NTI® NanoFilm
ADVANCING TECHNOLOGY SOLUTIONS

Nanofilm Technologies International Limited

Nanofilm Corporate Presentation

24th Credit Suisse Asian Investment Conference

NTI®

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Nanofilm Technologies International Limited

Nanofilm Group

Introduction

Leading Deep-tech Nanotechnology Solutions Provider

Differentiated technology-based solutions provider

- **Advanced Materials,** via proprietary vacuum deposition process, with superior surface properties
- **Proprietary nanofabrication** technologies for affordable mass-production of critical components
- **Redrawing the boundaries** of materials science to enable new end-product possibilities

Mission-critical products to enable our customers

- **Joint collaboration and R&D** with customers
- **Single source supplier** to many of our top customers

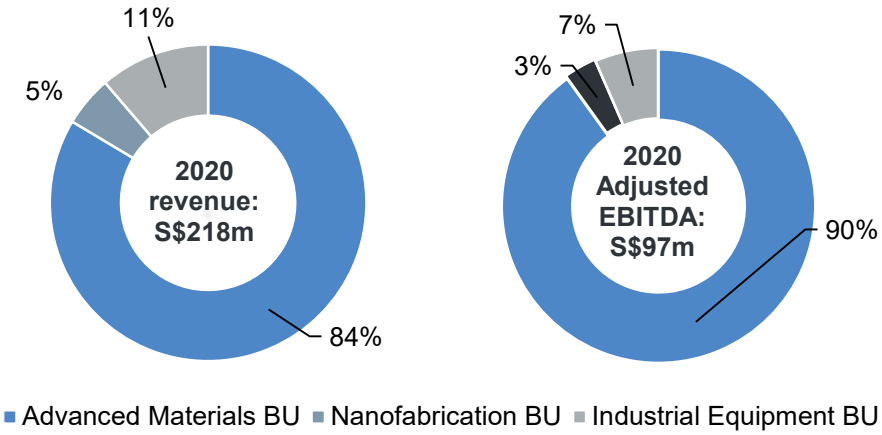
Multiple avenues of growth with projected TAM[3] for advanced materials of **US$24.3bn** by 2023F with additional **US$423.0bn** components manufacturing TAM

Proprietary and versatile in-house nanotechnology platform

Listed on SGX Mainboard in 2020
Track record of strong financial performance

- High quality revenues growth

Focused on BU Strategy Execution to Deliver Growth



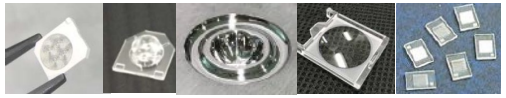
>70 (ex. >20 pending)
Patents and Trademarks[2]

>270
Employees engaged in R&D and Engineering

>5,000,000
Daily turn-around parts capacity with flexibility to handle close to 300 product types

Source: Company Information.

BU's Demonstrated Strong Track Record & Capabilities

	Advanced Materials BU ("AMBU")	Nanofabrication BU ("NFBU")	Industrial Equipment BU ("IEBU")
			
	▪ Provides mission critical surface solution services based on vacuum coating technologies and processes	▪ Combining our proprietary synergistic nanofabrication and coating technologies to cement our market place position	▪ Manufactures turnkey equipment systems for AMBU and for sale to selected customers[1]
Technology & Footprint	▪ Patented materials like TAC-ON®, iTAC® and MICC® ▪ Singapore and China facilities	▪ CAM software ▪ FCVA (Tooling) ▪ China, Japan, Vietnam facilities	▪ FCVA in-line coating systems ▪ PVD in-line coating systems
End-Markets	▪ 3C ▪ Automotive ▪ Precision Engineering ▪ Printing & Imaging	▪ Optical Lens ▪ Optical Sensory Components	▪ Automotive Components ▪ Aspherical Glass Lens and Plastic Lens mold ▪ Solar Cells

Source: Company Information.

We have Leveraged our Technology know-how to Evolve Over Time

- Executing growth pillars

1999
- Founded as a technology company offering surface solutions using FCVA coating technology

2000-01
- Our Advanced Materials adopted by MFP industry
- Canon
- Customer X

2002-03
- Offered TAC-ON® and MiCC® Advanced Materials
- 1st application – hard disk drive industry

2004
- World's 1st FCVA in-line system, suitable for coating on plastics
- Commercialised CdTe thin film solar cell production line
- Developed low / high temperature PVD in-line system
- Commenced surface solution services for Customer Z

2007-09
- Our aspherical glass lens mold became industry standard
- Developed CdTe thin film surface solution for solar cells

2010-12
- Our iTAC® was adopted by Japan auto market for piston rings

2013
- Commenced operations at Shanghai Plant 1
- Progressed towards Smart Factory – Industry 4.0 to increase automation and robotics

2014
- Equity investment by OCBC and Lion-OCBC Capital Asia 1 Holding

2015
- Sole supplier for tablet logos
- Microsoft

2016
- Commenced functional coating services for smart wearable devices

2017
- Expansion into Shanghai Plant 2

2018
- Established JV in China with CYPR to provide coated piston rings
- Expanded into Nano-fabrication through acquisition(1)

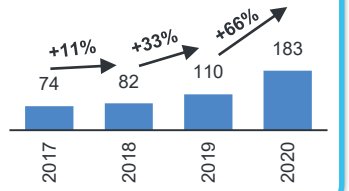
2019
- Listed on SGX Mainboard

2020

2021-Beyond

Accelerating revenue growth led by AMBU

(AMBU revenues, S$m)



