## Q4/FY18 Earnings Release & Strategy Update

(preliminary, unaudited figures)

November 7<sup>th</sup>, 2018

**Light is OSRAM** 

**OSRAM** 

#### **Disclaimer**

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This presentation includes references to non-IFRS financial measures, including, but not limited to: FCF, EBITDA, EBITDA margin, capital expenditure, capital expenditure as percentage of revenue, net financial debt and net working capital. We have provided these measures and other information in this presentation because we believe they provide investors with additional useful information to assess our performance. Our use of these supplemental financial measures may vary from others in our industry and should not be considered in isolation or as an alternative to our results as reported under IFRS.

Due to rounding, numbers presented throughout this and other documents may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

## **Agenda**

| Time          | Topic                                      | Responsible                  |
|---------------|--|------------------------------|
| 14:30 – 15:00 | Arrival and Registration                   |                              |
| 15:00 – 15:05 | Welcome                                    | Andreas Spitzauer            |
| 15:05 – 15:40 | Summary and results Q4/FY18 & Outlook FY19 | Dr. Olaf Berlien / Ingo Bank |
| 15:40 – 16:00 | OSRAM Strategy Update                      | Dr. Olaf Berlien             |
| 16:00 – 16:30 | Q&A  | OSRAM Board                  |
| 16:30 – 17:00 | Automotive                                 | Hans-Joachim Schwabe         |
| 17:00 – 17:35 | Digital                                    | Dr. Wilhelm Nehring          |
| 17:35 – 18:10 | Q&A  | OSRAM Team                   |
| 18:10 – 18:15 | Closing remarks                            | Dr. Olaf Berlien             |
| 18:15 – 19:00 | Get together                               | All                          |





# Fiscal Year 2018 – An important year in OSRAM's transformation

#### Statement from the CEO



FY18 summary:

- Revenue of €4,115m; comp. growth at 1.9%
- Adjusted EBITDA margin of 14.7%
- Negative free cash flow due to higher capital expenditures

"With Q4 we ended our FY18 in line with expectations.

Due to highly dynamic markets, we were forced to adapt to the environments but we worked very hard and were able to secure solid financial results for our group.

From the strategic point of view the last 12 months have been very important as well. We took important steps to become a High-Tech Photonics Champion.

Global economic environments for our FY19 seem to remain challenging. But based on our strong strategic and financial foundation we are well positioned to drive our growth momentum."

## **OSRAM** is a global leader in lighting technology

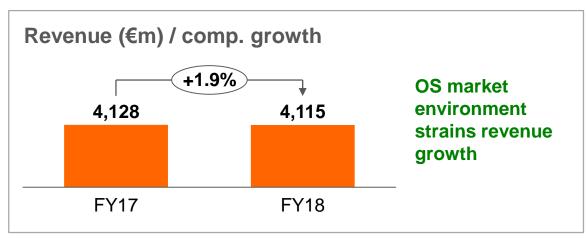


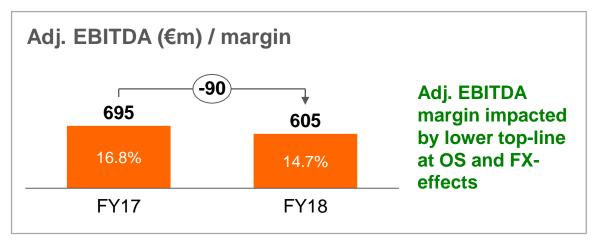


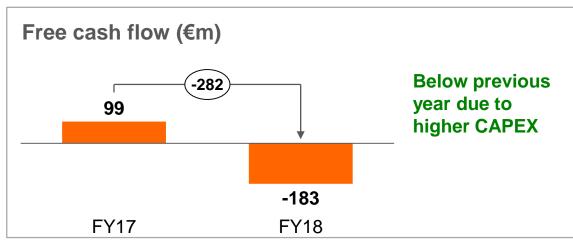


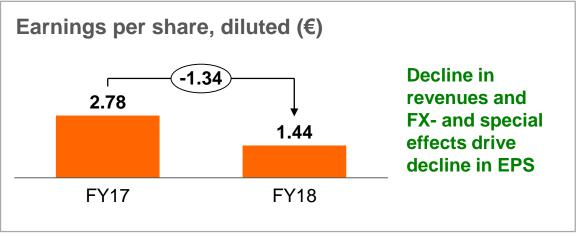


## Currency and market dynamics impacted development of FY18

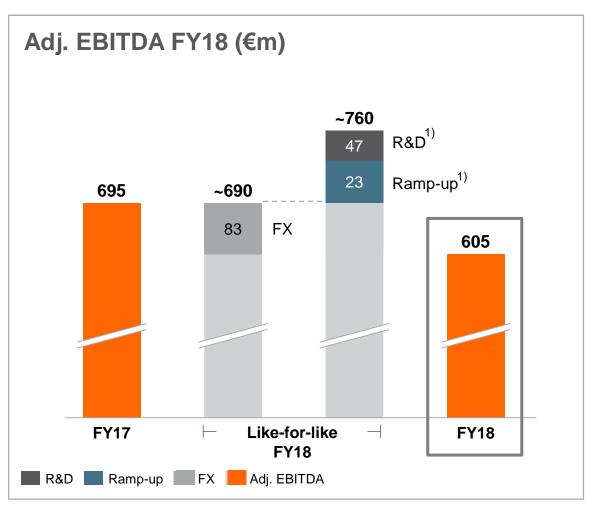








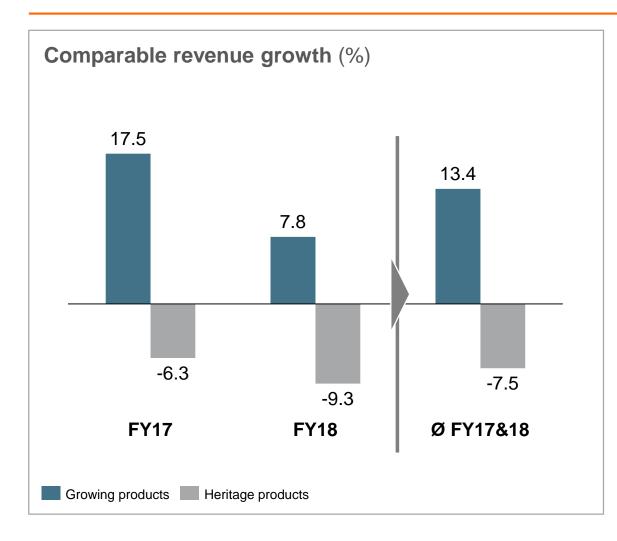
## Adj. EBITDA impacted by FX, ramp-up costs and R&D investment



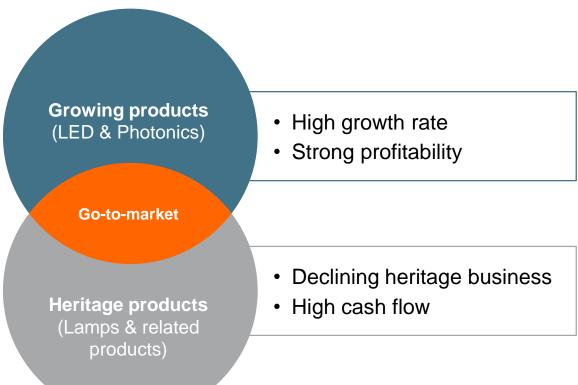
- Foreign exchange rates (strengthening of EUR against USD) weighs negatively on profitability
- Ramp-up and R&D expenses as expected higher than last year, in particular due to OS
- Ramp-up of capacity in Malaysia, Germany and China to further expand the industrial footprint of OS

<sup>1)</sup> Excluding FX

## **OSRAM's business is in a transformation process**

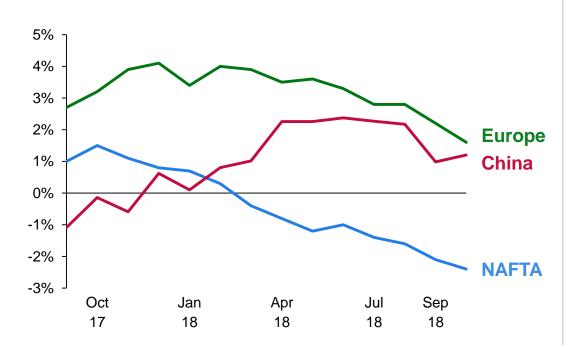


#### **OSRAM's** growth profile implies two business paths



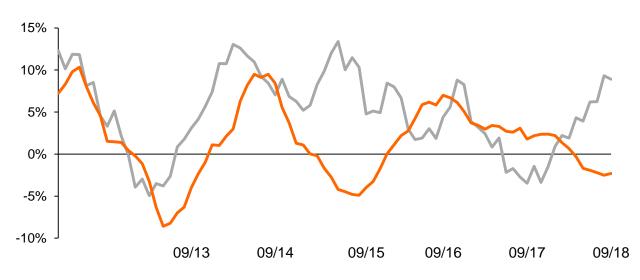
## Market indicators provide a cautious outlook into FY19

# IHS Forecast FY 2018 – Development of light vehicle production (YoY comparison)



## US nonresidential construction and electric lighting orders

- Census Bureau US Construction Nonresidential SA, YoY
- US Durable Goods New Orders Electric Lighting Equipment, 12 months rolling, YoY



Source: IHS Data as of October 2018

## The economic outlook for FY 2019 shows multiple elements of uncertainty





## **Summary financial performance Q4 FY18**

- Q4 FY18 comparable revenue growth @ 1.1%; all segments with single-digit growth
- Q4 FY18 adjusted EBITDA margin @ 13.9%; negative impact of -70bps from FX and of -130bps from R&D
- Free Cash Flow positive @ €40m, mainly driven by reduced capex at OS as expected
- Q4 FY18 reported EPS at -6 Eurocents; adjusted EPS at 55 Eurocents
- Special Items in Q4 FY18 EBITDA @ €-75m

## Modest comparable growth driven by all business segments

#### Revenue (€m)

**OSRAM Group: Revenue bridge Q4 FY18 YoY** 



#### **Comments**

- Growth in APAC and Americas across all business segments
- EMEA declined; challenging market environment continues; deceleration of growth from Q3/18 to Q4/18 driven by Automotive (LED & Traditional) and General Lighting

#### Revenue growth Q4 FY18

|                              | Nom.<br>growth | FX    | Portfolio | Comp.<br>growth |
|------------------------------|----------------|-------|-----------|-----------------|
| Opto Semiconductors          | 3.9%           | 0.3%  | 2.0%      | 1.6%            |
| Specialty Lighting           | 1.8%           | -0.8% | 1.6%      | 1.0%            |
| Lighting Solutions & Systems | 7.9%           | -1.3% | 5.3%      | 3.8%            |

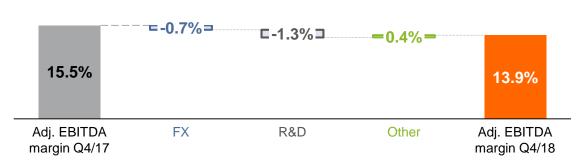
#### Regional split Q4 FY18



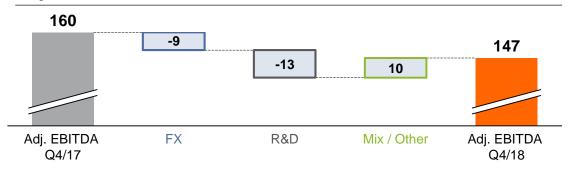
## R&D investment and FX effects with negative impact on margin

### Adjusted EBITDA (€m) / Adjusted EBITDA margin (%)

#### Adjusted<sup>1)</sup> EBITDA margin Q4 FY18 YoY



#### Adjusted EBITDA Q4 FY18 YoY



#### **Adjusted EBITDA margin Q4 FY18**

|                              | Adj. EBITDA<br>margin | FX impact<br>YoY <sup>2)</sup> |
|------------------------------|-----------------------|--------------------------------|
| Opto Semiconductors          | 24.7%                 | -1.4%                          |
| Specialty Lighting           | 10.6%                 | -0.2%                          |
| Lighting Solutions & Systems | -3.0%                 | -0.6%                          |

#### **Comments**

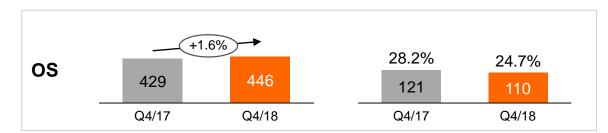
- Adjusted EBITDA in Corporate Items: €-15m
- Special Items @ €-75m

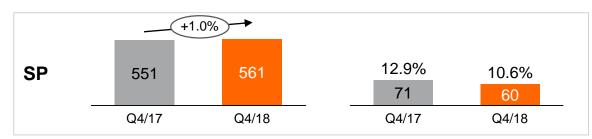
<sup>1)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities including the sale of subsidiaries, investments and other businesses 2) in %-points

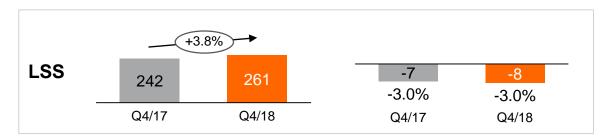
## **Segments: Key financials Q4 FY18**

Revenue (€m) / Comp. growth (%)

Adj.¹) EBITDA (€m) / Adj. EBITDA margin (%)







#### Comments

#### OS

- Modest growth at OS overall, clear growth in Industry and Mobile Devices, moderate growth in Automotive; significant growth in APAC and Americas while business in EMEA declined significantly
- Lower profitability due to higher R&D expenses, FX effects and lower benefits from degression due to volume development

#### SP

- APAC and Americas with clear growth, partially offset by significant decline in EMEA; Automotive first equipment business in traditional light sources continued to decline in a lower teens range
- Decreased profitability resulting from FX effects and continued shift from traditional to LED lighting (mix)

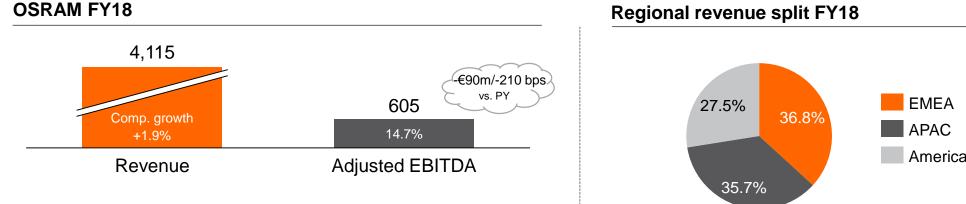
#### LSS

- Growth in APAC and Americas insufficient to fully compensate challenging market environment in EMEA
- Adj. EBITDA % unchanged

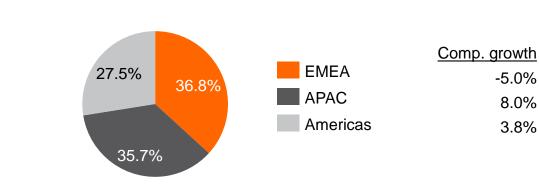
<sup>1)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities including the sale of subsidiaries, investments and other businesses

## FY 2018: a challenging market environment, in particular in EMEA

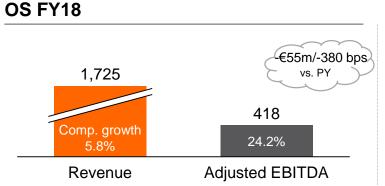
#### Revenue / Adjusted¹) EBITDA (€m) / Adjusted EBITDA margin (%)

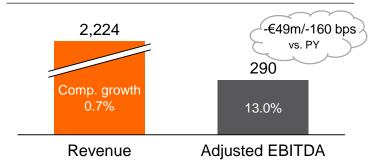


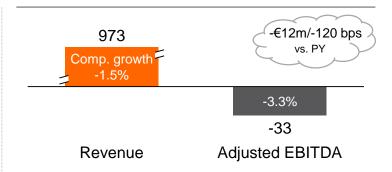
SP FY18



LSS FY18





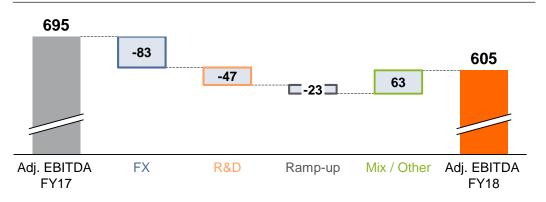


<sup>1)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities

## Adj. EBITDA in FY18 was impacted by FX and a step-up in R&D

#### Adjusted¹) EBITDA development (€m) & Net Liquidity Bridge (€m)

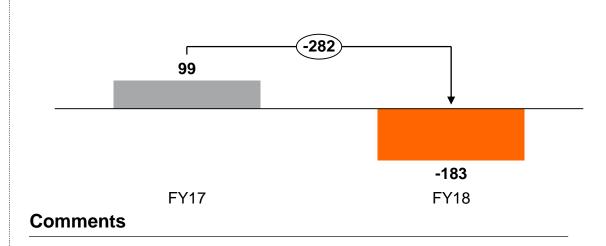
#### Adjusted<sup>1)</sup> EBITDA FY18 YoY



