

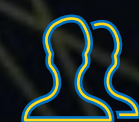


M A L A Y S I A N P A C I F I C I N D U S T R I E S B E R H A D

I N V E S T O R P R E S E N T A T I O N

Q 3 F Y 2 0 2 3 (J a n - M a r ' 2 3)

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FINANCIALS & SUMMARY



Business overview

MPI – A MEMBER OF THE HONG LEONG GROUP

Hong Leong Group and MPI

- The Hong Leong Group was established over 50 years ago and is one of the largest conglomerates in Asia
- Carsem and Dynacraft are operating companies within Malaysian Pacific Industries, which is a part of the Manufacturing & Distribution Services segment of Hong Leong Group
- Carsem was acquired by Hong Leong over 30 years ago
- Carsem has 49 years experience in semiconductor assembly and testing
- Today, Carsem is one the most trusted and recognized names in the Outsourced Semiconductor Assembly & Test (OSAT) Industry

Hong Leong Group Holdings

- Banking & Financial Services segment (2) is the largest segment with over 300 banks in Asia including insurance services
- Property Development & Investment segment (3) builds and manages commercial and residential real estate around the world
- Hospitality & Leisure segment (4) is comprised of hotel and casino operators in Macau and Las Vegas
- Hong Leong continues to grow by acquisition and owns more than 50% stake in each of their group companies

The Hong Leong Group One of the Largest Conglomerates in Malaysia





Financial performance snapshot

STRONG FUNDAMENTALS CREATE BUSINESS RESILIENCE IN TOUGH TIMES

Revenue (RM million)

472

Q3 FY23

EBITDA (%)

17%

Q3 FY23

Net cash (RM million)

813

as of Q3 FY23

CAPEX (RM million)

44

Q3 FY23

- Focused growth & transformation strategy with execution capabilities
- Cost prudence
- Productivity, innovation & sustainability focus with continued investments
- Customer focused business model
- Strong & experienced leadership
- Functional & strong company culture

Note: FY23 = July 2022 – June 2023





Business outlook

Semiconductor industry growth has slowed down



- Weak 2023 outlook with expectations of a 11% drop in semiconductor industry revenue vs. 2022 (Gartner);
- Economic headwinds (inflation and recessionary risks) persist leading to sluggish end consumer demand environment;
- Elevated inventory levels and dipping chip prices are fueling the slowdown in semiconductor industry

- Trends, such as the switch to battery electric vehicles, autonomous driving, vehicle connectivity;
 - Adoption of 5G, artificial intelligence, and sensing devices



Long term growth drivers

Challenges to MPI's business



- End market demand drop and deferment;
- Cost surges – electricity tariff increase, transportation, material and equipment costs;
- Industrywide talent scarcity – upskilling and specialized hiring plans in place

- Prudent cost management measures such as energy consumption optimization, freight cost reduction, etc.;
 - Close collaboration with customers to ensure a healthy overall sales pipeline – short & long term;
 - Capacity expansions at China and Malaysia - a reliable supply centre based out of Malaysia and China;
- Strong cash position to pursue technology/ company acquisitions to move further into advanced packaging space;



MPI's responsive strategy

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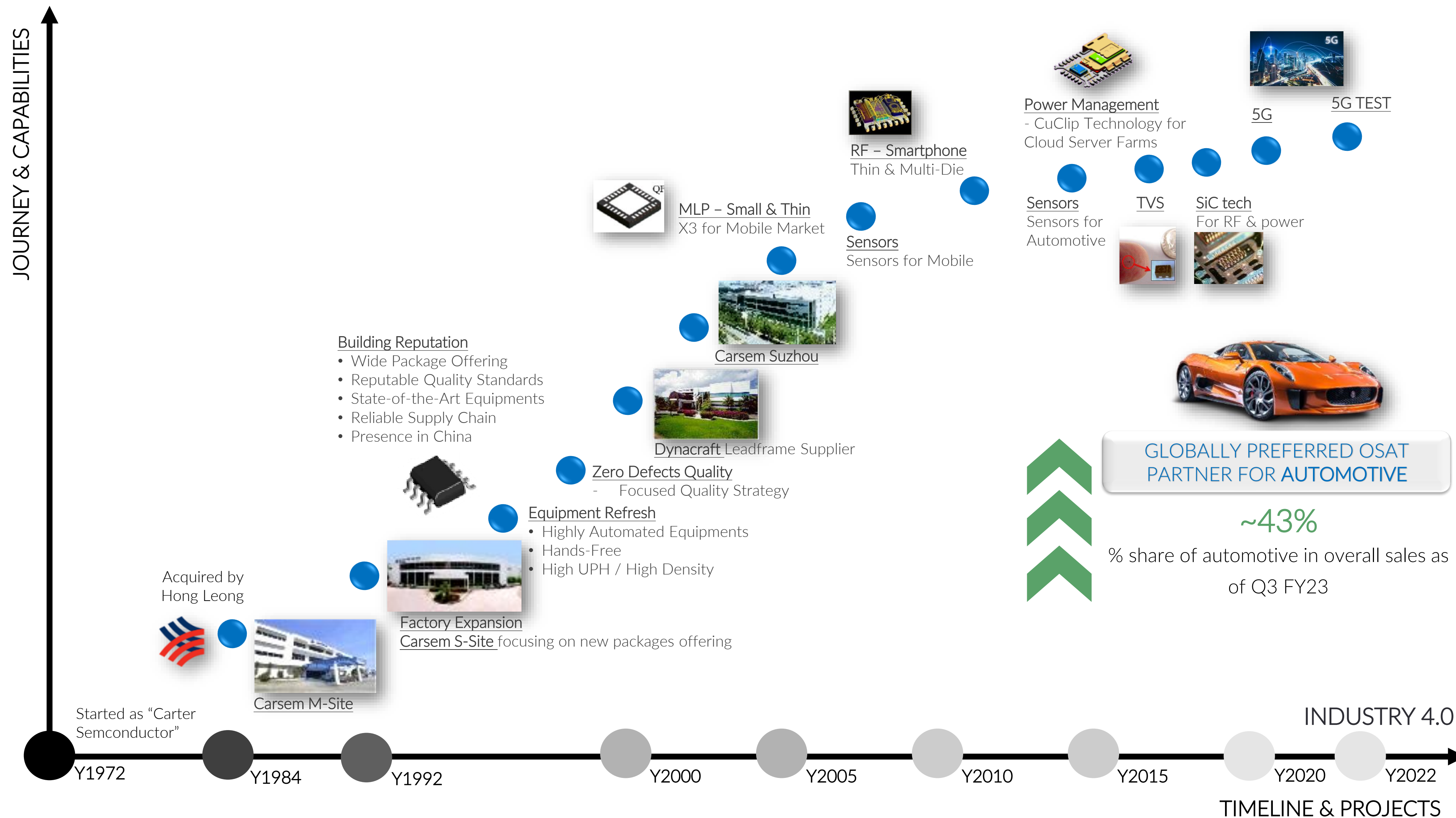
GROWTH DRIVERS

6

FINANCIALS & SUMMARY



Our journey



Carsem

One of the most trusted OSAT partners globally

100% Malaysian

Healthy Balance Sheet (Equity to debt 100:0)

Semiconductor Experience – 50 years



Board of Directors

YBHG DATUK KWEK LENG SAN

CHAIRMAN; Non-Executive/ Non-Independent

- Appointed to BoD of MPI in Jul 1990, and as GMD of MPI from Sept 1990-Aug 1993; Member of the nominating committee
- Chairman of Hong Leong Industries Bhd., Hume Industries Bhd., and Southern Steel Bhd.; Director of Hong Leong Company (Malaysia) Bhd

YBHG DATO' MOHAMAD KAMARUDIN BIN HASSAN

Non-Executive Director/ Independent

- Mar 2015: Appointed to board of MPI, and is a member of the Board Audit & Risk Management Committee of MPI
- Is a Director of Duopharma Biotech Bhd and Muhibbah Engineering (M) Bhd, and ManagePay Systems Bhd

MANUEL ZARAUZA

GROUP MANAGING DIRECTOR/ Non-Independent

- Over 25 years of experience across various manufacturing sectors
- April 2015-Aug 2016: Joined HLMG Management as its Managing Director
- Aug 2016-Present: Group Managing Director of MPI

DR TUNKU ALINA BINTI RAJA MUHD ALIAS

Non-Executive Director/ Independent

- Jan 2018: Appointed to board of MPI, and is a member of Nominating Committee of MPI
- Is a Director of IJM Corporation Bhd, Batu Kawan Bhd, MBSB Bank Bhd and Raja Alias Foundation
- 1992: Set-up legal firm (Wong Lu Peen & Tunku Alina); Managing Partner till 2011, Consultant now

IR. DENNIS ONG LEE KHIAN

Non-Executive Director/ Independent

- Nov 2014: Appointed to board of MPI; is the Chairman of the Nominating Committee and a member of the Board Audit & Risk Management Committee of MPI
- Held directorships in Shell Malaysia Trading Sdn Bhd, Champ Distributors Sdn Bhd, Lubotech Sdn Bhd, Assar Chemical Dua Sdn Bhd and was the Chairman of the Board for UMW Pennzoil Distributors Sdn Bhd.

MS FOO AI LI

Non-Executive Director/ Independent

- Appointed as an Independent Non-Executive Director of the Company on 1 September 2021.
- She is presently attached to CDC Consulting Sdn Bhd providing advisory work.
- Her last position in the energy industry was as the Chief Financial Officer of Hengyuan Refining Company Berhad (formerly Shell Refining Company (FOM) Berhad) from 2016 to 2019.



Management team

MANY YEARS OF CONSOLIDATED EXPERIENCE IN THE INDUSTRY



MANUEL ZARAUZA, GROUP MANAGING DIRECTOR, MPI

Over 25 years of manufacturing sector experience; Previously with Siemens, Osram Opto Semiconductors, and Seoul Semiconductor



ERIC CHEAH
CFO, MPI

Extensive experience across large-scale semiconductor manufacturing & in KPMG



INDERJEET SINGH
GM, CARSEM S-SITE, MY

Started his career at Carsem & went on to hold various management positions



MURALITHARAN
GM, CARSEM M-SITE, MY

Previously held senior leadership positions at NXP semiconductors



RAYMOND SHI
GM, CARSEM SZ-SITE, CHINA

More than 20 years of experience with Carsem SZ handling operations



CK LEE
HEAD, CARSEM CHINA

Started his career at Carsem & went on to hold various management positions

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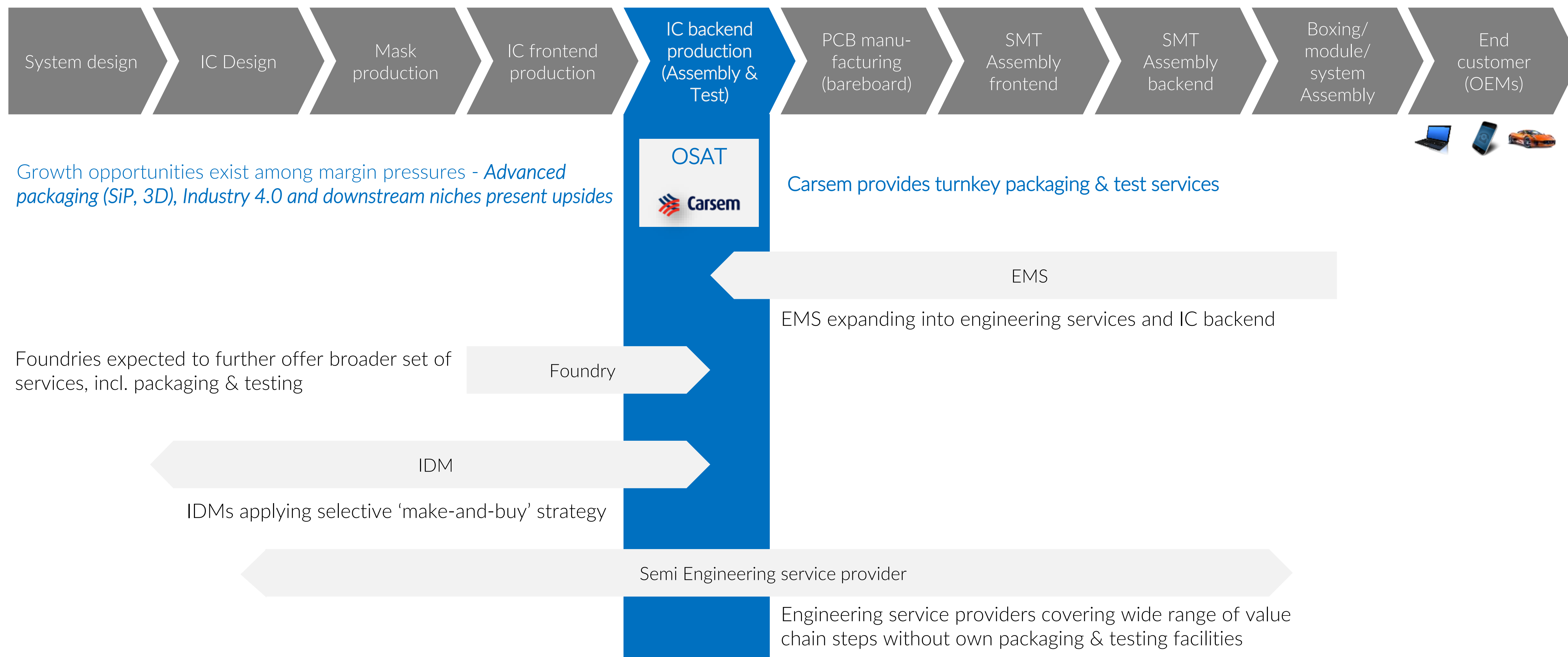
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FINANCIALS & SUMMARY



Supply chain & business model

CARSEM'S PACKAGING & TESTING SERVICES FORM A VITAL PART OF SEMICONDUCTOR VALUE CHAIN

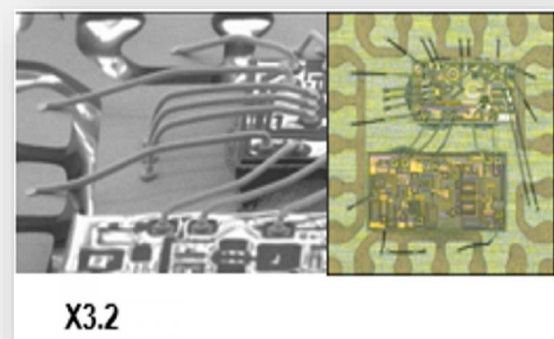




Wide portfolio

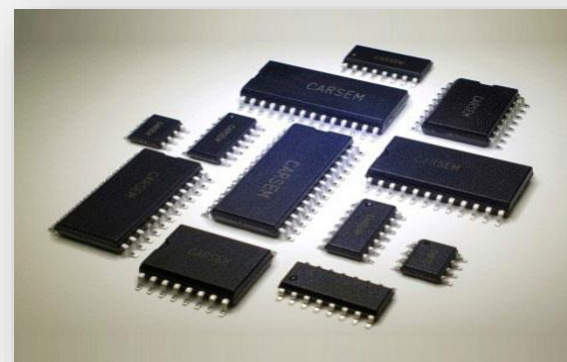
COMPREHENSIVE TURNKEY PACKAGING & TEST SERVICES

