



BOSCH

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Dalal Street, Fort
Mumbai – 400 001
Scrip code:500530

The Manager
Listing Department
National Stock Exchange of India Ltd.
Exchange Plaza, C-1, Block G
Bandra-Kurla Complex
Bandra (E)
Mumbai – 400 051
Scrip code: BOSCHLTD

August 10, 2022

Dear Sir/Madam,

Sub: Regulation 30 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulation, 2015 – Presentation made to the Institutional Investors / Fund-Houses

In pursuance of Regulation 30 of the Securities and Exchange Board of India (Listing Obligations and Disclosures Requirements) Regulations, 2015 and in continuation of our earlier letter dated August 08, 2022 intimating schedule of Annual Investor Meet convened on August 10, 2022, please find attached Presentation made thereat. The presentation can also be accessed on the Company's website i.e. www.bosch.in

This is for your information and records.

Thanking you,

**Yours Sincerely,
for Bosch Limited,**

**Divya Ajith
Deputy Company Secretary**

Annual Investor Meet 2022 | Bosch Ltd.

Safe Harbour

The contents of this presentation are for information purposes. The contents are intended, but not guaranteed, to be correct, complete, or absolutely accurate. This presentation also contains forward looking statements based on the currently held beliefs and assumptions of the management of the Company, which are expressed in good faith and, in their opinion, are reasonable. Forward looking statements involve known and unknown risks, contingencies, uncertainties, market conditions and other factors, which may cause the actual results, financial condition, performance, or achievements of the Company or industry results, to differ materially from the results, financial condition, performance or achievements expressed or implied by such forward looking statements. The Company does not make any representation, warranty or prediction that the results anticipated by such forward looking statements will be achieved. Neither the Company nor its affiliates or advisors or representatives nor any of their respective affiliates or any such person's officers or employees guarantees that the assumptions underlying such forward-looking statements or management estimates are free from errors and the Company disclaims any obligation or liability to any person for any loss or damage caused by errors or omissions, whether arising from negligence, accident or any other cause. Further, past performance is not necessarily indicative of future results. Any opinions expressed in this presentation, or the contents of this presentation are subject to change without notice. The presentation should not be construed as legal, tax, investment or other advice.

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BOSCH

Invented for life

100 Years of
Bosch in India



CELEBRATING

100 YEARS
OF BOSCH
IN INDIA

ANNUAL INVESTOR MEET
2022



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Bosch Ltd. Executive Management



Soumitra Bhattacharya
Managing Director, Bosch Ltd.
President, Bosch Group in India



Guruprasad Mudlapur
Joint Managing Director &
Chief Technology Officer,
Bosch Ltd.



Karin Gilges
Chief Financial Officer,
Bosch Ltd.

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Agenda for the day

100 Years of
Bosch in India



1

Transition and Transformation of Bosch Limited

~ Soumitra Bhattacharya, MD & CEO

2

Bosch Limited Financial Update and Business Outlook

~ Karin Gilges, CFO

3

Bosch Limited Portfolio and Technology Roadmap

~ Guruprasad Mudlapur, JMD & CTO

4

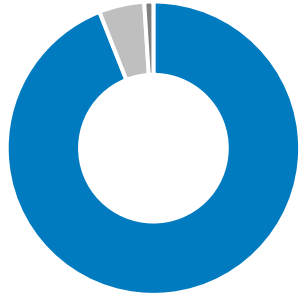
Questions and Answers Session

Bosch Limited 2021-22: A lookback

Annual Investor Meet 2022 | Bosch Ltd. Bosch Global, Bosch India & Bosch Ltd.

Bosch Global

Ownership



- 94%** Charitable Robert Bosch Foundation
- 5%** Bosch family
- 1%** Robert Bosch GmbH

78.7

Sales in bEUR In 2021

402,600

Associates

230

Manufacturing Locations



Mobility Solutions
58%



Industrial Technology
8%



Consumer Goods
27%

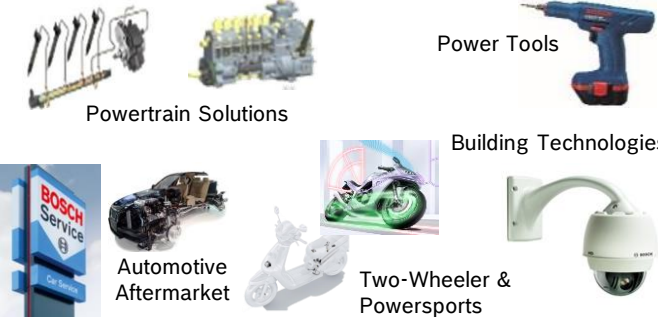


Energy & Building Technology
7%

Bosch India

Bosch Ltd. 	Bosch Global Software Tech. 	Bosch Chassis Systems India Ltd. 
Bosch Automotive Electronics Pvt. Ltd. 	BSH Home Appliances 	Bosch Rexroth Ltd. 
Bosch Electrical Drives India Pvt. Ltd. 	Automotive Steering India Pvt. Ltd. 	ETAS 
221 Revenue Sales in bINR in 2021	15 Group Companies	76 Locations across India
31,500 Associates		18 Manufacturing facilities

Bosch Ltd.



114

Revenue Sales in bINR in 2021

7,550

Associates

6

Manufacturing facilities



Mobility Solutions
85%



Industrial Technology
1%



Consumer Goods
11%



Energy & Building Technology
3%

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Macro Economic Outlook

Russia – Ukraine Conflict
impact on GDP



Inflation: Rising concern



Rising Crude Oil Prices



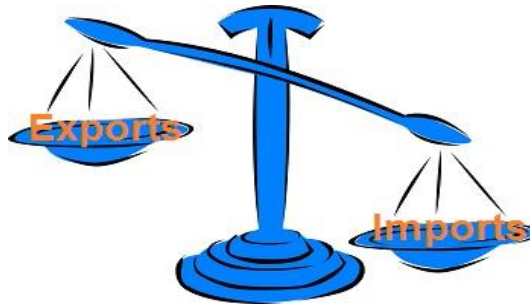
Cumulative hikes in repo rate



Industrial Sector
Performance



Adverse CAD @ 3.5% for
FY23



FDI : Key source for financing



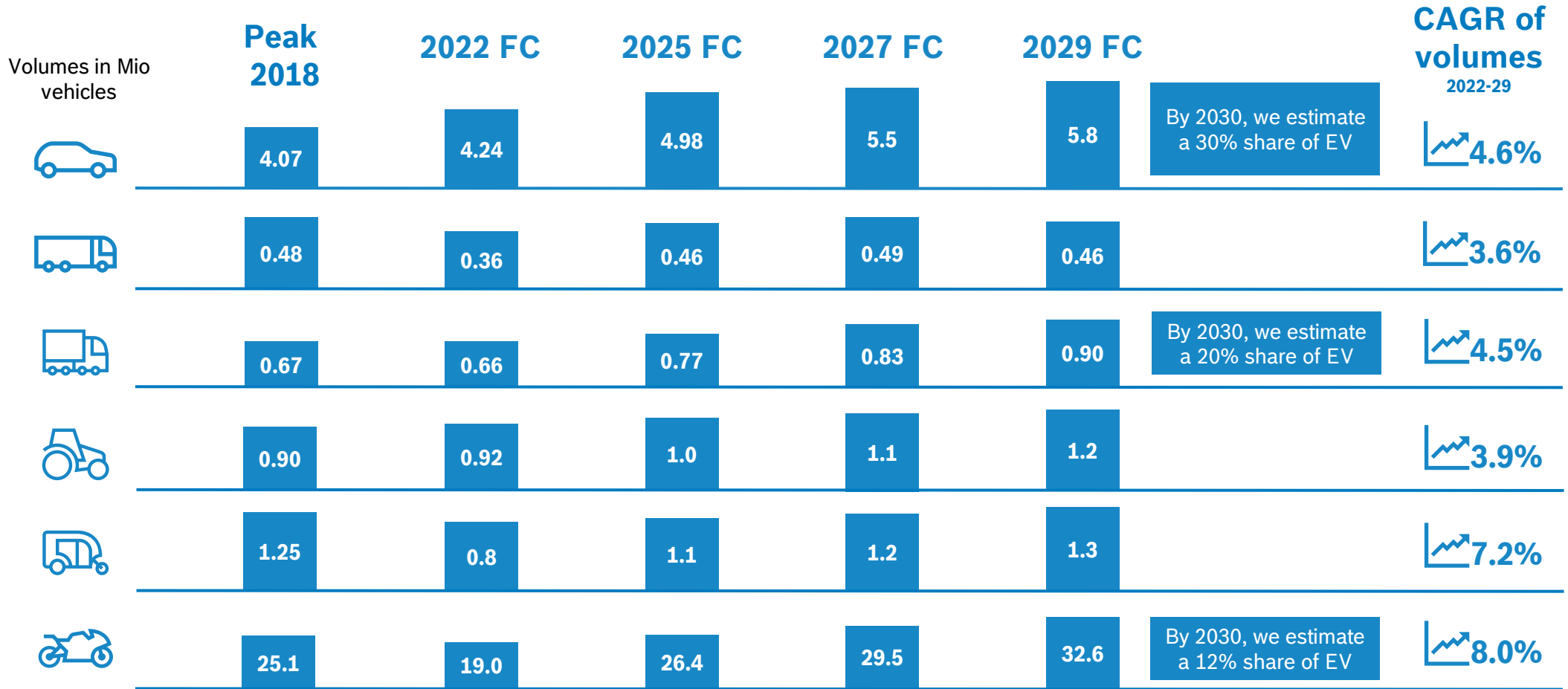
Forex reserves used to tackle
rupee volatility



High commodity prices (including crude) dampening consumer sentiments, thereby affecting automobile demand in medium term | Recovery of input price increase from customers is critical

