

TEMISA

Smart Mobility

Smart Mobility with Temsa

Istanbul, April 14th 2016

**Cüneyt Tekgül, Director
Marketing and Business Development**

Content

- **Temsa in a Nutshell**
- **Market**
 - Turkey
- **Strategy**
 - Smart Mobility
 - Powertrain

TEMSA
Smart Mobility

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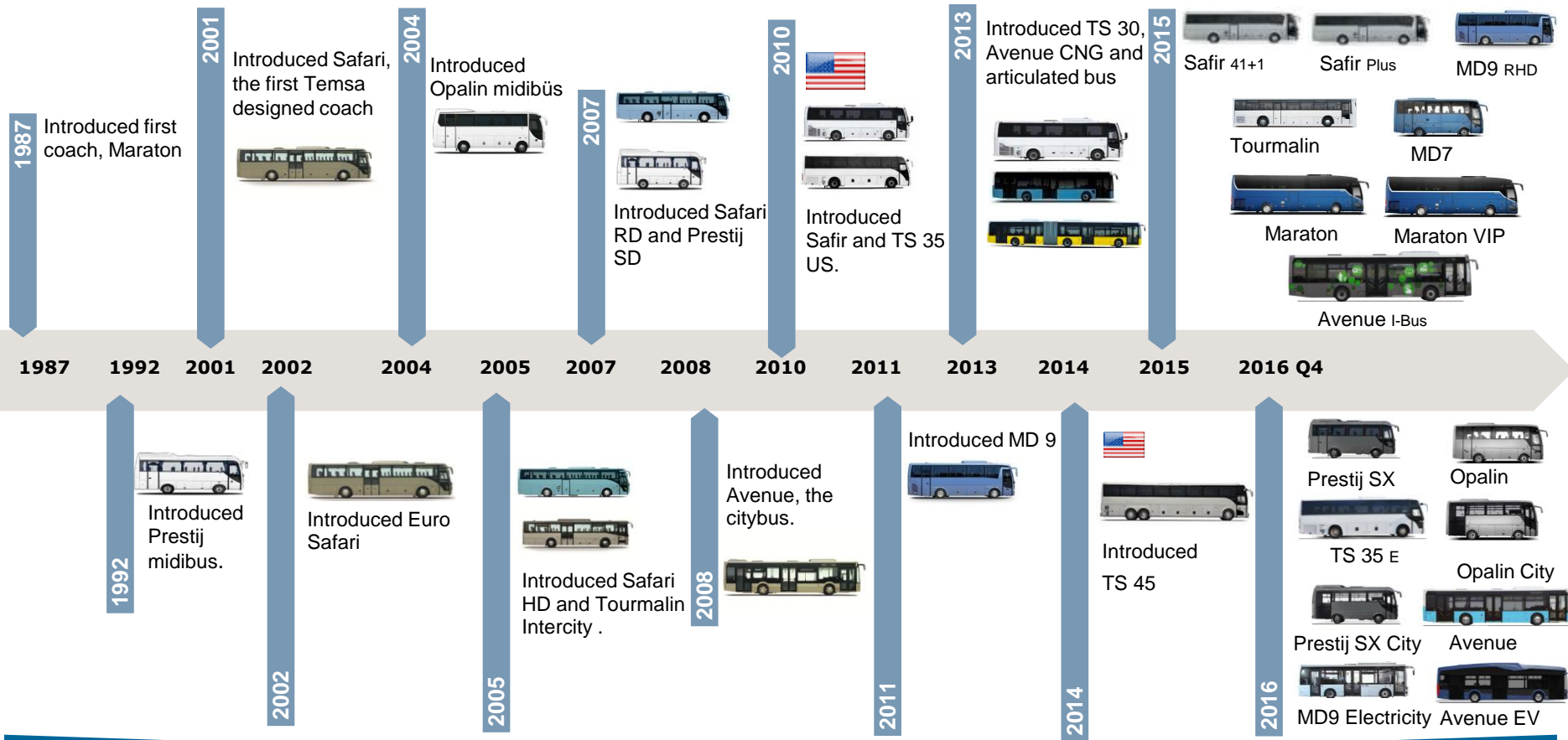
TEMSA
Smart Mobility

Temsa at a Glance

- **Founded in 1968**
- First bus manufactured in **1987**
- Today **17.000 buses** and **16.000 midibuses** are manufactured
- Sells its products to **64 countries**
- **4.5K +** buses in **France**, **800** in **Germany**, **700** in **Benelux**, **700** in **Italy**, and **800** in **USA**
- **First Automotive R&D center in Turkey**
- R&D spending **4,5 %**
- Number of employees: **1.560**