ACROSS KEY APPLICATIONS

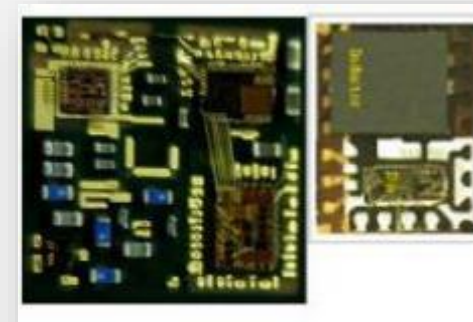


X3.2

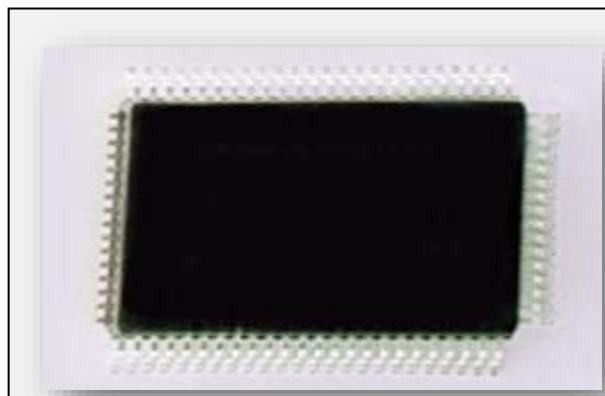
MLP



Small Outline IC



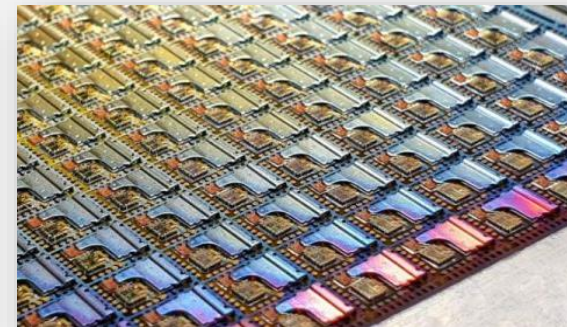
System in
Package (SiP)



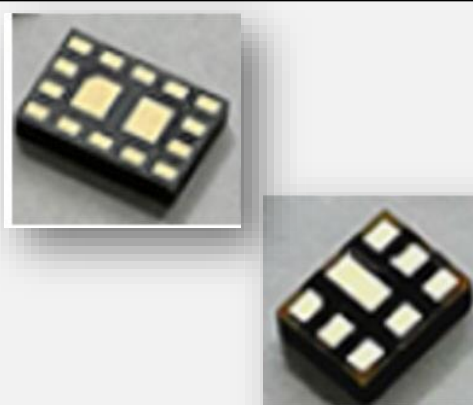
Quad Flat Package
(QFP)



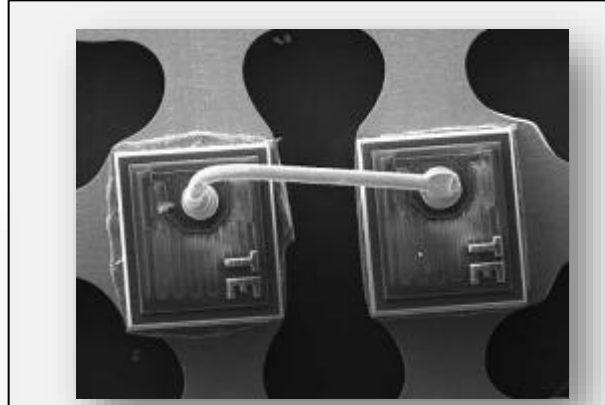
MEMS & Sensors



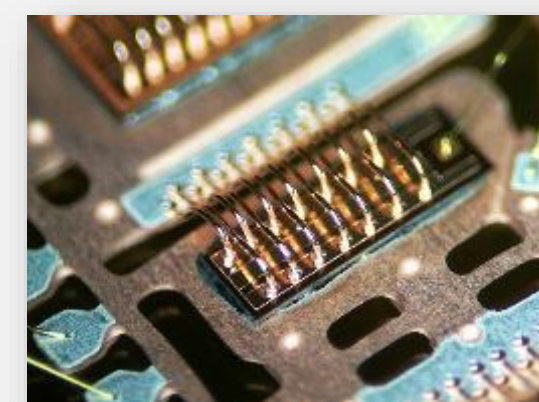
Copper Clip



Flip Chip



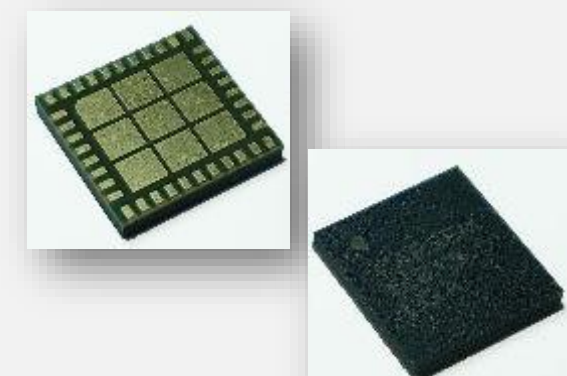
Transient Voltage
Suppressor (TVS)



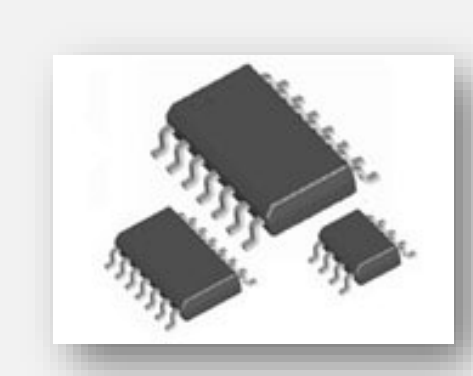
Power Management
(SiC, GaN, GaN on
SiC)



MICRO



Land Grid Array
(LGA)



IC – PDIP, SOP
packages



Test



Automotive

Industrial



*Consumer &
Communications*

PC/ Notebook





Geographic footprint

BROAD GEOGRAPHIC PRESENCE, SERVING A GLOBAL CUSTOMER BASE





Production facilities

CARSEM MANUFACTURING SITES & BUSINESS UNITS



Carsem (M-Site, Ipoh)

- Floor Space: 436K sq. ft. (40,500 sq. m.)
- Workforce: 2,317 employees
- GM: Muralitharan



Automotive & Consumer

SOIC

MICRO

MSU



Carsem (S-Site, Ipoh)

- Floor Space: 640K sq. ft. (60,000 sq. m.)
- Workforce: 3,262 employees
- GM: Inderjeet Singh



Automotive & Industrial

PMG

MLP

TEST



Carsem Suzhou, China

- Floor Space: 600K sq. ft. (56,000 sq. m.)
- Workforce: 1,900 employees
- GM: Raymond Shi



Consumer

RF

MLP

LGA

FC



Production facilities

DESPITE NEAR TERM CHALLENGES, OUR FACTORY EXPANSION PLANS CONTINUE TO CAPTURE LONG TERM OPPORTUNITIES

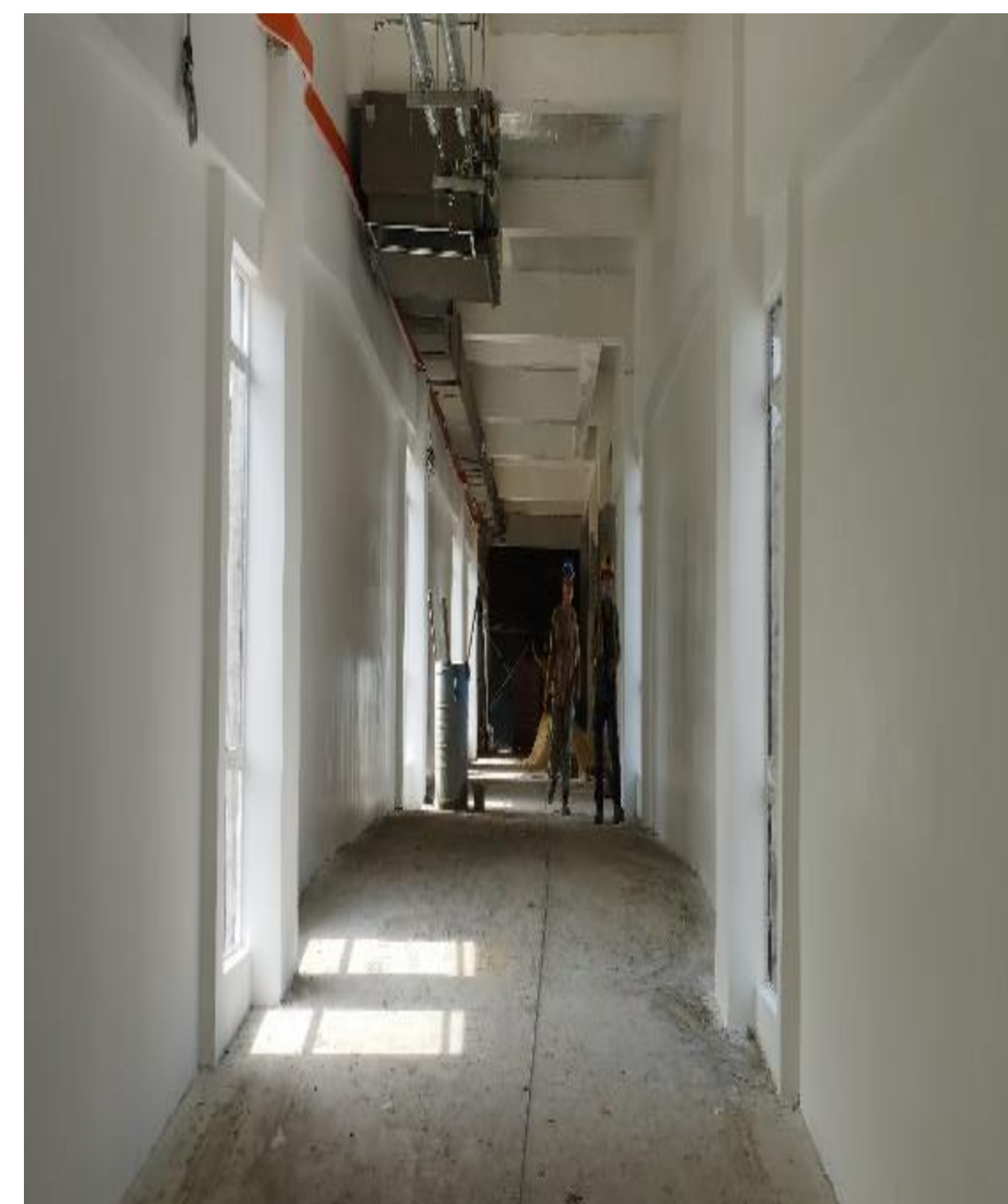
Expansion for pipeline, commitments and business growth



Construction is progressing as per the plan

Production Starting in January 2025*

SUXIANG, CHINA



Production Starting in August 2024*

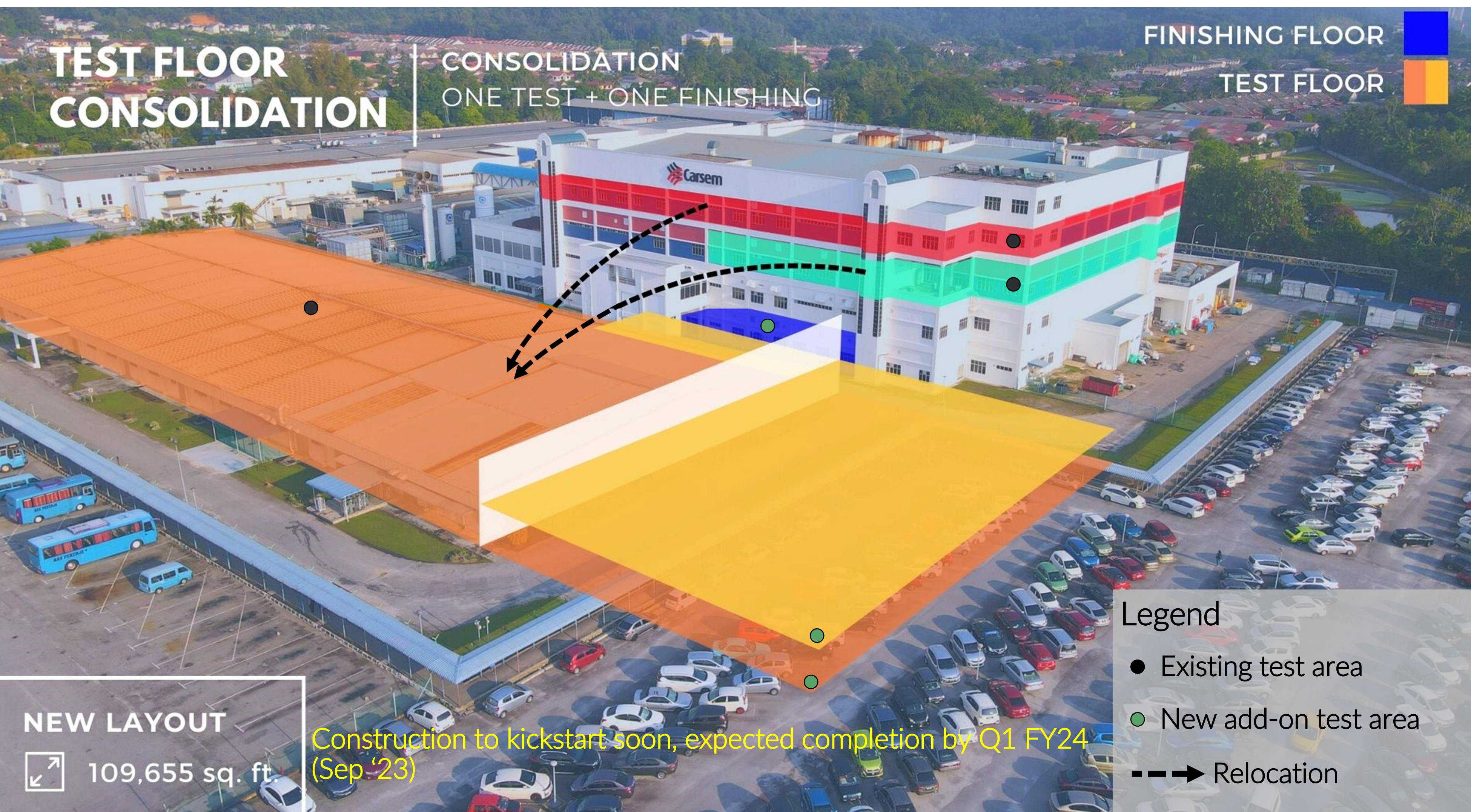
MALAYSIA (IN FRONT OF CARSEM M SITE)

*Depending on the covid situation & global externalities



Production facilities

INVESTING AT S-SITE TO STRENGTHEN CAPABILITIES FOR THE GROWING AUTOMOTIVE & INDUSTRIAL SEGMENTS



FINISHING FLOOR
TEST FLOOR

1 Equipment standardization

Replacing current legacy handlers with newer high efficiency test handlers

2 One floor consolidation

Expanding test floor to support the additional machines

3 Test automation

Overhead tunnel

Benefits

- ✓ Achieve world class OEE
- ✓ Eliminate variance of test machines
- ✓ Consolidate floor space
- ✓ Automate test operations (Industry4.0, AI)
- ✓ Develop 5G capabilities

Legend

- Existing test area
- New add-on test area
- > Relocation

NEW LAYOUT



109,655 sq. ft.

