

Annual General Meeting of Shareholders 2019

Chuck del Prado, President & CEO

May 20, 2019

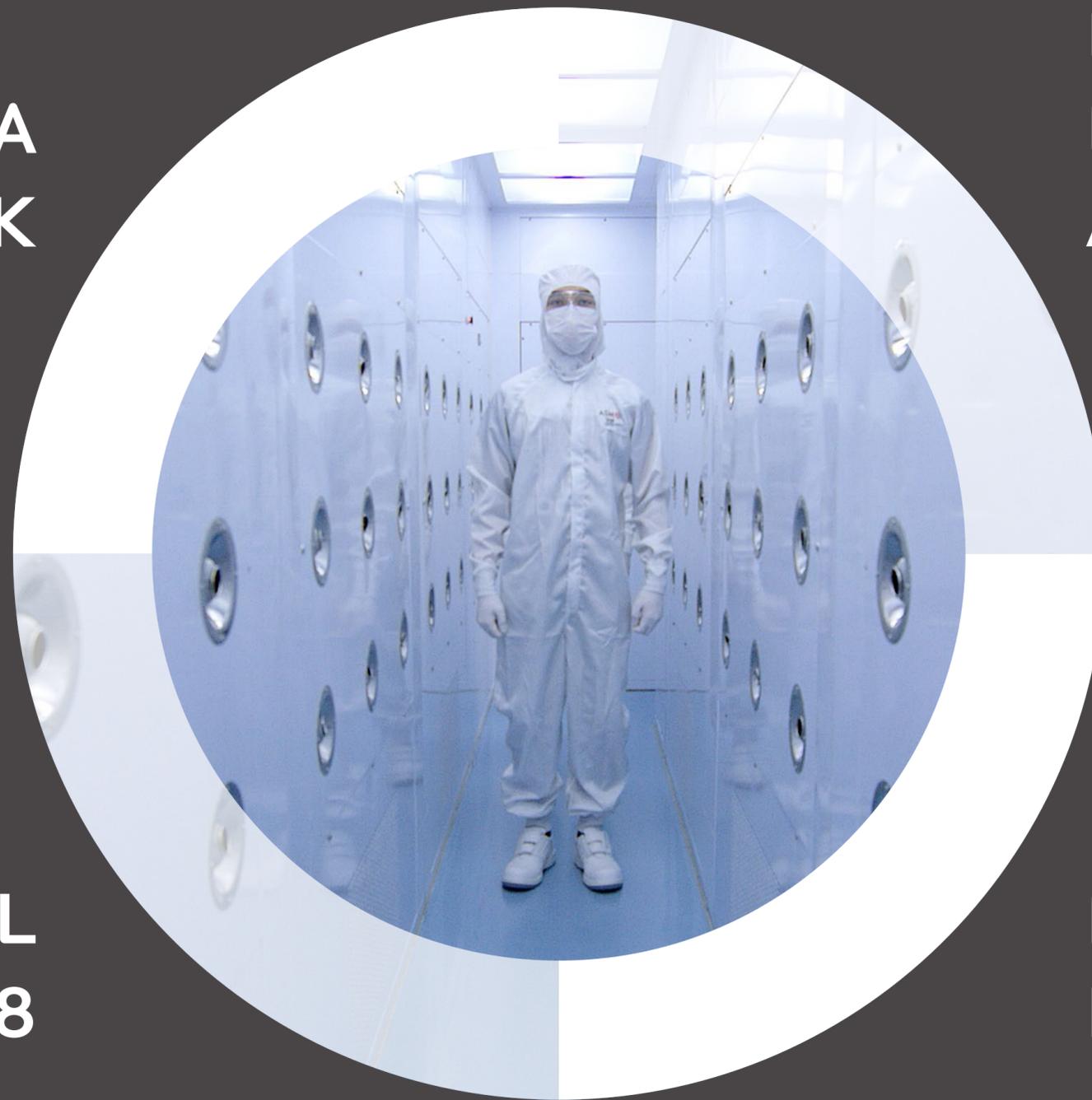
**TAKING THE NEXT
LEAP FORWARD**



Cautionary Note Regarding Forward-Looking Statements: All matters discussed in this presentation, except for any historical data, are forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. These include, but are not limited to, economic conditions and trends in the semiconductor industry generally and the timing of the industry cycles specifically, currency fluctuations, corporate transactions, financing and liquidity matters, the success of restructurings, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholders or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict or political instability, epidemics and other risks indicated in the Company's reports and financial statements. The Company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.

