

FOOD SERVICES

INDUSTRY DIGITAL PLAN

A guide for Small and Medium Enterprises (SMEs) to identify opportunities for digitalisation and adopt digital solutions to support their business needs.



SECTOR LEAD:

**Enterprise
Singapore**

SUPPORTED BY:

CSA
SINGAPORE

pdpc

SKILLSfuture SG

IN SUPPORT OF:

SG:DIGITAL

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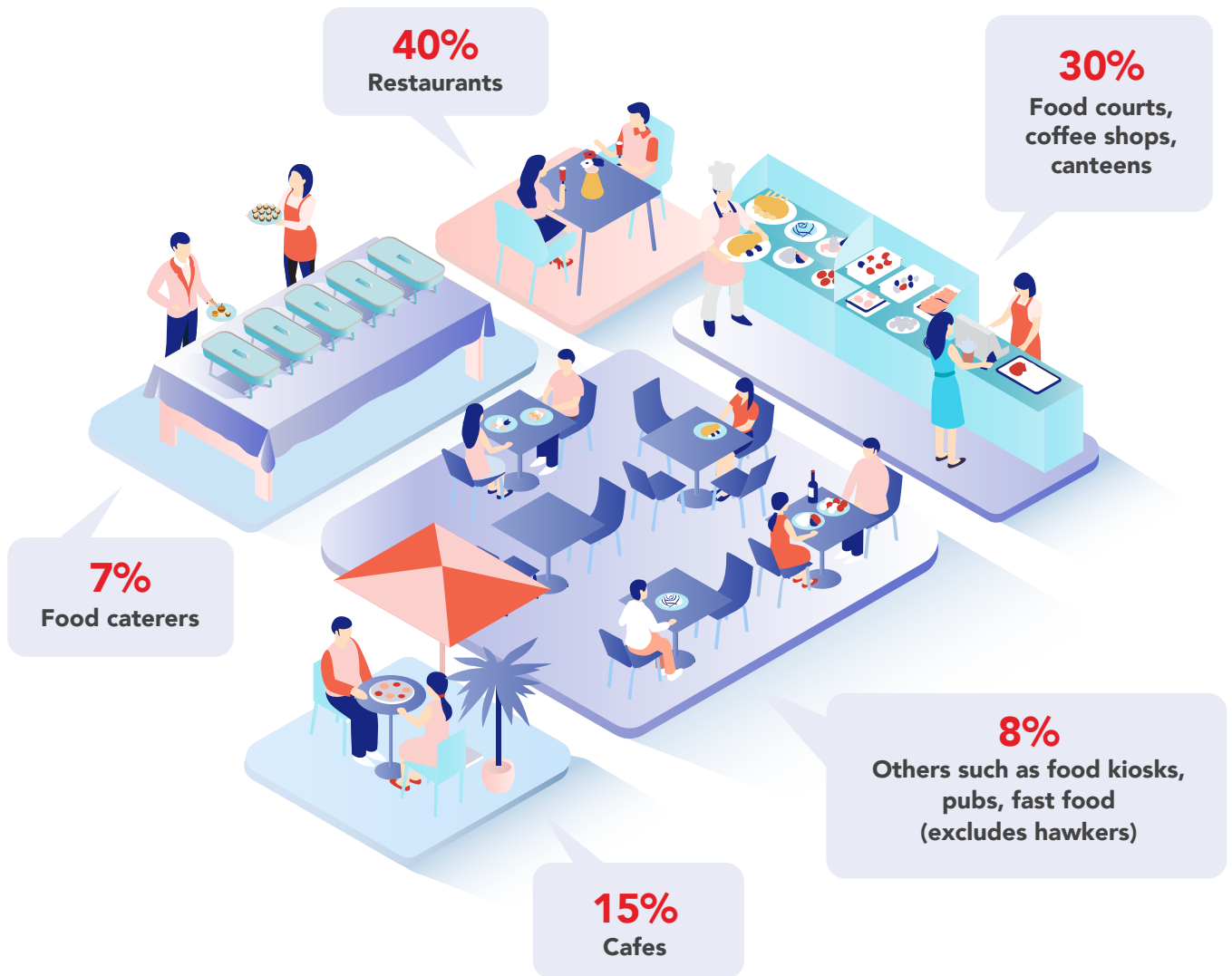
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1

The Food Services industry

The Food Services industry plays a vital role in Singapore's economy, contributing S\$4 billion to our economy and employing about 220,300 workers in 2021¹.

