



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 2 F Y 2 0 2 4 (O c t - D e c ' 2 3)

INVESTOR RELATIONS CONTACT



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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 is an operating company 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 over 50 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)

523

Q2 FY24

PATAMI growth (%)

95%

vs. Q1 FY24

Net cash (RM million)

936

as of Q2 FY24

EBITDA (%)

26%

Q2 FY24

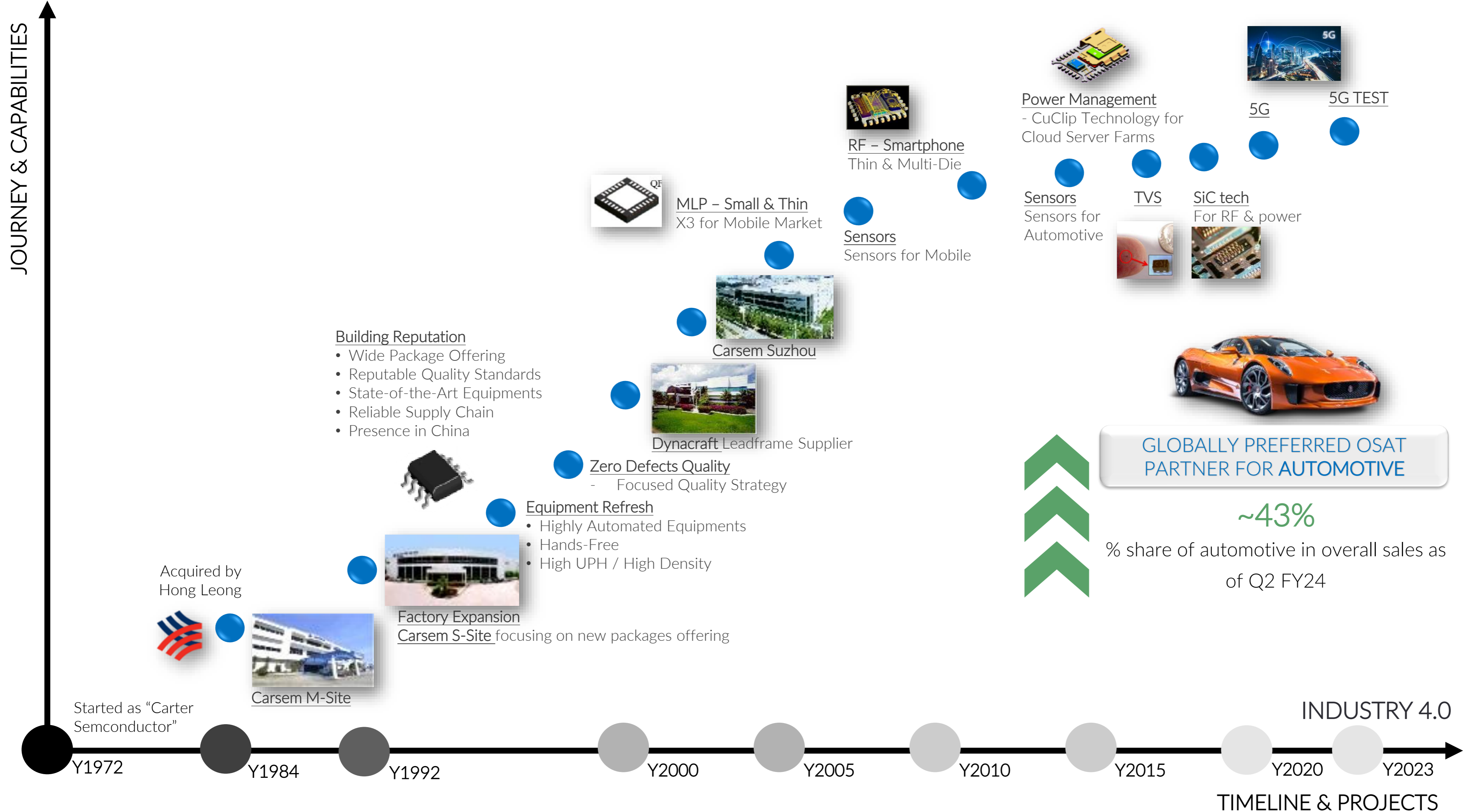
Note: FY24 = July 2023 – June 2024

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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

MS JENIFER THIEN BIT LEONG

Non-Executive Director/ Independent

- Nov 2023: Appointed to board of MPI, and is a member of Nominating Committee of MPI
- Is a Director of UEM Edgenta Berhad & AEON Co. (M) Berhad
- Is the founder & principal of Grit & Pace, through which she advises corporations on ESG & Sustainability strategies

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



PO LAU
CFO, MPI

Over 20 years of financial management experience



INDERJEET SINGH
GM, Wide bandgap business

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



Jay
GM, CARSEM S-SITE, MY

27 years of experience in manufacturing, previously held senior positions in EMS Industry



MURALITHARAN
GM, CARSEM M-SITE, MY

Over 26 years of experience leading multinational plant operations, managing subcon factories & large-scale projects



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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Supply chain & business model

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



Growth opportunities exist among margin pressures - *Advanced packaging (SiP, 3D), Industry 4.0 and downstream niches present upsides*

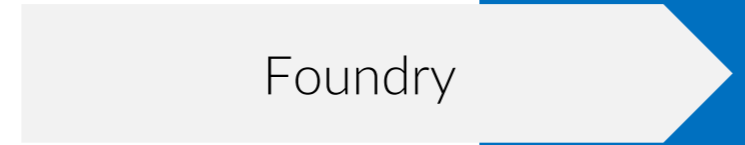


Carsem provides turnkey packaging & test services

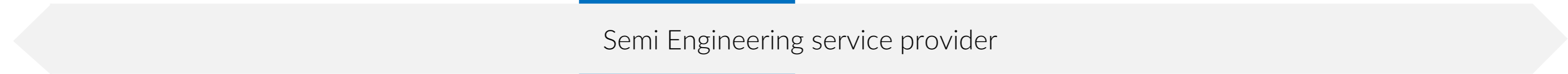


EMS expanding into engineering services and IC backend

Foundries expected to further offer broader set of services, incl. packaging & testing



IDMs applying selective 'make-and-buy' strategy



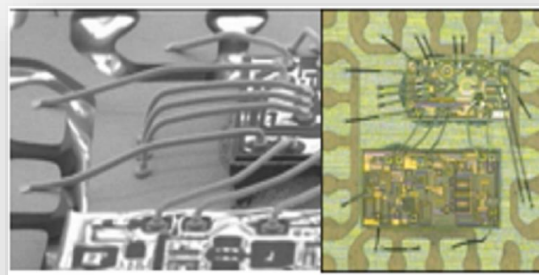
Engineering service providers covering wide range of value chain steps without own packaging & testing facilities



Wide portfolio

COMPREHENSIVE TURNKEY PACKAGING & TEST SERVICES

ACROSS KEY APPLICATIONS

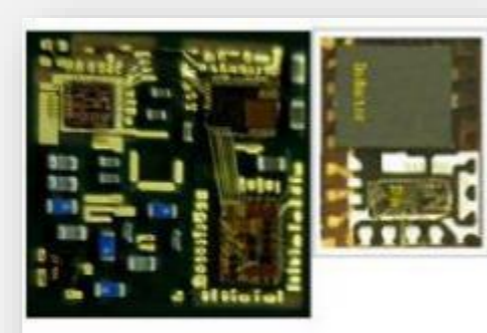


X3.2


MLP



Small Outline IC



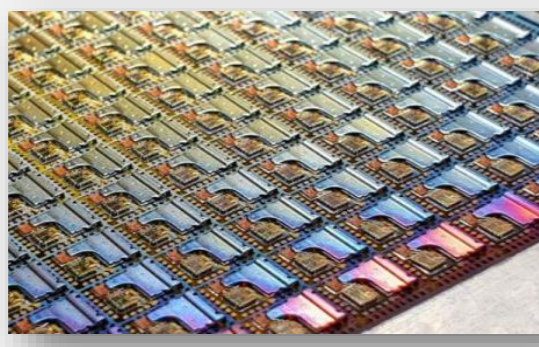
System in Package (SiP)



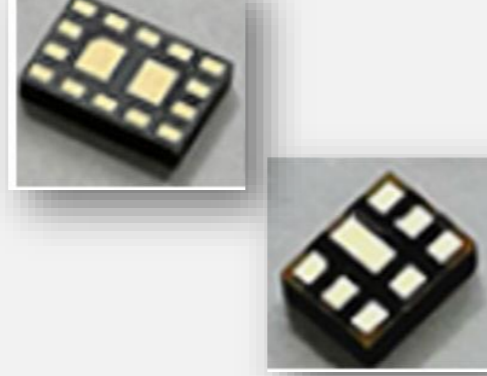
Quad Flat Package (QFP)



MEMS & Sensors



Copper Clip



Flip Chip



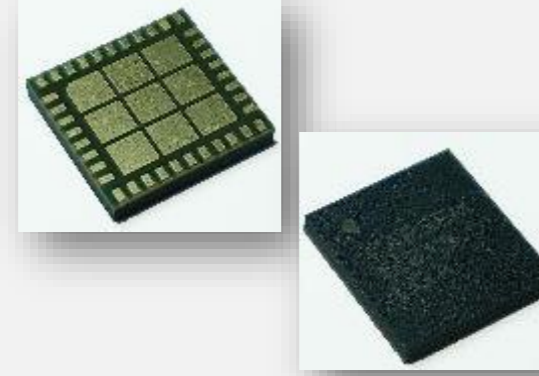
Transient Voltage Suppressor (TVS)



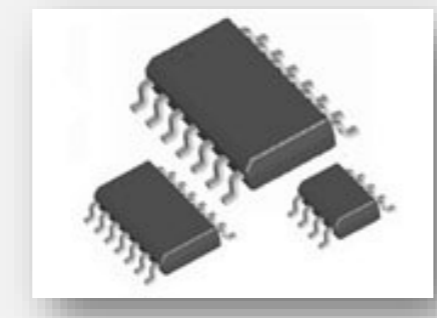
Power Management (SiC, GaN, GaN on SiC)



MICRO



Land Grid Array (LGA)



IC - PDIP, SOP packages



Test



Automotive

Industrial



Consumer & Communications

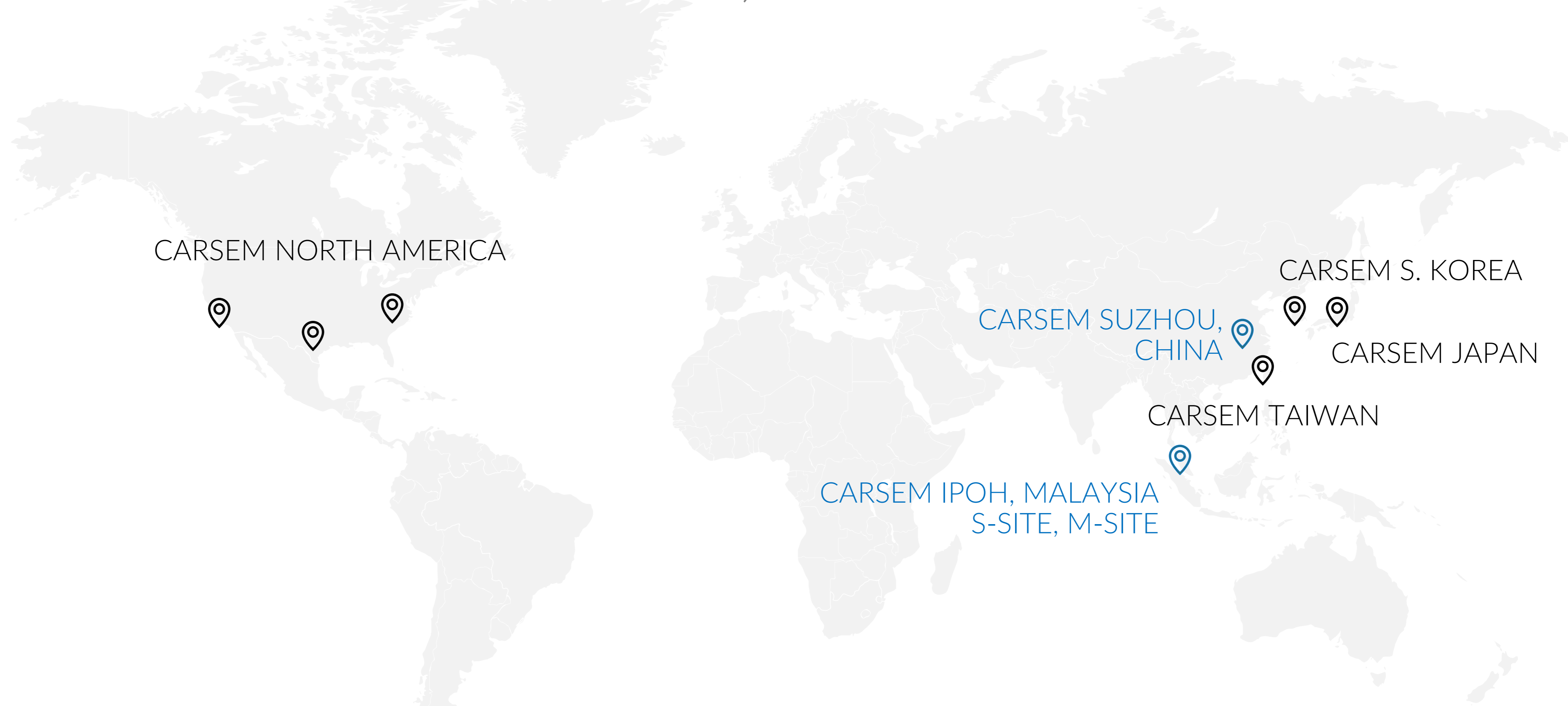
PC/ Notebook






Geographic footprint

BROAD GEOGRAPHIC PRESENCE, SERVING A GLOBAL CUSTOMER BASE



LEGEND

 Manufacturing plants & Sales offices

 Sales offices



Production facilities

CARSEM MANUFACTURING SITES & BUSINESS UNITS




Carsem (M-Site, Ipoh)

- Floor Space: 436K sq. ft. (40,500 sq. m.)
- Workforce: 2,170 employees
- GM: Muralitharan



Automotive & Consumer

SOIC MICRO MSU



Carsem (S-Site, Ipoh)

- Floor Space: 640K sq. ft. (60,000 sq. m.)
- Workforce: 2,829 employees
- GM: Jay



Automotive & Industrial

PMG MLP TEST



Carsem Suzhou, China

- Floor Space: 600K sq. ft. (56,000 sq. m.)
- Workforce: 2,121 employees
- GM: Raymond Shi