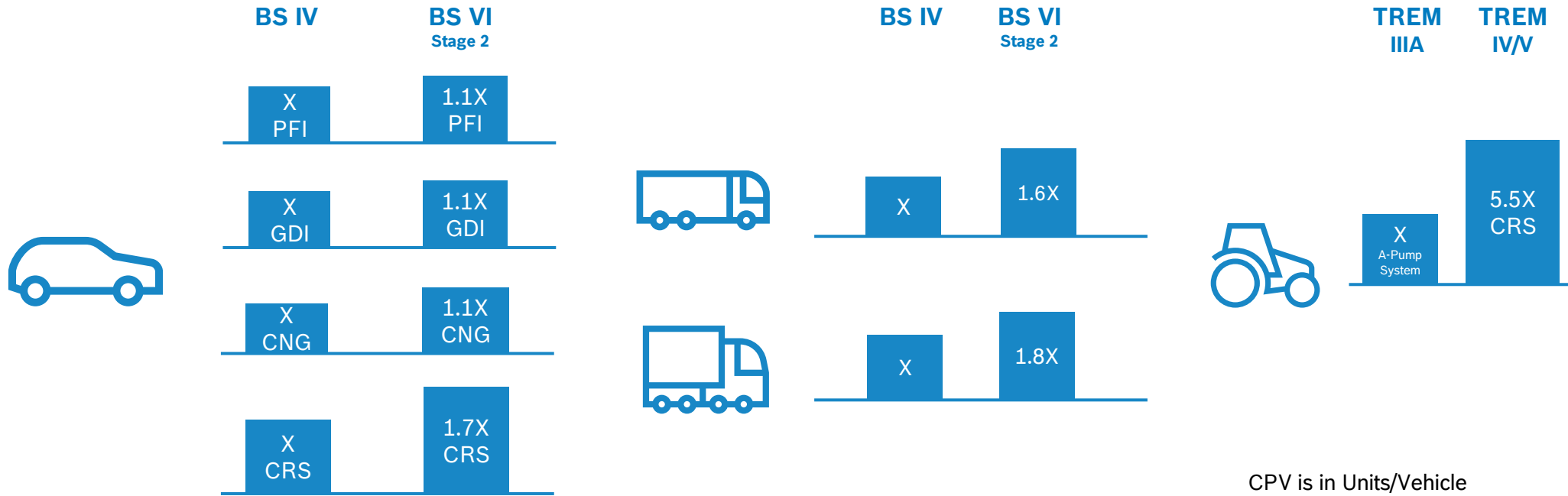
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Automotive Market Outlook



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Development of Content per Vehicle (CPV) for Industry



Significant growth in the content per vehicle over the last few years due to **Change in legislations in Emission Norms in Powertrain** domains

*Above CPV figure represents overall technology content, which helps in calculating the total addressable market
Also, the HCV is based on a 6 Cyl engine whereas all other segments are based on a 4 Cyl engine*

Total Addressable Market (TAM) Fuel Wise and Segment Wise

	TAM by value in 2022	TAM by value in 2029	Overall TAM CAGR (2022-2029)	ICE	Overall TAM CAGR (2022-2029)
 Diesel	10X	7.5Y	 2.8%		 2.2%
 Petrol	4X	4Y	 (3.1%)*		 1.6%
 CNG	X	Y	 7.0%		 (0.2%)
	0.6X	20Y	 75%**		 12.7%
					 8.7%

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PACE and Future of Mobility



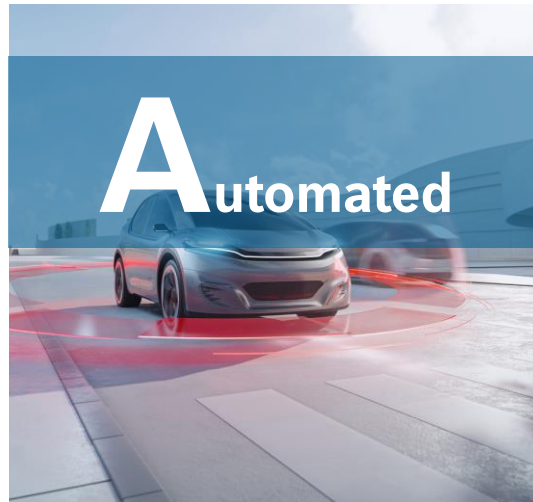
Bosch is pursuing a vision of mobility that is as **safe**, **sustainable**, and **exciting as possible**.



To get there, we are focusing on four megatrends: personalization, automation, connectivity and **electrification**.



Thanks to our decades of cross-domain expertise, we are an innovation leader in all these areas.



Urban mobility

Safety on the roads

Automated mobility

Automated parking

Rental vehicles

Charging infrastructure

Electromobility

Efficient powertrains

Connected services

Hybrid powertrain systems

Driver assistance systems

Infotainment in the car

Convenient mobility

Alternative fuels

Internet of things

Connected mobility

Reduction in emissions

HMI systems

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2Wheeler Business

Electrification Focus
- Strategic projects w. OEMs
- Engagement w. new mobility players



2W Market revival positive for 2023, estimate double digit growth



Evaluate new market and OEMs



Future ready for Flex fuel legislation, chances of new component addition to our portfolio



Survive the supply crisis, avoid long term business impact w. OEMs



Raw Material Price Recovery



Risks of shifting OBD2 legislation to 2025

WE ARE DIGITALIZING LARGEST AUTOMOTIVE SERVICE CHAIN

HIGHEST EVER GROWTH IN 2021-22

- Expansion of multi-brand BCS to 1000 locations by 2025
- Introduce 1000 multi-brand bike service centres over next 2 years
- Investment in development of B2B E-Marketplace

autozilla

BOSCH
Service



Car Service



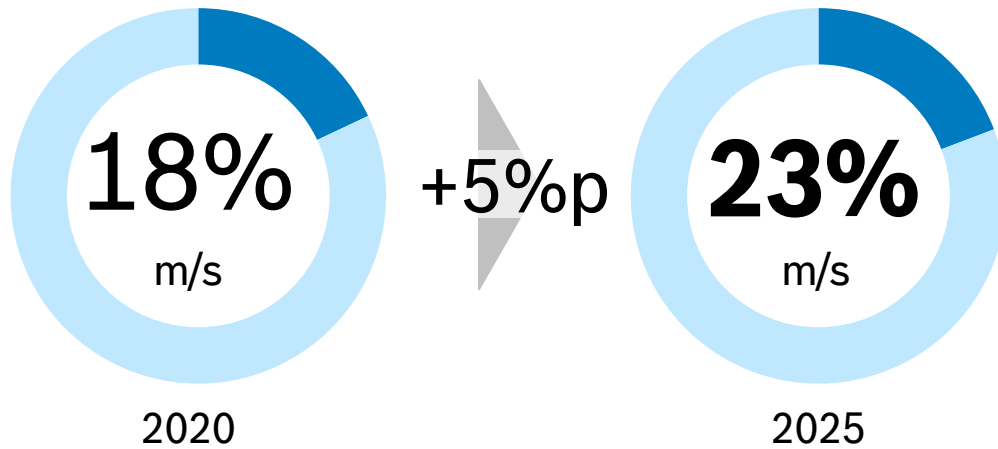
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Power Tools



INDIA MARKET SHARE AMBITION



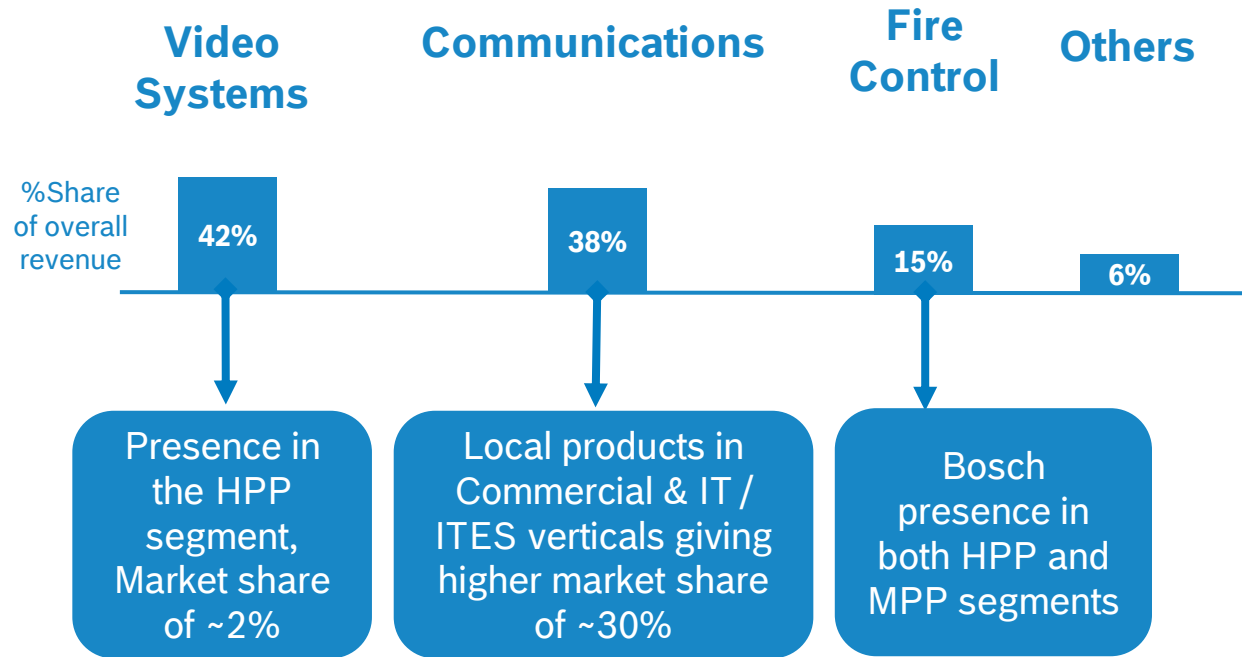
**BOSCH IS THE MARKET LEADER IN POWER TOOLS IN INDIA
HIGHEST EVER GROWTH IN 2021-2022**

Key Levers

- Launch of **affordable products in the MPP segment** to achieve full potential
- Drive **Cordless Conversion** in India to leverage first mover advantage
Cordless Matlab/Means Bosch will be the anthem for Power Tools
- a 360-degree **digital ecosystem** to connect directly with our users including purchase at e-shop and post sales service through e-repair

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Building Technologies



Key Levers

- **Localization opportunities** in the Comms and Video Systems businesses is key to ensure growth
- **Inorganic Opportunities** in India
- **Export Focus**

Key Risks

- Missing Mid-Market Segment
- Discouragement of China origin products in the government opportunities
- High Custom Duties

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Inorganic Opportunities

Focus on electrification to enable and capture the eLCV and passenger car segment



Investments in disruptive innovation



Exploring electrification opportunities via Battery Swapping models

Digital ecosystem for Aftermarket continues to be a key area



Strategic alliance with start ups to service customers



Bosch forayed into ecommerce marketplace

Connected & Mobility tech - vehicle lifecycle enablement solutions



Invest in emerging areas



Servicing customer demands for connected solutions for vehicles

Expand product offering across business divisions Aftermarkets, Building technologies, Power tools



Investments to fill portfolio gaps



Enabled Bosch digital solutions such as Mobility cloud platform

Next generation fuel technology for mobility (e.g., FCEV), stationary applications (e.g., SOFC)


