

# The Vision of Asia





## China market overview

June 2022

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# There are Four Forces in Asia

		<b>By 2040...</b>	<b>GDP 2018</b> USD trillion	→	<b>GDP 2040</b> USD trillion
	<b>Advanced Asia:</b> Capital and technology providers	Larger than the Middle East and Africa combined	<b>8</b>	→	<b>11</b>
	<b>China:</b> An economic pillar providing connectivity and innovation platforms	On par with North America	<b>13</b>	→	<b>36</b>
	<b>Frontier Asia and India:</b> Young economies with potential to leapfrog and urbanize quickly	Larger than the Middle East and Africa combined	<b>4</b>	→	<b>13</b>
	<b>Emerging Asia:</b> Regionally integrated economies with cultural diversity	Comparable with Latin America	<b>3</b>	→	<b>7</b>

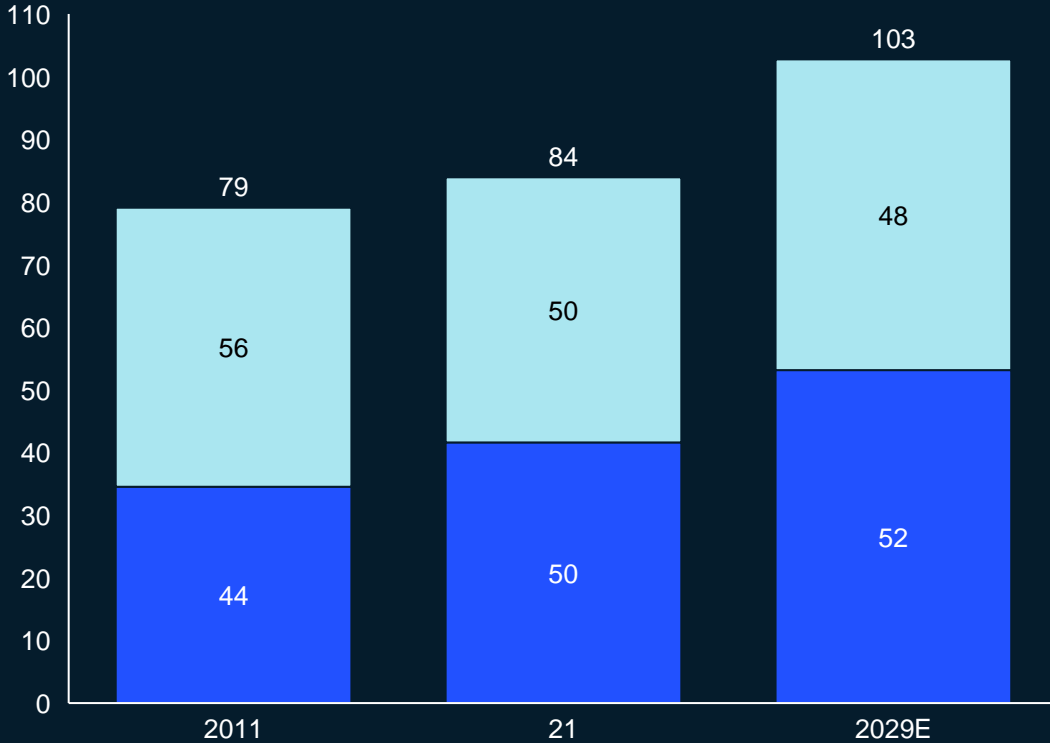
# China is the driving force behind Asia Auto industry

