

# Creating value for all stakeholders

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President & Chief Executive Officer

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INVESTOR DAY  
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NEW YORK CITY

## Our DNA

- ASML provides **value for our customers, shareholders, employees, and supply chain partners** by delivering **superior integrated patterning solutions** at lowest cost of ownership

## Our industry

- Profits of our thriving ecosystem continue to grow and have reached **290+B\$** – driving innovations across the value chain
- We see a growth wave in our end-markets driven by **Connected devices, Cloud computing and Storage** supported by continued growth in mobile device units and IC content

## Our customers

- Compelling cost and performance benefits drive our customers to **continue their technology roadmaps** into new nodes despite increasing initial investment
- In addition, the **industry continues to innovate and expand in existing nodes** to address new markets

## Our products

- **EUV** enables customer litho roadmaps providing **cost-effective shrink** for next **10+ years**
- **DUV** remains a **litho workhorse** alongside EUV
- **Holistic Lithography** maximizes patterning related **process yield**

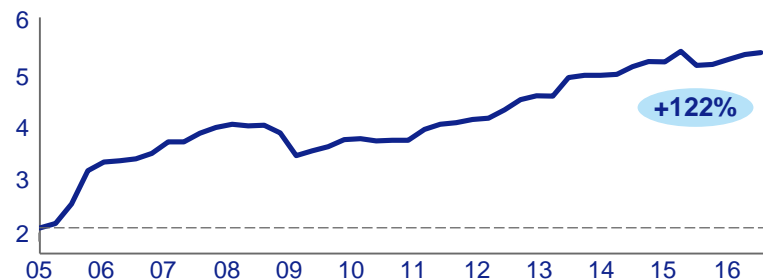
## Market opportunities

- **Market opportunities** continue to support our 2020 target with additional opportunity provided by our planned HMI acquisition
- In addition we see significant growth opportunity beyond 2020

# ASML continues to provide value for our customers, shareholders, employees, and supply chain partners

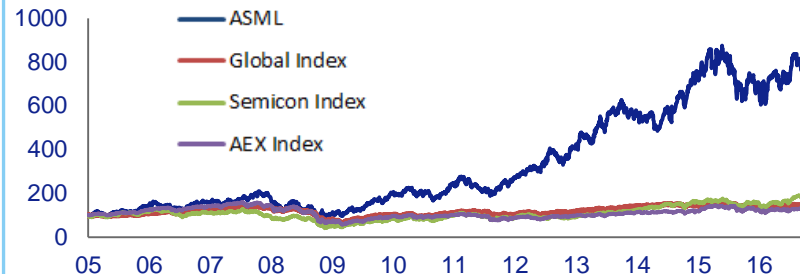
## We have realized productivity improvement for our customers

Average wafers per day (best day of week), in thousands



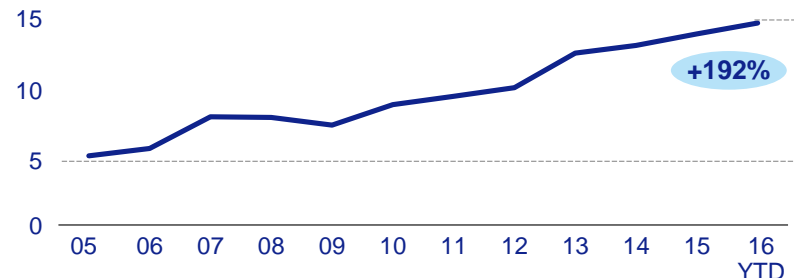
## We have outperformed industry peers and AEX

Share price development, index; 2005



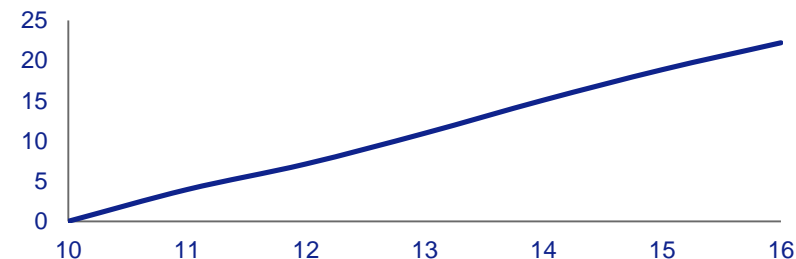
## We have created career opportunities for professionals