Revenue

$104m → $123m → $143m → $218m

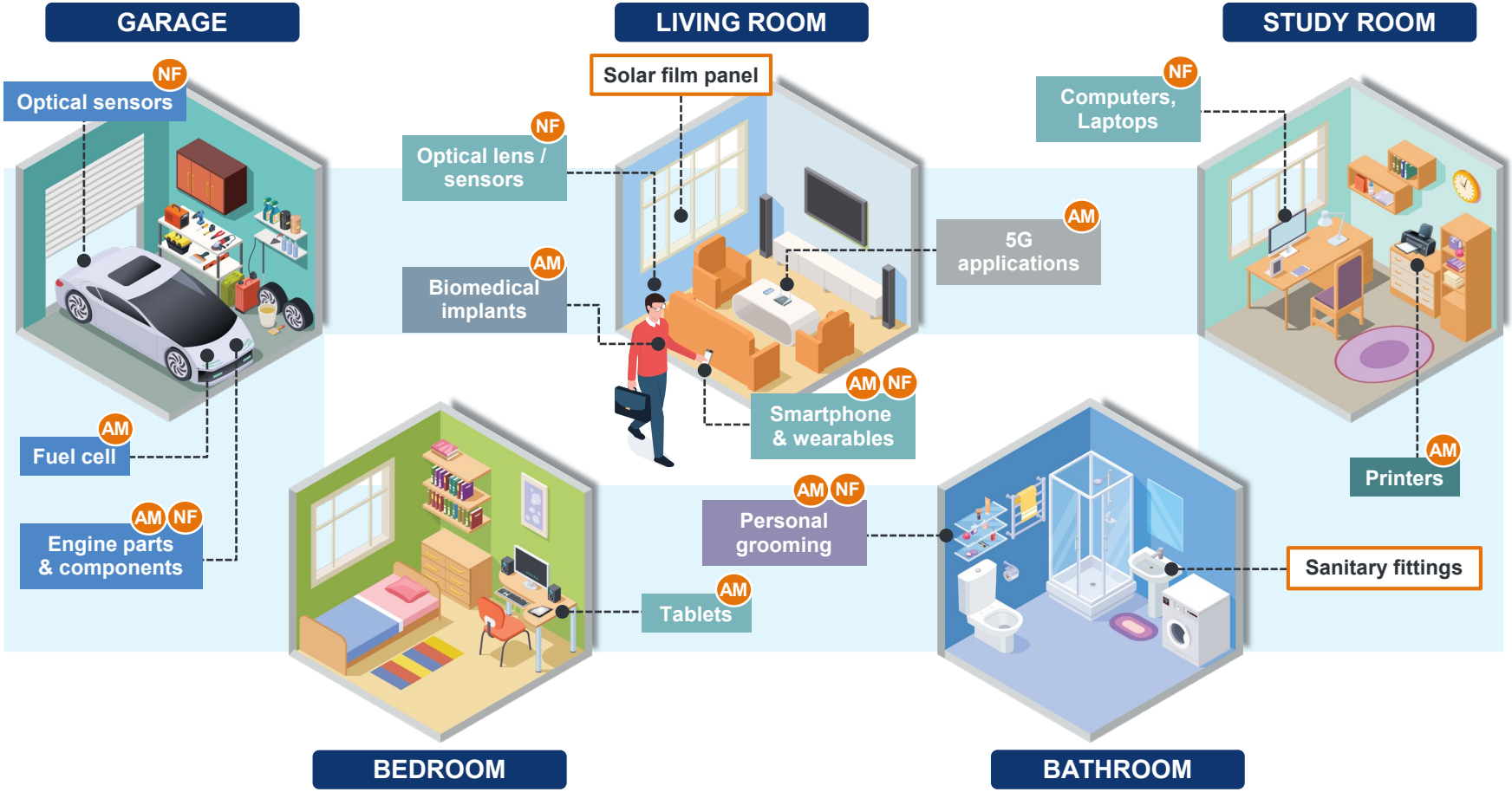
PLASMA SOURCE | SYSTEMS | SERVICES | COMPONENTS | VALUE CHAIN INTEGRATION | HORIZONTAL INTEGRATION / CAPACITY EXPANSION

Source: Company information.

(1) We acquired a majority stake in ManGo Nanofab Group and renamed it Nanofab Technologies Pte Ltd. ("NFT")

Mass production of mission critical products / innovation | Capacity expansion | Corporate actions

Company's Nanotechnology Solutions are Being Used in Our Daily Lives Across a Range of Industries



Industries: Automotive | Bio-medical | High Frequency Component and Equipment | 3C | Office automation & productivity modules | FMCG | Others

Business units: AM Advanced Materials | NF Nanofabrication

Our nanotechnology solutions are adaptable for use across a wide range of industries

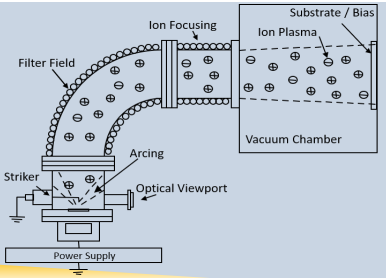
Source: Company information.

Spectrum Technology Pillars Leveraging FCVA Platform

Complementary pillars built upon an enabling technology solution

FCVA – Filtered Cathodic Vacuum Arc

- ✓ Significant advantages to conventional products (e.g., superior density, less impurities)
- ✓ Guarded by Patents and Trade Secrets, with proven applications across end-markets
- ✓ Global leader in providing surface solutions using FCVA and FCVA-hybrid technologies



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Advanced Materials

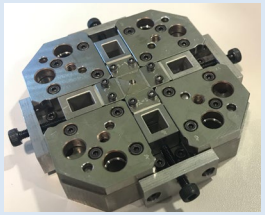
- **TAC-ON®** (Tetrahedral Amorphous Carbon)
- **iTAC®** (Thick Tetrahedral Amorphous Carbon)
- **MiCC®** (Nano-crystalline chromium nitride)
- **FCVA Metals**

Deposition Technologies

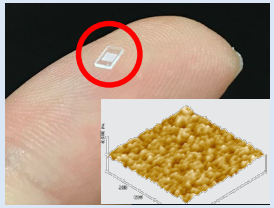
- **In-house Equipment**
- **Single & Hybrid**
  FCVA + PVD
  FCVA + CVD
- **Full Body & Select Surface**

Nano Tooling & Fabrication

- **Single Point Diamond CNC**



- **Nano Molding & Wafer Impression**



System Level Integrations

- **Assembly & Testing**

- **Value Chain Integration**

Operational Excellence

- **Ind. 4.0 & MES**

- **Automation**

- **Resources Optimisation**

Source: Frost & Sullivan, Company information.

