



# NAIAS

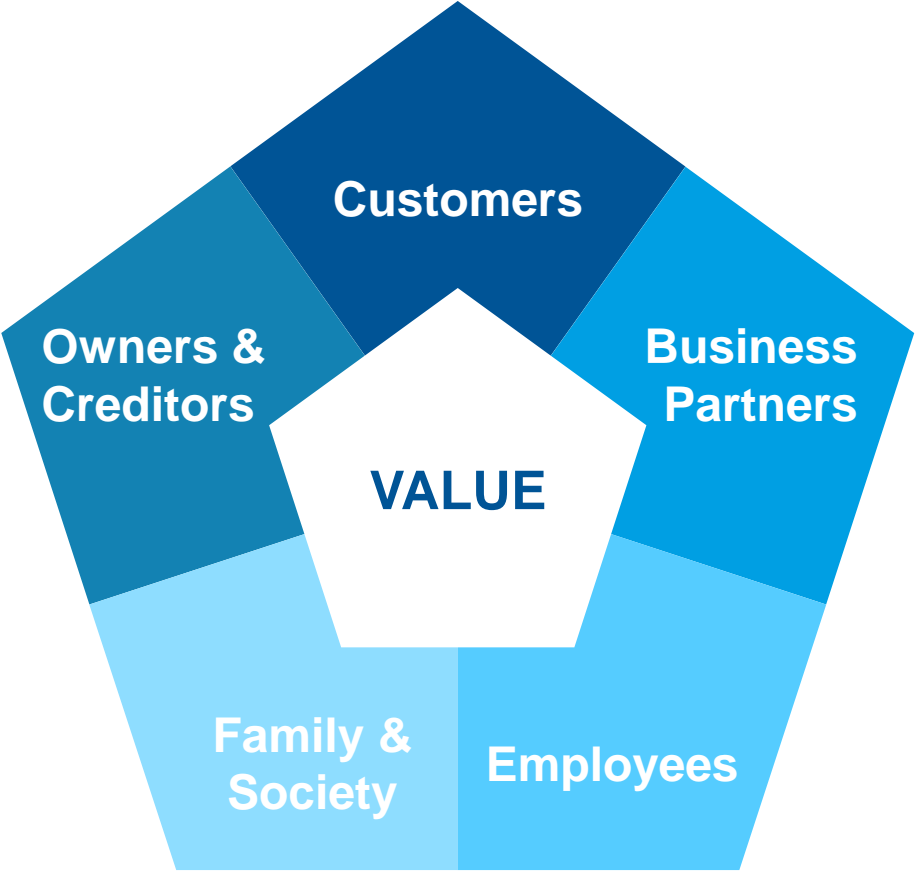
Detroit, MI

Jan Carlson, Chairman, President & CEO

January 10-11, 2017

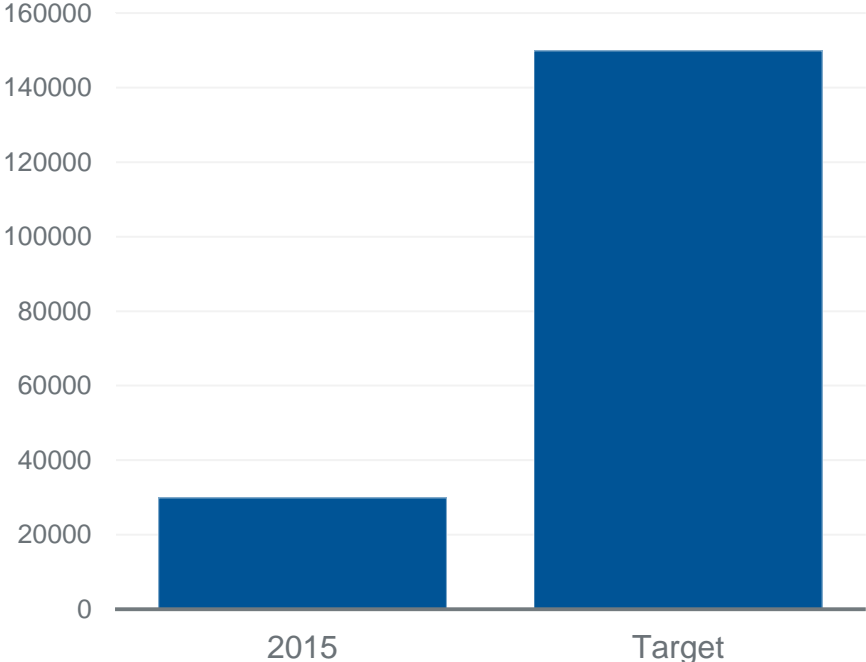
**Autoliv**

# Saving Lives and Creating Value



# We Save More Lives while Creating Value

Human lives saved by our products  
*... additionally they prevent ten times as many severe injuries*



# Our Guiding Principles



## OUR VISION

**Saving more  
lives**

## OUR MISSION

To be the  
leading supplier  
of Safety Systems  
for the Future Car,  
well integrated  
with Autonomous  
Driving

## OUR VALUES

**One Autoliv  
Transparent  
Innovative  
Agile**

# Our Strategy to Stay Ahead

Quality is our first priority, in all we do



🚦 Q5 is about Quality in all dimensions and is our journey towards “Zero Defects”