ASML total employees, '000 FTE

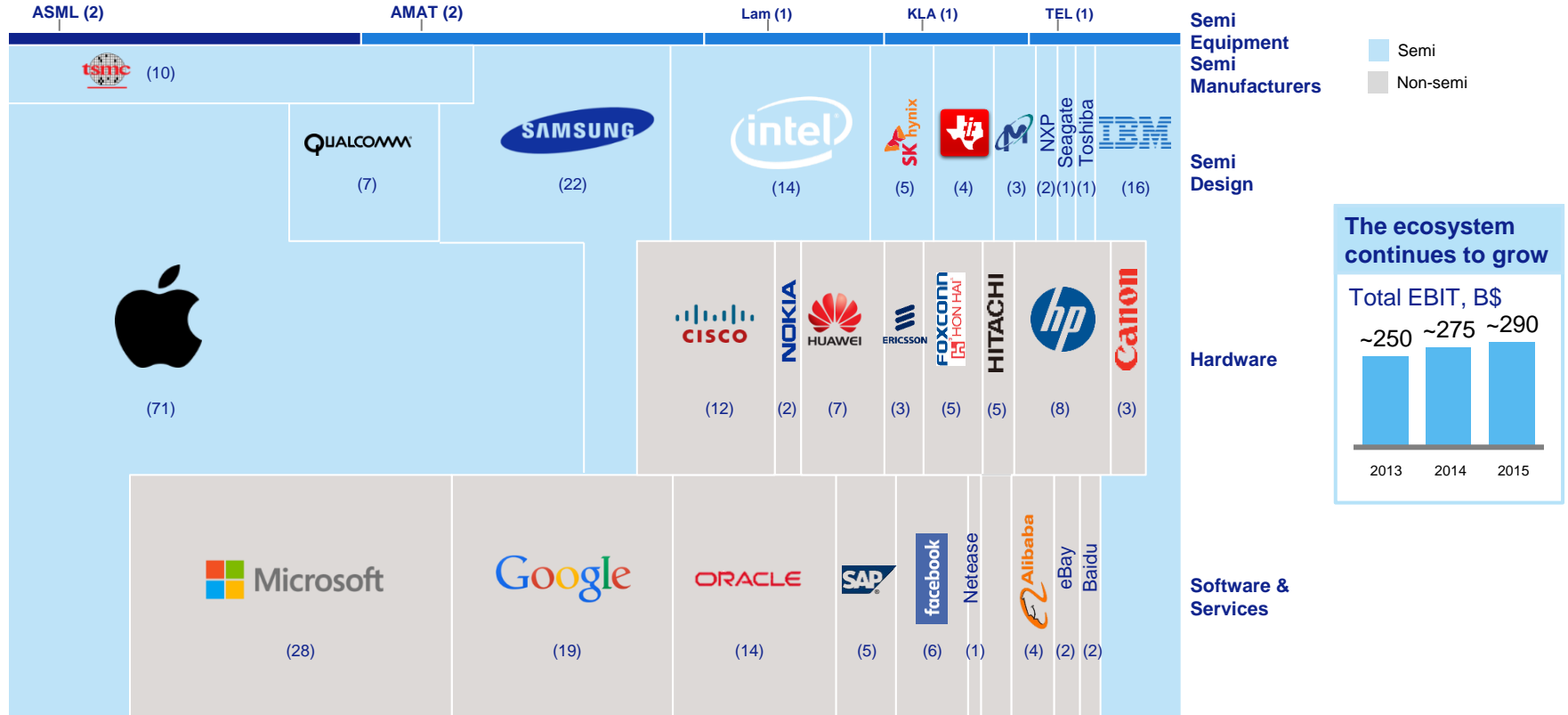


## Since 2010 we have commissioned >20B€ to our supply chain

Cumulative revenue generated for supply chain partners, B€

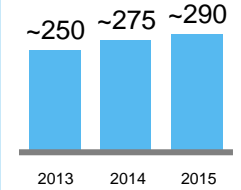


# ASML operates in a highly profitable value chain with strong incentives to compete and drive innovation



### The ecosystem continues to grow

Total EBIT, B\$

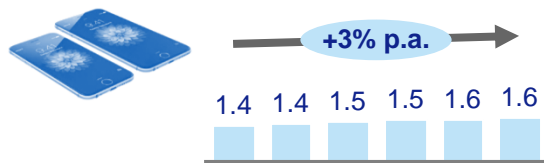


Top technology companies in our ecosystem (EBIT 2015, B\$), source: S&P Capital IQ

