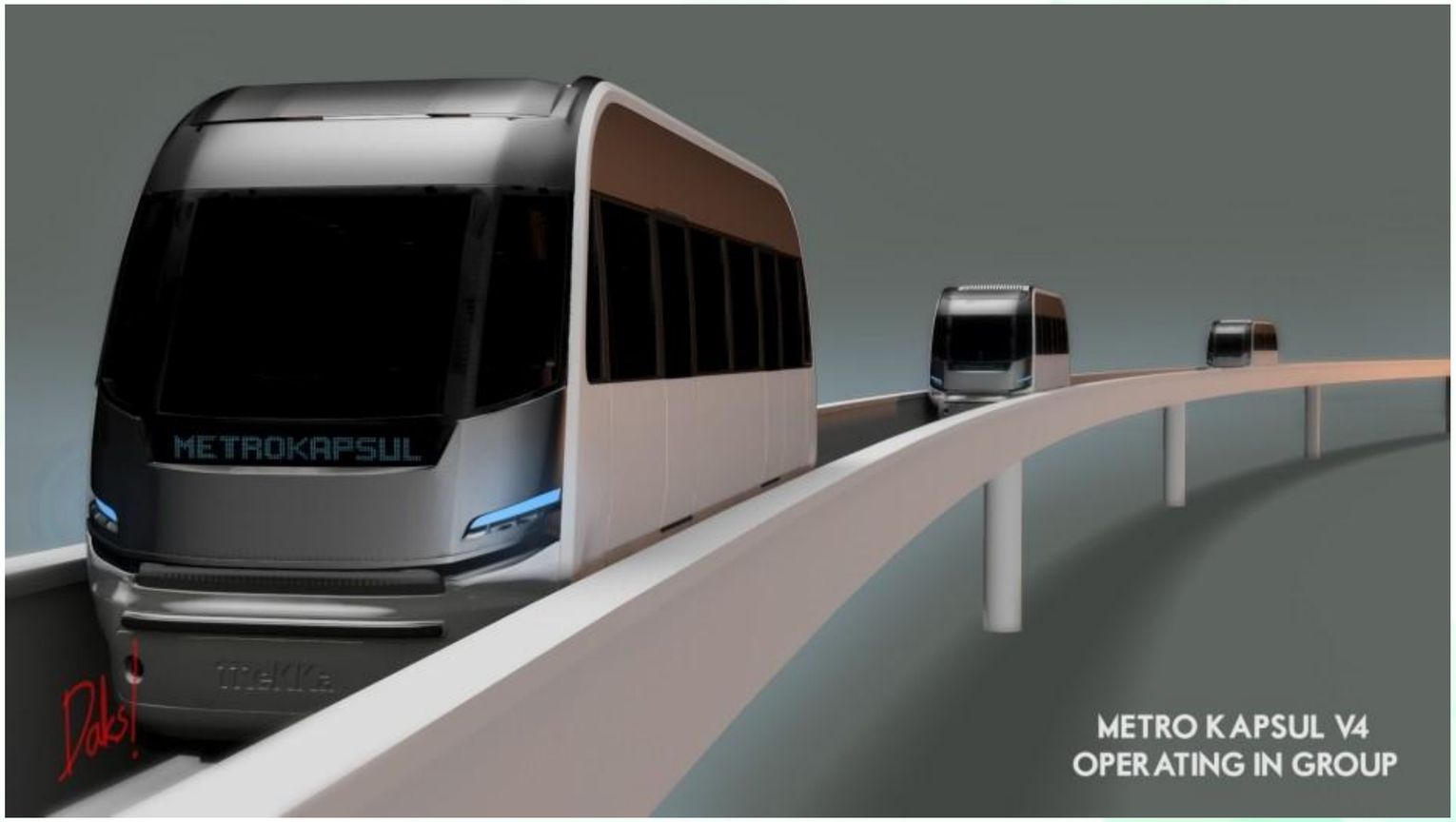
Cost Effective On Operational



The use of running in group system also able to improve operational efficiency. where the number of members in the group can be adjusted to the number of passengers at any time. At peak hours, the number of cars in a group can be increased and at quiet hours the number of cars can be reduced. This adjustment is done by central management.

this results in savings in power resources and increased vehicle life. where each car in the group undergoes an operational rotation.