Temsa History & Timeline

Developing a broad range of products, Temsa has experienced rapid growth since its establishment



- Yearly production capacity of 4,000 bus and coaches
- More than 10,000 vehicles exported to over 64 countries

Temsa Adana Plant (Capacity & Location)

Annual production capacity of 2,000 Motor Coach, 2,000 Midibus, and 7,500 Light Trucks



- Total Area: 555k sq m
- Covered Area: 115k sq m



Product Line-Up

COACH



MARATON/ MARATON VIP



TS 45



SAFIR PLUS/ SAFIR PLUS VIP/ HD



TS 35 E



LD



TS 30



MD 9



HD RHD



OPALIN/ MD7



MD9 RHD



PRESTIJ SX

INTERCITY



LD SB



MD 9 IC



MD 9 LE

CITY



AVENUE/ LF18



AVENUE/ LF12



AVENUE IBUS/ LF12 IBUS



AVENUE/ LF12 CNG



AVENUE EV/ LF EV



MD 9 LE



MD9 ELECTRICITY



OPALIN CITY/ MD7 CITY



PRESTIJ SX CITY

New Products Launch Plan

2016-Q1



TS35 E



PRESTIJ SX

2016-Q2



MD9 ELECTRICITY



PRESTIJ SX CITY



AVENUE/ LF12



OPALIN/ MD7



busworld
ISTANBUL TURKEY
14-17 APR 2016

2016-Q3



AVENUE EV/ LF EV



OPALIN CITY/ MD7 CITY

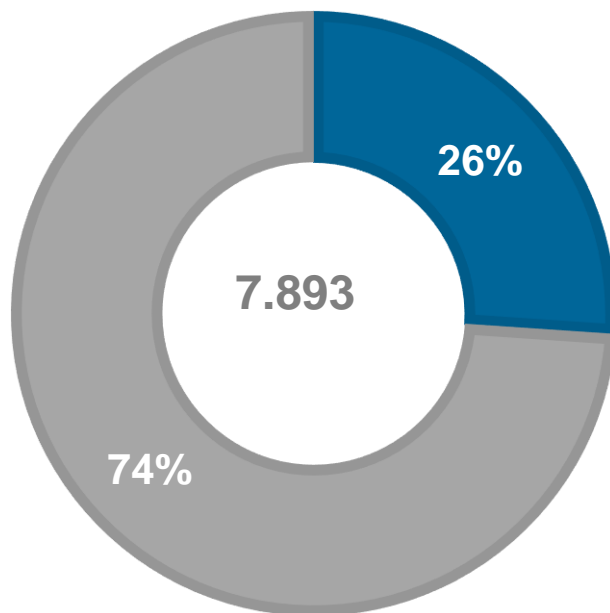
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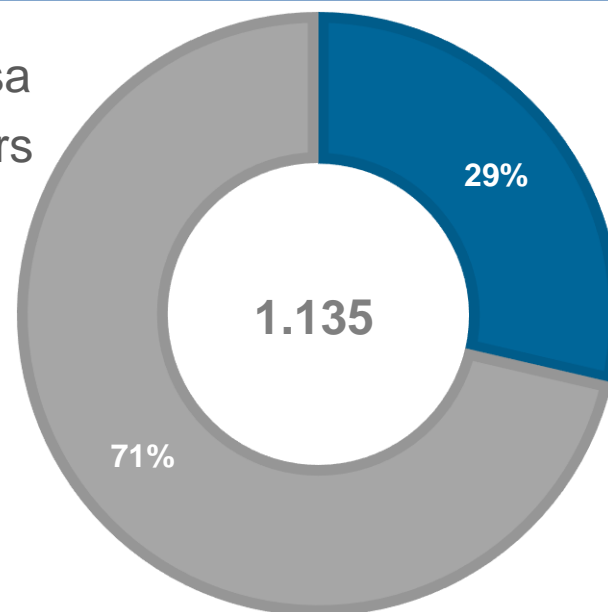
Turkish Bus & Coach Market = Temsa