**BUSINESS AGENDA
AND 2019 OUTLOOK**

**BUSINESS
ENVIRONMENT
AND RESULTS 2018**



**NON-FINANCIAL
HIGHLIGHTS 2018**

**FINANCIAL
HIGHLIGHTS 2018**

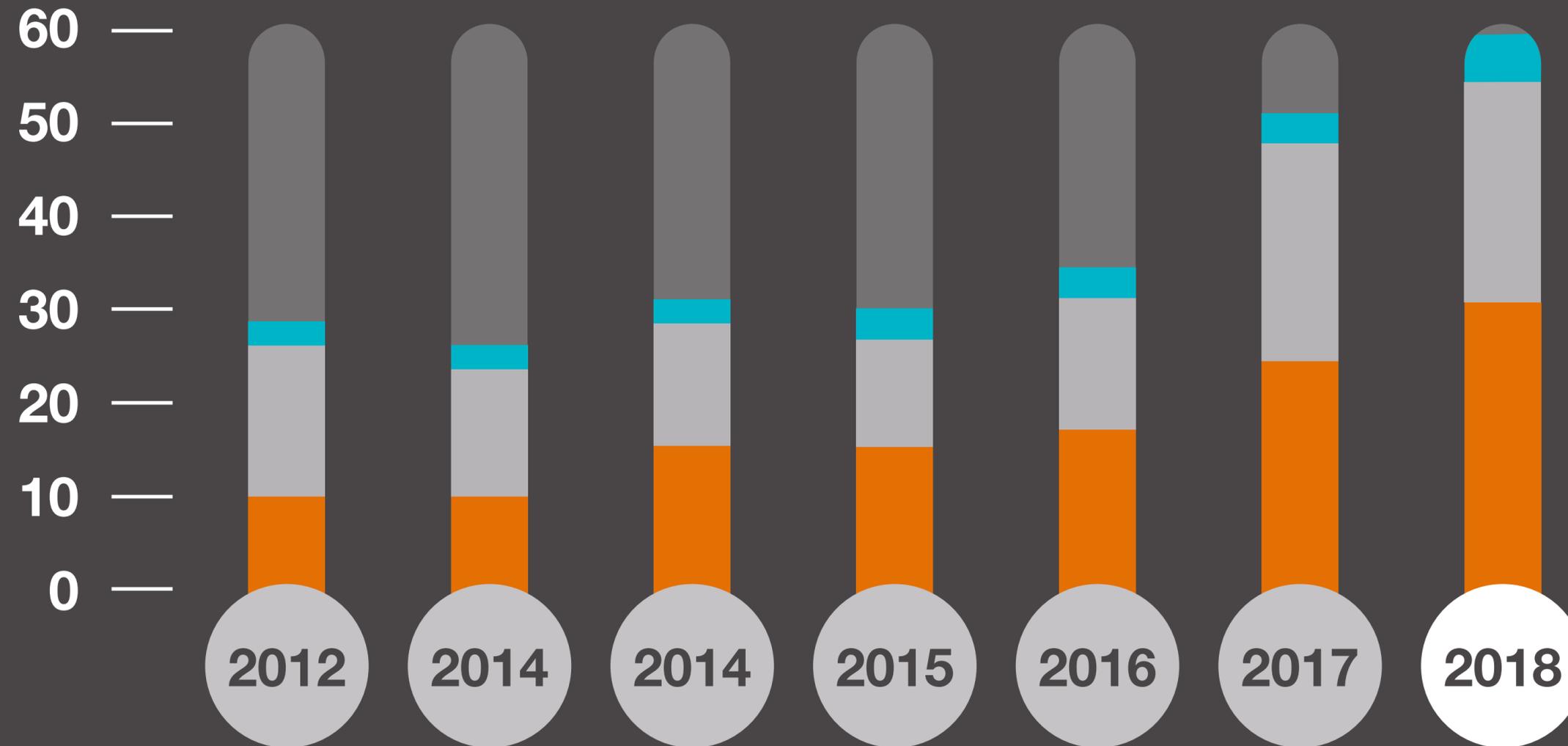
**BUSINESS
ENVIRONMENT
AND RESULTS 2018**





BUSINESS ENVIRONMENT AND RESULTS 2018

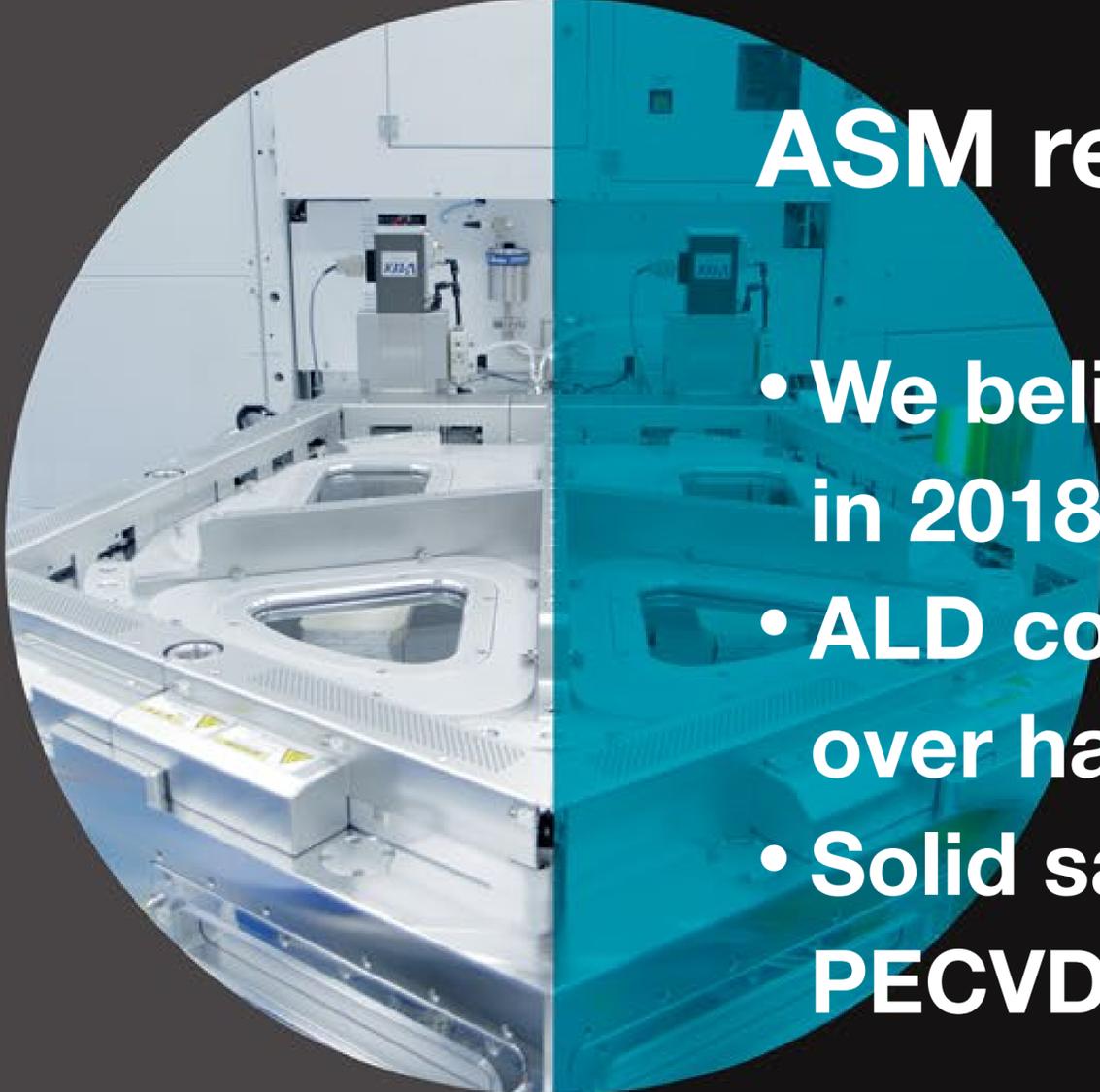
WAFER FAB EQUIPMENT BY INDUSTRY SEGMENT (US\$ BILLION)



- ASMI estimates 2018 WFE increased slightly above 10%
- Strong growth in memory, but slowed in second half
- Logic/foundry healthy, strongly increasing late in the year

