



JAGUAR LAND ROVER INVESTOR DAY

22 JUNE 2018

Agenda



Continuing the investor communication

P.B. Balaji
CFO Tata Motors Group

Corporate strategy – Product plans and ACES

Hanno Kirner
Executive Director, Corporate and Strategy

Brands, marketing and sales

Felix Brautigam
Chief Commercial Officer

Coffee break

Engineering Strategy

Nick Rogers
Executive Director, Product Engineering

Purchasing

Ian Harnett
Executive Director, HR and Global Purchasing

Manufacturing

Grant McPherson
Executive Director, Manufacturing

Financial Strategy

Ken Gregor
CFO, Jaguar Land Rover

Transformation and Vision

Prof. Dr. Ralf Speth
CEO, Jaguar Land Rover

Tata perspective on Jaguar Land Rover

N. Chandrasekaran
Chairman, Tata Sons and Tata Group

Q&A

Ride and drive



CONTINUING THE INVESTOR COMMUNICATION

P.B. BALAJI
CFO, TATA MOTORS GROUP

Snapshot of Tata Motors Group

Market
Capitalization

\$15B



Underlying EBITDA

\$5B

Employees

80K

Revenue

\$45B

Underlying EBIT

\$2B



Volumes

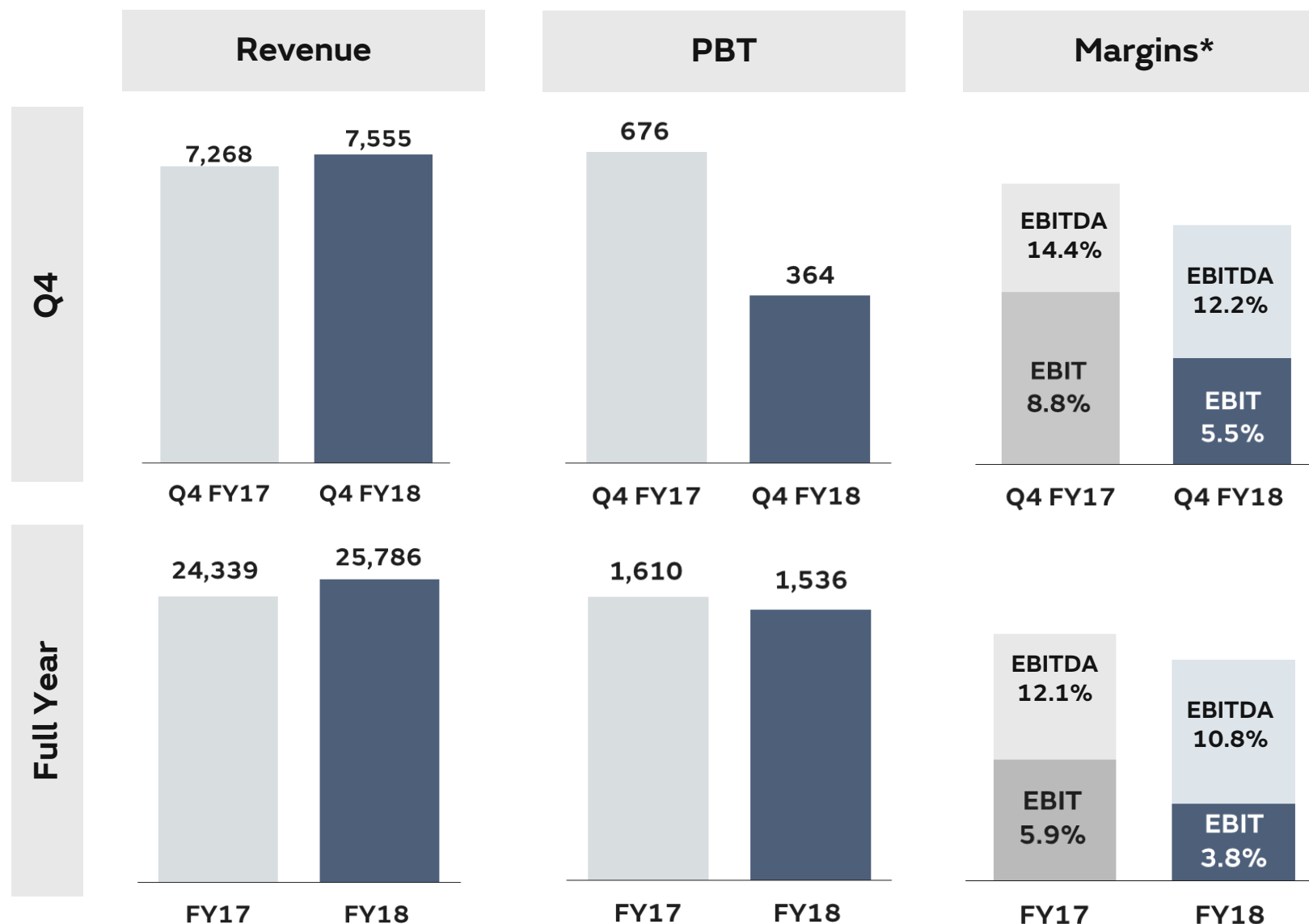
1.2M

6 cylinders in the Tata Motors engine



FY'18 revenue up 6%, PBT £1.5b

Favourable volume, costs and FX offset by higher D&A



- Wholesales up 3.4k led by Velar and new Discovery
- Reported EBIT at 5.5% - Primarily impact of higher D&A. EBIT excluding £97m one-off Q4 engineering charges 6.7%
- PBT impacted by higher D&A and one-off engineering charges ("Fit for future")

- Wholesales up 10.6k
- Reported EBIT (excl. Q1 exceptional pension credit) at 3.8% - Primarily impact of higher D&A, incentives, fixed marketing costs. EBIT excluding one-off Q4 engineering charges 4.2%
- Reported PBT includes £436m exceptional pension credit in Q1 FY18

* FY17 margins restated to exclude gains on certain FX derivatives

IFRS, £m

We aim to “Win Distinctively” by leveraging our uniqueness



- Two of the most-loved, well differentiated premium brands



- Good balance of scale and agility



- World-class engineering, innovation and design pedigree



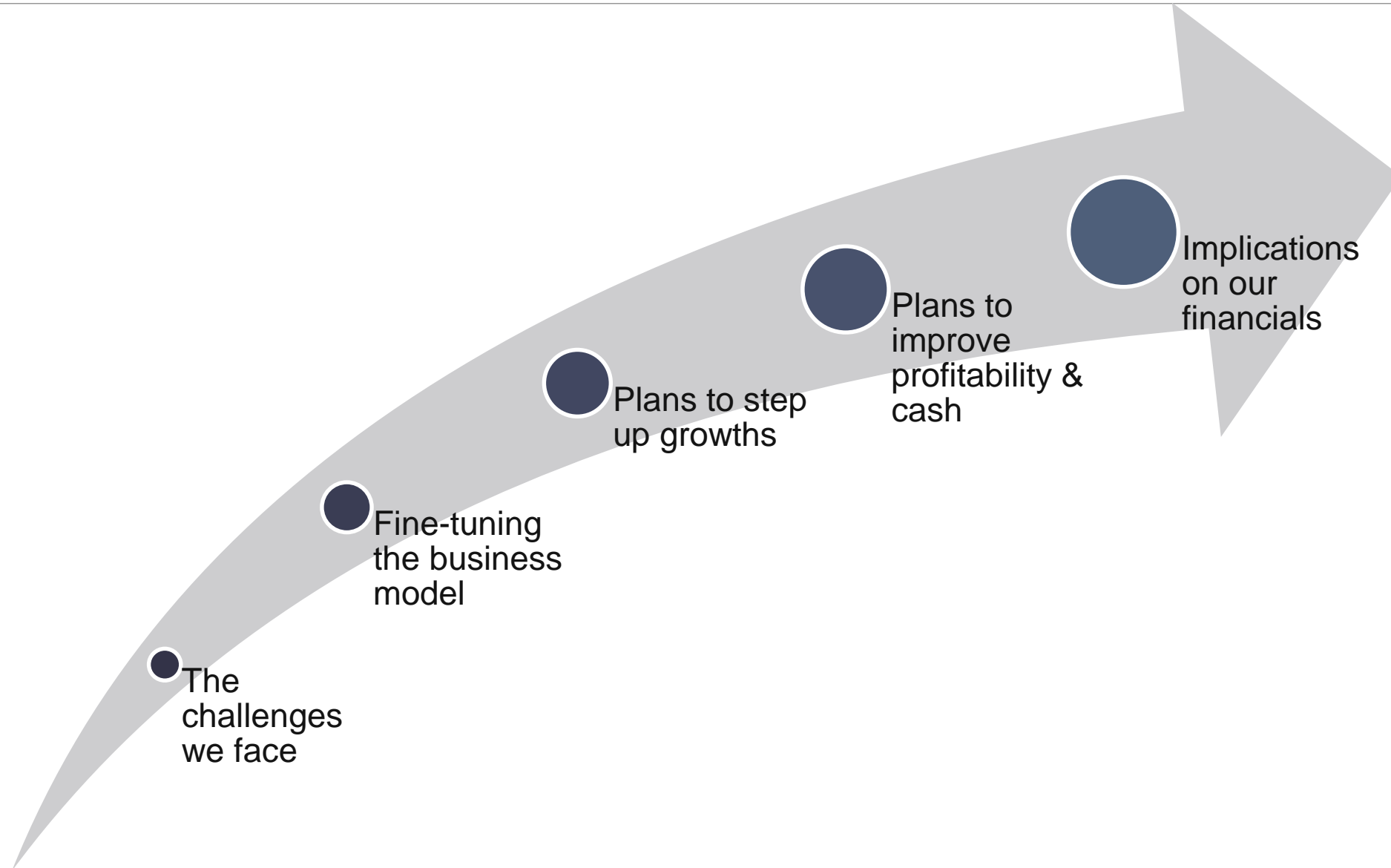
- Passionate and cutting edge talent



- Supportive and empowering ownership



Business model fine-tuned to address our challenges





CORPORATE STRATEGY

OUR PRODUCT PLANS AND THE ACES

HANNO KIRNER
EXECUTIVE DIRECTOR, CORPORATE AND STRATEGY

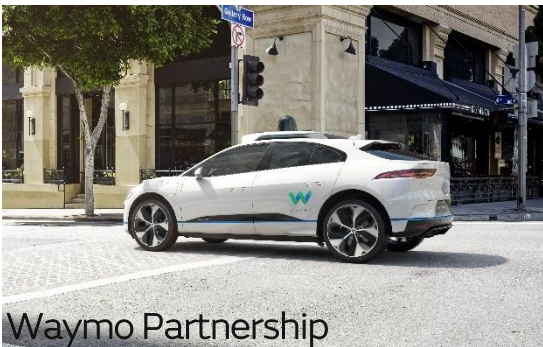


A The Challenges Ahead

B Embracing These Challenges

- Our Strategy
- Our Product Portfolio
- Our approach to the ACES

We are driving for sustainable, profitable growth despite significant headwinds experienced in FY18



Highlights

- Successfully launched new Range Rover Velar, Jaguar E-PACE and 18MY Range Rover and Range Rover Sport with our first PHEVs, as well as the Jaguar I-PACE or first BEV
- Retail volumes grew 1.7% and revenue grew 6%
- New Slovakia plant on track for start of production end 2018
- Waymo partnership announced to boost I-PACE sales and autonomous driving strategy

Challenges

- Sales and revenue did not grow as much as we planned with diesel uncertainty impacting the UK and European markets, exacerbated in the UK by Brexit and cyclical weakness
- Continuing high incentives in the US and other markets
- Margins and profitability were well below our internal targets and as a result cashflow was negative after investment spending

Looking ahead these challenges will also provide a number of opportunities that Jaguar Land Rover intend to maximise



Our challenges

- Restoring stronger sales growth
- Improving margins and profitability and managing investment spending to return to positive cashflow
- Responding to the ACES transformation and the changes in the regulatory environment
- Potential unfavourable Brexit outcome or US tariffs

Our response

- Exciting new products -- 4 new nameplates from FY18 to FY23, including the stunning I-PACE with the all new Defender in development
- More realistic planning volumes – recognizing present market realities
- Being a leader in electrification and other technologies
- Drive cost efficiency and operating leverage across the business
- Tough but prudent choices made on investment plans to meet affordability criteria whilst remaining at the forefront of technologies

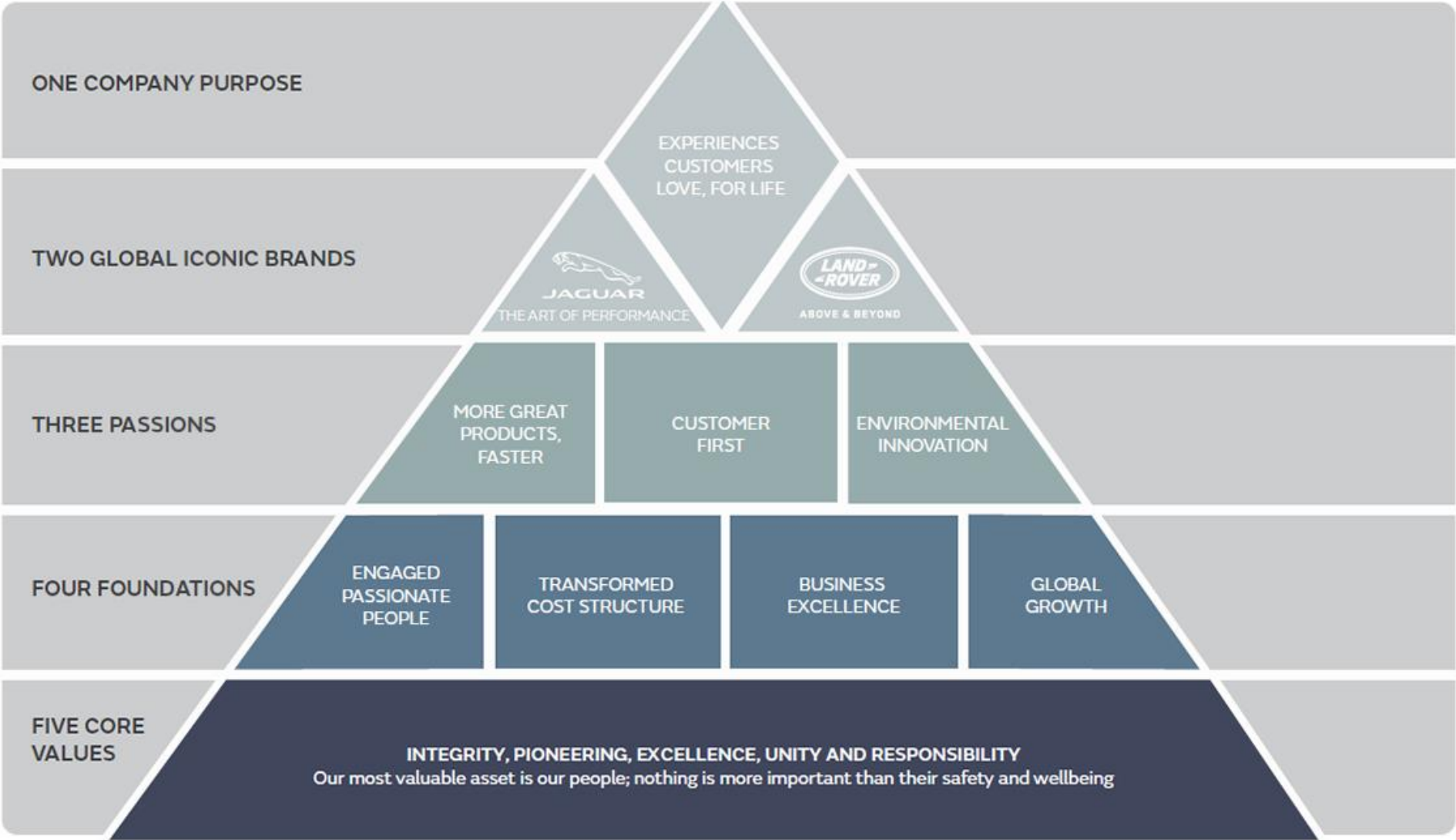


A The Challenges Ahead

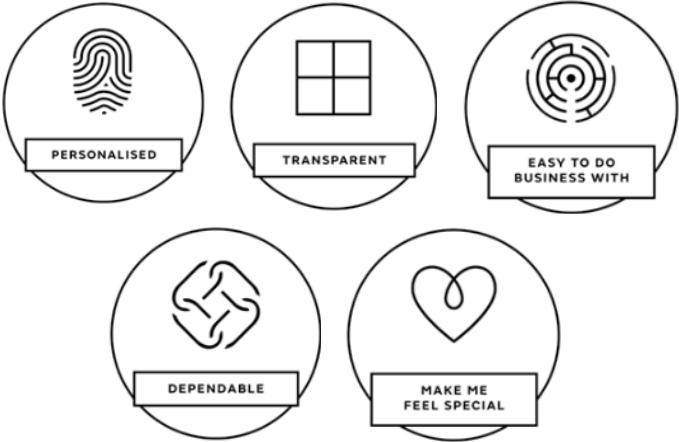
B Embracing These Challenges

- Our Strategy
- Our Product Portfolio
- Our approach to the ACES

Our Blueprint for Lasting Success is the guide by which we set out our strategy



Our strategy is focussed around offering customers experiences they love for life



Customer First principles



Products customers love



Leading customer relationship management



Developing dealer network - ARCH



Services customers need and want





A The Challenges Ahead


B Embracing These Challenges

- Our Strategy
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- Our approach to the ACES technologies

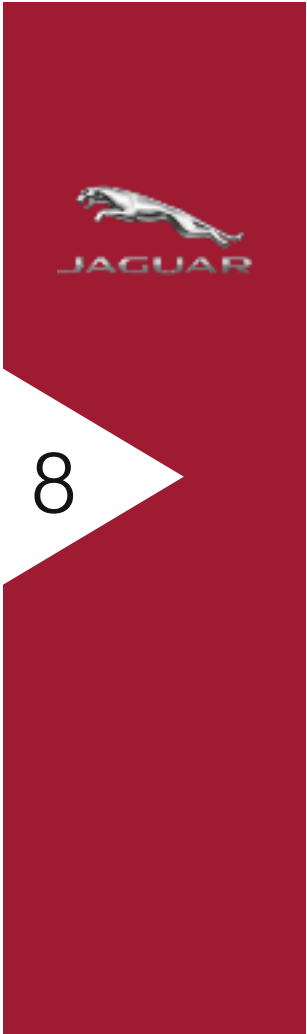
Jaguar has started the migration to being a leader in electrification and the introduction of the recent PACE range has been a success

 = ICE / MHEV

 = PHEV

 = BEV

2018



X



Sedan

PACE



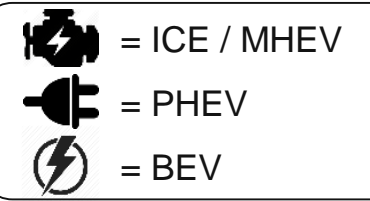
SUV

TYPE



Sports

Land Rover has a strong line up of SUVs ranging from the capable to the luxury, and Defender will join the family again soon



2018

RANGE ROVER



DISCOVERY



DEFENDER



Currently under development

In addition, we have a world class line up of special vehicles created in Special Vehicle Operations – a £1bn business in its own right and growing



Special Vehicles



F-Type Project 7



F-Type SVR



XE SV Project 8



F-Pace SVR



XJ 575



Range Rover SVA-D



Range Rover SVA

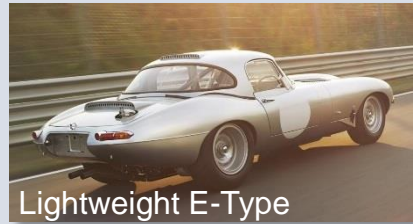


Range Rover Sport SVR

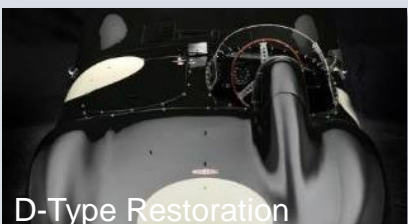


Discovery SVX

Classic Business



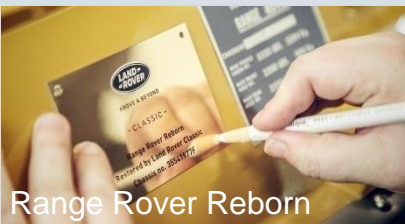
Lightweight E-Type



D-Type Restoration



Defender V8 Works



Range Rover Reborn

Bespoke/
Unique vehicles



Range Rover SV Coupe



Red Cross Discovery



James Bond stunt cars

We will continue our growth journey by adding new nameplates and expanding our powertrain offering



Fiscal 2019



19 product actions
13 nameplates

Fiscal 2020 - 2021



Defender

38 product actions
15 nameplates

Fiscal 2022 - 2024



42 product actions
16 nameplates



A The Challenges Ahead

B Embracing These Challenges

- Our Strategy
- Our Product Portfolio
- Our approach to the ACES

We know that the ACES are shaping the future of the automotive industry and we must embrace them



AUTONOMOUS



CONNECTED

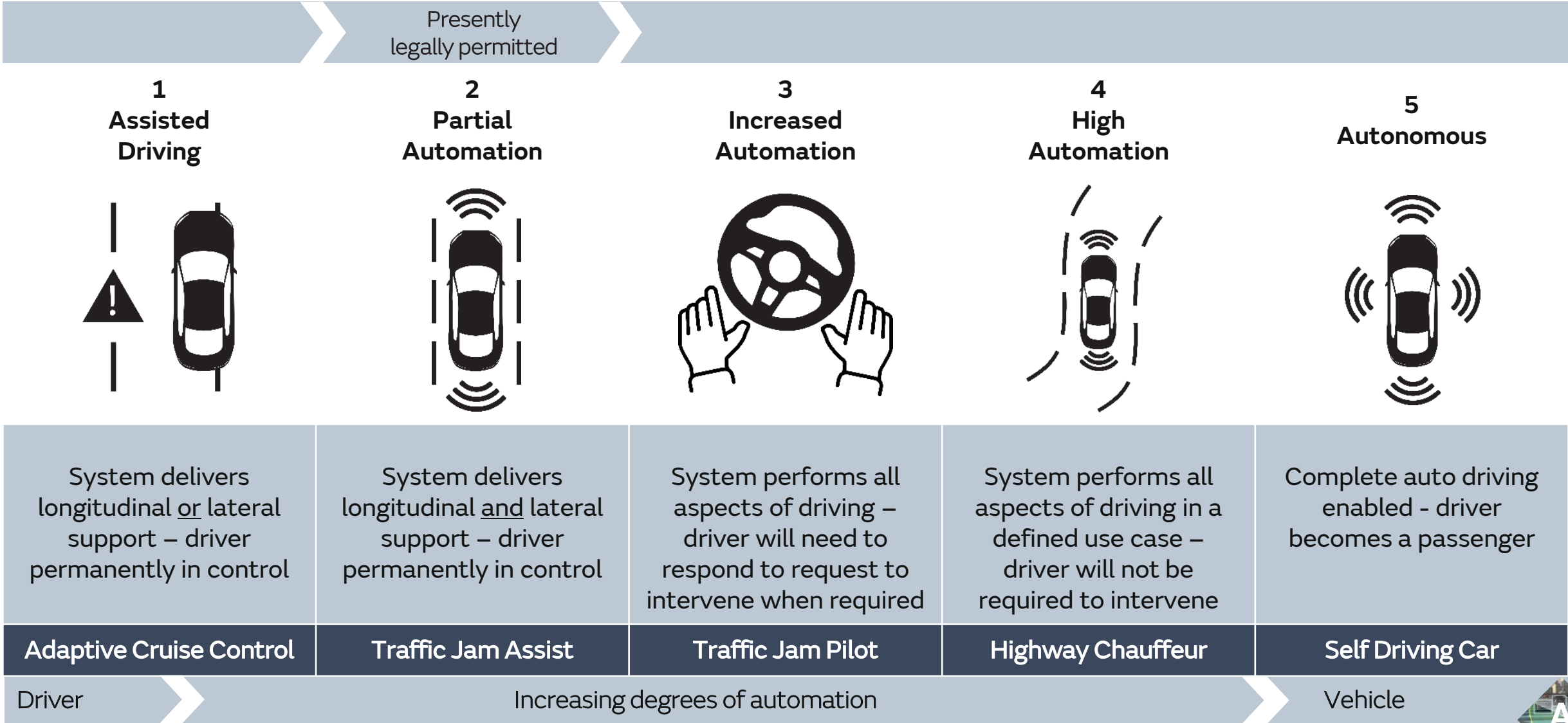


ELECTRIC



**SHARED
MOBILITY**

Automated technologies exists in our cars today however for the industry to progress further into Level 4 and 5 technologies we will need the support of legislative bodies



We have Level 1 features available on our products, with the first Level 2 features launching with the I-Pace



ADAS Level 1
Currently in production

Automated Cruise Control
Blind Spot Monitoring
Lane Keeping Warnings
Traffic Sign Recognition
AEB (automatic emergency braking)
Parking Assistance

ADAS Level 2
Jaguar I Pace 2018

Features include:
Traffic Jam Assist
Integrated Cruise Assist
Cyclist AEB

ADAS Level 3

Features include:
Predictive Speed Optimisation
Junction AEB
Remote Control Drive
Remote Control Parking
Etc.

