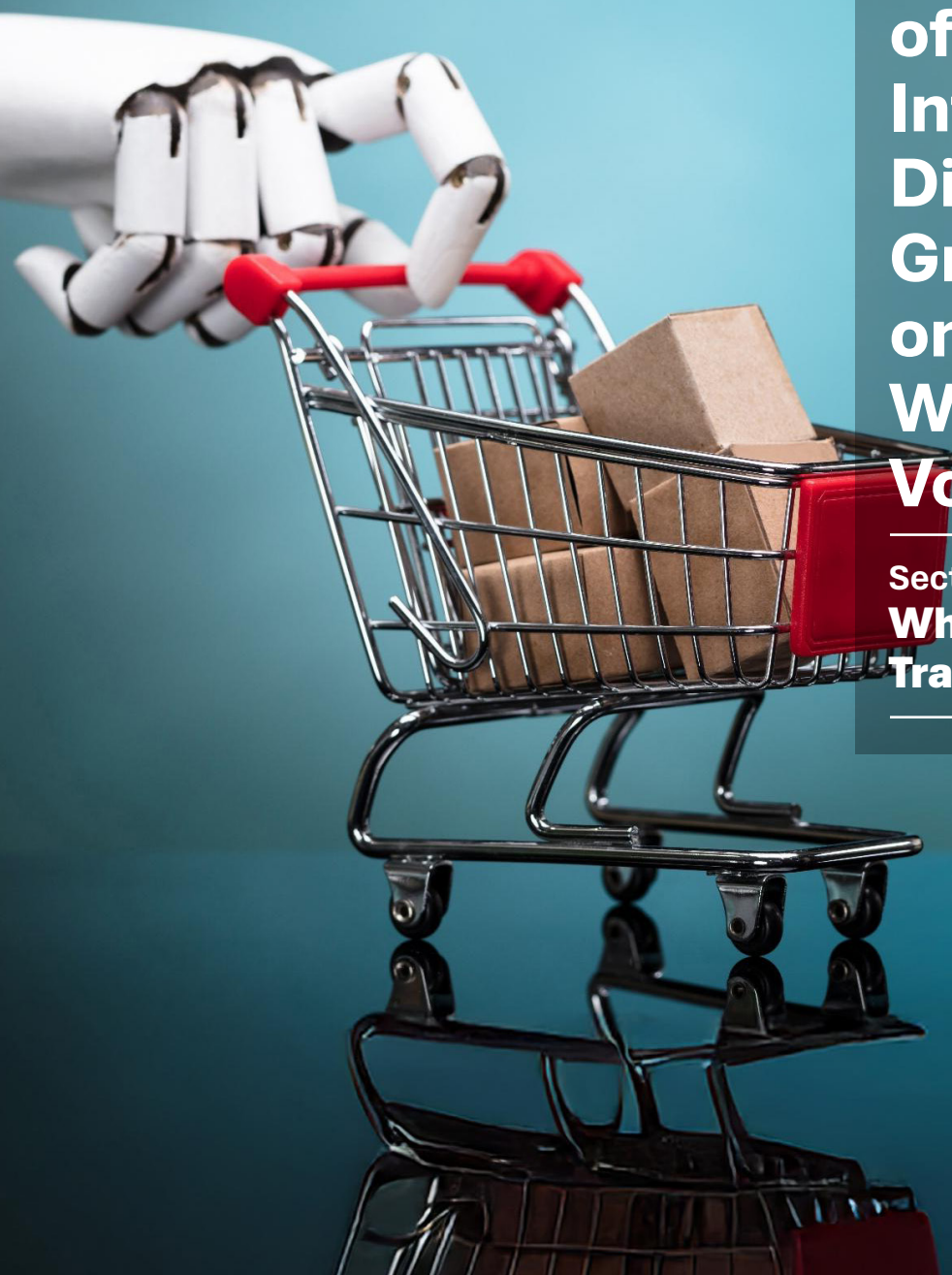




MINISTRY OF HUMAN RESOURCES

TalentCorp
GROUP OF COMPANIES



Impact Study of Artificial Intelligence, Digital, and Green Economy on the Malaysian Workforce Volume 2

Sector:
**Wholesale and Retail
Trade**

**Impact Study of Artificial
Intelligence, Digital, and
Green Economy on the
Malaysian Workforce
Volume 2**

Sector:
Wholesale and Retail Trade



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Preface by the Group Chief Executive Officer of TalentCorp

As Malaysia stands on the threshold of a transformative era, we find ourselves driven by the accelerating forces of Artificial Intelligence (AI), Digital, and Green Economy. These global trends are reshaping industries, redefining the future of work, and challenging us to navigate both the opportunities for job creation and the realities of evolving role redundancies.

With a median age of 31, Malaysia leads a youthful ASEAN region where the median age is just 30. This demographic advantage presents a unique opportunity—a vibrant, dynamic workforce ready to harness the opportunities of a Digital and Green Economy. Yet, it also poses challenges. Youth unemployment and underemployment remain persistent issues across ASEAN, with Malaysia facing a youth unemployment rate of 11% and 36.3% of tertiary-educated employees grappling with skill-related underemployment. These figures demand immediate action. Reskilling and upskilling are not just important—they are imperative as the landscape of jobs continues to evolve.

At TalentCorp, we are honoured to serve as a strategic think tank under the Ministry of Human Resources' (KESUMA) mandate. This critical role allows us to leverage our networks and initiatives, providing data-driven insights that strengthen the government's intelligence capacity and support national policy development, advocacy, and long-term strategic planning.

One of our foremost initiatives in this capacity is the **Impact Study of AI, Digital, and Green Economy on the Malaysian Workforce**. This study is designed to offer key guidance to policymakers and industries, equipping them with the knowledge to prepare the workforce for upcoming shifts. It highlights essential reskilling and upskilling programmes to assist Malaysians affected by job displacement, ensuring they transition smoothly into new roles, fostering sustainable growth, and ensuring no one is left behind.

Through insights gleaned from this study, TalentCorp's MyMAHIR Future Skills Talent Council (FSTC)—an industry-led body dedicated to addressing skills needs—will drive efforts to close critical skills gaps. MyMAHIR's collaboration with industry leaders enables us to identify priority competencies and shape training programmes to meet the evolving demands of their sectors. Aligned with the MADANI Economy framework's focus on lifelong learning and guided by best practices from the International Labour Organization (ILO), TalentCorp will continue working closely with key ministries, agencies, and industry players to develop forward-looking curricula that meet the workforce needs of the future.

As Malaysia navigates this new landscape, the findings from this study will serve as an indispensable resource—providing policymakers, industries, and the workforce with the insights and tools required to stay competitive and resilient in an ever-evolving global economy.

On behalf of TalentCorp, I extend our deepest gratitude to our industry partners, colleagues, and experts for their invaluable contributions to this study. Together, we have crafted a comprehensive and impactful report that will serve as a guide for Malaysia's future of work, ensuring that we are prepared for the challenges and opportunities ahead.

Thomas Mathew

Group Chief Executive Officer
Talent Corporation Malaysia Berhad

“

As Malaysia navigates this new landscape, the findings from this study will serve as an indispensable resource—providing policymakers, industries, and the workforce with the insights and tools required to stay competitive and resilient in an ever-evolving global economy.

”

Thomas Mathew
Group Chief Executive Officer
Talent Corporation Malaysia Berhad





Artificial Intelligence (AI), Digital, and Green Economy are transforming the Wholesale and Retail Trade sector, spearheading innovation and reshaping operations. The analysis underscores that these trends will significantly impact Malaysia’s workforce, marking its crucial role over the next three (3) to five (5) years. It is imperative for the Malaysian Wholesale and Retail Trade sector to prepare for this evolution in the modern age, particularly as global growth in the sector continues to accelerate rapidly.

Globally, the Wholesale and Retail Trade market has experienced substantial growth, expanding from USD78 trillion (RM341.4 trillion) in 2023 to a projected USD84 trillion (RM367.7 trillion) by 2024, reflecting a robust compound annual growth rate (CAGR) of 7.7%. This surge, driven by the disruptions of the unprecedented COVID-19 pandemic, has compelled wholesalers and retailers to adapt to changing consumer behaviours. The continued rise of online shopping and home deliveries is set to reduce in-store visits, with consumers increasingly seeking transparency and value. The sector is focusing on a more digital-centric, agile, and resilient model, emphasising technological advancements and sustainability to foster growth and operational efficiency. In Malaysia, the Wholesale and Retail Trade sector is one of the largest in the country, with Wholesale Trade

contributing RM114.1 billion and Retail Trade contributing RM118.5 billion to Gross Domestic Product (GDP). This sector employs approximately 1,828,765 people and is influenced by economic recovery, digital transformation, and shifting consumer behaviours. Challenges such as reduced spending on non-essentials and global events such as the international geo-political tensions impacting local retailers, are impacting the sector, yet growth is driven by rising online spending and e-commerce. Both the global and Malaysian Wholesale and Retail Trade sectors are undergoing significant transformations due to digitalisation and shifting consumer preferences. Both markets are adapting to increased online shopping and e-commerce, necessitating more agile and technology-driven business models, and both are prioritising sustainability and efficiency improvements to sustain growth and meet evolving consumer expectations. However, the workforce **remains fundamentally human-centric**.

This impact study on the Wholesale and Retail Trade sector, examines how current trends are shaping the Malaysian labour market. AI, Digital, and Green Economy principles are already being applied across the sector. This is evident in the potential emergence of new jobs from merchandising to e-commerce.



Artificial Intelligence (AI):

Machine learning models capable of performing tasks that would have required human intelligence (e.g., deep learning, computer vision, Natural Language Processing (NLP), reinforcement learning, supervised and unsupervised learning)

Digital:

Produce, adopt and innovate digital technologies and services for enhanced productivity and quality of life (e.g., big data analytics, cloud, Internet of Things (IoT), Robotic Process Automation (RPA))

Green Economy:

Growth in employment and income driven by investment into low carbon, resource efficient and socially inclusive economic activities, infrastructure and assets

As the growing influence of AI, Digital, and Green Economy reshapes the Wholesale and Retail Trade sector, roles are expected to evolve. For example, an Assistant or Coordinator within Procurement and Sourcing has a high opportunity to automate supplier relationship management, potentially pivoting to merchandise and online store job clusters within the sector or supply chain in the Manufacturing sector. To stay relevant, these workers may need to pivot into new roles like Retail Coordinator. This transition requires developing skills in order fulfilment; merchandise inventory; hazard and risk identification; and cargo receipt and inspection ensuring workers are equipped for the evolving sector.

The study has identified 23 roles in **Wholesale Trade** that are key for maintaining the sector’s standards and operational efficiency. Of these roles, five (5) or 22% are highly impacted by AI, Digital, and Green Economy, eight (8) or 35% are moderately impacted, and 10 or 43% are minimally impacted. On the other hand 57 roles have been identified in the **Retail Trade** of which six (6) or 11% are highly impacted, 35 or 61% are medium impacted, and 16 or 28% are low impacted. Additionally, six (6) emerging roles have been identified as a result of the disruptions brought about by the trends, which will shape future advancements

and innovations within the Wholesale and Retail Trade sector.

Integral to the study, it is certain that the growth trends in AI, Digital, and Green Economy will significantly impact the sector’s workforce, with high-impact roles at risk of convergence or displacement, thus requiring a pivot to adjacent roles and reskilling. Consequently, the study identifies viable career pathways and essential skill sets for the Malaysian workforce, ensuring they are well-prepared for future challenges and opportunities.

As such, **11 initiatives** have been developed with the aim of adapting to the trends within the Wholesale and Retail Trade sector’s talent ecosystem and to harness opportunities while addressing challenges posed by these transformative shifts. By aligning with the needs and aspirations of each stakeholder group, these strategies will foster innovation, promote skill development, and ensure the sector’s sustainable growth.

The Recommended Initiatives have been grouped into four (4) categories based on the leading entities: **Government, Industry Players, Academia, and Training Providers:**

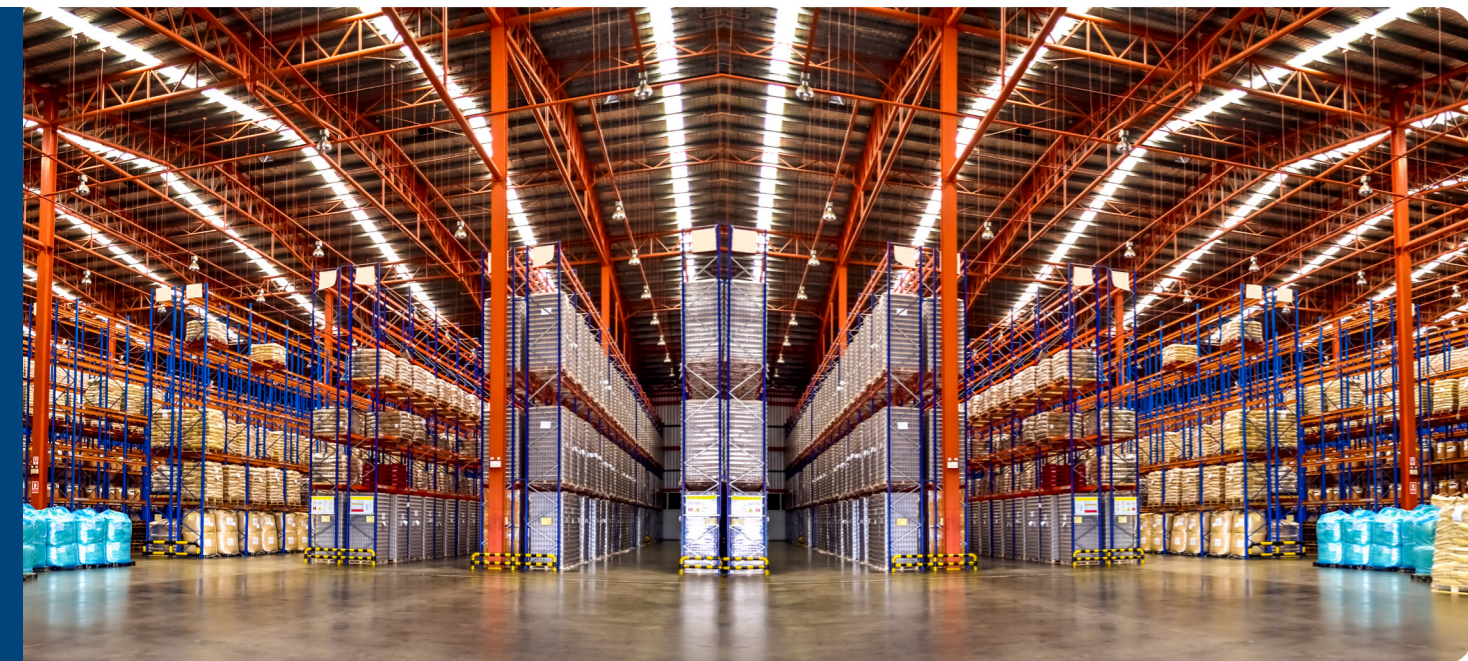
	GOVERNMENT	IN1 Develop Policy / Adoption Framework to Prevent Risk on AI Technologies Adoption
		IN2 Provide Funding and Incentives to Encourage Emerging Trends Adoption
		IN3 Develop National Talent Development Strategy to Bridge the Talent Gap
		IN4 Upgrade Information Technological Infrastructure to Keep Pace with Emerging Digital Technologies
	INDUSTRY PLAYERS	IN5 Encourage Investment In Emerging Digital Technologies
		IN6 Integrate Green Practices to Promote Environmental Awareness Among Employees And Consumers
		IN7 Enhance Talent Retention Strategy for High-Skilled Employees
	ACADEMIA	IN8 Collaborate with Sector Experts to Integrate Real-World Practices in Curriculum and Syllabus
		IN9 Enhance Quality of Educators with Advanced Sector Training and Resources
	TRAINING PROVIDERS	IN10 Develop Applicable Training Content by Building Partnership with Sector Experts
		IN11 Enhance Training Delivery and Effectiveness by Onboarding More Credible and Certified Training Providers

1. The Business Research Company, Retail And Wholesale Market International Expansion, Future Scope Report, 2033, <<https://www.thebusinessresearchcompany.com/report/retail-and-wholesale-global-market-report>>
2. Malaysia Retail Chain Association (MRCA); EY Research



Chapter 1: **Introduction of the Study**

Introduction of the Study



Purpose of the Study

The increasing focus and adoption of AI, Digital, and Green Economy call for a transformative shift in global operating models and workforce, supported by the digitally enabled drive beyond Industrial Revolution 4.0. The study aims to help government, industry players, academia, training providers, and the public to prepare for future workforce demands. The output of this study will contribute to the Malaysia National Skills Registry (MyNSR), a skills taxonomy that will be integrated into the MyMAHIR platform. This platform offers comprehensive insights into industry trends, job roles, required skills, career pathways, and available training programmes across all sectors.

These research and studies cover several sectors, namely Information and Communications Technology (ICT); Food Manufacturing and Services; Pharmaceutical Manufacturing; Medical Devices; Aerospace; Electrical and Electronics; Wholesale and Retail Trade; Energy and Power; Chemical; and Global Business Services.

AI will increasingly impact the nature of work and the broader societal progress

Majority of industry players in Malaysia are conscious about AI and the benefits it brings to organisations. While some have leveraged AI to carry out tasks, many organisations have yet to fully embrace AI as it remains difficult for organisations to justify the expense and effort required to implement AI due to the uncertainty

of Return on Investment (ROI). Organisations are also wrestling with how to address AI throughout their operations – not just from a technology perspective but also from the human perspective in terms of roles and skills readiness.

This is also consistent with an inaugural Cisco AI Readiness Index in 2023 where 86% of organisations worldwide are not fully ready to integrate AI into their businesses. Malaysia's AI Readiness tracks that of the Global level, standing at 87% with only 13% considered as “pacesetters”.

With the rise of AI, the Malaysian government has launched the National AI Talent Roadmap 2024–2033 to cultivate a skilled workforce to unlock the potential of AI across various sectors. Adding to this momentum, tech giant Microsoft Corp announced a significant investment of RM10.5 billion in Malaysia's cloud and AI infrastructure. Additionally, global tech firms Google and ByteDance will invest RM9.4 billion and approximately RM10 billion to establish data centres and transform Malaysia into a regional AI hub.

Malaysia's digital transformation is key to enhance national competitiveness, empower industries and local enterprises to progress towards high-value added activities

Digital transformation has been a strategic imperative across many organisations for many years. By continuing to embrace digital technologies, Malaysia can

significantly elevate the capabilities of its industries and local enterprises. This technological advancement is not just about automating existing processes to enhance productivity, but also about enabling a shift towards higher value activities.

Digital economy is one of Malaysia's key economic pillars, contributing 22.6% to the country's gross domestic product (GDP).⁴ This number is set to rise to 25.5% by 2025. To remain relevant and resilient, the Malaysia Digital Economy Blueprint overseen by MyDIGITAL outlines the efforts and initiatives taken to transform Malaysia into a high-income nation that is focused on digitalisation and a regional pioneer in the digital economy.

Malaysia is also making significant strides in Green Economy

When it comes to Green Economy, most organisations in Malaysia today are still driven by compliance to regulations. However, there has been growing awareness and willingness to drive the Environmental, Social and Governance (ESG) agenda at the forefront with concerted efforts from the government, private sector, and public. While progress is being made, ongoing commitment and collaboration across all industries are necessary to ensure a sustainable future for the country.

This is in line with the Twelfth Malaysia Plan (2021–2025) that outlines the nation's aspiration to achieve net-zero greenhouse gas (GHG) emissions as early as 2050. Complementing this, the National Energy Policy (2022–2040) sets the foundation for transforming the energy landscape towards sustainability. In line with these objectives, the Malaysian Government has also developed the National Energy Transition Roadmap

(NETR) to accelerate the shift from a traditional fossil fuel-based economy to a high-value Green Economy. Malaysia's efforts are reflected in its leading position in the World Economic Forum Energy Transition Index, ranking 1st in ASEAN and 35th globally.⁵

It is imperative to future-proof Malaysia's workforce for the impact of AI, Digital, and Green Economy

This study aims to provide transformative and strategic inputs to complement the rapid growth of these areas. It will examine how these trends as a whole will reshape Malaysia's workforce in the upcoming three (3) to five (5) years and assess the impact of current and future trends of AI, Digital, and Green Economy; its implications for current and future job roles and skills; the nation's capacity to cater to future workforce demands and needs; and lastly, policy recommendations that the policy makers and agencies, industry players, academia and training providers as a whole can do in spurring the industry forward amidst flexible changes ahead.

This report will provide an overview of the Wholesale and Retail Trade sector, including its related sub-segments, the key trends and developments relating to AI, Digital, and Green Economy.

More importantly, it will highlight the roles impacted as well as the skills needed to be future-ready for the Wholesale and Retail Trade sector. These findings are based on engagements with industry associations and key players as well as regulators and government agencies.

The report concludes with Recommended Initiatives for four (4) key stakeholder groups, namely: Government, Industry Players, Academia, and Training Providers.

