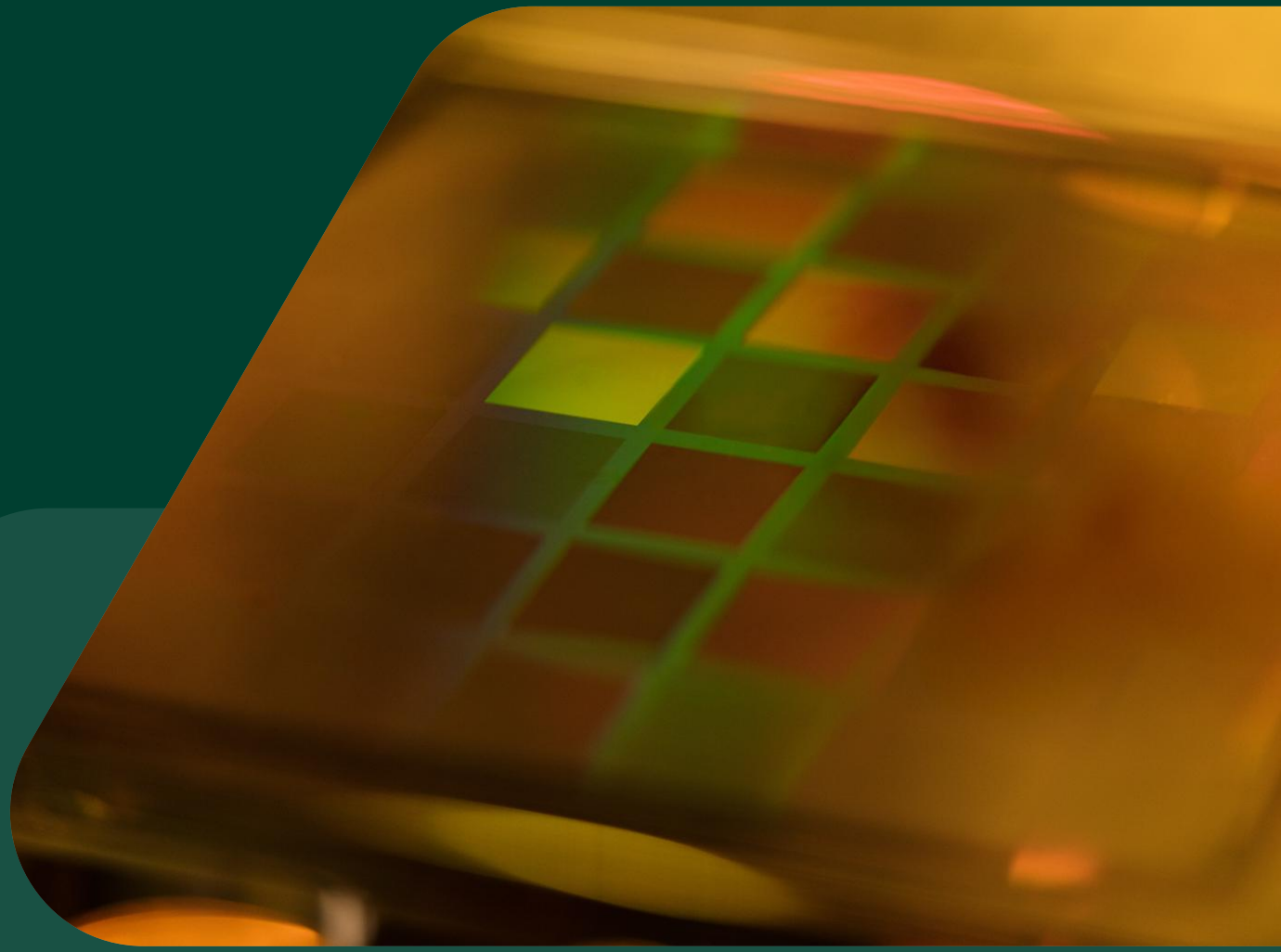
Business Unit Photomask Solutions

(Yuta Nagai)