Product Offering Underpinned by Proprietary Technology

Offering significant advantages compared to conventional offerings

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Improved properties vs others

	NTI NanoFilm	Others(1)
Hardness and strength	●	◔
Durability	●	◔
Low friction coefficient	●	◔
Corrosion resistance	●	◔
Electrochemistry properties	●	◔
Adhesiveness	●	◑

Access to new substrates

	NTI NanoFilm	Others(1)
High melting point products	✓	✓
Plastics	✓	✗
Rubber	✓	✗
Other low melting point products	✓	✗

Nanofilm technology capabilities enable deposition at room temperatures opening up new markets which others cannot access

Specific technology edges

TAC-ON® (Tetrahedral Amorphous Carbon)	**>85%** Diamond Content vs 25% in Others
iTAC® (Thick Tetrahedral Amorphous Carbon)	**5x** Average Life Expectancy of Piston Rings
MiCC® (Nano-crystalline chromium nitride)	**Superior properties** (Adhesion, Hardness and Low Temperature Requirements)
FCVA Metals	**Superior properties** (Energy efficiency, Conductivity, low impurity)

Source: Company information.
Note: (1) Such as PVD and CVD.

Current Global Footprint

5	4	~110,000	3	>1,500
Production facilities	R&D centres	sqm total gross floor area	Sales & technical support offices	Employees

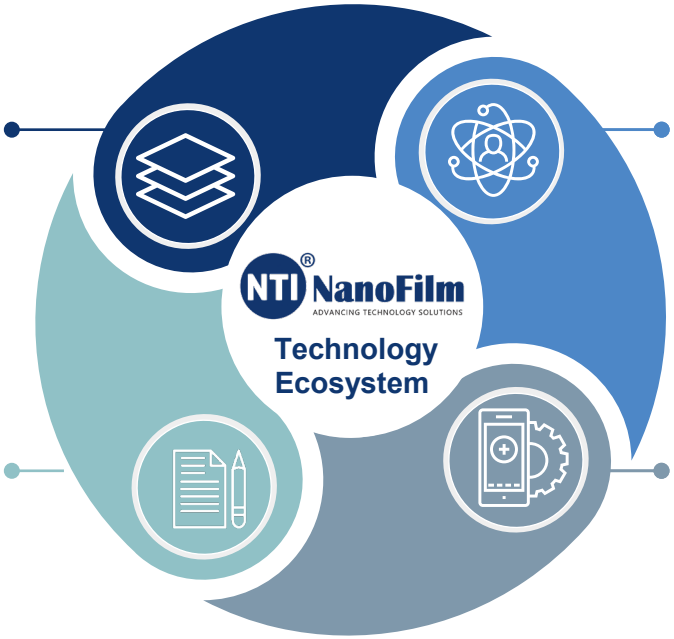
Source: Company information.

Overview of Nanofilm Technology Ecosystem

Blend of In-house Expertise and Client-Driven Customization

In-house Proprietary Production Equipment

- ✓ Able to offer **comprehensive end-to-end nanotechnology solutions**
- ✓ **~0.8 years Payback Period** for Coating Equipment(1)



New & Differentiated Advanced Materials

- **TAC-ON®** (Tetrahedral Amorphous Carbon)
- **iTAC®** (Thick Tetrahedral Amorphous Carbon)
- **MiCC®** (Nano-crystalline chromium nitride)
- **FCVA Metals**

Blend of R&D and Engineering Capabilities

- ✓ **In-house engineering capabilities complements R&D platform** and facilitates mass production

Production Excellence

- ✓ **Able to handle high volume and high mix product** demand
- ✓ **Reduce total cost per unit production**
- ✓ Ability to achieve **mass production of products and services within short lead time**

(1) Based on average revenue per equipment and average cost of equipment in the six months ended 30 June, 2020. Please refer to financial section for additional details.
Source: Company information.