# Continued IC content and end market growth drives our opportunity

## Mobile and PC maturing

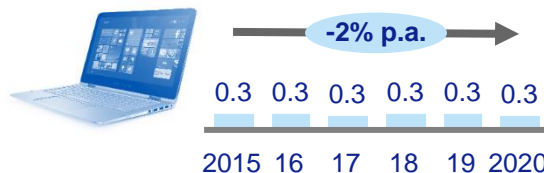
### Smartphones, B units



### Tablets, B units

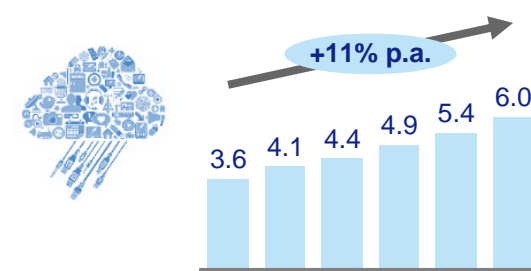


### PCs, B units

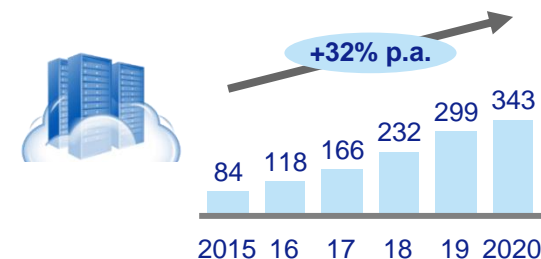


## Continued growth in cloud applications

### Cloud server shipments<sup>1</sup>, '000 units

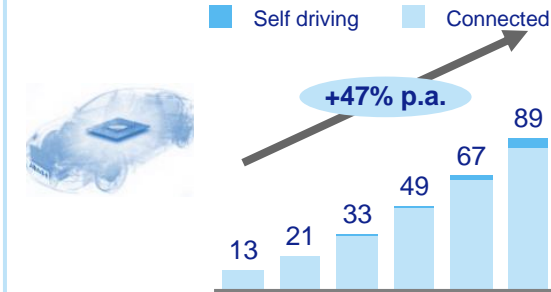


### Cloud storage shipment<sup>2</sup>, M Terabytes

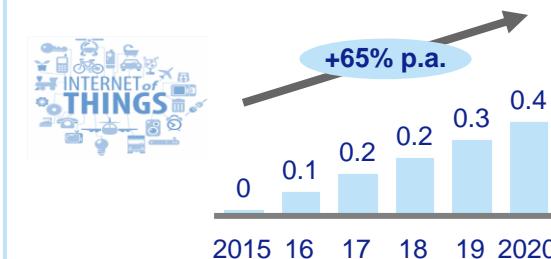


