



Getting Ready for the Future

SPOILER ALERT: IT'S MOSTLY LEAD

Jeremy Cordray

Head of Global Specialty/Transportation Products

EnerSys

State of the Transportation Market

PAST, PRESENT, & FUTURE

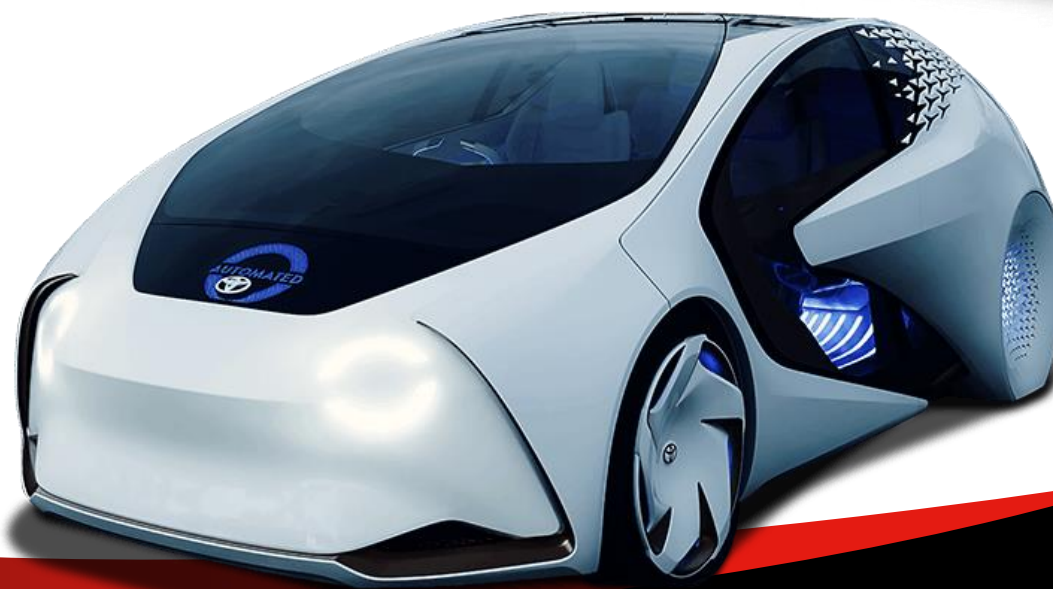
2010



2025



2040?



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State of the Transportation Market

PAST, PRESENT, & FUTURE

Forward Collision Warning/Avoidance

Reverse Brake Assist

Heated Seats

Hands Free Driving

Blind Spot Alert

Cooled Seats

2010

Smartphone Connectivity & Charging

Towing Tech

Cross Traffic Alerts

Adaptive Cruise Control

2025

Connected Mobile Apps/Digital Keys

Security Systems

Emergency Services/Tracking

2040

Cameras

Lane Departure Warnings

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State of the Transportation Market

PAST, PRESENT, & FUTURE



2010



2025



2040

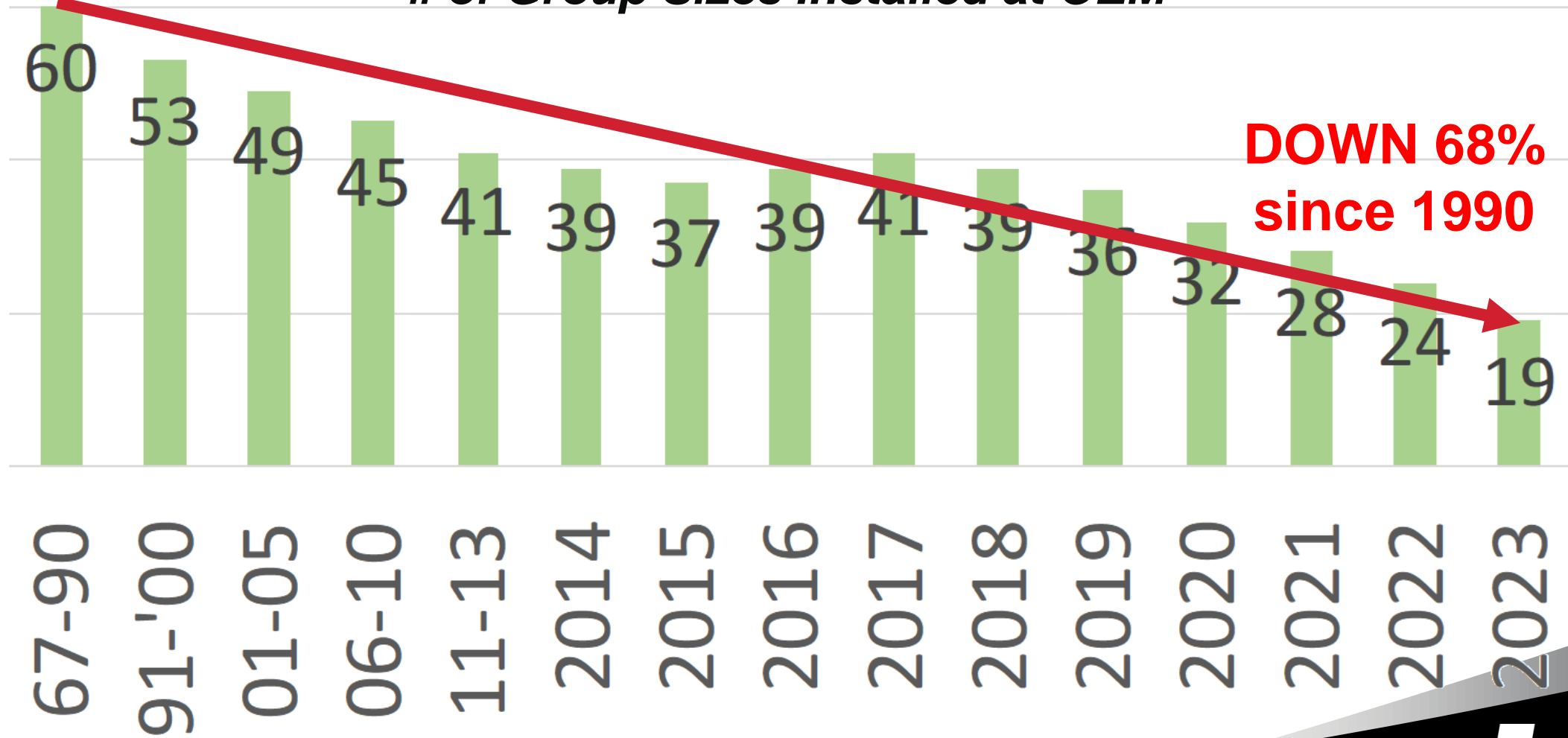


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State of the Transportation Market

