ASM Pacific Technology

2020
Q1 Results
Announcement

22 Apr 2020

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Awards & Accolades

Forbes Asia
2019
BEST OVER
A BILLION

2019
HKMA
Quality
Award
GRAND
AWARD

SINGAPORE
QUALITY
AWARD
2019 WINNER

Winner of the
productronica
innovation award 2019

VLSIresearch
RANKED 1st
SUPPLIERS
Customer Satisfaction
2019

HK C
香港企業公民

BEST HR AWARDS 2019

ASIA'S OUTSTANDING
COMPANIES
POLL
2019
ASIAMONEY

VLSIresearch
THE BEST
SUPPLIERS
Customer Satisfaction
2019

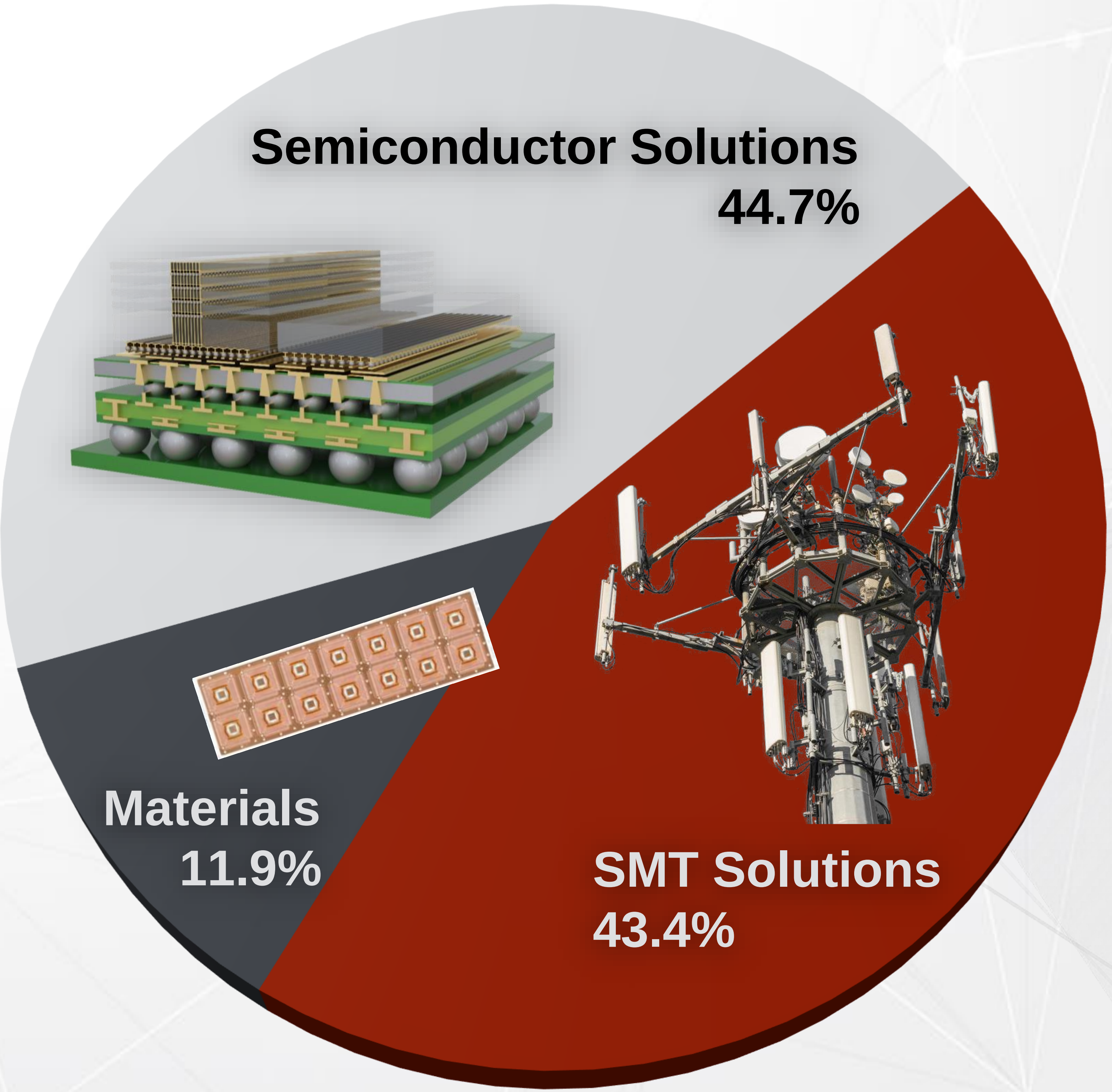
VLSIresearch
10 BEST
SUPPLIERS
Customer Satisfaction
2019

香港恒生大學
2019(第九屆) 君子 企業計劃
IN PURSUIT OF THE JUNZI SPIRIT

The World's Technology & Market Leader

Q1 2020 Group Revenue:

USD 434m



2018 THOMSON REUTERS
TOP100
GLOBAL TECH LEADER

ASMPT'S
Major Facilities
Around The World

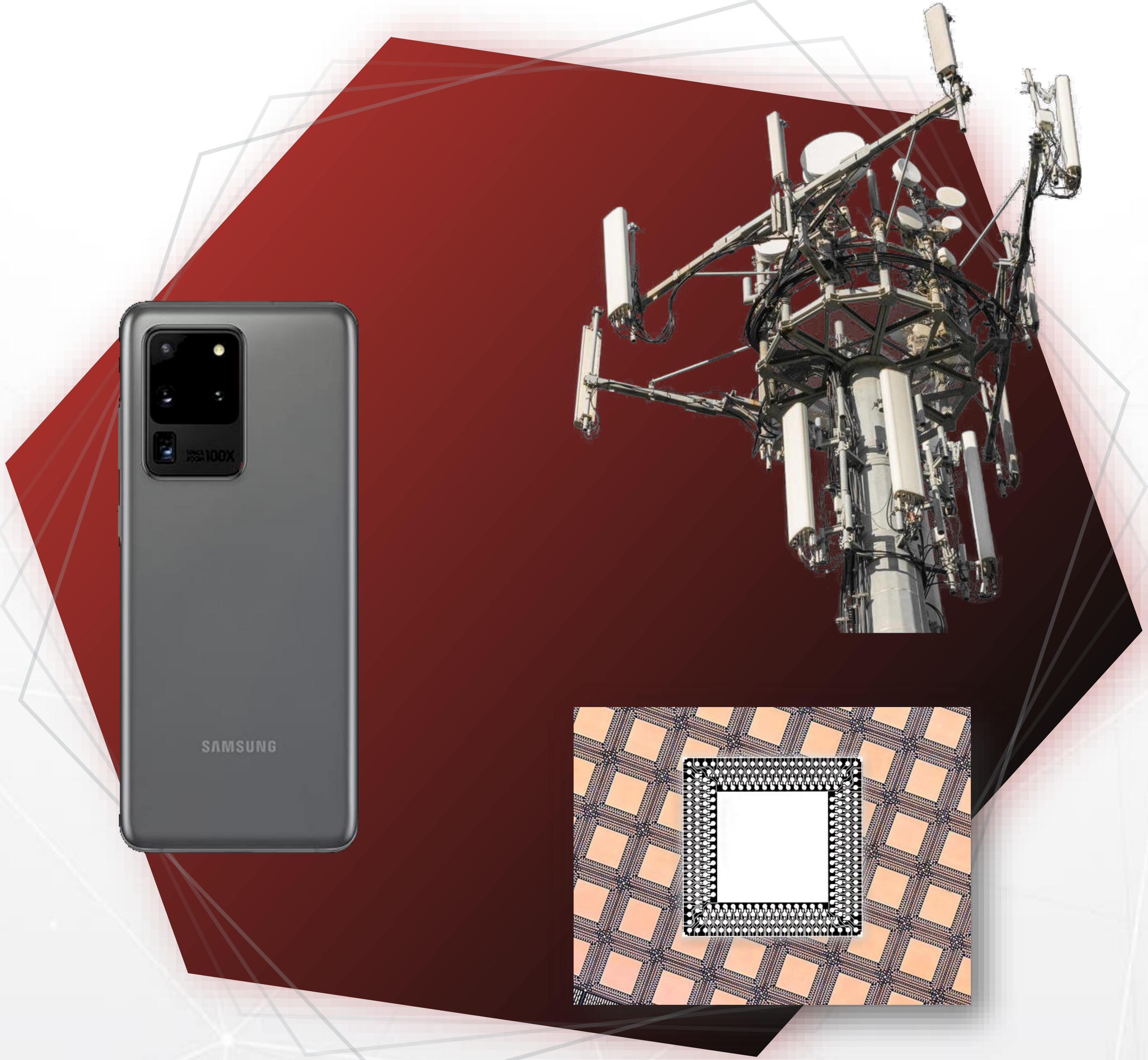
>2,000
Global R&D staff

>1,400
Patents on leading edge technologies

10
R&D centres worldwide

12
Manufacturing facilities

Three Business Segments With
Leading Market Positions



SEMICONDUCTOR SOLUTIONS[1]

#1 in Assembly & Packaging Equipment Market

Since 2002

2019 Worldwide
PAE Market Share:

~29%

SMT SOLUTIONS

#2 in SMT Equipment Market

2019 Worldwide
SMT Market Share:

~22%

MATERIALS

#3 in Leadframe Market

2018 Worldwide
Leadframe Market Share:

~9%

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[1] FORMERLY BACKEND EQUIPMENT SOLUTIONS

Sources: VLSI, SEMI and ASMPT Market Intelligence |

2020 Q1 Highlights

Q1 2020 Billings

	USD	QoQ	YoY
Group	434m	**-24.0%**	**-7.6%**
Semi Solutions Segment	194m	**-25.3%**	**-1.6%**
Materials Segment	52m	**-22.3%**	**+1.3%**
SMT Solutions Segment	188m	**-23.1%**	**-15.1%**

Group

- **Higher end of guidance**

SEMI

- **AP a key driver for Q1 20**
  - **AP > CIS revenue**
- **AP + CIS contributed close to 50% SEMI Revenue**

