

ESG amidst geopolitical tensions

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What does ESG mean for ASML?

Technology contribution to society's challenges

Reducing the carbon footprint within the broader ecosystem

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What does ESG mean for ASML?

Our stakeholders become more vociferous

- Our customers feel the need to act:
'TSMC is expected to soon consume more energy than the entire 21 million-person population of Sri Lanka. In 2020 the company accounted for about 6% of Taiwan's overall energy consumption. It's expected to use 12.5% of it by 2025.' (Bloomberg)
- Our talent expects us to contribute positively to society's main challenges
- Investor engagement around ESG is growing
- Many suppliers are more and more actively engaged
- Governments are increasingly aware regarding the strategic nature of technology

What are the most specific ESG considerations for ASML?

- 1. Technology plays a key role in solving society's toughest challenges**
We have to continue to facilitate that development
- 2. Semiconductor manufacturing has a carbon footprint that should be reduced**
And lithography plays a significant role
- 3. ASML has a big stake in regional ecosystems**
We have a role to play in positively shaping those ecosystems
- 4. Semiconductor manufacturing plays a pivotal geopolitical role (economic and military)**
We need to educate stakeholders, protect and enhance our IP and prepare for geopolitical scenarios
- 5. Etc.**

As part of a wider ESG Sustainability program that intends to contribute to our stakeholders' ambitions

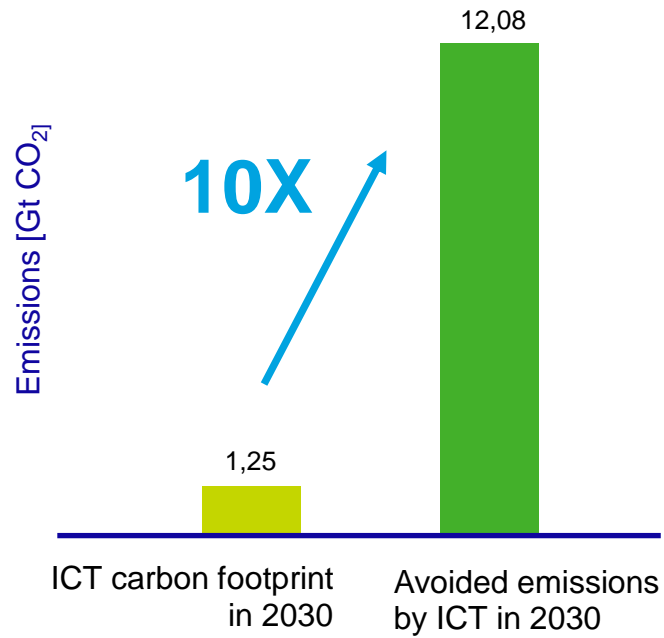
ENVIRONMENT	Energy efficiency & climate action	Zero GHG emissions in our value chain by 2040
	Circular economy	Zero waste from operations to landfill and incineration by 2030
SOCIAL	Attractive workplace for all	A highly attractive place to work for all
	Responsible supply chain	Engaged suppliers who share our commitment to and collaborate with us on ESG Sustainability
	Innovation ecosystem	A thriving, multi-regional innovation ecosystem which helps solve some of humanity's challenges
	Valued partner in our communities	ASML and communities benefit from each other's presence and each other's development
GOVERNANCE	Integrated governance	ESG is part of all regular, day-to-day decision making
	Engaged stakeholders	Our stakeholders view ASML as a top performer on ESG Sustainability
	Transparent reporting	'Best-in-class' reporting, according to our stakeholders

Technology can help solve big societal challenges

Technology contribution to society's challenges

1. Climate change (Next slides)
2. Aging population (E-health, next slide)
3. Global hunger (AgriTech)
4. Natural disasters (EWSs)
5. Under-education (E-learning)
6. Etc.