ESG


Where we were

CRISIL (S&P equivalent) rated Bosch Limited at “55”; E:44, S:56, G:65

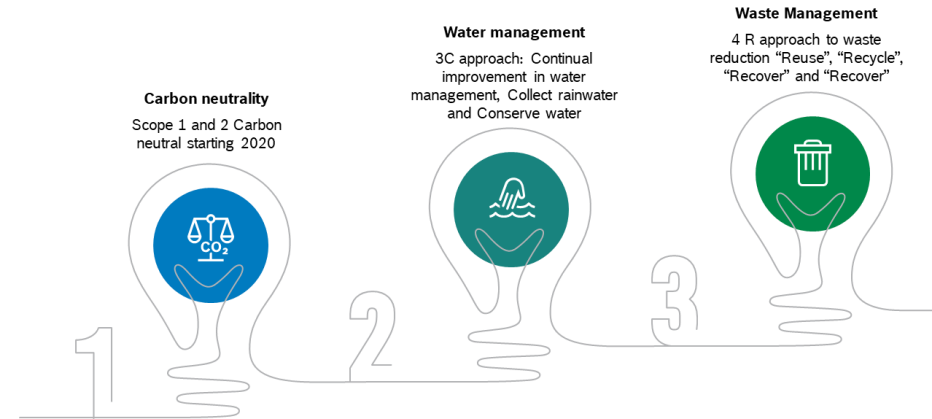
Benchmarking results across Mahindra (72), Hindustan “Unilever” (63) Infosys (79)

Where we are

 Bosch Limited score has improved from 22.6 to 13.2 (lower the better)

 Bosch Limited ranking has improved from 60th (out of 209) to 4th (out of 165) among auto component industries

E



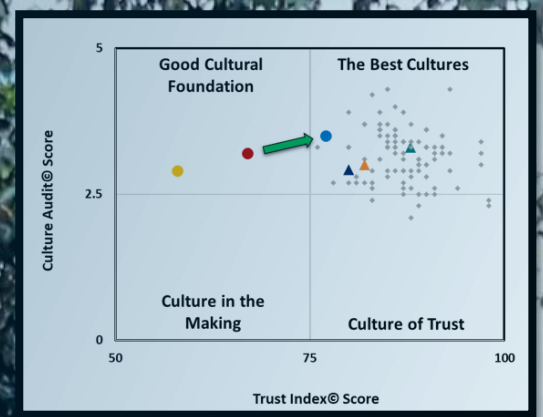
S



G



WE ARE SUSTAINING A CULTURE OF GREAT EMPLOYEE EXPERIENCE



WE ARE GPTW CERTIFIED FOR THE 2ND YEAR IN A ROW

- We have paved our way to the Best Cultures quadrant in India
- Our focus on creating a high-trust, high-performance culture at Bosch Limited will continue
- We build & nurture Talent for the future through strategic initiatives



WE ARE INVESTED FOR THE FUTURE

100 Years of
Bosch in India



BOSCH HAS INVESTED 800 CR. TO DEVELOP THE SMART CAMPUS IN THE HEART OF BENGALURU

- The smart campus provides a collaborative environment to 10,000 associates that will attract vibrant and talented minds
- This will be an opportunity to innovate and work on the latest cutting-edge technology that Bosch has to offer



THANK YOU

CELEBRATING
100 YEARS
OF BOSCH
IN INDIA

Next Up



Karin Gilges
Chief Financial Officer, Bosch Ltd., India



Finance & Business Update

Agenda

- ❖ Bosch India Business Update
- ❖ Material cost
- ❖ Dividend & Liquidity
- ❖ Business Outlook 2022

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Bosch in India



Review of FY2021-22: BOSCH LIMITED

ALMOST REACHING THE PEAKS OF 2018-2019

+21.2%

117 bINR



+38%

9.6% oS



FY 2020 - 21 FY 2021 - 22

Revenue from Operations

FY 2020 - 21 FY 2021 - 22

Operating Profit (EBIT)



6.3 bINR

Research and
Development cost



4.1 bINR

Capital
Expenditure



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100 Years of
Bosch in India

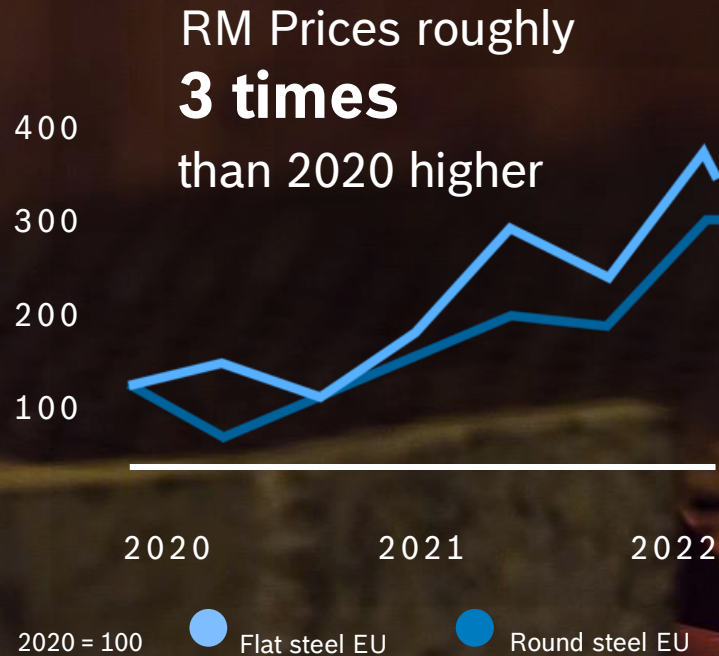


Forecast for 2022

STEEP INCREASE IN RAW MATERIALS, ELECTRONICS & LOGISTIC COSTS

High cost pressure

RECOVER price increase from customers



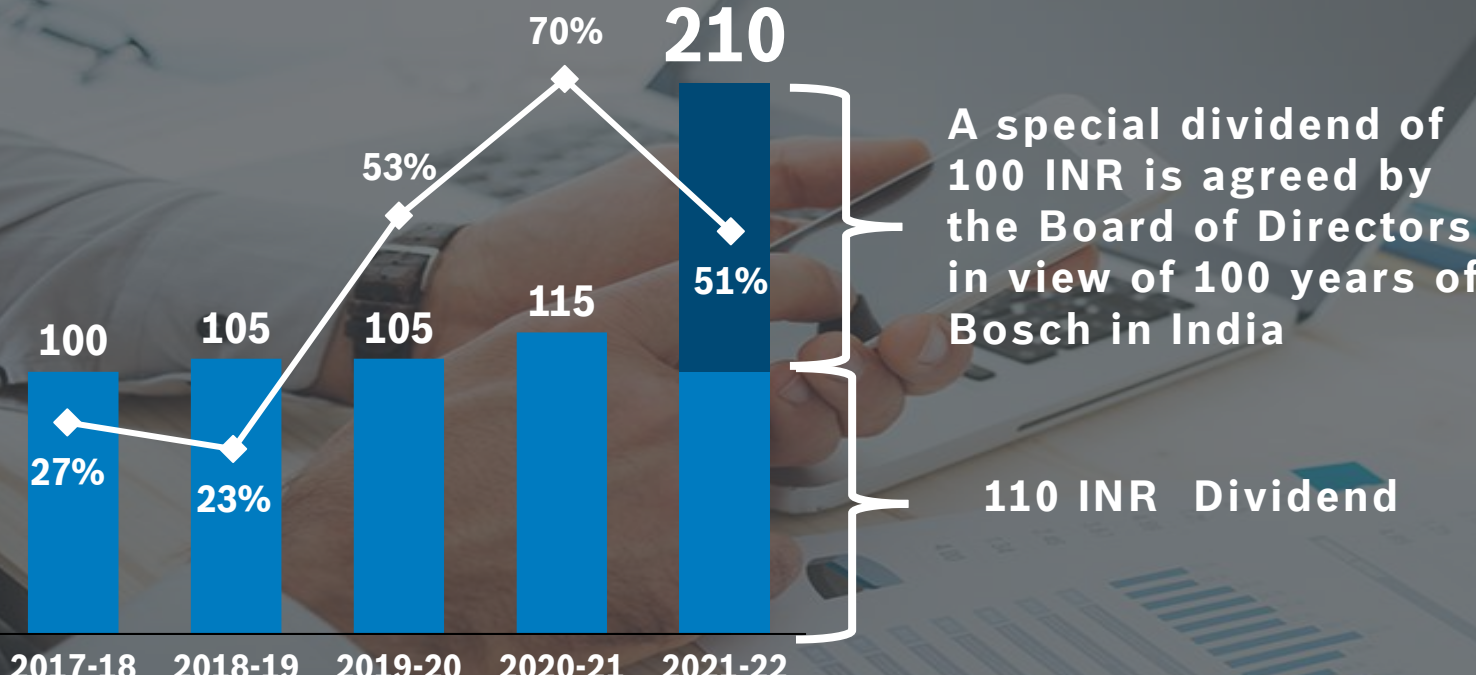
Increase in material costs due to

- ❖ Mix effect Manufacturing & Trading (mainly BS4 to BS6 transition)
- ❖ RMI (commodity prices), ECI (semi-conductor), Logistics cost

Localization projects in the upcoming years will support the balancing of material cost

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Consistency in Dividend pay-out

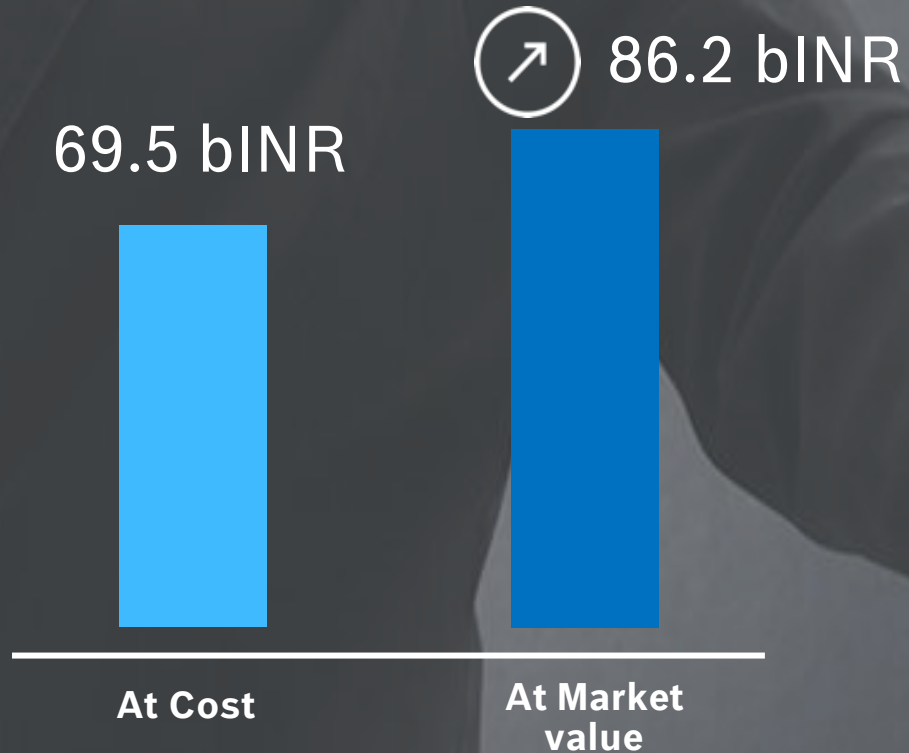


Particulars	FY 2021-22	FY 2020-21
Profit after tax (PAT) in MINR	12,172	4,825
Dividend per share (INR)	210*	115
Total Dividend payout in MINR	6,194	3,392
Dividend payout ratio (% of PAT)	50.9%	70.3%

