

GROUP BUSINESS REVIEW: RESOURCE-BASED MANUFACTURING

WHO WE ARE & WHAT WE DO



The Group's global resource-based manufacturing business, comprising our refining, oleochemical, specialty food ingredients, and non-crude palm oil sub-segments, plays an important role in fortifying our integrated palm value chain.

It consists of downstream activities such as refining of crude palm oil ("CPO") and palm kernel oil, and processing of refined palm oil and palm kernel oil into oleochemical and specialty food ingredients products as well as converting oil palm trunks ("OPT"), a biomass of the plantation sector, into eco-friendly, sustainable non-tropical wood panels.

With our local and international manufacturing facilities, we are well-equipped to meet the needs of our customers domestically and internationally.

FINANCIAL HIGHLIGHTS

The Group's resource-based manufacturing segment profit for FY2025 was RM128.4 million as compared to RM329.3 million for FY2024. Excluding the fair value gain on derivative financial instruments of RM18.5 million (FY2024: RM37.4 million) and impairment loss on property, plant and equipment of RM39.2 million (FY2024: nil), the segment reported an underlying profit of RM149.1 million for FY2025 which was 49% lower than FY2024's RM291.9 million due mainly to lower contribution from the refining sub-segment with lower margin and lower share of associate results.

REFINING

2 Manufacturing Facilities

1.8 million MT
Combined Annual Refining Capacity

276,419 MT
Sales of Total Certified Refined Products

The Group has two wholly-owned refineries in Malaysia with a combined annual processing capacity of 1.8 million MT. They are strategically located in Pasir Gudang, Johor, and Sandakan, Sabah, which have gateways to major shipping routes with direct port access. Both refineries are closely located to our plantations and mills. They produce refined palm oil and palm kernel oil fractions for domestic and export markets, as well as feedstock for the Group's downstream activities. Our refineries are 100% Roundtable on Sustainable Palm Oil ("RSPO"), Malaysian Sustainable Palm Oil ("MSPO") and International Sustainability and Carbon Certification ("ISCC") certified. In addition, our manufacturing premises have attained various national and internationally recognised quality management systems, environmental management systems, food safety certifications and more. We are constantly identifying and implementing resource optimisation measures to reduce greenhouse gas ("GHG") emissions.



KEY FOCUS AREAS

- Optimise refineries' processing capacity and efficiency
- Supply consistently high-quality palm oil products that fulfil different customers' needs
- Ensure efficient supply chain management with uninterrupted supply
- Expand certified sustainable palm oil products and low 3-MCPD, GE, MOSH and MOAH markets
- Maximise consumer packing capacities in various packing configurations to meet customers' requirements
- Drive innovation and promote sustainable development

KEY BUSINESS HIGHLIGHTS

- Our refining sub-segment faced ongoing trade tensions, negative refining margins and stiff competition from Indonesian refiners. Despite a highly challenging macroeconomic landscape, the sales volume of our certified sustainable refined products recorded higher sales, underpinned by our efforts in producing low contaminant oils and continued cost optimisation initiatives.
- Both refineries reported increased sales of low 3-MCPD and GE products, attributed to the implementation of stringent quality controls and a corresponding rise in customer demand.

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BUSINESS PERFORMANCE REVIEW

Strategic Objectives

- Drive innovation and promote sustainable development.

Key Initiatives

- Continuous improvement on process and digitalisation, and reduction of GHG emissions and energy consumption.

Achievements In FY2025

- IOI Edible Oils Sdn Bhd ("IOIEO") and IOI Bio-Energy Sdn Bhd ("IOIBE") were awarded the *Asia-Pacific Sustainable Innovation Enterprise Awards* in the Food & Beverage Industry, and Energy Industry 2025–2026 categories, respectively (see pages 12–13 for the full award listing).

- IOIEO improved the water flow of its cooling tower systems by streamlining the piping layouts and upgrading to high-efficiency pumps with variable-speed drives.

These led to greater energy efficiency through decreased electricity consumption of 137,231 kg of CO₂ emissions and savings of RM141,152.