Construction to kickstart soon, expected completion by Q1 FY24 (Sep '23)

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Sustainability performance

FY22 PERFORMANCE SNAPSHOT

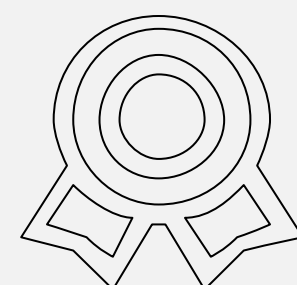
Included in

FTSE4Good Bursa Malaysia Index

and in

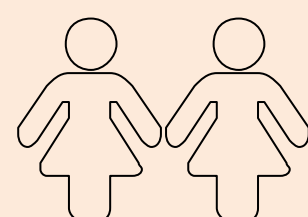
top-quartile of ESG ratings

amongst all PLCs assessed by FTSE Russell on Bursa Malaysia



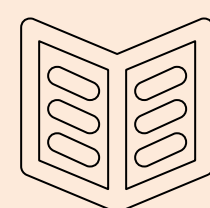
Women in workforce

48%



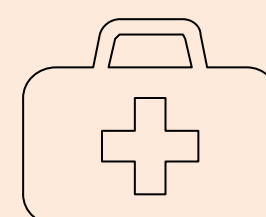
Training

4 hours on average
per employee



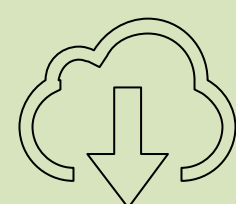
Health and safety

**Zero occupational
fatality, Vaccination** of
employees



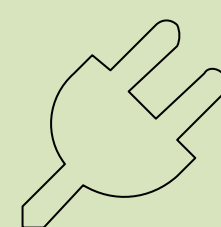
GHG emissions intensity
(vs. FY15 baseline)

43% lower



Energy index (vs. FY15
baseline)

43% lower



Water consumption index (vs. FY15 baseline)

46% lower



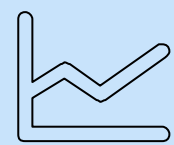


Sustainability at MPI

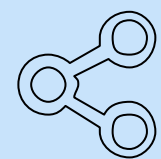
OUR APPROACH IS RESPONSIBLE & RESPONSIVE, DRIVEN BY 3 THEMES

Better Economy

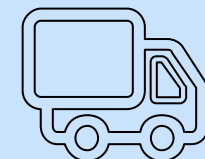
- We create economic value for our shareholders
- We work with like-minded partners
- We prioritise safety & productivity, and offer innovative solutions to our customers



Shareholders



Customers



Suppliers

Better Environment

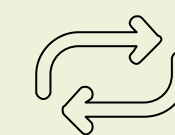
- We respect the local environment
- We strive to manage our energy consumption and GHG emissions
- We manage our waste and use natural resources with care



Energy & emissions



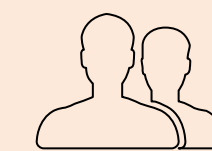
Water



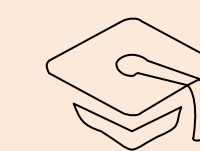
Waste

Better Society

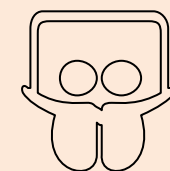
- We prioritise the safety & wellbeing of our people
- We conduct business ethically and compete fairly
- We engage with & support our communities



Employees



Business ethics



Community



UN Sustainable Development Goals

6 PRIORITY SDGs MOST ALIGNED WITH OUR BUSINESS

Innovation, technology & related infrastructure development is a key focus area for MPI

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



13 CLIMATE
ACTION



MPI has a role to play in energy efficiency, emissions control and waste management



As a responsible business, safeguarding employee health & safety is a priority for MPI

3 GOOD HEALTH
AND WELL-BEING



5 GENDER
EQUALITY



6 CLEAN WATER
AND SANITATION



8 DECENT WORK AND
ECONOMIC GROWTH



MPI makes a significant contribution to employment and economic growth

As a global employer, MPI can help to ensure workforce diversity and address inequality

MPI's manufacturing processes can take active steps towards water conservation and wastewater management



Environment

IMPROVING PREPAREDNESS AND RECEIVING RECOGNITION

Commitment from the top management in environment care and compliance to legal & other requirements



Recognition from Malaysian Society For Occupational Safety and Health



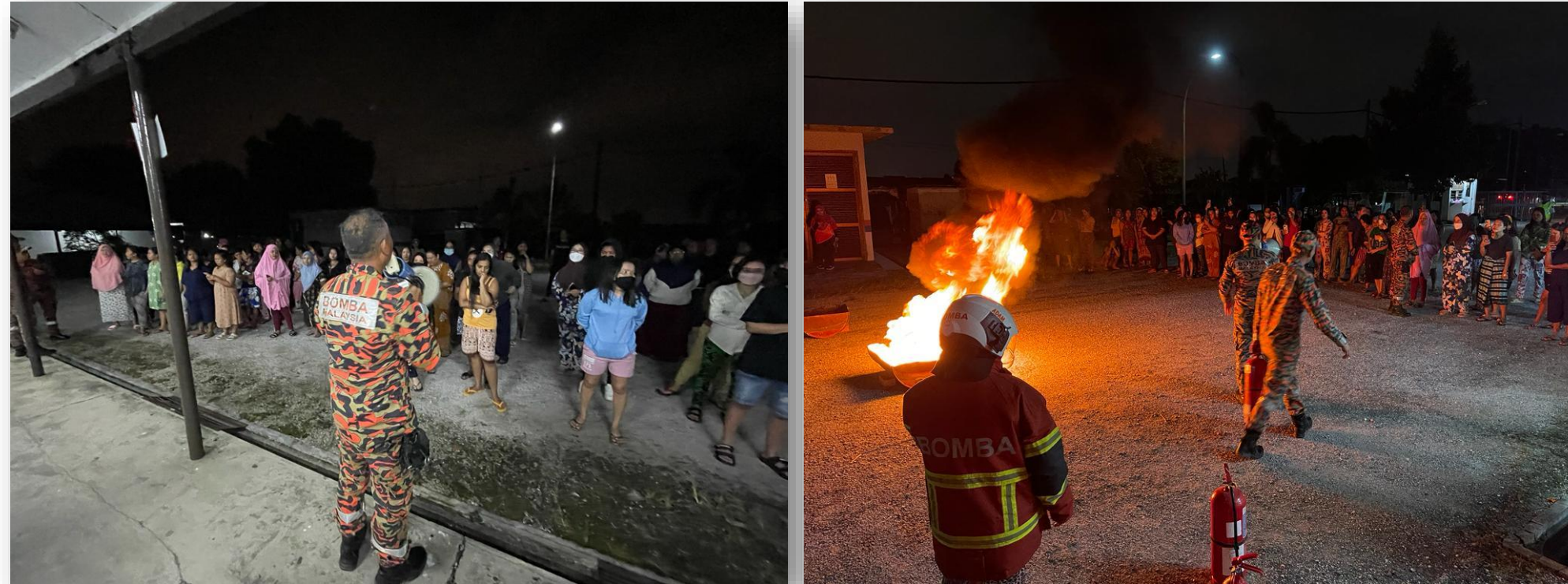
Received OSH practitioners awards from the MSOSH



Health & safety

EMPLOYEE AWARENESS

EMERGENCY PREPAREDNESS & RESPONSE



Hostel emergency evacuation exercise in collaboration with nearest fire services department



GEMBA walk to selected sites



Organized health lectures to all female employees on Women's Day



Training & education

TRAINING & UPSKILLING IS AMONG OUR TOPMOST STRATEGIC PRIORITIES

Online & offline training - ISO37001 Training, Automotive Series Training, Engineer Core Competency – DOE, 8D, Customized Course – Leadership Series



ISO37001 Standard Training



ISO37001 Standard Training



Automotive Series Training



8D & 3X5 Why Training



DOE Training



DOE Training



Team Bonding Training



Team Bonding Training



Training, sports & recreation

Continuous education program for chemical handlers and noise hearing conservation



Carsem C.E.R.I.A & Hong Leong Sports carnival





Employee engagement

Sport & activities program

HLMG Sports Tournament 2023





Corporate Social Responsibility (CSR)

CSR helps contribute towards improving various aspects of society

Back To School

Program Back to School helps 200 families in preparing their children for upcoming school



Iftar with orphanage An-Nur Maisarah

To celebrate Ramadhan iftar with Orphanage. To understand and give support to those in need





Anti-bribery & anti-corruption

LEADING ETHICALLY & TRANSPARENTLY



*Renewed SIRIM certification
for implementing Anti-
Bribery Management
Systems complying with ISO
37001:2016.*



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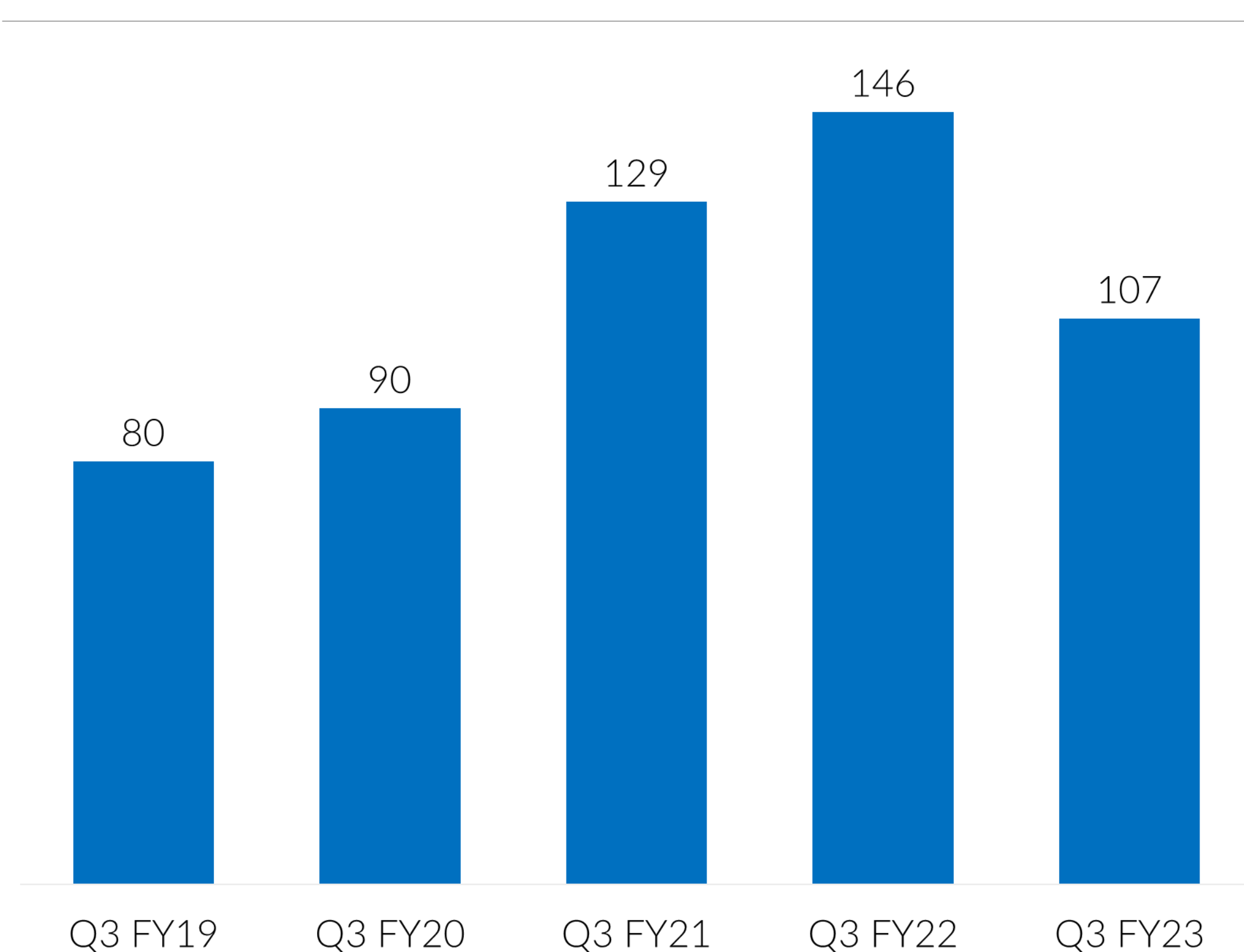
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Industry dynamics

AMID MACROECONOMIC HEADWINDS, SEMICONDUCTOR INDUSTRY GROWTH HAS SLOWED DOWN SIGNIFICANTLY

MPI Revenue (US\$ million)



In the short term, the demand dynamics is expected to remain volatile

- ✓ Worldwide Car Sales to drop by 8.8% - cautious buying, possibilities of global recession, higher bank rates
- ✓ Global PC Shipment dropped drastically by 33% annually - 4th consecutive quarter of decline, GaN expected to be the gamechanger
- ✓ Smartphone shipment fell further by another 13% - 5th consecutive quarter of decline



In early 2023, certain segments have already witnessed a shift from shortages to oversupply. This has led to bottlenecks such as end market demand drop, demand deferment, and cost increases, thereby, affecting MPI's business negatively

Source: Statista; Canalys



Industry dynamics

OTHER CHALLENGES IN SHORT TERM AFFECTING TOPLINE & BOTTOMLINE

Electricity rates

Commercial electricity tariff hike

- Upgrading to efficient facility equipment, digital sensors to track electricity consumption and installing solar panels
- Requires substantial investment



Employee wages & working hours

Wage increase & 45 hour working week

- Driving plantwide digitalization & floor space consolidation
- Optimizing each resource to increase plant wide productivity



Increase in machine cost

Machine & delivery cost up

- Deployed teams to plan in advance & monitor material as well as machine deliveries
- Carsem to avoid shipment by air as much as possible and prefer vessel to save costs



Steep inflation

Rise in prices of raw materials

- R&D team is investing time in value engineering to optimize cost
- In some cases, Carsem passes on the cost to the customers depending on the volume of business



Talent crunch

Hard to get good semiconductor talent

- Carsem is working with specialized agencies to get good talent from worldwide
- Carsem is also investing in technical learnings for existing employees to upskill

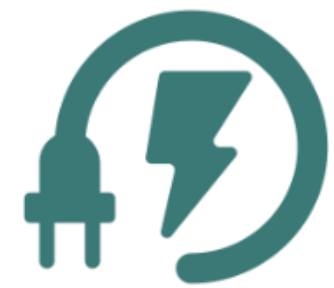




MPI's response

COST PRUDENCE MEASURES – IMMEDIATE RESPONSE TO MARKET CONDITIONS

Continuous measures are taken to make a positive impact on costs, make processes efficient and proliferate it to all the sites



Smart Sense to monitor electricity on each machine



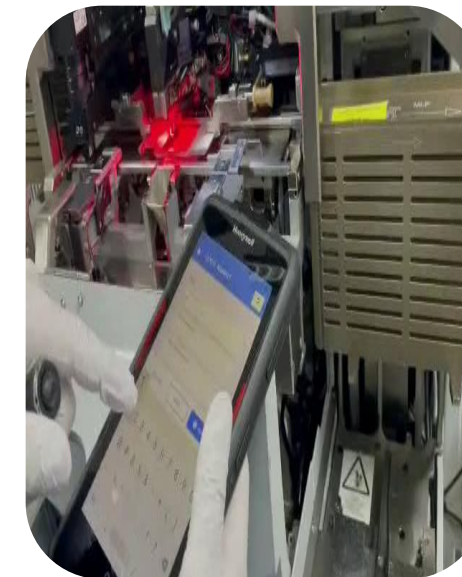
Digital transformation and automation initiatives for better OEE