“Microsoft's investments in digital infrastructure and skilling will help Malaysian businesses, communities, and developers apply the latest technology to drive inclusive economic growth and innovation across the country.”

Satya Nadella, CEO of Microsoft

3. Vanessa Gomes, *Catalysing Malaysia's Digital Economy*, September 2022, <https://mdec.my/esg-mdcap/content-hub/catalysing-malaysia-digital-economy>

4. MIDA, *Malaysia ranked first place in S-E Asia in WEF energy transition index*, July 2030, <<https://www.mida.gov.my/mida-news/malaysia-ranked-first-place-in-s-e-asia-in-wef-energy-transition-index/>>



Chapter 2:

Approach and Methodology

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Approach

A six-pronged approach entailed a blend of qualitative and quantitative research techniques that generated insights and met the objectives desired from this study. The study’s outcomes reflect what is happening in each industry today and what is expected of each sector in the next three (3) to five (5) years.



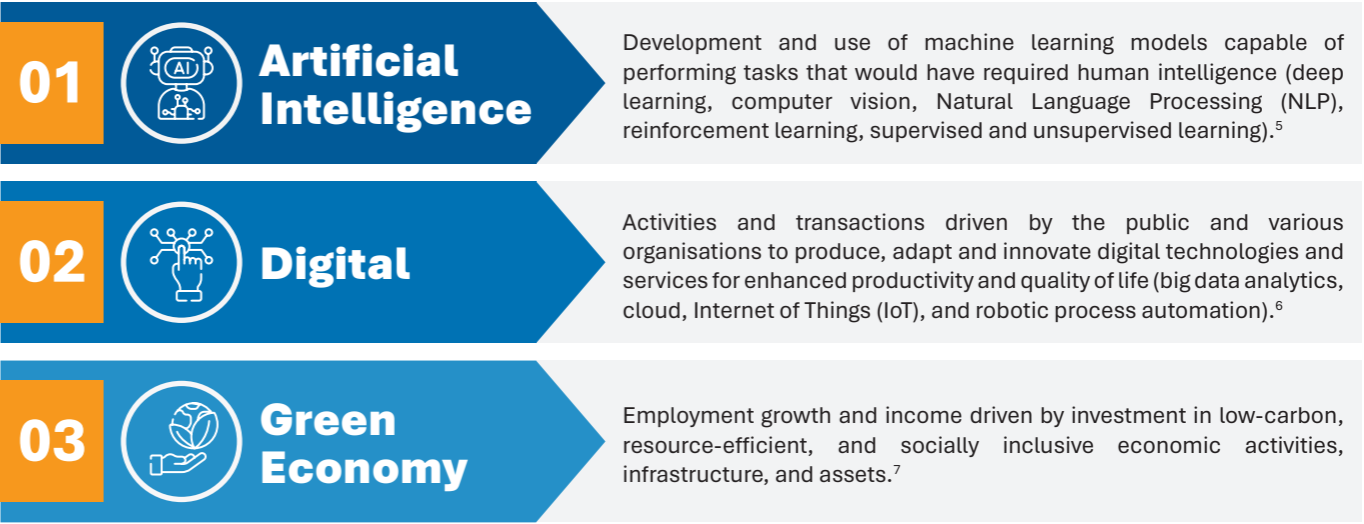
Research Techniques

The qualitative and quantitative research techniques were as follows:



Research Methodology

The study focused on three (3) key trends shaping today’s workforce: AI, Digital, and Green Economy. Their definition is outlined below:



To effectively analyse how the key trends impact existing roles, four (4) key parameters have been defined in the assessment process, as stated below:



5. World Economic Forum
6. Malaysia Digital Economy Corporation (MDEC)
7. United Nations Environment Programme (UNEP)

Based on the parameters above, the impact assessment of AI, Digital, and Green Economy on roles will result in one of the following outcomes:

HIGH
Roles at risk of convergence or displacement
Need to pivot to adjacent role and reskill

MEDIUM
Roles still relevant
Need to evolve and upskill to deliver beyond what would traditionally be expected

LOW
Roles not severely impacted
Require ongoing self-improvement to stay relevant

The impact assessment results inform individuals and organisations about the levels of risk faced by job roles in the industry. This information can aid in strategising career development and workforce planning, ensuring relevance amidst advancements in the three (3) key trends.

Key Stakeholders Engaged in the Study

Recognising the importance of on-the-ground perspectives, the impact study gathered insights from key stakeholders across the country, including Government, Associations, Industry Players, and Training Providers. The contributions from these four (4) groups enriched and fine-tuned the study’s findings.

Stakeholders and their Contributions to the Study				
Stakeholder Groups	Government	Associations	Industry Players	Training Providers
	Entities responsible for enforcing industry regulations and ensuring compliance with standard.	Organisations facilitating networking, advocacy, and knowledge exchange among industry players.	Companies actively involved in producing and distributing goods or services within the industry.	National and state-specific institutions that offer courses to develop skills and knowledge in various fields.
Key Contributions	<ul style="list-style-type: none">Share inputs on industry trends.Validate high-level impact assessments.Recommend initiatives.	<ul style="list-style-type: none">Identify selected industry players.Share inputs on industry trends.Validate high-level impact assessments.Recommend initiatives.	<ul style="list-style-type: none">Validate industry trends.Validate detailed impact assessments.Identify future roles and skills requirement.Provide a view of capacity demand and number of highly impacted workforce.Recommend initiatives.	<ul style="list-style-type: none">Recommend training providers and suitable programmes mapped to skills.Suggest new training programmes to close existing and future gaps.Recommend initiatives.

Stakeholders’ Selection Criteria

Selecting the right stakeholders ensures the impact study benefits from diverse perspectives and relevant expertise. The four (4) criteria used to identify stakeholders for engagement are:

01
HOLISTIC SECTOR COVERAGE
Comprehensive coverage of industry players across all sub-sectors and the entire value chain

02
STRONG BRAND PRESENCE
Widespread visibility and influence within the sector

03
SIZEABLE EMPLOYMENT COVERAGE
Comprehensive coverage and employee counts across all roles included in the assessment

04
SIGNIFICANT TURNOVER
Ensure a diverse mix of industry players, including large firms with high turnover

The study was conducted from April to September 2024, consulting **24** experts from **18** organisations during a workshop, followed by **10** separate engagements with industry stakeholders.

Key Facts and Figures of Impact Study Stakeholder Engagements

In-Depth Interviews

**Associations : 1**

Validation Workshops

**Industry Players : 17**



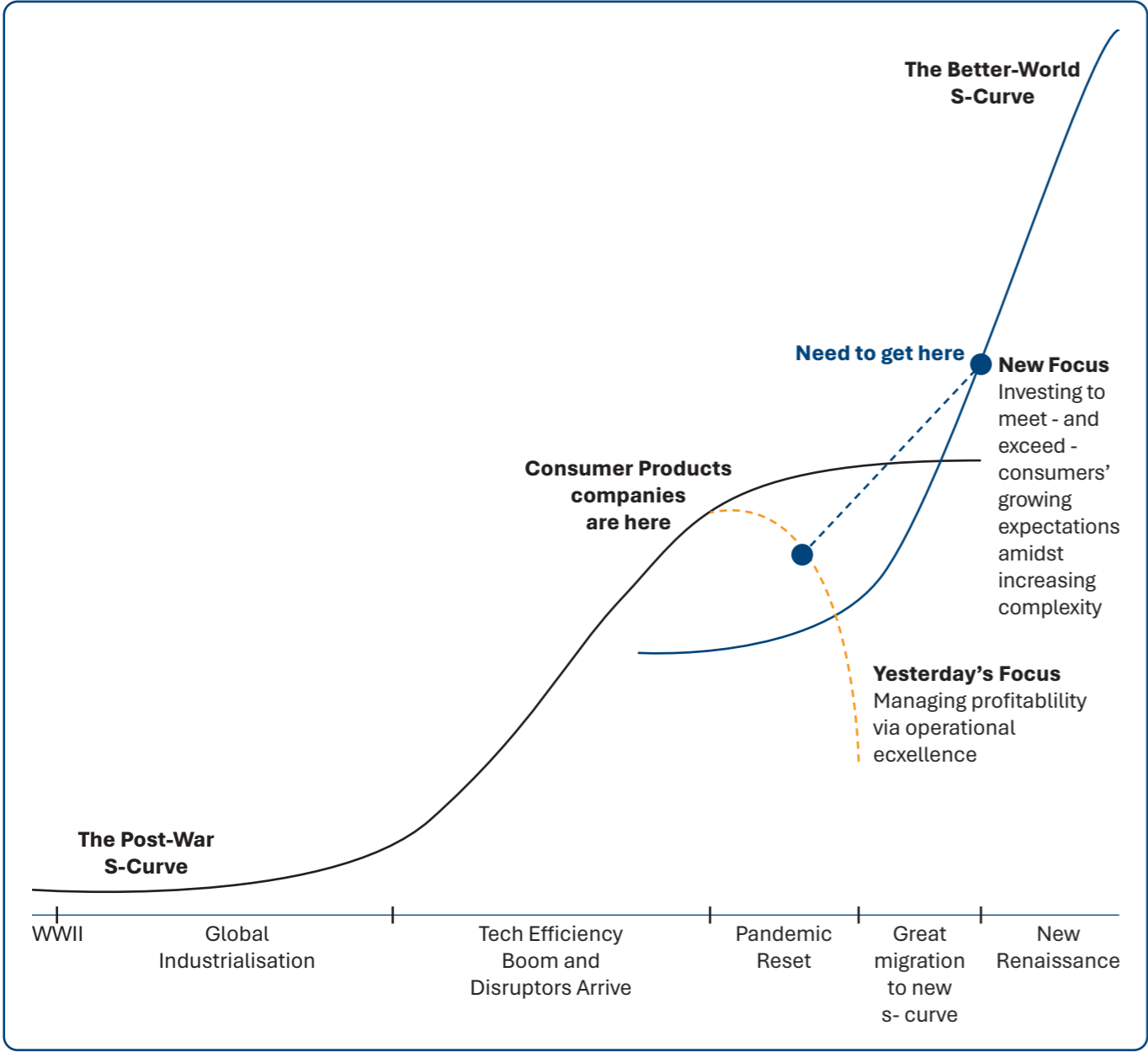
Chapter 3:

Sector Overview

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Overview of Global Trends in the Wholesale and Retail Trade Sector

Consumers are evolving faster than ever and people are fundamentally rethinking what they value and how they spend their time, money and attention.⁸



The global Wholesale and Retail Trade market size has grown strongly and will continue to grow from USD78 trillion (RM341.4 trillion) in 2023 to USD84 trillion (RM367.7 trillion) in 2024 at a CAGR of 7.7%.⁹ This sector is on track for robust expansion in the coming years. The pandemic has prompted wholesalers and retailers to rethink how they will shift to the next s-curve of growth as economic uncertainties, continuing inflationary pressures, and climate change are driving consumers to change their spending patterns as they make efforts to optimise their budgets accordingly.

Companies are reacting to these disruptions by taking pricing actions, reshaping portfolios, pursuing productive initiatives, and moving beyond the traditional focus to prioritise investments. This improves customer experience to secure growth for the years ahead by exploring consumer-centric value propositions that reflect how they will remain relevant in the future.

To accelerate transformation, wholesalers and retailers need to rethink their business holistically to address disruptive forces in order to shift to new growth curves. The continuous wave of disruption is pushing consumers to make significant changes to their lifestyles, behaviours, and values, which may lead to reduced spending and a shift towards thrifting as a cost-saving strategy. The growing convenience of online shopping and home deliveries is expected to further increase, causing a decline in in-store visits. At the same time, consumers are becoming more selective and informed, seeking greater transparency and value in their purchases. As shoppers reassess their habits and redefine their essentials, wholesale and retail companies are being compelled to innovate and rethink their business models in response to these changes:

01

Wholesale companies are building more connections with consumers

By adopting a multi-channel approach, companies can effectively strengthen their direct-to-consumer connections through innovative business strategies and models. This includes creating personalised websites, offering subscription services, leveraging social media, and engaging in experiential retail through pop-up stores. Wholesale companies are also strategically cutting costs, reevaluating product recipes and packaging sizes to enhance sustainability and drive growth.

02

Retailers are emphasising customer centricity as a priority

By expanding their product range and enhancing the overall customer experience, retailers are focusing on delivering value to their customers. Additionally, positioning themselves as the “defender of the consumer” shows a willingness to advocate for customers’ interests, specifically in regards to price increases, which helps to build trust and loyalty with their target audience.

Staying consumer-centric is more important than ever to remain relevant. As a result, wholesalers and retailers must shift to a new operating model - one that is more digital-centric, agile, and resilient - to drive commercial transformation, achieve tech-enabled business improvements, and ensure a profitable future.

Businesses must also leverage technology and data to drive greater agility, resilience, and efficiency in the supply chain, while embedding sustainability across the value chain. This approach unlocks long-term value for both consumers and the business by operationalising sustainability.

8. Ibid

9. The Business Research Company, *Retail And Wholesale Market International Expansion, Future Scope Report, 2033*, <<https://www.thebusinessresearchcompany.com/report/retail-and-wholesale-global-market-report>>

Overview of the Malaysian Trends in the Wholesale and Retail Trade Sector



Malaysia’s Wholesale and Retail Trade sector is set to grow steadily in the next few years, supported by modernisation and supply chain enhancement to overcome current challenges.

Nature of sector

The nature of the sector is fragmented, with no single firm holding enough market share to influence its direction or pricing. It includes a diverse mix of both global and local players consisting Multinational Corporations (MNCs), Public Listed Companies (PLCs), and Small and Medium-Sized Enterprises (SMEs).

For the purpose of this study, the coverage will include:

Wholesalers	Non-Specialised Stores	Specialty Retail	E-Commerce and Online Retail
Business-to-business (B2B) businesses purchase large quantities of goods from producers or manufacturers and distribute them to other points of sale.	Hypermarkets, supermarkets. and convenience stores (e.g. groceries, household items) etc.	Fashion, electronics, healthcare, pharmaceutical, and beauty products etc.	Online marketplaces, e-commerce platforms, and digital retailers.

A snapshot of Malaysia’s Wholesale and Retail Trade sector¹⁰

GDP contribution	Wholesale Trade RM114.1 bil (49%)	Retail Trade RM118.5 bil (51%)
Number of Employees	Wholesale Trade 565,385 (29%)	Retail Trade 1,263,380 (71%)

As of mid-2024, the Wholesale and Retail Trade sector in Malaysia is mostly influenced by several factors such as the economic recovery from the unprecedented COVID-19 pandemic, digital transformation, and shifts in consumer behaviour. A decline in purchasing power has led consumers to spend thriftily particularly on non-essential items, resulting in lower sales. Consumers are increasingly shifting their behaviour towards prioritising lifestyle-related purchases, indicating a noticeable focus on lifestyle spending. Furthermore, global events, such as the Boycott, Divestment, and Sanctions (BDS) movement in relation to Israel’s war on Palestine, are also impacting consumer spending decisions, while growth driven by a surge in online consumer spending and the expansion of e-commerce has altered the business operations of wholesalers and retailers due to the pandemic.¹¹

The Wholesale and Retail Trade sector is central to the national agenda

Under the Twelfth Malaysia Plan (RMKe-12), the services sector is projected to grow steadily at 5.2% per annum, accounting for 58.3% of GDP by 2025. The Wholesale and Retail Trade sector will continue to drive growth, with efforts to modernise and streamline the supply chain, as well as increase the adoption of technology, in line with the Malaysia Digital Economy Blueprint 2030. This will enhance efficiency and productivity in the sector, ensuring continued growth and development. Some of the national initiatives include:¹²

Improving Operational and Production Process

01 Modernising business activities that are mostly manually operated. Large scale retailers will be encouraged to invest in systems that are cost-effective and improve consumer experience, including self-checkout, and pick and pack.

Strengthening Legislation

02 Self-regulation will be introduced to encourage adherence to legal and safety regulations. This will reduce the regulatory costs of doing business and improve market outcomes for consumers.

E-Commerce as the Engine for Catalytic Growth for Businesses in Malaysia

03 Interventions from the government in collaboration with the sector across the various programmes under the six (6) strategic thrusts, are expected to drive the growth of e-commerce market size, MSME e-commerce adoption, and e-commerce export.

10. Department of Statistics Malaysia (DOSM)
11. Department of Statistics Malaysia (DOSM); *The 12th Malaysia Plan (2021-2025)*; *Malaysia Digital Economy Corporation (MDEC), National ECommerce Strategic Roadmap 2021-2025: E-Commerce as the Engine of Catalytic Growth for Businesses in Malaysia, 2021*; Malaysia Retail Chain Association (MRCA); EY Research
12. The 12th Malaysia Plan (2021-2025); *Malaysia Digital Economy Corporation (MDEC), National ECommerce Strategic Roadmap 2021-2025: E-Commerce as the Engine of Catalytic Growth for Businesses in Malaysia, 2021*

Impacts of AI, Digital, and Green Economy on the Wholesale and Retail Trade Sector

A

Challenges and Opportunities

Six (6) interdependent disruptive forces are creating new challenges and opportunities¹³

	<div><div>38%</div><div>of consumers are buying fewer products</div></div> <div>Businesses today are facing several challenges. They need to find the right balance between selling their own private label products and offering direct sales. There is also a growing demand for sustainable and plant-based products that they need to meet. Companies are also navigating the rise of subscription services, rental options, and second-hand markets, thus catering to new consumer groups that prefer experiences over physical products and focus on creating items that are durable and long-lasting.</div>	<div><div>48%</div><div>of consumers expect their technology use to improve in the future</div></div> <div>Businesses should focus on key areas by engaging users online and using blockchain for secure transactions. 3D printing can improve manufacturing, while growing digital goods and exploring the Metaverse presents new opportunities. Adopting augmented reality (AR) and virtual reality (VR) can enhance user experiences. By leveraging generative AI to help create new content, and integrating technologies like 5G, Internet of Things (IoT), cloud computing, and edge computing to boost efficiency. Finally, preparing for the future of quantum computing will keep businesses competitive.</div>	<div><div>48%</div><div>of consumers assume products that are bad for people or planet would be banned</div></div> <div>Companies are faced with a variety of challenges, including new taxes on carbon and plastics, stricter product regulations, bans on certain ingredients, recycling laws, and higher taxes on harmful products. Additionally, they must navigate issues like intellectual property management, detailed labelling requirements, fair labour practices, and data privacy regulations.</div>	<div><div>70%</div><div>of consumers feel companies should drive positive ESG outcomes</div></div> <div>Firms are addressing several important needs, including improving supply chain visibility, reducing carbon emissions, promoting human rights and diversity, decreasing plastic use, adopting circular practices, minimising food waste, enhancing consumer health, protecting biodiversity, and managing resource consumption.</div>	<div><div>60%</div><div>of consumers are worried that war will spread globally</div></div> <div>Organisations are navigating a range of challenges, including geopolitical conflicts, rising trade disputes, varying vaccination rates, high inflation and energy costs, fluctuating debt and interest rates, disruptions in supply chains, joblessness, cybersecurity threats, and growing political divides.</div>	<div><div>44%</div><div>of consumers intend to spend more on experiences</div></div> <div>Businesses are responding to several trends, including the shift of consumers becoming products, the move from goods to services, the blending of retail with entertainment, and the creation of immersive experiences. There is also focus on ensuring end-to-end engagement, offering bundled solutions, promoting self-managed healthcare, integrating gamification, and managing the complexities of selling data.</div>
Charge Driver	<div>Evolving Consumer Behaviours</div> <div>Businesses are seizing opportunities to customise in-store products, adjust retail spaces, innovate for new trends, apply fresh business models, and create service-led solutions. They are also targeting emerging consumer segments, offering experiential products, developing private label lines, and building stronger consumer trust.</div>	<div>Rapidly Changing Technologies</div> <div>Companies are taking advantage of opportunities to leverage data and analytics, enhance customer experience, create digital-first products, and improve supplier transparency. They are also developing integrated systems, prioritising cybersecurity, upgrading technology infrastructure, integrating AI, and automating processes to boost efficiency.</div>	<div>Increasing Tax and Regulatory Complexity</div> <div>Organisations are embracing opportunities to prepare for different regulatory scenarios, optimise tax and wage structures, ensure supplier accountability, and establish both global and local standards. They are also managing cross-border data, adapting to changing labelling requirements, improving reporting metrics, monitoring employee well-being, and actively engaging with policymakers.</div>	<div>Escalating Prioritisation of Sustainability</div> <div>Businesses are leveraging opportunities to enhance supply chain transparency, develop circular processes, and form alliances with industry peers. They are prioritising key material issues, measuring and reporting their impact, educating consumers on product use, optimising stakeholder communications, implementing ESG strategies, and exploring alternative supplier options.</div>	<div>Rising Political and Economical Uncertainty</div> <div>Organisations are harnessing opportunities to build local supplier networks, protect against cost spikes, and diversify global logistics. They are also assessing geopolitical scenarios, securing price guarantees, simplifying in-store assortments, reducing reliance on fossil fuels, enhancing data encryption, and restructuring debt burdens.</div>	<div>Blurring Lines between Sectors and Channels</div> <div>Companies are capitalising on the opportunity to broaden their ecosystem, enhance service offerings, and bundle products with services. They are exploring related sectors, leveraging alternative business models, identifying B2B value areas, building a retail media presence, developing digital-first offerings, and creating engaging in-store experiences.</div>
Imperatives						

13. EY Future Consumer Index 2023

B

Impacts of AI, Digital, and Green Economy

Artificial Intelligence

AI Trends and Impact¹⁴

AI is rapidly transforming the global retail landscape, introducing innovative solutions that are redefining the way consumers shop and brands operate. From personalised product recommendations and targeted marketing campaigns to efficient inventory management and supply chain optimisation, AI is empowering United Kingdom (UK) retailers to enhance customer experiences, improve operational efficiency, and gain a competitive edge.