Automotive & Consumer

RF MLP LGA FC

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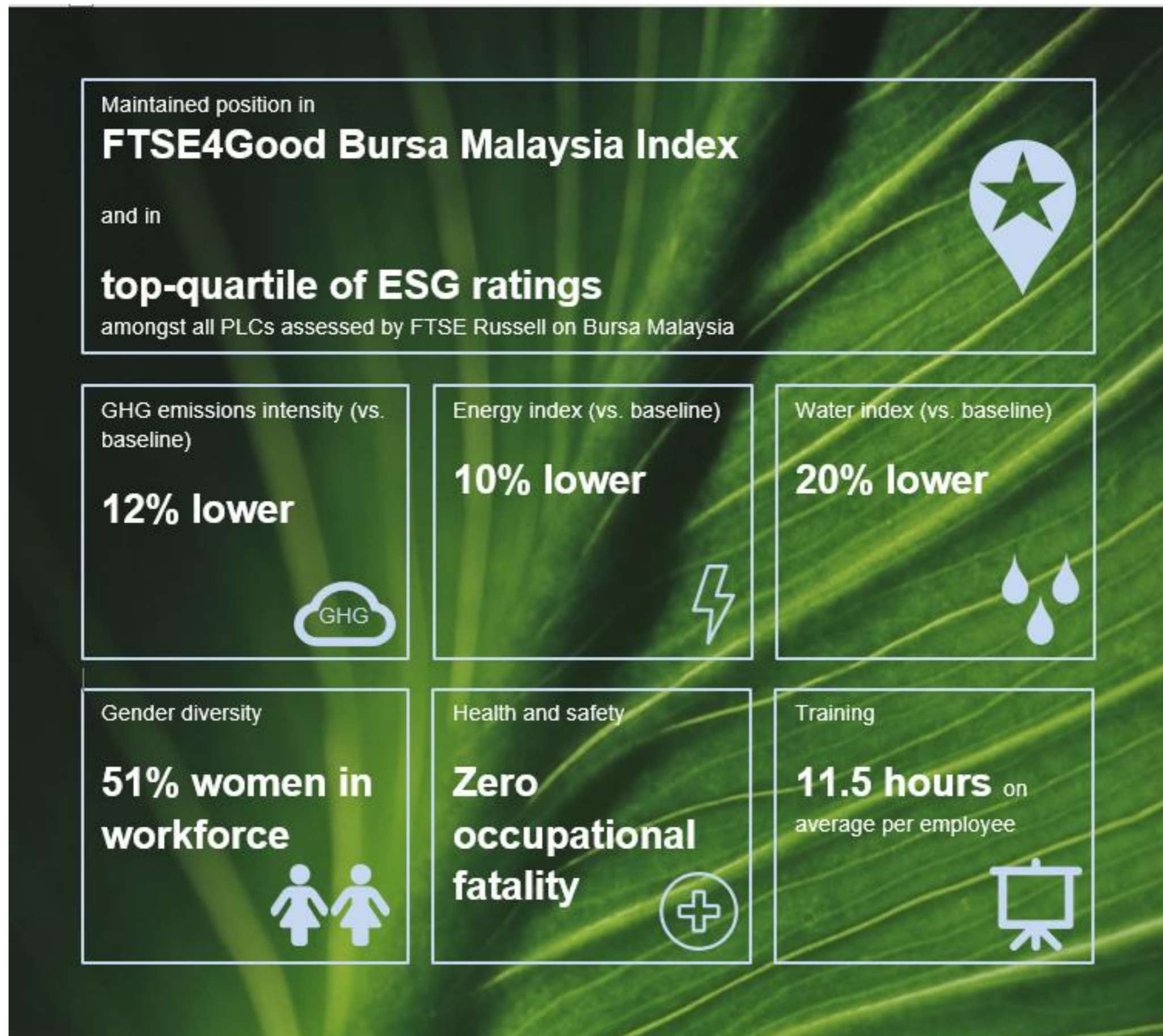
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Sustainability performance

MPI IS IN FTSE4GOOD BURSA MALAYSIA INDEX

FY23 performance snapshot





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







Sustainability themes at MPI



UN Sustainable Development Goals

6 PRIORITY SDGs MOST ALIGNED WITH OUR BUSINESS



<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>Safeguarding employee health & safety is a top priority for MPI</p>	<p>MPI makes a significant contribution towards employment and economic growth</p>	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 
<p>5 GENDER EQUALITY</p> 	<p>As a global employer, MPI strives to ensure workforce diversity and address inequality</p>	<p>MPI actively focuses on innovation, technology and related infrastructure development</p>	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 
<p>6 CLEAN WATER AND SANITATION</p> 	<p>MPI's operations strive for water conservation and wastewater management</p>	<p>MPI has a role to play in emissions control, energy efficiency improvement and waste management</p>	<p>13 CLIMATE ACTION</p> 



Environment



River monitoring activities at Sungai Meru



Green day campaign every 1st Friday of the month;
No plastic bag every Friday

Boundary noise monitoring to meet Guidelines of EQA 1974





Training & education

TRAINING AND UPSKILLING IS AMONG OUR TOPMOST STRATEGIC PRIORITIES

Online & offline training – PMP training, Online Meeting software training, IATF16949 quality tools training, DOE, Techknowledge training, FA Reliability Applications & Capability Training, Factory 5S auditor training, Automotive & Quality System Training



Project Management Training



Online Meeting Software Training



IATF16949 Quality Tools Training



DOE Training



Tech-knowledge roadmap training



FA reliability applications training



Factory 5S Auditor training



Automotive & quality system training



Training & education

TRAINING AND UPSKILLING IS AMONG OUR TOPMOST STRATEGIC PRIORITIES

Online & offline training – Program Advokasi Restart dan Kerjaya Myfuturejobs, Enforcement of Amended Employment Act Training Core Competency – Six Sigma Yellow Belt (Root Cause Analysis), IATF Core Tools Audit Training, Six Sigma Green Belt (SSGB)



Program Advokasi Restart dan Kerjaya Myfuturejobs



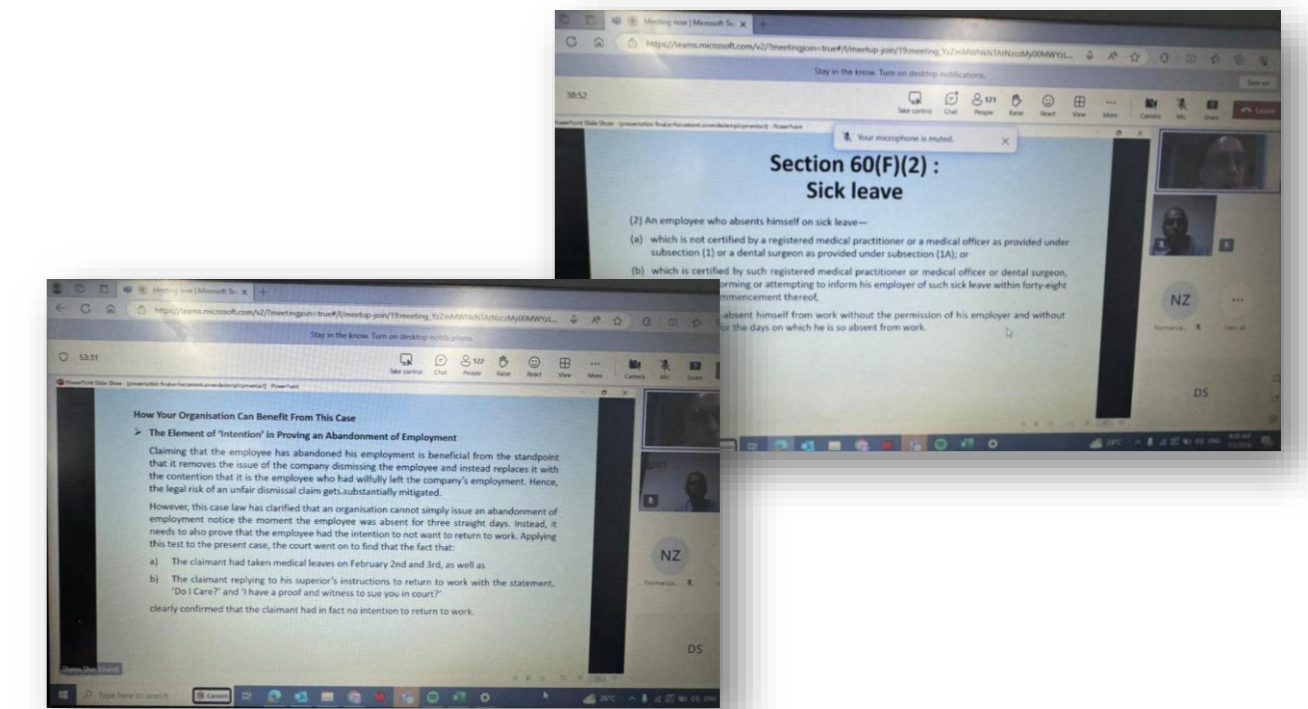
Six Sigma Yellow Belt (Root Cause Analysis)



Six Sigma Green Belt (SSGB)



IATF 16949-2016 Core Tools Audit Training



Enforcement of Amended Employment Act Training



Employee relations

Celebrations - 50th anniversary of Carsem Malaysia





Employee relations

Program: Academic Excellence

Academic Excellence Ceremony organized for the children of our employees





Employee relations

Sports

C.E.R.I.A Sports 2023



HLMG Sports





Recruitment

Successfully organized an open interview campaign



Program: Karnival Kerjaya & TVET Perak Sejahtera





Anti-bribery & anti-corruption

LEADING ETHICALLY & TRANSPARENTLY

Certification for implementing Anti-Bribery Management Systems, complying with ISO 37001:2016.

Operating subsidiaries	Certifying authority	Status
Carsem M	SIRIM QAS International Sdn. Bhd.	Certified
Carsem SZ	Shanghai Ingeer Certification Assessment Co., Ltd.	Certified

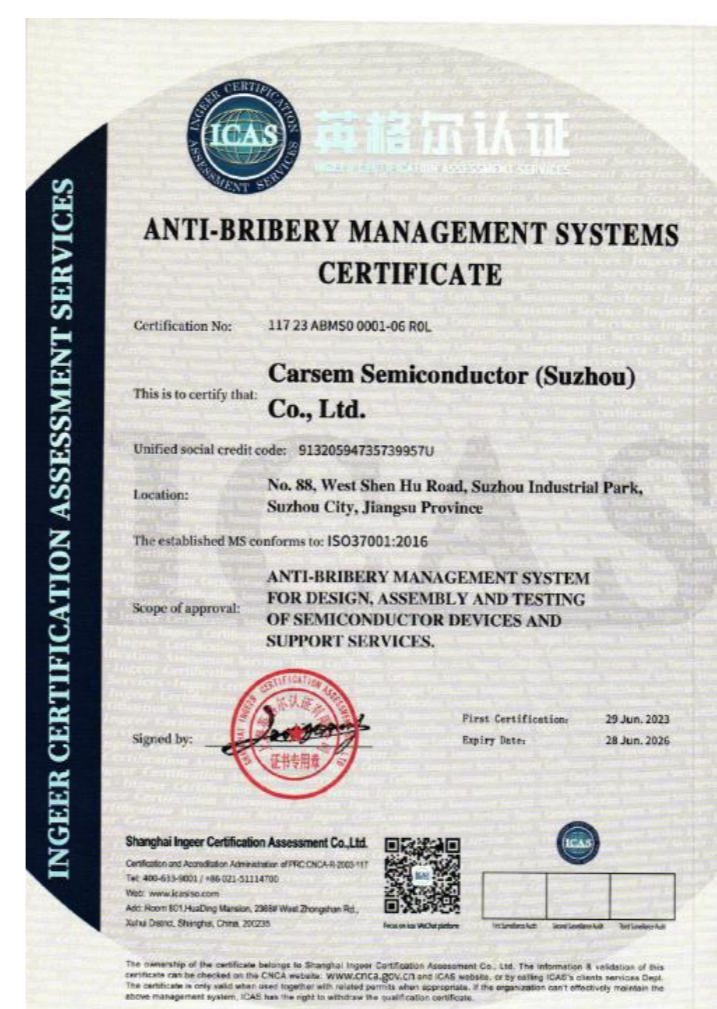


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Industry dynamics

FEW SIGNS OF RECOVERY AMIDST PERSISTING UNCERTAINTY, LONG-TERM OUTLOOK REMAINS STRONG

Market uncertainty remains, despite PC & Smartphone market ending their 7 consecutive quarters of decline



Worldwide EV car sales up by 47% annually - Global EV sales in Dec '23 were record high... over 1.5 million units



Global PC shipment rebound by 3% annually - meaningful innovations through on device AI



Smartphone shipment grew by 8% annually - rebound in demand in the emerging markets