## Asia contributes half of world's automobile demand

### World automobile sales mix by regions

in million units and percentage; PV+CV

Rest of World  
Asia



## Within Asia, China is the leading driving force of auto industry development

China as driving engine for auto sales growth in Asia

Contribution from China to auto sales expansion in Asia

94%

For the period 2011 to 21

62%

For the period 2021 to 29

China as the Asian leader for new mobility, e.g., EV

Contribution from China to BEV light vehicles production in Asia

91%

2021

79%

2029

# We see great potential in China market

**A**

**THE largest automotive market and leading market for EV adoption and growth**

**B**

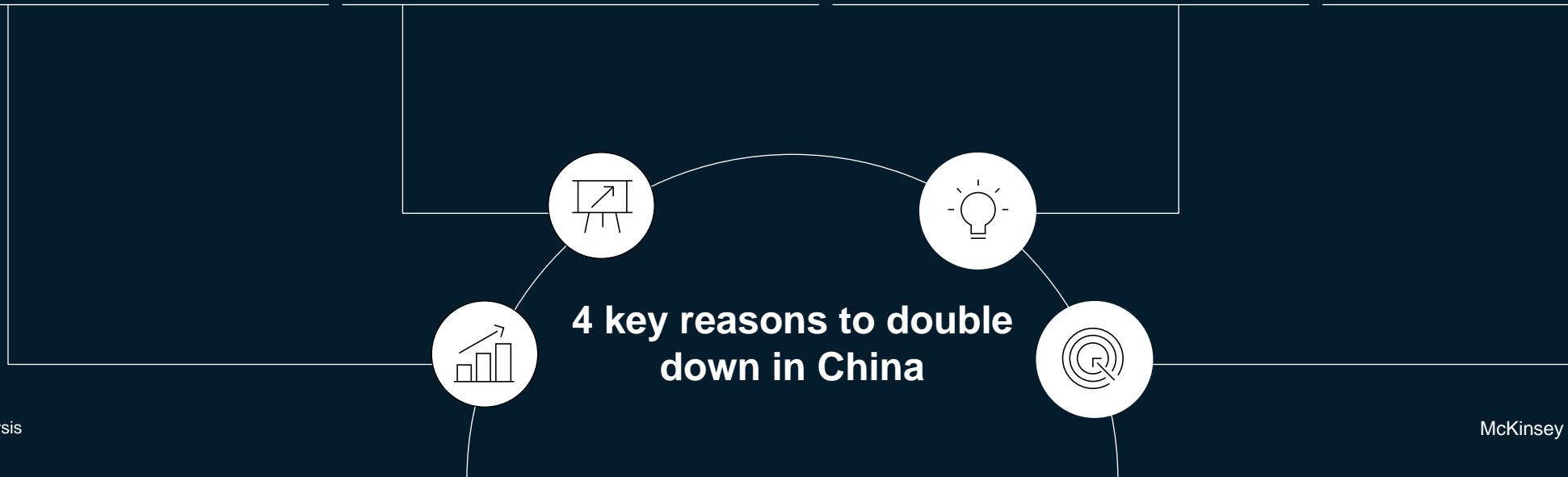
**Ultra-dynamic market landscape with emerging OEMs going into world stage**