PAST, PRESENT, & FUTURE

of Group Sizes Installed at OEM

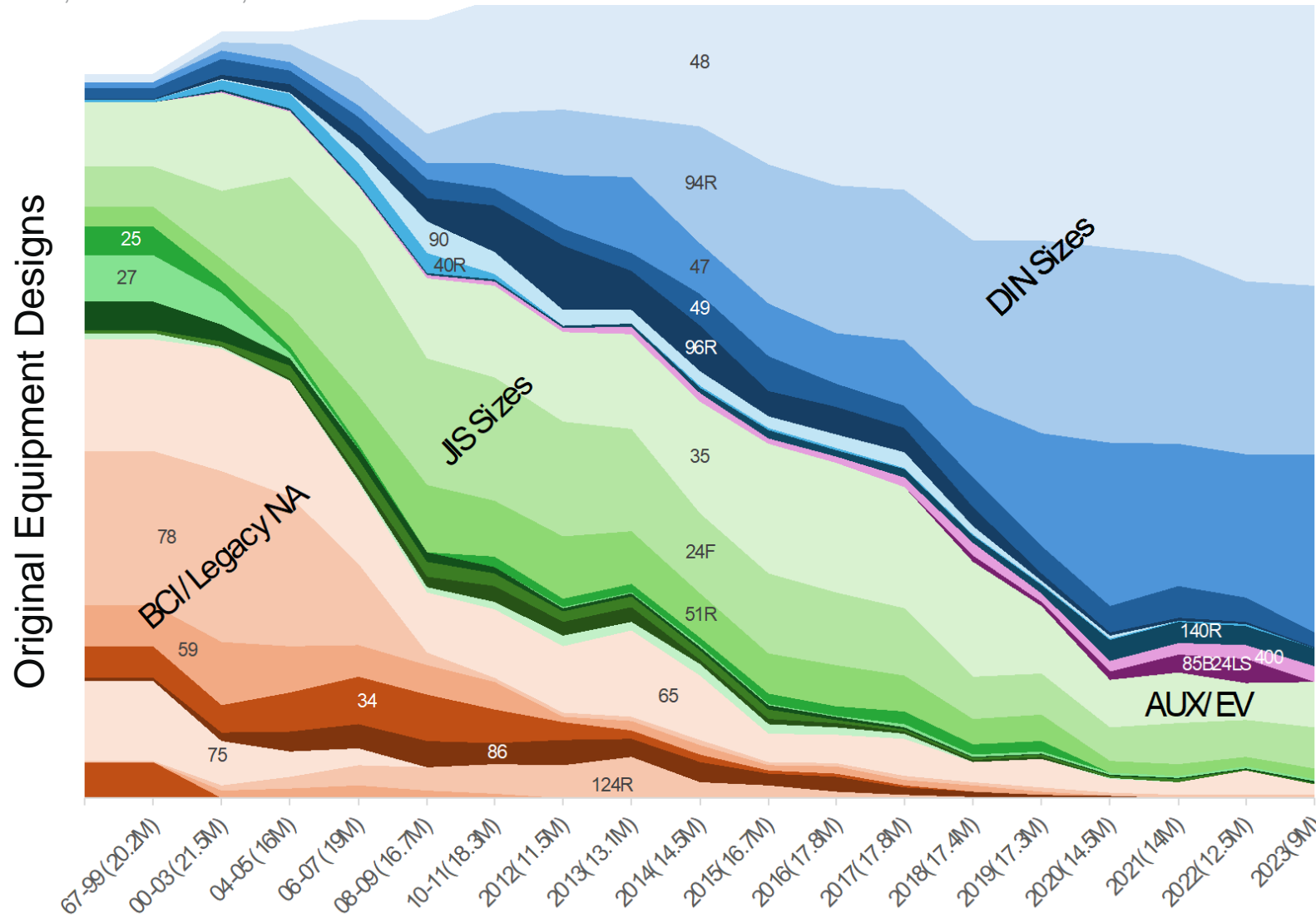


DOWN 68%
since 1990



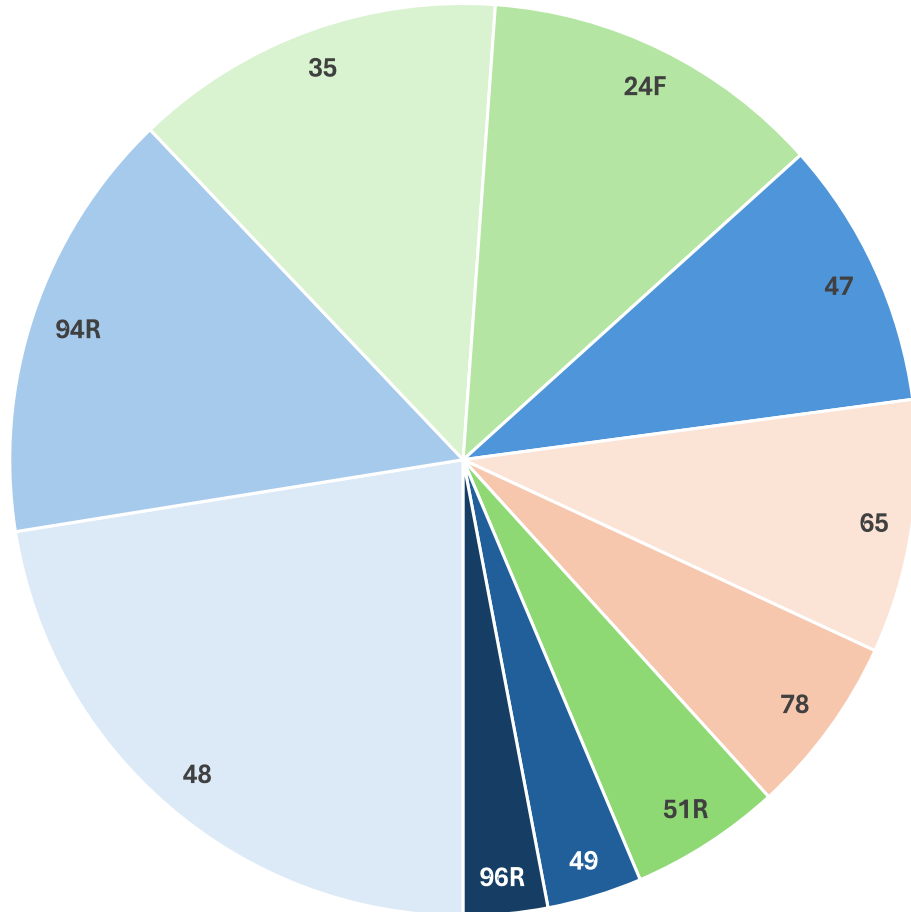
State of the Transportation Market

PAST, PRESENT, & FUTURE

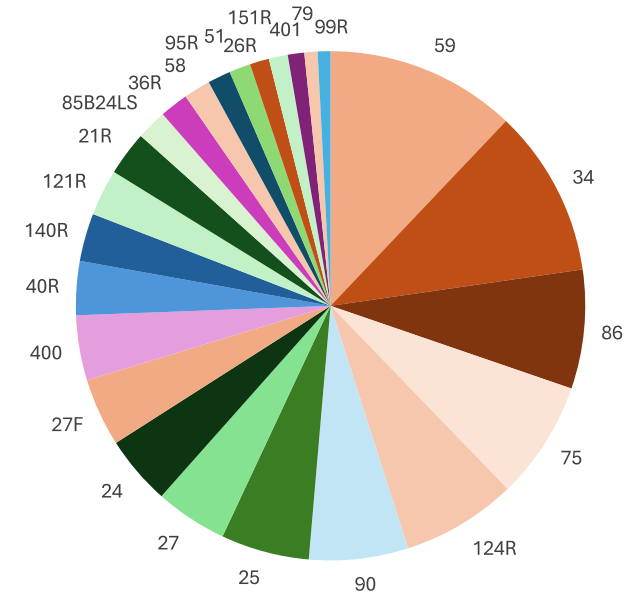


State of the Transportation Market