SMT

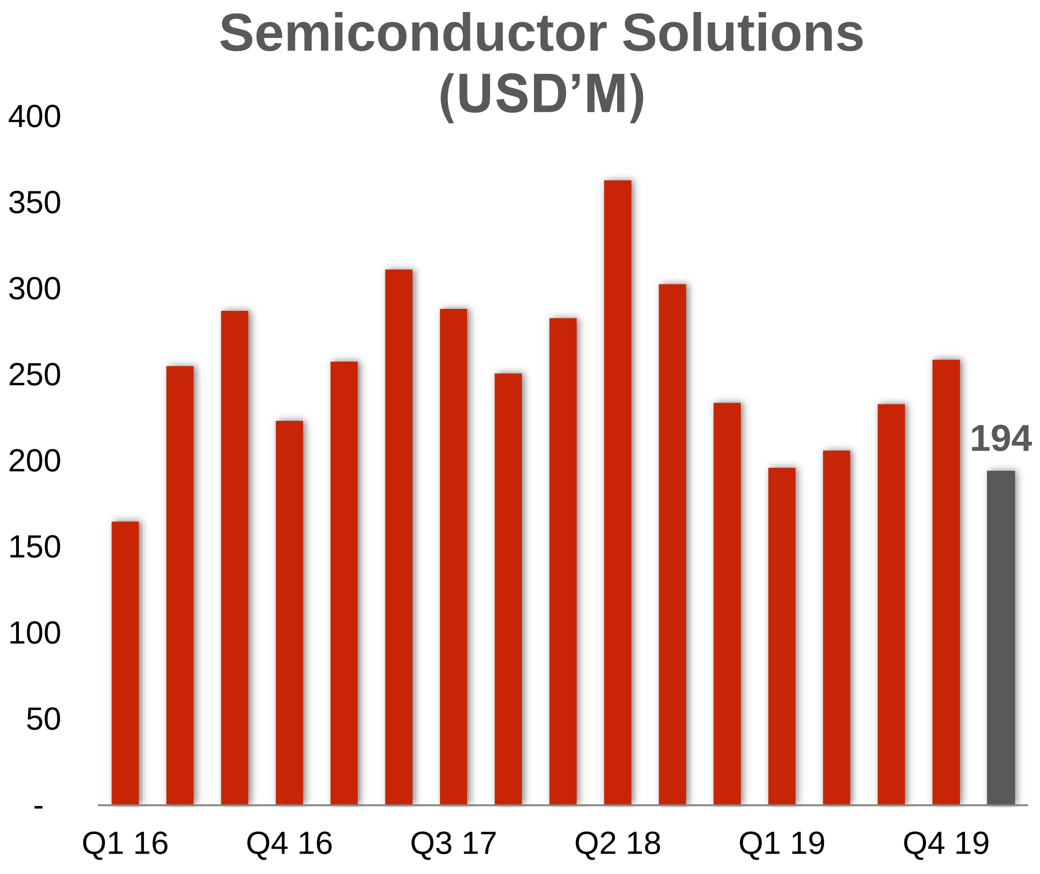
- **Driven by 5G + SiP**

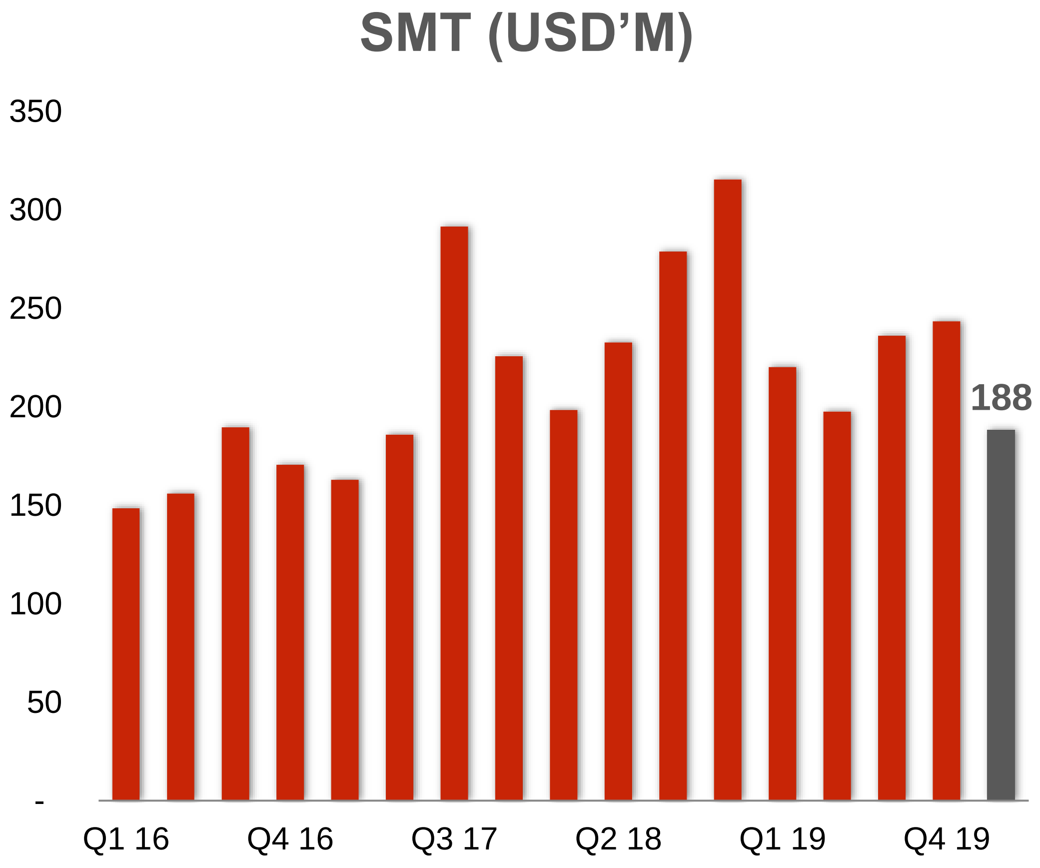
Q1 2020 Billings

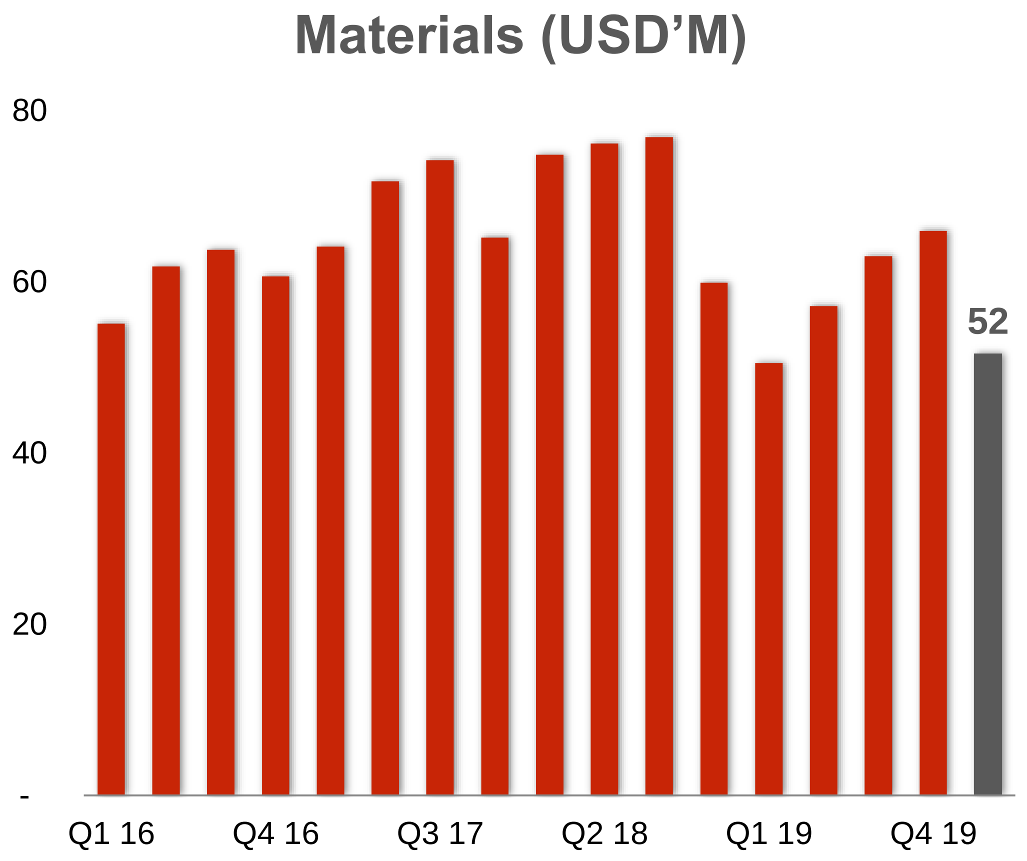
QoQ Growth:
-25.3%

QoQ Growth:
-23.1%

QoQ Growth:
-22.3%







Strong Q1 2020 Group Bookings

Q1 2020	USD	QoQ	YoY
Group	669m	+50.2%	+45.3%
Semi Solutions Segment	310m	+73.3%	+39.0%
Materials Segment	89m	+26.9%	+93.4%
SMT Solutions Segment	270m	+37.6%	+41.2%

Group

- 2nd highest ever Q1 bookings

SEMI

- Strong demand for traditional die/wire bonders
- Key driver
  - China localization
  - Advanced Packaging
  - General lighting
- Relatively weaker CIS demand due to softer smartphone market (COVID-19)

SMT

- Strong demand for 5G infrastructure and SiP
- High booking level similar to Q1 2018

