

SEA TRANSPORT SHIP AGENCY | INDUSTRY DIGITAL PLAN

A Guide for Small and Medium Enterprises (SMEs) to Assess Their Digital Readiness and Opportunities to Go Digital



Sector lead:



In supported of:



Supported by:



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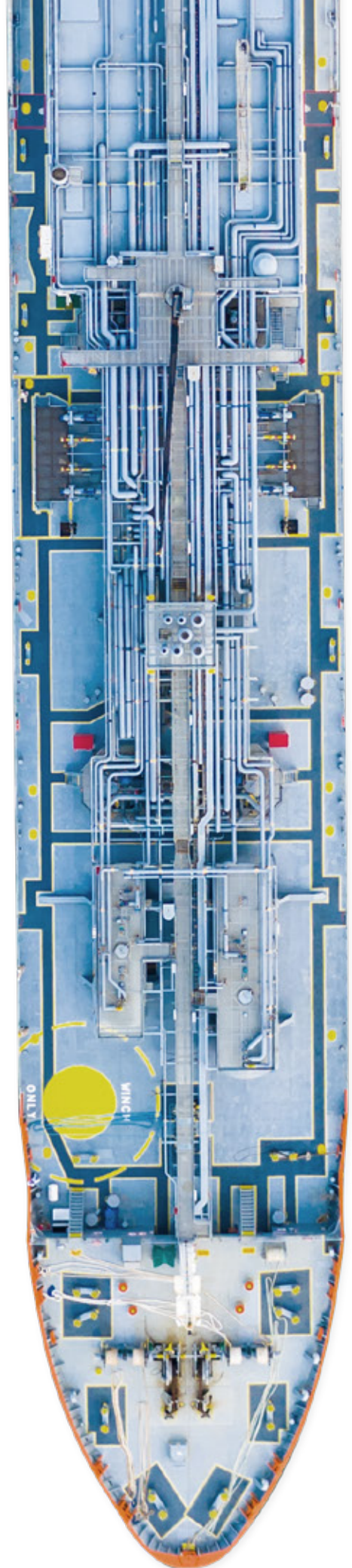
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OUR SEA TRANSPORT INDUSTRY

Sea Transport Industry which comprises the port, port services, shipping and maritime services sub-sectors, is a key pillar of Singapore's economy.



¹GDP refers to Gross Domestic Product
²TEUs refers to Twenty-foot Equivalent Units

Source: Maritime & Port Authority of Singapore (MPA)

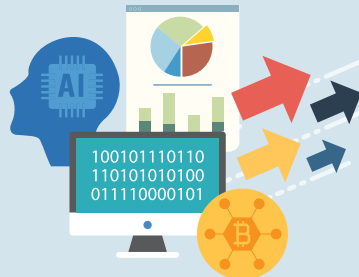
TRENDS IMPACTING SEA TRANSPORT INDUSTRY



Intensifying competition from key ports and maritime centres

Drives the need for our sea transport sub-sectors to improve operational efficiency amid expansion plans by regional ports (e.g. Klang, Tanjung Priok) and increased efforts from aspiring maritime centres (e.g. Dubai, Shanghai).

Source: Maritime & Port Authority of Singapore (MPA)



Accelerating pace of technological advancements

Disrupts existing business models and brings opportunities for greater productivity through the use of technology e.g. Data analytics, Internet-of-Things, artificial intelligence, blockchain, smart sensors, robotics process automation.



Shrinking local workforce with rising costs and more educated workforce with higher aspirations

Increases the need for better-skilled and trained manpower to leverage technology to achieve more by optimising limited resources, streamlining and simplifying business processes.

INDUSTRY TRANSFORMATION MAP (ITM)

The Sea Transport Industry Transformation Map (ITM) was launched in January 2018. Developed by the Maritime and Port Authority of Singapore (MPA) in partnership with the industry, unions and other government agencies, the Sea Transport ITM builds on MPA's strategic long term plans to develop Singapore's next-generation port and strengthen our International Maritime Centre (IMC). Specific initiatives have been laid out under the Sea Transport ITM to catalyse innovation, drive productivity improvements and enhance the skills of the maritime workforce.