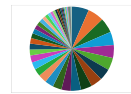
PAST, PRESENT, & FUTURE



80% VIO = 10 SKUs



19% VIO = 25 SKUs

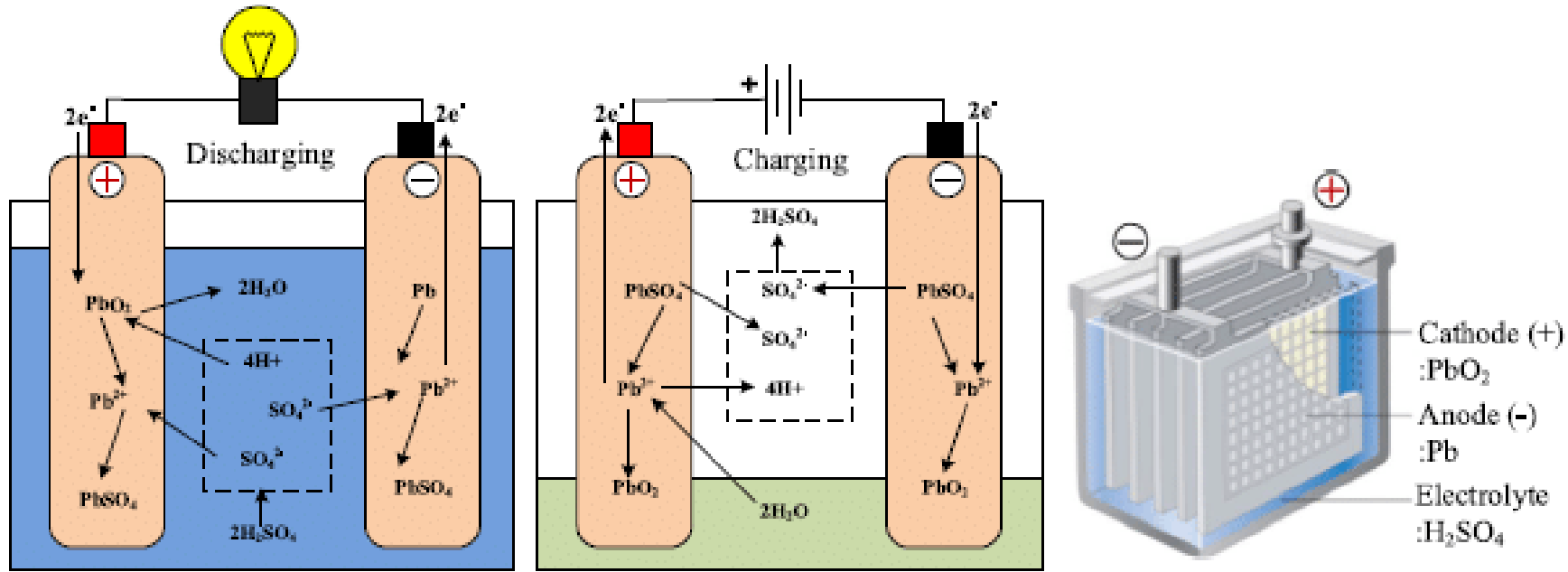


1% VIO = 63 SKUs



Battery Technology for Transportation

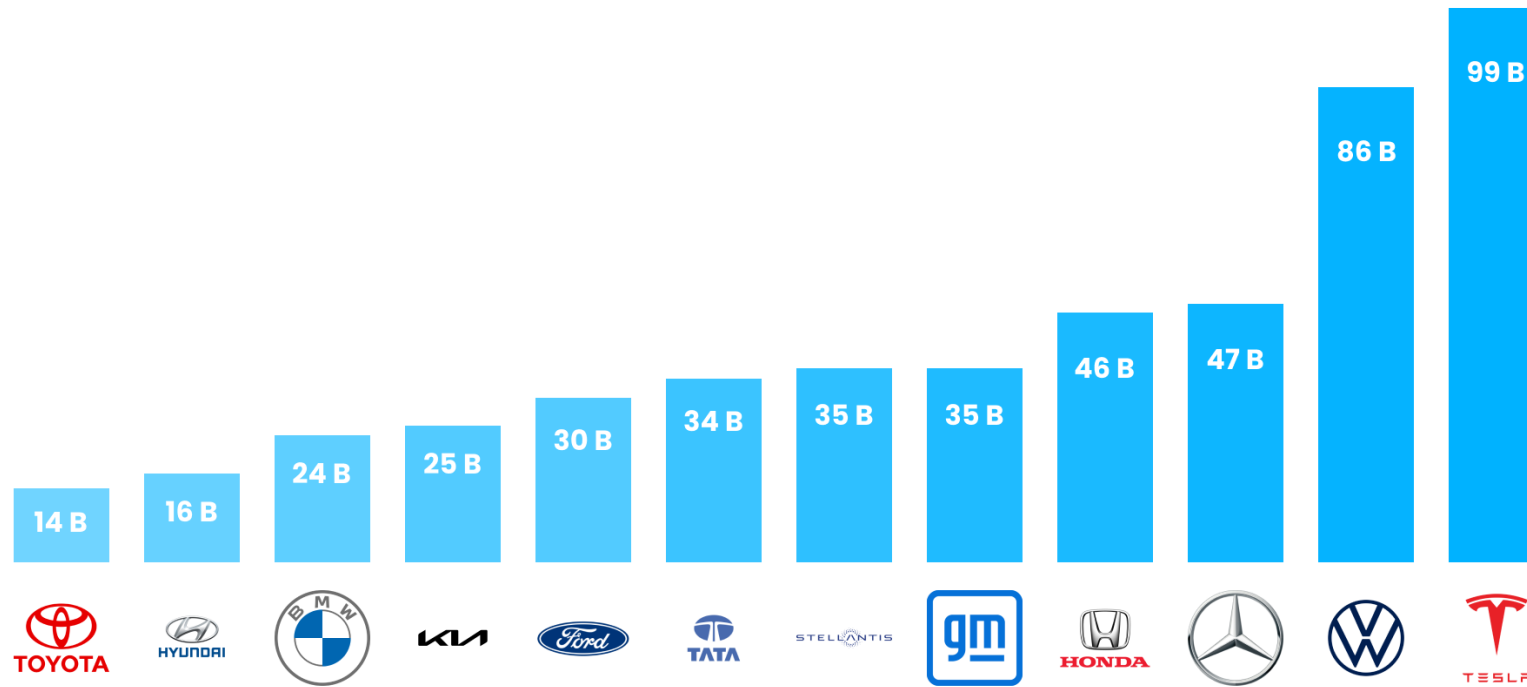
PAST, PRESENT, & FUTURE



Battery Technology for Transportation

