

# Business Model and Capital Allocation Strategy

**Roger Dassen**  
Executive Vice President  
& Chief Financial Officer

Public

# ASML

The background of the slide is a collage of images showing various ASML buildings. A prominent feature is a tall, dark grey skyscraper with many windows. Other images show lower-rise, modern office buildings with large glass windows and green spaces around them. The sky is clear and blue.

# ASML Small Talk 2021

Investor Day  
Virtual

# Business model and capital allocation strategy

## Key messages



Our continued **investments in technology** leadership have created **significant shareholder value**

**Growth in semiconductor end markets** and **increasing lithography intensity** on future nodes fuel demand for our products and services

Based on **different market scenarios**, we have an opportunity to achieve an **annual revenue for 2025 between** approximately **€24 billion and €30 billion** with a **gross margin for 2025 between** approximately **54% and 56%**.

We see **significant growth opportunities beyond 2025**. Assuming a 1 trillion dollar semiconductor market by 2030, with litho intensity and our market share constant from 2025, we expect an **annual revenue CAGR for 2020-2030 of around 11%**

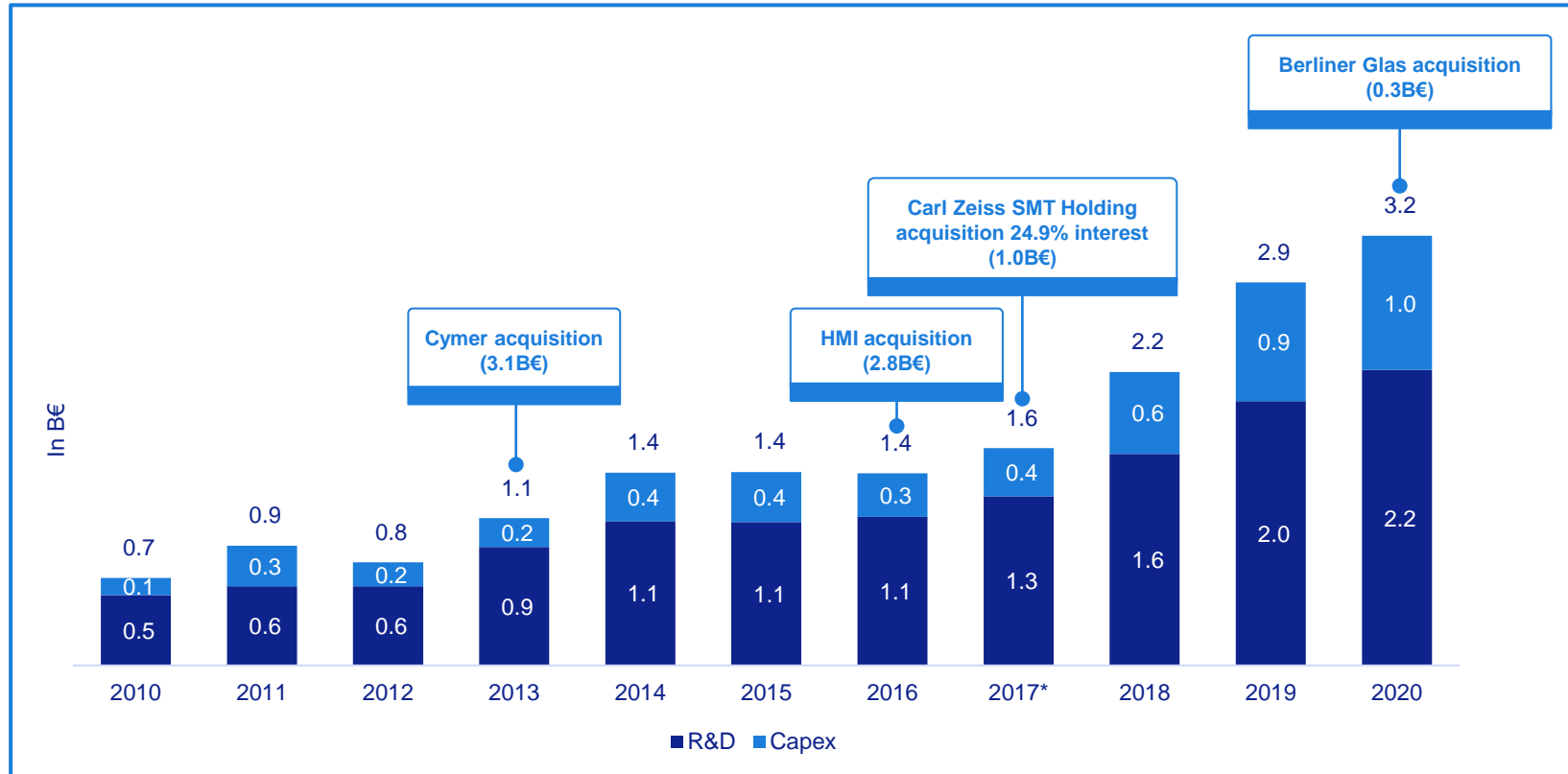
We expect to continue to **return significant amounts of cash** to our shareholders through a combination of **growing dividends and share buybacks**