Source: Sea Transport Industry Transformation Map



Click [here](#) or scan this QR code for more details on the Sea Transport ITM

SMEs GO DIGITAL

Aligned to the ITM, the Industry Digital Plan (IDP) is part of the SMEs Go Digital Programme that helps to make going digital simple for SMEs.



SMEs GO DIGITAL

3 STEPS TO GO DIGITAL



For more information

Scan the QR code or visit
www.imda.gov.sg/SMEsGoDigital

Support available

- Chief Technology Officer-as-a-Service (CTO-as-a-Service)
- Industry Digital Plans
- Pre-Approved Solutions
- Start Digital
- Grow Digital
- Advanced Digital Solutions
- Government Grants e.g. Productivity Solutions Grant (PSG)

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?
 Access the CTO-as-a-Service for support.

SMEs Go Digital comprises the following:

CTO-as-a-Service

Assess your digital readiness, explore digital solutions and request for digital advisory and project management services.

INDUSTRY DIGITAL PLANS (IDP)

Step by step guide on digital solutions and training required at each stage of your business growth.

PRE-APPROVED SOLUTIONS

Proven off-the-shelf digital solutions pre-approved by IMDA to meet your business needs. Government grants, e.g. Productivity Solutions Grant (PSG), are available for the adoption of these solutions.

START DIGITAL

Foundational digital solutions for new SMEs to get a head start in going digital.

GROW DIGITAL

Leverage Business-to-Business (B2B) and Business-to-Consumer (B2C) e-commerce platforms to go international, without a physical presence overseas.

ADVANCED DIGITAL SOLUTIONS

Advanced and integrated digital solutions to help you strengthen business continuity and build longer term resilience.

DIGITAL ROADMAP FOR SHIP AGENCY

This digital roadmap serves as a guide for you to follow on your digital journey.

STAGE 01

GETTING READY FOR THE DIGITAL ECONOMY READY

Streamlined Operations
Optimised Resources



Ship Agency Management

- Service Booking Portal
- Cargo Operations (for Liner Agents)
- Port Call Management
- Port Disbursement
- Accounting & Payment
- Management Reporting
- Resource Management

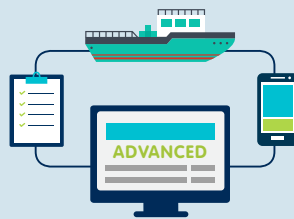


Collaboration & Document Management

STAGE 02

GROWING IN THE DIGITAL ECONOMY

Integrated Insights
Collaborative Ecosystem



Advanced Ship Agency Management



Ship Agent Training Management

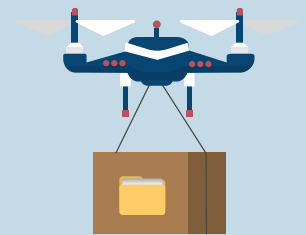
STAGE 03

LEAPING AHEAD

Autonomous Operations
Intelligent Business



Shipping Blockchain Ecosystem



Drones for Document Delivery

ROBOTIC PROCESS AUTOMATION

To automate ship agency business processes such as immigration clearances, cargo declarations and generation of shipping documentation

BUSINESS CAPABILITIES

Human Resource, Payroll, Accounting

STAGE 01

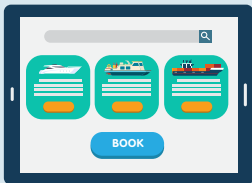
GETTING READY FOR THE DIGITAL ECONOMY

Streamlined Operations, Optimised Resources

Streamline and integrate business processes to enhance productivity and efficiency



DIGITAL SOLUTION



Service Booking Portal

SOLUTION DESCRIPTION

Allow online booking with streamlined booking processes for shippers, charterers and vessel owners.

Key features include:

- One-stop customer facing portal with standardised booking forms
- Electronic submission of booking-related documents
- Streamlined booking confirmation with automatic generation of proforma invoice
- Revenue management module with price optimisation and customer analytics capabilities to maximise agency revenue

BENEFITS

- Enhanced efficiency, increased completeness/accuracy of booking information and improved quotation turnaround time
- Enhanced customer service and transparency
- Maximised revenue



Cargo Operations (for Liner Agents)

Enhance execution and decision-making capabilities for container cargo-handling operations.