PAST, PRESENT, & FUTURE

Automakers commitment to next generation vehicles by 2030 (\$B)



Source: S&p Global, USAID, Invest India

EV Markets
Reports.com

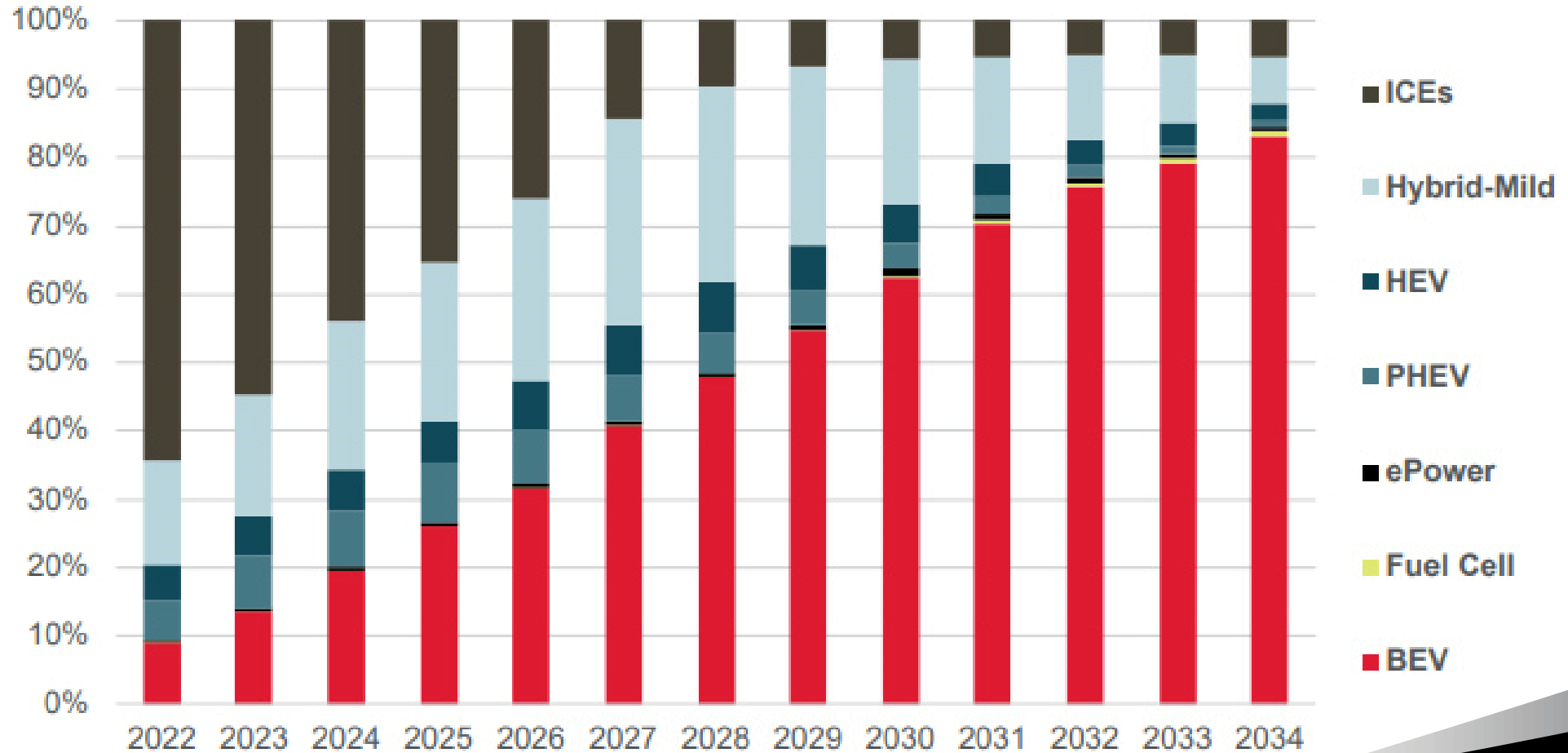
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Battery Technology for Transportation