Integration of Augmented Reality into Retail Operations

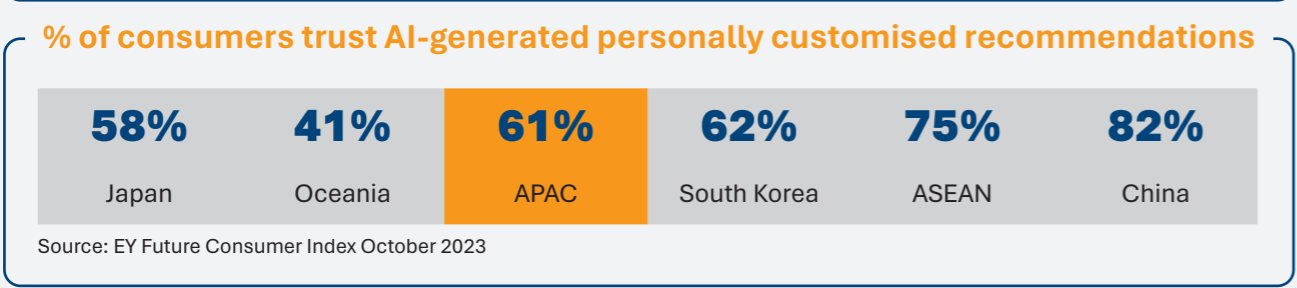
The global customer purchase journey is shifting from transactional to experiential concepts, incorporating innovations like virtual fashion shows, spatial elements, 3D avatars, and Non-Fungible Tokens (NFTs). Retailers are further enhancing this experience by merging in-store try-ons with Augmented Reality/Virtual Reality (AR/VR) technology, enabling precise product choices and personalised sizing, ultimately reducing return rates.

Integration of AI into applications enable personalised product and targeted purchases

Retailers are leveraging AI capabilities to optimally personalise online product recommendations and enhance visual discovery, driving cross-selling and upselling opportunities. Additionally, IoT and wearables provide real-time insights, such as skin health and hydration tracking, further enriching the customer experience. Adopting a multi-brand strategy, retailers are using data-driven insights to target diverse customer segments with tailored products.

AI-driven Chatbots leveraged for customer service solutions

Retailers are transforming by leveraging AI for personalised innovation at scale, evolving their stores into digital-led experience centres for seamless shopper engagement. Simultaneously, they are transforming their supply chains through AI, cloud, and blockchain technologies to enhance agility and visibility to respond to changing market demands.



14.Press articles, Consumer EY Knowledge analysis; EY Future Consumer Index 2023

Digital

Digital Trends and Impact¹⁵

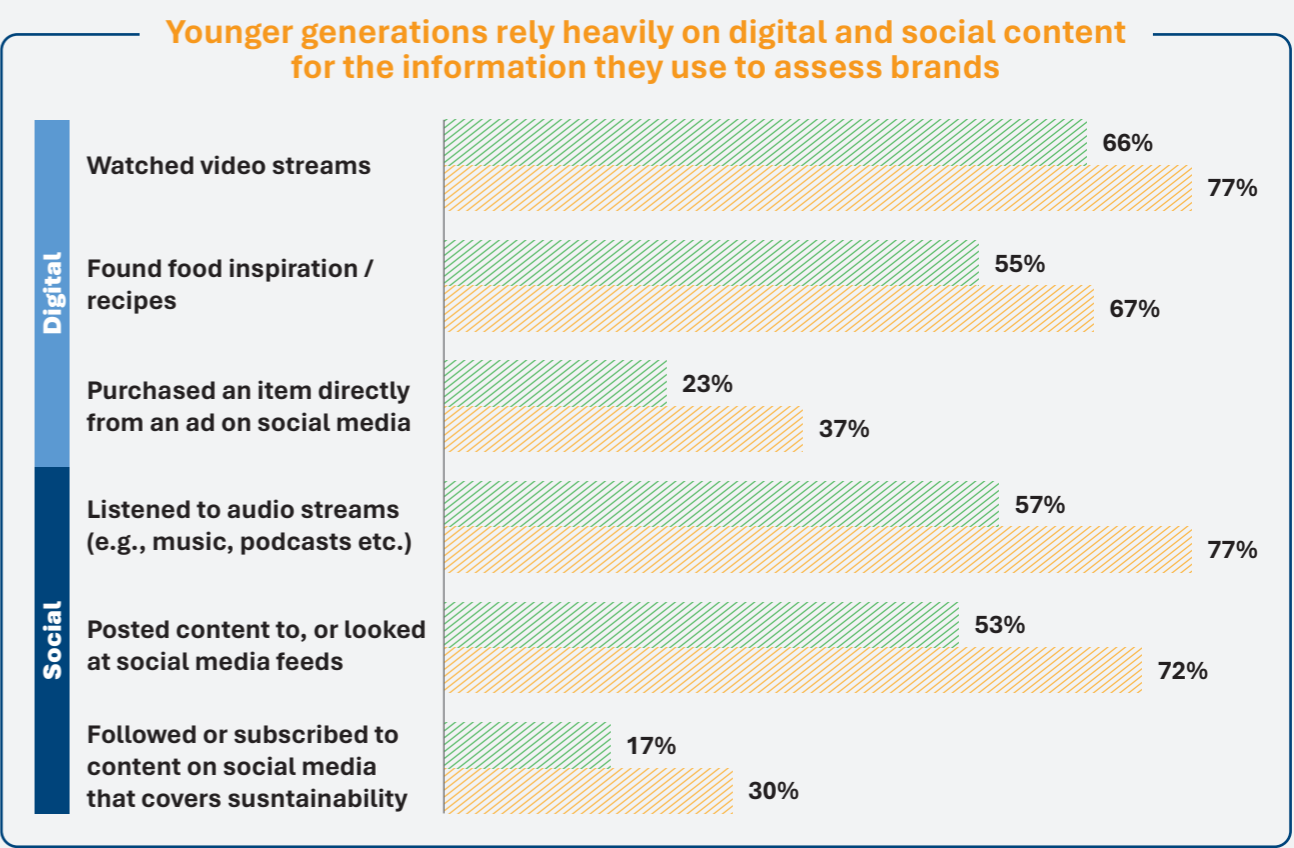
As consumers demand seamless and convenient shopping experiences, retailers and wholesalers are compelled to adapt their strategies to meet these evolving expectations. The integration of digital solutions, from e-commerce platforms to advanced analytics, is becoming a necessity for businesses across the retail value chain to remain competitive in the global market.

Rising demand for seamless omni-channel solutions

According to the ASEAN consumer survey, e-commerce growth is driven by consumers' demand for convenience, safety, and promotions, leading retailers to adopt omnichannel loyalty programmes that leverage CRM systems and data analytics to personalise rewards and offers. By doing so, retailers can foster repeat purchases and increase average basket size, making it essential for them to adapt to changing consumer habits by improving their omnichannel approach through online services and partnerships with digital companies.

Data analytics to gain insights into customer behaviour and operational efficiency

Digital transformation can revolutionise the sector by leveraging data to gain insights, inform decisions, and drive growth. By constantly collecting, analysing, and updating data, businesses can stay agile and respond quickly to changing market dynamics, ultimately leading to increased competitiveness and growth. This data-driven approach can provide valuable insights into consumer behaviour, preferences, and trends, enabling the sector to develop targeted marketing and promotional strategies that drive results.



Utilisation of digital tools to automate day-to-day operations

The integration of technology, innovation, and digitalisation tools in supply chain operations has significantly enhanced healthy competitiveness, leading to increased productivity. Intelligent automation is being used to optimise inventory and streamline warehouse operations, while cloud platforms, IoT, and blockchain systems are deployed to ensure end-to-end transparency and prevent the risk of low-quality counterfeit products.

15.Press articles, Consumer EY Knowledge analysis; EY Future Consumer Index 2023

Green Economy

Green Economy Trends and Impact¹⁶

Globally, Green Economy is driven by two (2) key factors: younger consumers’ preference for sustainable and locally sourced products, and progressive efforts to create a waste-free future through improved operations.¹⁷

Younger consumers prefer sustainable and locally sourced products

Retailers are adapting to Gen Z’s values and beliefs to remain relevant in the market. While Gen Z prioritises cost savings, they are willing to pay a premium for brands that align with their values and beliefs, such as environmental conservation, inclusivity, and transparent supply chains. As a result, retailers must prioritise transparency and authenticity in their marketing and operations to attract and retain Gen Z consumers, who exhibit strong brand loyalty to those that share their values.

Gen Z are intentional consumers demonstrating loyalty to brands which align with their beliefs



of Gen Z care about purchasing goods from businesses that align with their values



of Gen Z think it is very or extremely important to buy from brands that show they are taking action to protect and preserve the environment

Source: EY Gen Z Segmentation Study 2023

Progressive effort to create a waste free future through operations

Rising environmental consciousness is driving demand for sustainable packaging solutions such as recyclable, biodegradable, and refillable options. Brands are expected to be transparent and honest about their sustainability efforts and their impact. Consumers are increasingly supporting brands that actively combat climate change by investing in renewable energy, reducing carbon footprints, and initiating eco-friendly projects. In wholesale and retail operations, a significant proportion of emissions arise from Scope 3 sources, primarily within the supply chain and the use of products by consumers.

While these emissions are indirect, they offer businesses a substantial opportunity to positively influence their environmental impact. By strategically collaborating with suppliers, streamlining processes, and engaging stakeholders across the value chain, companies can effectively reduce their overall carbon footprint. Addressing Scope 3 emissions not only aligns with sustainability objectives but also fosters innovation, operational efficiency, and long-term profitability, underscoring the company’s dedication to responsible and sustainable business practices. Additionally, eliminating plastics or creating healthier recipes requires consumers to fundamentally change their behaviour. Retailers are currently viewing these initiatives primarily through the lens of value creation, as many aspects of a sustainable transition also improve earnings before interest, taxes, depreciation, and amortisation (EBITDA) or significantly mitigate risks.

16.Press articles, *Consumer EY Knowledge analysis; EY Future Consumer Index 2023*

17.Ibid

State of Trends Adoption



Artificial Intelligence



Currently, Malaysia is prudently prioritising the adoption of AI, recognising the significant investments required for new-age technology and the potential risks, including data privacy and protection. The state of adoption is low and there are several key concerns raised by sector players:¹⁸

- **Data privacy and protection is a primary concern for GenAI adoption** due to potential data sharing with third-party entities. GenAI also remains vulnerable to malware, phishing, and other cyber attacks, posing risks of data breaches, financial losses and reputational harm.
- **Copyright issues and regulatory compliance** are key hurdles for GenAI-led content creation as GenAI-led content creation is nascent and may lead to copyright infringements. Compliance with emerging AI regulations that emphasise transparency, accountability and fairness in the use of AI may be a challenge.
- **System integration, data consolidation and high investments are key technical challenges** for GenAI implementation. Integration with existing systems and unifying data silos are key challenges for GenAI implementation as availability of high computing power alongside other emerging tech, such as 5G and cloud computing requires significant financial investment.



Case Study



Athlete Imagined Revolution (A.I.R.) Project

Nike’s Chief Innovation Officer, John Hoke, announced that the company has been working on a proprietary generative AI model aimed at designing products based on exclusive data from athletes. This AI initiative is a key aspect of Nike’s overall plan to transform product design and production. Hoke referred to the combination of AI with technologies such as virtual reality and 3D printing as a “new alchemy” that significantly accelerates the prototyping process, enabling Nike to realise the visions of athletes. Technologies employed include a proprietary generative AI model, large language models (LLMs), generative AI, 3D printing, and computational design.

18.Stakeholder Meeting



Digital



Malaysia is accelerating investments in technology-driven solutions to enhance customer centricity and boost operational efficiency across all levels of business operations.¹⁹ The state of adoption in the country is currently medium-high, with sector players demonstrating progressive implementation of emerging technologies that drive positive business outcomes:

- Frictionless In-store shopping**
Retailers are investing in digital technologies to create a seamless shopping experience. This includes smart stores, robotics, contactless payment, and computer vision, which can lead to increased customer satisfaction, loyalty, and sales growth.
- Inventory Management**
Retailers are leveraging cutting-edge technologies like RFID, blockchain, and geolocation to optimise inventory tracking, reduce costs, and increase profitability. These solutions enable real-time tracking, accurate reporting, and efficient supply chain management, ultimately allowing retailers to make data-driven decisions and improve their overall performance.

Technology investments expected to gain momentum in 2-5 years



EDGE
COMPUTING



QUANTUM
COMPUTING



5G

Source: Stakeholder Meeting

19.Stakeholder Meeting



Case Study



Automated Warehouse System (AWS) at Coca-Cola Bottling Production Plant

The Automated Storage and Retrieval System (ASRS) has boosted productivity considerably. To streamline warehouse and supply chain management, Coca-Cola has created a dedicated maintenance team, reducing reliance on outside vendors. While the company focuses on utilising its internal resources, traditional roles have transitioned to support automation rather than being eliminated.

Facilities have been developed with a focus on empowering the workforce to repurpose job roles.

Zubair Raffiq, Talent of Director at Coca-Cola Beverages MY



Green
Economy

On the national front, Malaysia is increasingly prioritising sustainability, with a noticeable rise in the adoption of Green Economy practices within key business operations. Currently, the state of adoption is medium. Major sector players have been proactive in integrating their business strategies with green initiatives. For instance, RMKe-12 has set the stage for sectors to advance their sustainability agendas. It encourages hypermarkets and supermarkets to install solar panels on their rooftops, reflecting a commitment to renewable energy.

- Retailers are also emphasising eco-friendly and locally produced merchandise**, with 60% of Malaysians expressing a willingness to pay more for sustainable products.²⁰ Additionally, those adopting sustainable practices have significantly reduced their use of single-use plastics.²¹

Despite these advancements, smaller-scale businesses often view sustainability initiatives as optional, citing the lack of immediate impact on business growth and quick wins. This perception can hinder the broader adoption of sustainable practices across the sector.

20.Amanda Siddharta, *Willingness to pay for sustainable efforts among consumers in Malaysia 2023*, Statista, <<https://www.statista.com/statistics/1385668/malaysia-willingness-to-pay-for-sustainable-efforts/>>

21.Stakeholder Meeting



Case Study



AEON's Commitment to Ethical Sourcing and Environmental Stewardship

In 2023, AEON's private brand, TOPVALU, converted all its paper products to Forest Stewardship Council (FSC) Certified material. In line with their commitment to enhance environmental stewardship, AEON has continued to engage in biodiversity conservation by completing a reforestation project in 2014 to restore a former tin mine area. Cumulatively, AEON has successfully planted more than 550,000 trees through various tree-planting activities.



Through AEON's Sustainability Charter, AEON integrates sustainability into our daily operations, striving to create long-term value for our stakeholders while contributing positively to global sustainability efforts.



Dr. Kasuma Satria, Chief Human Resources Officer at AEON



Uniqlo Initiates Repurposing Used Clothes

To not be left behind, Uniqlo has embarked on a sustainability journey, embedding sustainability deeply into its business model and overarching purpose. One of the most prominent initiatives under this journey is the collection of pre-loved clothing from their customers directly in stores. These items are then processed for recycling, contributing to their broader goal of reducing waste. This clothing collection effort reinforces Uniqlo's commitment to minimising environmental impact, making sustainability a strong pillar of their operations.



Sustainability is woven into our corporate DNA. It's a fundamental part of who we are.



Mabel Lee, Director HR at Uniqlo Malaysia



Lotus's Proactive Efforts on Climate Resilience

Lotus's Malaysia has taken a significant step towards sustainability by installing rooftop solar photovoltaic (PV) panels at 15 of its stores. This initiative not only harnesses clean energy but also enhances the overall energy efficiency of our operations. Together, these solar panels produce approximately 18 GWh of clean energy annually. This remarkable amount of energy is equivalent to powering up to 104 Olympic-sized stadiums at the same time or supplying electricity to about 804,905 three-bedroom homes for a year. This commitment reflects Lotus's Malaysia's dedication to renewable energy and reducing its environmental footprint.



We are the first net zero carbon organisation in Malaysia. Our efforts in the field of renewable energy are actively ongoing.



Alvin Low, Head of People at Lotus's

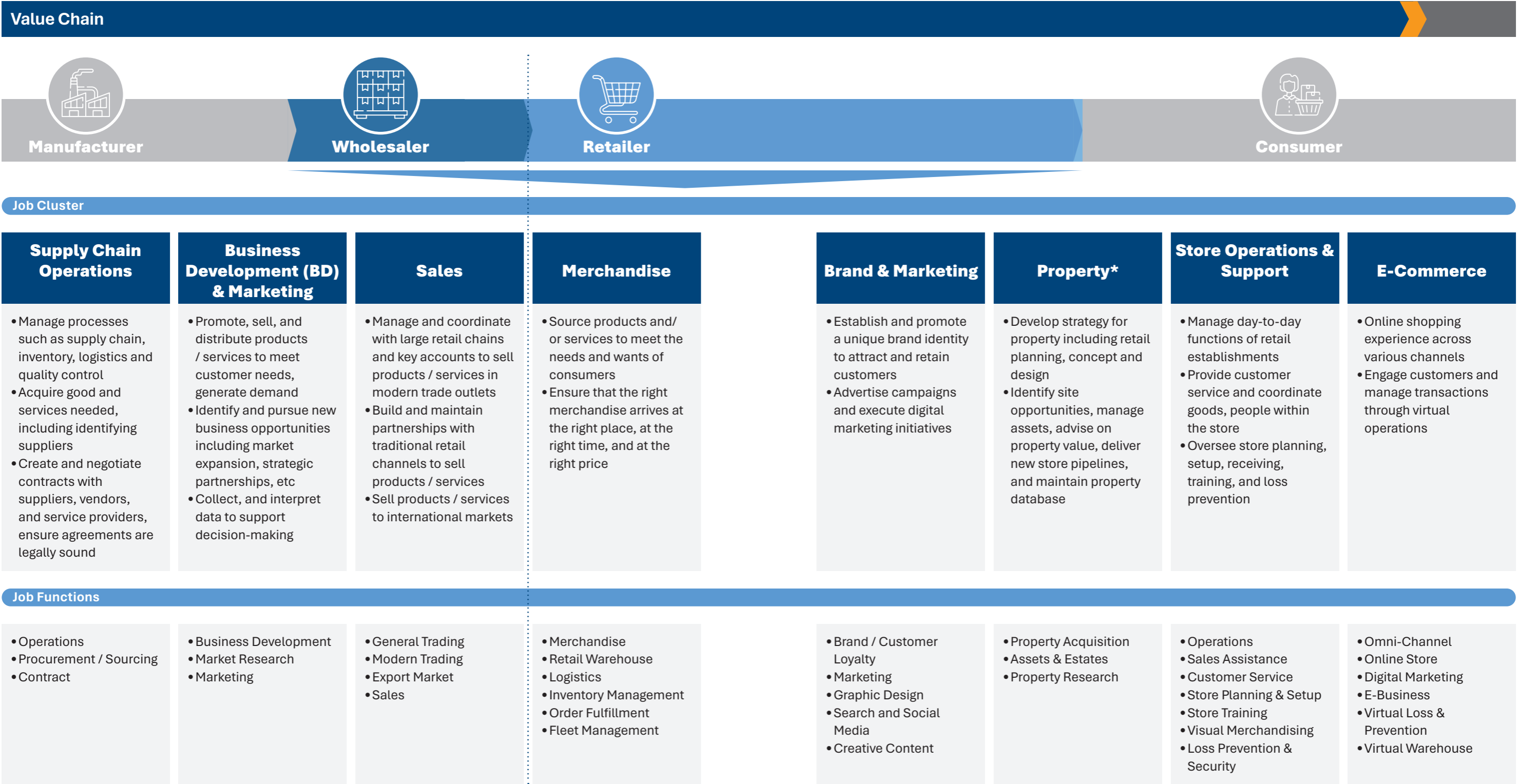
Chapter 4:

Key Findings

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Overview of Roles and Skills

As the Wholesale and Retail Trade sector evolves under the influence of AI, Digital, and Green Economy, it is essential to understand how these transformations will impact the value chain, job clusters, and roles within the sector and on the Malaysian workforce. While Wholesale Trade and Retail Trade are distinct, they intersect in numerous ways, further influencing these changes.