Freight cost reduction by consolidating shipments bi-weekly



Alternative energy – Solar



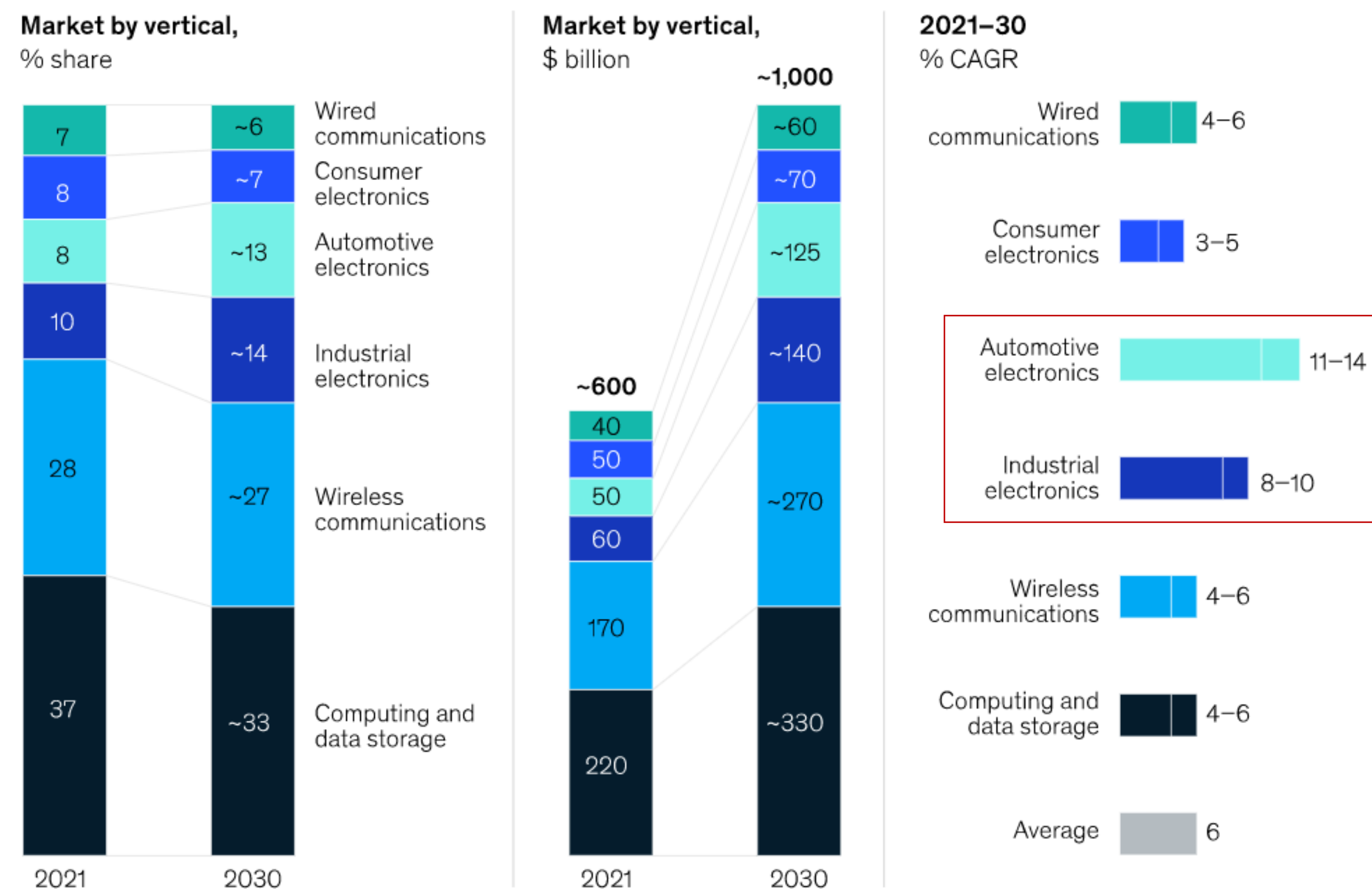
Ongoing discussions with vendors to install solar panels on the terrace



Industry dynamics

LONG TERM SEMICONDUCTOR DEMAND IS SET TO GROW, DRIVEN BY AUTOMOTIVE AND INDUSTRIAL SEGMENTS

Global semiconductor market, 2021-30



Source: McKinsey

Significant opportunities ahead

Electric vehicles

- 30% of global vehicles will be electric by 2030 (~ 7X vs. 2021)

SiC/ GaN technology

- SiC based EVs are expected to grow from 1 mil units in 2021 to ~13 mil units by 2030, driving total auto SiC market expansion
- Significant spending is announced on front-end but not as much on the backend

5G connectivity

- Prospects beyond phone – automated factories, AI, smart cities, AI enabled cars, etc.

Semicon investments

- Substantial public and private spending is announced, globally

Strong pipeline

- Tech. advancements in automotive and power segments augur well for Carsem's strategy aligned with these segments



Growth strategy

OUR LONG TERM VISION IS TO BE THE LEADING OSAT FOR AUTOMOTIVE, DRIVEN BY 4 STRATEGY TENETS



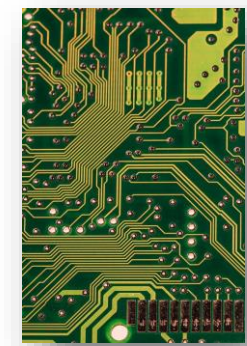
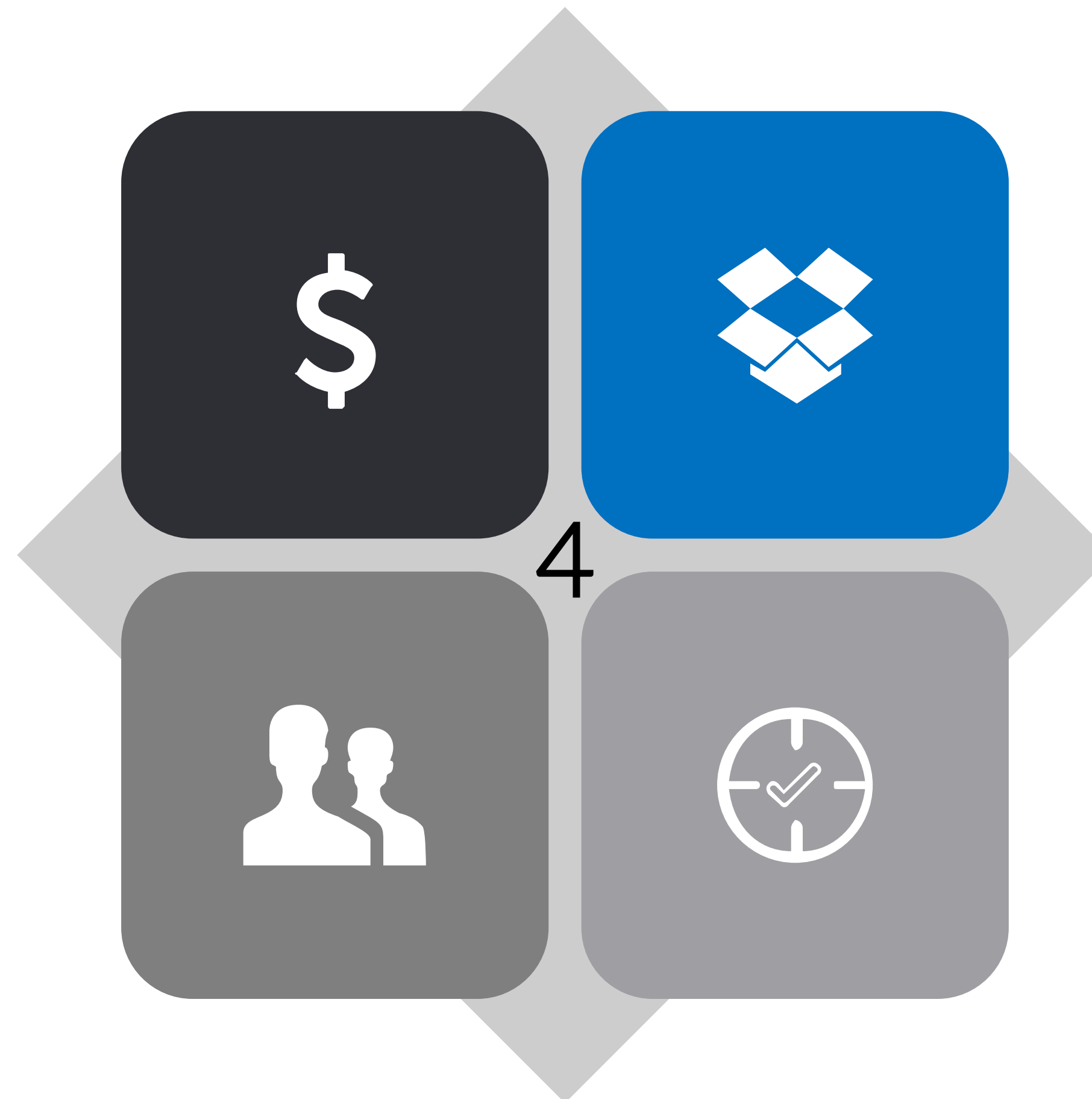
Sales

- Strategic sales across application & geography segments
- Sharp sales pipeline management



People

- Strategic workforce – restructuring & hiring
 - Upskilling, training
- Covid mitigation, Employee engagement



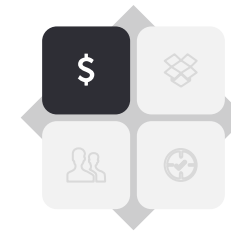
Technology

- Investing in SiC, MEMS sensors, GaN, 5G testing
- Advanced packaging – inorganic options for modules/ 3D printing/ design house
- Robust R&D; own product (TVS)



Quality

- Zero Defects Culture
- Automation, high productivity
- State-of-the-Art Equipments



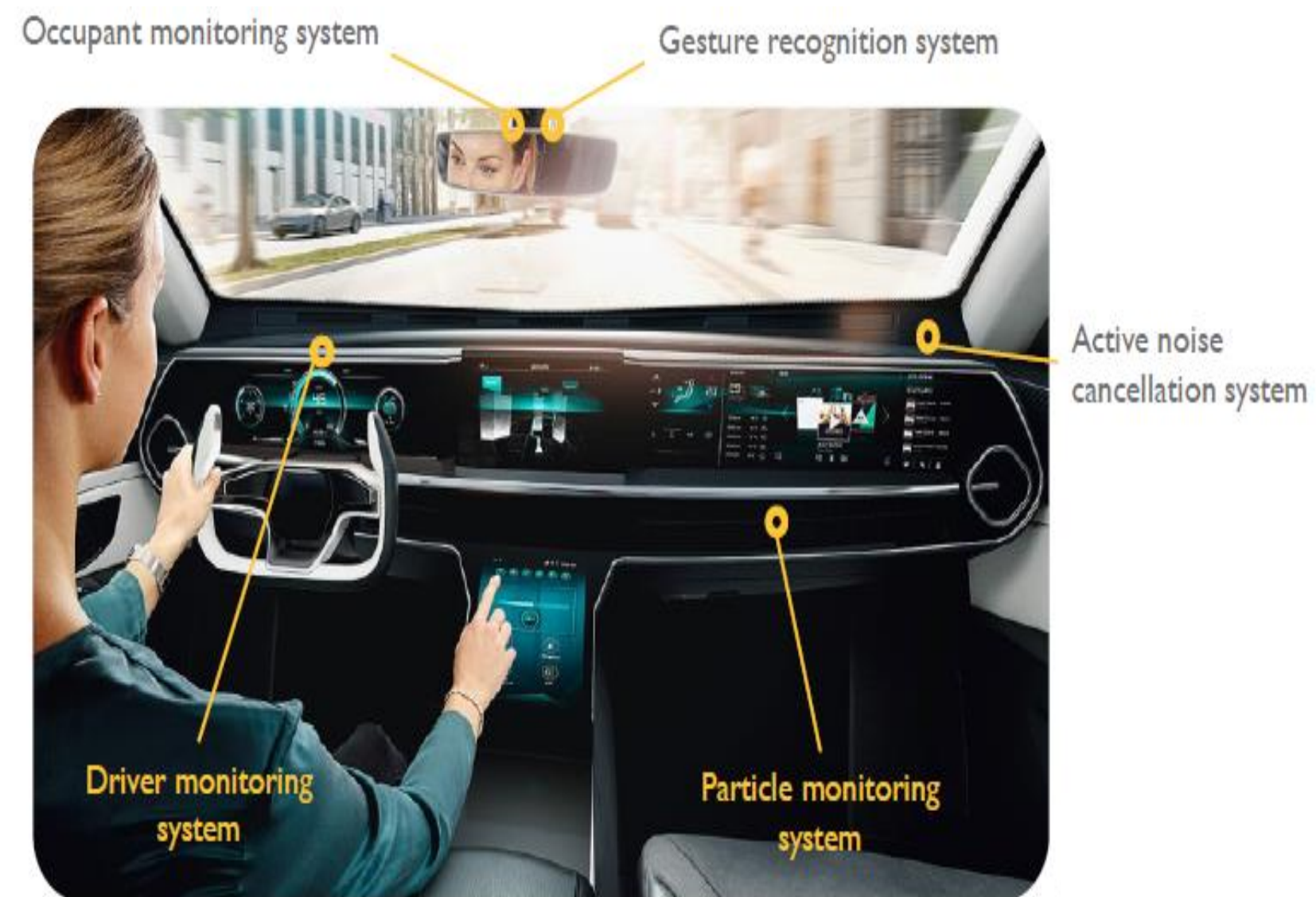
Sales – Target segments to play in

MPI MADE A STRATEGIC MOVE TOWARDS UPCOMING TECHNOLOGIES

Continued investments in complex packaging technologies



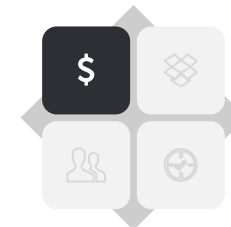
SiC adoption in EVs is gaining momentum – Experience of handling SiC packaging will lead the way



Customized sensors used for monitoring several data points – multi-functionality in small, cost-competitive, customized packages

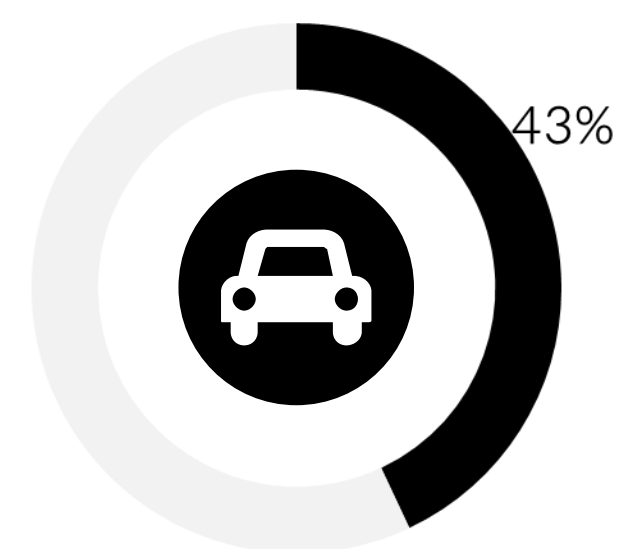


5G technology has a bright future – it is small for Carssem right now but in the next few years it will ramp up



Sales – Revenue composition

AUTO REMAINS STRATEGIC – GROWN FROM ~29% IN FY18 TO 43% OF OUR SALES NOW



% Revenue share

AUTOMOTIVE

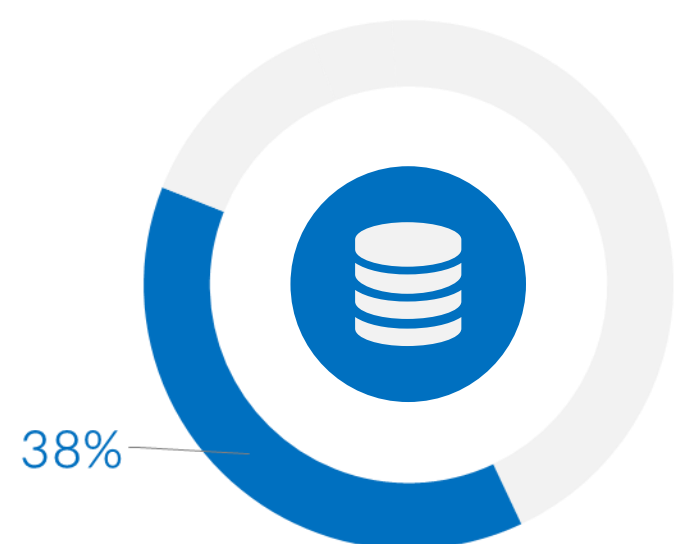
- Long term growth is driven by **electrification, ADAS/ AD, safety, and connectivity** trends



% Revenue share

CONSUMER & COMMUNICATIONS

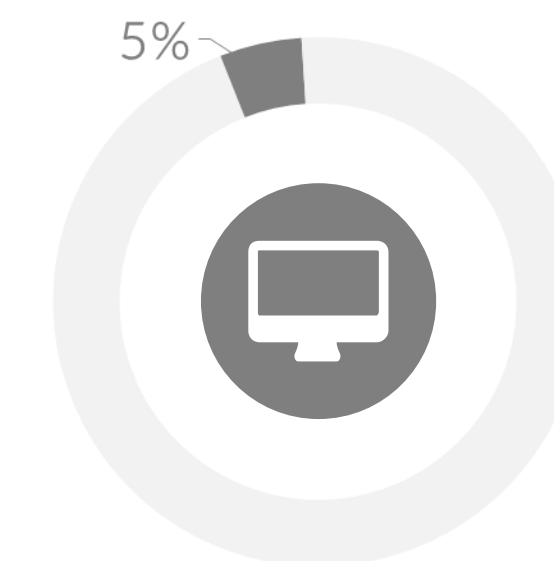
- **5G and IoT** are unlocking multitude of use cases – smart cities, healthcare, etc.
- Semiconductor demand is likely to ride this wave with need for **advanced packaging solutions**