#### **Comments**

 Adj. EBITDA below previous year, mainly due to negative FX impacts, higher R&D investments and ramp-up costs related to the infrastructure build-up at OS

#### Free Cash Flow<sup>2)</sup>



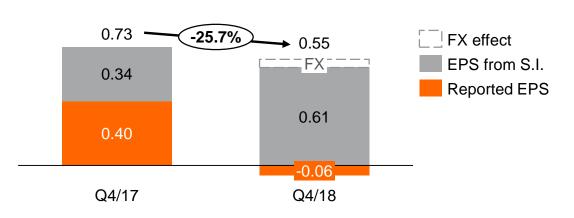
 Free Cash Flow development was impacted by Capex spend, especially due to infrastructure build-up at OS in H1/18

<sup>1)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities 2) defined as net cash provided by (used in) operating activities less capital expenditure

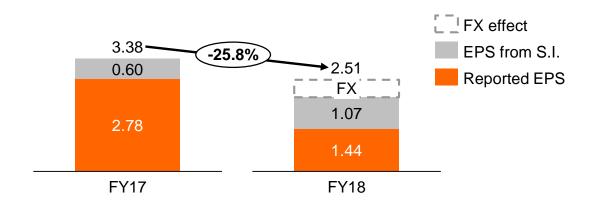
## FY18 reported EPS below previous year due to FX effects, Special Items and depreciation

### Earnings per share¹) (€)

#### Adjusted<sup>2)</sup> EPS Q4 FY18 YoY



#### Adjusted<sup>2)</sup> EPS FY18 YoY



#### Net income / Shares outstanding

|                                       | Q4/17 | Q4/18 | FY17 | FY18 |
|---------------------------------------|-------|-------|------|------|
| Net Income cont. ops. (€m)            | 40    | -5    | 275  | 142  |
| Shares outstanding, diluted (million) | 96.9  | 96.8  | 97.7 | 96.9 |

#### **Comments**

- FX impact in Q4 compared to previous year quarter ~ €0.07; for FY18 compared to previous year ~ €0.59
- Depreciation impact in Q4 compared to previous year quarter ~ €-0.10; for FY18 compared to previous year ~ €-0.37
- Tax rate for FY18 at approx. 28%

<sup>&</sup>lt;sup>1)</sup> diluted and for cont. ops

<sup>2)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities including the sale of subsidiaries, investments and other businesses

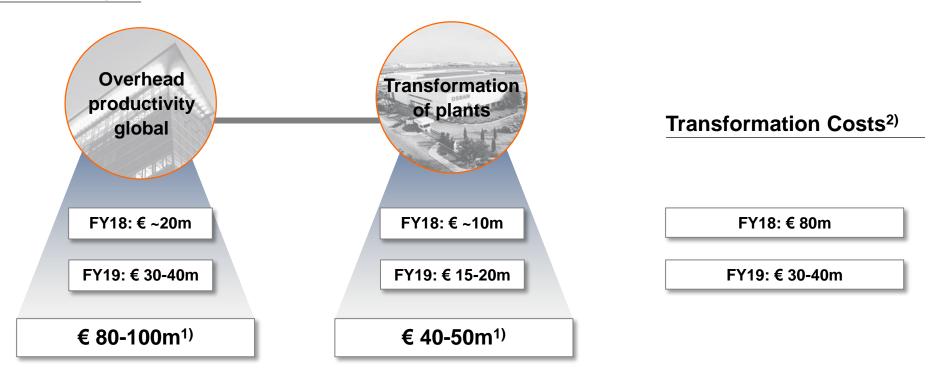
## **Expected opportunities and headwinds for FY19**

| Growth opportunities   | Growth challenges |  |
|--|-------------------|--|
| <ul> <li>OSRAM Continental contributing to absolute top line growth</li> <li>China market growth to improve over FY19</li> <li>Improvement of General Lighting market particularly in USA in the course of calendar year 2019</li> <li>Possible project wins in Industry &amp; Mobile Devices for OS</li> <li>LED penetration rates for cars continuing to grow faster than car production market</li> </ul> |                   | <ul> <li>Market uncertainties (short-term visibility in the automotive sector, geo-political tensions, ongoing tariff discussions, Brexit etc.) to impact market growth further in FY19</li> <li>Continued softness in General Lighting market</li> <li>IFRS 15 expected to shift ~€40m revenue into FY20, as well as corresponding EBITDA impact</li> </ul> |
| Adj. EBITDA opportunities  |                   | Adj. EBITDA challenges   |
| <ul> <li>Revenue growth influences EBITDA development</li> </ul>   | ++                | <ul> <li>Tariffs and ongoing electronic component shortage</li> </ul>  |
| <ul> <li>Performance programs drive productivity</li> </ul>  | +                 | <ul><li>Increasing inflation</li></ul>   |
| <ul><li>Lower ramp-up cost OS</li></ul>  | +                 | <ul><li>R&amp;D ramp-up invest from OSRAM Continental</li></ul>  |

## OSRAM put in place different performance programs to improve efficiency

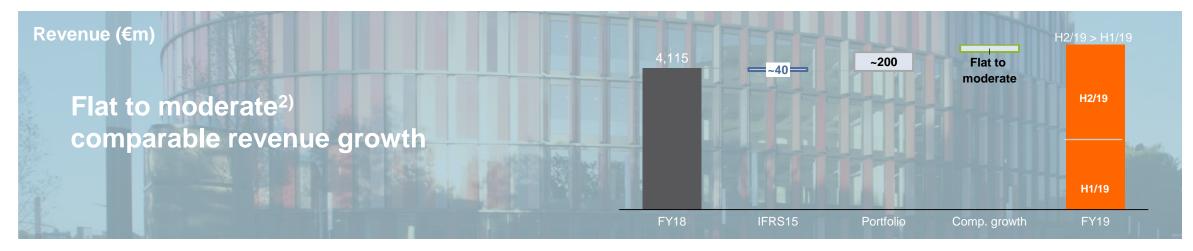
#### **Cross-functional & BU-specific performance programs**

#### **Targeted Gross Savings**

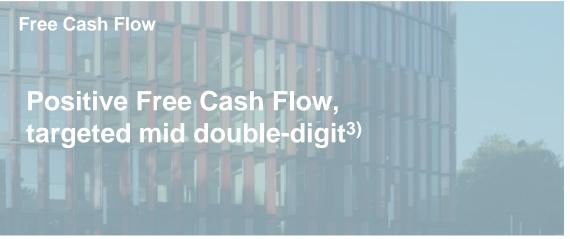


<sup>1)</sup> estimated annualized savings by end of FY2020 compared to FY17 baseline 2) recorded as Special Items

### Outlook for FY19<sup>1)</sup>



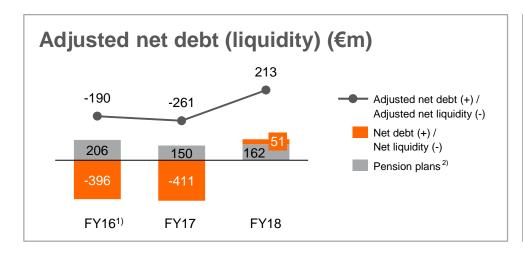


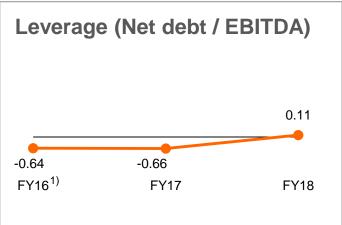


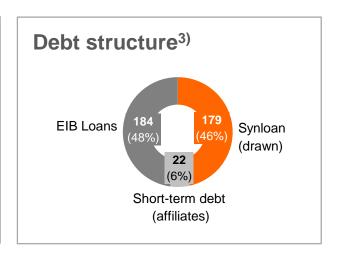
1) based on an exchange rate EUR/USD of 1.15 2) flat to moderate represents a growth rate in the range of 0-3% 3) incl. cash outflow from restructuring of up to €100m; excl. proceeds from possible divestments

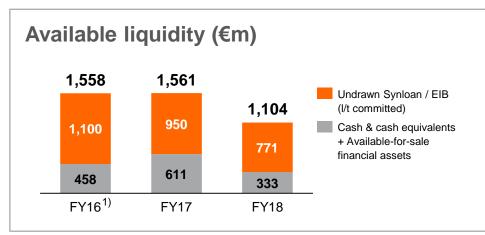


## OSRAM's financial strategy targets an investment grade rating









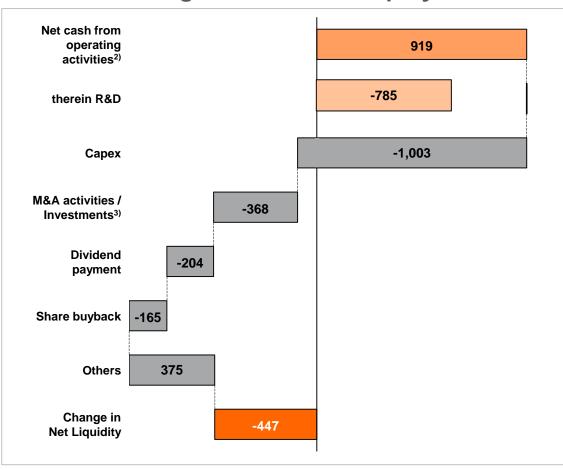
#### Comments

- Prudent financial policy targeting an investment grade rating
- Low net debt despite high investments (CAPEX, M&A)
- Diversified financing sources with well balanced maturity profile
- High funding status (87%) of pension plans<sup>4)</sup>
- Strong capital structure with leverage potential
- € 950m committed syndicated credit facility largely until 2022
- Strong balanced core banking structure

Note: all values are year-end-values as of 30.09.2018

## Cash flow in FY17 and FY18 predominantly invested in long-term growth

#### OSRAM's cash generation and deployment<sup>1)</sup>

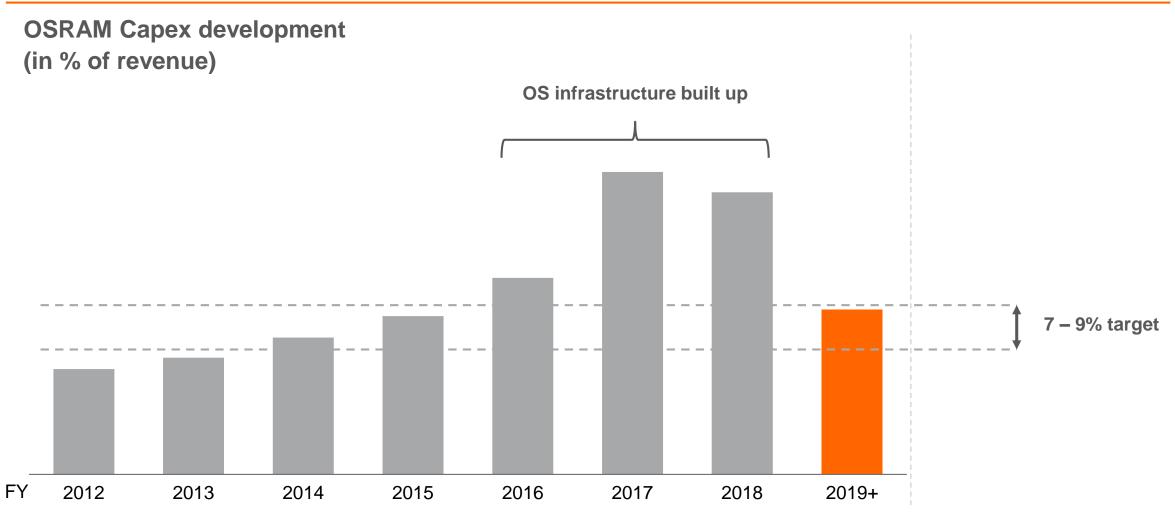


#### Use of cash

- R&D investments to secure future growth based on attractive product portfolio
- Capex, in particular for OS (Kulim, Regensburg, Wuxi) representing ~83% of the overall Capex spend in FY17 and FY18
- Dividend target range: Annual dividend payout of 30-50% of net income or at least stable dividend per share
- M&A activities to strengthen portfolio further (Fluence, Vixar, Digital Lumens etc.)

1) cum. values for FY17 and FY18 2) net cash provided by operating activities (cont. ops.) 3) excl. divestments

## OSRAM targets a Capex ratio of 7 – 9% of revenues going forward



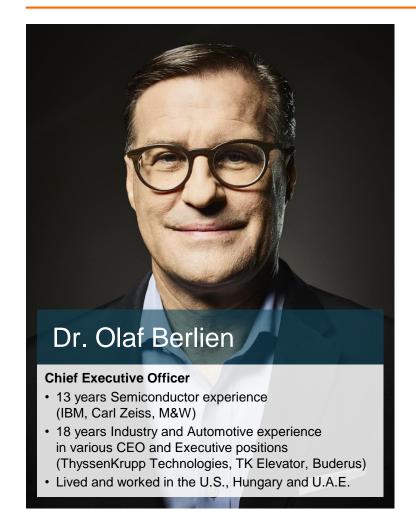
Note: does not include any major greenfield or infrastructure investments

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## **OSRAM Management Team**