**C**

**At scale innovations happening throughout industry value chain**

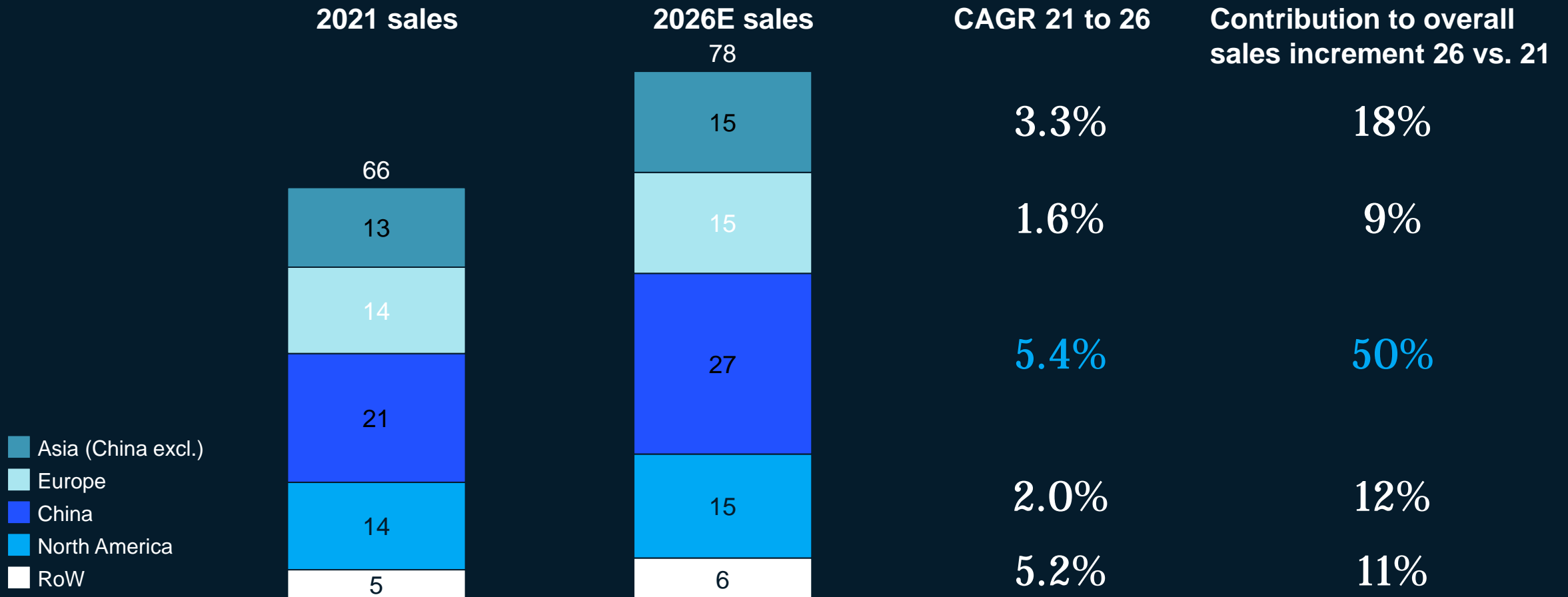
**D**

**High levels of M&A attracting investor interests pursuing transformations and strategic moves**