Key features include:

- Consolidation of shipment information in an easy-to-read format
- Custom cargo-handling workflow for different cargo types with automatic task alerts
- Automatic generation of shipping documentation and streamlined review process
- Optimisation of container rollover management
- Optimisation of stowage planning

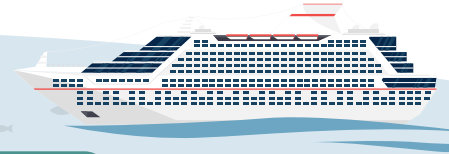
- Enhanced efficiency in decision making for cargo handling operations such as transshipment
- Ensured completeness and accuracy of cargo-related data, thereby reducing exceptions and execution delay
- Reduced manual work

STAGE 01

GETTING READY FOR THE DIGITAL ECONOMY

Streamlined Operations, Optimised Resources

Streamline and integrate business processes to enhance productivity and efficiency



DIGITAL SOLUTION

SOLUTION DESCRIPTION

BENEFITS



Port Call Management

Execute non-cargo related operating processes such as the arrangement of ship husbandry services, crew handling and customs clearance.

Key features include:

- Automatic consolidation of relevant vessel call information
- Automatic generation of agent workflow according to call requirements with outstanding tasks alerts
- Web-based application for boarding officers

- Enhanced workflow efficiency, leading to increased service delivery, speed and higher customer satisfaction
- Reduced manual work



Port Disbursement

Accelerate and streamline port disbursement processes (e.g. creation of disbursement account and statement of facts), thereby enhancing cashflow management.

Key features include:

- Consolidation of billing information
- Automatic calculation of port charges using operations data
- Invoice verification/approval function
- Disbursement tracking function

- Reduced invoicing delay
- Improved cashflow management

STAGE 01

GETTING READY FOR THE DIGITAL ECONOMY

Streamlined Operations, Optimised Resources

Streamline and integrate business processes to enhance productivity and efficiency

DIGITAL SOLUTION



Accounting & Payment

SOLUTION DESCRIPTION

Support and manage budget, payments and financial reporting for increased accuracy.

Key features include:

- Automatic report generation for monthly/yearly closing, financial reporting and tax accounting purposes
- Budget and cashflow monitoring functions
- Streamlines creditor payment process

BENEFITS

- Reduced manual effort needed for report generation
- Increased accuracy of reports
- Improved cashflow management



Management Reporting

Track Key Performance Indicators (KPIs) and identify opportunities to enhance business performance and analyse critical information.

Key features include:

- Performance analysis on integrated sales, operations and financial data
- Corporate KPI setting and tracking
- Analytics dashboard with report building and data visualisation capabilities

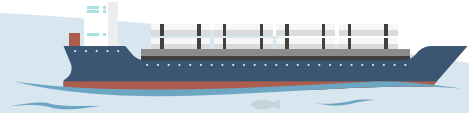
- Enhanced management of business performance
- Facilitation of better decision making by management

STAGE 01

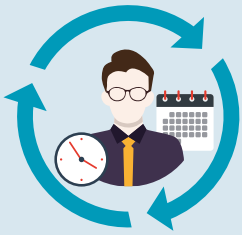
GETTING READY FOR THE DIGITAL ECONOMY

Streamlined Operations, Optimised Resources

Streamline and integrate business processes to enhance productivity and efficiency



DIGITAL SOLUTION



Resource Management

SOLUTION DESCRIPTION

Dynamically re-schedule and manage resources, such as boarding officers.

Key features include:

- Automatic scheduling/assignment of resources based on availability
- Dynamic assignment of manpower to vessels
- Tracking and providing alerts on duplicate assignments or unassigned vessels

BENEFITS

- Reduced manual effort needed to deploy resources
- Minimisation of operational disruptions arising from deployment errors
- Optimised resource deployment



Collaboration & Document Management

Manage high e-mail volumes as well as consolidate, archive and search documents and files from various systems across offices and teams.