## **OSRAM: From Illumination to Photonics**





**Current core: Illumination** 

**Emission of light** 





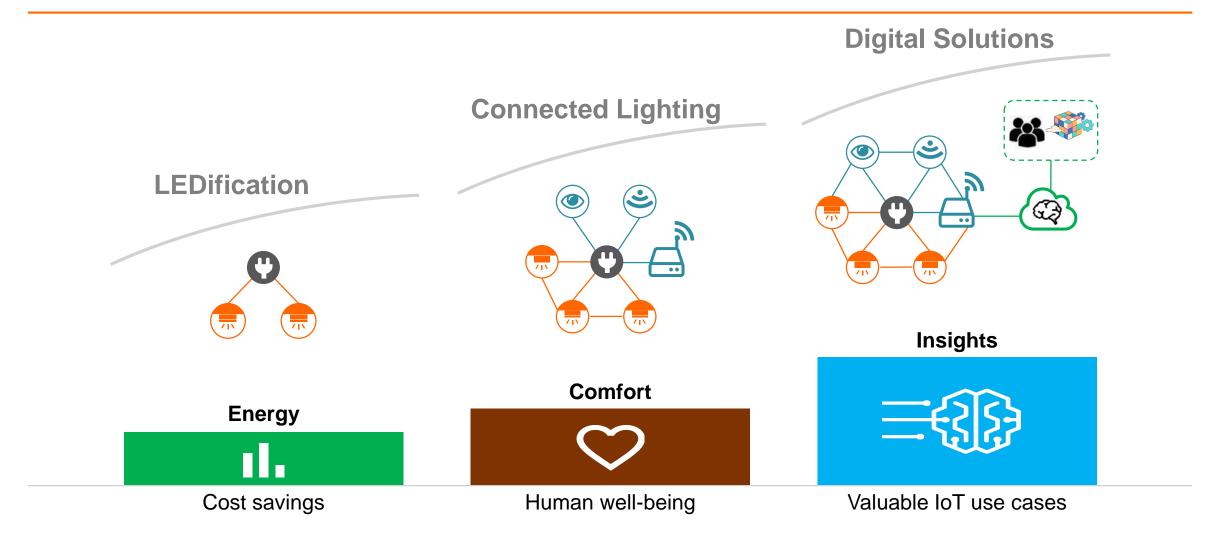




**Photonics: Enabling new applications** 

Illumination, Sensing, Visualization, Treatment

## **OSRAM: From LEDs to Digital Solutions**

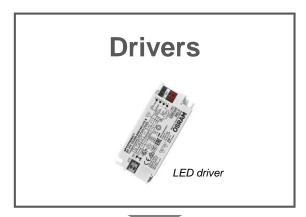


## **OSRAM: From Lighting Components to Enabling Systems**

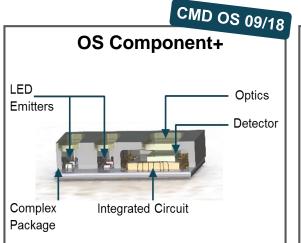
#### Components



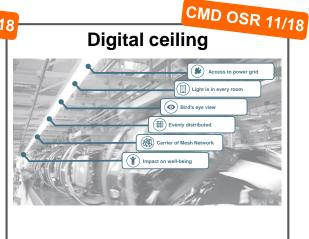




## Systems (examples)







## From Lighting Applications to High-tech

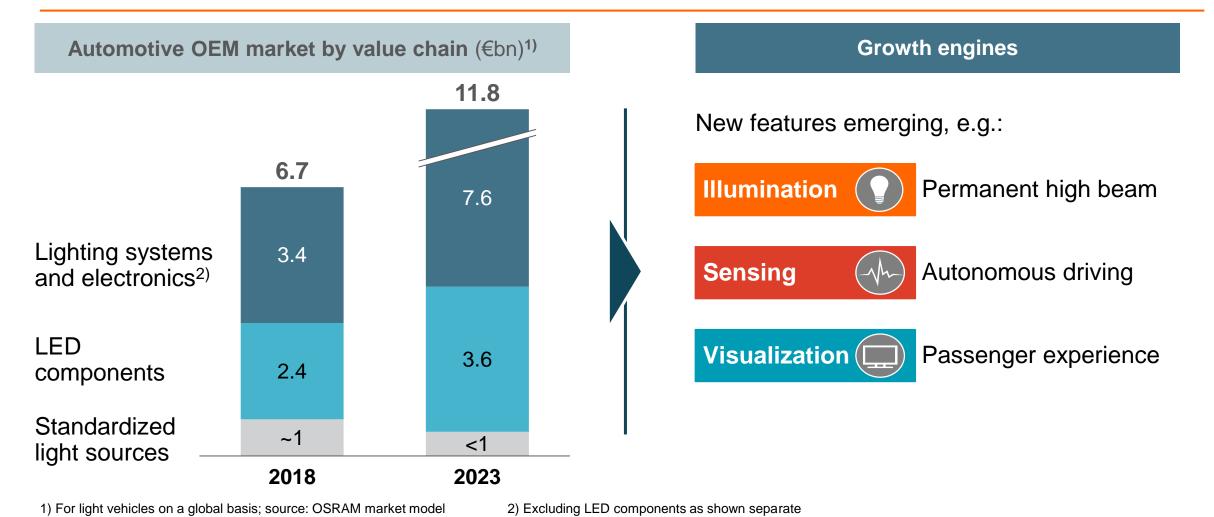
Global Photonics market (selected applications), FY18; CAGR FY18-231)



<sup>1) 40</sup> selected applications assessed; all market data on module/system value chain-level; OSRAM does not address all applications within segments Source: OSRAM market model, Yole, IHS, PMA, Trendforce, Strategies Unlimited

## **Moving from Illumination to Photonics**

## - Example Automotive OEM -



OSRAM Q4/FY18 Earnings Release & Strategy Update (preliminary, unaudited figures)

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

November 7th, 2018

### **OSRAM: From #1 in Automotive**

## to leadership in Automotive and new end markets

#### Illustrative

#### **TODAY** → **FUTURE**

**Non-Automotive** 

Consumer Electronics







Industry







Building

Infrastructure







**Prof. Illumination** 





. . .

#### **Automotive**







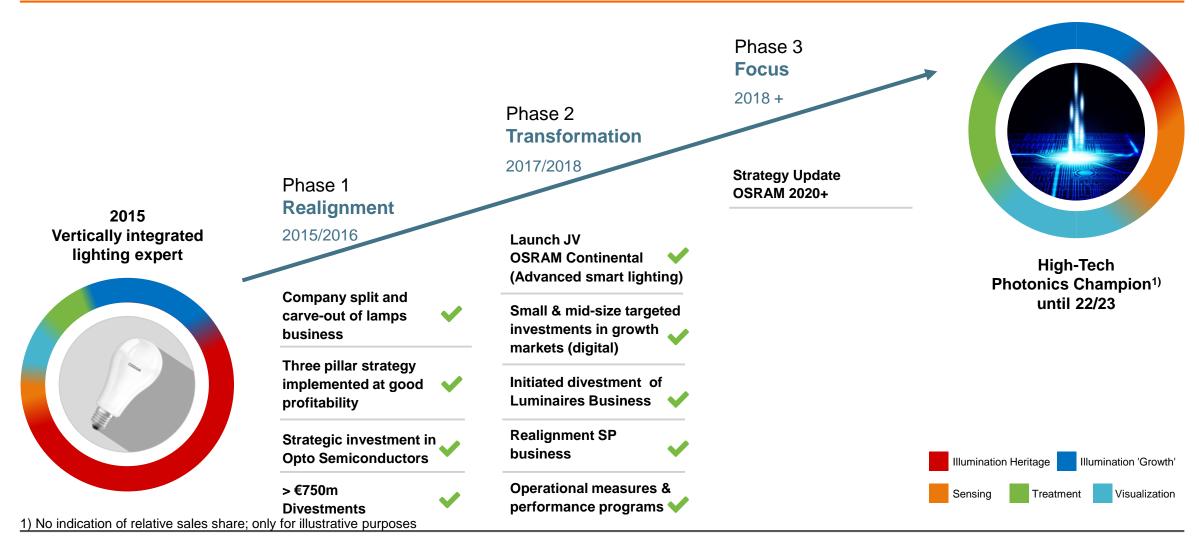
**Automotive** 







# OSRAM is undergoing a deep transformation – The first steps have been implemented consequently



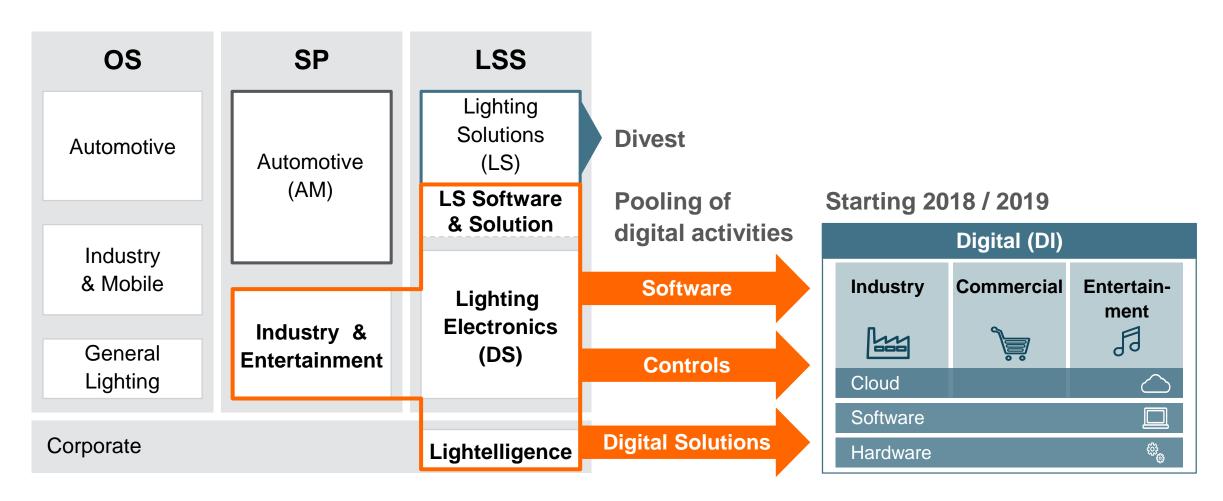
## **OSRAM's Vision – Action Program**

#### **Actions**

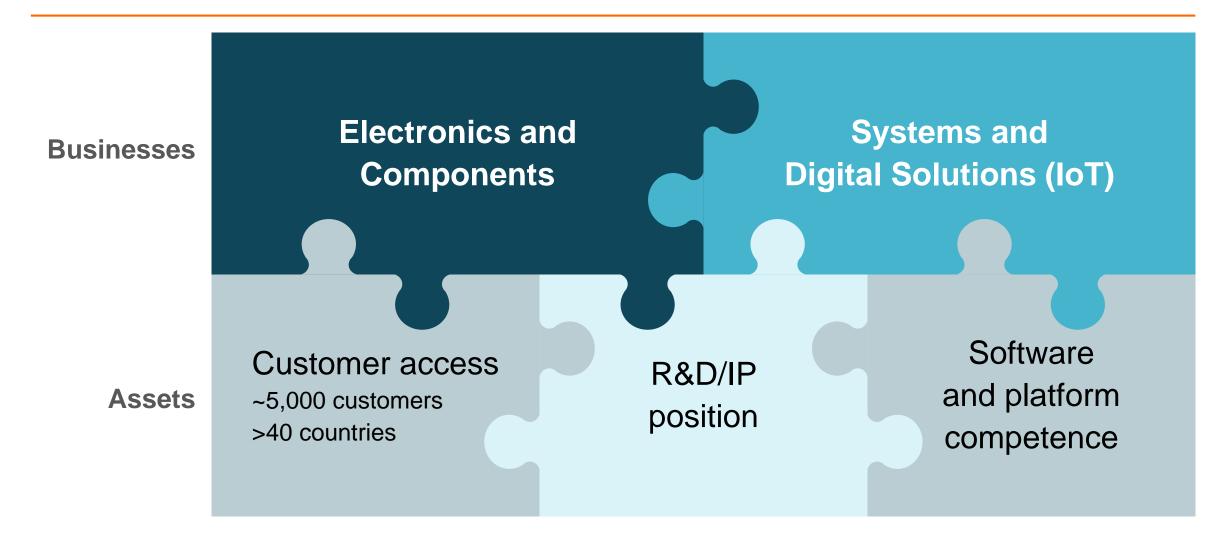
- A Organizational Adjustment: Pooling of digital activities in a new unit
- Permanent Portfolio Management: Divestments & technology acquisitions
- Clear Execution Path: Performance programs and tangible actions in 19/20

## Pooling of digital activities in a new unit – Digital (DI)

Simplified

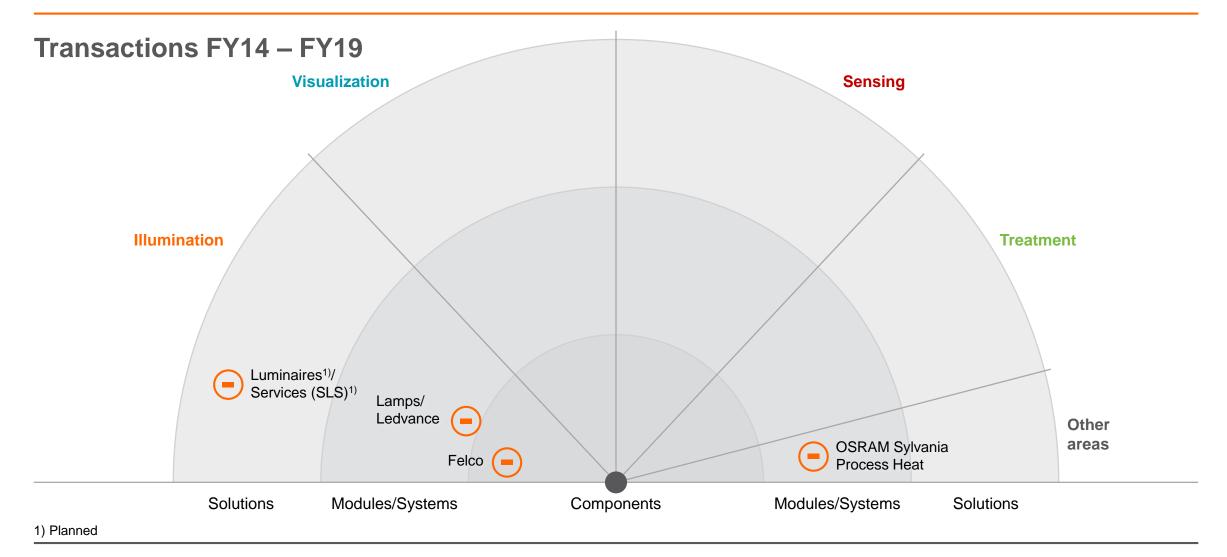


# Combining our heritage business with new businesses gives unique advantages for Digital (DI)



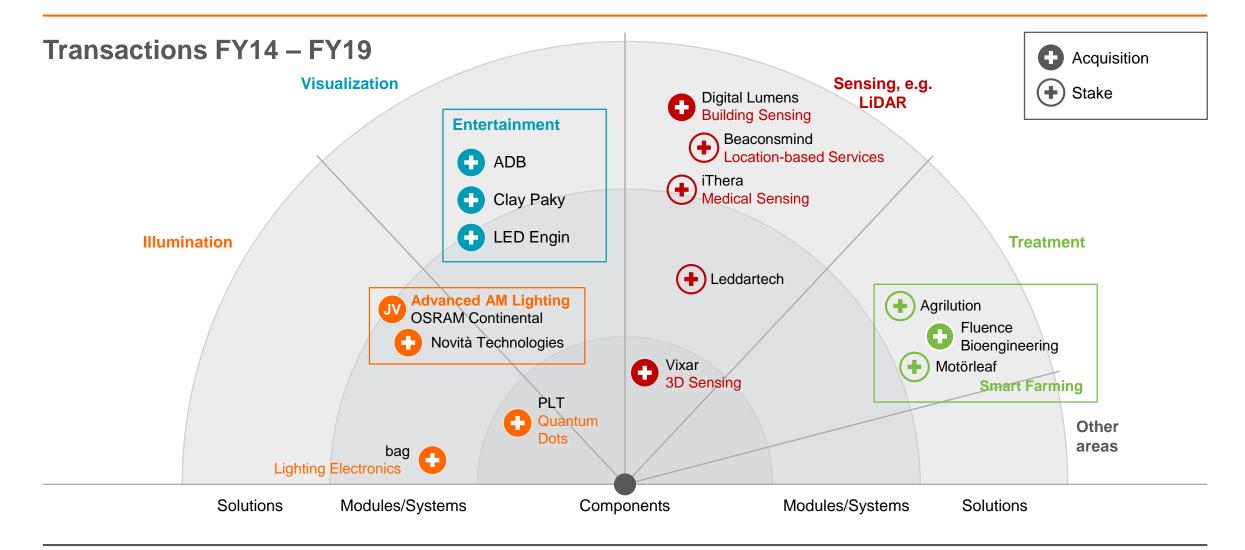
## Permanent Portfolio Management on the path to Photonics Champion

#### - Divestments -



## Permanent Portfolio Management on the path to Photonics Champion

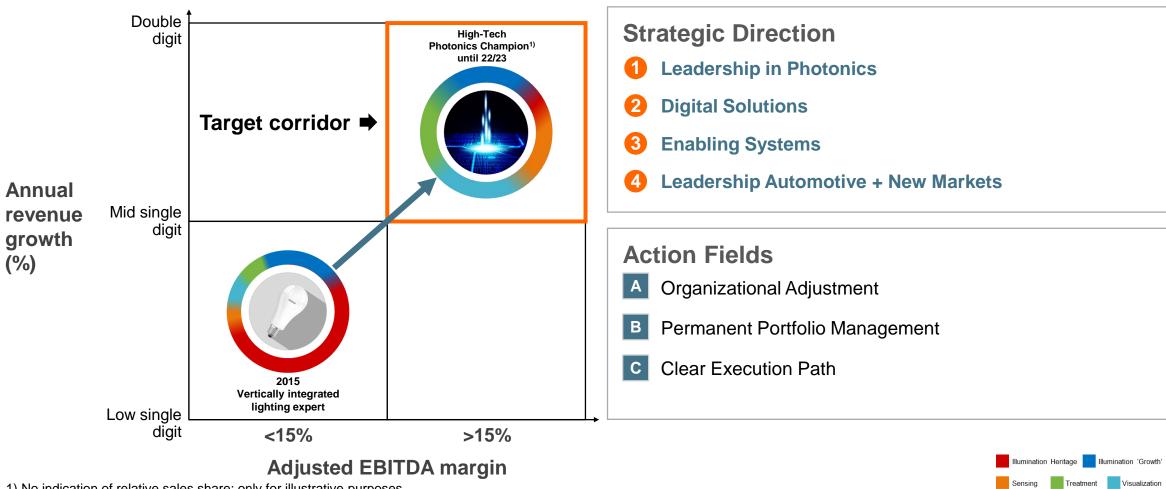
- Investments -



### **Clear Execution Path**

|                  |   |   | Level of completion     |  |
|------------------|---|---|-------------------------|--|
|                  |   |   | Define Detail Implement |  |
| OSRAM            | Divest LS North America business  | • |                         |  |
| Group            | Divest LS European business (Siteco)  |   |                         |  |
| Cloup            | Execute performance programs: Overhead, Footprint                                     |   |                         |  |
|                  | Permanent Portfolio Mgmt. towards Photonics Champion                                  | 0 |                         |  |
| Opto             | Drive competitiveness in core business  | • |                         |  |
| Semiconductors 5 | <ul> <li>Accelerate growth in new application fields e.g. sensing and μLED</li> </ul> |   |                         |  |
| Semiconductors   | Extend value chain towards Component+   | 0 |                         |  |
| Automotive       | Execute growth plan in OSRAM Continental  | • |                         |  |
| Automotive       | Stay #1 in light sources  |   |                         |  |
|                  | Aftermarket growth with light sources and portfolio extension                         | 0 |                         |  |
| Digital          | Implement new organizational setup (DI)   | • |                         |  |
|                  | Transform lighting electronics into digital infrastructure provider                   |   |                         |  |
|                  | Ramp-up digital business in focus applications  |   |                         |  |

