



From Data to Decisions:
Unlocking Growth with SEMI Market Intelligence

Fab Forecast Reports Unveiled: Overview and Demo

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MARKET
INTELLIGENCE
TEAM

AGENDA

- 1 Introduction & Overview
- 2 World Fab Forecast Example (1Q14 publication)
- 3 300mm Fab Outlook Example (1Q14 publication)
- 4 Methodology
- 5 Key Trends – 3Q 2025 Publication
- 6 Our Strength – What sets our forecast apart

Overview of Fab Forecast Reports

<https://www.semi.org/en/products-services/market-data/fab-forecast>

<https://www.semi.org/eu/products-services/market-data/fab-forecast>

SEMI Market Intelligence Reports

Semiconductor Fab Forecast for Capacity Technology & Investments



- World **Fab Forecast**
- World Fab Watch
- FabView
- 300mm Fab Outlook
- 200mm Fab Outlook
- MEMS & Sensors Fab Outlook
- Power & Compound Fab Outlook

Semiconductor Equipment & Component



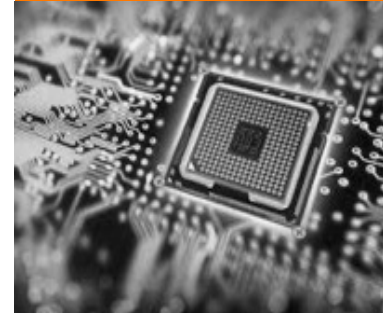
- **Equipment** Market Data Subscription
 - North American Billings Report
 - Semiconductor Equipment Market Statistics (WWSEMS)
 - Total Semiconductor Equipment Forecast
- Semiconductor Manufacturing Monitor (with TechInsights)
- Mass Flow Controller Report

Semiconductor Materials



- **Material** Market Data Subscription
- Wafer Fab Materials Quarterly
- Silicon Wafer Market Monitor
- Photomask Characterization Report
- **Linx Consulting** reports

Packaging Materials / Assembly & Test



- Global Semiconductor **Packaging** Materials Outlook (with Techsearch & Techcet)
- Worldwide **Assembly & Test** Facilities Database (with Techsearch)

Specialty Reports



- **Electronic Design** Market Data (EDMD)

www.semi.org/en/products-services/market-data

Overview Fab Forecast Reports



Publication Schedule and Key Characteristics. All Reports are in **Excel** format except Fab View (Online)

Report Name	Coverage	Update	Forecast Changes	Last update
Fab View Online Access (not Excel) Downloadable	3 years of data (end of each year). Filter option. 1500 to 1600 Lines	Updates daily Available 24/7 real time	Begin of each year (1Q) forecast moves up by 1 year	Every day
World Fab Forecast (WFF)	3 years of data by quarters. High level Fab info beyond 2028. 1500 to 1600 Lines	Every quarter: - Early March - Early June - Early September - Early December	Begin of each year (1Q) forecast moves up by 1 year. Then 2 years forecast plus 1 year past.	3Q25 (Sept 5, 2025)
World Fab Watch (WFW)	No quarterly data. Snapshot of past quarter. High level Fab info beyond 2028. 1500 to 1600 Lines	Every quarter: - Early March - Early June - Early September - Early December	No quarterly data. Snapshot of past quarter	3Q25 (Sept 5, 2025)
300mm Fab Outlook	6 years of data by quarters. 2 additional years by year (high level). High level Fab info beyond 2028. 300 to 400 Lines	Every quarter: - Early March - Early June - Early September - Early December	Begin of each year (1Q) forecast moves up by 1 year. Then 4 years forecast plus 2 years extended plus 2 year past.	3Q25 (Sept 5, 2025)
200mm Fab Outlook	6 years of data by quarters. 2 additional years by year (high level). High level Fab info beyond 2028 300 to 400 Lines	Every quarter: - Early March - Early June - Early September - Early December	Begin of each year (1Q) forecast moves up by 1 year. Then 4 years forecast plus 2 years extended plus 2 year past.	3Q25 (Sept 5, 2025)
Power & Compound	12 years of data by quarters. High level Fab info beyond 2028. 900 to 1100 Lines	Every half year - April - October	April of each year: 8 years past + 4 years forecast	Last: April 2025 Next: October 2025
MEMS & Sensors	12 years of data by quarters. High level Fab info beyond 2028. 400 to 500 Lines	Every half year - April - October	April of each year: 8 years past + 4 years forecast	Last: April 2025 Next: October 2025

Overview Fab Forecast Reports

Key Features: Fab Forecast Reports Cover Front End Facilities (“**Fabs**”): From R&D to Volume

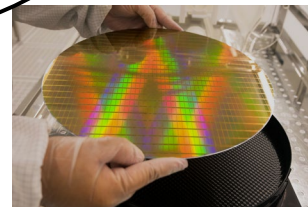
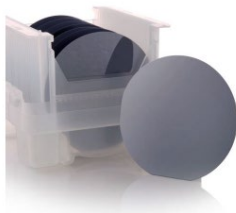
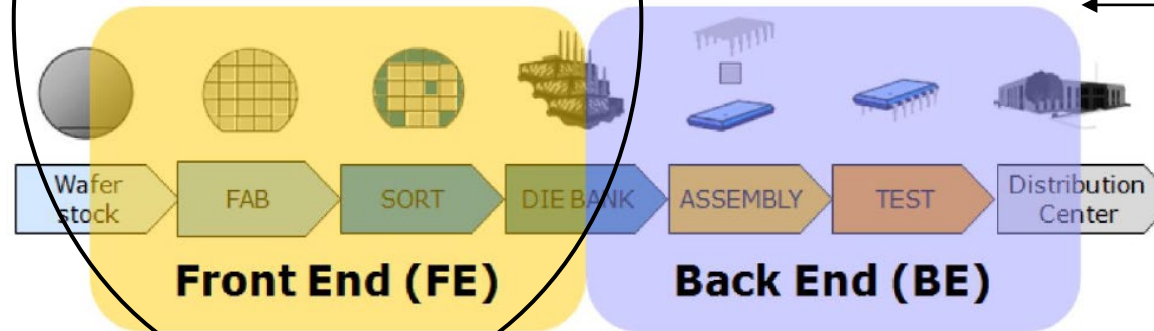
Fab Reports
Front-End Fabrication
Facility or “Front-End Fab”
Manufacturing of devices/chips
on any substrate wafer
(including EPI facilities)