## Emerging connected devices market

### Connected cars shipments, M units



### IoT devices shipments, B units

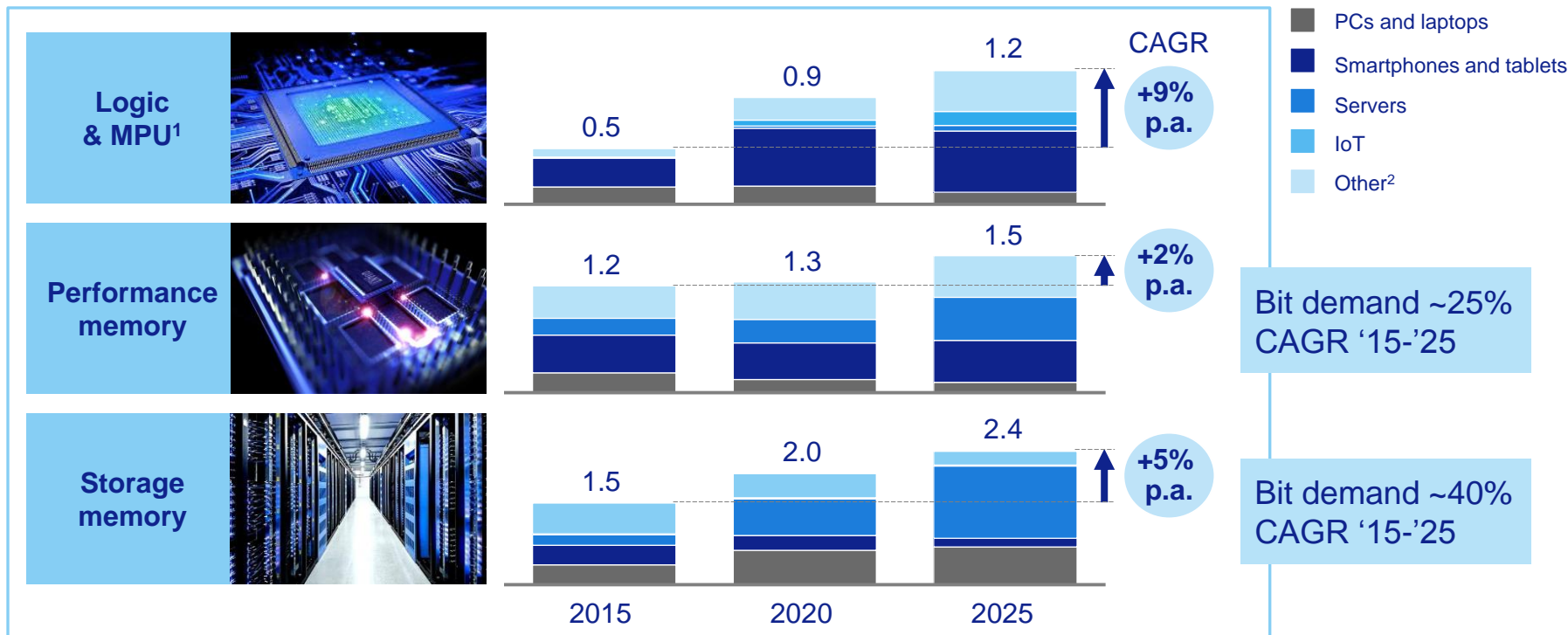


1 Shipped to cloud, 2019 and 2020 extrapolated; 2 Shipped to cloud, 2020 extrapolated

Source: Gartner, Markets and Markets, IHS, IDC Cloud infrastructure tracker, BI Intelligence

# Growing end markets require additional fab capacity in all segments, driving demand for our litho tools

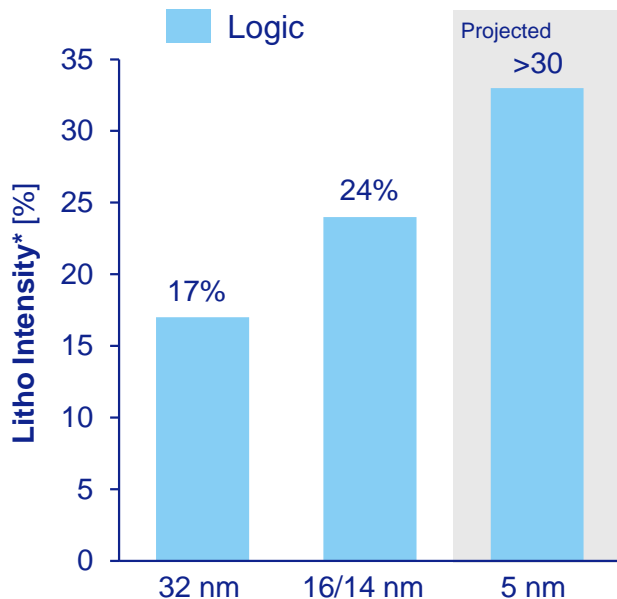
Worldwide fab capacity, million wafers per month