*These roles are applicable primarily to large retail

Consolidated Job Clusters, Roles, and Skills in Wholesale and Retail Trade

8 Job Clusters



21 Skills Clusters

(Categorised into 19 specific skill clusters and 2 basic skill clusters)



Job Clusters and Roles

For the **Wholesale Trade** sector, 23 roles were identified, with 22% classified as highly impacted, and 78% as medium or low impacted roles:

Job Clusters	Roles	
Supply Chain Operations	1. Head of Department, Operations	6. Manager, Procurement and Sourcing
	2. Manager, Operations	7. Executive, Procurement and Sourcing
	3. Executive, Operations	8. Assistant / Coordinator, Procurement and Sourcing
	4. Assistant / Coordinator, Operations	9. Specialist, Contract
	5. Head of Department, Procurement and Sourcing	
Business Development & Marketing	1. Head of Department, Business Development and Marketing	4. Manager, Marketing
	2. Manager, Business Development	5. Executive, Marketing
	3. Senior Analyst / Analyst, Market Research	6. Assistant / Coordinator, Marketing
Sales	1. Head of Department, Sales	5. Executive, General Trade
	2. Manager, Modern Trade	6. Manager, Export Market
	3. Executive, Modern Trade	7. Executive, Export Market
	4. Manager, General Trade	8. Assistant / Coordinator, Sales

A total of 57 roles in the **Retail Trade** sector have been assessed, with 12% classified as highly impacted and 88% as medium or low impacted roles:

Job Clusters	Roles	
Merchandise	1. Head of Department, Merchandise	6. Associate/ Assistant, Warehouse
	2. Manager, Merchandise	7. Manager, Inventory
	3. Category Buyer, Merchandise	8. Manager, Fleet Management
	4. Planner, Merchandise	9. Coordinator, Logistics & Transport
	5. Manager, Warehouse	10. Specialist, Order Fulfillment
Brand & Marketing	1. Head of Department, Brand	5. Manager, Marketing
	2. Manager, Brand/ Customer Loyalty	6. Associate/ Assistant, Marketing
	3. Associate/ Assistant, Brand	7. Graphic Designer
	4. Head of Department, Marketing	8. Specialist, Search & Social Media
Property	1. Head of Department, Property	3. Manager, Assets and Estates
	2. Manager, Property Acquisition	4. Data Analyst, Property Research
Store Operations & Support	1. Head of Department, Operations	10. Manager, Store Planning & Setup
	2. Branch / Store Manager, Operations	11. Manager, Store Training
	3. Department Manager, Product-Based Operations	12. Manager, Receiving
	4. Sales Assistant, Operations	13. Store Assistant, Receiving
	5. Manager, Customer Experience	14. Manager, Visual Merchandising
	6. Representative, Customer Service	15. Display Artist, Visual Merchandising
	7. Specialist, Chat Support	16. Manager, Loss Prevention & Security
	8. Cashier, Customer Care	17. Officer/ Security, Loss Prevention & Security
	9. General Manager, Store Support	

Job Clusters	Roles	
E-Commerce	1. Head of Department, E-Commerce	11. Executive, Retail E-Business
	2. Associate / Assistant, E-Commerce	12. Assistant, Retail E-Business
	3. Manager, Omni-Channel	13. Manager, E-Retail Loss & Prevention
	4. Executive, Omni-Channel	14. Executive, E-Retail Loss & Prevention
	5. Manager, Online Store	15. Officer, E-Retail Loss and Prevention
	6. Retail Coordinator, Online Store	16. Manager, Retail Virtual Warehouse
	7. Manager, Retail Digital Marketing	17. Executive, Retail Virtual Warehouse
	8. Executive, Retail Digital Marketing	18. Assistant, Retail Virtual Warehouse
	9. Assistant, Retail Digital Marketing	
	10. Manager, Retail E-Business	

Skills Clusters and Skills

Skills Category	Skills Clusters
BASIC SKILLS Essential skills required for a person to be fit for a job	Innovation and Delivery <ul style="list-style-type: none">Adaptability and ResiliencyBusiness AcumenCognitive SkillsCritical ThinkingDigital and AI FluencyInnovative ThinkingLearning AgilitySustainability Awareness
	Social Intelligence <ul style="list-style-type: none">Coaching and MentoringCommunicationEmpathyTeamwork and Collaboration
	Agile and Continuous Improvement <ul style="list-style-type: none">Continuous Improvement
SPECIFIC SKILLS Skills relating to a specific task or situation. It involves both understanding and proficiency in such specific activity that involves methods, processes, procedures, or techniques.	Branding, Sales, and Marketing <ul style="list-style-type: none">Cargo Issuance and DispatchCargo Receipt and InspectionCargo Tracking System AdministrationFreight and Cargo Claim AdministrationImport and Export Documentation AdministrationRetail AdministrationRetail Space Utilisation

Skills Clusters	Skills
SPECIFIC SKILLS Skills relating to a specific task or situation. It involves both understanding and proficiency in such specific activity that involves methods, processes, procedures, or techniques.	Branding, Sales, and Marketing <ul style="list-style-type: none">Brand Campaign ManagementBrand Guideline DevelopmentBrand ManagementBroadcast and Interactive Media CopywritingCommunications Channel ManagementContent Writing and EditingE-Commerce Campaign ManagementMarket ProfilingMarketing Campaign ManagementMarketing Communications Plan DevelopmentMarketing Mix ManagementMass Communications ManagementMedia Platforms ManagementMedia Strategy DevelopmentPoint-Of-Purchase MarketingPrint Media CopywritingPrint Production Trends and TechniquesPublic Relations Campaign ManagementRules-Based Copy EditingSales Strategy and ExecutionSales Target ManagementTypeface and Layout ProductionVisual Design and Communication Principles
	Business Development and Strategy <ul style="list-style-type: none">Business Opportunities DevelopmentBusiness Performance ManagementSolutions Design ThinkingSystems Thinking
	Customer Service and Experience <ul style="list-style-type: none">Affiliate MarketingContent ManagementCustomer Acquisition ManagementCustomer Experience DesignCustomer ProfilingMobile Apps MarketingPaid Search Engine Marketing (SEM)Search Engine Optimisation (SEO)Service ExcellenceSocial Media ManagementSocial Media Marketing
	Customer, Vendor, and Stakeholder Management <ul style="list-style-type: none">Customer Relationship ManagementPartnership ManagementStakeholder ManagementSupplier Relationship ManagementVendor Management
	Data Development and Implementation <ul style="list-style-type: none">Big Data AnalyticsBusiness Environment AnalyticsData MiningData Modelling and DesignData StoryboardingDigital Asset and File Management

Skills Clusters and Skills (Continue)

Skills Category	Skills Clusters
SPECIFIC SKILLS Skills relating to a specific task or situation. It involves both understanding and proficiency in such specific activity that involves methods, processes, procedures, or techniques.	General Business Management <ul style="list-style-type: none">Budget ManagementBusiness NetworkingCost ManagementProblem IdentificationResource Management
	Health, Safety, and Environment (HSE) <ul style="list-style-type: none">Consumer Sustainability EducationEco-Design PrinciplesEco-Friendly Site SelectionGreen Business InnovationGreen Procurement Policies and StandardsGreen Product DesignHazards and Risk Identification & ManagementStore Facilities and HousekeepingStore Security PolicySustainable Business PracticesSustainable Facilities ManagementSustainable SourcingSustainable Transportation ManagementWaste ManagementWorkplace Safety and Health
	People Management and Development <ul style="list-style-type: none">Learning ManagementOrganisational Relationship BuildingService Staff ManagementStaff Training Facilitation
	Products and Services <ul style="list-style-type: none">Category ManagementDemand and Supply AnalysisDigital MarketingInbound MarketingMerchandise BuyingMerchandise Performance AnalyticsProduct AdvisoryProduct Costing ManagementProduct DemonstrationProduct DevelopmentVisual Merchandising Presentation
	Project and Process Management <ul style="list-style-type: none">Project Feasibility AssessmentProject Management
	Quality Management <ul style="list-style-type: none">Print ManagementProduct Performance ManagementQuality Assurance Management

Skills Category	Skills Clusters
SPECIFIC SKILLS Skills relating to a specific task or situation. It involves both understanding and proficiency in such specific activity that involves methods, processes, procedures, or techniques.	Research and Development <ul style="list-style-type: none">Research and Information Synthesis
	Risk Management, Compliance, and Governance <ul style="list-style-type: none">Business Continuity ManagementCrisis and Disaster Recovery ManagementEnterprise Risk ManagementFraud Risk ManagementInternational Trade Legislation ComplianceMarket and Liquidity Risk ManagementOperational Risk ManagementProject Risk ManagementRegulatory ComplianceRisk Governance
	Risk Management, Compliance, and Governance <ul style="list-style-type: none">Contract ManagementDelivery ManagementOrder Fulfilment AdministrationOrder Fulfilment and Returns ProcessingProcurement ManagementSupplier Evaluation and SelectionSupplier Performance EvaluationSupplier SourcingSupply Chain Operational Costing
	Technical Design and Architecture <ul style="list-style-type: none">Digital Image ProductionDrawing Specification and Production PlanningImage Development and AnimationPhotographic Images ManipulationTechnology Strategy FormulationUser Interface and User Experience OptimisationVisual Collaterals ProductionWebsite DesignWebsite Performance Management
	Technology Management <ul style="list-style-type: none">Advanced Technology IntegrationDigital Business Model Innovation
	Warehouse and Inventory Management <ul style="list-style-type: none">Goods Inventory ControlMerchandise Inventory Control

In-Demand Skills

The in-demand skills in the Wholesale and Retail Trade sector include:

Areas	Skills	
<div></div> <div>AI & DIGITAL</div>	<ul style="list-style-type: none">• Advanced Technology Integration• Digital Business Model Innovation• Digital Image Production• Drawing Specification & Production Planning• Image Development and Animation• Visual Collaterals Production• Website Design• Website Performance Management• Big Data Analytics	<ul style="list-style-type: none">• Business Environment Analytics• Data Mining• Photographic Images Manipulation• Technology Strategy Formulation• User Interface and User Experience Optimisation• Data Modeling and Design• Data Storyboarding• Digital Asset and File Management
<div></div> <div>GREEN ECONOMY</div>	<ul style="list-style-type: none">• Consumer Sustainability Eeudation• Eco-Design Principles• Eco-FriendlySite Selection• Green Business Innovation• Green Procurement Policies and Standards• Green Product Design• Hazards and Risk Identification and Manangement• Store Facilities and Housekeeping	<ul style="list-style-type: none">• Store Security Policy• Sustainable Business Practices• Sustainable Facilities Management• Sustainable Sourcing• Sustainable Transportation Management• Waste Management• Workplace Safety and Health

Below are the non-exhaustive skills relevant to the Wholesale and Retail Trade sector:

Continuous Improvement	Customer Relationship Management	Business Performance Management
Stakeholder Management	Digital Marketing	Research and Information Synthesis



Case Study



AEON Malaysia has embraced the 3H culture, which is all about balancing three (3) key elements:

Head: Using our knowledge, skills, and know-how to make smart decisions

Hand: Being hands-on and getting things done effectively where it matters

Heart: Building solid connections, working well with others, and always approaching our work with empathy and a good attitude

“Knowledge alone isn’t enough—the real power lies in connecting the dots and executing effectively. Getting things done quickly and thoroughly is challenging, but it’s what truly makes the difference.”

Dr. Kasuma Satria, Chief Human Resources Officer at AEON

Findings

- The retail industry increasingly relies on **Advanced Technology Integration** and **Big Data Analytics** to boost efficiency, optimise supply chains, and understand consumer behaviour, using AI and IoT to enhance inventory management and personalise marketing.
- The focus on **Sustainable Business Practices** and **Consumer Sustainability Education** highlights growing demand for eco-friendly operations. Educating consumers on sustainability suggests that businesses aim to build brand loyalty through transparency and ethical practices.
- **Research and Information Synthesis**, combined with **Big Data Analytics**, emphasises the importance of data-driven insights for staying competitive, understanding market trends, and making strategic decisions.
- **Customer Relationship Management (CRM)** and **Consumer Sustainability Education** emphasise the importance of maintaining customer relationships, with the industry emphasising personalised experiences, loyalty programmes, and education to retain customers in a competitive market.
- **Stakeholder Management** points to the need for effective communication and collaboration with a diverse range of stakeholders, including suppliers, investors, customers, and regulators. Managing these relationships is critical for preserving a positive brand image and ensuring business continuity.
- The emphasis on **Digital Marketing** illustrates the importance of a robust online presence and engaging consumers through digital channels. This shift from traditional retail to e-commerce and omnichannel strategies underscores the pivotal role of digital marketing in driving sales and brand awareness.
- **Business Performance Management** and **Continuous Improvement** reflect a focus on operational excellence and the ongoing refinement of business processes. The industry is likely prioritising efficiency, cost management, and quality control to remain competitive and adapt to evolving market conditions.

Roles and Skills Analysis by Impact Level

The study has identified a total of 86 critical roles: 80 are essential for maintaining the sector’s standards and operational efficiency, while six (6) emerging roles are positioned to drive future advancements and innovations. Highly impacted roles face significant risks of obsolescence due to evolving trends, whereas the emerging roles are expected to spearhead future progress and innovation within the sector. The study further explores how AI, Digital, and Green Economy are reshaping these roles, offering detailed insights into viable career pathways and the essential skills needed for the Wholesale and Retail Trade workforce to thrive in this changing landscape.

Impact Assessment on 80 Existing Roles Wholesale and Retail Trade Sector				Emerging
	High	Medium	Low	
AI/Digital	<ul style="list-style-type: none">• High opportunity to automate• Low human intervention	<ul style="list-style-type: none">• High opportunity to automate• High human intervention	<ul style="list-style-type: none">• Low opportunity to automate• High or low human intervention	
Green Economy	<ul style="list-style-type: none">• Job no longer required due to impact to environment• May or may not have opportunity to diversify	<ul style="list-style-type: none">• Job still required despite impact to environment• Opportunity to diversify exist	<ul style="list-style-type: none">• Job still required despite impact to environment• No opportunity to diversify	
Outcome	<div>Roles facing convergence or displacement</div> <div>Need to pivot to adjacent role and reskill</div>	<div>Roles are evolving</div> <div>Need to upskill to deliver beyond what would traditionally be expected</div>	<div>Roles not severely impacted</div> <div>Need to continue improving to keep self relevant</div>	
Proportion of Roles	11 Roles 14%	43 Roles 54%	26 Roles 32%	New job positions created due to technological advancements, sector trends, and societal changes help organisations drive innovation, adopt sustainable practices, and stay competitive and compliant with evolving regulations and market demands. 6 Roles



Currently, roles in the Wholesale and Retail Trade sector are not severely impacted by AI, Digital, and Green Economy trends because **significant human touch is still required for customer service, physical handling of goods, and on-the-spot decision-making**, which are not fully replicable by current technology

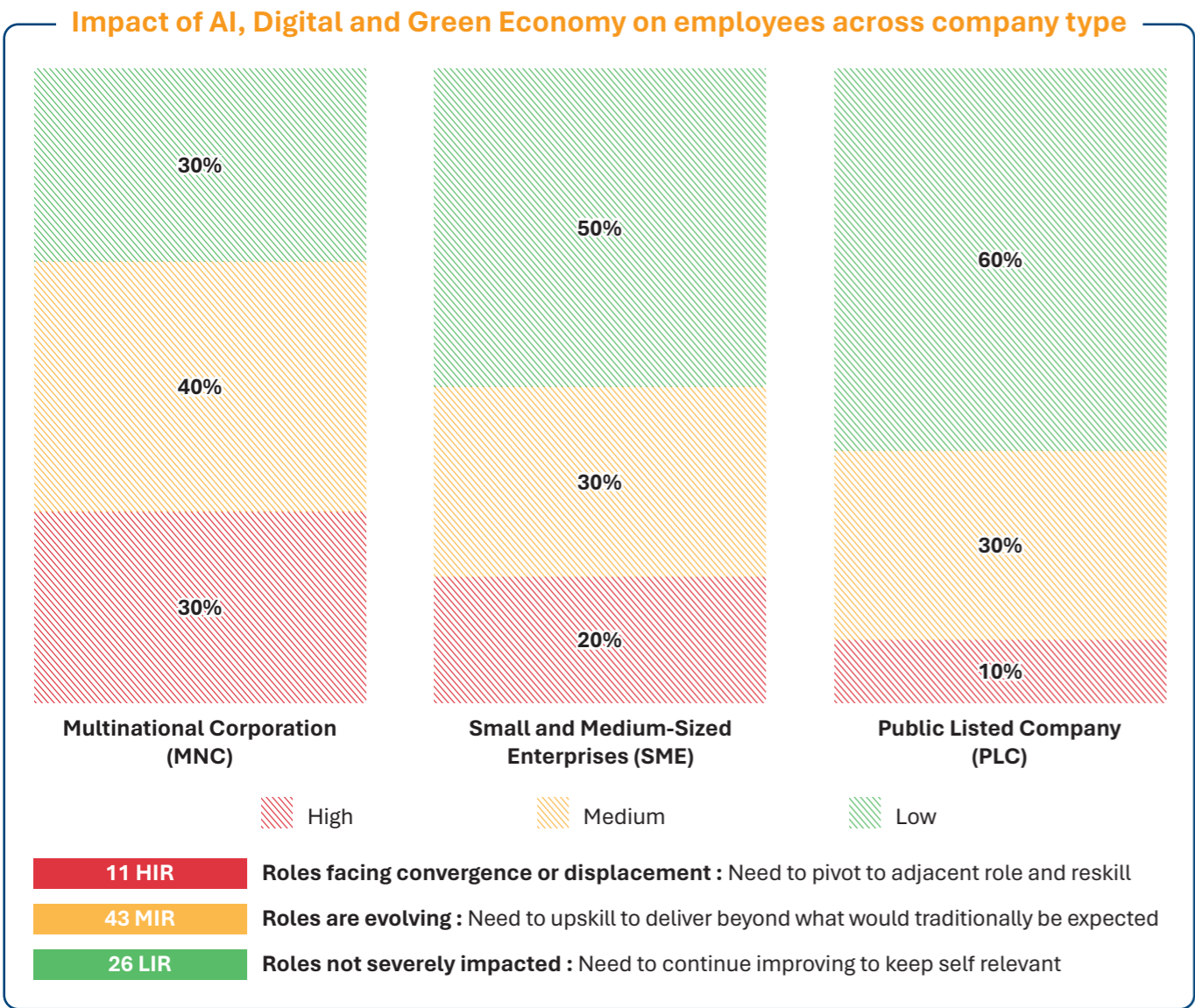
11/80 or 14%
of **highly impacted roles** are affected by warehouse automations and big data analysis on sales management. Most of these jobs require repurposing and transformation into analytics roles

43/80 or 54%
of **medium impacted roles** are mostly operational roles, upskilling is needed to help them stay abreast of trends, operate more sustainably, and meet evolving expectations of customers

26/80 or 32%
of **low impacted roles** are mainly multifaceted roles, such as Head of Department, and customer-facing managerial roles, which often involve complex decision-making and leadership that requires human judgement, empathy, and understanding of organisational dynamics, which AI and Digital have yet to be able to fully replicate

Additionally, while automation and digital tools can **enhance efficiency, they often create new roles and opportunities** within the sector, rather than merely displacing existing jobs.

Industry players have pointed out that emerging trends in AI, Digital, and Green Economy can have different impacts on various companies. In a study, industry players shared the potential number of employees within their organisations who could be affected by these emerging trends:



Findings

- The degree to which these trends affect companies depends on several factors:
- MNCs typically have more **complex supply chains** in which more roles could be automated to increase efficiency. Hence, **nearly 30% of jobs can be repurposed**, making it relevant for MNCs to invest in new technologies and green initiatives.
 - SMEs and PLC players mentioned that they have **limited financial and human resources** compared to larger MNCs, which restricts their ability to invest in and adopt emerging technologies/initiatives. As a result, more than **50% of the roles remained low impacted**.
 - Additionally, the **benefits of AI and digital transformation are more pronounced in larger organisations that can leverage these technologies** across the global footprint, leading to more significant efficiencies and cost savings.
 - Nevertheless, all players acknowledged the emerging trends that will impact their business in the near future. Therefore, it is crucial to equip roles with the necessary skills to stay relevant, as **30% to 40% of roles across all company types require upskilling**.