# A. China will remain as the world No.1 PV market and contribute ~50% of the increment sales volume

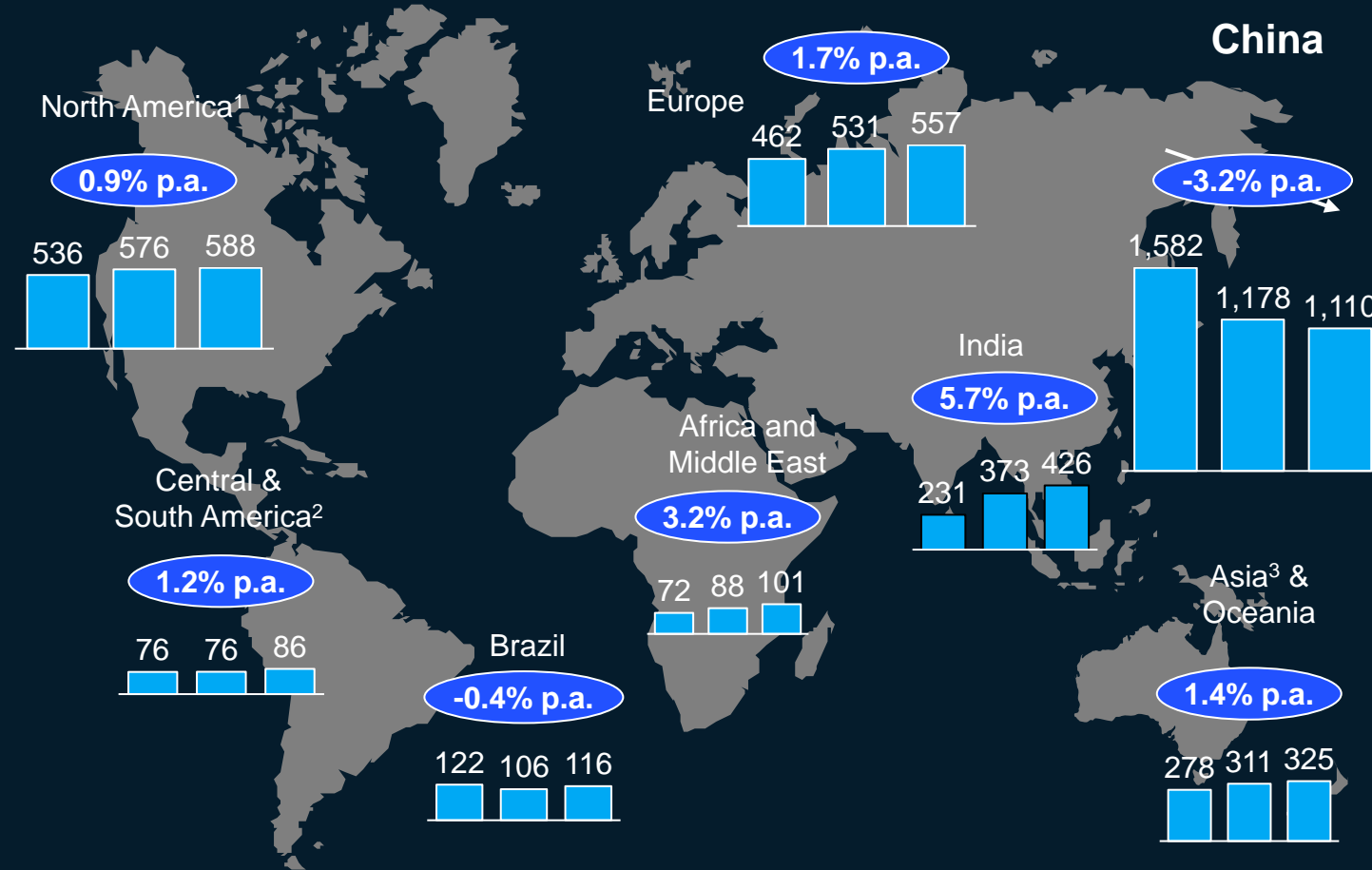
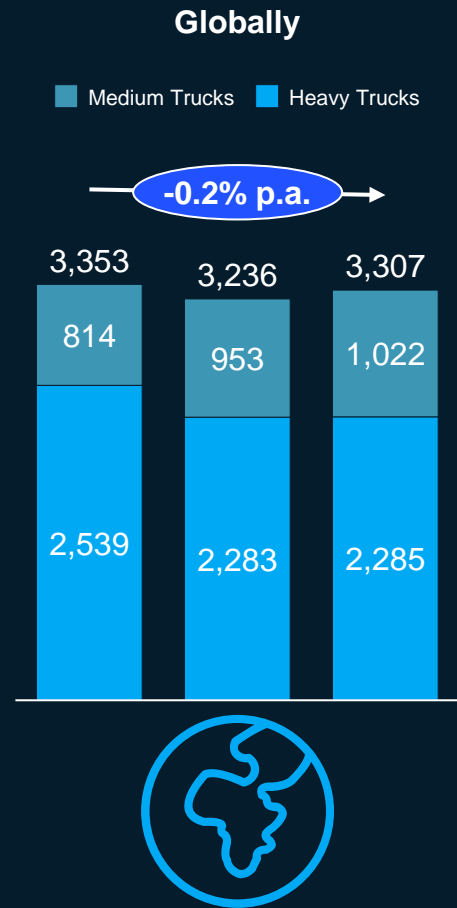
PV sales by regions, In million units