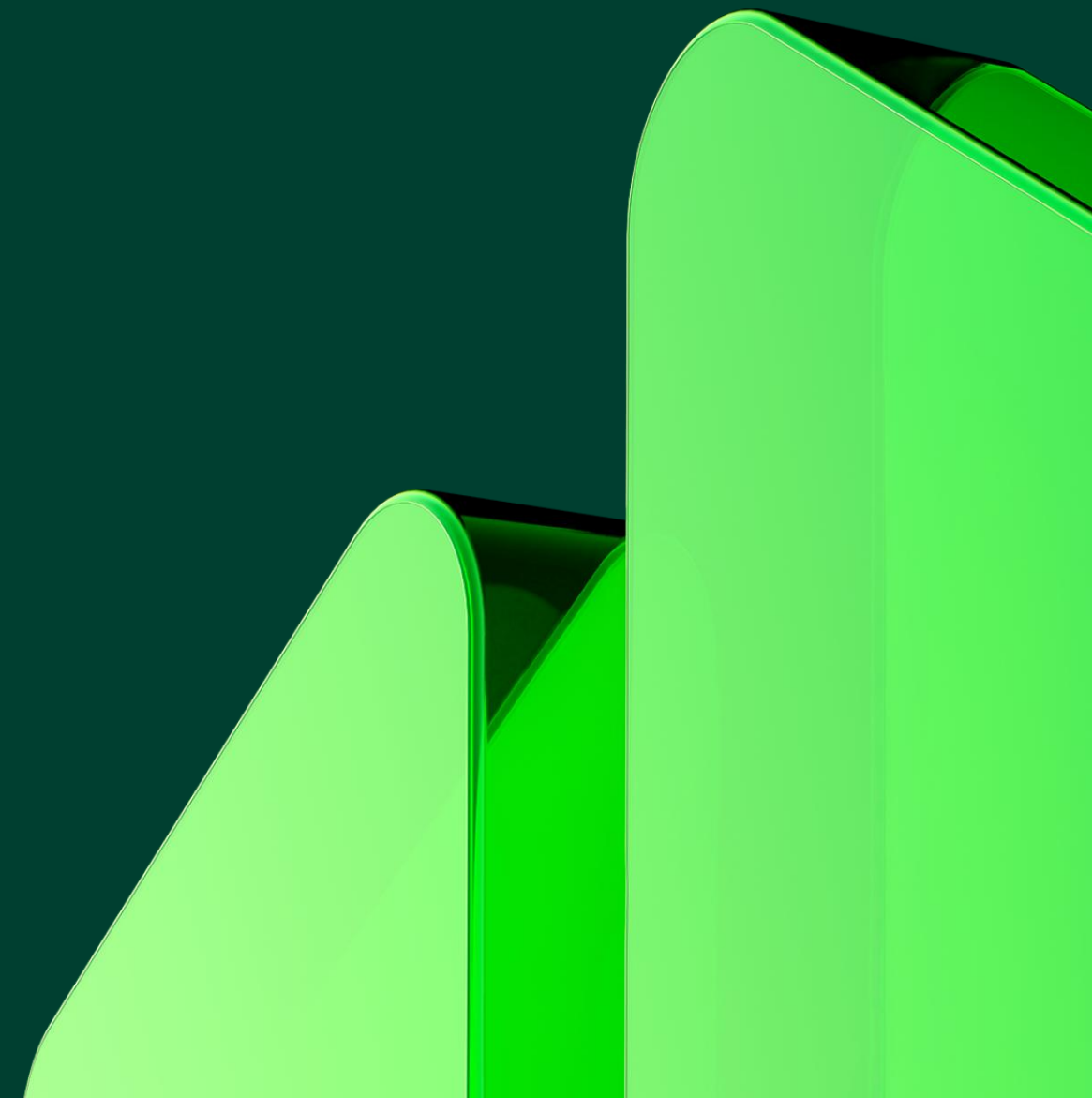
Agenda

01 **Market Outlook**

02 Vision & Strategy

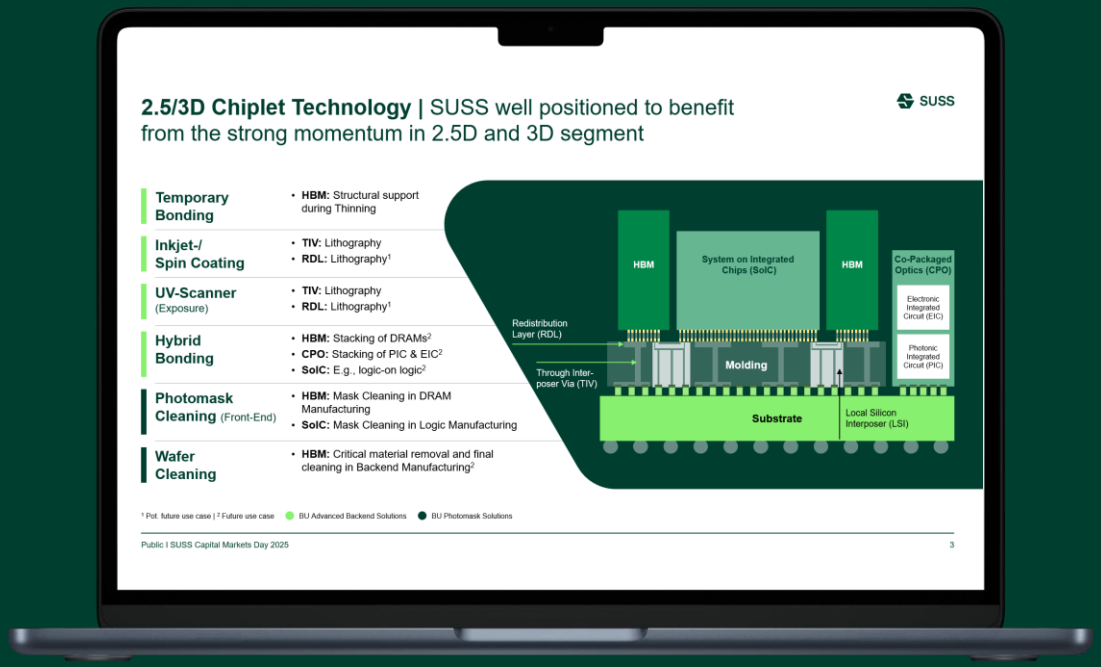
03 Financial Highlights

04 Summary



Synergies with Corporate Strategy and Our Strategic Role

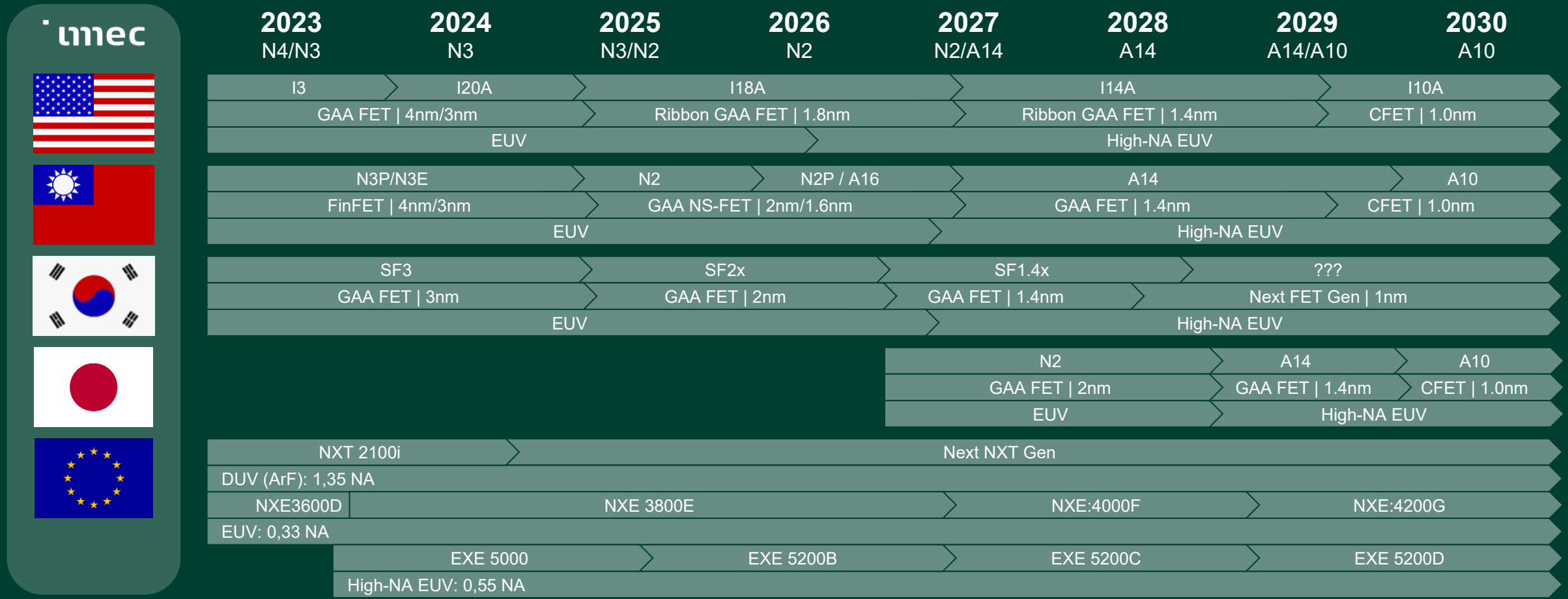
Building the Foundation for Growth Across Front-End and Back-End



As **Moore's Law** continues to be extended, the demand for advanced photomasks remains solid. At the same time, demand in mature nodes is accelerating beyond 2025, requiring a **hybrid strategy** that addresses both segments.

Photomask Solutions will play a key role in supporting the corporate core strategy of expanding into next-generation **Backend applications** by strengthening its product portfolio to capture these emerging opportunities.

Global Evolution Driven by Moore's Law | Pushing the Boundaries of Semiconductor Technology with High-NA and Next-Gen Logic

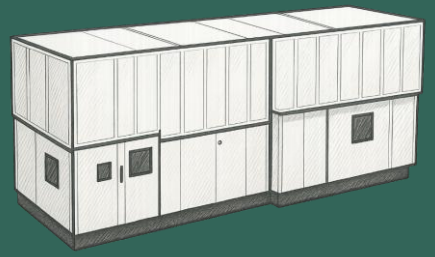


Source: Company Research & BNP Paribas Exane Estimates

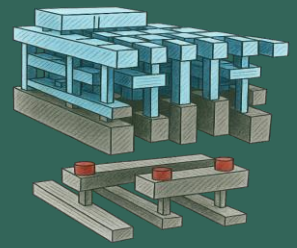
Three Pillars of Future Technologies Driving Photomask Solutions

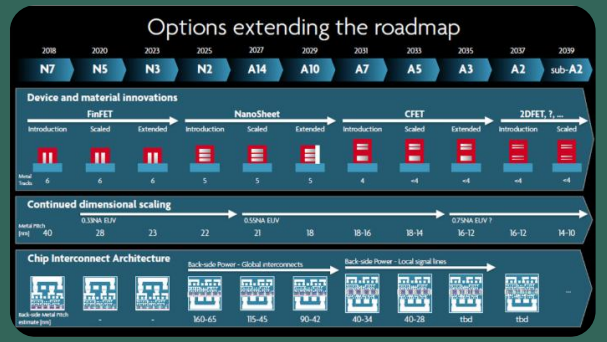
Shift from solely Scale-Determined to Function-Optimized Chip Design