- IOIEO upgraded its 20-year-old dry fractionation plant's cooling tower to a modern, optimised system, delivering cooler water at 29.6°C over the previous 32.9°C, enhancing chiller efficiency while operating with smaller kW fans. Chiller energy usage also dropped by 14.4%, from 4.72 to 4.04 kWh/tonne of refined bleached and deodorised palm oil ("RBDPO"). The upgrade offers a rapid payback of 1.16 years and reduces 268,175 kg of CO₂ emissions per year.

- IOIEO installed a new efficient air compressor at its palm kernel dry fractionation plant which reduced electricity consumption by 32%, and reduced 52,823 kg of CO₂ emissions.

- IOIBE automated its cooling tower fan operations through a design thinking project, cutting electricity consumption by 354,108 kWh and saving RM134,560.

- Contributed to key discussions on palm food safety (MOSH and MOAH) at MPOB conference.
- Promoted sustainability through circular palm oil initiatives and collaborations with experts.
- Shared industry insights in the book *Palm Oil Industry* through a chapter titled *Circular and Sustainable Practices of a Palm Oil Processing Complex*.

Strategic Objectives

- Expand certified sustainable palm oil products and low 3-MCPD, GE, MOSH and MOAH markets.
- Maximise consumer packing capacities in various packing configurations to meet different customers' requirements.

Key Initiatives

- Focusing on expanding our markets for certified sustainable and value-added palm oil.
- Actively participate in World Food Programme tenders and expand other potential markets.

Achievements In FY2025

- Sales of certified refined palm products was 276,419 MT in FY2025.
- Successfully performed 23 shipments for the United Nations World Food Programme.

CHALLENGES & MITIGATION**Challenges/ Risks**

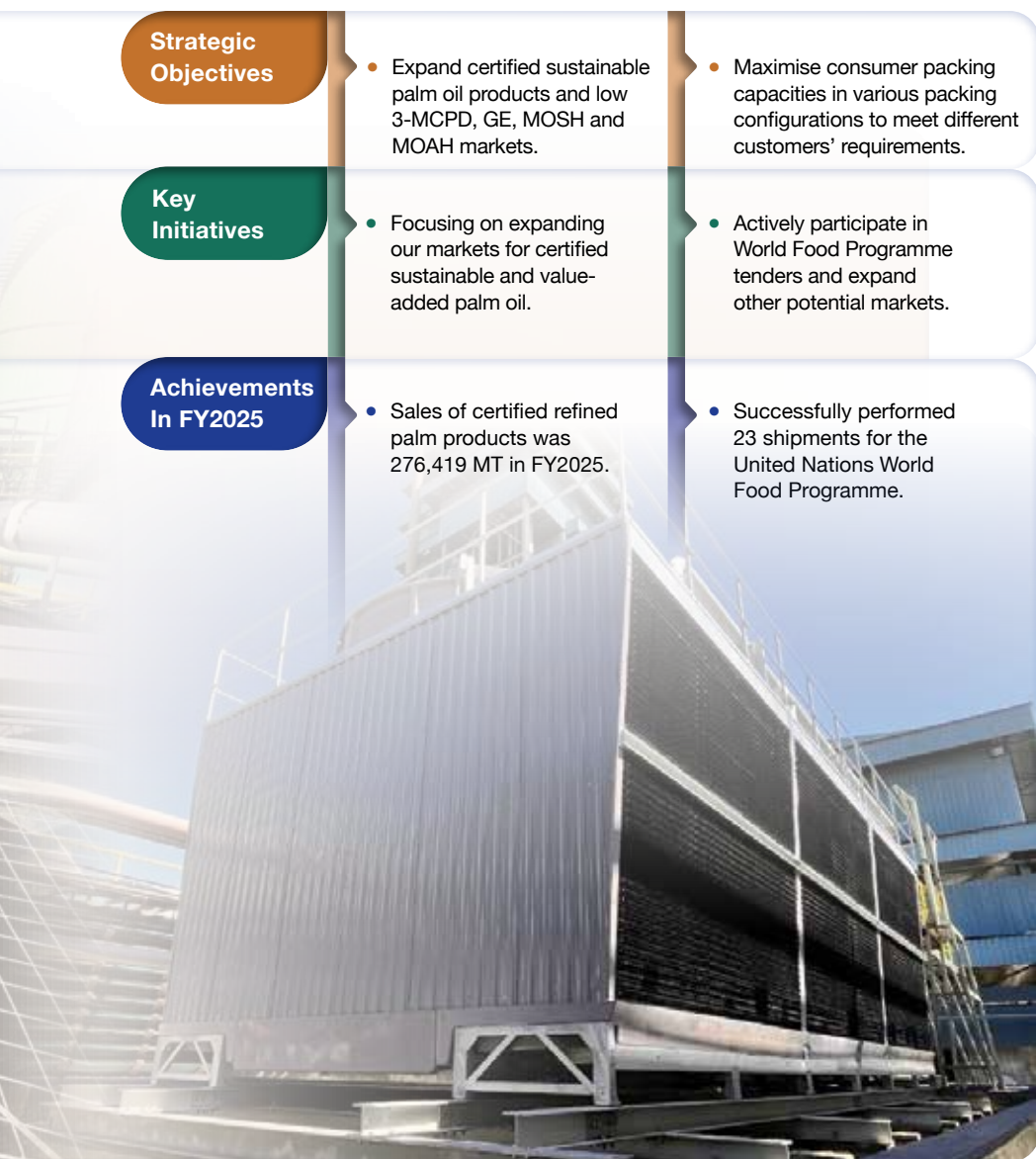
- Significant fluctuations in demand and prices can adversely impact our units' sales performance and bottom line.
- Intense competition of raw materials will affect our plant productivity and operational efficiency.