The Food Services industry comprises the various sub-sectors:



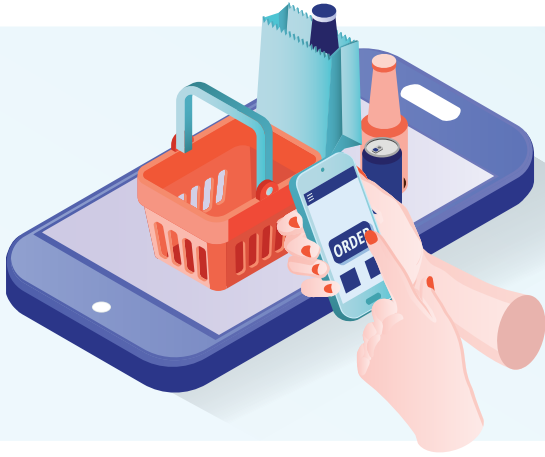
NOTE:

[1] Department of Statistics (DOS), 2021. Ministry of Manpower (MOM), 2021. Gross Domestic Product In Chained (2015) Dollars, Food & Beverage Services.

[2] DOS, 2020.

2

Landscape of the Food Services industry



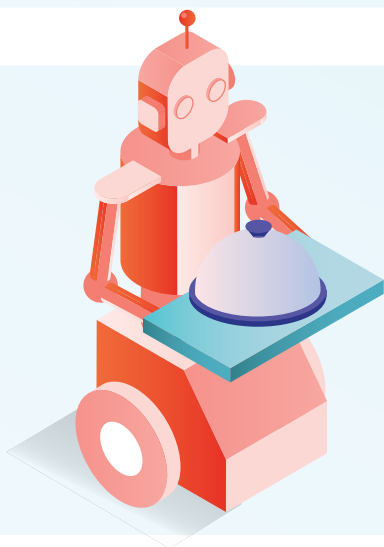
Increasing adoption of digital solutions

- In recent years, more F&B companies have adopted digital solutions to optimise business operations and improve efficiency. These include basic productivity tools such as digital ordering and payment, and more advanced technologies such as cooking robots.
- With technological advancements, there are increasingly more advanced and integrated digital solutions relevant for F&B companies.



Changing consumer preferences

- The COVID-19 pandemic has accelerated the shift in consumer behaviour towards online trends, convenience, and food delivery.
- With sustainability emerging as a rising global trend, F&B companies can incorporate sustainability as a value proposition in their businesses.



Embracing digitalisation to stay competitive and seize new opportunities

- The Food Services industry is set to see further growth and transformation. Digitalisation is one of the key ways for F&B companies to thrive and overcome challenges such as manpower shortage and high labour costs.



Digital solution roadmap

This digital solution roadmap outlines solutions for your company to adopt at each stage of growth. Where relevant, data analytics and artificial intelligence (AI) are incorporated into the solutions.