2015-2016 bus, coach and midi- coach market



2015

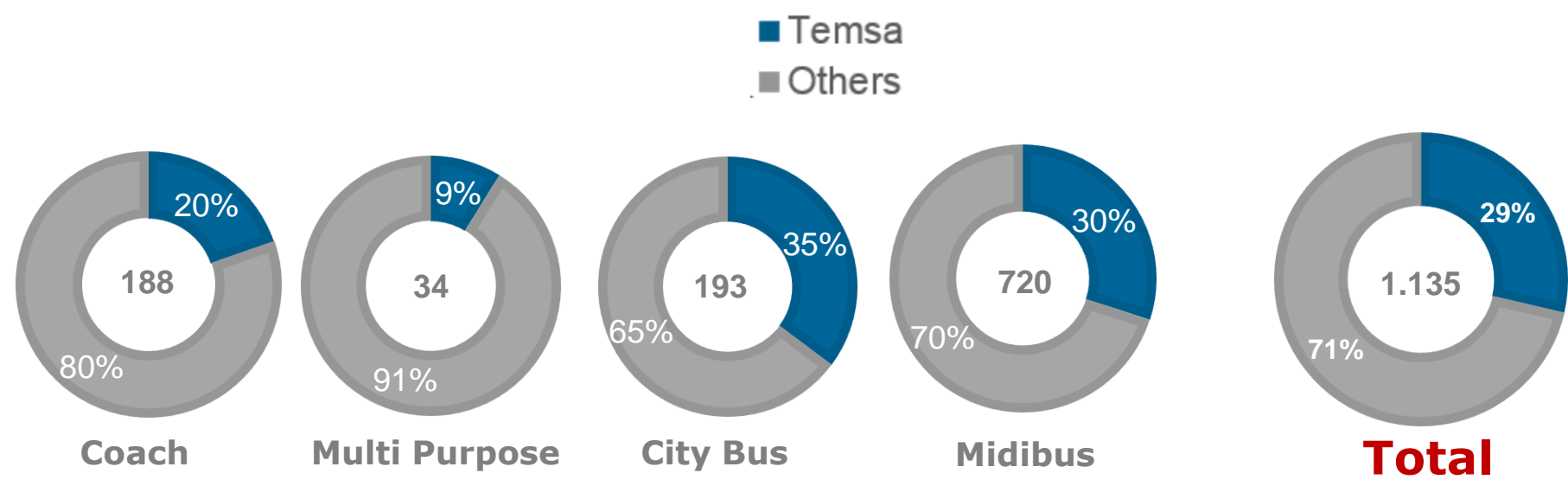
■ Temsa
■ Others



March 2016

- Focusing on the domestic market, TEMSA benefited from the rapidly growing demand.
- TEMSA is on the right track to increase its domestic market share according to 2016 YTD1 figures





Temsa Market Share-2016 March







Market Influencers:

- Steady tourism industry
- High investment in intercity roads
- Rapid urbanization growth
- Increase in number of schools & companies
- Increase of air & rail transport
- Regulatory changes

Eastern Europe, MENA Markets

	Coach	City	Midibus & Other
	<ul style="list-style-type: none"> + Old bus fleet - Second hand preference 	<ul style="list-style-type: none"> + Rising urban population 	<ul style="list-style-type: none"> - Presence of low cost Asian players
	<ul style="list-style-type: none"> - Midibus usage on inter-city routes as well 	<ul style="list-style-type: none"> + Structured public bus systems replacing midibuses in cities + Capacity not meeting demand 	<ul style="list-style-type: none"> + Midibuses widely used as shared taxi - Presence of Japanese players
	<ul style="list-style-type: none"> + Well established operator¹ with good network - Recent conflicts damage tourism hence luxury coach segment 	<ul style="list-style-type: none"> - Bus kilometers traveled decreasing in last 3 years 	<ul style="list-style-type: none"> - Sheruts (minibus) preferred to get around rather than midibuses
	<ul style="list-style-type: none"> + Currently imported buses from Brazil face heavy service problems, making Nigeria look for alternatives - Very small market, ~300 buses per year 	<ul style="list-style-type: none"> + Rising urban population + New BRT systems + Rising traffic in major cities 	<ul style="list-style-type: none"> - Second hand driven market - Minibuses are very dominant, midibuses are not