Mitigation Actions

- Consistently look for opportunities to capture demand and lock in positive margins whenever possible.
- Constantly keep abreast of changes in market competition and proactively adopt necessary strategies to secure additional raw materials domestically and internationally, whenever available.

OUTLOOK & PROSPECTS

The outlook for the refining sub-segment remains challenging, mainly due to the intense competition from Indonesian refiners who benefit from the raw material price advantage under the country's CPO export duty policy. On a positive note, the recent United States ("US") tariffs on Malaysian palm oil are expected to have minimal impact, given the Group's low export of palm oil to the US market. Against this backdrop, our competitive advantage in producing low contaminant oils as well as the continuation of our operation efficiency initiatives will be key to maintaining a satisfactory financial performance.



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OLEOCHEMICAL

4 Manufacturing Facilities

More than **80** Countries Worldwide

890,000 MT
Combined Annual Oleochemical Capacity

The principal activities of the Group's oleochemical sub-segment are manufacturing and sales of fatty acids, glycerine, soap noodles and downstream oleochemical products such as fatty esters and specialty derivatives. These versatile products are used in a wide variety of applications from industrial sectors such as automotive, construction and plastic to food, nutrition, pharmaceutical and cosmetic. Our oleochemical products are exported to more than 80 countries worldwide. Our main customers are located in Japan, China, Europe and the US, which include some of the world's most esteemed and well-known multinational corporations.

The Group's oleochemical manufacturing activities are undertaken by four manufacturing facilities – two are located in Peninsular Malaysia while another two are in Germany – with a total combined production capacity of up to 890,000 MT per annum.

Our Penang and Johor plants are exclusively palm oil-based, and are already accredited under the Roundtable on Sustainable Palm Oil Supply Chain Certification Standard ("RSPO SCCS"), Malaysian Sustainable Palm Oil ("MSPO") and International Sustainability and Carbon Certification ("ISCC"), in addition to meeting the stringent European Federation for Cosmetic Ingredients ("EFfCI") Good Manufacturing Practices ("GMP") requirements.

Meanwhile, our plants in Germany use mainly palm oil supplemented by other vegetable oils such as coconut oil, rapeseed oil and sunflower oil. They complement and add value to each other through technical know-how collaborations and application of basic oleochemicals into niche derivatives.