- **Historical shareholder value creation**

Continuing growth

Continued shareholder value creation

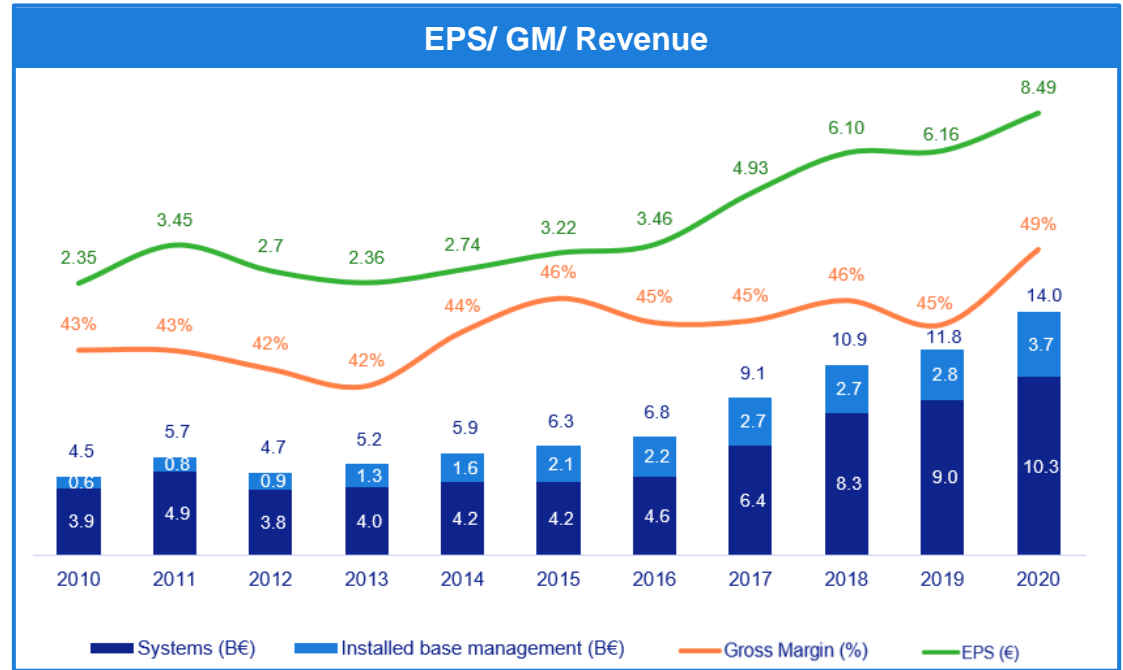
# ASML's technology leadership comes from strategic investments that enable cost-effective innovations for our customers



\* ASML contribution Zeiss SMT CapEx included as of 2017

# ASML's EPS has grown at a CAGR of 14% driven by system and installed base revenue with improved margins

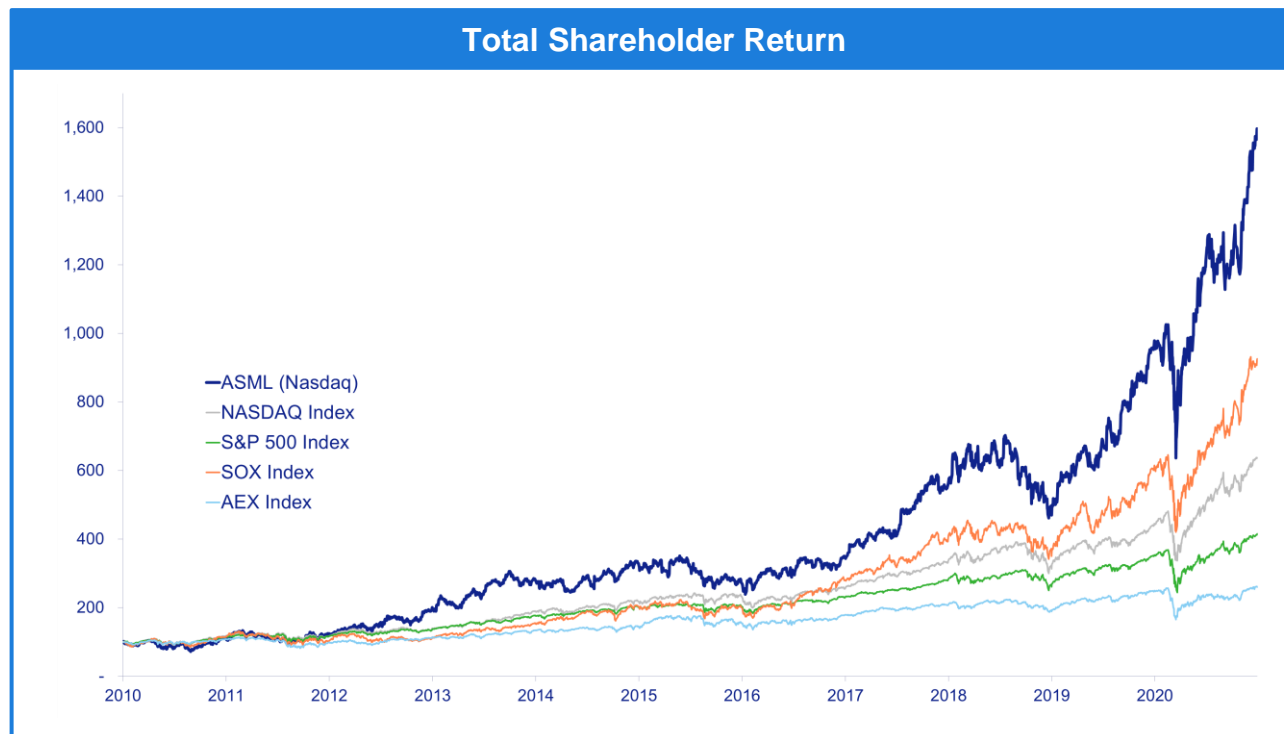
- **Systems revenue** grew at a 10% CAGR since 2010
- **Installed Base Management\*** grew at a 20% CAGR since 2010 driven by upgrades and service of growing installed base
- **Gross Margin amount** improved at a 13% CAGR since 2010, reflecting the strength of our DUV and Applications business and progress in EUV profitability
- **EPS** grew at 14% CAGR since 2010 driven by profitability and share buyback



