

## **FACT SHEET**

# **SEA TRANSPORT (BUNKERING) INDUSTRY DIGITAL PLAN**

### **Background**

1. The Sea Transport Industry is a key pillar of the Singapore Maritime Cluster, which contributes to about 7% of the nation's Gross Domestic Product (GDP) and employs about 170,000 people. As Singapore advances its role as a Global Maritime Hub for Connectivity, Innovation and Talent, digitalisation and automation will significantly change the Sea Transport landscape. The availability of digital tools will help small and medium enterprises (SMEs) in the Sea Transport Bunkering sub-sector to better streamline their processes and forge strong inter-linkages across the maritime cluster. This helps them to improve their competitiveness and access more revenue streams.

### **Sea Transport (Bunkering) Industry Digital Plan**

2. Aligned to the Sea Transport Industry Transformation Map (ITM) launched in January 2018, the Sea Transport (Bunkering) Industry Digital Plan (IDP) is part of the SMEs Go Digital programme<sup>1</sup> that aims to make going digital simple for SMEs.

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<sup>1</sup> [www.imda.gov.sg/SMEsGoDigital](http://www.imda.gov.sg/SMEsGoDigital)



**INFOCOMM MEDIA DEVELOPMENT AUTHORITY | SMEs GO DIGITAL**

# 3 STEPS TO GO DIGITAL

**1 | Is your business digital-ready?**  
Find out using the Industry Digital Plan (IDP) for your sector.

**2 | How do you get started?**  
Take up pre-approved solutions with grant support.

**3 | Where can you get help?**  
Contact your nearest SME Centre for support.

**For more information**  
Scan the QR code or visit [www.imda.gov.sg/SMEsGoDigital](http://www.imda.gov.sg/SMEsGoDigital)

**Support available**

- Pre-Approved Solutions
- Start Digital Pack
- Grow Digital
- Consultancy Services (SME Digital Tech Hub)
- Government Grants (e.g. Productivity Solutions Grant (PSG); SkillsFuture Enterprise Credit (SFEC))
- Digital Resilience Bonus
- Digital Project Management Services

3. The Infocomm Media Development Authority, in partnership with the Maritime and Port Authority of Singapore and the industry, jointly developed the Sea Transport (Bunkering) IDP to guide SMEs in their digital transformation efforts. It provides SMEs in the bunkering sub-sector with a step-by-step guide on digital solutions and workforce training relevant for them. The IDP will be updated over time as the industry progresses and newer, more relevant technologies are introduced.
4. The three-stage Digital Roadmap of the IDP charts out the digital solutions that bunkering SMEs can adopt at each stage of their growth. Larger enterprises in the Sea Transport industry can also use the digital roadmap to guide their digital journey.

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**DIGITAL ROADMAP FOR BUNKERING**

This Digital Roadmap serves as a guide for your business as you embark on your digital journey.

**STAGE  
01**

**GETTING DIGITAL  
ECONOMY READY**

Streamlined Operations  
Optimised Resources



**Bunker Barge Planning System**



**Bunker Fuel Data Profiling**



**Bunker Sales Management**



**Video Surveillance and  
Monitoring System**

**STAGE  
02**

**GROWING IN THE  
DIGITAL ECONOMY**

Integrated Insights  
Collaborative Ecosystem



**Advanced Vessel  
Management**



**Electronic Bunker  
Delivery Note (e-BDN)**

**STAGE  
03**

**LEAPING  
AHEAD**

Autonomous Operations  
Intelligent Business



**Blockchain for  
Bunkering Transactions**



**Just In Time (JIT) Platform**



**Smart Vessels**

**BUSINESS CAPABILITIES**

Accounting Management, Human Resource Management, Customer Relationship Management,  
Sales Management, Inventory Management, Fleet Management and Cybersecurity

Note: The roadmap will be progressively updated to reflect the advent of new digital tools and technologies for the industry.