Overview of Roles by Impact Level



A total of 23 roles in **Wholesale trade** are assessed, 22% are highly impacted roles and 78% are medium and low impacted roles:

HIGH	MEDIUM	LOW
5 Roles	8 Roles	10 Roles
1. Assistant / Coordinator, Operations 2. Assistant / Coordinator, Procurement and Sourcing 3. Specialist, Contract 4. Assistant / Coordinator, Marketing 5. Assistant / Coordinator, Sales	1. Executive, Operations 2. Executive, Procurement and Sourcing 3. Senior Analyst / Analyst, Market Research 4. Manager, Marketing 5. Executive, Marketing 6. Executive, Modern Trade 7. Executive, General Trade 8. Executive, Export Market	1. Head of Department, Operations 2. Manager, Operations 3. Head of Department, Procurement and Sourcing 4. Manager, Procurement and Sourcing 5. Head of Department, BD and Marketing 6. Manager, Business Development 7. Head of Department, Sales 8. Manager, Modern Trade 9. Manager, General Trade 10. Manager, Export Market

A total of **57 roles in Retail trade** is assessed, 12% are highly impacted roles, and 88% are medium and low impacted roles

HIGH	MEDIUM	LOW
6 Roles	35 Roles	16 Roles
<div>1. Associate/ Assistant, Warehouse</div> <div>2. Cashier, Customer Care</div> <div>3. Display Artist, Visual Merchandising</div> <div>4. Specialist, Chat Support</div> <div>5. Specialist, Order Fulfilment</div> <div>6. Store Assistant, Receiving</div>	<div>1. Assistant, Retail Digital Marketing</div> <div>2. Assistant, Retail E-Business</div> <div>3. Assistant, Retail Virtual Warehouse</div> <div>4. Associate / Assistant, E-Commerce</div> <div>5. Associate/ Assistant, Brand</div> <div>6. Associate/ Assistant, Marketing</div> <div>7. Branch / Store Manager, Operations</div> <div>8. Category Buyer, Merchandise</div> <div>9. Coordinator, Logistics & Transport</div> <div>10. Data Analyst, Property Research</div> <div>11. Department Manager, Product-Based Operations</div> <div>12. Executive, E-Retail Loss & Prevention</div> <div>13. Executive, Omni-Channel</div> <div>14. Executive, Retail Digital Marketing</div> <div>15. Executive, Retail E-Business</div> <div>16. Executive, Retail Virtual Warehouse</div> <div>17. Graphic Designer</div> <div>18. Head of Department, E-Commerce</div> <div>19. Manager, Assets and Estates</div> <div>20. Manager, Customer Experience</div> <div>21. Manager, Fleet Management</div> <div>22. Manager, Inventory</div> <div>23. Manager, Loss Prevention & Security</div> <div>24. Manager, Marketing</div> <div>25. Manager, Property Acquisition</div> <div>26. Manager, Receiving</div>	<div>1. General Manager, Store Support</div> <div>2. Head of Department, Brand</div> <div>3. Head of Department, Marketing</div> <div>4. Head of Department, Merchandise</div> <div>5. Head of Department, Operations</div> <div>6. Head of Department, Property</div> <div>7. Manager, Brand/ Customer Loyalty</div> <div>8. Manager, E-Retail Loss & Prevention</div> <div>9. Manager, Merchandise</div> <div>10. Manager, Omni-Channel</div> <div>11. Manager, Online Store</div> <div>12. Manager, Retail Digital Marketing</div> <div>13. Manager, Retail E-Business</div> <div>14. Manager, Retail Virtual Warehouse</div> <div>15. Manager, Store Training</div> <div>16. Planner, Merchandise</div> <div>27. Manager, Store Planning & Setup</div> <div>28. Manager, Visual Merchandising</div> <div>29. Manager, Warehouse</div> <div>30. Officer, E-Retail Loss and Prevention</div> <div>31. Officer/ Security, Loss Prevention & Security</div> <div>32. Representative, Customer Service</div> <div>33. Retail Coordinator, Online Store</div> <div>34. Sales Assistant, Operations</div> <div>35. Specialist, Search & Social Media</div>

Six (6) emerging roles across the Wholesale and Retail Trade Sector

EMERGING
6 Roles
<div>1. AI and Robotics Technician</div> <div>2. Sustainability Coordinator</div> <div>3. Personal Shopper and Stylist</div> <div>4. Innovation Specialist / Agile Coach</div> <div>5. Digital Analyst</div> <div>6. Live Host</div>

Highly Impacted Roles and Career Pathways

Highly impacted roles are those at risk of convergence or displacement, necessitating a pivot to adjacent roles and reskilling. These roles are significantly influenced by shifts in consumption patterns and automation technologies. Professionals in these roles must adapt to evolving demands, such as the increasing integration of AI in drug discovery and manufacturing. This requires expertise in data analysis, machine learning, and AI algorithm development to effectively utilise AI tools for analysing large datasets and optimising processes.

As digitalisation advances across the sector, there’s a rising need for digital literacy at all workforce levels, with cybersecurity skills becoming critical to safeguard sensitive data from breaches. The development and adoption of green technologies, like renewable energy and biodegradable materials, call for innovative research and technical skills. This includes enhancing capabilities in research and development to create sustainable alternatives for traditional manufacturing processes.



Case Studies for Highly Impacted Roles


Roles	Impact and Case Studies
Supply Chain Operations: Assistant / Coordinator, Operations	<p>This role support the efficient and effective functioning of wholesale operations, including ensuring smooth trading activities, maintaining high service levels, and optimising profitability, while complying with corporate processes and procedures. There is potential to automate this role, transitioning it into executive-level positions within operations:</p> <ul style="list-style-type: none">AI-powered tools expedite compliance verification and reduce errors in document checks and administrative tasksDigital inventory management optimises retail operations with real-time tracking and restocking insightsMinimal human oversight is required for document verification and administrative duties, as the inventory management system relies on human insight rather than burdensome tasksProcurement and retail operations impact the environment through resource use, waste, and emissionsPotential diversify the role to enhance long-term sustainability <p>Lotus's</p> <p>In 2023, Lotus's Malaysia implemented an advanced Enterprise Resource Planning (ERP) system, equipping store managers with real-time sales analysis tools to enhance sales performance and optimise product movement. Additionally, a comprehensive company-wide initiative has been implemented to train all staff in digital literacy, enabling them to efficiently manage tasks such as real-time sales analysis and waste management. Advanced digital solutions are also being employed to address promotional wastage by refining inventory management and improving sales forecasting. These measures aim to significantly boost operational efficiency and reduce the reliance on manual oversight.</p>

Roles	Impact and Case Studies
Supply Chain Operations: Assistant / Coordinator, Procurement and Sourcing	<p>This role support procurement and sourcing tasks by creating purchase orders, maintaining detailed records, gathering procurement specifications and compiling tender bids from suppliers. There is a significant opportunity to automate supplier management:</p> <ul style="list-style-type: none">• AI streamlines supplier operations and guarantees adherence to policies through automated compliance checks, while digital tools enhance collaborative efforts.• Minimal human oversight is needed for routine tasks such as document checks and administrative tasks• No direct environmental impact but can optimise storage and distribution process to reduce energy consumption• Potential to diversify the role to focus on sustainable sourcing <p>AEON AEON MY is using digital platforms to roll out an end-to-end (E2E) digital application that enhances transaction processes across its entire ecosystem. This transformation touches every part of their operations—from vendors and tenants to business partners, B2B customers, and employees. By embracing digital solutions, AEON streamlines transactions, making them faster and more efficient. For example, individuals and businesses can now use this app to buy or sell goods with ease, simplifying their business operations and making transactions more seamless and efficient.</p>
Supply Chain Operations: Specialist, Contract	<p>This role involves preparing and verifying contractual agreements for trade transactions, resolving disputes, and providing clarifications based on trade regulations and guidelines. It has significant potential for automating contract reviews and compliance checks:</p> <ul style="list-style-type: none">• AI-powered contract review tools can streamline compliance checks and identify potential issues, boosting efficiency• Digital tools like electronic signature solutions and contract management software can significantly streamline documentation processes• Human intervention remain indispensable for interpreting complex regulations, resolving disputes, and providing strategic guidance on trade transactions, as these nuanced tasks still necessitate human expertise• The management of trade agreements typically has a limited direct impact on the environment• Potential to diversify the role to portfolio such as in trade law, compliance, or sustainable sourcing <p>MYDIN MYDIN has significantly enhanced its contract handling and statement reconciliation processes through the implementation of Robotic Process Automation (RPA). By automating repetitive tasks such as processing digital invoices and reconciling statements, RPA has reduced the payment turnover time for 1,800 suppliers from 45 days to mere hours. This automation has not only improved operational efficiency but has also reduced the need for manual intervention, resulting in cost savings and increased accuracy.</p>

Roles	Impact and Case Studies
	
Business Development and Marketing: Assistant/Coordinator, Marketing	<p>This role supports the execution of branding and digital marketing initiatives to enhance the organisation’s market presence and drives engagement, ensures adherence to branding guidelines across all business units. By leveraging AI-powered tools, research and information synthesis, and data analysis processes can be significantly streamlined:</p> <ul style="list-style-type: none">• AI-powered tools can significantly streamline market research and data analysis• While AI tools are valuable, they cannot fully replace human creativity and strategic thinking. Human expertise remains essential for interpreting data, making informed decisions, and developing innovative solutions• Digital tools can automate marketing tasks such as scheduling social media posts and optimising ads• By leveraging automation, human intervention can be minimised while ensuring adherence to guidelines• Branding and digital marketing tasks typically have a limited direct impact on the environment• Potential opportunities for specialisation in green branding, CSR, and contributing to organisational success in various sectors <p>Lotus’s At Lotus’s MY, the team of commercial specialists works closely with Lazada on promotional planning. Lazada focuses on consumer data analysis, while Lotus handles negotiations and branding strategies. This collaborative approach might reduce the need for dedicated marketing coordinators, as their responsibilities could be integrated into the existing team structure or assumed by commercial specialists.</p>

Roles


Impact and Case Studies




Sales:
Assistant / Coordinator, Sales

This role involves generating and following up on leads, analysing customer behaviour through inquiries and feedback, and organising data to enhance client acquisition and retention. It has significant potential for automating various sales support tasks:

- AI can streamline various sales support tasks, for example, by deploying intelligent CRM systems that automate data entry and lead tracking, or by using predictive analytics to prioritize leads based on their likelihood to convert
- Digitalisation can significantly enhance efficiency, scalability, and responsiveness in sales operations, as seen in the integration of real-time inventory management with e-commerce platforms, enabling instant updates and order processing, which improves customer satisfaction and sales turnover
- Significant decrease in manual work and the need for human intervention, as routine tasks can be largely automated, reducing the necessity for continuous human monitoring
- Limited direct impact on the environment, but potential to diversify portfolio in contributing to more sustainable business model



Coca-Cola Bottlers MY has adopted AI applications like Coke Buddy to streamline operations and repurpose the traditional sales team. By shifting from Business Development roles to Account Developers, the company has empowered its sales team to play a more strategic and customer-driven role. This transition has led to a reduction in headcount by nearly 30%, achieved through natural attrition and redeployment of resources.



AEON Big has been utilising RPA for sales reconciliation since the year 2000. This technology allows the organisation to efficiently derive sales data and share it with their business partners.

Roles

Impact and Case Studies



Merchandise:
Associate / Assistant, Warehouse

The role of Associate/Assistant under Warehousing oversees and manages the efficient flow of cargo, ensuring safe and systematic operation of material-handling equipment, and maintaining accurate inventory records. The role has significant potential for automating various support tasks, which could lead to transitions into roles such as Executive within the sector or Administrative Coordinator in other sectors:

- AI can significantly streamline routine tasks like inventory tracking, sorting, and routing of cargo
- While human oversight is still necessary for ensuring the safe operation of material-handling equipment and resolving inventory discrepancies, AI can significantly reduce the workload
- Digital tools such as warehouse robots and automated guided vehicles can significantly streamline material handling processes
- While human expertise is still required for tasks involving delicate or fragile items, automation can significantly reduce the need for human intervention in many material handling activities

MYDIN


MYDIN, a pioneer in local warehouse digitalisation, has implemented a warehouse management system (WMS) powered by mobile computers and cloud-based software. This system has streamlined operations, from receiving and stocking to picking and dispatching, significantly boosting order processing capacity. The automation of traditional tasks through AI and digital tools may reduce the need for associates/assistants in the warehouse.

Roles	Impact and Case Studies
	
Merchandise: Specialist, Order Fulfilment	<p>This role oversees and manages the order fulfilment process to ensure timely delivery, accurate order processing, and high customer satisfaction. It has significant potential for automating order processing tasks:</p> <ul style="list-style-type: none">• AI can significantly streamline routine tasks like inventory tracking, sorting, and routing of cargo• Digital tools such as warehouse robots and automated guided vehicles can significantly streamline material handling processes• While human oversight is essential for safely operating material-handling equipment and resolving inventory discrepancies, and expertise is needed for handling delicate items, AI can greatly lessen the human workload in many material handling activities• Although this role does not directly impact the environment, it offers opportunities to advocate for eco-friendly practices such as recycling materials and using energy-efficient equipment• Individuals in this role can develop valuable skills in sustainability, environmental management, and corporate social responsibility, even without requiring new skills. These skills can enhance their career prospects and contribute to a more sustainable future <p><i>Coca-Cola</i> Coca-Cola Bottlers MY has fully embraced digitalisation by integrating advanced AI-driven systems such as RPA for managing tools, purchase order approvals, and system reconciliation. This integration has significantly enhanced operational efficiency and streamlined processes. While automation has been implemented, the Talent & Culture Director emphasised that impacted roles will continue to exist in a supportive capacity, with affected employees being repurposed to align with the new digital environment.</p>

Roles	Impact and Case Studies
Store Operations & Support: Specialist, Chat Support	<p>This role provides customer service and technical assistance via chat, resolving issues, answering questions, and ensuring a positive customer experience. Significant opportunity to automate various customer service tasks:</p> <ul style="list-style-type: none">• AI tools can automate responses to common inquiries by analysing historical data for service improvement, provide quick access to customer information• Human oversight is primarily required for escalating complex customer issues to the appropriate departments and for recommending improvements and updates that go beyond the capabilities of chatbots• This role primarily involves digital communication and customer service management, which have a limited direct environmental impact <p><i>Coca-Cola</i> Coca-Cola Bottlers MY, recognising the need for customer support without the immediate requirement for an in-house specialist, opted to outsource chat support services to a third-party vendor. This approach allowed them to provide necessary support without the overhead of hiring and training a dedicated team.</p> <p>Lotus's Lotus's MY, previously relying on a combination of automated systems like WhatsApp for simple queries and live agents for complex issues (such as online deliveries), has now transitioned its customer service operations to a third-party company. This decision was driven by the need to reduce manpower costs while maintaining a high level of service quality.</p>
Store Operations & Support: Cashier, Customer Care	<p>Cashier and Customer Care roles involve handling payments, managing transactions, and providing excellent service in line with policies. These roles have potential for automation, enabling transitions to positions like Assistant within the sector or Finance Clerk in others:</p> <ul style="list-style-type: none">• AI tools can streamline checkout processes and provide AI-driven customer service through chatbots• Digital tools can modernize cash register systems and facilitate electronic payment methods• Minimal human intervention is required for managing customer interactions and oversight, as transactions are predominantly digital• Limited direct environmental impact <p>Lotus's Lotus's MY has introduced Scan & Pay and self-checkout counters to enhance the shopping experience and reduce reliance on cashiers. Their predominantly young cashiers can be easily retrained for other roles within the organisation, ensuring continued employment.</p> <p><i>AEON</i> AEON MY has implemented self-checkout counters to streamline the process. However, human intervention is still required for customers using various payment methods, discounts, or vouchers, as these features are not fully supported by the self-checkout system.</p>

Roles

Impact and Case Studies



Store Operations & Support: Store Assistant, Receiving

This role oversees the receipt of incoming items, reviews purchase orders, matches shipped items to orders, documents discrepancies, and updates inventory databases. It has high opportunity to automate shipment verification and tracking tasks:

- AI tools can streamline the process of verifying shipment details and identifying discrepancies or damages
- Digital tools can measure items and streamline the verification, recording, and tracking of incoming shipments
- Although human judgment is crucial for assessing the overall condition, AI can significantly reduce the need for manual verification and inspection, with minimal human oversight needed for operating digital tools and resolving discrepancies as routine tasks become automated
- Limited direct environmental impact

MYDIN

MYDIN has been at the forefront of digital transformation in the Malaysian retail industry. In 2013, the company integrated Demand & Forecast software with SAP and adopted Blue Yonder for supply chain management, significantly enhancing inventory and order forecasting capabilities. This digital transformation continued with the adoption of OpenText VIM in 2015, which digitised 99% of invoices and automated accounts payable processes. This automation eliminated the need for 100 data entry roles. MYDIN further advanced its digital capabilities by implementing RPA in 2021. RPA reduced payment turnover time from 45 days to mere hours, although this required the hiring of 20-30 employees for data integration. By 2024, a remarkable 99.5% of invoices were being processed automatically, showcasing the power of advanced digital and AI technologies in streamlining operations and improving efficiency.

Roles

Impact and Case Studies



Store Operations & Support: Display Artist, Visual Merchandising

This role drives the visual merchandising plans and executes artistic effects for store windows and display areas to enhance the retail outlet's image and promote product sales. It has a high opportunity to automate visual merchandising tasks:

- AI tools can analyse customer engagement with store displays, optimise visual layouts based on shopper behaviour data, and automate the design process
- Digital tools can facilitate the creation of digital mockups and integrate multimedia elements into display designs
- While human creativity is essential for conceptualizing overall visual merchandising strategies, AI can significantly streamline the design and optimisation process, with human intervention primarily needed for interpreting design briefs and making high-level adjustments, allowing routine tasks to be automated
- Does not directly impact the environment, but it offers opportunities to advocate for sustainable materials in display designs





**Coca-Cola Bottlers MY**

Coca-Cola Bottlers MY has embraced digital innovation by introducing Coke Creations, a platform featuring AI-generated products. This marks a departure from traditional display artistry. Furthermore, the use of Microsoft Power BI for data visualisation has reduced reliance on conventional visual merchandising roles. This transition highlights the growing importance of digital solutions and the innovative application of AI in marketing.

MYDIN





MYDIN has adopted Generative AI (GenAI) for copywriting in its marketing efforts. This advanced AI-generated content enhances marketing efficiency and creativity, demonstrating the potential of AI to revolutionise copywriting processes.