STAGE 01

Getting ready for the digital economy



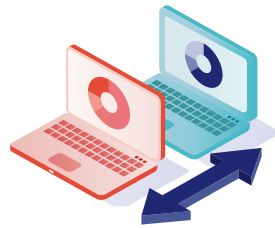
Digital ordering & payment



e-Procurement

STAGE 02

Growing in the digital economy



Connected business suite



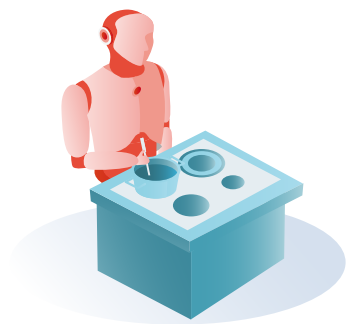
Food waste management



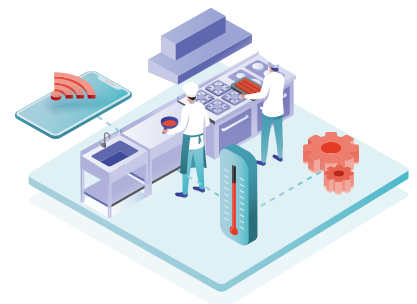
Service robotics

STAGE 03

Leaping ahead in the digital economy



Kitchen robotics & autonomous cooking



Smart central kitchen management system

SMEs can also adopt generic solutions such as cybersecurity, accounting management, human resource management, customer relationship management, inventory management, sales management and fleet management.

Newly incorporated businesses can also adopt foundational solutions under Start Digital, covering areas such as cybersecurity, sales generation, and business efficiency.

NOTE:

This roadmap shall be updated over time as digitalisation of the industry progresses and new technologies are introduced for the industry.

3.1

Stage 01

Getting ready for the digital economy

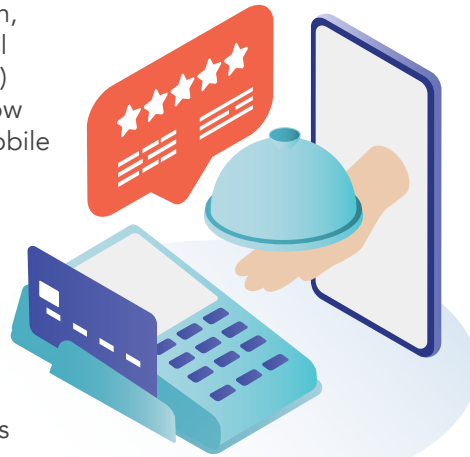
Core digital solutions to support essential operations

Digital ordering & payment

Allow customers to order food for dine-in, takeaway or delivery with different digital devices (e.g. mobile phone, tablet, kiosk) or methods (e.g. chatbot, QR code). Allow customers to use different online and mobile payment modes.

Benefits:

- Capture more customers through their preferred channels for ordering and payment
- Reduce manpower needed for order-taking and payment
- Enable staff to better service customers

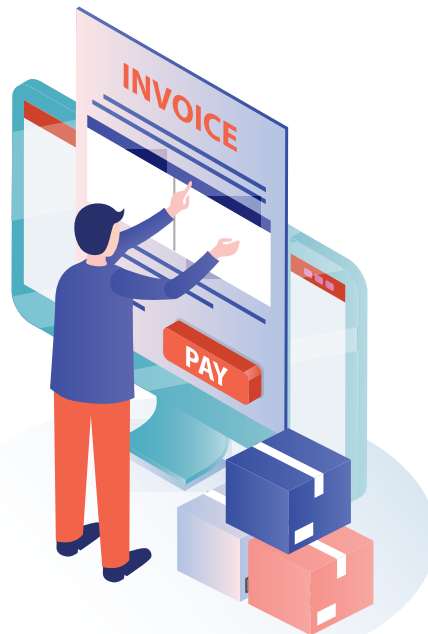


e-Procurement

Perform sourcing and buying of products through business-to-business (B2B) online or e-commerce platforms.

Benefits:

- Enable paperless transactions and digital invoices
- Gain access to wider pool of suppliers
- Add value to buyers with dynamic pricing
- Improve traceability and tracking



3.2

Stage 02

Growing in the digital economy

Integrated and advanced digital solutions to support connectivity and derive business insights

Connected business suite

The Connected business suite integrates the solutions for F&B companies' front-of-house and back-of-house operations, and also connects with other entities across value chains.