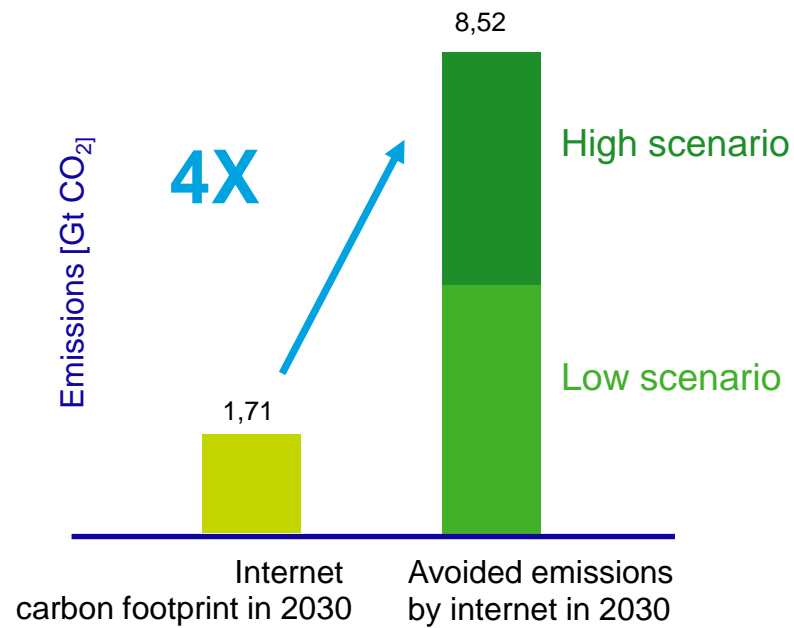
Contributing to a reduction of total carbon footprint