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Nanofilm Group

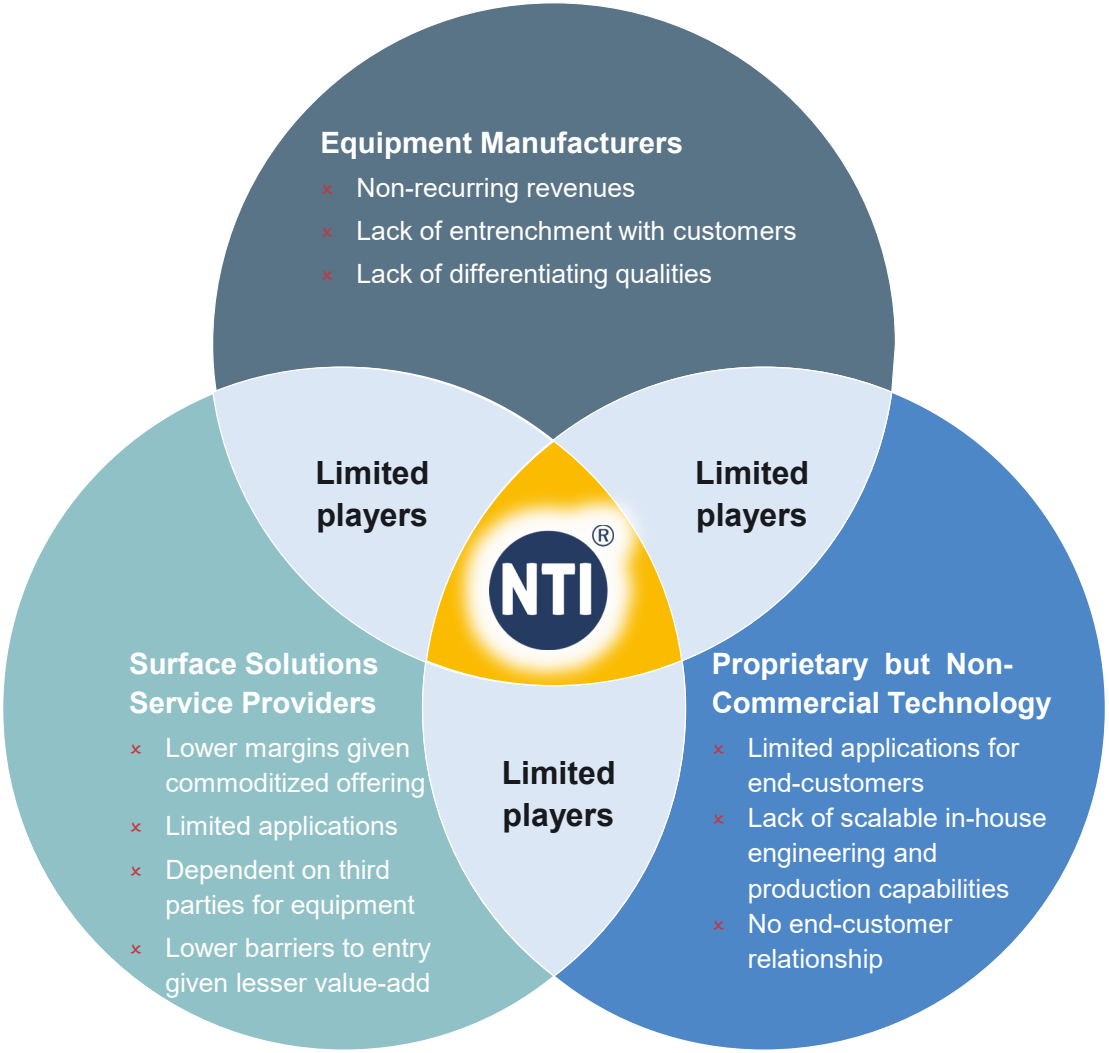
Key Strengths

Key Strengths

1. Differentiated Technology-based Solutions Drive Sustainable Competitive Advantage
2. Mission-Critical Products Enable Customers and Create Stickiness
3. Multiple Avenues for Growth from a Large TAM and Favorable Secular Industry Trends
4. Strong in-house R&D, Engineering and Production Capabilities Drive Additional Value Creation
5. Demonstrated Strong Growth and Resilient Margin Performance
6. Experienced Founder and Management Team

Source: Company Information.

1 Differentiated Technology-based Solutions Drive Sustainable Competitive Advantage



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A **Differentiated technology-based solutions enabling mission-critical applications**

✖

B **Full-service in-house Equipment and Surface Solutions Capabilities**

✖

C **Redraws market boundaries opening up broader end-markets exposure**

✖

D **Scalable and Reliable Production Capabilities**

=

NTI Sustainable Competitive Advantage

Technology | Mission-Critical | Growth | Execution | Track Record | Team

Source: Company Information.

2 Mission-Critical Products Enable Customers and Create Stickiness

Enabling customers to achieve high value-add improvements in their end-products

	Superior Functional Properties		Aesthetic Enhancements	New Applications
	 Piston Rings	 HPLC Components	 Tablet Logos	 Fuel Cells Bipolar Plates
Improved Properties	▪ Extends useful life via improved corrosion and wear resistance ▪ Improves Hardness		▪ Enables laser cutting of thin layer of stainless steel plates, for deposition with a broad range of color choices	▪ Replace expensive materials ▪ Functional performance ▪ Improves aesthetic qualities
Applications	▪ Smartphones, computers and wearables ▪ Multi functional printers components ▪ EMI(1) coatings on plastics in camera brackets in devices ▪ Piston Rings ▪ HPLC Pumps / Valves		▪ Tablets ▪ Smartphones	▪ Engine components ▪ FMCG applications ▪ Fuel Cells

Winning Formula for Customers

1. **Differentiated Solutions with Improved Properties**
2. **Expands Market Possibilities**
3. **High value-add functional and aesthetic improvements**

(1) Electromagnetic Interference

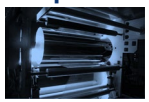
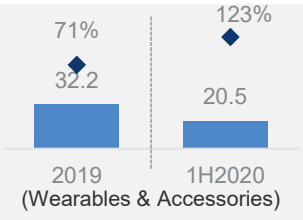
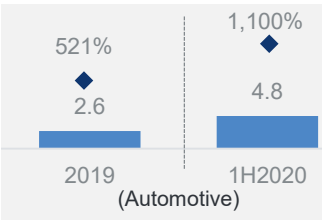
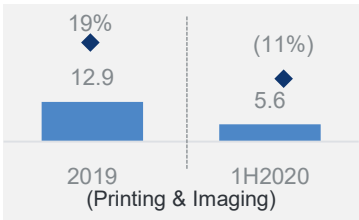
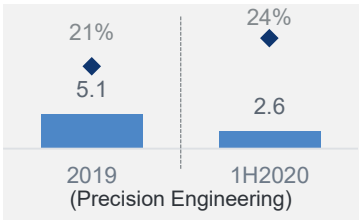
Note: The blue shaded portion of each of the images denotes NTI's contribution. Source: Company Information.