Besides ISO 9001, ISO 14001 and ISO 50001 certifications, our Penang, Johor and Wittenberge sites are also certified under the Food Safety System Certification ("FSSC") 22000, while the Witten site holds both the European Union-Good Manufacturing Practice ("EU-GMP") and US Food and Drug Administration ("FDA") certifications for the production of Active Pharmaceutical Ingredients ("API"). With our focus on our net zero goal by 2040, we have also obtained the ISO 14064 for effective GHG management.



KEY FOCUS AREAS

- Product Portfolio Expansion
- Innovation
- Productivity and Quality
- Sustainability and Climate Initiatives

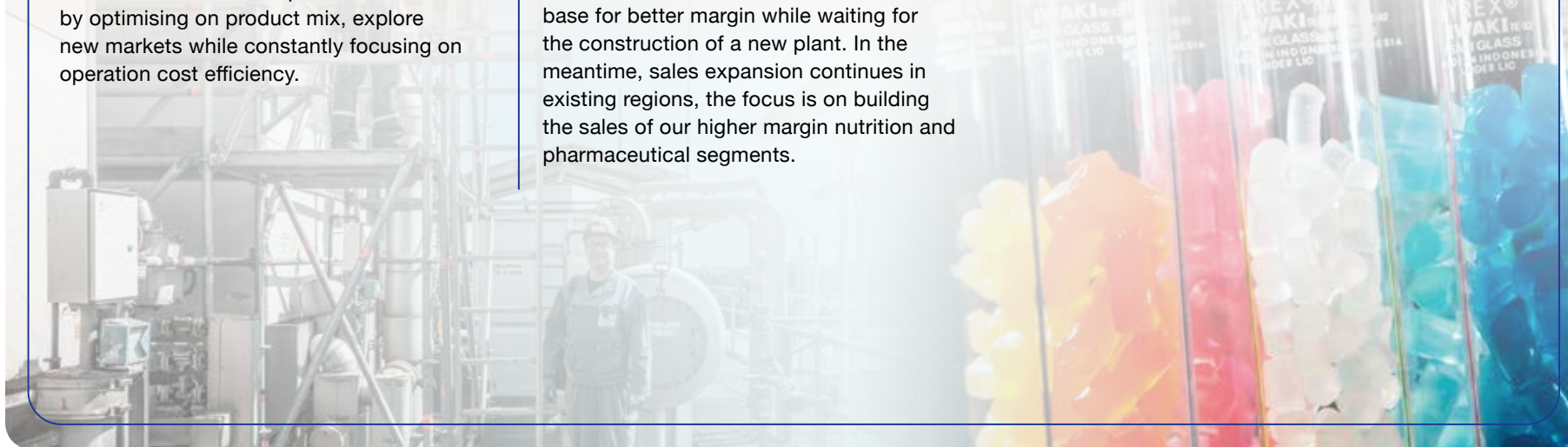
KEY BUSINESS HIGHLIGHTS

Our fatty acids business continued to face a challenging operating environment, with sales underperforming in both volume and profit margin. During the beginning of the financial year, the market was active due to higher stocking activities in Europe and China. However, the high volatility in the raw material market, particularly in palm kernel oil prices, kept sales volume and margins subdued from the second quarter onwards and throughout the remainder of the financial year. Uncertainties surrounding US tariffs and broader geopolitical tensions have significantly impacted the global economy, leading to increased costs and fluctuating consumer demand. Nonetheless, we remain committed to improve business by optimising on product mix, explore new markets while constantly focusing on operation cost efficiency.

Overall, our soap noodles business managed to slowly improve sales volume by securing long-term contracts and orders from multinational companies, increased coverage of existing and untapped markets, and leveraging industry statistics/trade data platforms to explore new business opportunities. Competition from Indonesia remains the biggest threat hence the soap noodles unit has developed new products potentially catered to customers in price-sensitive markets.

As for our fatty esters business, the key product drivers remain Medium Chain Triglycerides (“MCT”) and Isopropyl (“IP”) esters. As our IP esters capacity are fully sold, we shall rationalise our customer base for better margin while waiting for the construction of a new plant. In the meantime, sales expansion continues in existing regions, the focus is on building the sales of our higher margin nutrition and pharmaceutical segments.

