



# Perspectives from An Auto OEM: A Conversation with JLR

**Hanno Kirner** Executive Director, Corporate and Strategy, Jaguar Land Rover



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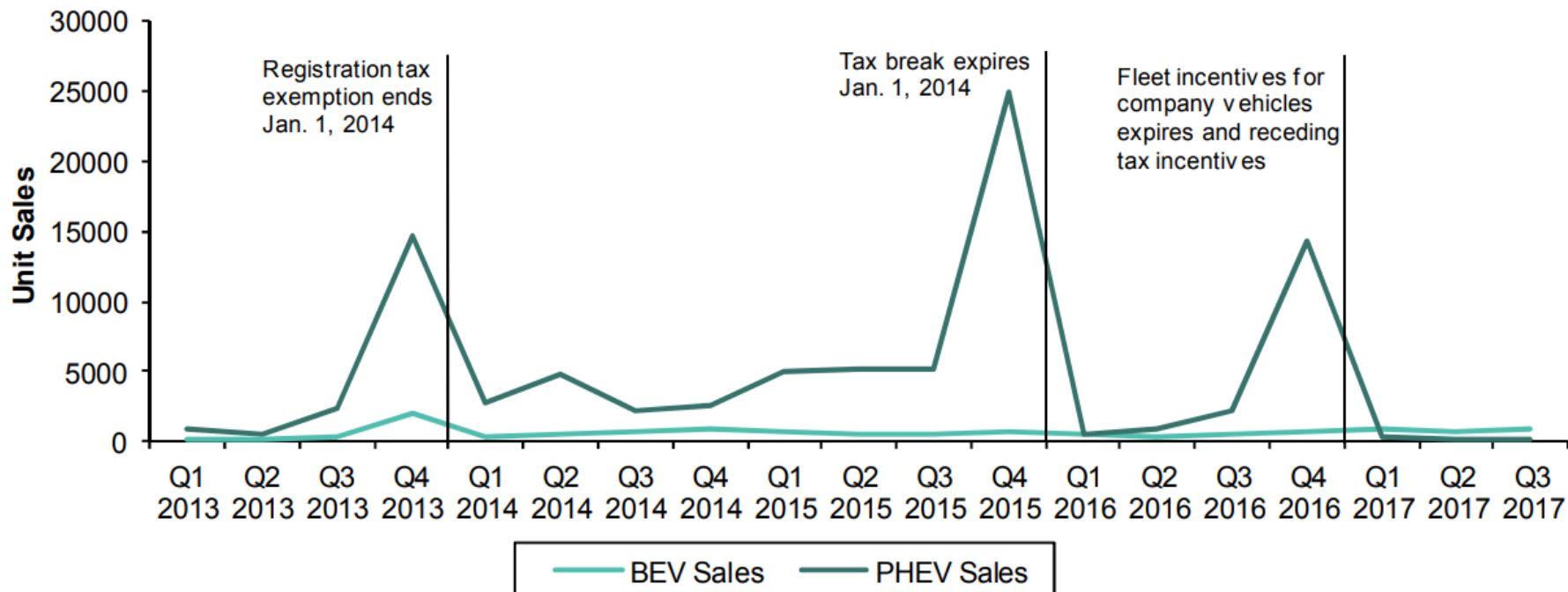
**What does the future hold for electrification?**

# Incentives are driving electric vehicle adoption...



EXHIBIT 8: **Consumer demand for EVs peaked prior to tax breaks and incentives ending, before plummeting...**

## Dependency on incentives (Netherlands)



# ... but we also know these won't last forever



Norwegian EV incentives	2018	2020
Free road licence fee	Yes	No
No VAT on purchases	Yes	No
Free parking nationally	Yes	No



US incentives are only applicable on the first 200k EV units per OEM	2017	2018
Tesla	Yes	No
GM	Yes	No
Jaguar Land Rover	Yes	Yes



UK EV incentives	2018	2021
Vehicle Price < £60k	Yes	No
Vehicle price > £60k	No	No

# There are a number of real world barriers to buying electric vehicles



43%

Of UK consumers say that charging an EV battery would have to be as quick and easy as filling up the tank with gasoline.