ICT



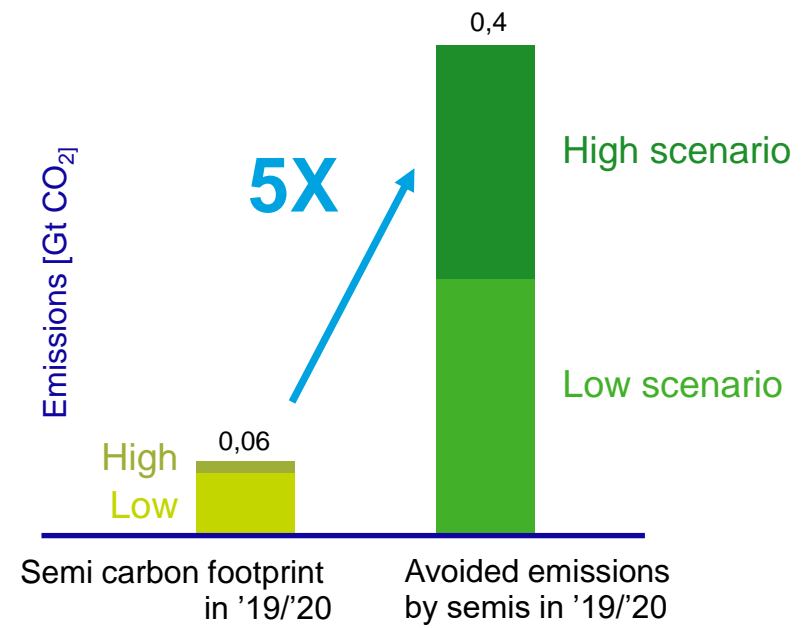
GeSi SMARTer



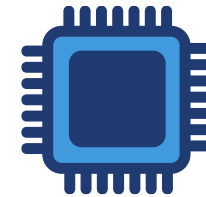
INTERNET



Anders Andrae



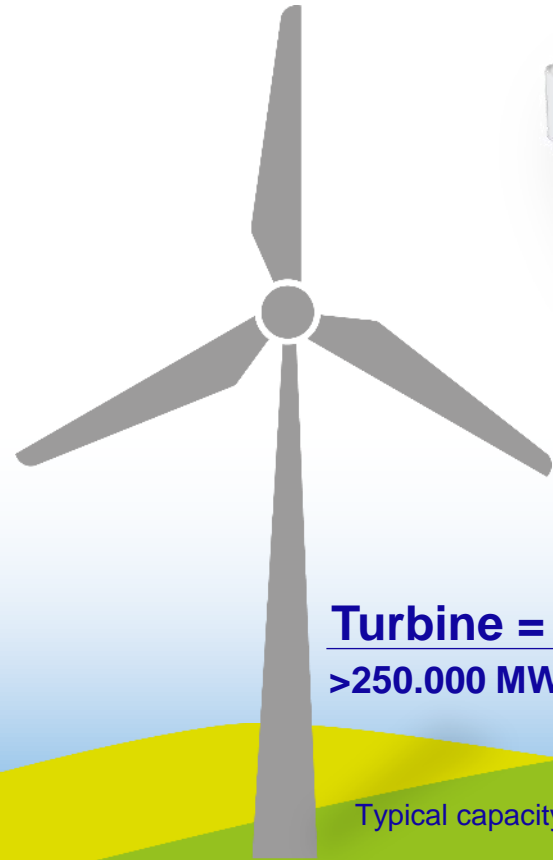
SEMICONDUCTORS



Goldman Sachs

Semicon innovations will support efficient use of renewable energy

According to the EU, smart charging can help reduce required charging capacity by a third before 2040

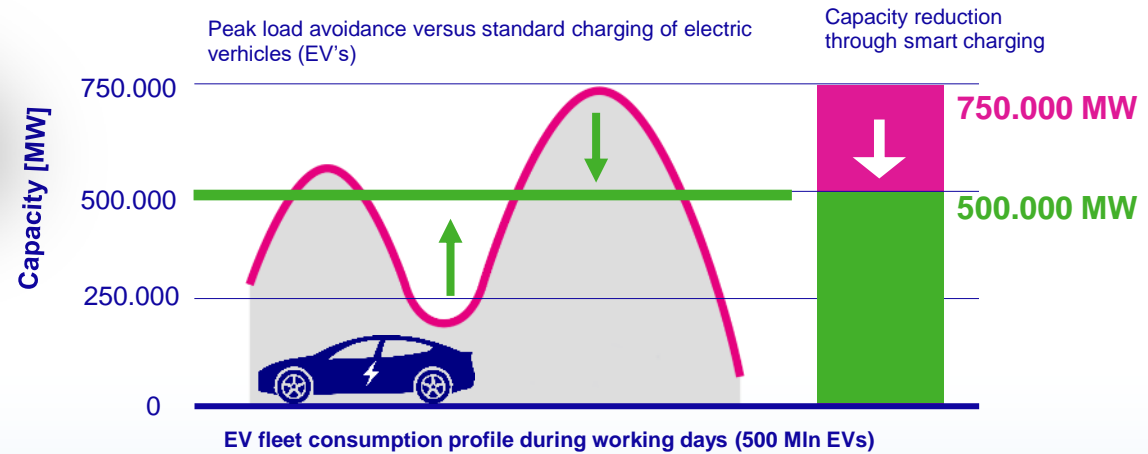


Silicon Carbide CoolSiC™ MOSFET Module

Applications:

- Energy Storage Systems
- Fast EV charging
- Solutions for solar energy systems
- Uninterruptible Power Supply (UPS)

Peak load reduction challenge (2040)



Turbine = 1 MW

>250.000 MW worldwide ▶ >>1.200.000 MW* in 2040

Typical capacity new turbine:	2,75 MW
Utilization %	35%
Averaged production capacity:	1 MW
