



### Maxime Picat

Chief Purchasing & Supply Chain Officer

### **OEM Perspective**

EV Batteries in the Future of Automotive

# NE FUSBRIGHT CE.

#### **International Strength** with Global Operations

Employees on all continents; more than 160 nationalities

**Operations in** more than 130 commercial markets countries

Manufacturing in more than 30

### **Cutting Edge and Best-in-Class Technology**

14 iconic brands. diversity in portfolio

4 native BEV platforms: STLA Small STLA Medium STLA Large STLA Frame

3 tech platforms: STLA Brain STLA SmartCockpit **STLA Autodrive** 











(1) Sum of EU and NA portfolios above global portfolio due to models present in both regions
 (2) Based on current assessment of future markets & regulations, assuming conducive public policies (charging infrastructure, purchasing incentives)

## **BATTERY PLANTS & LABS**



5 million battery electric vehicle sales by 2030
400GWh planned battery capacity

TIS

Sourcing plan to be completed with additional supply contracts and partnerships to support total demand

### OUR GALAXY OF ELECTRIFICATION PARTNERS



MATERIAL

#### To accelerate our execution by expanding access to technologies and raw materials



### WE ARE CUSTOMER-CENTRIC







### TOP CHALLENGES PURCHASE BEV, PRICE AND RANGE



Main Reasons why people are not buying BEV	2020	Today
Purchase price	35%	<b>↓</b> 28%
Limited driving range	16%	↓ 13%
Poor exterior styling	7%	10%
Lack of charging points	13%	<b>↓</b> 8%



Seriously considered EV but didn't purchase (Reasons)	2020	Today
Model not available	5%	<b>†</b> 20%
Purchase price	20%	<b>↓</b> 14%
Limited driving range	5%	1 7%
Overall cost of ownership	6%	6%

Source: Internal Stellantis Sources Main reasons why people are not buying BEV Source: NVCS

Most seriously considered electric, did not purchase

### **BATTERY ADVANCES**

SEVERAL MAJOR THEMES IN THE INDUSTRY





HIGHER ENERGY DENSITY CHEMISTRIES

**SOLID STATE** 

ELIMINATE CRITICAL METALS (Co, Ni)

FASTER CHARGING

THERMAL PROPAGATION MITIGATION

CELL-TO-PACK / CELL-TO-CHASSIS

**CO2 REDUCTION OVER LIFE** 

LOW-COST BATTERIES (<<\$75/kWh)



### MAXIMIZING BATTERY LIFE AND MATERIAL SUSTAINABILITY





#### Minimize critical material use and recycle

#### **Challenges:**

- Obtaining recycled material
- Retrieving ELV batteries
- Changing chemistry affects future needs
- Recycled content regulation ahead of availability

#### **Opportunities:**

- Extending the life
- Chemistry development
- Repair & Reman methods
- 2nd life applications
- Designing for recycling



## THANK YOU