\* Installed Base Management equals our service and field upgrades sales

# ASML created significant shareholder value over the past 10 years

**ASML (Nasdaq) Total Shareholder Return**  
annualized compounded  
TSR 29% versus  
**Nasdaq at 18%**



Historical shareholder value creation

- **Continuing growth**

Continued shareholder value creation

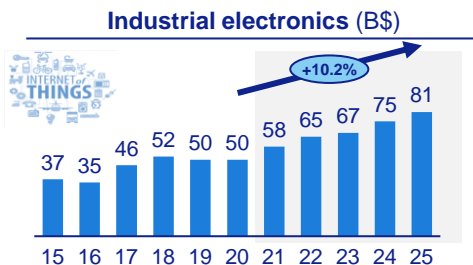
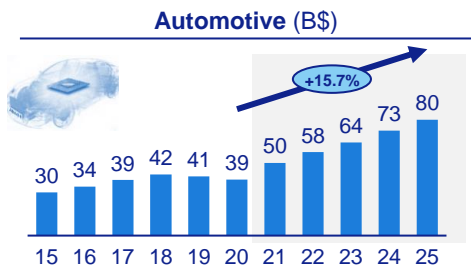
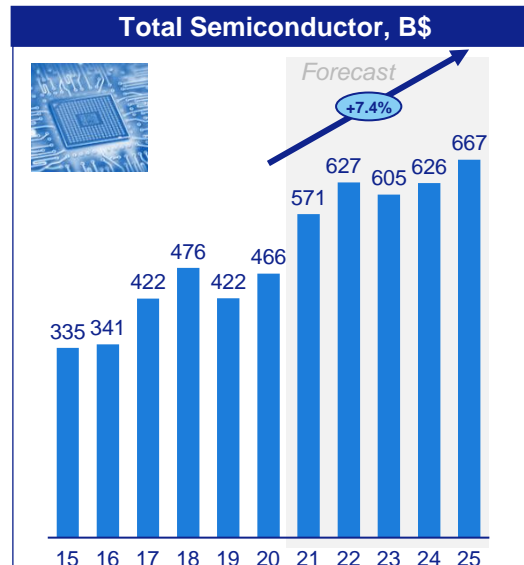
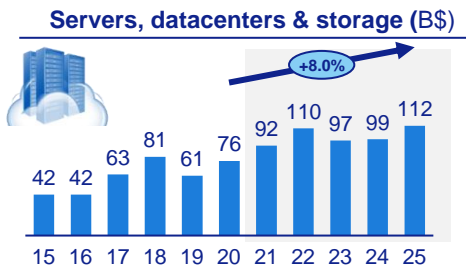
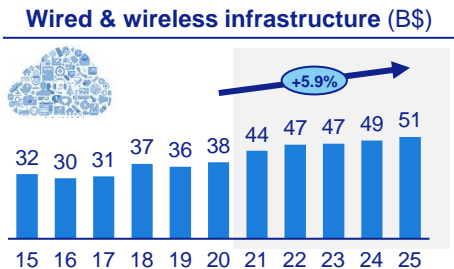
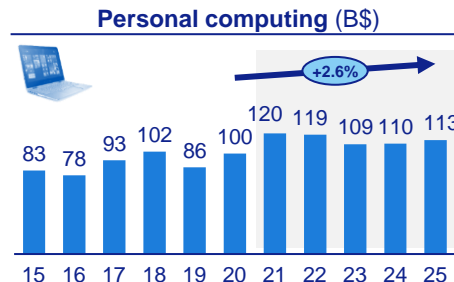
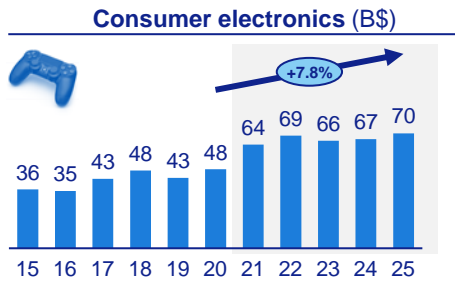
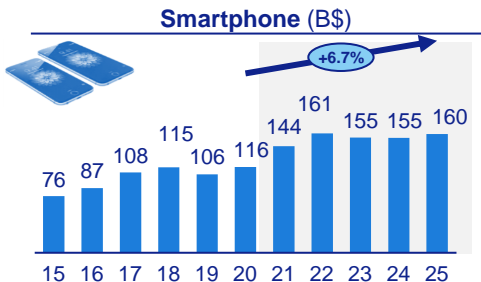
# Model scenarios