Artist's rendition of Global Foundries' Fab 2 at completion



Back End (BE) or
Assembly & Test



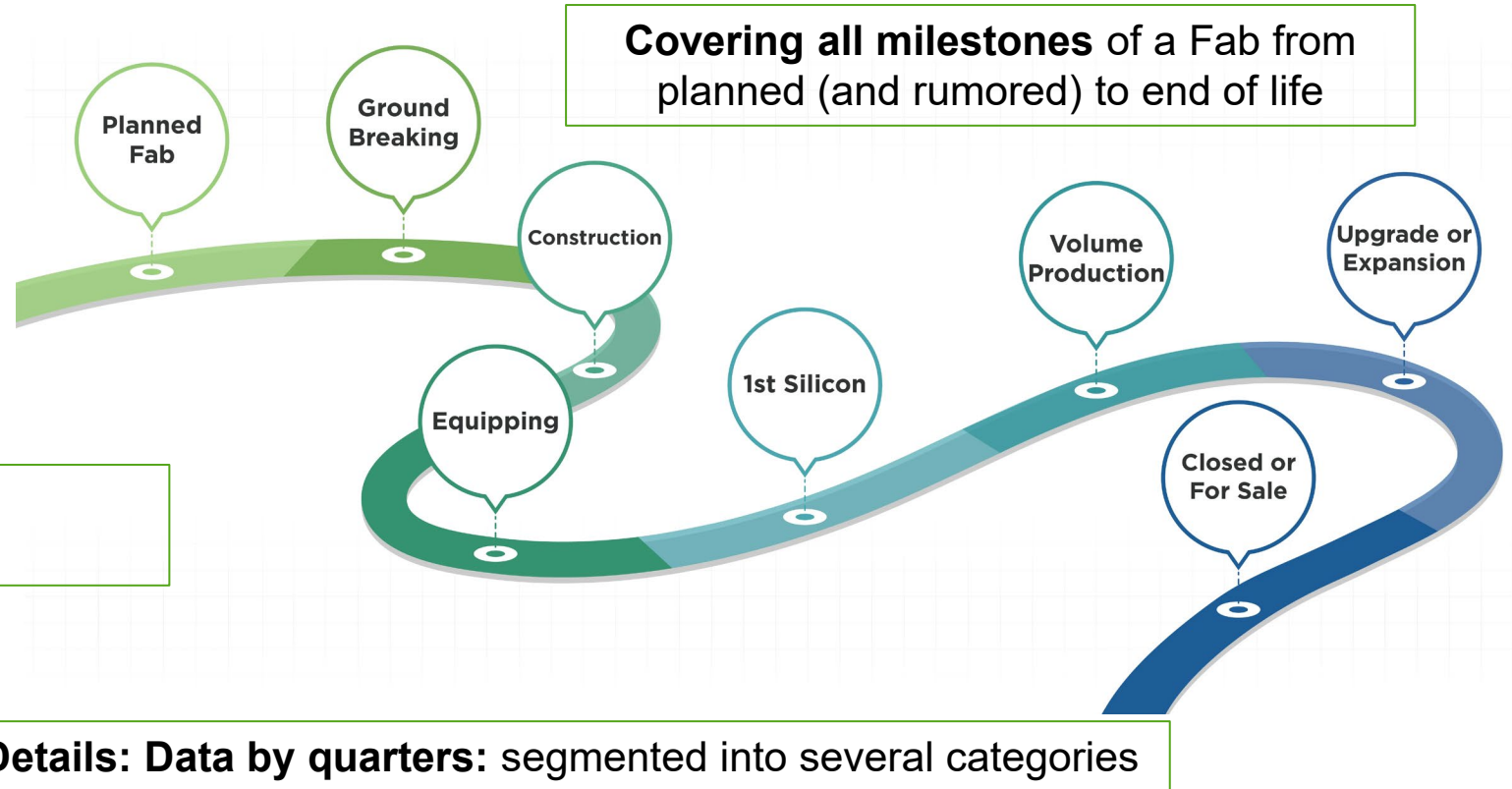
Overview Fab Forecast Reports

Key Features

Front-End Facilities: from small R&D to high volume facilities

Standardized Excel framework
(except Fab View Online):
all reports are structured using a well developed and standardized Excel framework which evolved over many years.

Bottom-up data: tracking each project by Fab/line



Overview Fab Forecast Reports

Key Features: Standardized Excel Framework

Company Detail Page can have 421 (3-year report:) to 1474 columns (12-year report); pending how many years a report has (each year has 4 quarters)

These columns are grouped consistently into 19 different categories (see “+” sign above column header).

The reports are divided into **two major areas**:

Left section Column A to Column BB: Status as of time of publication.

And a **Right Section** (Column BG to Column PE): Quarterly data with forecast

World Fab Forecast Company Detail Jan 2013 to Dec 2015, 1Q14 Edition																		
Rec No	Company owner/partner	Demographic info	Fab info planned or current	Cleanroom info	Initial Start Year and Close Year	Core Projects last Core project within reported time (Core projects only include: greenfield, shell, new line)	Fab and History Comments	Change documentation	Capacity related	Construction \$ related	Equipment \$ related	Spending \$ by Year	Product Segment	Fab Owners	Commercial Status	CountFab	Merged	Company Origin
Rec #	Company Name	City	Fab Name	CR SQ FT	Initial Volume Start Year Initial	Project Type Cor	Fab Comment	Date Last Update	Capacity C 1Q13	Construction \$ C\$ 1Q13	Equipment \$ E\$ 1Q13	Spending \$ t	Product Segment	Fab Owners 2013	Commercial Status	untFab Values CF 1Q1	Merged	Origin-2013
2160	3S Photonics	Nozay	Nozay		1994	greenfield	Wafer size capability is 3	5/9/14	5,000				Sensor & Compo	3S Photonics (3S Ph Sold		CountFab		France
1572	ABB Semiconductor	Lenzburg	Lenzburg 1	40364	1975	greenfield		3/27/03	12,000				Power & Compo	ABB Semiconductor (ABB Semicond		CountFab		Switzerland
1573	ABB Semiconductor	Lenzburg	Lenzburg 2	86111	1998	greenfield		2/5/03	23,000				Power & Compo	ABB Semiconductor (ABB Semicond		CountFab		Switzerland
3517	ABB Semiconductor	Lenzburg	Lenzburg 3	27000	2010	greenfield	October 2012: added exi	10/5/12	45,000		0.35		Power	ABB Semiconductor (ABB Semicond		CountFab		Switzerland
898	ABLC Inc.	Matsudo	#A		1979	chngwaf	In January 2018, SII semi	10/27/09	20000				Sensor & Power	SII Semiconductor Co. Ltd. (Seiko Ins		CountFab		Japan
897	ABLC Inc.	Matsudo	#B		1987	greenfield	In January 2018, SII semi	10/27/09	5000				Sensor & Power	SII Semiconductor Co. Ltd. (Seiko Ins		CountFab		Japan
2062	ACSMC	Zhuhai	Fab 1		2001	greenfield	ACSMC is a special joint	3/9/09	15,000				Power	ACSMC (ACSMC)		CountFab		China
25	Advanced Microelectronic Pri	Hsinchu	Fab 1		1988	greenfield		1/10/11	36,000		1.50		Power	Advanced Microelectronic Products		CountFab		Taiwan
2485	Advanced MicroSensors, Inc	Shrewsbury	MEMS Fab	20000	1998	greenfield	February 2014: complete	2/24/14	400				MEMS	Advanced MicroSensors, Inc. (Adva		CountFab		US
5110	Advanced Ultraviolet Optoele	Changzhi	Luan UV LED fab		2019	shell	June 2019: add new UV LED facility in Shanxi, China. The company held a start of production ceremony on May 30 2019						Compound					
5077	Agiltron	Woburn	Woburn (shared with S	5000	2010	greenfield	Jan 2019: added existing facility which is share		100				MEMS & Sensor	Agiltron (Photowares)		CountFab		US
1782	AIST	Tsukuba	Super Clean Room	48438	2002	greenfield	Wafers are test wafers!	8/29/11	5000				Power & Compo	AIST (AIST)		CountFab		Japan
3797	AIST	Tsukuba	TIA-MEMS Line (Building 3D)		2011	shell	July 2015: add existing 2	9/18/15	1,500				MEMS & Sensor	AIST (AIST)		CountFab		Japan
3867	AIST	Tsukuba	TIA-Power Electronics Line (inside AIST-C		2015	shell	June 2016: add existing Power Electronics R&D facility. It is under TIA-Power Electronics office. Uses SiC wafers.						Power & Compound					
3401	Akoustis	Canandaigua	STC-MEMS (was SUNY	26000	2004	shell	Feb 2021: Akoustis inve	3/9/15	1,000				MEMS	SUNY Polytechnic Ins Sold		CountFab		US
2196	Alphion Corporation	Princeton	Princeton Junction		2001	greenfield	Alphion is a privately hek	8/31/05	1,000				Compound	Alphion Corporation (Alphion)		CountFab		US
3486	Alps Electric Co., Ltd.	Nagaoka	Nagaoka Plant		1998	chngwaf+expansion	Existing fab added: MEMS	4/12/12	30,000		0.06		MEMS & Sensor	Alps Electric Co., Ltd. (Alps)		CountFab		Japan
486	Amphenol Advanced Sensor	Fremont	Amphenol Advanced Sensors		2000	greenfield	GE sold Fremont Fab to t	8/11/11	2,400				MEMS	GE - Measurement & Control Solution		CountFab		US
3810	ams AG	Marcy		60000		greenfield	Dec 15, 2016: cancelled:	8/10/15					Sensor & Power					
1684	ams-OSRAM	Premstaetten	AMS 200 (was ams AG	39826	2002	new line	2014: increased capex a	8/10/15	8,000	2.00			Sensor & Power	ams AG (ams [American Microsystem		CountFab		Austria
1875	ams-OSRAM	Regensburg	Fab 2 (was OSRAM)	35521	2003	chngwaf	One fab with two differe	2/27/15	12,000				Sensor & Power	Osram AG (ams (71%), others)		CountFab		Germany

