

Specification of Competency Standards
for the Manufacturing Technology.
Unit of Competency.

Functional Area - Business Intelligence and Information Technology

Title	Implement “Industry 4.0” extended product lifecycle management involves monitor product condition throughout their entire lifecycle, from design, manufacturing, completion, and customer use, to disposal, ultimately optimising the lifecycle and user experience
Code	111553L5
Range	This unit of competency is applicable to the business intelligence and information technology departments, marketing, sales and customer management departments / marketing departments, and product design and development departments / engineering departments of companies in the manufacturing technology industry. Practitioners should be capable to master “Industry 4.0” product lifecycle management methodologies and implement “Industry 4.0” extended product lifecycle management
Level	5
Credit	6
Competency	Performance Requirements - Understand relevant knowledge of “Industry 4.0” product lifecycle management standards - Understand the product lifecycle is a strategic business model that supports the creation, management, distribution, and use of product information across the entire enterprise and throughout the product lifecycle (from concept to end-of-life). It integrates elements such as employees, processes, information, etc. - Understand various product data management and engineering change network systems, such as product data management (PDM) and product lifecycle management (PLM) - Understand data management techniques for “Industry 4.0” products: from suppliers to internal enterprises to customers - Understand the skills for collaboration and information synchronisation, including product design, product manufacturing, and product maintenance - Implement “Industry 4.0” extended product lifecycle management - Able to share business processes and product knowledge within the enterprise, encompassing all stages of the product lifecycle from conception to market launch - Able to apply data collected through cyber-physical systems (CPS), we can optimise the entire product lifecycle and achieve a new operating model for customised products and services - Able to leverage past product development knowledge and digitised design information as a basis for each stage of new product development, achieving collaborative design and improving R&D efficiency - Able to apply methods to extended product lifecycle management, such as finding new markets for products, improving product lines, and developing and producing products for new target markets - Able to incorporate the developed Industry 4.0 system to the latest laws and regulations concerning about market, environmental protection, quality and risk management - Professional handling of extended product lifecycle management based on “Industry 4.0” - Able to ensure the accuracy of all content and data during the product lifecycle management process
Assessment Criteria	The integrated outcome requirements of this unit of competency are:

	• Able to master the “Industry 4.0” product lifecycle management method • Able to adapt to specific circumstances of enterprise and implement “Industry 4.0” extended product lifecycle management
Remark	Cyber- Physical System (CPS): CPS is a system that deeply integrates Internet of Things (IoT) technology with control systems. It transforms real-time data from physical spaces (including production) into network environment for comprehensive analysis, processing, and display (including digital twins). The resulting knowledge data is stored in database and the control system transforms decision information into control commands and feeds them back to the physical space (including production) Individuals who possess the above knowledge and competency are able to support the enterprise to achieve the Industry 4.0 digital maturity level of transparency (2i)