

The Fiscal Year ending March 2020 (2019 April- 2020 March)

Business Results

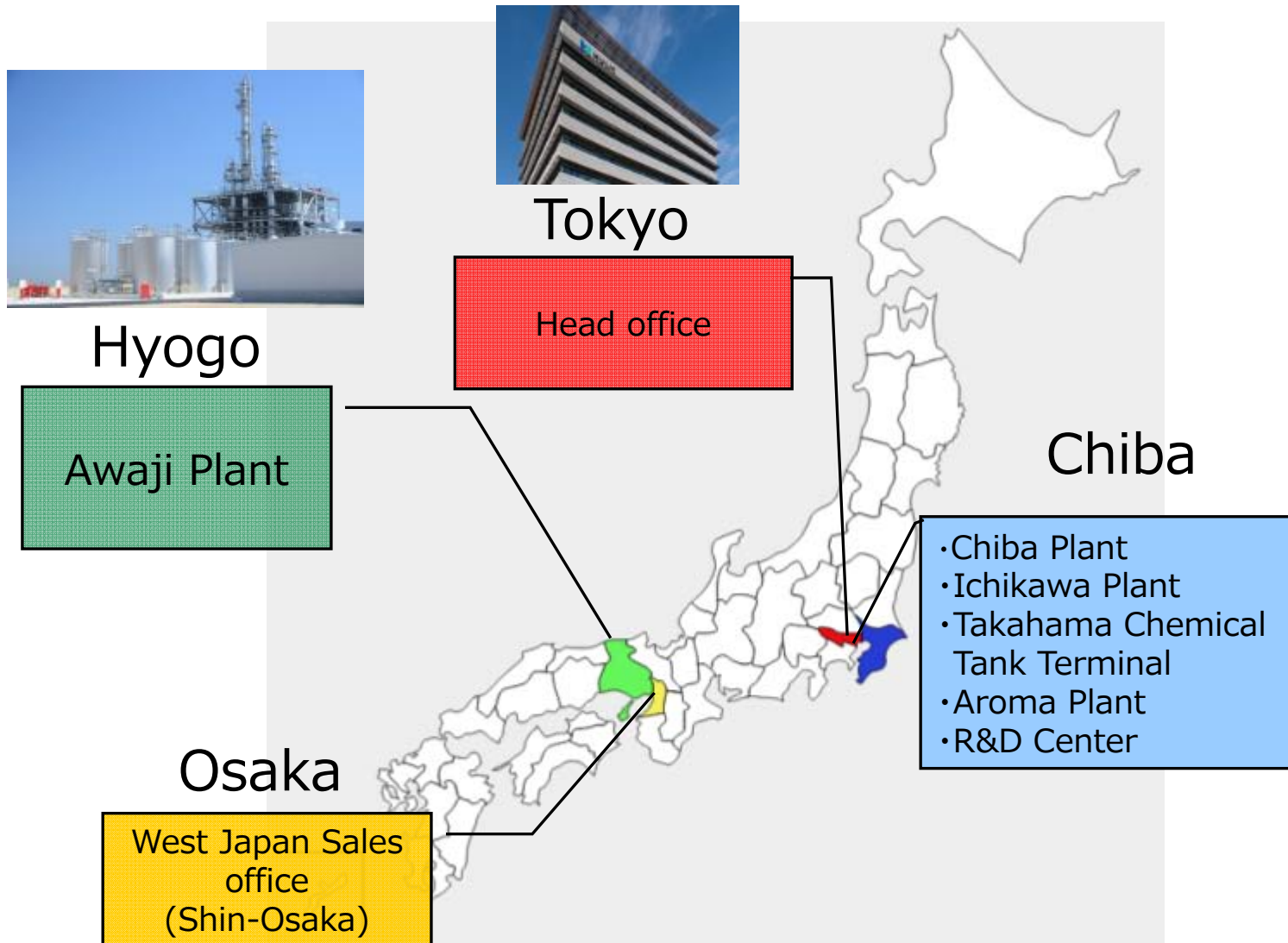
May 2020



Corporate Outline

- Establishment : September 27, 1954
- Top Management : Yujin Kimura, President
- Paid-In Capital : 1,618 Million yen (As of March 31, 2020)
- Net Sales : 24,455 Million yen (For the year ended March 31, 2020)
- Employees : 688 (As of March 31, 2020)
- Listed Market : Tokyo Stock Exchange JASDAQ Market
- Securities Code : 4970

Site Map



Origin of company name

Differences between those possessed and those not possessed = Science and technology and strategy in Reconstruction of Japan after world war II.

“Our founder wanted to start a business that contributes globally from Asia based on chemical technology”, then he named it “Toyo Gosei Kogyo”.



A scene of Ichikawa City's Baraki in 1966 (Showa 41). Rice harvesting.

Under the environment, our founder did self-study about distillation technology, designed and made distillation tower and boiler.

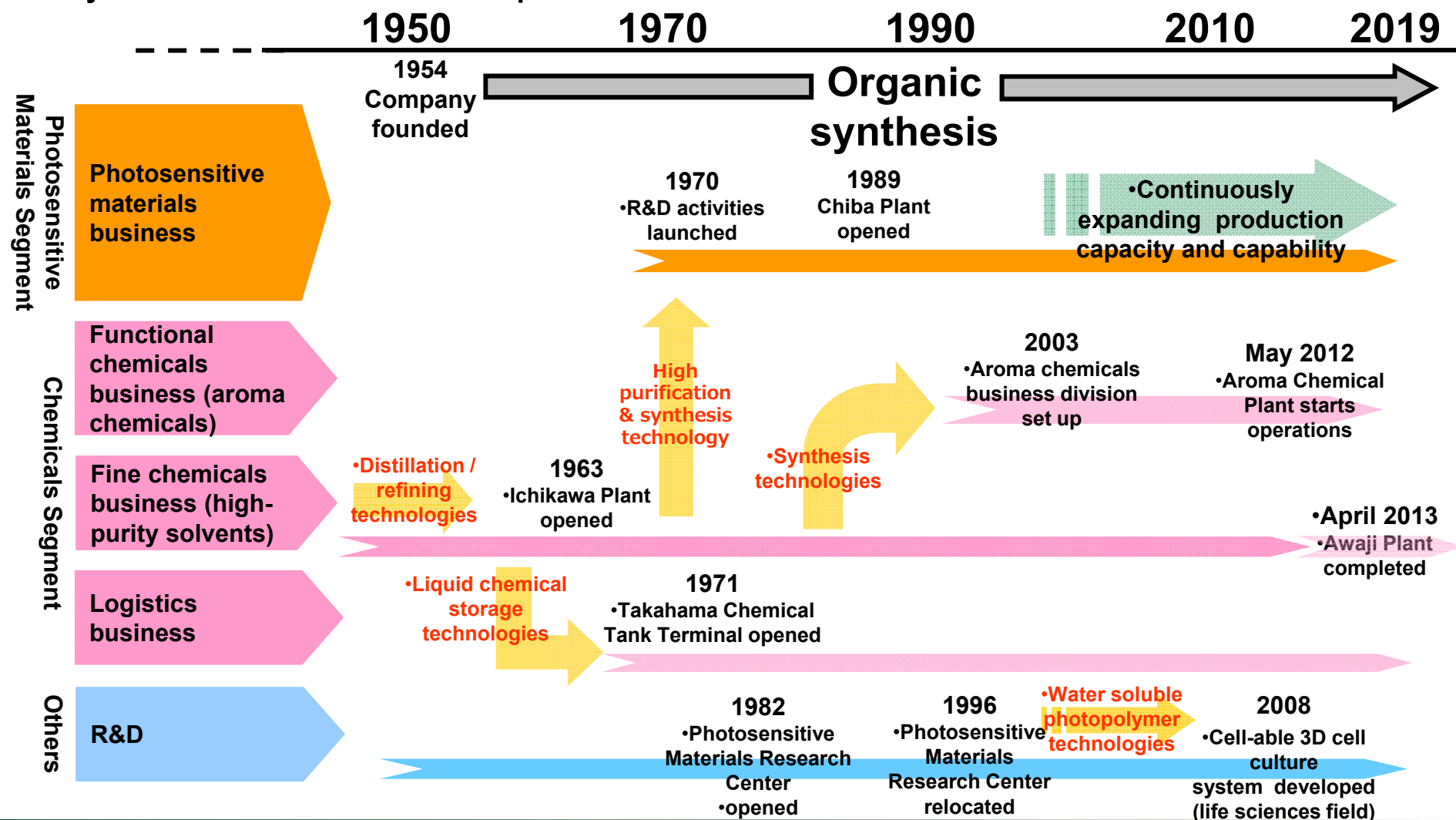
Source : City Ichikawa Nature Museum

Management Policy

1. Make what is needed in the times
2. Making something that other companies cannot make (Global niche top)
3. Research & Development and technology at the core in the business
4. Don't give up, do it simply honestly and sincerely

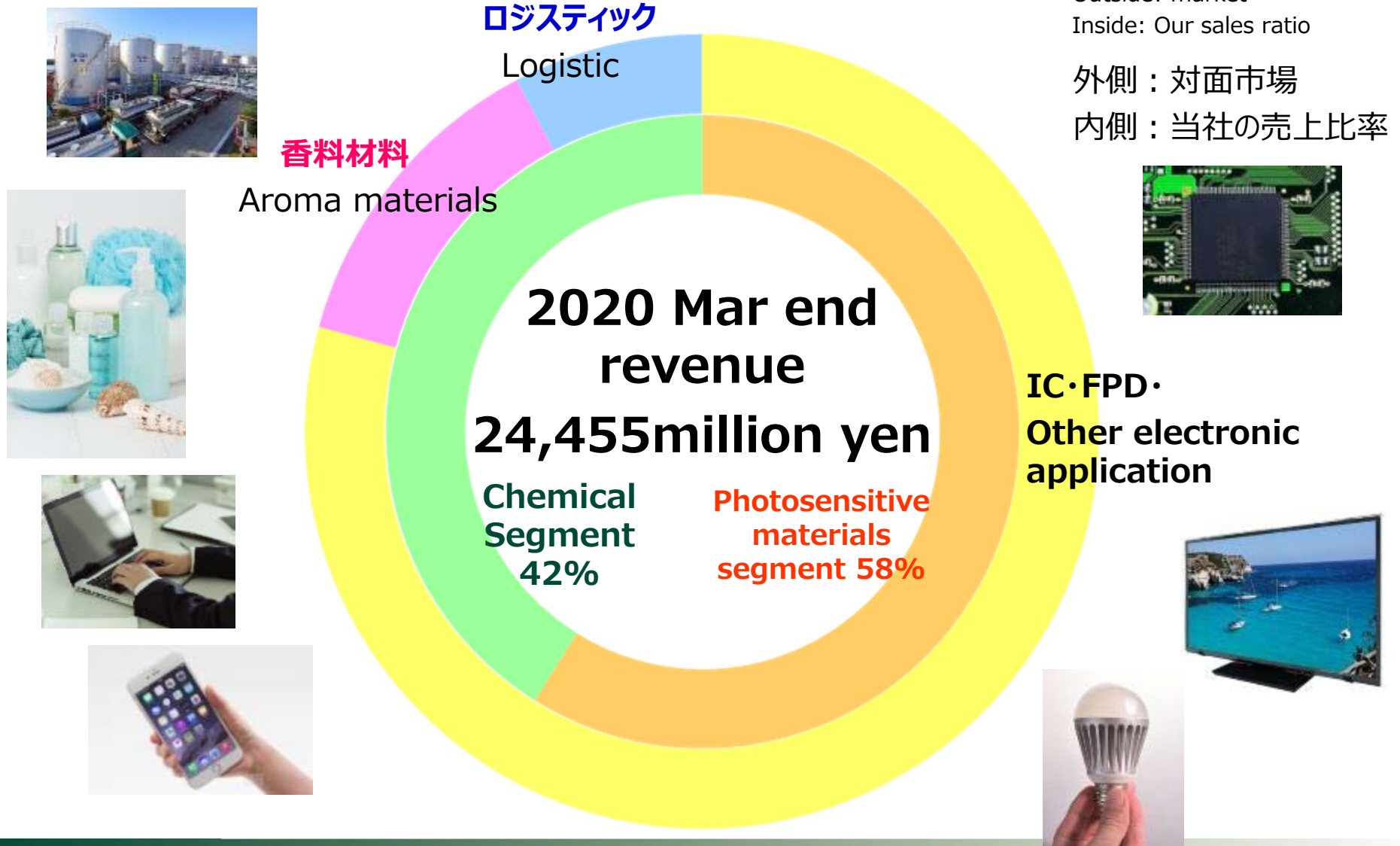
•Our Business History

- Since established in 1954, the Company expanding business in the functional chemicals field by leveraging our strengths in organic synthesis and purification technologies.
- Always estimate market's need to expand business