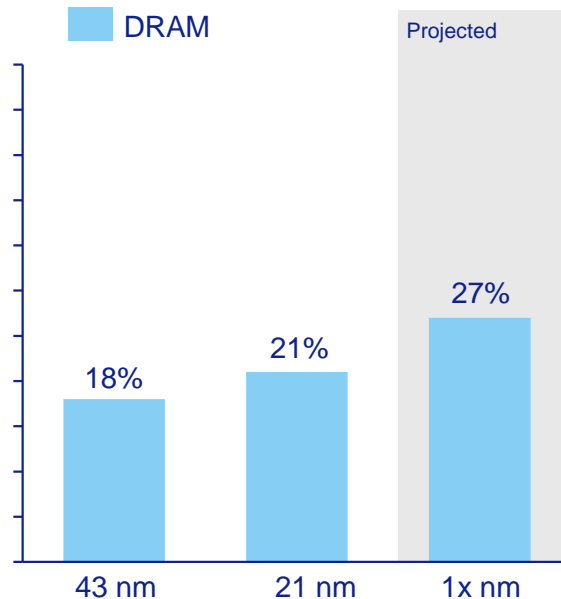
1 Advanced Logic and MPU nodes only ≤ 32nm; 2 Including but not limited to: Consumer, Automotive, Industrial, Computer graphics, FPGA  
Source: Gartner, ASML

# Litho Intensity increasing for all market segments

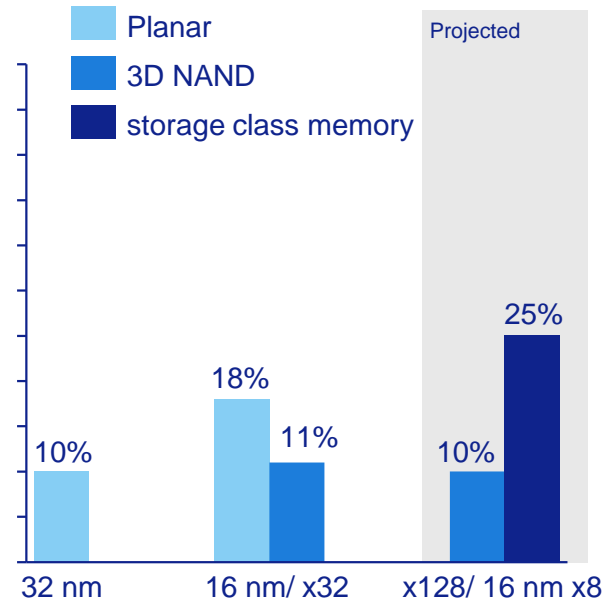
## Logic



## Performance Memory



## Storage Memory



\* Litho Intensity = Litho CapEx fraction of total WFE Capex for "greenfield" fab investment

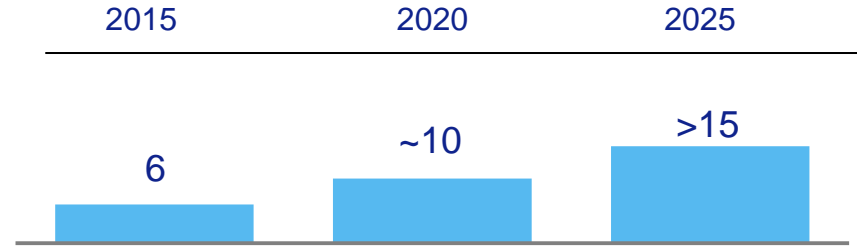
# Market opportunities support another 10 years of growth

A

## Systems

Capacity for **new technology nodes** in all segments will continue to be the main driver for our **litho systems**, including over time High NA EUV

Total addressable market, B€



B

## Installed base services and options

Growing installed base drive demand for our **services and options** (installed base revenue)