*Cap Gemini, Beyond the Car, May 2017*

2 minutes

The time taken to fill a Land Rover Discovery's 18.5 gallon tank which returns 560+ miles  
*Discovery user*

66%



Of property in London lacks a garage or off street parking which would allow home charging stations

*McKinsey, 2016*

40%



Of London's public charge points are out of service at any one time.

*Financial Times*

# We all know electrification is coming, but no one really knows how quickly it will arrive



57% for rapid adoption,  
36% for government  
target scenario  
17% for slow adoption  
globally by 2030

*Bernstein: Electric Revolution 2018: The Resistance, Part  
1 - Bottlenecks, substitutes and hold-outs February 2018*



33% globally in 2025



15-25% globally in  
2025



26% globally in 2030

*Global Electric Vehicle Battery Handbook:  
Disruptive with strong growth July 2016*



20-25% globally in  
2025



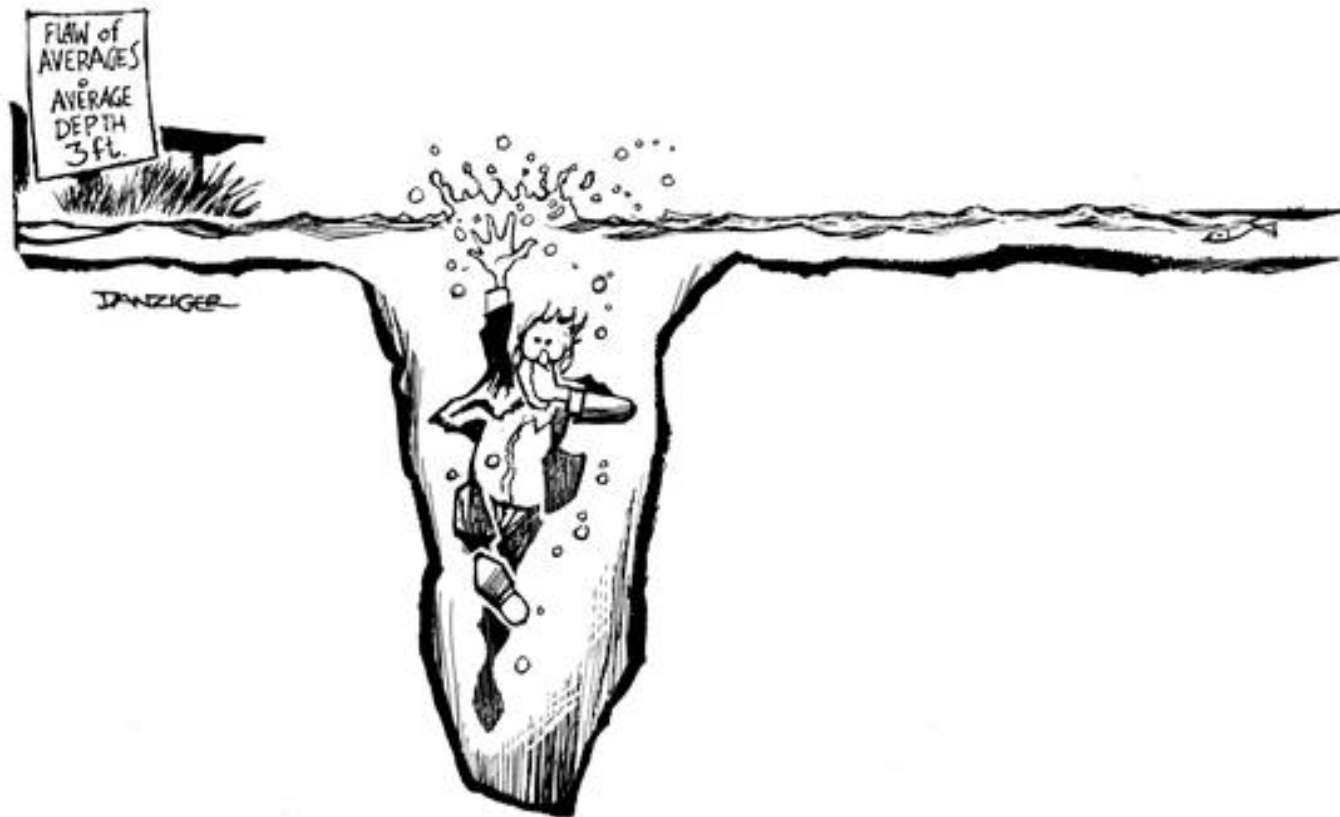
24% globally in 2030

*Bloomberg Electric Vehicle Outlook July 2017*



20% globally in 2025

But we all know how dangerous the law of averages can be





Because the roll out across the globe will be very different



**LONDON**



**SHANGHAI**



**HOUSTON**







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**So how is JLR responding to this uncertain future?**