Overview Fab Forecast Reports

Key Features: Standardized Excel Framework

The Excel file groups quarterly data into 3 major main categories



Each of these groups is detailing into following sub-categories:

Wafer Size	Geometry	Geometry Range	3D Layers	Product Type 1	Product Type 2	Product Type Special
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Capacity is shown in wafers per month (wpm)

- Capacity (pending wafer size)
- Capacity (in 200mm equivalents)

Construction Spending and Equipment Spending also show:

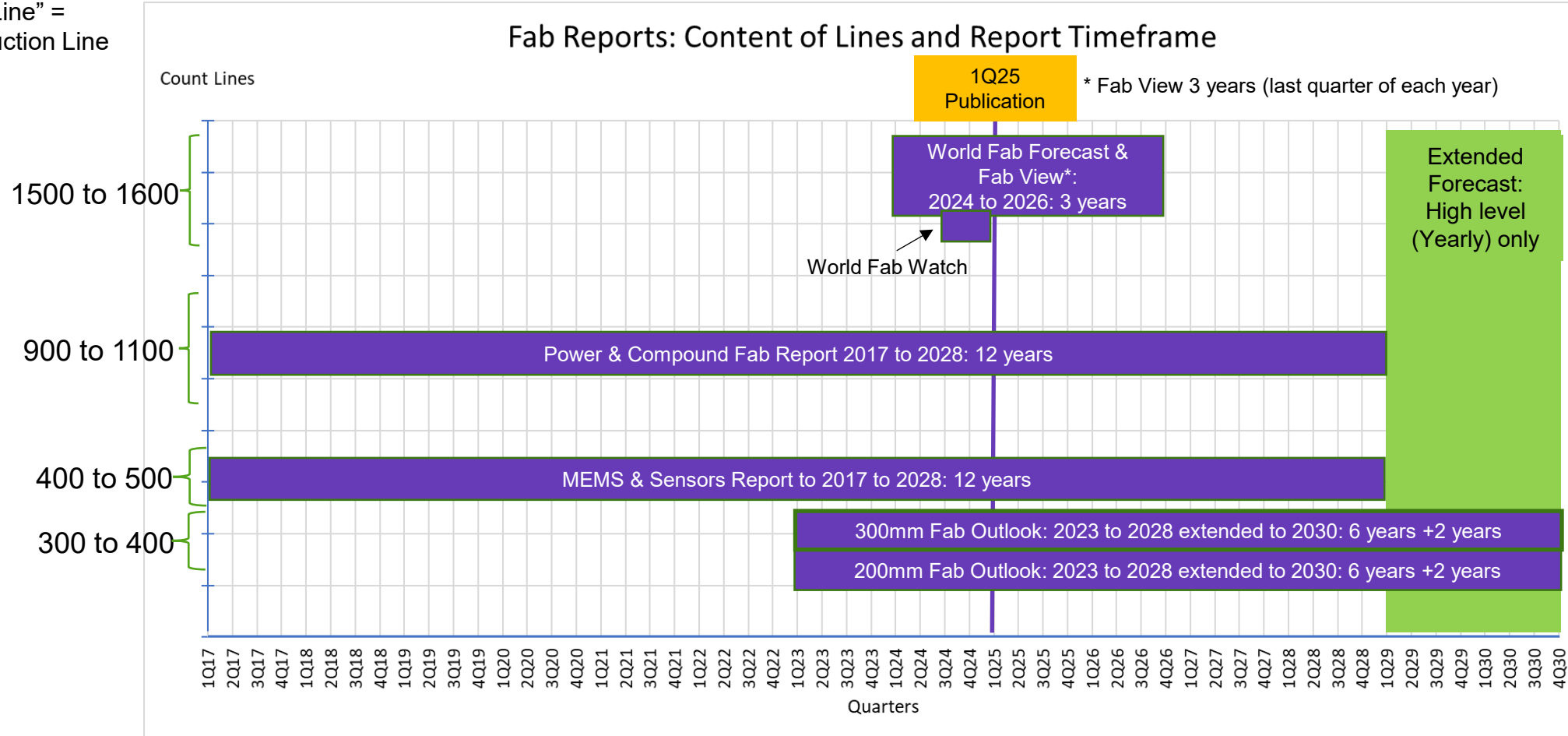
Spending by Project Type such as:
greenfield, product type change, wafer size change or upgrade.

Overview Fab Forecast Reports

Content Fab Forecast Reports and Covered Time Period: Published 1Q25 (March 2025)