Global number of turbines	>300000
Global averaged capacity	260.000 MW

Electric Vehicle: 0,001 MW

>10.000 MW Worldwide ▶ >500.000 MW in 2040



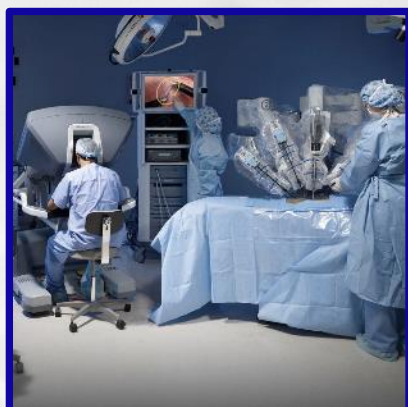
Power use, driving	0,025 MW
Charging	0,25 MW
Utilization %	4% (1 hour/day)
Averaged power use	0,001 MW
Global number of EV in 2020	10.000.000
Global averaged power use	10.000 MW

Improving health

Augmented vision



Robotic surgery



Early treatment



Smart monitoring



Early detection



Preventing and curing diseases by combining advanced science and medicine with breakthrough technology and data sciences

Paul Stoffels, MD

Reducing ecosystem's carbon footprint

Technology has always been a critical contributor to solving our biggest societal challenges...



