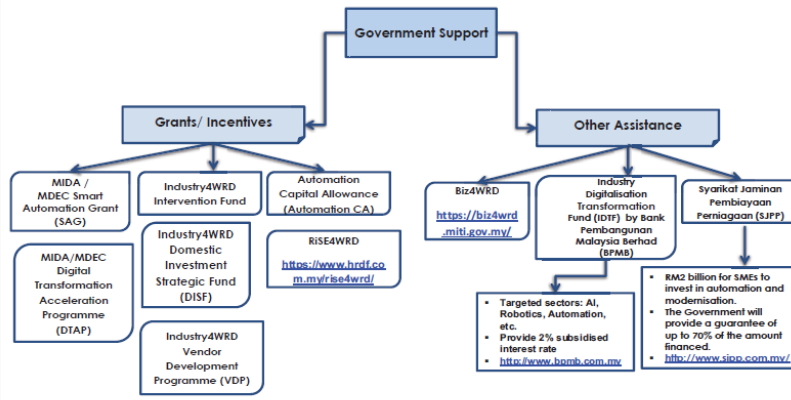


MALAYSIA'S MOVE TOWARDS EMBRACING INDUSTRY 4.0: A Roadmap to Lighthouse



The manufacturing sector in Malaysia has played a vital role in modeling the country as a significant player in the global value chain. In recent decades, the manufacturing sector has increasingly evolved from mass production lines of intensive labour force to automatised infusion and robotics processes in increased efficiency.

The National Policy on Industry 4.0: Industry4WRD has set specific goals and targets for the transformation of the nation's manufacturing sector. The policy aims in improving productivity, strengthening the innovation capacity and capability, driving the shift to a higher-skilled workforce, and expanding the overall contribution of the manufacturing sector to the national economy.

Having experienced productivity stagnation and demand fragmentation in past decades; the sector needs innovative reboots and re-imagine its qualities from conventional models to greater technology adoption. As smart technology unleashes new narration and fresh breath in the industrial sector, the clarion call to shift to higher value-added process, digitalisation, advanced manufacturing technologies and efficient resource utilisation is greatly warranted to drive Malaysia's competitiveness in the global economy.

To reiterate the high stakes, Industry 4.0 arrives in the most critical decade for climate action. Scientists stressed that humankind could face existential risk as early as 2050 if the world don't act to reduce greenhouse gas emissions in far reaching changes. Likewise, Industry 4.0 could address the rapid emergence of ecological constraints, balancing global resource consumption against availability, human health and well-being, supply chain management, reduction in wastages and last mile delivery efficiency. Its growth potential is limitless, but then again it all boils down to knowledge in application.

The COVID-19 pandemic had forced businesses to reshape their day-to-day operations to more digital and consumer-centric approaches.

Businesses are being transformed over tipping points as they compete to the quality and pricing of those companies that hold the economics of scale from early adoption of Industry 4.0. The challenge is also intense in the new norm of restricted public movements and reduced foreign labour due to local-first policy and tighter border control of foreign citizens' entry.

Research has revealed tangible results in productivity increase, products variation and shorter time to market within the first year of Industry 4.0 adoption. Low cost labour offered by developing countries may soon be irrelevant as Industry 4.0 phases out routine jobs; where robots and artificial intelligence only require minimal human cognitive involvements. SME companies too need to think ahead and "future

proof" their businesses to continue moving up the value chain.

It is inevitable that industries in Malaysia are facing obstacles in implementing Industry 4.0 technologies. "Pilot purgatory" as it commonly assumed in implementing without knowledge, adverse company culture between top management and operating levels; and diversion in generational gaps to digest new business pitches on Industry 4.0 adoption are only some of factors that require higher intervention from the stakeholders.

While the Government's role in the whole transformation process is as an enabler to ensure the initiatives of Industry 4.0 technologies is implemented with proper subject experts, financial and infrastructure support frameworks, in order

for this strategy to work, it will also requires MNCs and domestic industry players having successfully transformed in Industry 4.0 technologies to encourage, guide and nurture their supply chain companies for higher technology adoption.

Thus, MIDA is taking proactive steps to introduce Malaysia's Lighthouse programmes to invite existing multinationals and domestic lead companies from various industries to take up this experimentation and emerge as lighthouses to smaller companies in the industry value chain. The Lighthouse industry player should have taken 4IR/Ind4.0/Smart Manufacture technology from pilot to integration at scale, thus achieving significant financial and operational benefits. The company or its project acts as a beacon to guide other local companies, some that are

looking to apply artificial intelligence, system integrations, advanced analytics, autonomous robots and other technology applications to overcome challenges in upgrading existing production. By guiding the implementing of Industry 4.0 in scalable integrated phases, the Lighthouse player would boost significant impacts to local companies and businesses by resetting the benchmark of operational and sustainability levels. Remarkable improvement could result in a plethora of areas, in productivity, sustainability, agility, speed to market and efficient product customisation upon successful transformation of the smaller companies and the Lighthouse company itself. Financial support in partial grants and soft loan could be considered for both parties in their applications to MIDA.

The Malaysia Lighthouse programme by MIDA anticipates integration of economic multiplier effects showcased in the DNA of domestic manufacturing companies resulting from advanced 4IR / Ind 4.0/ Smart Manufacturing technology adoption, Innovations / Research and Development (R&D), Ecosystems Collaborations, Socio-Economic Development and Human Capital Development.

Looking beyond, recognising the successful companies in this programme, a new roadmap will be drafted for the next stage of Industry4WRD initiatives, to include non-manufacturing/ services sectors. Malaysia envisage its dynamic manufacturing and services sectors to reign by technological occupations, innovation capacity, specialised skilled talent pool, high tech operation assets and enhanced productivity; for a primary destination in smart, cleaner and efficient manufacturing and smart services investments. " For more information, please visit www.mida.gov.my or email lighthouse@mida.gov.my

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