Source: Company Information.

2 Mission-Critical Products Enable Customers and Create Stickiness

Case study

Showcasing customers' reliance on our nanotechnology

	3Cs (Wearables)	Automotive (Piston Rings)	Printing & Imaging (Multi function printers components)	Precision Engineering (HPLC Components)
Segment / Product(s)				
Pain Points	■ Constant movement leads to wear and tear and discoloration etc.	■ High wear and tear leading to engine friction loss	■ Wear and tear due to frequent movement and high temperature	■ Only able to coat on stainless steel reducing optionality for customers
Our Solution	✓ Enabled wearables with higher wear resistance, lower friction and broader color choices	✓ Extended piston ring useful life by >5x ✓ Lower emissions and energy loss	✓ Provided components with superior properties (hardness, wear resistance, low temperature deposition)	✓ Deposit on ceramics and plastics ✓ Maintain hardness, cohesion, wear resistance
Our enablement	✓ Enabled Customer Z to produce affordable wearables with longer useful life	✓ Enabled auto suppliers to meet Euro VI emission standards	✓ Extended useful life of components and reduced replacement cost for Canon and Customer F	✓ Enabled Customer W to use a wider range of materials for HPLC
Segment % of 2019 Revenue(1)	 **22.5%** (Wearables & Accessories)	 **1.8%** (Automotive)	 **9.0%** (Printing & Imaging)	 **3.6%** (Precision Engineering)
Revenues (S$m, YoY Growth) ■ *End-market AMBU Revenues* ◆ *YoY Revenue Growth*				

Source: Company information, Note: (1) Proportion of AMBU revenues by end-markets as a percentage of total revenues for NTI.

2 Mission-Critical Products Enable Customers and Create Stickiness

Entrenchment with Customers Will Grow Even Stronger With Time

Early Direct Engagement with End-Customers in their Product Development and Design Process

Single source status for mission critical applications

End Final Product Assembly

Production Process – Surface Solutions/ Nanofabrication

NTI NanoFilm — Materials spec-in and mass production ready

Production Process – Semi-finished Parts

Mid-stream suppliers are required to engage the Company's services

Product Development & Engineering

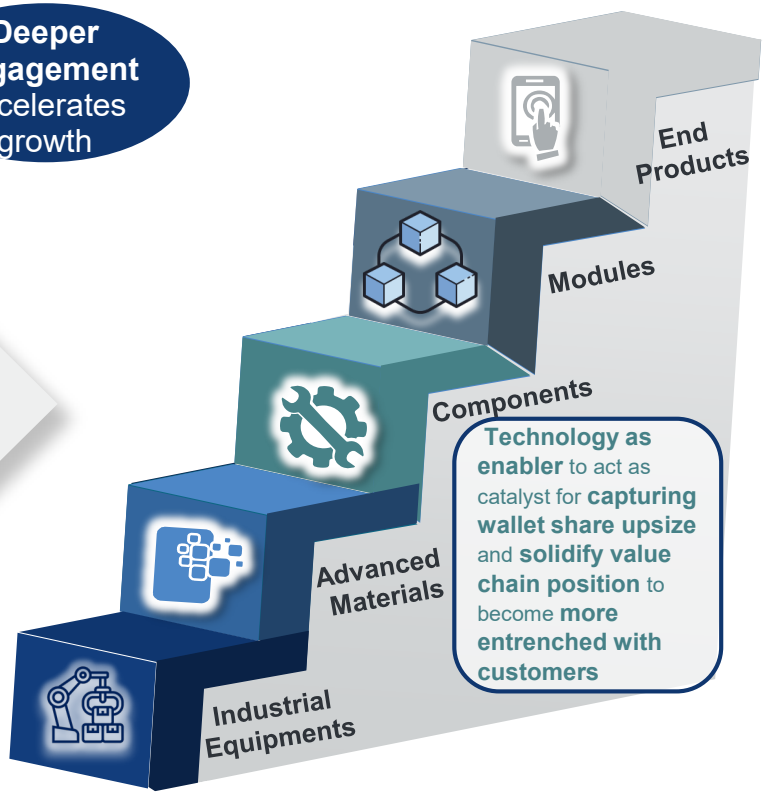
NTI NanoFilm — Early direct engagement during new materials verification and approval

Product Design & R&D, Technology Solutions

Technology-based solutions & early engagement allow the Company to capture further parts of customer value chain