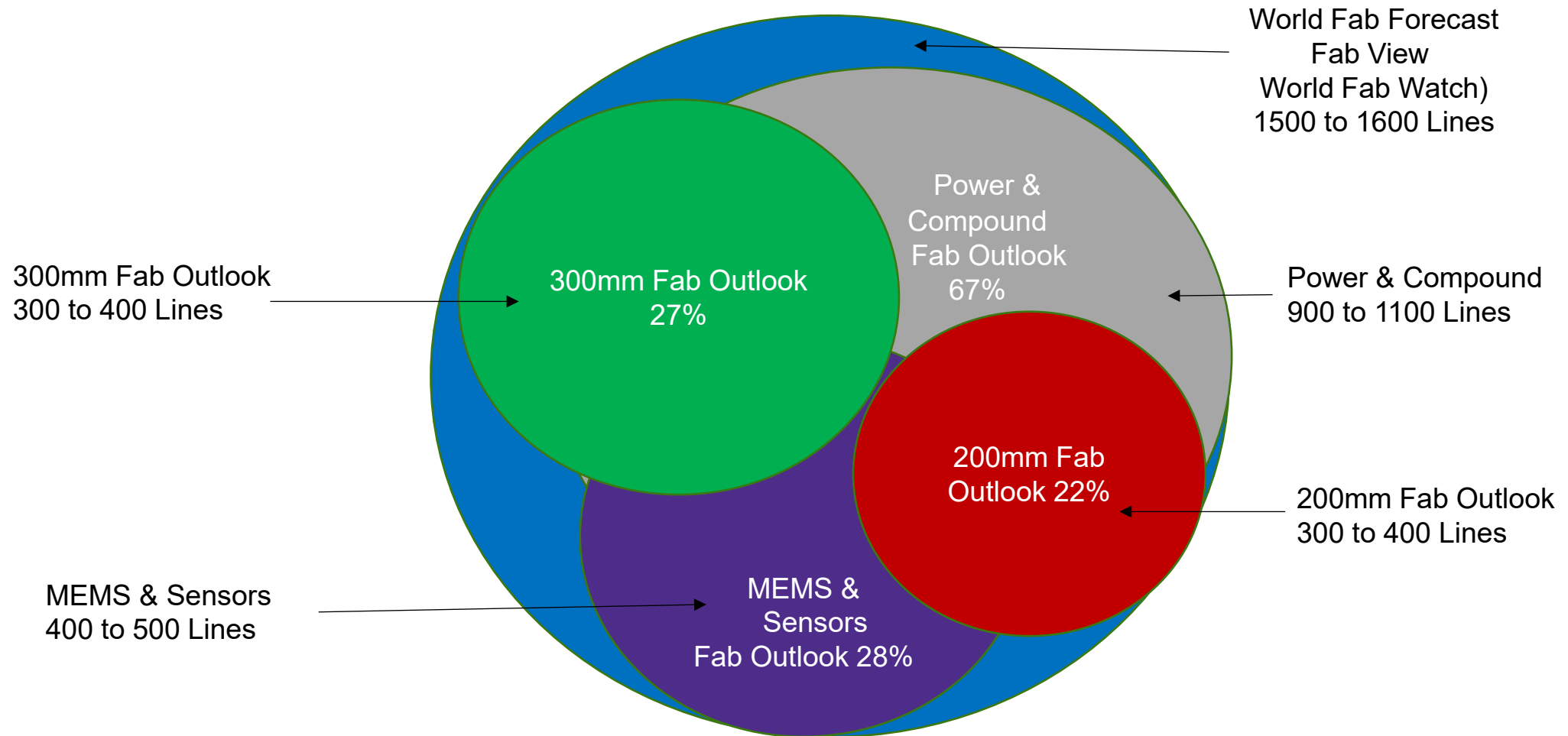
Each report maintains a fixed time period for the duration of a full calendar year.
At the beginning of each first quarter, the time frame is advanced by one year

“Line” =
Production Line



Overview Fab Forecast Reports

One database supports many reports. These reports **share** common facilities, depending on product types and wafer sizes. This chart provides a rough estimation showing the share of lines of each report and how they overlap.



Example

World Fab Forecast (WFF)

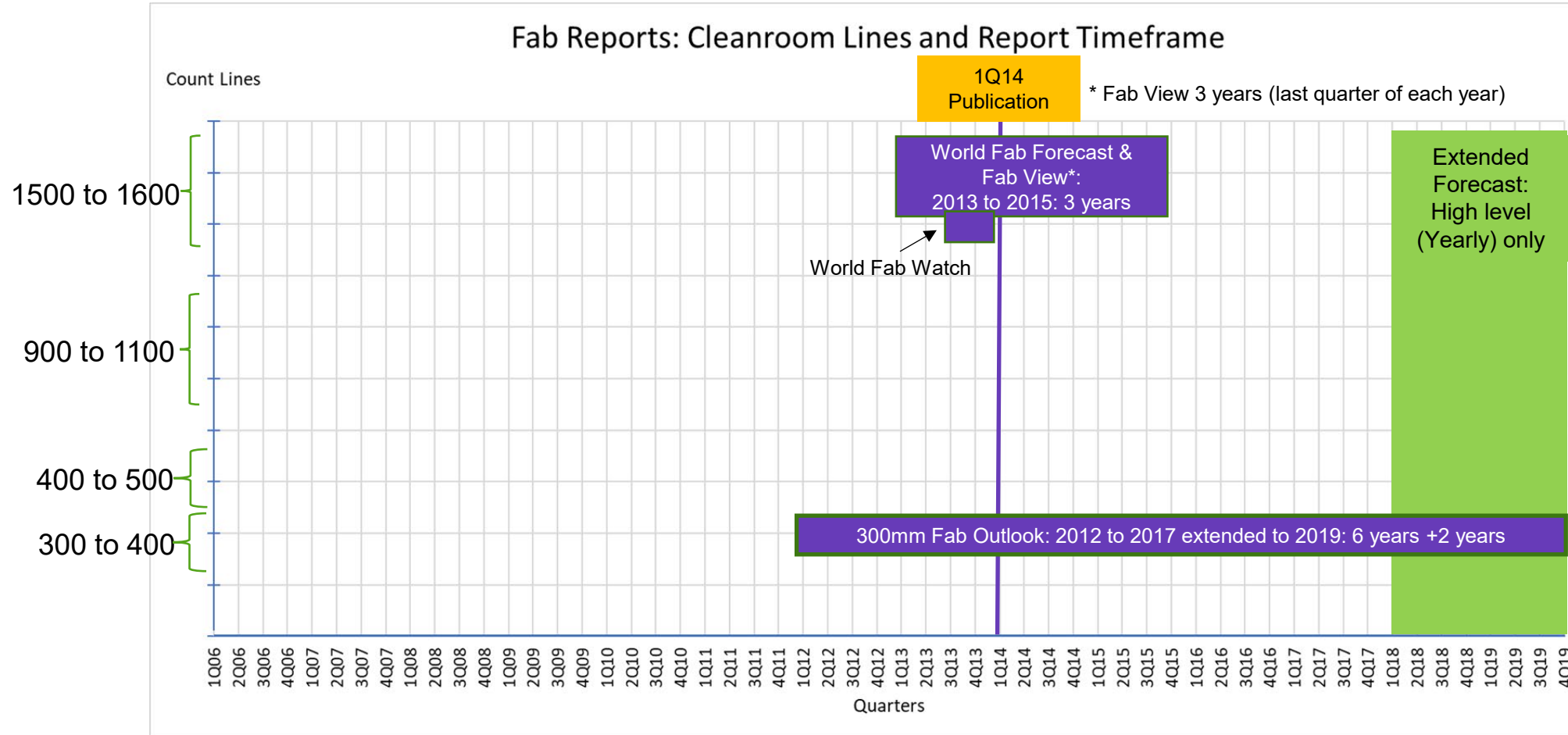
Based on report published 1Q14

See more and a sample:

<https://www.semi.org/en/products-services/market-data/world-fab-forecast>

Example: World Fab Forecast Report: 3 years

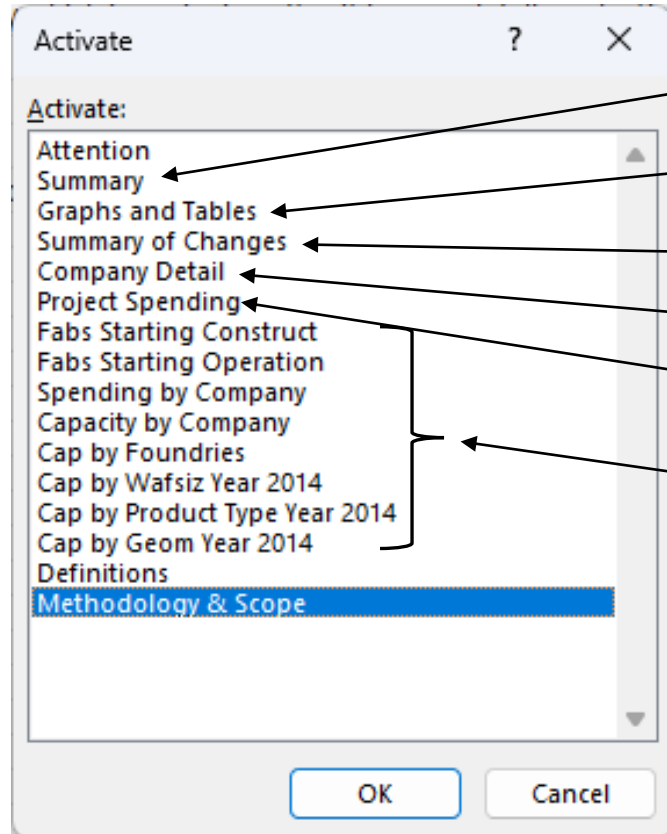
Scenario 1Q14 Publication



Example: World Fab Forecast Report: 3 years

Worksheets (Pages)

The World Fab Forecast (Excel format) has 16 worksheets (or pages)



Summary: Executive, high-level summary

Graphs & Tables: includes **15 graphs** and **72 tables**, thoughtfully developed based on direct customer requests and feedback, ensuring the content is highly relevant and actionable.