## OSRAM Vision: From Lighting player to High-Tech Photonics Champion



1) No indication of relative sales share; only for illustrative purposes

Assumptions: Successful implementation of Build & Buy strategy | Macroeconomics: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)



### Our targeted financial performance



#### **Automotive (AM)**

#### Digital (DI)







Competitive position<sup>1)</sup>

#2

#1

#2

#### Target corridor<sup>2)</sup>

Revenue growth Adj. EBITDA margin

Underlying drivers

~10%

23% - 29%

(through the cycle)

- Automotive Cycle / Content per Car
- Consumer Electronics Spend
- Semiconductor

3% - 7%

9% - 11%

- · OEM: Automotive Cycle
- · Aftermarket: Mileage

- 3% 8%
- 5% 10%
- mid-term

> 10%

> 10%

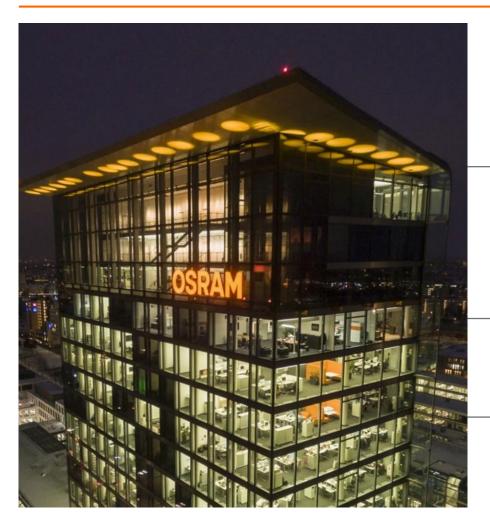
longer term

- Construction & Refurbishment
- Industrial Production
- IoT Ramp-up

1) AM market position for light sources incl. LEDs; DI for Electronics & Components 2)This does not represent segment guidance for FY19; target corridor for AM and DI represent possible averages of the period between 2020 and 2023

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

### **Summary**



## OSRAM well on track in transformation to a High-Tech Photonics Champion

- From Illumination to Photonics
  - From Components to Enabling Systems
  - Light as an Enabler in a Connected World
- We have a strong Automotive core and emerge into additional growth markets
- We have a clear strategy and we will continue to execute it consistently

## **Agenda**

| Time          | Topic                                      | Responsible                  |
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### **AM Management Team**







### **OSRAM AM at a glance**







1) Source: OSRAM market model

# OSRAM AM is the market leader driven by strong customer ties and innovation leadership

#### Key success factors...

- #1 position in all lighting technologies
- Strong electronic competence through OSRAM Continental
- Strong reputation and recognition at all global OEMs
- Global leading brands in AFTM with strong regional presence

  OSRAM SYLVANIA NEOLUX\*
- Global manufacturing and R&D footprint with deep process know-how leading to excellent quality position

#### ...recognized by customers & industry





NAFTA: Visteon award for best quality supplier







LEDriving® headlights for Golf VII

Supplier award for OES business

E-commerce award China









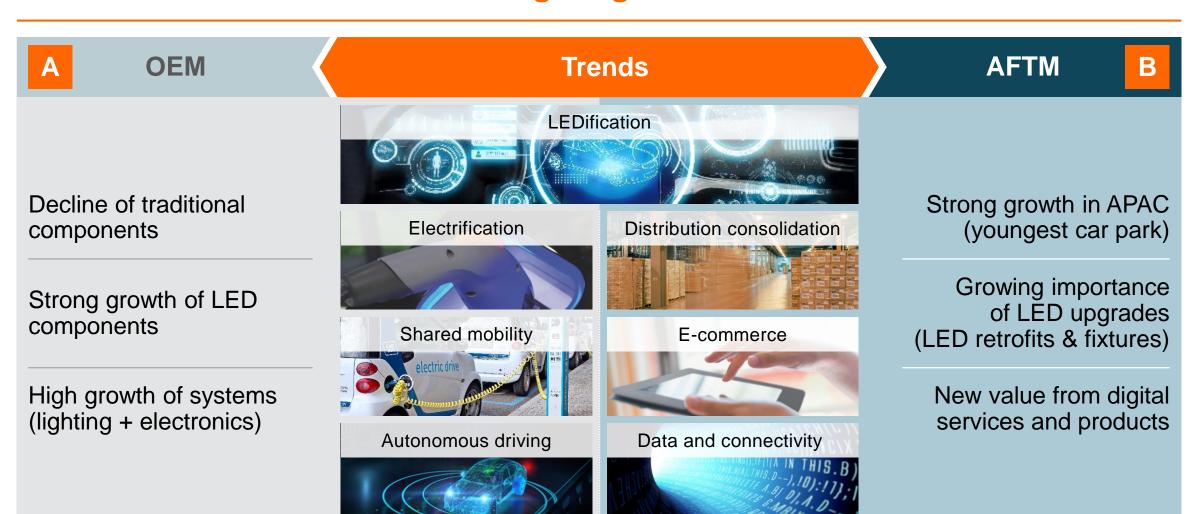
International supplier award



Awards at big four NAFTA customer

...and many more

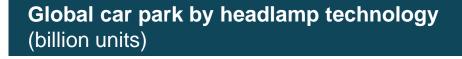
## Various trends drive automotive lighting market



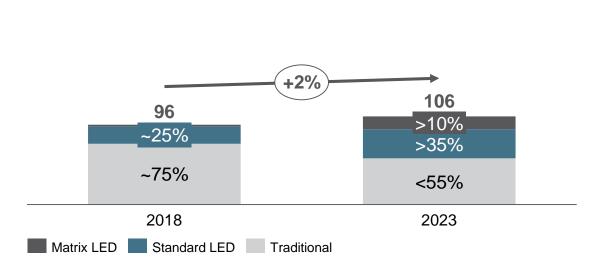
## Automotive business is growing – OSRAM well positioned to drive transformation

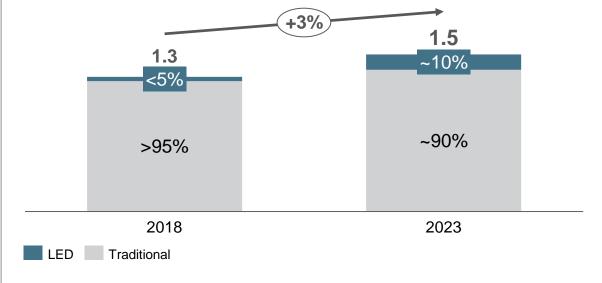


Global car production by headlamp technology (million units)









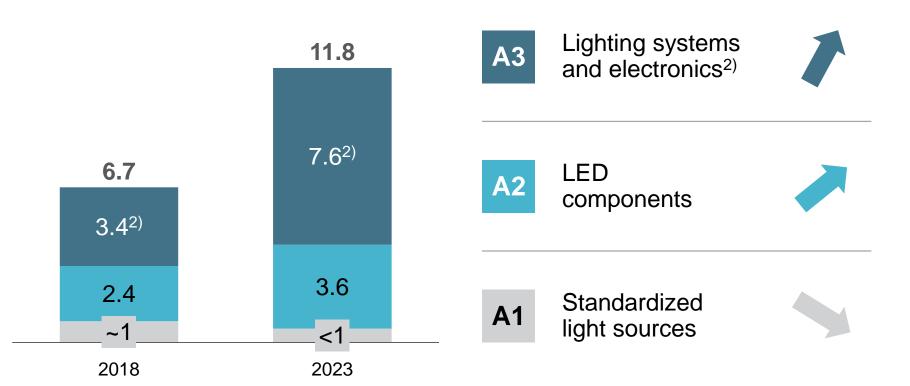
- Increase of LED penetration driven by energy efficiency, higher functionality and new design options
- Strong market transparency based on OEM data for >2 years

- Growth across all technologies
- Slow LEDification due to large car park
- Additional ~680m motorcycles and trucks installed basis

Sources: OSRAM market model, Car park & Light vehicle production from IHS; Car park for vehicles up to 3.5t except NAFTA with up to 6.5t, no motorcycles

# Automotive OEM lighting is characterized by a fast technological transformation

Global automotive OEM lighting market¹) (€bn)



CAGR 2018 – 2023





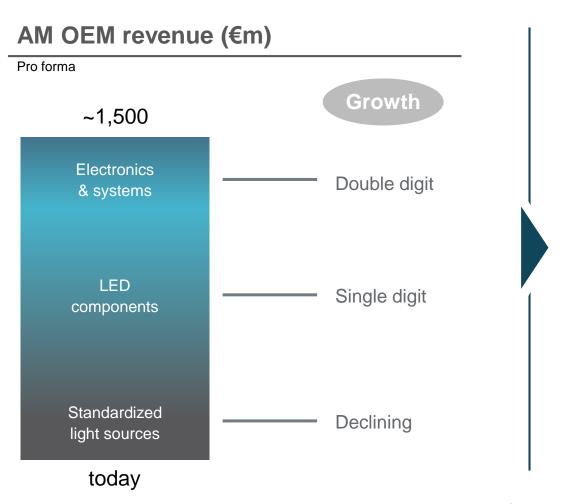
+7 – 9%

-~10%

<sup>1)</sup> Source: OSRAM market model

<sup>2)</sup> Excluding LED components as shown separate

## AM is well positioned to keep industry position #1



#### **Key strategic actions**

- Execute the growth story for OSRAM Continental intelligent, dynamic and smart lighting by combining lighting and electronics
- Keep market leadership in components business with focus on APAC

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

#### Standardized light sources are the backbone for AM

## **Cash** generation

Harvest strategy on EBITDA and cash



## Global footprint

Strong footprint close to regional customer



## **Cost** management

Effective cost saving programs



## Additional opportunities

- Potential in APAC
- New LED bulbs (XLS)



We will stay #1 in Automotive traditional light sources as last man standing

## **Consistent cost management** driven by footprint and productivity measures

#### **Productivity**

#### Lean principle

- Significant productivity savings in factories
- End-to-end performance & cost saving programs for overhead functions
- Tight tracking programs



#### **Footprint**

#### **Ongoing footprint** measures

- Continuous proactive adaption of capacity and overhead
- Ongoing program to reduce fixed costs

High double digit €m savings over the next years

Continuous optimization to support last man standing strategy

## Exchangeable LED light sources (XLS) as new standard for platforms

#### Combination of ...

... advantages of traditional bulbs...

Exchangeable

Standardized

... with newest LED technology

Design and performance

Styling

Energy consumption



Benefits



Reduction of complexity

Long-term availability

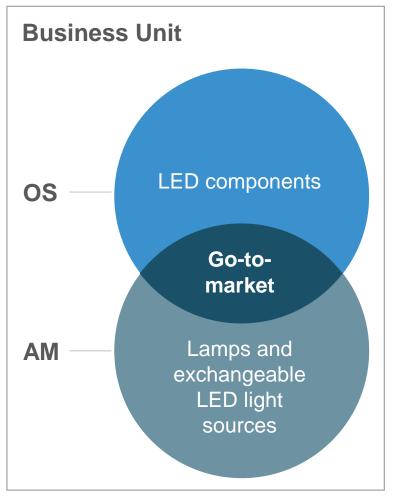
Opportunity



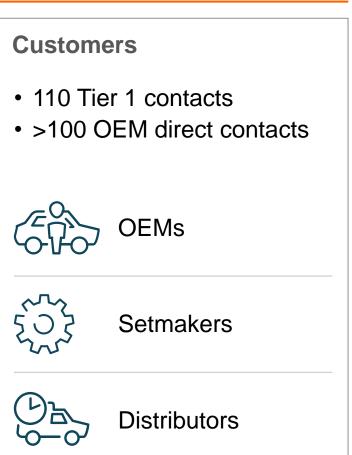
Enter mass volume market



### One face to the customer – OS uses go-to-market of AM

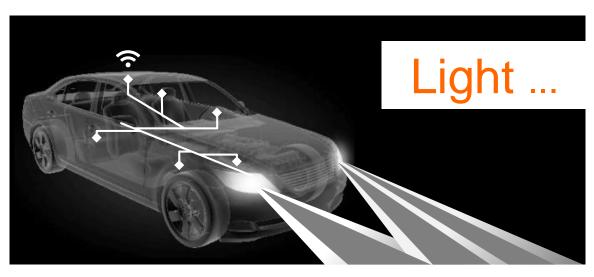




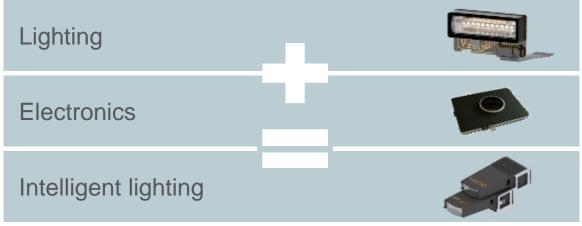


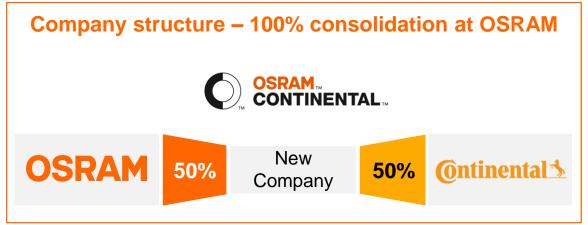


## Leading player for automotive lighting and light electronics



- ... is adaptive
- ... is becoming intelligent ...