# On March 1<sup>st</sup> I-PACE was revealed at Geneva Motor Show



‘Jaguar has pipped its competitors to the post, revealing its first stand-alone electric model before SUV rivals from Audi and Mercedes’  
**Autocar**

‘Jaguar’s game-changing Tesla beater’  
**Top Gear**

‘The Jaguar I-Pace has everybody buzzing’  
**Autonews**

‘The Jaguar I-Pace is arguably the most radical vehicle in the British manufacturer’s 82-year history’  
**Auto Express**

‘Jaguar’s I-Pace will give Tesla a run for its money’  
**Globe and Mail**

‘What’s radical about the I-Pace is that it’s a pure-electric vehicle based on a new platform.’  
**Car and Driver**

# I-PACE delivers benchmark electric car performance



**90kWh** battery

**2** electric motors

**480km (298 miles)** range on the WLTP cycle

**45 minutes** rapid charging

**696Nm** of Torque

**400PS** Power

0-60mph in **4.5s**



# With a cutting edge, uncompromised architecture

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However, we don't know when, where, or what customers will buy in the future



## WHEN

33% globally in 2025

*Audi*

OR

26% globally in 2030

*Global Electric Vehicle Battery Handbook:  
Disruptive with strong growth July 2016*

## WHERE

### SHANGHAI



### LONDON



### HOUSTON



## WHAT



= ICE &  
MHEV



= PHEV

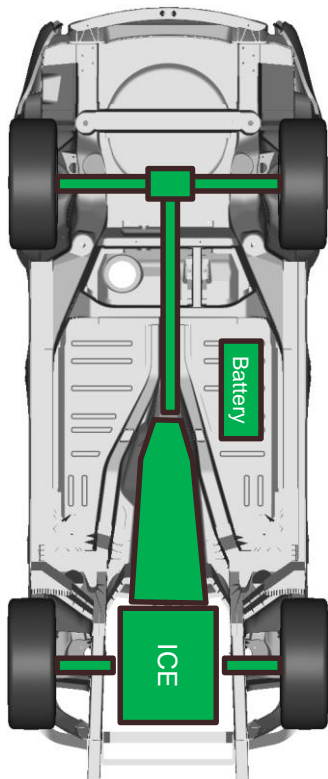


= BEV

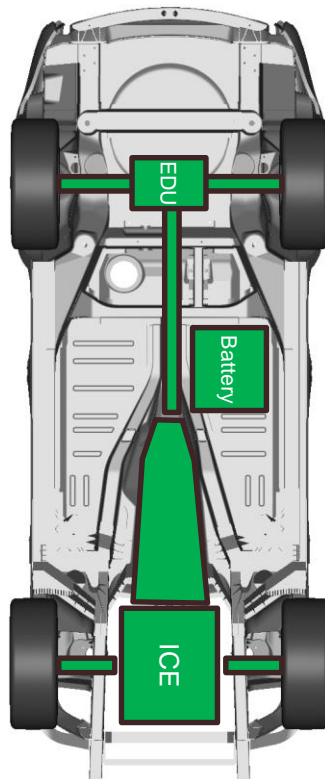
# We have decided to launch future products on a flexible architecture