PAST, PRESENT, & FUTURE

European New Vehicle Sales Forecast

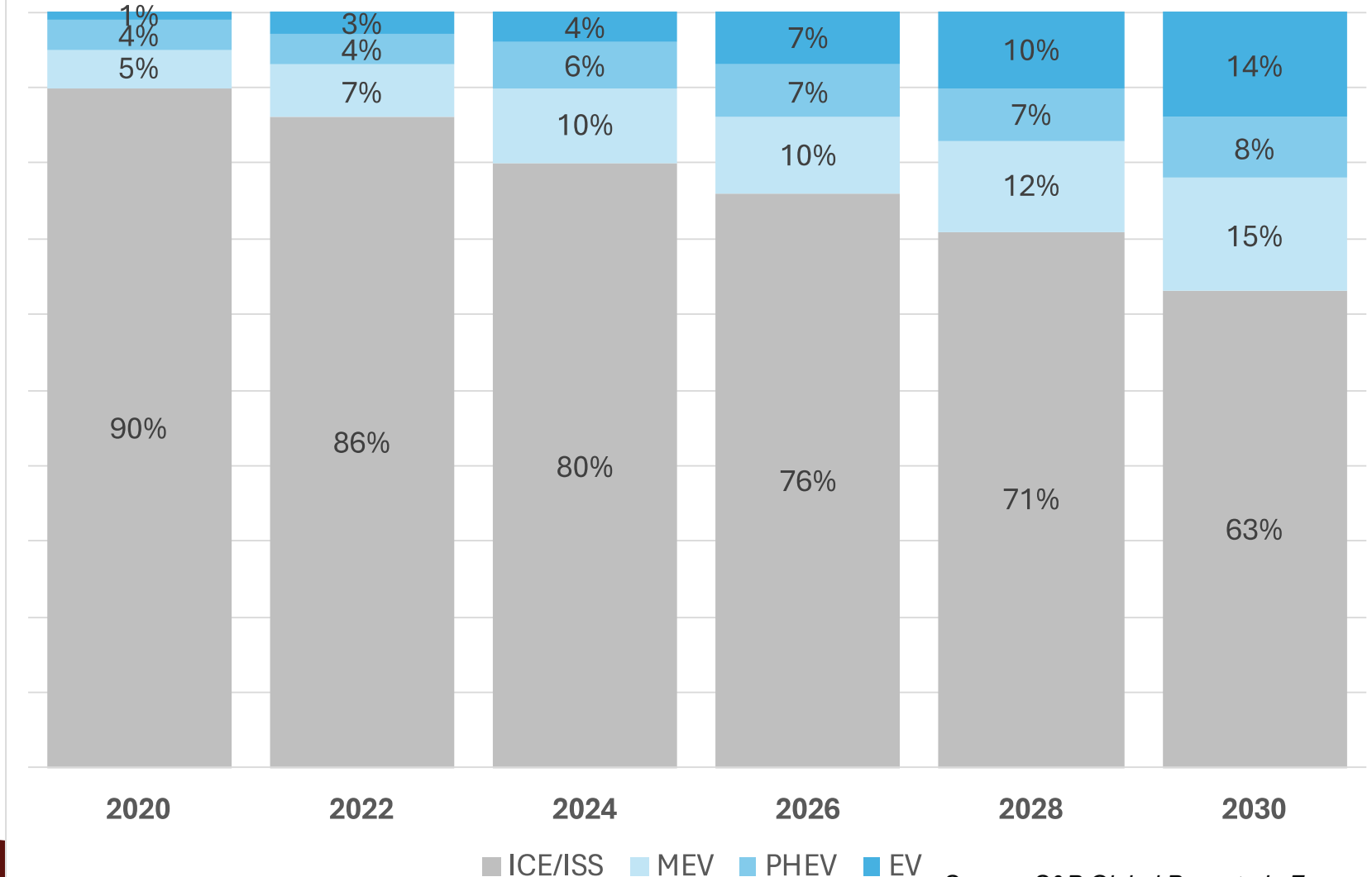


Source: S&P Global Powertrain Forecast

Battery Technology for Transportation

PAST, PRESENT, & FUTURE

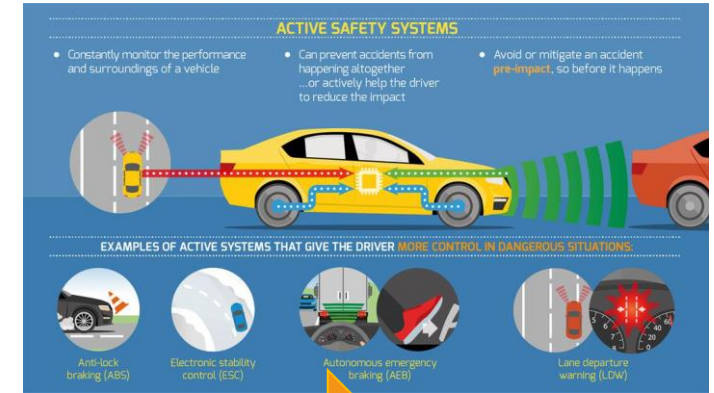
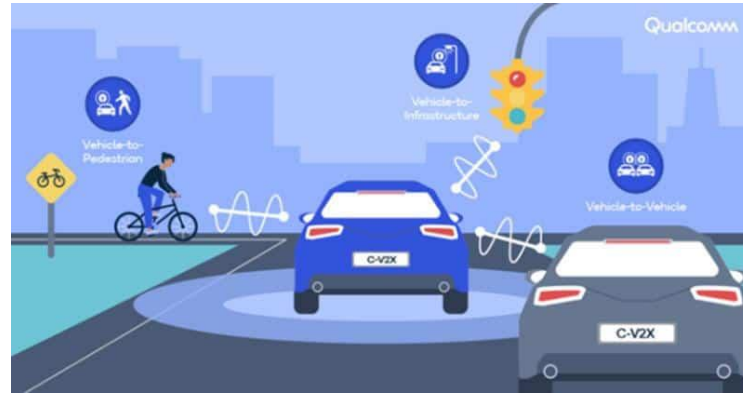
NA LDV Powertrain Forecast 2020-2030



Source: S&P Global Powertrain Forecast

Battery Technology for Transportation