Over in IOI Oleo GmbH, our sales in certain areas have declined due to intense competition and challenging market conditions. Nevertheless, sales growth in the personal care sector, primarily driven by an innovative and expanded product portfolio, contributed to a solid performance. More importantly, a forward-looking purchasing and pricing strategy was instrumental in driving this result. Against the backdrop of heightened global challenges, our German team continued to implement operational excellence measures to improve energy efficiency and production capacity while strengthening the product portfolio through innovation and expansion.



GROUP BUSINESS REVIEW: RESOURCE-BASED MANUFACTURING

BUSINESS PERFORMANCE REVIEW

Strategic Objectives

- Improve energy efficiency, reduce energy consumption and GHG emissions to contribute towards our net zero goal.
- Drive efficiency through operational excellence.
- Uphold and maintain regulatory compliance in all business areas.
- Improve automation and digitalisation efforts.
- Introduce innovative processes and products.
- Adapt to current market trends and global challenges.

Key Initiatives

- Developing and implementing measures to enhance process improvement.
- Expanding innovation and research and development capabilities through the construction of a new Lipid Excellence Center in Witten.
- Stepwise implementation of measures outlined in IOI's Pathway to Net Zero.
- Implementing automation concepts in the Distributed Control System (Yokogawa) while increasing the degree of automation.
- Adapting the energy infrastructure at Wittenberge site to the current production setup.

Achievements In FY2025

IOI Oleochemical Industries Berhad, Penang

- Commissioned a new 3.2 MW co-generation plant in July 2025 with potential GHG reduction of 9,000 MT CO₂ per year.
- Successfully energised the solar project at the new warehouse in May 2025 and completed a third solar photovoltaic ("PV") installation, which is expected to generate 2,000 MWh of green energy and reduce about 1,500 tCO₂e of emissions per year.
- Debottlenecked the splitting plant and oleic acid plant.
- Completed the enhanced esterification plant in June 2025, enabling 100% capacity for low 3-MCPD grade MCT production.

IOI Pan-Century Group, Johor

- IOI Pan-Century Oleochemicals Sdn Bhd ("PCOC") and IOI Pan-Century Edible Oils Sdn Bhd ("PCEO") have remained among the 20 Strategic Partners of Pasir Gudang Zone 1 for the *Low Carbon Cities Framework 2030 Challenge* since 2016, and continue to promote sustainable development and reduction of carbon emissions.
- IOI PCEO installed a 122 kW solar thermal system (comprising 58 sets of solar thermal collectors integrated with process waste heat and Internet of Things) to meet the heating demand of product storage tanks by converting the heating system from steam to hot water, resulting in a reduction of 1,700 MT CO₂e per year.
- IOI PCEO commissioned a solar PV system that generated about 58 MWh of electricity, resulting in a reduction of 45 MT CO₂e emissions and yearly savings.
- IOI PCEO installed rainwater harvesting systems, conserving around 1,000 m³ of tap water per year.
- Initiated various digitalisation efforts including weight checker and metal detector at its soap noodles plant (IOI PCOC), remote monitoring of IOI PCOC's biogas boiler, real-time operating data for IOI PCEO's compressor system (cloud) and solar PV system (cloud) for both IOI PCOC and IOI PCEO, which have all brought substantial savings and enhanced operational efficiency.
- IOI PCEO successfully obtained preliminary approval from the Department of Environment and final approval from the Malaysian Investment Development Authority for the installation of a biomass boiler, which is targeted to reduce approximately 20,000 MT of CO₂ per year once operational in 2026.

IOI Oleo GmbH, Germany

- Achieved significant improvement in energy efficiency and production capacity in MCT production through the successful implementation of operational excellence measures.
- Gained improvement of CO₂ balance through the implementation of efficiency-based GHG reduction projects.
- Successfully implemented initial sub-projects for the optimisation and expansion of MCT production.
- Successfully developed and launched two new personal care products (Polyglycerol Esters and SOFTISAN® 650, which won the *Innovation Zone Best Ingredient Award* – see pages 12–13 for the full award listing).
- Established SAP S/4HANA as the Enterprise Resource Planning platform for system continuity and scalability.