...but also introduces new problems to solve

Reducing ecosystems footprint

1. Contributing to more energy efficient micro-chips (roadmap)
2. Reducing energy consumption of chip manufacturing through reducing process complexity
3. Reducing energy consumption of our tools
4. Reducing energy consumption in manufacturing of our tools
5. Optimizing re-use in manufacturing, service and life-long use of our tools

How we reduce energy consumption & emissions on our sites

Towards Net Zero scope 1+2 emissions by 2025

- Energy efficiency & climate action
- Circular economy
- Attractive workplace for all
- Responsible supply chain
- Innovation ecosystem
- Valued partner in our communities
- Integrated governance
- Engaged stakeholders
- Transparent reporting

'21	'Actual	'23	'24	'25	metric
39	26.7	30	25	0	ktCO ₂

Examples of actions

KPI

Net scope 1+2 CO2 emissions

Definition
Emissions from Manufacturing & Buildings

Q3 | 2022 UPDATE



Energy measurement & reporting

2021: 57 locations: covering >95% of CO2 emissions

Renewable energy

- Global share renewable electricity: 92%
- NL & US: 100% renewable electricity

Energy grid

Total annual savings CRE masterplan:
100 TJ (~100,000 solar panels)

Solar Run cooperative

First project: €70k invested by 150 colleagues, panels delivered by year-end

Enabling colleagues to put solar panels on ASML roofs

Re-use: The biggest learning opportunity for all of us

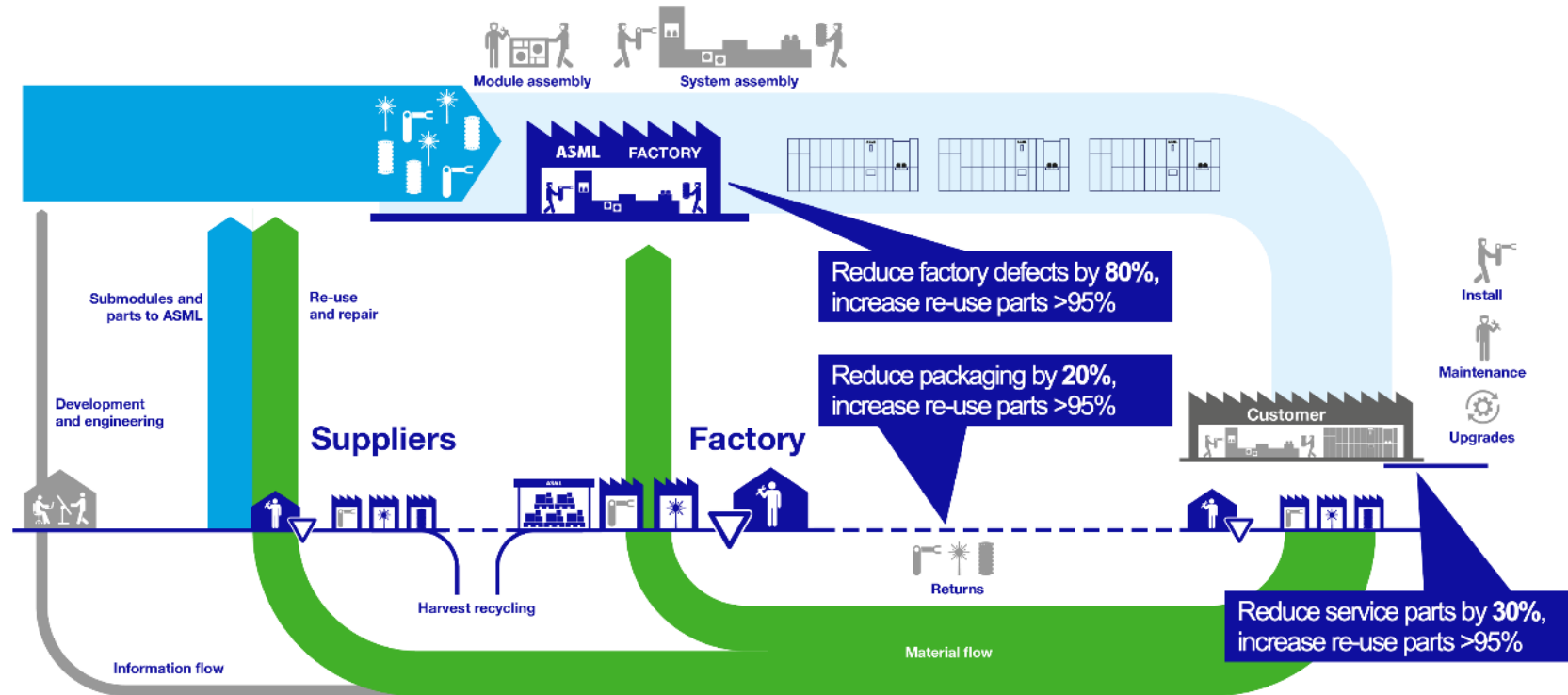
We drive to zero waste ASML

- Energy efficiency & climate action
- Circular economy
- Attractive workplace for all
- Responsible supply chain
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'21	'Actual	'23	'24	'25	metric	KPI
86%	86%	88%	90%	95%	Re-use % parts	% Re-use rate Definition % Re-use rate of parts returned from field and factory