# Our Strategy to Stay Ahead

Relentless focus on Operational Excellence



**Zero Defects** by flawless execution



**One Product One Process** to improve cost effectiveness and robustness

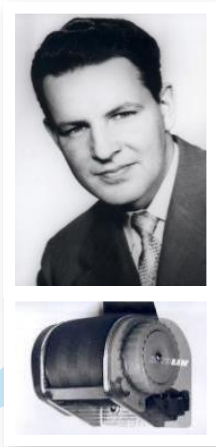


**Innovation** to lead industry in Real Life Safety



# Industry Pioneer with Strong Heritage

More than 60 years of innovation in Automotive Safety



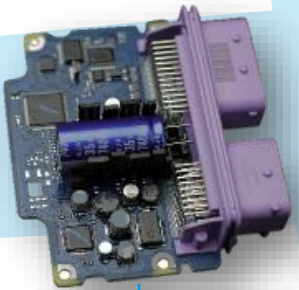
1950s



1980s



1990s



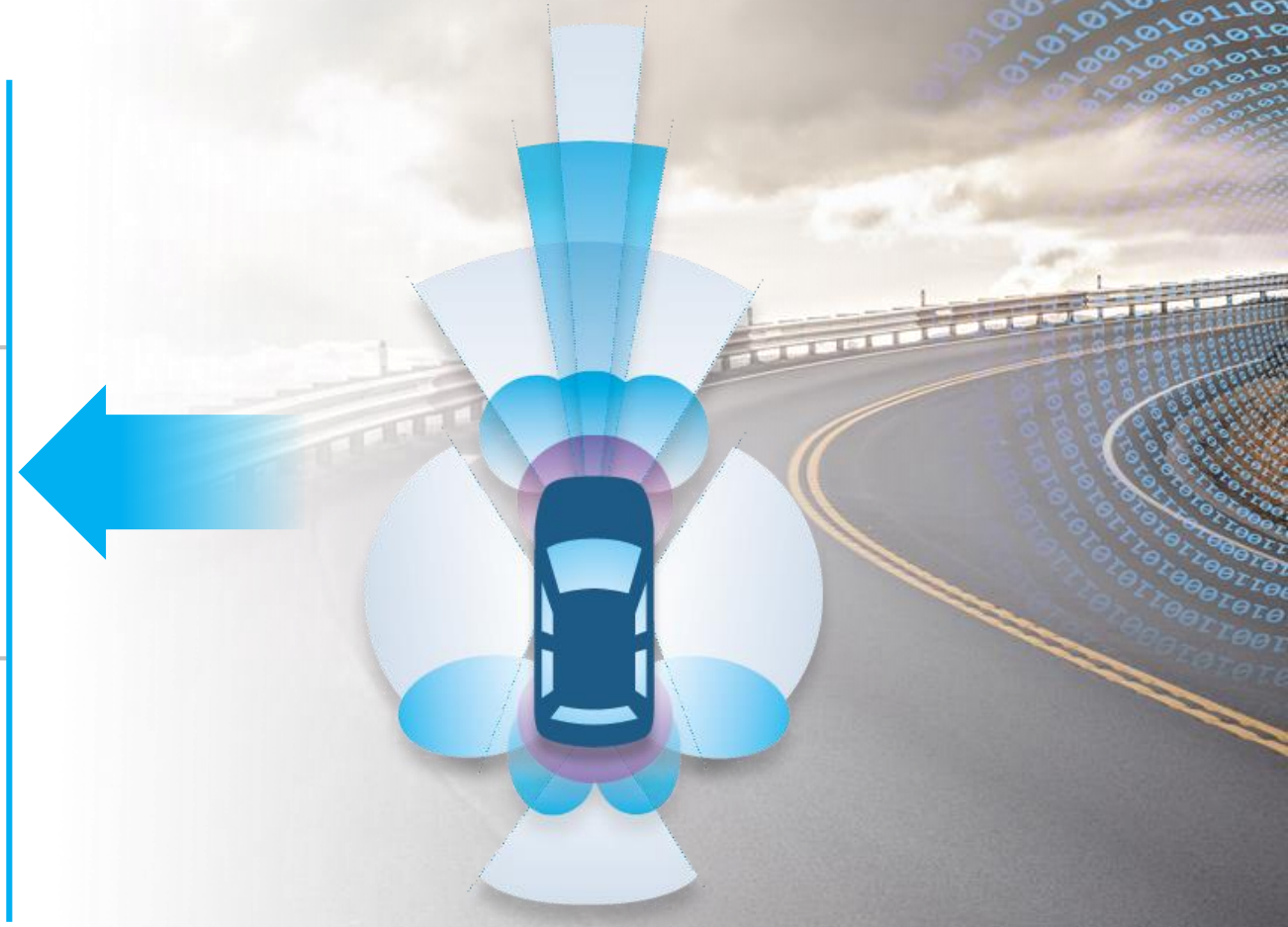
2000s



2010s

# Changing Industry Landscape

New technology change the way we drive and shape competition





# Real Life Safety

The Road to Saving More Lives



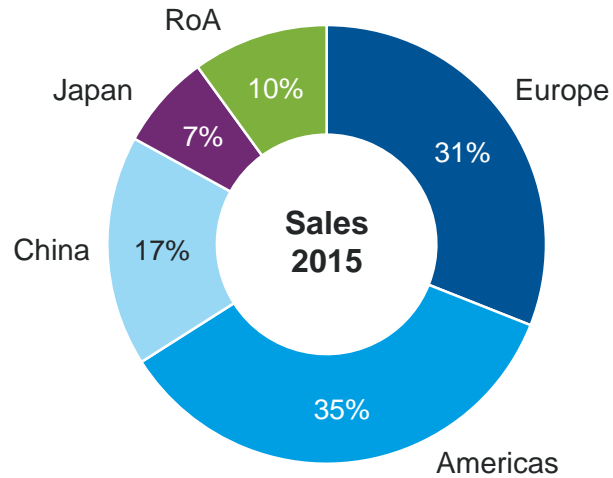
Beyond Standardized Test Scenarios...

...Towards Real Life Situations and Benefit

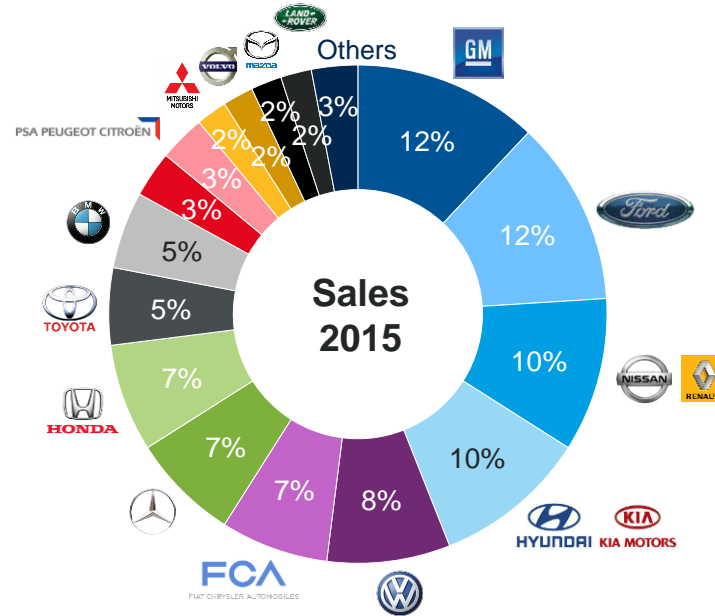
# Autoliv Today\*

A global leader in Automotive Safety with a well-balanced footprint

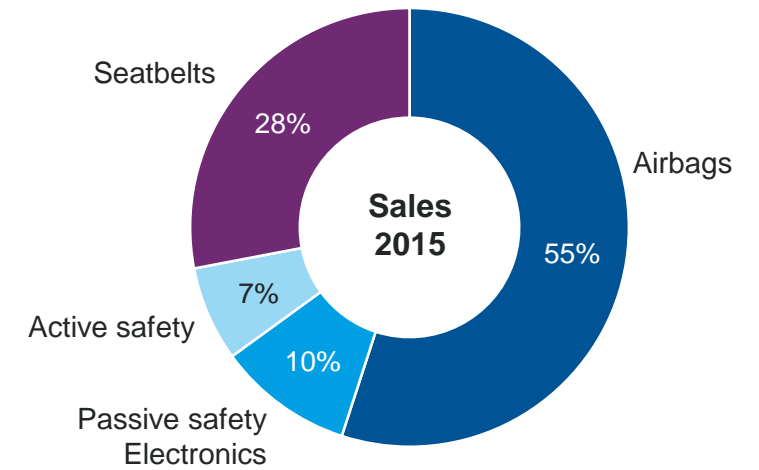
Global Footprint



Customers



Products



~67,000 ASSOCIATES  
WHERE OF ~6,000 IN  
R,D&E

~83 FACILITIES IN  
27 COUNTRIES

SALES TO ALL MAJOR  
VEHICLE  
MANUFACTURERS

21 TECHNICAL CENTERS  
20 CRASH TEST TRACKS

SALES AND TECHNOLOGY  
LEADER

S&P 500 company with sales of \$9.2B in 2015

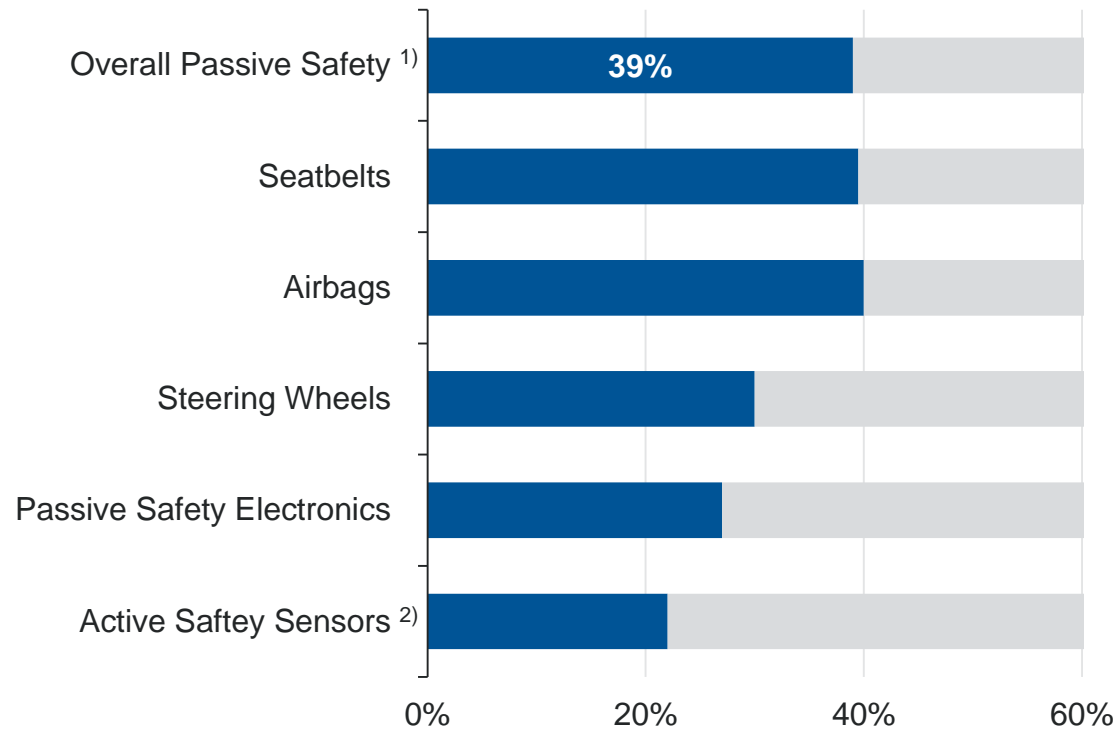
(\* ) 2015

# Market Shares 2015

## Global Safety Market Share by Product

Autoliv's share

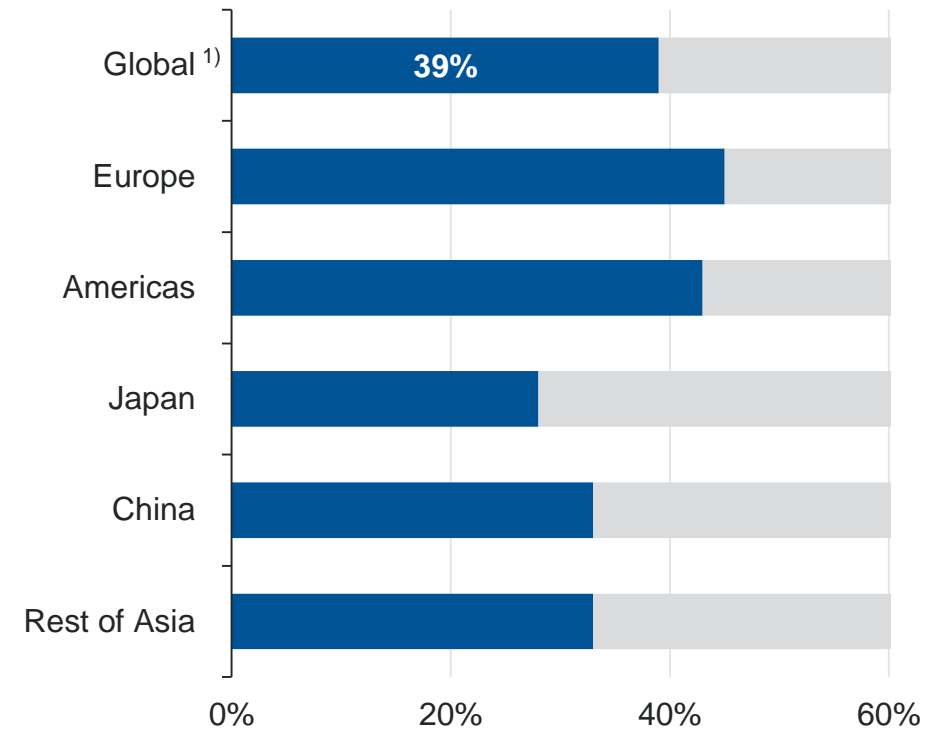
### Market share by Product



1) Airbag, steering wheel, seatbelt.