# A Shrink drives litho systems market growth

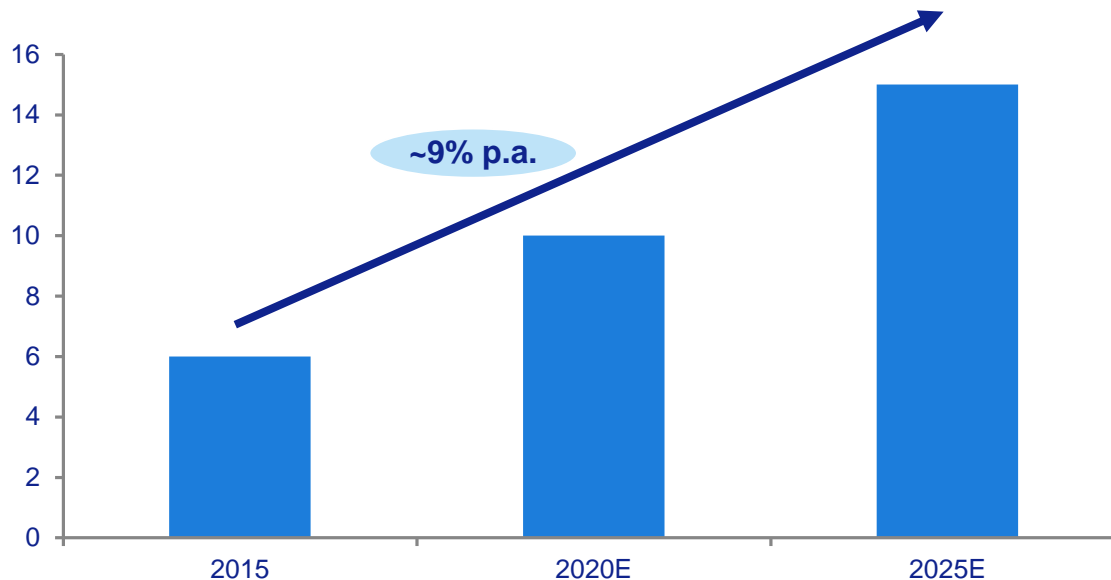
Presents opportunity modeled at ~10B€ in 2020 and >15B€ in 2025

## Model Assumptions

- Full ASML roadmap is **delivered**
- Customers will **continue** to execute on their **shrink roadmap**
- A **3-year** logic industry **cadence** is assumed
- End market demand is based on **moderate growth of existing application segments**

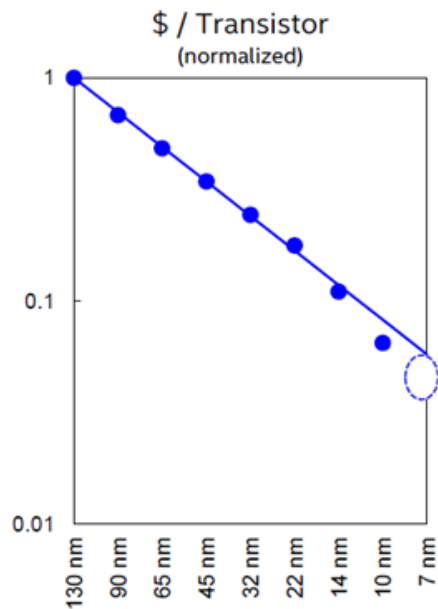
## Total addressable litho systems market

Revenues B€



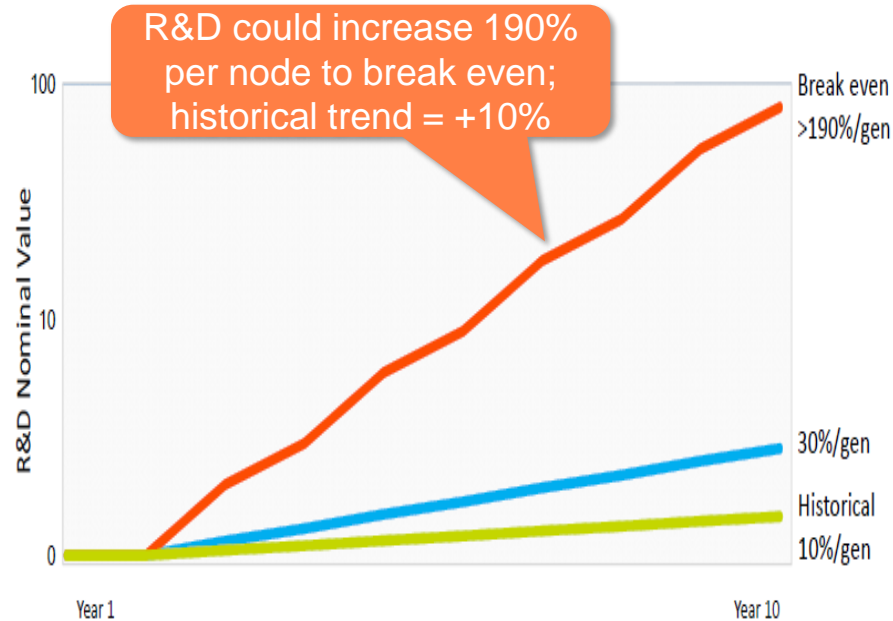
# A ...driven by compelling performance and cost benefits