## Process



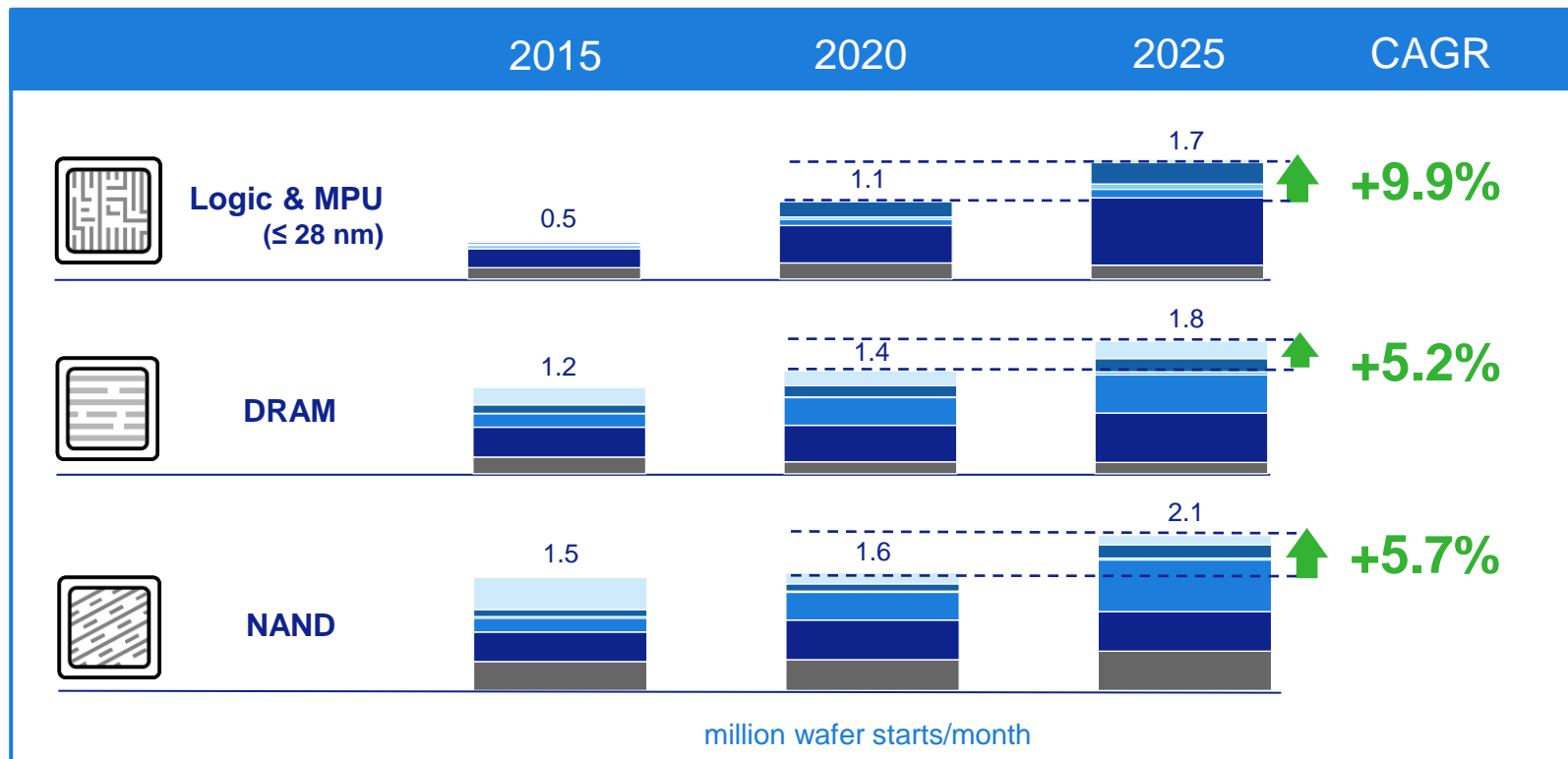


# Semi end markets expected to grow 7% longer-term



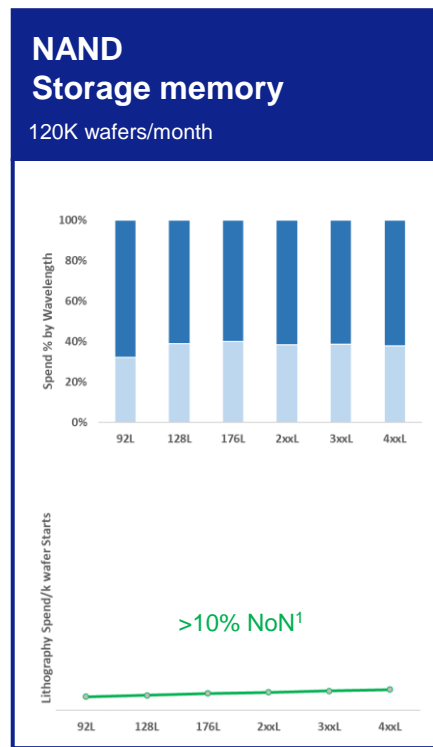
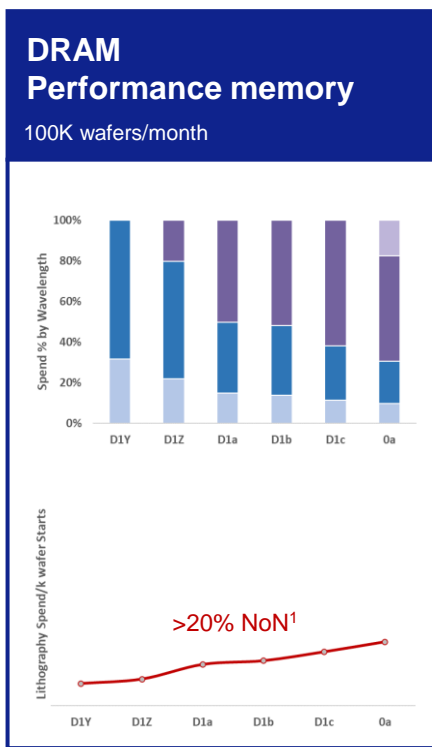
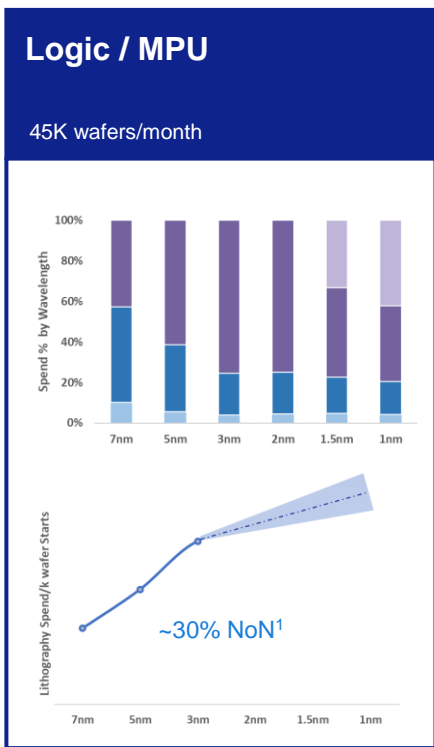
CAGR  
2020-2025