Materials

- 5th Consecutive QoQ growth
- Record high booking

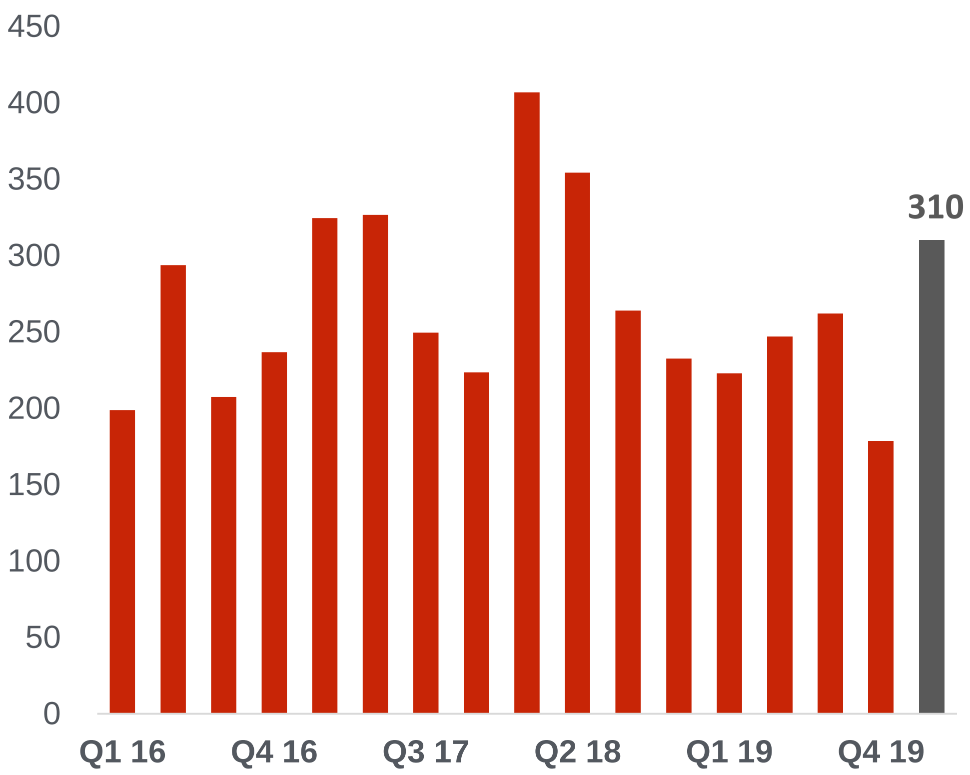
Q1 2020 Bookings – Business Segments

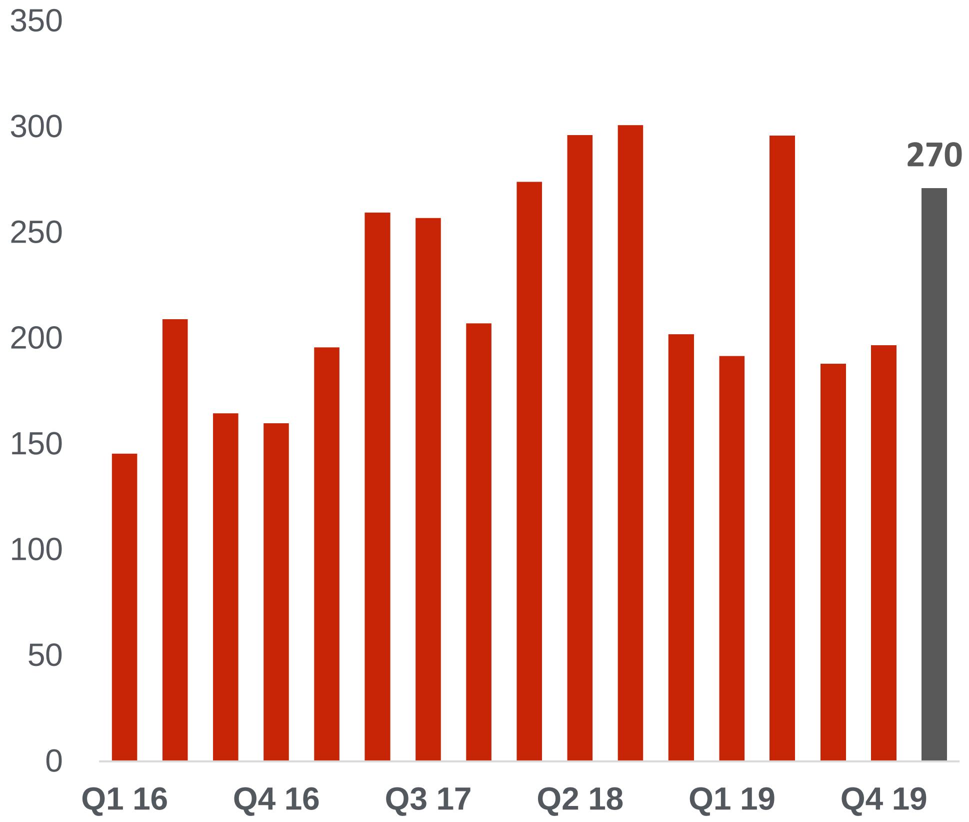
QoQ Growth Across All Business Segments

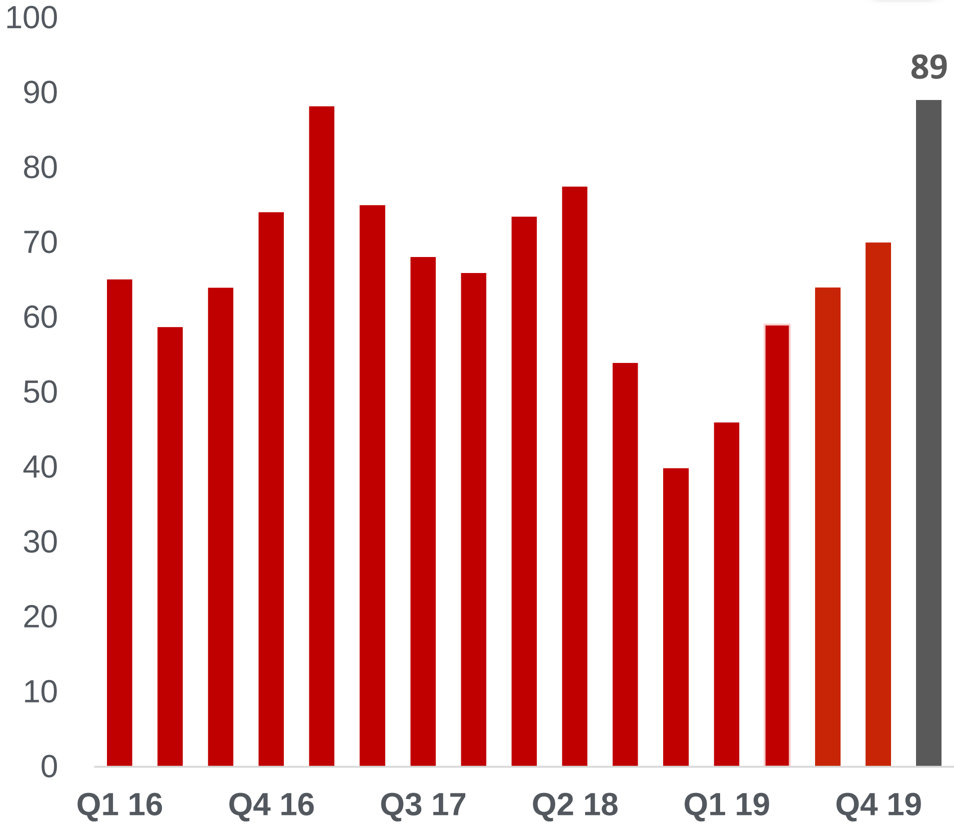
QoQ Growth:
+73.3%

QoQ Growth:
+37.6%

QoQ Growth:
+26.9%


Semiconductor Solutions (USD'M)


SMT (USD'M)


Materials (USD'M)

Record

Q1 2020 Group GM & Profitability

Gross Margin	Gross Margin	QoQ	YoY
Group	33.5%	**-125 bps**	**-37 bps**
Semi Solutions Segment	41.3%	**+45 bps**	**+202 bps**
Materials Segment	8.5%	**+7 bps**	**-188 bps**
SMT Solutions Segment	32.4%	**-312 bps**	**-214 bps**
Group Billing (USD)	434m	**-24.0%**	**-7.6%**
Operating Profit (HKD)	145m	**-65.4%**	**-39.3%**
Net Profit (HKD)	25m	**-88.6%**	**-76.6%**

Group

- **Net profit of HK$25m – beats guidance for a loss this quarter**
- **Group GM ▼ mainly due to SMT's volume and geographical mix**

SEMI

- **GM increased QoQ and YoY due to product mix**

SMT

- **GM declined largely due to volume and geographical mix**

YoY Bookings Growth:

+39.0%

Key Highlights:

Semiconductor Solutions Segment

- Demand for traditional die/wire bonders contributed to strong booking performance
- China localization effect and general lighting demand contributed to strong bookings for IC/Discrete and Optoelectronics
- Advanced Packaging continued to be strong
- AP + CIS contributed to close to 50% SEMI revenue; AP revenue contribution exceeded CIS in Q1 20
- Relatively weaker orders for CIS due to anticipated softness in smartphone market brought about by COVID-19

YoY Bookings Growth:
+41.2%

Key Highlights:

SMT Segment

- High booking level similar to Q1 2018 due to strong demand for
  - 5G infrastructure
  - System-in-Package ("SiP")
- Slow down in Automotive continued

YoY Bookings Growth:

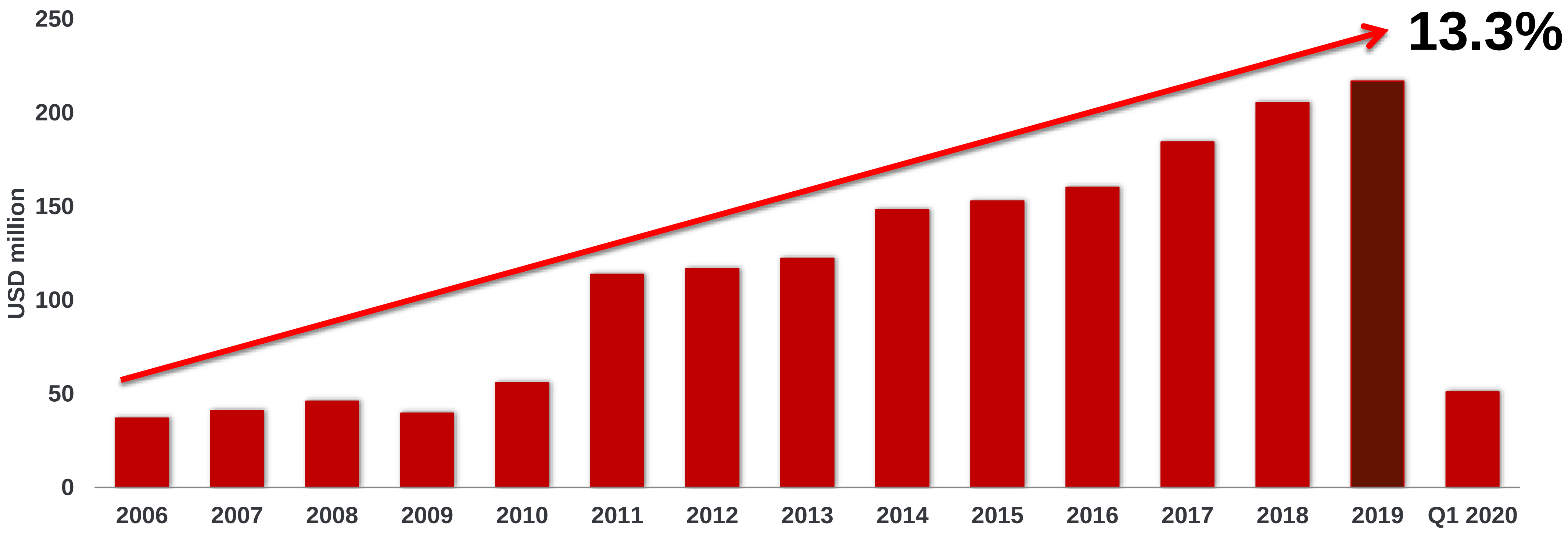
+93.4%

Key Highlights:

Materials Segment

- Consecutive 5 quarters of Quarterly Bookings growth
  - Overwhelming indicator of market recovery; COVID-19 outbreak introduces uncertainty
- Profit improved by 51.3% YoY and 61.4% QoQ in absence of the recently discontinued MIS business
- GM and profitability expected to improve due to shifting of Leadframe operations from Singapore to Malaysia – completion expected Mid-2021

R&D Commitment Makes Us a Preferred Partner of Choice

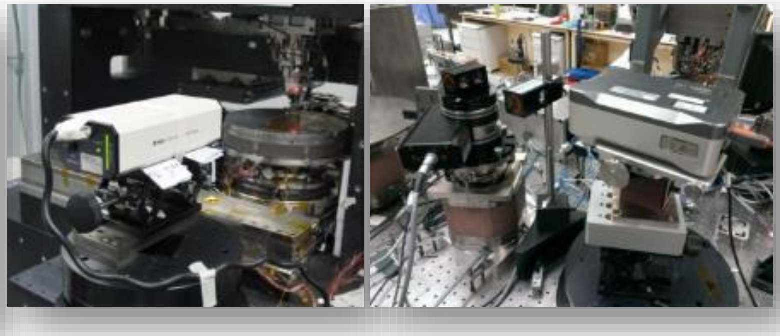


USD1,692 million invested in R&D

Q1 2020 R&D expenditure

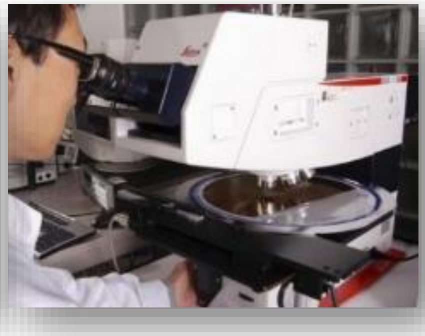
- US$ 51 million
- 13.3% of Equipment Sales