% Revenue share

INDUSTRIAL

- With **Big Data and Industry4.0** gaining further momentum, need to power data centers & servers is growing
- This **high power & high efficiency** requirement is fueling new innovations

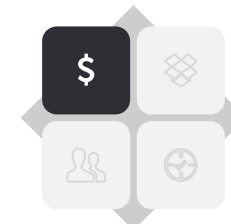


% Revenue share

PC/ NOTEBOOK

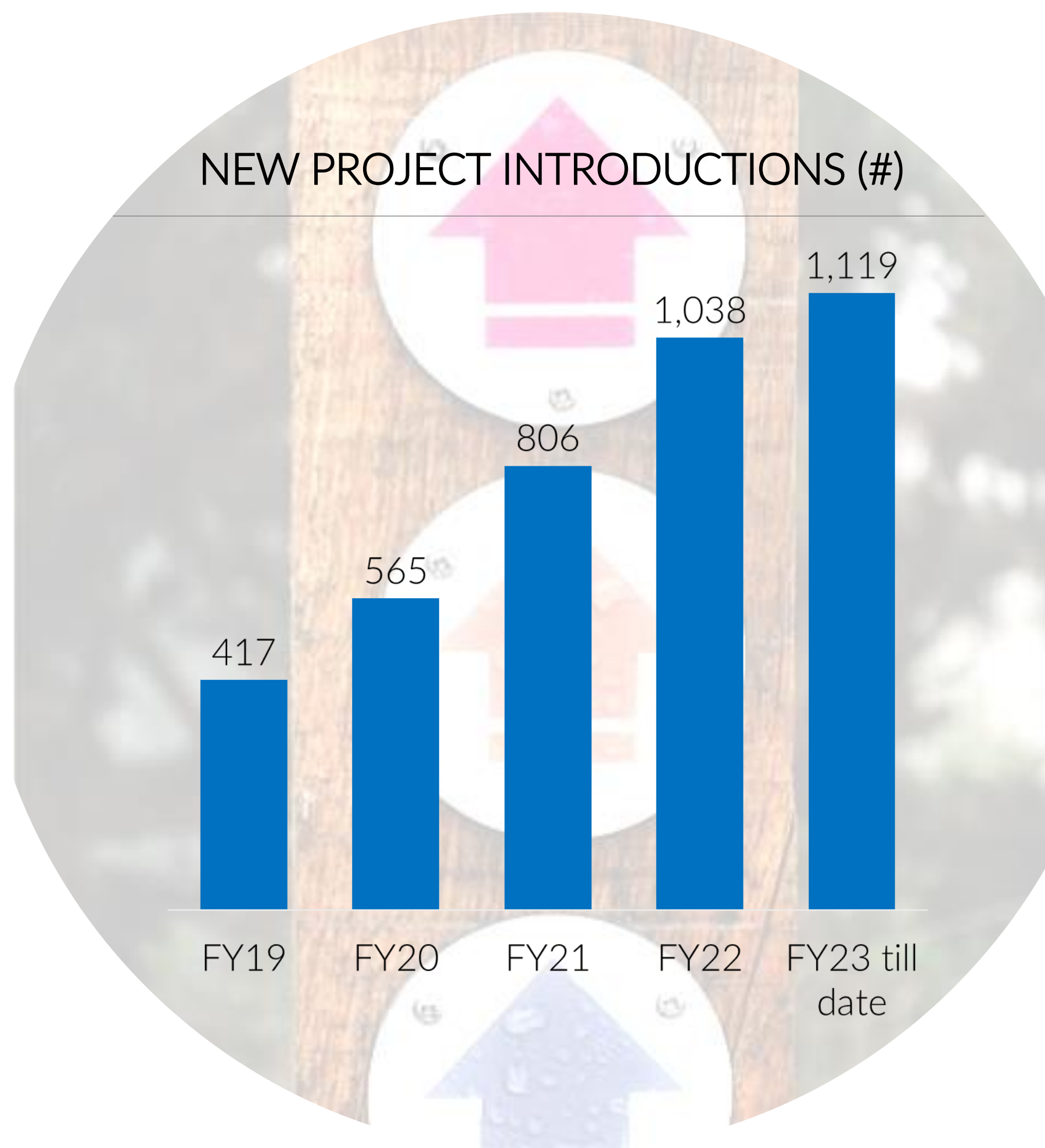
- Consumer electronics industry sales witnessing significant downward trend as the demand induced from trends such as WFH, online education, etc. normalizes with opening up of offices/ schools across economies

NOTE: Remaining 1% share of revenue is towards Miscellaneous applications



Sales – Pipeline

HEALTHY PIPELINE BUT RECESSIONARY RISKS HAVE PUSHED PROJECTS TO FUTURE QUARTERS



- Carsem has a healthy order book with major projects coming from the Automotive segment
- Pipeline is full but the recent wafer shortage & end customer demand drop/ postponement has pushed projects to future quarters
- Ease of travel has helped Carsem team & customers engage in on-site physical meetings, driving closer collaboration on new pipeline projects in the last 6 months



Technology – Automotive segment

INNOVATING IN LINE WITH STRATEGY TO BE GLOBALLY PREFERRED OSAT PARTNER FOR AUTOMOTIVE

Major trends impacting semiconductor demand (Mobility disruptions)



Electrification

Novel battery technologies, growth of electrical powertrain, demand for power electronics



Autonomy

Surge in autonomous driving platforms & advanced safety features



Connectivity

New use cases (V2X, V2V, OTA) - progression in connectivity technology (5G, WIFI-6)

>20 years as a certified automotive supplier

Carsem Technology Value Propositions & Activities

MEMS & Sensors – riding ‘Electrification’ and ‘Sensorization’ wave

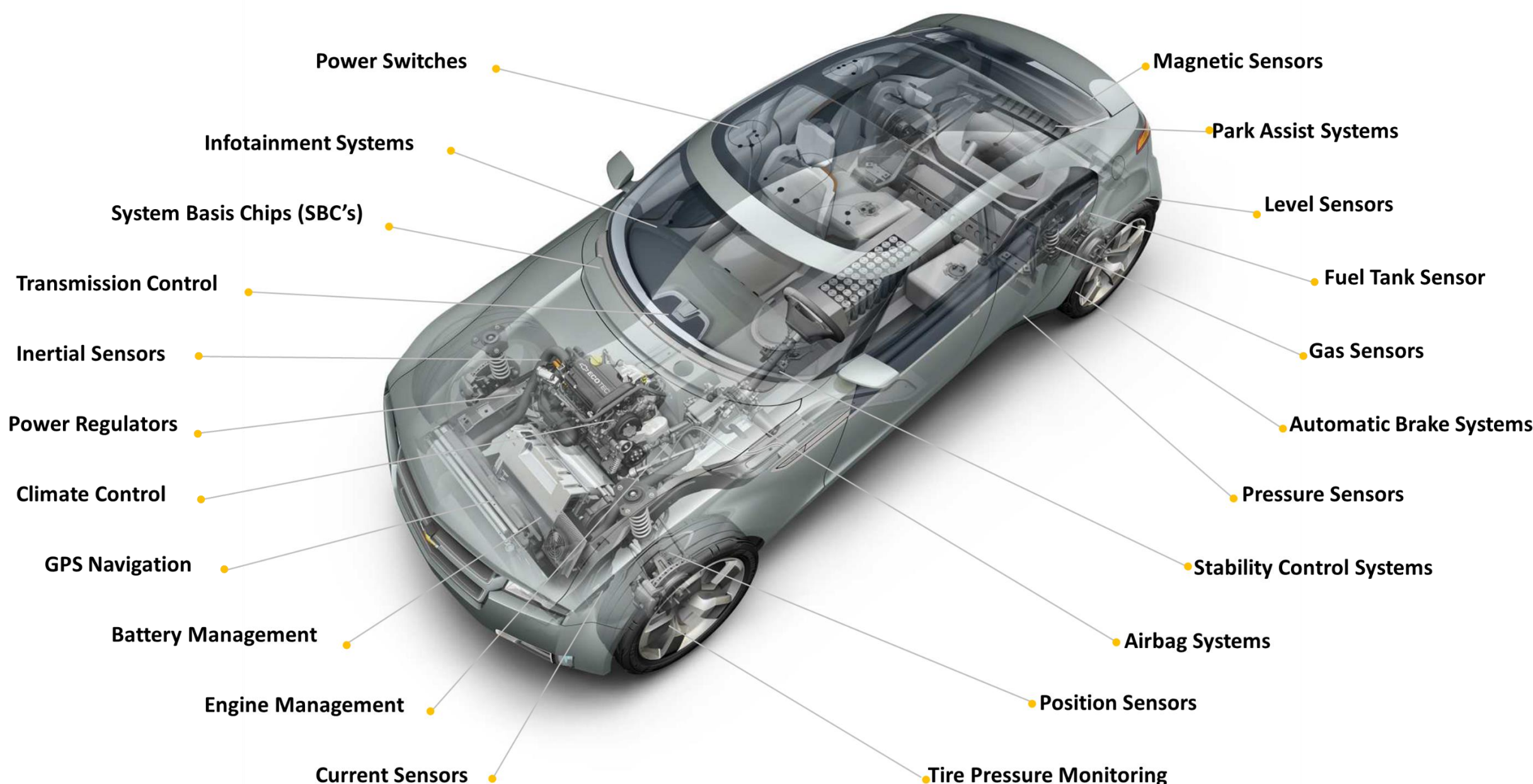
- ✓ SiP Pressure sensors for ICE and Safety are ramping up for Automotive, Gas & Flow sensors – safe launch production stage
- ✓ Expanding in temperature/ humidity sensor applications with qual, in parallel with ramp up phase - production tooling NRE on going with tool fabrication
- ✓ New focused development: current sensor for EV with wettable flank technology - sample launched for qualification
- ✓ New design concept under review for Lidar / Radar segment

Power Packaging

- ✓ MIS solution Automotive PMIC Module, pass qualification, under safe launch
- ✓ Module development with SiC for automotive

RF for Connectivity

- ✓ Differentiated support on diverse applications using Gallium Nitride (GaN) technology

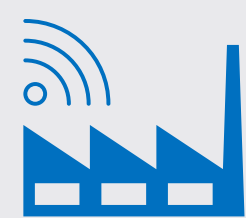




Technology – Industrial segment

EXPANDING PORTFOLIO ALIGNED WITH TRENDS IN ADVANCED PACKAGING & TESTING FOR POWER

Major trends impacting semiconductor demand



Industry 4.0

Higher performing devices with greater functionality driving models that enable increased flexibility, higher productivity & lower costs



Big Data

More servers with high power & high efficiency to support large volumes of data

>30 years in power packaging

Carsem Technology Value Propositions & Activities

Power Packaging

- ✓ Awarded the next generation of Power stage products for servers and workstation (Cu Clip). In qualification will be ready for HVM in Q3 FY23
- ✓ Development on chip embedding package, expected HVM in FY22/23
- ✓ Development of Cu Clip for automotive in progress, expected HVM in Q3FY24
- ✓ Setup Taiko Ring Removal process for ultrathin die application, in production
- ✓ High power (2KV/100A) Test solution under development, with applications in base station/industry power supply/big data center

MEMS & Sensors

- ✓ Ramping gas sensing applications & flow sensor under R&D, target production in Q4 FY23; also, ramping current sensor and magnetic sensor applications. Expanding further in high end applications with special coating on die technology – under devp.
- ✓ Hermetical & Non hermetical Ceramic Packages (Gyroscopes & Accelerometers) with safe launch. Targeted production by Q2 FY24





Technology – Consumer/ communications segment

TAPPING INTO THE 5G REVOLUTION THROUGH ROBUST CUSTOM OFFERINGS

Major trends impacting semiconductor demand



5G

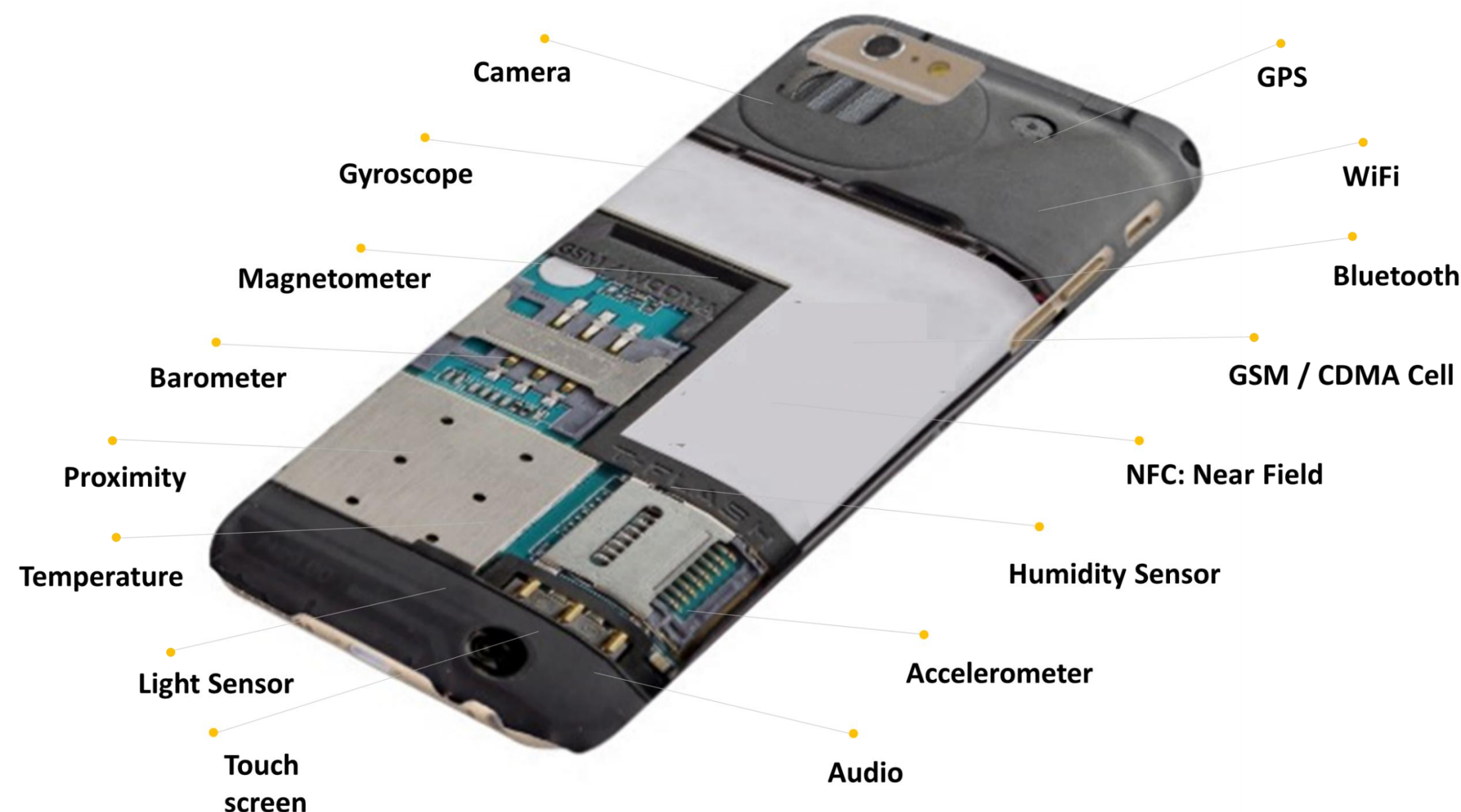
High data rates, massive connectivity and ultra-low latency, catalyzing remote health care, autonomous driving, AR/ VR experiences



IoT

Need for combining functionalities – security, connectivity & microprocessors - stimulating usage of sensors, actuators & computing power