## Cost per function reductions are projected to remain compelling



Source: Intel, 2016 IDF

## Ten Year Model of Manufacturing and Process R&D A small R&D investment delivered 154B\$ of savings



Source: Intel, 2016 ISSCC

# B Growing installed base creates service and options opportunity

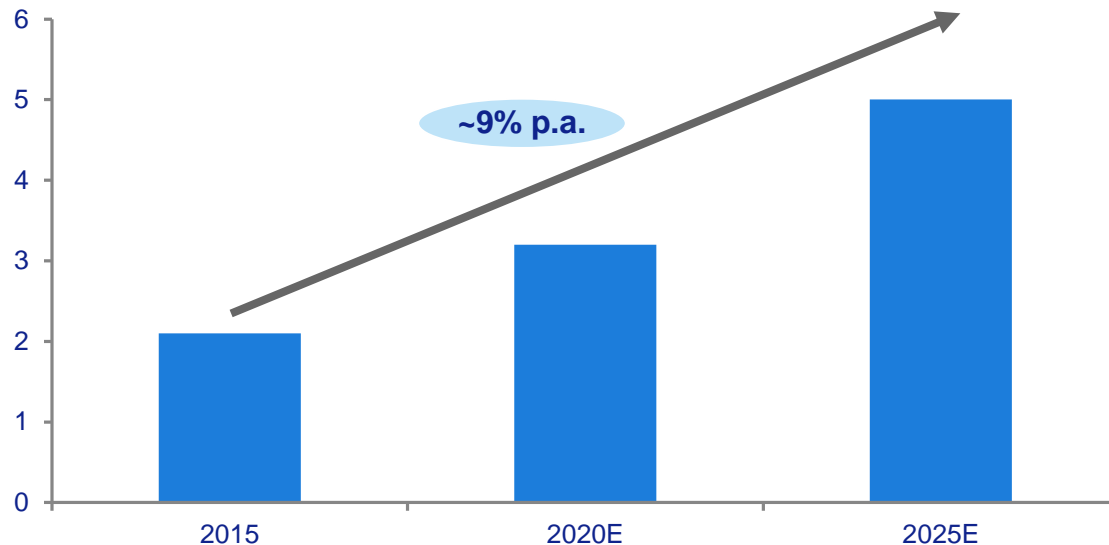
Presents opportunity modeled at ~3B€ in 2020 and >5B€ in 2025

## Assumptions

- Move to **value based service model** on both DUV and EUV beyond 2020
- **Holistic litho** included in options
- Options business continue to grow driven by **performance** upgrades

## Total addressable Service & Options (installed base revenue) market

Revenues B€



# Most impactful industry developments reviewed

## Confident in our ability to mitigate challenges



### Customers

- Sustained delivery at cost and quality improvements
- Customer concerns regarding EUV industrialization speed



### Suppliers

- Growing complexity supply chain
- Increasing investment requirements for suppliers
- Managing lead times



### Competitors

- Dry: increasing competition
- Immersion: continuing competition
- Blurring domain boundaries and consolidating peers

**ASML's challenge is to remain competitive in DUV, to bring EUV to high volume manufacturing standards and to expand our Holistic Litho opportunities in order to grow profitably**

# Summary

<b>Our DNA</b>	<ul style="list-style-type: none"><li>ASML provides <b>value for our customers, shareholders, employees, and supply chain partners</b> by delivering <b>superior integrated patterning solutions</b> at lowest cost of ownership</li></ul>
<b>Our industry</b>	<ul style="list-style-type: none"><li>Profits of our thriving ecosystem continue to grow and have reached <b>290+B\$</b> – driving innovations across the value chain</li><li>We see a growth wave in our end-markets driven by <b>Connected devices, Cloud computing and Storage</b> supported by continued growth in mobile device units and IC content</li></ul>
<b>Our customers</b>	<ul style="list-style-type: none"><li>Compelling cost and performance benefits drive our customers to <b>continue their technology roadmaps</b> into new nodes despite increasing initial investment</li><li>In addition, the <b>industry continues to innovate and expand in existing nodes</b> to address new markets</li></ul>
<b>Our products</b>	<ul style="list-style-type: none"><li><b>EUV</b> enables <b>cost-effective shrink</b> for next <b>10+ years</b></li><li><b>DUV</b> remains the <b>litho workhorse</b> for the coming decade</li><li><b>Holistic Lithography</b> maximizes patterning related <b>process yield</b></li></ul>
<b>Our opportunities</b>	<ul style="list-style-type: none"><li>ASML's model confirms an annual revenue opportunity of <b>€ 10 billion in 2020*</b> and given the significant leverage in our financial model this will allow a potential <b>EPS &gt; €8 in 2020</b></li><li>Further growth opportunities beyond 2020 and thereby creating significant value for all stakeholders</li></ul>