Values in INR

◆ Dividend % of PAT

Solid Liquidity Situation at RBIN



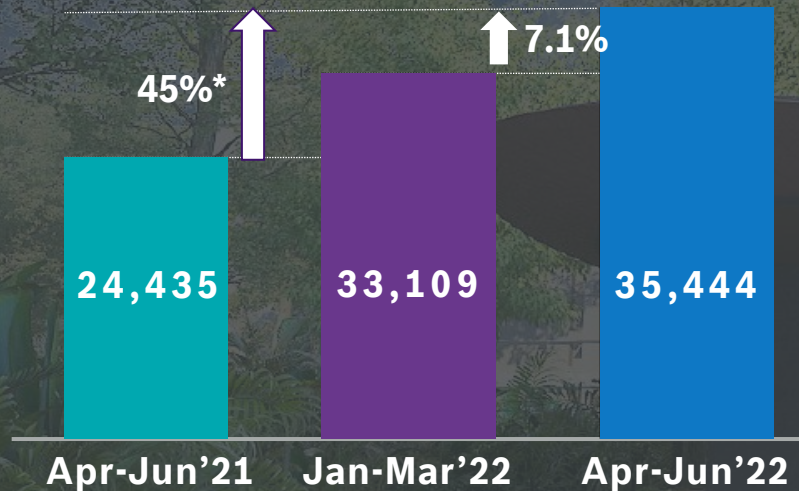
- Liquidity situation continues to be solid
- More than adequate to fund our investment plans while remitting dividend to investors
- Cash flow continues to be robust

* As on 31st March 2022

* Surplus parked mainly in debt-based instruments

Good Start for Q1'2022-23

Values in m INR



*On a low base

❖ Operating Profit (EBIT)	3,847 (10.9% oS)
❖ Profit Before Tax (PBT)	4,377 (12.3% oS)
❖ Profit After Tax (PAT)	3,342 (9.4% oS)

SOUND FINANCIAL RESULT MEANS POSITIVE OUTLOOK FOR THE FUTURE

Outlook for 2022



Sales growth
forecast more than **~15%**



Attempt to achieve healthy
EBIT margin



Research and
development cost

5.8 bINR



Capital
expenditure

5.1 bINR



New Business
Investment

2.0 bINR



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Bosch in India



THANK YOU

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100 YEARS
OF BOSCH
IN INDIA

Next Up



Guruprasad Mudlapur
JMD & CTO, Bosch Ltd.



Annual Investor Meet -- Aug'2022

Technology Roadmap and Portfolio
for ICE, Electrification & Hydrogen

Guruprasad Mudlapur

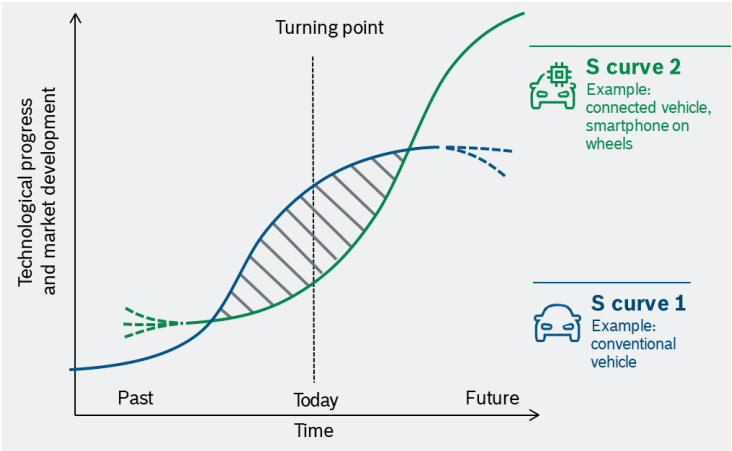
JMD & CTO, Bosch Limited

10.08.2022



Technologies & Market development – Today's progress

Advancing technological trends creating new opportunities



S curve as typical development of a new business innovation

Opportunities for Bosch in Mobility

PACE & Bosch Vision on Future mobility



Bosch is pursuing a vision of mobility that is as **safe**, **sustainable**, and **exciting** as possible.



To get there, we are focusing on four megatrends: personalization, automation, connectivity and **electrification**.



Thanks to our decades of cross-domain expertise, we are an innovation leader in all these areas.