2) Radar, night vision, mono/stereo forward sensing

### Market share by Region



# Long-term Targets

Remain unchanged

Organic\* sales growth at least in line with our market

... and faster than our market including acquisitions.

Operating margin\* range 8-9% over the business cycles

... US GAAP excl. costs related to the antitrust matters.

EPS\* growth faster than organic sales growth

... US GAAP excl. costs related to the antitrust matters.

Net Debt\*/EBITDA around one times (Debt Limitation Policy)

... and within the range of .5 and 1.5 times.

Underlying Debt Policy is to remain “Strong Investment Grade”

*(\*) Non US GAAP, Net Debt adjusted to include Pension Liability*

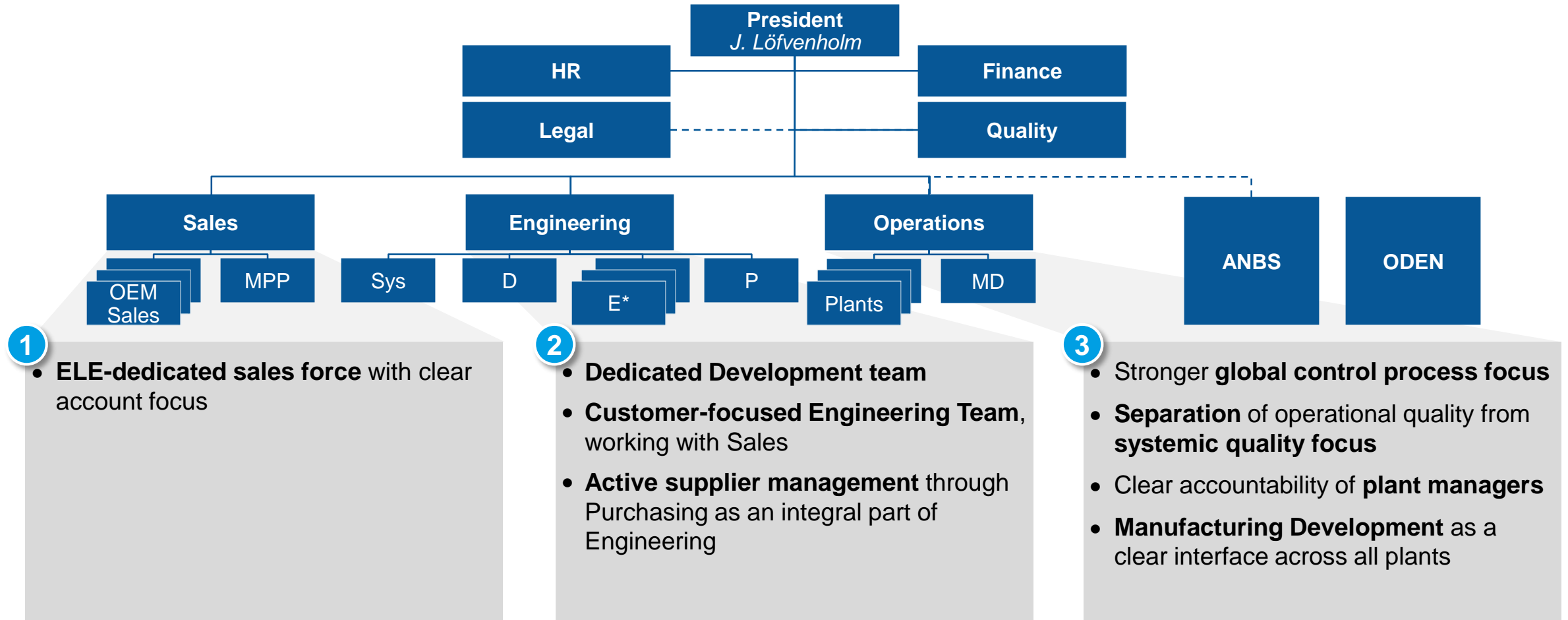
# End of Decade Targets

CMD – October 2015

- Changing industry landscape
- Focus on Quality and Real Life Safety is our way to stay ahead
- Strategic targets through end of decade:
  - Sales target is \$12B with an ambition to reach up to \$15B
    - **Expect to Surpass \$12B in 2019 based on Q2-2016**
  - Expand our presence in our new more than \$12B market
  - Grow EPS faster than our Sales growth rate
  - Investing in growth is our priority, excess Free Cash flow is returned to shareholders over time



# New ELE Operating Model focuses on customer centricity and simplicity, in line with design principles



# Benefits of the new Operating Model

## Key benefits



### Customer impact

- **Strong customer focus** in Sales and OEM Project Managers in Application Engineering
- **Fully aligned market view and product roadmaps** between Sales, Engineering and Operations



### Financial impact

- **Single points of accountability** for key decisions and critical financial metrics
- **Improved efficiency** in current production and pre-launch through improved **joint work** between Sales, Engineering and Operations



### Team impact

- **Build a winning mindset and attract key talent** through improved training and new hire integration
- Development with **empowered, dedicated talent pool** for undivided product focus

# Three Pillars of Autoliv Electronics

## Autoliv Electronics


### Passive Safety Electronics

**Passive Safety Electronics**  
2015 approx. \$1B



### Active Safety

**Active Safety**  
2015 approx. \$600M



M&A MACOM  
SW IP - Volvo

### Active Safety

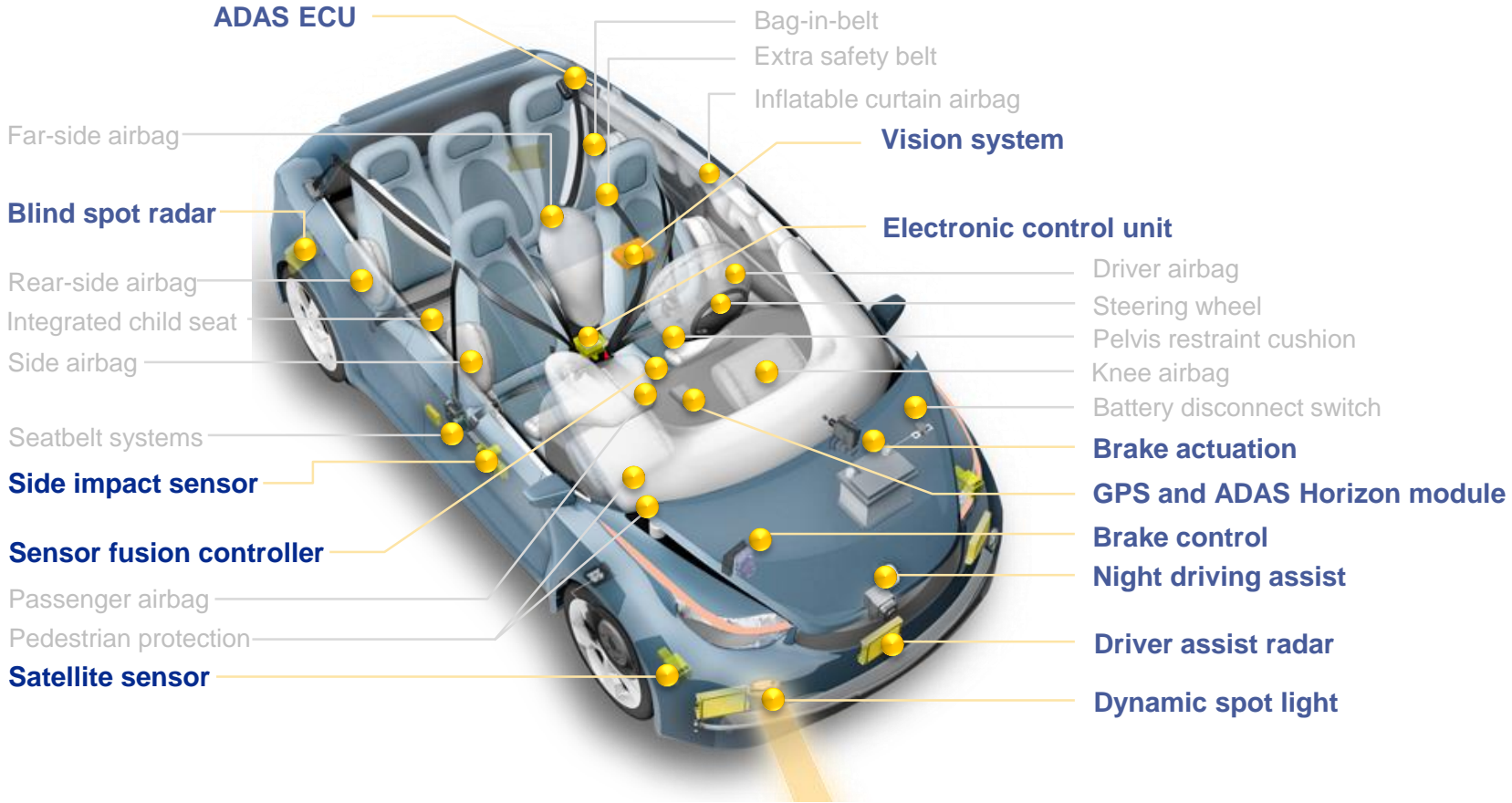
**Brake Control Systems**  
Launched April 2016



ANBS- JV with  
Nissin Kogyo



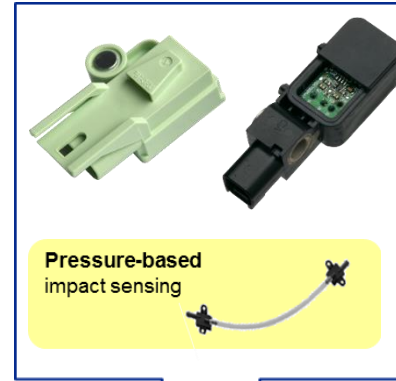
# Increasing Safety Electronics portfolio....