PAST, PRESENT, & FUTURE



12V VOLTAGE STABILIZATION

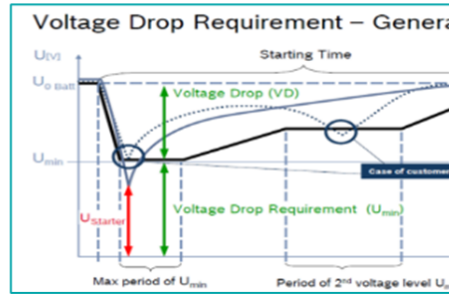
12V NETWORK POWER SUPPLY

12V BACK UP POWER

Voltage Stabilization
Starting/Braking Steering

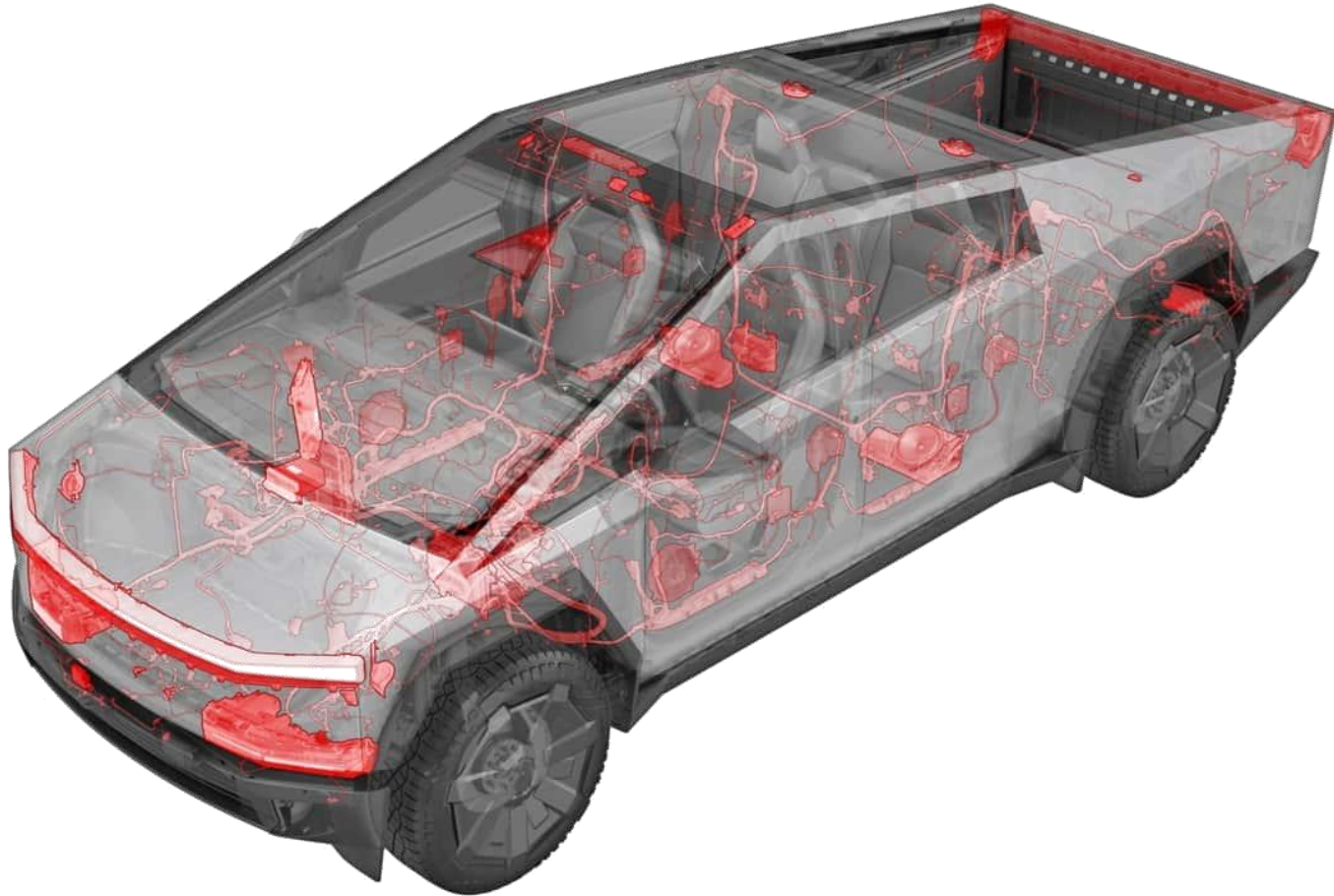
MHEV ,HEV,PHEV BEV

Emergency steering
and braking support
Telematics



Battery Technology for Transportation

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Where we are going...