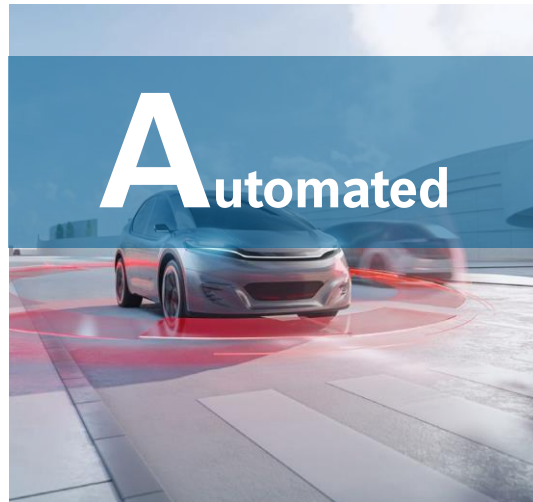
Personalized

Urban mobility

Charging infrastructure

Hybrid powertrain systems

Alternative fuels



Automated

Safety on the roads

Rental vehicles

Driver assistance systems

Internet of things



Conected

Automated mobility

Automated parking

Efficient powertrains

Connected mobility



Electrified

Electromobility

Connected services

Convenient mobility

HMI systems

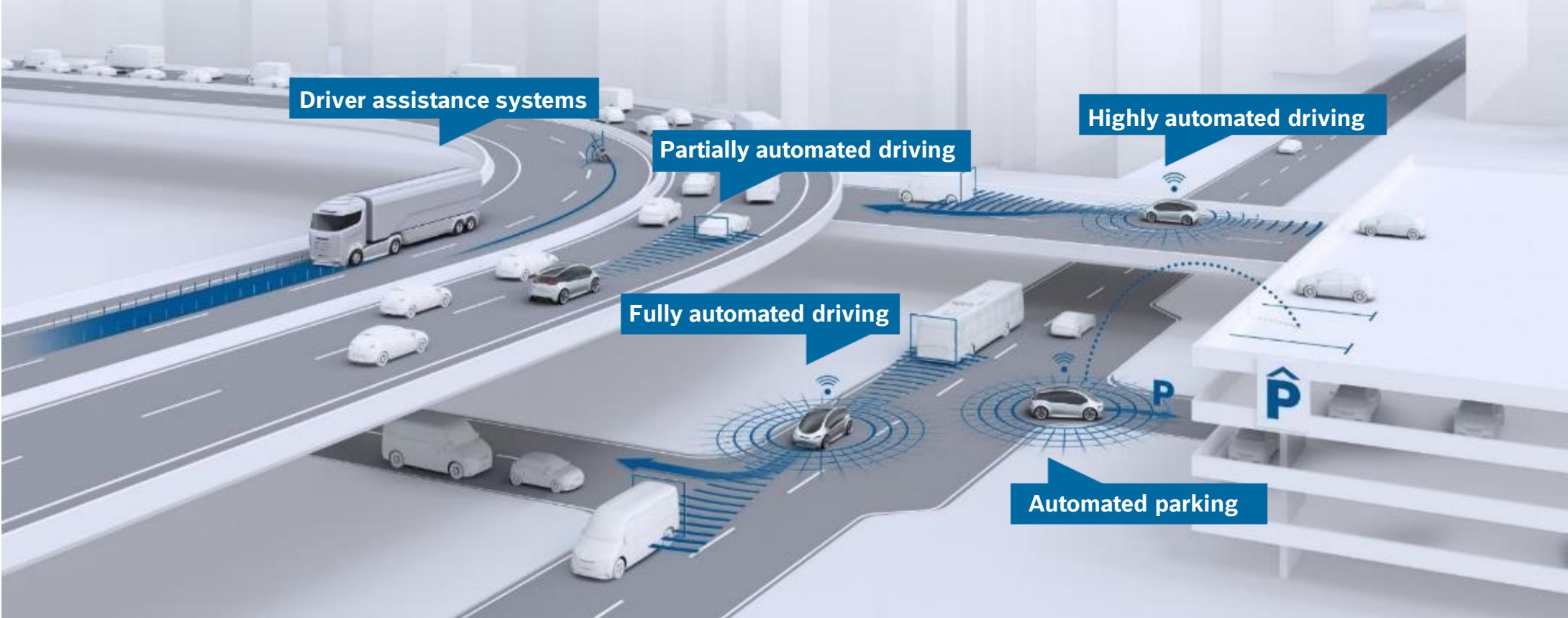
P - Personalized mobility

Bosch customizes your mobility experience



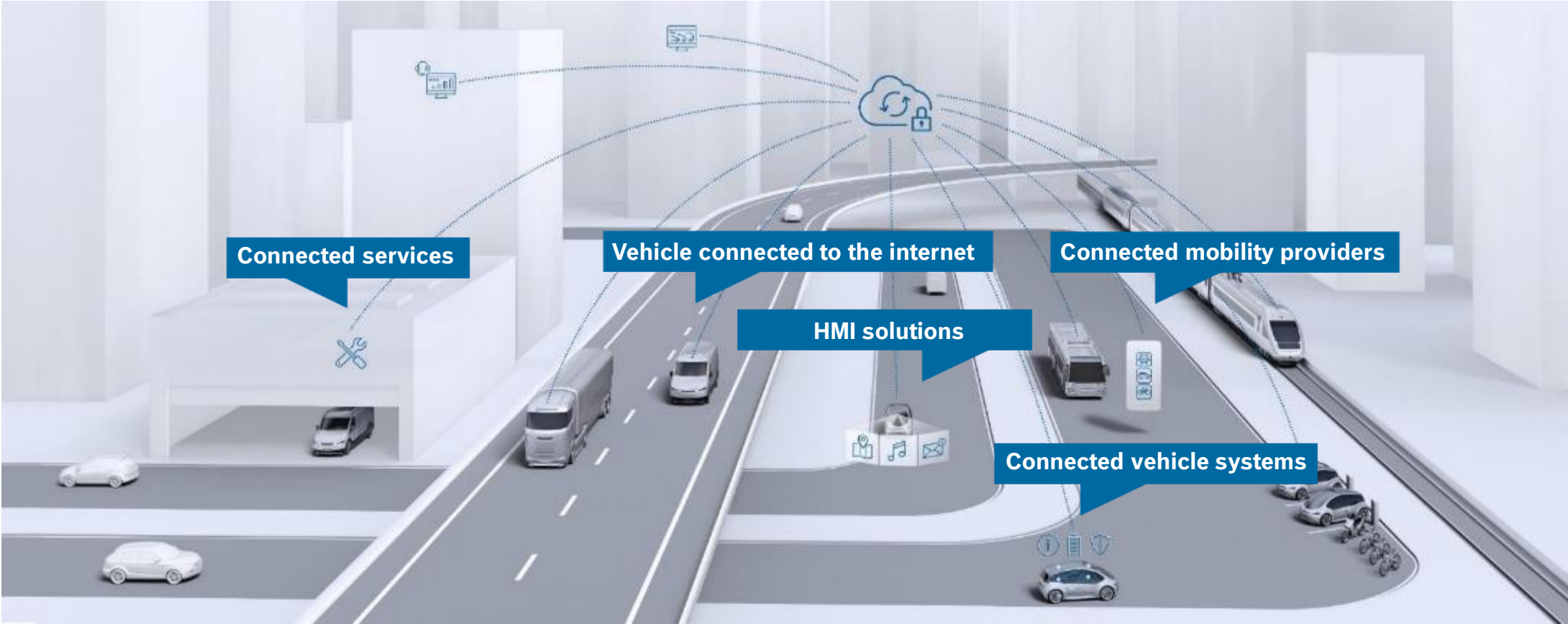
A - Automated mobility

Bosch is teaching the vehicle how to drive



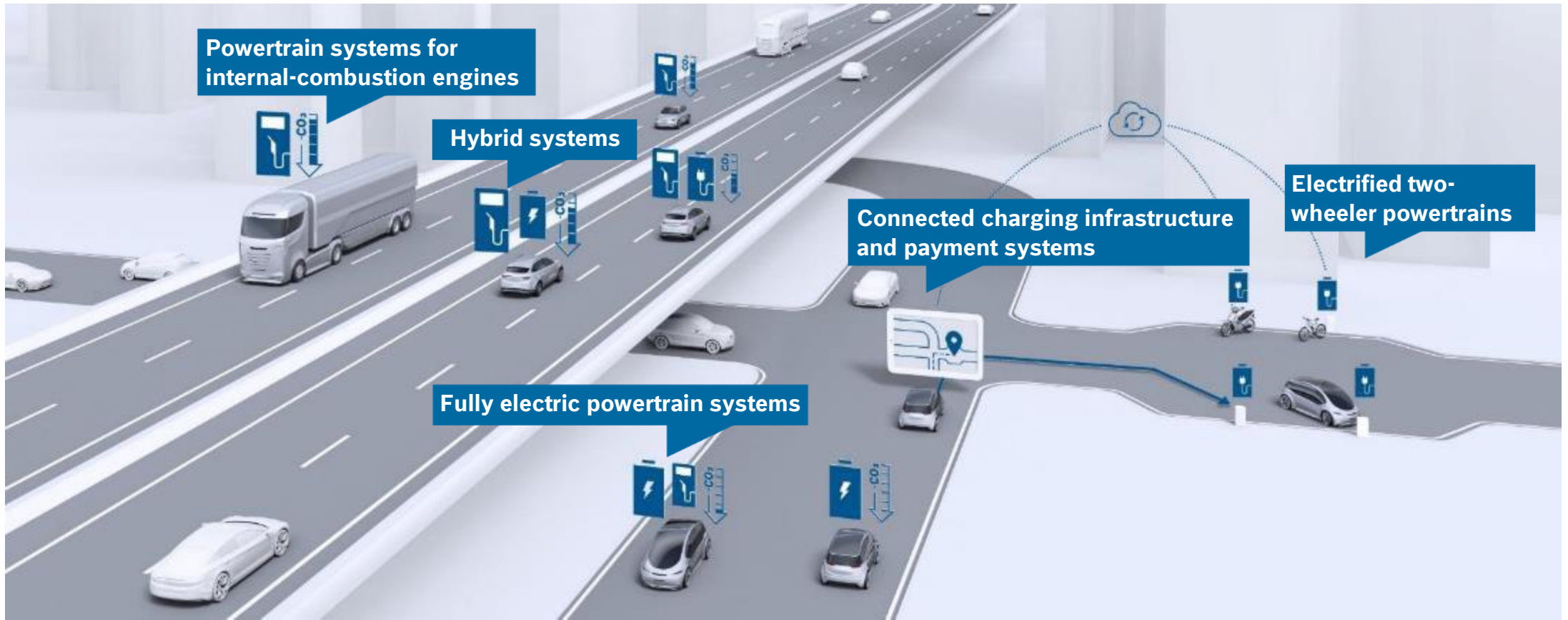
C - Connected mobility

Bosch is seamlessly connecting mobility



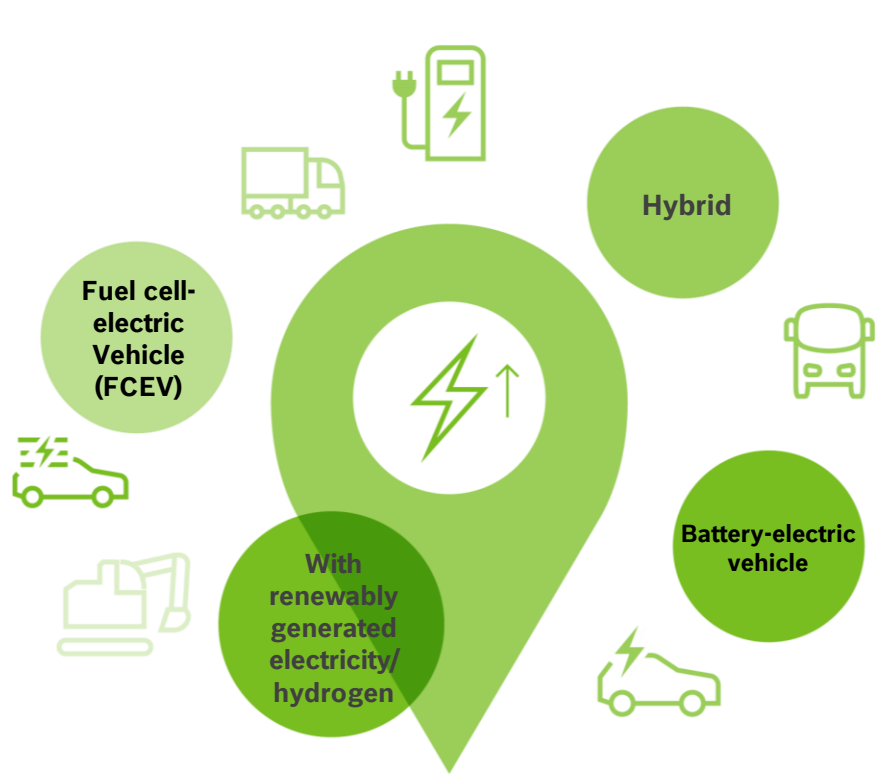
E - Electrified mobility

Bosch is energizing the powertrain

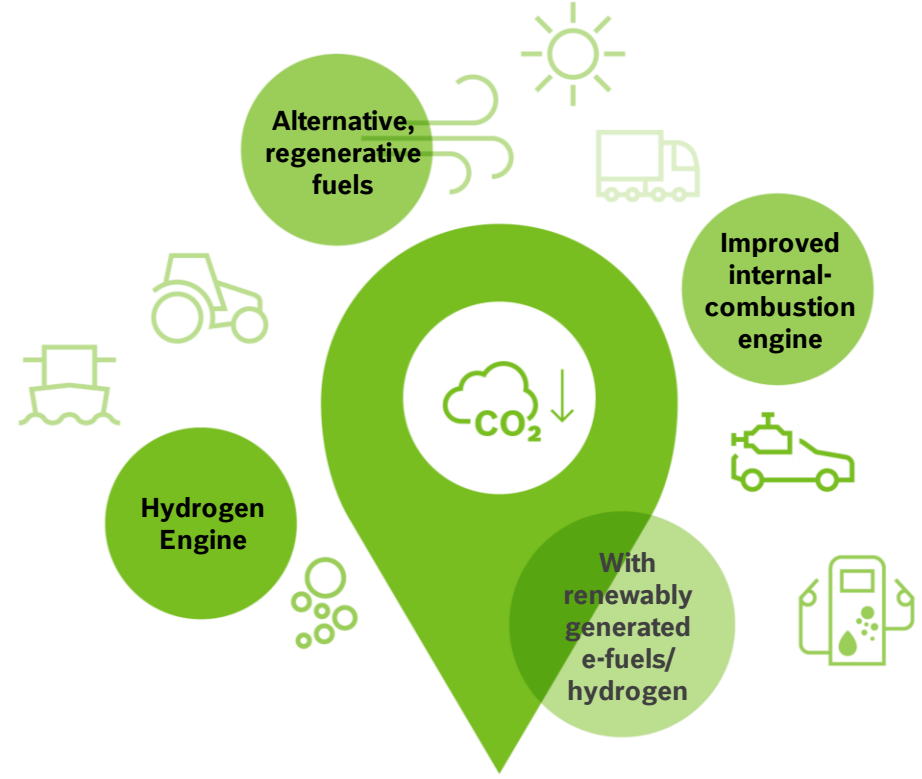


Bosch view and opportunities in Powertrain

We decarbonize all powertrains from well to wheel



Powertrain electrification



ICE decarbonization

Natural-gas powertrains

Economical, efficient, and fascinatingly quiet



Natural-gas powertrain technology is an established alternative available today

resource-saving

up to 10% less CO₂ emissions than a diesel powertrain

comfortable

Commercial vehicles with a modern natural-gas powertrain are

- ▶ Comprehensive competence and experience in natural-gas technology due to adaption of existing passenger car components capable 24 V applications
- ▶ Extended portfolio of natural-gas components offering full engine management system proven in series

Flex fuel drive systems

For a powerful mobility with low-carbon and carbon-neutral fuels



For a powerful mobility with low-carbon and carbon-neutral fuels

flexible

with the choice of fuel

more start comfort

with the Flexstart system cold temperatures

- ▶ Flex fuel vehicles from Bosch have an injection system which can be operated with gasoline, with any mixture ratio of gasoline and ethanol or with pure ethanol.
- ▶ Bosch offers flex fuel systems for port fuel and direct injection.