1 High-NA EUV

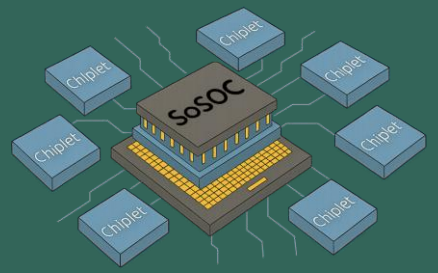


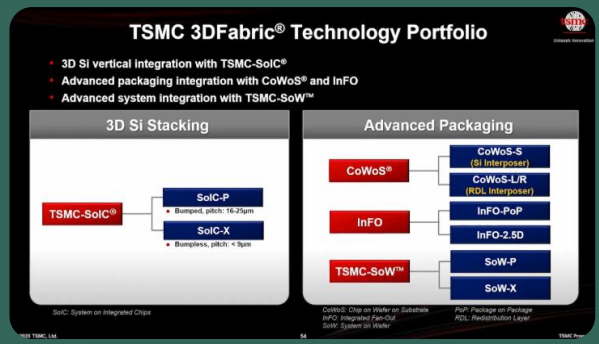
2 CFET – Transistor





3 Heterogeneous Integration





Source: ASML Investor Day 2024

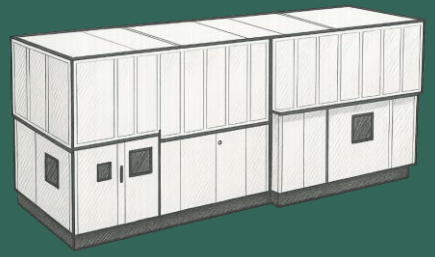
Source: IMEC

Source: TSMC 2025 Technology Symposium

Three Pillars of Future Technologies Driving Photomask Solutions

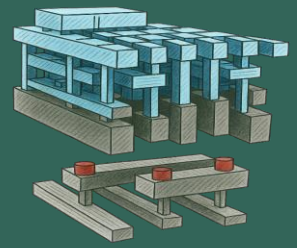
Shift from solely Scale-Determined to Function-Optimized Chip Design

1 High-NA EUV



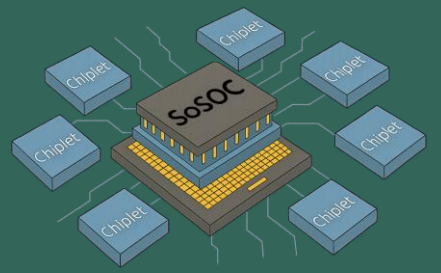
Higher resolution imaging
introduces new mask develop and cleaning challenges and potentially new Photomask formats

2 CFET – Transistor



Vertical transistor stacking
increases number of lithography layers & number of high-end masks