Business portfolio

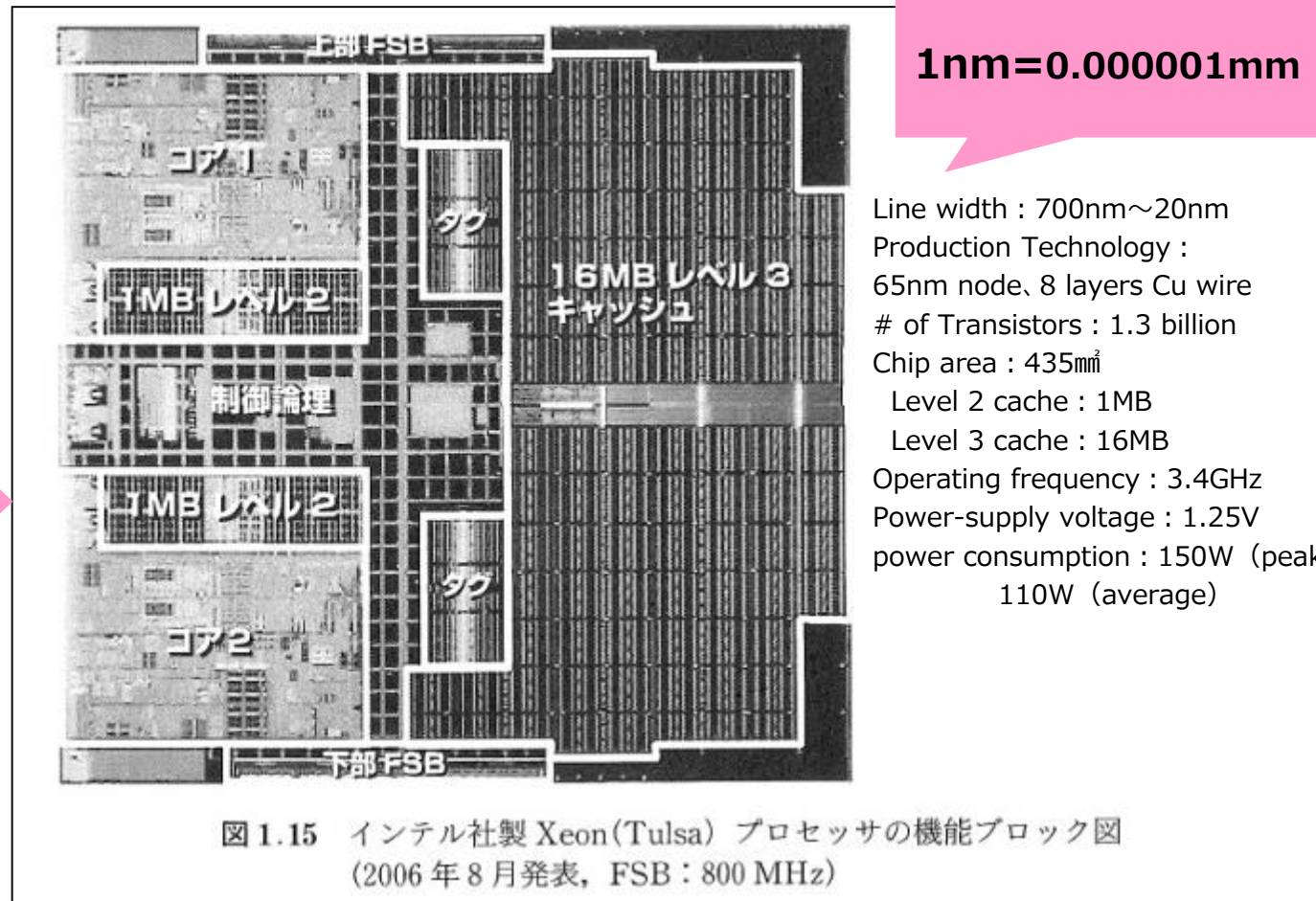
- 80% sales from IC/FPD/Electronic application



Photosensitive materials products,
Electronic materials products
High-purity solvents

Inside of IC Chip

- Intel's IC Chip: Photo of CPU(Central Processing Unit)



<http://www.eos.ncsu.edu/e115/text.php?ch=6&p=processors>

Intel's Xeon (Tulsa), Processor's function structure
(Present on Aug 2006, FSB: 800MHz)

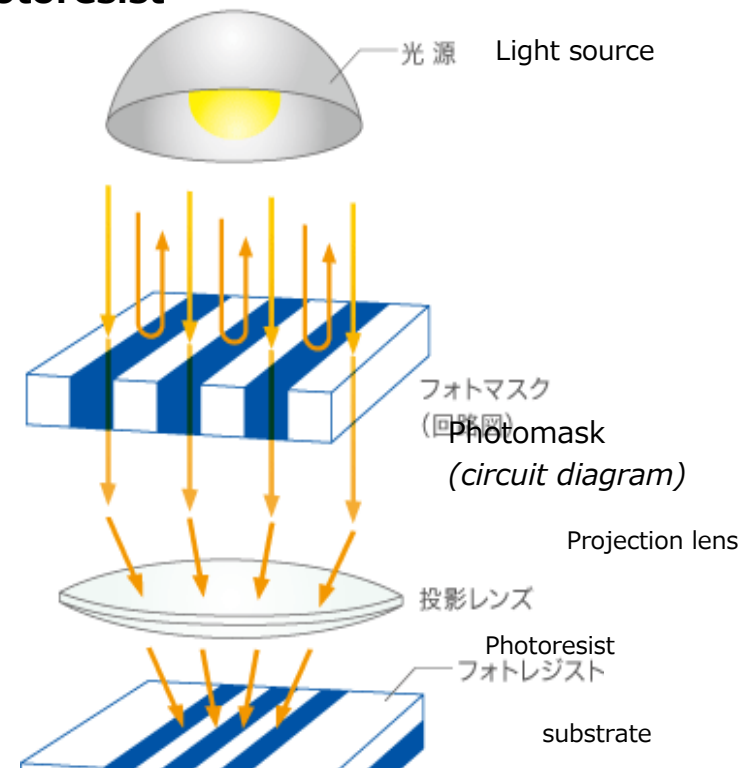
Photolithography in Semiconductor and FPD

- High definition FPD = Minimum line width
- Performance of CPU/Memory (IC) = Minimum line width

1. Coating photoresist on the substrate



2. Exposure via photomask as transferring image to coated photoresist



4. Developing by developer to get the pattern



3. Chemical reaction on the exposure area

Composition of photoresist

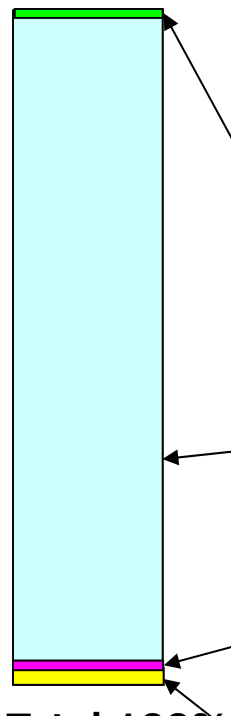
- Toyo Gosei's photosensitive materials are a critical component in photoresists used to make semiconductors and FPDs.



Photoresist (liquid form)

*Blended with other materials by photoresist makers

Common photoresist composition ratio



Additives

High-purity organic solvent (PGMEA, EL etc.)

Photosensitive materials
PAG: Photo Acid Generator
PAC: Photo Acid Compound
Several% to several tens% for polymer

Polymer (Resist resin, Base polymer) ~10%

•Our main products

Business Overview Photosensitive Materials/Chemicals (Solvents)

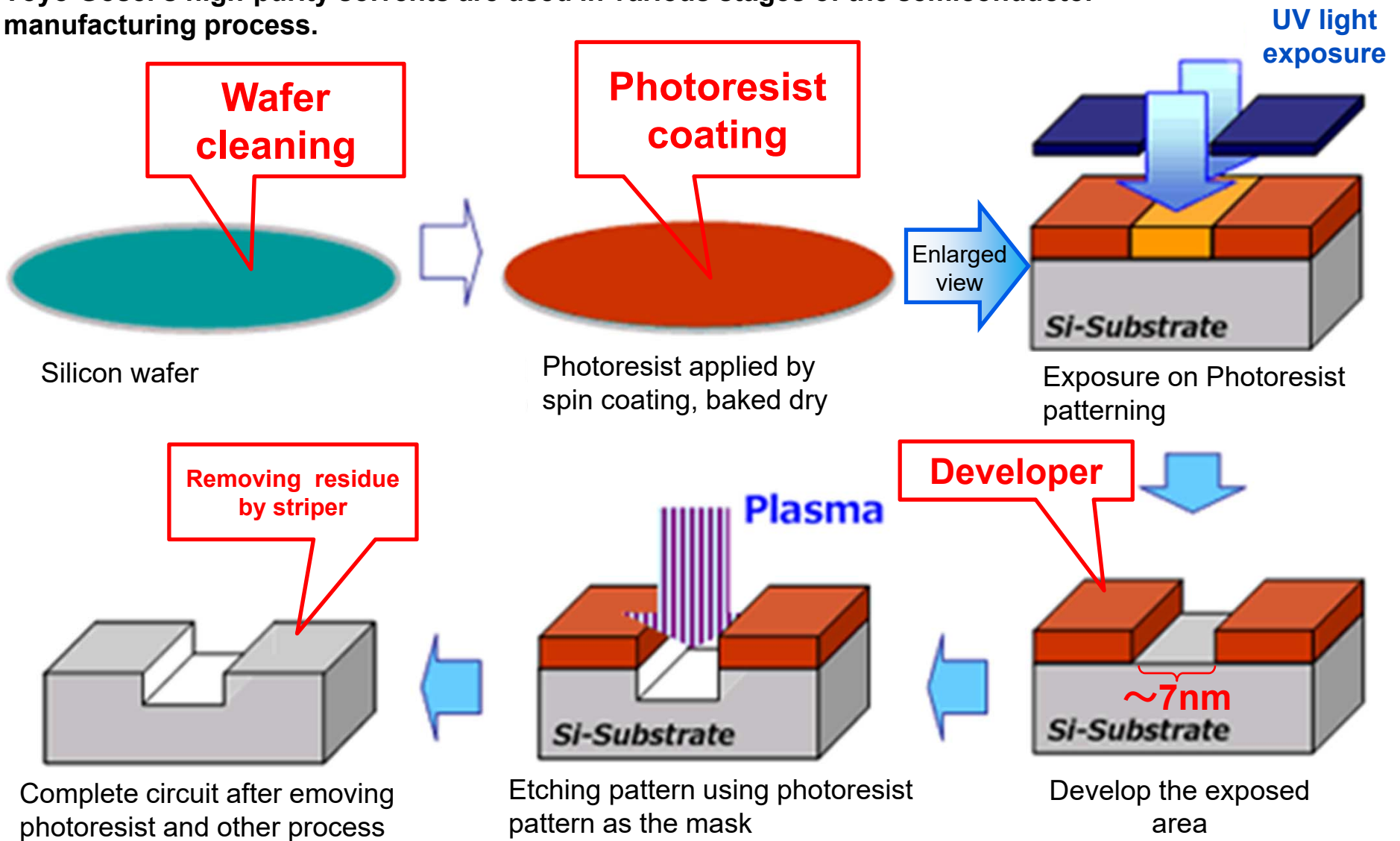
Toyo Gosei supplies photosensitive materials to customers worldwide. These materials play a key role in determining the performance of semiconductors and FPD.

Semiconductors' application is diversifying in growing market such as IoT, which is driving growth in photosensitive material demand.



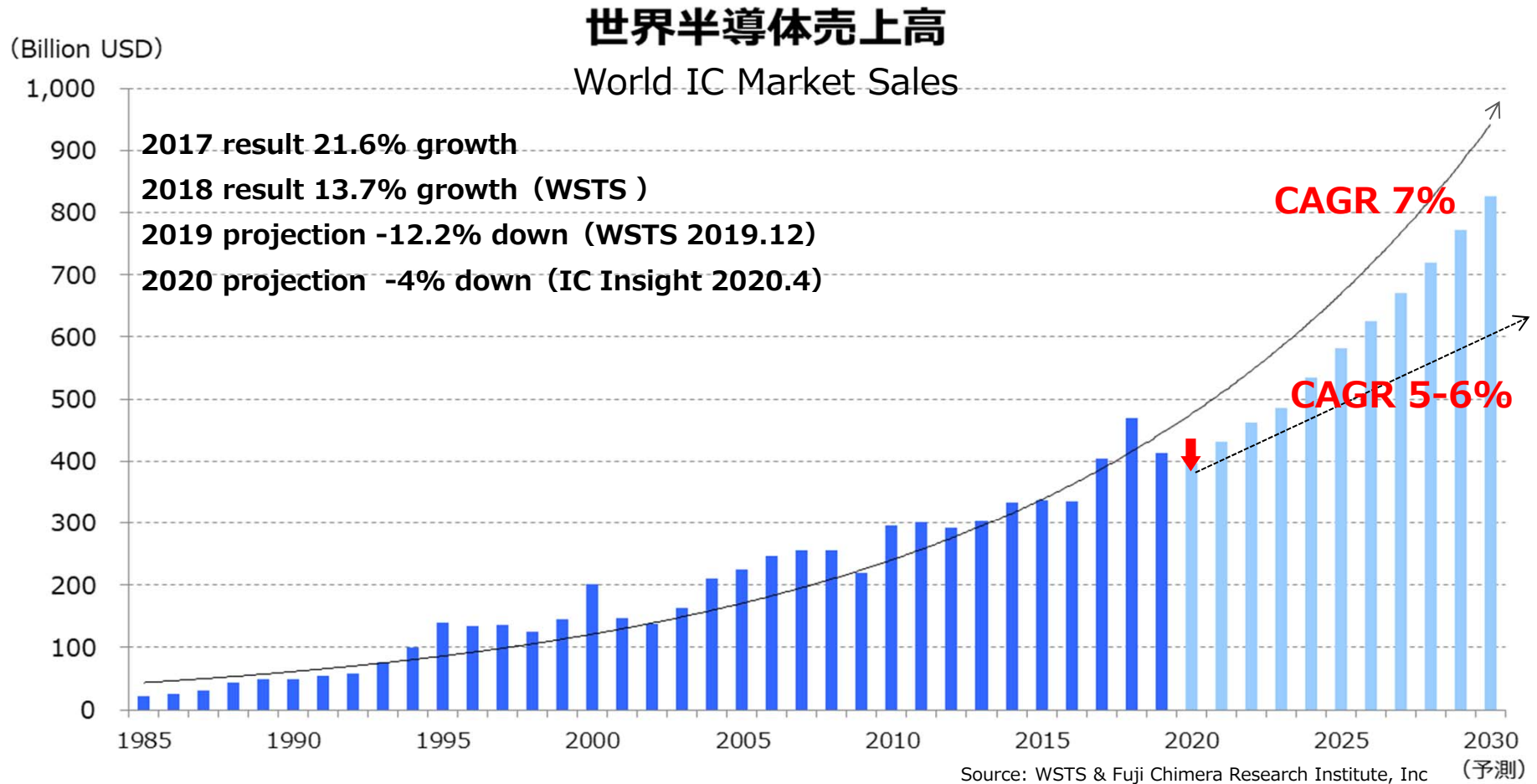
Business Overview high-purity solvents

Toyo Gosei's high-purity solvents are used in various stages of the semiconductor manufacturing process.



