

Criteria of Industry 4.0 Readiness –Technology

The key parameter used to assess industries of their readiness to embrace Industry 4.0 would be technology. While the previous industrial revolutions have been driven by advances involving the emergence of mechanizations, steam, as well as electric and electronics, Industry 4.0 is driven by the advent of the Internet and the rise of a virtual world.

The Internet of Things (IoT) has always been touted as a major technological key to achieve Industry 4.0. The concept revolves around attaching daily devices and systems with digital sensors and actuators, then connecting them via the Internet or a local network., This is sometimes referred to as the Intranet of Things. This network of sensors allows the data acquired to be accumulated in the cloud, where decisions can be made based on the artificial intelligence (AI) assisted analysis. AI is capable of getting insights from copious amounts of data, drawing unparalleled insights and enabling automation processes like never before. Following which, actuators, robotic arms and controllers would execute the instructions extracted from the cloud. The use of robotics would be able to handle jobs at a larger scale and for longer hours, compared to human workers.

IoT will introduce a synergy between systems that is unprecedented, resulting in better resource planning and intervention. Nevertheless, there is a need to have bigger bandwidth and faster Internet speeds to support the increasing amounts of data being uploaded to the cloud, hence creating an urgency for 5G technology.

Notwithstanding, security remains a concern with the use of IoT. Several high profile data breaches and accidents have occurred all over the world, resulting in financial losses and breach of trust. In the near future, industries would be expected to minimize data tampering and leakage.

In a nutshell, while embracing technology may have been essential in previous industrial revolutions, having the right mix of technologies and possessing the right knowledge would be key to ensure successful adoption of Industry 4.0.

The Ministry of International Trade and Industry (MITI) is driving the Industry4WRD initiative to transform the manufacturing industry in Malaysia towards Industry 4.0 adoption. To find out how

you can be ready for industry 4.0, visit MITI's website at <https://www.miti.gov.my/index.php/pages/view/4832>.