Summary of Changes: changes made since last publication

Company Detail: **the heart** all other pages are made from. This page has all data.

Project Spending: breaking down every project by Fab

Trend analysis in table format using various categories developed based on direct customer requests and feedback

Cap = Capacity
Geom = Geometry

Example: World Fab Forecast Report: 3 years

Demonstration



Demonstration of World Fab Forecast 1Q14 report
Move to Excel file

Example

300mm Fab Outlook

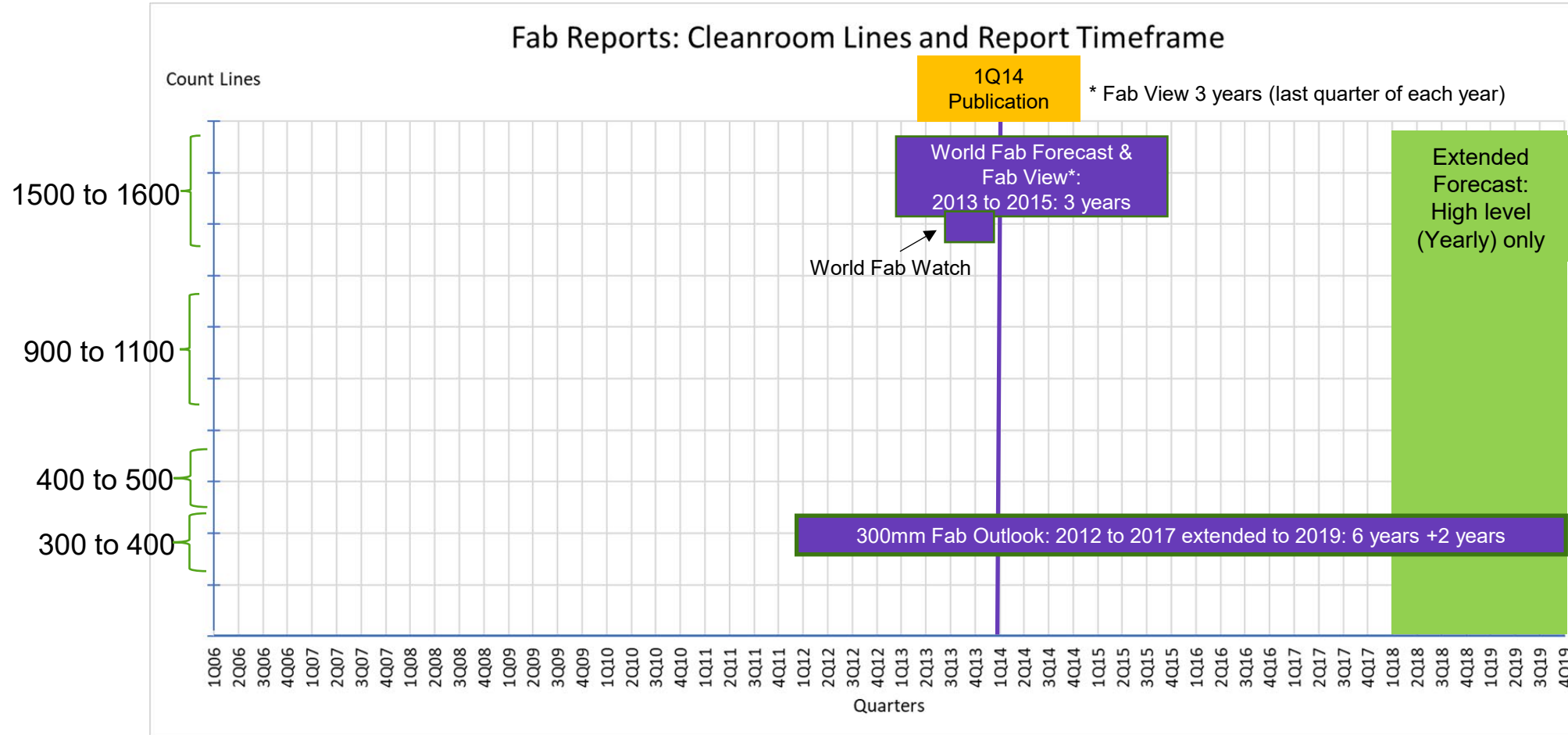
Based on report published 1Q14

See more and a sample:

<https://www.semi.org/en/products-services/market-data/300mm-fab-outlook>

Example: 300mm Fab Outlook: 6+2 Years

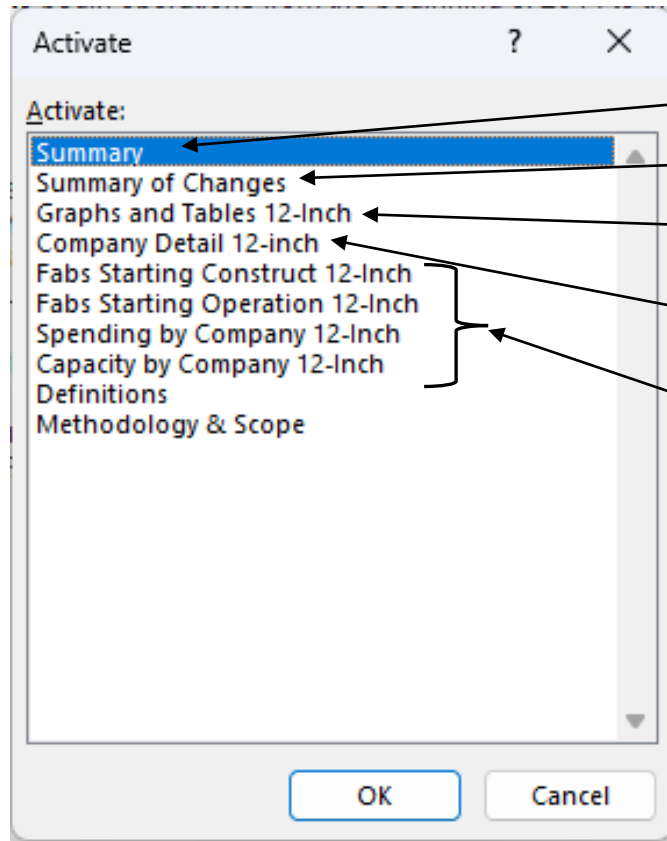
Scenario 1Q14 Publication



Example: 300mm Fab Outlook 6+2 Years

Worksheets (Pages)

The 300m Fab Outlook (Excel format) has 10 worksheets (or pages)



Summary: Executive, high-level summary

Summary of Changes: changes made since last publication

Graphs & Tables: includes **13 graphs** and **17 tables**, thoughtfully developed based on direct customer requests and feedback, ensuring the content is highly relevant and actionable.

Company Detail: **the heart** all other pages are made from. This page has all data.