- Other
- Logic/foundry
- Memory

Source Gartner May 2019



ASM revenue grew 17% (based on US\$)

- **We believe we outperformed the WFE market in 2018**
- **ALD continues as our main driver with revenue over half of our total equipment revenue**
- **Solid sales increases for Epitaxy, PECVD and Vertical Furnace**



Logic/foundry is the largest part of our business, and we are increasing share of wallet with our customers in their advanced nodes, 10nm logic and 5nm foundry

Further strengthened R&D engagements with key customers



BUSINESS ENVIRONMENT AND RESULTS 2018

SYNERGIS[®] ALD INTRODUCED JULY 2018

Expanding ALD SAM with high productivity thermal ALD memory and logic solutions

- Wide range of films allows us to address more ALD applications
- Leverages HVM proven XP8 platform
- New dual chamber thermal ALD reactor technology evolved from decades of ALD expertise on Pulsar and EmerALD





BUSINESS ENVIRONMENT AND RESULTS 2018

XP8 QCM INTRODUCED JANUARY 2019

**Expanding plasma opportunities
on the successful XP8 platform**

- High productivity PEALD & PECVD applications
- Quad Chamber Module enables processing up to 16 wafers at a time
- XP8 QCM is in high-volume manufacturing at multiple customers worldwide





INTREPID[®] ES[™] EPITAXY

Intrepid addresses advanced node CMOS Epi market

- We improved our Epi position in the foundry segment going from 7nm to 5nm
- ASM's Epi market share increased in 2018
- Continued healthy contribution from analog and power
- Epi steps for logic/foundry are expected to increase in future nodes





A412 VERTICAL FURNACE

Continued innovation in Vertical Furnace

- Niche focus on selected customers and markets such as analog
- Solid sales increase in 2018