ADAS Level 4

Level 4 Highway Driving
Level 4 Parking Assistance
Level 4 Urban Driving



We're developing these features through both internal development and external partnerships



UK Autodrive: A government backed competition to support the introduction of self-driving vehicles in the UK



WAYMO

Partnership with Waymo to deliver up to 20,000 self-driving I-Paces



\$1m investment in a self-driving taxi company operating in Florida



We have already begun the journey to a connected car, and are enhancing our suite of features for customers



In-vehicle connectivity



Maximise use of existing devices when in the vehicle and access information



‘Touch’ Infotainment
Multimedia and navigation system



Wi-Fi Hotspot
Connects up to 8 devices



Smartphone pack
Enables use of third party apps

Off-board connectivity



View status information and give instructions to and from vehicle



Remote smartphone app
Interact with vehicle remotely



SOS Emergency Call



Stolen Vehicle Tracker



Roadside Assistance
Direct contact to provider

Future connectivity



Next generation in vehicle infotainment system



Always on



Always connected



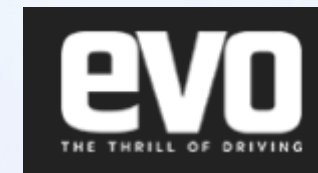
Always listening



Always up to date



We've just launched our first all electric vehicle, the Jaguar I-Pace



VERDICT: Performance, agility and range all combine in the I-Pace to create the most compelling EV on the market

EVO RATING: ★★☆☆☆

AUTOCAR

Jaguar I-Pace EV400 S 2018 review

From £63,495 ★★★★★

make no mistake: you're looking at the best of them.



Verdict



Jaguar has succeeded in not only creating the best electric car on sale but perhaps one of the most exciting cars you can buy.

But we understand that there are real world barriers to buying electric vehicles, and we can't accurately predict the adoption rate...



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

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



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



26% globally in 2030

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

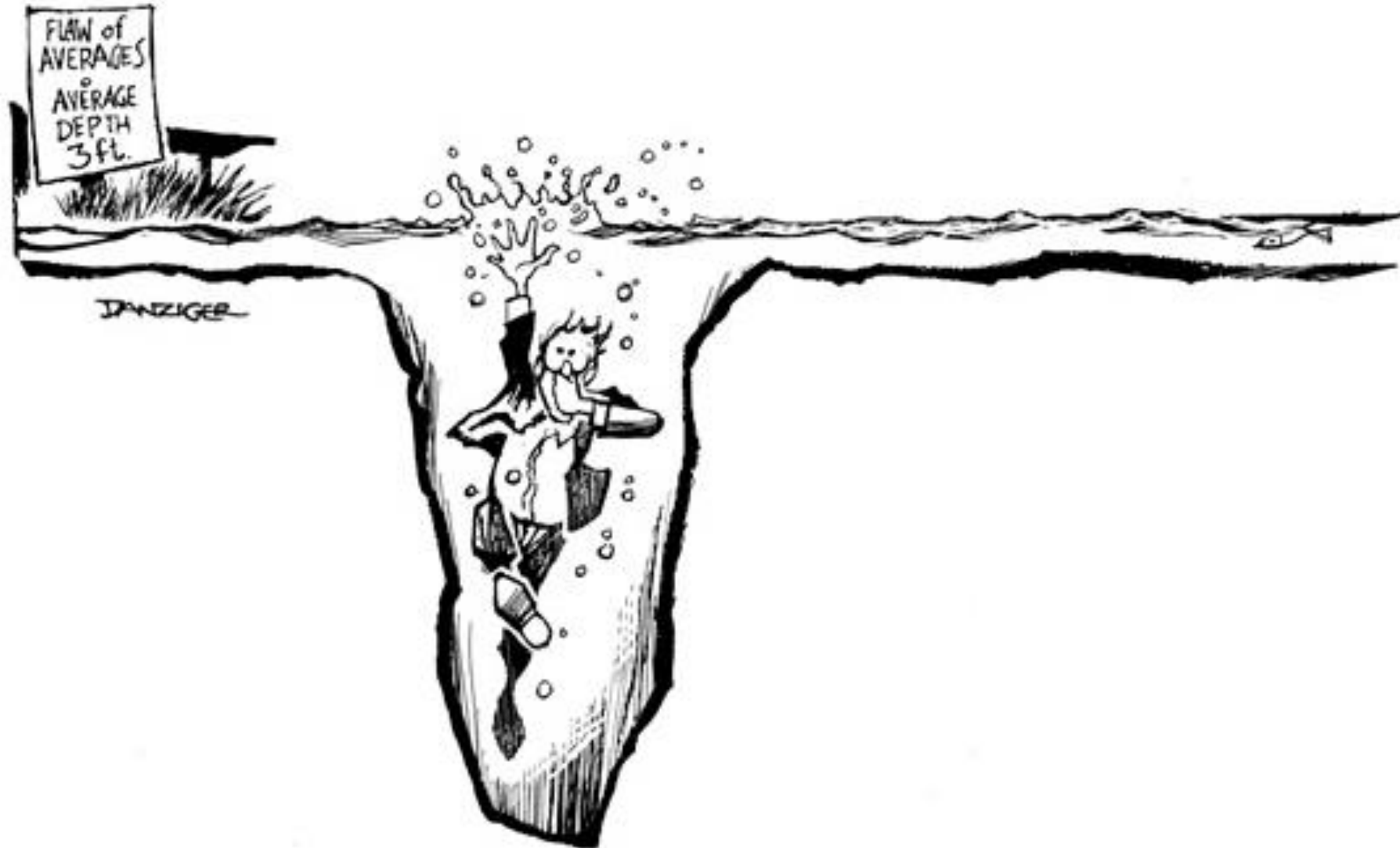


24% globally in 2030

Bloomberg Electric Vehicle Outlook July 2017



And that the law of averages can be extremely dangerous



Because the roll out across the globe will be very different



LONDON



SHANGHAI



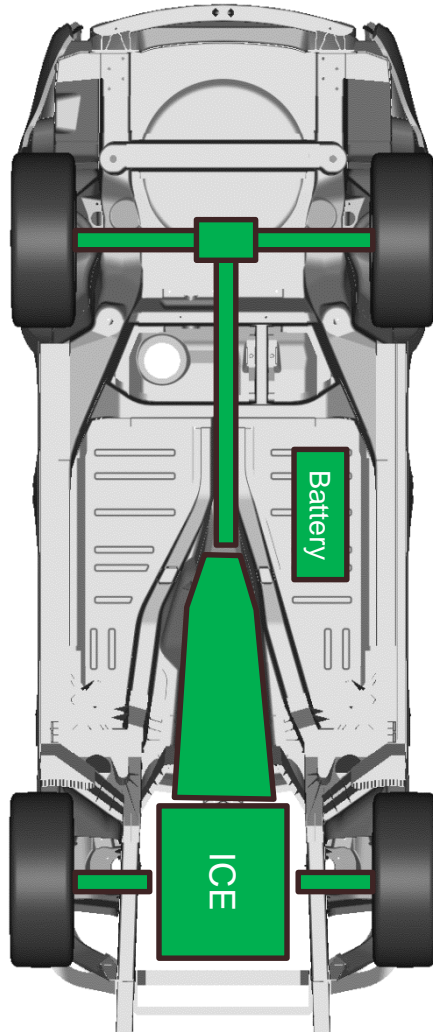
HOUSTON



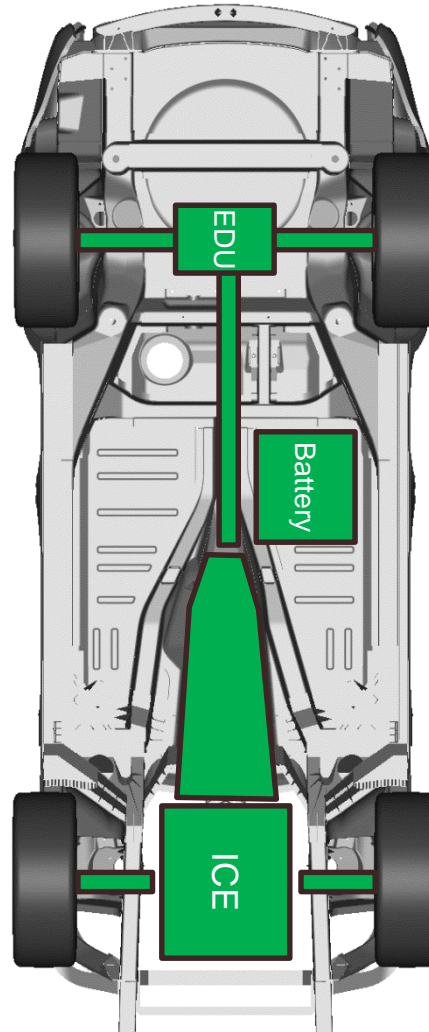
To offer this flexibility we're investing in a new platform: Modular Longitudinal Architecture (MLA)



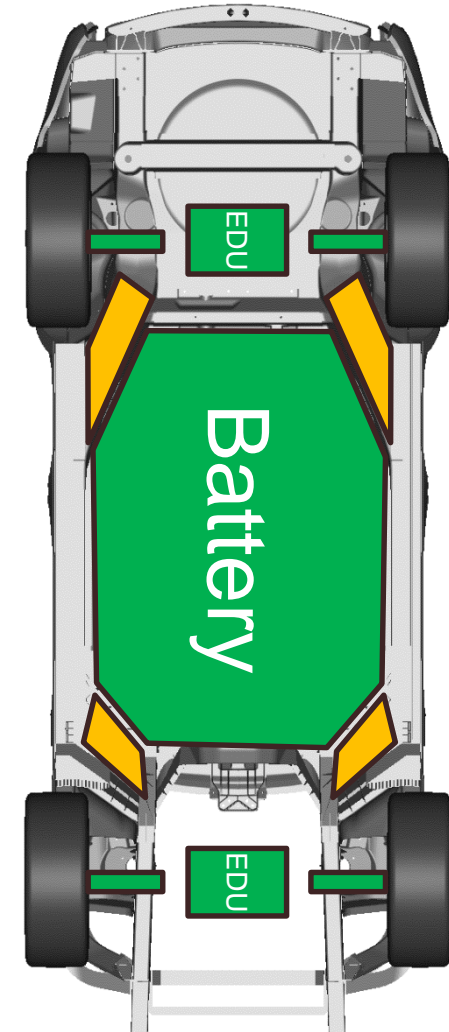
ICE & MHEV



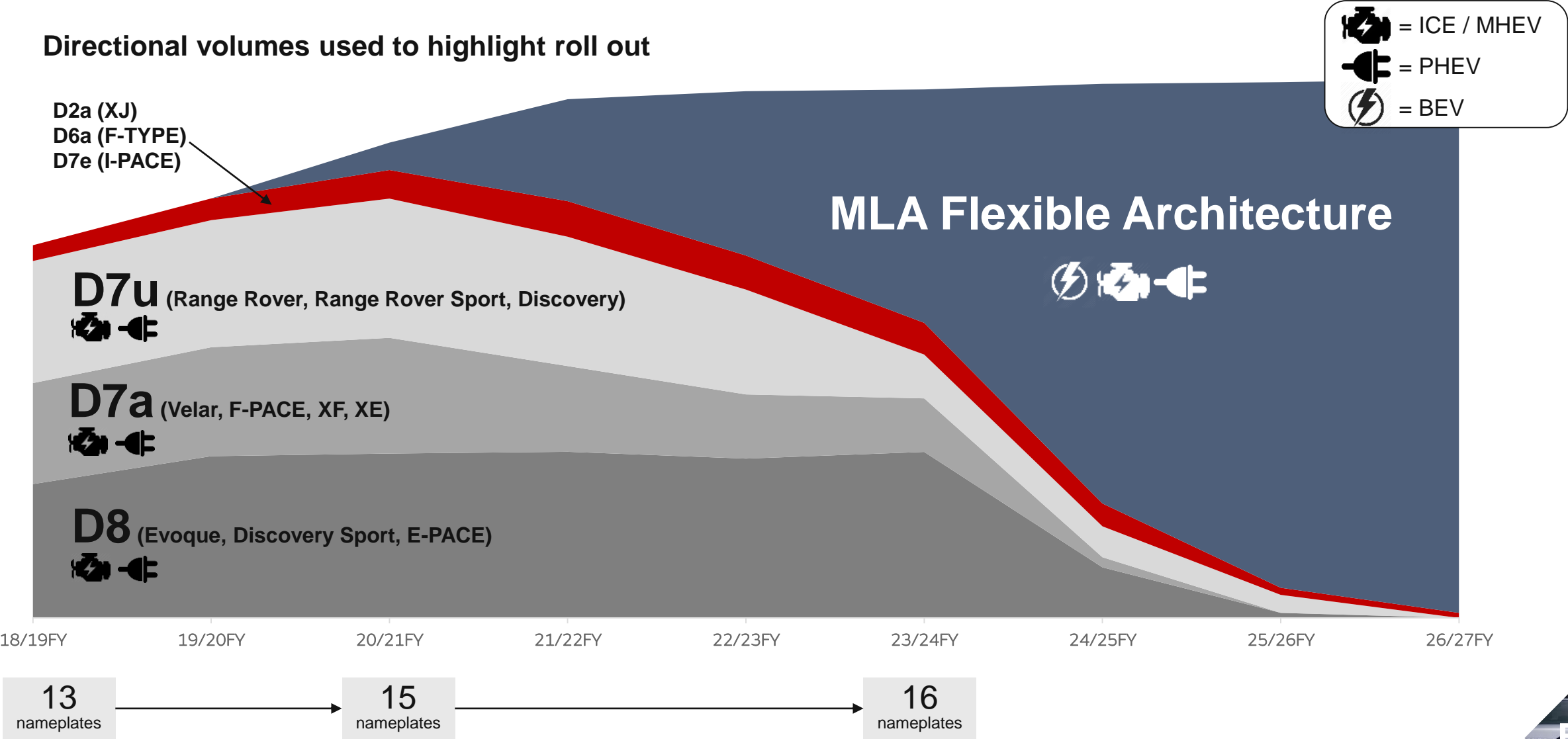
PHEV



BEV



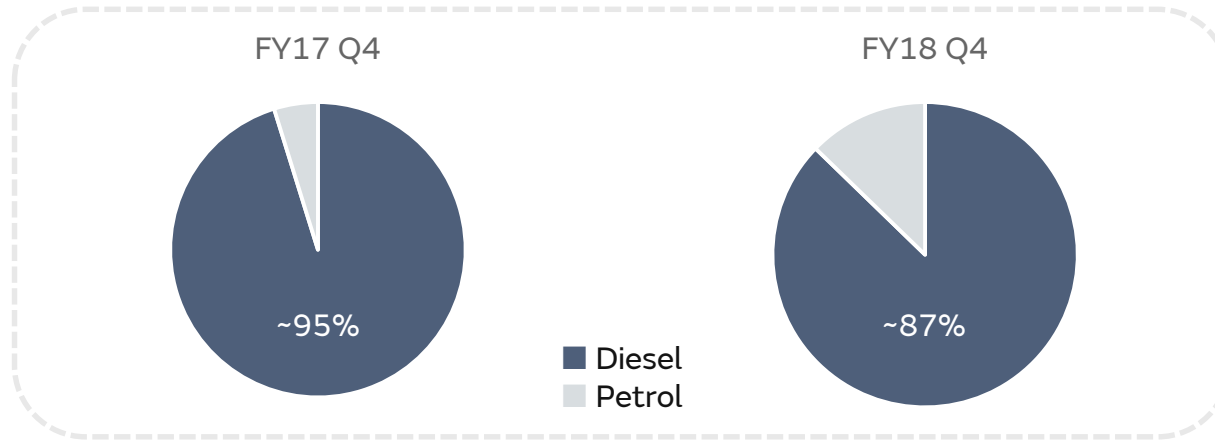
Our roll out to MLA will be fully complete by 2025 at which point every product can cater for an ICE, BEV or PHEV derivative



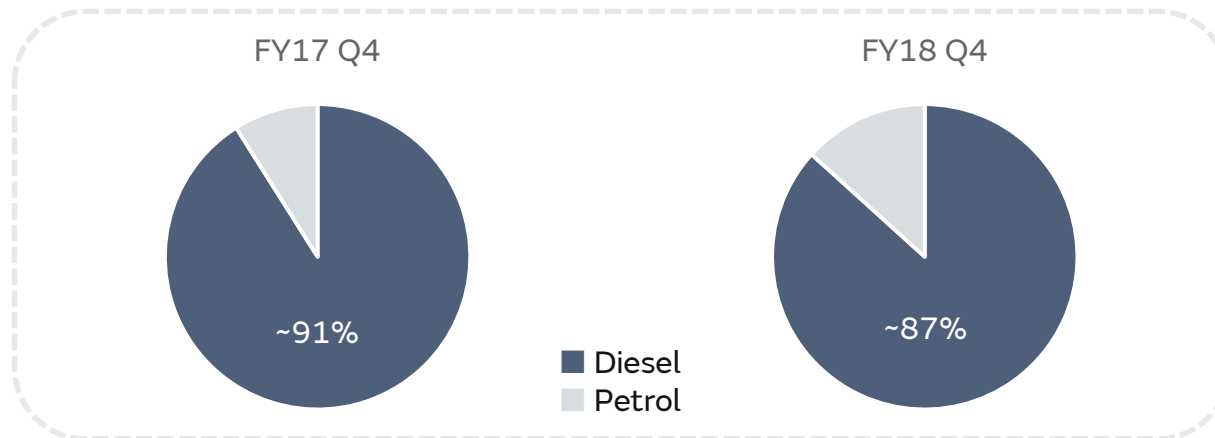
The need for this flexibility is also highlighted through our forecasted powertrain volume mix



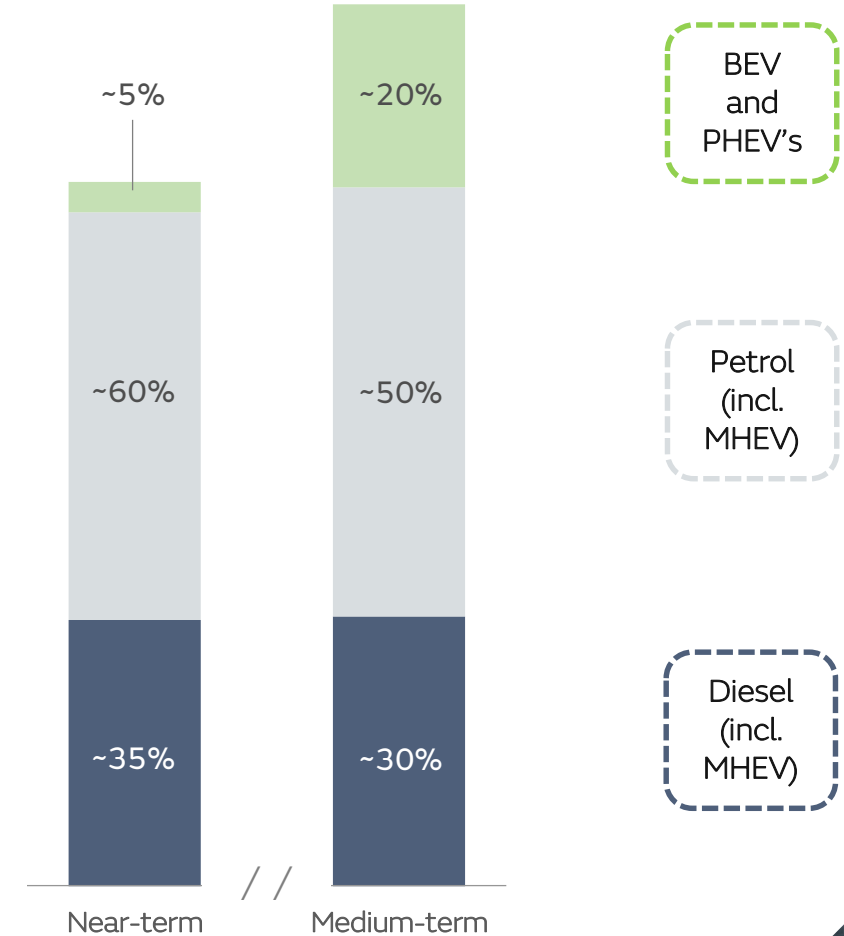
JLR UK sales



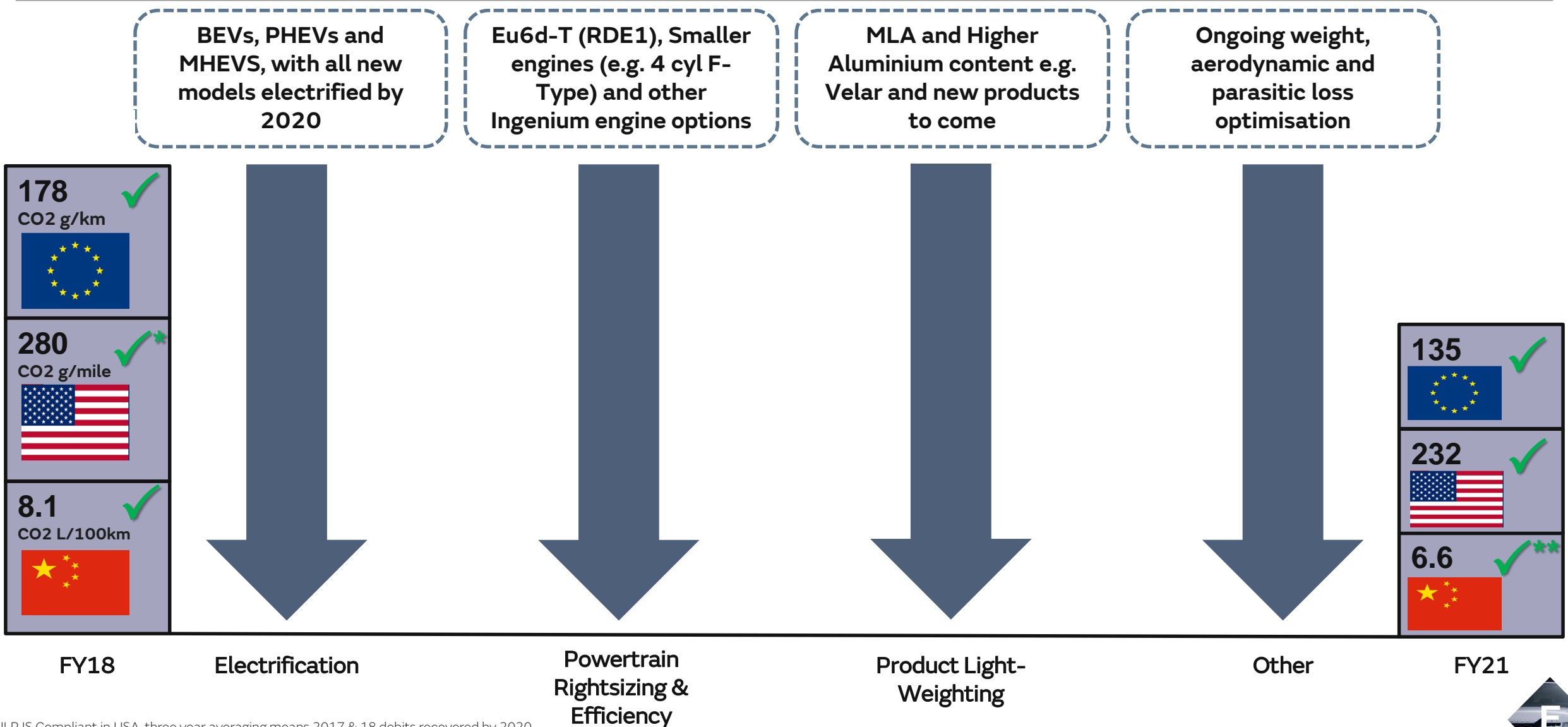
JLR EU sales



JLR global sales



Our strategy delivers a fully emissions compliant portfolio***



* JLR IS Compliant in USA, three year averaging means 2017 & 18 debits recovered by 2020
** 2021 China Targets 1st Draft Proposal CAFC Stage V tbc
*** Based on todays volume and mix assumptions (powertrain and regional), as well as todays understanding of future regulations



The need for flexibility extends beyond products, we know we have to also adapt our business models and services



Our vision for mobility is to become a leading premium mobility player, dedicated to delivering experiences customers love for life

Leading	Premium	Mobility	Experiences Customers Love	For Life
<i>JLR at the forefront in ACE fleets, premium mobility products & prestige services in select cities</i>	<i>Not ordinary, but extraordinary which commands premium and builds on the brands</i>	<i>Extends from the movement of people to enjoying the destination itself – compliment core</i>	<i>Distinctive, desirable, relevant, useful and accessible. A single, seamless experience</i>	<i>Generational brand building to drive customer lifetime value</i>



Through InMotion, we're already deepening our understanding of both the challenges and opportunities that mobility brings



Jaguar Land Rover's Corporate Venturing Unit

STRATEGIC BUSINESS UNIT

- Develops proprietary mobility services
- Pursues cross-divisional collaboration with JLR
- Engages in strategic partnerships, e.g.



Vehicle rental in London, developed and deployed by JLR



Unlimited mileage vehicle subscription of a Jaguar or Land Rover

VENTURE CAPITAL ARM

- Focused on early stage – Seed to Series B
- Multipronged approach to proprietary deal flow
- Invests globally in best-of-breed technology companies, e.g.