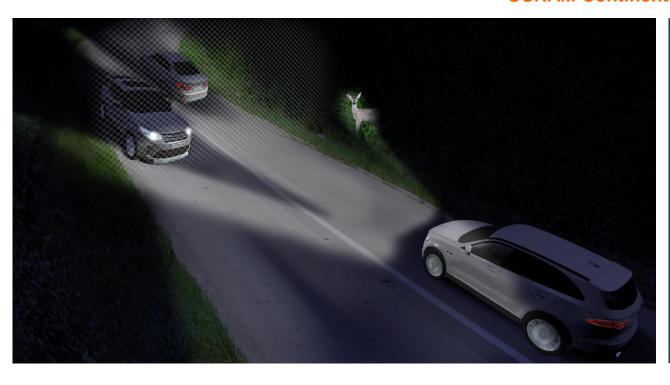


## A3 OSRAM Continental covers the value chain from module to system



**Electronics LED** Module **System Fixture** 

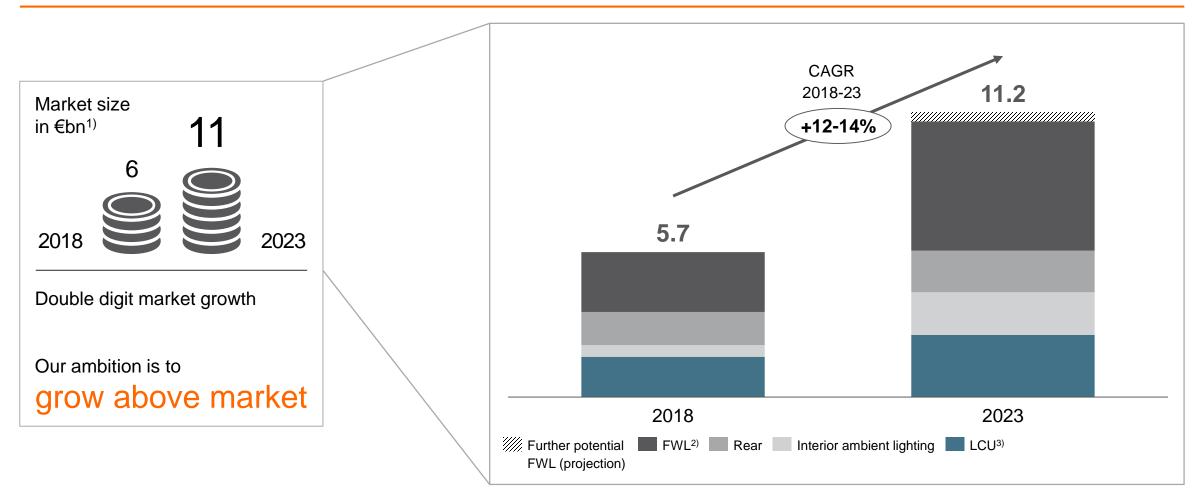
#### **OSRAM Continental**



- Unique combination of optics and electronics
- Parallel development of light, electronics, and software will fuel innovation and shorten time to market
- Global access to Tier 1 and OEM to build up collaborative relationship in early stage

# Strong growth driven by rising market penetration of intelligent lighting functions





<sup>1)</sup> Source: OSRAM market model

<sup>2)</sup> FWL = forward lighting; includes high beam, low beam, front fog, turn indicator, position light and daytime running light

<sup>3)</sup> LCU = light control unit

## Intelligent lighting with increasing importance Typical examples of existing and future product lines









#### **Example**

- Full LED light module, similar low beam & high beam packages
- Lens, emitter, carrier and heatsink all in the same part, as well as light driver module (LDM)
- 3 models of leading pick-up truck family

#### **Example**

- High-end ADB (adaptive driving beam) functionality
- Up to 71 pixels for high beam, low beam & adaptive driving beam
- Module platform
- One OEM with 3 vehicles on the road; more to come

#### Example

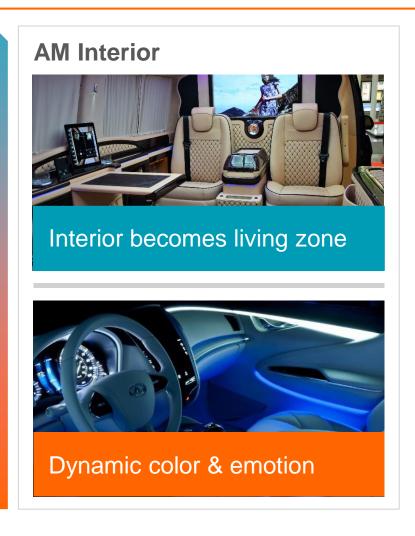
- Cross car-line module
- Significant contribution to headlamp cost reduction
- 13 vehicles on the road;
   more to come

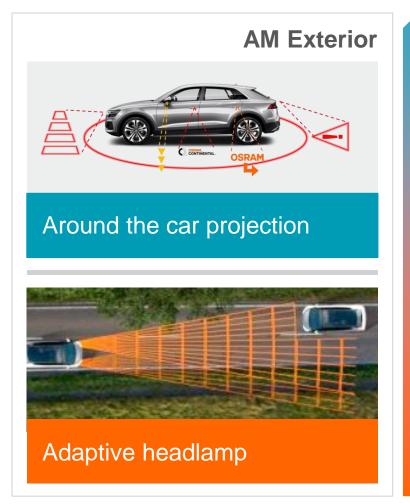
## **OSRAM Continental –**

## OSRAM TO CONTINENTAL TO

### Autonomous driving and visualization drive future markets

Autonomous Driving





Sensing

Visualization and connectivity

Illumination (

Human

Driver



### **OSRAM Continental at a glance**

Today 16 Locations \$\iiii \cdot \cdo

R&D as key driver >20% of developers with software focus



#### Targeted margin range

Adj. EBITDA margin

12 - 14%

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

# More than 1 billion cars on the road – An excellent opportunity for the Automotive Aftermarket

Large market (>1bn cars on the road) with stable market growth (~2%)

Strong growth in APAC as the most dynamic region (youngest car park)

Average life cycle of a car is ~12 years

More than 95% are still equipped with a halogen or xenon light source, in 2025 still ~90%

Lamp replacement driven by mileage and usage

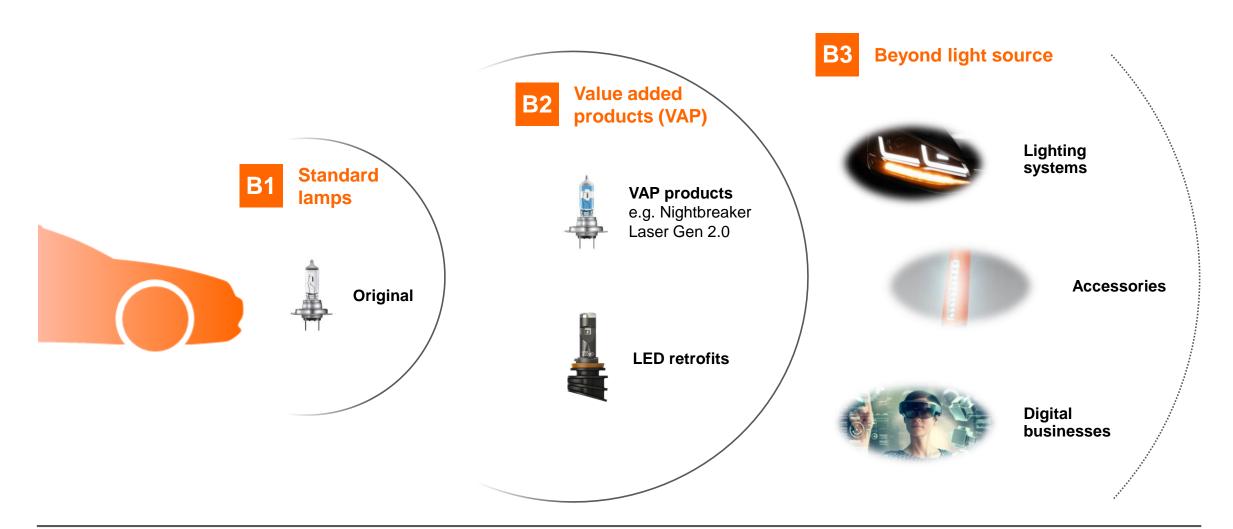
# Our position Global #1 market leader



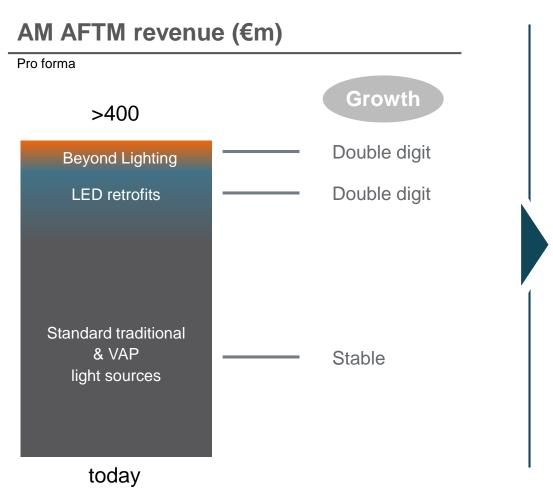
## Aftermarket with different dynamics to OEM – We are well established in the attractive & resilient aftermarket

**Omnichannel** Managing multiple channels (trade, retail, OES, e-Com, ...) Go-to-market management Regional differences (channels, regulations): Global sales and NAFTA vs. Europa vs. APAC logistics network >€1bn under long-Multi-year contracts possible term contracts Multi-brand strategy Quality expectation ≤ OEM requirement for segmentation **Portfolio** Packaging design, Brand, packaging, digital content and tools are buying criteria marketing, e-com Strong portfolio Opportunity to upsell segmentation

## Aftermarket growth strategy is based on three portfolio areas



#### AM is well positioned to extend the profitable AFTM business



#### **Key strategic actions**

Leverage of brand and sales channel ownership in AFTM business

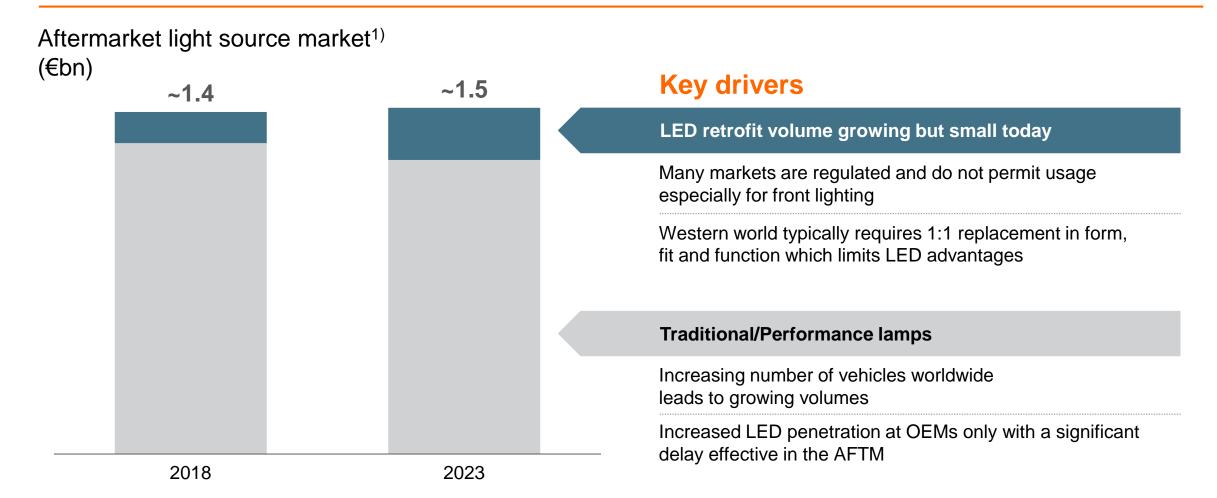
- Growth opportunities in VAP and LED retrofits
- Expansion in APAC
- Expansion in portfolio and digital business

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

VAP = Value added products



## The automotive lighting aftermarket is growing



<sup>1)</sup> Light vehicles only (up to 3.5t except NAFTA with up to 6.5t), no motorcycles; source: OSRAM market model

## AFTM offers many opportunities for upsell in light sources with attractive revenue and margin potential

#### **Standard (OEM-grade) products**







>1.5x



Price to standard<sup>1)</sup>

>2.2x

Lifetime

Design



>4.5x



 $>10x^{2}$ 

**Performance** 

**LED** retrofit

- 1) Representative end-consumer prices October 2018 (Amazon, Check24, Motointegrator, D&W Motion Corporation, ...)
- 2) Not for sale in Germany

### **OSRAM** is market leader in LED retrofits and profitable

#### Retrofit example



#### **OSRAM Way**

#### **Highly regulated market**

- ECE (56 countries incl. EU), SAE (USA) and (non)-regulated (RoW)
- OSRAM actively pursues regulatory change

#### **R&D** strength

Lamps need to meet form, fit and function,
 e.g. light distribution, heat management, lumen output

#### **AFTM portfolio and lighting know-how**

 Successful portfolio extension in the past 3 years with dedicated portfolio per region and segment (>150 products)

#### Manufacturing concept

- Partner network for fast ramp-up and flexibility (typically manual assembly)
- Insourcing with scale for automation and re-use of existing machinery where possible (cost down)

### Beyond lighting offers additional growth opportunities for OSRAM

## **5 OSRAM core strengths**

- Brand & customer relationships
- Sales network & logistics
- Strong application & testing know-how
- Portfolio management
- In-depth AFTM know-how

## **Attractive growth areas**

- Lighting systems
  - Upgrade fixtures
  - Driving/working lights
- Accessories<sup>1)</sup>
- Digital services







1) Focus on long-term viable products based on ACES-Trends: Autonomous, Connected, Electric, Shared

### Expected business development – OSRAM Automotive (AM)

#### 2019

#### Market and Industry

- Uncertain development of global car production growth
- China: Largest and growing car park key variable in global market growth
- Pending tariff discussion creates uncertainty
- WLTP impact

#### **OSRAM Automotive (AM)**

- Expecting soft start into 2019 given high level of uncertainty
- Keep #1 position in automotive OEM
- 1st full year of OSRAM Continental

### 2020 beyond

- Global car production growth on average ~2% p.a./ Global car park growth on average: ~3%
- LED penetration in headlamp expected to grow to >45%
- Interior lighting as additional growth driver in a 'shared and electrified' auto environment
- Increasing LED penetration and advanced solutions (e.g. pixelated matrix headlamp) drive growth in headlamp
- OSRAM Continental to be established in the market
- Interior as additional growth opportunity

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

### AM is well positioned to lead the automotive lighting market as #1



- Keep market leadership in traditional light sources and LED components by innovative platforms
- Execute double digit growth in advanced smart lighting (OSRAM Continental)
- Secure strong cash flow generation
- Double digit growth in APAC and LED retrofits in emerging aftermarket channel and first steps of portfolio extension beyond light source

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### **DI Management Team**



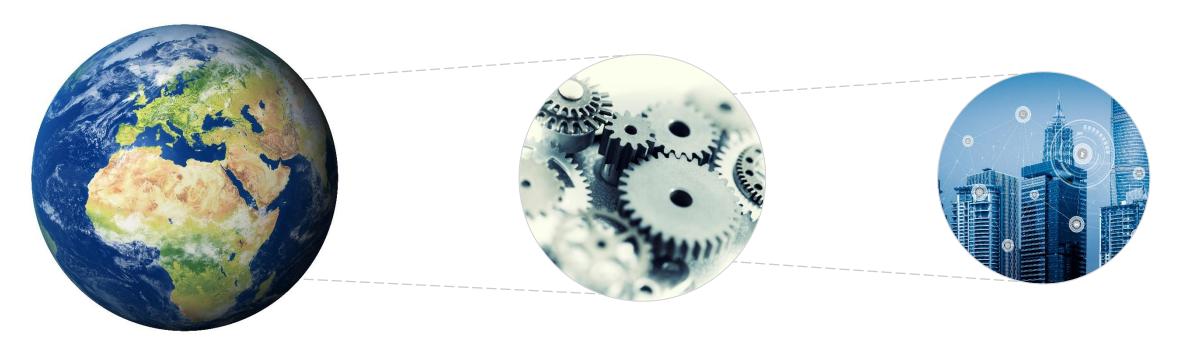


## How will you live in the future?



### IoT is the key enabler of the future urban world

#### **Snapshot of the IoT potential in 2020**



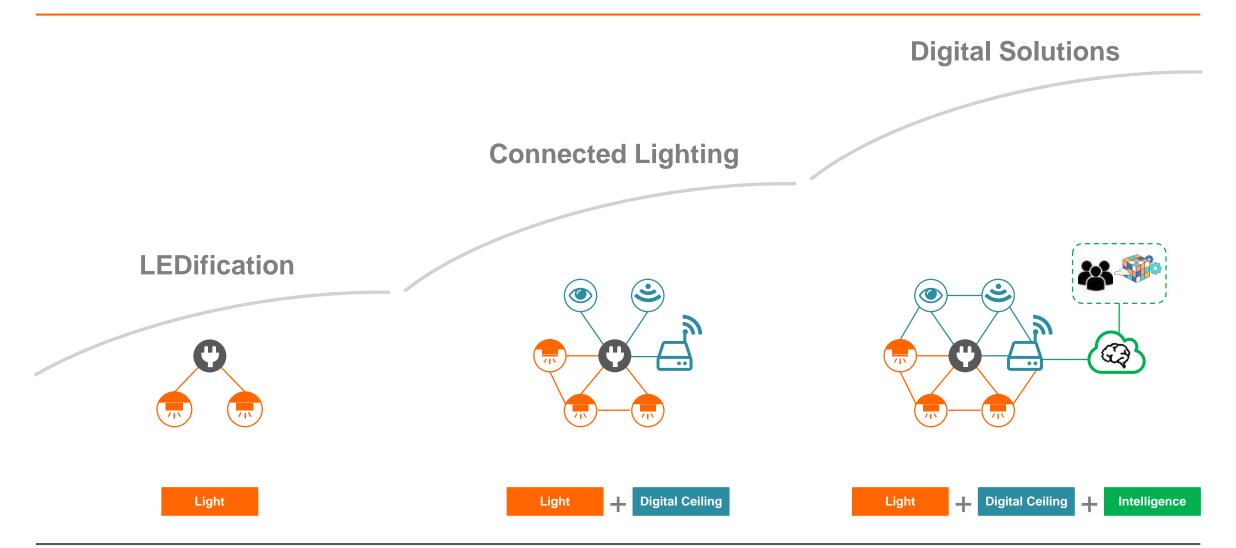
>€400bn

~€300bn
Professional IoT

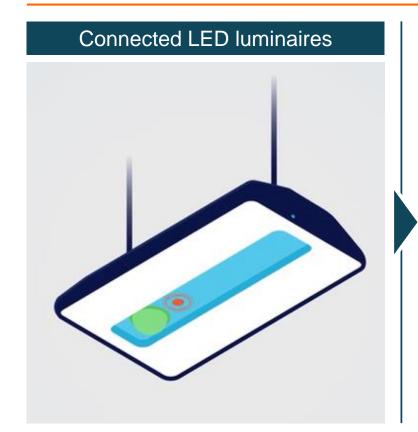
~€100bn Building and Industrial IoT

Source: Bain&Company 2017

# Lighting electronics transform into the digital infrastructure in buildings – OSRAM will be a key enabler for digital use cases