- Capacity Efficiency
- High Energy Density
- Safe & Reliable
- Physical Integration

Battery Technology for Transportation

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This means multiple electro chemistries

- Lead Acid
- Lithium
- Sodium Ion
- ???



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What Is Our Role?

PAST, PRESENT, & FUTURE

BABY BOOMERS: people born between 1946 and 1964

GENERATION JONES

GEN X: people born between 1965 and 1980

XENNIAL

MILLENNIALS: people born between 1981 and 1996

ZILLENNIAL

GEN Z: people born between 1997 and 2012

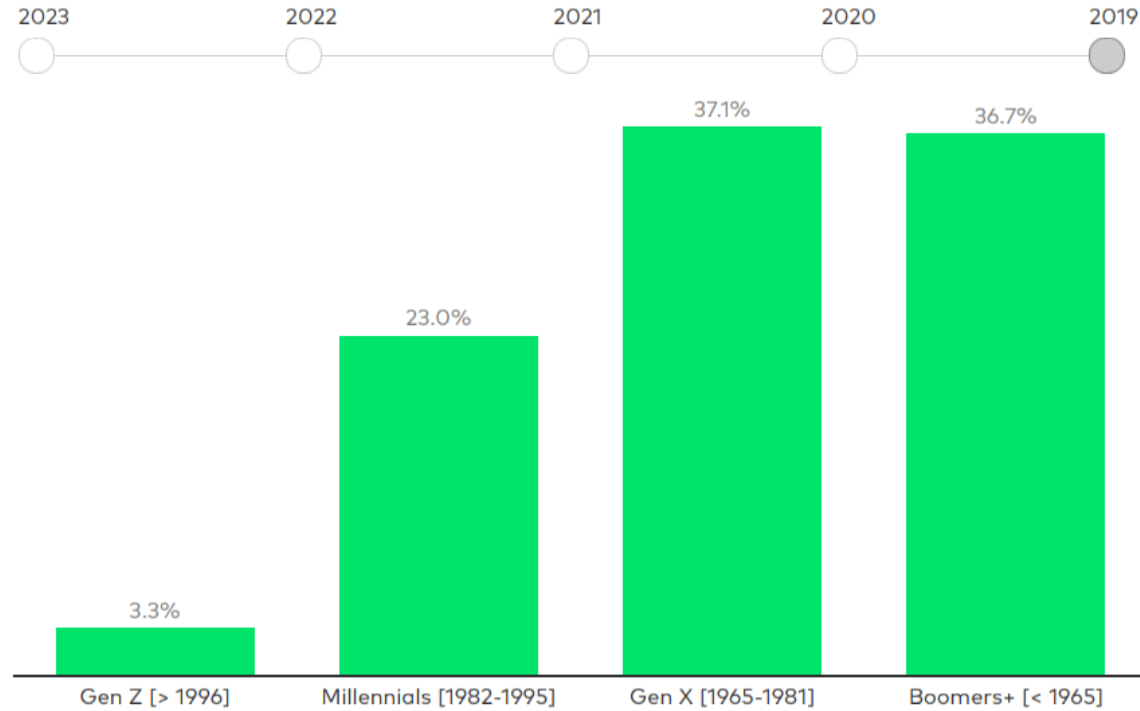


What Is Our Role?

PAST, PRESENT, & FUTURE

Share of Total Sales by Age Generation

% of Sales | Total US | CPG & General Merchandise | Rolling 12 Months by Year

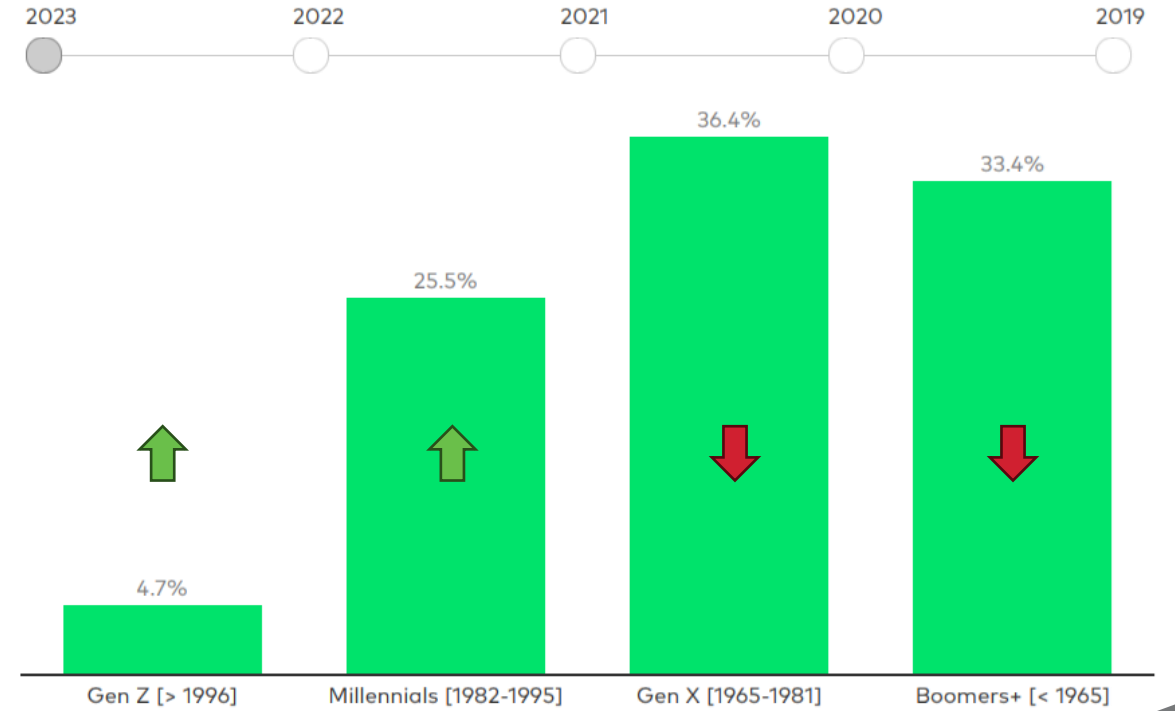


Sectors include: Baby, Grocery, Health & Beauty, Household, Pet, Electronics, Home & Garden, Office, Sports, Tools & Home Improvement & Toys.