Semiconductor Market Development & Projection

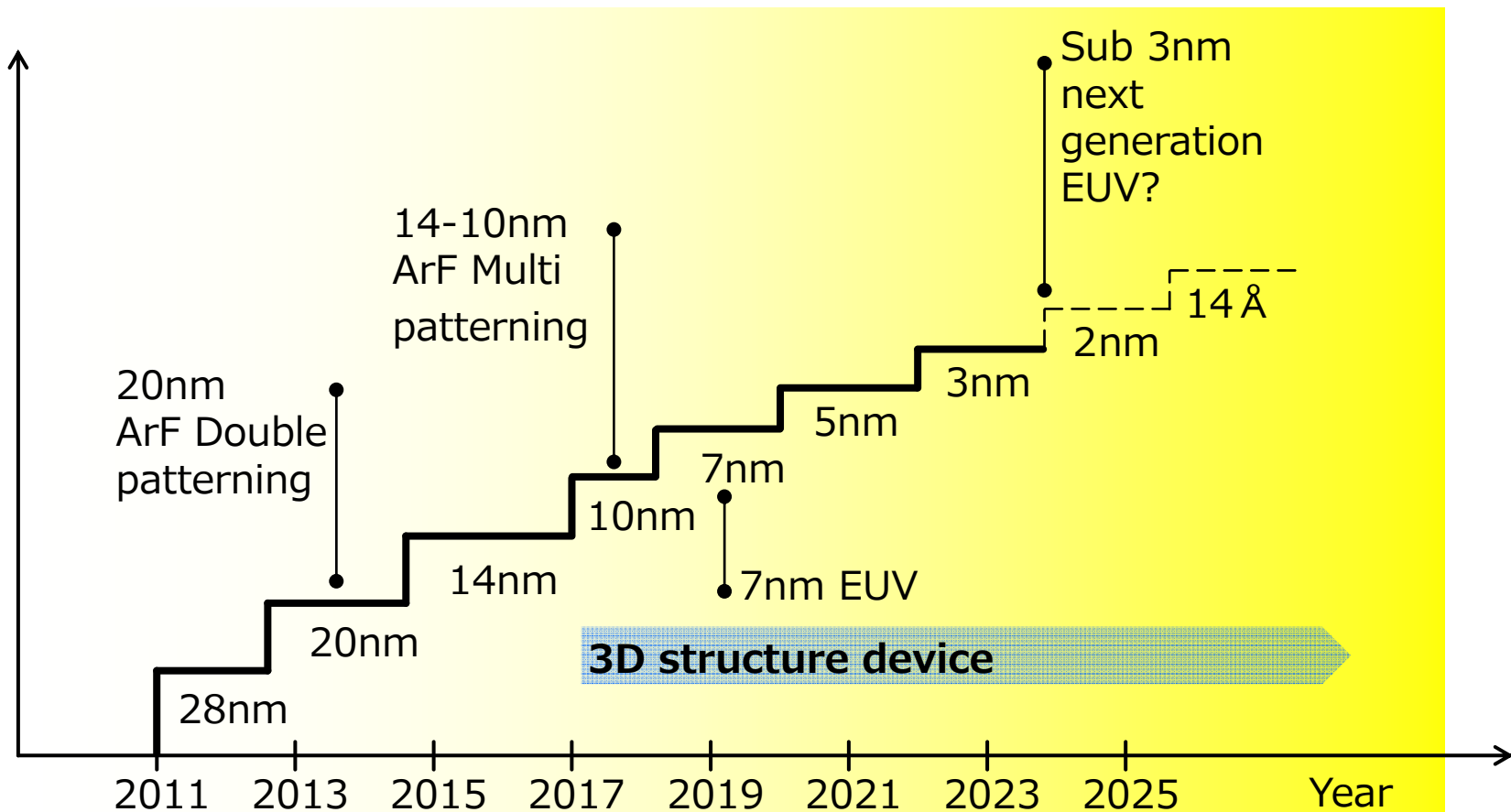
- Since 1980era, information society is driving IC market demand growth.
- In 2020, growth rate will be 0 or minus
- Thanks to progress of information communication technology support IC demand growth, x1.5-2.0 for 2020-2030



Projection

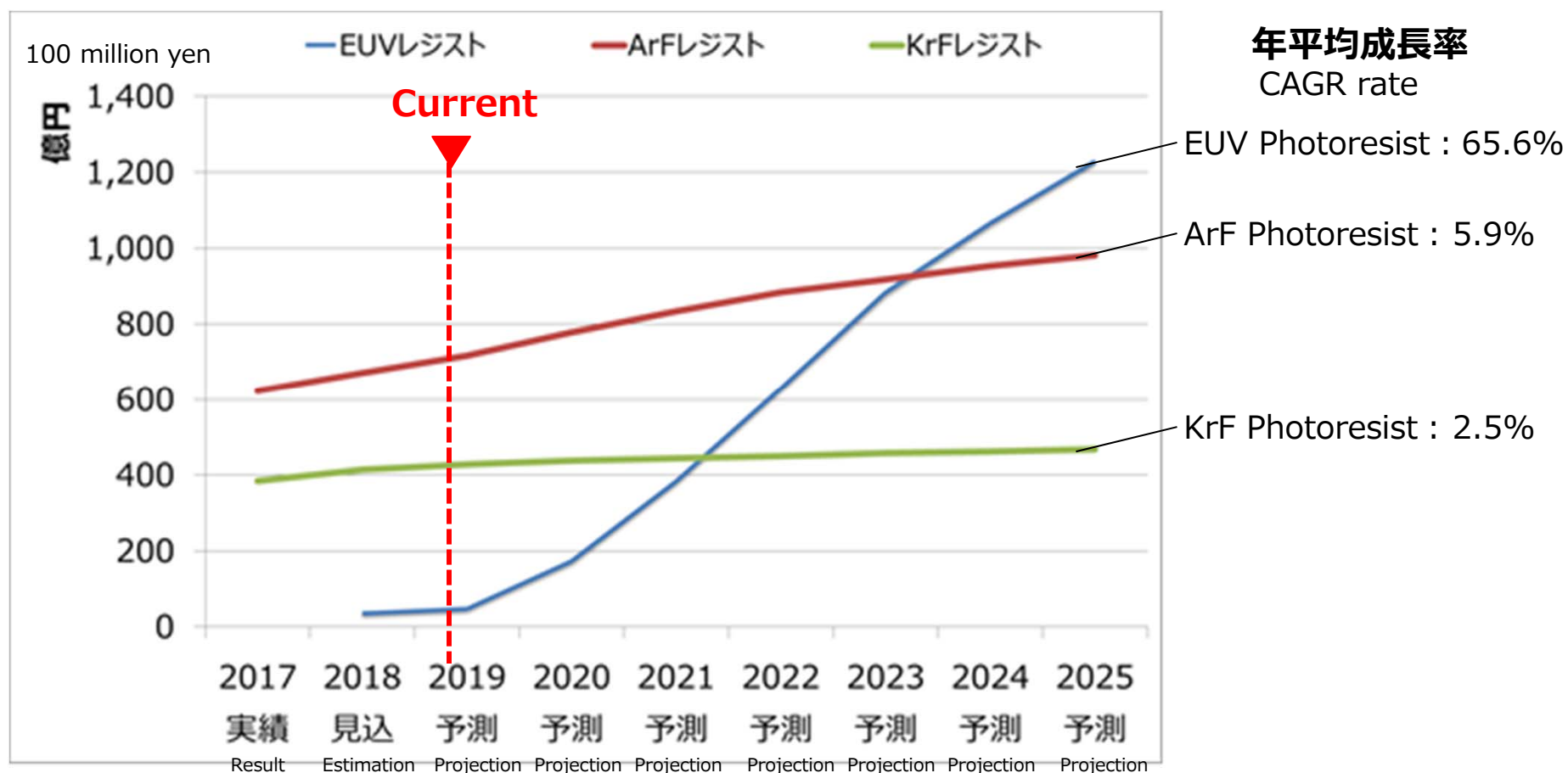
Down Size by photo lithography

- Semiconductor Node (Line Width) continues to be down size, 5nm technology in mass production now.
- For 2025, 2nm node process is under development
- In accordance with line width down size, surging need more high purity photosensitive materials



Photoresist Market Development

- EUV photoresist process started mass production in 2019
- EUV photoresist demand growth is estimated x 2.0 in 2021, x1.5 in 2022, x1.2 in 2023 compared to previous year will overtake KrF photoresist market size in 2021 and ArF photoresist market size in 2023.