# Already today DI offers digital solutions beyond lighting to enhance customer experience and optimize business processes









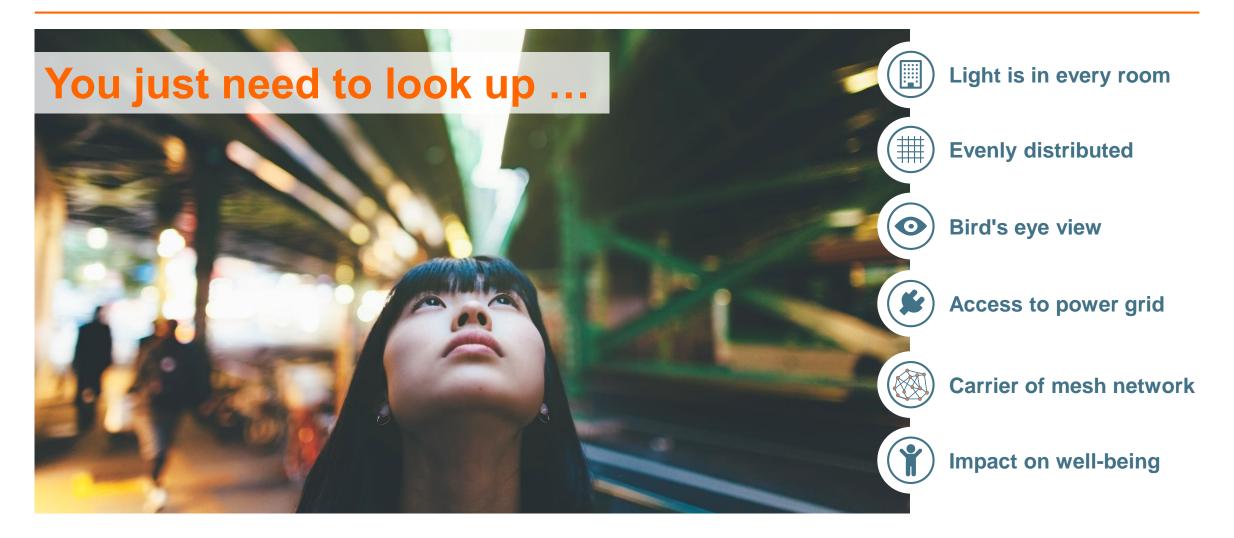
## Creating value beyond lighting through data insights

- Tracking of goods & people
- Value stream mapping
- Space optimization
- •



## Intelligence overhead

# Lighting infrastructure is uniquely positioned to play a crucial role in digital applications in all professional buildings



# DI has a unique position to succeed in digital photonic systems and applications

#### Key success factors...

- Strong market access with ~5,000 customers worldwide
- Global sales network in >40 countries
- Broad installed base with >18m intelligent drivers sold annually
- Strong and recognized IP portfolio in lighting infrastructure
- Strong IoT platform creating an open ecosystem

#### ...recognized by customers & industry







2018 PIA – Product Innovation Award

2018 ADEX Platinum Design Excellence Award

2018 Consulting -Specifying Engineer's Product of the Year

**DEXAL Driver** 

Wireless Area Lighting Control

**ENCELIUM EDGE** 







2017 LUX Awards Control Product of the Year 2017 Plasa Awards - Award for Innovation 2017 ISA Global SSL - Top 100 Award

Encelium

K-EYE

Zhuhai Grand Theatre

...and many more

### DI is targeting selected markets with a broad photonics scope

#### Market selection criteria

- High growth potential
- Non-consolidated
- Technology differentiation
- Opportunity for new business models







#### **Photonics scope**









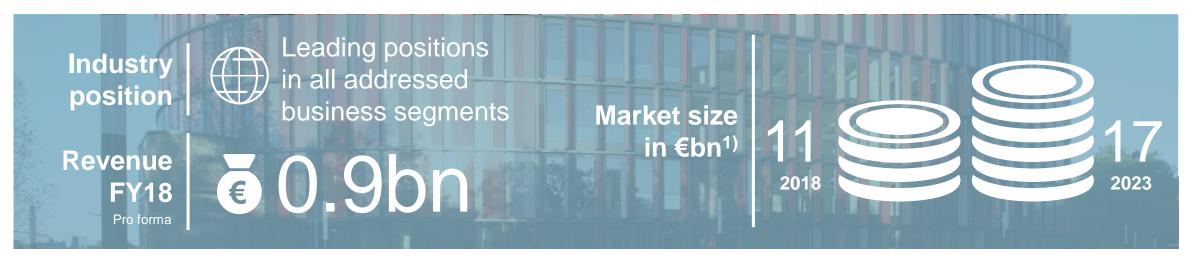








### **OSRAM DI at a glance**







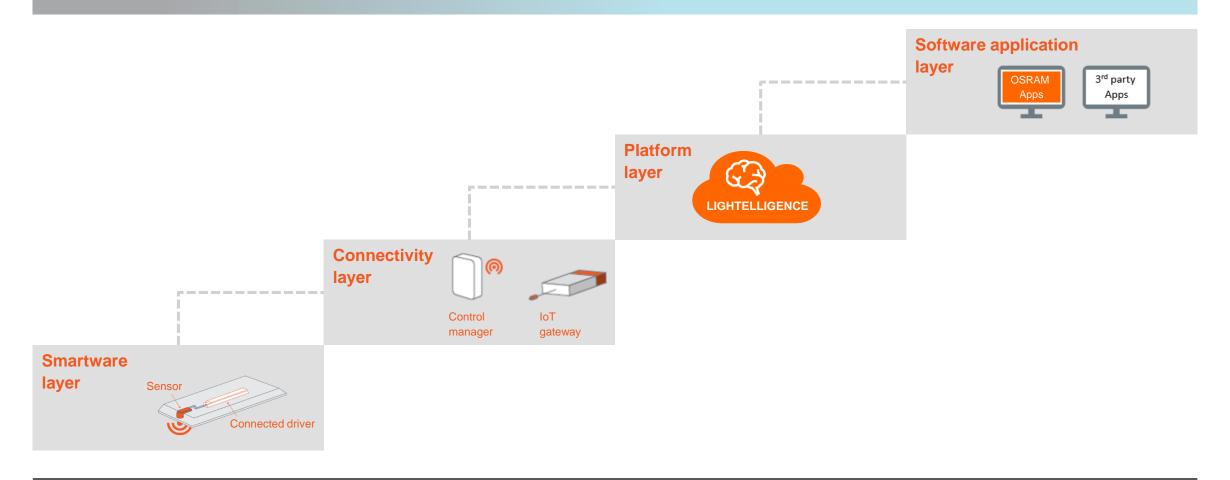
Addressable market. Source: OSRAM market model 2) OSRA

2) OSRAM internal competitor analysis

# Connected Electronics & Components are integral elements for Systems & Digital Solutions in our focus markets

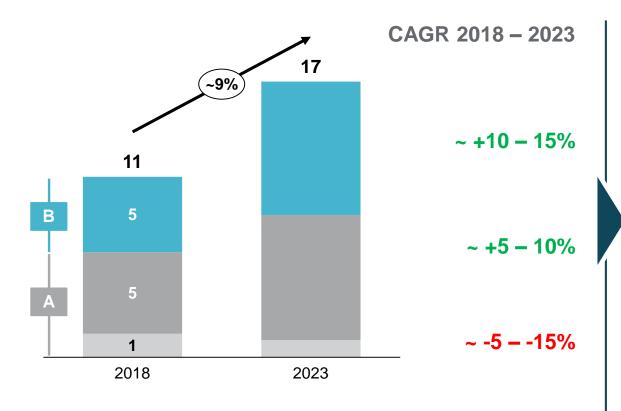
**A Electronics & Components** 

**B** Systems & Digital Solutions



## Three different speed levels of market growth for DI

#### **Addressable market** (€bn)



#### **Growth trends and drivers**

Highest growth in systems and digital solutions driven by IoT ramp-up in professional applications

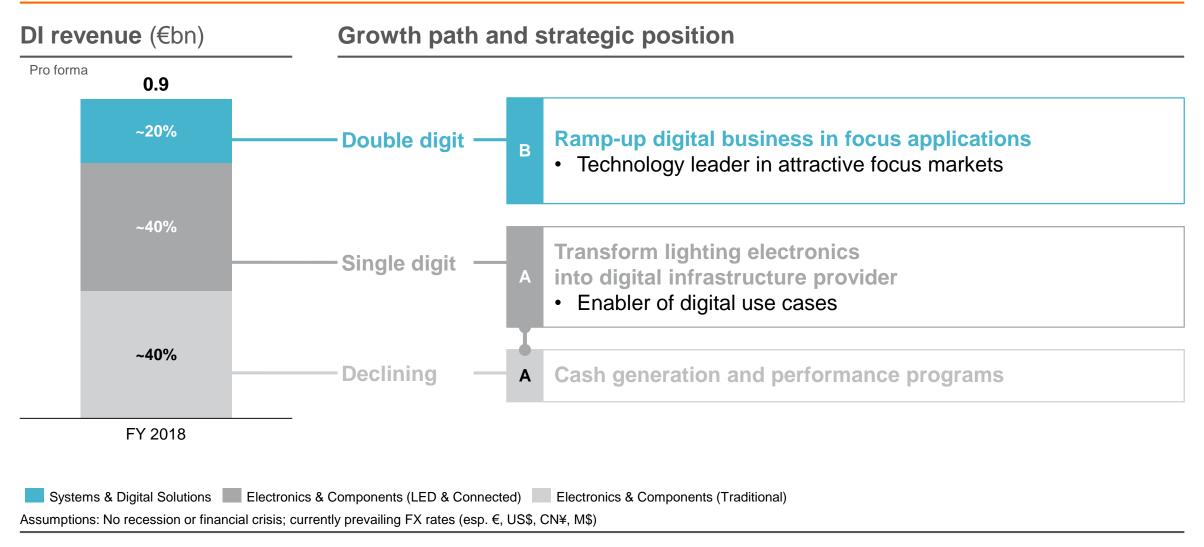
Solid growth in electronics and components for LED and connected lighting driven by GDP, construction and refurbishment

Moderate decline in traditional electronics and components driven by LEDification

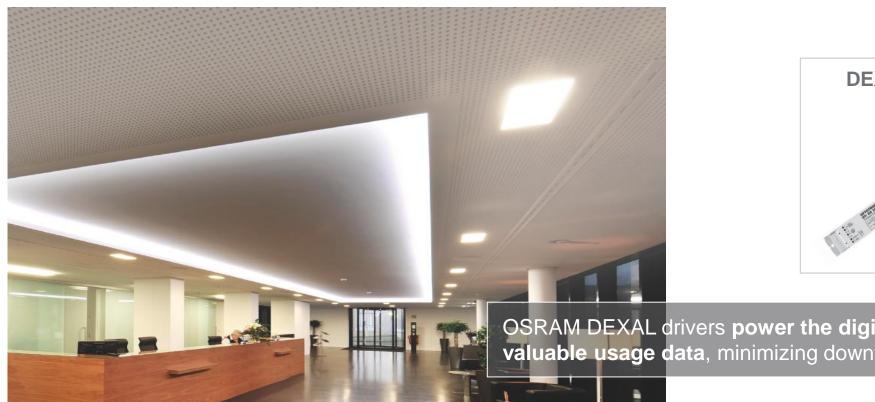
Systems & Digital Solutions Electronics & Components (LED & Connected) Electronics & Components (Traditional)

Source: OSRAM market model

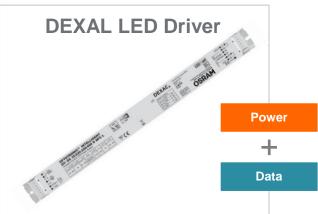
# DI will ramp-up digital business while transforming the Electronics & Components business into a digital infrastructure provider



## **OSRAM's** connected electronics provide the ideal infrastructure for future digital applications



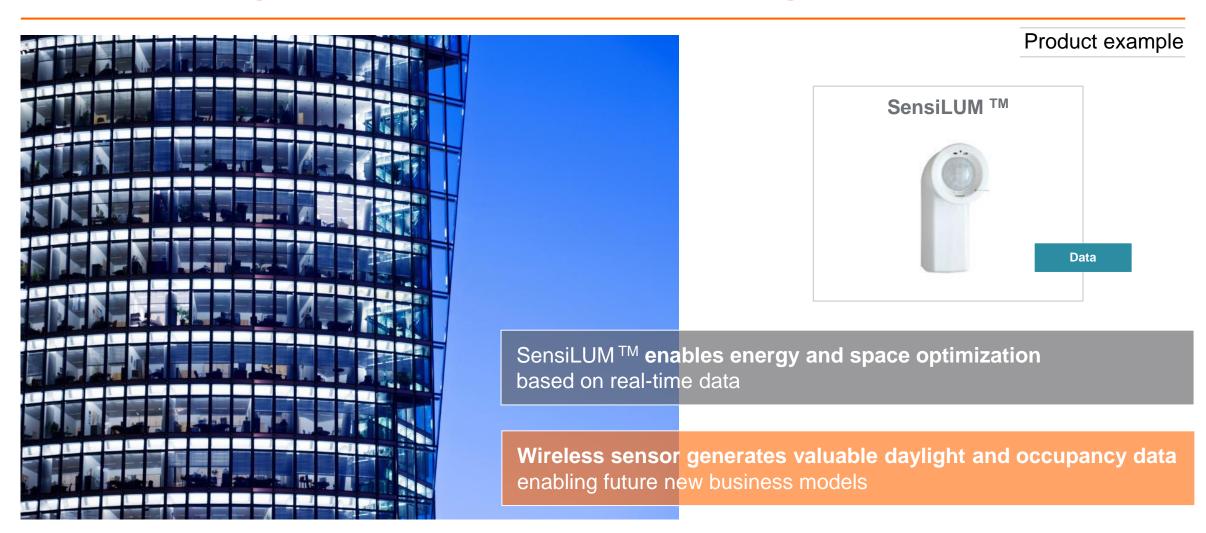
Product example



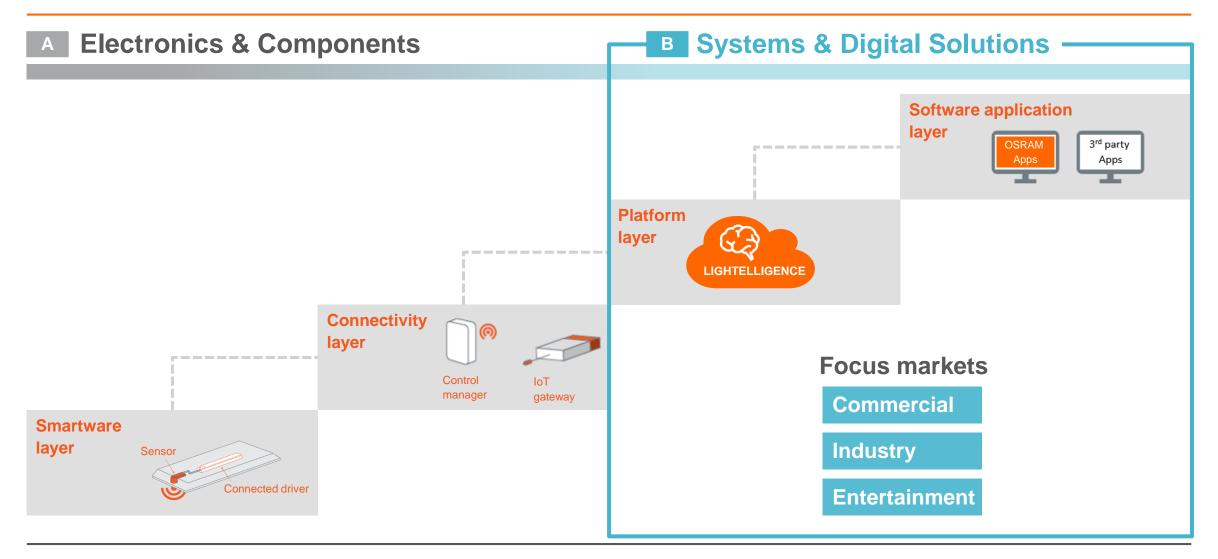
OSRAM DEXAL drivers power the digital ceiling and collect valuable usage data, minimizing downtime and replacement costs