On-demand school buses in the US
\$1m investment through InMotion



The Waymo partnership is both driving autonomous capability and understanding of shared mobility business models



Owned by Alphabet, Waymo - universally acclaimed world leaders in autonomous driving technology are partnering with Jaguar Land Rover



Up to 20,000 I-PACEs over 2020 and 2021 to be used by Waymo in their autonomous vehicle mobility service, planned for rollout in the US



JLR and Waymo will collaborate to develop and maintain self-driving Jaguar I-PACE vehicles



Waymo Jaguar I-PACEs, equipped with Waymo's self-driving technology, will start testing later this year



On-road testing and real-world data to allow Waymo and JLR engineers to refine technology and deliver optimum safety and reliability

THE VERGE

WAYMO AND JAGUAR WILL BUILD UP TO 20,000 SELF-DRIVING ELECTRIC SUVs

Jaguar I-Pace will be the second official vehicle in Waymo's robot taxi fleet

By Andrew J. Hawkins | @andyjayhawk | Mar 27, 2018, 10:09am EDT



Financial Times • @FinancialTimes • 16m
Waymo and Jaguar Land Rover pair up to push self-driving cars



Waymo and Jaguar Land Rover pair up to push self-driving cars
Carmaker will provide up to 20,000 electric SUVs to form part of tech group's taxi fleet
ft.com

1 5 9



Bloomberg • @business • 33m
Waymo and Jaguar team up with 20,000 car self-driving fleet bloom.bg/2pKTzdD



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BRANDS, MARKETING AND SALES

THE COMMERCIAL TEAM

FELIX BRAUTIGAM
CHIEF COMMERCIAL OFFICER

THE COMMERCIAL TEAM

Agenda



Market Environment



Brands

Communications

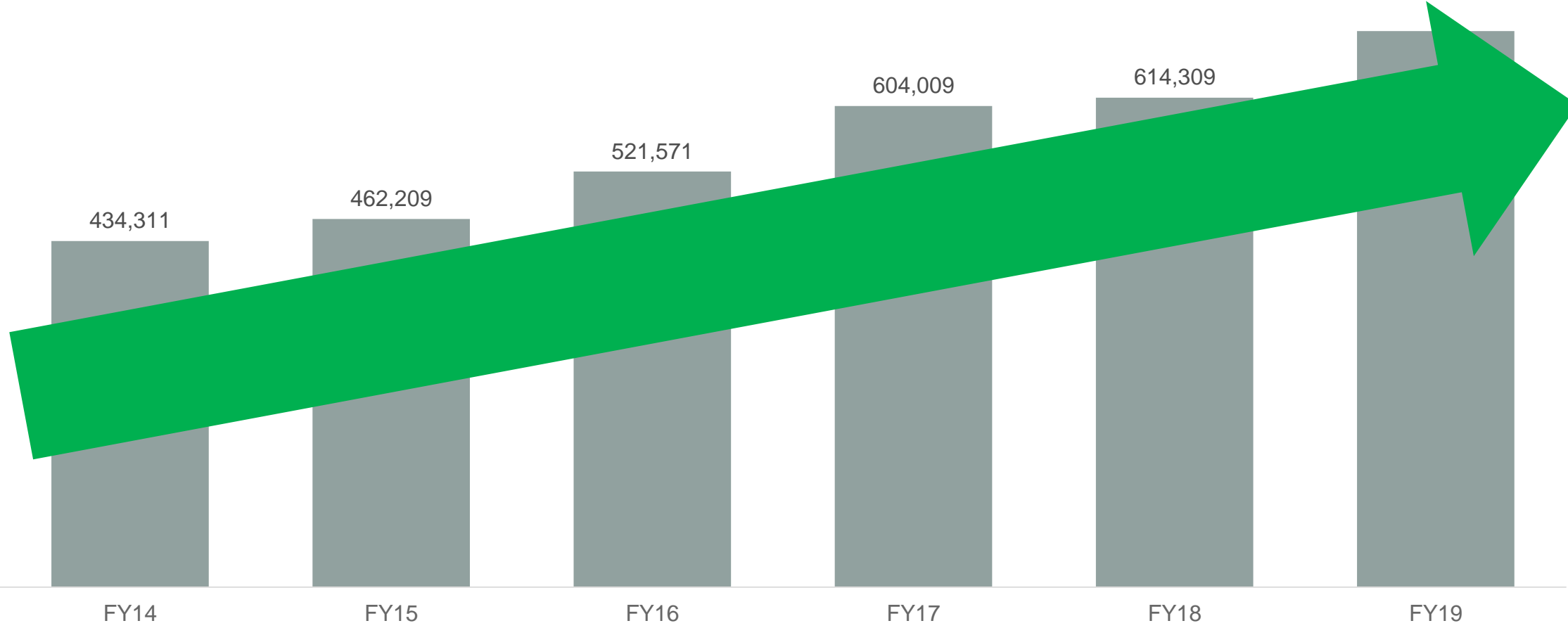
Network

Team



OUR PERFORMANCE...

...has been Excellent

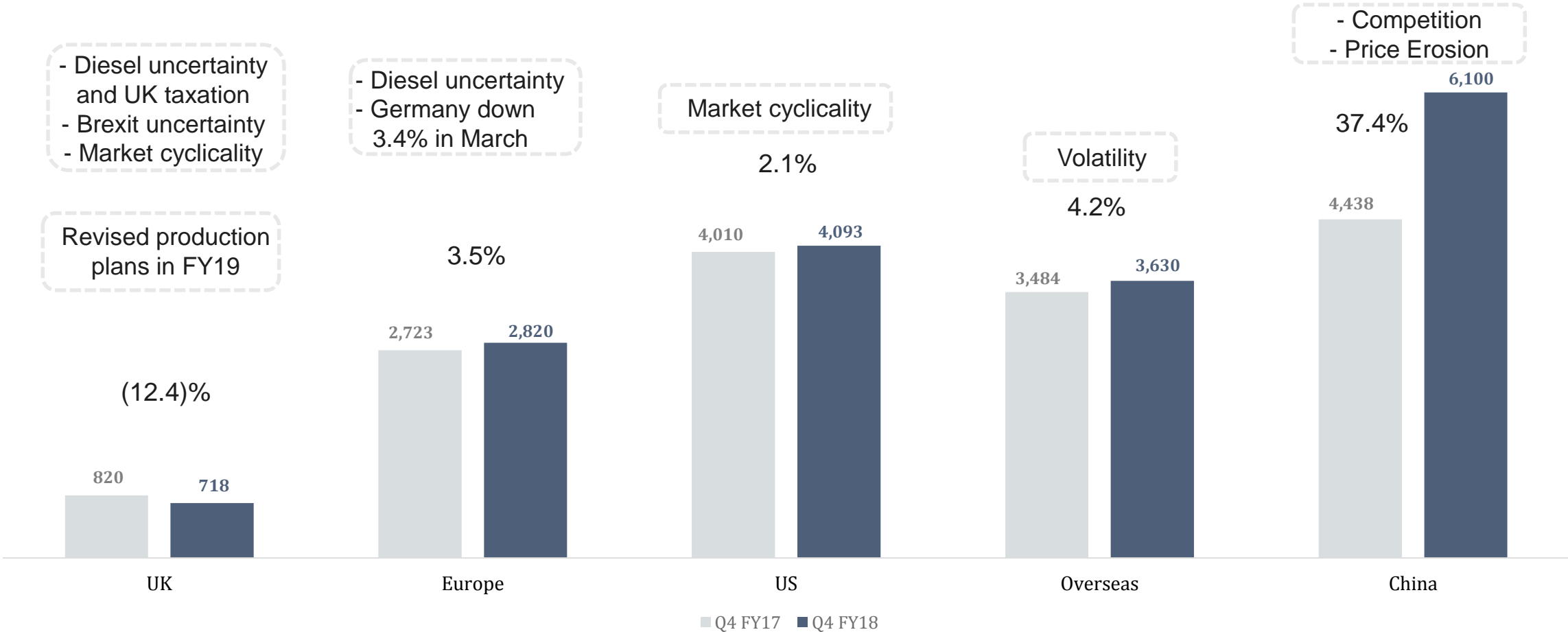


RECENT TRENDS

in Industry Volumes



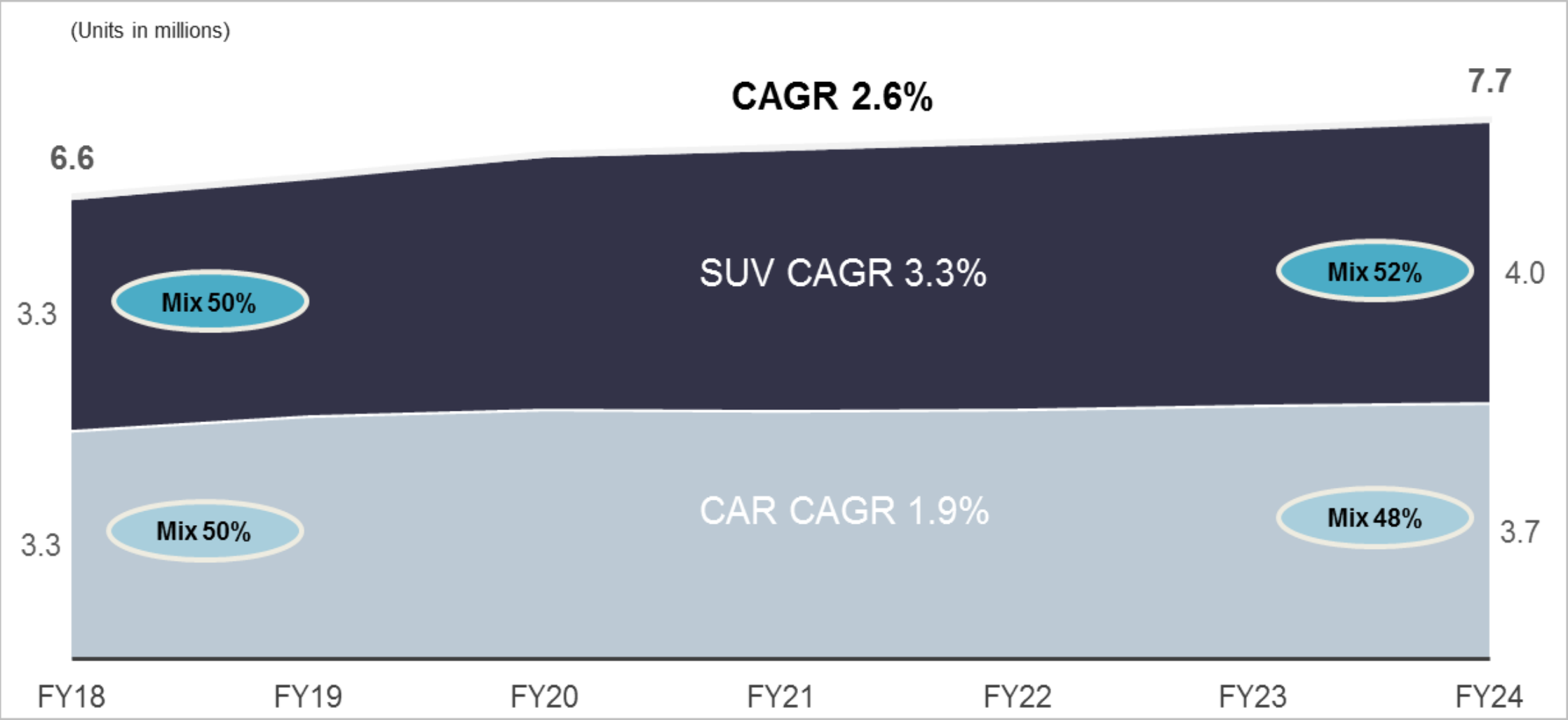
Units 000s



The total industry car volume data above has been compiled using relevant data available at the time of publishing this Interim Report, compiled from national automotive associations such as the Society of Motor Manufacturers and Traders in the UK and the ACEA in Europe, according to their segment definitions, which may differ from those used by JLR. South Korea industry volumes have been excluded from Overseas

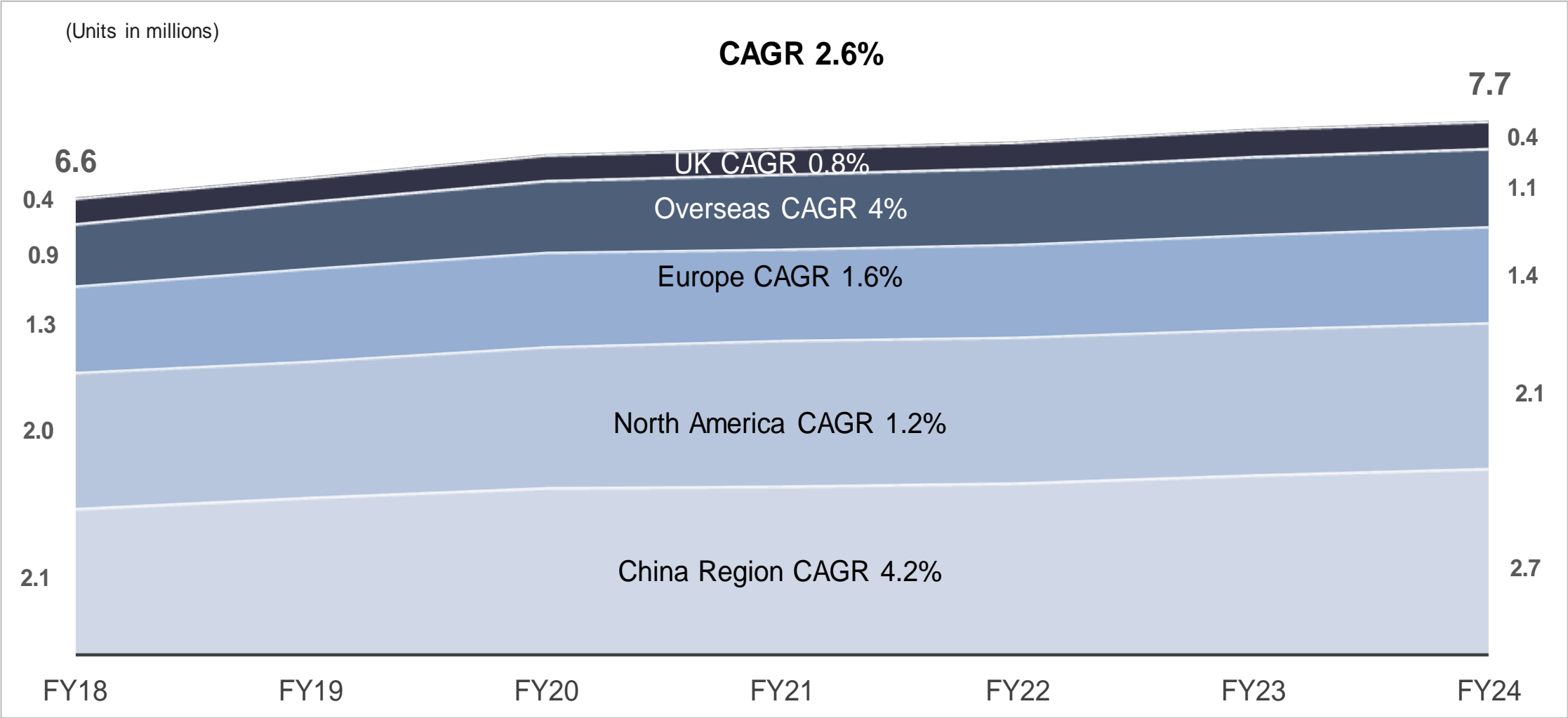
GLOBAL JLR SEGMENT VOLUMES

Growing JLR Segments



JLR TARGETED SEGMENTS BY REGION

Broad Growth Across Regions



THE COMMERCIAL TEAM

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Brands



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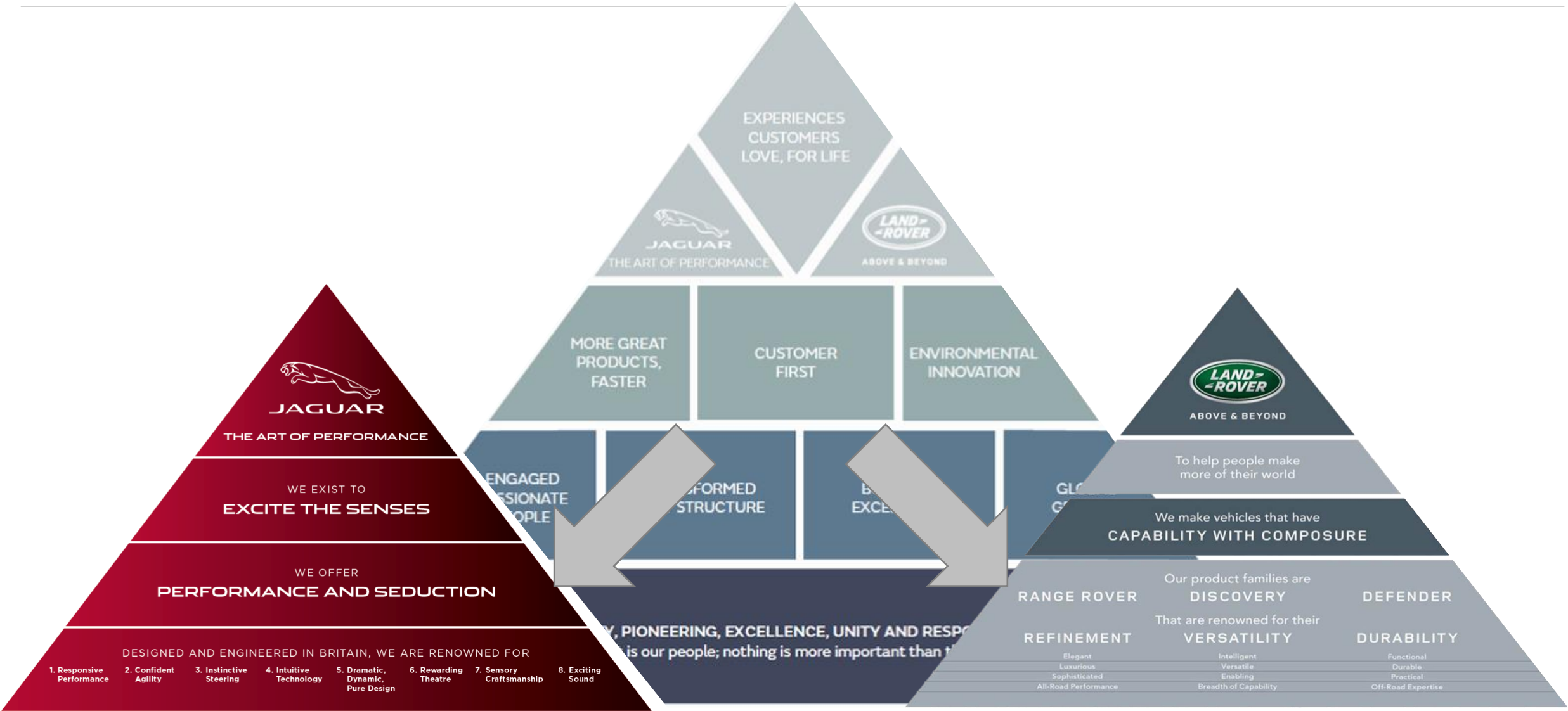
Network

Team



JAGUAR LAND ROVER BRAND STRATEGY

Our Brand Structure



JAGUAR LAND ROVER BRAND STRATEGY

Distinction and Synergies



Distinction

Design

Product Attributes

Positioning

Communications

Commonality

Research & Development

Platform

Manufacturing

Logistics

Retailers

JAGUAR LAND ROVER BRAND STRATEGY

Distinction and Synergies



The Velar is the most stylish Range Rover in the line-up... It's still bristling with tech but the Velar is a designed car.

AutoExpress

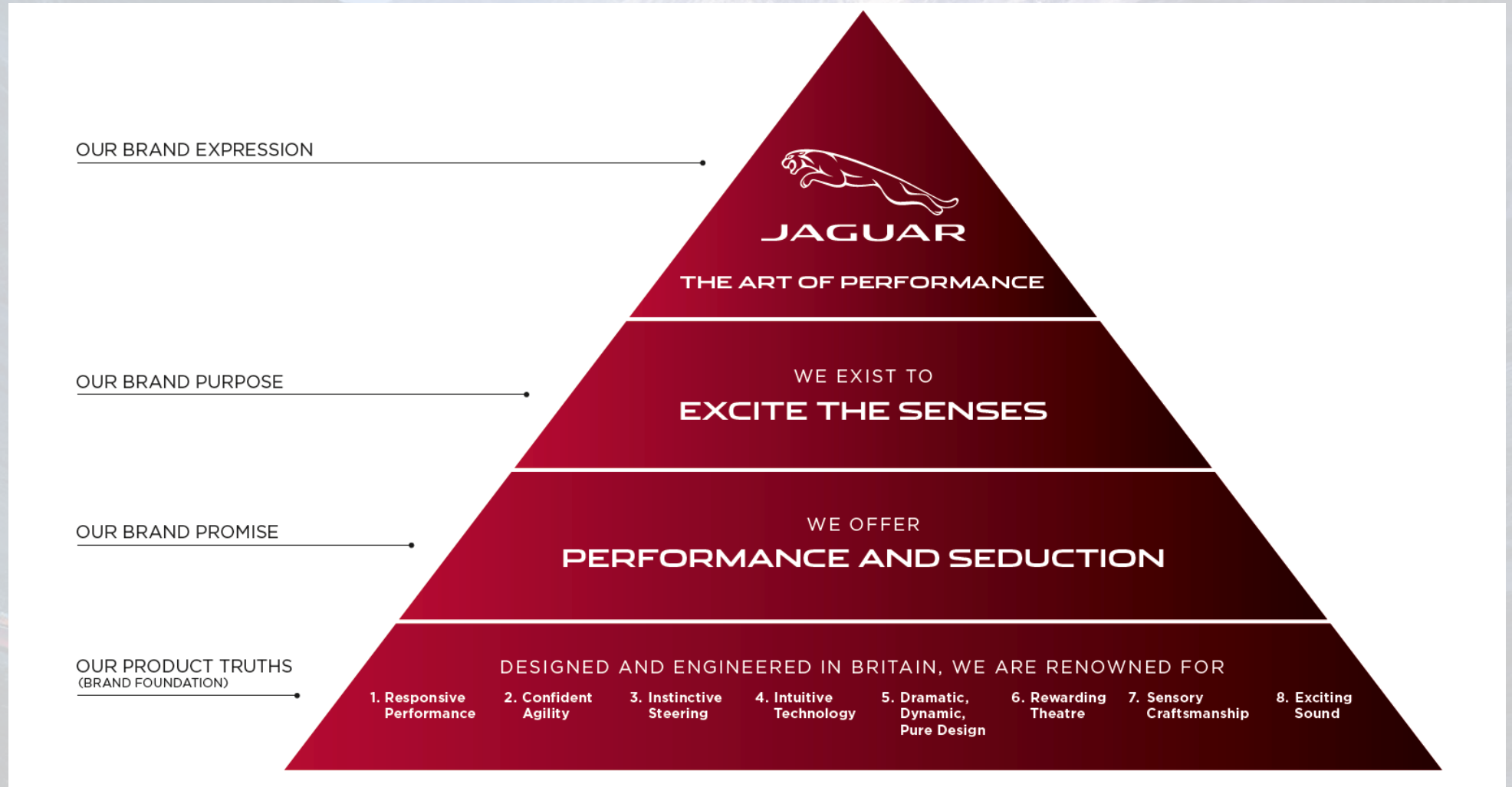


When you get out into the countryside..., the F-Pace comes into its own! ...handles as well as its saloons ...feeling responsive and direct

CarKeys



Jaguar Vision: To Be The World's Performance Brand Of Choice



THE ART OF PERFORMANCE

Customer Emotional End Benefits of Ownership



ENGAGED

leaves me feeling
excited, stimulated and
connected



INDIVIDUAL

leaves me feeling
empowered,
recognised and unique



COURTEOUS

leaves me feeling
Sophisticated, civilised and well-
mannered



CHIC

leaves me feeling
well-dressed, elegant
and contemporary



Our Campaign Platform



KEY CONSUMER INSIGHT

“I want an exciting life; one I remember and am remembered for. Not one where I am bound just by what is expected of me”



THE ART OF PERFORMANCE

CREATIVE TERRITORY

SHOW YOUR EDGE

We'll help people to break free from societal conventions, so they can express their individual 'edge' and live a life less ordinary

LR Vision: To be the World's Premium SUV Brand of Choice



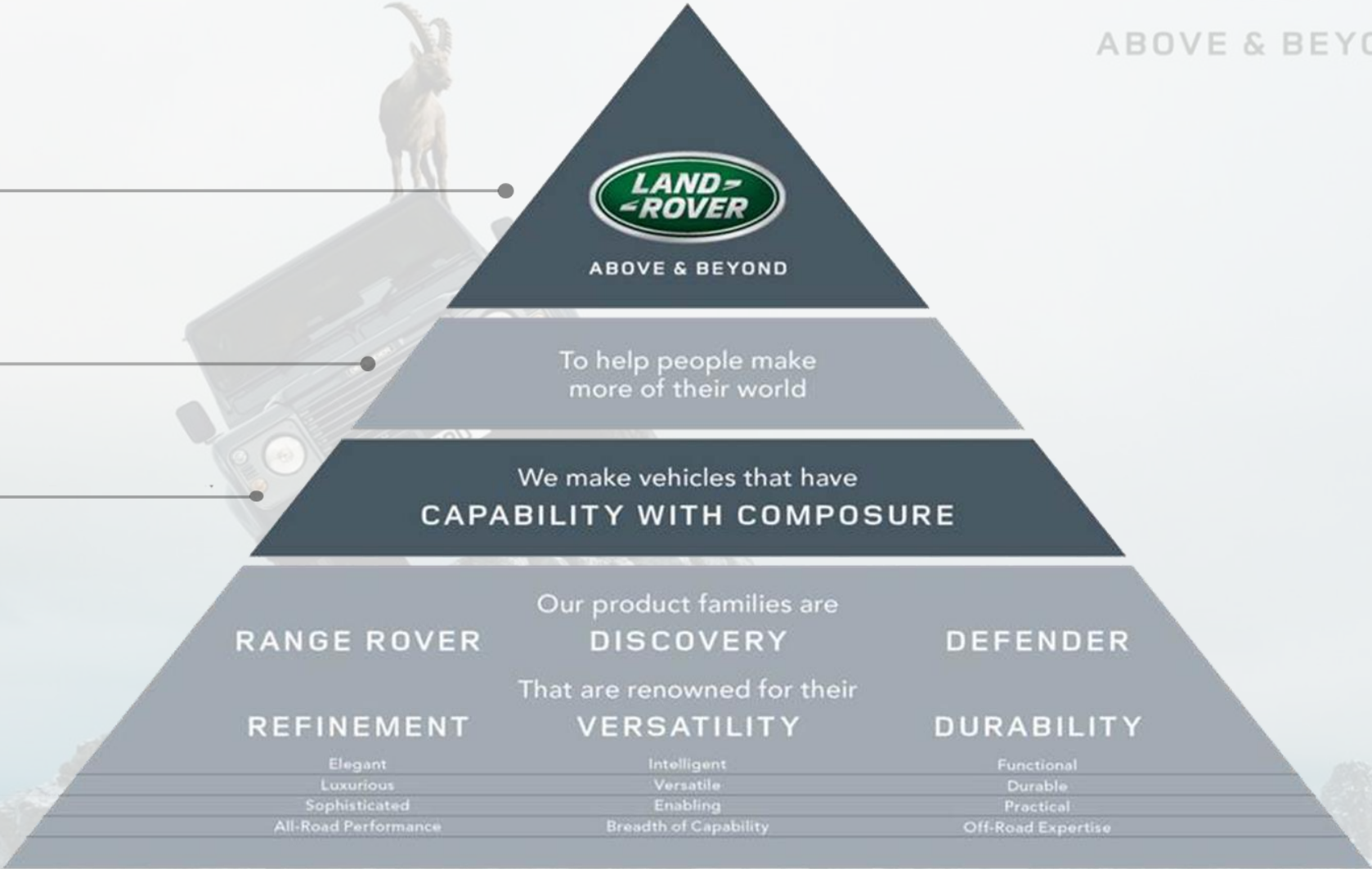
ABOVE & BEYOND

OUR BRAND
EXPRESSION

OUR BRAND
PURPOSE

OUR BRAND
PROMISE

OUR PRODUCT
FAMILIES



Customer Emotional End Benefits of Ownership



FREEDOM

I feel free, independent, able to achieve anything and go anywhere.