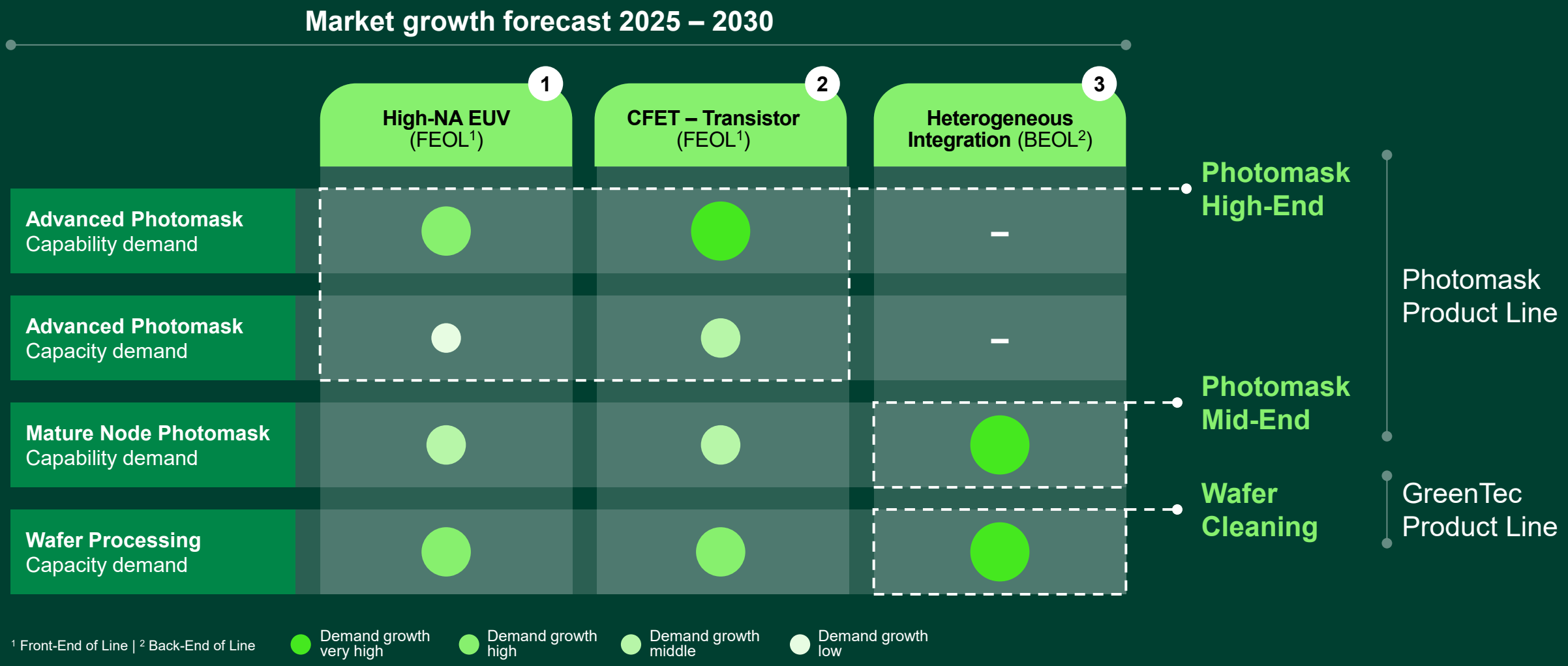
3 Heterogeneous Integration



Disintegration into Chiplets
boosts wafer count and matured node Photomask usage

Three Pillars of Future Technologies Driving Photomask Solutions

Demand outlook 2030 – SUSS is well positioned across FEOL & BEOL



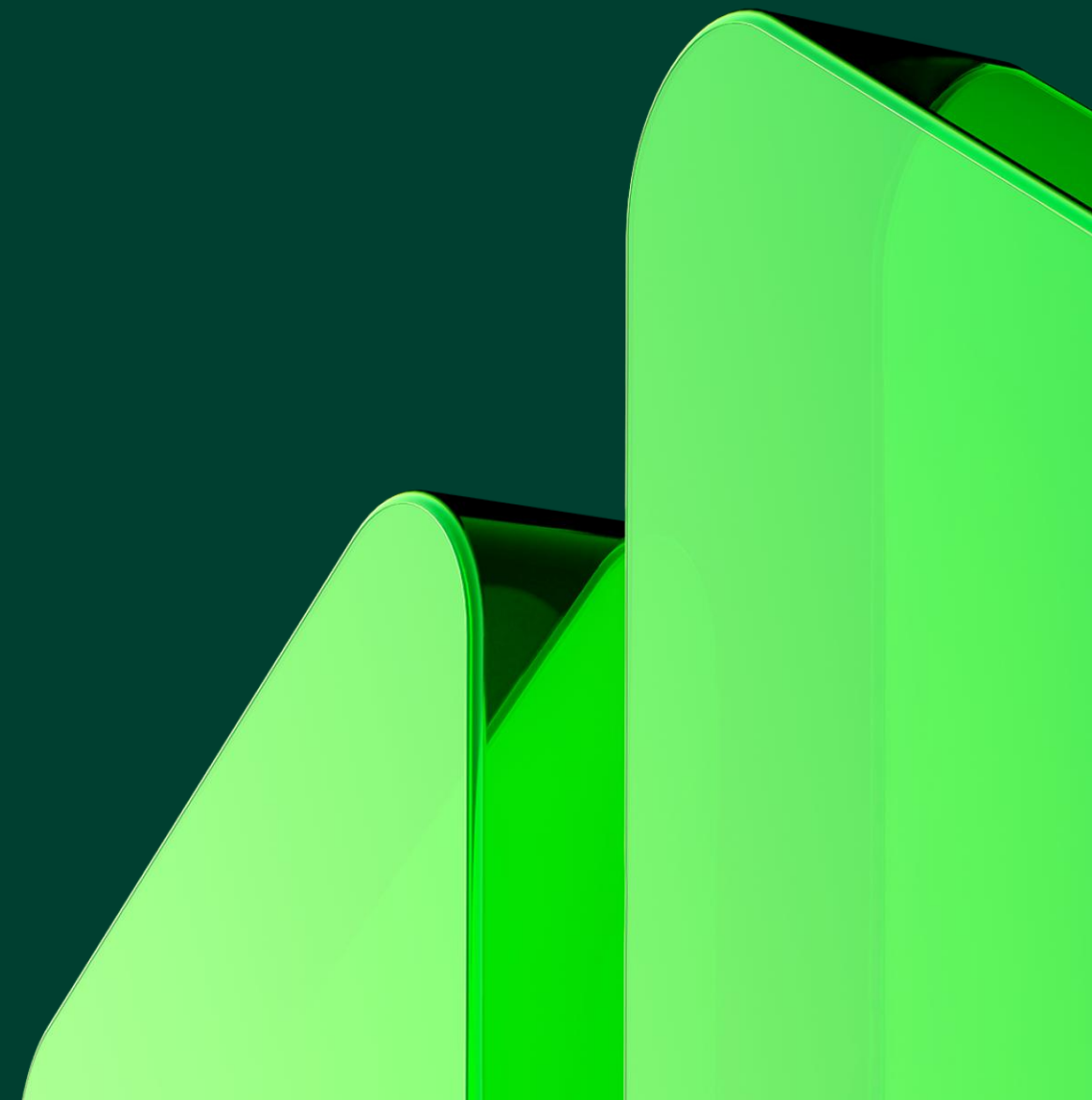
Agenda

01 Market Outlook

02 **Vision & Strategy**

03 Financial Highlights

04 Summary



Strategy to Win | Leading the industry through cutting-edge technology & sustainable solutions

High-NA and **CFET** will set new **technology benchmarks,** while **Heterogeneous Integration** including Advanced Packaging drives **volume growth**

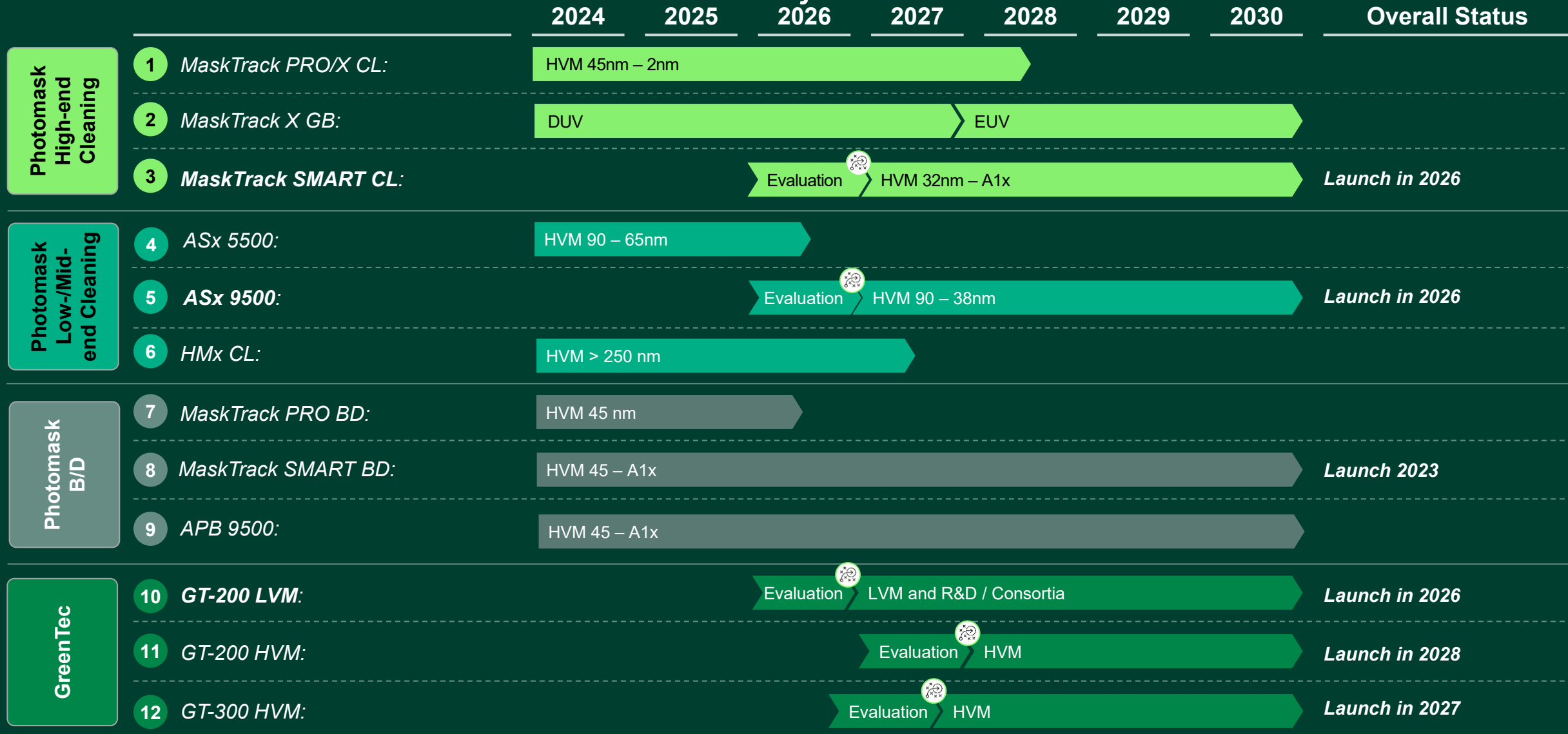
Market leader High-End Photomask cleaning: Committed to sustaining leadership through continuous innovation

Strong position Mid-End Photomask cleaning: Relaunch of mid-end photomask tools to meet the growing needs of mature technologies

Enter Wafer Cleaning market: Launch wafer cleaning solutions for MEMS, Power, and CIS, paving the way to Advanced Packaging

Product Portfolio Roadmap

2026 will be a Milestone Year with three Major Product Launches



MaskTrack SMART Cleaning System | Expanding Hybrid Solutions from Optical Mask Technologies to High-NA EUV

MaskTrack SMART
Launch in 2026

SUSS Market share

2025 Target 2030

- **Superior particle removal** through super high-frequency physical force cleaning
- **Gentle surface preparation** through ICP Plasma[1] surface treatment
- **Optimized coverage and efficiency** through 4 nozzles per chamber
- **Real-time tool performance optimization** through SMART software
- **Scalable configuration** with up to 5 process chambers
- **EUV mask backside-only cleaning** capability

[1] ICP: Inductively Coupled Plasma

Photomask Cleaning Evolution in High-NA EUV Era | Tackling Shrinking CDs, 3D Mask Effects, Tight Overlay, High EUV Power and Zero Defect