Highly Impacted Roles Career Pathways

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>SUPPLY CHAIN OPERATIONS: ASSISTANT/ COORDINATOR, OPERATIONS</div> <div>Key Responsibilities: Supports the efficient and effective functioning of wholesale operations, ensuring smooth trading activities, maintaining high service levels, and optimising profitability while adhering to corporate processes and procedures.</div>	<div>AI / DIGITAL SKILLS</div> <div><div>1. Advanced Technology Integration: Gain proficiency in operating advance technologies into day-to-day operations to optimise efficiency and effectiveness of processes</div></div>	<div>GREEN SKILLS</div> <div><div>4. Sustainable Transport Management: Develop environmentally friendly transportation solutions and design routes that minimise environmental impact</div><div>5. Environmental Protection Management: Ensure all materials are handled effectively and efficiently to reduce the impact towards the environment and prevent disasters that could result in financial and reputational damage</div><div>6. Renewable Energy: Implement and maintain systems that generate energy from renewable sources</div></div>	<div><div>Supply Chain Operations Executive, Operations</div></div> <div><div>Merchandise Coordinator, Logistics and Transport</div></div>	
	<div>GREEN SKILLS</div> <div><div>1. Sustainable Business Practices: Ensure sustainability elements in operations, aligning operational strategies with environment standards</div><div>2. Eco-Design Principles: Gain proficiency in sustainable design to integrate it into operational strategies and achieve environmental outcomes</div><div>3. Waste Management: Develop waste reduction strategies for operations to ensure environmental impact is effectively managed</div></div>	<div><div>7. Sustainable Manufacturing: Conduct the process of producing goods that minimises negative environmental impacts, conserves energy and natural resources</div><div>8. Environmental Remediation: Conduct the process of cleaning up, restoring, or mitigating environmental damage caused by pollutants, contaminants, or hazardous materials</div></div>	<div><div>Warehouse Storekeeper / Inventory Coordinator Sector: Food Manufacturing and Services</div></div> <div><div>Warehouse / Inventory Executive Sector: Chemical</div></div>	
	<div>Possible Roles for Transition into Other Sectors</div>			




Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
SUPPLY CHAIN OPERATIONS: ASSISTANT/ COORDINATOR, PROCUREMENT AND SOURCING Key Responsibilities: Supports procurement and sourcing processes, including raising purchase orders, maintaining records, gathering procurement specifications, and compiling tender bids from suppliers.	AI / DIGITAL SKILLS	GREEN SKILLS	 Supply Chain Operations Executive, Operations	 Supply Chain Operations Executive, Procurement and Sourcing
			Possible Roles for Transition into Other Sectors	
			 Procurement Executive Sector: Global Business Services	 Procurement Analyst Sector: Global Business Services



Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>SUPPLY CHAIN OPERATIONS: SPECIALIST, CONTRACT</div> <div>Key Responsibilities: Prepares and verifies contractual agreements for trade transactions, resolves conflicts, and provides clarifications in accordance with trade regulations and guidelines.</div>	AI / DIGITAL SKILLS	GREEN SKILLS	<div><div>Sales Executive, Sales</div><div>Property Data Analyst, Property Research</div></div>	
	<div>1. Business Environment Analytics: Analyse data leveraging analytics tools such as competitor-analysis, trends and developments in laws and regulations and the impact on the business</div> <div>2. Data Mining: Extract valuable insights from large datasets, which can be used to analyse performance, identify trends, and uncover potential risks or opportunities</div> <div>3. Data Modelling and Design: Create databases and data systems to organise and optimise data storage and retrieval</div> <div>4. Data Governance: Develop and implement guidelines, laws, and regulations for handling of data at various stages in its lifecycle</div>	<div>1. Consumer Sustainability Education: Provide information and guidance to consumers to make environmentally responsible purchasing decisions</div> <div>2. Eco-Friendly Site Selection: Consider environmental impact when selecting sites to ensure compliance with sustainability goals and regulatory requirements</div> <div>3. Green Procurement Policies and Standards: Develop strategies to mitigate risks associated with environmental impacts due to resource scarcity or regulatory changes</div>	<div><div>Procurement, Compliance Specialist Sector: Global Business Services</div></div>	




Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis	Possible Roles for Transition Within the Sector
<div>BUSINESS DEVELOPMENT AND MARKETING: ASSISTANT / COORDINATOR, MARKETING</div> <div>Key Responsibilities: Supports the execution of branding and digital marketing initiatives to enhance the organisation’s market presence and drive engagement, ensuring adherence to branding guidelines across all business units.</div>	<div>AI / DIGITAL SKILLS</div> <div><div>1. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div><div>2. User Interface and User Experience (UI/UX) Optimisation: Design and deploy consistent customer experience-led interface and visual assets that allow for a seamless retail experience to boost customer retention and conversion</div></div>	<div><div><div>E-Commerce Assistant, Retail Digital Marketing</div></div><div><div><div>E-Commerce Live Host, Social Media</div></div></div></div>





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>SALES: ASSISTANT / COORDINATOR, SALES</div> <div>Key Responsibilities: Supports sales acquisition by generating and following up on leads, analysing customer behaviour through enquiries and feedback, and organising data to enhance client acquisition and retention.</div>	<div>AI / DIGITAL SKILLS</div> <div><div>1. Advanced Technology Integration: Gain proficiency in operating advance technologies into day-to-day operations to optimise efficiency and effectiveness of processes</div><div>2. Business Environment Analytics: Analyse data leveraging analytics tools such as competitor-analysis, trends and developments in laws and regulations and the impact on the business</div><div>3. Data Mining: Extract valuable insights from large datasets, which can be used to analyse performance, identify trends, and uncover potential risks or opportunities</div><div>4. Data Modelling and Design: Create databases and data systems to organise and optimise data storage and retrieval</div><div>5. User Interface and User Experience (UI/UX) Optimisation: Design and deploy consistent customer experience-led interface and visual assets that allow for a seamless retail experience to boost customer retention and conversion</div><div>6. Website Design: Determine functionalities of websites, analyse the user-interface design requirements</div></div>	<div>AI / DIGITAL SKILLS</div> <div><div>7. Website Performance Management: Design mechanisms to identify website maintenance, administration, or performance problems, as well as generate website performance</div><div>8. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div></div>	<div><div><div>Sales Executive, Sales</div><div>E-Commerce Associate/ Assistant, E-Commerce</div></div></div>	
			<div>Possible Roles for Transition into Other Sectors</div>	
			<div><div><div>BD & Project Financing Executive Sector: Energy and Power</div></div></div>	





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>MERCHANDISE: ASSOCIATE / ASSISTANT, WAREHOUSE</div> <div>Key Responsibilities: Oversees and manages the flow of cargo, ensures the safe and systematic operation of material-handling equipment, and maintains accurate inventory records.</div>	AI / DIGITAL SKILLS	GREEN SKILLS	Possible Roles for Transition into Other Sectors	
	<div>1. Advanced Technology Integration: Gain proficiency in operating advance technologies into day-to-day operations to optimise efficiency and effectiveness of processes</div>	<div>4. Sustainable Transport Management: Develop environmentally friendly transportation solutions and design routes that minimise environmental impact</div> <div>5. Environmental Protection Management: Ensure all materials are handled effectively and efficiently to reduce the impact towards the environment and prevent disasters that could result in financial and reputational damage</div>	<div>Merchandise Executive Warehouse</div> <div>Merchandise Coordinator, Logistics & Transport</div>	<div>Warehouse Storekeeper, Inventory Executive Sector: Food Manufacturing and Services</div> <div>Warehouse / Inventory Executive Sector: Chemical</div>





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>MERCHANDISE: SPECIALIST, ORDER FULFILMENT</div> <div>Key Responsibilities: Oversees and manages the order fulfilment process to enhance customer satisfaction and operational efficiency.</div>	AI / DIGITAL SKILLS	GREEN SKILLS	Possible Roles for Transition into Other Sectors	
	<div>1. Website Design: Determine functionalities of websites, analyse the user-interface design requirements</div> <div>2. Website Performance Management: Design mechanisms to identify website maintenance, administration, or performance problems, as well as generate website performance</div> <div>3. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div>	<div>1. Renewable Energy: Implement and maintain systems that generate energy from renewable sources</div> <div>2. Sustainable Manufacturing: Conduct the process of producing goods that minimises negative environmental impacts, conserves energy and natural resources</div> <div>3. Environmental Remediation: Conduct the process of cleaning up, restoring, or mitigating environmental damage caused by pollutants, contaminants, or hazardous materials</div>	<div>E-Commerce Retail Coordinator, Online Store</div> <div>E-Commerce Assistant, Retail E-Business</div>	
			<div>Warehouse Storekeeper, Inventory Executive Sector: Food Manufacturing and Services</div> <div>Warehouse / Inventory Executive Sector: Chemical</div>	





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>STORE OPERATIONS & SUPPORT: SPECIALIST, CHAT SUPPORT</div> <div>Key Responsibilities: Provides customer service and technical assistance via chat, resolving issues, answering questions, and ensuring a positive customer experience.</div>	AI / DIGITAL SKILLS	GREEN SKILLS		
	<div>1. Website Design: Determine functionalities of websites, analyse the user-interface design requirements</div> <div>2. Website Performance Management: Design mechanisms to identify website maintenance, administration, or performance problems, as well as generate website performance</div> <div>3. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div>	<div>1. Sustainable Business Practices: Ensure sustainability elements in operations, aligning operational strategies with environment standards</div>	<div>E-Commerce Retail Coordinator, Online Store</div> <div>E-Commerce Assistant, Retail E-Business</div>	
			<div>Possible Roles for Transition into Other Sectors</div> <div><div>Dispute Resolution Specialist Sector: Global Business Services</div><div>Customer Relationship Management Specialist Sector: Global Business Services</div></div>	





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>STORE OPERATIONS & SUPPORT: CASHIER, CUSTOMER CARE</div> <div>Key Responsibilities: Oversees the receipt of payments, manages customer transactions at the cash register, and delivers exceptional customer service in accordance with established policies and guidelines.</div>	AI / DIGITAL SKILLS	GREEN SKILLS		
	<div>1. Advanced Technology Integration: Gain proficiency in operating advance technologies into day-to-day operations to optimise efficiency and effectiveness of processes</div> <div>2. Website Design: Determine functionalities of websites, analyse the user-interface design requirements</div> <div>3. Website Performance Management: Design mechanisms to identify website maintenance, administration, or performance problems, as well as generate website performance</div> <div>4. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div>	<div>1. Sustainable Business Practices: Ensure sustainability elements in operations, aligning operational strategies with environment standards</div> <div>2. Environmental Protection Management: Ensure all materials are handled effectively and efficiently to reduce the impact towards the environment and prevent disasters that could result in financial and reputational damage</div> <div>3. Renewable Energy: Implement and maintain systems that generate energy from renewable sources</div> <div>4. Sustainable Manufacturing: Conduct the process of producing goods that minimises negative environmental impacts, conserves energy and natural resources</div> <div>5. Environmental Remediation: Conduct the process of cleaning up, restoring, or mitigating environmental damage caused by pollutants, contaminants, or hazardous materials</div>	<div>E-Commerce Retail Coordinator, Online Store</div> <div>E-Commerce Assistant, Retail E-Business</div> <div>Possible Roles for Transition into Other Sectors</div> <div><div>Warehouse Storekeeper, Inventory Executive Sector: Food Manufacturing and Services</div><div>Warehouse / Inventory Executive Sector: Chemical</div></div>	





Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>STORE OPERATIONS & SUPPORT: DISPLAY ARTIST, VISUAL MERCHANDISING</div> <div>Key Responsibilities: Drives visual merchandising plans and execute artistic effects for store windows and display areas to enhance the retail outlet’s image and promote products effectively.</div>	AI / DIGITAL SKILLS	GREEN SKILLS		
	<div><div>1. Website Design: Determine functionalities of websites, analyse the user-interface design requirements</div><div>2. Website Performance Management: Design mechanisms to identify website maintenance, administration, or performance problems, as well as generate website performance</div><div>3. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div></div>	<div><div>1. Environmental Protection Management: Ensure all materials are handled effectively and efficiently to reduce the impact towards the environment and prevent disasters that could result in financial and reputational damage</div><div>2. Renewable Energy: Implement and maintain systems that generate energy from renewable sources</div><div>3. Sustainable Manufacturing: Conduct the process of producing goods that minimises negative environmental impacts, conserves energy and natural resources</div><div>4. Environmental Remediation: Conduct the process of cleaning up, restoring, or mitigating environmental damage caused by pollutants, contaminants, or hazardous materials</div></div>	<div><div>E-Commerce Retail Coordinator, Online Store</div><div>E-Commerce Assistant, Retail E-Business</div></div>	
			Possible Roles for Transition into Other Sectors	
			<div><div>Warehouse Storekeeper, Inventory Executive Sector: Food Manufacturing and Services</div></div>	<div><div>Warehouse / Inventory Executive Sector: Chemical</div></div>

Highly Impacted Roles Career Pathways

(Continue)

Roles	Examples of Additional Skills Required and Analysis		Possible Roles for Transition Within the Sector	
<div>STORE OPERATIONS & SUPPORT: STORE ASSISTANT, RECEIVING</div> <div>Key Responsibilities: Oversees the receipt of incoming items; this role involves reviewing purchase orders, matching delivered items to orders, documenting discrepancies, and updating inventory databases.</div>	AI / DIGITAL SKILLS	GREEN SKILLS	<div><div></div><div>E-Commerce Assistant, Retail Digital Marketing</div></div> <div><div></div><div>BD & Marketing Executive, Marketing</div></div>	
	<div>1. Big Data Analytics: Process vast amounts of data to identify trends and risks to forecast market movements, evaluate the financial viability of projects, and develop strategies that align with business goals</div> <div>2. User Interface and User Experience (UI/UX) Optimisation: Design and deploy consistent customer experience-led interface and visual assets that allow for a seamless retail experience to boost customer retention and conversion</div>	<div>1. Green Procurement Policies and Standards: Develop strategies to mitigate risks associated with environmental impacts due to resource scarcity or regulatory changes</div> <div>2. Sustainable Business Practices: Ensure sustainability elements in operations, aligning operational strategies with environment standards</div>	<div><div></div><div>Buyer Purchasing Agent Sector: Global Business Services</div></div> <div><div></div><div>Customer Relationship Management Specialist Sector: Global Business Services</div></div>	

Projected Number of Highly Impacted Employees

According to the TalentCorp Demand Model Projection, approximately 15%, or 24,500 employees, will be at risk in the next three (3) to five (5) years due to highly impacted roles.²²

Summary of Highly Impacted Roles

	Summary of Highly Impacted Roles			
	Wholesale		Retail	
	Supply Chain Operations	BD and Marketing	Sales	
	<ul style="list-style-type: none">Assistant / Coordinator, OperationsAssistant / Coordinator, Procurement and SourcingSpecialist, Contract	<ul style="list-style-type: none">Assistant / Coordinator, Marketing	<ul style="list-style-type: none">Assistant / Coordinator, Sales	
	Merchandise	Store Operations & Support		
	<ul style="list-style-type: none">Associate/ Assistant, WarehouseSpecialist, Order Fulfillment	<ul style="list-style-type: none">Specialist, Chat SupportCashier, Customer CareStore Assistant, ReceivingDisplay Artist, Visual Merchandising		

Findings

Based on impact study survey conducted, industry players believe that high impacted roles, which could experience a projected workforce impact of up to 30% in the organisation, may be redefined to concentrate on more value-added services.

- As self-checkout systems, kiosks, and increased automation of everyday tasks become more common, industry leaders are noting that their organisations have approximately 15% to 30% of their workforce in Assistant / Coordinator; Sales, Cashier; and Customer Care roles. This shift suggests that there's a potential need for reskilling across all types of companies.
- As industry leaders progressively automate various operational areas to boost efficiency, this is affecting the number of staff in roles like Assistant / Coordinator, Operations and Store Assistant, Receiving. Job reductions in these positions are ranging from 5% up to 26% across different types of organisations.
- PLCs recognise that incorporating AI, digital technologies, and sustainable practices are crucial for driving growth and staying competitive in the next three (3) to five (5) years. To support these pillars, these businesses are investing in a complete transformation of their operations, covering everything from customer-facing areas like sales and customer management to backend processes such as warehousing and supply chains. As a result, this shift is causing a reduction in staff across all roles that are significantly affected.
- In contrast, SMEs are concentrating mainly on front-of-house activities to build a solid sales pipeline that guarantees strong financial performance. Consequently, a considerable number of positions related to sales and customer service at the forefront are being impacted.

Employers with these roles in their organisation will need to plan for talent reskilling and pivoting strategies within or across sectors.

22. Impact Study Industry Survey; Department of Statistics Malaysia; TalentCorp Demand Model Projection

Medium and Low Impacted Roles

Medium Impacted Roles Analysis

54% medium impacted roles are mostly operational roles; upskilling is needed to help them stay ahead of trends, operate more sustainably, and meet evolving expectations of customers and business needs.

Job Clusters	Roles	Skills
Supply Chain Operations	<ul style="list-style-type: none">Executive, OperationsExecutive, Procurement and Sourcing	<p>Specific Skills</p> <ul style="list-style-type: none">Goods Inventory ControlQuality Assurance ManagementStakeholder ManagementVendor ManagementDelivery Management <p>Additional Skills</p> <ul style="list-style-type: none">Advanced Technology IntegrationSustainable Business PracticesEco-Design PrinciplesWaste ManagementSustainable Sourcing
BD and Marketing	<ul style="list-style-type: none">Senior Analyst / Analyst, Market ResearchManager, MarketingExecutive, Marketing	<p>Specific Skills</p> <ul style="list-style-type: none">Research and Information SynthesisMarketing Mix ManagementDigital MarketingContent Writing and EditingCommunications Channel Management <p>Additional Skills</p> <ul style="list-style-type: none">Advanced Technology IntegrationDigital Business Model InnovationSustainable Business PracticesGreen Business Innovation Consumer Sustainability Education
Sales	<ul style="list-style-type: none">Executive, Modern TradeExecutive, General TradeExecutive, Export Market	<p>Specific Skills</p> <ul style="list-style-type: none">Research and Information SynthesisMarketing Mix ManagementDigital MarketingContent Writing and EditingCommunications Channel Management <p>Additional Skills</p> <ul style="list-style-type: none">Advanced Technology IntegrationSustainable Business PracticesConsumer Sustainability Education



The integration of AI and Digital have revolutionised the way businesses operate, allowing increased efficiency and automation. Human intervention is still necessary for customer-facing roles and complex decision-making, highlighting the importance of upskilling in these areas. The growing emphasis on sustainability and ESG initiatives coerce professionals to adapt their roles to prioritise environmentally responsible practices, further emphasising the need for continuous learning and professional development. Furthermore, medium impacted roles must evolve and upskill to exceed traditional expectations and deliver enhanced value.

Example
Medium Impacted Role

#1

Business Development and Marketing:
Senior Analyst/ Analyst, Market Research

Key Responsibilities:

Researches and analyses on market trends, consumer research, competitors, products, technology and other aspects

Findings	Additional Skills
<div>AI</div> <ul style="list-style-type: none">• High Opportunity to Automate: AI-powered tools analyse market trends and consumer behavior to optimise digital marketing• High Human Intervention: Human intervention remains essential for strategic interpretation, alignment, and execution in business	<div>AI / Digital Skills</div> <ul style="list-style-type: none">• Advanced Technology Integration This skill allows this role to leverage on AI / Digital tools to enhance market research and data analysis, allowing for deeper insight to inform strategic key decisions• Digital Business Model Innovation To keep up with sector trends, this skill enables this role to provide recommendations and suggestions to future-proof existing business models
<div>Digital</div> <ul style="list-style-type: none">• High Opportunity to Automate: Digitalisation automates repetitive tasks in market research, data analysis, and strategic focus for business growth• High Human Intervention: Human expertise is essential for interpreting insights, aligning with strategy, validating opportunities, and making nuanced decisions	
<div>Green Economy</div> <ul style="list-style-type: none">• Low Impact on the Environment: Market research, data analysis, and digital marketing have a minimal direct environmental impact• High Opportunity to Diversify: There's a rising demand for expertise in green marketing, CSR, and sustainable practices	<div>Green Skills</div> <ul style="list-style-type: none">• Sustainable Business Practices As part of overarching sustainability goals, this role needs to actively integrate sustainability efforts when executing daily activities• Green Business Innovation This skill is needed for the role to actively integrate sustainability perspectives when providing insights to inform decisions regarding business strategy and growth

Example
Medium Impacted Role

#2

Merchandise:
Category Buyer, Merchandise

Key Responsibilities:

Assist in selecting and purchasing merchandise within a specific product category or department

Findings	Additional Skills
<div>AI</div> <ul style="list-style-type: none">• High Opportunity to Automate: AI assists in automating replenishment and forecasting trends to minimise stockouts and reduce holding costs• High Human Intervention: Human expertise to assess AI insights and align merchandise plans with business objectives and customer expectations	<div>AI / Digital Skills</div> <ul style="list-style-type: none">• Advanced Technology Integration This skill allows this role to leverage on AI / Digital tools to improve inventory management and streamline sourcing, enhancing overall operational efficiency
<div>Digital</div> <ul style="list-style-type: none">• High Opportunity to Automate: Digital tools to streamline sourcing, improve procurement efficiency and enhance transparency in supplier negotiations• High Human Intervention: Human oversight is needed to evaluate supplier protocols, assess product quality, and mitigate supply chain risks	
<div>Green Economy</div> <ul style="list-style-type: none">• Low Impact on the Environment: Merchandising operations to include sustainable sourcing, reduced packaging waste, and promoting eco-friendly products• High Opportunity to Diversify: Integration of green sourcing practices, eco-labeled products and sustainable packaging	<div>Green Skills</div> <ul style="list-style-type: none">• Sustainable Sourcing Partnerships with vendors who emphasise sustainability should be a key business focus• Waste Management Effective waste management is needed to reduce environmental impact due to retail operations• Sustainable Facilities Management Operating retail spaces in an eco-friendly manner is now a part of achieving sustainability goals

Low Impacted Roles Analysis

32% of low impacted roles are primarily multifaceted, such as Head of Department and customer-facing managerial positions, which often involve complex decision-making and leadership responsibilities. These roles have yet to be replicated by AI and digital technologies.

Roles	In-Demand Skills Analysis	
Wholesale	Basic Skills <ul style="list-style-type: none">Learning AgilityAI and Digital FluencyCritical ThinkingInnovative ThinkingSustainability AwarenessAdaptability and ResiliencyCommunicationEmpathyTeamwork and CollaborationCognitive Skills	Additional Skills <div>AI / Digital Skills<ul style="list-style-type: none">Advanced Technology Integration Essential for managerial roles to implement AI / Digital initiatives into business operationsDigital Business Model Innovation Managerial roles should take a hands-on approach in identifying potential opportunities to transform existing business models</div>
Retail	Specific Skills <ul style="list-style-type: none">Business Performance ManagementStakeholder ManagementResearch and Information SynthesisBudget ManagementBig Data AnalyticsSolutions Design ThinkingBusiness Environment AnalyticsResearch and Information SynthesisSupplier Performance	

Although managerial roles are not highly impacted by AI or Digital, they are the driving force behind ensuring business operations are transformed and enhanced to stay ahead in the market. Therefore, upskilling knowledge and cognitive abilities is essential for identifying potential opportunities for transformation within the business.

Sustainability goals and initiatives are developed by Head of Department roles and implemented by the working-level teams. Head of Departments must understand the importance of sustainability in business operations and adopt a proactive mindset in incorporating these initiatives, empowering employees to actively participate in and implement sustainability measures.

Head of Departments and managerial roles should take an innovative approach to reducing environmental impact through their sustainability initiatives. This can include improving manufacturing processes to reduce waste, become more cost-effective, and enhance operational efficiency.