# Translating to growth of wafer demand in all segments



■ PCs and laptops ■ Smartphones and tablets ■ Servers ■ Automotive ■ Consumer incl. wearables ■ Other

# Lithography spend increasing on future nodes



High NA EUV ArFi Dry

<sup>1</sup> NoN: Node on Node

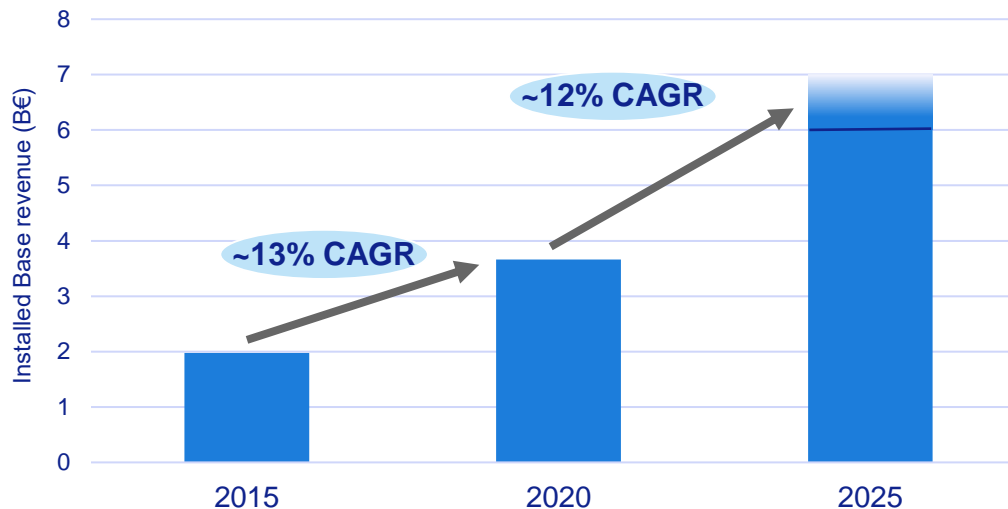
# Installed Base Management\*: growing installed base provides opportunity for growth in service and upgrades

## Growth drivers:

- **Growing installed base**
- **Service:** move to value-based services
- **Upgrades:** design for extendibility, enabling performance upgrades

## Installed Base Management: Services and upgrades

Revenues B€



\* Installed Base Management equals our service and field upgrades sales

# Model assumptions 2025



Logic / MPU



Performance memory



Storage memory

Market share assumptions: EUV 100%, ArFi 90%, Dry 65%

<p><b>General</b></p>	<ul style="list-style-type: none"> <li>• EUV High-NA high volume from <b>2025</b></li> <li>• <b>2 year</b> cadence</li> </ul>	<ul style="list-style-type: none"> <li>• EUV High-NA <b>from D0a onwards</b></li> </ul>	<ul style="list-style-type: none"> <li>• Storage class memory remains a niche</li> <li>• 3D NAND: stack of stacks</li> </ul>
<p><b>Market (Low - High)</b></p>	<ul style="list-style-type: none"> <li>• Reference 16/14nm, <b>315</b> kwspm1</li> <li>• Node on node (reduction):  <b>Low: -15%</b>  <b>High: 0%</b> </li> </ul>	<ul style="list-style-type: none"> <li>• Bit growth:  <b>Low: 15%</b>  <b>High: 25%</b> </li> </ul>	<ul style="list-style-type: none"> <li>• Bit growth:  <b>Low: 25%</b>  <b>High: 45%</b> </li> </ul>
<p><b>EUV</b></p>	<ul style="list-style-type: none"> <li>• 20-30 EUV exposures</li> <li>• First EUV High-NA node ~ <b>4-9</b> exposures</li> </ul>	<ul style="list-style-type: none"> <li>• <b>60-70%</b> of wafer capacity converted to nodes with <b>up to 8</b> exposures of EUV</li> </ul>	

# Key challenges\* we face in our industry

Geo(political) landscape	General	ASML
<ul style="list-style-type: none"><li>• Technological sovereignty leading to new fabs in more regions</li><li>• Export controls</li><li>• IP protection</li></ul>	<ul style="list-style-type: none"><li>• End-market growth dynamic</li><li>• War for talent</li><li>• Increasing focus on sustainability</li></ul>	<ul style="list-style-type: none"><li>• Managing execution of technology roadmap</li><li>• Managing ramp in production</li><li>• Managing growth</li></ul>
Customers	Suppliers	Competitors
<ul style="list-style-type: none"><li>• Limited number of customers</li><li>• Sales concentrated among few large customers</li></ul>	<ul style="list-style-type: none"><li>• Growing complexity supply chain</li><li>• Increasing investment requirements for suppliers</li><li>• Managing lead times</li></ul>	<ul style="list-style-type: none"><li>• Immersion</li><li>• Dry</li><li>• Metrology + Inspection</li></ul>
<p><b>In a booming chip market, ASML's challenge is to remain competitive in DUV, ramp 0.33 EUV, execute our 0.55 EUV (High-NA) program and expand the Holistic Litho program opportunities in order to create value for all our stakeholders, while navigating the geopolitical landscape.</b></p>		