# A. While in CV sector, China contributes the largest share even with a slight drop due to the COVID-19



Medium/Heavy truck sales and growth by region, Units, Thousands



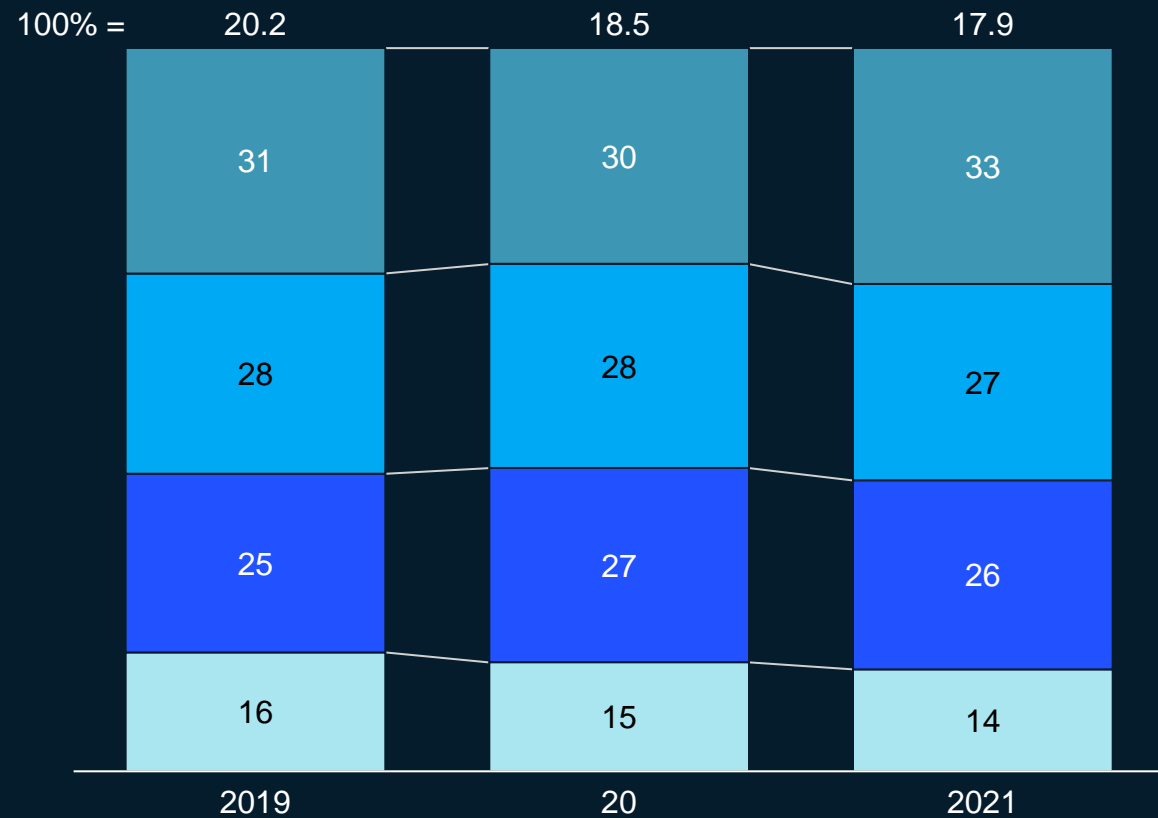
**Largest market in China** expected to alternate around 1.2mn units p.a. after peak years 2019/20

1. North America includes Canada, the U.S. and Mexico; 2 Central & South America excl. Brazil; 3. Asia excl. China & India