Package Interconnection



Optics precision engineering

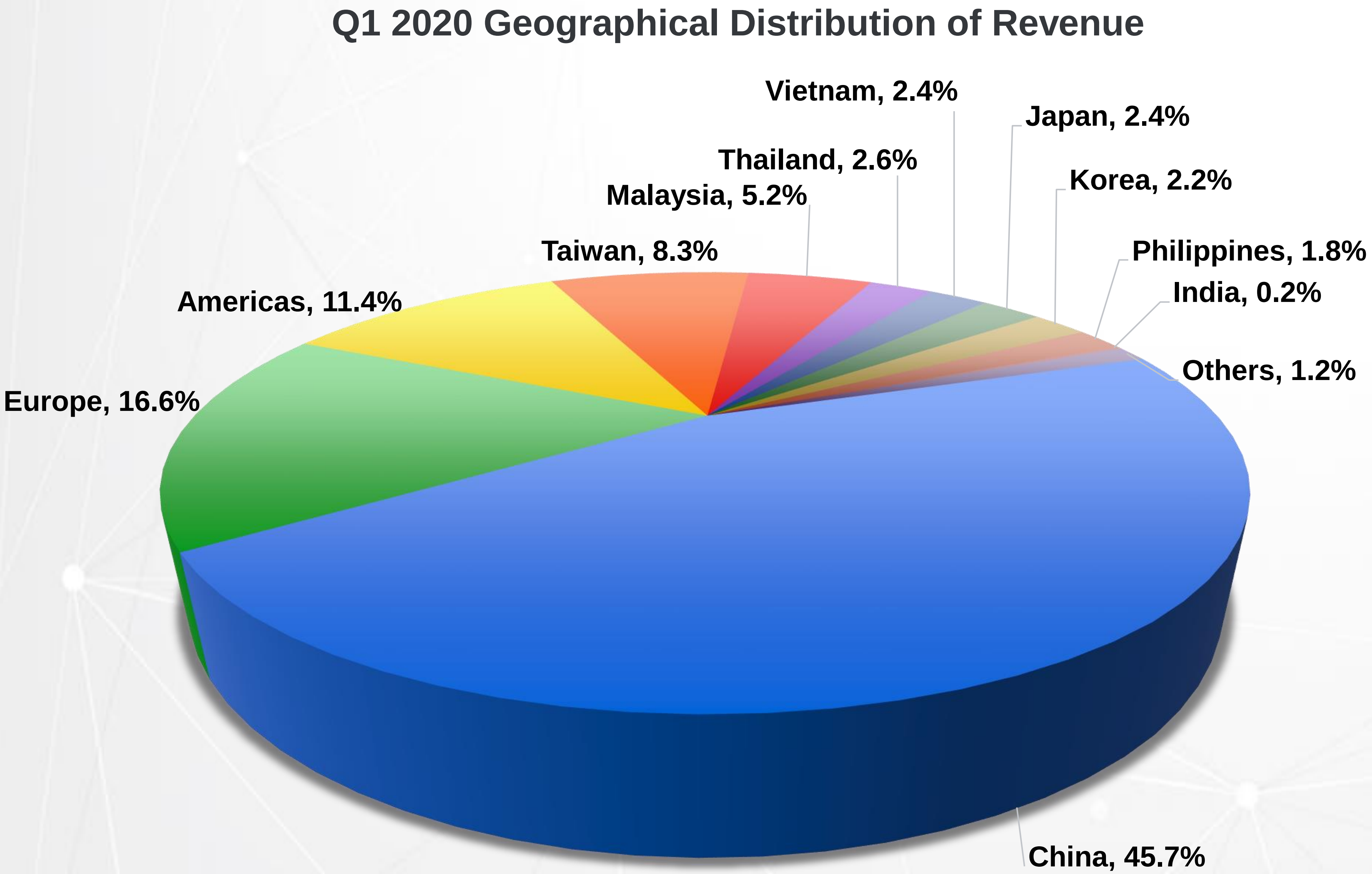
Vibration control



Laser dicing & grooving

SMT

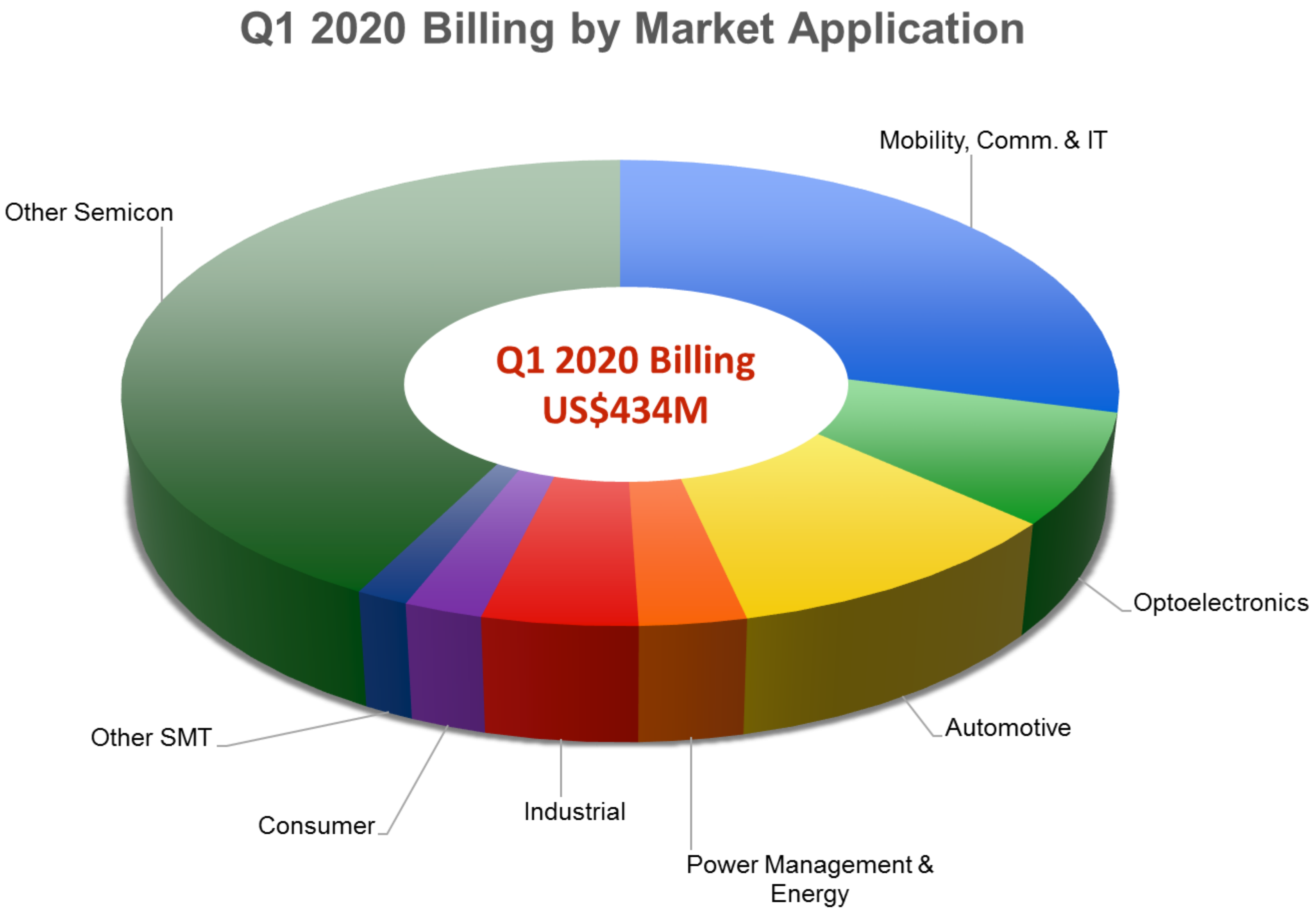
An Extensive Customer Base



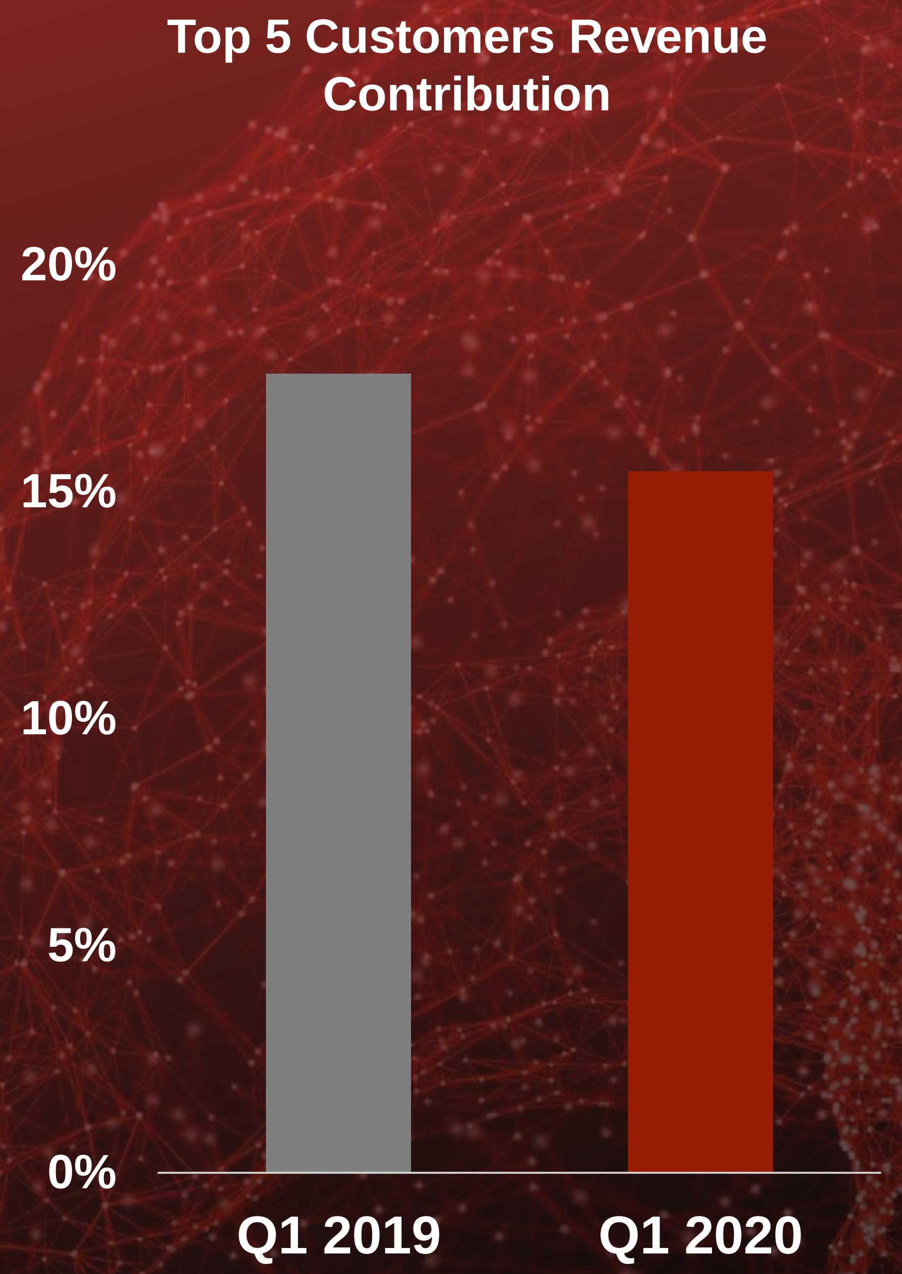
China Leads Market Recovery

- No single customer accounted for more than 10% of Group revenue
- Top 5 customers accounted for 15.4% of Group's Q1 2020 revenue
- Top 20 customers include:
  - World's leading Telecommunication and Information Technology provider
  - Leading High-Density Substrate makers
  - World's leading IDMs
  - Tier 1 OSATs, major OSATs in China
  - Major camera module makers
  - Top EMS providers
  - Leading automotive component suppliers
- Among Top 20 customers of Group:
  - 7 from SMT Solutions segment
  - 6 from both Semi Solutions & SMT Solutions segment