Q3 | 2022 UPDATE

Examples of actions



Regional ecosystems

Taking responsibility for our growth in the Brainport region

A view towards 2030

Energy efficiency & climate action

Circular economy

Attractive workplace for all

Responsible supply chain

Innovation ecosystem

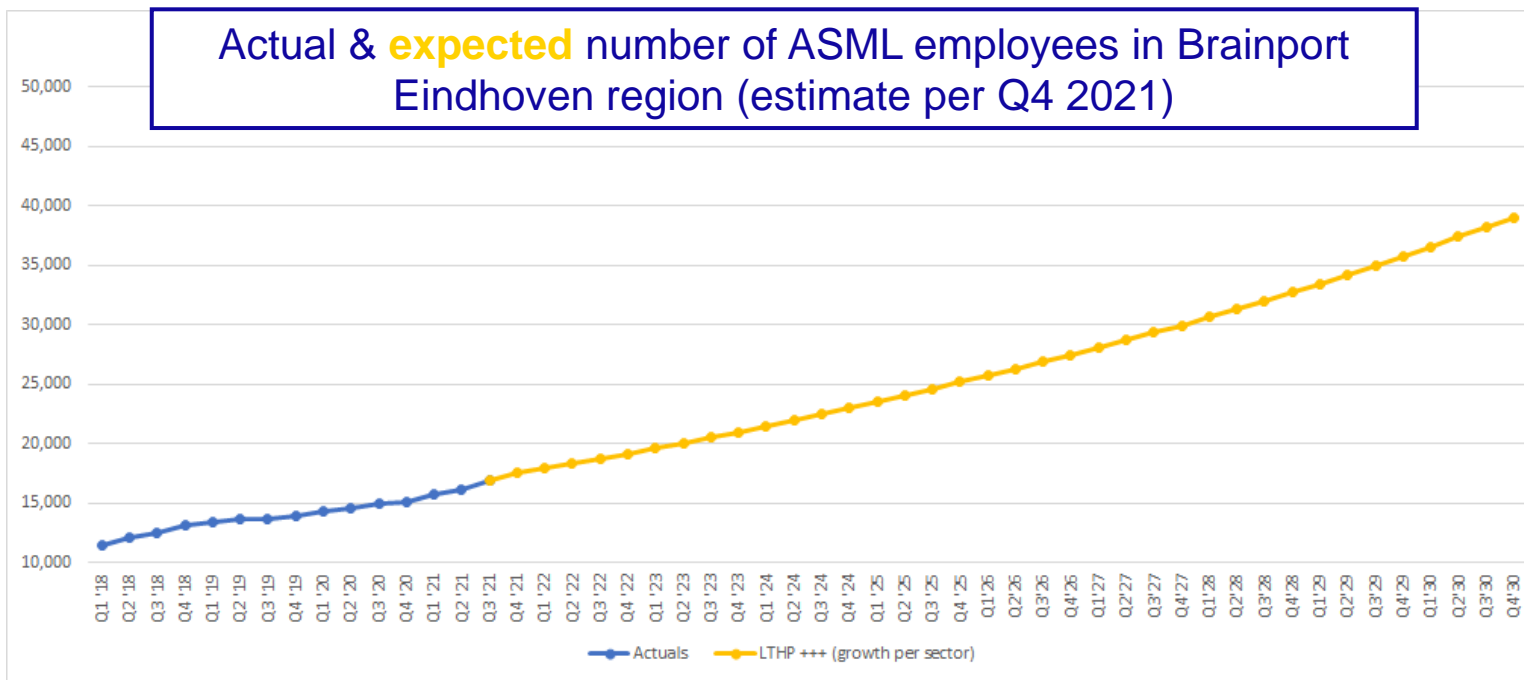
Valued partner in our communities

Integrated governance

Engaged stakeholders