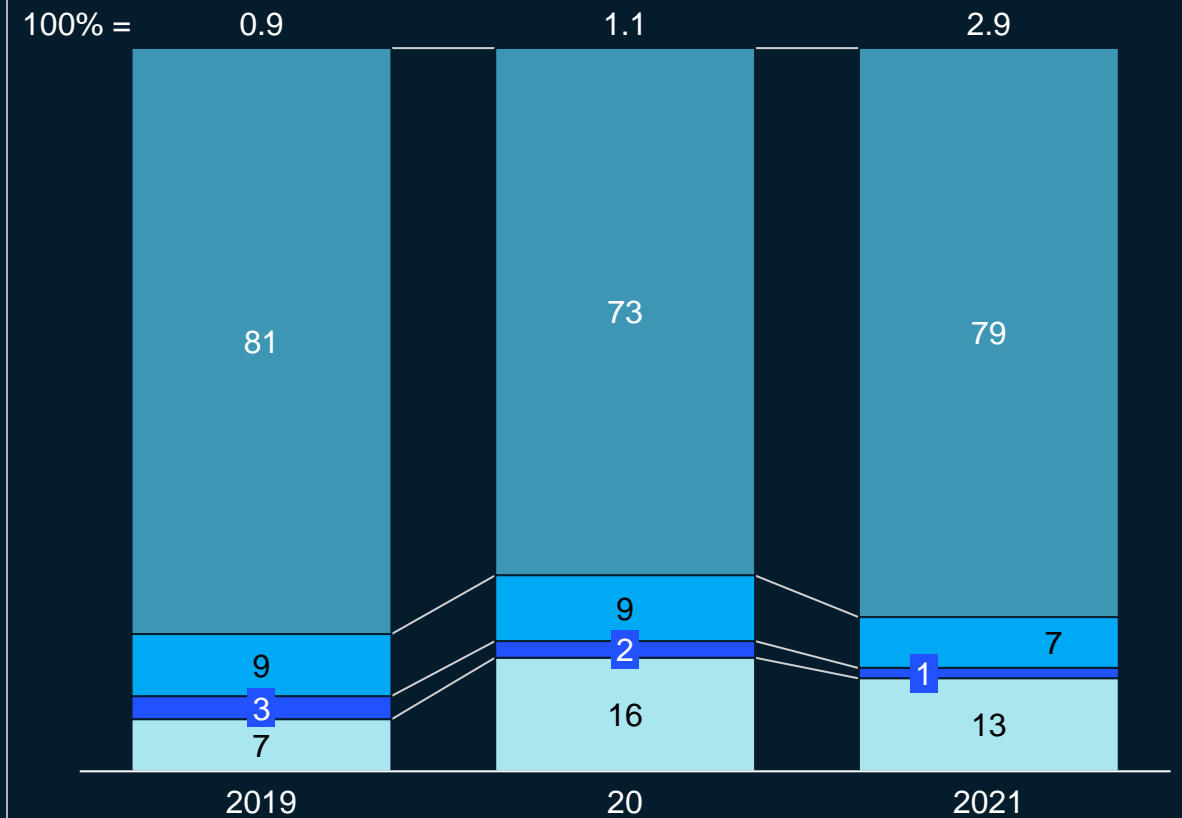
# B. Top Chinese OEMs have consistently expanded market share especially in xEV segment...