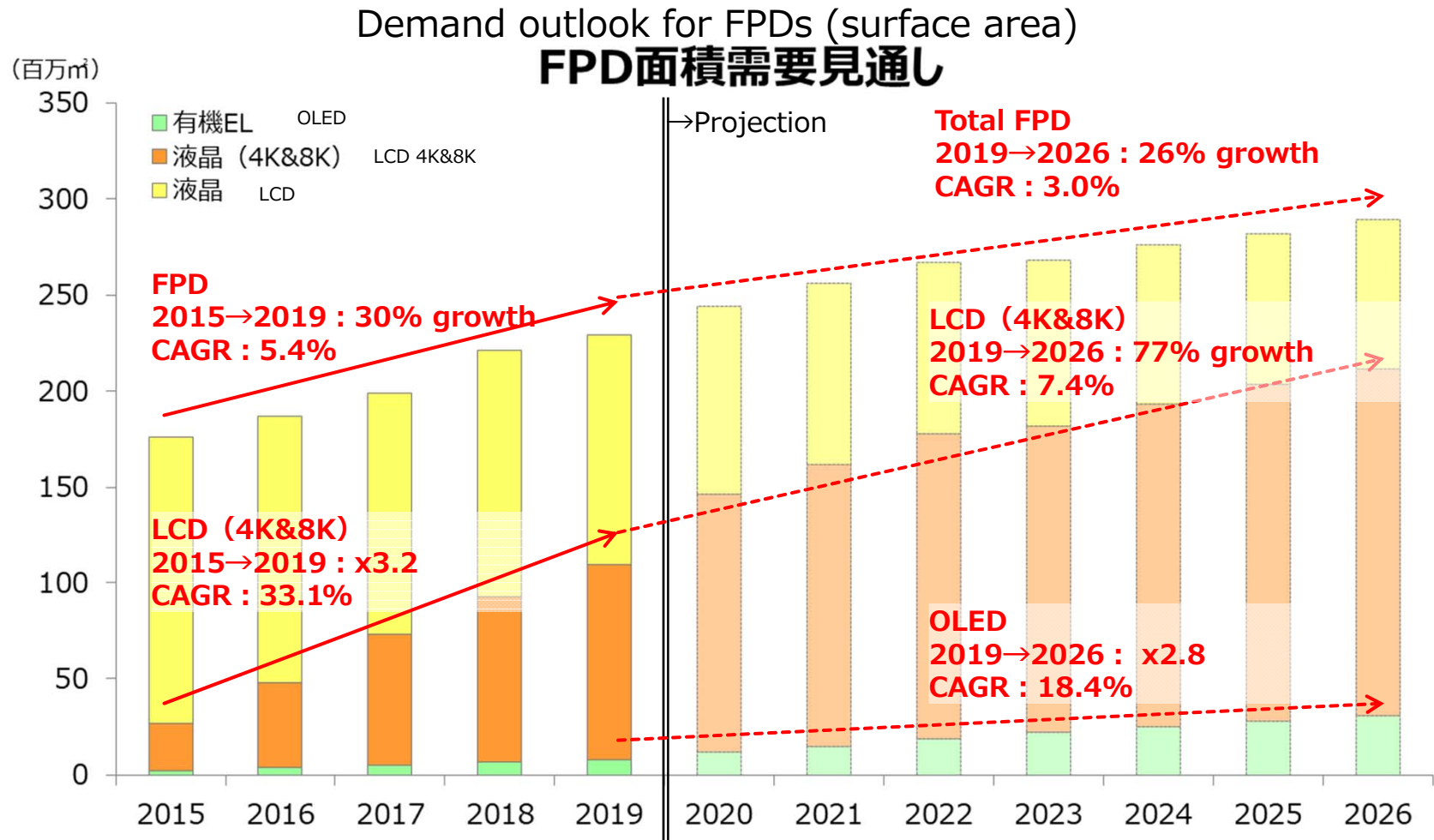


Source: Fuji Chimera Research Institute, Inc

「 & (オンゲストローム) 半導体プロセス材料/技術の展望調査 (2018年7月) 」より当社作成

FPD Market Trend

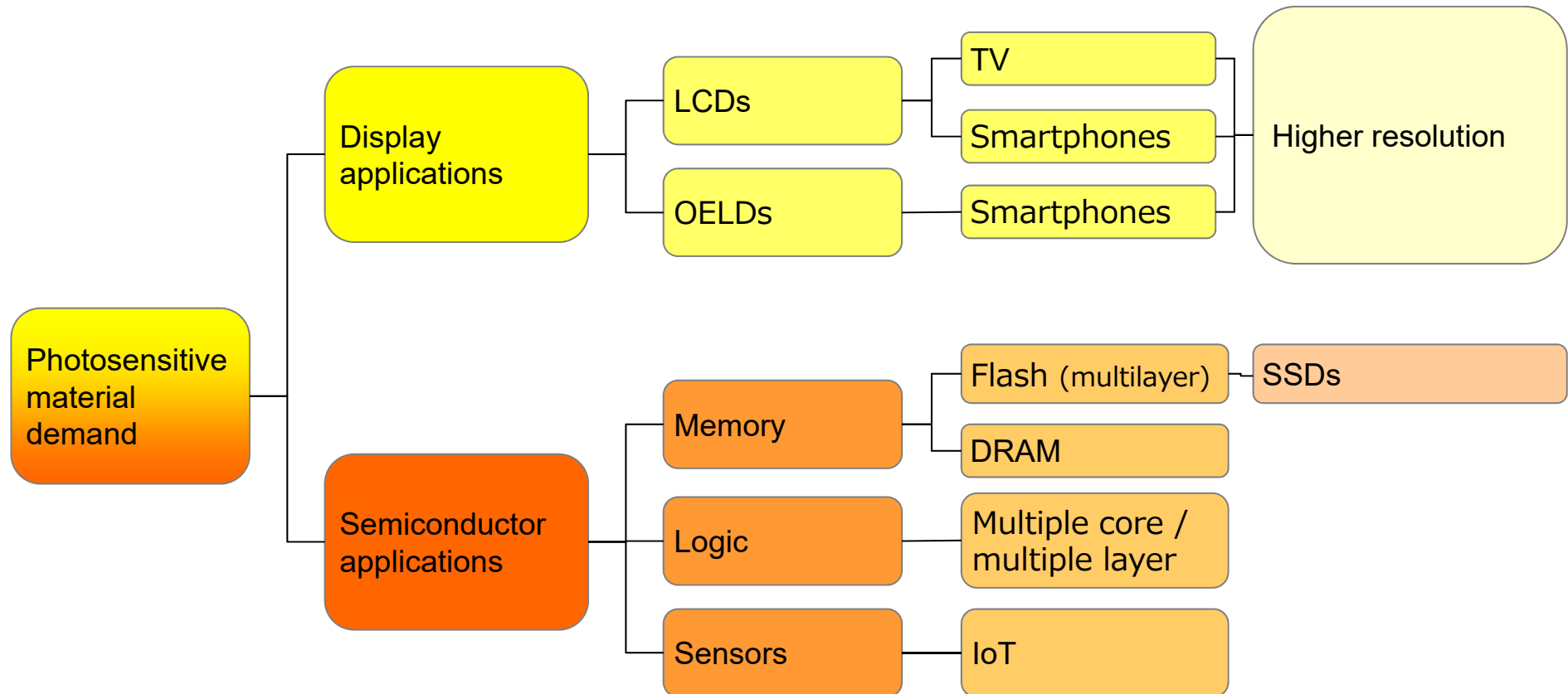
- FPD market continue to grow as CAGR 3%
- High end FPD combined LCD (4K&8K) & OLED shows higher CAGE, 8.6%, then it will be count as 70% of total in 2026.



Source : IHS Marketing

Key demand driver for Photosensitive Materials/ EL Solvent

Demand for photosensitive materials will be driven by market growth, and by the need for new types of materials as semiconductor and display technologies become more advanced.



Outlooks: Photosensitive materials Application, Wave length and Line Width

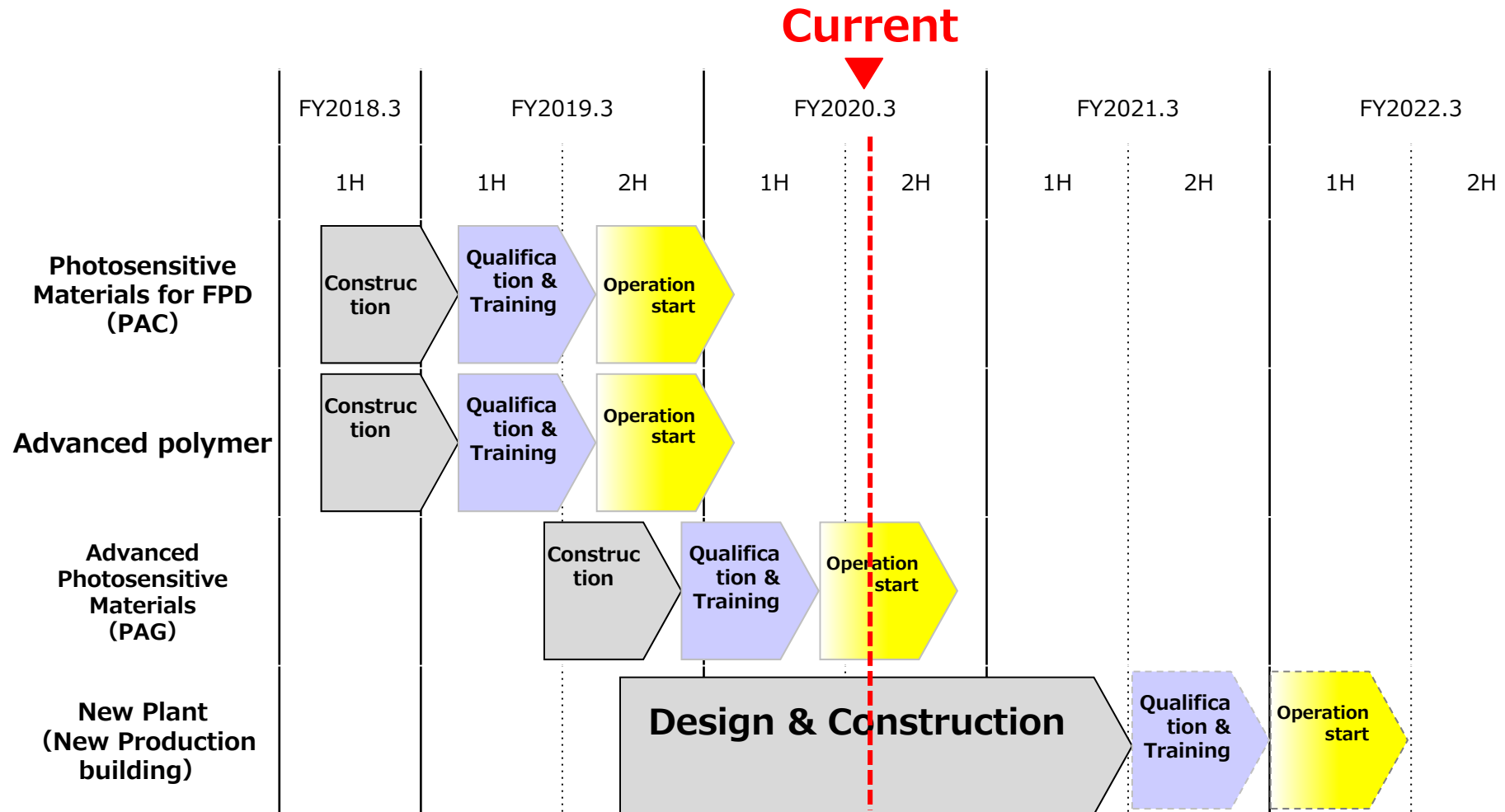
- Continue down size of photoresist line width need EUV process
- Started mass production supply for EUV materials in 2019
- TGC continue to improve quality of photosensitive materials and diversifying product line up to satisfy customer's needs

= stagnant
 = growing

		FPD		IC								
		g + h + i line	I line	G line	I line	KrF	ArF	ArF Immersion	ArF DP	ArF MP	EUV	
Node		~2,000nm	~1,000nm	~700nm	~200nm	~110nm	~65nm	~45nm	~22nm	~7nm	~5nm	~2nm ?
Application	TV, PC	Small & Mid size Panel	IGBT, LCD driver, LED		DRAM/NAND memory (recovery in 2020 as projection)				New generation DRAM (2020~)			
		Smart phone and etc.	Back-end process materials CMOS sensor		Advanced logic LSI ⇒ steady				New Generation Logic LSI Start EUV process in production			
Market	Stagnant	Stagnant and gradually growth	Gradually growth	expanding	stagnant	steady	expanding		CAPEX in progress		R&D	
TGC Products	Photo Active Compound (PAC) EL high purity solvents					Photo acid generator (PAG) Polymer EL Ultra high purity solvents						

Photosensitive Materials Capacity Up Investment

- On going capacity up project to meet market demand increasing
- Completed capacity up project for the existing plant as plan. After customers' qualification process, starting products shipment from new line accordingly.
- New production plant construction to be completed in 2020 as on going in the planned schedule.



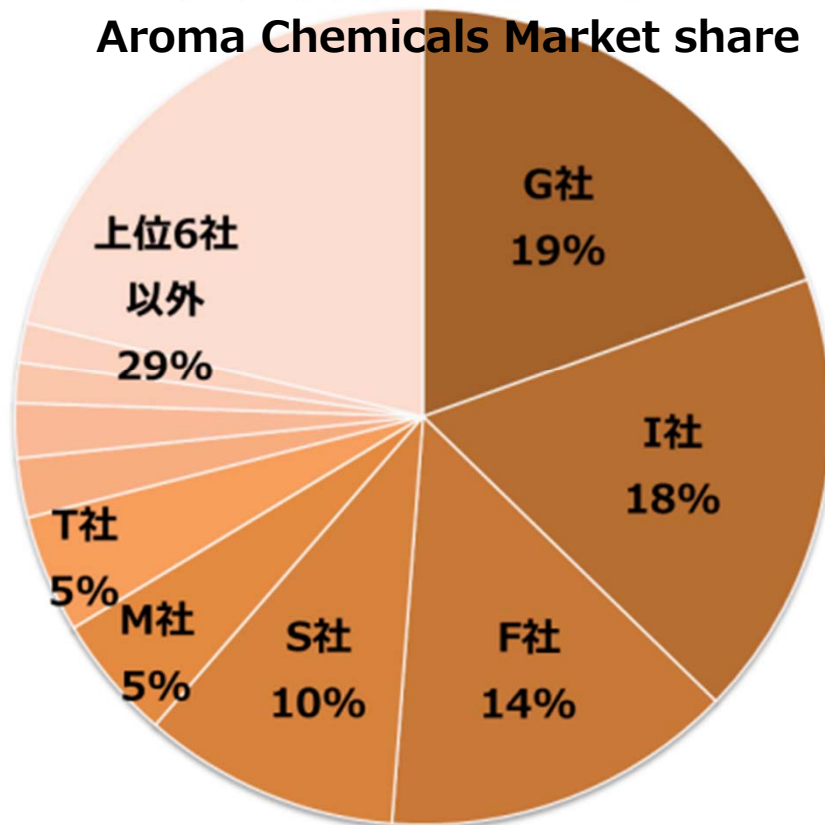
Aroma chemicals products,

**Chemicals logistics
and storage services**

Aroma Chemicals Market

世界香料市場シェア

Aroma Chemicals Market share

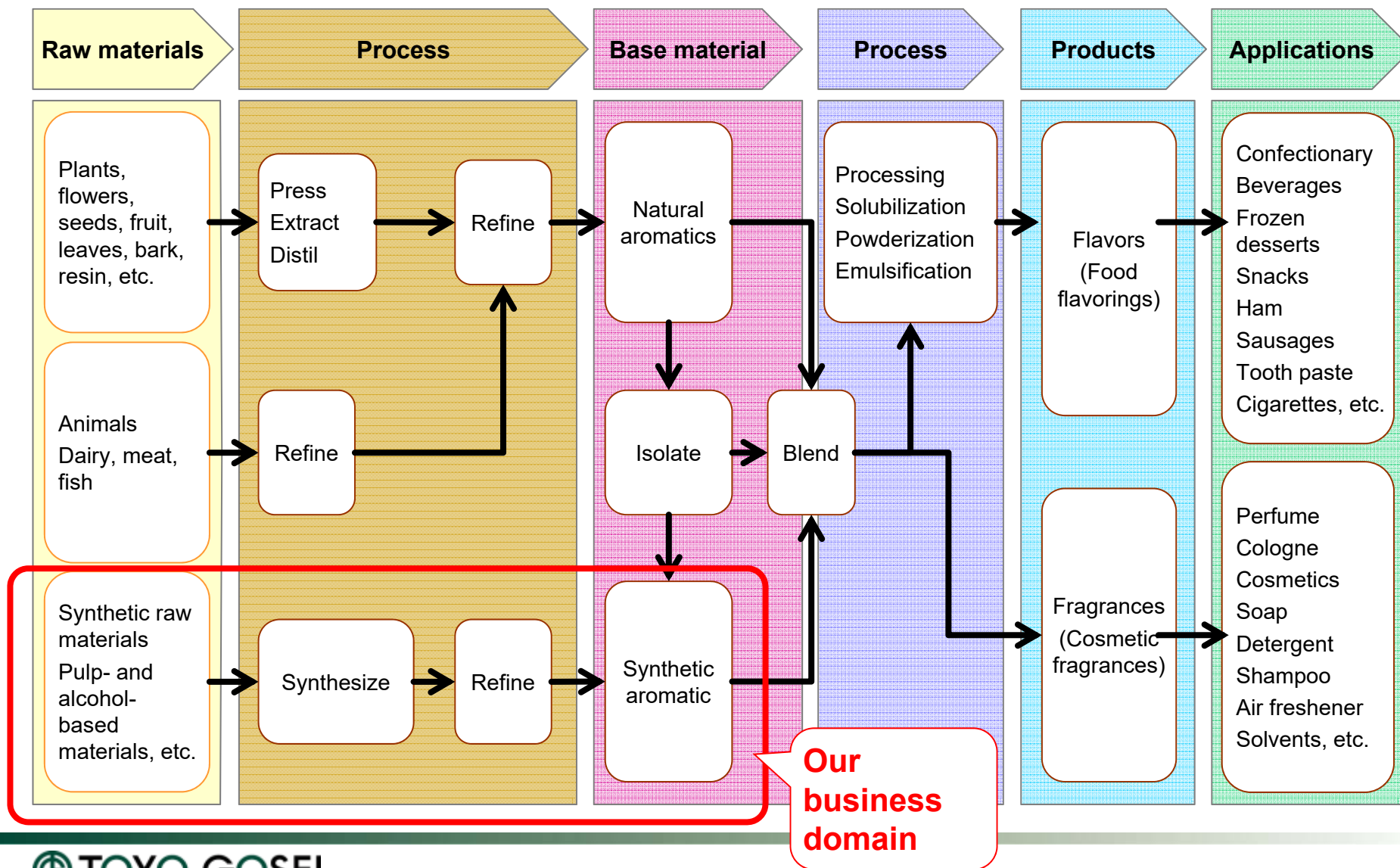


- The global aroma chemicals market is expanding at CAGR 3-4% steadily
- The top six suppliers dominate 70% of the global market.
- Major suppliers is actively doing the M&A to increase their global market share, which is lead to oligopolization.
- TGC is a few selected aroma chemical key materials to mainly major global aroma chemicals companies. Our market share is estimated around 30-40% in our segment
- Global niche top position