Projected Numbers of Medium and Low Impacted Employees

It is essential to address the upskilling needs of the workforce. Approximately 1.4 million²³ medium and low impacted employees in the Wholesale and Retail Trade sector require upskilling related to AI, Digital, and Green Economy trends. These employees will need to continuously develop their skills to remain relevant and deliver beyond traditional expectations.

Based on assessments and industry feedback, a total of 143 basic and specific skills have been identified for this sector. Of these, 5% are AI / Digital skills, and 8% are Green Economy skills. This highlights the growing importance of these emerging technologies in the industry.

Upskilling is essential for 54% of medium impacted roles to progress and perform beyond traditional expectations. While upskilling is not mandatory for the 32% of roles designated as low impacted roles, continuous self-improvement is advised to maintain relevance and make informed decisions, particularly keeping up on knowledge of emerging trends.

23. Department of Statistics Malaysia; TalentCorp Demand Model Projection

In-Demand Skills for AI, Digital, and Green Economy

Training Programmes Available

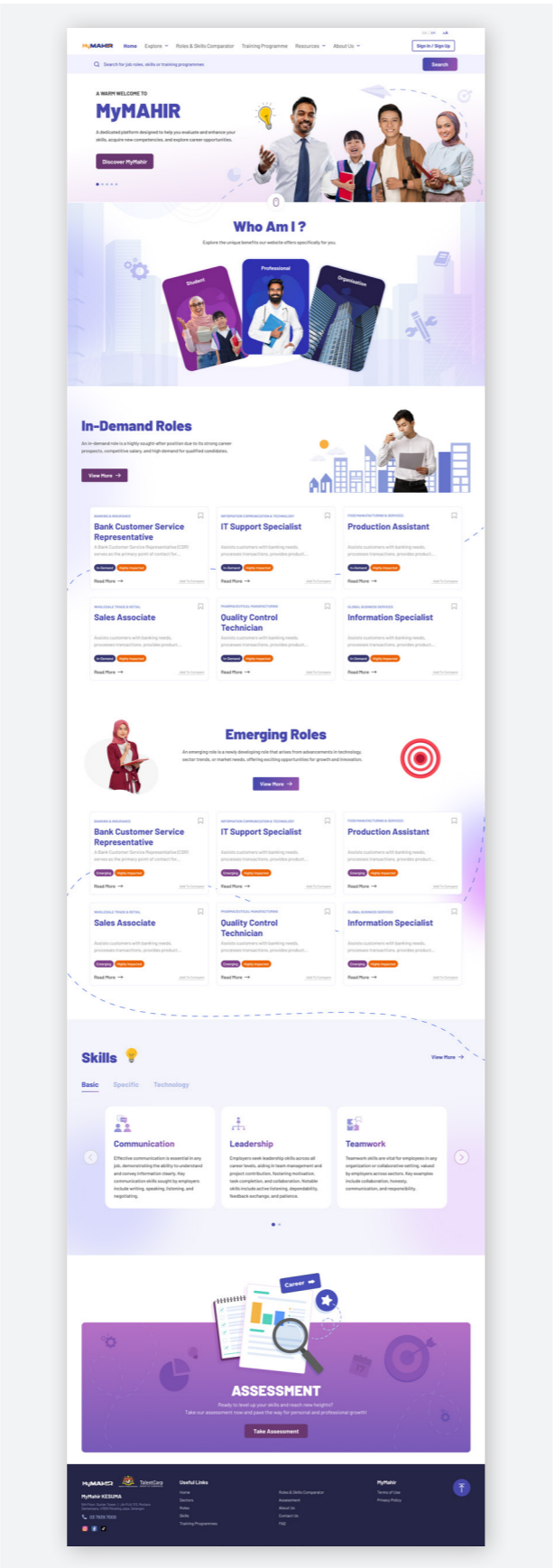
AI / Digital skills that are essential for roles to adopt for business operations enhancements and overall workforce productivity improvements

- AI / Digital Skills
- Advanced Technology Integration
 - Business Environment Analytics
 - Data Modeling and Design
 - Digital Asset and File Management
 - Digital Image Production
 - Image Development and Animation
 - Technology Strategy Formulation
 - Visual Collaterals Production
 - Website Performance Management
 - Big Data Analytics
 - Data Mining
 - Data Storyboarding
 - Digital Business Model Innovation
 - Photographic Images Manipulation
 - User Interface and User Experience (UI/UX) Optimisation
 - Website Design

Green skills that are needed for roles to integrate sustainability efforts and initiatives into business operations

- Green Skills
- Consumer Sustainability Education
 - Eco-Friendly Site Selection
 - Green Procurement Policies and Standards
 - Sustainable Business Practices
 - Sustainable Sourcing
 - Sustainability Awareness
 - Eco-Design Principles
 - Green Business Innovation
 - Green Product Design
 - Sustainable Facilities Management
 - Sustainable Transportation Management
 - Waste Management

List of proposed training programmes is accessible on the **MyMAHIR platform**.



Emerging Roles

Global trends such as data-driven insights and automation are being leveraged to enhance eco-friendly practices and optimise resource management, improve sustainability efforts to reduce environmental impact, the rise of digital platforms, needs of hyper-personalising experiences is more accessible to the consumers and needs of building in-house capabilities around the aspect of digital analytics

Emerging roles below are becoming increasingly prominent in the Wholesale and Retail Trade sector.:

AI & Robotics Technician, Digital Analyst

AI and Robotics Technician manages, installs, programs, maintains, and optimizes AI and robotic systems for retail efficiency and settings. By automating tasks such as stocking shelves, inventory management, and checkout processes, robotics can significantly streamline these processes, enabling businesses to keep up with the rapid pace of online shopping. In addition, technicians are essential for ensuring the smooth operation of these systems, performing routine maintenance, and troubleshooting any issues that may arise

MYDIN has implemented RPA to improve its invoice and payment processing, manage records, and match transactions in their accounts, which helps eliminate discrepancies. Thanks to this automation, Mydin can now meet the key performance indicators set by Shopee and fulfil online orders within the promised time frames. Additionally, statement reconciliation has significantly reduced payment processing time from 45 days to just a few hours, positively impacting 1,800 suppliers.

Sustainability Coordinator

Sustainability Coordinator develops, implements, and monitors sustainability initiatives within retail operations to ensure the organisation meets ESG goals. Malaysian consumers are increasingly prioritising sustainability and local products, driving retailers to adopt eco-friendly and locally sourced initiatives to build strong relationships with customers. By prominently showcasing these items, retailers can demonstrate their commitment to environmental responsibility and community support, fostering brand loyalty and creating advocates for their brand.

Coca-Cola Bottlers MY is making significant strides in its commitment to sustainable packaging by increasing its use of recycled PET (rPET) bottles. This effort is part of the company's global "World Without Waste" program, which strives to collect and recycle one bottle or can for every one sold by 2030. By switching to rPET, Coca-Cola is not only minimising the reliance on new plastic but also fostering a circular economy that supports overall environmental sustainability goals.

“Having a dedicated Sustainability role within the operations team will expedite the implementation of sustainable practice.”

AEON

Personal Shopper and Stylist

Personal Shopper and Stylist provides individualised attention to customers, helping them make purchasing decisions based on their preferences and needs. Personalisation is a crucial factor in creating a tailored customer experience, which can lead to increased customer loyalty and satisfaction. By leveraging data and analytics, retailers can tailor their offerings to individual customers, making them feel valued and understood, ultimately driving business growth and success. Retailers are venturing into new sectors to accelerate digital transformation initiatives to bolster customer-centricity.

For example, **Tapestry** is working with Persado, a US based AI company, to automate online personalisation. Persado’s Generative AI solution allows Tapestry to adapt messaging to users as they fill and check out their online basket. The tool uses emotional and conversational tones to improve conversion rate. The AI is trained on a specialised dataset reflecting analytics and interactions from about 150 million US users.

Innovation Specialist / Agile Coach

Innovation Specialist / Agile Coach develops and implement new ideas, products, and processes to foster organisational growth and maintain competitive advantage. This role is crucial in driving digital transformation in the Malaysian Wholesale and Retail sector, enabling businesses to leverage new technologies, enhance customer experiences, and optimise operational efficiency. By creating innovative products, services, and experiences that differentiate businesses in a competitive market, while also prioritising sustainability to meet consumer and regulatory demands, this role can help drive business growth and competitiveness.

IKEA is enhancing the shopping experience with AI technology through its augmented reality app, IKEA Place. This app allows customers to visualise how furniture will look in their homes by overlaying digital images on real spaces. By simply pointing their smartphones at a room, users can experiment with different styles and arrangements, making it easier to make confident purchasing decisions. This innovative approach underscores IKEA’s commitment to providing a seamless and enjoyable shopping experience, solidifying its position as a leader in retail.

Digital Analyst

Digital Analyst analyses and interprets digital data to help an organisation make informed decisions. With the increasing amounts of data from various touchpoints, it’s crucial to interpret and analyse this data to extract actionable insights. By doing so, organisations gain a deeper understanding of customer behaviour and preferences, enabling them to streamline their audience more effectively and develop targeted marketing campaigns. This can lead to enhanced customer experiences, increased sales, and improved customer satisfaction. Retailers are embracing new technology to enhance efficiency and improve the shopping experience. One innovative approach is the introduction of shelfless stores, which aim to speed up digital-only purchasing methods.

A prime example is **Wawa**, a convenience store chain in the US, which has transformed one of its locations into a digital shelfless concept. In this setup, customers make purchases exclusively through the Wawa app or in-store kiosks, with fulfilment handled by store staff. This shift not only streamlines the buying process but also helps address the rising issues of theft and violence in retail settings. By leveraging technology in this way, Wawa is paving the way for a more secure and efficient shopping experience.

“Outsourcing digital analytics may be beneficial short-term, but in the long term, developing in-house expertise is crucial for gaining insightful data-driven decision-making capabilities.”

Coca-Cola Bottlers MY

Live Host

Live Host offers personalised recommendations, interactive experiences, enhancing the shopping experience and building brand loyalty. By incorporating live hosting into their digital platforms, brands are able to create a more immersive and engaging experience for customers. This leads to increased brand loyalty and customer trust. With live hosts, customers can receive personalised product recommendations, participate in interactive Q&A sessions, and virtually try on products, all while promoting sustainability through reduced returns and carbon footprint.

Sephora is harnessing artificial intelligence with its AI-driven chatbots, such as the Sephora Virtual Artist, to improve customer experiences. The Sephora Virtual Artist also answers questions, provides tutorials, and helps guide customers through the purchasing process, ensuring a smooth shopping experience. By integrating these advanced technologies, Sephora enhances customer satisfaction and strengthens its position as a leader in the beauty retail industry.

“In-house live hosts have the advantage of having deep knowledge of the brand’s products, services, and values, allowing them to provide authentic, tailored presentations that resonate more effectively with the target audience.”

Habib Jewels



Demand Projection for Emerging Roles

The demand for such emerging specialists is expected to grow as companies increasingly recognise the benefits of emerging technology and sustainability practices in a dynamic market environment.

Based on the input collected from the industry players during the impact assessment workshop analysis, MNCs have an employee size ranging from 1,500 to 10,000, PLCs range from 500 to 5,000 employees, and SMEs range from 80 to 1,800 employees.

The demand for such emerging specialists is expected to grow as companies increasingly recognise the benefits of emerging technology and sustainability practices in a dynamic market environment.²⁴

Based on survey conducted during the study, the headcount of organisation based on company type ranges from:

Multinational Corporations (MNCs):

1,500 - 10,000

Public Listed Companies (PLCs):

500 - 5,000

Small and Medium-Sized Enterprises (SMEs):

80 - 1,800

Projected Demand for Emerging Roles for each organisation in the next three (3) to five (5) years

	Multinational Corporations (MNCs)	Public Listed Companies (PLCs)	Small and Medium-Sized Enterprises (SMEs)
AI & Robotics Technician	Not Needed	2-6	2-5
Sustainability Coordinator	Exist	1-2	1-2
Personal Shopper & Stylist	5-10	10-300	1-2
Innovation Specialist / Agile Coach	3-4	1-2	1-2
Digital Analyst	3-4	3-5	5-10
Live Host	Not Needed	5-10	2-20

24. Talentcorp sector survey on Impact Study Validation Workshop

Chapter 5:

Recommended Initiatives

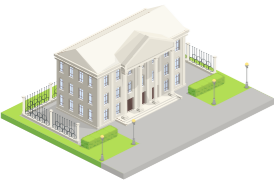
Government	101
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Initiative 2: Provide Funding and Incentives to Encourage Emerging Trends Adoption	102
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Initiative 11: Enhance Training Delivery and Effectiveness by Onboarding More Credible and Certified Training Providers	111

Overview of 11 strategic initiatives across all four (4) stakeholder groups in the Wholesale and Retail Trade sector

The findings from our impact study assessment have yielded valuable insights into the evolving landscape shaped by AI, Digital, and Green Economy trends within Malaysia’s Wholesale and Retail Trade sector. Through extensive collaboration with key stakeholders, including government bodies, industry leaders, academia, and training providers, we have developed 11 Recommended Initiatives. These initiatives are crafted to propel the sector ahead by seizing emerging opportunities and tackling the challenges posed by transformative trends. Through a collaborative approach that aligns with the goals of all stakeholders, we seek to spark innovation, cultivate talent, and champion sustainable practices for a thriving future.

The initiatives are grouped into four (4) categories based on the leading and enabling entities: **Government**, **Industry Players**, **Academia**, and **Training Providers**.

Summary of 11 Recommended Initiatives



Government

- IN1** Develop **Policy / Adoption Framework** to Prevent Risk on AI Technologies Adoption
- IN2** Provide **Funding and Incentives** to Encourage Emerging Trends Adoption
- IN3** Develop National Talent Development Strategy to Bridge the Talent Gap
- IN4** Upgrade **Information Technological Infrastructure** to Keep Pace with Emerging Digital Technologies



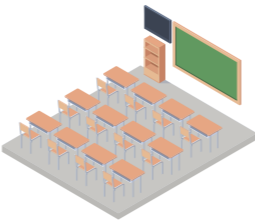
Industry Players

- IN5** Encourage **Investment** In Emerging Digital Technologies
- IN6** Integrate **Green Practices** to Promote Environmental Awareness Among Employees And Consumers
- IN7** Enhance **Talent Retention** Strategy for High-Skilled Employees



Academia

- IN8** Collaborate with Sector Experts to **Integrate Real-World Practices** in Curriculum and Syllabus
- IN9** Enhance **Quality of Educators** with Advanced Sector Training and Resources



Training Providers

- IN10** Develop Applicable **Training Content** by Building Partnership with Sector Experts
- IN11** Enhance **Training Delivery and Effectiveness** by Onboarding More Credible and Certified Training Providers

Government

IN1

Develop Policy / Adoption Framework to Prevent Risk on AI Technologies Adoption

This initiative aims to establish a comprehensive policy and adoption framework to mitigate risks associated with AI technologies and to alleviate sector fears regarding potential vulnerabilities, such as digital threats.

Initiatives	Case Studies
<p>IN1.1</p> <p>Benchmark against international standards and best practices in AI governance, such as the EU’s Ethics Guidelines for Trustworthy AI, and adapt them to the Malaysian context. Steps include:</p> <ul style="list-style-type: none">• Draft policy recommendations that address identified risks and promote responsible AI development and use• Implement pilot projects to test the policy and regulatory frameworks in controlled environments• Set up mechanisms to monitor the impact of AI technologies and the effectiveness of the policy framework• Establish enforcement mechanisms to ensure compliance with AI policies and regulations	<p>NIST AI Risk Management Framework:²⁵</p> <p>In the US, the National Institute of Standards and Technology released the framework as a voluntary guide for organisations to manage AI risks and promote trustworthy AI systems in developing, designing, and using AI-related products and services.</p> <p>The framework helps organisations to integrate trustworthiness into the design, development, use, and evaluation of AI products, services, and systems. Furthermore, it assists organisations in managing AI risks by aligning with legal and regulatory requirements, best practices, and risk management priorities.</p>
<p>IN1.2</p> <p>Regularly evaluate and update the policies to adapt to the rapidly evolving AI landscape</p>	
<p>Benefits</p> <p>Ensuring Responsible and Secure AI Implementation:</p> <p>A well-defined policy and framework reduce risks while ensuring the responsible and secure adoption of AI technologies, addressing the concerns of sector players regarding cybersecurity. Furthermore, having a committee will ensure regulatory compliance and best practices, improving AI effectiveness and security while safeguarding consumer interests.</p>	

25. NIST, *AI Risk Management Framework*, <<https://www.nist.gov/it/ai-risk-management-framework>>

IN2

Provide Funding and Incentives to Encourage Emerging Trends Adoption

The government can drive the adoption of AI, Digital, and Green Economy practices among sector players and the workforce by implementing funding and incentive programmes.

Initiatives	Case Studies
<div>IN2.1 Encourage grants and loans application for startups and SMEs focused on innovative solutions such as Penjana Kapital, Venture Capital Tax Incentives etc</div>	
<div>IN2.2 Provide tax deductions or relief for expenses related to implementing ESG improvements, such as retrofitting stores with energy-saving lighting or refrigeration systems<ul style="list-style-type: none">• Offer matching grants or co-investment opportunities to attract private investors to fund AI and ESG initiatives• Partner with financial institutions to offer green loans with favourable terms for retailers investing in eco-friendly technologies and practices</div>	<div>US’ Clean Energy Tax Incentives for Businesses:²⁶ In the US, the Inflation Reduction Act (IRA) of 2022 provides significant tax incentives to boost clean energy adoption and reduce GHG emissions across all sectors. For instance, the Energy Efficient Commercial Buildings Deduction offers a tax deduction for the cost of energy efficiency upgrades to commercial buildings, including improvements to the building envelope, interior lighting, and heating, cooling, ventilation, and hot water systems.</div>
Benefits	
<div>Providing Financial Incentives for Adoption: Financial support reduces the cost burden and accelerates the adoption of emerging technologies. Subsidies will reduce the perceived financial burden, further encouraging businesses to invest in sustainability.</div>	

26. International Revenue Service, Clean Energy Tax Incentives for Businesses, <https://www.irs.gov/pub/irs-access/p5886_accessible.pdf>

IN3

Develop National Talent Development Strategy to Bridge the Talent Gap

Initiatives	Case Studies
<div>IN3.1 Identify existing educational institutions, vocational training centres, or corporate training facilities that can be repurposed or enhanced to serve as specialised training hubs</div>	
<div>IN3.2 Collaborate with companies and technology leaders in the AI, Digital, and Green Economy sectors to ensure that the training is relevant and that students are exposed to real-world applications. Position the Centres of Excellence (CoEs) as the go-to places for cutting-edge AI, Digital, and Green Economy skills training. Effective marketing strategies can help attract top talent and establish the centres’ reputations.</div>	<div>U.S. TechFuture CoE: The United States has several CoEs focused on technology and sustainability. For example, the National Renewable Energy Laboratory (NREL) leads in green technology research, while initiatives like the MIT-IBM Watson AI Lab focus on advancing AI research and development.²⁷ National Centres such as the National Centre for Photovoltaics and the National Wind Technology Centre drive innovations that will power a clean, sustainable energy future while driving industrial growth.²⁸</div>
Benefits	
<div>Centres of Excellence: Elevating Skills and Innovation CoEs play a pivotal role in elevating the skill level of the workforce, thus increasing its competitiveness and ability to effectively meet the demands of various industry sectors. Furthermore, these centres serve as focal points for leading-edge research and innovation, driving the creation of new technologies and pioneering solutions.</div>	

27. National Renewable Energy Laboratory (NREL), <<https://www.nrel.gov/>>

28. Ibid

IN4

Upgrade Information Technological Infrastructure to Keep Pace with Emerging Digital Technologies

It is important for the government to enhance the nation’s technological infrastructure to support emerging digital technologies. This involves assessing the current infrastructure to identify and address gaps, ensuring it can effectively accommodate future advancements.

Initiatives	Case Studies
<div>IN4.1</div> <div>Promote the adoption of e-payment systems and digital wallets to facilitate cashless transactions, particularly in both urban and rural areas</div>	
<div>IN4.2</div> <div>Expand and upgrade the national broadband infrastructure to ensure high-speed internet access across both urban and rural areas. This enhancement will facilitate e-commerce and digital transactions</div> <div><ul style="list-style-type: none">Strengthen cybersecurity infrastructure to protect retailers from cyber threats and ensure the safety of digital transactions and customer data.Encourage public-private partnerships to develop and deploy advanced IT infrastructure, such as 5G networks and IoT solutions</div>	<div>Singapore Building a Future-Ready Digital Infrastructure:²⁹</div> <div>Singapore recognises the need for a higher-capacity broadband network to support future innovations and opportunities. As AI and Digital, rapidly evolve, the demand for high-speed connectivity continues to increase. To address this, the Infocomm Media Development Authority (IMDA) is investing up to SGD100 million to upgrade the Nationwide Broadband Network (NBN), ensuring it is prepared for future needs.</div>
Benefits	
<div>Enhancing IT and Connectivity:</div> <div>Optimising IT infrastructure enhances technological readiness and efficiency, while strengthening the IT domain reduces cybersecurity risks and encourages the adoption of AI and digital tools. Expanding internet access in rural areas further promotes the implementation of AI and Digital, contributing to overall economic growth.</div>	

29.Alita Sharon, *Singapore’s 10G Era: Future-Proofing Digital Infrastructure*, OpenGov, February 2024, <<https://opengovasia.com/2024/02/22/singapores10g-era-future-proofing-digital-infrastructure/>>; The National Renewable Energy Laboratory, NREL Welcomes Next Generation of Renewable Energy Researchers, <<https://www.nrel.gov/>>

Industry Players

IN5

Encourage Investment In Emerging Digital Technologies

It is highly essential for industry players to prioritise investments in emerging digital technologies, such as AI and Digital, to stay competitive and adapt to evolving global market trends.