\*For full list of risk factors, see Annual Report 2020

# Our updated model goes beyond our high-market scenario from 2018

## ASML modeled Sales in 2025

(in B€)

### 2018 high market scenario

#### Market demand

based on mid EUV insertion

Worldwide units		Sales	
High demand	High-NA	9	17.9
	EUV	55	6.4
	ArFi	60	
	Dry	200	
	<b>Total</b>	<b>324</b>	<b>24.3</b>
<b>Systems Installed Base Management</b>			

#### EUV insertion

based on moderate market

Worldwide units		Sales	
High insertion	High-NA	7	13.4
	EUV	43	5.9
	ArFi	40	
	Dry	150	
	<b>Total</b>	<b>240</b>	<b>19.3</b>
<b>Systems Installed Base Management</b>			

Worldwide units		Sales	
Low demand	High-NA	5	10.2
	EUV	32	4.8
	ArFi	35	
	Dry	140	
	<b>Total</b>	<b>212</b>	<b>15.0</b>
<b>Systems Installed Base Management</b>			

Worldwide units		Sales	
Low insertion	High-NA	3	12.7
	EUV	45	5.8
	ArFi	40	
	Dry	150	
	<b>Total</b>	<b>238</b>	<b>18.5</b>
<b>Systems Installed Base Management</b>			

# Our simulation model 2025 supports total sales between ~24 B€ (Low market) – ~30 B€ (High market)

## ASML modeled sales in 2025

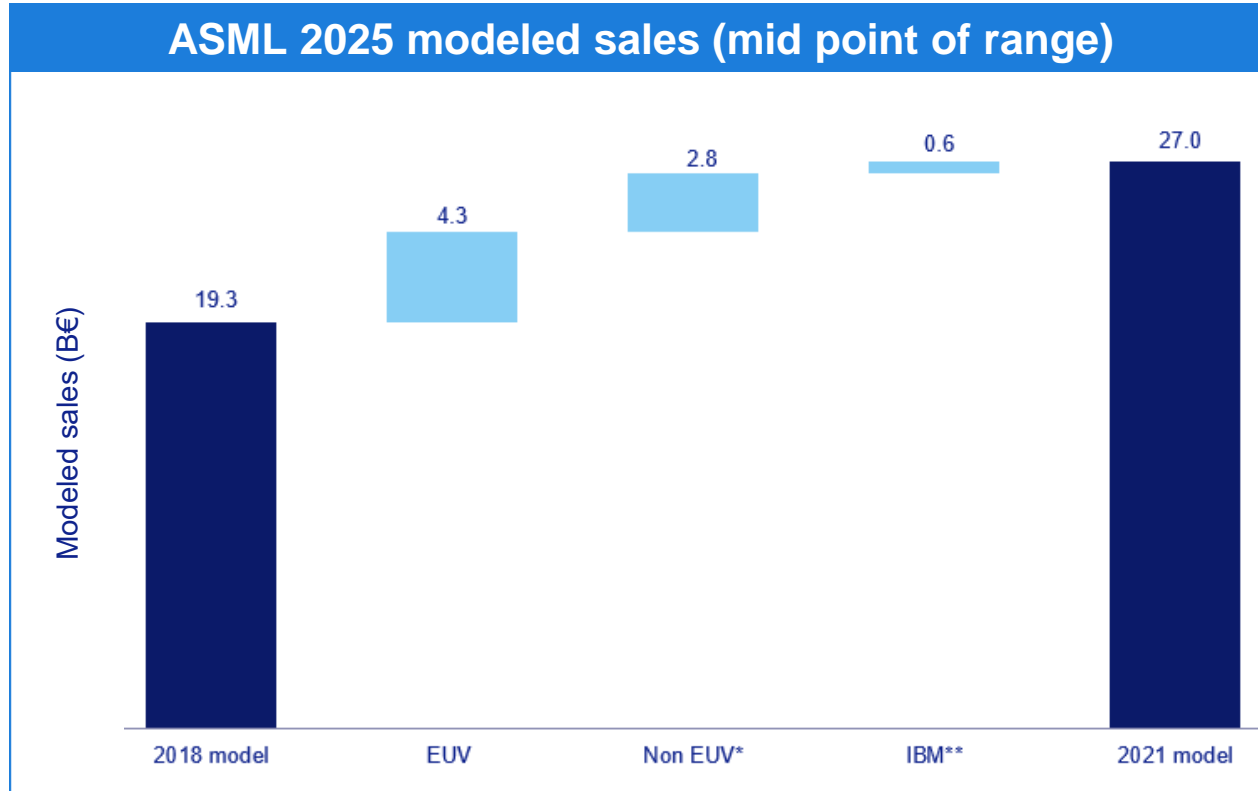
(in B€)

	Worldwide litho units		Sales	
<b>High market</b>	High-NA	5	Systems (Litho and M&I)	23.0
	EUV	70	Installed Base Management	7.0
	ArFi	87		
	Dry	290		
	<b>Total</b>	<b>452</b>	<b>Total</b>	<b>30.0</b>

	Worldwide litho units		Sales	
<b>Low market</b>	High-NA	5	Systems (Litho and M&I)	18.0
	EUV	48	Installed Base Management	6.0
	ArFi	70		
	Dry	190		
	<b>Total</b>	<b>313</b>	<b>Total</b>	<b>24.0</b>