Eastern Europe, MENA Markets

	Coach	City	Midibus & Other
	<ul style="list-style-type: none"> + Very old bus fleet - Delays in improvement of road network - Insufficient financing - Import duties 	<ul style="list-style-type: none"> + Very old bus fleet + High number of informal operators with low buying power - Import duties¹ 	<ul style="list-style-type: none"> + Mini and midi buses also being preferred for intercity travels - Low cost Asian players presence in imports - Import duties¹
	<ul style="list-style-type: none"> + Old bus fleet + Growing tourist coach segment² - Capillary rail network 	<ul style="list-style-type: none"> + Realization of crisis-era plans in near future - Operators' dependence on public funding 	<ul style="list-style-type: none"> - Capillary rail network
	<ul style="list-style-type: none"> + Individual car transport accounts less compared to other EU² 	<ul style="list-style-type: none"> + Cost-sensitive approach due to lack of funding - Operators' dependence on public funding 	<ul style="list-style-type: none"> - Availability of tram and metro in some regions limit midibus usage
	<ul style="list-style-type: none"> - Driven by tourism sector, which slumped due to political issues 	<ul style="list-style-type: none"> + Heavily crowded bus networks in Cairo and Alexandria 	<ul style="list-style-type: none"> - Panel vans of Korean or Japanese origin usually preferred, rather than midibuses

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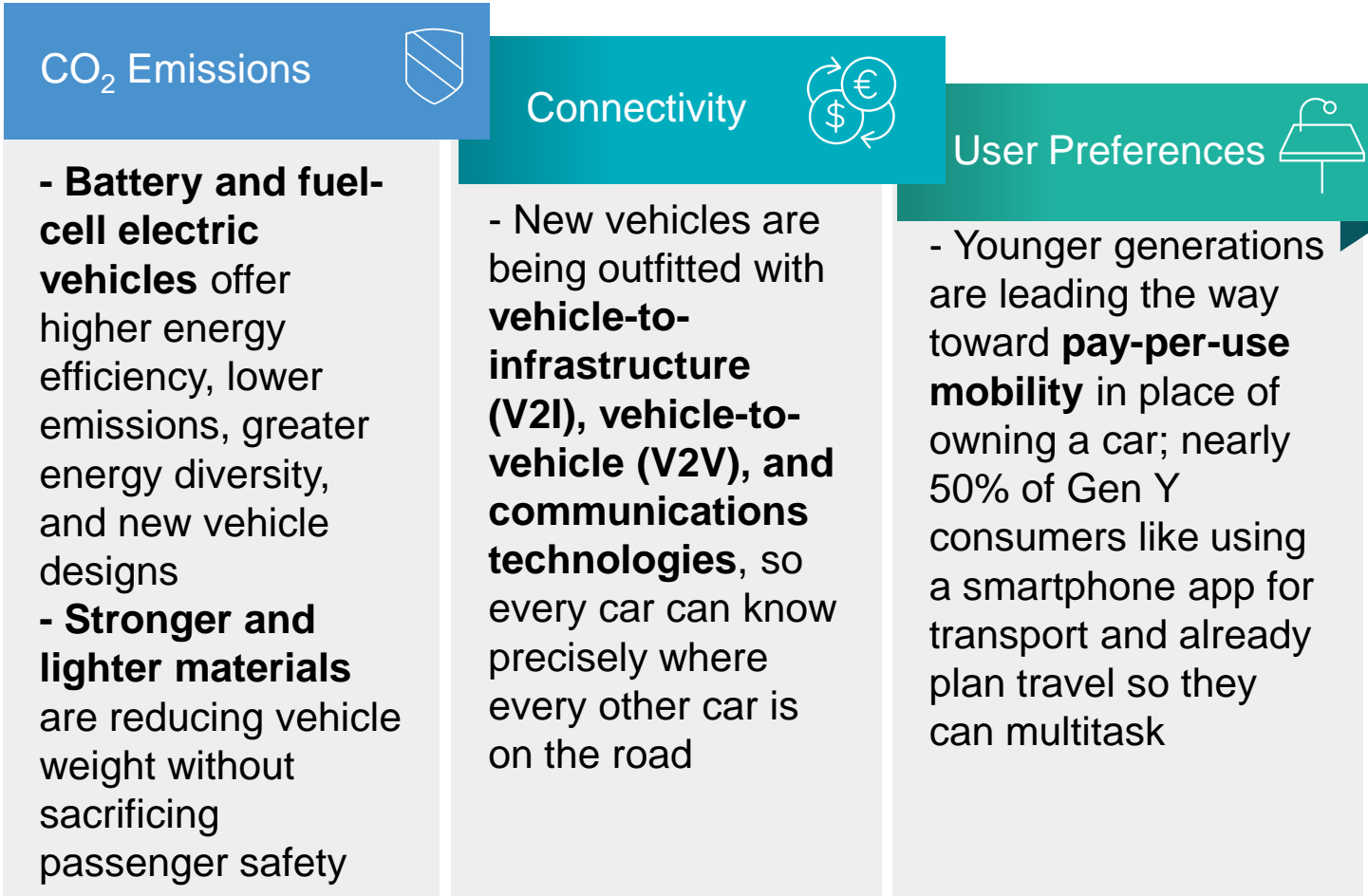
Smart Mobility

- Our motto is meant to represent our innovative, safe and smart approach to mobility.
- **Smart Mobility= Smart Energy + Smart Transportation**

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Smart Mobility

Converging Forces Transforming the Future...