出所 : Leffingwell & Associates

Business Overview Chemicals (Aroma Chemicals)

Aroma chemical flow from raw materials through to finished products



Logistic Business (Advantage of Takahama Chemical Oil terminal)



Terminal has 65 bonded storage tanks with various volumes, capable of holding chemicals with different grades and properties



Receives 70 vessels per month



Largest shipment volume in the Kanto region: 80-100 Tank lorry car per day

- Toyo Gosei's chemical logistics terminal distributes liquid chemicals made in Japan or overseas to plants across the Kanto region-biggest chemicals distribution hub as largest shipment volume in Tokyo bay area
- Only chemical tank terminal run by chemicals company and handling variety of package, own certified analytical laboratory for the high-quality storage management as providing service for wide range chemicals
- Prime location close to expressway network (about a few minutes from Chidoricho IC) shorted delivery time to northern Kanto area where are major chemical users located. Possible to three round delivery a day is appreciated by customers in shortage of tank lorry driver.
- Strict regulations in the Fire Service Act make it difficult for new competitors to establish new operations in the Tokyo Bay area

Logistic Business model



① Liquid chemicals made in Japan or overseas coming to Takahama by chemical tanker



② Transfer chemical to tank from tanker



③ Storage at tank



④ Transfer chemicals to tank lorry and other package from tanks



⑤ Deliver to users in Tokyo metropolitan area

Completion of New Expressway contribute turnover rate

- Completion of Tokyo-Gaikan Expressway in 2018 further improved transport access to northern Kanto area as shortening delivery time
- # of Round trip per day increased which contribute higher operation rate at Takahama chemical oil terminal



Business Results for FY2020

Business Highlight for FY2020

- Revenue & profit, all achieved historical record
- Revenue is 24,455mio yen (vs Prev. year +1,480百万円、+6%)
- For profit, Operation profit 2,184 mio yen (+624mio yen、+40%) , Ordinary profit 2,061 mio yen (+494mio yen、+32%) 、 net profit1,852mio yen (+681mio yen、+58%)

(Million yen)	Prev. year Result	Projection Projection	FY2020 Result	YOY		Vs Projection	
				I/D AMT	I/D %	I/D AMT	I/D %
Revenue	22,975	25,500	24,455	+1,480	+6%	△1,044	96%
Operation Profit	1,559	1,800	2,184	+624	+40%	+384	+121%
Ordinary Profit	1,567	1,700	2,061	+494	+32%	+361	+121%
Net profit	1,171	1,600	1,852	+681	+58%	+252	+116%
Net profit per share	147.54	201.58	233.43				
Dividend per share	10.00	20.00	20.00				
FX rate (USD)	¥110/\$	¥107/\$	¥109/\$				

The summary of the Business Result FY2020

■ Revenue

- ✓ 24,4556million yen (YOY+1,480799million yen、+6%)
- ✓ Photosensitive Materials Segment: Sales growth mainly thanks to advanced products and stable increasing FPD as YOY
- ✓ Chemicals Segment: Sales in high-end application keep growth. Aroma chemicals sales for export increased. Solvent sales for Electronic application like memory application slightly decreased. Logistic business kept high operation.

■ Operation profit

- ✓ 2,184 million yen (+624million yen、+40%)
- ✓ Although investment cost (labor, depreciation etc.) for the capacity improvement in photosensitive materials segment increased, the profit increases as contribution of sales expansion mainly from high-end application both in photosensitive materials and EL solvents as well as aroma chemical more than compensate investment cost (labor, depreciation etc. +450million yen) for the capacity improvement in photosensitive materials segment

■ Ordinary profit

- ✓ 2,061 million yen (+494 million yen、+32%)
- ✓ Non-Op Exp.: No Non-Op income from FX and insurance, then interest fee increase 130million compared to previous year

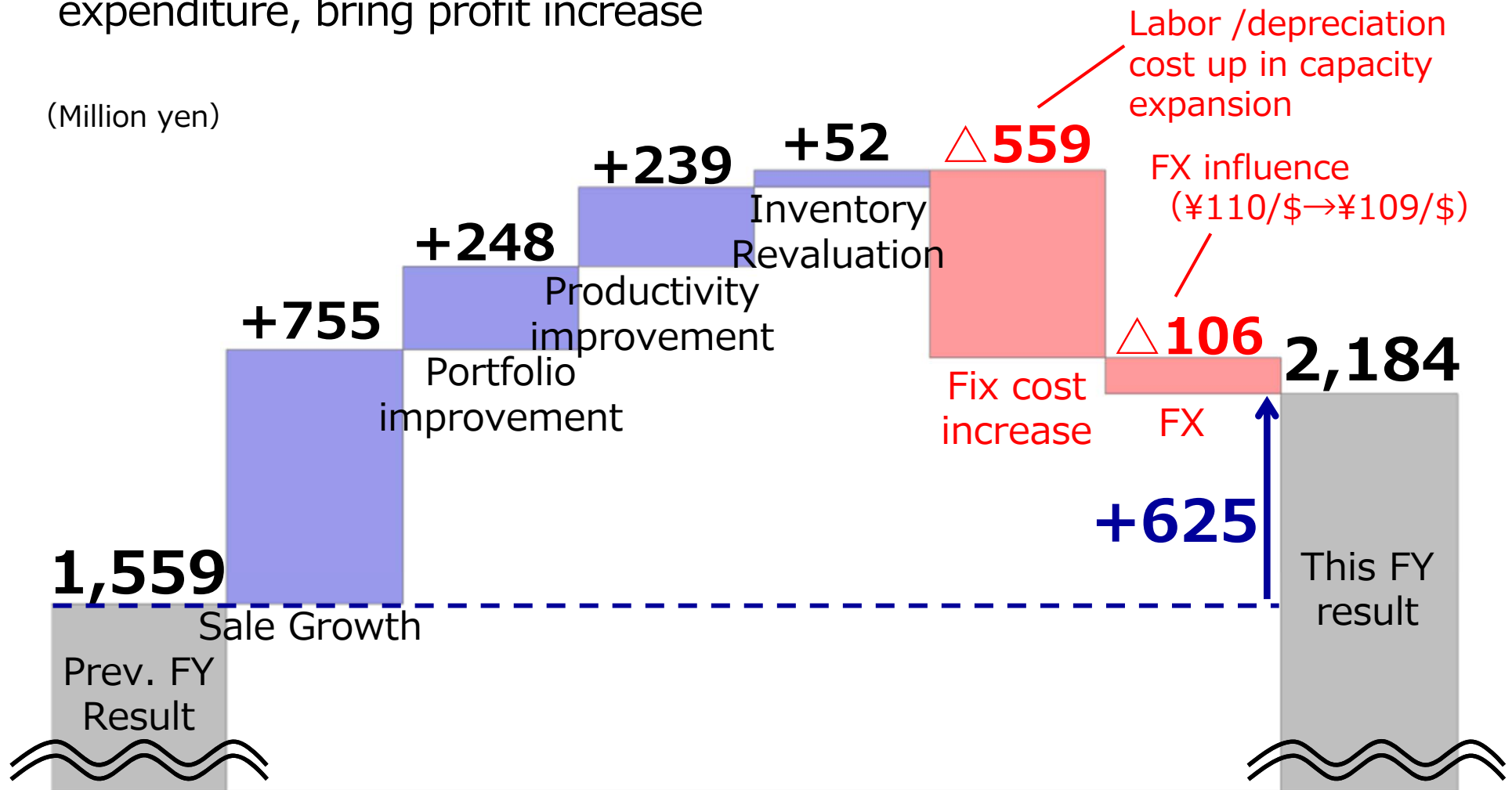
■ Net profit

- ✓ 1,852million yen (+681million yen、+58%)
- ✓ This term net profit included deferred tax asset, it cause higher net profit as one time.

Operating profit: factors for increase/decrease

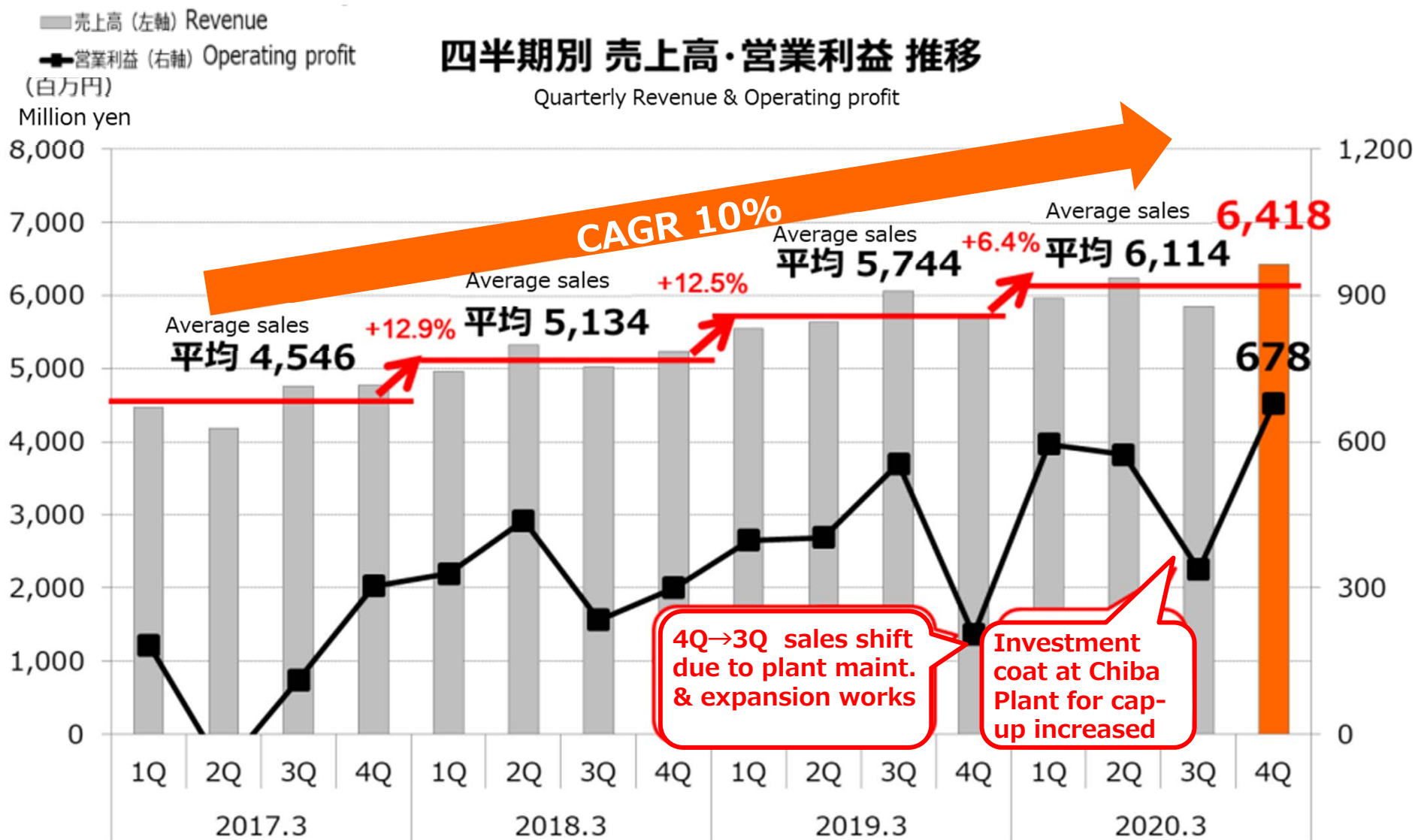
- Sales growth more than compensates capacity up investment expenditure, bring profit increase

(Million yen)