Benefits:

- Consolidate sales orders from multiple channels
- Reconcile records across operations
- Gain deeper data insights for better business decisions

(refer to [section 3.4](#) for more information)

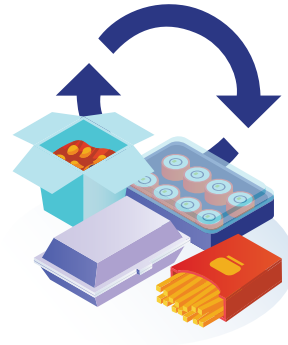


Food waste management

Identify and audit source of kitchen waste.

Benefits:

- Reduce food and packaging waste
- Optimise usage of food ingredients



Service robotics

Improve front-of-house operations with automated systems (e.g. robotic arms).

Benefits:

- Relieve physical demands on service staff
- Enable staff to better service customers



3.3

Stage 03

Leaping ahead in the digital economy

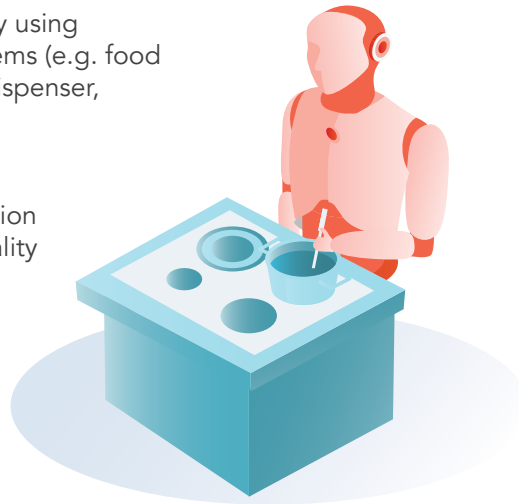
Advanced digital solutions using emerging technology and automation to support digital transformation

Kitchen robotics & autonomous cooking

Enhance back-of-house operations by using kitchen robotics and automated systems (e.g. food preparation tools, smart ingredient dispenser, robotic chefs).

Benefits:

- Increase efficiency in meal preparation
- Ensure consistency in taste and quality of products

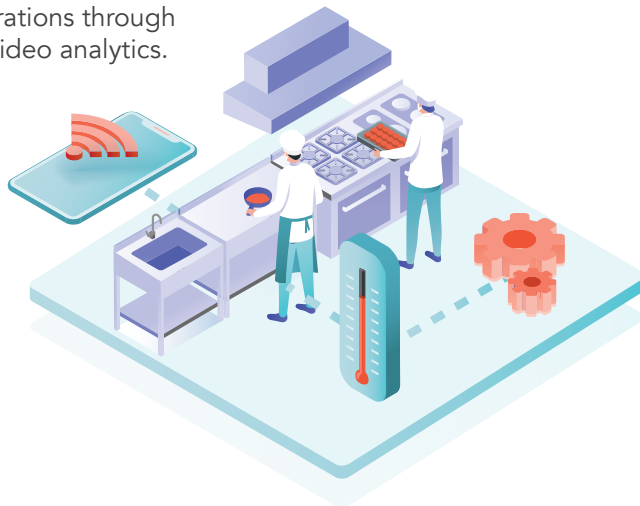


Smart central kitchen management system

Manage end-to-end kitchen operations through Internet of Things (IoT), AI, and video analytics.