CHALLENGES & MITIGATION

Challenges/ Risks

- Declining contribution margins due to heightened competition, particularly in our commodity-driven products and volatility of raw material prices.
- Risk of increase in production cost due to inflationary factors.
- Constant increase in regulatory requirements.
- Global market developments such as tariffs, protectionism, sanctions and more.
- New legislative requirements in the EU, specifically the implementation of the EU Deforestation Regulation ("EUDR").
- Potential economic downturn due to uncertainty over US trade tariffs.

Mitigation Actions

- Focus on high-margin products in niche markets and develop new products tailored to market and customer needs.
- Explore and enhance raw material hedging strategies.
- Ongoing energy efficiency projects and process optimisation are in place.
- Improve cost efficiency by investing in automation and digitalisation projects.
- Ongoing adjustment of regulatory setup in line with current guidelines and developing a regulatory strategy that is tailored to market and customer needs.
- Closely monitor global market developments and events while identifying specific solutions to individual situations.
- Working closely with EU customers to prepare for the transition of the EUDR implementation.
- Stay abreast of tariff developments by the US government and respond accordingly.

OUTLOOK & PROSPECTS

The operating environment for our oleochemical sub-segment is expected to remain challenging. US trade tariffs and ongoing geopolitical tensions will continue to influence global trade flows and purchasing patterns. Industry overcapacity and high raw material prices remain headwinds, exerting pressure on both sales volume and profit margins. Meanwhile, the implementation of the EUDR, now scheduled for December 2025, may disrupt trade flows into Europe but could also create opportunities for certified sustainable producers like us.

To overcome these challenges, we will continue to strengthen our product portfolio through market insights and application expertise, drive innovation with differentiated offerings, and enhance cost efficiency through disciplined resource management.

SPECIALTY FOOD INGREDIENTS

Bunge Lodgers Croklaan Group BV ("BLC"), our associate company, continues to be a global leader in sustainable, plant-based specialty oils and fats. Its products are essential in a wide range of food applications, including bakery, confectionery, culinary and infant nutrition. BLC's solutions are designed to meet evolving dietary trends and consumer preferences, delivering both functionality and taste to food manufacturers and service providers worldwide.

Our partnership with Bunge Limited has further strengthened BLC's global presence and innovation capabilities. With a diverse portfolio based on tropical and seed oils, and advanced formulation expertise, BLC remains a trusted supplier to B2B customers across the food industry. The company continues to invest in sustainable practices and product innovation to support long-term growth and customer satisfaction.

Sales margins, particularly cocoa butter equivalents, are expected to remain good although sales margin in the US operations may be affected by the additional tariffs on palm raw material imports. However, we anticipate BLC's performance to remain satisfactory. Furthermore, BLC's transition to a new, energy-efficient refinery plant in Amsterdam, expected to be completed by the end of 2026, will replace its former Rotterdam site and consolidate operations, enhancing efficiency and reducing carbon emissions, positioning BLC for continued success in the years ahead.

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PALM WOOD

Our Group's non-crude palm oil subsidiary, IOI Palm Wood Sdn Bhd ("IOI Palm Wood"), continued its progress towards becoming a key innovator in green materials made from OPT. Despite ongoing operational challenges, including unique complexities of drying and processing, we made measurable improvements in productivity, efficiency and market readiness.



BUSINESS PERFORMANCE REVIEW

Strategic Objectives

- Implement Lean manufacturing concept and adopt a continuous improvement culture to enhance efficiency and productivity.
- Drive growth, innovation and long-term value creation.
- Reinforce IOI Palm Wood's position as a trusted supplier of quality and sustainable materials.
- Integrate sustainability and climate resilience into all operations.