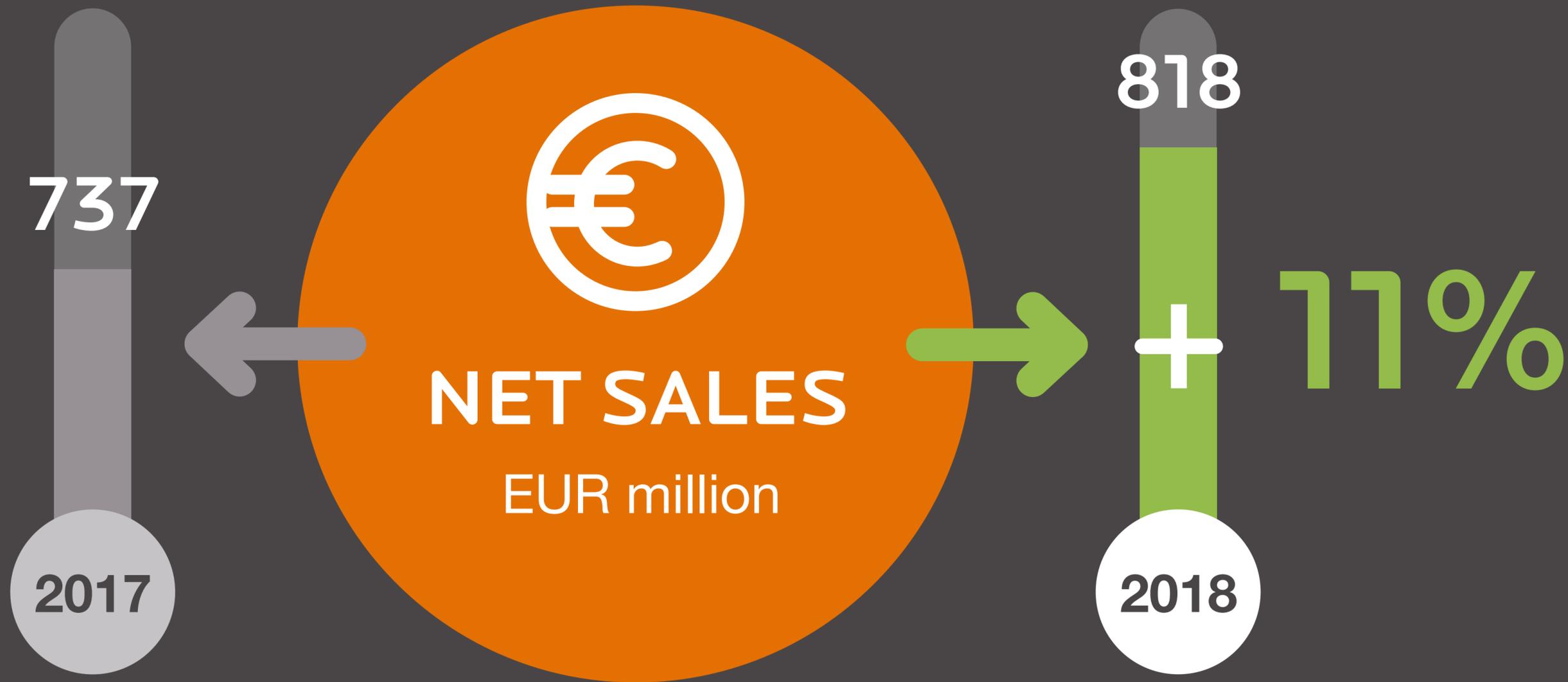


FINANCIAL HIGHLIGHTS 2018



FINANCIAL HIGHLIGHTS 2018

HIGHLIGHTS 2018

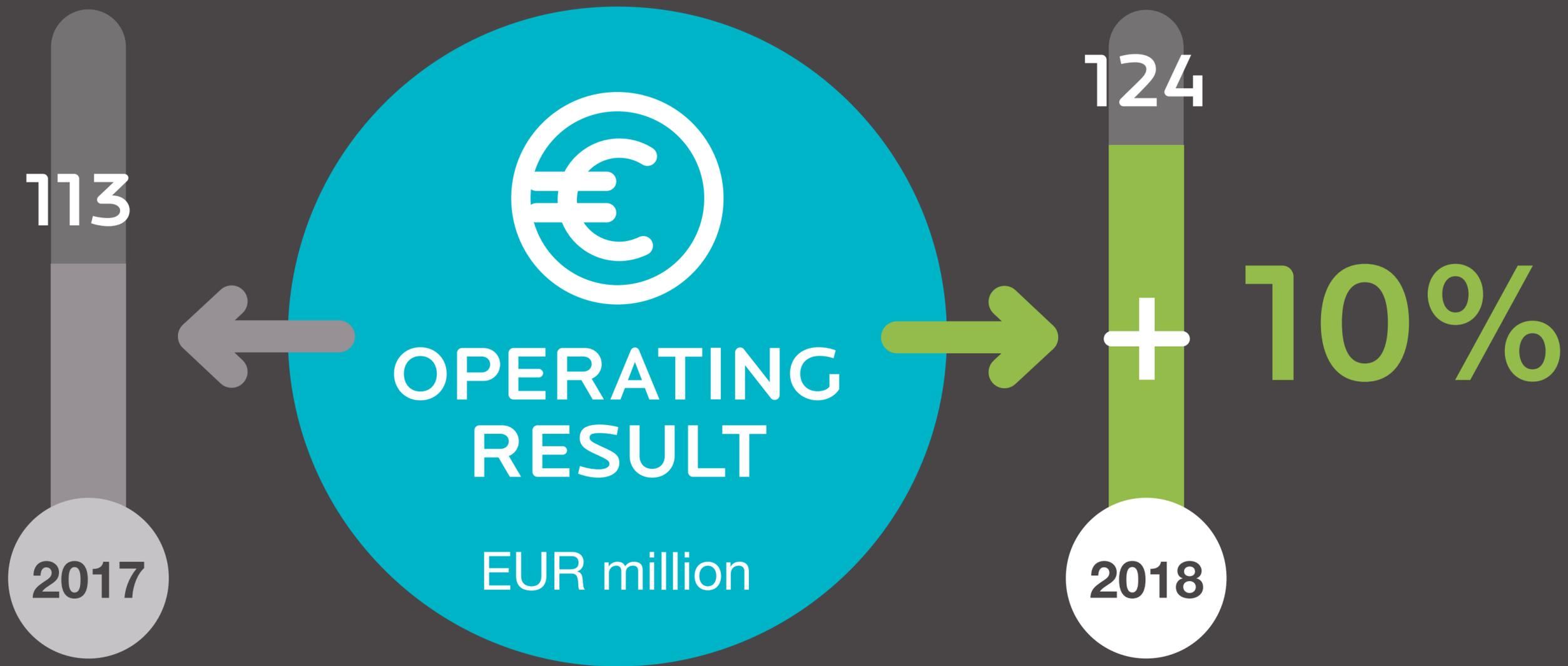


2018 +17% on US\$ basis



FINANCIAL HIGHLIGHTS 2018

HIGHLIGHTS 2018





FINANCIAL HIGHLIGHTS 2018