SUSS

1 Photomask Challenges

- **Anamorphic imaging**
  Needs tighter CD and overlay tolerances for new masks
- **M3D *1 effects**
  Use of new absorber materials to mitigate 3D mask issues
- **EUV pellicles**
  Higher transmission and improved thermal stability
- **Defects & contamination**
  Stronger control of particles and imperfections
- **Edge & reflectivity**
  Stricter limits for black-border and edge performance and reflectivity losses caused by carbon and hydrocarbon

2 SUSS Excellence

- **Advanced particle removal control**
  High-Frequency Megasonic and plasma-assisted cleaning
- **Use of EUV-compatible chemistry**
  Formulated for multilayer mirrors and absorber stacks
- **Backside cleaning module**
  Frontside protected backside cleaning
- **Ultra gentle frontside cleaning**
  Local cleaning methods, ISUV technology
- **Automation & analytics**
  Closed-loop control, smart predictive maintenance, pellicle-mounted mask handling

3 Competitive Advantage

- **Outstanding acknowledged process know-how**
  Delivering unmatched precision and consistency
- **Proven field reliability EUV cleaning**
  High-NA compliant photomask cleaning equipment
- **Partnerships with leading EUV key players**
  With all fabs and Maskshop of the EUVL arena and equipment makers
- **Scalable platform design**
  New platform prepared for new needed technologies and HVM

*1 M3D: Monolithic 3D

ASx9500 Cleaning System

A Scalable Mid-End Tool Configurable with only the Required Functions

ASx9500 – Launch in 2026

SUSS Market share

Scalable technology platform supporting technology nodes from 90 nm to 38 nm

Cost-efficient platform architecture enabling high productivity within a compact space

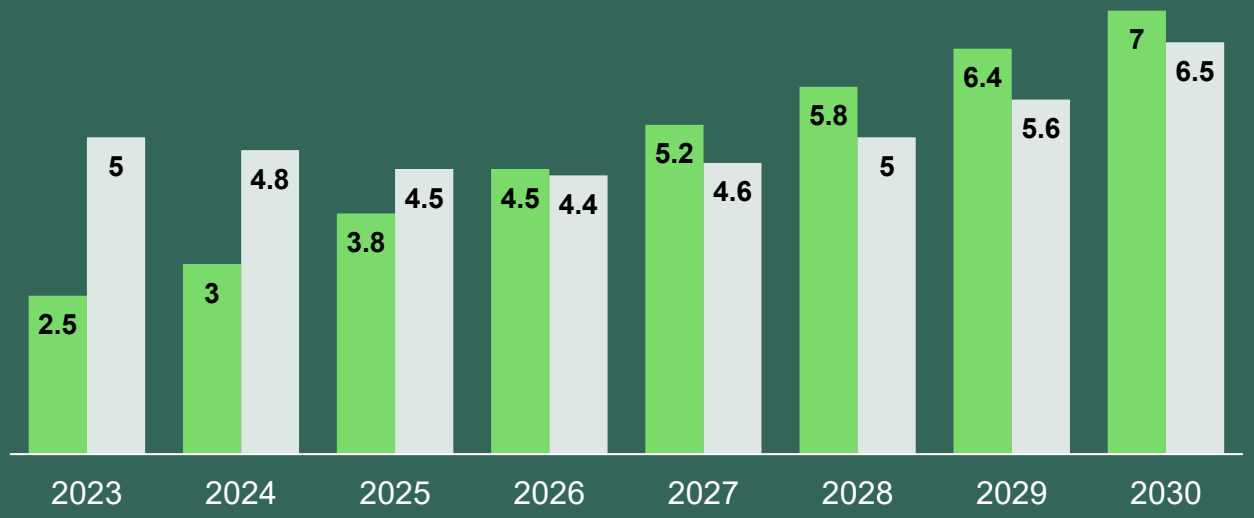
High performance and low operating cost through State-of-the-art Insite UV technology (acid-less process)

Optimized surface treatment through flexible physical force cleaning capability

Mature Node Growth Expected to More Than Double by 2030
Reaching Scale Comparable to High-End Nodes

Global Photomask Market Value by Technology Node (USD Billions, 2023 – 2030)

Market Value (USD Billions)



Mature Nodes (≥28nm) Advanced Nodes (<14nm)

Market dynamics

- AI, Automation & IoT: Sustaining semiconductor demand
- China: Scaling mature nodes beyond 2027
- Heterogeneous integration drives a new wave of demands

Outlook

High photomask intensity at mature-node fabs offsets slower advanced-node spending, supporting continued market growth through 2030.

Overall Photomask Market Outlook 2027 – 2030

High-end demand is expected to rebound after 2027. Together, mature and High-end nodes are projected to fuel the photomask market's CAGR of approx. 7 – 8%.

GreenTrack Wafer Cleaning System | All-in-One Solution for Environmental Impact Reduction, TCO Improvement, and more

GreenTrack Wafer Cleaning – Launch in 2026

SUSS Market share

2025

Target 2030
(ramp-up phase)

Long-term target

CrustBuster technology for advanced water-based cleaning

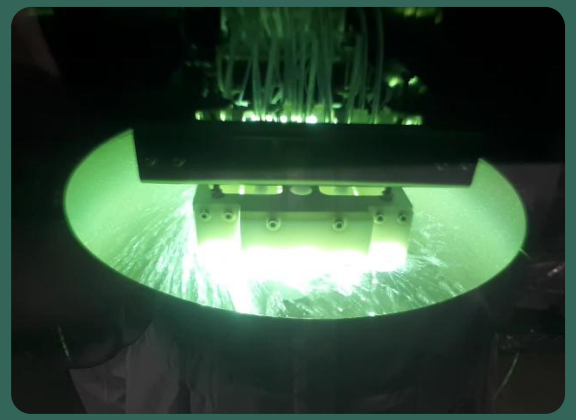
Sustainable processing through TurbulenStrip technology utilizing green fluids

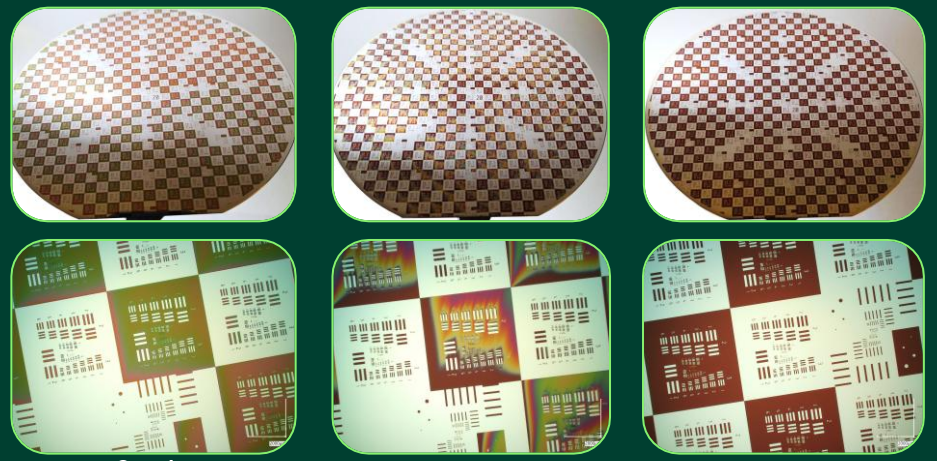
Batch and single-wafer processing enabled by hybrid design