Chinese German Japanese Rest of the world

China ICE PV market sales mix by origins of the brands, Mn units, %



China xEV<sup>1</sup> PV market sales mix by origins of the brands, Mn units, %

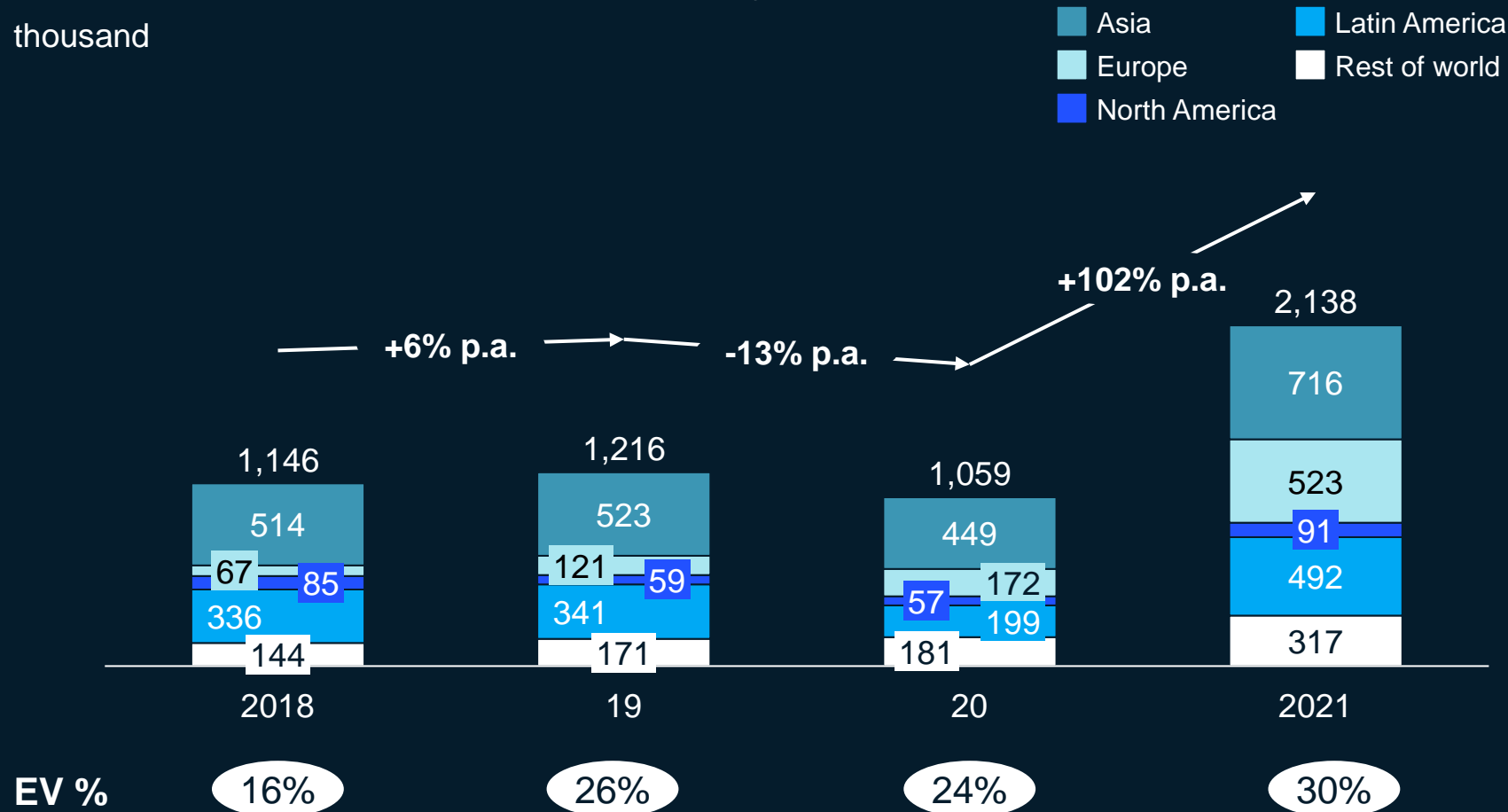


1. Incl. BEV, PHEV, REEV, FCEV

2

# B. ...meanwhile the export volume is growing fast, with Latin America as one of the major export destinations

2018-2021 China vehicle export volume by continent, thousand



Top 3 player contribute ~36% of total export

A 15%

B 13%








C 8%

Several China NEV player entry into European market



# C. We observed fast progress made by leading local players on technology innovation across the full stack

Not Exhaustive

		Description	
Hardware		<b>Sensors</b>	a) Radar + Radar Control Unit b) Camera + Camera Control Unit <b>c) LiDAR + LiDAR Control Unit</b> d) Other Sensors (Ultrasonic, Microphones,....)
		<b>Central control unit</b>	<b>Central control unit</b> <b>Control unit for redundancy</b>
In-car software		<b>Environment Perception</b>	Sensor signal processing <b>Low level sensor fusion</b> Object fusion <b>High-precise localization</b> Object detection Prediction
		<b>Decision making &amp; control</b>	Decision making Path planning Drive control
		<b>Middleware / Operating system</b>	Real-time operating system <b>Middleware</b> <b>Hardware abstraction layer</b>
Backend-software		<b>HD-map and location based services</b>	<b>HD-maps</b> <b>HD-map updates</b> <b>Location based services, e.g.</b> <b>Real-time traffic</b> Road hazard warning Friction map
Engineering services		<b>Integration</b>	Integration of SW modules of central computer Integration of AD/ADAS-Kit including sensors

1. Here and TomTom don't have Class A surveying & mapping qualification, but cooperate with local players (Navinfo and Baidu respectively)