INDIVIDUALITY

Similar to a Land Rover car I prefer to go my own way, forge my own path through life.



THE REAL THING

Land Rover is the true SUV category leader. The original premium SUV.



UNSTOPPABLE

There are no limitations, I can overcome any obstacles in my way to achieve my goals



LAND ROVER

70

YEARS

LAND ROVER BRAND

18MY Range Rover and Range Rover Sport Launched



Distinctive Designs



PHEV



Luxury Interiors



Touch Pro Duo



LAND ROVER BRAND

Success of the Dragon Challenge...



10M

YouTube documentary
views across market
channels worldwide

2.8 M

Total YouTube views (30s)

10.5M

Global Land Rover
channel YouTube
documentary views



Total Facebook views (3s)

4.5M

THE COMMERCIAL DEPARTMENT

Agenda



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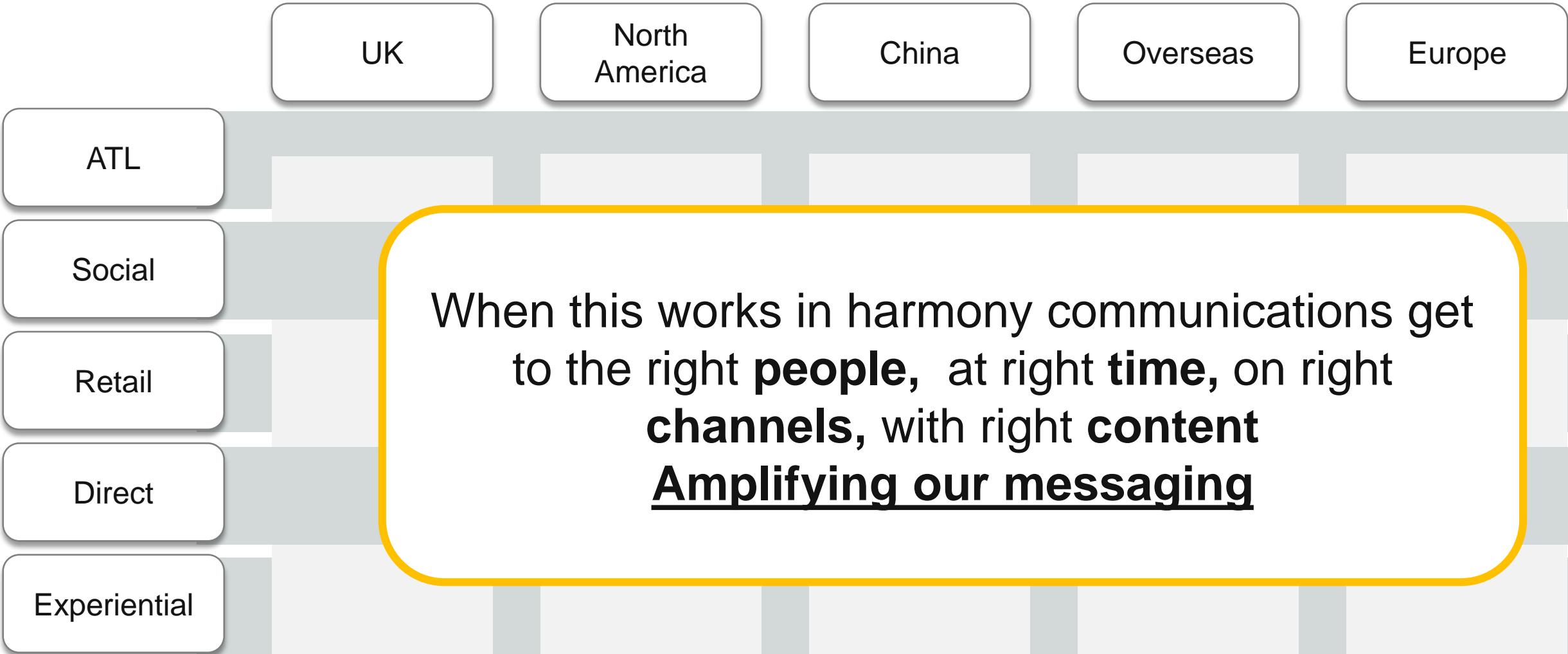
Network

Team



GLOBAL COMMUNICATIONS

Paid and Organic need to work in Harmony...

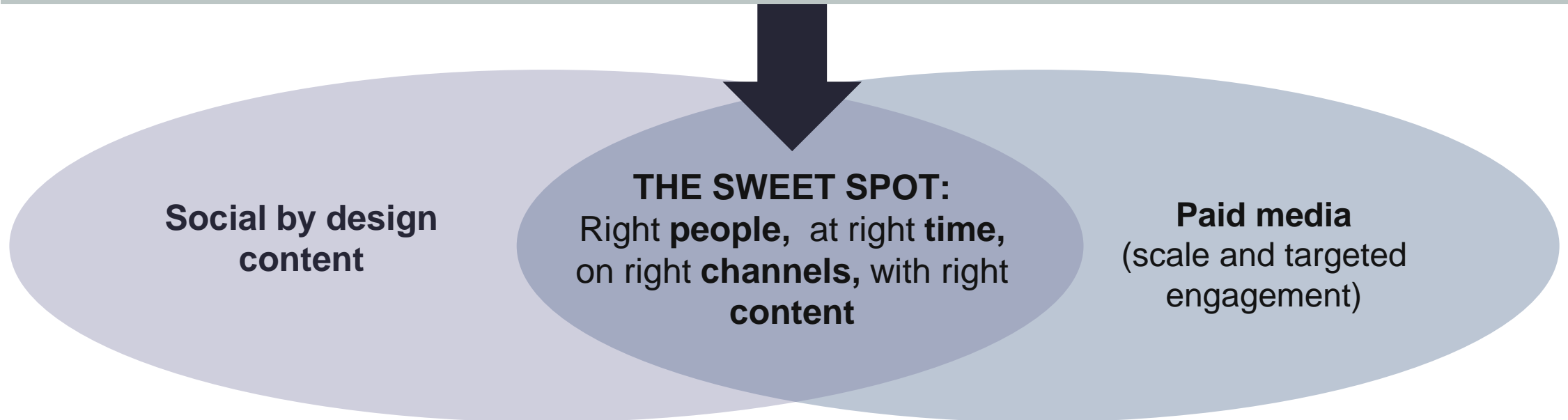


COMMUNICATIONS

Paid and Organic need to work in Harmony...



A SYMBIOTIC RELATIONSHIP



COMMUNICATIONS

Paid and Organic need to work in Harmony...



Global Lead content Channel for building brand favourability and vehicle preference



Targeted Broadcast Content (media channel) and Fan engagement



Build brand love through engaging follower base and targeting



Primary news Channel



Connect with our customers

COMMUNICATIONS

Content Marketing – FY17/18 Performance



25M
Total YouTube
views (30s)

58.5M

20.2M
Readings

5,850,611



52.7M
Total YouTube
views (30s)

48.9M

5.6M
Readings

5,606,845

THE COMMERCIAL DEPARTMENT

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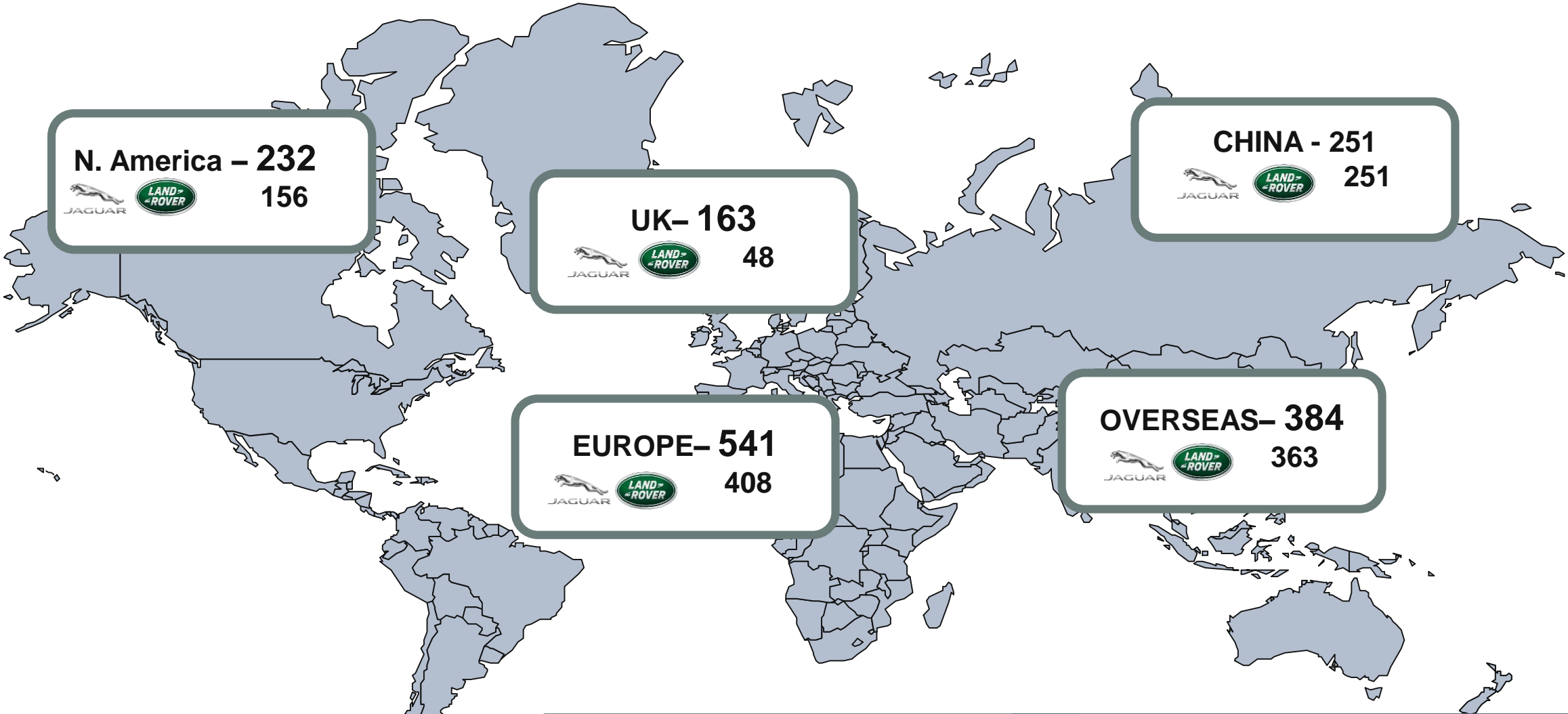


Team



GLOBAL NETWORK

We currently operate in **129** countries with **1,571** Retailers



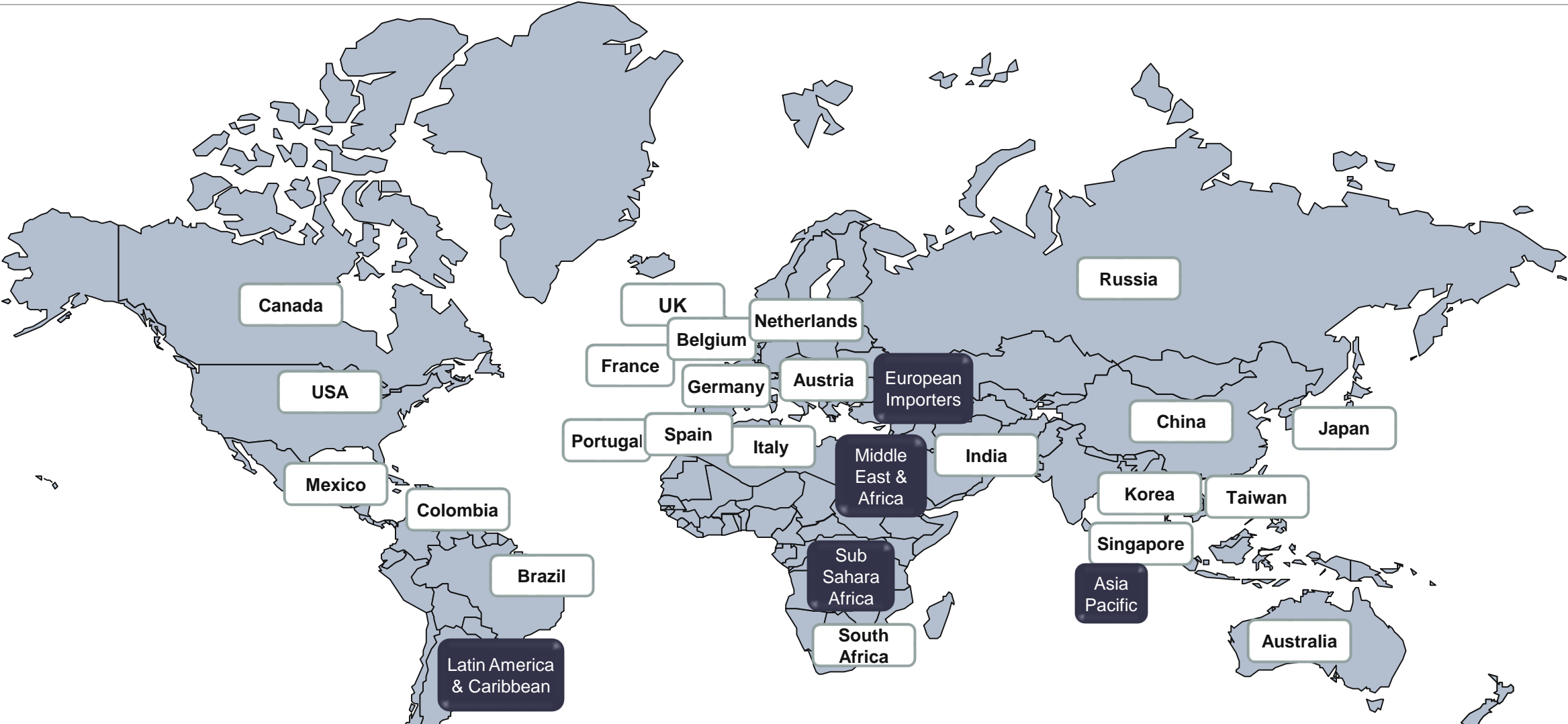
By 2023 this is forecast to increase to **C.1,800 Retailers**



Source: JLR Market Representation Plans as at 23 May 2018

GLOBAL NETWORK

23 National Sales Companies cover **92%** of our worldwide volume



In addition to our **5 REGIONAL OFFICES**



OUR GLOBAL RETAIL NETWORK

This is where we started....



WE ARE NOW ROLLING OUT...

A common identity across our Network (ARCH)



OUR RETAILERS ARE INVESTING

...in this Customer Experience Game Changer



£3bn

538 Arch
Sites

17/18

< £9bn

22/23



GLOBAL NETWORK

Common CI equates to visible results for our retailers



UK Arch Retailer Results
17/18 YOY*

Enquiry Levels

↑ 7%

New Car Sales

↑ 7%

Used Vehicle Sales

↑ 3%

Conquest Ratios

↑ 22%



• All UK ARCH retailers (Land Rover) that have been in place 12 months or more compared to the national average performance
• Source: JLR UK Composite and JLR Customer Relationship Management data 2018

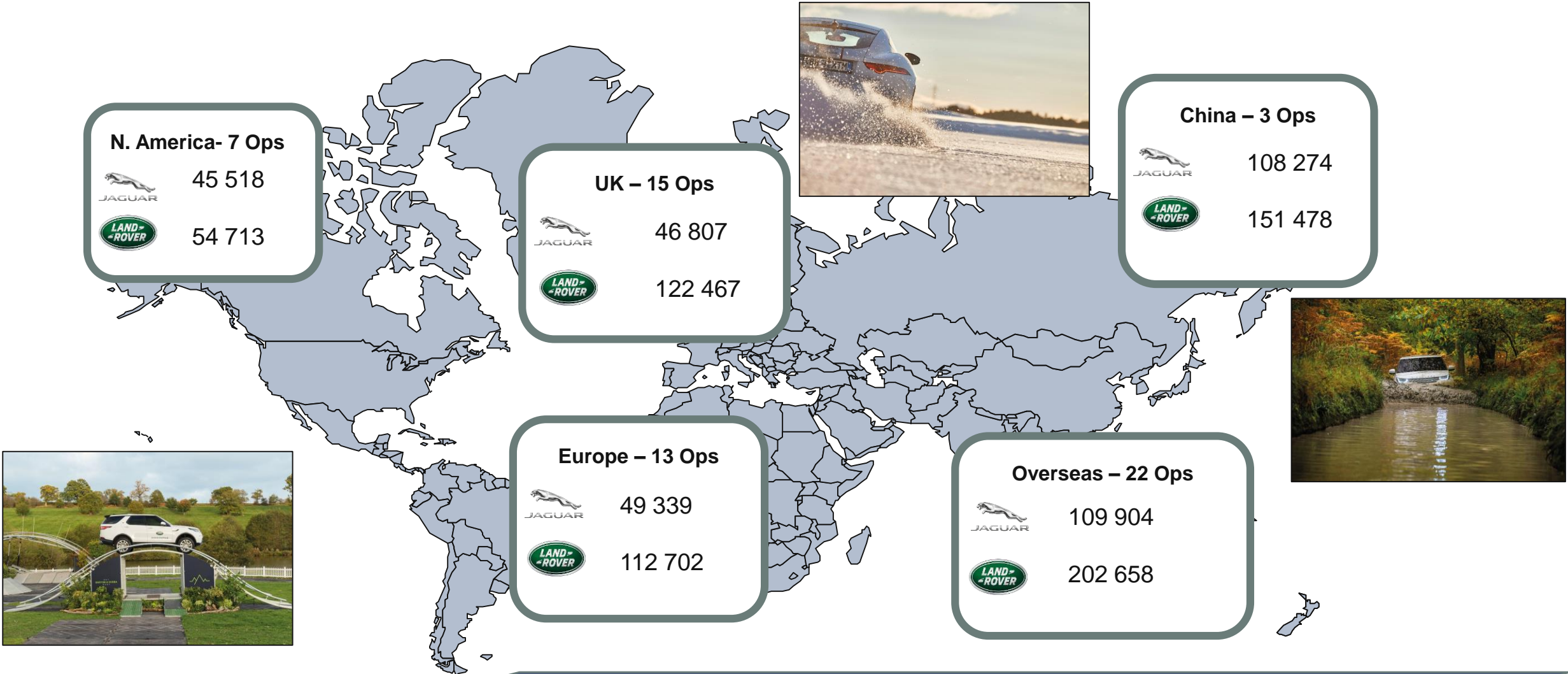
OUR RETAILERS ARE AN IMPORTANT PART OF OUR NETWORK

...But lets not forget our Experience Centres...



GLOBAL JAGUAR LAND ROVER EXPERIENCE NETWORK

60 Operations Globally



In 2017/18 we delivered over **1 Million Guest Experiences**



THE COMMERCIAL DEPARTMENT

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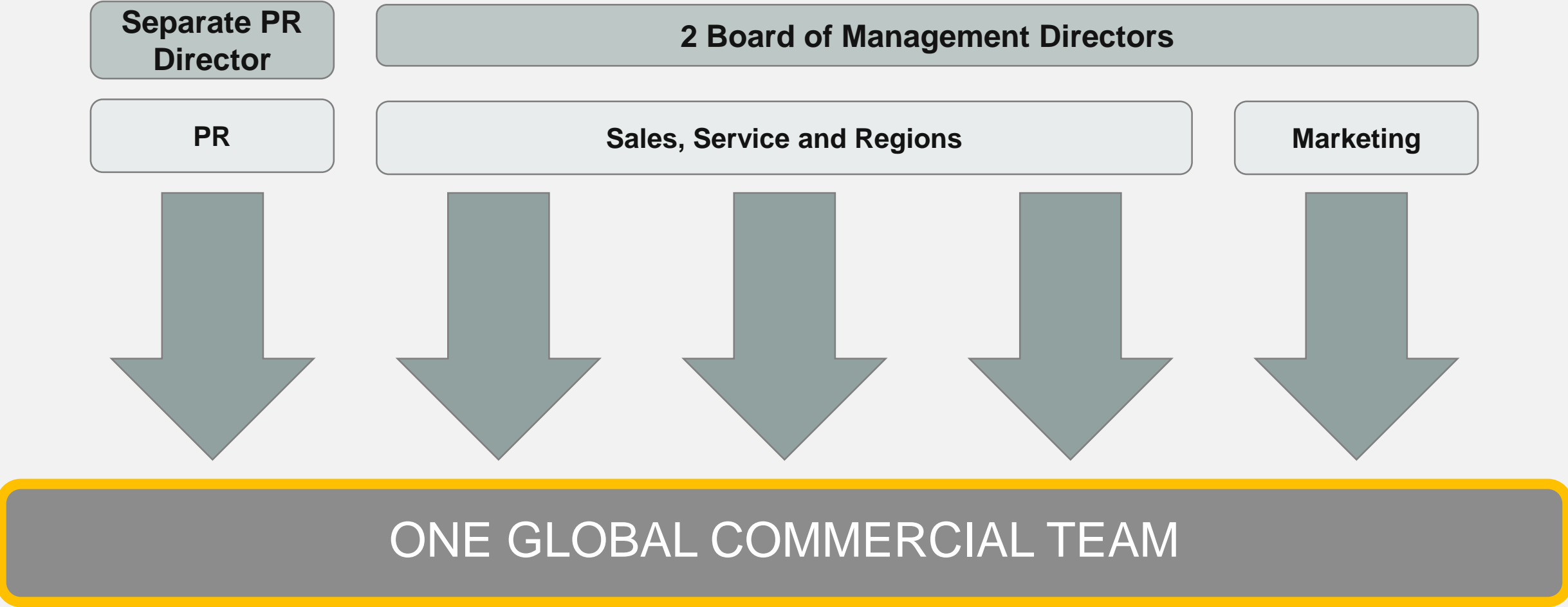
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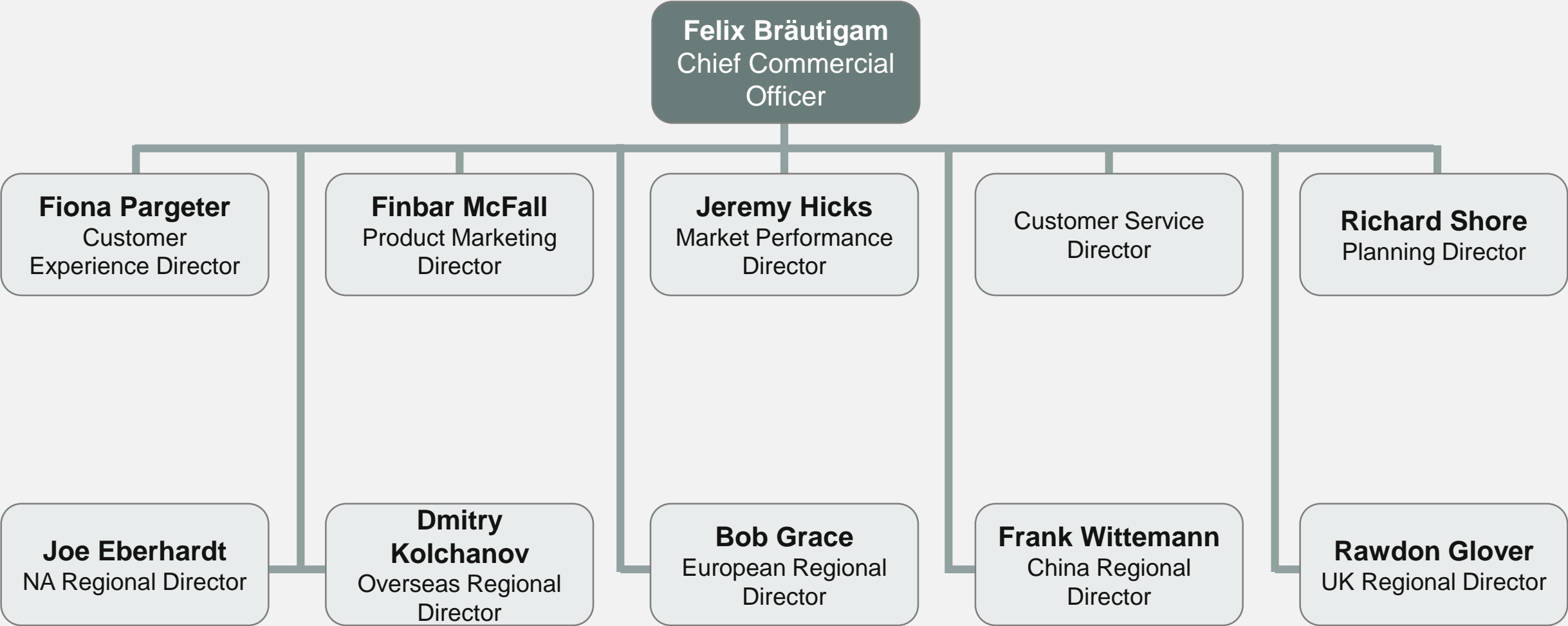
A TRANSFORMED STRUCTURE

What has changed?