Trend analysis in table format using various categories developed based on direct customer requests and feedback

Example: 300mm Fab Outlook: 8 years: 6 detailed+2 high level

Demonstration

Demonstration of 300mm Fab Outlook 1Q14 report
Move to Excel file

Methodology

Methodology

1. Information Gathering: Research, Investigation, and Data Collection

1. Screen internet news & websites (always verify)
2. Company Reports: quarterly, yearly, SEC filings, websites, presentations
3. Company Contacts such as: Fab managers, operations managers, marketing, CEOs, VPs, IR Dept
4. Conferences, webcasts, meetings
5. Utilization of SEMI worldwide network (offices): like China, Korea, Japan, Europe, Singapore, Taiwan
6. Working with third parties in various regions
7. Feedback from our customers
8. Company visits: visiting companies, Fab sites

Methodology

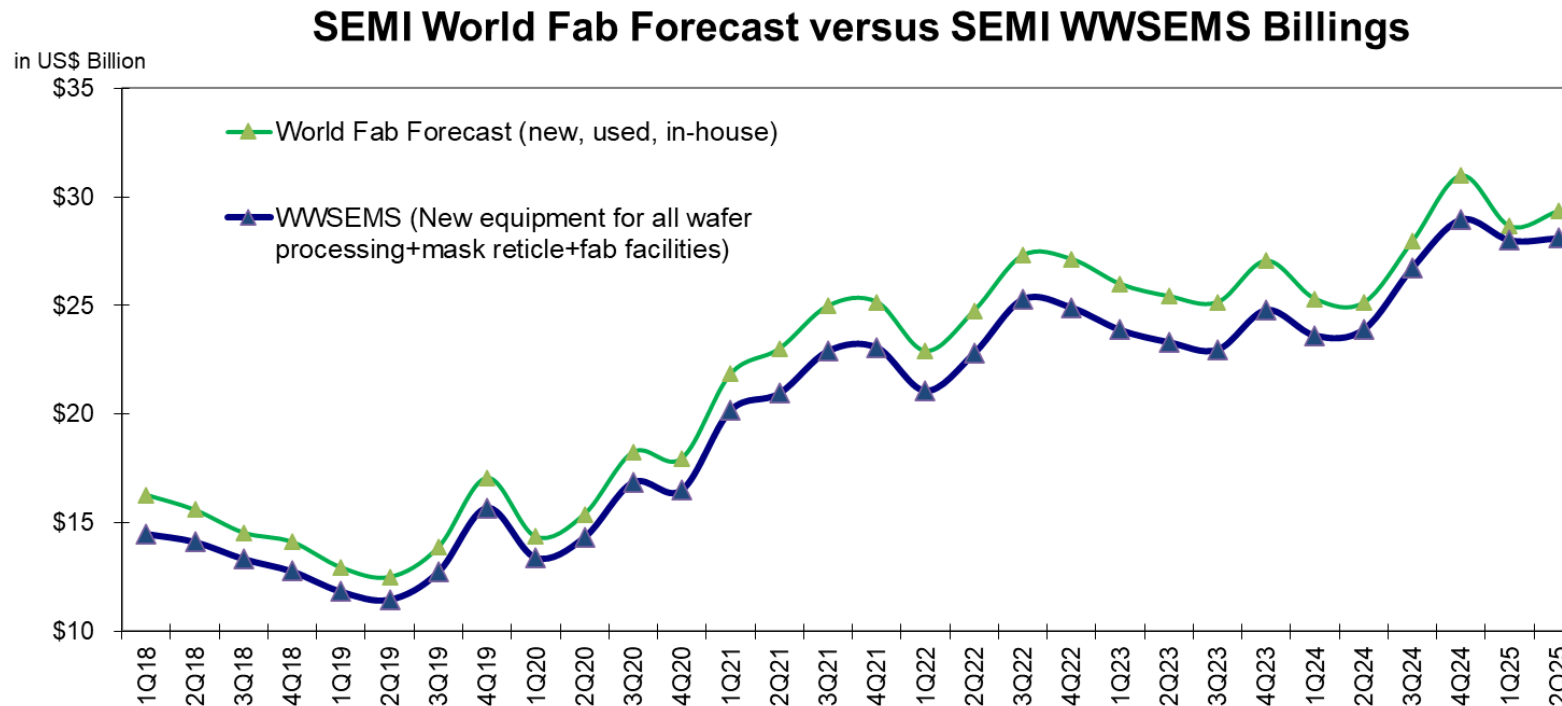
2. Analysis, Modeling and Benchmarking

-  1. The forecast reports employ a capex-led, bottom-up modeling approach
-  2. For each company, we maintain a model file with historical data spanning up to 40 years, tracking every known Fab project
-  3. In our modeling, we track several key metrics, including capital expenditure, equipment costs, cost for upgrades and capacity loss
-  4. We consider market & company situation
-  5. We take into account both macroeconomic and geopolitical factors
-  6. In our modeling, we also incorporate experience and best-educated estimates
-  7. We benchmark with other market indicators such revenue, ASP (average selling price), silicon shipments, and inventory level
-  8. We benchmark against other reports such as WWSEMS (OEM survey of billing data).
We apply backward adjustments to the data and incorporate this learning into our forecast modeling.

Methodology

2. Analysis, Modeling and Benchmarking

7. We benchmark against other reports such as WWSEMS (OEM survey of billing data), apply backward corrections, and incorporate this information into our forecast modeling.



Methodology

Changes made from publication to publication

The industry is very dynamic; companies make changes every day and the team is very active.

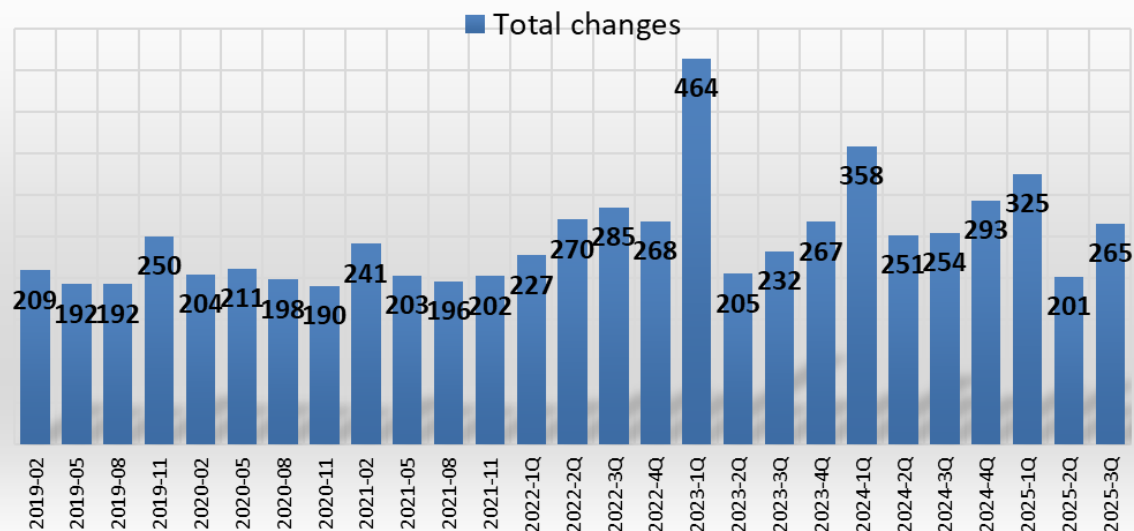
Updates are done daily.

This can be observed in Fab View Online Real-time Access (24/7)

Showing changes made of Excel reports are published on quarterly basis.