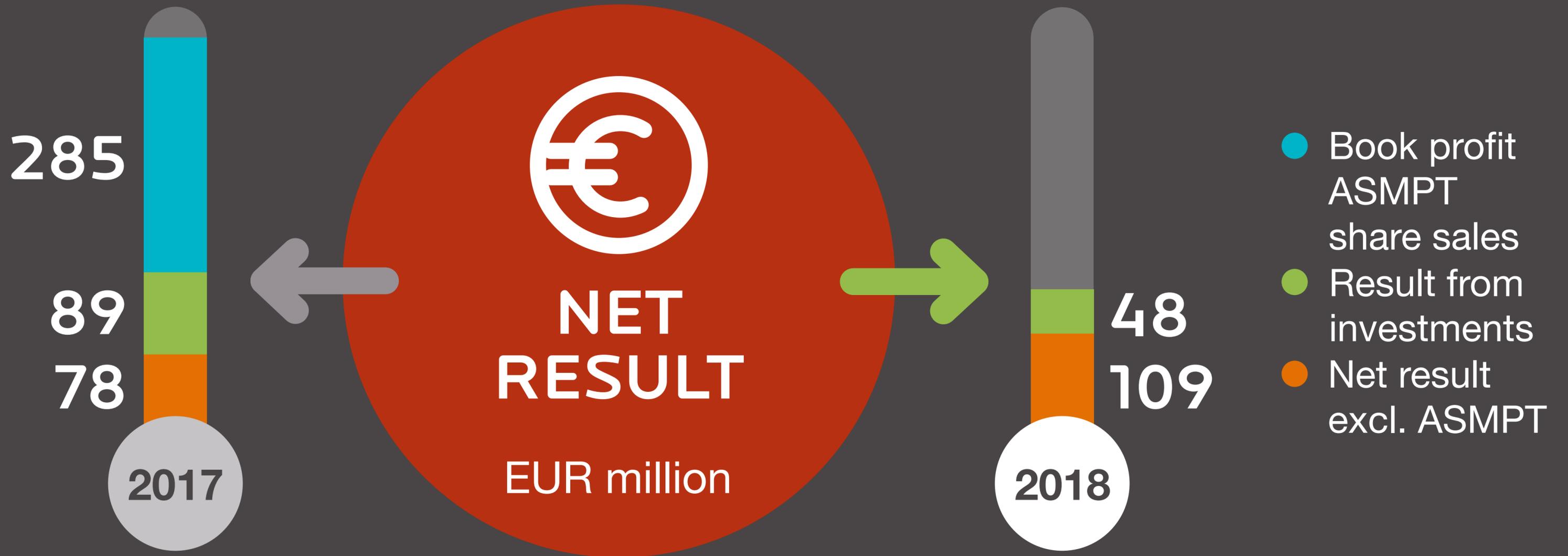
HIGHLIGHTS 2018



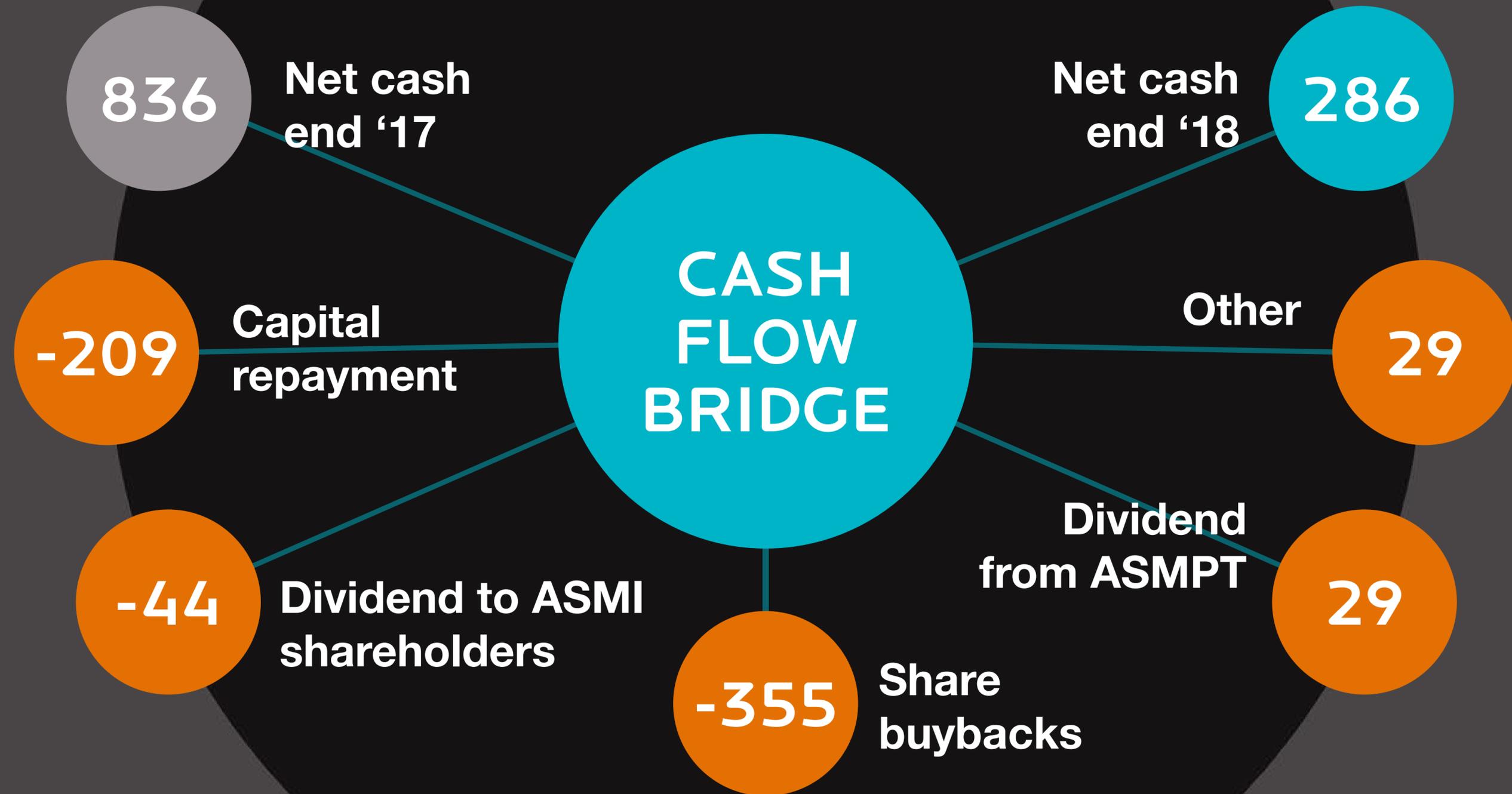


FINANCIAL HIGHLIGHTS 2018

HIGHLIGHTS 2018



FINANCIAL HIGHLIGHTS 2018

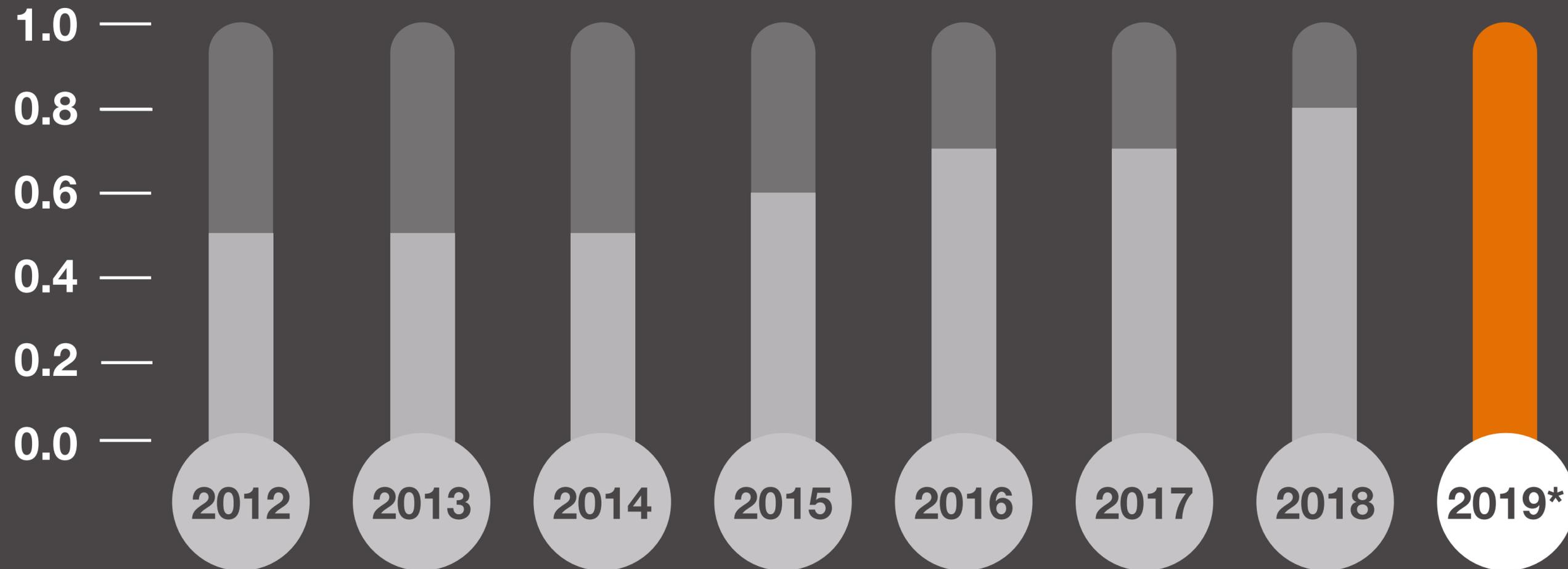




FINANCIAL HIGHLIGHTS 2018

SHAREHOLDER RENUMERATION

DIVIDEND PER SHARE (EUR)