A TRANSFORMED STRUCTURE

The New Global Team



A TRANSFORMED STRUCTURE

Key Deliverables



THE COMMERCIAL DEPARTMENT

Concluding thoughts...



Delivering sustainable profitable growth

Iconic Brands, Passionate Customers

Professional Network investing and seeing returns

Communications: Right Person, Right Time, Right Channel

One Global Team rising to the challenge





ENGINEERING STRATEGY

IT'S A CHANGING WORLD – DISRUPT OR BE DISRUPTED

NICK ROGERS

EXECUTIVE DIRECTOR, PRODUCT ENGINEERING

This year we celebrated the 70th anniversary of two icons – born in 1948



First aluminium body
Top speed of 120mph



First vehicle to explore the world
Unrivalled off road capability

Creating and engineering pioneering products is in our DNA

We continue to have a disruptive, pioneering spirit in 2018...



JAGUAR I-PACE ELECTRIC PERFORMANCE

90kWh BATTERY

The battery is made up of 432 high energy density, Lithium-ion pouch cells, arranged in 36 modules of 12, the best technology to deliver maximum range, performance and efficiency



SINGLE-PEDAL DRIVING

The I-PACE's sophisticated braking system provides regenerative charging power to the battery in all driving modes - maximising range. And, by selecting the 'high' regenerative mode, it enables intuitive 'single pedal' driving in many conditions. Regenerative braking can produce up to 0.4G of braking force

480km (298 miles) RANGE ON THE WLTP TEST CYCLE

40 MINUTES RAPID CHARGING

Time taken to charge from 0-80% (100kW DC)
15-MINUTES CHARGING AT 100kW DC DRIVES
UP TO 100km (62 miles) EXTRA RANGE

7kW AC

WALL BOX
Charges the battery from 0-80% in 10 hours - ideal for overnight charging at home

TWO ELECTRIC MOTORS

The Synchronous Permanent Magnet motors are light and extremely efficient. Packaging them concentrically with the single-speed transmissions makes them as compact as possible. Their position on each axle delivers all-wheel drive and, together with the underfloor battery, contribute to I-PACE's low centre of gravity to enhance control, handling and agility



36kNm/° TORSIONAL RIGIDITY

The integral battery structure means I-PACE is the stiffest vehicle in the Jaguar range - optimising handling agility and safety

**696Nm
TORQUE** **4.5s
0-60mph** **400PS
POWER**

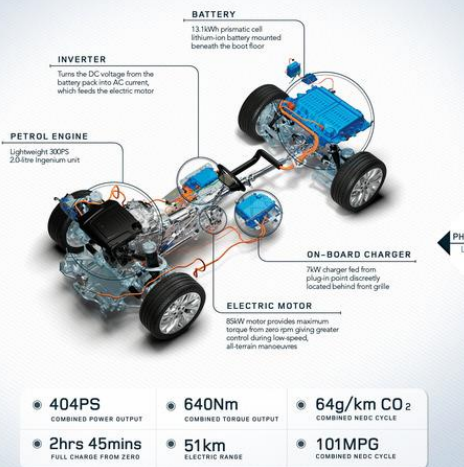
#IPACE



THE NEW RANGE ROVER



ABOVE & BEYOND



We are engineering and delivering ACES today with our cutting edge electrified vehicles

With our new premium BEV, the Jaguar I-PACE, we are dramatically transforming our vehicle technologies



LE FIGARO

"We were able to climb a steep and pebbly mountain road but also cross a ford without endangering ourselves thanks to the AWD system that perfectly manages the distribution of torque to all four wheels." **Le Figaro (FR)**

WIRED

The Jaguar I-Pace is a game changer for electric vehicles

The new all-electric kid on the block is a thorn in the side of Tesla and arguably the best electric vehicle £60,000 can currently buy

But that's simplifying things too much, as I-Pace is built upon a bespoke aluminium chassis architecture, styled like nothing else in the current Jaguar range and packs technologies that have been conceived and produced solely for this model.

Throw in the cutting edge nickel, manganese and cobalt battery construction, the compact and 95 per cent efficient Jaguar-designed dual motors and you're faced with a package that delivers 400hp and 696Nm of torque, a 0-60mph sprint time of just 4.5 seconds and a battery range of up to 298 miles. A bold move from Jaguar. Another headache for Musk.

wheels24
Motoring News First

"As we experienced on the track, the high-torque density of the motors delivers sports car type performance. With the instantaneous torque delivery inherent to an EV, you had to brace when you floored the accelerator, as the zero-emission Jaguar took off like a scalded cat, sprinting from 0-100km/h in just 4.8 seconds. It is smooth and linear, yet to feel that surge, that swoosh, is strangely exciting." **Wheels24 (ZA)**

caradvice

With 294kW of power and 696Nm of torque (combined) on tap, the car sprints to 100km/h in just 4.8 seconds – faster than a Tesla Model X 100D, slower than the Ludicrous Mode-enabled P100D. Both those cars are significantly more expensive – \$60,000 and \$130,000 respectively – than the I-Pace.

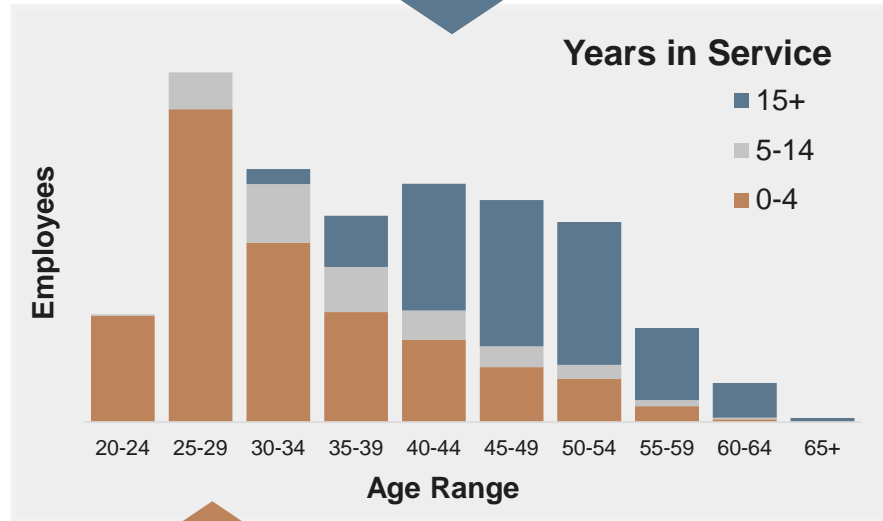
When the time comes to slow down, Jaguar has given the car a 'high-regenerative' mode. When you step off the accelerator, the car can generate up to 0.4G of deceleration as the motor essentially becomes a generator, recapturing energy and feeding it back into the battery.

The Jaguar Land Rover BEVolution is already a reality

Our people are our biggest asset – our Engineering team has a diverse demographic giving us both experience and new skills



Experience - Expertise



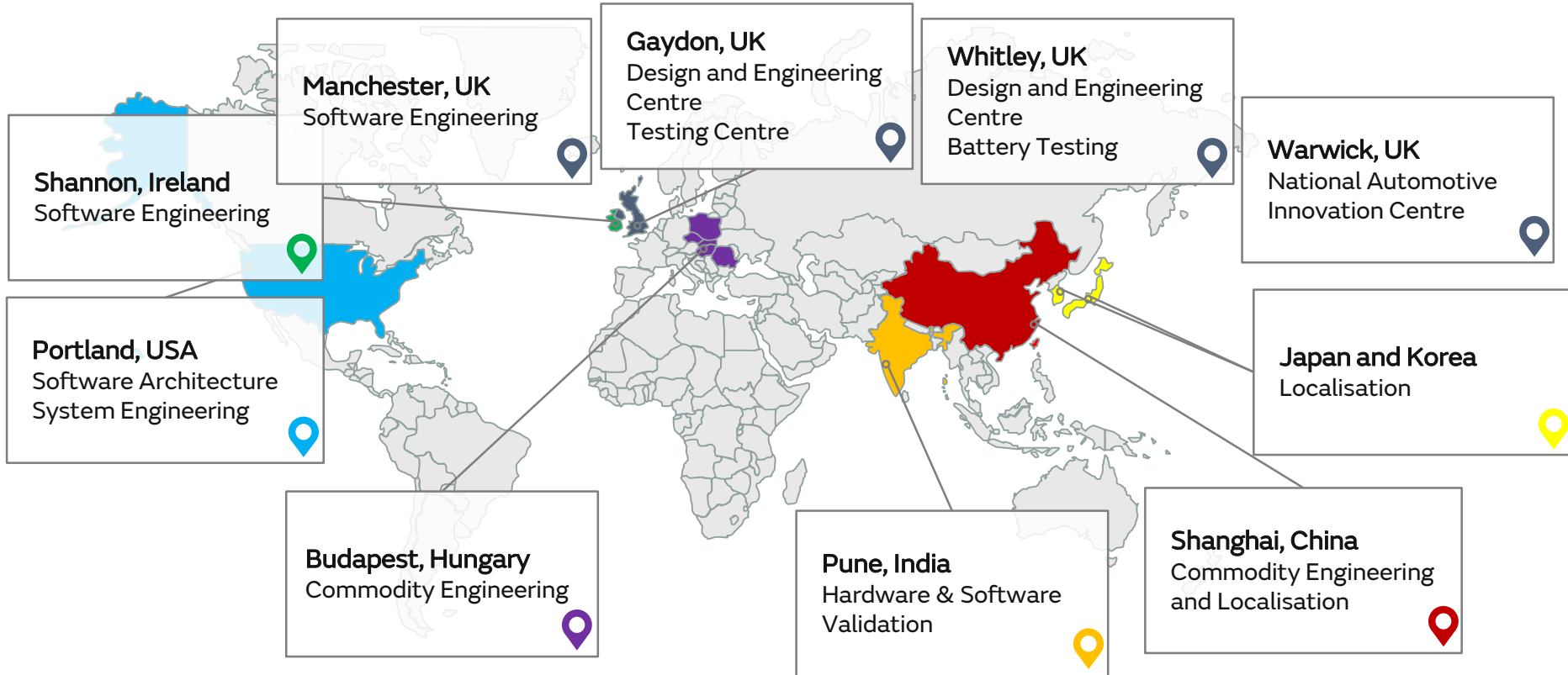
Traditional Attributes



New skills - Technology Innovation

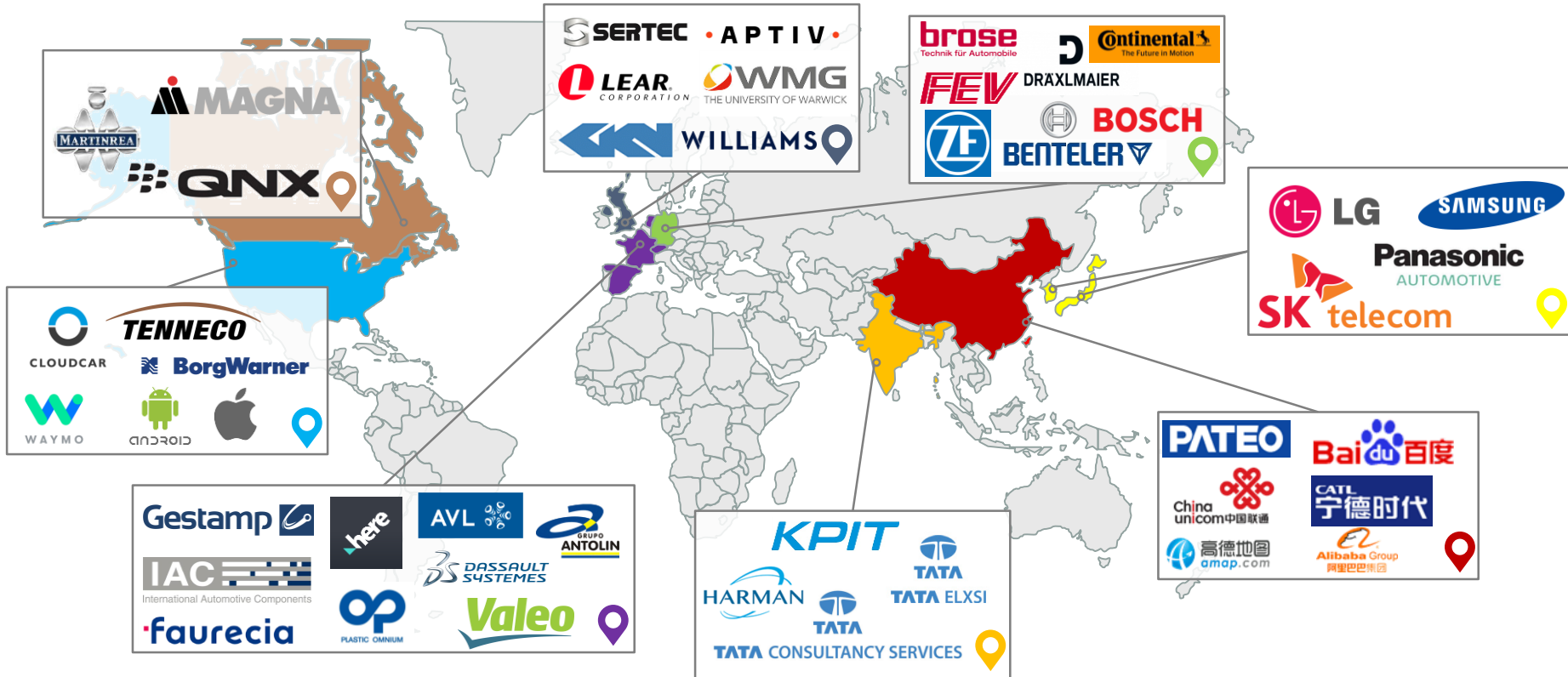
We have a demographic to die for, with a global team that can innovate products with expertise

We are sourcing skills in places that are most effective at being technology disruptors



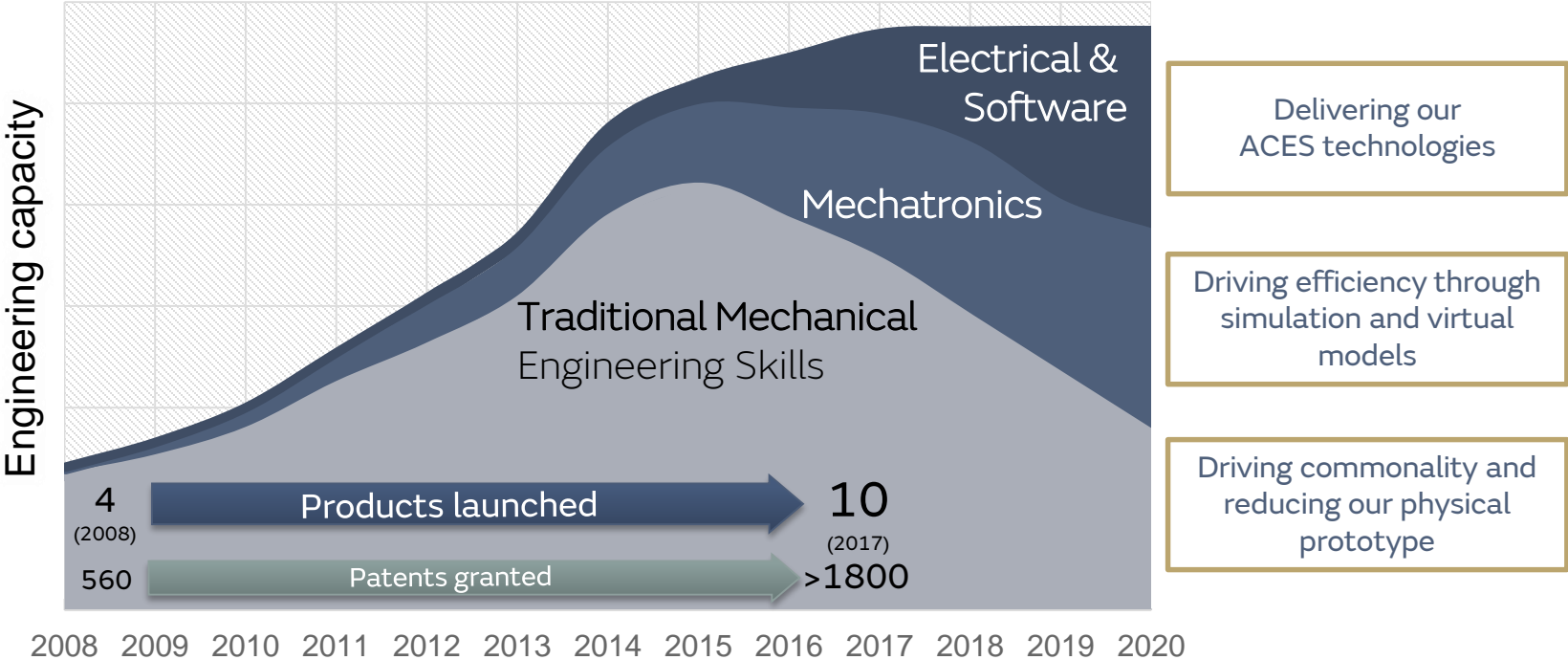
Our global Engineering footprint allows us to leverage all regions for technology and efficiency

Our engineers are collaborating with global partners to leverage pioneering new technologies



We are investing wisely through intelligent partnerships

We are embedding the engineering skills required to pioneer new technologies

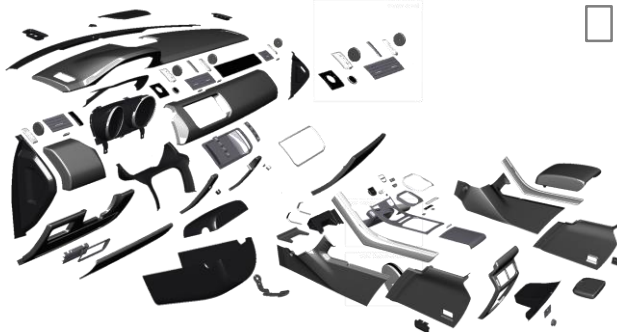
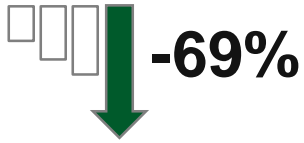


We are enabling electrical and software growth by using techniques to drive efficiency in traditional engineering

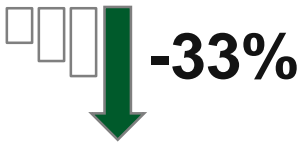
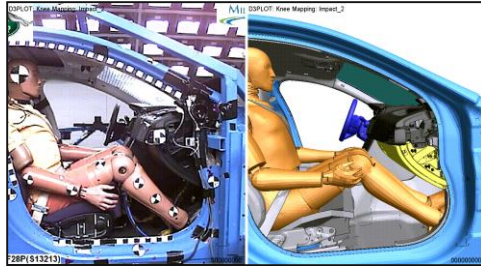
We are leveraging our engineering skills, allowing us to do more in-house for less



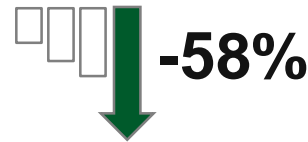
Design & development costs



Vendor tooling costs



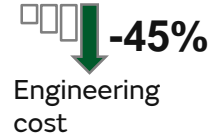
Cockpit lifetime costs



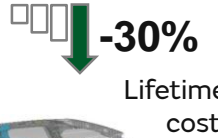
Material costs

We do this across all our commodities ...

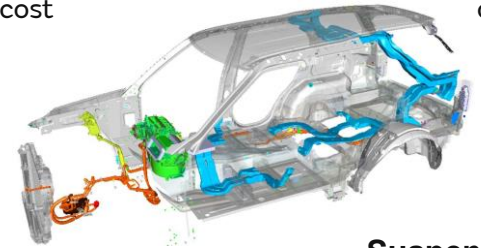
Climate Systems



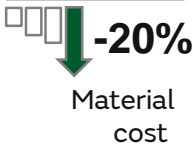
Engineering cost



Lifetime cost



Suspension Systems



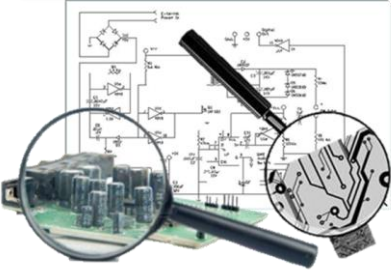
Material cost

Dramatic efficiency reduction in engineering mechanical systems

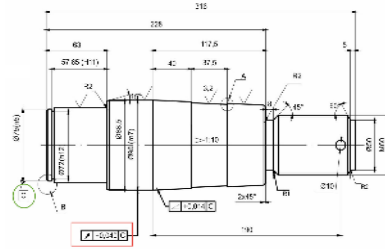
We are reskilling our Engineering from the top down in addition to the bottom up



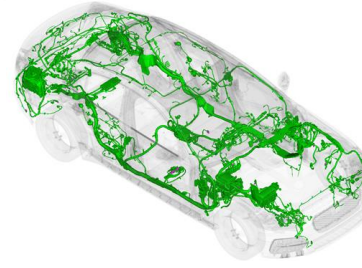
Engineering and Development of Electrical Hardware



Efficient Geometric Control



Networks and Electrical Distribution Systems



Software Engineering and Delivery



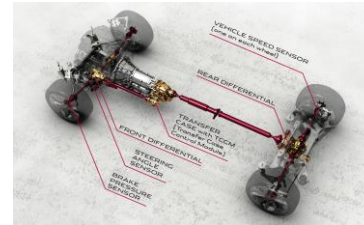
Thermal and Aerodynamic Engineering



Leveraging Digital Engineering



Systems Engineering

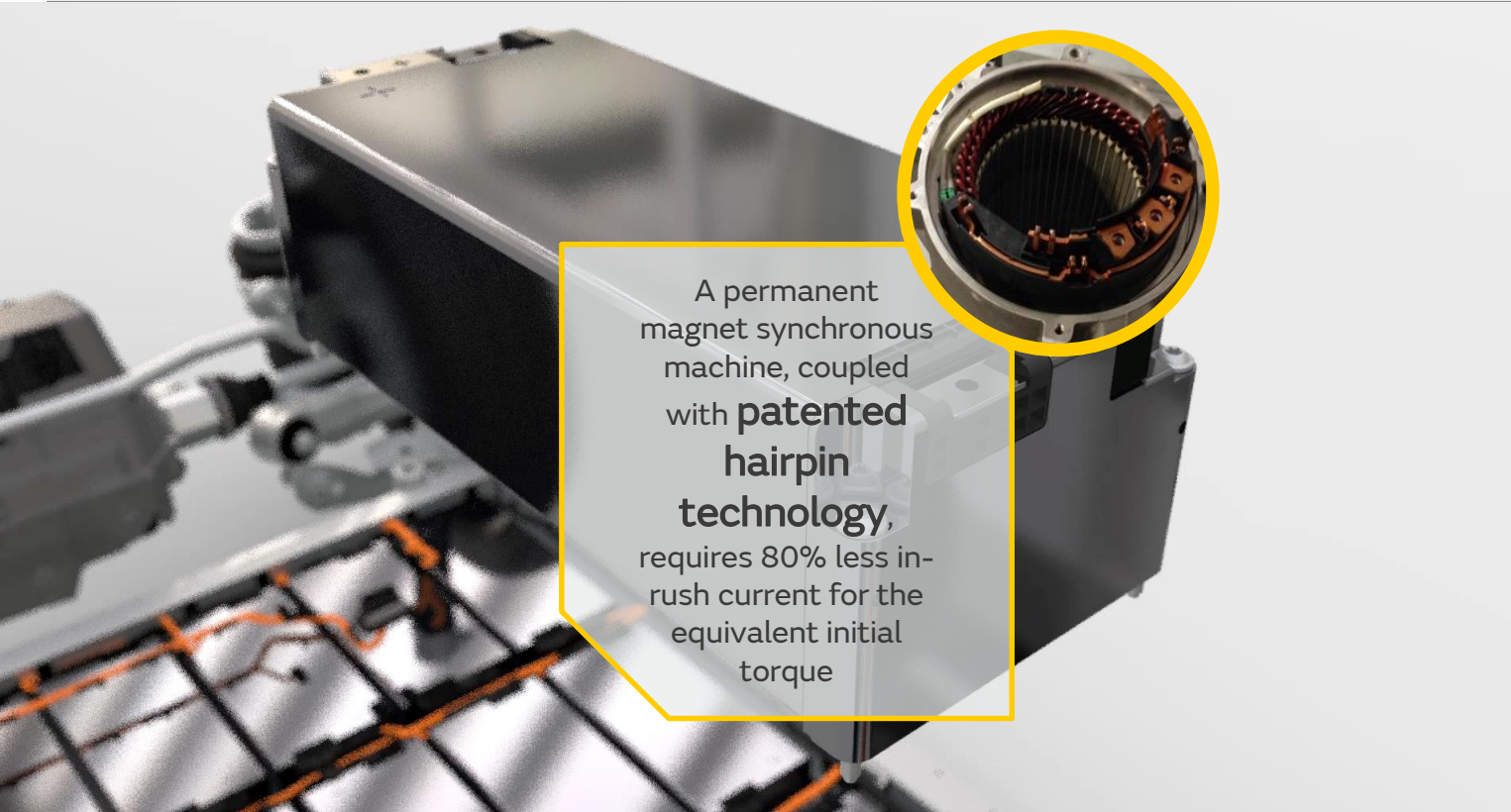


Engineering Structures Efficiently



Licence to Lead Engineering is mandatory for all engineering leaders to enable robust delivery of our products

By reskilling our engineers, we have designed and engineered our I-PACE batteries in-house



A permanent magnet synchronous machine, coupled with **patented hairpin technology**, requires 80% less in-rush current for the equivalent initial torque

I-PACE has
**432 Lithium ion
Nickel Manganese
Cobalt cells**
in 36 modules

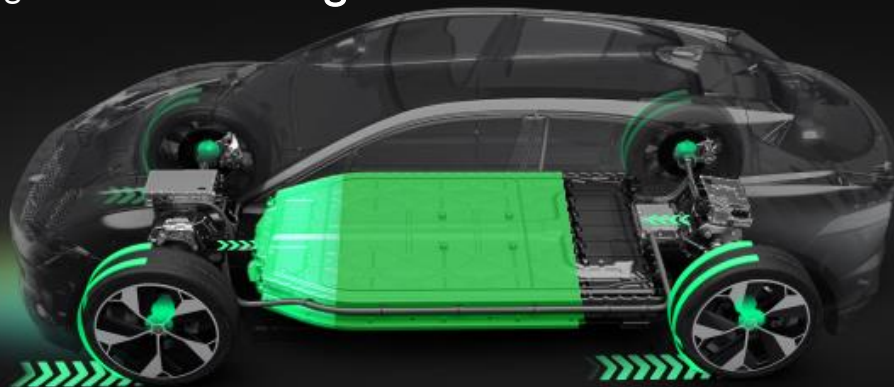
It is the first electric car
to have a **unique
cooling circuit**
dedicated to the
battery pack

The cutting edge technology engineered by our innovative team has been captured in numerous patents

I-PACE is the only electric vehicle that can decelerate 0.4g without applying friction brakes



Our control system ensures the synchronous machines and battery system work in harmony, harvesting **3 times more regeneration**



Over 95% of braking events can be completed using **regenerative braking**, seamlessly blending into friction brakes in dynamic situations

I-PACE is also the only car that can complete EPA, NEDC and WLTP drive cycles without using friction brakes

We have engineered I-PACE for convenient, rapid charging



70kWh of energy can be taken on board in less than 40 minutes, giving up to 380km of range

Each I-PACE can identify you as an individual and learn how to help you every day



I-PACE can learn your preferred...