Q1 2020 Revenue Breakdown by Application Markets



More Resilient in a Downturn with Multiple Application Markets Strategy



New Lifestyle Norms Fast-tracking Digitalization

'Work from Home' Initiatives by Companies Worldwide

Online "Live" Fitness Classes

"Zoom, Microsoft Teams usage are rocketing"

Marketwatch, April 2020

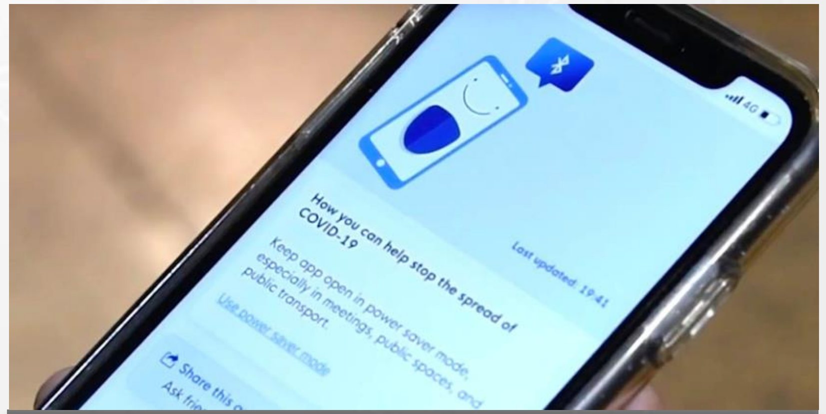
"First-Quarter Demand Picked Up on Laptop Orders"

Intel

"Apple and Google partner on COVID-19 contact tracing technology"

Apple, Google, April 2020

Home-based Learning adopted by schools



Harnessing Technology in Contact Tracing

ASM Pacific Technology

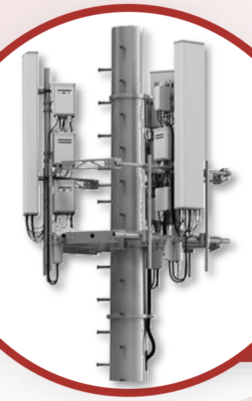
2018 THOMSON REUTERS TOP100 GLOBAL TECH LEADER

Data-Centric Era will **spur Semiconductor Demand**

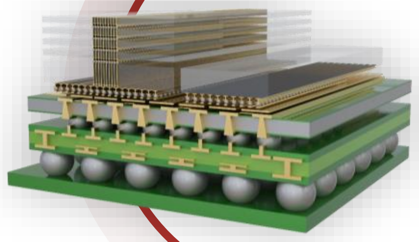
	Collect	**Transmit**	**Store**	**Analyse**	**Visualise**
	Camera, 3D Sensing, Industry IoT, Sensor, LIDAR	*5G, WiFi, LiFi*	*Big Data Centre, Cloud Computing, Memory*	*AI, TPU, Data Analytics, HPC*	*AR, VR, Micro LED, Mini LED*
ASMPT's Enabling Solutions	• CMOS Imaging Sensors • Active Alignment • Precision Die Attach	• Silicon Photonics • RF Filters • Wire Bonding • SAW Filters • BAW Filters • SMT Solutions • PVD	• Silicon Photonics • TCB • Wire Bonding • PLFO • Laser Dicing	• WLFO • PLFO • Pick & Place • Laser Grooving • TCB • PVD/ECD • Precision Die Attach • Heterogeneous Integration	• High Precision Die Attach • Mini/Micro LED Displays

Q1 2020 Growth Drivers For ASMPT

China Supply Chain Localization



5G



Advanced Packaging

Optoelectronics

5G Will Transform the World Beyond Our Imagination

5G

Infrastructure

2019-2025: 25-30mil
New 5G
Base Stations
Source: Topology Research Institute 2019

Big Data
Cloud Servers

"Power" Up
All Industries

Terminal

2023: 417mil
New 5G
Handsets
Source: IDC, 2019

Smart Consumer

50 MEMS & Sensors
per car
Automotive
Source: Bosch, 2019

ASMPT Solutions for 5G:

Photonics Solutions

IC & Discrete Solutions

Image Sensor Solutions

Advanced Packaging

SMT Solutions

Power Solutions

Wafer Separation

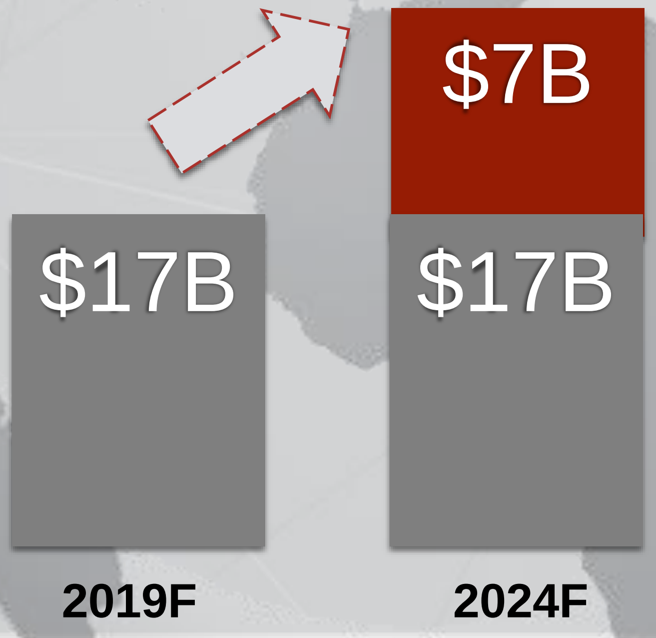
Broad-Based Applications In CIS Market

Worldwide CIS Unit Shipment CAGR (2020 – 2023) Source: Yole, Sep 2019

13%

CIS Market to Reach US$24B by 2024

Source: Yole, Q3 2019



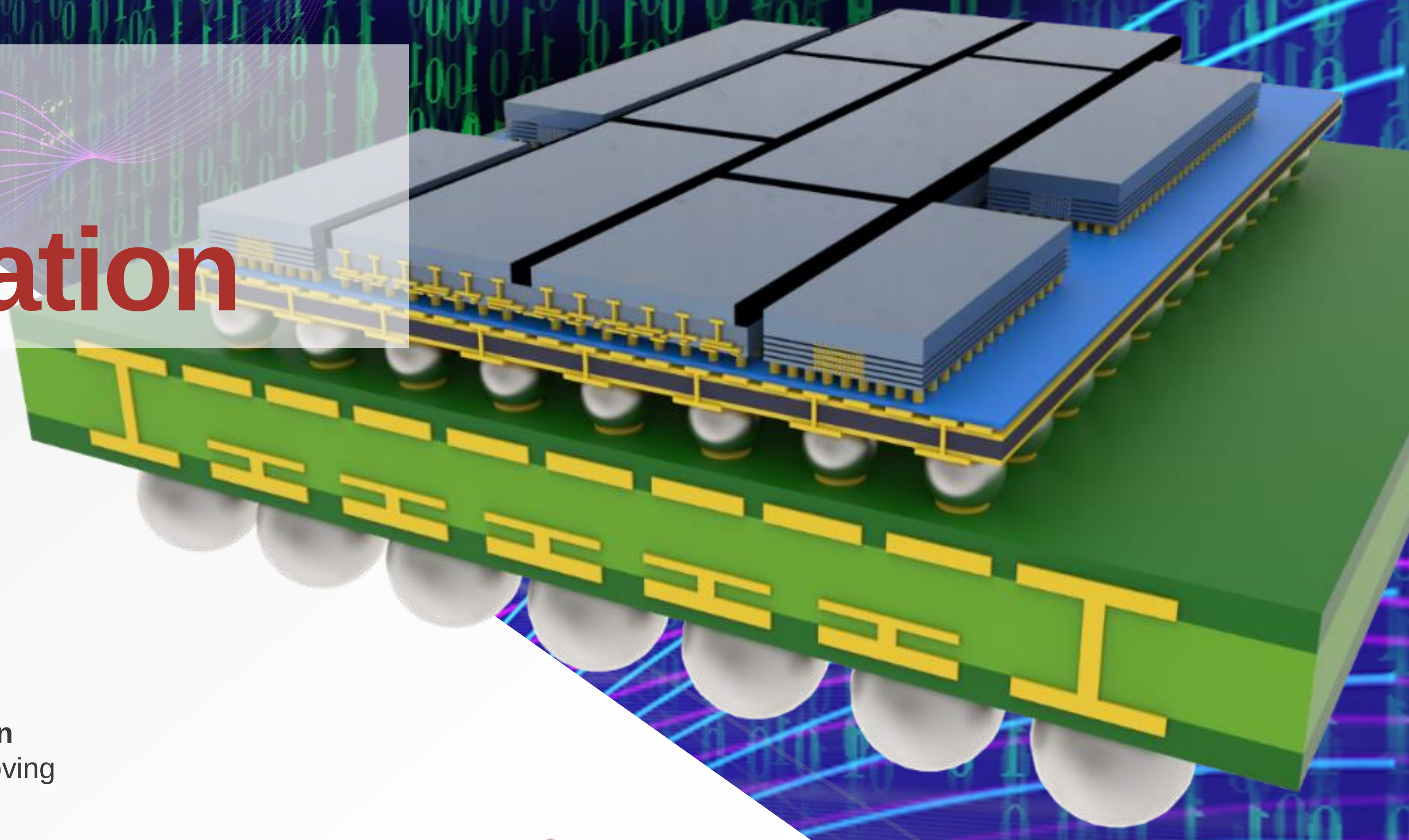

Smart Homes & Cities


Autonomous Vehicles

Advanced CIS Comparable to DSLR


Security with Facial Recognition

Advanced Packaging
Enables Heterogeneous Integration



SIPLACE CA
Die Attach & SMT
Wafer & Panel Recon
IPD tool

NEXX
PVD | ECD
Bumping, TSV & RDL

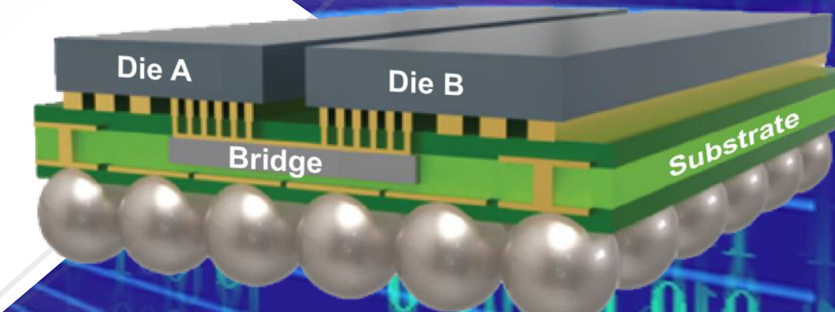
LASER 1205
Laser Separation
Wafer Dicing & Grooving

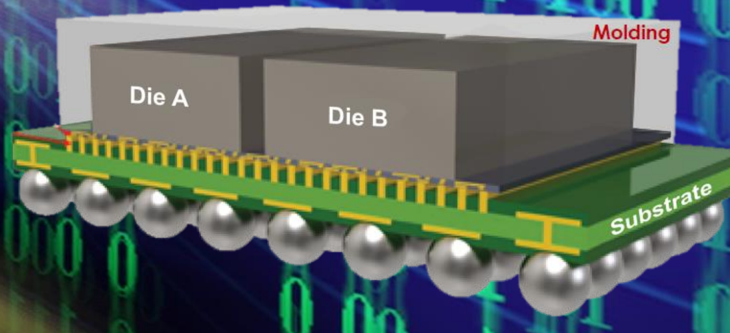
NUCLEUS XPM
HBM Bonder

NUCLEUS
Pick & Place
Wafer & Panel Level

ORCAS
Compression mold
Wafer & Panel Level

FIREBIRD
TCB, FLI





End Applications:

DATACENTERS
for HPC, Machine Learning

IoT ERA
Smart Wearables & Smart Machines (Factories)

AUTOMOTIVE
Sensors, Camera, Body Electronics, Safety Systems, Infotainment

GPU
for VR/AR & AI

Future Growth Drivers for OPTO Business

MiniLED

Medium to Large RGB / BLU Display

Market Size CAGR (2019 – 2025)

~ 35%

MicroLED

Small Gadget & Transparent Display

Market Size CAGR (2019 – 2025)

~ 131%

Fast Growing Applications

Source: LEDInside, Sep 2019

Application	CAGR	Period
Automotive Display	63%	(2019 – 2025)
Digital Display	35%	(2019 – 2025)
Large Display	31%	(2019 – 2025)
Smartphone Display	118%	(2022 – 2025)
Wearable Display	91%	(2020 – 2025)
VR Display	75%	(2021 – 2025)

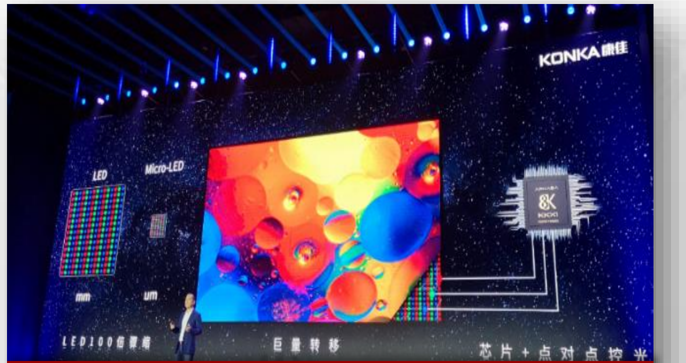
TCL
(TCL Conference - 2019)

LEYARD
(InfoComm - 2019)

RitDisplay + PlayNitride
(Touch Taiwan - 2019)

TIANMA
(SID - 2019)

CEDAR ELECTRONICS
(InfoComm - 2019)



KONKA
(KONKA Conference - 2019)

AUO
(Touch Taiwan - 2019)

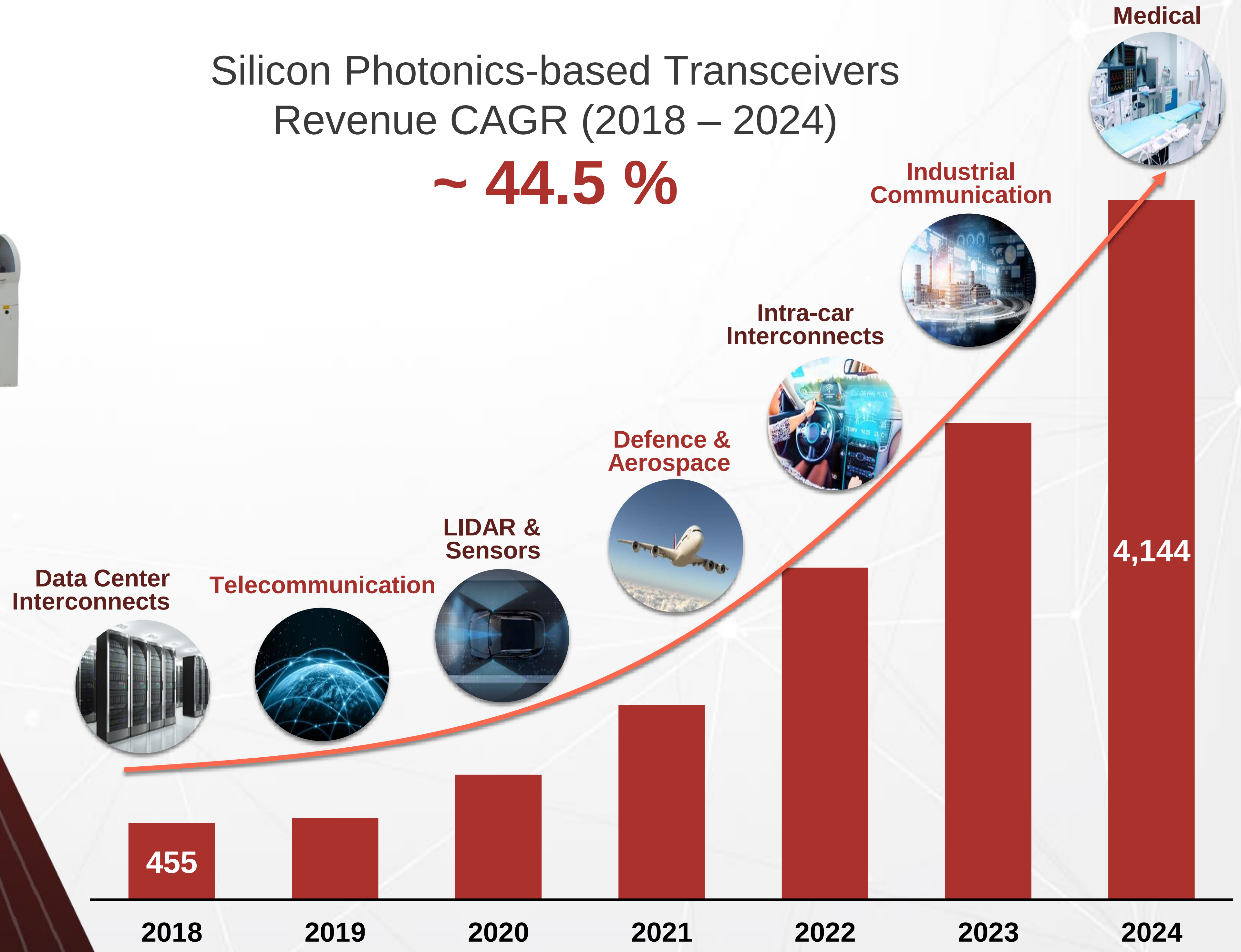
Samsung
(CES - 2019)

Source: Photos of displays from various conferences

Booming Applications in Photonics Market

Silicon Photonics-based Transceivers Revenue CAGR (2018 – 2024)

~ 44.5 %



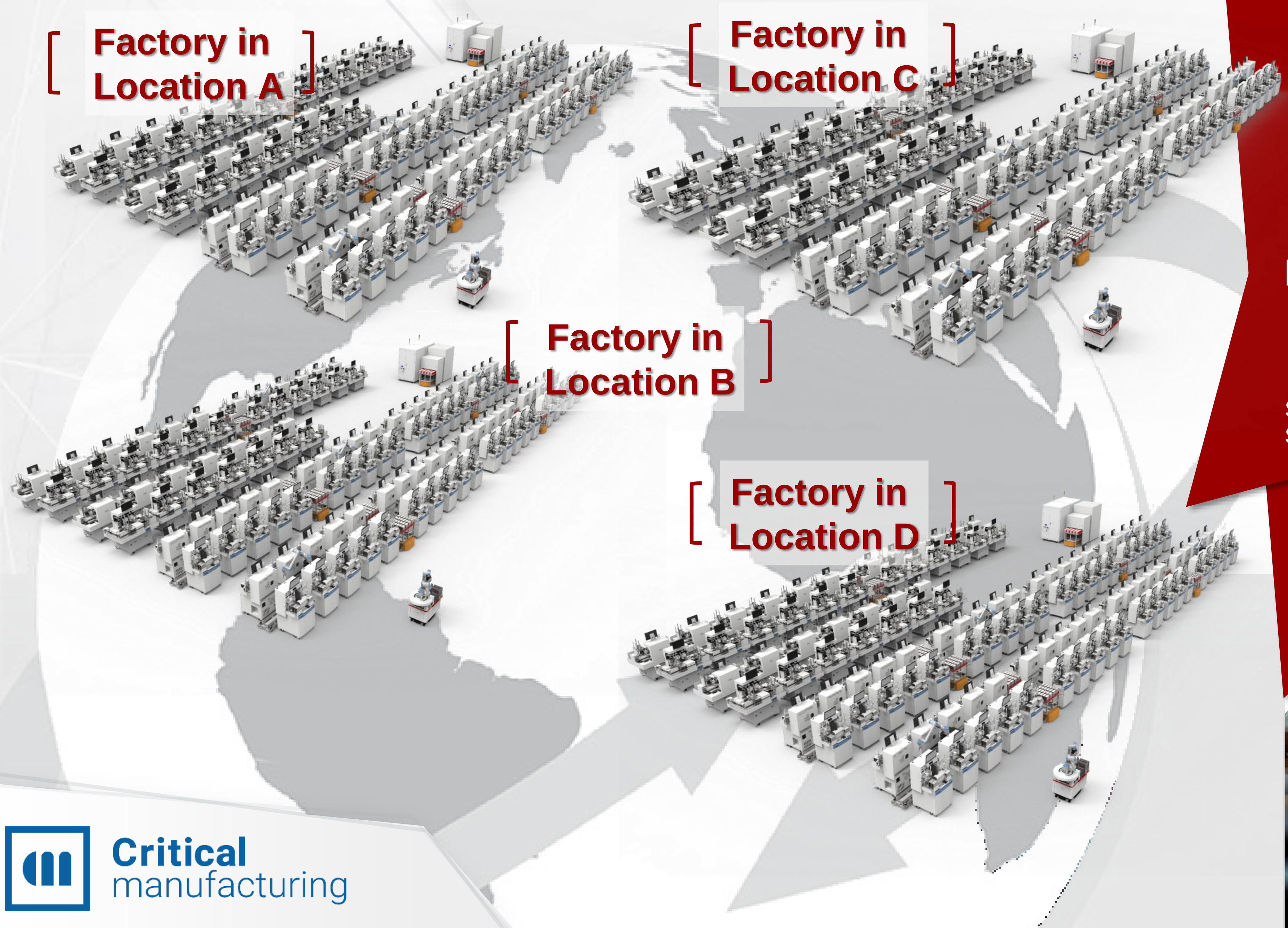
Si Photonics Market Size (USD'M)