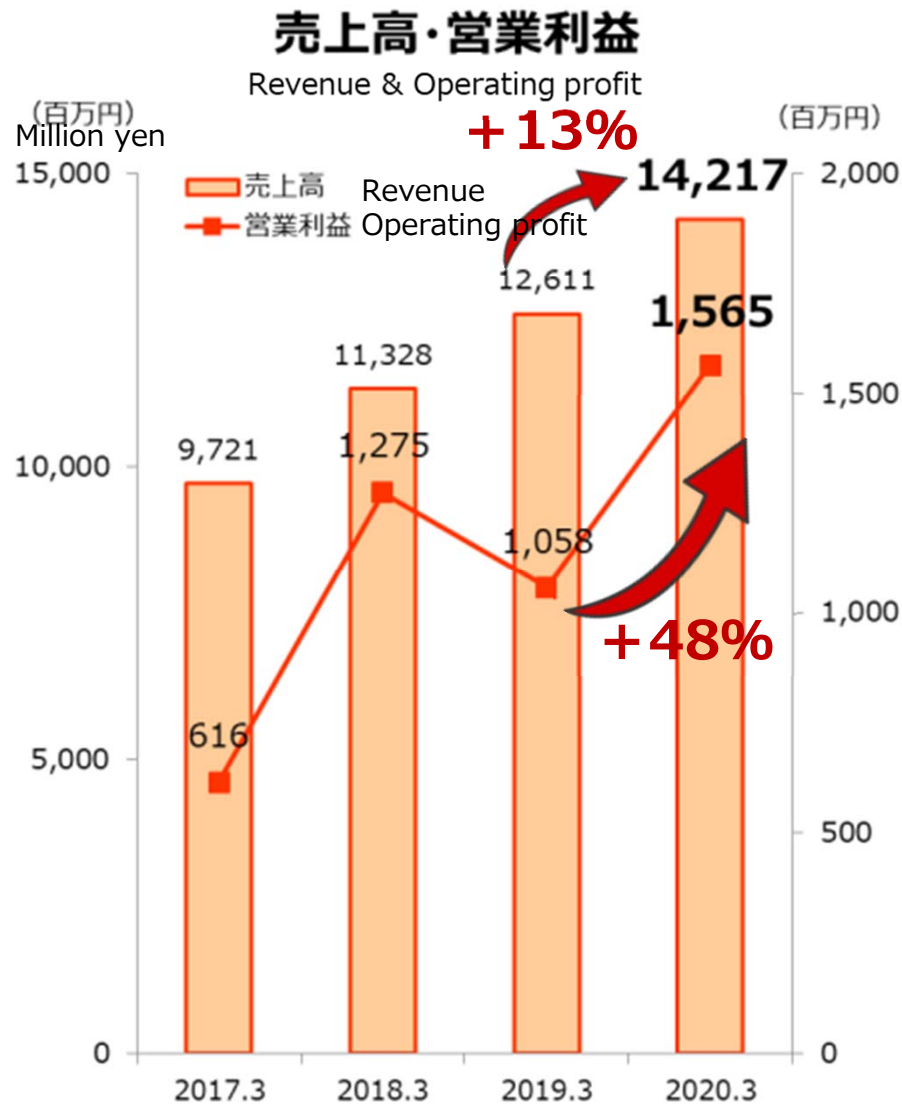


Quarterly Sales & Operating profit trend

- Quarterly sales steadily increasing (CAGR10%) , quarterly operation profit improved from 200million to 600million level
- 4Q sales achieved historical highest record (6,418million yen)



Photosensitive Materials Segment



Revenue : 14,217 million yen

(YOY+1,605million yen、+12.7%)

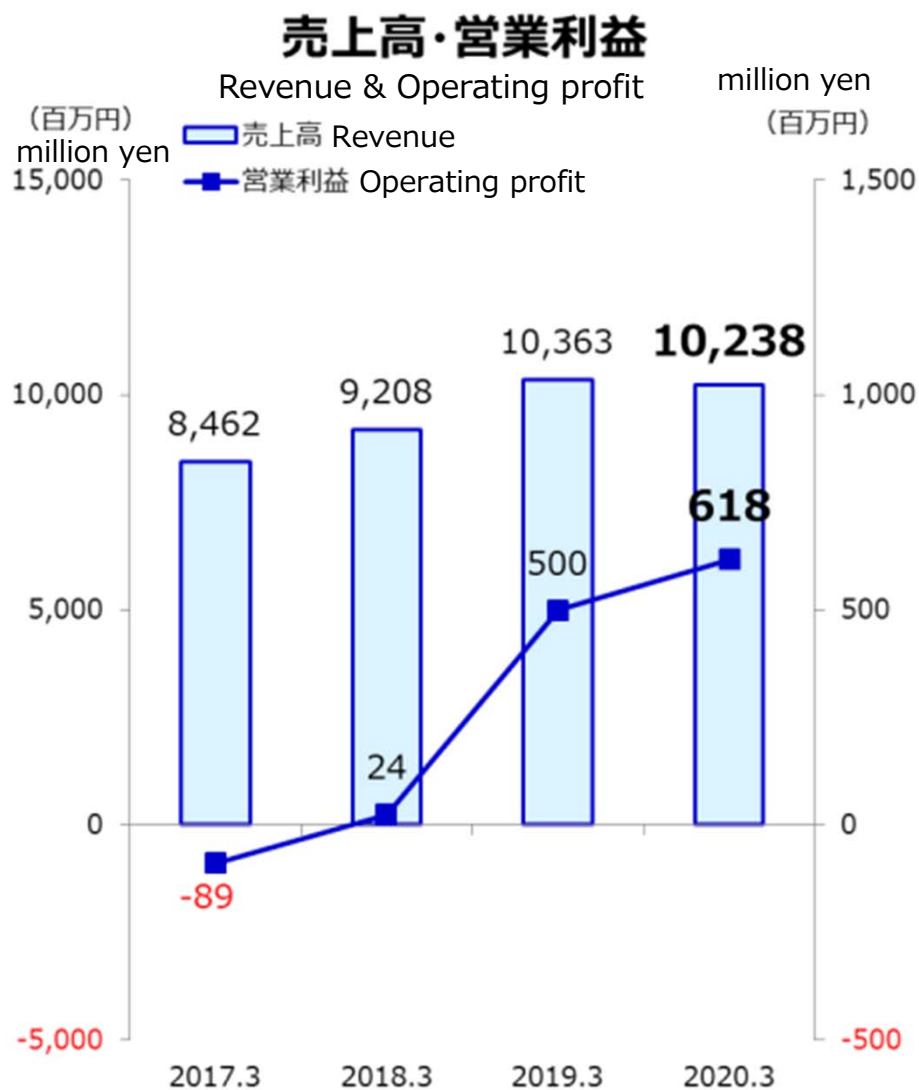
- Products for high-end semiconductor application (ArF、EUV generation) keep good sales
- Stable increasing for FPD application as YOY

Operating profit : 1,565million yen

(YOY+507million yen、+47.9%)

- Contribution of sales expansion contributed more than investment cost (labor, depreciation etc. +450million yen) for the capacity improvement increase.

Chemicals Segment



Revenue : 10,238million yen

(YOY△125million yen、△1.2%)

- EL solvent sales for high-end semiconductor process & aroma chemical increase, but Stagnant memory IC market and commodity EL solvent impact to sales decrease, as result, sales slightly decreased compared to previous year.
- Logistic business keep high operation

Operating Profit : 618million yen

(YOY+117million yen、+23.4%)

- Accelerating shift to high value product business

Profit & Loss Statement

- Revenue 24,455百万円 (YOY+1,480百万円、+6%)
- Gross Profit more than compensated fix cost up (+450million yen) , recorded 5,262million yen (YOY+726百万円、+16%) and profitability improvement (YOY+1.7pt) thanks to good sales with high end products.
- Operating profit achieved 2,184million yen (YOY+624百万円、+40%) as controlling selling expense within 100million incrase.

(Million yen)	2019.3 end	2020.3 end	I/D AMT	ID %
Revenue	22,975	24,455	+1,480	+6%
COGS	18,438	19,192	+754	+4%
Gross Profit	4,536	5,262	+726	+16%
Selling Exp.	2,976	3,078	+101	+3%
Op. Profit	1,559	2,184	+624	+40%
Non-Op profit	162	94	△67	△42%
Non-Op Exp.	154	217	+63	+41%
Ordinary profit	1,567	2,061	+494	+32%
Extraordinary P&L	△56	△48	+8	△14%
Profit before Tax	1,511	2,013	+502	+33%
Tax	340	160	△179	△53%
Net Profit	1,171	1,852	+681	+58%

[Gross profit +435]
Product portfolio improvement, high value product expansion contribute profit improvement (19.7%→21.5%)

[Non-ope profit △67、
Non-ope expense +63]
FX gain △33、
FX loss +56

Cash Flow

- **CF of operating activities** : 3,463million yen (+1,365百万円、+65%) Sales increase 1400million contributed profit expansion (+500million yen) , and WIC improvement (+500million yen) for strategic investment
- **CF of investing activities** : △5,179million yen as executed cash out for photosensitive material business capacity
- **CF of financing activities** : △80million yen as result payback bank loan

(million yen)	2019.3期	2020.3期	増減額
CF of operating activities	2,097	3,463	+1,365
Profit before income taxes	1,511	2,013	+502
Depreciation	1,944	2,172	+228
Increase (decrease) in account receivable	△619	△339	+279
Increase (decrease) in inventories	△713	△197	+516
Increase (decrease) in accounts payable	222	△94	△316
Others	△247	△90	+156
CF of investing activities	△2,499	△5,179	△2,679
Free ·Cash Flows	△401	△1,715	△1,313
CF of financing activities	3,268	△80	△3,348
Effect of exchange rate change on cash and cash equivalents	20	△33	△53
Net increase (decrease) in cash and cash equivalents	2,886	△1,829	△4,716
Cash and cash equivalents at end of period	5,000	3,170	△1,829

[AR +279、
Inventory +516、
AP △316]
← Improve WIC by operation activity

Balance Sheet

- Shareholder's equity increased 1,733million yen thanks to net profit increase , equity ratio also increased to 27% (+3pt)
- Spent profit and cash into photosensitive material production expansion, then tangible asset+3,546 million yen、 facility account payable and etc +426million yen, as result Interest-bearing debt keep +203million yen

(million yen)	2019.3 end	2020.3 end	I/D AMT
Current assets	17,228	15,503	△1,725
Cash	5,412	3,582	△1,829
Accounts receivable	4,314	4,654	339
Inventories	6,822	7,019	197
others	679	246	△433
Fixed assets	19,637	23,627	3,990
tangible assets	18,566	22,112	3,546
Intangible assets	417	407	△10
Inv.& other assets	653	1,107	453
Assets total	36,865	39,130	2,264
Liabilities	28,024	28,561	536
accounts payable	3,094	3,000	△94
interest-bearing debt	17,984	18,188	203
others	6,945	7,372	426
Net assets	8,841	10,569	1,728
Shareholder's equity	8,830	10,563	1,733
valuation/translation difference	11	5	△5
Liabilities & Net Assets Total	36,865	39,130	2,264

[Cash △1,829]
cash out for facility investment

[Tangible asset +3,546]
Due to investment for photosensitive material capacity up

[equity ratio]
27.0% (YOY+3.0pt)

Measurement for COVID-19

Measurement for COVID-19

- As of May 14, no infected employee
- As of Feb 27, set up COVID-19 countermeasures office under CEO's leadership
 - ① Countermeasures for commuting
 - ✓ Apply Time difference work, Car commuting or Tel-work for all site
 - ✓ Apply Tel-work for HQ in Tokyo and Sales office in Osaka as principle.
 - ② Business trip, Customer visit and internal meeting
 - ✓ Ban visit other office as principle
 - ✓ Use WEB meeting, TVG meeting, tele conference as much as possible to reduce infection risk
 - ✓ Asking same rule for all customer, vender and etc who have chance to come to TGC
 - ③ Countermeasures for work
 - ✓ Ask employee (who has Cold symptoms) to stay home
 - ✓ Within TGC site, all person inquired to wear mask, washing hand, alcohol finger disinfection and Gargling
 - ✓ Asking same rule for all customer, vender and etc who have chance to come to TGC

Appreciate all who cooperating with us and continue keep our operation under good safety and health management

Support to local community

- Donate disinfection solution to local government in near our site(Chiba Ichikawa city, Tonosho town, Hyogo Awaji city). TGC continue to support local communities.



Left above) Ichikawa city fire station with disinfection solution (ethanol 90L)

Right above) Tonosho Town with disinfection solution (ethanol 90L and hypochlorous acid solution)

Left bottom) Hyogo Awaji city with disinfection solution (ethanol 90L)

Progress for Mid term plan

TGC300

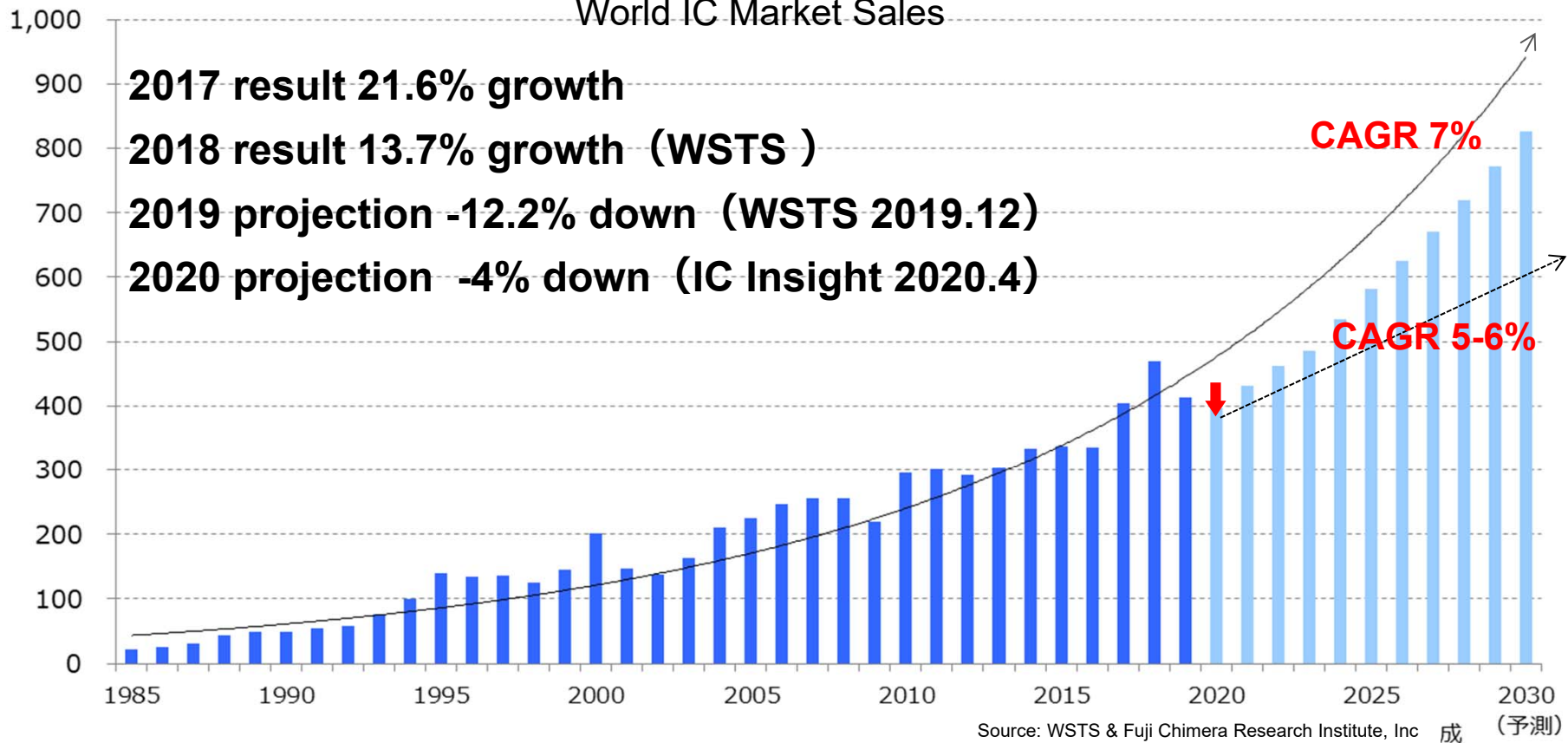
Semiconductor Market Development & Projection