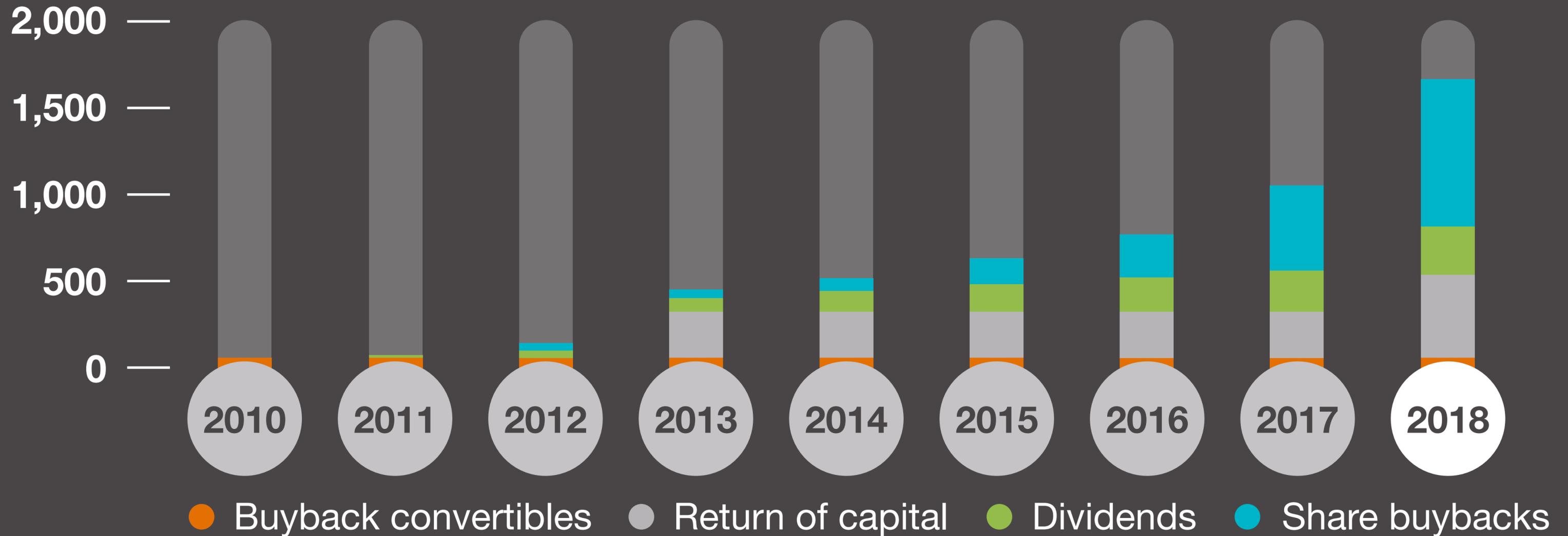


* Proposed



FINANCIAL HIGHLIGHTS 2018

CUMULATIVE CASH RETURNED TO MARKET '10-'18 (EUR MILLION)





NON-FINANCIAL HIGHLIGHTS 2018



NON-FINANCIAL HIGHLIGHTS 2018

STRIVING FOR ZERO HARM!





NON-FINANCIAL HIGHLIGHTS 2018

STRIVING FOR ZERO HARM!

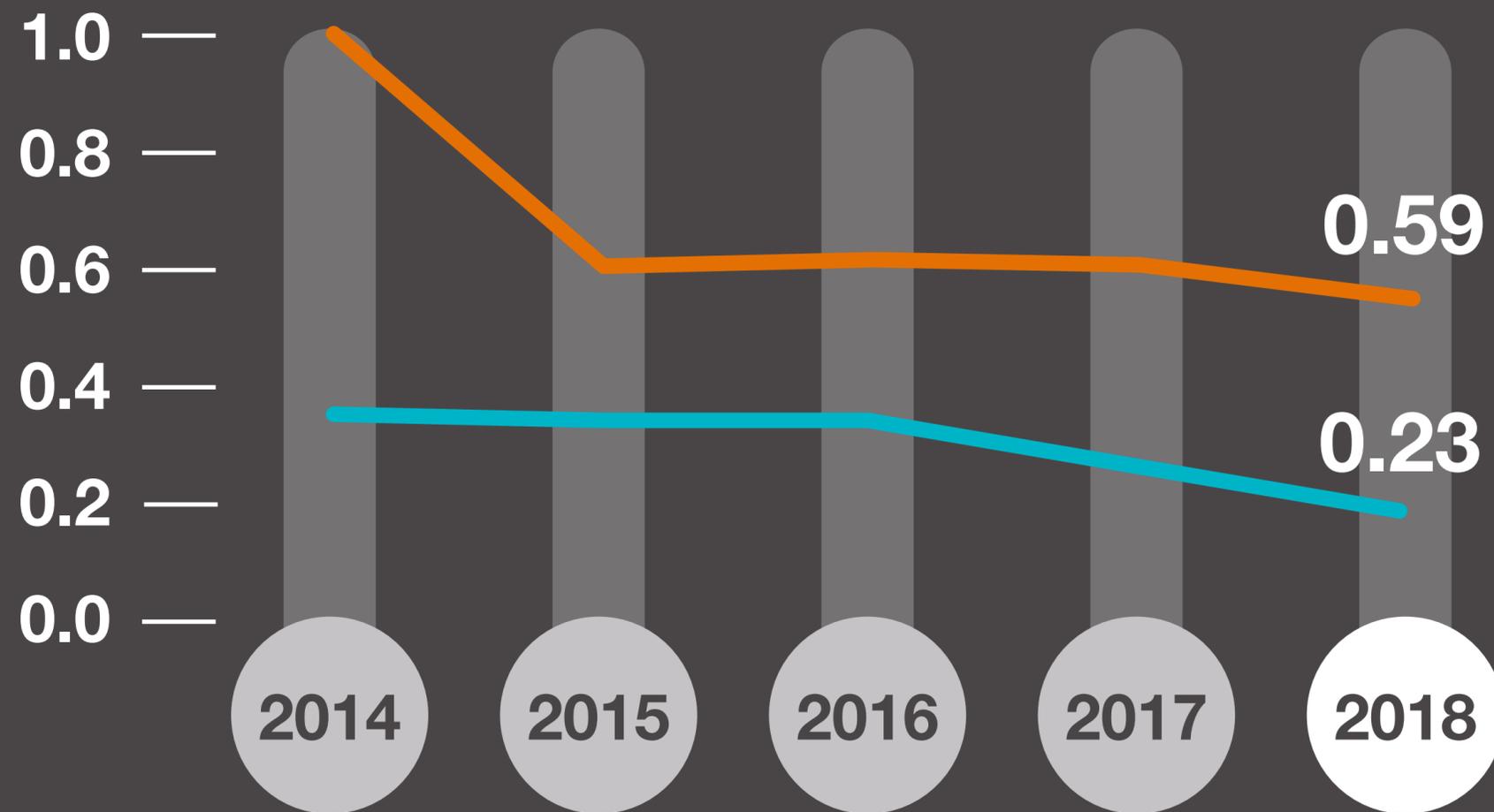
- FURTHER REDUCED OUR INJURY RATES
- SIGNIFICANTLY REDUCED GLOBAL WATER CONSUMPTION
- AND CONTINUED POSITIVE CONTRIBUTIONS TO SOCIETY