Source: Numerator TruView

Share of Total Sales by Age Generation

% of Sales | Total US | CPG & General Merchandise | Rolling 12 Months by Year



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Source: Numerator TruView



What Is Our Role?

PAST, PRESENT, & FUTURE



Baby Boomers

Born 1946 to 1964

- Raised in post-WWII, resource-limited society
- Work-centric, conservative, competitive
- ~25% of today's workforce



Gen X

Born 1965 to 1980

- Raised in after war, but before technology society
- Work-life balanced, independent, materialistic
- ~33% of today's workforce

Boomers and Gen X still make up the largest consumer group in terms of US sales for CPG and general merchandise, holding 70% of share.



What Is Our Role?

PAST, PRESENT, & FUTURE



Gen Y (Millennials)

Born 1981 to 1996

- Raised in an economically stable and technologically advancing society
- Questioning, flexible, self-prioritization (growth oriented)
- ~35% of today's workforce



Gen Z

Born 1997 to 2010

- Raised in a digitalized, economically fluctuating society
- Communicative, open, diverse, collaborative
- ~5% of today's workforce

Adult Gen Z and Millennial households are becoming powerhouses for the consumer and retail industry as they now account for 30% of US sales.

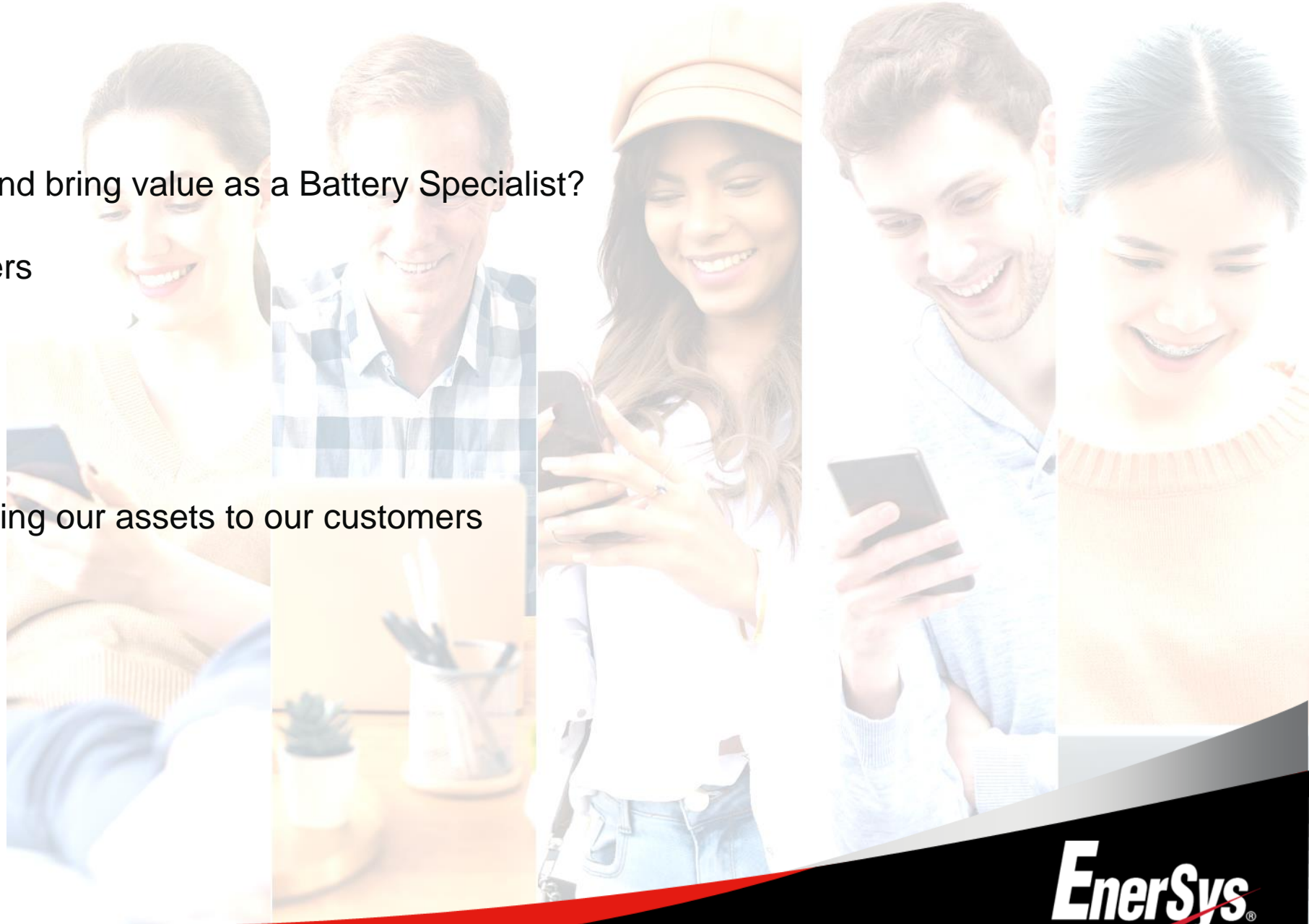


What Is Our Role?

PAST, PRESENT, & FUTURE

How do we impact the market and bring value as a Battery Specialist?

- Understand our customers
 - Talk
 - Listen
- Understand our assets
 - Take Inventory
 - Find Value
- Be innovative in connecting our assets to our customers
 - Communicate
 - Learn
 - Be Fearless
- Focus on vision
 - Goals
 - Impact



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What Is Our Role?

PAST, PRESENT, & FUTURE

Leadership is the capacity to
translate vision into reality.

-Warren Bennis



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THANK YOU!



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