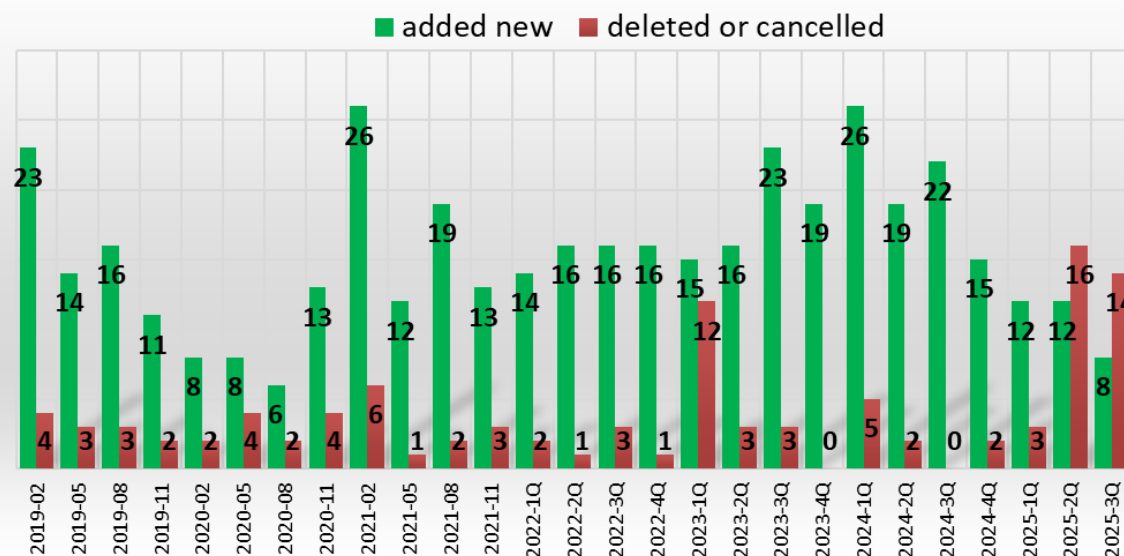
On average, each publication includes around 240 updates

Quarterly Activity Report SEMI Fab Database



On average, each publication includes 15 new lines and 4 deletions

Quarterly Activity Report SEMI Fab Database

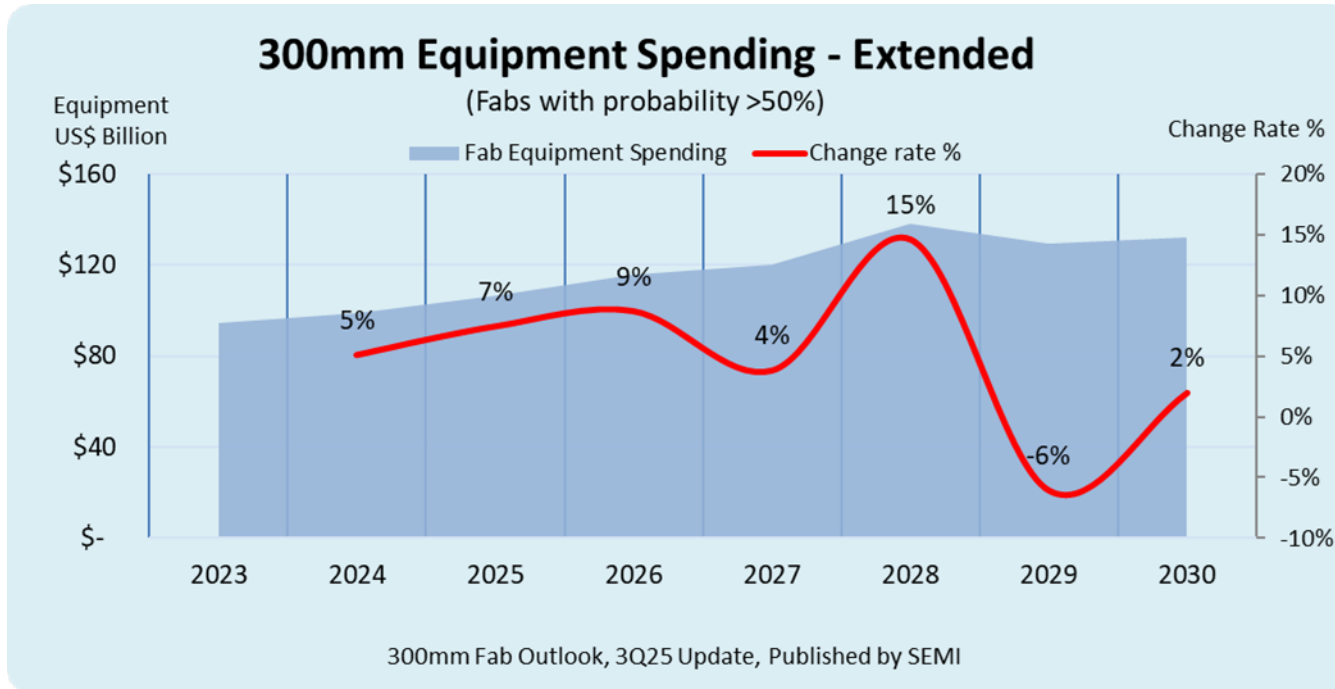


Trends from last published reports 3Q25

A glimpse into our latest update

Trends from 3Q25 Update

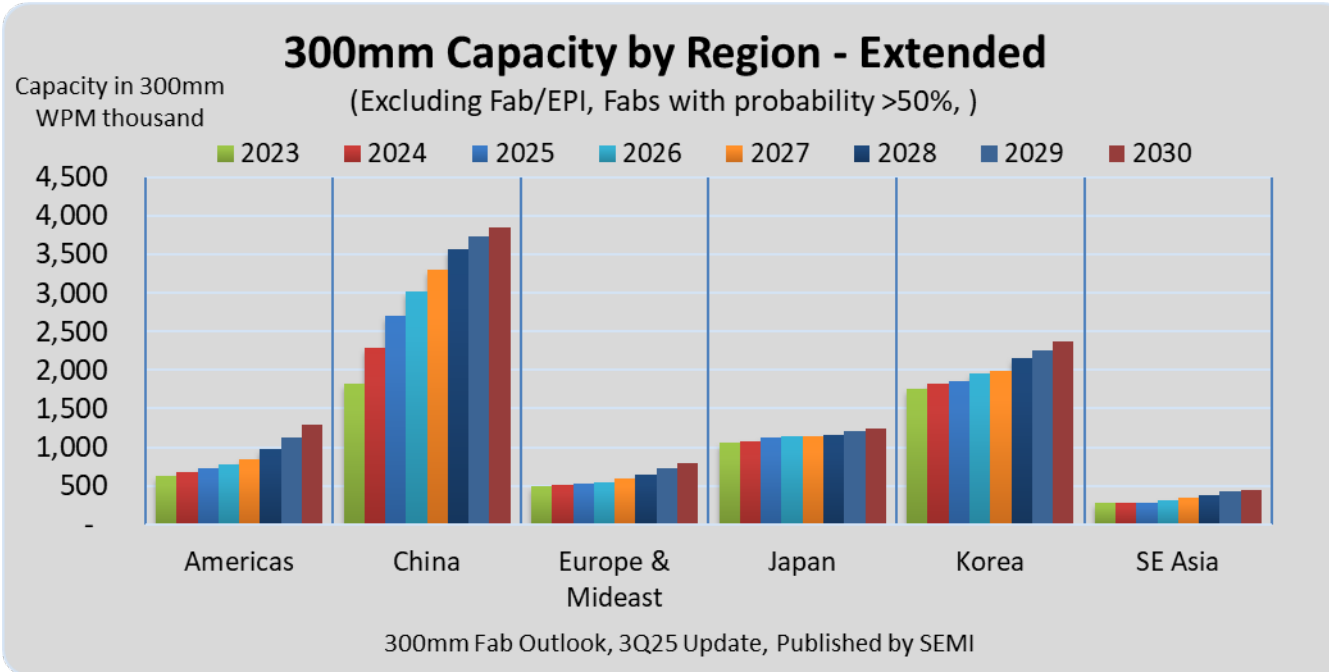
300mm Fab Outlook to 2028 – Extended to 2030