Source: InsideEVs; Canalys



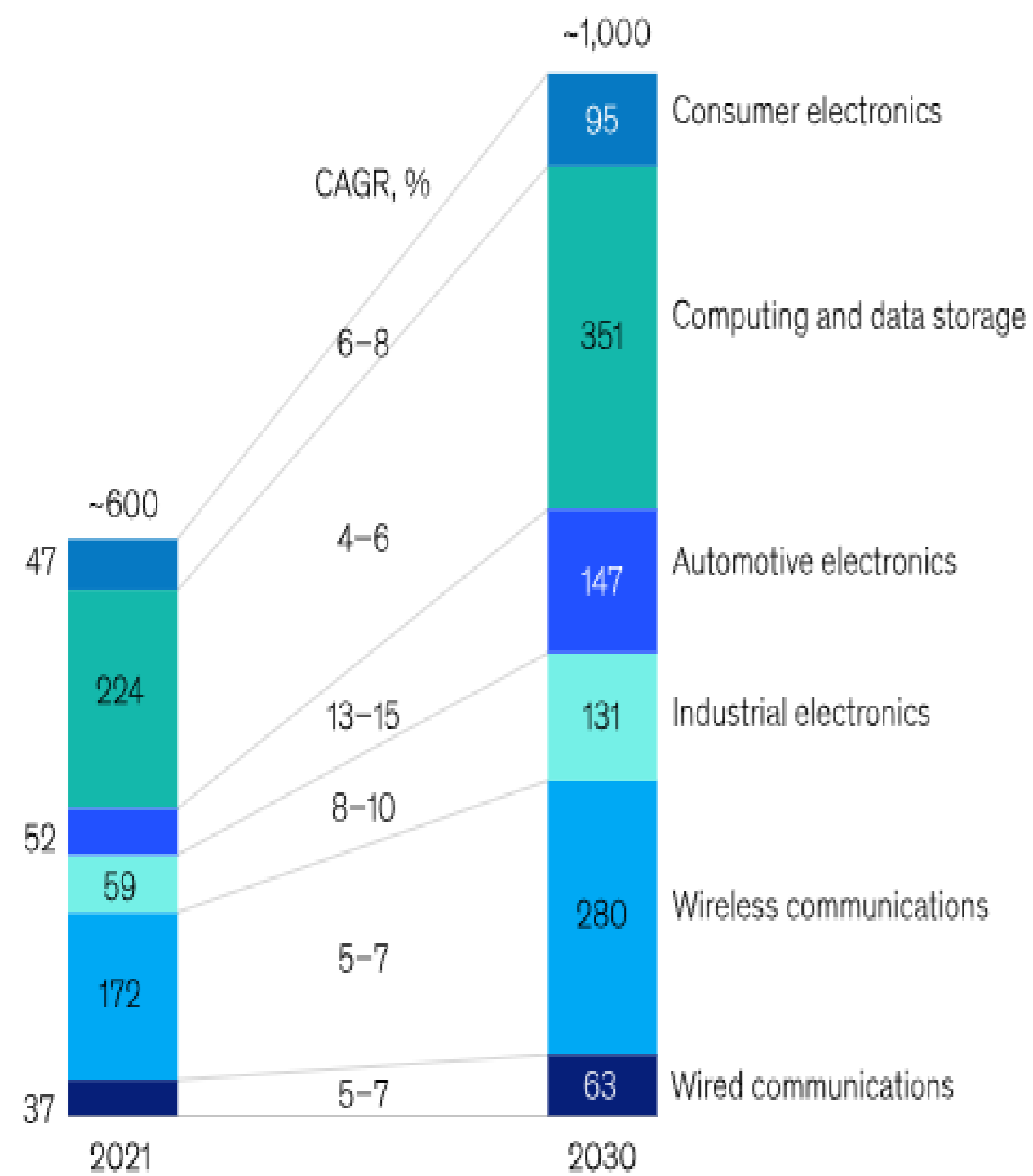
Industry dynamics

AUTOMOTIVE & INDUSTRIAL SEGMENTS HAVE A BRIGHT FUTURE

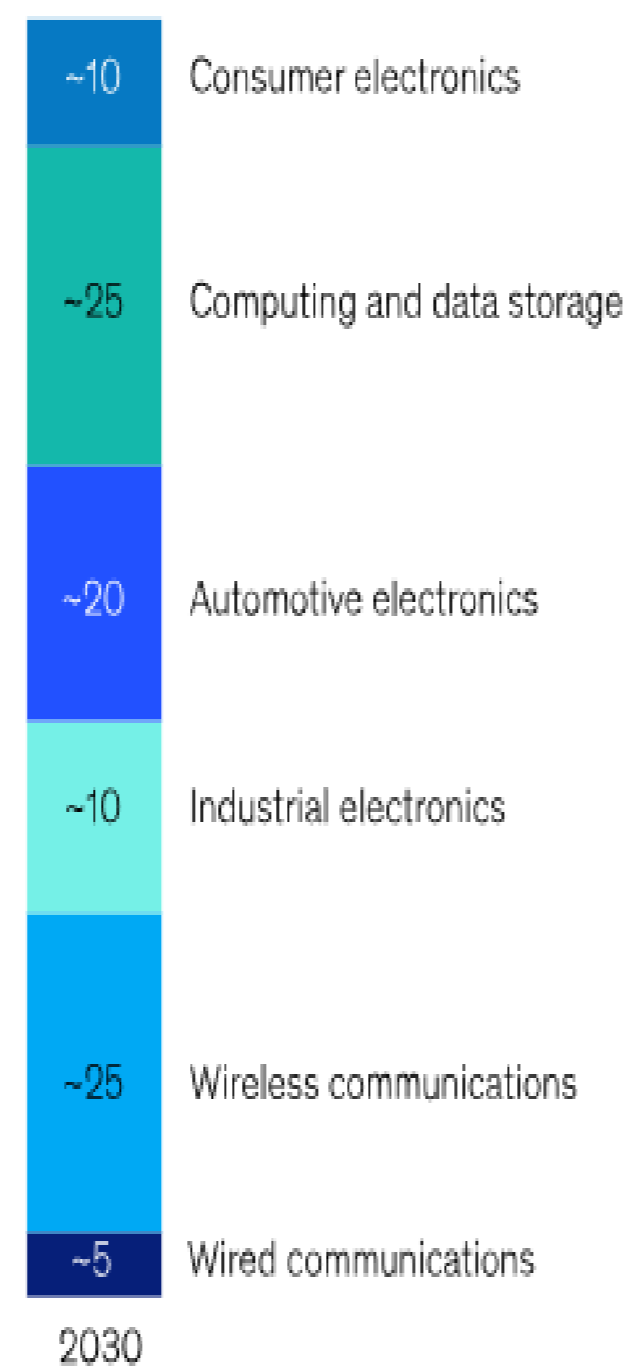
Semiconductor market expected to reach \$1 trillion by 2030

Carsem is strategically positioned in the growing segments

Global semiconductor market, \$ billion



Growth contribution per vertical, %



Automotive (SiC & GaN)

Green Energy & Industrial

Automotive

Artificial Intelligence

5G/6G Connectivity

Automotive





Growth strategy

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



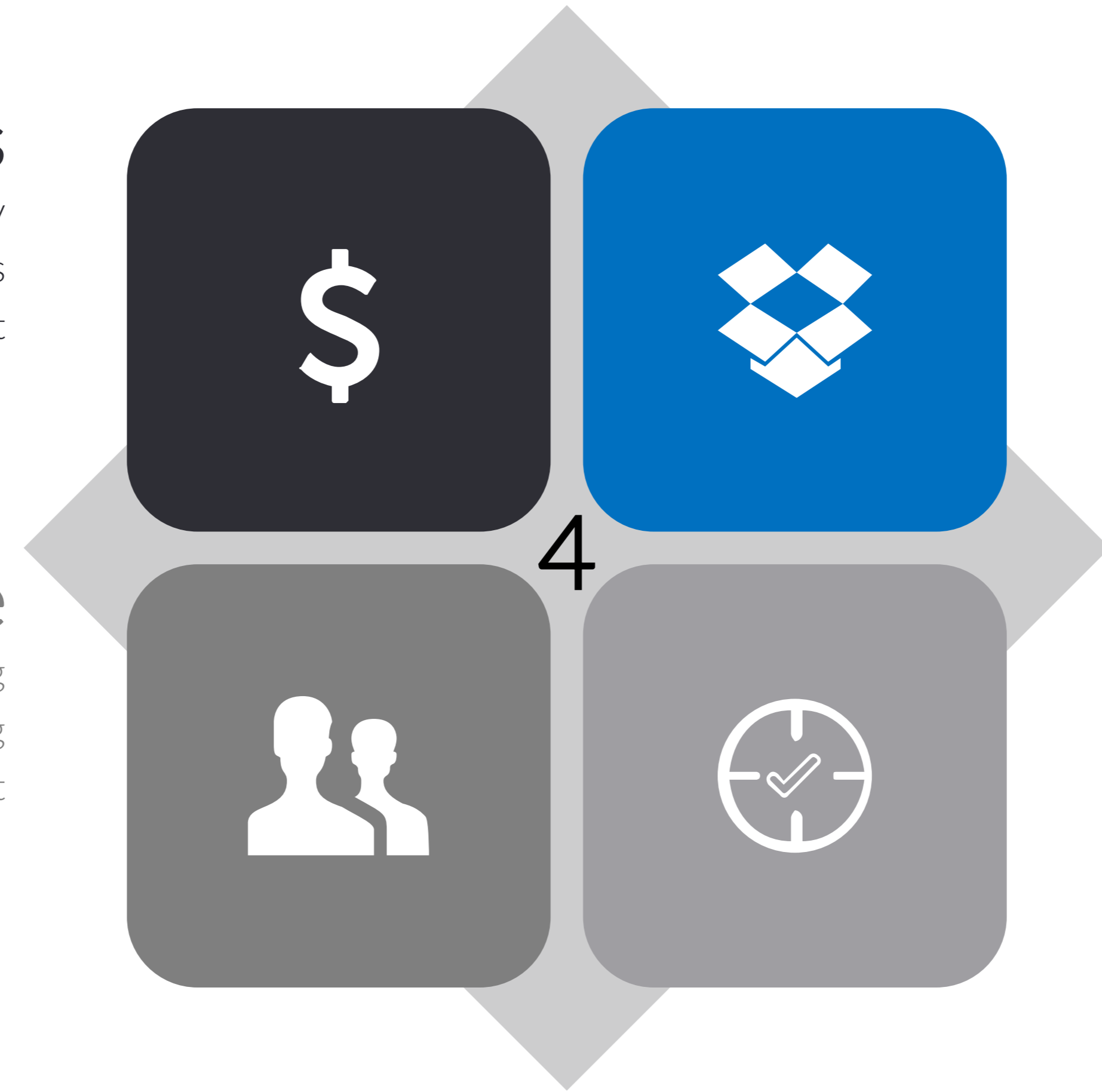
Sales

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

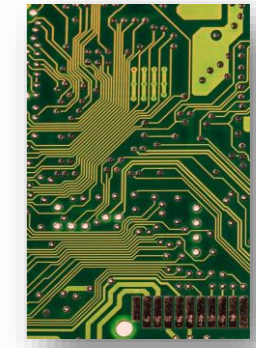


People

- 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

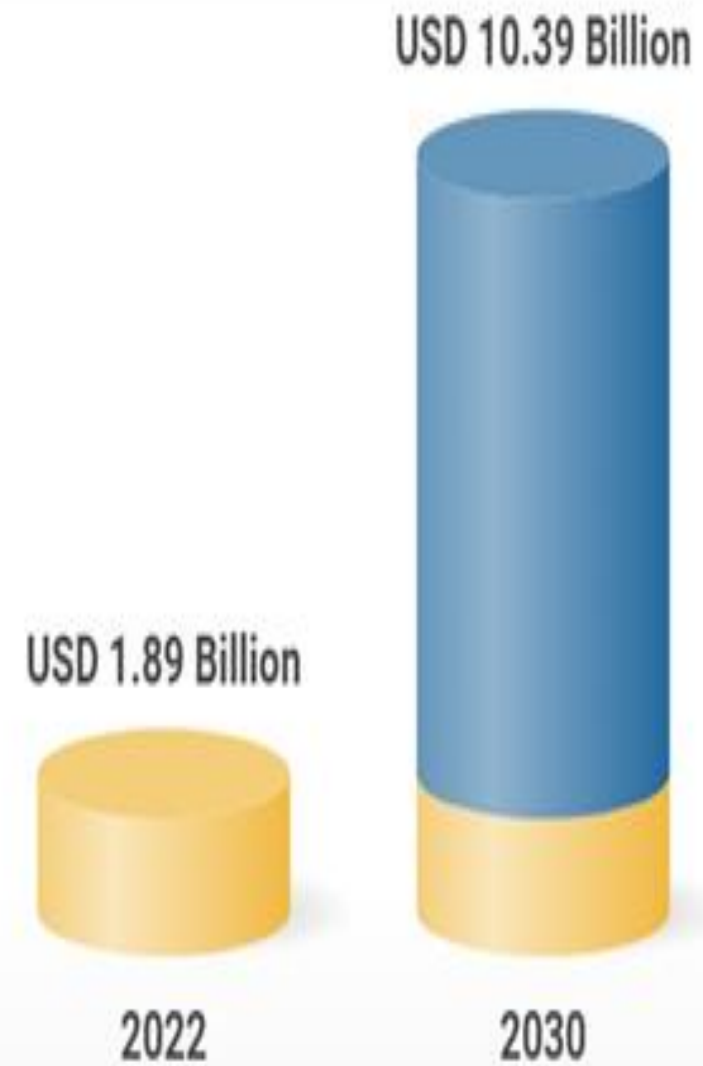


Sales – SiC and GaN packaging business

SHARPENING STRATEGIC FOCUS – CARSEM S-SITE HAS A NEW BUSINESS UNIT FOCUSING ON HIGH POWER TECHNOLOGY

Global Silicon Carbide Semiconductor Devices Market

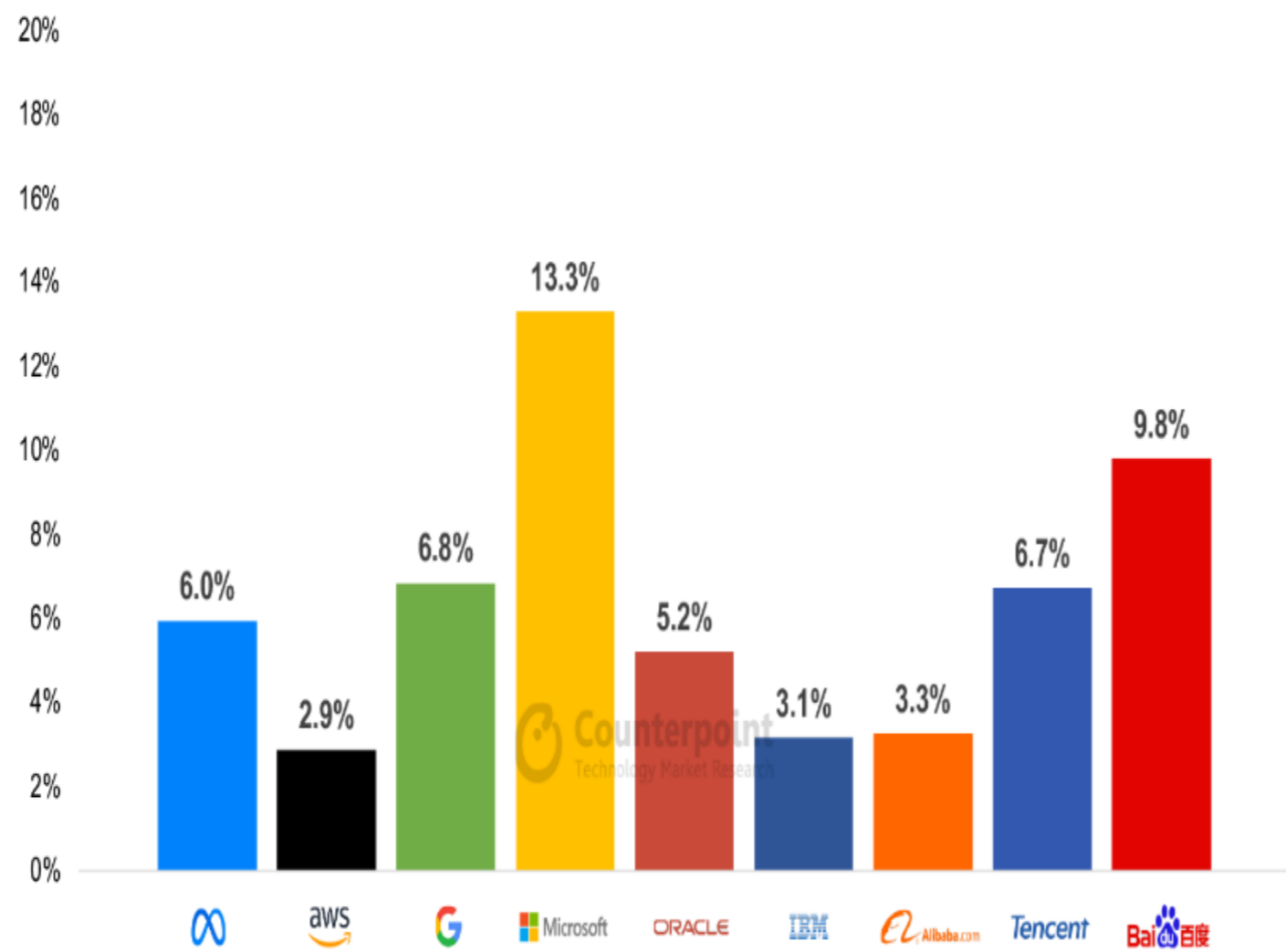
Market forecast to grow at a CAGR of 23.8%