# Passive Safety Electronics Portfolio



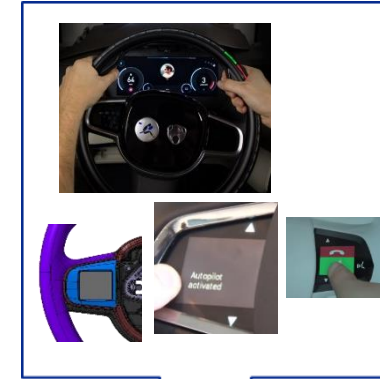
ECUs



Satellite Sensors  
& Systems



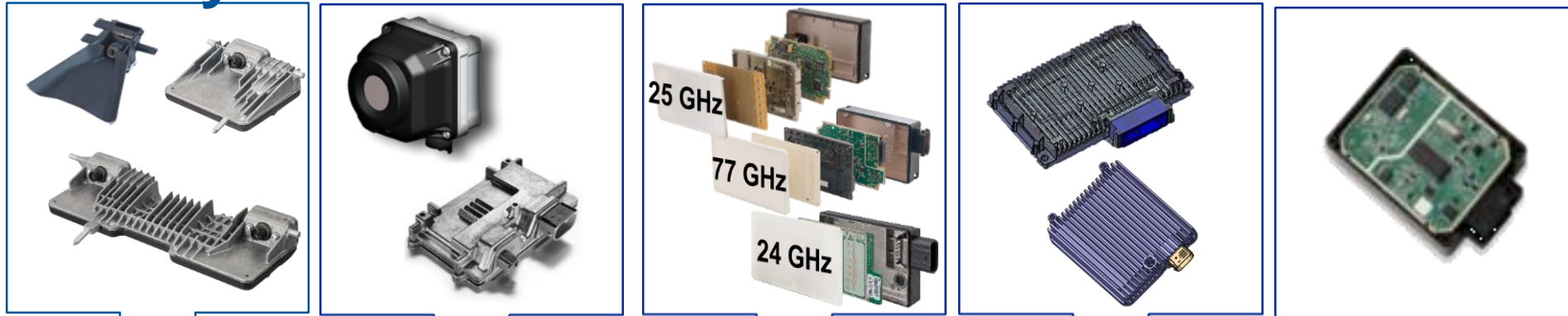
PrePretensioners



Steering Wheel  
Electronics

- World leader in restraint control ECUs and Satellite Sensors
- World leader in IMU Integration into airbag ECUs
- World leader in Pre-Pretensioner controls

# Active Safety Product Portfolio



Mono / Stereo  
Vision

Night Vision

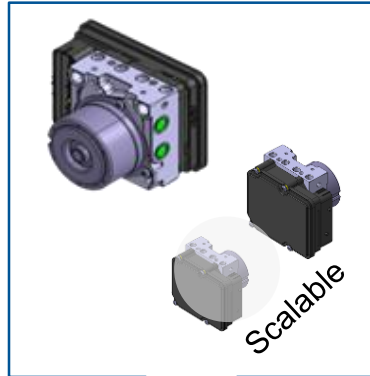
Radar

ADAS ECUs

GPS  
ADAS Horizon

- Monovision in production since 2011
- Stereovision production launch 2016
- World leader in Night Vision
- Full Radar portfolio - Rear, Corner & Forward Applications
- ADAS ECU production launch 2016
- GPS and ADAS Horizon capability acquired 2015

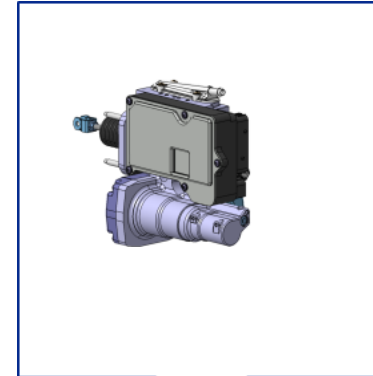
# Brake Systems Portfolio



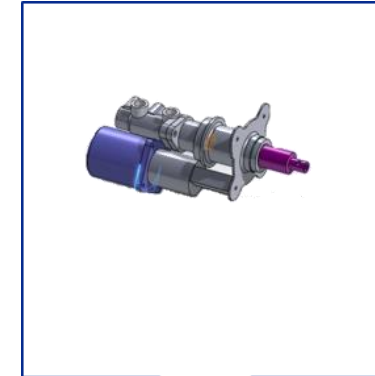
ABS / ESC



Power Brake  
Actuator



Integrated  
Systems



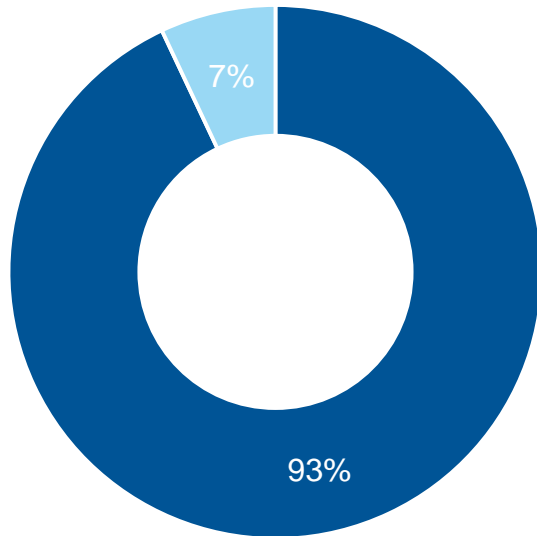
eBooster

- JV with Nissin Kogyo Launched April 2016
- Leading Technology for Hybrid and Electric Vehicles

# Eliminating human error by Autonomous Driving can prevent millions of crashes ...

...while adding convenience

Traffic fatalities



■ Human Error ■ Other

## Autonomous Driving:

- Prevents millions of crashes
- Reduces the severity of injuries and property damage

## Additional Benefits:

- Increases driver comfort and productivity
- Uses infrastructure more efficiently
- Improves mobility