- Temperature settings
- Media settings, including Apple CarPlay and Android Auto
- Seat settings

And...

- Analyse your driving attributes and use of energy
- Predict who you'll phone next
- Share journey information
- Optimise precondition settings
- Allow you to remotely set charging times to maximise off peak energy use



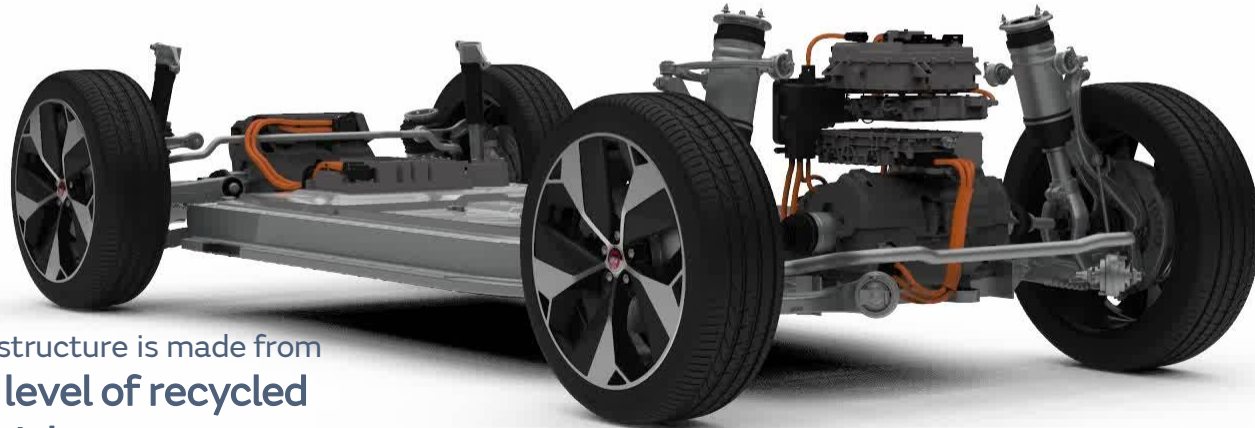
...It even tells you when you've **forgotten your phone!**

We are passionate about delivering maximum efficiency for our customers

We continue to lead with our patented aluminium lightweight technology, delivering our most efficient body on I-PACE



Steel hot stampings riveted to the B-post, **reducing its weight by 5%** compared to conventional aluminium.



94% of the I-PACE body structure is made from aluminium, with a **high level of recycled material**.

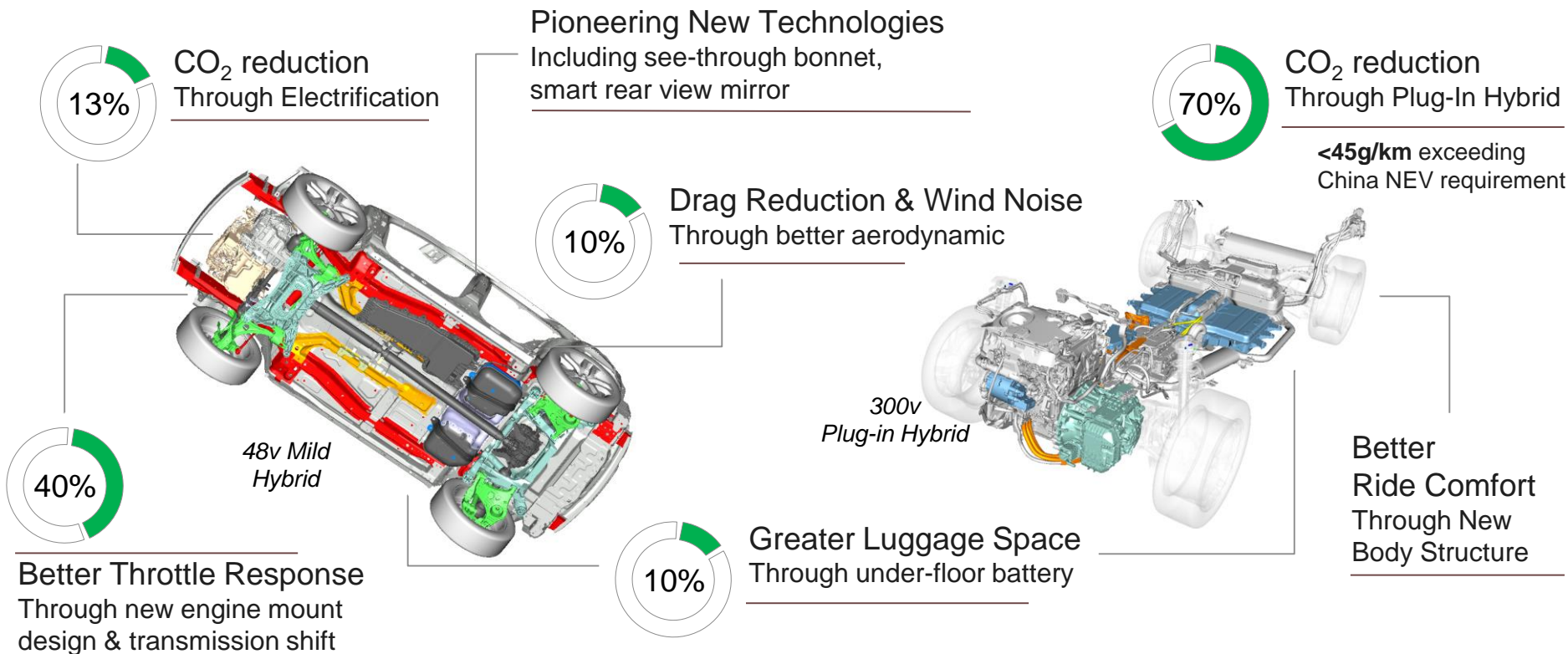
Through efficient engineering and toolsets, we have engineered our most rigid body structure for I-PACE

The learning and new skills we have gained with I-PACE will be embedded into all our new products



We are passionate about ensuring our reborn icon is fit for the future

And this year we are transforming our smaller SUVs with our brand new Premium Transverse Architecture



A full architecture transformation delivers new technology at great scale economies

All of this learning paves the way for our modular longitudinal architecture

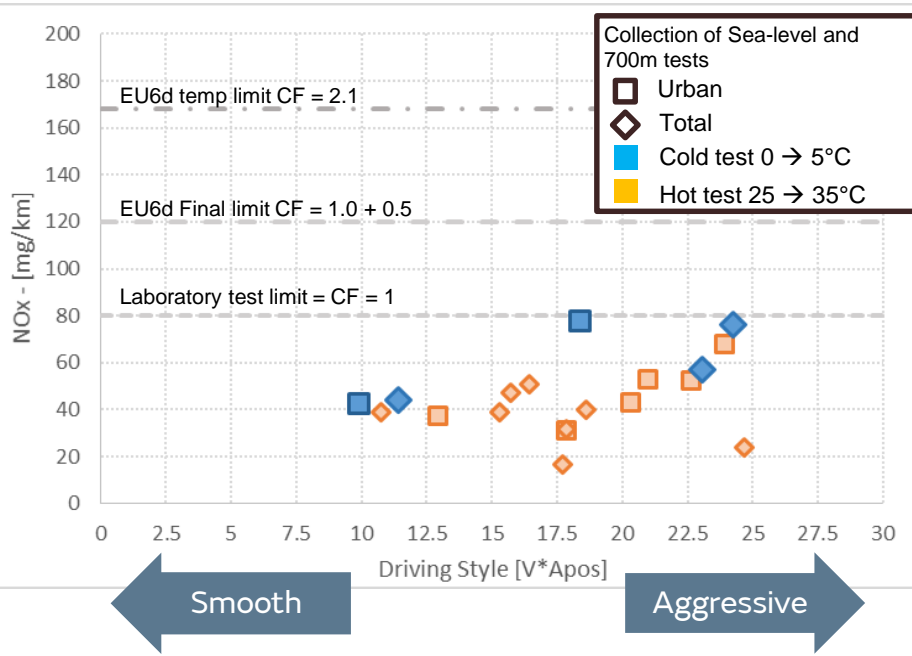


Our scalable architecture is agnostic to propulsion systems and utilises efficiently modular commodities

In addition to our electrified vehicles, we are continuing to engineer clean diesels



Tailpipe Nitrogen Oxides (NO_x) performance – mg/km



Proven across Europe and around the world



Factor	Limit	Tarragona	Guadalajara	Innsbruck	Stuttgart
		Sea Level	700m	700m	250m
Urban Average Speed	15-60kph	18-25	20-30kph	22kph	15kph
Motorway Max Speed	145 - 160kph	120kph	120kph	130kph	160kph
Urban gradient	1200m/100km	1031m/100km	833m/100km	457m/100km	802m/100km
Total gradient	1200m/100km	1214m/100km	1523m/100km	486m/100km	1200m/100km
Altitude difference	100m	185m	3m	25m	100m

Our results today already achieve the 2020 emissions standard

We are aligned to new Real Driving Emissions (RDE) standards – our technology enables us to meet them



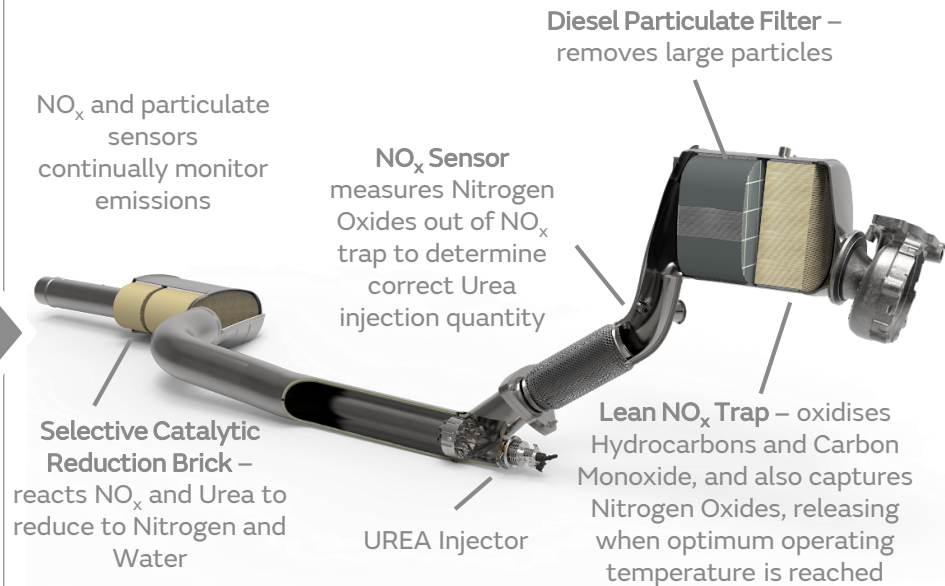
Testing Requirements



3000 tests required
to certify our 19MY
vehicles



JLR Exhaust System Technology



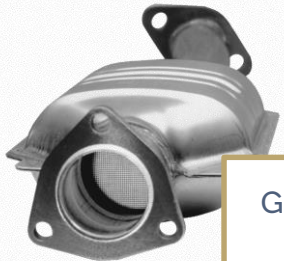
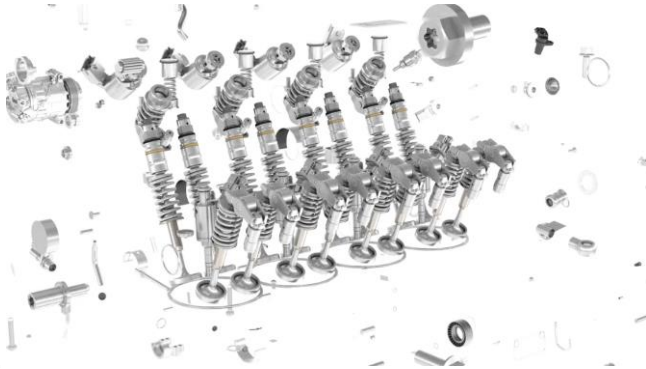
98% NO_x conversion efficiency

RDE is the most stringent emissions standard to date – JLR have been fitting SCR technology in cars for 3 years

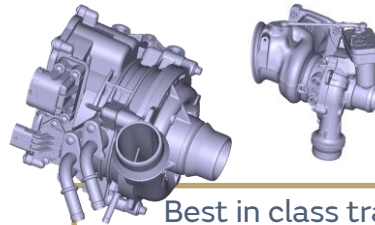
Our Ingenium gasoline engine family is also already equipped for future legislative challenges



China ✓
Eu6d ✓
Sulev 30 ✓



Gasoline Particulate Filter
to improve real driving
emissions



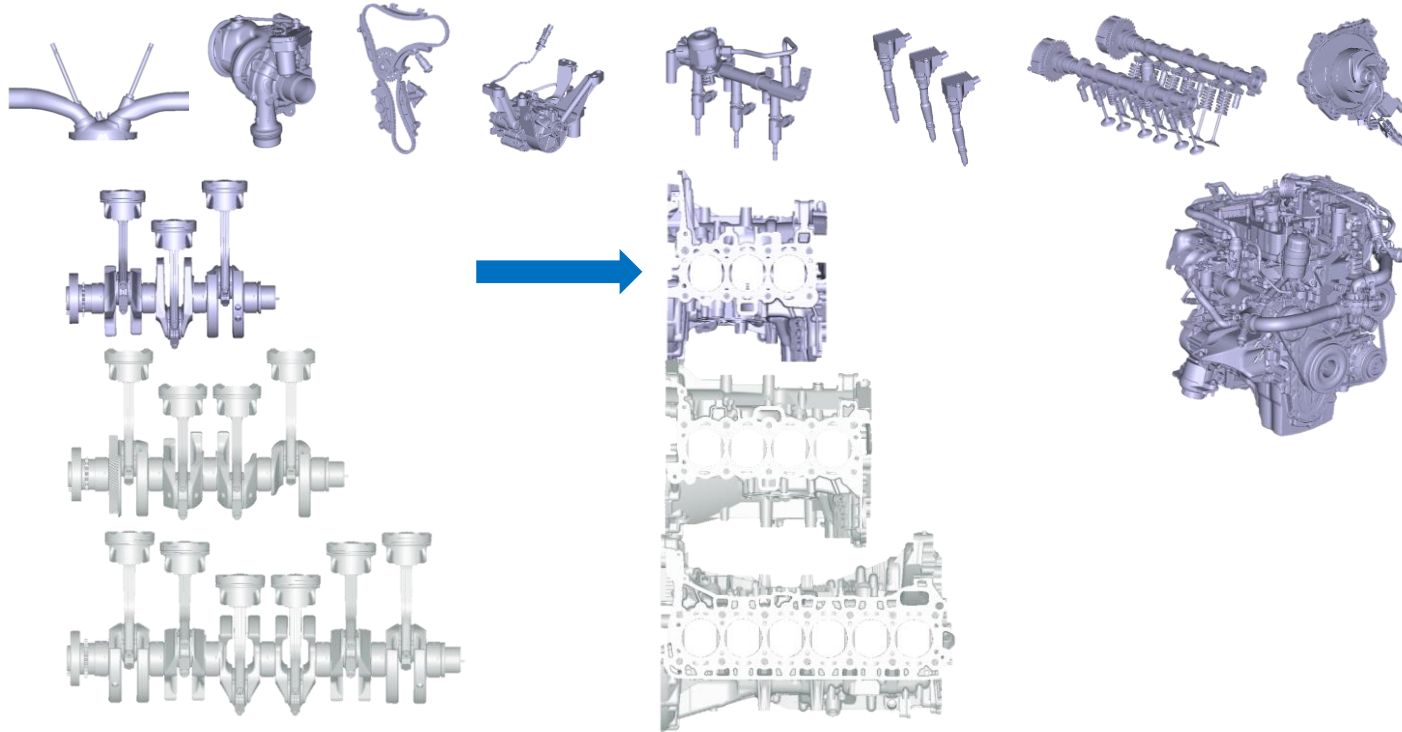
Best in class transient
performance with electric
SuperCharger



Fully Variable Lift
and Timing Electro-
Hydraulic Valve Train

Efficient combustion engines and new technology deliver customer focused attributes, fit for the next decade

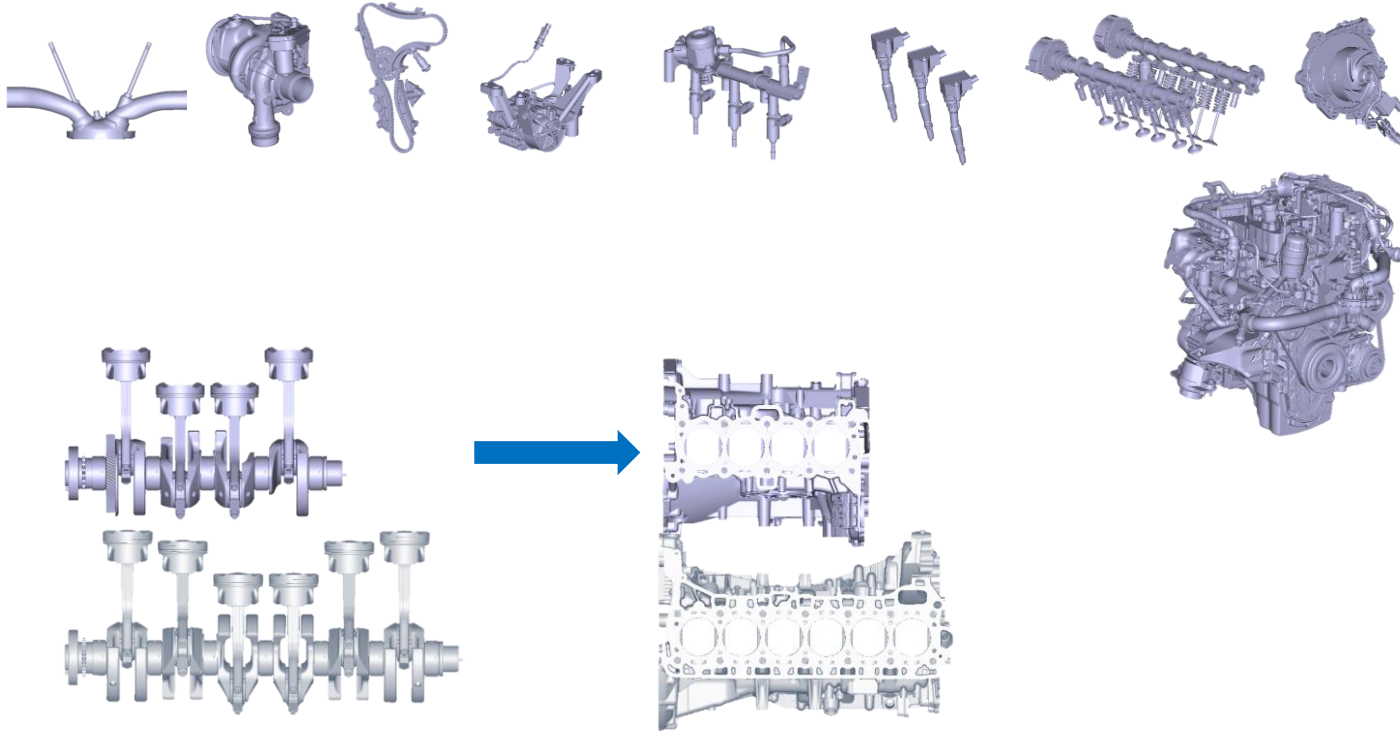
Our modular engine architecture enables efficient engineering, shared technologies and complexity reduction



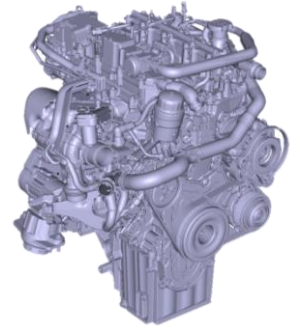
Common Ingenium
Technologies

By reusing parts and processes, we are able to focus our efforts on innovative new technologies

Our modular engine architecture enables efficient engineering, shared technologies and complexity reduction

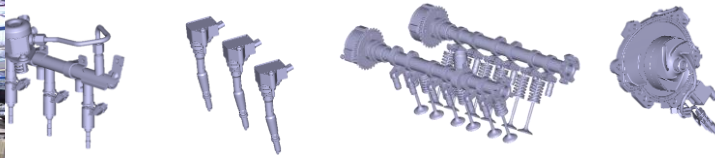
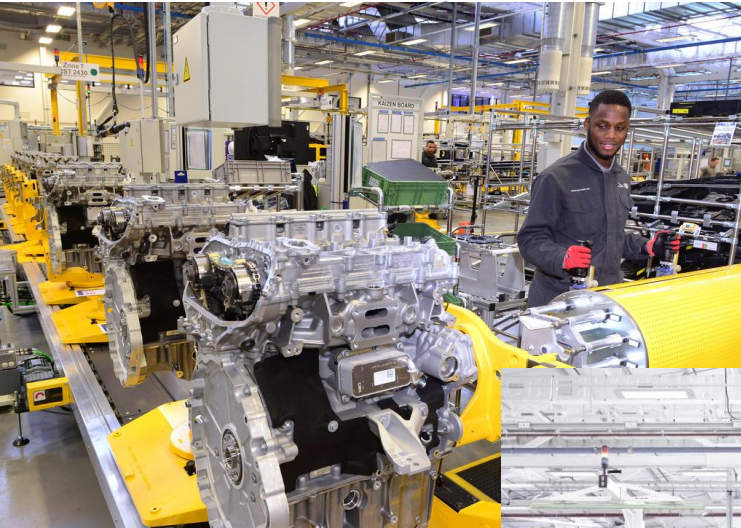


Common Ingenium
Technologies

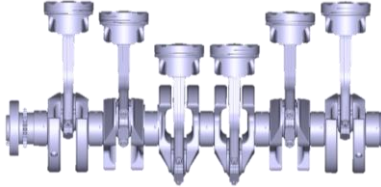
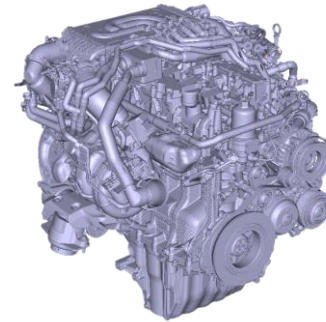
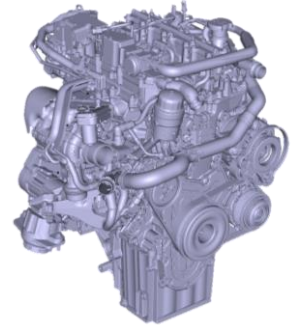
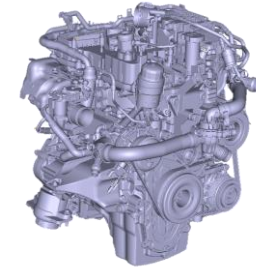