Carsem in Communication



Carsem Technology Value Propositions & Activities

RF (5G mobile, WiFi6)

- ✓ FC MIS with underfill plus exposed die process start HVM in Q4FY23
- ✓ QFN SIP solution : FC+ SMT, power management application under development, high end wireless charging, fast charging , Li-Ion battery management

Power Packaging

- ✓ RF Power (mid-high) packaging expertise for handphones/ 5G base stations; high volume manufacturing experience of handling GaN
- ✓ RF module/ high power switch for 5G base stations remains focus

MEMS & Sensors

- ✓ Optical sensor using clear compound under volume production (for VR, wearables, etc.); and IMU for hand held devices with qualification lot shipped
- ✓ Expanding into high grade BOM for RF segment and qual in progress



Technology-Immediate focus

SiC - UNLOCKING RF & POWER APPLICATIONS

Carsem advantage

- ✓ Already working with the No.1 SiC wafer supplier in the world
- ✓ Optimized packaging & performance for better results
- ✓ Ongoing advanced SiC packaging solutions for major customers in Europe and China
- ✓ Dedicated SiC technology trained team for assembly & test
- ✓ Enhanced dedicated floor space & lines to cater to latest technology – SiC & GaN
- ✓ Witnessing double digit growth YoY with strong pipeline for the coming years in SiC

CARSEM
INNOVATION TO
REALIZE SiC's
FULL POTENTIAL



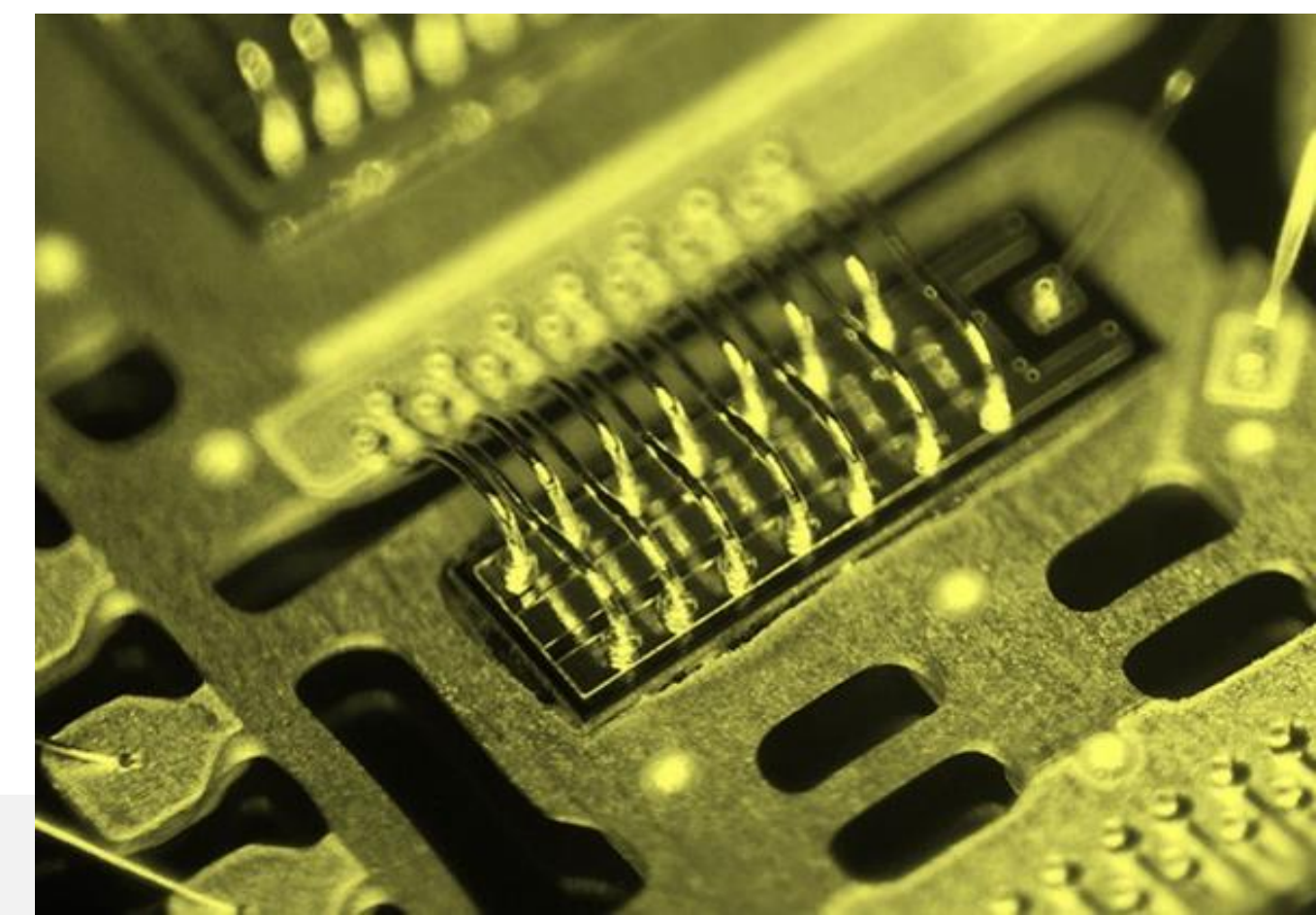
CARSEM ADVANTAGE

- ✓ Our experience in running RF & high power devices using SiC



Benefits of SiC over previous gen materials

- ✓ Wider bandgap,
- ✓ improved energy conversion efficiency & power density,
- ✓ higher thermal conductivity (3-4X Si/GaAs/GaN),
- ✓ higher switching frequencies, and reduced system size



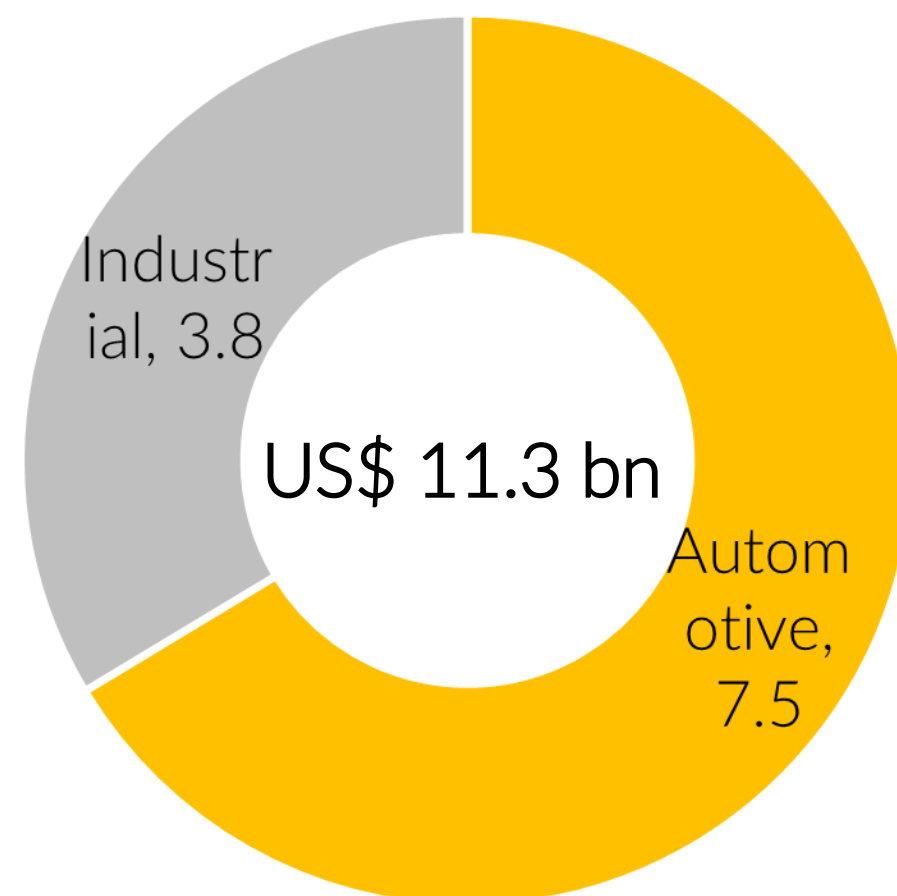


Technology–Immediate focus

GROWING DEMAND FOR SILICON CARBIDE TECHNOLOGY

The silicon carbide device market is accelerating at breakneck speed, driven by automotive

Power SiC devices market, 2030e
US\$ billion

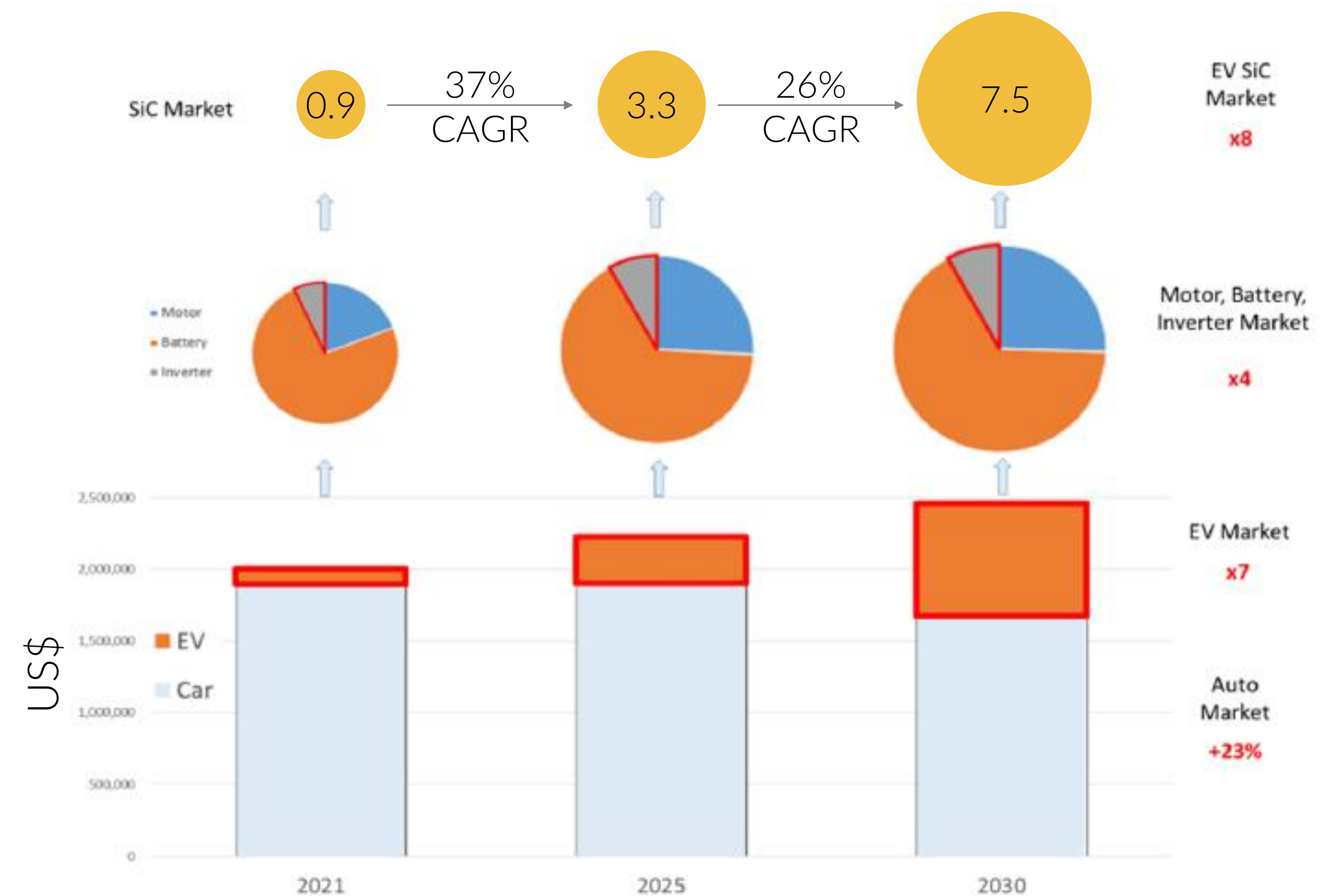


from slightly over US\$ 1 billion market in 2021...CAGR ~ 30%

Source: Goldman Sachs Global Investment Research



Auto-related (EV) SiC market growth to stand out, rising to US\$3.3bn in 2025 and to US\$7.5bn in 2030 from ~ US\$0.9bn in 2021



The numbers on the right show the growth of each market compared with 2021

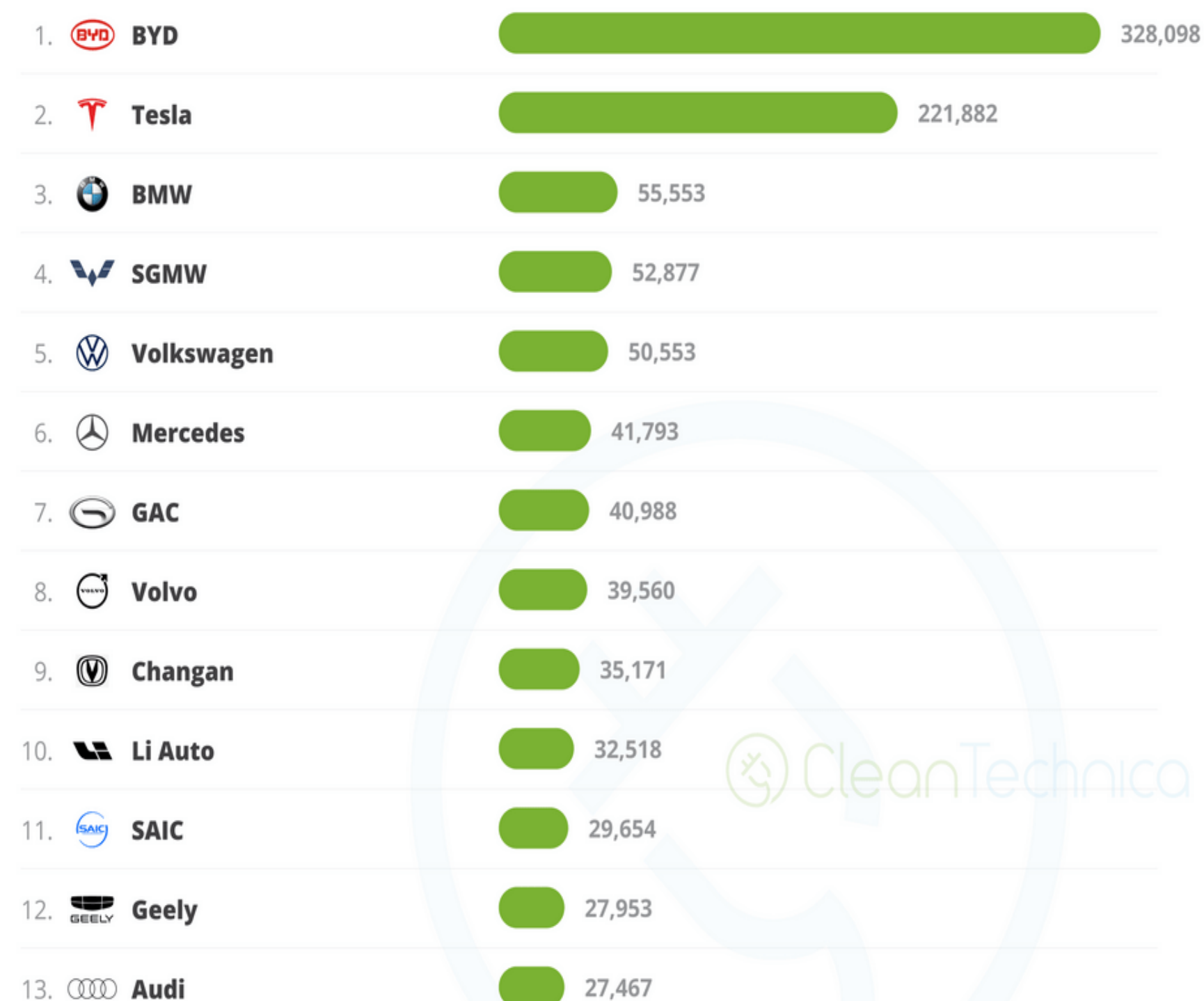


Technology–Immediate focus

INVESTING FOR TAPPING INTO AUTOMOTIVE SEGMENT GROWTH IN CHINA

No.1 EV selling brand is BYD by a big margin – opportunities for reliable auto OSATs in China