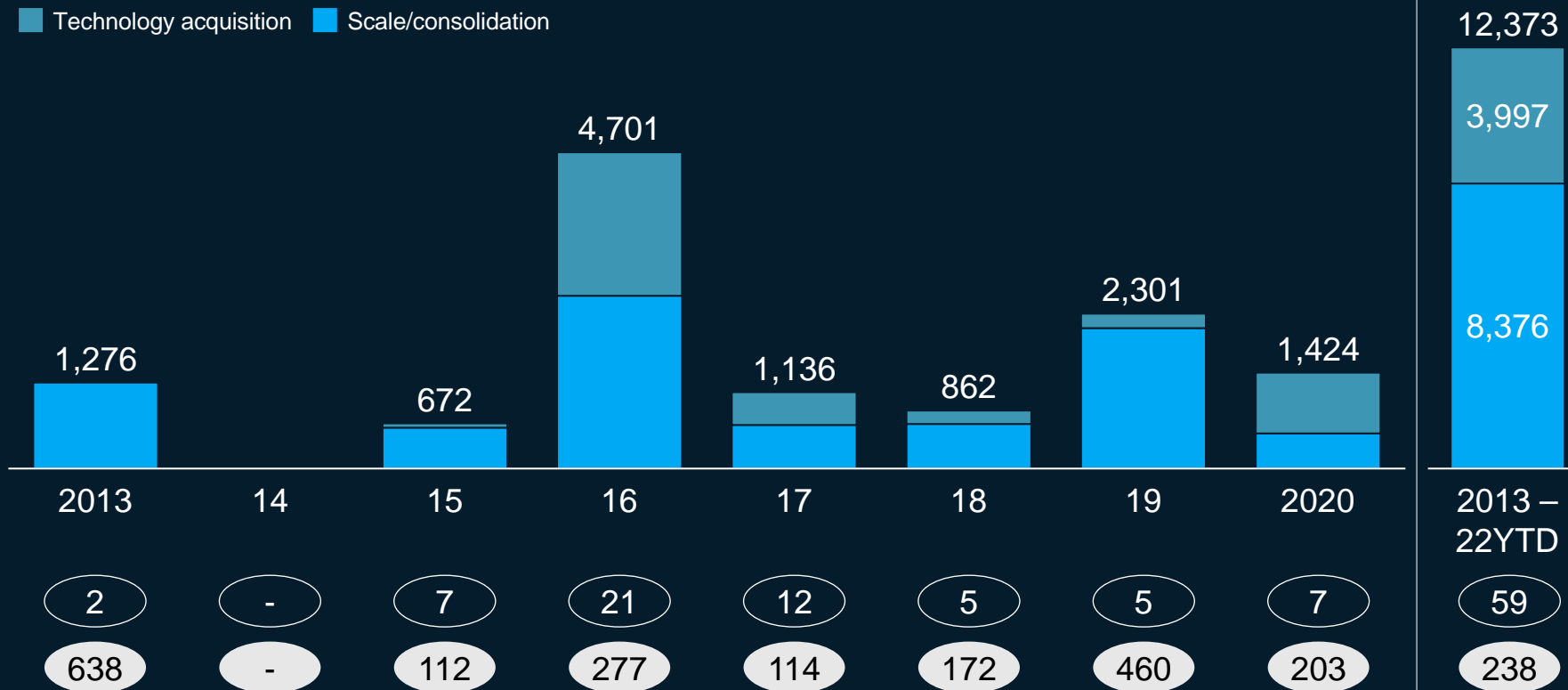
# D. In line with OEM requirements, supplier sector deal activity significantly increased with focus on new technologies since 2016

Preliminary

(x) Number of deals (x) Avg. deal value (USD Mn)

## Deal value<sup>1</sup> by target supplier categorization in China, by year<sup>2</sup>

USD million



## Key takeaways

While overall deal activity fluctuating in past years, clear trend towards **increasing focus on technology acquisition in China deals shown**  
**~1/3 of overall deal value** driven by acquisitions targeting new technologies (e.g., electrification-related)

1. Completed deals included with final stake share >50%, target industry auto/truck parts and equipment

2. Based on year of deal announcement; 2021 and 2022 YTD without any auto parts and equipment deals that have >50% final stake

# Key implications for Global Suppliers



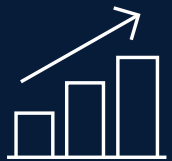
**1. China Matters**



**2. Know your (future) customers**



**3. Leverage the force of innovation**



**4. Think about inorganic growth**