Smart Mobility = Smart Energy + Smart Transportation

Environmental Concerns..

Powertrain



- **Battery Electric Vehicle** (BEV)

Materials

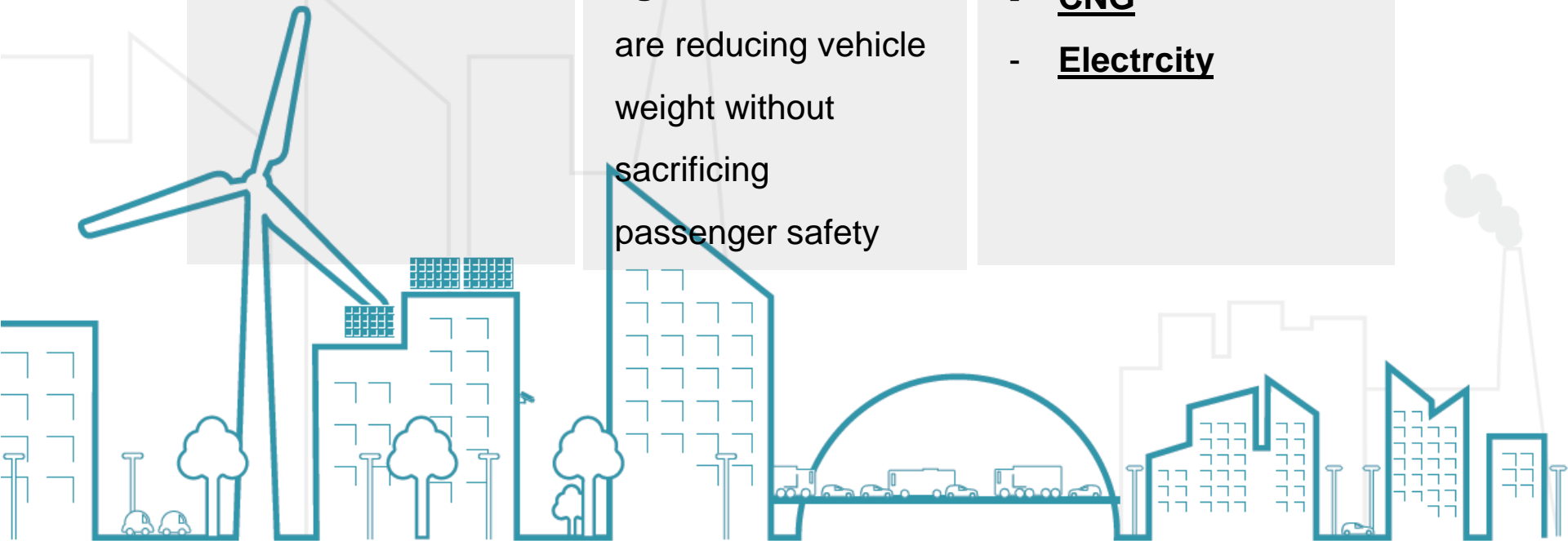


Stronger and lighter materials are reducing vehicle weight without sacrificing passenger safety

Energy



- **Diesel**
- **CNG**
- **Electricity**



EV Buses ...Smart Energy

MD9 ElectriCity



Specifications

- 9.5 mt length
- 3.1 mt height
- 2.4 mt width
- Range: 230 km +
- Output: 100 kw
- Torque: 2200 Nm
- 160 kwh Battery
- Charge duration: 2 h
- AC: 27 KW
- 26 (seats)-30 (standing passengers)-1 WheelChair-2 Foldable Seats=59

Avenue EV

- ASELSAN and TEMSA will focus on producing a 100% made in Turkey bus, with all parts such as motors, gearbox, the electric motors, inverters and converters are designed domestically.

Avenue I-BUS



- Fully connected with city and the individuals.... Fuel consumption, speed, rpm, location..



- Coach MediaRouter provides Internet access to the passengers...



- Digital DWP ...



- Integrated LCD window..



- Eco.Logic Motion in action...



- Passenger counting system ...



- Media server...



- USB and DVR..

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