Source: Yole, Apr 2019

ASM AMICRA

2018 THOMSON REUTERS TOP100 GLOBAL TECH LEADER

IIoT & Smart Manufacturing
Powered Up by 5G Network



Industrial IoT

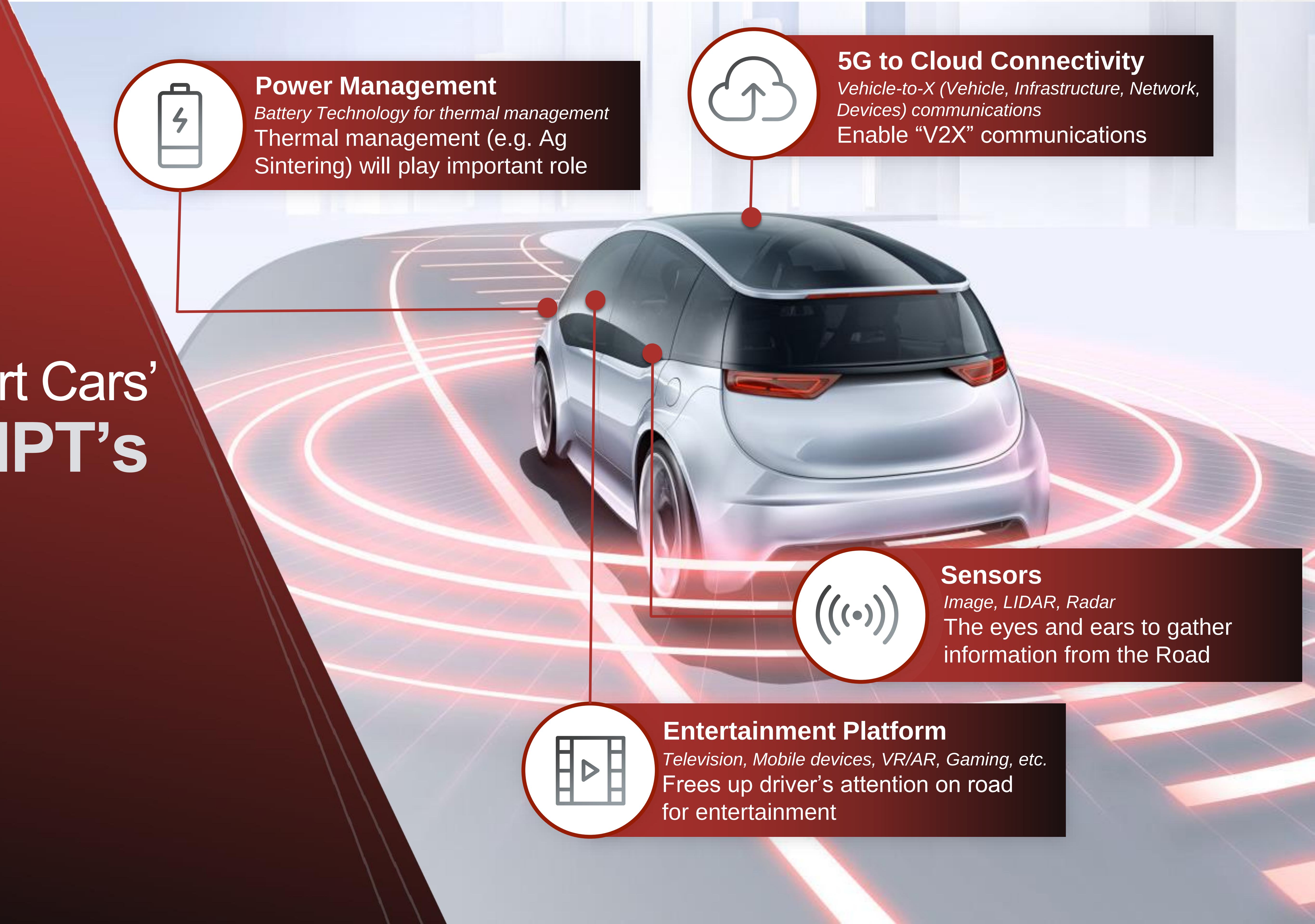
~ 24%

CAGR (2019 – 2023)

Source: Marketwatch,
Sep 2019

Critical manufacturing

How will ‘Smart Cars’
Drive ASMPT’s Growth?



Power Management
Battery Technology for thermal management
Thermal management (e.g. Ag Sintering) will play important role

5G to Cloud Connectivity
Vehicle-to-X (Vehicle, Infrastructure, Network, Devices) communications
Enable “V2X” communications

Sensors
Image, LIDAR, Radar
The eyes and ears to gather information from the Road

Entertainment Platform
Television, Mobile devices, VR/AR, Gaming, etc.
Frees up driver’s attention on road for entertainment

Outlook

COVID-19 Update

SITUATION UPDATE

- ~100% of employees in China plants have returned to work
- Some production capacity lost in China plants; Working towards recovering big portion of lost capacity through productivity gain and overtime
- Group is grateful to suppliers who had supported us
- While Singapore and Malaysian plants may be affected, impact is cushioned with diversified manufacturing base
- Minimal impact to plant operations in USA and Europe
- Strong local support teams to serve our customers to ensure smooth operations of our customers

Outlook

Q2 Group Bookings

- Double digit percent decline QoQ due to COVID-19 impact
- Strong momentum from Materials Segment in April month to date; Demand momentum for traditional tools in SEMI Solutions Segment not as strong

Q2 Group Billings

- US$500m – US$580m
- Demand from information technology and datacenter related applications driven by increased telecommuting and home-based working activities
- Strong Q1 Bookings expected to be delivered over several quarters due to production lead time as well as some delivery push-outs to Q3

Q2 Group Gross Margin

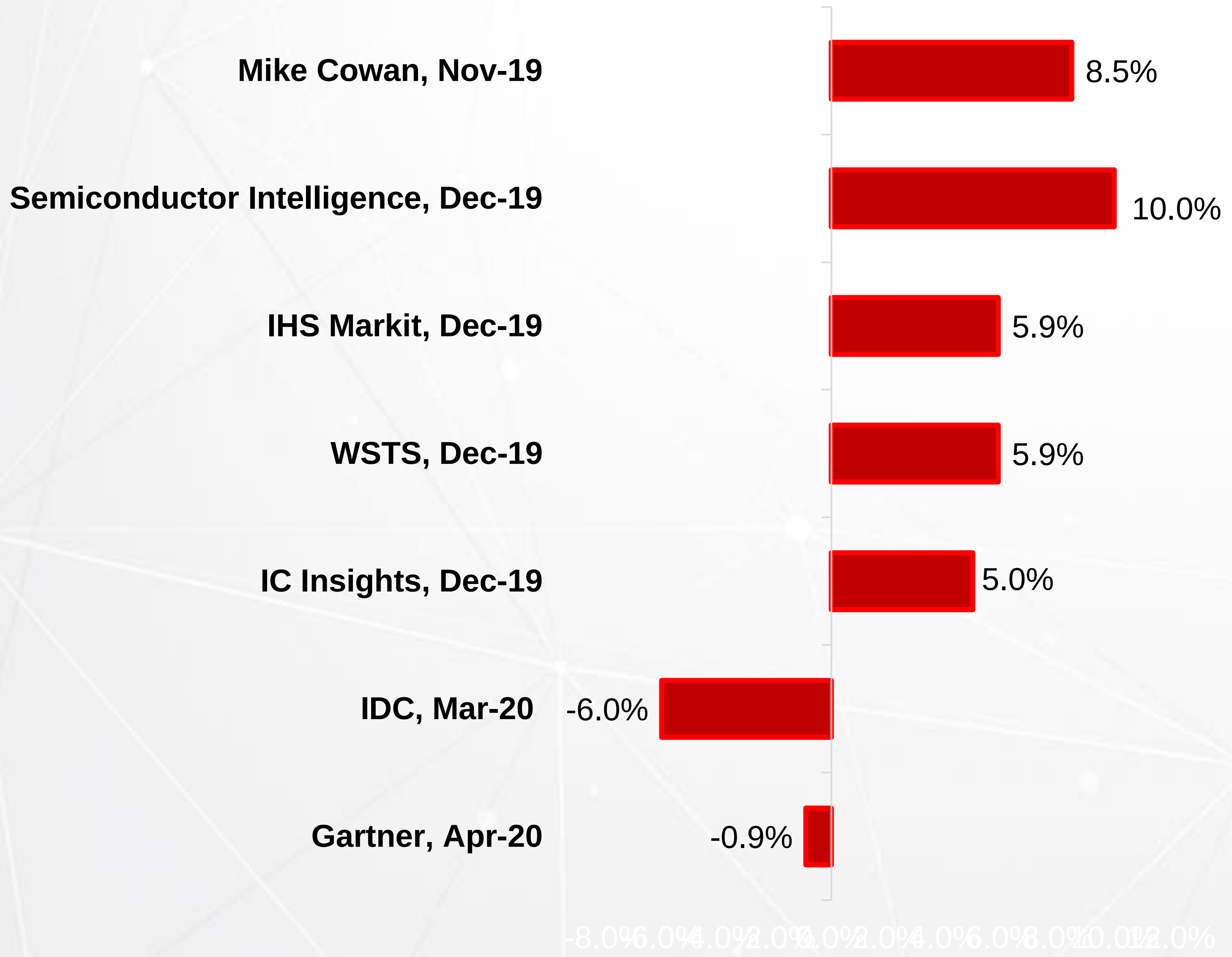
- 34.5% - 36.5%

A Myriad of Growth Drivers for 2020 & Beyond – *with acceleration for Digitalization*

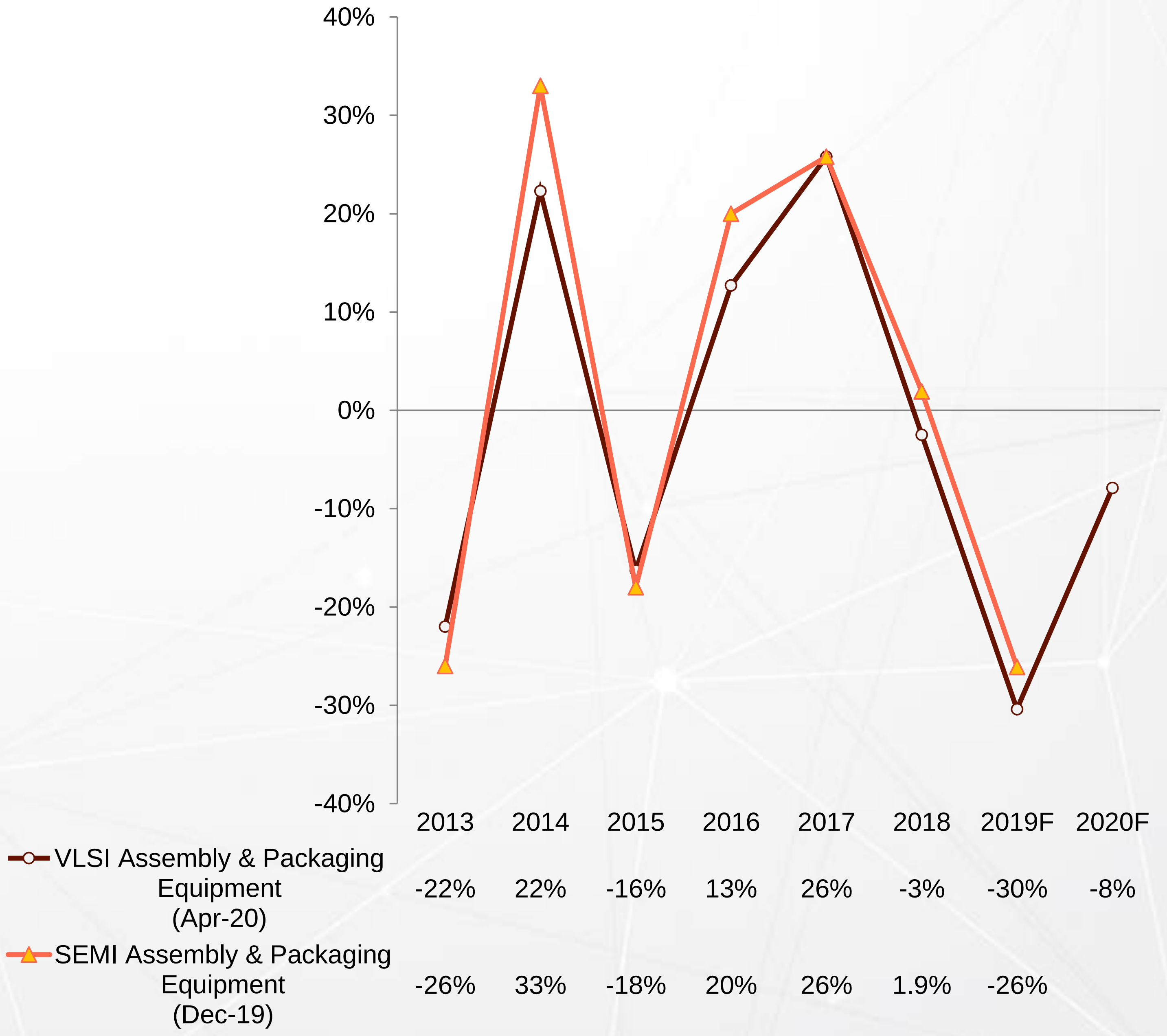
- 5G infrastructure and handsets: remains multi-year / multi-country driver
- Strong pick-up in demand from Chinese manufacturers to localize supply chains
- “New Normal” fast-tracking digitalization with worldwide home-based learning and remote working initiatives
- New market opportunities for Advanced Packaging, Silicon Photonics, Industrial IOT, mini and micro LED solutions
- ASMPT is well positioned to take advantage of this unique window of opportunity