Key features include:

- E-mail filtering and indexing
- E-mail parsing
- Ability to share e-mails, documents and actions effected across teams and offices
- Image recognition to extract relevant data from documents for direct integration with in-house IT systems

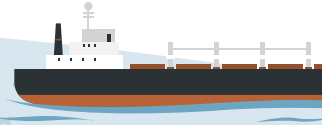
- Reduced time spent on emails
- Enhanced and seamless work processes across regional offices
- Reduced time taken to retrieve relevant e-mails for better document control and handling

STAGE 02

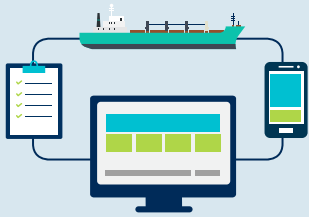
GROWING IN THE DIGITAL ECONOMY

Integrated Insights, Collaborative Ecosystem

Collaborate ecosystems enables integrated insights to maximise business value



DIGITAL SOLUTION



Advanced Ship Agency Management

SOLUTION DESCRIPTION

Enhance agency operations and service transparency.

Key features include:

- Integration with external platforms (e.g. PortNet, customer systems)
- Real-time cargo and vessel visibility for ship owners, charterers, shippers and vendors
- Predictive analytics for proactive business management, enabled by integration of market intelligence and agency proprietary data

BENEFITS

- Reduced manual effort in the operations
- Enhanced operational efficiency by integrating with external sources
- Increased service transparency, leading to greater customer satisfaction and retention
- Identification of strategic business opportunities, with top-line and bottom-line impact



Ship Agent Training Management

Design and deliver custom training curriculums for agents at different career stages.

Key features include:

- Training curriculum design tool
- e-Learning platform that adapts to agent proficiency, work performance and seniority
- Native performance appraisal and feedback system

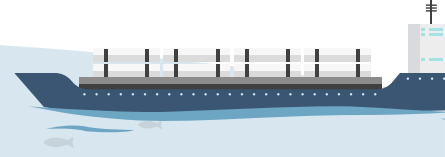
- Increased employee proficiency
- Increased employee job satisfaction

STAGE 03

LEAPING AHEAD

Autonomous Operations, Intelligent Business

Exploit autonomous robotics and advanced tech to maximise business value and impact



DIGITAL SOLUTION



Shipping Blockchain Ecosystem

SOLUTION DESCRIPTION

Integrate shipping operations system through global shipping blockchain platform.

Key features include:

- Seamless sharing of shipping documents and data across all stages of shipping life cycle
- Automate transactions such as payments, document transfers
- Streamline approval processes

BENEFITS

- Increased speed of approval processes
- Increased operational efficiency by facilitating better data sharing and transaction flows



Drone for Document Delivery

Deliver shipping documents to vessels where physical agent's presence is not required.

- Enhanced time management
- Improved deployment of human resources

DIGITAL SKILLS NEEDED

Digital skills are required for all ship agency job roles, to varying levels of proficiency. All job roles may require upskilling to support your digitalisation journey.



ALL USERS

Require broad-based digital literacy and awareness

ADVANCED USERS

Require higher proficiency digital skills

“TECH BASICS” COURSES

Broad-based innovation mindset and digital literacy/awareness

SSG funded broad-based courses e.g. Skills Future for Digital Workplace

Solution-specific user level digital skills

Vendor solution-specific training

“TECH ADVANCED” COURSES

Higher proficiency level digital skills

Training mapped to the Skills Framework for Sea Transport and Information and Communication Technology (ICT)



Boarding Officer



Ship Agency Manager









Shipping Clerk

DIGITAL SKILLS NEEDED

DIGITAL ROADMAP ON TRAINING – SHIP AGENCY



	STAGE 01 GETTING READY FOR THE DIGITAL ECONOMY	STAGE 02 GROWING IN THE DIGITAL ECONOMY	STAGE 03 LEAPING AHEAD
“TECH BASICS” COURSES Require broad-based digital literacy and awareness	 Introduction to Digital Ship Agency Management Benefits of Using Analytics for Start-ups and SMEs Vendor Solution Specific Training	 Optimising Customer Management and Operations with Data Analytics Vendor Solution Specific Training	 Application of RPA and Drones for Document Delivery Vendor Solution Specific Training
“TECH ADVANCED” COURSES Require higher proficiency digital skills	 Simplifying Documentation and Customer Relationship Management with Digital Technologies Hands-On Data Protection Officer Training Introduction to Data Analytics	 Enhancing Workplace Productivity through Learning Management System	 Leveraging of Digital Platforms for Ship Agency Intelligence