Source: www.researchandmarkets.com

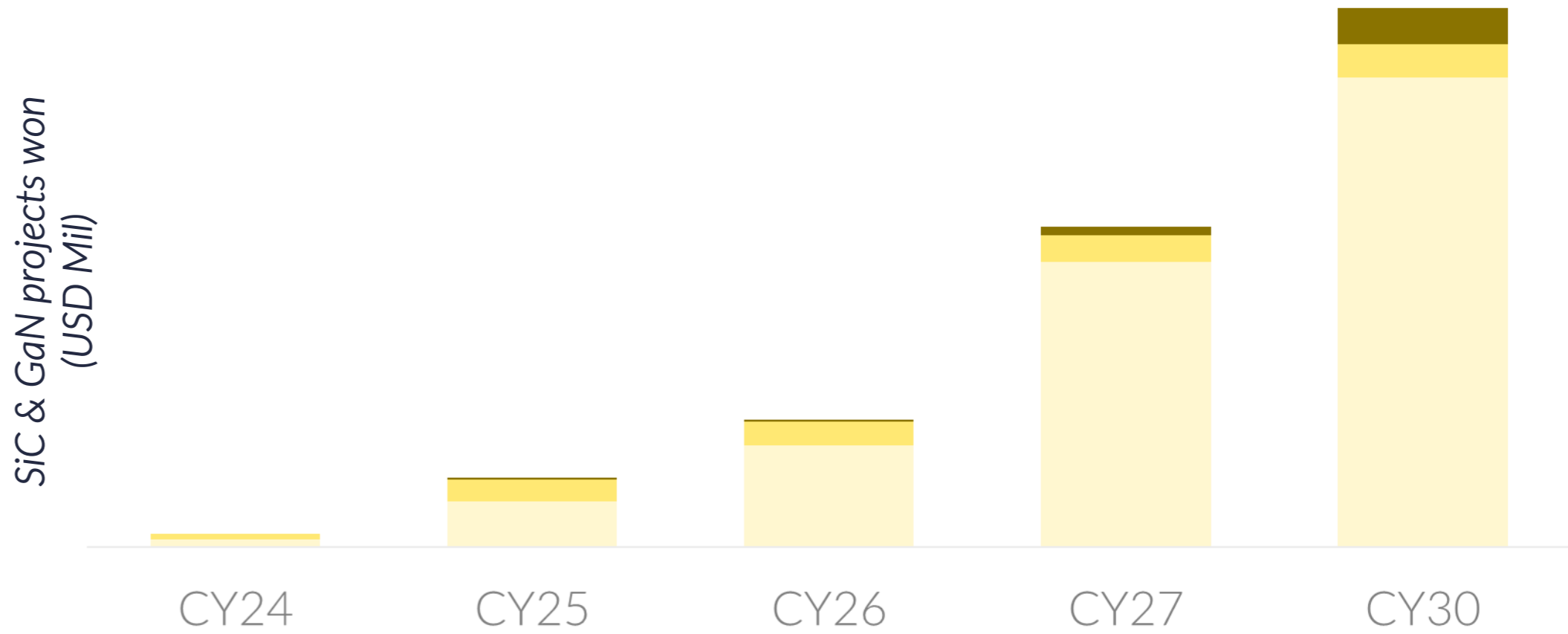
GaN powered Artificial Intelligence (AI)

Global Cloud Service Providers' AI Spends as % of Total Capex, 2023



Source: www.counterpointresearch.com

New Business Unit for SiC & GaN established in Q2 FY24



Construction start Q4 FY24

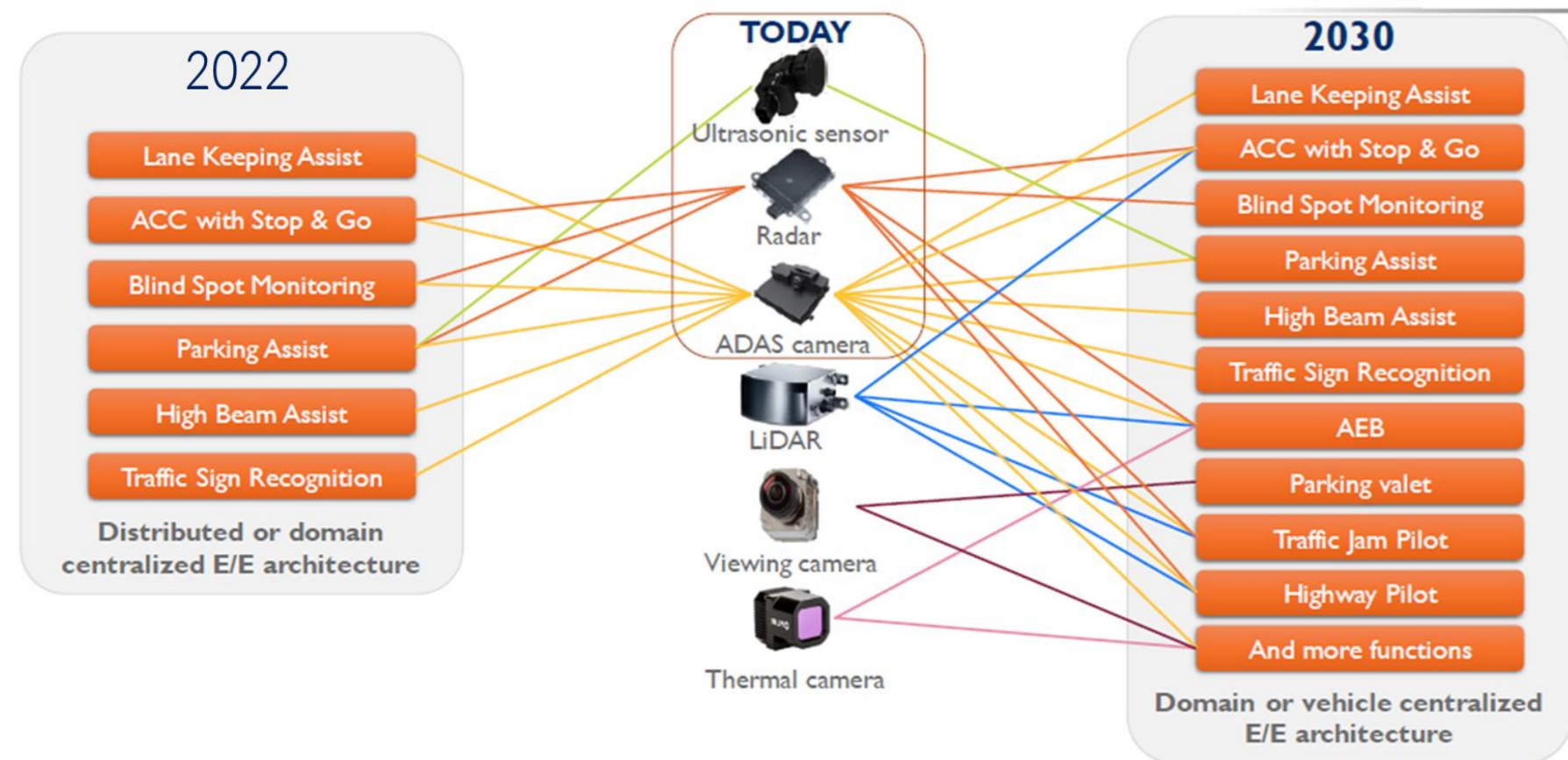
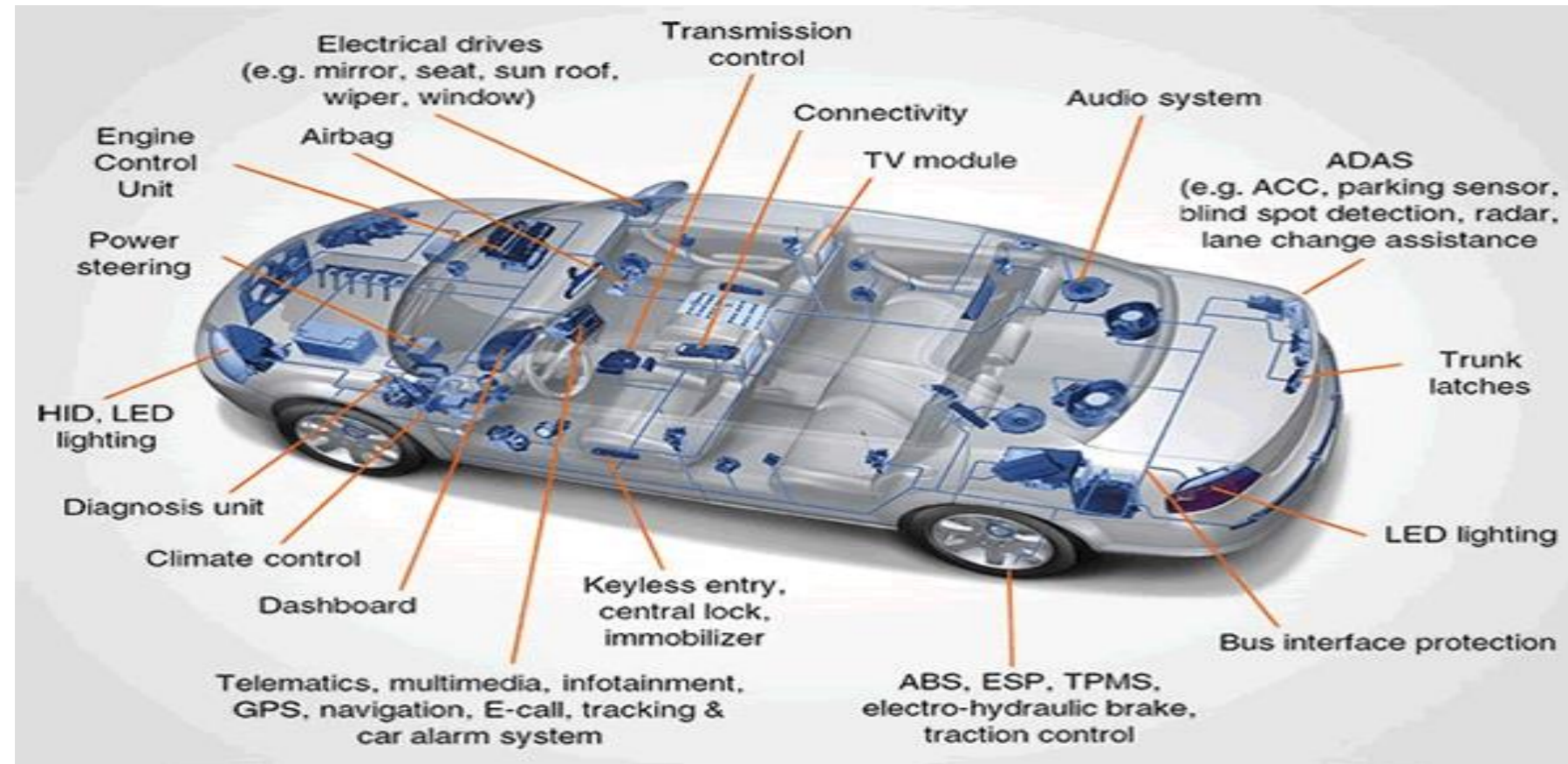
Carsem is an early adopter of SiC & GaN packaging

- Expertise
- Machines
- Quality
- People



Sales – Expansion of automotive sensors

The future for cars with intuitive traffic information & real time monitoring is not possible without over 100 highly sensitive sensors & faster data transfer



Transformation to advanced automotive sensor packages

Working with major automotive customers for package miniaturization

Carsem will facilitate floor wise & bring in machines as soon as there is high volume commitment from customer

Strong Pipeline

Huge CAPEX approved for ramp up



Sales – Tapping into auto segment growth in China

Automotive segment growth in China is expected to be tremendous and all the cars would need high power & complete connectivity



CSX fully automated factory for automotive packaging



Strong future for Carsem in China

Total Overall Investment – RMB 4.5 Billion



Chinese Car Brands

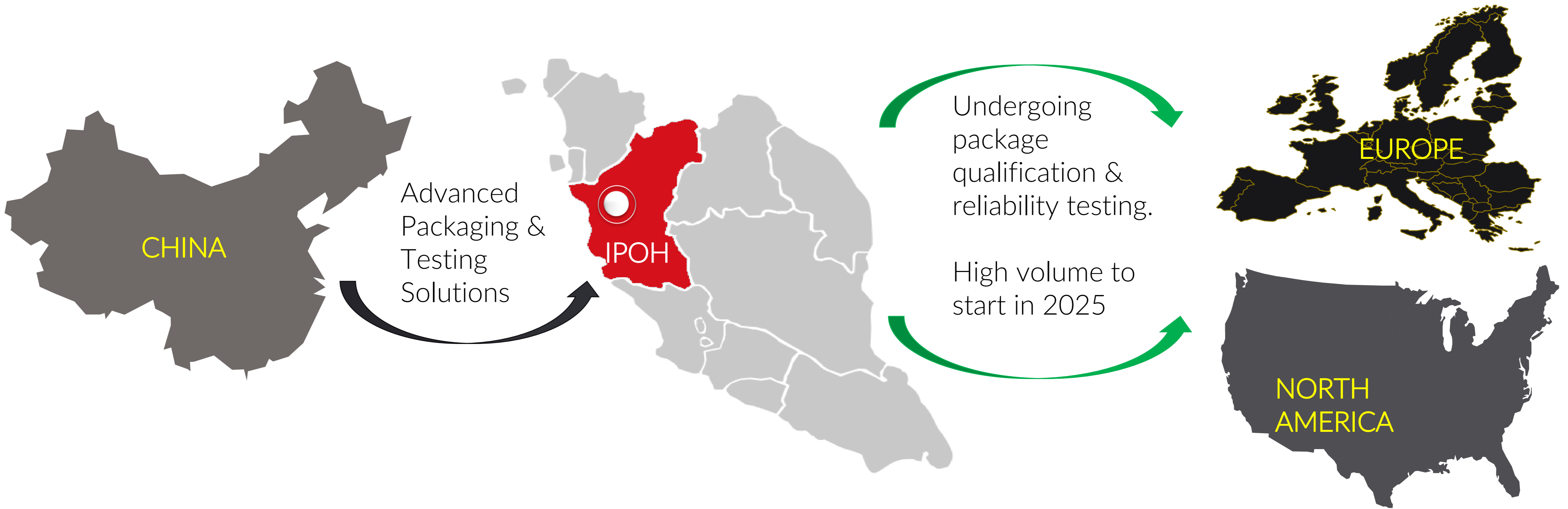


- Automotive in China has a strong high compounded growth rate
- Over 100 Automotive projects already in different stages of pipeline
- Transfer some technology & experience manpower from Ipoh



Sales – Capturing opportunities

Major companies from China are building samples with Carsem Ipoh to supply to European & American customers