Region	Change rate % 5 years 2026 to 2030
Europe & Mideast	470%
Americas	155%
SE Asia	102%
Japan	62%
Taiwan	4%
Korea	1%
China	-34%
Numbers rounded	

Trends from 3Q25 Update

300mm Fab Outlook to 2028 – Extended to 2030



Product Type 2	300mm WPM added 5 years 2026 to 2030	Change rate % 5 years 2026 to 2030
Logic&Micro	1,200,000	45%
Analog	825,000	65%
Memory	600,000	15%
Discrete	215,000	45%
Opto	140,000	40%
MEMS	60,000	175%
SUM	~ 3,000,000	~ 35%
Numbers rounded		

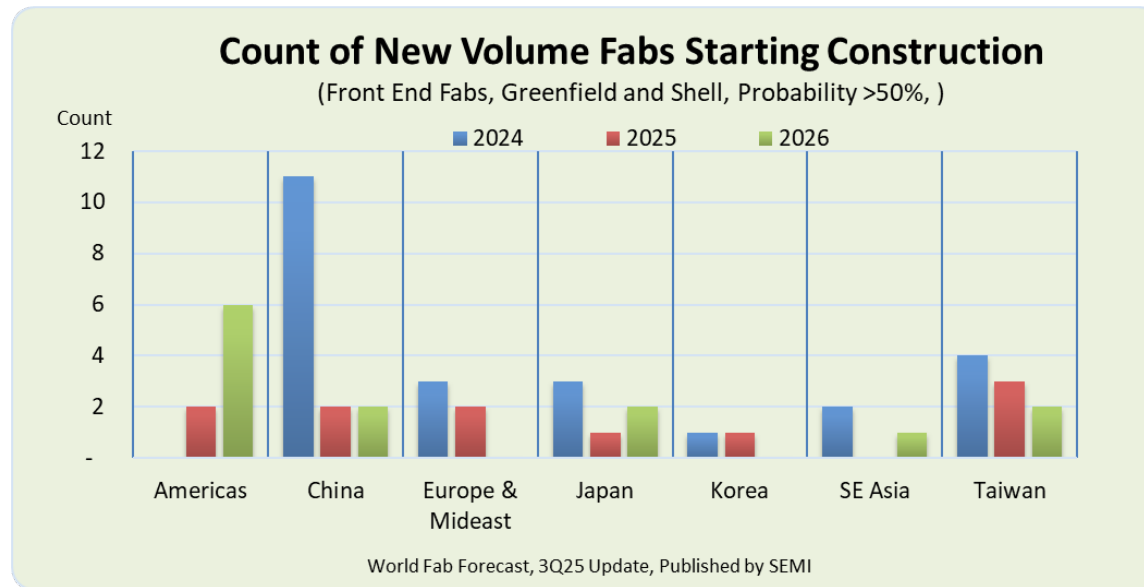
Trends from 3Q25 Update

World Fab Forecast Report (WFF)

The team does not invent Fab projects.

Reports only reflect known, planned, or rumored projects.

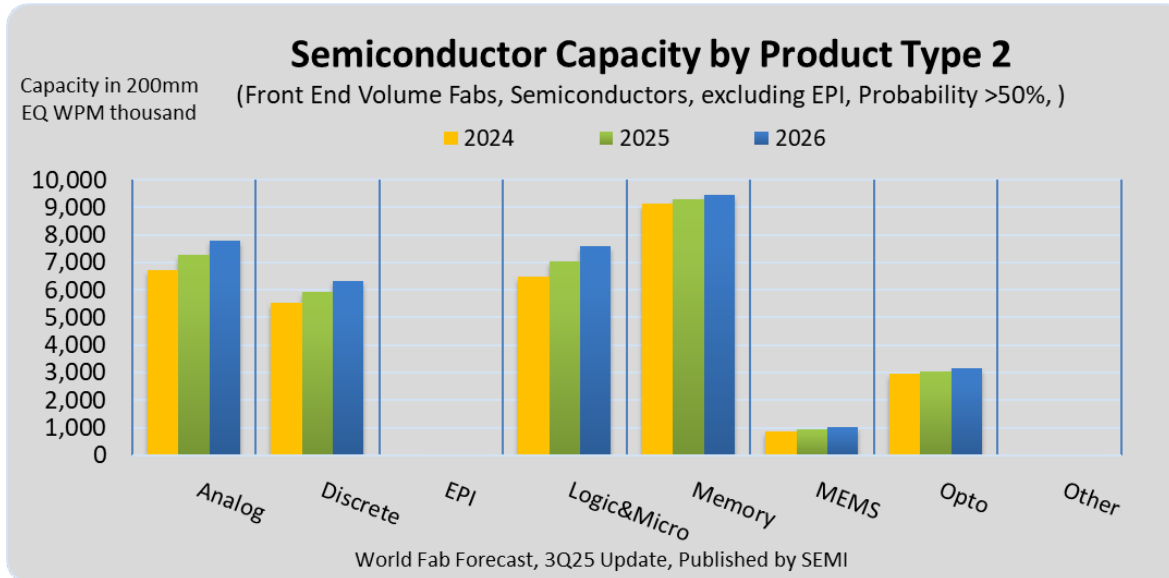
Fewer future projects are shown simply due to limited information, which will be updated as it becomes available.



- 48 Fabs to start construction in 2024 to 2026.
Data available in quarterly section.
- 16 Fabs to start construction from 2027 to 2033
In company detail page shows in high level section.

Trends from 3Q25 Update

World Fab Forecast Report (WFF)



Each Product Type 2 category includes many combinations that are also available in Product Type 1, such as:

- Analog/Mixed Signal
- Analog/Power
- Foundry/Logic
- Memory/DRAM
- Memory/3D NAND
- Logic/MPU
- Logic/MCU
- Discrete/Power
- Opto/Image Sensor

Our Strength

Our Strength

What sets our forecasts apart — accuracy, depth, global coverage, and industry relevance.

Depth in Detail: Quarterly Data

We specialize in providing comprehensive, granular data — our reports go beyond the surface.

Established and Trusted Database:

Our database, developed and maintained since 1992, is one of the most robust and respected in the industry.

Always Up to Date:

Our data is updated daily, providing the most current insights available.

Customer-Driven Reporting:

We continuously refine and expand our reports based on direct customer feedback — including new tables, categories, and analysis methods.

Dedicated Expert Team:

Our analysts come from engineering backgrounds with extensive industry experience, bringing both technical depth and market understanding.

Global Reach:

Through SEMI's worldwide offices and trusted third-party partners, we maintain a truly global data collection and validation network.

Strong Industry Connections:

Decades of collaboration with industry leaders give us privileged insights and reliable information sources.

Neutral and Independent:

As SEMI is not a competitor to any device maker, our reports remain impartial, ensuring unbiased analysis and insights.



THANK YOU

Contact

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Website:

<https://www.semi.org/en/products-services/market-data/fab-forecast>

<https://www.semi.org/eu/products-services/market-data/fab-forecast>



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