Training programmes aligned to **Skills Framework** and emerging areas under **SkillsFuture Series**

LEGEND



CLASSROOM



+ BLENDED LEARNING

GET STARTED TODAY

You will be supported at every stage of your digital journey, through three simple steps:

1 | Is your business digital-ready?

Find out if you are digital-ready by using the IDP resources [here](#) or scan the QR code.



Sea Transport IDP



CTO-as-a-Service



Maritime & Port Authority of Singapore

2 | How do you get started?

- Tap on the [CTO-as-a-Service](#) to complete your Digital Readiness Self Check in the web app and select from the recommended digital solutions that best meet your business needs.
- Visit the [MPA](#) website to contact solution providers to purchase and implement digital solutions. If funding support is required, apply for MPA SME Grant.

3 | Where can you get help?



SME Centre

- Tap on the [CTO-as-a-Service](#) for digital consultancy and project management services.
- Visit [SME Centre](#) if you require business advisory.



ADDITIONAL INFORMATION



FOR SME

DIGITAL CONSULTANCY & SOLUTIONS

CTO-as-a-Service

go.gov.sg/CTOaaS

SMEs Go Digital

<https://imda.gov.sg/SMEsGoDigital>

GoBusiness Gov Assist

<https://www.gobusiness.gov.sg/productivity-solutions-grant/>

MPA Website

<https://www.mpa.gov.sg/web/portal/home/maritime-companies/research-development/industry-digital-plan>

Be Safe Online

https://www.csa.gov.sg/~media/csa/documents/publications/be_safe_online/be_safe_online_handbook.pdf

BUSINESS ADVISORY

SME Centres managed by trade associations:

- Association of Small and Medium Enterprises (ASME)
- Singapore Chinese Chamber of Commerce & Industry (SCCCI)
- Singapore Indian Chamber of Commerce & Industry (SICCI)
- Singapore Malay Chamber of Commerce & Industry (SMCCI)
- Singapore Manufacturing Federation (SMF)
www.enterprisesg.gov.sg/smecentre
Enterprise Infoline: +65 6898 1800

FOR INDIVIDUALS

CAPABILITY UPGRADING AND CAREER FACILITATION

Institute of Higher Learning

<https://www.sp.edu.sg/pace/sea-transport-industry-digital-plan>

Course Directory

<https://www.myskillsfuture.gov.sg/content/portal/en/training-exchange/course-landing.html>

Fundamentals for Future Economy

<https://www.skillsfuture.gov.sg/digitalworkplace>

Skills Framework

<https://www.skillsfuture.gov.sg/skills-framework>

TechSkills Accelerator (TeSA)

<https://www.go.gov.sg/TeSA>

WSG's Careers Connect

<https://www.wsg.gov.sg/career-services.html>

WSG PCP

<https://conversion.mycareersfuture.sg/Portal/ProgramListing.aspx?source=PCP>

e2i Centres

<https://e2i.com.sg/app>

FOR ICM VENDORS

SMEs Go Digital

<https://www.imda.gov.sg/icmvendors>

This Industry Digital Plan is part of the SMEs Go Digital programme
For programme information and feedback: <https://imda.gov.sg/SMEsGoDigital>

#SGDIGITAL

Singapore Digital (SG:D) is a nation-wide movement to unify Singapore's digitalisation efforts. Whether it is help for different industries to start their digitalisation journeys, or creating new ecosystems, opportunities and capabilities for the future, SG:D is set to take us ahead as a leading digital global node. The :D smiley face icon in the logo signifies the optimism of Singaporeans advancing together with digital innovation. As we progress into the digital economy, it is all about the people – the heart of all we do.



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The content of this guide is provided for informational purposes only and is correct as of February 2022.