Cost-efficient platform architecture leveraging strategic outsourcing

From Concept to Reality
Building Competitive Advantage Through Green Technology

CrustBuster Technology

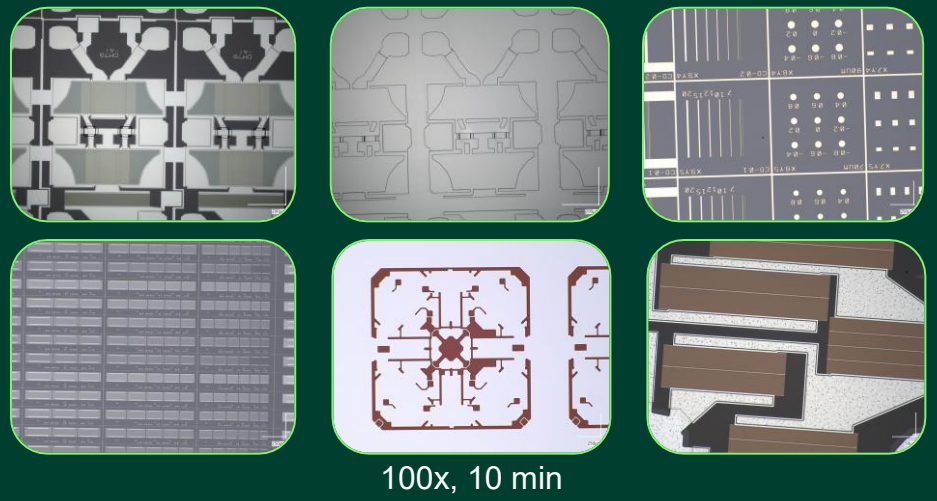




TurblenStrip Technology

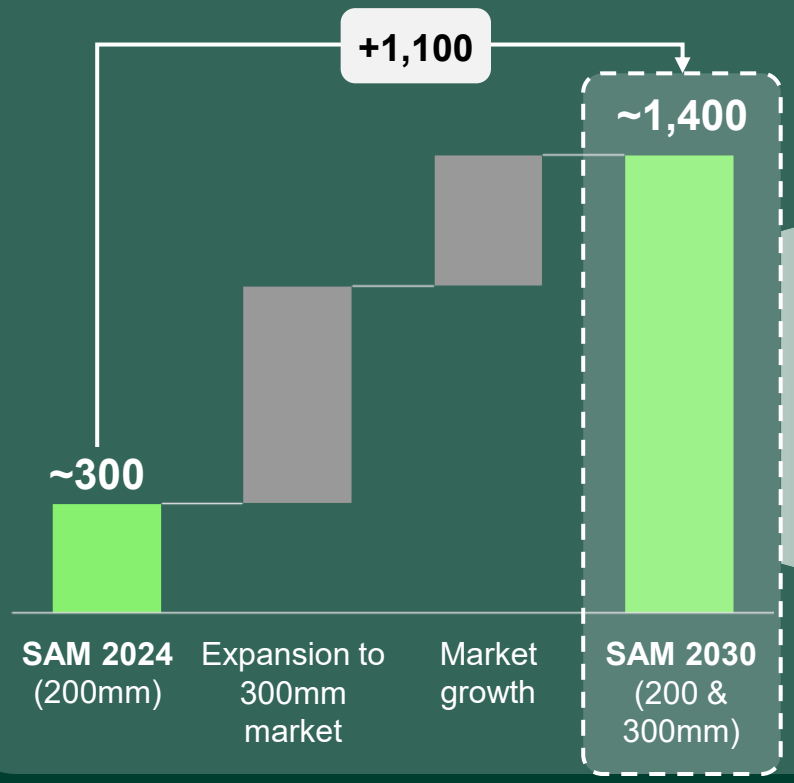
Green Fluids:

- High performance
- Water-based liquid
- Biodegradable
- Improved health and safety

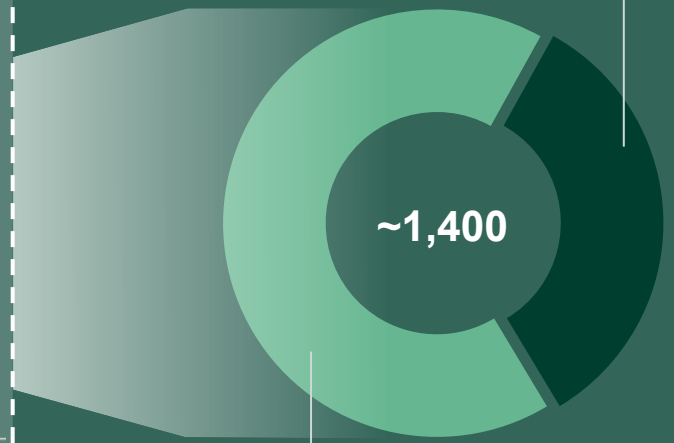


GreenTrack Wafer Cleaning System | Strategic Entry into a Market Projected to Quadruple in SAM Alongside Product Launches

Serviceable Available Market [€m]