Tailored common rail technology for off-highway India market

Highly flexible, robust and state of the art system to meet sustainable market needs



Oil lubricated systems with robustness package

Total cost of ownership

Fuel consumption, reliability, features

Comfortable and convenient

Noise, reliability

- ▶ Common-rail system designed to off-highway requirements with system pressure levels from 1,600 bar to 2,000 bar. High injection pressure relatively independent of speed & load allows flexible selection of injection start, quantity & duration.
- ▶ Mass market 19 to 37 kW transition from conventional FIE system to common-rail system with exhaust-gas treatment with implementation of TREM / CEV Stage V from 2024





BATTERY ELECTRIC VEHICLES

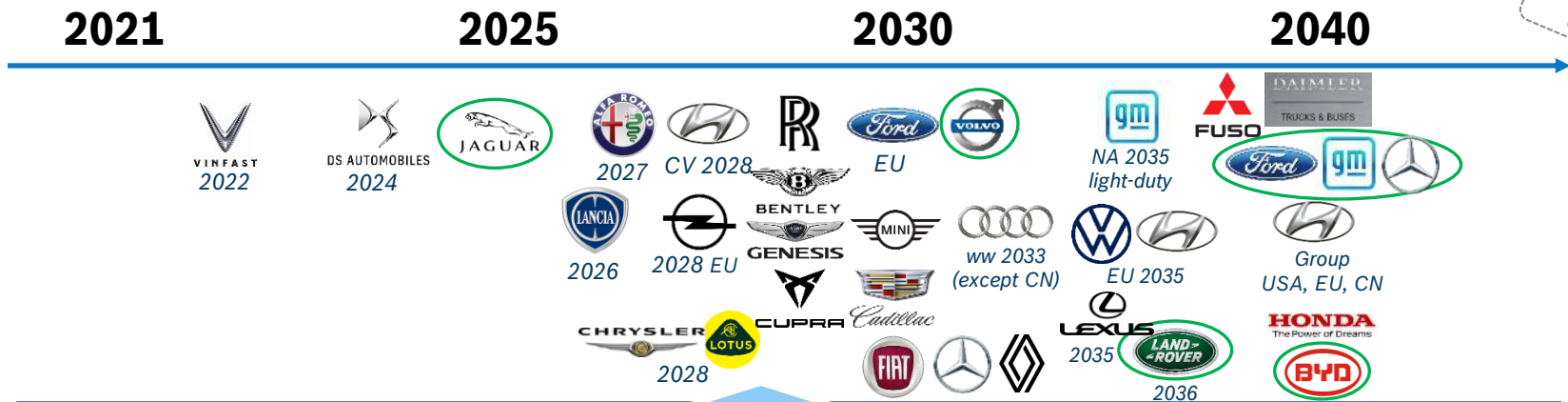
OEM phasing out internal combustion engines

Overview of press announcements

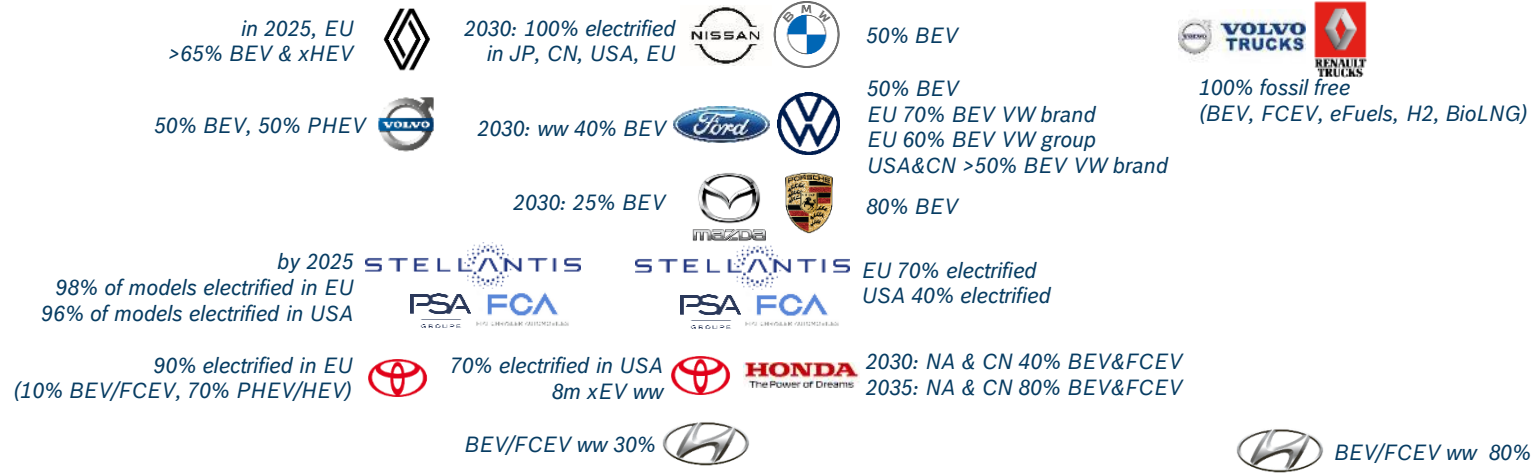
non-exhaustive overview



ZEV only
Commitments



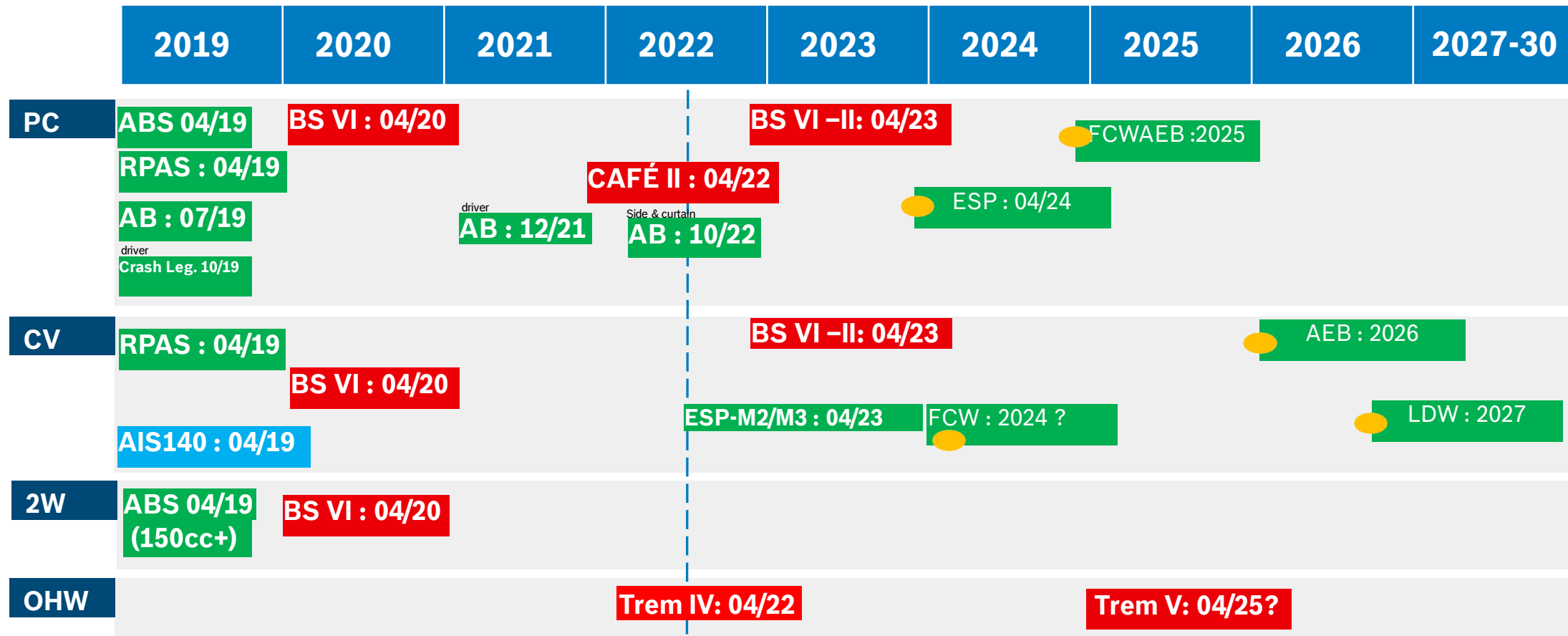
Announced
ZEV shares...
Selection



Source: Public information and Press release | ZEV: Zero Emission Vehicle | BEV: Battery electric vehicle | FCEV: Fuel cell Electric Vehicle | HEV: Hybrid Electric Vehicle | MHEV: Mild Hybrid Electric Vehicle

Legislation Roadmap

Powertrain & Safety defined until 2023-24



Roadmap 2027-30 for BS VII and next step of CO2 norms not defined by Govt yet

Powertrain Safety/ADAS Connected

● - Indicate Date of intro not decided yet



Drivers for electrification

Global and India

Global - Three main drivers:

- **Emission regulations** for road traffic getting tighter
- **Driving bans** for combustion engines in inner cities, urbanization
- **Subsidies and incentive policies** (e.g. to push “New Energy Vehicles” in CN or EU)



India - Three main drivers:

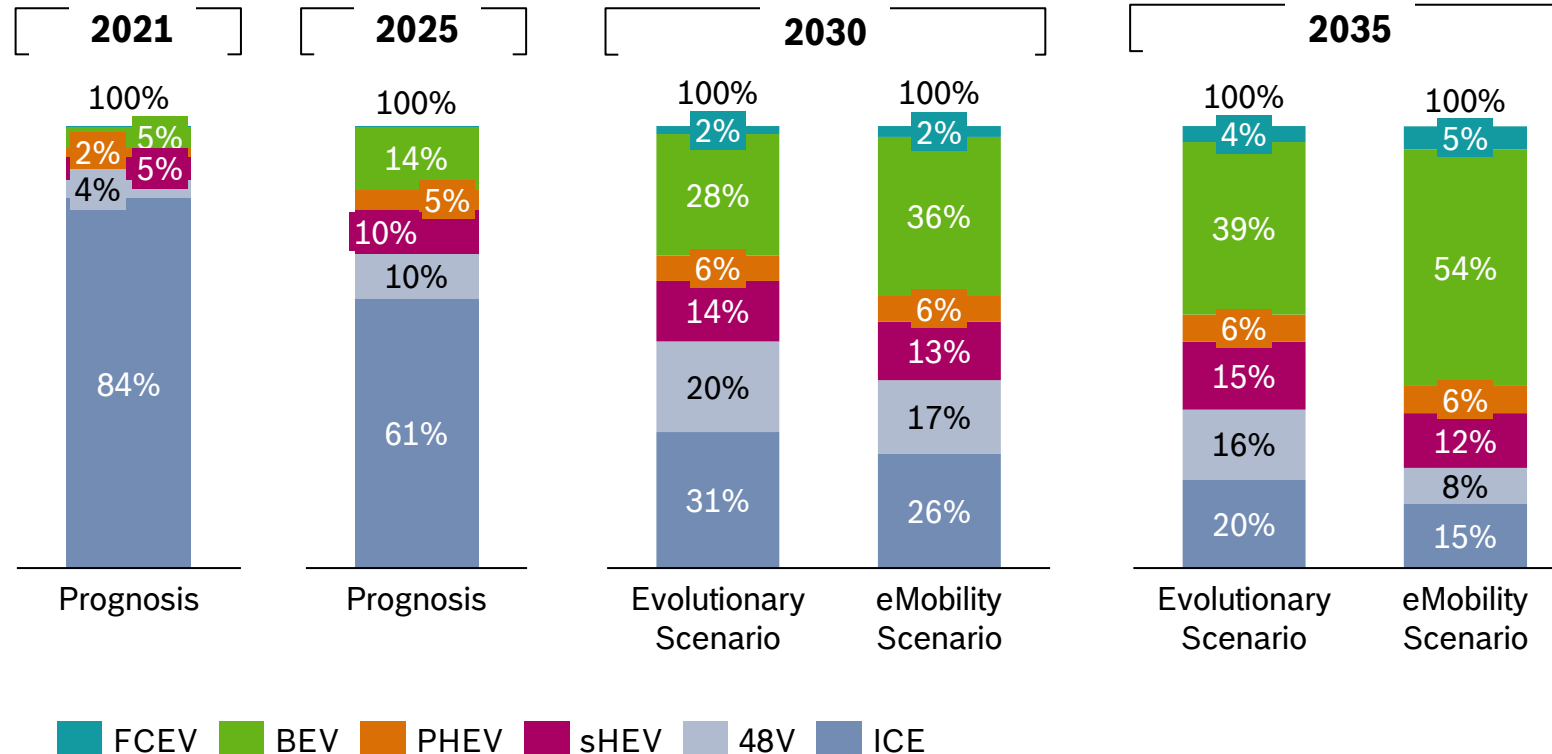
- **Total Cost of Ownership** in a long run for an EV
- **Developing EV Ecosystem** by Investments and Infrastructures
- **Subsidies and incentive policies** (PLI, Make in India, etc)

