

DIGITAL ROADMAP


As you embark on your digital journey, this Digital Roadmap serves to guide your company through the process.



Stage 01 Getting Ready for the Digital Economy

Streamlined Operations,
Enhanced Capabilities

 Digital Wearables*
for Workers' Health
and Safety

 e-Permit-to-work*
(e-PTW)

 e-Procurement

 Field Management

 Inventory (Materials
& Equipment)
Management

 Project Management

 Training Platforms

 Workforce
Management



Stage 02 Growing in the Digital Economy

Integrated Systems,
Innovative Planning

 3D Printing for
Maintenance

 3D Visualisation for
Project Crafting

 Asset Data and
Information Integration

 Equipment Health
Monitoring


 Integrated
Inspection System



Stage 03 Leaping Ahead

Intelligent Business,
Automated Operations

 Predictive Asset
Monitoring and
Maintenance

 Project Simulations

Project Simulations

 Semi-Automated
Robotics

Semi-Automated
Robotics



Business Capabilities

Accounting Management, Customer Relationship Management, Cybersecurity, Human Resource Management

* May require close consultation and collaboration with site owners throughout the digital adoption process, e.g. in the refinery operations environment.

Note: This roadmap will be updated over time as digitalisation of the industry progresses and new technologies are introduced to the industry.

DIGITAL SKILLS NEEDED: DIGITAL ROADMAP ON TRAINING



This training roadmap serves as a guide to prepare companies' workforce to adopt digital solutions at each of the three stages of growth.

	STAGE 01 Getting Ready for the Digital Economy	STAGE 02 Growing in the Digital Economy	STAGE 03 Leaping Ahead
"TECH BASICS" All employees in the industry	<ul style="list-style-type: none"> • Project Management Professional Training • SkillsFuture for Digital Workplace (SFDW) • Mindset Transformation for the Workplace • Basic Digital Confidence 	<ul style="list-style-type: none"> • Fundamental Data Analysis using Excel 2016 • Introduction to Data Analytics and Applications • Data Analysis using Python • Data Analytics Using R • Robotic Process Automation • Intermediate Robotic Process Automation • Robotic Process Automation Implementer • Strategies for Effective Data and Information Management • Fundamentals of Data Architecture, Governance and Strategy • SolidWorks – 3D Modelling and Drawing • AutoCAD 2018 Basics (2D & 3D) • Business Needs Analysis – a Data-Driven Approach • Introduction to Data Engineering 	<ul style="list-style-type: none"> • Autonomous Mobile Robots (AMR) Implementation and Applications • Application of Robotics • Autonomous Robots and Computer Vision • Technology and Applications of Digital Transformation and Robotics • AI E-Enabled Robotics for Beginners • Introduction to Predictive Analytics for Maintenance
Vendor Solution-Specific Training			
"TECH ADVANCED" Employees that use or are exploring advanced tech in their work / organisation	<ul style="list-style-type: none"> • Introduction to Predictive Analytics for Maintenance 	<ul style="list-style-type: none"> • Appreciation of IoT and Data Management • Collaborative Robot Cell Integrated with Vision for Shop Floor Applications • Industrial Robotised Polishing • Data Engineering for Effective Data Analytics 	<ul style="list-style-type: none"> • Introduction to AI and Machine Learning • Analytics and Computational Modelling
Training programmes are aligned to Skills Framework and emerging areas under SkillsFuture Series			

Course directory: <https://www.sp.edu.sg/pace/courses/course-type/short-modular>