**DEXAL** drivers create a future-proof installed base of digital infrastructure, enabling digital applications

## OSRAM sensing components deliver valuable insights for our customers



# DI's strong position in the smartware and connectivity layer enables system & digital solution business – for OSRAM and 3<sup>rd</sup> parties

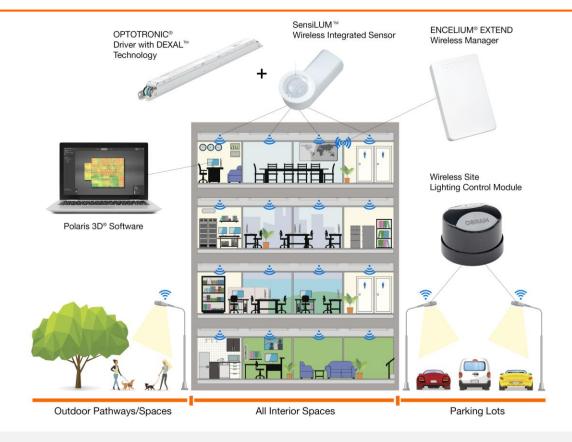


# **Energy savings and more productive spaces** with sensors and IoT

Commercial

Industry

Entertainment



>70% Energy savings

Improved operational efficiency

**Increased occupant comfort** 

Enhanced experiences (e.g. quality of light, care and work)

Global Trend ~75%

Yearly increase of sensors used in commercial real estate (2017 – 2020)

Source: Deloitte 2016

# More yield with less use of water, fertilizer and cultivation area







25% Increase in output

50% Increase in efficiency

75% Reduction in land use

60% Reduction of H<sub>2</sub>O and fertilizer

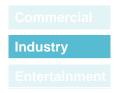
Global Trend ~50%

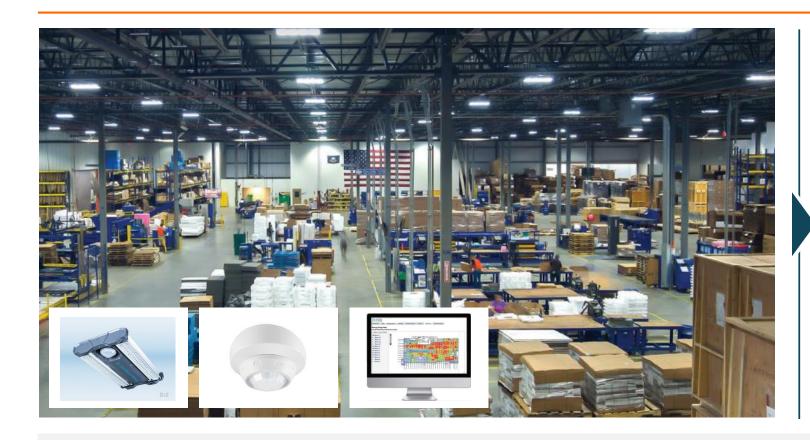
Yearly increase of greenhouse cultivation area lit with LED (2018 – 2022)

Source: OSRAM market model

Customer example: Shenandoah Growers

# Increased transparency and productivity based on data-driven insights







>80% reduction in lighting energy usage

 $\sim 20\%$  Increase in productivity<sup>1)</sup>

**Increase in process transparency** 

**Enhanced compliance to EHS norms** 

Global Trend ~35%

Yearly increase of globally installed professional IoT devices (2018 – 2020)

Source: Gartner Research 2017 1) Customer example: AGS

# Industry-leading entertainment & architainment products for eye-catching experiences

Commercia

Industr

Entertainment



Leading software to illuminate large scale lighting installations

Illumination of the three highest buildings in China

Integrated solution offering from hardware to software

Leading innovator in entertainment lighting

Global Trend ~17%

Yearly increase of the global architectural LED products market (2017 – 2021)

Source: Persistence Market Research 2018

# New digital applications offer the opportunity for new business models

#### DI's journey to new business models

**Today** 

**Tomorrow** 

One-time revenue

Recurring revenue



Hardware Local controls

Software Cloud

scales with # of new projects

scales with # of installed base

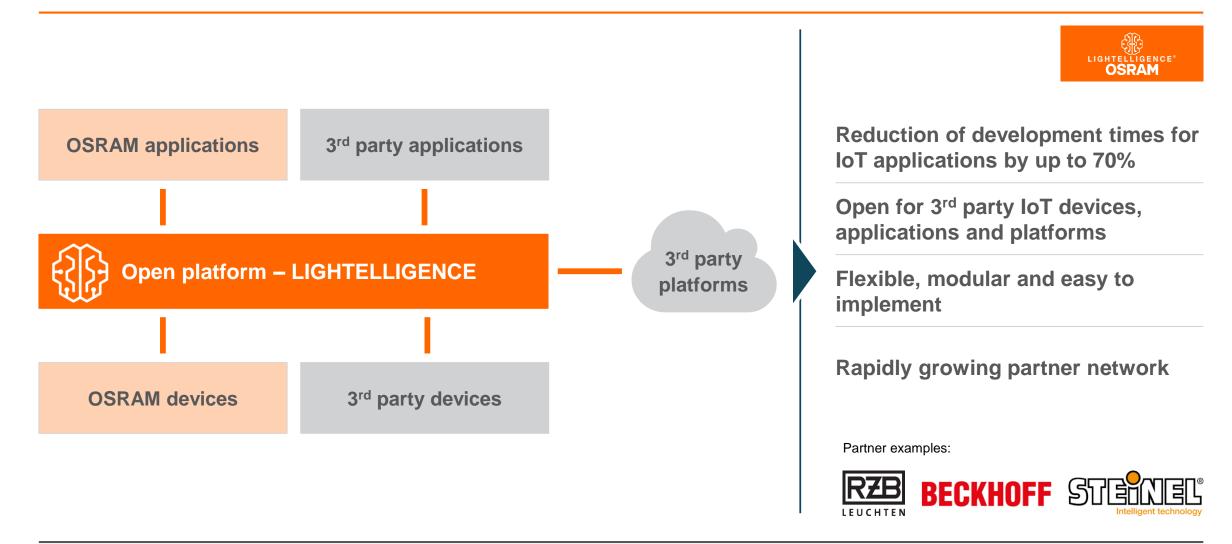
#### **Examples for applications with recurring revenue**





- Tracking of assets & goods
- Reporting of environmental conditions to improve business processes
- Remote and predictive maintenance for moving heads

# loT platform LIGHTELLIGENCE creates an open ecosystem for the lighting industry and beyond

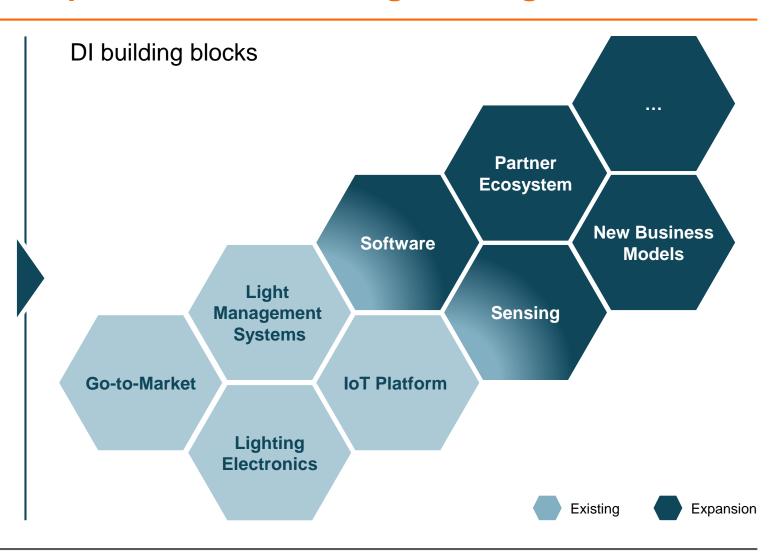


### Competencies are being built up in-house and through strategic M&A

### **Build and Buy approach**



- Expand competencies for fully integrated systems & solutions
- Expand existing Go-to-Market with a partner ecosystem
- Expand software and sensor-related competencies



### **Expected business development – OSRAM Digital (DI)**

#### 2019

## Market and Industry

- Further decline in traditional components and commoditization of standard electronics
- Continued strong growth in connected electronics
- Increasing demand for IoT pilot solutions

#### Beyond 2020

- Traditional fades out except for special applications
- Digital infrastructure demand continues to grow
- IoT drives introduction of new business models

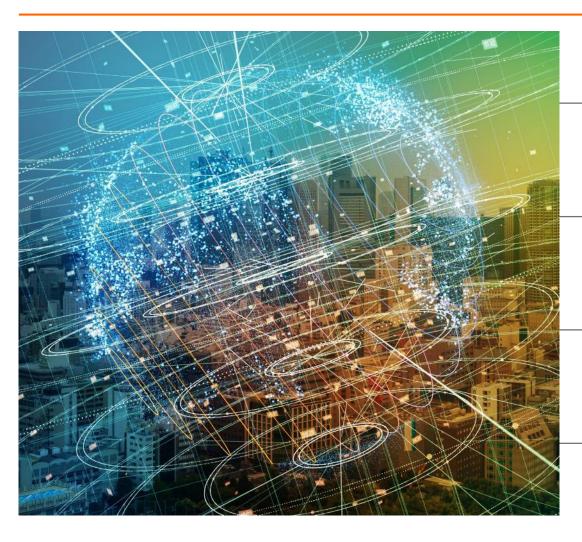
## OSRAM Digital (DI)

- Continued productivity and fixed cost optimization
- Execute roadmap for connected electronics
- Ramp-up digital business in focus markets with new digital offerings

- Partnering and selected M&A to extend competencies
- Transform into a digital infrastructure provider
- Extend digitalization offerings with focus on recurring revenue streams

Assumptions: No recession or financial crisis; currently prevailing FX rates (esp. €, US\$, CN¥, M\$)

### DI is well positioned to perform successfully



 Market with structural growth driven by LEDification and digitalization

Smart electronics and lighting infrastructure as enablers in a connected world

Systems & Digital Solutions in selected markets with promising growth potential

Build and Buy approach with solid financial outlook

## **Agenda**

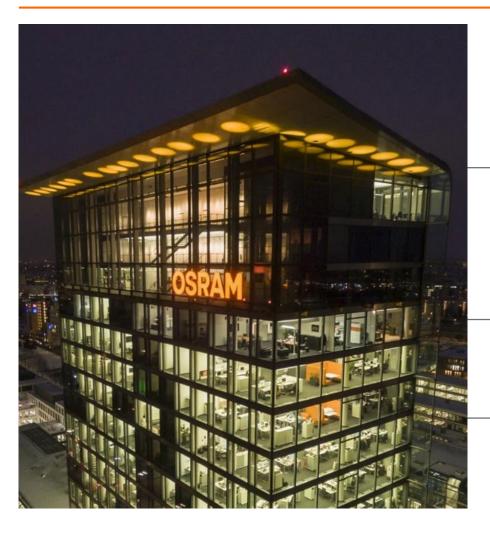
| Time          | Topic                                      | Responsible                  |
|---------------|--|------------------------------|
| 14:30 – 15:00 | Arrival and Registration                   |                              |
| 15:00 – 15:05 | Welcome                                    | Andreas Spitzauer            |
| 15:05 – 15:40 | Summary and results Q4/FY18 & Outlook FY19 | Dr. Olaf Berlien / Ingo Bank |
| 15:40 – 16:00 | OSRAM Strategy Update                      | Dr. Olaf Berlien             |
| 16:00 – 16:30 | Q&A  | OSRAM Board                  |
| 16:30 – 17:00 | Automotive                                 | Hans-Joachim Schwabe         |
| 17:00 – 17:35 | Digital                                    | Dr. Wilhelm Nehring          |
| 17:35 – 18:10 | Q&A  | OSRAM Team                   |
| 18:10 – 18:15 | Closing remarks                            | Dr. Olaf Berlien             |
| 18:15 – 19:00 | Get together                               | All                          |



## **Agenda**

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| 18:15 – 19:00 | Get together                               | All                          |

### **Key take-aways**



## OSRAM well on track in transformation to a High-Tech Photonics Champion

- From Illumination to Photonics
- From Components to Enabling Systems
- Light as an Enabler in a Connected World
- We have a strong Automotive core and emerge into additional growth markets
- We have a clear strategy and we will continue to execute it consistently

## **Agenda**

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| 18:15 – 19:00 | Get together                               | All                          |





## **Appendix**





### Financial calendar and IR contact information

#### **Upcoming events**

- November 9, 2018 Roadshow London
- November 12, 2018 Roadshow Frankfurt and Montreal
- November 13-14, 2018 Roadshow New York, Chicago and Boston
- November 26, 2018 Goldman Sachs Conference London

- November 27, 2018 Redburn Conference London
- December 4-5, 2018 Berenberg Conference Pennyhill
- December 5, 2018 **HSBC** Conference Zurich
- January 8-11, 2019 **CES Show Las Vegas**

#### **Investor Relations contact**

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|-----------|--|
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| Email     | ir@osram.com                           |



# **Key financial metrics** (preliminary, unaudited)

| Group (€m)                                    | Q4 FY17 | Q4 FY18 |       | Change (y-o-y) | FY17  | FY18  |       | Change (y-o-y) |
|---|---------|---------|-------|----------------|-------|-------|-------|----------------|
|   |         |         | nom.  | 3.0%           |       |       | nom.  | -0.3%          |
| Revenue                                       | 1,029   | 1,060   | comp. | 1.1%           | 4,128 | 4,115 | comp. | 1.9%           |
| Gross margin                                  | 33.2%   | 28.9%   |       | -430 bps       | 34.8% | 32.0% |       | -280 bps       |
| R&D   | -95     | -117    |       | +23.9%         | -364  | -421  |       | 15.5%          |
| SG&A  | -190    | -195    |       | -3.0%          | -697  | -702  |       | 0.7%           |
| EBITDA  | 118     | 72      |       | -38.7%         | 621   | 477   |       | -23.3%         |
| EBITDA margin                                 | 11.4%   | 6.8%    |       | -460 bps       | 15.1% | 11.6% |       | -350 bps       |
| Adj. <sup>1)</sup> EBITDA                     | 160     | 147     |       | -7.8%          | 695   | 605   |       | -13.0%         |
| Adj. EBITDA margin                            | 15.5%   | 13.9%   |       | -160 bps       | 16.8% | 14.7% |       | -210 bps       |
| Financial result (including at-equity result) | -2      | -4      |       | 99.7%          | -8    | -11   |       | 38.7%          |
| Income before income taxes                    | 55      | -8      |       | -115.2%        | 389   | 197   |       | -49.2%         |
| Taxes   | -15     | 3       |       | -121.9%        | -114  | -55   |       | -51.7%         |
| Net income                                    | 40      | -5      |       | -107.8%        | 275   | 142   |       | -48.2%         |
| Diluted EPS in €                              | 0.40    | -0.06   |       | -115.0%        | 2.78  | 1.44  |       | -48.2%         |
| Free cash flow                                | -28     | 40      |       | -243.8%        | 99    | -183  |       | -284.8%        |
| CAPEX   | -192    | -70     |       | -63.8%         | -537  | -467  |       | -13.0%         |
| Net liquidity                                 | 411     | -51     |       | -158.2%        | 411   | -51   |       | -112.5%        |
| Equity ratio                                  | 58.0%   | 56.6%   |       | -140 bps       | 58.0% | 56.6% |       | -150 bps       |
| Employees (in thousands)                      | 26.4    | 27.4    |       | 4.7%           | 26.4  | 27.4  |       | 4.7%           |