Sales

FULLY GEARED UP TO CAPITALIZE AS SOON AS MARKET BOUNCES BACK

Confident about our future growth

THE RIGHT PORTFOLIO POSITIONING

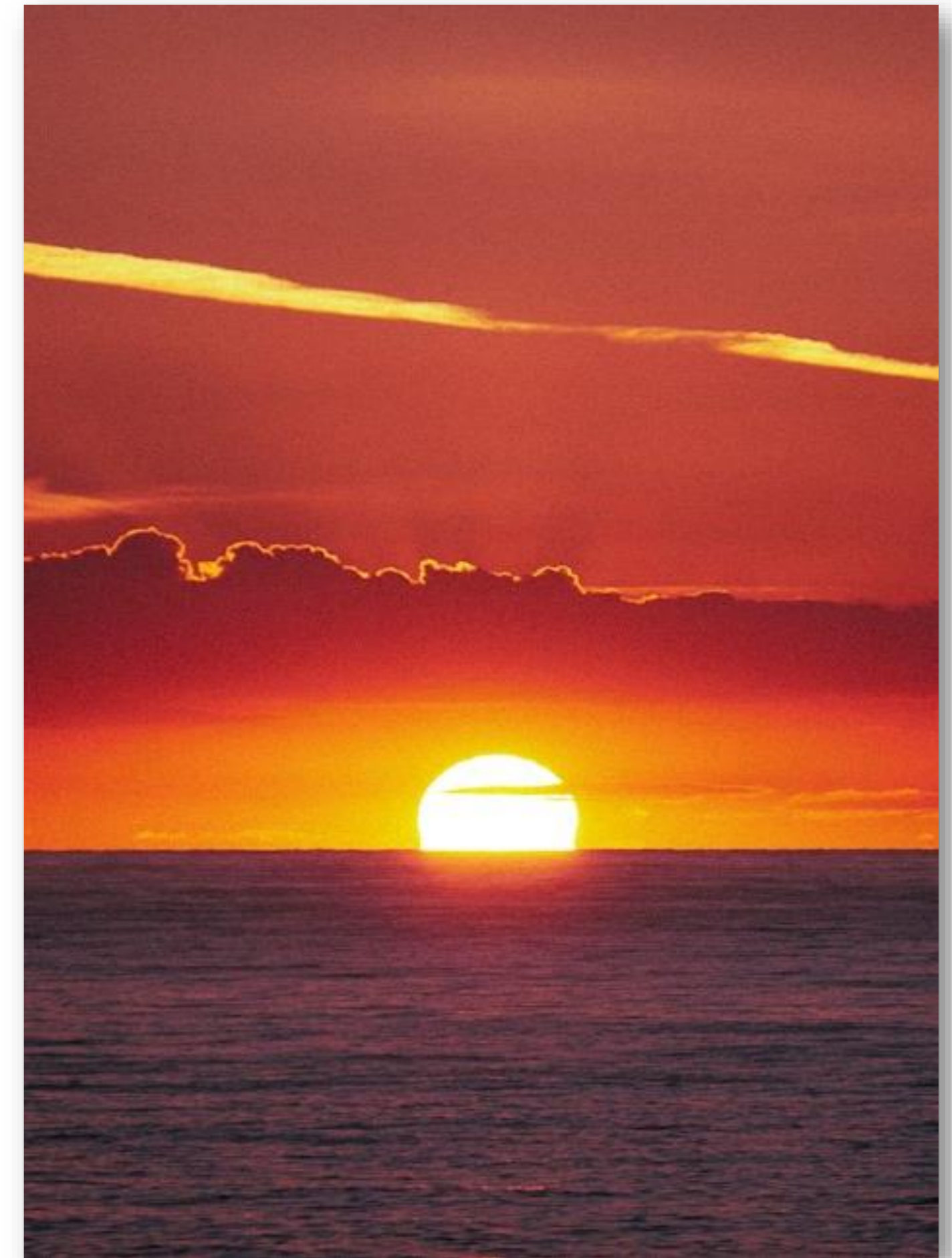
COMPETITIVE PRICING STRATEGY

CONTINUOUS INVESTMENT IN GROWTH AREAS

ADEQUATE CAPACITY TO ABSORB NEW BUSINESS

ANCHOR CUSTOMERS & STRONG PIPELINE

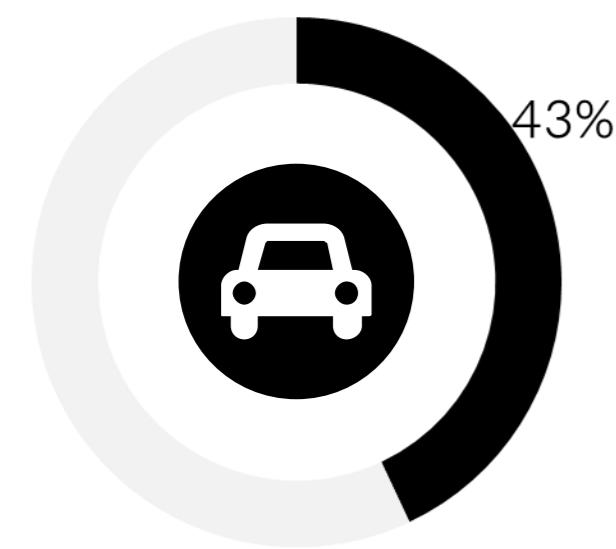
ROBUST CASH POSITION





Sales – Revenue composition

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



% Revenue share

AUTOMOTIVE

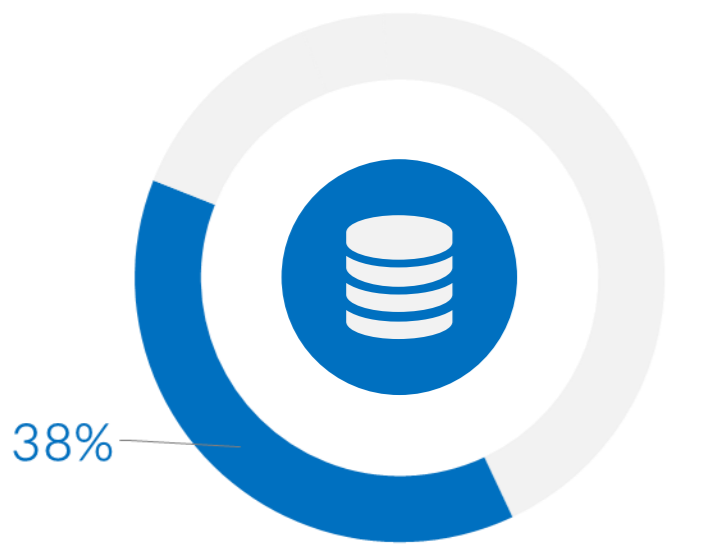
- Long term growth is driven by **electrification, ADAS/ AD, safety, and connectivity** trends



% Revenue share

CONSUMER & COMMUNICATIONS

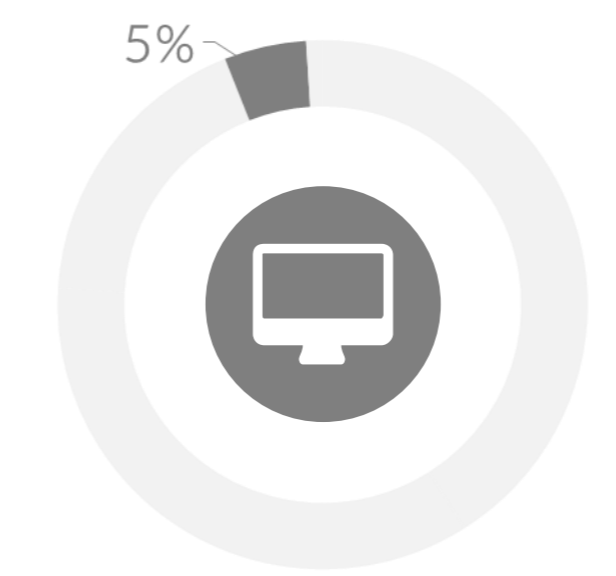
- **5G and IoT** are unlocking multitude of use cases – smart cities, healthcare, etc.
- Semiconductor demand is likely to ride this wave with need for **advanced packaging solutions**



% Revenue share

INDUSTRIAL

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

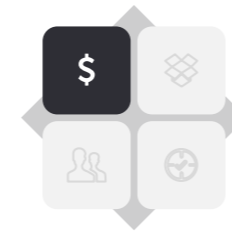


% Revenue share

PC/ NOTEBOOK

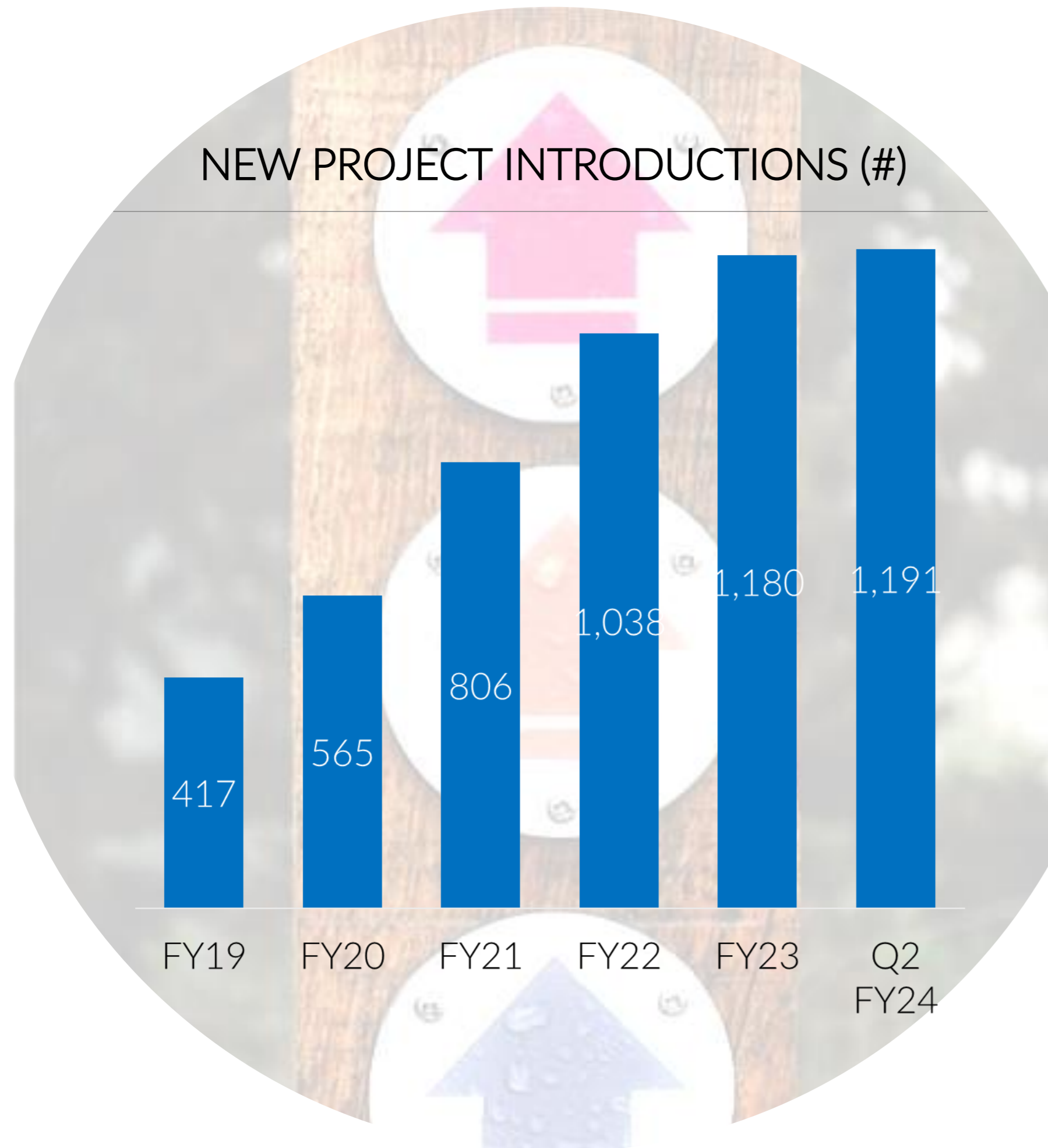
- Consumer electronics industry sales are **beginning to show signs of recovery** though market uncertainty remains

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

- Healthy pipeline development on the enabling technologies of future, i.e., SiC, GaN, sensors

- Significant new business development with existing & new customers from North America and EU on the latest technologies. Also, gaining a lot of traction among the Chinese customers



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

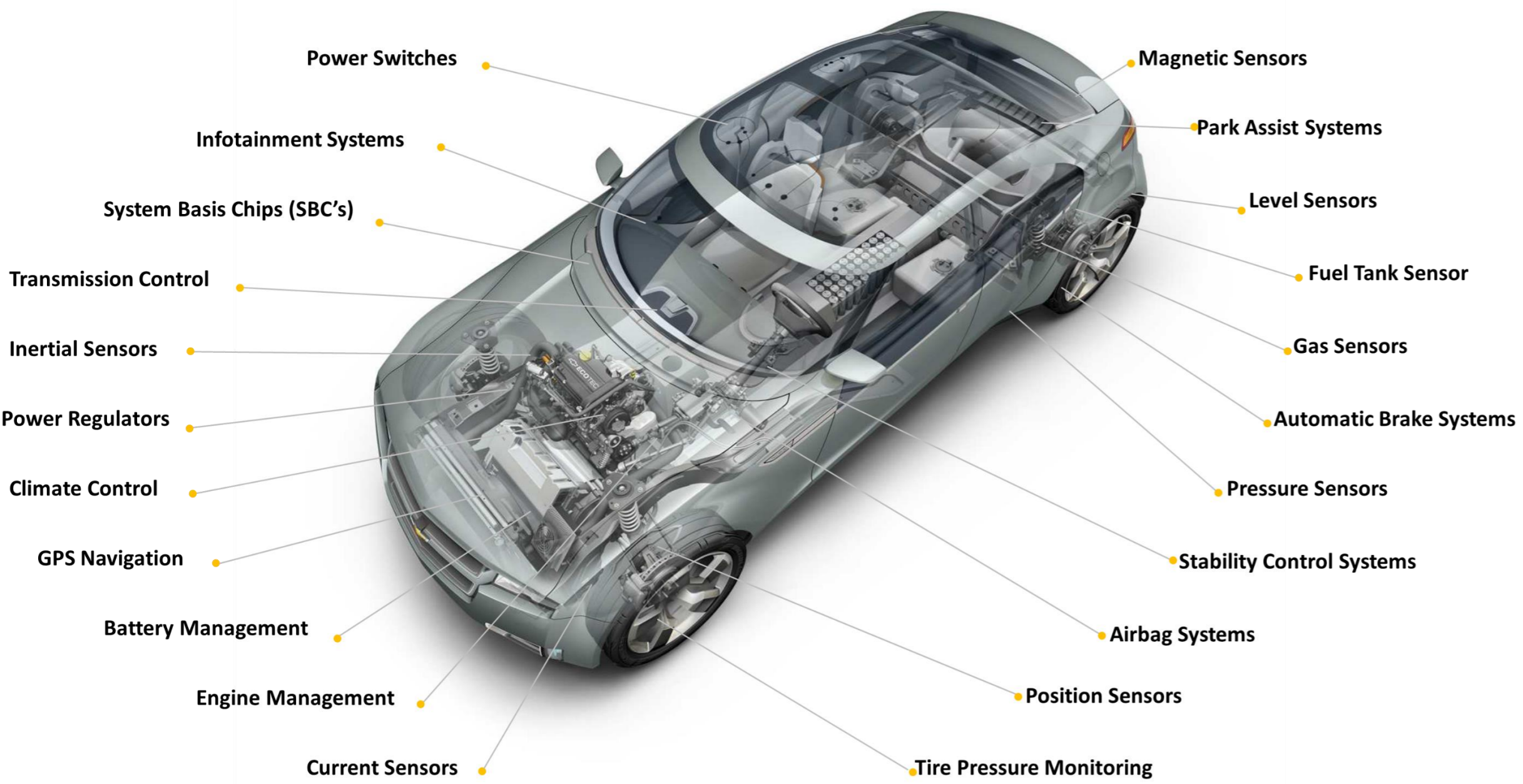
- ✓ SiP Pressure sensors for ICE and Safety are ramping up for Automotive, Gas & Flow sensors – safe launch production stage and some in ramp up stage to HVM
- ✓ New focused development: current sensor for EV with wettable flank technology - sample launched for qualification with target segment on TPMS and EV controllers.
- ✓ New design concept under review for Lidar/ Radar segment
- ✓ Expanding into module base product- ramping up with first variant