\* excluding HMI

# Forward looking statements

This document contains statements relating to certain projections and business trends that are forward-looking, including statements with respect to our outlook, including expected customer demand in specified market segments (and underlying assumptions) including memory, logic and foundry, expected sales levels, trends, including trends towards 2020 and beyond and expected industry growth, and outlook, systems backlog, expected or indicative market opportunity, financial results and targets, including, for ASML and ASML and HMI combined, expected sales, other income, gross margin, R&D and SG&A expenses, capital expenditures, cash conversion cycle, EPS and effective annualized tax rate, annual revenue opportunity and EPS potential by end of decade and growth opportunity beyond 2020 for ASML and ASML and HMI combined, cost per function reduction and ASML system ASP, goals relating to gross cash balance and ASML's capital structure, customer, partner and industry roadmaps, productivity of our tools and systems performance, including EUV system performance (such as endurance tests), expected industry trends and expected trends in the business environment, the addition of value through delivery of lithography products and the achievement of cost-effective shrink, expected continued lithography demand and increasing lithography spend, the main drivers of lithography systems, lithography intensity for all market segments, customer execution of shrink roadmaps, future memory application distribution, expected addressable markets, including the market for lithography systems and service and options, expected manufacturing and process R&D, statements with respect to growing end markets that require fab capacity driving demand for ASML's tools, statements with respect to the acquisition of HMI by ASML, including market opportunity, the expected timing of completion of the HMI acquisition and delisting of HMI, the expected benefits of the acquisition of HMI by ASML, including expected continuation of year on year growth, the provision of e-beam metrology capability and its effect on holistic lithography solutions, including the introduction of a new class of pattern fidelity control and the improvement of customers' control strategy, statements with respect to EUV, including targets, such as availability, productivity, facilities and shipments, including the number of EUV systems expected to be shipped and timing of shipments, and roadmaps, shrink being key driver to industry growth, expected industry adoption of EUV and statements with respect to plans of customers to insert EUV into production and timing, the benefits of EUV, including expected cost reduction and cost-effective shrink, the expected continuation of Moore's law, without slowing down, and that EUV will continue to enable Moore's law and drive long term value, goals for holistic lithography, including pattern fidelity control, expectations relating to double patterning, immersion and dry systems, intention to return excess cash to shareholders, statements about our proposed dividend, dividend policy and intention to repurchase shares and statements with respect to the current share repurchase plan. You can generally identify these statements by the use of words like "may", "will", "could", "should", "project", "believe", "anticipate", "expect", "plan", "estimate", "forecast", "potential", "intend", "continue" and variations of these words or comparable words. These statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about the business and our future financial results and readers should not place undue reliance on them.

Forward-looking statements do not guarantee future performance and involve risks and uncertainties. These risks and uncertainties include, without limitation, economic conditions, product demand and semiconductor equipment industry capacity, worldwide demand and manufacturing capacity utilization for semiconductors (the principal product of our customer base), including the impact of general economic conditions on consumer confidence and demand for our customers' products, competitive products and pricing, the impact of any manufacturing efficiencies and capacity constraints, performance of our systems, the continuing success of technology advances and the related pace of new product development and customer acceptance of new products including EUV, the number and timing of EUV systems expected to be shipped and recognized in revenue, delays in EUV systems production and development, our ability to enforce patents and protect intellectual property rights, the risk of intellectual property litigation, availability of raw materials and critical manufacturing equipment, trade environment, changes in exchange rates, changes in tax rates, available cash and liquidity, our ability to refinance our indebtedness, distributable reserves for dividend payments and share repurchases and timing of resumption of the share repurchase plan, and other risks indicated in the risk factors included in ASML's Annual Report on Form 20-F and other filings with the US Securities and Exchange Commission. These forward-looking statements are made only as of the date of this document. We do not undertake to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

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