Transparent reporting

Actual & **expected** number of ASML employees in Brainport Eindhoven region (estimate per Q4 2021)



>35,000 employees at ASML in Veldhoven/ Eindhoven within 8 years.

This is an increase of >18,000 compared to end-2021

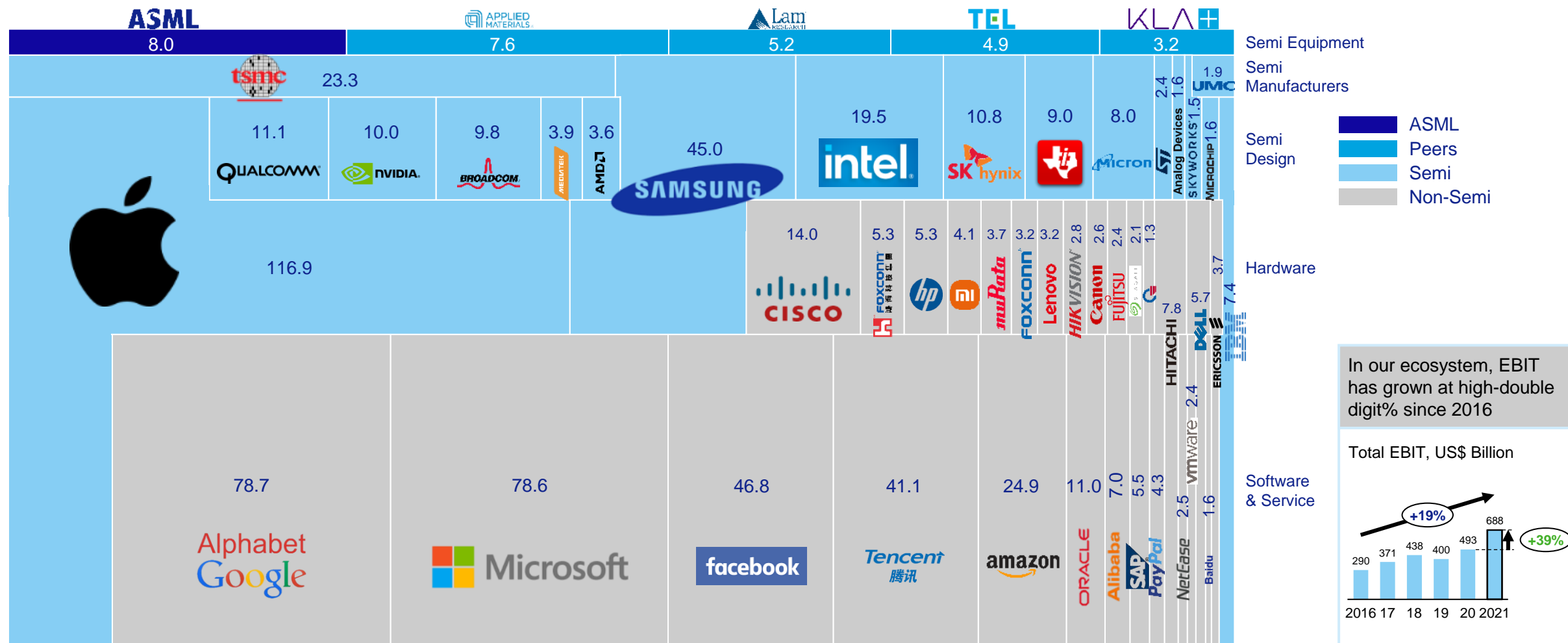
Assuming 1:2,5 multiplier for the supply chain in the region, expect >60,000 additional employees in the region by 2030