Power Packaging

- ✓ Under development - EV power inverter module, DDPACK package (EV onboard charger), TO top side cooling (fast charging adapter), TOLL/ TOLT R&D plan (automotive, industrial), TSSOP & LQFP (automotive) – expected HVM in FY25
- ✓ Automotive: MIS solution PMIC module, in mass production; SiC module development

RF for Connectivity

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

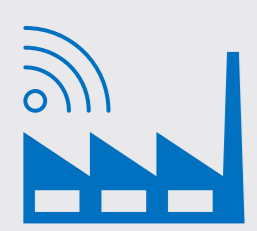




Technology – Industrial segment

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 production
- ✓ Taiko ring released to production, with 50um thin die handling
- ✓ Working with customer to develop Dr. MOS MOSFET/ CuClip MLP packaging, as power management IC to support AI application

MEMS & Sensors

- ✓ Production ramping on current sensor and magnetic sensor applications.
- ✓ Expanding further in high end applications with special coating on die technology – under development on standard package platform.
- ✓ Hermetical & Non hermetical Ceramic Packages (Gyroscopes & Accelerometers) with safe launch. Targeted production by Q4 FY24



Technology – Consumer/ communications segment

TAPPING INTO THE 5G REVOLUTION THROUGH ROBUST CUSTOM OFFERINGS

Major trends impacting semiconductor demand



5G

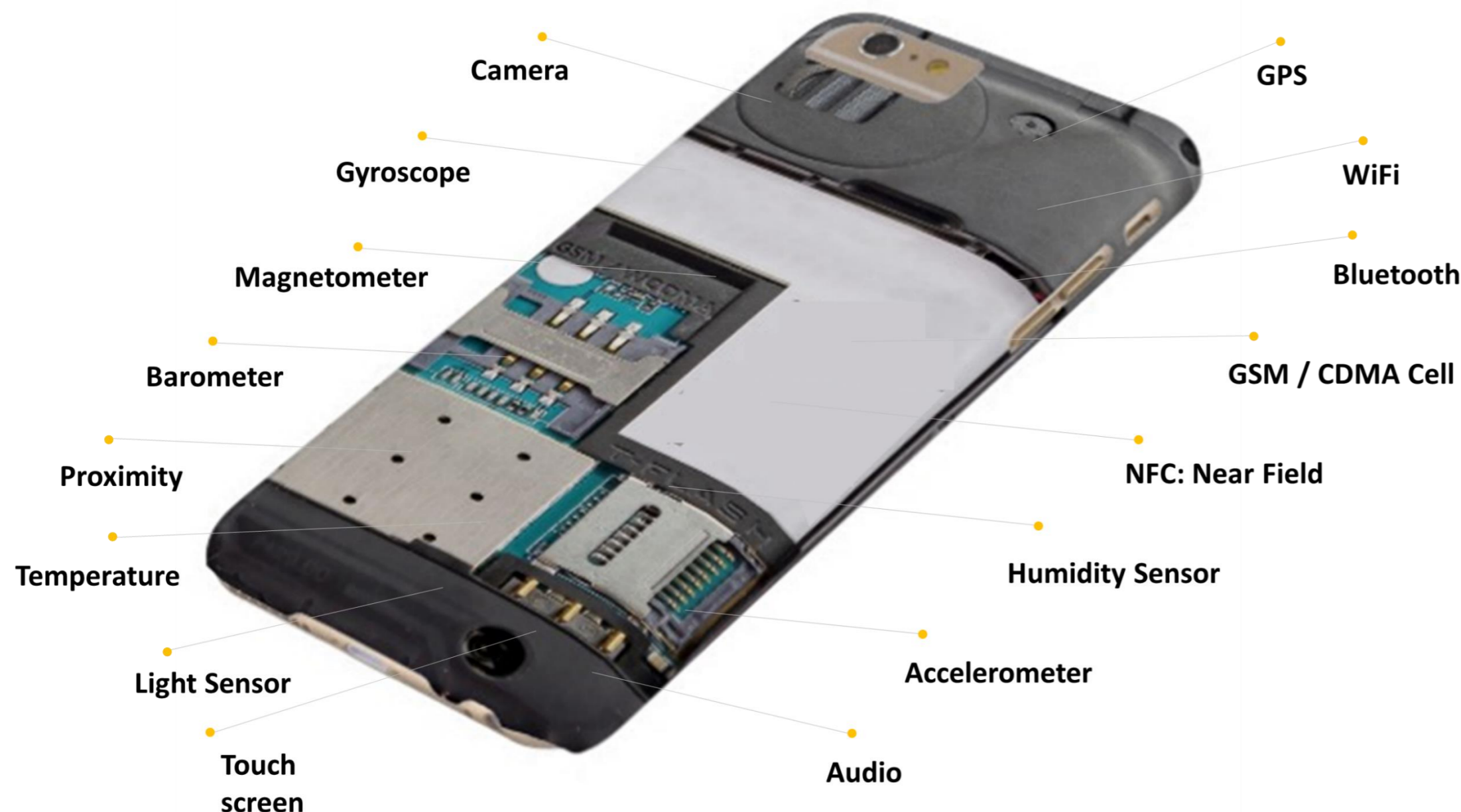
High data rates, massive connectivity and ultra-low latency, catalyzing remote health care, autonomous driving, AR/ VR experiences



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)

- ✓ QFN SIP solution : FC+ SMT, power management application under development, high end wireless charging, fast charging , Li-Ion battery management
- ✓ WiFi 7 project under mass production since Q2FY24
- ✓ Gold Stud R&D plan for RF filter, expected HVM in 2024

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

- ✓ New growth in timing MEMs with 3 variants project base under qualification
- ✓ Expanding into high grade BOM for RF segment and qual in progress
- ✓ Exploring IAQ consumer products market segment



Technology – Invention patent

GRANT OF IPO30 - DFN SIDE WALL PLATING

国家知识产权局

100033
北京市金融街35号国际企业大厦A座16层 北京三友知识产权代理有限公司
陈伟(010-62300800) 李辉(010-62300800)

发文日:
2023年10月28日

申请号: 201811324155.5 发文序号: 2023102800263110

申请人: 嘉盛半导体(苏州)有限公司

发明创造名称: 引线框架条、半导体封装方法、半导体封装结构及其单元

授予发明专利权通知书

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原始申请文件。分案申请递交日提交的文件。下列申请文件:
申请日提交的摘要附图、说明书摘要、说明书附图;2018年12月19日提交的说明书第1-169段;2023年10月12日提交的权利要求第1-10项。

3.授予专利权的上述发明专利申请的名称:
未变更。
由_____变更为上述名称。

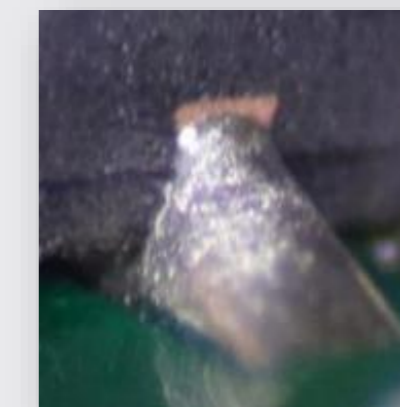
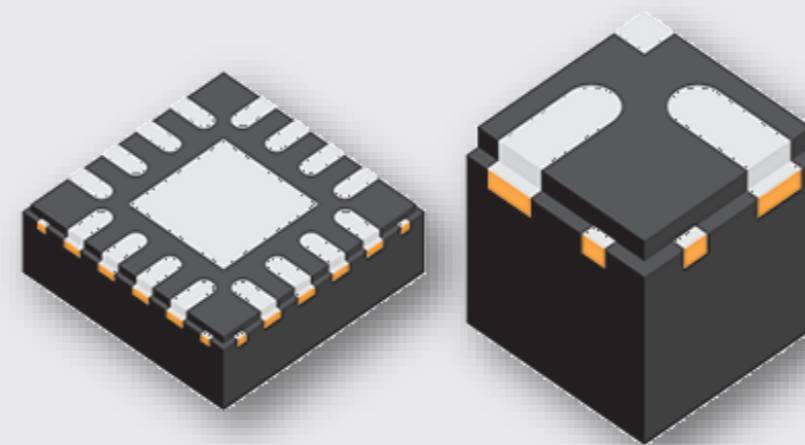
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5. 审查员依职权对申请文件修改如下:

6. 申请人在申请日后补交了实验数据,该数据未包含在授权公告文本中。
注:在本通知书发出后收到的申请人主动修改的申请文件,不予考虑。

审查员:张敬文 审查部门:专利审查协作江苏中心
联系电话:0512-88995439

210413 纸质申请,回函请寄:100088 北京市西城区蓟门桥西土城路6号 国家知识产权局专利局受理处收
2022.10 电子申请,应当通过电子专利申请系统以电子文件形式提交相关文件。除另有规定外,以纸质等其他形式提交的文件视为未提交。



Invention patent description:

a package design method to achieve side wall plating, a process method to achieve “Zero Burr”. Carsem Suzhou is the market leader in mainland China for side wall plating

Patent validity period: 20 years

- Leader in China OSAT for Wettable Flank MLP (QFN/DFN), FC MIS, CuClip for Automotive.
- 16 customers in mass production and 10 of them qualified wettable flank MLP.
- More than 600 kk units shipped, in many OEM and Tier 1 supply chain
- 100 NPI in pipeline, with 55% from US/ EU customers



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
- ✓ TO247 & TO263-7L packages under R&D - with high density leadframe that can improve the efficiency by ~20%; expected HVM in FY25

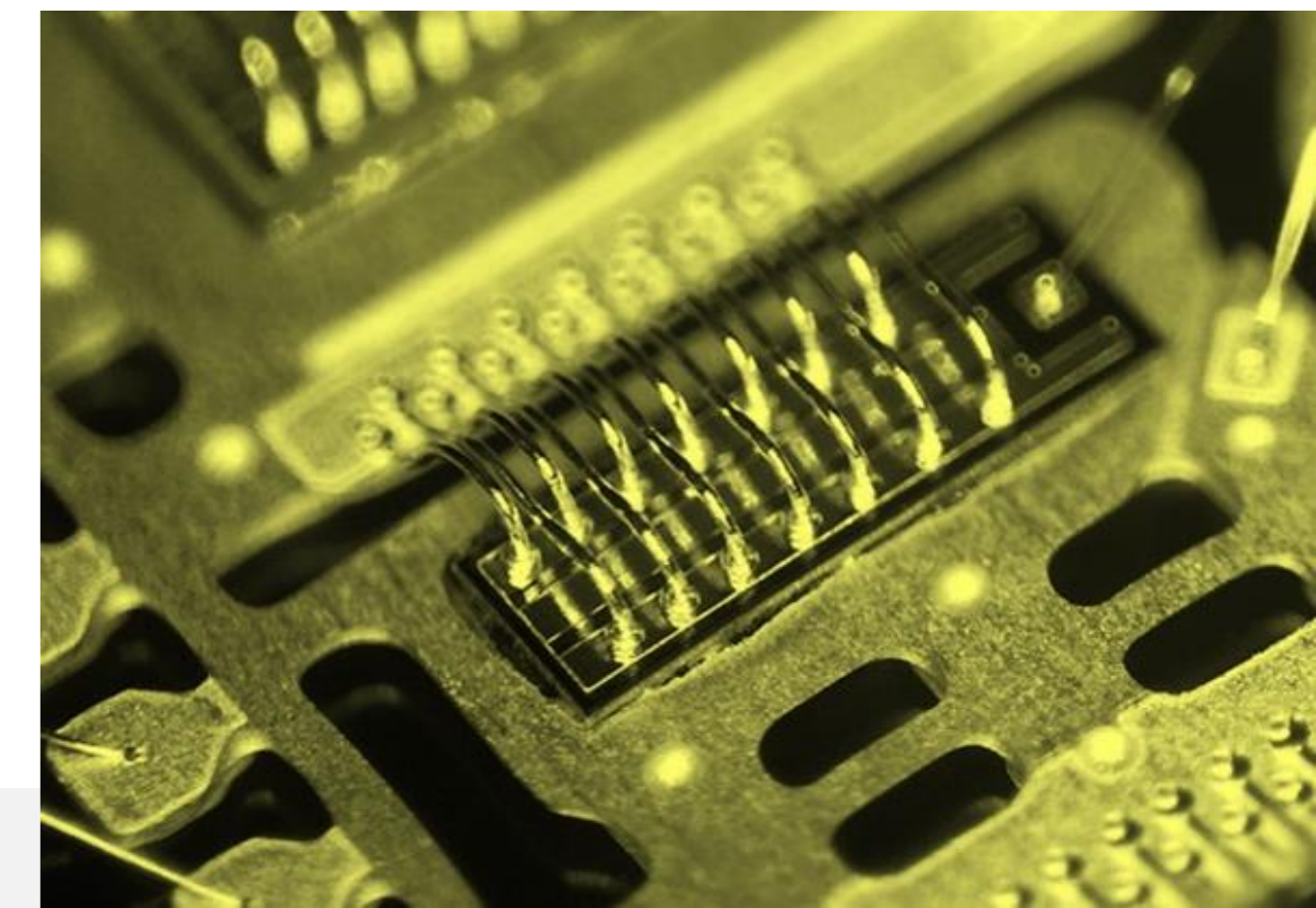
SiC technology for power has a promising future, globally