- Since 1980era, information society is driving IC market demand growth.
- In 2020, growth rate will be 0 or minus
- Thanks to progress of information communication technology support IC demand growth, x1.5-2.0 for 2020-2030

世界半導体売上高

(Billion USD)

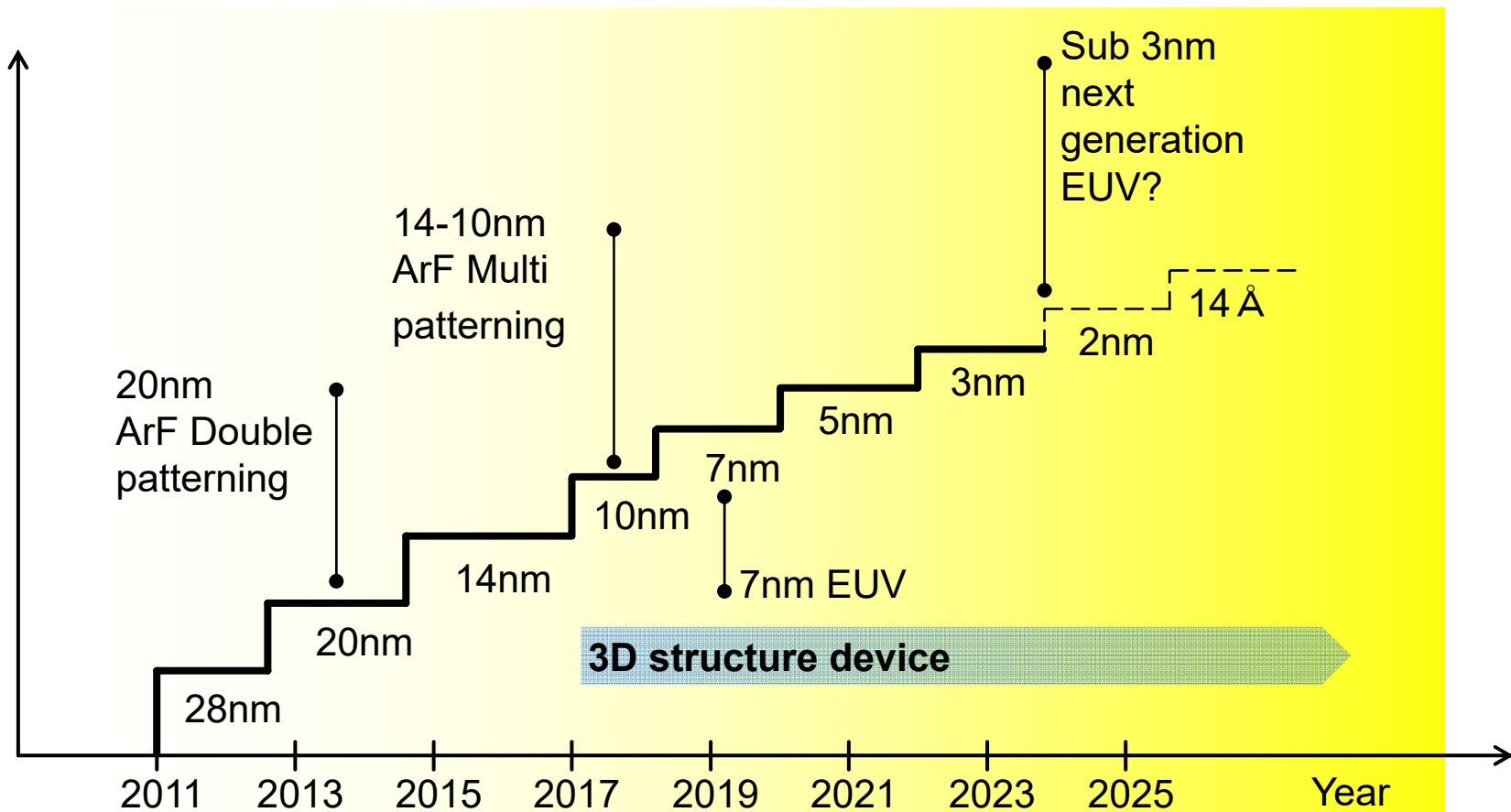
World IC Market Sales



Projection

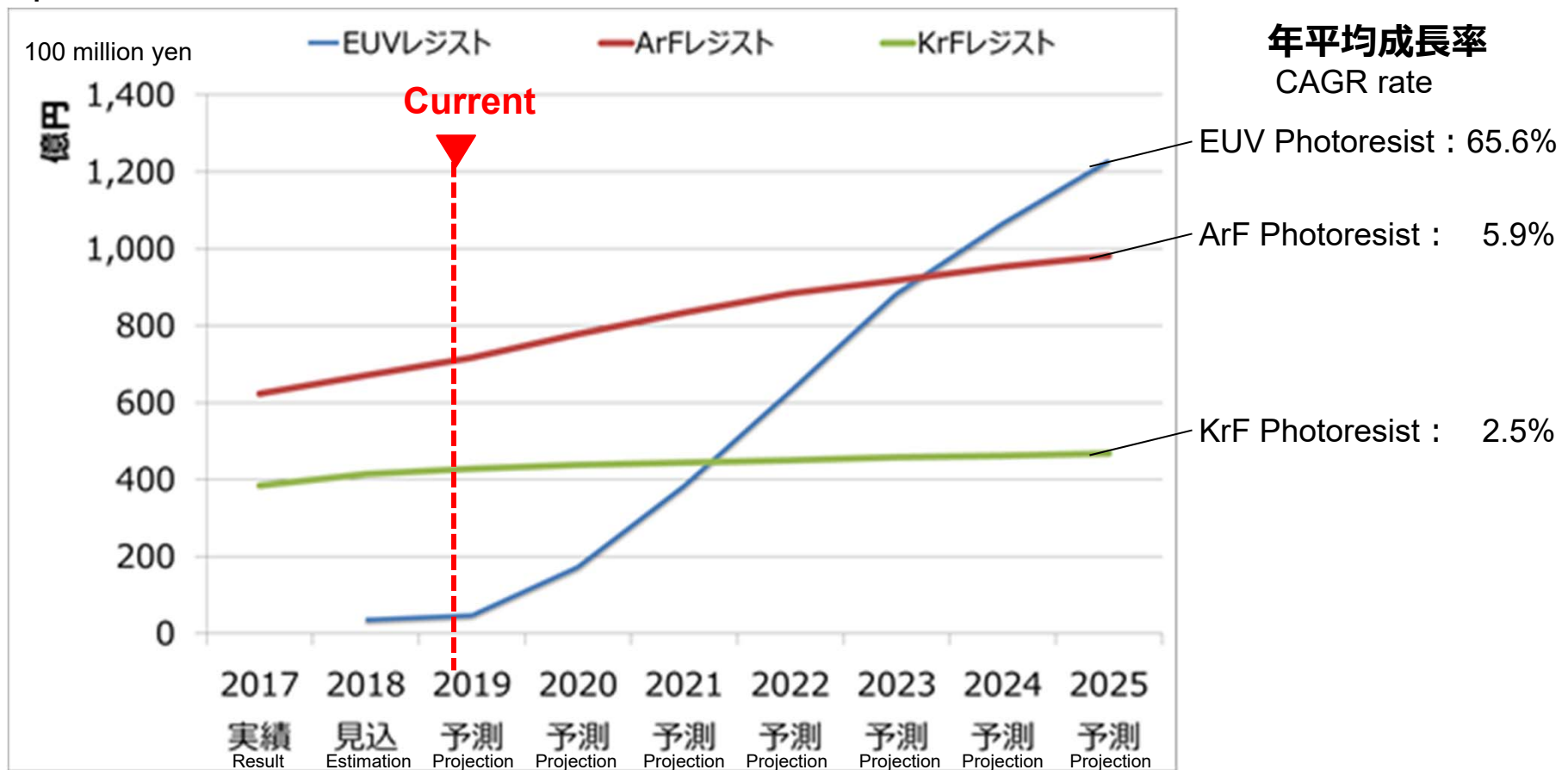
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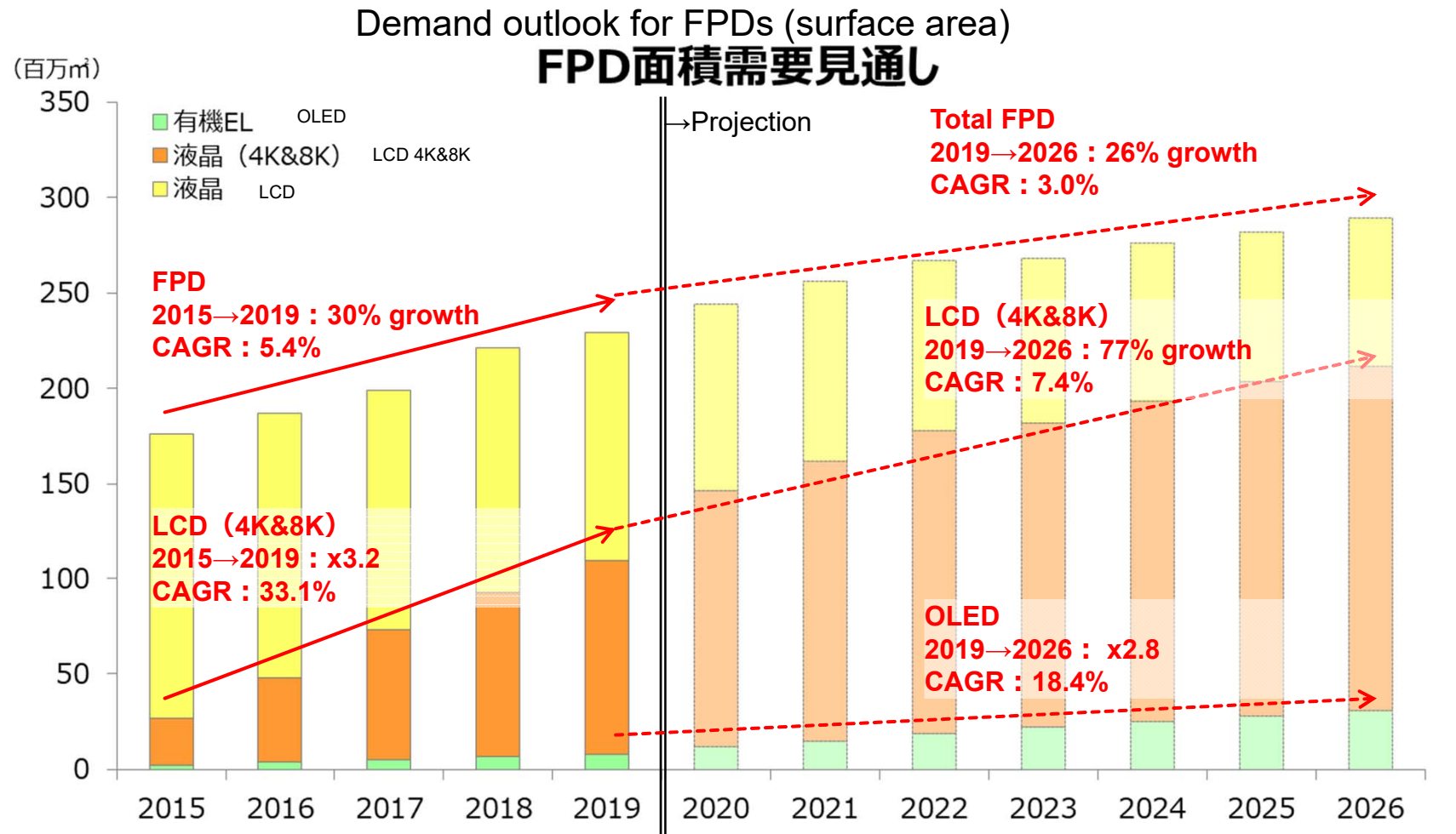


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FPD Market Trend

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- High end FPD combined LCD (4K&8K) & OLED shows higher CAGE, 8.6%, then it will be count as 70% of total in 2026.



Source : IHS Marketing

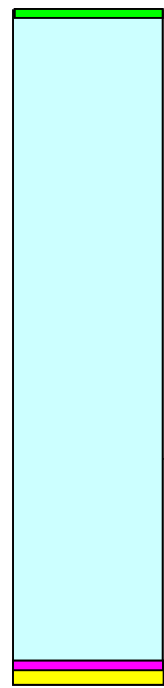
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Photoresist (liquid form)

Common photoresist composition ratio



Total 100%



Additives

High-purity organic solvent (PGMEA, EL etc.)