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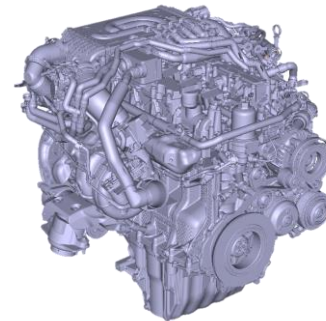
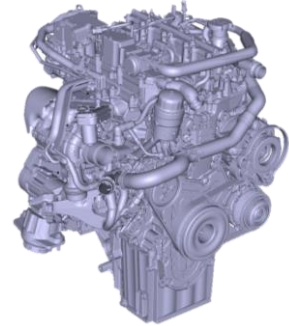
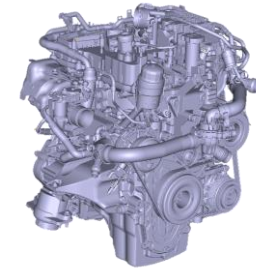
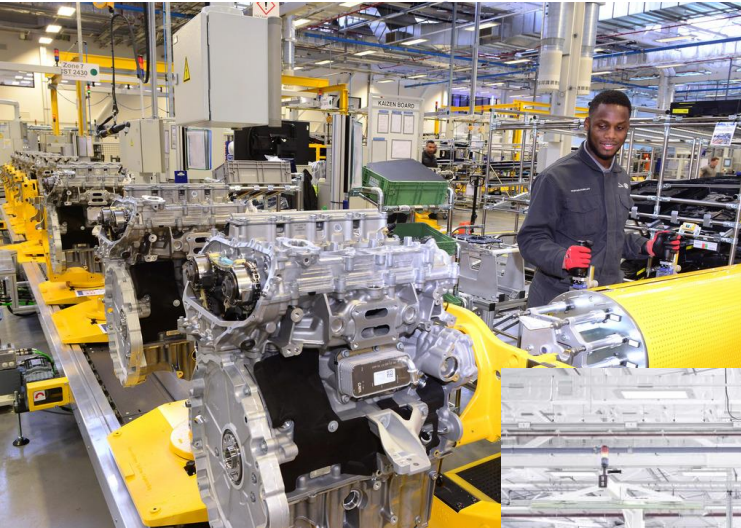


Common Ingenium
Technologies



We have set up our flexible manufacturing facility to enable the most efficient delivery of propulsion systems

Our modular engine architecture enables efficient engineering, shared technologies and complexity reduction



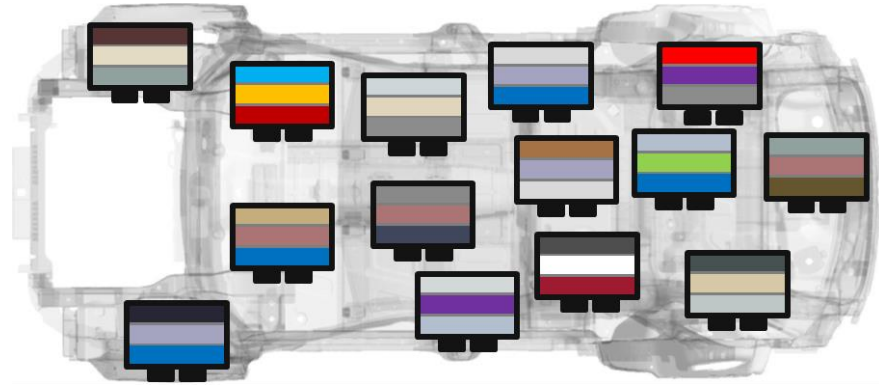
We have set up our flexible manufacturing facility to enable the most efficient delivery of propulsion systems

We are committed to efficiently engineering software for our pioneering products



Traditionally ECU hardware and software have been tightly coupled

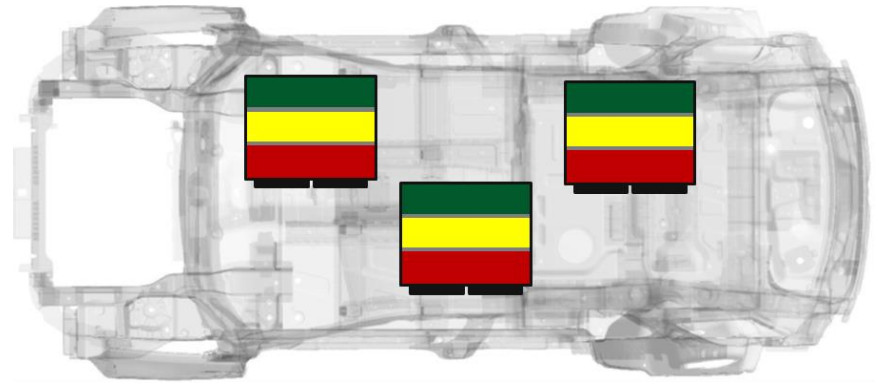
Software produced by individual ECU suppliers



Duplication of software in the ECUs drives up to 200 million lines of code in each car

Inefficient duplication and redundancies drive expensive supplier costs

Now hardware becomes compute module so we reduce the number of ECUs required



We are driving reuse of industry standard software, enabling greater levels of software integration

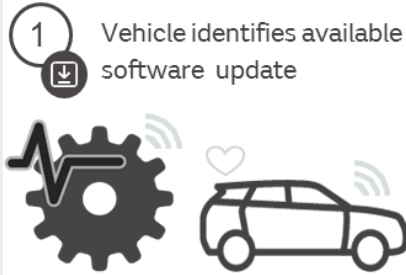
More efficient use of hardware optimises investment

We have an obsession for fully streamlining our integrated electrical architecture to realise system efficiency

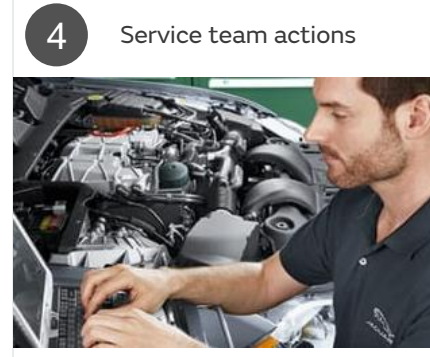
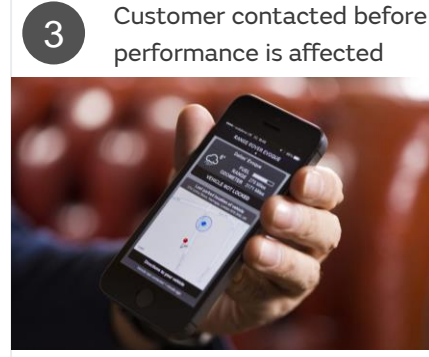
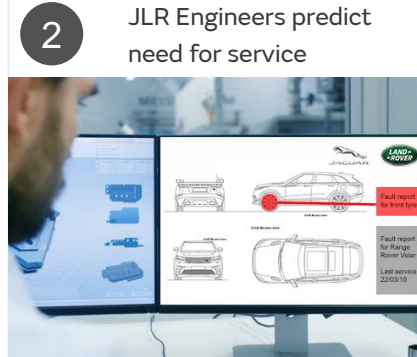
We are embracing Gen Y trends to pioneer continuous configuration and enhancement for our vehicles



SOTA
today






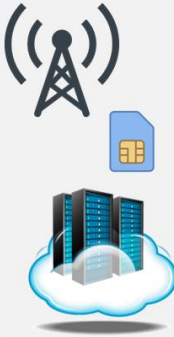




Next
gen

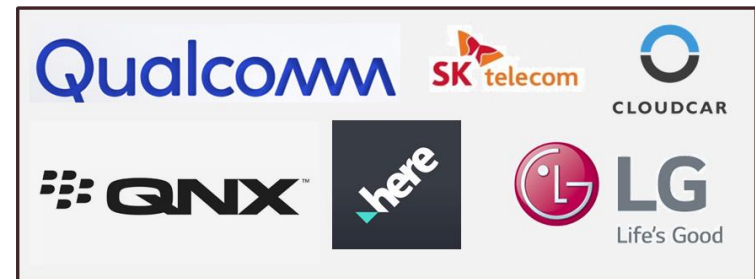
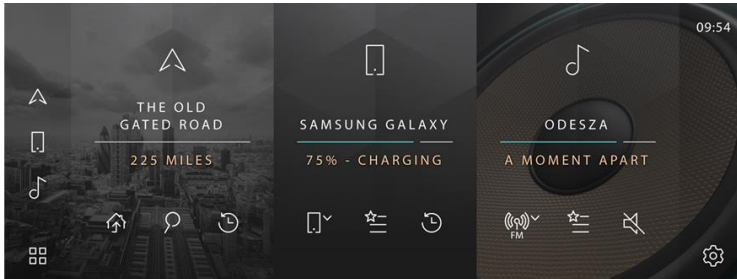


Next generation SOTA enables predicted services and enhancements through continuous updates

We are learning and taking the next leap with our infotainment systems for our customers



<p>Always On</p>  <p>Instant start up from low power mode - Back up battery gives 2week standby</p> 	<p>Always Connected</p>  <p>Always connected to 4G network (5G future)</p> 	<p>Always Listening</p>  <p>Full interaction through voice</p>  <p>Multiple key partners for offboard voice, Alexa, Nuance, Microsoft</p>	<p>Always Up to Date</p>  <p>Next generation Software over the air (SOTA)</p> 
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We are applying human science design rules to user interfaces and streamlining system messaging

It's a changing world...



...And we are disruptors



GLOBAL PURCHASING

PRODUCTION PURCHASING

IAN HARNETT

EXECUTIVE DIRECTOR, HR AND GLOBAL PURCHASING

**ONE GLOBAL PURCHASING TEAM
LEADING SUPPLIER PERFORMANCE
EXCELLENCE TO DELIVER A
COMPETITIVE EDGE TO JLR**



Spend under management
£18.9bn



2,310 team members

Production Purchasing

- 708.5 team members
- Spend £12.6 bn



Non Production Purchasing

- 153 team members
- Spend £5.4bn



AM & SO Production Purchasing

- 147.5 team members
- Spend £908m



Cost Engineering

- 225 team members
- Cost Engineering, Total Value Management



Supplier Technical Assurance & Contract Manufacturing

- 646 team members
- Supplier process quality assurance



Global Programme & Operations

- 239 team members
- Supply side capacity assurance



Purchasing Transformation and Operations

- 140 team members
- Enabling Systems, Processes, Performance and Transformation

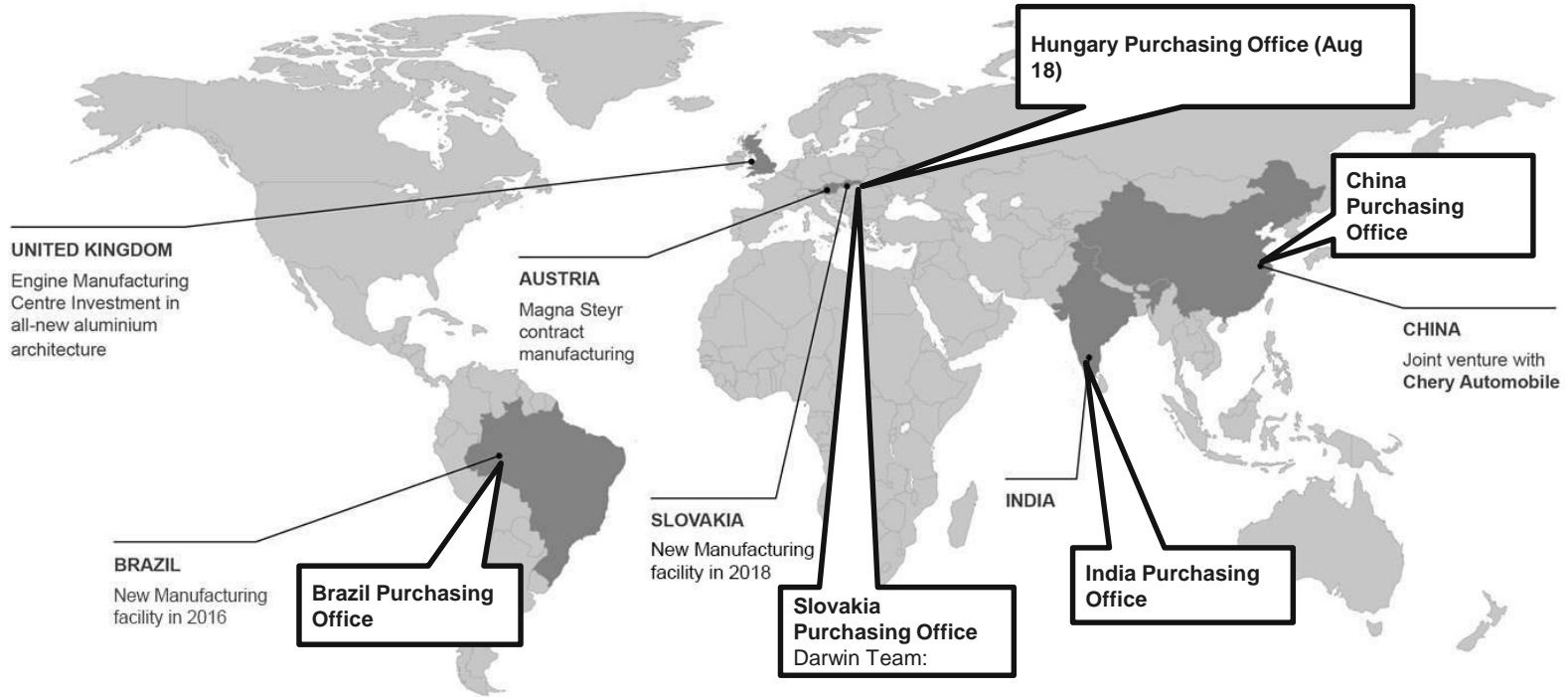


Apprentices & Directors Office

- 51 team members



Overview of the Global Organisation



- Global Purchasing also represented in each National Sales Company
- Hungary will become Eastern European Hub for Global Purchasing and STA

Production Purchasing

Continued evolution



- **Structured Supplier engagement & governance** with those who matter most
- **Global cross-functional supplier scorecard** and improvement planning
- **Win together** mentality
- **S24 holistic cost reduction** – material, ED+T, tooling, warranty etc. – Leverage MLA
- **Supplier management practices** to recognise move from 'Black box' to separate H/W + S/W sources

Supply Chain



Value Creation



- **Integrated Business Plan & cross functional target commitment process** to be introduced
- **Should design @ should cost** into MLA product & supply chain solutions
- **Software - accelerate core capability**, cybersecurity & validation
- **Develop business models** that incentivise feature development
- **Collaboration & Co-opetition**
- **Data and IP monetisation** and services

- **Connected Supply Chain** – real time supply chain visibility and collaboration
- **AutoSource** – automated tail spend sourcing and augmented sourcing / guided buying
- **Analytic insights** on sourcing, supplier and supply chain performance
- **Robotic Process Automation (RPA)** – liberating high value innovation
- **Blockchain** supporting end to end traceability and smart contracting
- **Network Risk mapping** – understanding and managing the risks across our network

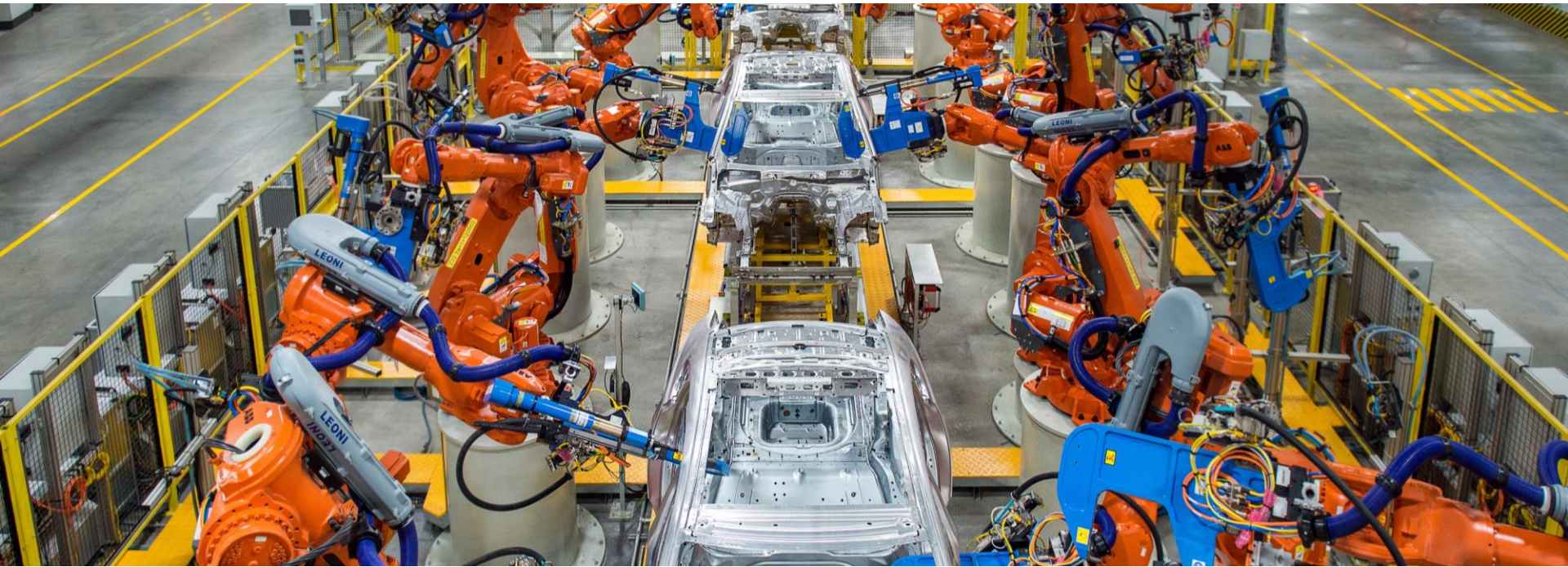
Digital



Responsible



- **Investment /Industrial strategy** (UK post Brexit) & supply chain reform programme to improve efficiency (complexity, consolidation, flexibility, vertical integration & re-use)
- Business case evaluation to consider **Brexit risk & social responsibility** e.g. conflict minerals, pollution /CO2 footprint, energy, water etc.
- **CoC solution providers'** as co-MD's maintain robust commodity business plans/strategies (inc. core competence development) & delivery responsibilities



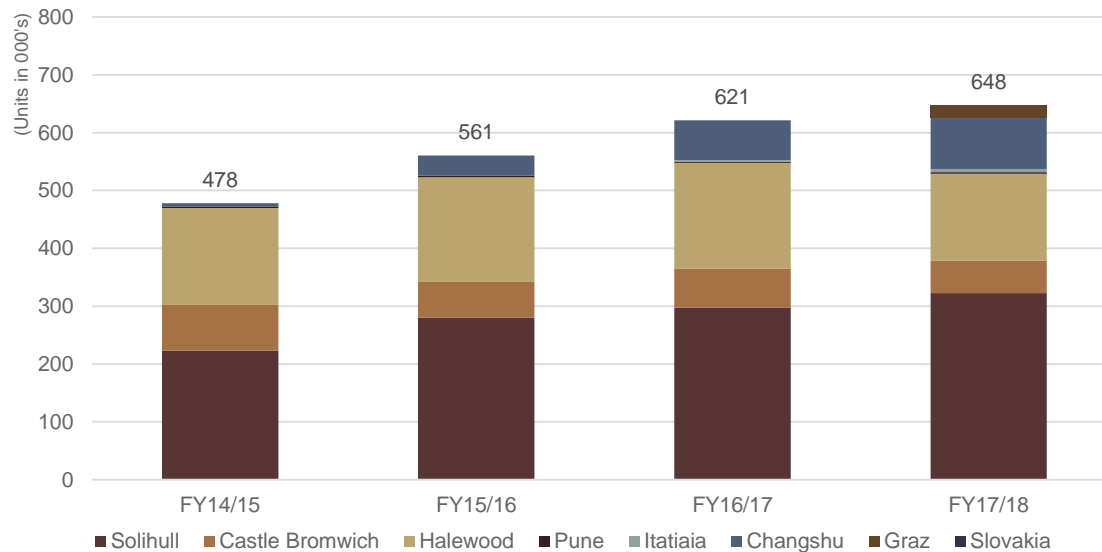
MANUFACTURING

TRANSFORMING OUR COST BASE

GRANT MCPHERSON
EXECUTIVE DIRECTOR, MANUFACTURING

DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Growing our Output through our Capital and Human Assets



JLR product portfolio global assembly locations								
	UK Solihull	UK Halewood	UK Castle Brom	CHINA Changshu	AUSTRIA Graz	SLOVAKIA Nitra	BRAZIL Itatiaia	INDIA Pune
RR	✓							
RR Sport	✓							
Discovery	✓					✓		
F-Pace	✓							✓
RR Velar	✓							
Discovery Sport		✓		✓			✓	✓
RR Evoque		✓		✓			✓	✓
XE			✓	✓				✓
XF			✓	✓				✓
XJ			✓					✓
F-Type			✓					
E-Pace				✓	✓			
I-Pace					✓			

- Global Manufacturing resources have grown to over 23,000 in March 2018
- This includes approx. 4,000 engineers and technicians

DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Core Technologies and a Global Plant Network



Press

8 new press & blanking lines in CB, HW, China & Slovakia incl. servo mechanical technology



Bodyshop

6 state of the art aluminium body Shops (CB, Sol, Slovakia & China) & full upgrade to steel body shops



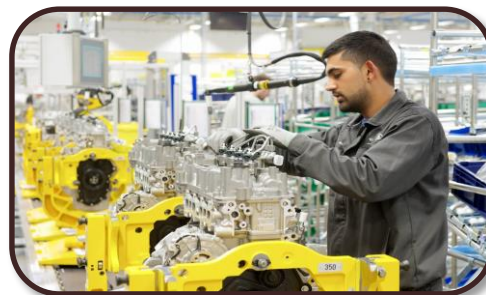
Paintshop

2 new paint shops (China & Slovakia) and automation upgrades for existing sealer and paint application systems in UK



Assembly

4 new vehicle assembly facilities (Sol, China & Slovakia) and upgrades for MHEV & PHEV capabilities



Engine

New Ingenium manufacturing facilities in UK, China and India

DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Global Plant Network (Outside of UK)



Austria (Graz) Full Manufacture
E-Pace and i-Pace



China (Changshu) Full Manufacture
Evoque, Disco Sport, XE LWB, XF
LWB & E-Pace



Slovakia (Nitra) Full Manufacture
Discovery and future models.



Brazil (Local Assy)
Evoque & Discovery Sport

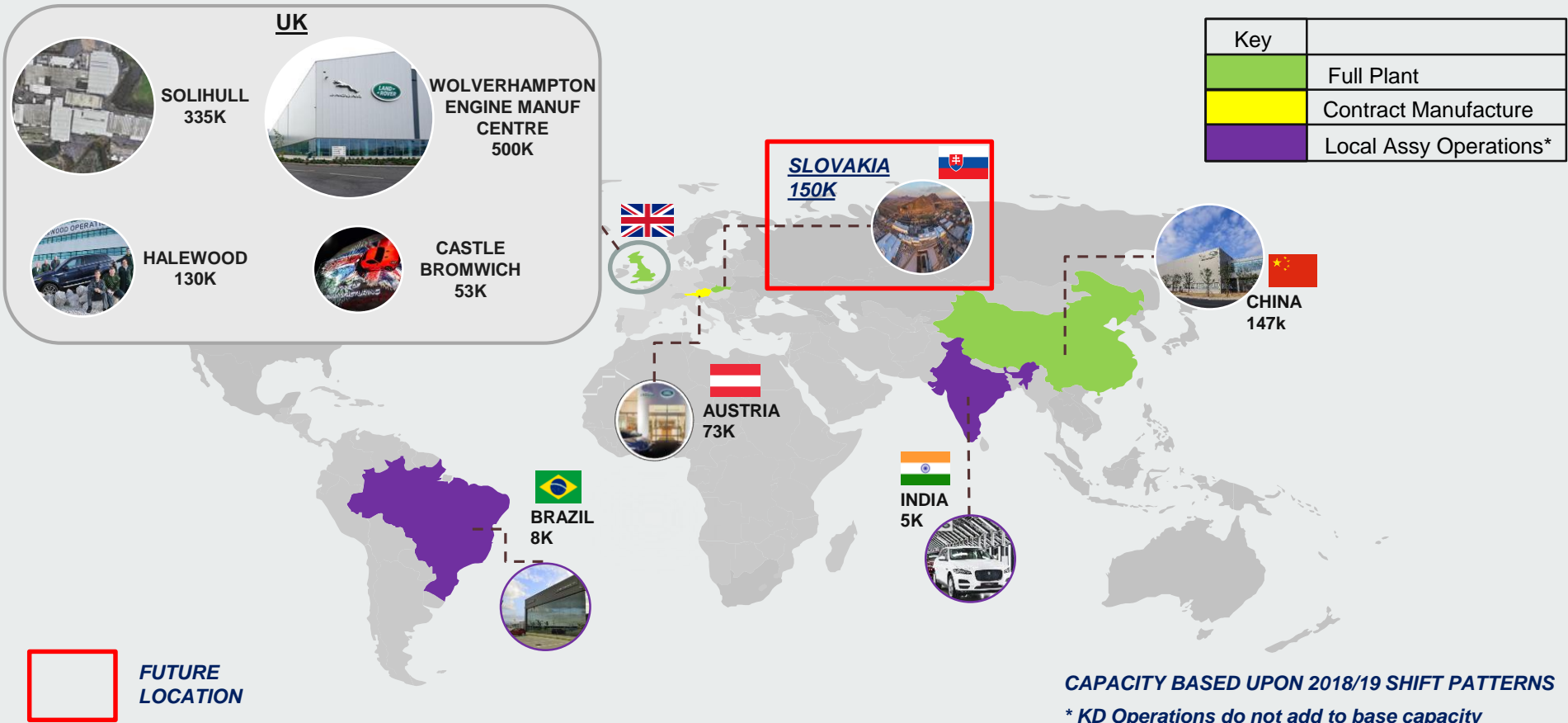


Pune (Local Assy)
Evoque, Disco Sport, XE, XF,
F-Pace & XJ

☐ Future Plans

DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Supporting Key Markets and Accessing a Lower Cost Base

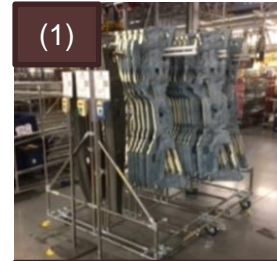


DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Transforming our Cost Base – Examples of productivity 2015-2018



Halewood paint shop – Over 20 robots installed for interior paint reducing headcount (29 heads), reducing basecoat material usage and improving quality



Dash Pad (1) and Fuel Filler Neck (2) trolleys in station reducing steps and avoiding sequencing costs



Solihull FA2 – 290 heads saved per shift since 2015 by increasing Value Added Utilisation of associates through Kaizen



Implementation of Automated Guided Vehicles across multiple locations (average save 1 head/shift per AGV)



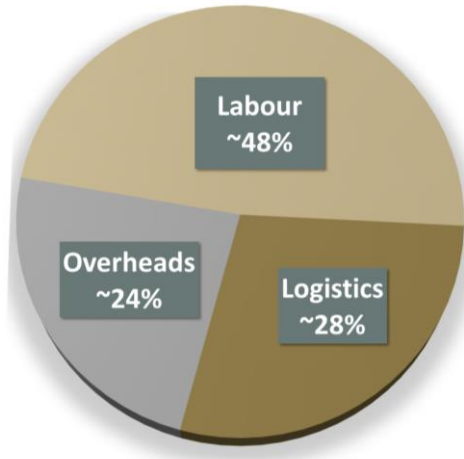
Re-tender and contracts negotiation, routes optimization, improved packaging solutions and utilisation of connected car technology delivering over £40m of freight positive performance in FY18

DEVELOPING A GLOBAL MANUFACTURING CAPABILITY

Transforming our Cost Base



Manufacturing Cost Structure 18/19



Total: c£2.8bn

Cost Transformation - Workstreams

Our target is to close any productivity gap to our near-facing competition*,

(*Harbour hours per car industry benchmarks).