# Automated Driving Roadmap



Feet off

2000

2015

Hands off



Eyes off

2018

2020

Mind off



Driver off

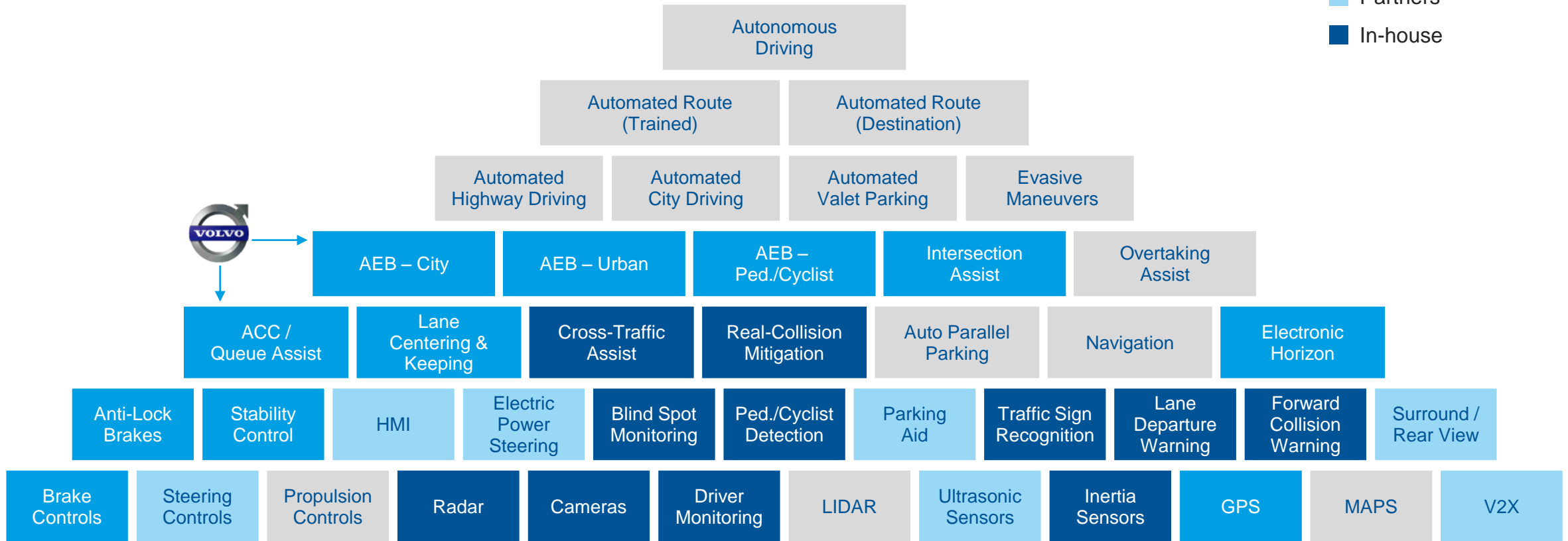
>2020



# Towards Autonomous Driving the Real Life Safety way

Our current footprint within the pyramid

- Recent JVs and M&A
- Partners
- In-house



**Autoliv-Nissin**  
Brake Systems

**MACOM**<sup>TM</sup>

**Autoliv**

# Enhancing our Growth and System Capability

## Autoliv and Nissin Kogyo form a Joint Venture

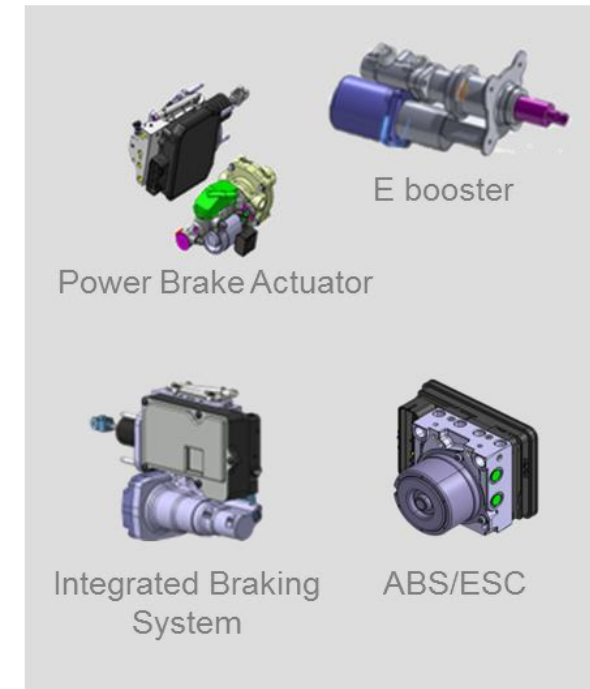
### ■ Overview

- Closed March 31, 2016
- Strengthens our product portfolio towards autonomous driving
  - Technology and knowledge in brake control and brake apply
- Manufacturing footprint in Japan, China and US
  - Includes a workforce ~1,800 associates
- Reported in the Electronics business segment
  - As a 3rd product category

### ■ Autoliv Financial Impact

- Purchase Price JPY 29.7 billion (~\$265M) for 51% ownership
  - Subject to post-closing adjustments
- Consolidation 100% of the Balance Sheet and P&L
- Eliminate 49% of the net earnings (minority interest)
- Included in the FY-2016 Indication (as of April 29, 2016)
  - Sales between \$400 to \$450M
  - Integration and Purchase accounting related costs combined \$20 to \$30M

### Autoliv-Nissin Brake Systems

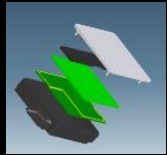


🚦 The ANBS JV provides additional building blocks towards Automated Driving



# Autoliv on the New Mercedes E-Class

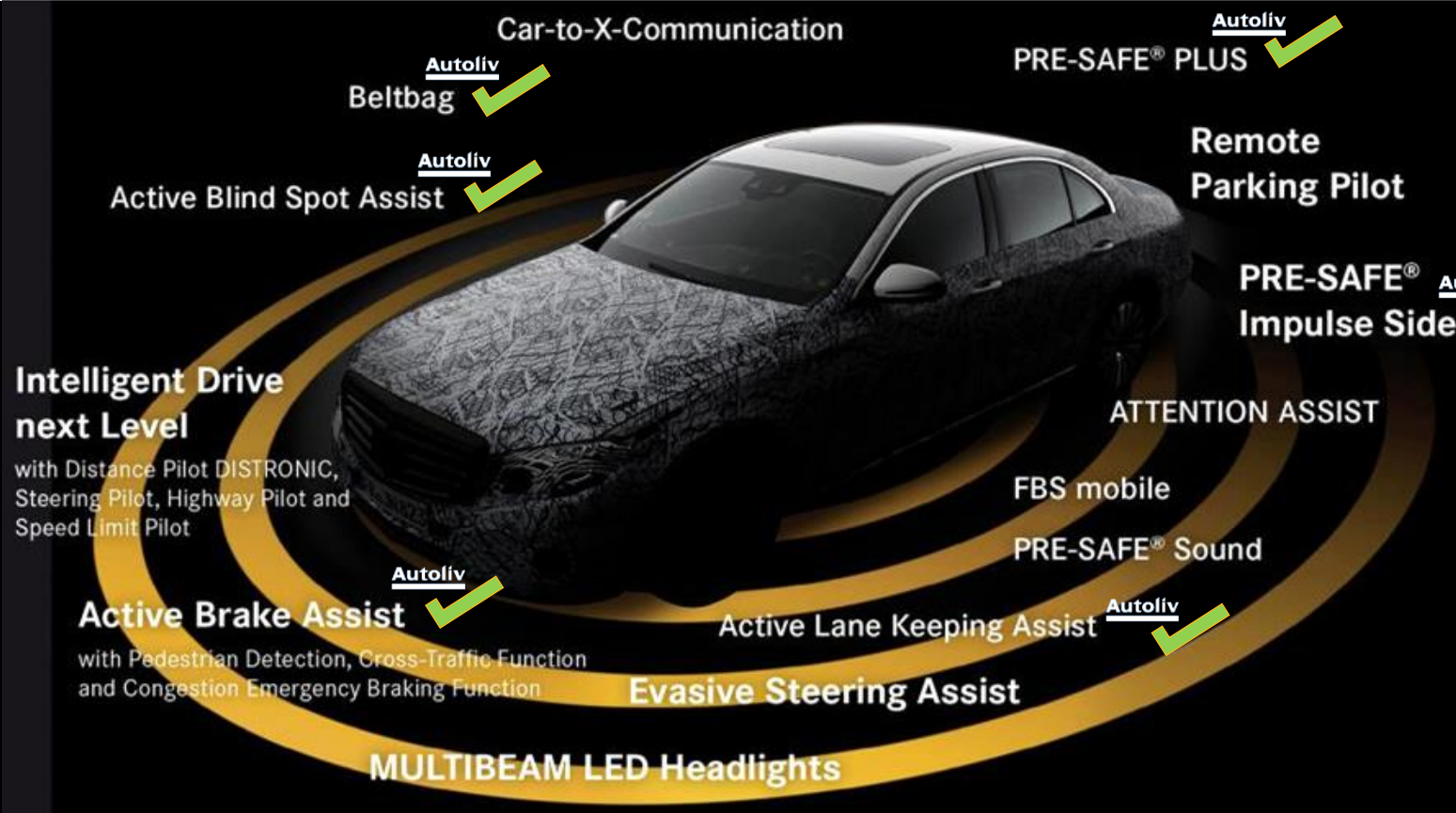
Radars



ADAS ECU



Cameras



# Functions Developed for the New E-Class

## ▪ Mono Vision

- Lane Detection
- Light Source Recognition
- Traffic Sign Recognition
- Calibration and diagnostics

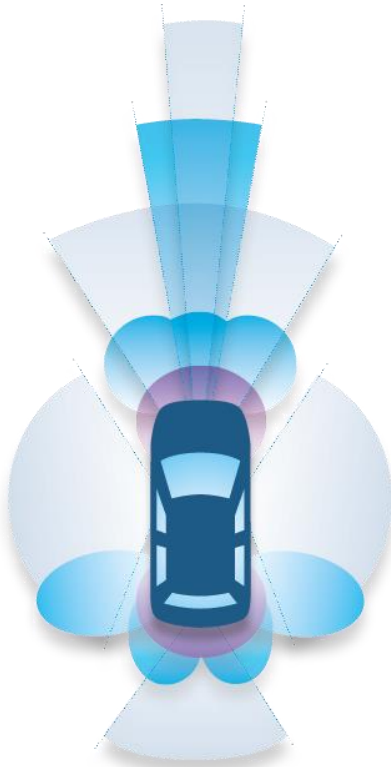
## ▪ Stereo Vision

- Mono Vision functions +
- 3D Lane Detection
- 3D Object Detection including classification (Vehicle, Pedestrian, Cyclist/motor cyclist, Truck)
- General Object Detection
- Road Surface Profile (only with 22cm Stereo version)
- 3D online calibration

## ▪ Mono and Stereo Vision

- Lane Departure Warning *and* Lane Departure Prevention (using brakes to keep vehicle in lane in the event of unintentional road departure)
- High beam control, including actuator control
- Traffic Sign fusion with map data (fused traffic sign between camera and map data is shown to the driver in the instrument panel)