- **Stage 1: Getting Digital Economy Ready.** The first stage aims to help bunkering SMEs be prepared for the digital economy through basic digital solutions that enable them to optimise their operations and channel resources into providing higher-value work.
  - **Stage 2: Growing in the Digital Economy.** The second stage highlights digital solutions that enable bunkering SMEs to participate in collaborative and integrated ecosystems to maximise their resources and business value.
  - **Stage 3: Leaping Ahead.** The third stage identifies advanced digital technologies, such as blockchain for bunkering transactions and automated navigation, that bunkering SMEs can adopt to gain a competitive edge to be forerunners in the provision of Port Operations and Services.
5. The IDP also includes a Digital Roadmap on Training to ensure that the industry's workforce is adequately equipped with the necessary skills to adopt digital solutions. This enables them to handle the challenges that come with digital transformation.

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## DIGITAL SKILLS NEEDED

### DIGITAL ROADMAP ON TRAINING



	STAGE 01 GETTING DIGITAL ECONOMY READY	STAGE 02 GROWING IN THE DIGITAL ECONOMY	STAGE 03 LEAPING AHEAD
<b>"TECH BASICS" COURSES</b> Require broad-based digital literacy and awareness	Introduction to Bunkering Operations with Digital Capabilities <ul style="list-style-type: none"> <li>• Introduction to information management for Bunker Supply Chains</li> <li>• Mindset Transformation for Workplace</li> <li>• Maritime Cyber Security (Basic) Training Programme</li> <li>• Fundamental Data Analysis using Excel 2016</li> <li>• Introduction to Data Analytics and Applications</li> <li>• Robotic Automation Process</li> <li>• Appreciation of IoT and Data Management</li> <li>• WSQ Fundamentals of the Personal Data Protection Act</li> <li>• HR for Non-HR Managers</li> <li>• Relationship Marketing &amp; Digital Customer Relationship Management</li> <li>• Effective Digital Marketing and Sales</li> <li>• Stakeholder Relations</li> </ul>	Leveraging information management for Bunker Supply Chain <ul style="list-style-type: none"> <li>• Intermediate Robotic Process Automation</li> <li>• Introduction to AI and Machine Learning</li> <li>• Practitioner Certificate in Personal Data Protection (Singapore) Preparatory Course</li> <li>• Fundamentals of Drones/Unmanned Aerial Vehicle (UAV)</li> <li>• Leveraging digital technology to streamline operational effectiveness and enhance information flows</li> </ul>	Optimising information management for Bunker Supply Chain <ul style="list-style-type: none"> <li>• Robotic Process Automation Implementer</li> <li>• Introduction to Data Analytics and Applications</li> <li>• Advanced Operations of Drones/Unmanned Aerial Vehicles</li> <li>• Transforming business and processes with Blockchain</li> </ul>
<b>"TECH ADVANCED" COURSES</b> Require higher proficiency digital skills	Vendor Solution Specific Training <ul style="list-style-type: none"> <li>• Data Storytelling</li> <li>• Tableau Desktop I and Desktop II</li> <li>• DS102: Data Analytics with Python</li> <li>• Certified Deep Learning Specialist</li> </ul>	Vendor Solution Specific Training <ul style="list-style-type: none"> <li>• Certified Data Analytics (R) Specialist</li> <li>• Deep Learning and Machine Learning with TensorFlow</li> <li>• Advanced Data Analytics and Machine Learning with R</li> </ul>	Vendor Solution Specific Training <ul style="list-style-type: none"> <li>• AWS Big Data Specialist</li> <li>• Wiley Certified Data Analyst</li> </ul>

6. SMEs can also use the online Self-Assessment Checklist to assess their digital readiness and identify opportunities to go digital based on their current business operations, level of digitalisation and business expansion plans. For more information on the Sea Transport (Bunkering) IDP, visit: [www.imda.gov.sg/sea-transport-idp](http://www.imda.gov.sg/sea-transport-idp).