Posing a significant coordination challenge around housing, infrastructure, schools, public facilities

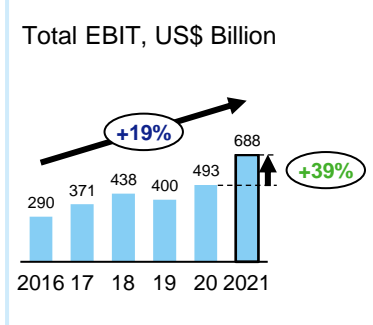
Our role and stance on geopolitics

The tech world is becoming a formidable economic power

50 top technology companies in our ecosystem generated US\$688 billion of EBIT in 2021

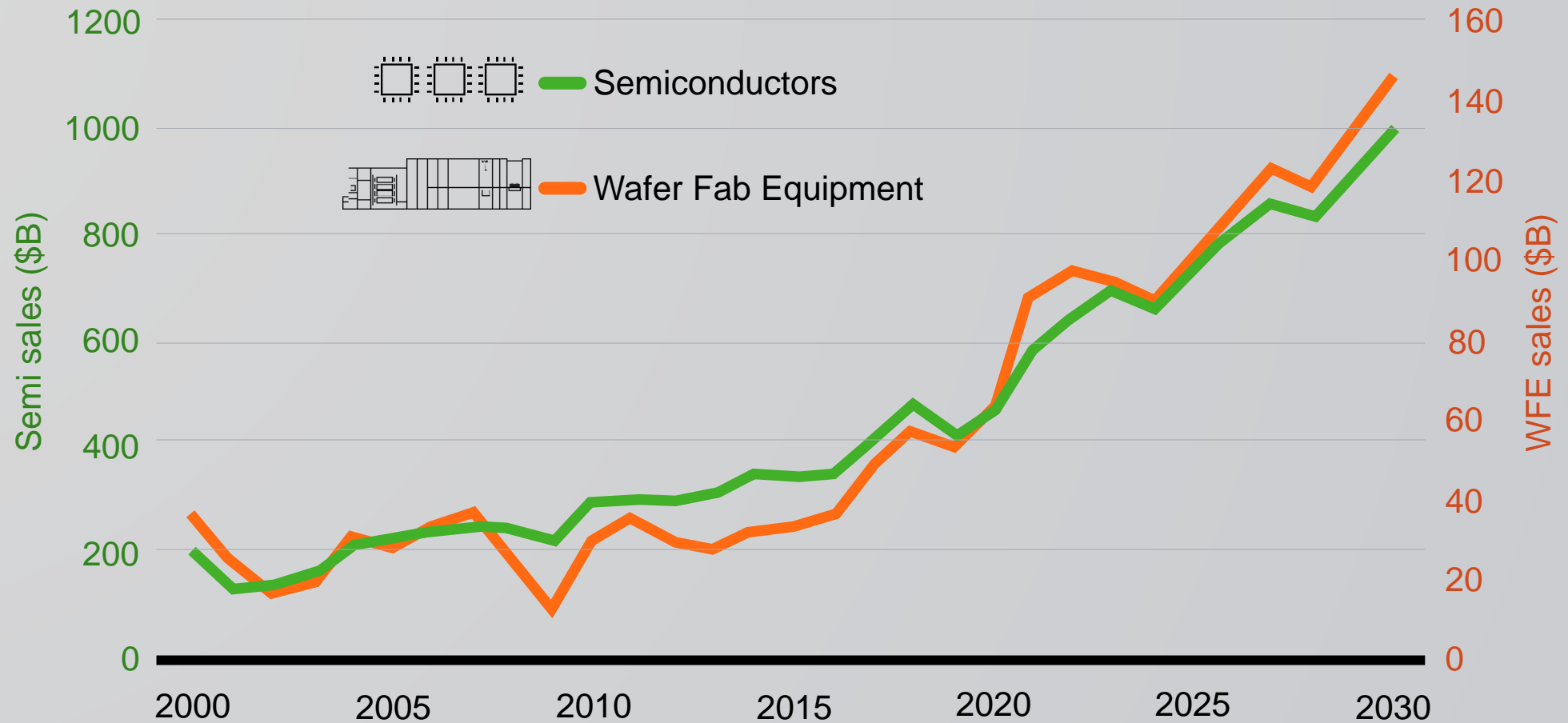


In our ecosystem, EBIT has grown at high-double digit% since 2016



Data source: Bloomberg, companies' annual reports, and ASML analysis. Note: EBIT = Earnings before Interest & Taxes; 50 top companies are top IT companies from the GICS 45 classification, according to EBIT rankings, plus Amazon, which is categorized as a retailing company by the GICS (= Global Industry Classification Standard). This chart uses the total EBIT of a company.

Powered by a growing semiconductor market



Geopolitical tensions in the global semiconductor industry

- The semiconductor industry is a complex global ecosystem, with limited number of players
- Economic interests are very high
- Not just confined to tech sector, a critical enabler for many other
- The military argument is often used, but nuanced



Policy trends:

- Many governments support increased self-sufficiency in chip manufacturing (e.g., Chips-Acts)
- Increased restrictive policies in international trade (e.g., export control regulations)



ASML operating in an increasingly complex geopolitical environment

US-China Trade Tensions Threaten Europe's Biggest Tech Company

ASML quietly built a chip machine manufacturing empire but a sales ban on its most advanced tech in China may hinder its growth plans.

US Chip Pressure on ASML Is a Tough Sell

Washington needs to do more to dissuade foreign partners to cut off its biggest rival.

Chipmakers caught in crossfire of rising US-China geopolitical tensions

De LANGE ADEM van ASML

Chipmachinefabrikant ASML leek vorig jaar nog de speelbal van Donald Trump. Maar in 2021 verwierf het Nederlandse techbedrijf een invloedrijke rol in de chipstrategie van de VS en Europa. *NRC* volgde ASML een jaar lang van binnenuit en zag dat niemand meer om Veldhoven heen kan.

Chips geopolitics and EU's new semiconductors sovereignty agenda

The Straits Times says

US' hardening tech war with China

Why The World Relies On ASML For Machines That Print Chips

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PLEIN CADRE

ASML, le « miracle néerlandais des semi-conducteurs »

Le groupe, créé en 1984, est devenu incontournable, et le seul véritable atout de l'Europe dans la course mondiale aux puces informatiques

ASML stance on geopolitics

1. The rule of law will determine any limitations in who we sell to
 - a. We will diligently follow the rule of law
 - b. Chip machines can be used to produce chips for good and for evil purposes
 - c. You typically cannot tell if a chip is used for good or evil purposes
2. We will advise policymakers, whoever is open to our advice, regarding
 - a. Effectivity
 - b. Unintended consequences
 - c. Enforceability of relevant regulation that is considered
3. We work on scenario planning around relevant potential geopolitical events
4. We are cognizant of the geopolitical and economic value of our knowledge and ecosystem and will protect it as best as we can

ASML