<sup>1)</sup> adjustment for special items (S.I.) includes a.o. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities including the sale of subsidiaries, investments and other businesses

OSRAM Q4/FY18 Earnings Release & Strategy Update (preliminary, unaudited figures)
November 7<sup>th</sup>, 2018

## **Segment overview** (preliminary, unaudited)

| Q4 FY18 (€m)   | os    | SP    | LSS    | CIE   | OSRAM<br>Licht Group |
|--|-------|-------|--------|-------|----------------------|
| Revenue  | 446   | 561   | 261    | -209  | 1,060                |
| Change % vs. PY reported   | 3.9%  | 1.8%  | 7.9%   |       | 3.0%                 |
| Change % vs. PY comparable                                       | 1.6%  | 1.0%  | 3.8%   |       | 1.1%                 |
| EBITDA   | 109   | 27    | -35    | -30   | 72                   |
| EBITDA margin  | 24.5% | 4.8%  | -13.3% |       | 6.8%                 |
| Special items EBITDA   | -1    | -33   | -27    | -15   | -75                  |
| therein transformations costs                                    | 0     | -28   | -20    | -14   | -61                  |
| EBITDA before special items                                      | 110   | 60    | -8     | -15   | 147                  |
| EBITDA margin before special items                               | 24.7% | 10.6% | -3.0%  |       | 13.9%                |
| Assets <sup>1)</sup>   | 1,329 | 998   | 359    | 2,043 | 4,730                |
| Free cash flow   | 60    | 50    | -39    | -31   | 40                   |
| Additions to intangible assets and property, plant and equipment | 49    | 12    | 8      | 1     | 70                   |
| Amortization   | 1     | 6     | 5      | -2    | 11                   |
| Depreciation   | 41    | 14    | 6      | 1     | 63                   |

<sup>1)</sup> net assets on segment level; total assets on group level; CIE includes reconciling items

# Segment overview (preliminary, unaudited)

| FY18 (€m)  | os    | SP    | LSS   | CIE   | OSRAM<br>Licht Group |
|--|-------|-------|-------|-------|----------------------|
| Revenue  | 1,725 | 2,224 | 973   | -807  | 4,115                |
| Change % vs. PY reported   | 2.4%  | -3.8% | -1.7% |       | -0.3%                |
| Change % vs. PY comparable                                       | 5.8%  | 0.7%  | -1.5% |       | 1.9%                 |
| EBITDA   | 417   | 239   | -81   | -98   | 477                  |
| EBITDA margin  | 24.2% | 10.8% | -8.4% |       | 11.6%                |
| Special items EBITDA   | -1    | -51   | -49   | -27   | -128                 |
| therein transformations costs                                    | 0     | -37   | -40   | -25   | -101                 |
| EBITDA before special items                                      | 418   | 290   | -33   | -71   | 605                  |
| EBITDA margin before special items                               | 24.2% | 13.0% | -3.3% |       | 14.7%                |
| Assets <sup>1)</sup>   | 1,329 | 998   | 359   | 2,043 | 4,730                |
| Free cash flow   | -145  | 176   | -107  | -108  | -183                 |
| Additions to intangible assets and property, plant and equipment | 393   | 49    | 23    | 2     | 467                  |
| Amortization   | 4     | 18    | 11    | 0     | 32                   |
| Depreciation   | 156   | 50    | 24    | 2     | 232                  |

<sup>1)</sup> net assets on segment level; total assets on group level; CIE includes reconciling items

# Consolidated statement of income (preliminary, unaudited)

|   | Three months ended<br>September 30, 2018 | Three months ended September 30, 2017 | Twelve months ended September 30, 2018 | Twelve months ended<br>September 30, 2017 |
|---|--|---------------------------------------|--|---|
| Revenue   | 1,060                                    | 1,029                                 | 4,115                                  | 4,128                                     |
| Cost of goods sold and services rendered                                  | -754                                     | -687                                  | -2,800                                 | -2,692                                    |
| Gross profit  | 306                                      | 342                                   | 1,315                                  | 1,436                                     |
| Research and development expenses   | -117                                     | -95                                   | -421                                   | -364                                      |
| Marketing, selling and general administrative expenses                    | -195                                     | -190                                  | -702                                   | -697                                      |
| Other operating income  | 9  | 4                                     | 38                                     | 30  |
| Other operating expense   | -6                                       | -4                                    | -22                                    | -7  |
| Income (loss) from investments accounted for using the equity method, net | 0  | 0                                     | -4                                     | -2  |
| Interest income   | 0  | 2                                     | 3                                      | 7   |
| Interest expense  | -2                                       | -3                                    | -10                                    | -12                                       |
| Other financial income (expense), net                                     | -2                                       | 0                                     | 0                                      | -1  |
| Income before income taxes OSRAM (continuing operations)                  | -8                                       | 55                                    | 197                                    | 389                                       |
| Income taxes  | 3  | -15                                   | -55                                    | -114                                      |
| Income OSRAM (continuing operations)                                      | -5                                       | 40                                    | 142                                    | 275                                       |
| Income (loss) from discontinued operation, net of tax                     | 5  | 3                                     | -2                                     | -51                                       |
| Net income  | 0  | 42                                    | 141                                    | 224                                       |
| Attributable to:  |  |                                       |  |   |
| Non-controlling interests   | 1  | 1                                     | 3                                      | 3   |
| Shareholders of OSRAM Licht AG  | -1                                       | 41                                    | 137                                    | 220                                       |
| Basic earnings per share (in €)   | -0.01                                    | 0.43                                  | 1.42                                   | 2.27                                      |
| Diluted earning per share (in €)  | -0.01                                    | 0.43                                  | 1.42                                   | 2.26                                      |
| Basic earnings per share (in €) OSRAM (continuing operations)             | -0.06                                    | 0.40                                  | 1.44                                   | 2.79                                      |
| Diluted earning per share (in €) OSRAM (continuing operations)            | -0.06                                    | 0.40                                  | 1.44                                   | 2.78                                      |

# Net Income OSRAM (continuing operations) (preliminary, unaudited)

|   | Three months ended<br>September 30 | Three months ended<br>September 30 | Change (y-o-y) | Twelve months ended<br>September 30 | Twelve months ended<br>September 30 | Change (y-o-y) |
|---|------------------------------------|------------------------------------|----------------|-------------------------------------|-------------------------------------|----------------|
|   | 2018                               | 2017                               |                | 2018                                | 2017                                |                |
| Net Income OSRAM (continuing operations)  | -5                                 | 40                                 | -112.7%        | 142                                 | 275                                 | -48.2%         |
| Special Items (Profit)  | 82                                 | 45                                 | 81.5%          | 145                                 | 84                                  | 72.9%          |
| Tax attributable to Special Items (Profit)  | -23                                | -12                                | 82.3%          | -40                                 | -25                                 | 64.5%          |
| Net Income OSRAM (continuing operations) adjusted <sup>1)</sup>                                   | 54                                 | 72                                 | -25.2%         | 247                                 | 334                                 | -26.2%         |
| Non-controlling interests   | 1                                  | 1                                  | 7.7%           | 3                                   | 3                                   | -1.4%          |
| Net Income OSRAM (continuing operations) adjusted, attributable to Shareholders of OSRAM Licht AG | 53                                 | 71                                 | -25.7%         | 243                                 | 331                                 | -26.4%         |
| Diluted earning per share (in €) OSRAM (continuing operations) adjusted                           | 0.55                               | 0.73                               | 26%            | 2.51                                | 3.38                                | -26%           |
| Diluted earning per share (in €) OSRAM (continuing operations)                                    | -0.06                              | 0.40                               | -116%          | 1.44                                | 2.78                                | -48%           |
|   |                                    |                                    |                |                                     |                                     |                |
| Diluted number of shares  | 96.8                               | 96.9                               |                | 96.9                                | 97.7                                |                |
| Tax rate  | 28%                                | 28%                                |                | 28%                                 | 29%                                 |                |

<sup>1)</sup> adjustment for special items (S.I.) includes e.g. transformation costs, substantial legal and regulatory matters, and costs related to mergers and acquisitions activities including the sale of subsidiaries, investments and other businesses.

## **Consolidated statement of financial position** (preliminary, unaudited)

|   | As of<br>September 30 | As of<br>September 30 |
|---|-----------------------|-----------------------|
|   | 2018                  | 2017                  |
| Assets  |                       |                       |
| Current Assets                                    |                       |                       |
| Cash and cash equivalents                         | 333                   | 609                   |
| Available-for-sale financial assets               | 0                     | 2                     |
| Trade receivables                                 | 614                   | 634                   |
| Other current financial assets                    | 45                    | 44                    |
| Inventories                                       | 743                   | 662                   |
| Income tax receivables                            | 49                    | 35                    |
| Other current assets                              | 151                   | 112                   |
| Assets held for sale                              | 49                    | 2                     |
| Total current assets                              | 1,984                 | 2,100                 |
| Goodwill  | 369                   | 148                   |
| Other intangible assets                           | 296                   | 142                   |
| Property, plant and equipment                     | 1,621                 | 1,396                 |
| Investments accounted for using the equity method | 66                    | 66                    |
| Other financial assets                            | 19                    | 13                    |
| Deferred tax assets                               | 309                   | 314                   |
| Other assets                                      | 65                    | 59                    |
| Total assets                                      | 4,730                 | 4,238                 |

|  | As of<br>September 30 | As of<br>September 30 |
|--|-----------------------|-----------------------|
|  | 2018                  | 2017                  |
| Liabilities and equity   |                       |                       |
| Current liabilities  |                       |                       |
| Short-term debt and current maturities of long-term debt       | 233                   | 16                    |
| Trade payables   | 714                   | 752                   |
| Other current financial liabilities                            | 40                    | 29                    |
| Current provisions   | 74                    | 75                    |
| Income tax payables  | 110                   | 99                    |
| Other current liabilities                                      | 373                   | 309                   |
| Liabilities associated with assets classified as held for sale | 12                    | 0                     |
| Total current liabilities                                      | 1,555                 | 1,280                 |
| Long-term debt   | 152                   | 184                   |
| Pension plans and similar commitments                          | 162                   | 150                   |
| Deferred tax liabilities                                       | 14                    | 10                    |
| Provisions   | 26                    | 32                    |
| Other financial liabilities                                    | 24                    | 10                    |
| Other liabilities  | 121                   | 111                   |
| Total liabilities  | 2,053                 | 1,778                 |
| Equity   |                       |                       |
| Common stock, no par value                                     | 105                   | 105                   |
| Additional paid-in capital                                     | 2,034                 | 2,035                 |
| Retained earnings  | 780                   | 699                   |
| Other components of equity                                     | 3                     | 5                     |
| Treasury shares, at cost                                       | -386                  | -392                  |
| Total equity attributable to shareholders of OSRAM Licht AG    | 2,536                 | 2,452                 |
| Non-controlling interests                                      | 140                   | 8                     |
| Total equity   | 2,676                 | 2,460                 |
| Total liabilities and equity                                   | 4,730                 | 4,238                 |

## **Consolidated statement of cash flows** (preliminary, unaudited)

|  | Three months ended Sep. 30 | Three months ended Sep. 30 | Twelve months ended Sep. 30 | Twelve months ended Sep. 30 |
|--|----------------------------|----------------------------|-----------------------------|-----------------------------|
|  | 2018                       | 2017                       | 2018                        | 2017                        |
| Cash flows from operating activities   |                            |                            |                             |                             |
| Net income   | 0                          | 42                         | 141                         | 224                         |
| Adjustments to reconcile net income (loss) to cash provided  |                            |                            |                             |                             |
| Income (loss) from discontinued operation, net of tax  | -5                         | -3                         | 2                           | 51                          |
| Amortization, depreciation, and impairments  | 77                         | 61                         | 268                         | 224                         |
| Income taxes   | -3                         | 15                         | 55                          | 114                         |
| Interest (income) expense, net   | 3                          | 1                          | 8                           | 5                           |
| (Gains) losses on sales and disposals of businesses, intangible assets, and property, plant and equipment, net | 1                          | 1                          | -16                         | -16                         |
| (Gains) losses on sales of investments, net  | -1                         | -                          | -1                          | 0                           |
| (Income) loss from investments   | 0                          | 0                          | 4                           | 2                           |
| Other non-cash (income) expenses   | 1                          | 7                          | 8                           | 27                          |
| Change in current assets and liabilities   |                            |                            |                             |                             |
| (Increase) decrease in inventories   | 27                         | 19                         | -73                         | -23                         |
| (Increase) decrease in trade receivables   | -21                        | -11                        | -8                          | -62                         |
| (Increase) decrease in other current assets  | 48                         | -2                         | -6                          | 11                          |
| Increase (decrease) in trade payables  | -44                        | 38                         | -85                         | 160                         |
| Increase (decrease) in current provisions  | 7                          | -9                         | -6                          | -29                         |
| Increase (decrease) in other current liabilities   | 43                         | 19                         | 71                          | -26                         |
| Change in other assets and liabilities   | 2                          | 17                         | -5                          | 12                          |
| Income taxes paid  | -26                        | -32                        | -76                         | -45                         |
| Dividends received   | 0                          | 0                          | 0                           | 0                           |
| Interest received  | 0                          | 2                          | 3                           | 7                           |
| Net cash provided by (used in) operating activities - OSRAM (continuing operations)                            | 109                        | 164                        | 283                         | 636                         |
| Net cash provided by (used in) operating activities from discontinued operation                                | 0                          | -2                         | -4                          | -87                         |
| Net cash provided by (used in) - OSRAM Licht Group (total)   | 109                        | 163                        | 279                         | 548                         |

|   | Three months ended Sep. 30 | Three months ended Sep. 30 | Twelve months ended Sep. 30 | Twelve months ended Sep. 30 |
|---|----------------------------|----------------------------|-----------------------------|-----------------------------|
|   | 2018                       | 2017                       | 2018                        | 2017                        |
| Cash flows from investing activities  |                            |                            |                             |                             |
| Additions to intangible assets and property, plant and equipment                                      | -70                        | -192                       | -467                        | -537                        |
| Acquisitions, net of cash and cash equivalents acquired   | -170                       | -46                        | -181                        | -108                        |
| Purchases of investments  | -3                         | -59                        | -10                         | -68                         |
| Proceeds and payments from sales of investments, intangible assets, and property, plant and equipment | 0                          | 0                          | 9                           | 27                          |
| Proceeds and payments from the sale of business activities, net cash disposed of                      | -                          | -                          | 22                          | 380                         |
| Proceeds from sale of current available-for-sale financial assets                                     | 1                          | -                          | 2                           | -                           |
| Net cash provided by (used in) investing activities - OSRAM (continuing operations)                   | -242                       | -297                       | -625                        | -305                        |
| Net cash provided by (used in) investing activities discontinued operation                            | -                          | -                          | -                           | -14                         |
| Net cash provided by (used in) investing activities - OSRAM Licht Group (total)                       | -242                       | -297                       | -625                        | -319                        |
| Cash flows from financing activities  |                            |                            |                             |                             |
| Purchase of treasury stock  | -                          | -1                         | -                           | -165                        |
| Proceeds from changes in ownership interest without change in control                                 | 0                          | -                          | 1                           | -                           |
| Proceeds from issuance of long-term debt  | -                          | -                          | -                           | 150                         |
| Repayment of long-term debt   | -2                         | -2                         | -8                          | -8                          |
| Change in debt and other financing activities   | 195                        | -9                         | 195                         | -3                          |
| Interest paid   | -2                         | -1                         | -5                          | -9                          |
| Dividends paid to shareholders of OSRAM Licht AG  | -                          | -                          | -107                        | -97                         |
| Dividends paid to non-controlling interest shareholders   | -3                         | -4                         | -3                          | -7                          |
| Net cash provided by (used in) financing activities - OSRAM (continuing operations)                   | 188                        | -18                        | 72                          | -139                        |
| Net cash provided by (used in) financing activities discontinued operation                            | -                          | -                          | -                           | -16                         |
| Net cash provided by (used in) financing activities - OSRAM Licht Group (total)                       | 188                        | -18                        | 72                          | -154                        |
| Effect of exchange rates on cash and cash equivalents   | -2                         | -9                         | -3                          | -25                         |
| Net increase (decrease) in cash and cash equivalents  | 54                         | -162                       | -276                        | 50                          |
| Cash and cash equivalents at beginning of period  | 279                        | 771                        | 609                         | 559                         |
| Cash and cash equivalents at end of period (consolidated statement of financial position)             | 333                        | 609                        | 333                         | 609                         |