ICE & MHEV



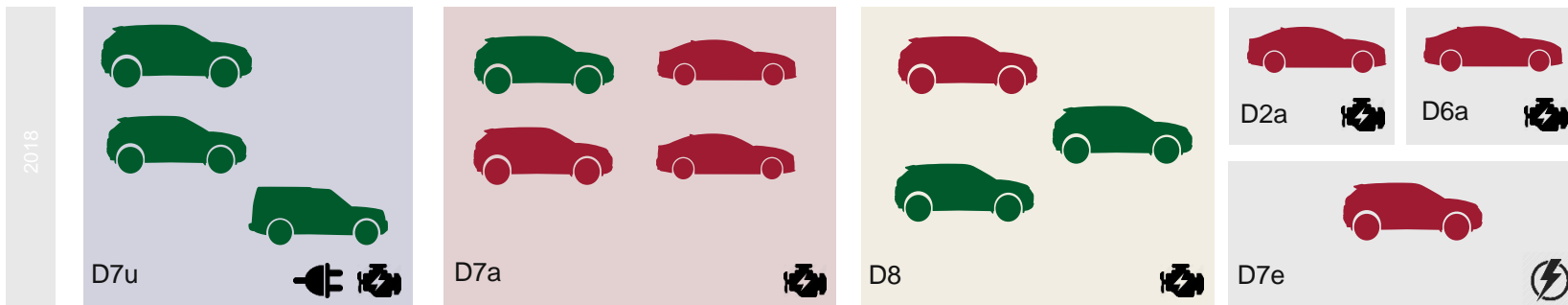
PHEV



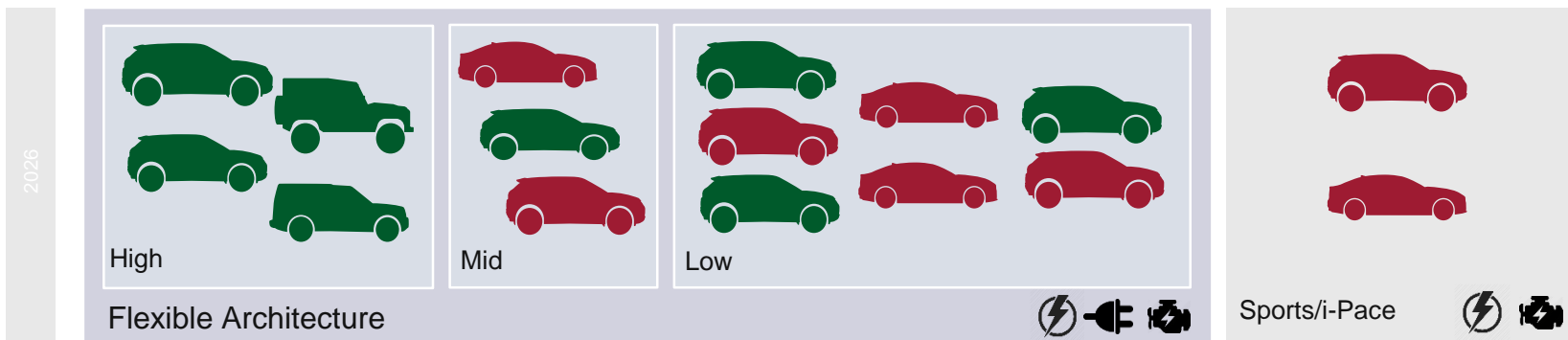
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# The architecture will cater for most of our current and future products