Already working with major players on pipeline for SiC packages



Benefits of SiC over previous gen materials

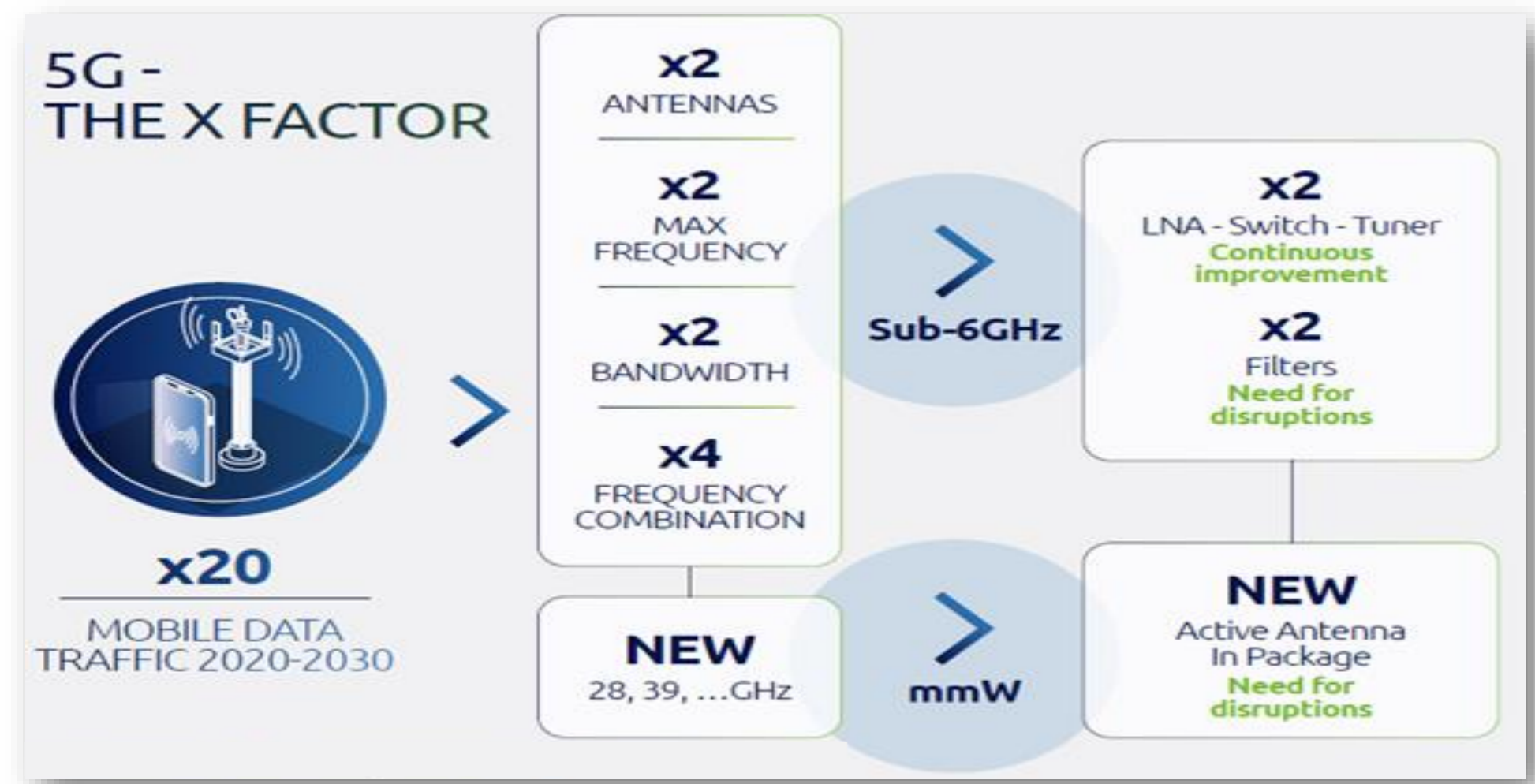
- ✓ Wider bandgap,
- ✓ improved energy conversion efficiency & power density,
- ✓ higher thermal conductivity (3-4X Si/GaAs/GaN),
- ✓ higher switching frequencies, and reduced system size





Technology – Immediate focus

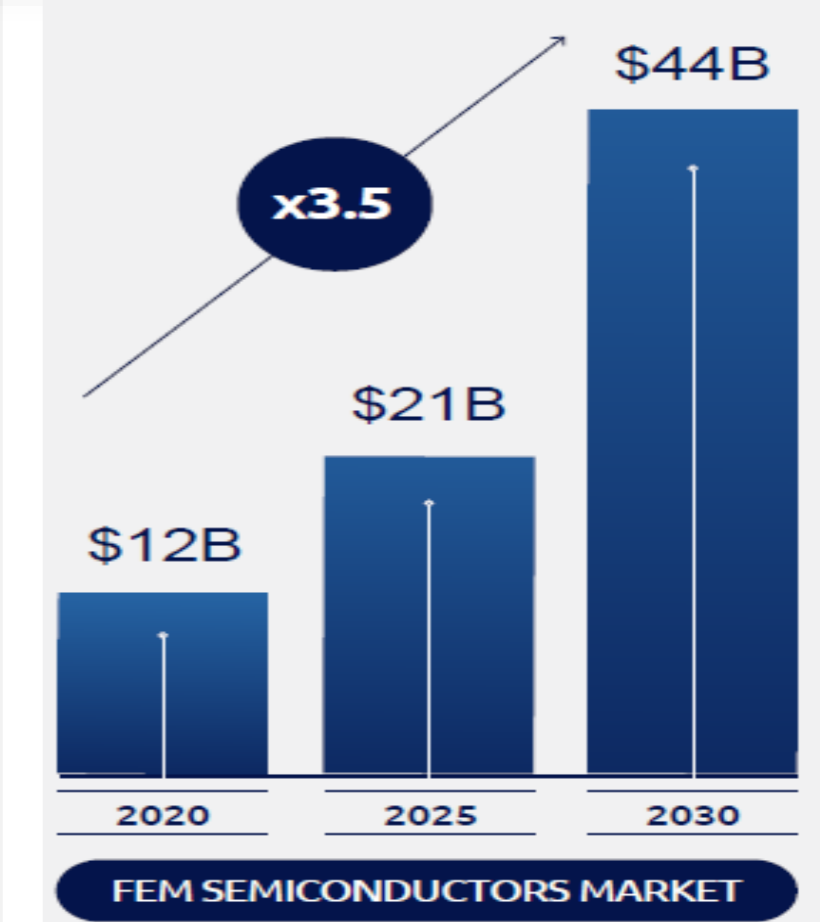
GaN FOR RADIO FREQUENCY (RF) APPLICATIONS – 5G BASE STATIONS



		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"/>
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+ Quadruplext and Inregular SiP package, started initial production in Q2 FY24
- ✓ 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

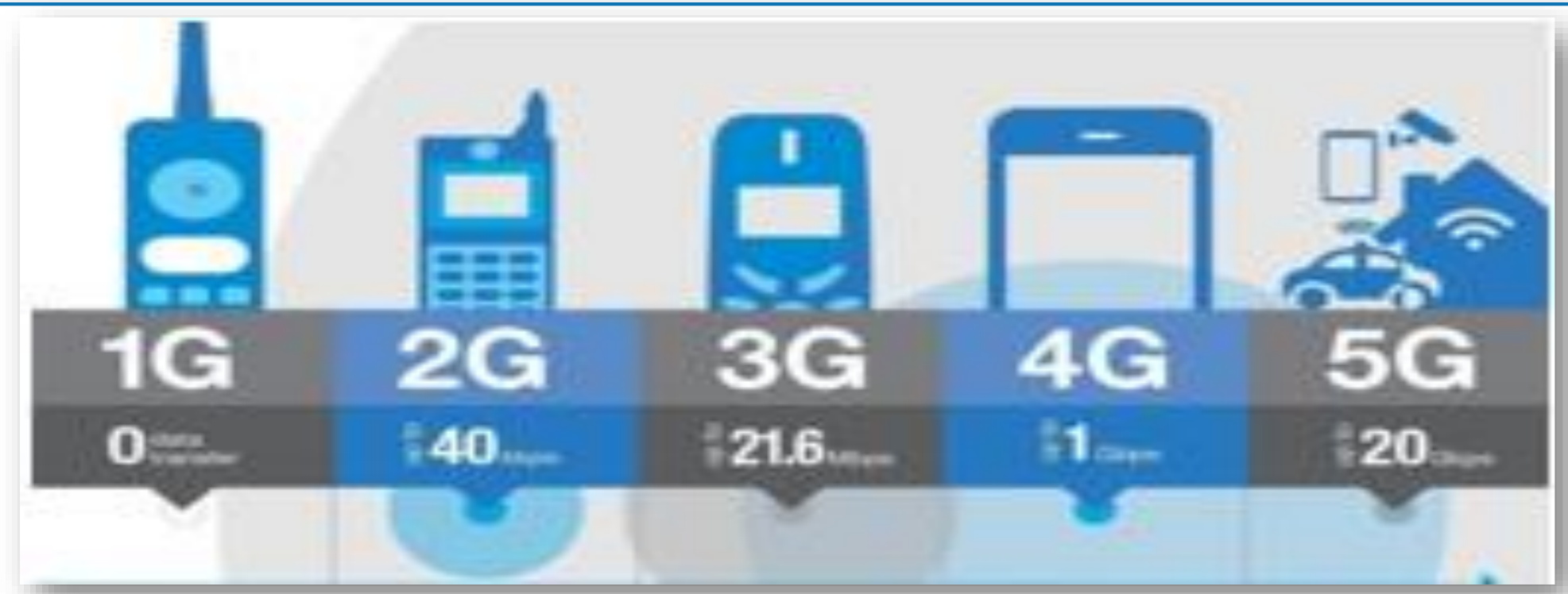


Source: Yole, Ericsson, Soltec, Qualcomm



Technology – Future focus

5G – 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



5G TESTING

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 LTE	5G (Sub-6GHz)	5G (mmWave)
	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





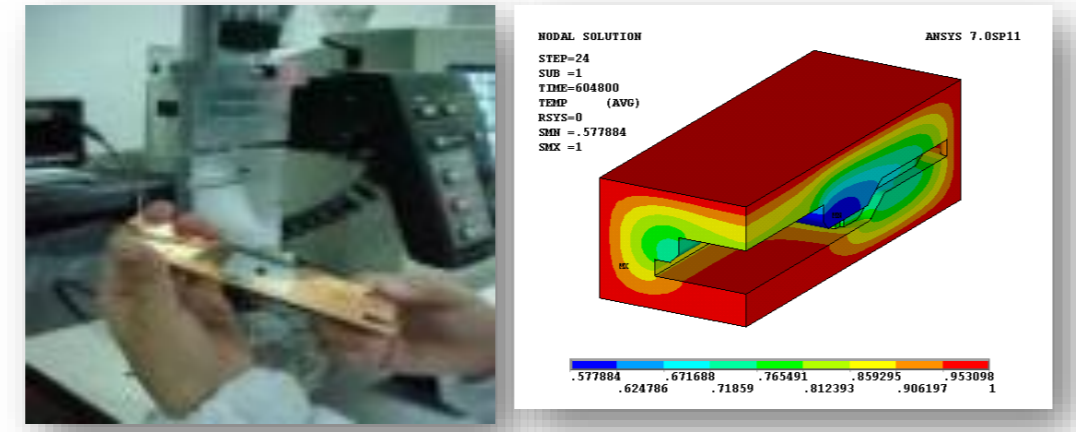
Technology – Carsem technology center

DEDICATED TECHNOLOGY CENTER TO DRIVE INNOVATION & TECHNOLOGY DEVELOPMENT

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

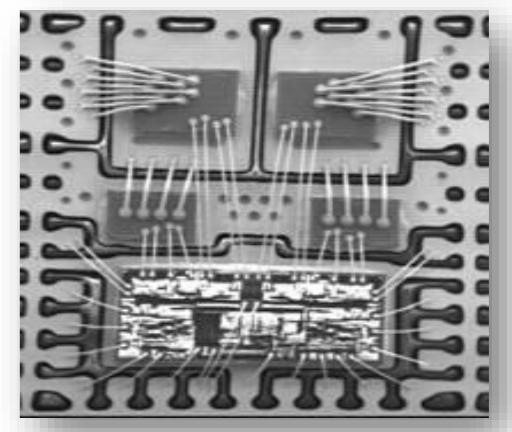
MATERIAL

- Materials lab,
- Design & Simulation



METHODOLOGY

- Process development
- Total 75 active patents



MACHINE



- Dedicated to package/process/materials development

MAN (HUMAN CAPITAL/ EXPERTISE)

- Total headcount: 59 (Technical Management ~8%, Project Management ~34%, Engineering ~58%)





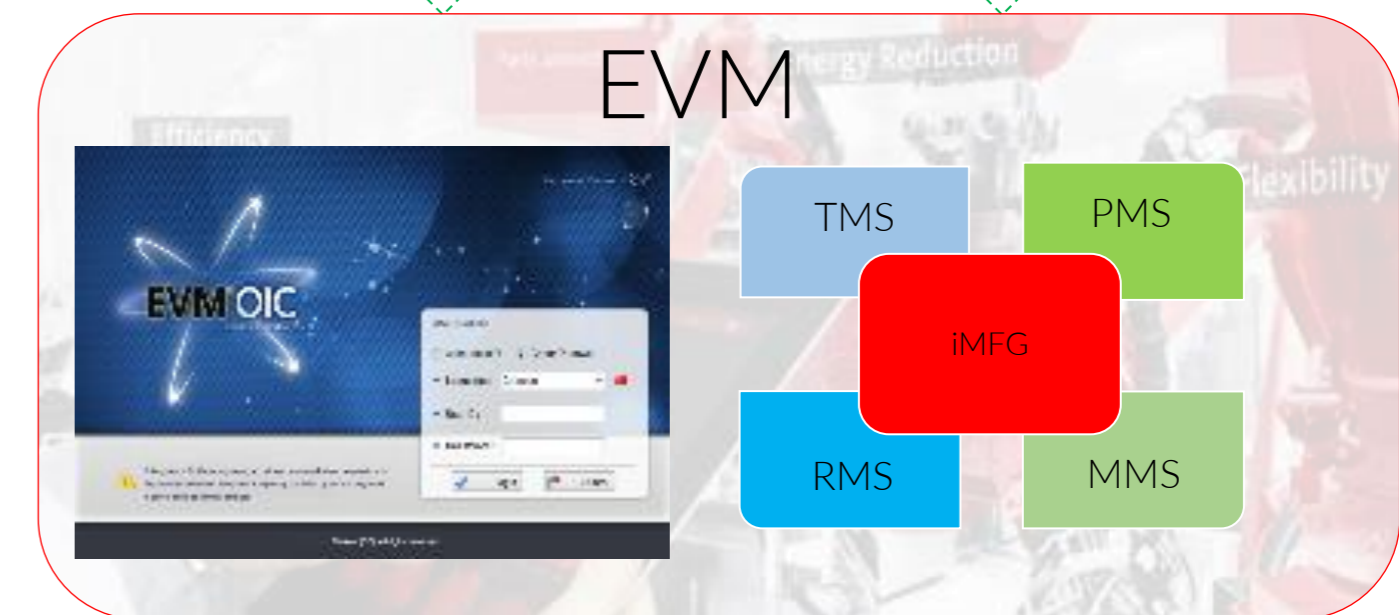
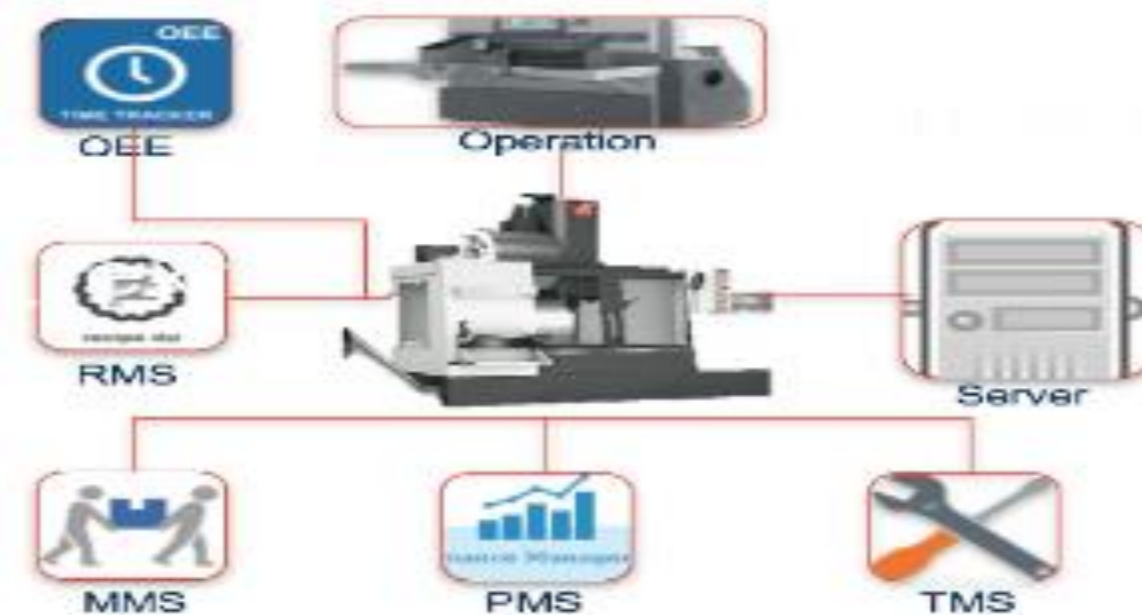
Quality & productivity focus

e-Office - Equipment Visual Management

In house system to consolidate all individual systems into one centralized EVM (Equipment Visual Management) system