Initiatives	Case Studies
<div>IN5.1</div> <div>Allocate resources to upgrade IT infrastructure, ensuring it can support new technologies like cloud computing, big data analytics, and IoT</div> <div><ul style="list-style-type: none">Form partnerships with technology providers, startups, and innovators to access cutting-edge solutions and expertise</div>	
<div>IN5.2</div> <div>Run pilot projects to test and validate the impact of new technologies before scaling them across the organisation</div> <div><ul style="list-style-type: none">Focus on win-win strategy by investing in digital technologies that improve environmental performance, such as energy management systems and waste reduction tools</div>	<div>Mobile App ‘Ask Sam’ Offers Answers and Emergency Alerts to Associates in Real-Time:³⁰</div> <div>US-based ‘Ask Sam’ is a mobile app developed for the retail giant Walmart. Utilising voice assistant technology, the app streamlines daily tasks for Walmart associates, enhancing customer service on the sales floor. It features functionalities such as locating specific products within the store, checking prices, and providing information about work schedules, thus simplifying various aspects of the associates’ responsibilities.</div>
Benefits	
<div>Optimising Technology Integration for Enhanced Engagement:</div> <div>A culture that embraces digital transformation not only boosts employee engagement but also drives successful technology adoption. By ensuring a structured and manageable integration of new technologies, organisations can minimise disruptions and optimise resource use. Conducting a comprehensive assessment is essential not only to ensure that digital tools effectively support operational needs and enhance performance but also to mitigate resistance during the transition.</div>	

30.Meng Chee, *Helping Associates Succeed at Work, While Elevating Customer Service & Safety: Mobile app ‘Ask Sam’ offers answers and emergency alerts to associates in real-time, Walmart*, July 2020, <<https://corporate.walmart.com/news/2020/07/29/helping-associates-succeed-at-work-while-elevating-customer-service-safety>>

IN6

Integrate Green Practices to Promote Environmental Awareness Among Employees And Consumers

Industry players are strongly encouraged to integrate green practices to boost environmental awareness among employees and consumers. This is essential for aligning with sustainability trends, reducing environmental impact, and fostering a culture of environmental responsibility within the organisation and its customer base.

Initiatives	Case Studies
<div>IN6.1</div> <div>Create and communicate a comprehensive environmental policy that outlines the organisation’s commitment to sustainability and green practices</div>	
<div>IN6.2</div> <div><div>Provide regular training sessions for employees and educate consumers on environmental issues and sustainability efforts, including topics such as recycling, energy conservation, and waste reduction.</div><div><div>• Recognise and reward departments or individuals who make significant contributions to the organisation’s environmental goals</div><div>• Design facilities with sustainability in mind, making it visible to employees and visitors. This can include using green building materials, installing solar panels, and implementing water-saving measures.</div></div></div>	<div>Nike ISPA Link Axis Pushes the Boundaries of Sustainable Design:³¹</div> <div>Nike introduced the ISPA Link Axis, its first entirely circular shoe crafted from recycled materials. Designed for easy disassembly and recycling, the Link Axis features interlocking parts and avoids the use of glue, supporting a closed-loop system and reducing waste. The shoe is made from 100% recycled polyester and TPU, significantly reducing the need for new materials and minimising its environmental impact.</div>
Benefits	
<div>Enhancing Sustainability through Building Awareness:</div> <div>Building awareness will help employees recognise the importance of sustainability, fostering more eco-friendly behaviours. Additionally, by demonstrating a commitment to green practices, a company can earn a positive reputation among stakeholders. Overall, this initiative promotes environmental responsibility, enhances employee engagement, and reinforces the company’s dedication to sustainability.</div>	

31.Nike, *Nike Marks First Exploration into Circular Design with ISPA Link Axis Shoe*, July 2024, <<https://www.nike.com/my/a/ispa-link-axis-release-info?msocid=031ed653230d6771371bc4bb270d6ce5>>

IN7

Enhance Talent Retention Strategy for High-Skilled Employees

Industry players are encouraged to improve talent retention by upskilling high-skilled employees through targeted training. This is a necessary step to ensure employees can adapt to AI, Digital, and Green Economy trends, equipping the workforce to meet the evolving demands of the sector.

Initiatives	Case Studies
<div>IN7.1</div> <div><div>Work with employees to regularly review and update individualised career development plans that align with their aspirations and the company’s goals</div><div><div>• Offer subscriptions to online learning platforms or reimbursements for relevant courses and certifications</div></div></div>	<div>Amazon Web Services (AWS) ‘Grow Our Own Talent’ Programme:³²</div> <div>In the US, Amazon’s ‘Grow Our Own Talent’ programme helps employees with non-traditional experience launch their careers in AWS data centres. For example, an employee might start at an Amazon fulfilment centre, secure a position as a process assistant, and decide to pursue a long-term career with the company. They then undergo a fully paid month of online and in-person training through the AWS work-based learning programme, ultimately transitioning into a security specialist role at an AWS Data Centre.</div>
<div>IN7.2</div> <div><div>Encourage internal mobility to expose employees to different aspects of the business, broadening their skill sets</div><div><div>• Partner with universities, vocational schools, and industry associations to offer tailored training programmes that meet the specific needs of the Wholesale and Retail Trade sector</div></div></div>	
Benefits	
<div>Empowering Employees through Targeted Upskilling:</div> <div>Upskilling high-skilled employees through targeted training encourages continuous learning, enhances job satisfaction, and reduces turnover rates. By acquiring relevant skills in AI, Digital, and Green Economy, employees can better align their expertise with sector demands, increasing their value and career prospects. Effective training programmes will also strengthen the overall capability of the workforce.</div>	

32.Amazon, *New AWS Upskilling Initiative Trains People for Data Center Roles*, September 2021, <<https://www.aboutamazon.com/news/aws/new-aws-upskilling-initiative-trains-people-for-data-center-roles>>

Academia

IN8 Collaborate with Sector Experts to Integrate Real-World Practices in Curriculum and Syllabus

To ensure that educational content aligns with current sector standards, academia should collaborate with industry experts. This partnership improves the relevance of curricula and syllabi, equipping students with the essential knowledge and skills for the workforce.

Initiatives	Case Studies
<p>IN8.1</p> <p>Integrate industry guest lecturers, internships with industry players, and industry projects into the curriculum to provide students with hands-on experience and direct industry exposure</p> <ul style="list-style-type: none">Academic institutions and industry experts are encouraged to collaborate to co-create and revise course materials, incorporating practical insights and case studies based on relevant skill setEstablish advisory boards comprising industry experts to offer continuous guidance and feedback on curriculum development and syllabus content.	<p>UF Warrington College of Business, Retail Centre:³³</p> <p>In the US, the UF Warrington College of Business, Retail Centre aims to cultivate future leaders by fostering interest in retail careers, training students for entry-level management roles, and promoting collaboration between retailers and academics. The centre offers courses like the Sears Holdings Retail Management Seminar, which features weekly lectures from industry professionals on topics such as Retail Store Management, Buying, and Planning. Additionally, the Retail Management Internship provides students with hands-on experience in the retail sector, offering a comprehensive understanding of retail operations and management.</p>
Benefits	
<p>Bridging Education and Workforce Needs:</p> <p>Through collaboration, students who graduate with real-world experience, not just theoretical knowledge, can transition into the workforce more smoothly. They will gain knowledge of relevant, up-to-date material and trends, aligning their education more closely with workforce needs. Advisory boards must play a role in providing guidance, helping institutions adapt to the demands of the sector and maintain high-quality education.</p>	

33. Warrington College of Business, <<https://warrington.ufl.edu/retail-center/contact/>>

IN9 Enhance Quality of Educators with Advanced Sector Training and Resources

Academia must equip educators with advanced industry training and access to comprehensive resources to elevate the quality of education. This approach ensures that educators are well-prepared to impart relevant and up-to-date knowledge, fostering a more effective learning environment for the future workforce.

Initiatives	Case Studies
<p>IN9.1</p> <p>Establish Industry-Academia Partnerships to provide educators with insights into current industry practices and trends. This should include:</p> <ul style="list-style-type: none">Encouraging educators to attend industry conferences, workshops, and seminars to stay updated on wholesale and retail innovationsPromote job shadowing and hands-on training with industry professionals to provide real-world context to academic teachingInvolve industry experts in co-creating curriculum content to ensure it reflects the skills and knowledge required in the sectorEstablish feedback mechanisms where educators can receive constructive input from industry partners and students on their teaching effectiveness	<p>SkillsFuture for Educators (SFEd):³⁴</p> <p>SFEd is a Singaporean initiative aimed at advancing educators’ skills and promoting lifelong learning. Its Professional Development Framework includes a roadmap that guides educators in strengthening their practice in six (6) areas, including assessment literacy, differentiated instruction, and inquiry-based learning, among others. There are four (4) levels of practice that represent the progression of an educator’s proficiency in a specific area and serve as benchmarks for professional development and growth.</p>
Benefits	
<p>Elevating Educators’ Expertise:</p> <p>Enhancing the quality of educators through advanced industry training and resources will increase their professional capabilities, providing them with the latest sector-relevant knowledge and skills. Consequently, educators’ teaching quality improves as they are equipped with up-to-date resources to support their teaching.</p>	

34. Academy of Singapore Teachers, *SkillsFuture for Educators (SFEd)*, <<https://academyofsingaporeteachers.moe.edu.sg/professional-excellence/skillsfuture-for-educators/overview/>>

Training Providers

IN10 Develop Applicable Training Content by Building Partnership with Sector Experts

It is vital for training providers to work closely with industry players to develop practical training content that aligns with the sector’s operational needs, especially in on-demand AI, Digital, and green skills. This includes fields like data analytics and sustainable business strategies, which are essential for addressing existing training gaps.

Initiatives	Case Studies
<p>IN10.1</p> <p>Conduct a training gap analysis of current programmes and refine existing offerings accordingly</p> <ul style="list-style-type: none">Training providers can refer to the in-demand skills analysis output (page 46) to identify potential new training courses	<p>Singapore Institute of Retail Studies (SIRS) Create Custom Training Solutions in Partnership with Retail Organisations:³⁵</p> <p>In Singapore, SIRS is working with retail sector leaders to develop training solutions. Their collaboration with Alibaba Business School has resulted in the creation of the ‘Alibaba Managerial Elite Programme’. This comprehensive training programme is designed to develop digital professionals, focusing on equipping participants with expertise in data analytics, content marketing, and digital strategies to effectively manage and grow online businesses.</p>
<p>IN10.2</p> <p>Training content should remain up to date with the latest technology and sustainability developments on an ongoing basis</p>	
<p>IN10.3</p> <p>Establish advisory panels comprising industry experts, business leaders, and retail associations to offer guidance on curriculum development</p>	
Benefits	
<p>Enhancing Training Through Industry Partnerships:</p> <p>Developing training programmes in partnership strengthens teamwork and collaboration between training providers and industry players. Greater accessibility and flexibility enable individuals to learn with easy access to high-quality materials and courses at any time. This approach ensures that skills are developed and kept up to date with the evolving needs of the sector.</p>	

35. Singapore Institute of Retail Studies, *Alibaba Managerial Elite Programme*, <<https://www.sirs.edu.sg/courses/business-and-marketing-excellence/ecommerce/alibaba-business-school/alibaba-managerial-elite-programme>>

IN11 Enhance Training Delivery and Effectiveness by Onboarding More Credible and Certified Training Providers

Training institutions must onboard reputable training providers with expertise in AI, Digital, and Green practices, as these areas are essential for the Wholesale and Retail Trade sector.

Initiatives	Case Studies
<p>IN11.1</p> <p>Assess the credibility and certification status of training providers to ensure they meet the specific needs and standards of the sector</p> <ul style="list-style-type: none">Implement a quality assurance programme that regularly evaluates the effectiveness of training delivery and contentForm partnerships with leading companies and industry experts within the Wholesale and Retail Trade sector to enhance the credibility of the training providerUse Learning Management Systems (LMS) and other digital platforms to deliver effective training content and track learners’ progress	<p>Train the Trainer (TTT) Programme: ³⁶</p> <p>Singapore’s TTT programme, offered by the Institute of Technical Education, is designed for workplace managers, supervisors, and individuals responsible for training, coaching, and assessing employees. This programme also addresses organisational educational needs. Modules include ‘Prepare and Conduct Coaching,’ which equips participants with the knowledge and skills to deliver effective on-the-job training, and ‘Design and Develop Training Curriculum,’ focusing on identifying training needs and creating in-house training programmes.</p>
Benefits	
<p>Enhancing Training Standards through Credible Providers:</p> <p>Onboarding credible and certified training providers will ensure that training remains current with the latest retail sector trends and requirements. Learners will benefit from high-quality, sector-relevant education in areas such as AI, Digital, and green practices. This approach will enhance training delivery, maintaining high standards through regular evaluations and ongoing refinements.</p>	

36. Institute of Technical Education, *Train the Trainer (TTT) Programme*, <<https://www.ite.edu.sg/courses/part-time-courses/train-the-trainer>>

Taking into account the Initiatives proposed, moving forward, these are the

Top 5 Initiatives

needed to kickstart the workforce transformation towards AI, Digital, and Green Economy to ensure their successful implementation

1  GOVERNMENT

Establish **Multi-Stakeholder Task Force** comprising government representatives, industry leaders, academia, and subject matter experts to oversee the development and implementation of policies and frameworks for AI adoption, talent development, and green practices

2  GOVERNMENT

Launch **National Upskilling Fund** to provide grants or subsidies for training providers to develop and deliver courses in collaboration with industry experts, focusing on AI, Digital, and Green Economy

3  INDUSTRY PLAYERS

Implement **Green Certification Programme** and incentivise companies to integrate green practices and promote environmental awareness among employees and consumers

4  ACADEMIA

Create **Industry-Academia Collaboration Platform** to integrate real-world practices into educational curricula, enhance the quality of educators through advanced sector training, and ensure that training content remains applicable and up-to-date

5  TRAINING PROVIDERS

Develop **Digital Infrastructure Upgrade Scheme** to provide financial incentives for businesses to invest in emerging digital technologies, with a focus on enhancing cybersecurity, adopting cloud services, and implementing AI-driven solutions

Conclusion

With rapid development in the AI, Digital, and Green Economy, the Wholesale and Retail Trade sector is gearing to see significant impact to the Malaysian workforce. Over the next three (3) to five (5) years, it is vital for the Malaysian Wholesale and Retail Trade Sector to remain a key figure in the region in conjunction with its rapid rise worldwide.

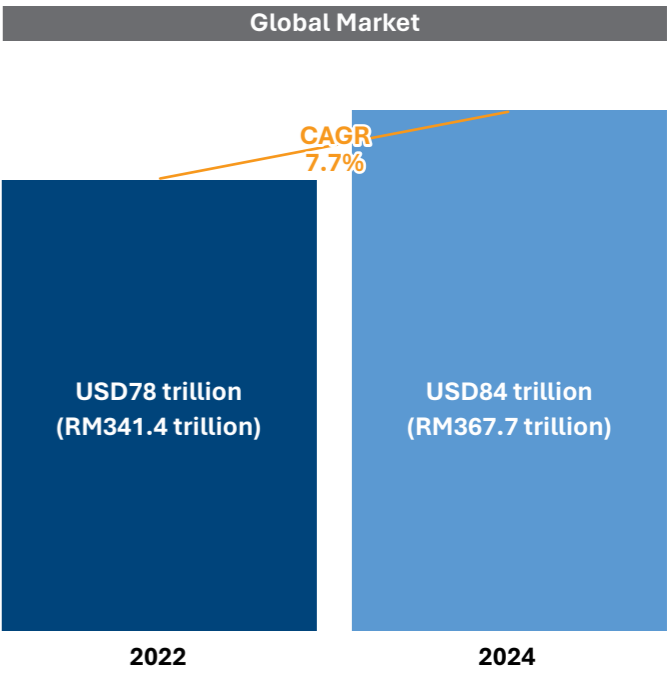
With a **Global Market Value growing from USD78 trillion (RM341.4 trillion) in 2023 to a projected USD84 trillion (RM367.7 trillion) by 2024**, reflecting a 7.7% CAGR. Consumer behaviour post COVID-19 saw a rise in online shopping and home deliveries gradually replacing in store visits.

In Malaysia, **this sector is vital to the economy, contributing RM114.1 billion from Wholesale Trade and RM118.5 billion from Retail Trade, employing around 1.8 million people**. However, challenges like the BDS saw a rise in mindful spending and a transition towards more agile and technology-driven business models.

The study highlights **23 key roles in Wholesale Trade and 57 in Retail Trade, assessing their vulnerability to these transformative trends**. A significant percentage of these roles are either highly or moderately impacted by AI and Digital, indicating the need for workforce adaptation and upskilling.

Looking ahead, embarking on this journey of continuous adaptation and innovation will be vital in preparing the Wholesale and Retail Trade workforce for ongoing advancements in AI, Digital, and Green Economy. To achieve this, **the MyMAHIR Future Skills Talent Council (FSTC) will conduct regular needs assessments to identify immediate and future workforce skills gaps, analyse talent demands by sector and educational level, propose strategies, determine essential sector-specific skills, and periodically update these skills in response to technological advancements and evolving operating environments**. Additionally, the council will align the educational system with the sector's needs while actively fostering collaboration among government, industry, academia, and training providers to enhance Malaysia's competitiveness and promote sustainable growth in the Wholesale and Retail Trade sector.

The Wholesale and Retail Trade sector is experiencing steady growth globally:



In Malaysia, this sector is vital to the economy, contributing **RM114.1 billion** from Wholesale Trade and **RM118.5 billion** from Retail Trade, employing around **1.8 million** people.

Key trends impacting existing roles:



The study highlights **23 key roles** in Wholesale Trade and **57** in Retail Trade, Assessing their vulnerability to these transformative trends.

MyMAHIR Future Skills Talent Council (FSTC) has been set up to prepare for these changes

Validation Workshop



Abbreviations

5G	5th Generation Mobile Network	IR4.0	The Fourth Industrial Revolution
AI	Artificial Intelligence	IT	Information Technology
A.I.R.	Athlete Imagined Revolution	LIR	Low-Impact Roles
AR	Augmented Reality	LLMs	Large Language Models
ASRS	Automated Storage and Retrieval System	LMS	Learning Management Systems
AWS	Amazon Web Services	MIR	Medium-Impact Roles
AWS	Automated Warehouse System	MNCs	Multinational Companies
B2B	Business-to-business	MDEB	Malaysia Digital Economy Blueprint
BDS	Boycott, Divestment, and Sanctions	MyNSR	Malaysia National Skills Registry
CAGR	Compound Annual Growth Rate	NBN	Nationwide Broadband Network - Singapore
CoE	Centre Of Excellence - US	NFTs	Non-Fungible Tokens
CRM	Customer Relationship Management	NLP	Natural Language Processing
DNA	Deoxyribonucleic acid	NETR	National Energy Transition Roadmap
E2E	End-to-end	NIST	National Institute of Standards and Technology - US
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization	NREL	National Renewable Energy Laboratory - US
ERP	Enterprise Resource Planning	PLCs	Public Listed Companies
ESG	Environment, Social Governance	Q&A	Question and Answer
EY	Ernst & Young	RMKe-12	Twelfth Malaysia Plan
FSC	Forest Stewardship Council - Germany	ROI	Return of Investment
GDP	Gross Domestic Product	RPA	Robotic Process Automation
GenAI	Generative Artificial Intelligence	RPET	Recycled PET
GHG	Greenhouse Gas	SEM	Search Engine Marketing
GWh	Gigawatt hours	SEO	Search Engine Optimisation
HOD	Head of Department	SFE d	Skills Future for Educators
HR	Human Resources Department	SIRS	Singapore Institute of Retail Studies
HSE	Health, Safety, and Environment	SMEs	Small and Medium-sized Enterprises
ICT	Information and Communications Technologies	TTT	Train the Trainer
IMDA	Infocomm Media Development Authority - Singapore	UI	User Interface
IN	Initiatives	UX	User Experience
IoT	Internet of Things	VR	Virtual Reality
IRA	Inflation Reduction Act - US	WMS	Warehouse Management System

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