Bosch view on the worldwide Powertrain scenario

By 2030, about every 3rd new vehicle is an EV



New vehicle sales PC incl. LCV < 6t worldwide



- By 2030, about every 3rd new vehicle is an EV.
- By 2030, more than 50% of all new ICE vehicles are hybridized.
- In 2035, we expect every 2nd new vehicle to be an EV.
- Renewable synthetic fuel (e-fuel) blends for the existing fleet will be decisive to meet CO₂ targets.

Note: difference to 100% due to rounding

Bosch Electrified Powertrain – Product portfolio

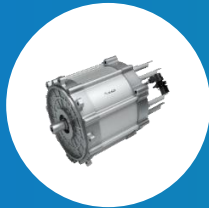
Our global technology and platform covers 48V to 850V

Power drive

Energy management & supply

System control

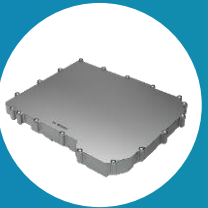
HV



Electric Motor



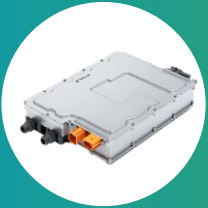
eAxles



Inverter



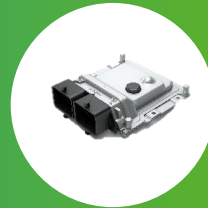
DC/DC Converter



Charger-Converter



Fuel cell

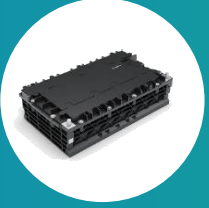


Vehicle Control Unit

48V



48V Traction Battery



48V Hybrid Battery



48 V – 850 V

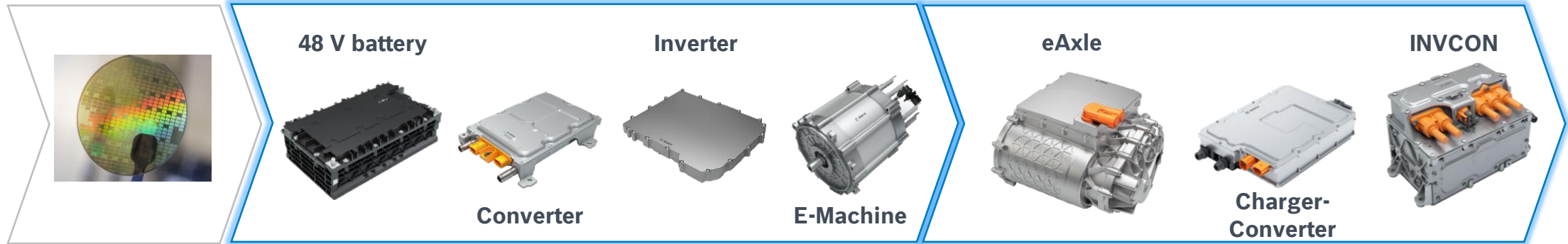
Bosch Electrified Powertrain – Landscape

Our portfolio covers all integration levels – component → system

System competence from SiC wafers to fully integrated systems & Engineering services

Individual components

Sub-systems



Modules for energy efficiency

Components

System integration

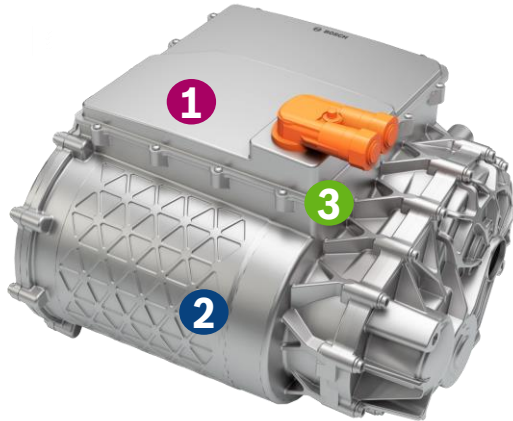
Flexible delivery scope

Standardization and Economies-of-scale importance

Integration and customization levels

Bosch Electrified Powertrain

Example of system integration - eAxle



1

Direct integrated power electronic

Reduction of cost, weight & losses

2

One shared bearing shield for E-machine & Transmission

Reduction of cost & weight

3

One common cooling circuit for power electronics & e-machine

Reduction of interfaces

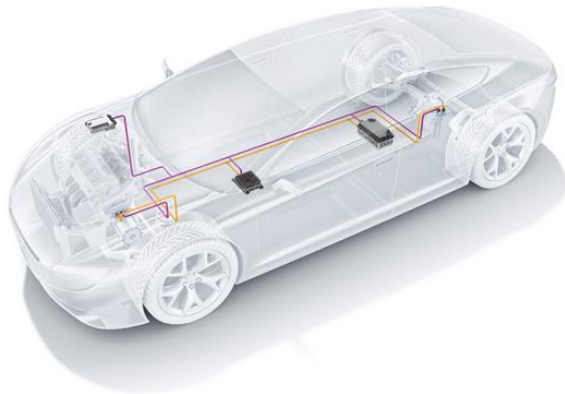
Bosch Electrified Powertrain

Example of standardization – 48 V battery

Industry challenge

Customer interests:

- ▶ Achieve CO₂ targets with minimum costs
- ▶ 48V systems and components support target achievement



Challenge:

- ▶ Develop standardized, compact, efficient solution at attractive costs to fulfill customer needs
- ▶ Straightforward integration into vehicle system