EVM is a 'one click' enabler

- access to the manufacturing data and effective data analysis
- remote control & disposition of system alarms
- drive OEE, engineering and quality improvement





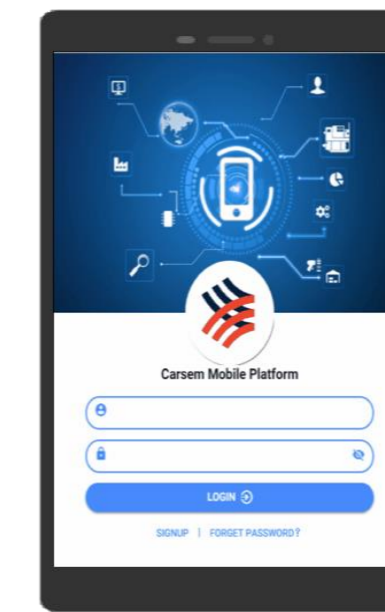
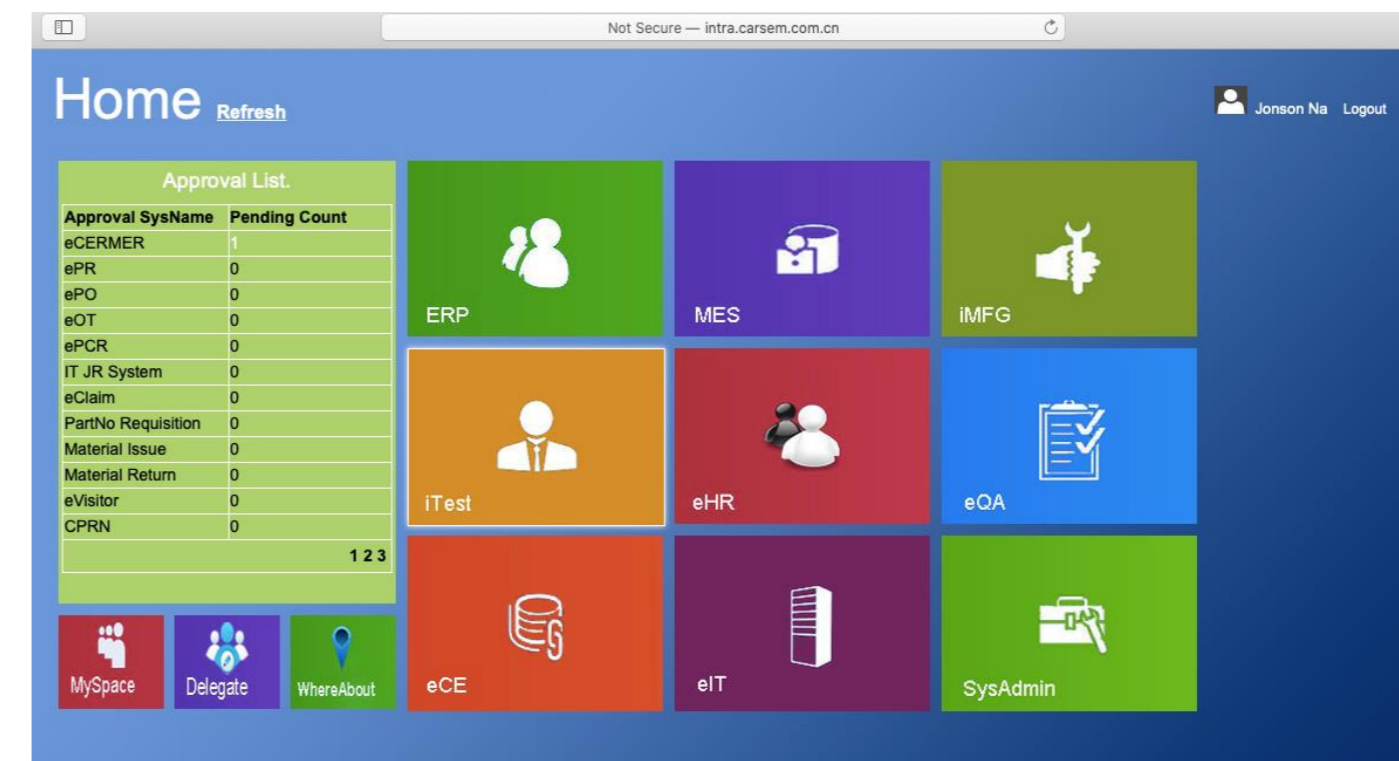
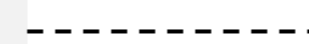
Quality & productivity focus

e-office Smart Business
(e-office, Paperless and PDA system development)

Carsem SZ is focusing on e-Office and paperless system development and implementation

Current Situation

e-Office and paperless system





Awards and recognitions

QUALITY, PEOPLE and ESG

BEST SUPPLIER AWARDS received



MAXSCEND



WILLSEMI

The Edge - FTSE ESG award 2023

The Edge Billion Ringgit Club & Corporate Awards 2023

MPI won this award for the second successive year



TABLE OF CONTENT

1	INTRODUCTION
2	CORPORATE OVERVIEW
3	BUSINESS OVERVIEW
4	SUSTAINABILITY
5	GROWTH DRIVERS
6	FINANCIALS & SUMMARY



Financial highlights

Q2 FY24 SNAPSHOT

REVENUE

Despite overall market slowdown, Q2 FY24 has grown revenue by 2% against Q1 FY24

PATAMI

Optimized productivity & cost prudence measures led to PATAMI growth by 95% on revenue increase of just 2% Vs Q1

CASH

Even with a decline in YoY sales, MPI continues to accumulate cash - Q2 FY24 Net Cash – RM 936 millions

EPS

Despite all the challenges & high costs, MPI Q2 EPS grew to 16.17c against 8.31c of Q1 FY24 (95% higher)

CHALLENGES

Global end market demand drop, high inventory stock with customers & manpower constraints

SEGMENTS

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



Key financials

MPI GROUP RESULTS AT A GLANCE

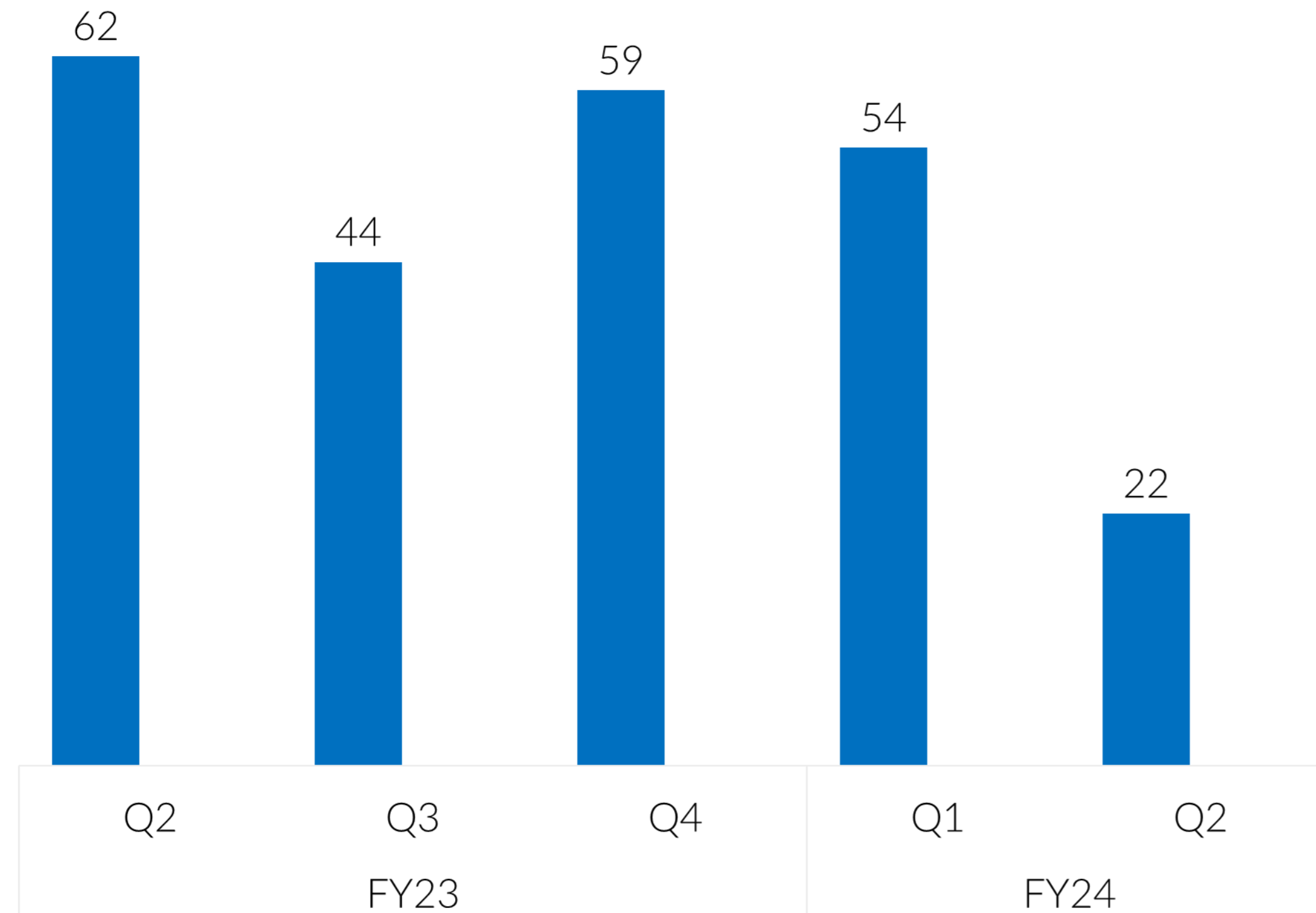
	Q2 FY24	Q1 FY24	Q2 FY23	Q2 vs Q1	Q2 vs Q2	YTD FY24	YTD FY23	YoY
	RM mil	RM mil	RM mil	%	%	RM mil	RM mil	%
Revenue	522.8	513.2	526.4	2%	-1%	1,036.0	1090.4	-5%
PAT	47.5	30.0	31.8	58%	49%	77.6	99.5	-22%
PATAMI	32.2	16.5	18.3	95%	75%	48.7	71.0	-31%
EPS (sen)	16.17	8.31	9.22	95%	75%	24.47	35.72	-31%
EBITDA %	26%	23%	23%			25%	26%	
Capex	21.9	53.7	62.0	-59%	-65%	75.7	148.5	-49%
Dividend	20	0	20			20	20	
Net Cash	935.7	871.9	815.9			935.7	815.9	
EDR	100:0	100:0	100:0			100:0	100:0	
ROSF	1.6%	0.8%	0.9%			2.4%	3.6%	



Investments

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

MPI CAPEX (RM million)



- 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 inching towards RM 1 billion cash despite continued capital expenditure for expansion



Statement of profit or loss

	Q2FY24 RM '000	Q2FY23 RM '000	Changes %
Revenue	522,751	526,419	-1%
Cost of sales	(455,215)	(455,645)	-0.1%
Gross profit	67,536	70,774	-5%
Operating expenses	(30,294)	(33,128)	-9%
Other operating income/(expenses)	6,225	(4,181)	-249%
Profit from operation	43,467	33,465	30%
Interest income	8,803	6,167	43%
Interest expenses	(2,016)	(2,360)	-15%
Profit before taxation	50,254	37,272	35%
Taxation	(2,737)	(5,450)	-50%
Profit for the period	47,517	31,822	49%
Profit attributable to:			
Owners of the Company	32,151	18,330	75%
Non-controlling interests	15,366	13,492	14%
Profit for the period	47,517	31,822	49%
Earnings per ordinary share (sen)			
Basic	16.17	9.22	75%
Ratio			
GP %	13%	13%	
PBT %	10%	7%	
PAT %	9%	6%	
EBITDA%	26%	23%	



Statement of financial position

	31/12/2023	30/06/2023
	RM'000	RM'000
Non-current assets		
Property, plant and equipment	1,325,865	1,416,233
Right-of-use assets	44,564	47,298
Investment properties	26,611	27,026
Investments	46	46
	1,397,086	1,490,603
Current Assets		
Inventories	138,528	149,537
Trade and other receivables, including derivatives	314,112	318,871
Tax recoverable	703	4
Cash and cash equivalents	1,100,663	1,053,096
	1,554,006	1,521,508
TOTAL ASSETS	2,951,092	3,012,111



Statement of financial position

	31/12/2023 RM'000	30/06/2023 RM'000
Equity		
Share Capital	352,373	352,373
Reserves	1,881,747	1,826,261
Treasury shares	(163,816)	(163,816)
	2,070,304	2,014,818
Non-controlling interests	365,191	345,570
	2,435,495	2,360,388
Non-current liabilities		
Borrowings (unsecured)	49,598	79,480
Lease liabilities	10,488	21,788
Deferred tax liabilities	9,703	6,936
	69,789	108,204
Current liabilities		
Trade and other payables, including derivatives	294,344	346,104
Borrowings (unsecured)	115,404	172,184
Lease liabilities	12,785	3,177
Current tax liabilities	23,275	22,054
	445,808	543,519
TOTAL LIABILITIES	515,597	651,723
TOTAL EQUITY AND LIABILITIES	2,951,092	3,012,111
Net Assets per share attributable to owners of the Company (RM)	10.41	10.13
Net Cash	935,661	801,432
EDR	100 : 0	100 : 0



Summary



MPI revenue grew sequentially by 2% QoQ



PATAMI improved by nearly 100%, proving the implemented cost prudence measures to be effective



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



Carsem continues to invest in new technologies & machines to grab the next wave of opportunities



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



Net Cash (RM 936 millions for investments and M&A), No debt



Thank You