Key Initiatives

- Optimise plant operations by adopting Lean, 5S and TQM principles to improve material flow, reduce waste, shorten cycle times and gain a more efficient plus cost-effective production process.
- Establish strategic partnerships and product trials that underpin future commercial orders and long-term supply agreements for our palm core materials.
- Achieve quality and certification milestones to validate our commitment to quality, environmental responsibility and workplace safety.
- Reduce environmental footprint by promoting renewable energy solutions and exploring technical solutions for biomass disposal.
- Implement sustainable practices that drive energy conservation across our operations.

Achievements In FY2025

- Initiated the adoption of Lean manufacturing principles in February 2025 following the completion of intensive training and coaching sessions, leading to approximately 65% increase in overall equipment effectiveness.
- Successfully formed early-stage strategic partnerships and initiated product trials with regional door producers, furniture manufacturers and interior design companies.
- Showcased and promoted *OnCore*® through its use in the serving counters of the food section of the Malaysia Pavilion at *Expo 2025* in Osaka, Kansai.
- Engaged in discussions with door makers to design reliable fire-rated doors.
- Achieved full certification under ISO 9001 (Quality Management), ISO 14001 (Environmental Management) and ISO 45001 (Occupational Health and Safety).
- Installed and commissioned a 928 kWp rooftop solar PV system, generating 620 kW AC to reduce reliance on conventionally sourced electricity, resulting in approximately 38% reduction in electricity cost.





Strategic Objectives

- Enhance innovation through focused R&D and new product developments.

Key Initiatives

- Ongoing R&D to improve palm core materials for better dimensional stability, enhanced fire resistance and fire retardancy, and formaldehyde-free properties to make them highly suitable for door cores, panel boards and acoustic solutions.

Achievements In FY2025

- Engaged fire retardance testing by Forest Research Institute Malaysia, demonstrating flame resistance for around 25 minutes.
- Arranged for Malaysian Timber Industry Board to conduct ISO 12460-3 test method, using gas analysis method, which confirmed *OnCore*[®] is processed without the addition of formaldehydes.
- Externally tested and shown to have excellent sound transmission class, indicating strong sound-blocking performance, suitable for environments where noise control is critical.
- Conducted BS EN 317 testing in-house, showing water swelling for palm lamella to be less than 5%.

CHALLENGES & MITIGATION

Challenges/ Risks

- Start-up and operational issues in achieving design capacity and in scaling the business.
- The early development of the technology involved in converting OPT into palm core products, which generated large amounts of side products such as fibre, sap and downgraded lamellas.
- Market acceptance of biomass materials derived from oil palms.

Mitigation Actions

- Continuously optimise and improve all aspects of operations, including engaging with strategic stakeholders, upskilling our human capital, and collaborating with machinery suppliers to enhance efficiencies and progress towards automation.
- Advance the monetisation of the OPT biomass generated beyond basic palm core products through ongoing R&D and enhancements in process, production and engineering improvements. This will ensure full utilisation of the OPT and maintain our technological leadership.
- Clearly communicate the value of repurposing sustainable raw materials into cost-effective and fit-for-purpose products, backed by certifications across sourcing, production and final output.

OUTLOOK & PROSPECTS

As a pioneer in producing sustainable non-tropical wood panels, IOI Palm Wood has encountered notable challenges, particularly in addressing technical issues and gaining market acceptance in a cyclically soft environment. While these challenges persist, the outlook has improved compared to the initial phase. The team has developed structured plans to improve and enhance market positioning. We are confident that the progress made thus far provides a solid foundation for continued advancement. With growing market demand for low-carbon products and responsibly sourced materials, our *OnCore*[®] product brand is increasingly aligned with global sustainability trends and the Environmental, Social and Governance (“ESG”) framework.

Our OPT, a biomass of the plantation sector, provides a compelling case for circular economy practices. By converting agricultural biomass into high-value building components, we are actively reducing waste, sequestering carbon and extending the life cycle of plantation resources.

With the groundwork laid in terms of product validation, certifications and operational improvements, we are well-positioned to scale production and expand into new market segments including green construction, eco-furniture and certified sustainable projects.

Our vision remains clear: to position sustainable palm wood materials as a viable alternative to traditional timber-based products, while supporting national and global goals towards renewable resources, decarbonisation and circular value chains.