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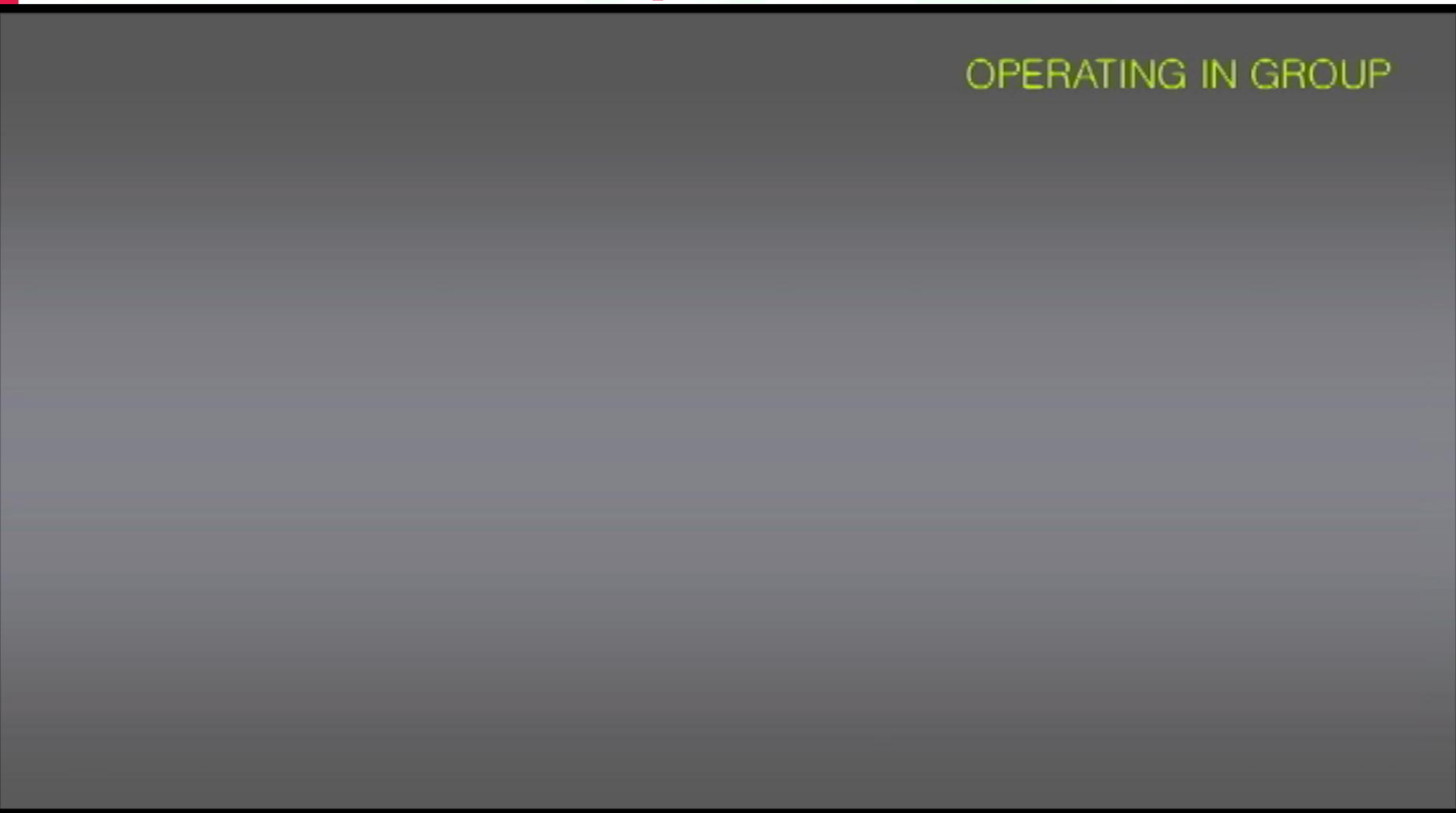
Cost Effective On Operational