NON-FINANCIAL HIGHLIGHTS 2018

GLOBAL INJURY RATES



Injury rate

Improved from 2017:

4.8%

Recordable Injury rate*

Improved from 2017:

11.5%

* Injuries requiring > first aid, restricted duty, or lost work days, rate per 100 employees

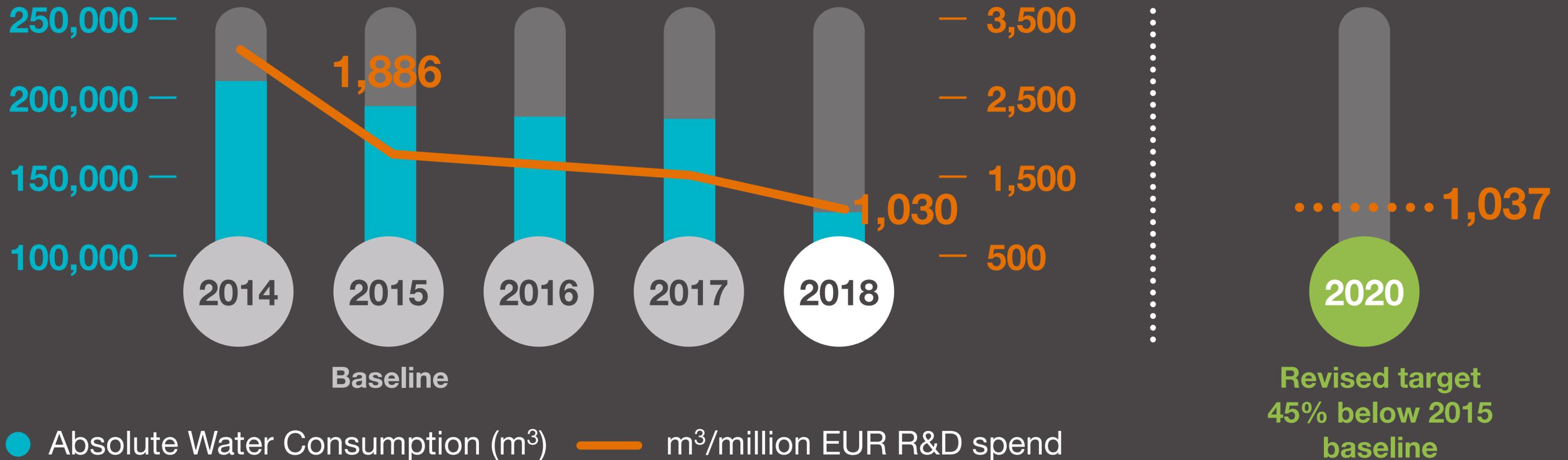


NON-FINANCIAL HIGHLIGHTS 2018



GLOBAL ASM WATER CONSUMPTION (M³)

- Phoenix water reuse plant functional, 28% absolute global reduction (from 2017)
- Reset normalized objective from 10% to 45% reduction from 2015 baseline





NON-FINANCIAL HIGHLIGHTS 2018





Korea facility completed in 2018, fully occupied since January 2019

Groundbreaking of new Singapore manufacturing Facility in April 2019

Further supporting the next stages of our growth

**TSMC
EXCELLENT
PERFORMANCE
AWARD 3RD
CONSECUTIVE
YEAR**



BUSINESS AGENDA AND 2019 OUTLOOK

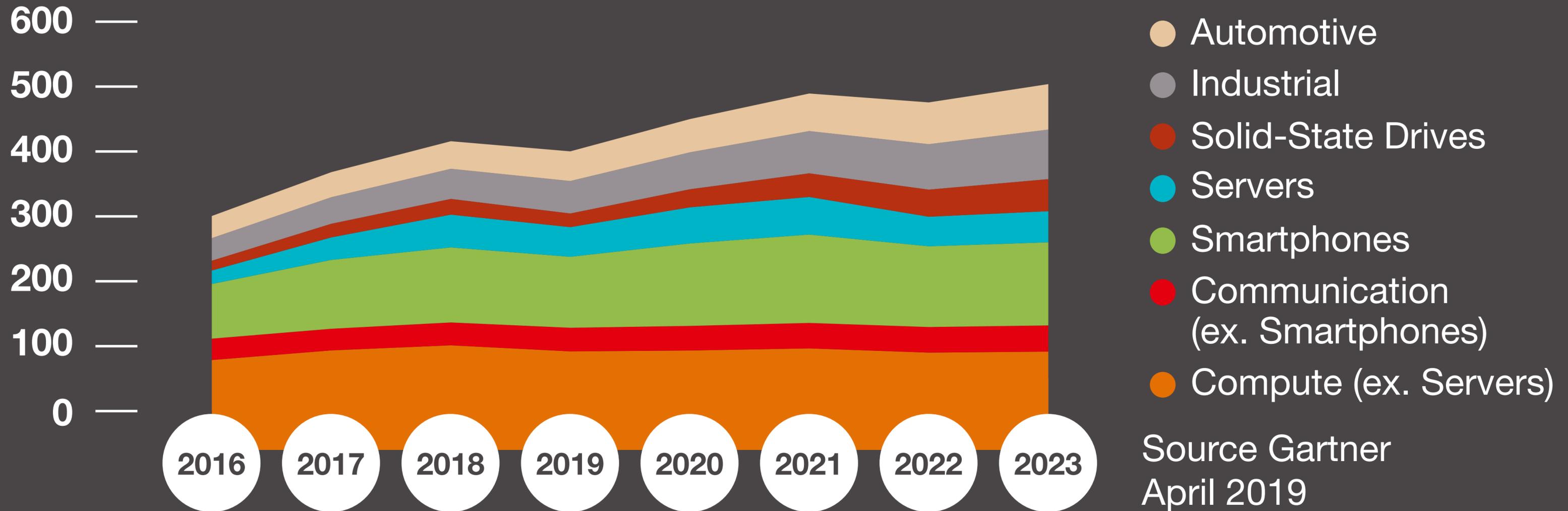




BUSINESS AGENDA AND 2019 OUTLOOK

SEMICONDUCTORS SALES BY KEY APPLICATION (US\$ BILLION)