# The role of the joint venture solutions

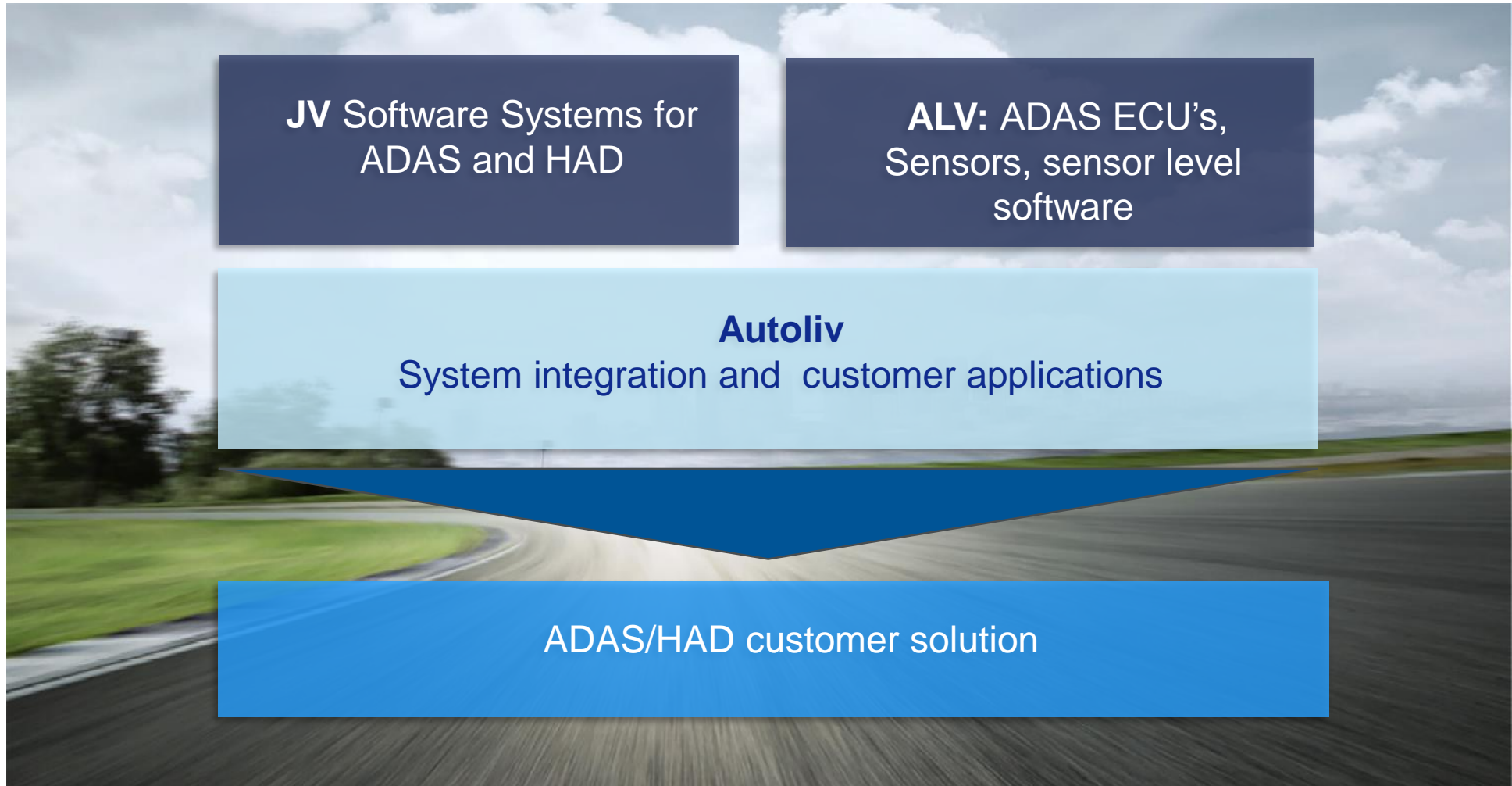


## AUTOMATED DRIVING MODEL

1. Sensors to see the environment
2. Intelligence to interpret and make decisions –  
Role of Autoliv-Volvo joint venture
3. Actuators to execute decisions

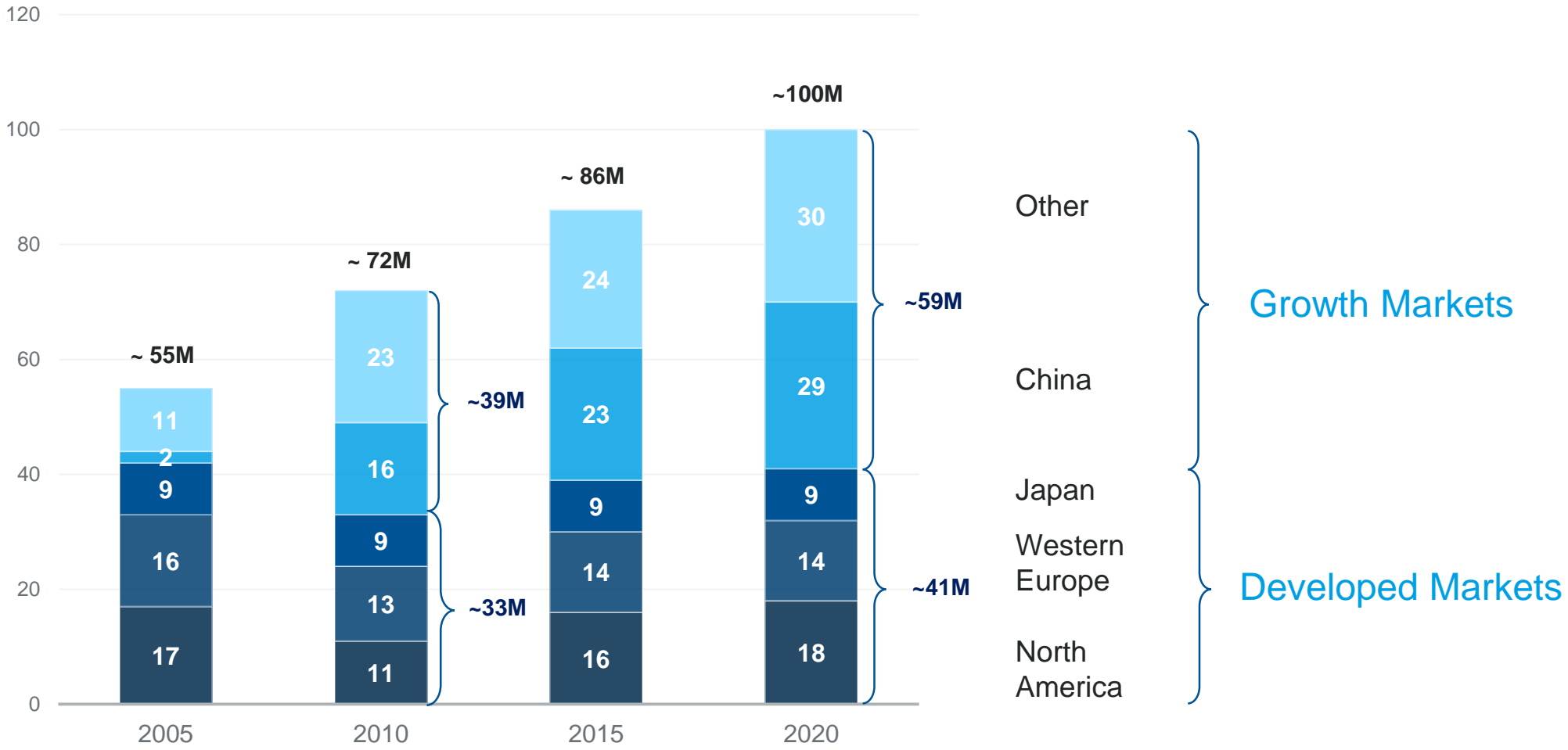
*The JV will focus on developing algorithms and software for automotive Advanced Driver Assistance Systems (ADAS) and Highly Automated Driving systems (HAD) aiming toward full autonomous driving.*