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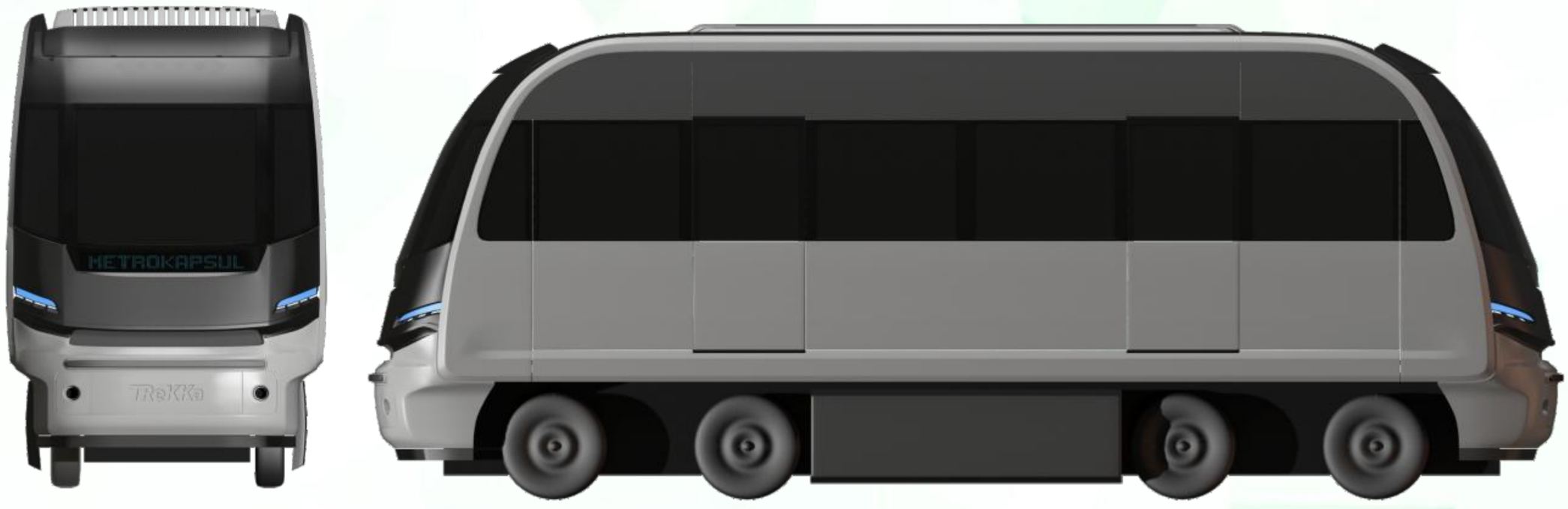

Capsule Specification	
Length	9300 mm
Width	2400 mm
Height	3340 mm
Door opening width :	900 mm
Bogie distance (pivot to pivot)	5000 mm
Guide track width	1400 mm
Floor height from track	1145 mm
Net weight	6000 kg
Full weight	12000 kg

Capacity and Performance	
Maximum Speed	80 km/hr
Maximum Acceleration	3,5 km/hr/sec
Normal Deceleration	3,5 km/hr/sec
Emergency Deceleration	4,5 km/hr/sec
Minimum Turning Radius	15 m
Passenger per Capsule	50 pax
Maximum Slope	8 %

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Development

Today some complete prototypes and test units is already being made, while complete final production type already on progress on completion.
The test track located in Subang, Indonesia, is already being used testing two complete units.

Endurance test, sensor test, mechanical test and many other tests being performed to ensure the cars and overall systems work perfectly from time to time.

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Mass Production Type

The mass production type is enhancement of every design versions and prototypes. Upgraded material and sensor systems, better than before. Using mix of aluminum and composites, for better performance and quality. An improvement on the interior side also being performed.

All of this enhancement on the car design and manufacturing, and improvement on the overall systems and procedures, are performed for passengers safety and comfort of doing travel with the MetroKapsul .

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Thank You

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