Industry Growth Forecast (2020)

Semiconductor Industry



Forecast Global Assembly & Packaging Equipment Market



	2013	2014	2015	2016	2017	2018	2019F	2020F
VLSI Assembly & Packaging Equipment (Apr-20)	-22%	22%	-16%	13%	26%	-3%	-30%	-8%
SEMI Assembly & Packaging Equipment (Dec-19)	-26%	33%	-18%	20%	26%	1.9%	-26%	

Recent Awards & Recognition

Latest

VLSIresearch 10 BEST SUPPLIERS Customer Satisfaction 2019

10 BEST Segment	Rank	10 BEST CHIP MAKING EQUIPMENT SUPPLIERS OF 2019	Rating	Stars
LARGE	1	TERADYNE	9.44	★★★★★
	2	ADVANTEST	9.23	★★★★★
	3	ASML	9.18	★★★★★
	4	ASM Pacific Technology	8.79	★★★★½
	5	KLA Keep Looking Ahead	8.03	★★★★
	6	TEL TOKYO ELECTRON	7.83	★★★½
	7	KE KOKUSAI ELECTRIC	7.75	★★★½
	8	Lam RESEARCH	7.61	★★★½
	9	APPLIED MATERIALS	7.36	★★★
	10	Hitachi High-Tech	7.29	★★★
FOCUSED	1	Plasma-Therm	9.39	★★★★★
	2	AMEC	9.01	★★★★★
	3	FORMFACTOR	8.89	★★★★½
	4	EVG	8.51	★★★★½
	5	SPTS	7.46	★★★
	6	Cohu	7.09	★★★

Source: VLSIresearch
css 10BEST v19.05

VLSIresearch THE BEST SUPPLIERS Customer Satisfaction 2019

WHAT THE BEST SUPPLIERS OF 2019 ARE BEST AT

ADVANTEST	Partnering Technical Leadership	AMEC	Partnering Commitment
APPLIED MATERIALS	Technical Leadership Software	ASM Pacific Technology	Partnering Trust in Supplier
ASML	Technical Leadership Partnering	Cohu	Trust in Supplier Partnering
EVG	Partnering Recommend Supplier	FORMFACTOR	Field Engineering Support Technical Leadership
Hitachi High-Tech	Uptime Product Performance	JEM JAPAN ELECTRONIC MATERIALS	Product Performance Support After Sales
KLA Keep Looking Ahead	Technical Leadership Application Support	KE KOKUSAI ELECTRIC	Partnering Support After Sales
Lam RESEARCH	Field Engineering Support Recommend Supplier	Nidec SV TCL	Commitment Support After Sales
Nikon	Partnering Trust in Supplier	Plasma-Therm	Recommend Supplier Support After Sales
SPTS	Recommend Supplier Field Engineering Support	TECHNOPROBE Wafer Probing Technologies	Commitment Partnering and Recommend Supplier
TERADYNE	Recommend Supplier Technical Leadership	TEL TOKYO ELECTRON	Technical Leadership Uptime

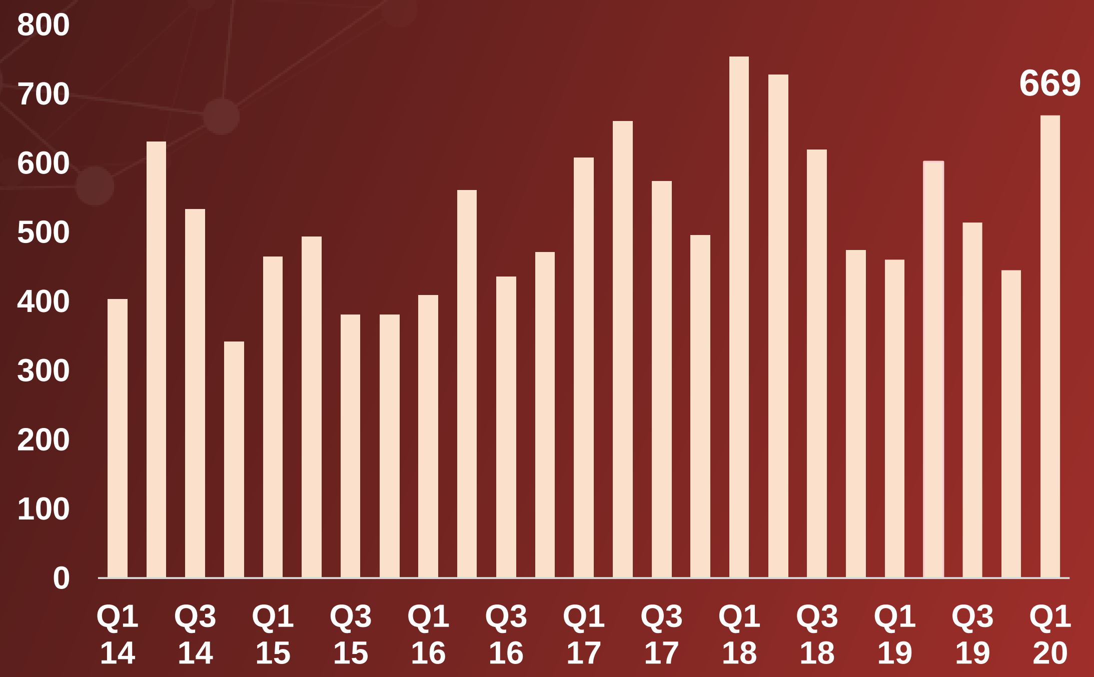
Source: VLSIresearch Doc: css_THEBEST_v19.05

2018 THOMSON REUTERS TOP100 GLOBAL TECH LEADER

Q1 2020
Financial Highlights

Q1 2020 Group Bookings

QoQ Growth:
+50.2%

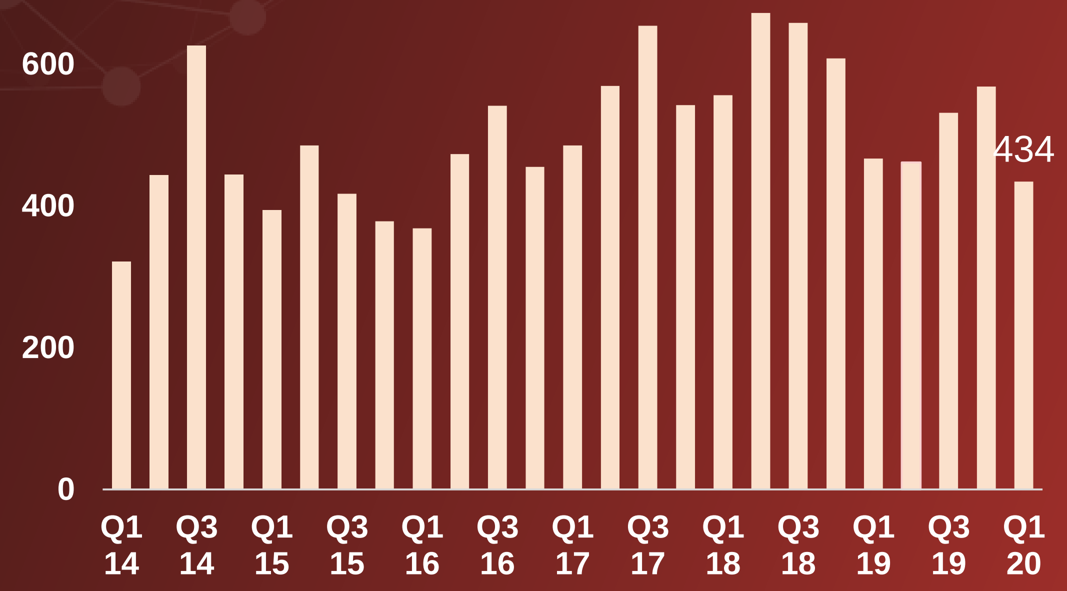


Quarterly Group Bookings (USD‘M)

	Q1 2020 Bookings		
	USD	**YoY**	**QoQ**
Group	669m	**+45.3%**	**+50.2%**
Semi Solutions Segment	310m	**+39.0%**	**+73.3%**
Materials Segment	89m	**+93.4%**	**+26.9%**
SMT Solutions Segment	270m	**+41.2%**	**+37.6%**

Q1 2020 Group Billings

QoQ Growth:
-24.0%



Quarterly Group Billings (USD'M)

	Q1 2020 Billings		
	USD	**YoY**	**QoQ**
Group	434m	-7.6%	-24.0%
Semi Solutions Segment	194m	-1.6%	-25.3%
Materials Segment	52m	+1.3%	-22.3%
SMT Solutions Segment	188m	-15.1%	-23.1%

2018 THOMSON REUTERS TOP100 GLOBAL TECH LEADER

Q1 2020 Group Financial Highlights

		Q1 2020	
		QoQ	**YoY**
Bookings (USD)	**669m**	**+50.2%**	**+45.3%**
Revenue (USD)	**434m**	**-24.0%**	**-7.6%**
Gross Margin	**33.5%**	**-125 bps**	**-37 bps**
EBIT (HKD)	**124m**	**-59.1%**	**-53.1%**
Net Profit (HKD)	**25m**	**-88.6%**	**-76.6%**
Net Profit Margin	**0.7%**	**-424 bps**	**-221 bps**

Q1 2020 Segment Results – Semiconductor Solutions

		Q1 2020	
		QoQ	**YoY**
Bookings (USD)	**310m**	**+73.3%**	**+39.0%**
Billings (USD)	**194m**	**-25.3%**	**-1.6%**
Gross Margin	**41.3%**	**+45 bps**	**+202 bps**
Segment Profit (HKD)	**85m**	**-52.6%**	**+59.8%**
Segment Profit Margin	**5.6%**	**-321 bps**	**+215 bps**

Q1 2020 Segment Results – Materials

		Q1 2020	
		QoQ	**YoY**
Bookings (USD)	**89m**	**+26.9%**	**+93.4%**
Billings (USD)	**52m**	**-22.3%**	**+1.3%**
Gross Margin	**8.5%**	**+7 bps**	**-188 bps**
Segment Profit (HKD)	**16m**	**+61.4%**	**+51.3%**
Segment Profit Margin	**3.9%**	**+205 bps**	**+130 bps**

Q1 2020 Segment Results – SMT Solutions

		Q1 2020	
		QoQ	**YoY**
Bookings (USD)	**270m**	**+37.6%**	**+41.2%**
Billings (USD)	**188m**	**-23.1%**	**-15.1%**
Gross Margin	**32.4%**	**-312 bps**	**-214 bps**
Segment Profit (HKD)	**126m**	**-54.6%**	**-40.8%**
Segment Profit Margin	**8.6%**	**-597 bps**	**-374 bps**

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