200mm:
MEMS, Power- & High Frequency- devices and CMOS Image Sensors



300mm:
Advanced Packaging

Green Track 200mm Launch 2026

Green Track 300mm Launch 2027

Source: SUSS Research based on Yole | Note: USD/EUR forward exchange rate = 1.18

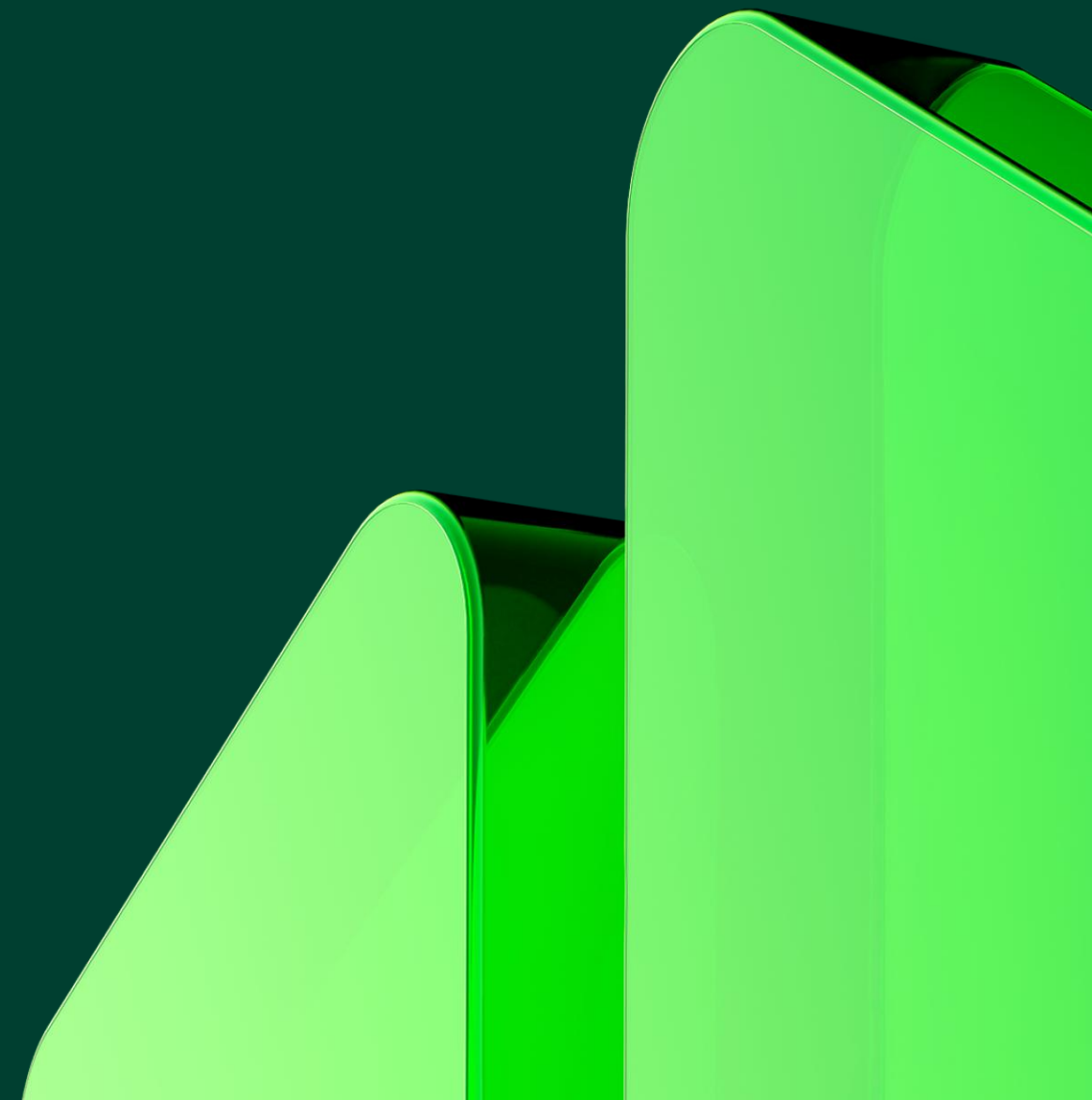
Agenda

01 Market Outlook

02 Vision & Strategy

03 **Financial Highlights**

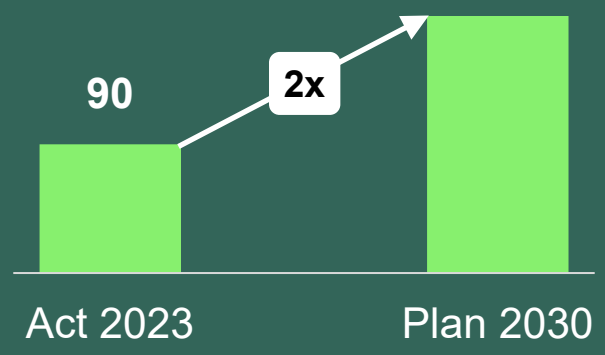
04 Summary



Based on our strong execution since the last Capital Markets Day, we are now in a position to raise our revenue target for 2030

Capital Markets Day 2023

Revenue [€m]



We set a bold target – 2x revenue by 2030 through:

- Strategic market expansion
- Acceleration of GreenTec productization

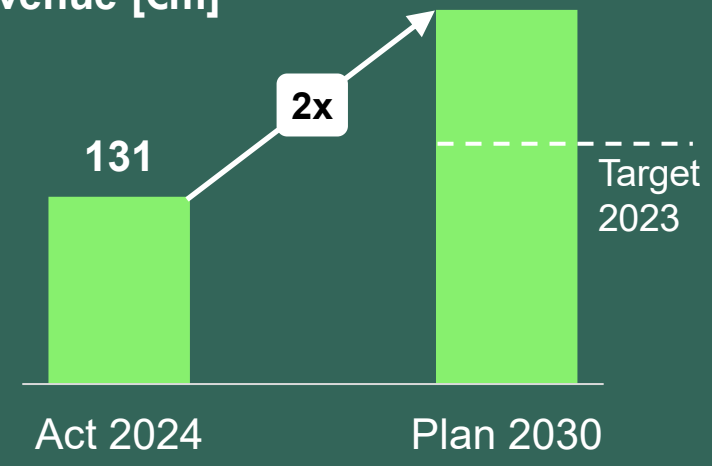
Accelerated execution

Technological innovation

Relentless drive toward sustainable leadership

Capital Markets Day 2025

Revenue [€m]

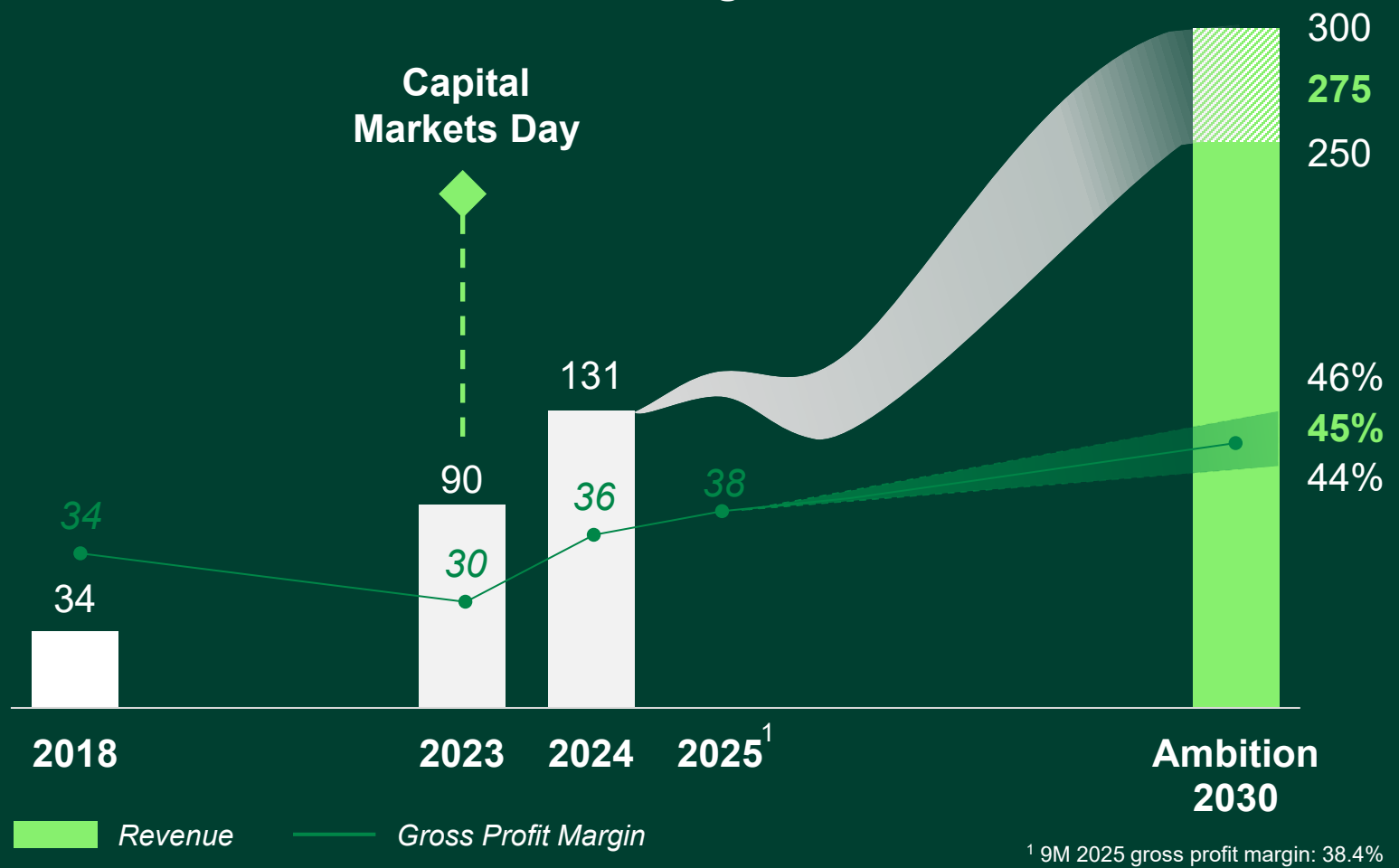


Through rigorous execution, we **exceeded our 2024 targets** even without GreenTec

We **raise our 2030 revenue ambition** to 2x 2024 levels

Revenue and Margin Outlook | Driving Growth through both Product Lines: Photomask and GreenTec

Revenue in €m & Gross Profit Margin in %



[1] 9M 2025 gross profit margin: 38.4%

Key Takeaways

Photomask:
Revenue Outlook: 2026 will likely mark a short pause in growth as the industry enters a transition phase of the technology and investment cycle. With new equipment releases during this period, **accelerated sales growth** is expected after 2026.

GreenTec:
Revenue Outlook: During 2026–2027, we will be in the Go-to-Market phase, focusing on technology validation in the market. With the launch of our 300 mm tool from 2028 onward, we target to achieve revenue exceeding **€100 m** by 2030.