# Higher sales across product portfolio translates to increase in 2025 modeled scenario



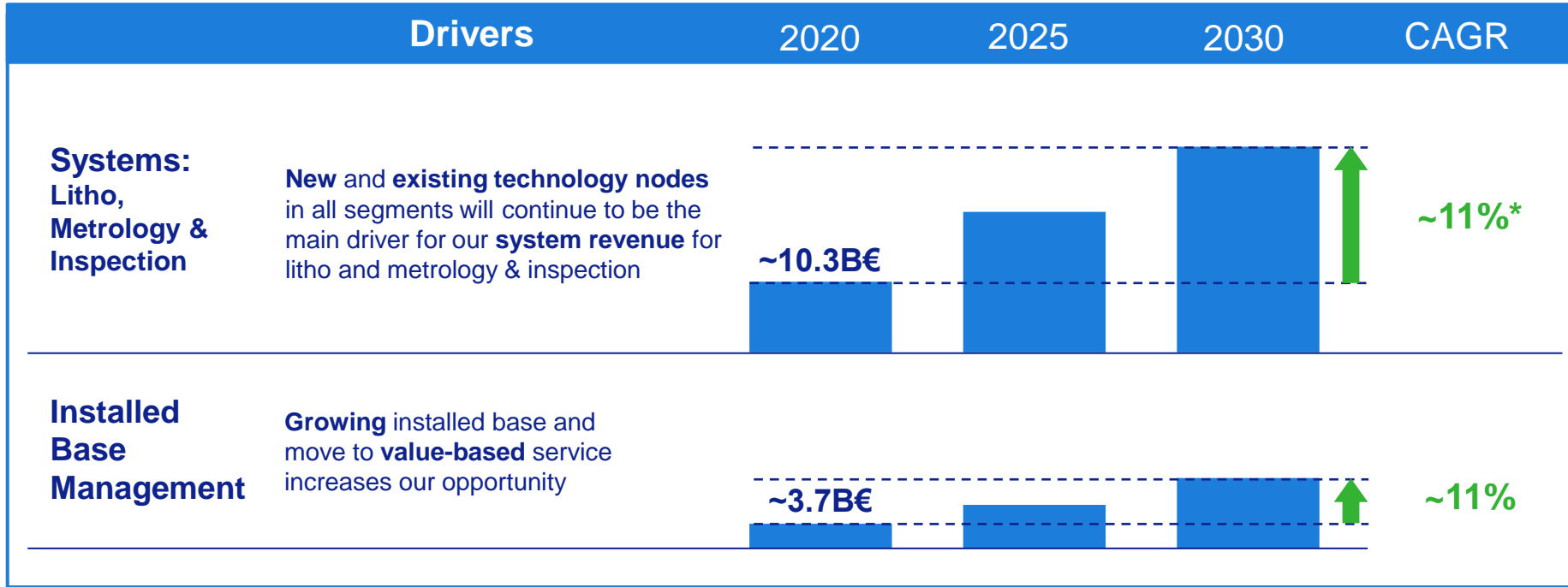
\*Non EUV = DUV, Metrology and Inspection \*\*IBM = Installed Base Management

# ASML updated financial model

	2020 (Actuals)	2025 (CMD 2018 Ranges)	2025 (Low - High market)
<b>Total sales</b>	<b>14.0B€</b>	<b>~15 - 24B€</b>	<b>~24.0 - 30.0B€</b>
<b>Installed base Management</b>	<b>3.7B€</b>	<b>~5 - 6B€</b>	<b>~6.0 - 7.0B€</b>
<b>System sales</b>	<b>10.3B€</b>	<b>~10 - 18B€</b>	<b>~18.0 - 23.0B€</b>
<b>Gross margin</b>	<b>48.6%</b>	<b>&gt;&gt;50%</b>	<b>~54 - 56%</b>
<b>R&amp;D</b>	<b>16%</b>	<b>~13%</b>	<b>~3.4 - 3.7B€</b>
<b>SG&amp;A</b>	<b>4%</b>	<b>~4%</b>	<b>~1.0B€</b>
<b>CapEx</b>	<b>7%</b>	<b>~3%</b>	<b>~1.0B€</b>
<b>Cash Conversion Cycle</b>	<b>228 days</b>	<b>&lt;200 days</b>	<b>&lt;200 days</b>
<b>Effective Tax Rate*</b>	<b>14%</b>	<b>~14%</b>	<b>~16%</b>

\* Based on 2021 tax legislation

# Market opportunities support another 10 years of growth



Source: VLSI Research, with ASML analysis;

Installed Base Management : ASML service and field upgrades sales;

\* Assumes litho intensity (litho % of WFE) and litho market share in 2030 similar to 2025;

\* Systems revenue CAGR, includes ASML Metrology & Inspection system revenue CAGR 2020-2030 ~15%