Top Auto Brands in World in EV Sales January – February 2023



With strong EV sales In China, Carsem is investing in superior machines and skilled manpower to increase its share in Automotive segment

Assembling & SLA testing for advanced SiC packaging with complete flexibility for xEV customization

Human Resource certification

100% Passing Marks for Automotive Training

Automotive Prod. Indicator

MES will auto HOLD lots when assembly yield <99%

Dedicated Operator & Tech System

Green tag shall be placed on jump suit of certified operator

Tighten Tooling lifetime

Key tools to be forcefully replaced after 1 year

Auto Dedicated Machine

“Automotive” tag be placed at the designated machine

Tighten Automotive Control Plan

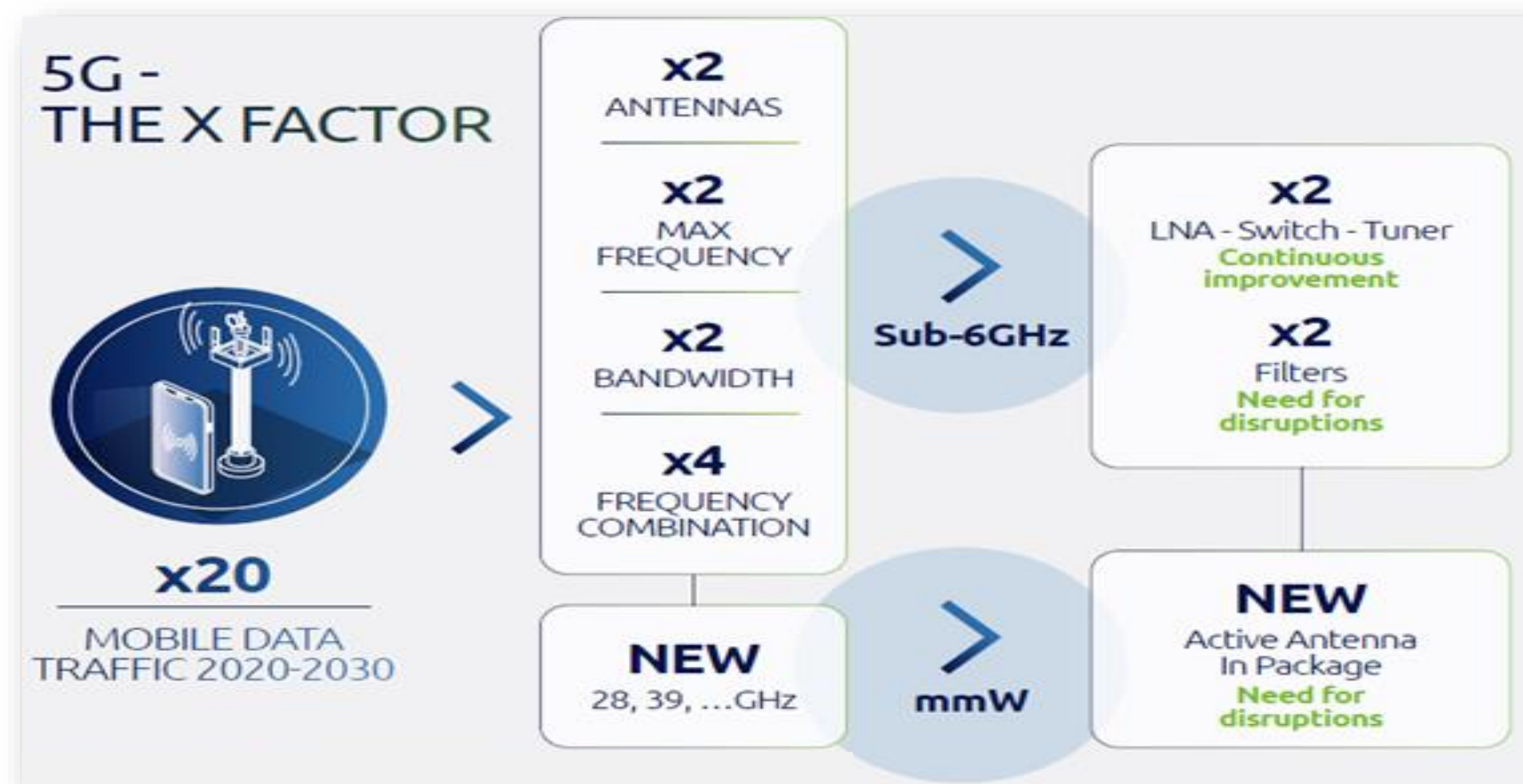
Automated process & zero defect quality planning

System will auto alarm if non certified human handles automotive product



Technology – Immediate focus

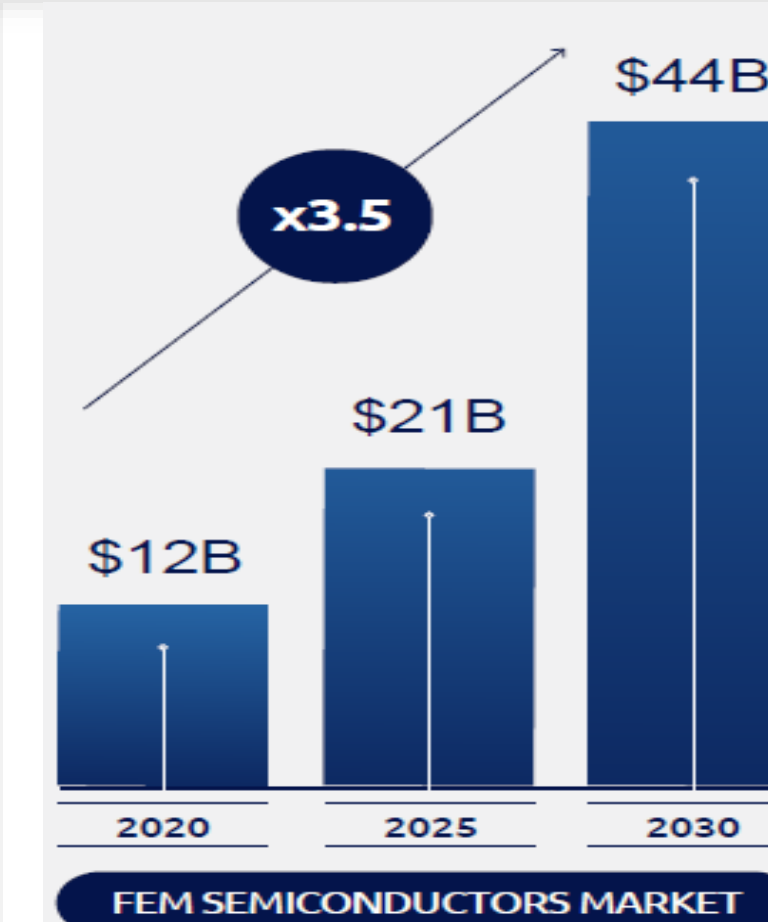
GaN FOR RADIO FREQUENCY (RF) APPLICATIONS – 5G BASE STATIONS



		POWER AMPLIFIER (PA)	LOW NOISE AMPLIFIER (LNA)	SWITCH	ANTENNA TUNER (AT)	FILTER	ENVELOPE TRACKER (ET)	PHASE SHIFTER	SYSTEM ON CHIP (SoC)
4G / 5G SUB-6GHZ FEM KEY BLOCKS	RF-SOI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	POI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	FD-SOI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	GaN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5G MMW FEM KEY BLOCKS	RF-SOI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	FD-SOI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	GaN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WIFI & UWB FEM KEY BLOCKS	RF-SOI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	POI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	FD-SOI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Significant growth is projected for front end modules (FEM) in the next 8 years

- ✓ Carsem spent US\$ 12Mil for 5G RF FEM. Carsem Suzhou already has experience in FEM for 4G/5G, include DiFEM Module/DiFEM Module/Duplexer+ Quadruplex and Irregular SiP package, expected initial production in Q2FY24
- ✓ Industry technology trend suggests that the business of GaN related FEM will be much more than 4G
- ✓ Carsem Suzhou is already engaging with main 5G players of China for 5G base stations FEM



Source: Yole, Ericsson, Soltec, Qualcomm



Technology – Future focus

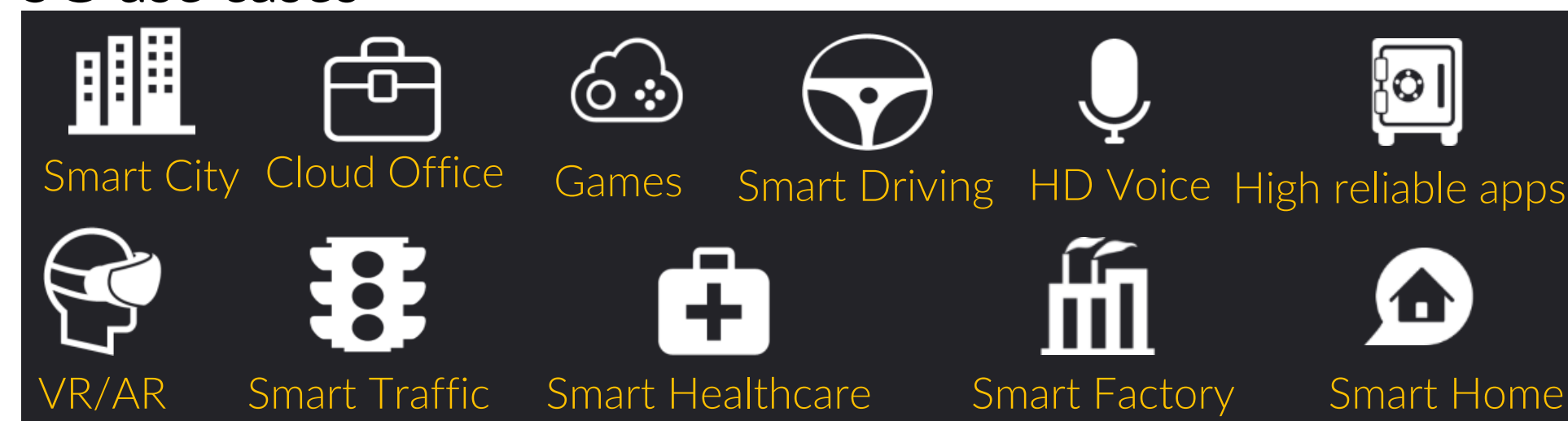
5G TESTING

5G – Next Generation of mobile broadband



- ✓ Exponentially faster download & upload speed
- ✓ Drastically decreased latency
- ✓ Implementation of IOT, Autonomous Cars, Artificial intelligence.
- ✓ High frequency signals on shorter wavelengths will require more base stations than usual 4G

5G use cases



Carsem Suzhou has been working extensively on 5G test technology development

- ✓ CSZ is working with 10+ customers for 5G device testing
- ✓ Completed 5G and Wifi7 RF test capability development, up to WiFi7 7.125GHz
- ✓ Continuing engagement with specialized customer for 5G FR2 (mmWave) testing development
- ✓ Building an exclusive 5G RF domain specific test development team to be the best in this field

CSZ R&D capability - able to support 5G sub 6GZ, but not ready for 5G mmWave yet

Product	2G	3G	4G	5G	
	800MHz~2GHz	2GHz~2.2GHz	1.7G~2.7G	3.3GHz~6.0GHz (Sub-6GHz)	>28GHz (mmWave)
Bandwidth	6MHz~24MHz	15MHz	15MHz~130MHz	<1G Hz	>1G Hz
Switch	✓	✓	✓	✓	Under development
Filter (SAW/BAW)	✓	✓	✓	✓	Under development
Diplexer/Multiplexer	✓	✓	✓	✓	Under development
PA (Power Amplifier)	✓	✓	✓	✓	Under development
LNA (Low Noise Amplifier)	✓	✓	✓	✓	Under development
Antenna Tuner	✓	✓	✓	✓	Under development
SiP (include 2 or more components into a package)	✓	✓	✓	✓	Under development



Technology – Future focus

MODULES

Entirely new SMT Line



3D X - Ray



C - Mold



CARSEM SUZHOU

- ✓ Invested in dedicated machines for FEM module line under production
- ✓ Invest in dedicated machine and skilled manpower to extend FEM line capacity
- ✓ Attacking high end customer FEM product, under engineering stage

CARSEM MALAYSIA

- ✓ Assembling advanced packages with complete flexibility for customization
- ✓ Major portfolio of advanced packages is with big semiconductor companies in NA & EU
- ✓ Investing in superior machines and skilled manpower to handle advanced packaging

BENEFITS OVER STANDARD PACKAGES

RELIABILITY COST SAVING PERFORMANCE ROBUST REDUCED SIZE CUSTOMIZABLE





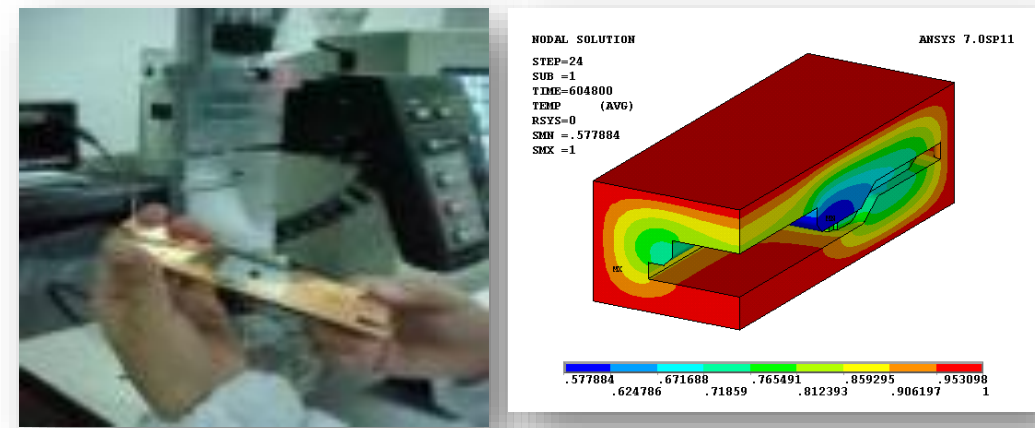
Technology – Carsem technology center

DEDICATED TECHNOLOGY CENTER TO DRIVE INNOVATION & TECHNOLOGY DEVELOPMENT

CARSEM TECHNOLOGY CENTER (CTC) – 4M APPROACH TO R&D

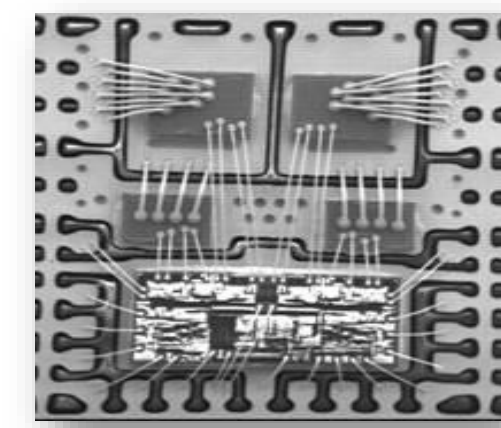
MATERIAL

- Materials lab,
- Design & Simulation



METHODOLOGY

- Process development
- Total 75 active patents



MACHINE



- Dedicated to package/process/materials development

MAN (HUMAN CAPITAL/ EXPERTISE)

- Total headcount: 66 (Technical Management ~8%, Project Management ~34%, Engineering ~58%)