## FLEXIBLE POWERTRAIN SOLUTIONS

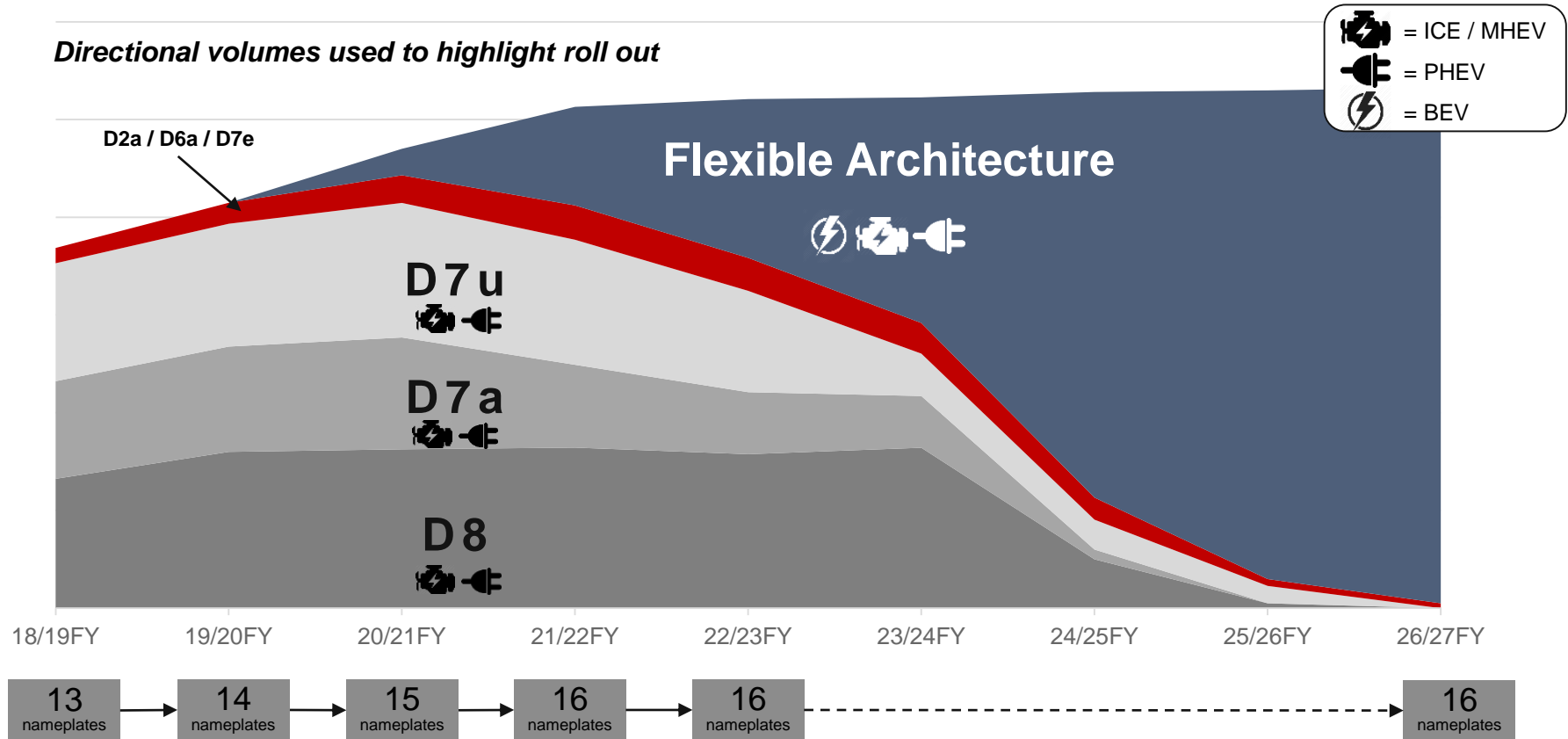




# By 2025 most of our portfolio will have migrated to the new architectures



*Directional volumes used to highlight roll out*



# We are prepared but the infrastructure needs to be in place to overcome the real world barriers



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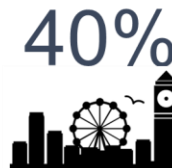
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*#JaguarElectrifies*

QUESTIONS