Benefits:

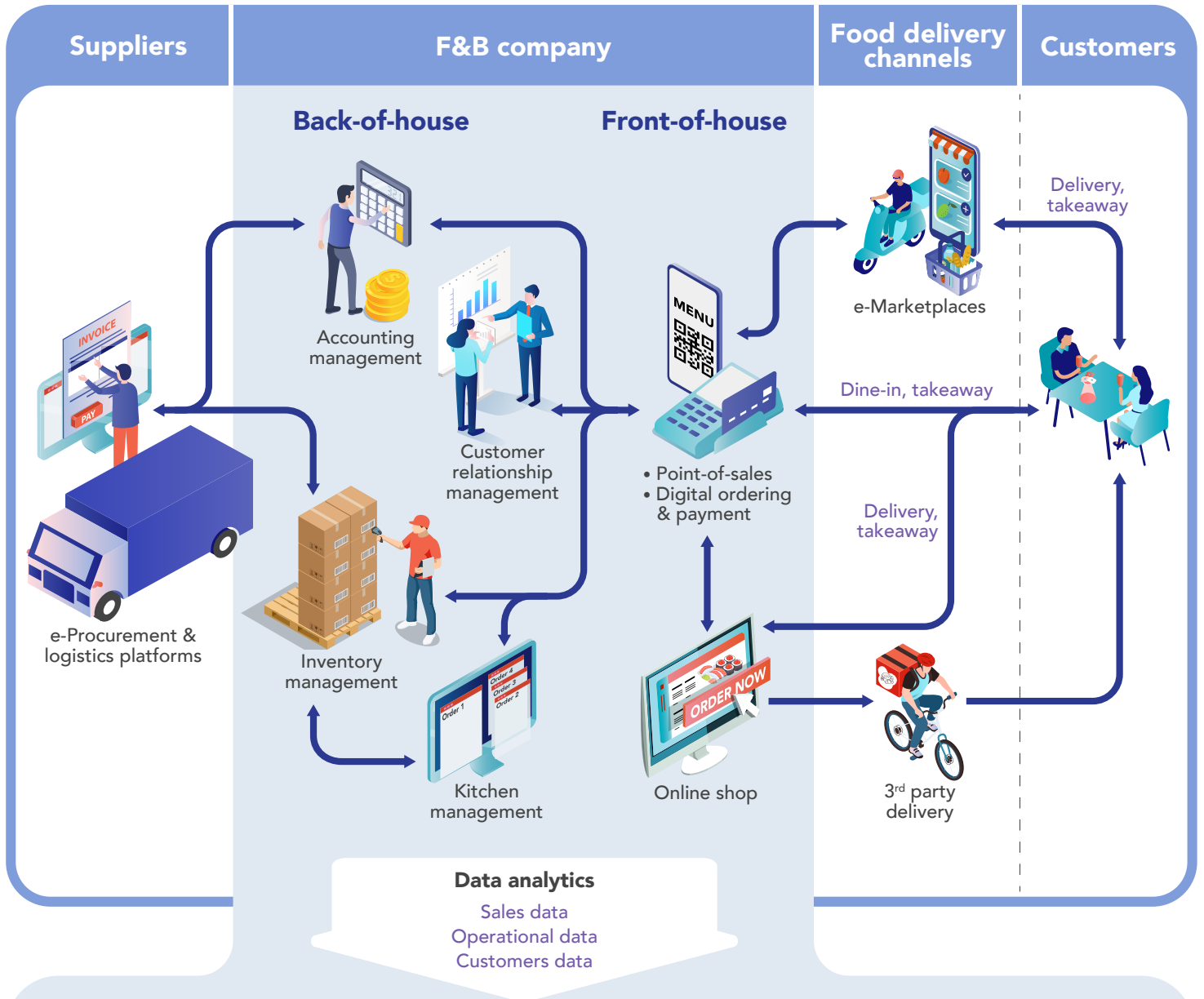
- Optimise usage of resources
- Streamline kitchen workflow



3.4

Connected business suite

The Connected business suite integrates the solutions for F&B companies' front-of-house and back-of-house operations, and also connects with other entities across value chains. This enables F&B companies to streamline their operations and use data analytics to guide business decisions.