## SMEs Go Digital

7. The sector-specific IDPs are central to the SMEs Go Digital programme. The programme also comprises the following:

- **Pre-Approved Solutions**

To make it easy for SMEs to adopt digital solutions recommended in the Sea Transport (Bunkering) IDP, IMDA provides a list of pre-approved solutions assessed to be market-proven, cost-effective and supported by reliable vendors. SMEs can visit the MPA website (<https://www.mpa.gov.sg/web/portal/home/maritime-companies/research-development/industry-digital-plan>) for the contact information of the pre-approved solution providers.

If funding support is required, SMEs can apply for the Sea Transport IDP Grant with MPA, before purchasing and implementing the digital solutions. SMEs can also participate in digital projects that are jointly initiated by IMDA and industry leaders. Such projects pilot new digital solutions or platforms that have the potential to uplift the whole sector.

- **Start Digital**

For SMEs that are just starting their business or are new to digital technology, they can take up a **Start Digital Pack**<sup>2</sup> to begin their business right with foundational and competitively-priced digital solutions. New SMEs can take up any two solutions free for at least six months with a minimum 18-month contract period from five categories: Accounting, Human Resources Management & Payroll, Digital Marketing, Digital Transactions and Cybersecurity. The solutions are pre-approved by IMDA and offered by Start Digital Partners like DBS, M1, Maybank, OCBC, Singtel and UOB.

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<sup>2</sup> [www.imda.gov.sg/StartDigital](http://www.imda.gov.sg/StartDigital)

- **Consultancy Services**

For a more comprehensive review of their business, SMEs can approach Business Advisors at their nearest **SME Centre**<sup>3</sup> for business diagnosis and advisory on digital solutions relevant to their operations. SMEs that require specialist consultancy on sophisticated technologies, such as data analytics and cybersecurity, will be referred to the Principal Consultants at the **SME Digital Tech Hub**<sup>4</sup>. These digital consultancy services are provided at no cost to SMEs.

- **Digital Project Management Services**

SMEs can consider engaging **Digital Project Management Services**<sup>5</sup> to support them in the implementation of digital solutions. The project managers can help with business process re-engineering and job redesign to get the maximum benefits and achieve more sustainable outcomes from going digital.

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<sup>3</sup> List of SME Centres can be found [here](#)

<sup>4</sup> For more information, visit: [www.digitaltechhub.sg](http://www.digitaltechhub.sg)

<sup>5</sup> Digital Project Management Services can be accessed [here](#)

## **About Infocomm Media Development Authority (IMDA)**

The Infocomm Media Development Authority (IMDA) leads Singapore's digital transformation with infocomm media. To do this, IMDA will develop a dynamic digital economy and a cohesive digital society, driven by an exceptional infocomm media (ICM) ecosystem – by developing talent, strengthening business capabilities, and enhancing Singapore's ICM infrastructure. IMDA also regulates the telecommunications and media sectors to safeguard consumer interests while fostering a pro-business environment, and enhances Singapore's data protection regime through the Personal Data Protection Commission.

For more news and information, visit [www.imda.gov.sg](http://www.imda.gov.sg) or follow IMDA on Facebook IMDAsg and Twitter @IMDAsg.

## **About Maritime and Port Authority of Singapore (MPA)**

The Maritime and Port Authority of Singapore (MPA) was established on 2 February 1996, with the mission to develop Singapore as a premier global hub port and international maritime centre (IMC), and to advance and safeguard Singapore's strategic maritime interests. MPA is the driving force behind Singapore's port and maritime development, taking on the roles of Port Authority, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative. MPA partners the industry and other agencies to enhance safety, security and environmental protection in our port waters, facilitate port operations and growth, expand the cluster of maritime ancillary services, and promote maritime R&D and manpower development.

[For more information, visit www.mpa.gov.sg.](http://www.mpa.gov.sg)

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