# Autoliv Business Model



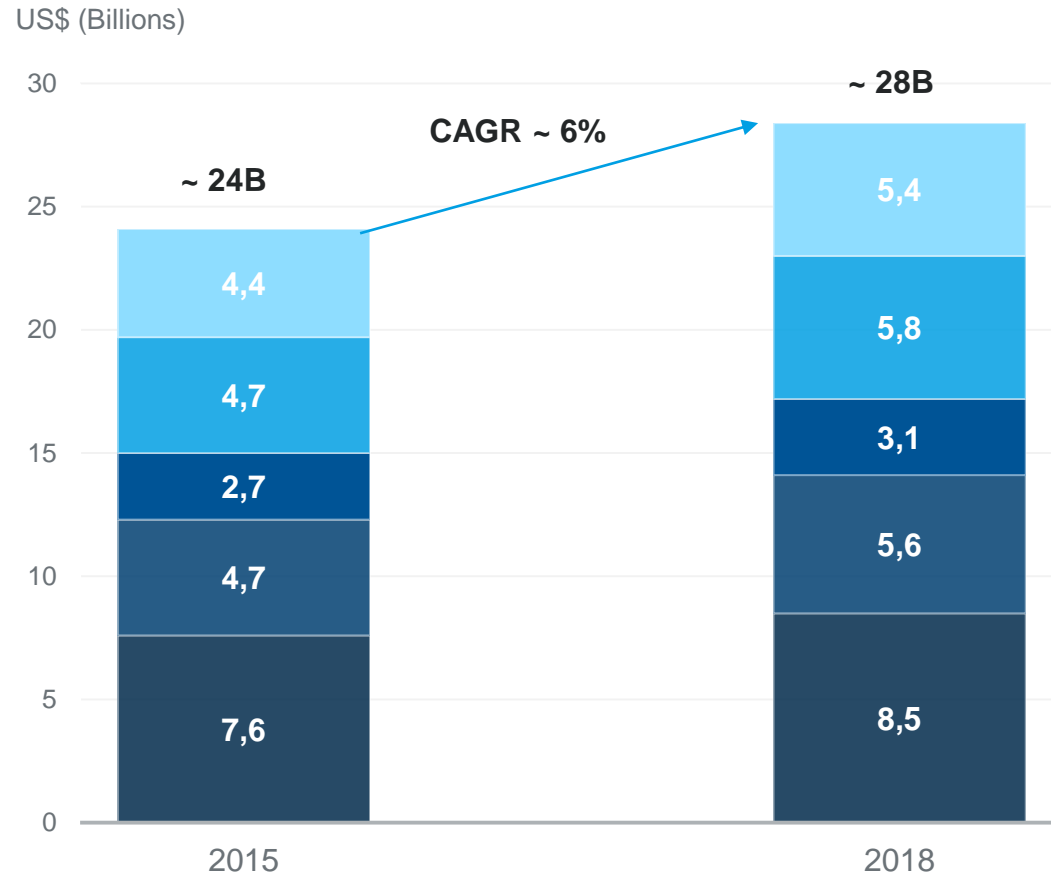
# Light Vehicle Production Outlook 2005 thru 2020

Million Units

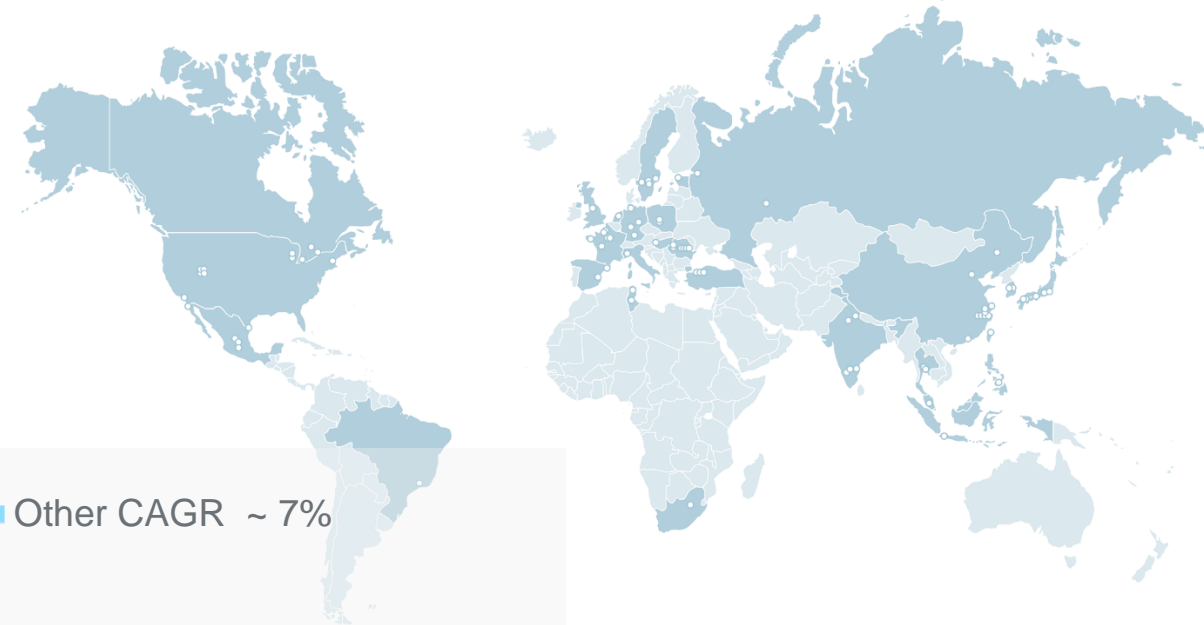


# Growth Drivers by Region

Strong presence in growth markets \*



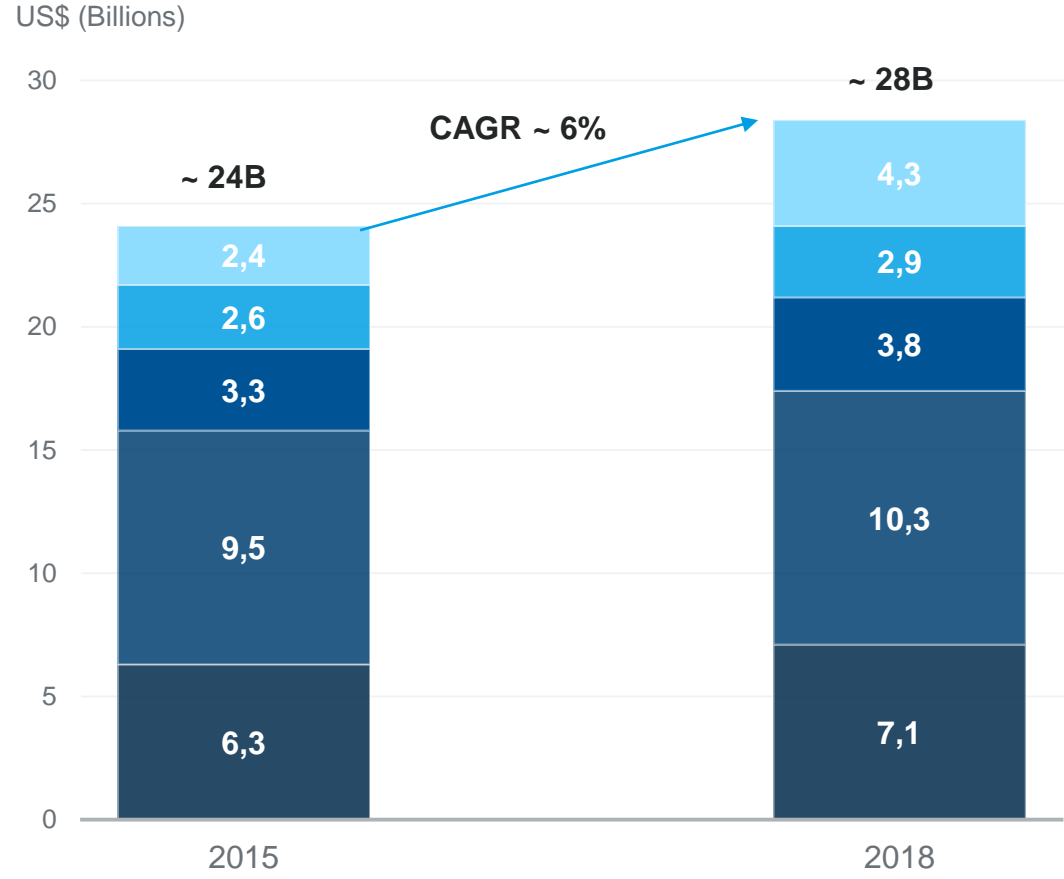
- Other CAGR ~ 7%
- China CAGR ~ 7%
- Japan CAGR ~ 5%
- Western Europe CAGR ~ 6%
- North America CAGR ~ 4%



(\* ) Growth Markets (Eastern Europe, Asia excluding Japan, South America, Middle East/Africa). CAGR = Compound Annual Growth Rate

# Growth Drivers by Product

Strong presence in growth segments\*



- Active Safety\* CAGR ~21%
- Steering Wheels CAGR ~5%
- Electronics CAGR ~5%
- Airbags CAGR ~3%
- Seatbelts CAGR ~4%

(\* Includes radar, front-view camera, night driving assist. CAGR = Compound Annual Growth Rate)

# Overall Market Conditions

## Macro environment remains mixed

### Asia

- China sales\*\* recovery continues, LVP\* increase ~16% for Q3-2016 YoY
- Japan LVP increase ~1% for Q3-2016 YoY
- RoA LVP is roughly flat for Q3-2016 YoY

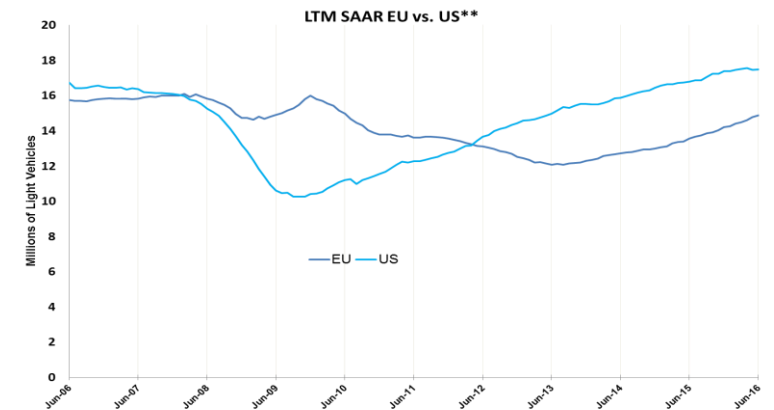
### Americas

- US SAAR\*\* LTM flattening, while inventories\*\* remain ~66 days
- North America LVP increase ~4% for Q3-2016 YoY
- South America still shows no sign of a real recovery, LVP decline ~3% for Q3-2016 YoY

### Europe

- EU27\*\* vehicle registrations continue to show a steady recovery
- LVP is expected to be flat for Q3-2016 YoY whereof WEU is expected to increase ~1%

FY 2016 LVP*		
Region	Vehicles (Millions)	YoY Chg.
China	24.2	+6%
Japan	8.5	(1)%
RoA	12.4	0%
North America	16.9	+3%
South America	2.6	(13)%
Europe	21.5	+3%
<b>Global</b>	<b>88.4</b>	<b>+2.8%</b>



In Q3-2016 the LVP\* is expected to increase ~5% vs. prior year and sequentially decline by ~6% from Q2-2016

(\*) Light Vehicle Production (LVP) according to IHS @ July 15, 2016, Year to Date (YTD), Year over Year (YoY).