EXAMPLE OF INSIGHTS

Customers' profiling

Determine customers' preferences based on different profiles to improve marketing efforts

Inventory monitoring

Enable real time inventory tracking to reduce out of stock situations and perform smart re-ordering



Product performance report

Enable F&B companies to assess performance of menu items to better manage supplies

Sales analytics

Enable F&B companies to identify products for potential cross selling opportunities

4

Cybersecurity and Data Protection roadmap

This roadmap serves as a guide to introduce cybersecurity and data protection to your company at each stage of growth. For more information, please refer to [SG Cyber Safe programme](#), [Data Protection Essentials \(DPE\)](#) and [Data Protection Trustmark \(DPTM\)](#).

STAGE 01 Getting ready for the digital economy



Cyber hygiene measures for protection against common attacks



FOR SMEs FOR Employees

Cybersecurity Toolkits



Cyber Essentials cybersecurity certification



Cybersecurity solutions

Cybersecurity
As company increases its level of digitalisation

Data protection
As company increases its collection and use of personal data

Basic data protection and security practices to protect customers' personal data and recover quickly in the event of a data breach



Data Protection Essentials (DPE)

STAGE 02 Growing in the digital economy



Risk assessment to assess if cybersecurity measures commensurate with company risk profile

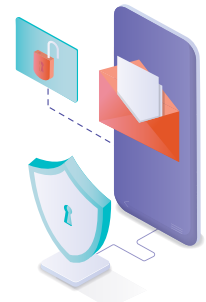


Cyber Trust cybersecurity certification



Cybersecurity solutions

STAGE 03 Leaping ahead in the digital economy



Accountable data protection practices to demonstrate compliance with the PDPA



Data Protection Trustmark (DPTM)

5

Digital skills training roadmap

This digital skills training roadmap serves as a guide to equip your company and workers with the necessary skills (including change management) to adopt digital solutions at each stage of growth. Training programmes are aligned to Skills Framework and emerging areas under SkillsFuture Series.

STAGE 01 & STAGE 02



- Digital ordering & payment
- F&B productivity and revenue management
- Maintain quality control procedures and safe F&B environment
- Supervise food production
- Understanding F&B income and expenses for revenue management
- Change management basics
- Customer relationship management
- Modify processes for productivity improvement
- PDPA e-learning programme
- SkillsFuture series (Cybersecurity and Entrepreneurship)
- SkillsFuture series (Data Analytics and Digital Media)
- Training from digital solution vendors¹

Tech Basics

All employees in industry

Tech Advanced

Employees that explore or use advanced tech in their work

- Advanced robotics in services/delivery
- Robotics in services/delivery
- Fundamentals of data analytics
- Fundamentals of Personal Data Protection Act (PDPA)
- Implementation of change management programmes & initiatives
- Introduction to robotics fundamentals
- Managing change for digital transformations
- Robotics integration and adaptation
- Understanding of Internet of Things (IoT)

STAGE 03



- Demonstrate food regeneration processes
- Business process and workflow automation - design, deploy and manage
- Training from digital solution vendors¹

- Automation for the smart kitchen
- Digital transformation for strategic competitiveness
- Smart Internet of Things (IoT) with data analytics

NOTE:

[1] This refers to training from digital solution vendors when your company adopts solutions in section 3.

Tech Basics and Tech Advanced courses directory can be found at MySkillsFuture course directory.

6

Get started with Chief Technology Officer-as-a-Service

CTO-as-a-Service is a one-stop self-help platform that allows your company to identify digitalisation needs, access market-proven solutions and engage digital consultants for customised advice.



SMEs GO DIGITAL

Bring your business to the next level!

1

Is your business digital-ready?

Find out using the Industry Digital Plan (IDP) for your sector.

2

How do you get started?

Search for digital solutions, grants and resources based on your business needs.

3

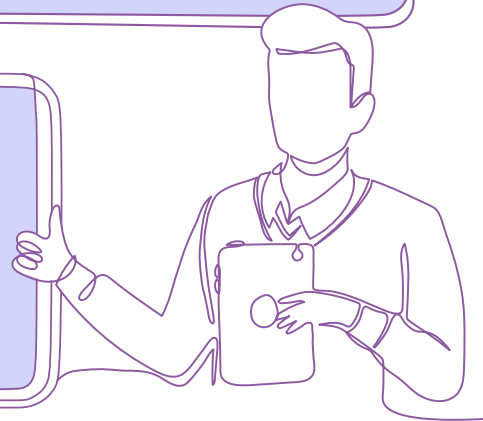
Where can you get advice?