Deeper engagement accelerates growth

Demonstrated Upsize Value Chain Creation



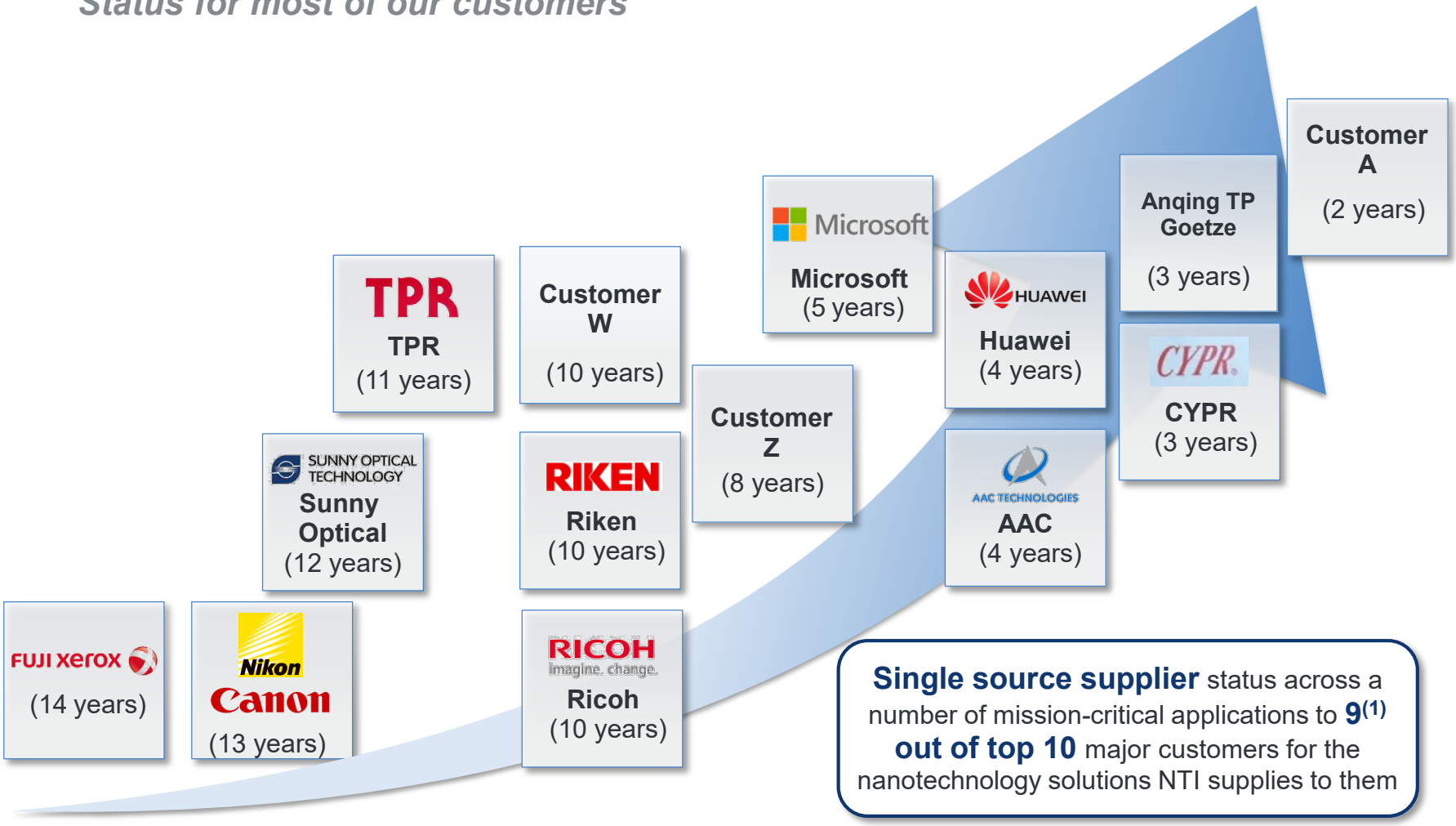
Barriers to Entry

1. **Key enablers for our customers across multiple applications leading to high intimacy**
2. **Low % of total end-product cost**
3. **Value chain integration, accelerated with strategic partners, entrenches NTI with customers**

Source: Company information.

2 Mission-Critical Products Enable Customers and Create Stickiness

Strong Track Record with Blue-chip Client Base with Single Source Supplier Status for most of our customers



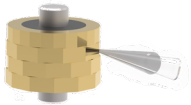
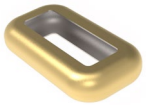
Single source supplier status across a number of mission-critical applications to **9**(1) **out of top 10** major customers for the nanotechnology solutions NTI supplies to them

(1) Including customers where Nanofilm is partially sole source. Including 4 direct customers and 5 end-customers.
Source: Company information.

3 Multiple Avenues for Growth from a Large TAM and Favorable Secular Industry Trends

Case study

Selected case studies of value chain integration

	Piston Rings and Engine Parts	3C / Logo and Button	Optical Sensing	Device Modules	Functional Enablers (MFP, Fuel Cells)
Product(s)	 CYPR				
Customer Pain Point	■ Piston rings account for 30% of engine friction loss	■ Logos require high aesthetic and functional coating	■ Requirement for miniaturization while maintaining performance	■ Demand for vertical integration in FMCG modules	■ Coatings critical to impart features like electro-chemical properties
Our Solution	✓ Extended piston ring useful life by > 5x ✓ Enabled component suppliers to meet Euro VI emission standards	✓ Laser cut stainless steel plates for deposition ✓ Thin layer deposition with fashionable color choices	✓ Integrated coatings for electro-mechanical sensor systems	✓ Vertical integration from substrate shaping to polymer molding along with additional color choices, corrosion resistance	✓ Integrated coatings with electronics / electric functions
Value Chain Integration	✓ JV supplies components to CYPR ✓ Enables NTI to produce more components for CYPR and diversify to other suppliers	✓ Become one-stop supplier for logos	✓ NTI presence across value chain from mechanical structure molding to coating and testing	✓ New and more effective way to make modules for FMCG products	✓ Facilitate new device architecture through reverse processing of epoxy

Value chain integration enables NTI to provide benefits to customers like lower cost, shorter supply chains, higher margins and increased control over procurement while expanding its own addressable market

Technology | Mission-Critical | **Growth** | Execution | Track Record | Team

Source: Company information.
Note: (1) CYPR is one of the leading automotive component supplier for diesel engines in China.