Gross Profit Margin Outlook:
We aim to achieve a gross profit margin target of **44 to 46%** through three key drivers:

- Operational excellence
- Reduction of operational costs via outsourced manufacturing
- Improved pricing structure driven by the launch of new equipment

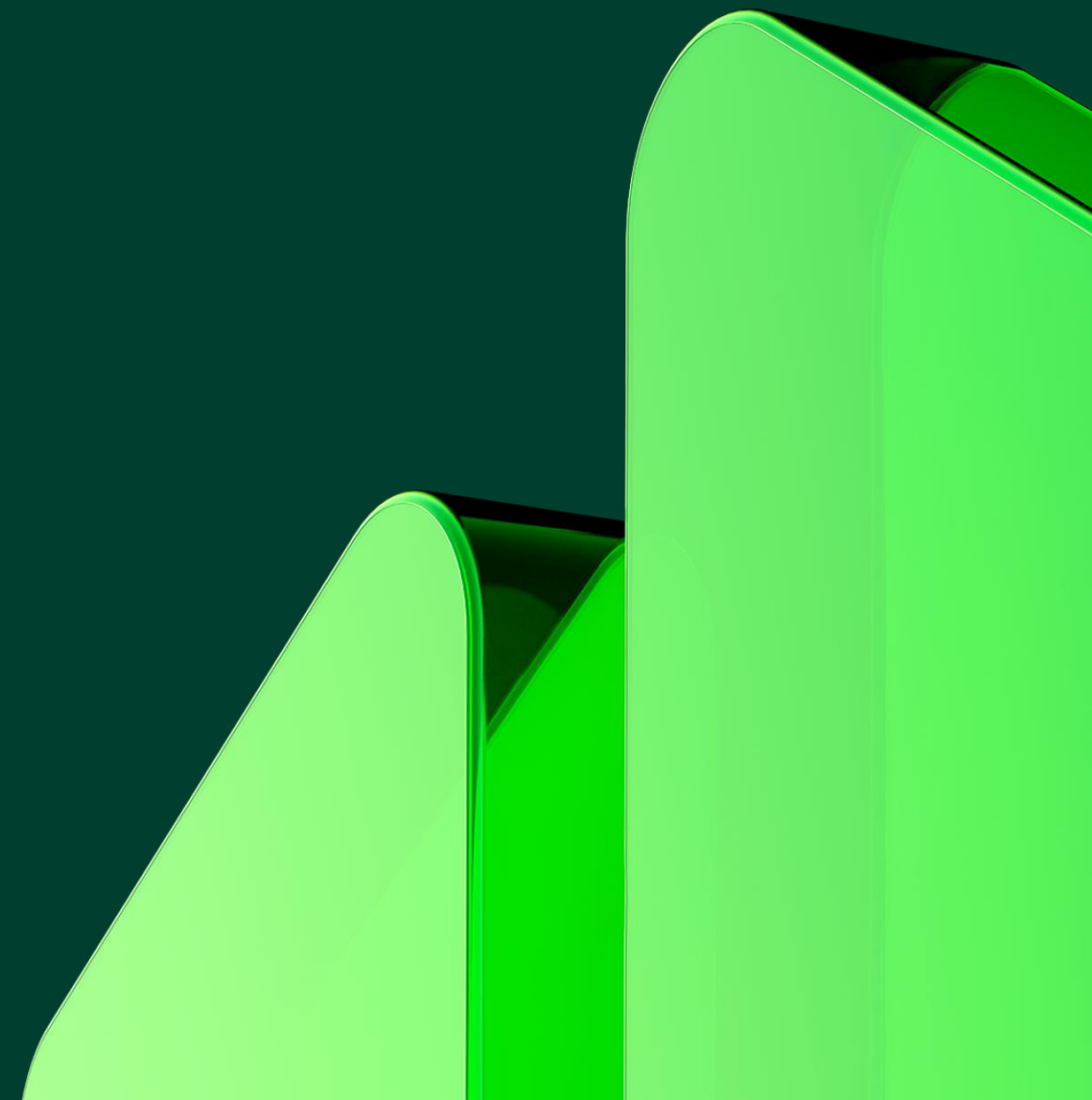
Agenda

01 Market Outlook

02 Vision & Strategy

03 Financial Highlights

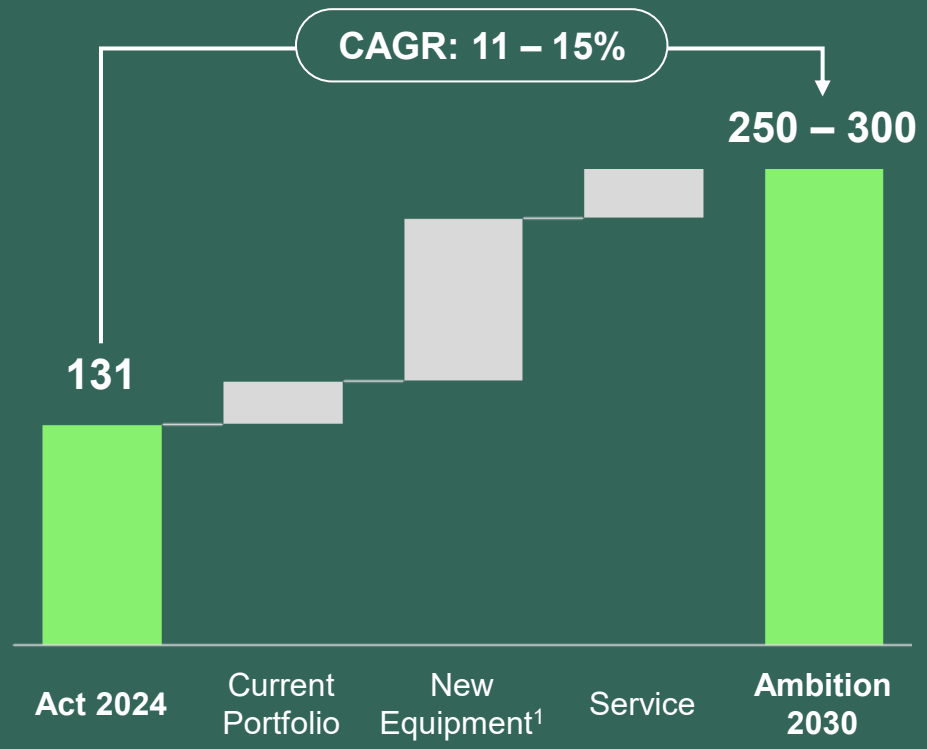
04 **Summary**



Summary | Sustainable growth toward 2030 through Technology, Market Expansion, & Sustainability – expanding from mask to wafer cleaning

SUSS

Revenue development (in €m)



Our Vision

Driving transformation and sustainable growth toward 2030 through **Technology, Market Expansion, and Sustainability.**

We remain the No.1 provider in high-end photomask equipment and are expanding leadership into mid-end and GreenTec solutions.

Product Roadmap Highlights

2026 marks a milestone year with three major launches:

- MaskTrack SMART Cleaning
- ASx9500
- GreenTrack 200 LVM

Financial Highlights – Ambition 2030

- Sales: €250–300m
- Gross Profit Margin: 44 to 46%

[1] GreenTrack Wafer Cleaning

Disclaimer

The following presentations contain forward-looking statements relating to the business, financial performance and earnings of SUSS MicroTec SE and its subsidiaries and associates.

Forward-looking statements are based on current plans, estimates, projections and expectations and are therefore subject to risks and uncertainties, most of which are difficult to estimate and which in general are beyond the control of SUSS MicroTec SE. Consequently, actual developments as well as actual earnings and performance may differ materially from those which explicitly or implicitly assumed in the forward-looking statements.

SUSS MicroTec SE does not intend or accept any obligation to publish updates of these forward-looking statements.