(\*\*) Source: ACEA, Ward's Auto, CAAM.



# Active Safety Update

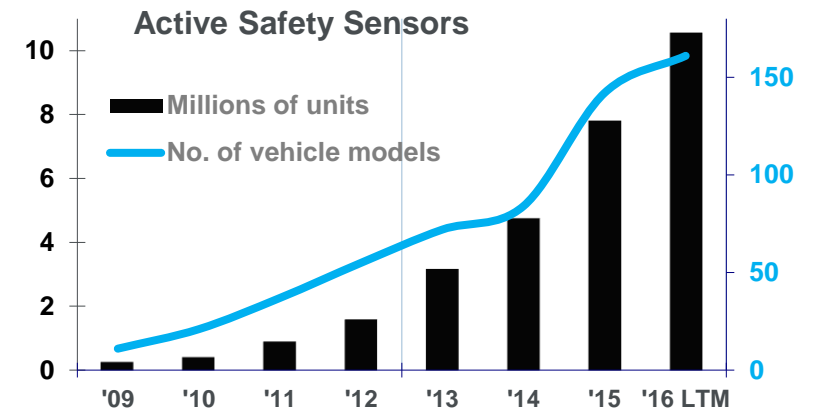
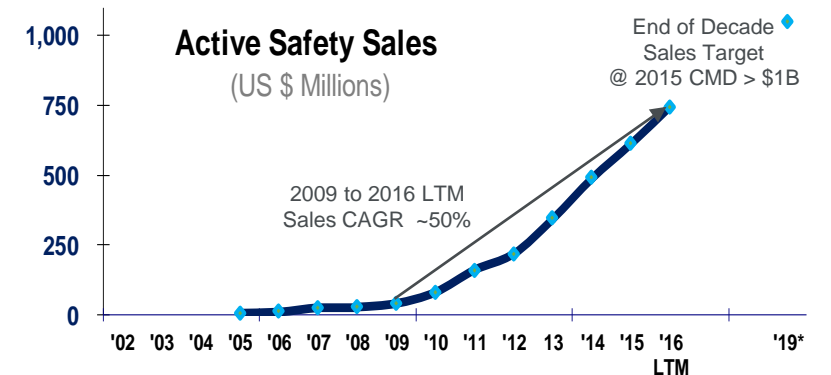
Lower organic sales\* growth as indicated earlier

## ■ Factors affecting Organic Sales\* Growth

- Phase-out of incumbent Brake Control programs
- Take rates on certain GPS programs ramping down sooner than expected
- Timing of programs phasing-out with new program launches on certain radar contracts
- Lower order intake earlier due to the change in our vision strategy from 2014

## ■ End of Decade Sales Target

- Now likely to be achieved about one year later, slightly later than previously anticipated



📌 Active Safety organic sales\* growth ~24% for Q3'16 YTD

(\*) Non-US GAAP measure.

# China Update

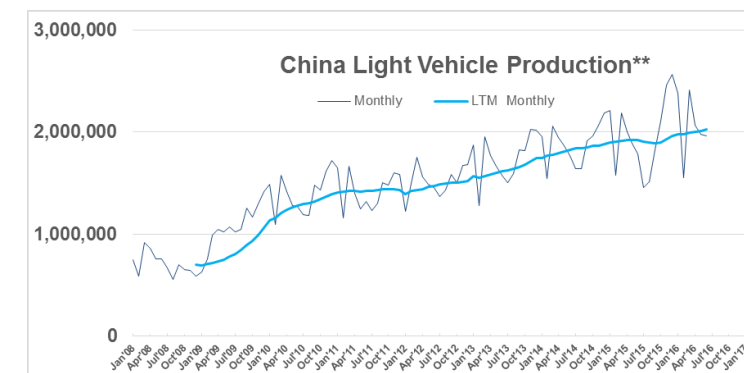
## Light vehicle production appears to have stabilized for now

### Market

- Solid H1-2016 with an increase in LVP\*\* of ~6% and an increase in LV sales\*\* ~8%, both most likely boosted by incentives
- LV Inventories\*\* improved during Q2-2016
- Monthly fluctuations remain erratic

### Autoliv

- Strong organic sales\* growth in H1-2016 of ~12% driven by local and global OEMs\*\*
- Strong organic sales\* growth anticipated for FY-2016 with several local Chinese and multiple global OEMs\*\*
- China NCAP\*\* under consideration for 2018
  - Improved rear-seat and side protection
  - Pedestrian protection
  - AEB



🚗 We remain confident in our long-term growth prospects for China

(\*) Non US GAAP measure.

(\*\*) Light vehicle production (LVP) according to IHS @ July 15, 2016, Original Equipment Manufacturer's (OEMs), According to CAAM and CADA, New Car Assessment program (NCAP).

# Looking Ahead

## Q3-2016 Guidance

### ▪ Sales

- **YoY organic sales\* increase ~6%**
  - Mainly related to strong growth in China, Europe and North America
- **YoY acquisition effect ~6%**
- **Sequential consolidated sales decline ~5%**
  - Mainly due to the normal seasonal effects

### ▪ Operating Margin\* ~7.5%

- **YoY**
  - Positive effects from organic sales\*, commodity costs and currencies are more than offset by increased RD&E, net and costs related to the ramp-up of capacity and new technologies for growth along with integration costs and the impact from acquisitions
- **Sequential**
  - Lower consolidated sales net effect

🚦 RD&E, net 110 bps higher YoY

(\* Non-US GAAP measures exclude costs for capacity alignments and antitrust related matters.

# Looking Ahead

## FY-2016 Indication

### ▪ Sales

- **YoY organic sales\* increase ~7%**
  - Mainly related to strong growth in Europe, China, North America and Active Safety
- **YoY acquisition effect ~5%**
- **YoY currency translation effect >(1)%**
  - Primarily due to the continued strong US\$

### ▪ **Operating Margin\* >8.5%**

- **YoY**
  - Positive effects from organic sales\*, commodity costs and currencies are more than offset by RD&E, net and costs related to the ramp-up of capacity and new technologies for growth along integration costs and the impact from acquisitions

🚦 The FY'16 indication is now for an operating margin\*\* of more than 8.5% mainly due to increased RD&E, net for future growth

(\*) Non-US GAAP measures exclude costs for capacity alignments and antitrust related matters.

# Looking ahead – 2016\*

## Executing towards our long-term plan

### ▪ Growth and Margins

- Organic sales\* growth ~7%, ~2.5pp better than LVP\*\*
- Growth from Acquisition / Joint Venture ~5%
- Adjusted operating margin\* >8.5%

### ▪ Capital Structure

- Strong balance sheet for an volatile, mixed and uncertain macro environment
- Operating cash flow ~\$0.8B, excluding any discrete items, and a leverage ratio\* within our long-term target range of 0.5 to 1.5 times

### ▪ Company Transformation continues

- Implementation of capacity alignment
- Investments for growth:
  - Step-up in RD&E in the high-end of our range of 6.5-7.0% of sales, for Passive and Active Safety (software and hardware) combined (from 6-6.5%)
  - CapEx in the range of 5-6% of sales
  - Exploring further strategic opportunities for growth
  - Nissin Kogyo JV\*

🚦 A balanced approach to growth, margins and capital deployment for the long-term

(\*) Non-US GAAP measures exclude costs for restructuring, antitrust related matters, update post Q1'16 earnings release, Nissin Kogyo Joint Venture closed March 31, 2016

(\*\*) Light Vehicle Production (LVP) according to IHS @ July 15, 2016.

# Financial Outlook

	Q3-2016	FY-2016
<b>Sales</b>		
Organic*	~6%	~7%
Acquisitions	~6%	~5%
Fx**	<(1)%	>(1)%
Consolidated Sales, net	~12%	>10%
Operating Margin*	~7.5%	>8.5%

Exchange rates**	Q3 2016	FY 2016
EUR / US\$	1.1048	1.1108
US\$ / JPY	104.42	107.42
US\$ / KRW	1144	1162
US\$ / MXN	18.39	18.26
US\$ / CNY	6.69	6.61

🚀 Strong organic sales\* growth and operating margin\* for FY-2016 despite a significant step-up in investments for growth

(\*) Non-US GAAP measures exclude costs for capacity alignments and antitrust related matters.

(\*\*) Mid-July 2016 exchange rates.

# A Sound Investment

- Strong long-term sales growth
- Among industry leading margins and return on capital
- Strong balance sheet and free cash flow generation over the cycles
- Shareholder returns over time





Each year, Autoliv's  
products save over  
30,000 lives

[autoliv.com](http://autoliv.com)

**Autoliv**