4 Strong in-house R&D, Engineering and Production Capabilities

Drive Additional Value Creation

Support Manufacturing More Efficiently

Common Activities Captured in Manufacturing Execution System (MES)

- Managing Process Orders & WIP
- Managing Material
- Managing Labor
- Managing Equipment
- Managing Quality

Demonstrated Value Creation

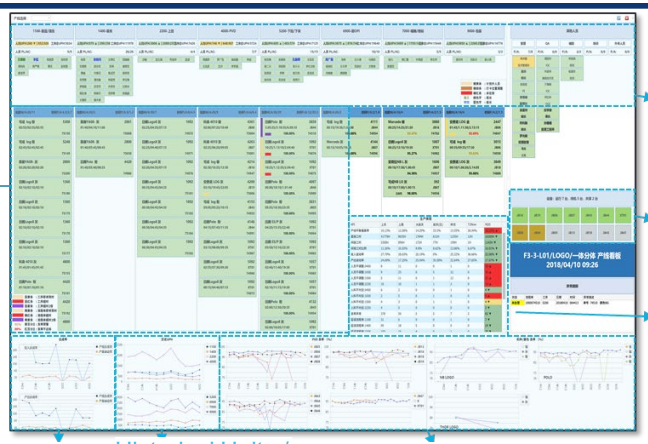
Total Cost Per Unit Reduction
13%

Improve Manufacturing Cycle Time
7%

Improve Overall Equipment Effectiveness
6%

Reduction in Lead Time to Procure Supplies
40%

Real Time Monitoring of Key Metrics



MES Dashboard

Quality Tracking Dashboard

Technology | Mission-Critical | Growth | Execution | Track Record | Team

Source: Company information.

5 FY2020: Record Financial Year

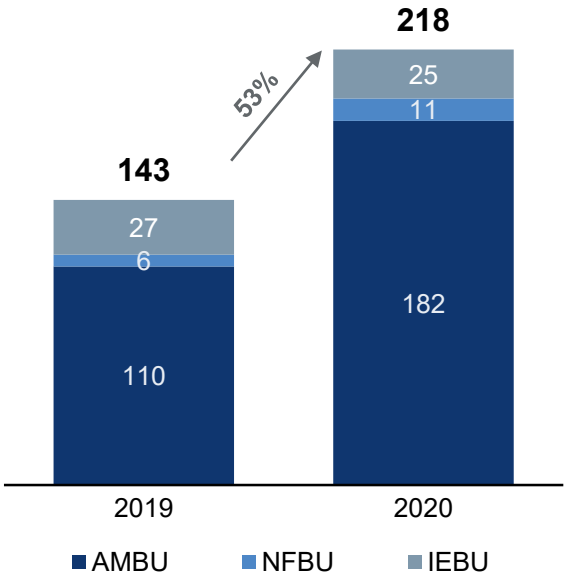
Revenue –
Strong and accelerated growth

(S$m)

NTI Group YoY Growth (%)

16% 53%

- AMBU strong growth underwritten by 3C and Automotive sub-segments
- Strong growth from NFBU driven by mass production of Fresnel lenses

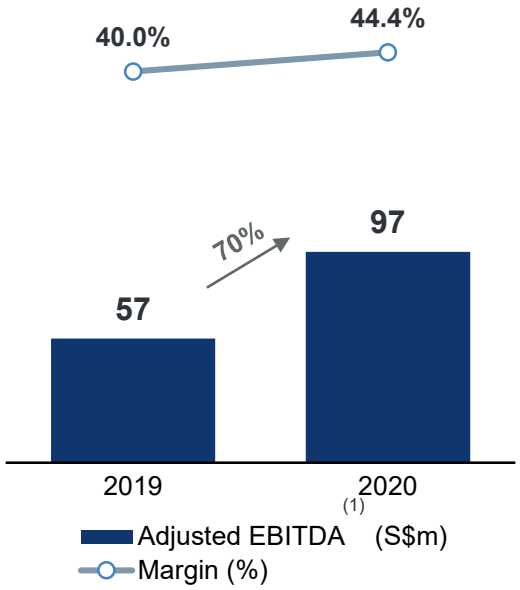


Adjusted EBITDA –
Grew at faster pace

(S$m)

13% 70%

- Higher rate of growth in income benefited from economies of scale and operational excellence, with increased efficiency and effectiveness of our production processes
- Notwithstanding the incurrence of one-off net listing expenses of S$2.2 mil and restricted shares award costs of S$3.2 mil, partially offset by the receipt of Covid-19 related government grants of S$1.2 mil

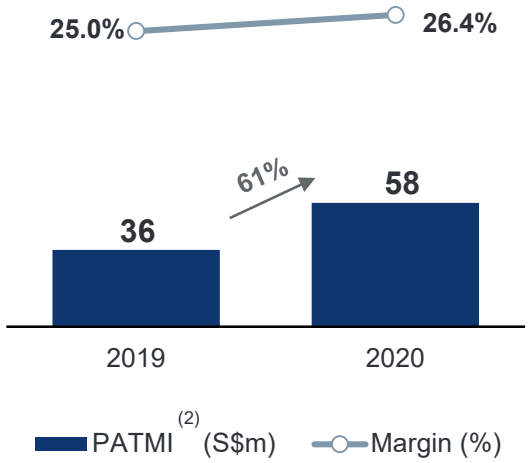


(1)

PATMI –
Up 61% YoY

(S$m)

22% 61%



(2)

Technology | Mission-Critical | Growth | Execution | Track Record | Team

Source: Company information

6 Experienced Founder and Management Team

Significant strategic and operational experience in their respective fields

Founder and Executive Chairman

Dr Shi Xu

- Founded Nanofilm in 1999, as a technology spin off from NTU
- Visionary founder of NTI who developed the Company's proprietary nanotechnology offering
- Recipient of National Technology Award from National Science and Technology Board in 2000, Innovation Award from Economic Development Board in 2001, EY Entrepreneur of the Year (Singapore) in 2017
- Previously served as Associate Professor at NTU

Nanofilm Management Team

Name	Position	Industry Experience (Years)	Selected Previous Experience
 Mr Lee Liang Huang	• CEO	c. 33	IBM, MI Holdings Pte Ltd.
 Mr Gary Ho	• CCO	c. 24	Hi-P International Limited
 Mr Ricky Tan	• COO	c. 26	WD Western Digital, HGST a Western Digital company, PEMSTAR, IBM
 Mr Lars Lieberwirth	• CTO	c. 21	Gillette, P&G, Hi-P International Limited
 Mr Kay Lim	• CFO	c. 13	zacd, OCBC, DNB, Credit Suisse

Technology | Mission-Critical | Growth | Execution | Track Record | Team

Source: Company Information.