Photosensitive materials
PAG: Photo Acid Generator
PAC: Photo Acid Compound
Several% to several tens% for polymer

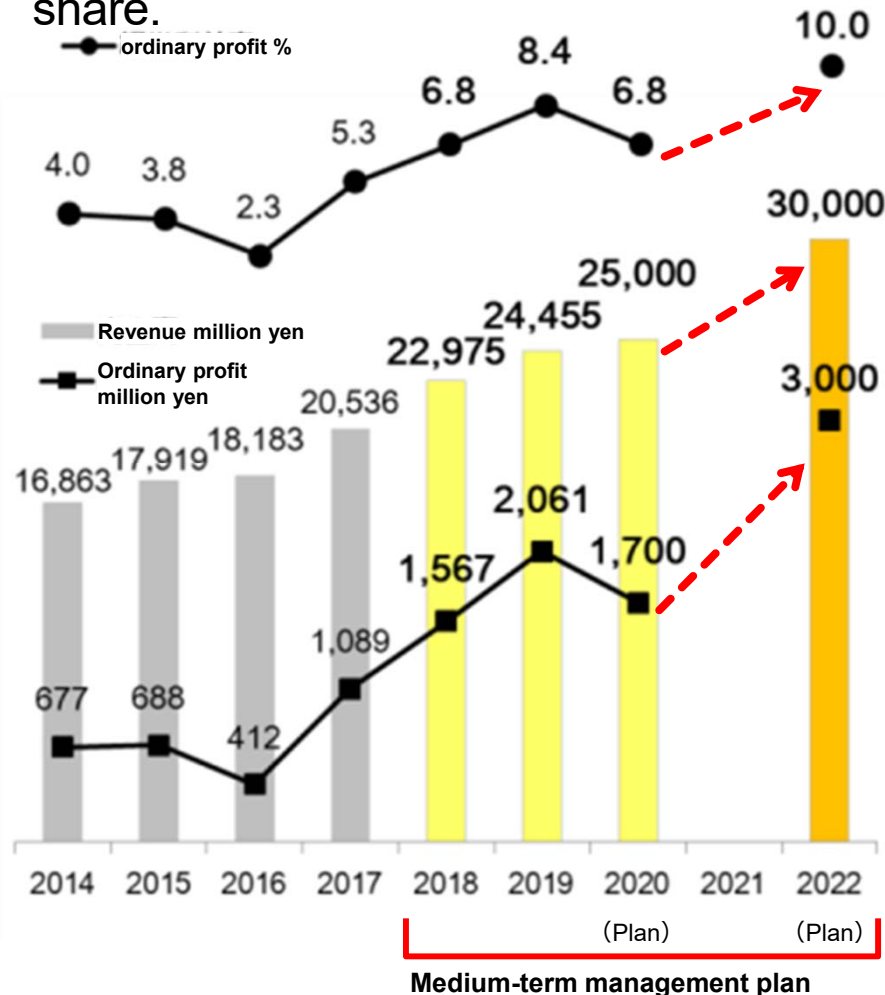
Polymer (Resist resin, Base polymer) ~10%

Our main products

*Blended with other materials by photoresist makers

Progress for Mid term plan TGC300

- Under COVID-19 outbreak, our business have risk for sales down, but we keep our mid term plan and try to achieve its goal:TGC300 : 2023 ending with sales 30billion yen, ordinary profit 3billion yen, ordinary profit more than 10%. Keep dividend as 20 yen per share.



- Exceeded our 2nd year plan in TGC300
(vs Projection Sales Δ 4%、Ordinary profit+21%)
(vs TGC300 Sales Δ 6%、Ordinary profit b+19%)
- Expanding Electronic material supply ability, production capacity investment on going as schedule
 - ✓ Existing facility enhancement→completed
 - ✓ New production building at Chiba plant→on going for completion by Sept 2020
- TGC all together work for TGC300 achievement

FY2021 March ending Projection

Background for FY2021 March ending projection

■ Market environment

- COVID-19 outbreak influence to demand for car, automobile and etc, it may lead risk of IC & FPD sales slow down
- 5G infrastructure investment, information communication technology innovation and data center investment bring continuous demand increase for high end IC, and expecting daily necessities products such as aroma chemicals for toiletry application steadily growing under the circumstance

■ Present status and assumption

- FY2020 March ending 4QT- FY2021 March ending 1QT, sales is increasing thanks to customer inventory increase for risk management under COVID-19 outbreak
- FY2021 March ending 2Q~3Q, consumer sales have risk to shrink.
- TGC's fixed cost will increase in 2nd half (YOY +800million yen) due to new building completion at Chiba plant

2021 March ending projection

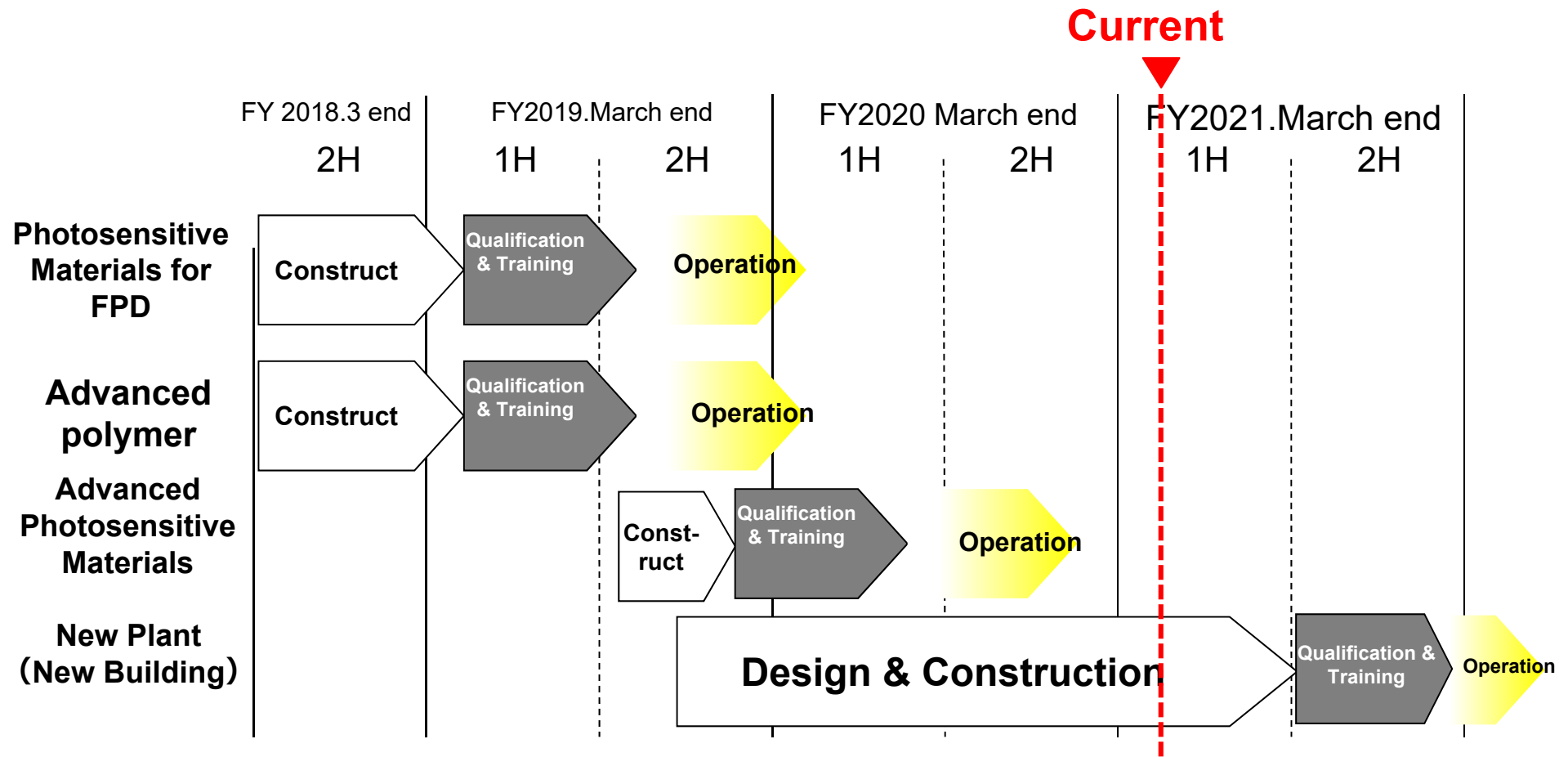
Assumption

- Sales for High end IC application (both Photosensitive & Chemical segment) and aroma chemical business continue to grow.
- Count for fixed cost increase (+800mio yen) as completion of new product building at Chiba plant on Sept , it bring lesser profit vs FY2020 Mach ending
- FY rate is ¥105/\$, dividend per share 20yen per share, no change form last FY

(million yen)	2020.3 result	2021.3 Projection	Prev. result vs projection	
			I/D AMT	I/D %
Revenue	24,455	25,000	+545	+2.2%
Operating profit	2,184	1,800	△384	△17.6%
Ordinary profit	2,061	1,700	△361	△17.5%
Net profit	1,852	1,100	△752	△40.6%
Earnings per share	233.43	138.59	※This is best our assumption on May 12 2020. We will promptly disclose new projection at any changes in the forecast.	
Dividend per share	20.00	20.00		
FX rate (USD)	¥109/\$	¥105/\$		

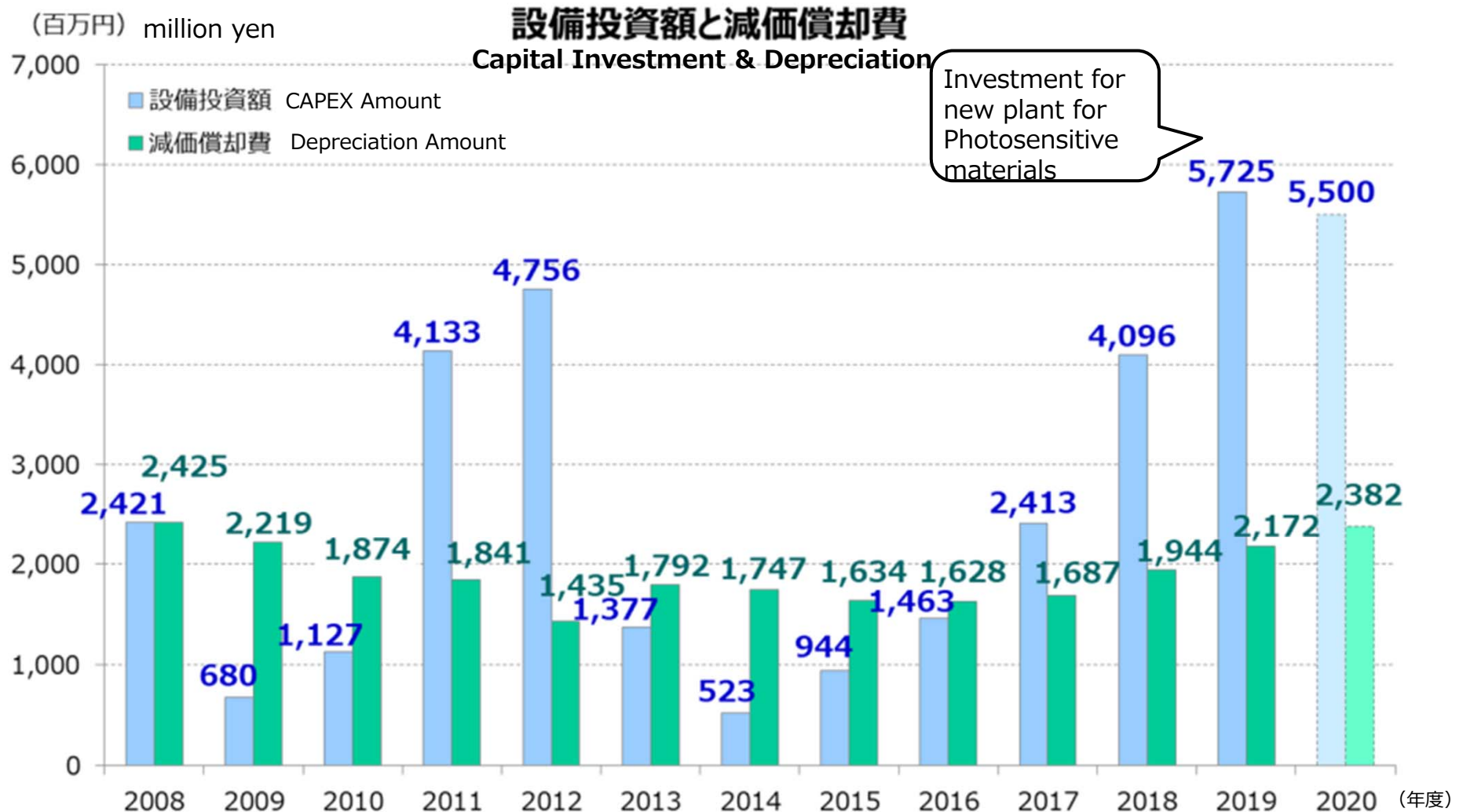
Progress of Photosensitive Materials Capacity Up Investment

- On going capacity up project to meet continuing increased demand from the market
- Completed 1st phase as PAC(FPD) and advanced polymer production capacity up as well as 2nd phase as PAG (advanced materials)
- On going 3rd phase for new production as to be completed in 2020 Sept.



Capital Investment & Depreciation History

- CAPEX for FY2021 ending plan as same level as previous year(about 5.5billion yen)
- Dep. Will be same level in FY2008



Photosensitive Materials (Chiba Plant) Construction status



【Construction status】
as of 2021 Apr 17

【The drawing of new production building at completion】



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Individual Development, to the global Chemical

 東洋合成工業株式会社

(見通しに関する注意事項)

本資料の業績予想は、現時点において見積もられた見通しであり、これまでに入手可能な情報から得られた判断に基づいております。

従いまして、実際の業績は、様々な要因やリスクにより、この業績予想とは大きく異なる結果となる可能性があり、いかなる確約や保証を行うものではありません。