Get free digital consultancy and project management services.

Go digital today with CTO as-a-Service



go.gov.sg/CTOaaS



1

Is your business digital-ready?

Find out using the Industry Digital Plan (IDP) for your sector.

Check your business' digital readiness at CTO-as-a-Service to get a copy of the Industry Digital Plan (IDP) for your sector.

2

How do you get started?

Search for digital solutions, grants and resources based on your business needs.

Search for digital solutions supported by the following grants at CTO-as-a-Service:

- **Start Digital** – Foundational solutions for sales generation, business efficiency and cybersecurity to start business right.
- **Productivity Solutions Grant (PSG)** – Market-proven and cost-effective solutions to improve productivity.
- **Advanced Digital Solutions (ADS)** – Integrated and advanced solutions (e.g. AI, Robotics) to deepen digital capabilities.
- **Grow Digital** – B2B and B2C e-commerce platforms to expand business overseas.

3

Where can you get advice?

Get free digital consultancy and project management services.

Contact the appointed digital consultancy partners at CTO-as-a-Service today.



Additional information

For SMEs

One-stop self-help platform

CTO-as-a-Service

<https://services2.imda.gov.sg/CTOaaS/>

Cybersecurity and Data Protection

CSA SG Cyber Safe Programme

<https://www.csa.gov.sg/sgcybersafe>

Cyber Essentials

<https://www.csa.gov.sg/cyber-essentials/>

Cybersecurity Toolkits

<https://www.csa.gov.sg/leaders-toolkit/>

Cyber Trust

<https://www.csa.gov.sg/cyber-trust/>

Better Data Driven Business

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

Data Protection Essentials

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

Data Protection Trustmark

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

Digital skills training

Skills Framework

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

SkillsFuture Series

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

MySkillsFuture course directory

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

Business advisory & digital consultancy

CTO-as-a-Service

<https://services2.imda.gov.sg/CTOaaS/Consultants>

SME Centres managed by trade associations

- SME Centre@ASME
- SME Centre@SCCCI
- SME Centre@SICCI
- SME Centre@SMCCI
- SME Centre@SMF

<https://www.enterprisesg.gov.sg/smecentre>

For ICM vendors

Pre-Approval of ICM Vendors' Solutions

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

This Industry Digital Plan is part of the SMEs Go Digital programme.

For programme information and feedback: <https://www.imda.gov.sg/SMEsGoDigital>

#IMDigitalArchitect

The Infocomm Media Development Authority (IMDA) leads Singapore's digital transformation by developing a vibrant digital economy and an inclusive digital society. As Architects of Singapore's Digital Future, we foster growth in Infocomm Technology and Media sectors in concert with progressive regulations, harnessing frontier technologies, and developing local talent and digital infrastructure ecosystems to establish Singapore as a digital metropolis.

EnterpriseSG

Enterprise Singapore is the government agency championing enterprise development. We work with committed companies to build capabilities, innovate and internationalise. We also support the growth of Singapore as a hub for global trading and startups, and build trust in Singapore's products and services through quality and standards.



imda.gov.sg
enterprisesg.gov.sg/



linkedin.com/company/imdasg/
linkedin.com/company/enterprisesingapore/



facebook.com/IMDAsg
facebook.com/EnterpriseSingapore/



twitter.com/IMDAsg



youtube.com/IMDAsg
youtube.com/enterprisesingapore



instagram.com/IMDAsg/

SUPPORTING ASSOCIATIONS:

ACAPS
Association Of Catering Professionals Singapore



SMBDA
Singapore Minority Business Association

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