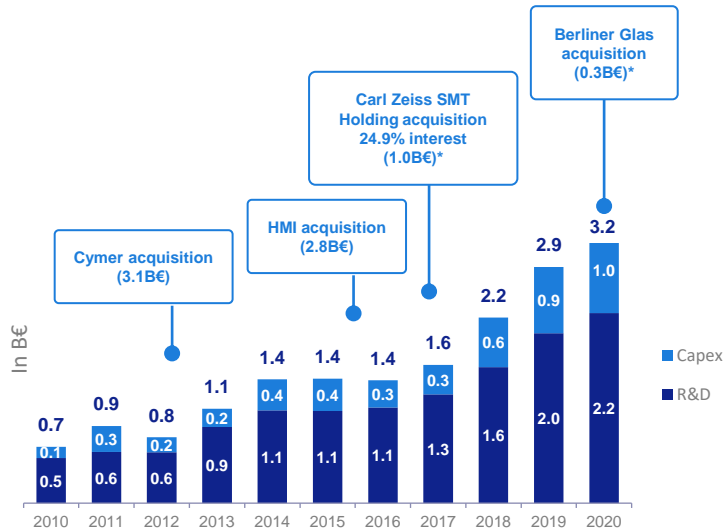
Historical shareholder value creation

Continuing growth

- **Continued shareholder value creation**

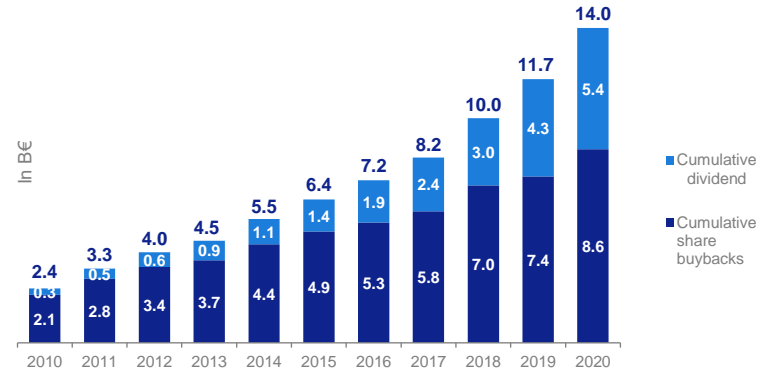
# ASML's capital allocation policy

## Focused investment in our business through R&D, CapEx



## Excess cash distribution

### Combination of growing dividends and share buybacks



Maintain a strong and flexible balance sheet

\* ASML contribution for Zeiss SMT capex included as of 2018

# Business model and capital allocation strategy

## Key messages



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**Growth in semiconductor end markets** and **increasing lithography intensity** on future nodes fuel demand for our products and services

Based on **different market scenarios**, we have an opportunity to achieve an **annual revenue for 2025 between** approximately **€24 billion and €30 billion** with a **gross margin for 2025 between** approximately **54% and 56%**.

We see **significant growth opportunities beyond 2025**. Assuming a 1 trillion dollar semiconductor market by 2030, with litho intensity and our market share constant from 2025, we expect an **annual revenue CAGR for 2020-2030 of around 11%**

We expect to continue to **return significant amounts of cash** to our shareholders through a combination of **growing dividends and share buybacks**

# Forward Looking Statements

This presentation contains statements that are forward-looking, including statements with respect to expected industry and business environment trends including expected growth, outlook and expected financial results, including expected net sales, gross margin, R&D costs, SG&A costs and effective tax rate, annual revenue opportunity for 2025, financial model for 2025 and assumptions and expected growth rates and drivers, expected growth including growth rates 2020-2025 and 2020-2030, total addressable market, growth opportunities beyond 2025 and expected annual growth rate in lithography and metrology and inspection systems and expected annual growth rate in installed base management, expected trends in addressable market up to 2030, expected trends in Logic and Memory revenue opportunities, long term growth opportunities and outlook, expected trends in demand and demand drivers, expected benefits and performance of systems and applications, semiconductor end market trends, expected growth in the semiconductor industry including expected demand growth and capital spend in coming years, expected wafer demand growth and investments in wafer capacity, expected lithography market demand and growth and spend, growth opportunities and drivers, expected trends in EUV and DUV demand, sales, outlook, roadmaps, opportunities and capacity growth and expected EUV adoption, profitability, availability, productivity and output and estimated wafer demand and improvement in value, expected trends in the applications business, expected trends in installed base management including expected revenues and target margins, expected trends and growth opportunity in the applications business, expectations with respect to high-NA, the expectation of increased output capacity, plans, strategies and strategic priorities and direction, expectation to increase capacity, output and production to meet demand, the expectation that Moore's law will continue and Moore's law evolution, product, technology and customer roadmaps, and statements and intentions with respect to capital allocation policy, dividends and share buybacks, including the intention to continue to return significant amounts of cash to shareholders through a combination of share buybacks and growing annualized dividends and statements with respect to ESG commitment, sustainability strategy, targets, initiatives and milestones. 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", "target", "future", "progress", "goal" 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 our 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 a number of substantial known and unknown 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, semiconductor end-market trends, the impact of general economic conditions on consumer confidence and demand for our customers' products, performance of our systems, the impact of the COVID-19 outbreak and measures taken to contain it on the global economy and financial markets, as well as on ASML and its customers and suppliers, and other factors that may impact ASML's sales and gross margin, including customer demand and ASML's ability to obtain supplies for its products, the success of R&D programs and technology advances and the pace of new product development and customer acceptance of and demand for new products, production capacity and our ability to increase capacity to meet demand, the number and timing of systems ordered, shipped and recognized in revenue, and the risk of order cancellation or push out, production capacity for our systems including the risk of delays in system production and supply chain capacity, constraints, shortages and disruptions, trends in the semi-conductor industry, our ability to enforce patents and protect intellectual property rights and the outcome of intellectual property disputes and litigation, availability of raw materials, critical manufacturing equipment and qualified employees and trends in labor markets, geopolitical factors, trade environment; import/export and national security regulations and orders and their impact on us, ability to meet sustainability targets, changes in exchange and tax rates, available liquidity and liquidity requirements, our ability to refinance our indebtedness, available cash and distributable reserves for, and other factors impacting, dividend payments and share repurchases, results of the share repurchase programs and other risks indicated in the risk factors included in ASML's Annual Report on Form 20-F for the year ended December 31, 2020 and other filings with and submissions to the US Securities and Exchange Commission. These forward-looking statements are made only as of the date of this document. We undertake no obligation to update any forward-looking statements after the date of this report or to conform such statements to actual results or revised expectations, except as required by law.

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ASMI Slide 24  
29 Sept. 2021

Investor Day  
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