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ADVANCING TECHNOLOGY SOLUTIONS

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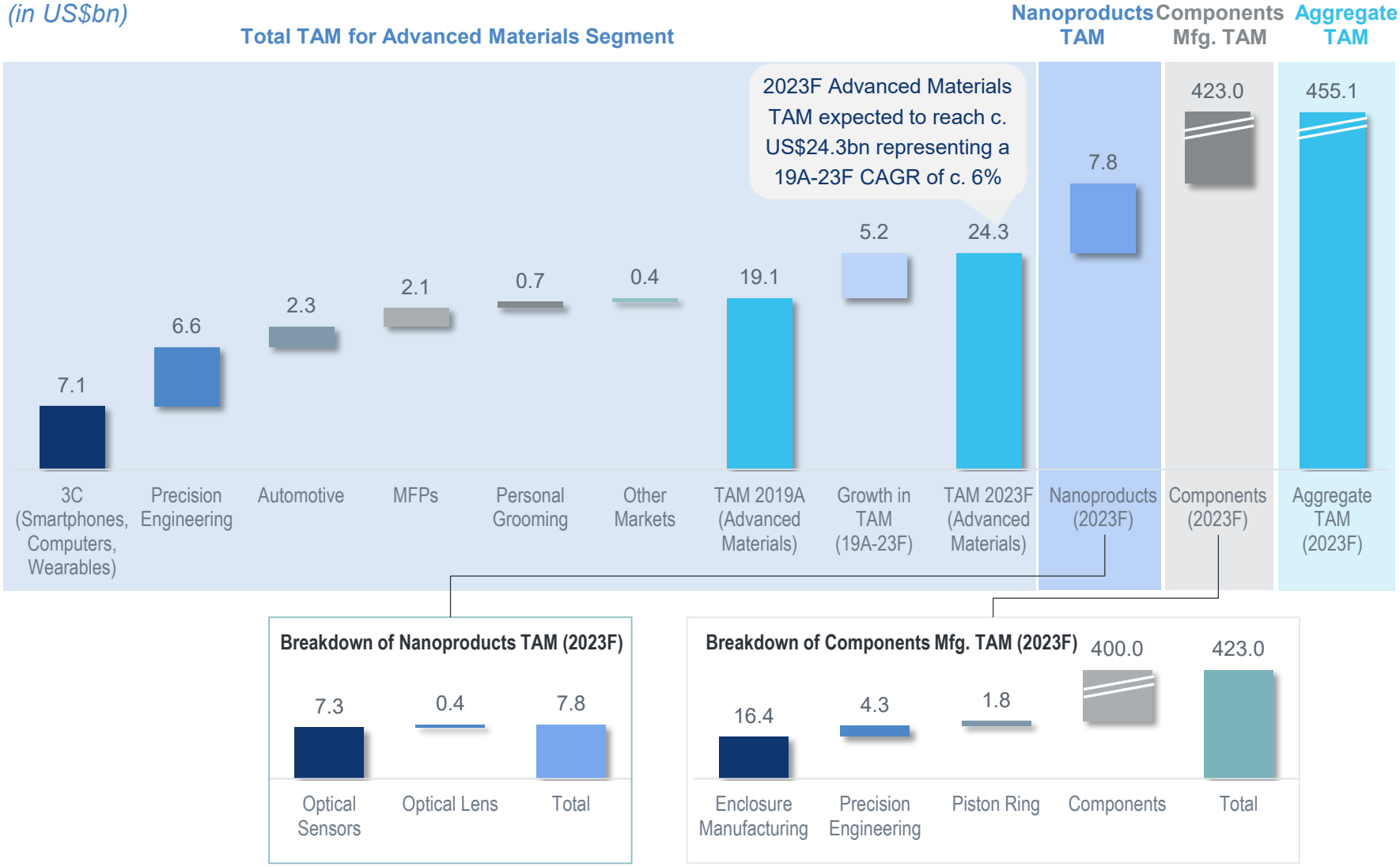
Outlook

Current Sizeable TAM with Strong Growth Trajectory

Total Addressable Market Size

(in US$bn)



Source: Frost & Sullivan, Company Information.

Well-Positioned for Multiple Avenues of Growth

Executing Strategy to Maximize our Core Enabling Technologies in Applications & End-Markets to Achieve Sustainable Long-Term Growth

Advanced Materials Market size 2023E: US$24.3bn(1)

Value Chain Integration - Components TAM 2023E: US$423bn(1)

Capturing greater share in Established End-Markets	Take-off in Recently Established End-Markets	Vertical & Horizontal Integration	Future New Areas
3Cs	Automotive	FATP, Module / End Component New Applications	FMCG Personal grooming
Printing and Imaging	Optical Lens	*Automotive*	New Energy
Precision Engineering / HPLC Pumps / Valves	Optical Sensors	*Fuel Cell*	Medical Lens
		Optical lens	Biomedical
		Optical sensors	IoT Optics
		FMCG	
Continue to increase sales to existing customers and grow customer base	*Ramp-up demonstrated share gains in new markets*	*Leverage synergies across business segments to offer customers integrated solutions*	*Opportunistically enter new markets leveraging easily adaptable nature of technology*

Source: Frost & Sullivan, Company Information.
(1) Based on Frost & Sullivan's forecast in its IMR

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Thank You