- Leverage new product architecture commonality and scale efficiencies through *Design for Assembly & Design for Logistics*
- Grow facility utilisation and energy efficiency with technology application and best practice maintenance systems
- Lean Toolset application for manpower productivity, throughput and space
- Access lower cost base as we develop our operational footprint eg Slovakia
- Enhance logistics infrastructure and systems for inbound supplychains
- Re-engineer line-side material supply eg AGV delivery >80% for new plants
- Outbound logistics using autonomous vehicle capabilities

Labour productivity benchmarking
(185 Global Plants, 19 OEMs, Hours Per Unit)

Harbour Report 17 ® - Oliver Wyman

JLR Plants rank in 3rd place for short term productivity improvement -3.7% in 1 year
JLR Plants rank in 5th place for medium term productivity improvement -14.8% in 4 yrs

Halewood Plant ranked as most improvement plant in 2017 Report -12% in last year

NEW SLOVAKIA PLANT ON TRACK FOR JOB #1 IN SEPTEMBER 2018

New model plant in eastern europe



First Phase with 150k units per annum capacity, Body in White, Paint Shop and Trim & Final Assembly, protection to grow to 300k units per annum



'Model Plant' technology installation completion in April 2018 for BiW, Paint Shop and Trim & Final



Discovery launch activity began November 2017, target Job #1 September 2018 and prepared for further new model in 2019



Over 1,000 local employees now recruited and onboarded, accessing lower cost base in Manufacture and Supplychain



JAGUAR LAND ROVER INVESTOR DAY

FINANCIAL STRATEGY

KEN GREGOR
CHIEF FINANCIAL OFFICER

Overall, long term profitable growth delivered

Recent headwinds and lower profitability



Jaguar Land Rover has delivered solid performance over the long term, through exciting products, strong profits and investing in our future

Over the period FY11 to FY18 JLR has:

- Increased revenues by 15% CAGR to £26 billion
- Generated PBT of over £14 billion
- Invested over £20 billion in new products, technology, capacity and infrastructure
- Delivered over £3 billion cash flow (after funding the investment)

And, we have exciting products and plans in the pipeline to generate sustainable, profitable growth

However, in the past 3 years, we have had slower volume growth and experienced lower profitability , reflecting:

- Market and economic headwinds including diesel uncertainty, Brexit and market cyclicality
- Higher incentive spending in competitive markets
- Negative operating leverage from lower volume growth and higher D&A expenses

JLR is taking action to address these challenges



We are taking actions to address these challenges

- Volume growth plans moderated to reflect revised market conditions
- Driving cost efficiencies and operating leverage across the business
- Tough choices made on investment plans to meet affordability criteria whilst remaining competitive and innovative

We are targeting sustainable profitable growth with positive cash flow over the medium to long term

- Sales growth supported by new products and technology
- Continuing to invest in world class capabilities and infrastructure
- Improving contribution margins and operating leverage
- Moderating investment to c. 12-13% of revenue whilst ensuring competitiveness

Medium term targets

Volume growth	>> Premium Segments
EBIT %	4-7%
Investment	c. £4.5b p.a. in FY19-21

Long term targets

Volume growth	>> Premium Segments
EBIT %	7-9%
Investment	c. 12-13% of Revenue



DELIVERING ON THESE PLANS

Present lower margins targeted to improve

New long term EBIT target for ACES, PD capitalisation change



Business challenges

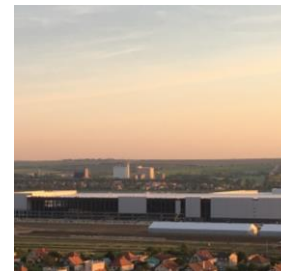
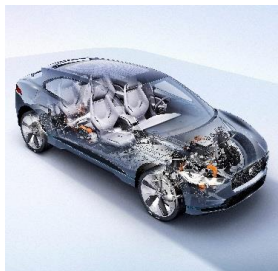
Geopolitical and economic environment, including Brexit

Market and competitive forces -higher incentives

Electrification, diesel uncertainty and emissions compliance

Driver assistance, connectivity and mobility trends

High capital investment, new capitalisation policy



Growing premium segments

Exciting new products

Improve operating leverage

Drive cost efficiencies

Modular architecture strategy

Profit improvement drivers

FY18 EBIT

3.8%

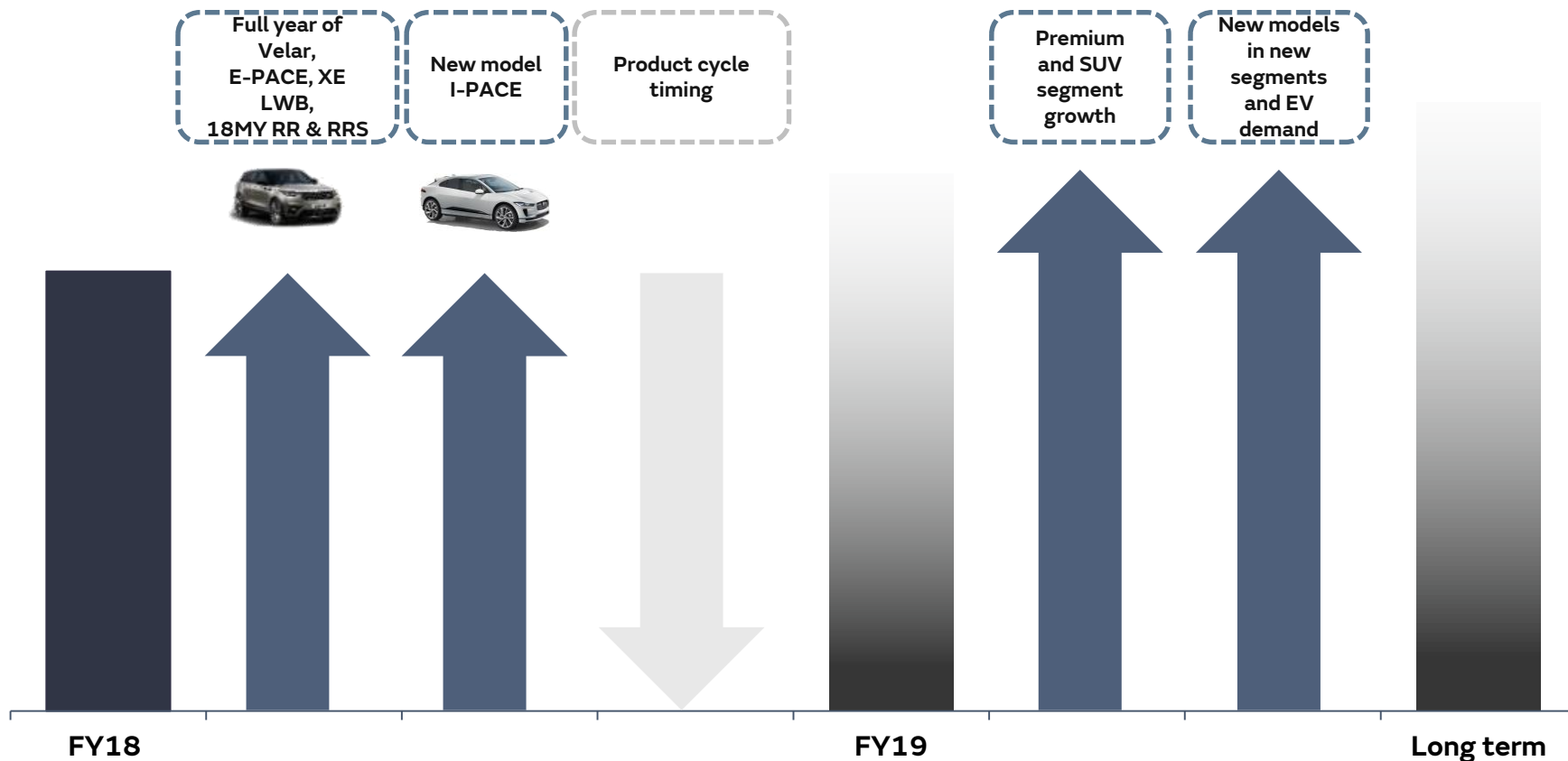
Target 4 – 7% EBIT in the medium term

Long term EBIT Target

7-9%

Continued volume growth expected

New models, new segments and premium segment growth



12 nameplates in FY18, growing to 16 by FY24

Velar / E-PACE launched. IPACE, Defender and 2 more to come



LUXURY



XJ



XF



XE

SPORTS



F-TYPE

LIFESTYLE



F-PACE



E-PACE



I-PACE

LUXURY – RANGE ROVER



RANGE ROVER



RANGE ROVER SPORT



RANGE ROVER VELAR



RANGE ROVER EVOQUE

LEISURE - DISCOVERY



ALL NEW DISCOVERY



DISCOVERY SPORT

DUAL PURPOSE - DEFENDER



LAND ROVER DEFENDER
Replacement in development

plus 2 additional
nameplates to come...

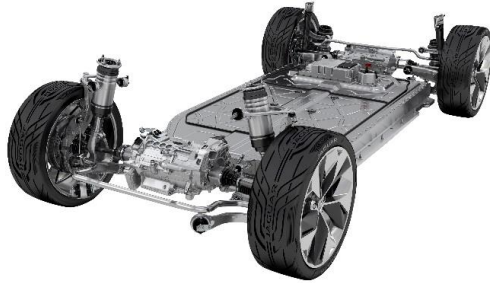


Focus on cost

Examples of initiatives undertaken



Engineering



Modular longitudinal architecture (MLA) -increased flexibility, commonality, standardisation & scale

Products designed and engineered **without unnecessary complexity**.

Global presence to tap into relevant skillsets cost effectively

Increased in-house engineering to reduce development cycle times and to develop our intellectual property

Collaborations and Partnerships to spread investment

Sourcing & Negotiation



Global sourcing and supply base to drive cost savings, improving flexibility and logistics (e.g. China, Hungary, Slovakia)

Consolidation and Architecture approach to drive economies of scale

Total value management and 'should design @ should cost' to drive cost focus

Focus on costs

Examples of initiatives undertaken



Manufacturing & Logistics



Harbour benchmarking productivity

Investments in new state of the art facilities designed for efficiency and quality

Global manufacturing (e.g. SK, CN)

Further in-sourcing (e.g. engine manufacture from Ford)

Improved logistics and supply designs

Marketing & Sales



Dual branded distribution to facilitate sales, distributions and service synergies for JLR and retailer network

Majority shareholder in own ad agency (Spark 44) facilitates FME efficiencies

Extended S&OP to balance supply and demand thereby reducing inventory and VME costs

Corporate & Admin

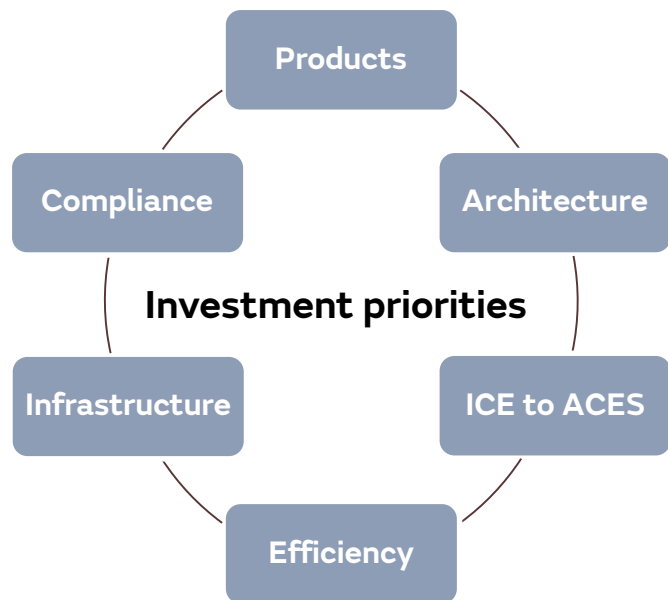


Manage SG&A cost inflation below revenue growth

Pension costs reduced: Agreement in April 2017 to changes in legacy defined benefit pension plans delivering £437m credit in FY18 and ongoing savings

Investment in infrastructure and IT to achieve efficiencies, e.g. improved analytics to support decision making

Capital allocation principles



Financial management

- Return on investment
- Affordability of overall spend versus operating cashflows
- Investment % Revenue
- Capex to D&A ratio

Efficiency drivers

- Architectures - MLA
- Commonality
- Flexibility
- Execution

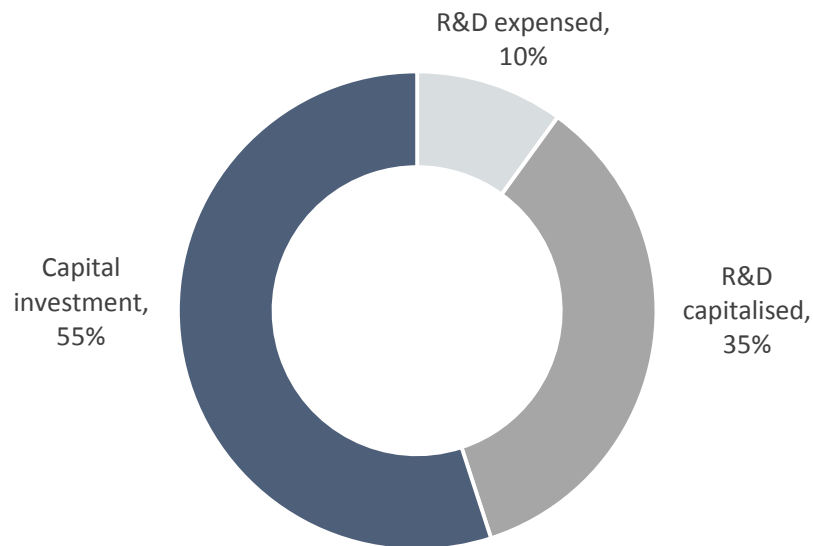
Investment to be c. £4.5b p.a. between FY19-21 and subsequently targeted at c. 12-13% of turnover

Investment in new models, technology, capacity

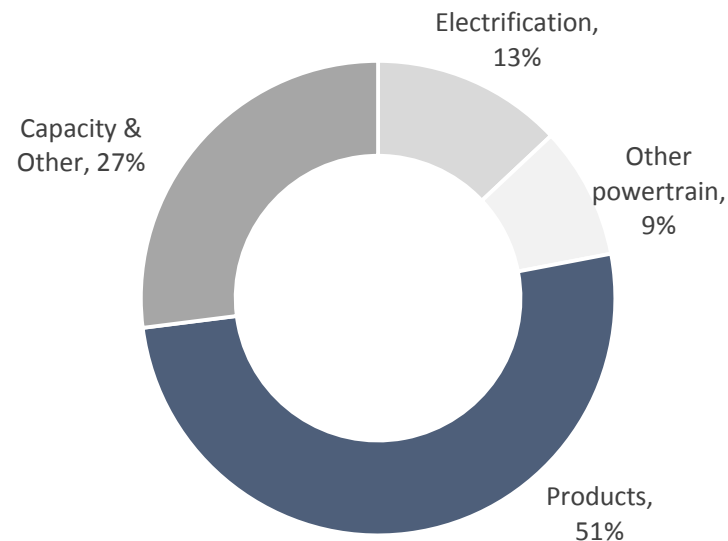
Significant investment in electrification and MLA



Long term R&D and capex



Long term Investment by activity



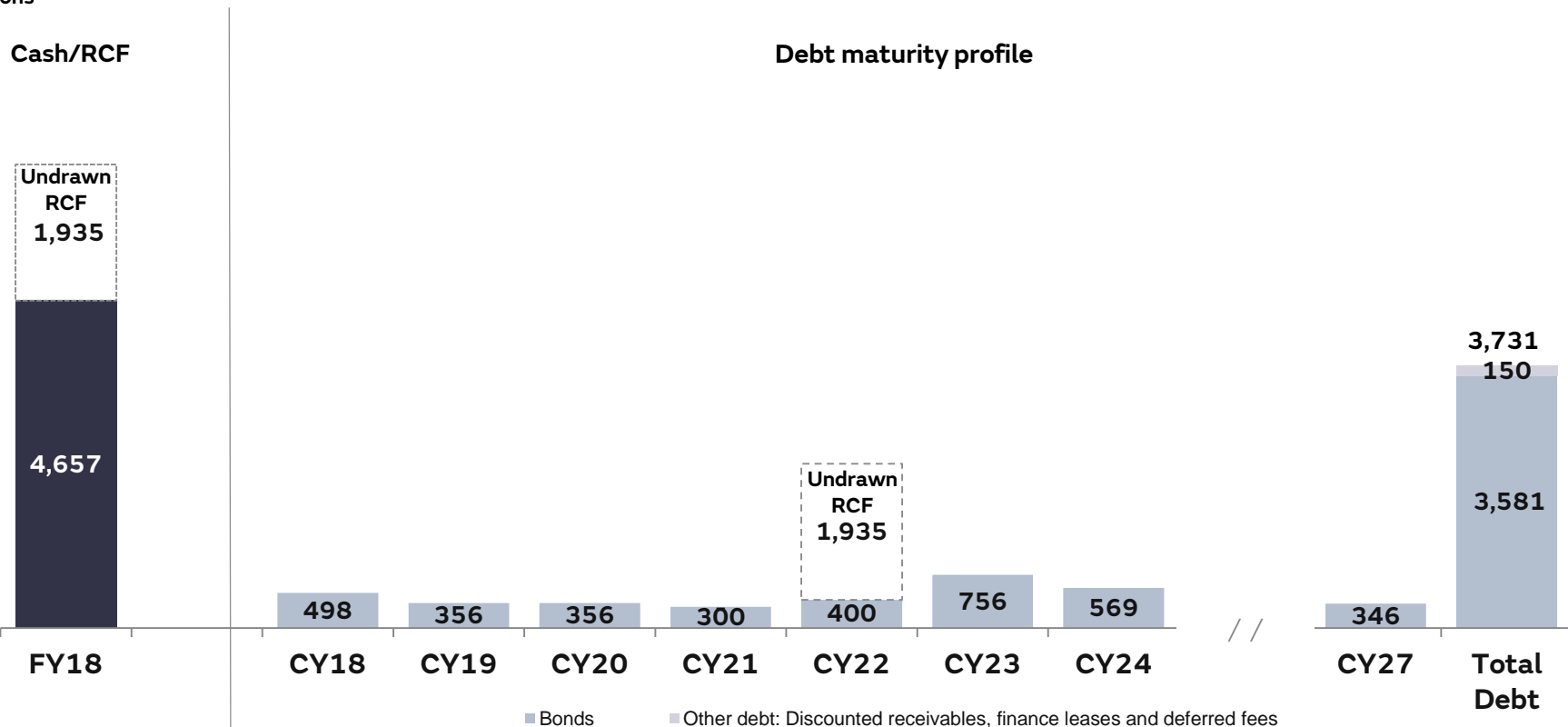
Product development capitalisation policy change resulting in capitalisation of c. 70% from c. 85%, effective 1 April 2018

£4.7b cash, £1.9b undrawn RCF

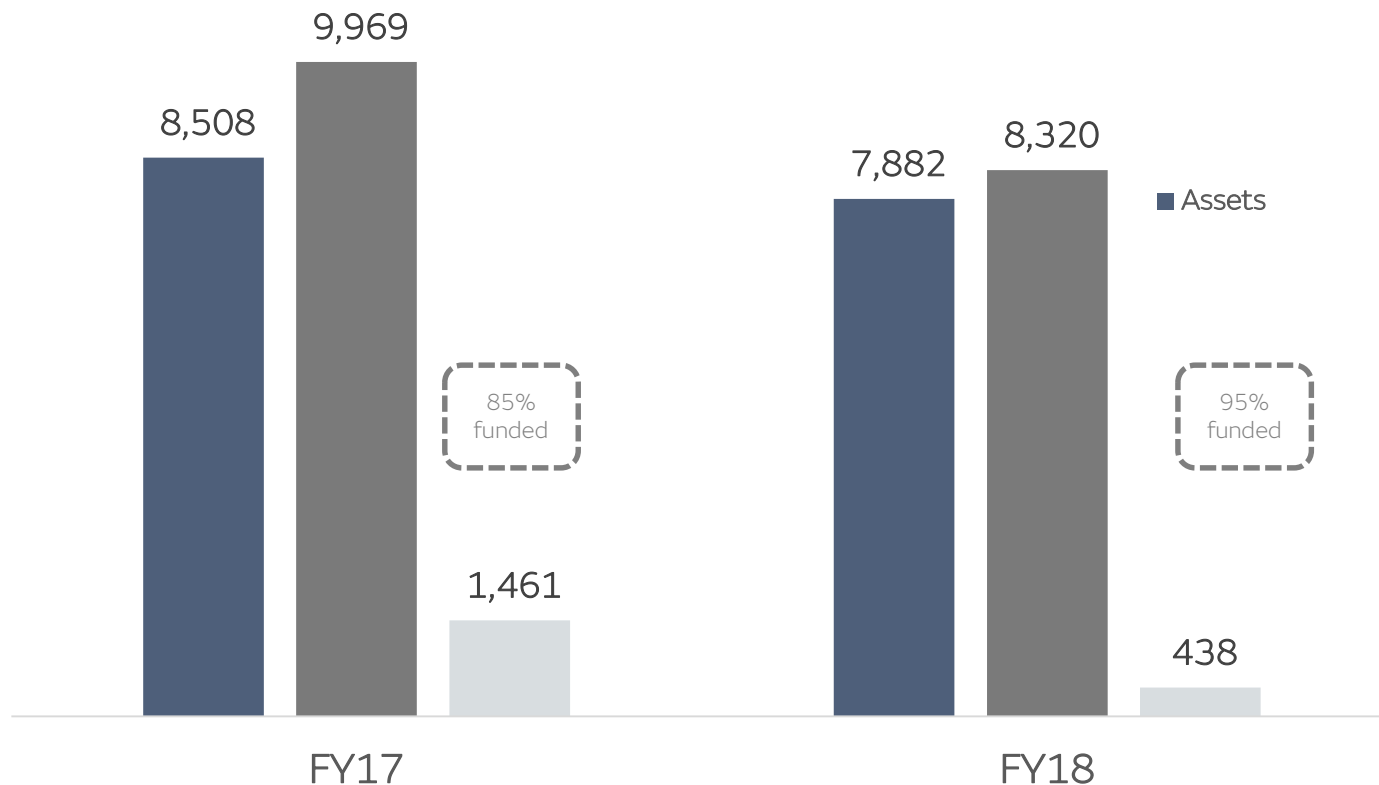
Debt maturities spread evenly over 10 years



£ millions



Our pension funds are well funded



- £437m Q1 FY18 credit
- Higher discount rate reflecting increased corporate yields
- Updated actuarial table
- Experience updated, lower funding requirement

Conclusion



- JLR has delivered strong performance over the long term through exciting products, solid profits and investment in our future
- However, in the past 3 years, we have had slower volume growth and lower profitability

We are taking action to address the challenges:

- Sales growth supported by new products and technology but assuming lower growth rates to reflect recent experience
- Improving contribution margins & operating leverage through driving cost efficiencies and operating leverage across the business
- Continuing to invest in world class capabilities and infrastructure, prioritised to meet affordability criteria whilst remaining competitive and innovative
- Cash flows targeted to improve as we deliver on these plans; but will remain negative in the near term.

We are committed to achieving sustainable profitable growth
with positive cash flow in the medium to long term

Medium term targets

Volume growth	> Premium Segments
EBIT %	4-7%
Investment	c. £4.5b p.a in FY19-21

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