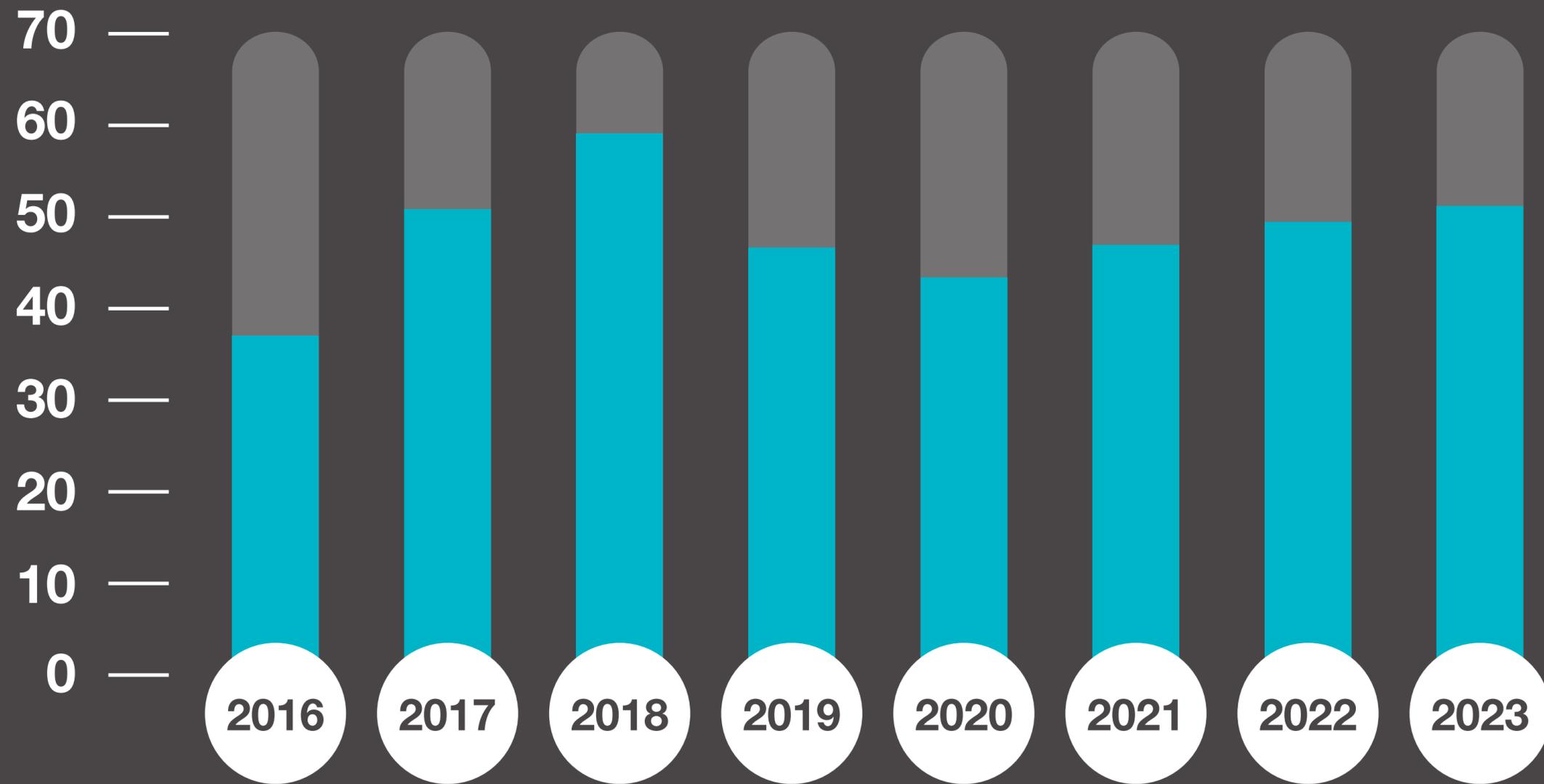
Long term semi growth drivers are solid state drives, servers, automotive and industrial





BUSINESS AGENDA AND 2019 OUTLOOK

WAFER FAB EQUIPMENT (US\$ BILLION)



Source Gartner
May 2019



BUSINESS AGENDA AND 2019 OUTLOOK

MARKETS

Overall WFE down mid to high teens

ASM benefits of current market segment dynamics

Memory

Substantial drop in equipment spending, no recovery expected throughout 2019



BUSINESS AGENDA AND 2019 OUTLOOK

MARKETS

Analog

H1 healthy, but spending in H2 2019 expected to decrease

Logic/foundry

Robust spending driven by 10nm logic and 5nm foundry nodes



BUSINESS AGENDA AND 2019 OUTLOOK

GROWTH

Increase addressable market in ALD

- **Broaden reach and increase share of wallet in memory markets**
- **Maintain leadership in growing logic/foundry market**

Drive structurally higher sales in other product lines

- **Broaden position in Epi**
- **Targeted investments in Furnaces and PECVD**



BUSINESS AGENDA AND 2019 OUTLOOK

GROWTH

Expand R&D engagements

- Focus on continued strengthening of R&D engagements with key customers

Preparing for next stage of growth

- Healthy pipeline of new products and applications
- New expanded Singapore manufacturing facility



BUSINESS AGENDA AND 2019 OUTLOOK

Q2 2019

For Q2, on a currency comparable level, we expect sales of €230-250 million while bookings, on a currency comparable level, are expected to be in the range of €240-260 million.



BUSINESS AGENDA AND 2019 OUTLOOK

FOR 2019

For 2019, general expectations are that the wafer fab equipment (WFE) market will decline with a mid to high teens percentage. Logic and foundry, as compared to the memory segment, are expected to stay healthy in 2019. Based upon this current market view, we expect to meaningfully outperform the WFE market in 2019.