Quality & productivity focus

INVESTING IN AUTOMATION & INDUSTRY4.0 TO ACHIEVE ZERO DEFECTS & HIGH PRODUCTIVITY GOALS

End Game – Smart factory

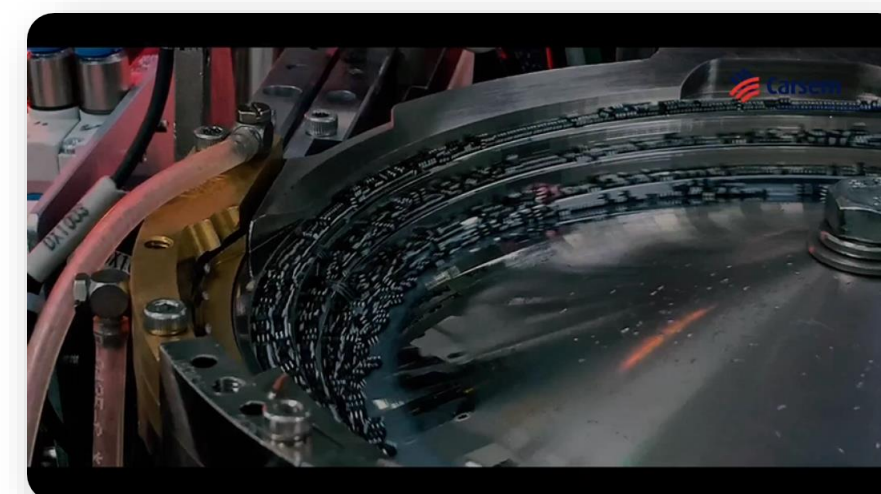


Highlights

- › Highly automated line with minimal dependence on people
- › **12%** drop in # of VOC cases per mil units (FY17-Q3 FY23)
 - Quality improvement
- › Productivity improvement
- › Connecting shop floor & processes

State of the art advanced facilities, towards lean manufacturing

5G testing



*Rack & stack with
Pentamaster handler*

Lights-off factory



*Automated
guided vehicle*

Zero defects quality



Robotic arm



Quality & productivity focus

AUTOMATION: EO Laser Continuous Run Enhancement

1. Operator can continuously load magazine without waiting for current lot to complete.

2. New lot is automatically tracked in when a new lot magazine is detected.

(Est 1 min saving)

3. Smart APC is only executed on every marking content change or every 1 hour. (Previously every lot)

(Est 2-4 min saving)

6. After machine validates all frames is complete, magazine change is done and lot is tracked out.

(Est 1 min saving)

4. Host will automatically choose dummy strip and SPC requirements.

(Est 10 sec saving/sublot)

5. Optimistic SPC parks the next SPC validation frame to the marking chamber in a dual shuttle configuration.

(Est 20 sec saving)

Improvement:

UPH increase by
19%

Legend :

Changes on machine

Changes on host




Quality & productivity focus

CERTIFIED ON INDUSTRY'S LEADING PERFORMANCE PARAMETERS




ESD Control

Applicable to Design, Assembly, Testing & Finishing of semiconductor component



IATF 16949:2016

Design & manufacturing of semiconductor components




ISO 45001:2018

Occupational Health & Safety Management System implemented in compliance



ISO 14001:2015

Environmental Management System implemented in compliance



Sony Green Partner Program

Environmental quality assurance activities



ISO 9001:2015

Design & manufacturing of semiconductor components



Awards and recognitions

QUALITY & PEOPLE

BEST SUPPLIER AWARDS received



Best supplier award, 2022

HEK, China



Best Partner Award,
2022

PSE, China



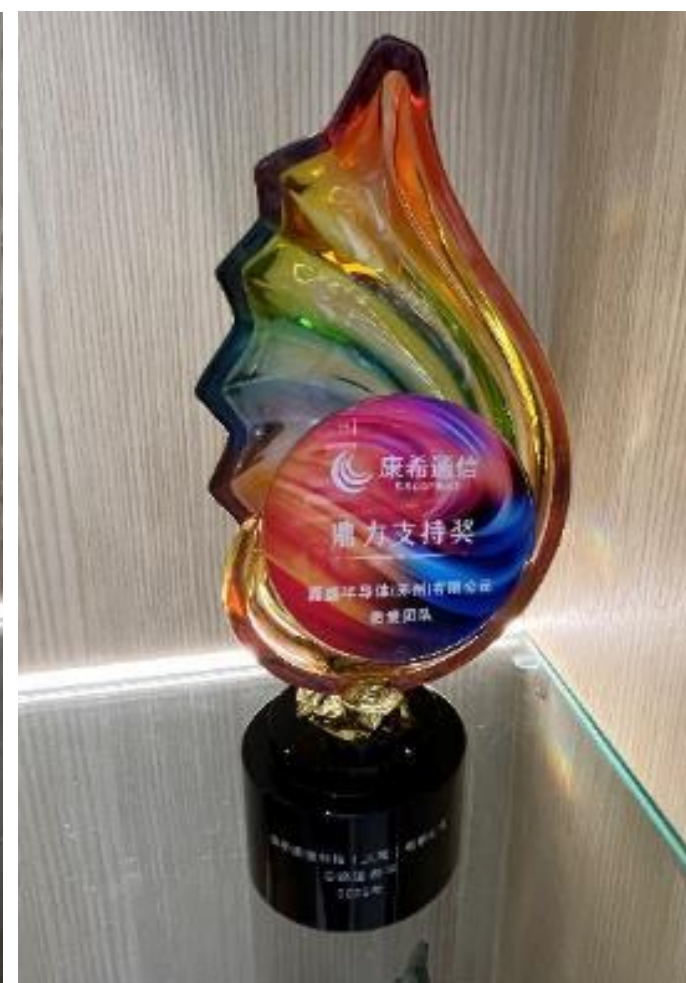
Best supplier award, 2022

QST, China



Best quality service
award, 2022

EPM, China



Best supplier award,
2022

Kangxi, China



Awards to assembly and test
engineering team, 2022



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3	BUSINESS OVERVIEW	
4	SUSTAINABILITY	
5	GROWTH DRIVERS	
6	FINANCIALS & SUMMARY	



Financial highlights

Q3 FY23 SNAPSHOT

REVENUE

With the challenges faced in China & worldwide consumer demand drop, MPI closed Q3 FY23 at US\$ 107M

DIVIDEND

Despite all the challenges & high costs, MPI's 2nd interim dividend was same as that in the corresponding quarter last year (25 sen)

CAPEX

Good or Bad times, Carsem invests in replacing old machines & getting new technology in. Q3 FY23 – RM 44M

CASH

MPI is backed by strong cash position even in these uncertain market dynamics – Q3 FY23 Net Cash: RM 813M

CHALLENGES

Uncertain macroeconomic environment, global end market demand drop, rise in costs and manpower constraints

SEGMENTS

Automotive segment is strengthening; Automotive (43%); Industrial (38%); Consumer (13%)



Key financials

MPI GROUP RESULTS AT A GLANCE

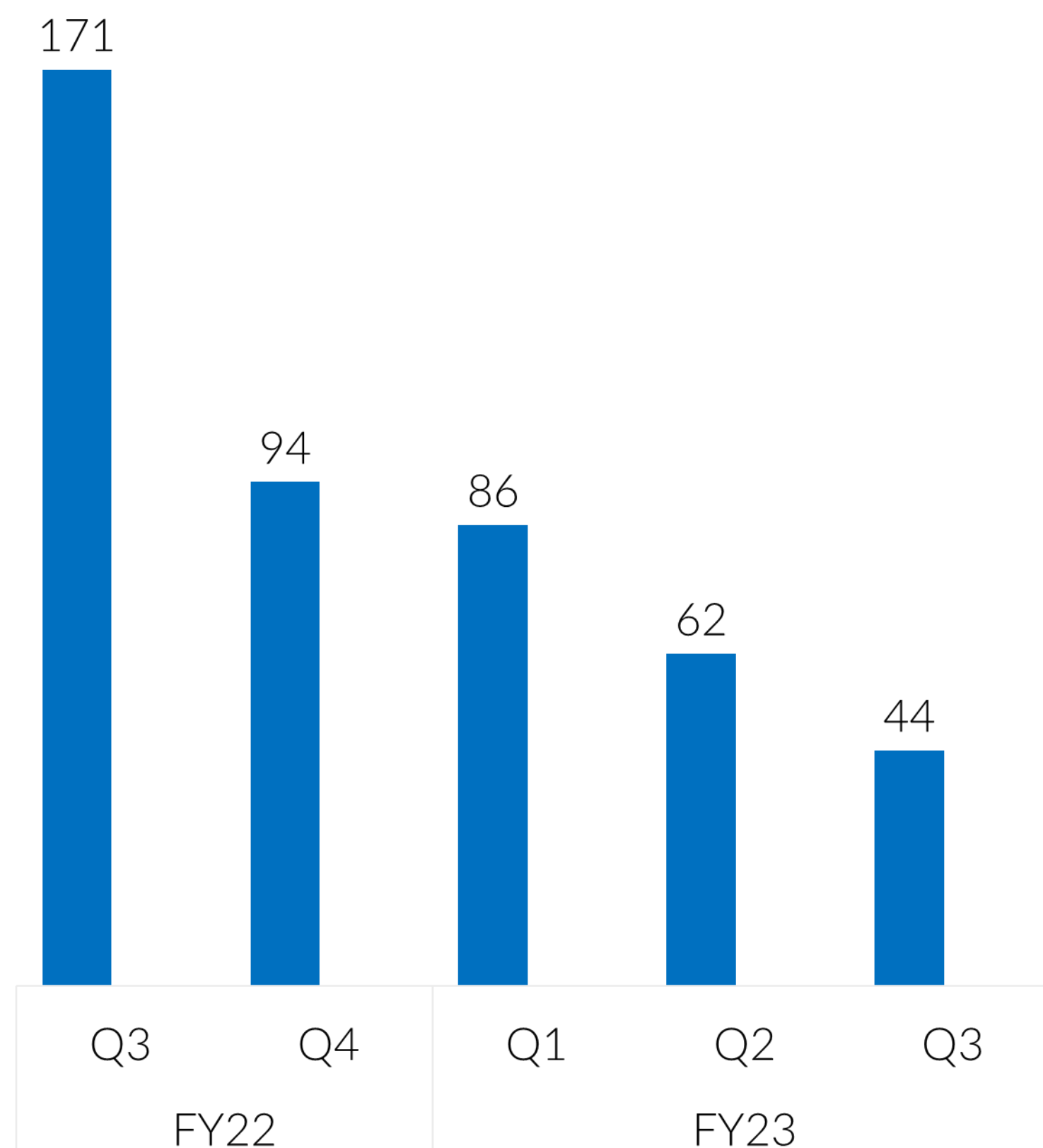
	Q3 FY23	Q2 FY23	Q3 FY22	Q3 vs Q2	Q3 vs Q3	YTD FY23	YTD FY22	YoY
	RM mil	RM mil	RM mil	%	%	RM mil	RM mil	%
Revenue	471.9	526.4	611.6	-10%	-23%	1,562.3	1,804.1	-13%
(LAT)/PAT	(8.4)	31.8	95.9	>-100%	>-100%	91.0	291.9	-69%
PATAMI	(17.8)	18.3	81.4	>-100%	>-100%	53.2	248.4	-79%
EPS (sen)	(8.97)	9.22	40.98	>-100%	>-100%	26.75	125.15	-79%
EBITDA %	17%	23%	31%			23%	31%	
Capex	44.3	62.0	171.0	-29%	-74%	192.8	635.7	-70%
Dividend	0	20	0			20	20	
Net Cash	812.9	815.9	848.8			812.9	848.8	
EDR	100:0	100:0	100:0			100:0	100:0	
ROSF	-0.9%	0.9%	4.8%			2.7%	14.6%	



Investments

SUSTAINED INVESTMENTS TO REALIZE LONG TERM BUSINESS ASPIRATIONS

MPI CAPEX (RM million)



- Continuing to invest in strategic capacity expansions at our operations in China and Malaysia

- Another key investment area during Q3 FY23 was automotive PMIC (Power management IC) with application in electronic power steering (EPS) modules & automotive power trains



Investments

CONTINUING STRATEGIC INVESTMENTS FOCUSING ON SENSORS, 5G TESTING & SiC/ GaN

CARSEM SITES

SZ

5G TESTING



S

SILICON
CARBIDE



M

MEMS
SENSORS



- Hire domain specific relevant people across the globe to support business operations & sales



- Investing in research & development to deliver latest technology solutions to our customers



- Floor space expansion to meet increasing business demands from existing & new customers



- Continuing Industry 4.0 via automation in each factory to have zero defects quality



- Upskilling existing operational & technical manpower to be able to perform better with latest technology



- Looking for more anchor customers to secure more guaranteed business in future



Cash

STRONG NET CASH POSITION MEANS STABILITY IN UNCERTAIN TIMES

NET CASH (RM million) position remained healthy



MPI is cash rich despite significant capital expenditure and expenses towards managing externalities



Statement of Profit or Loss

	Q3FY23 RM '000	Q3FY22 RM '000	Changes %
Revenue	471,861	611,557	-23%
Cost of sales	(440,317)	(495,653)	-11%
Gross profit	31,544	115,904	-73%
Operating expenses	(31,141)	(28,933)	8%
Other operating (expenses)/income	(9,641)	24,677	-139%
(Loss)/Profit from operation	(9,238)	111,648	-108%
Interest income	8,610	457	1784%
Interest expenses	(2,761)	(2,208)	25%
(Loss)/Profit before taxation	(3,389)	109,897	-103%
Taxation	(5,048)	(13,991)	-64%
(Loss)/Profit for the period	(8,437)	95,906	-109%
(Loss)/Profit attributable to:			
Owners of the Company	(17,832)	81,361	-122%
Non-controlling interests	9,395	14,545	-35%
(Loss)/Profit for the period	(8,437)	95,906	-109%
(Loss)/Earnings per ordinary share (sen)			
Basic	(8.97)	40.98	-122%
Ratio			
GP %	7%	19%	
(LBT)/PBT %	-1%	18%	
(LAT)/PAT %	-2%	16%	
EBITDA%	17%	31%	



Statement of Financial Position

	31/03/2023 RM'000	30/06/2022 RM'000
Non-current assets		
Property, plant and equipment	1,439,584	1,511,323
Right-of-use assets	48,869	52,285
Investment properties	27,234	27,897
Investments	46	46
	1,515,733	1,591,551
Current Assets		
Inventories	165,529	206,279
Trade and other receivables, including derivatives	294,544	356,139
Tax recoverable	-	62
Cash and cash equivalents	1,055,227	964,826
	1,515,300	1,527,306
TOTAL ASSETS	3,031,033	3,118,857



Statement of Financial Position

	31/03/2023 RM'000	30/06/2022 RM'000
Equity		
Share Capital	352,373	352,373
Reserves	1,859,674	1,811,656
Treasury shares	(163,816)	(163,816)
	2,048,231	2,000,213
Non-controlling interests	353,192	321,568
	2,401,423	2,321,781
Non-current liabilities		
Borrowings (unsecured)	55,915	180,100
Lease liabilities	21,730	23,566
Deferred tax liabilities	6,347	2,269
	83,992	205,935
Current liabilities		
Trade and other payables, including derivatives	330,343	543,813
Borrowings (unsecured)	186,383	13,170
Lease liabilities	3,817	2,781
Current tax liabilities	25,075	31,377
	545,618	591,141
TOTAL LIABILITIES	629,610	797,076
TOTAL EQUITY AND LIABILITIES	3,031,033	3,118,857
Net Assets per share attributable to owners of the Company (RM)	10.30	10.06
Net Cash	812,929	771,556
EDR	100 : 0	100 : 0



Summary



MPI declares 2nd Interim Dividend same as Q3 FY22 despite rising costs and overall semiconductor industry drop



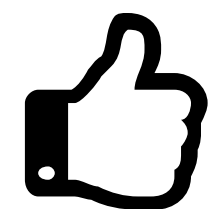
MPI has a healthy order book for future quarters despite the ongoing market uncertainty



Carsem continues to invest in SiC & GaN Technology, 5G Testing, MEMS sensors to grab the next wave of opportunities



Investing in expansion - new factory in Ipoh, additional floor in Carsem S – Site (Ipoh) & a new site in China



Net Cash (RM 813 million for investment & M&A), No debts



Thank You