Bosch solution

Cell design based on Bosch competence

Passive cooling

Compact design

IP class: IP5k4



Up to 15% CO₂ reduction

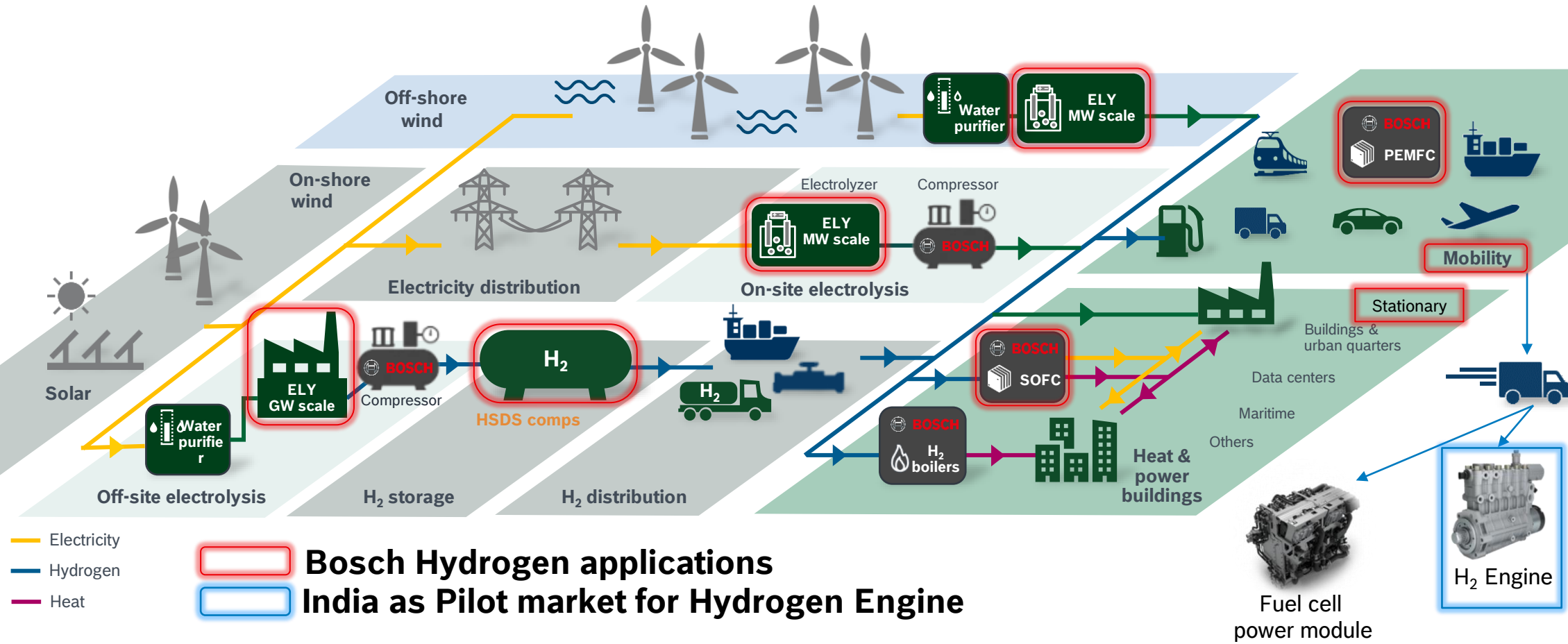
Optimized for P0 48V systems



HYDROGEN

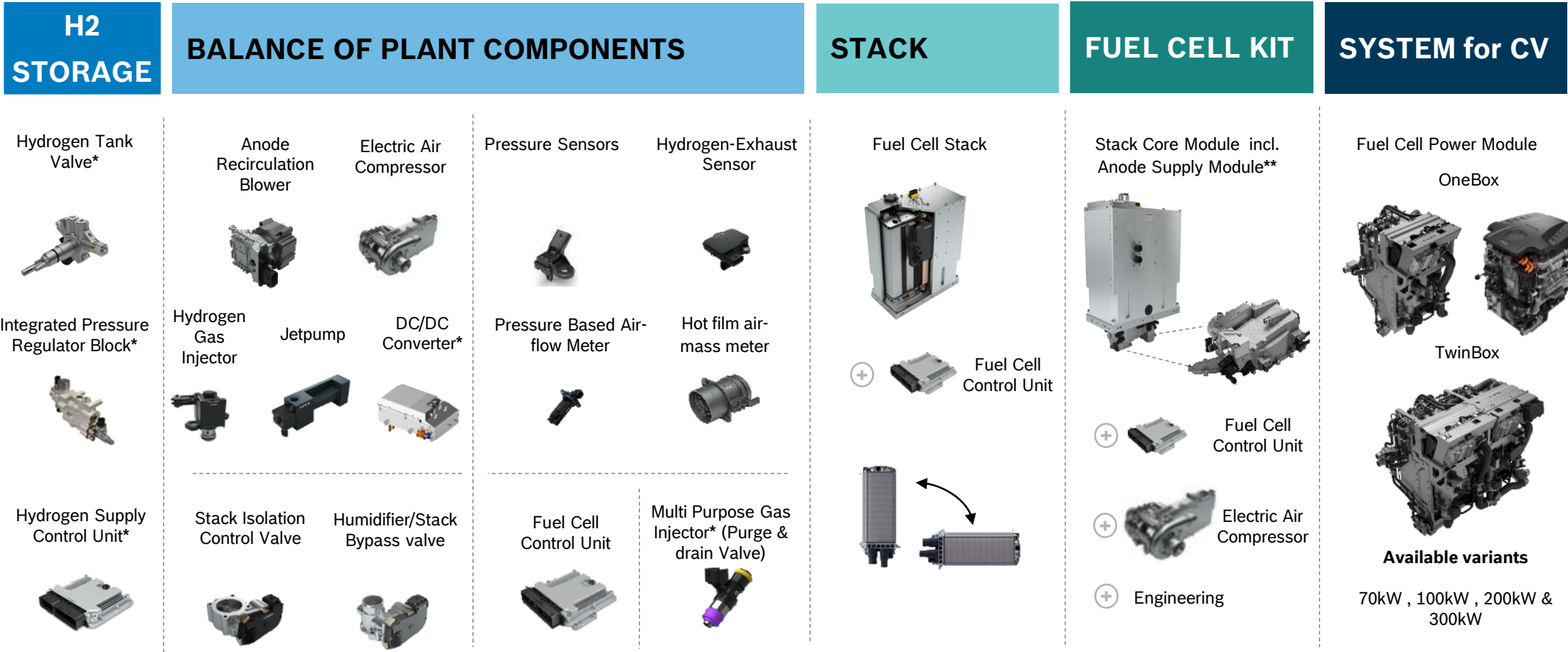
Hydrogen Landscape

Bosch applications in the Hydrogen Ecosystem



Bosch Fuel cell portfolio for Commercial Vehicle

Comprehensive portfolio of fuel cell products with SOP 2022/2023



* SOP 2024/2025; ** SOP 2026

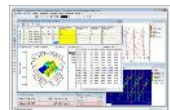
Bosch Hydrogen Engine portfolio for Commercial Vehicle

Quick to market with our synergies from the existing portfolios

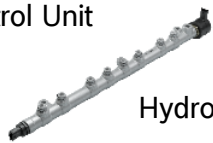
H₂-FIE: new / adapted for H₂-ICE



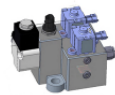
Control Unit



Software and Calibration



Hydrogen rail



Pressure regulator



HDI for H₂ DI



MPGI



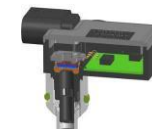
H₂ storage CU



H₂ storage integrated intank valve (IITV)



H₂ pressure sensor*



H₂ safety sensor

Common with Fuel Cell system



Throttle valve



Knock sensors



Boost & manifold p/T sensors



Air Flow Meter



Differential pressure sensor for EGT



Crankshaft speed sensor



Spark plug



Ignition coil



LSF lambda sensor



LSU lambda sensor



NO_x sensor



SCR-system Supply Module, Dosing Module



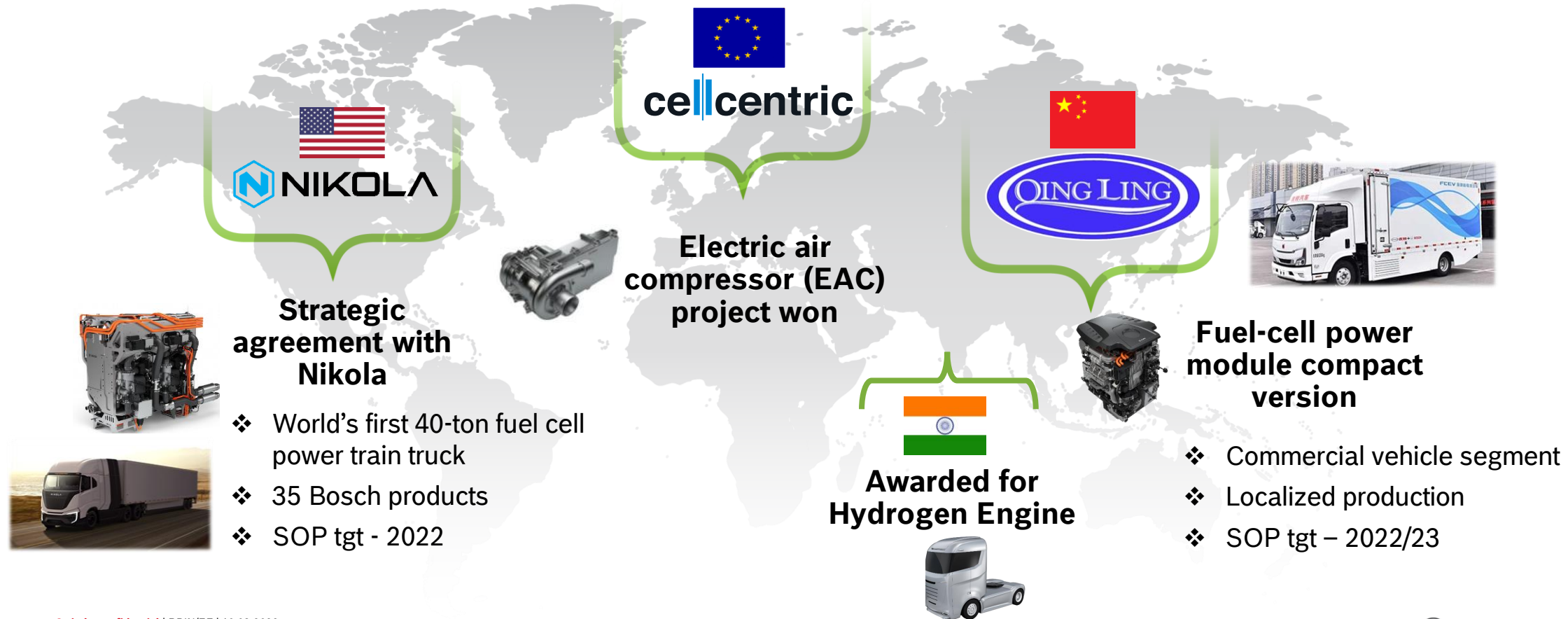
Camshaft position sensor



Speed sensor for turbo charger

Bosch Hydrogen acquisitions

Successful market entry with Bosch portfolio



Strategic agreement with Nikola

- ❖ World's first 40-ton fuel cell power train truck
- ❖ 35 Bosch products
- ❖ SOP tgt - 2022

Electric air compressor (EAC) project won

QING LING

Fuel-cell power module compact version

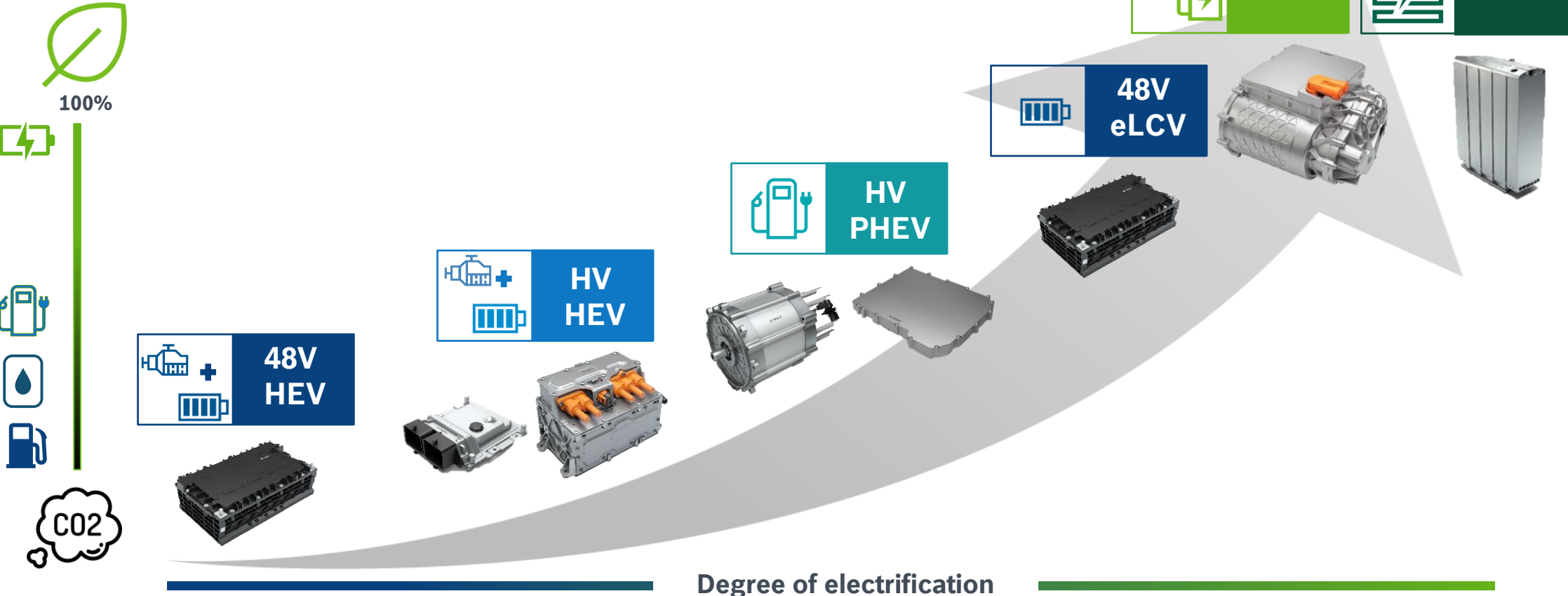
- ❖ Commercial vehicle segment
- ❖ Localized production
- ❖ SOP tgt – 2022/23

Awarded for Hydrogen Engine

Wrap-up : Bosch EV & Hydrogen Portfolio in a nutshell

Bosch offers solutions from PC to CV and Hybrids to BEV & FCEV

CO₂ reduction, tank-to-wheel [%]



Bosch On the way to a

NEW ERA OF MOBILITY

Thank you..!