

# EARLY CHILDHOOD

A guide for all Preschool Operators to assess their digital readiness and opportunities to go digital.

## INDUSTRY DIGITAL PLAN



Sector Lead:

In support of:

In collaboration with:



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# 01

## Our Early Childhood Sector

The Early Childhood (EC) sector plays a key role in achieving our national goals of supporting parenthood, nurturing the next generation and improving social mobility.



## 02

# Trends Impacting Early Childhood Sector



### Parents

**More varied needs and rising expectations**

#### Changing demographics

such as dual-income families, working grandparents

**Rising awareness of the importance and quality of early childhood development,** hence increasing demand for preschool services



### Professionals

**Rising manpower needs and demands for upskilling**

**Growing industry** with more trained professionals required over the next few years

**Challenges still exist in talent attraction and retention** due to high-touch and physically demanding work



### Operators

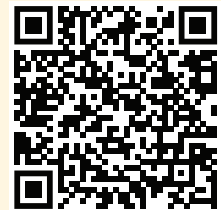
**Pressure to manage costs and grow capabilities**

**Diverse industry** with over 500 operators and 1,900 centres operating different types of models and service types (child care, kindergarten etc)

## Industry Transformation Map (ITM)

The Early Childhood Industry Transformation Map (ITM) was launched on 7 Mar 2018. Developed by the Early Childhood Development Agency (ECDA) in partnership with the sector, unions and other government agencies, the Early Childhood ITM aims to drive sustainable and quality Early Childhood (EC) services, as the demand for EC services and professionals rises.

The ITM specifies initiatives to help transform the sector through skills, innovation and technology. Adoption of digital technology plays an important role in helping the sector, to continue to deliver high quality services.



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

## Early Childhood Industry Digital Plan (IDP)

Aligned to the ITM, the EC Industry Digital Plan (IDP) aims to help address the trends that impact the EC Sector:

- 1. Improve the quality and range of services delivered for Parents**
- 2. Improve job attractiveness and support professional development for Professionals**
- 3. Enhance productivity and cost management for Operators**

# 03

## Why Digitalise?

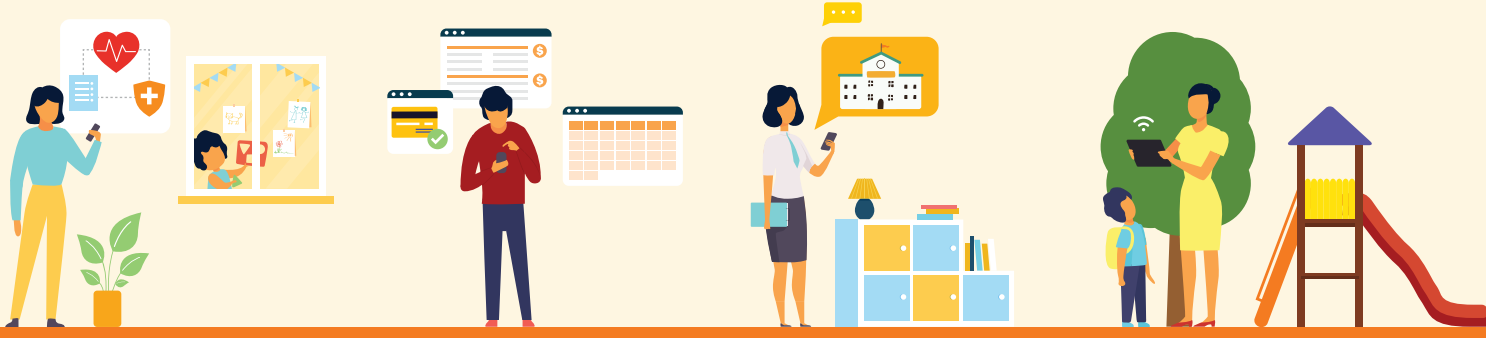
### Digitalisation for Parents

Enhance safeguards to preschool health, safety and operations with technology

Improve access to information on preschools, e.g. programmes, services and fees

Improve timeliness of communications between parents and centres

Simplify processes through digital means to bring greater convenience to parents



### Digitalisation for Professionals

Improve work conditions and image of EC professionals

Support professional development, training and mentoring using digital tools

Automate routine tasks and administrative duties to enhance productivity and save time



### Digitalisation for Operators

More integrated digital solutions to provide value-added services for parents and children

Easy adoption with pre-scope digital solutions that are useful, affordable and relevant to sector

Adoption of digital solutions to overcome manpower constraints and reduce operating costs

Productivity gains from automation of routine tasks can be re-invested into key service areas





The Industry Digital Plan (IDP) is part of the SMEs Go Digital programme that helps to make going digital simple for SMEs. For the EC sector, the EC IDP supports both SMEs and non-SMEs, including preschools operated by registered charities, institutions of public character (IPCs) and other Social Service Agencies (SSAs). Preschools who qualify as SMEs may additionally refer to the support under the SMEs Go Digital Programme below.



INFCOMM  
MEDIA  
DEVELOPMENT  
AUTHORITY

SMEs GO DIGITAL

## 3 STEPS TO GO DIGITAL

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

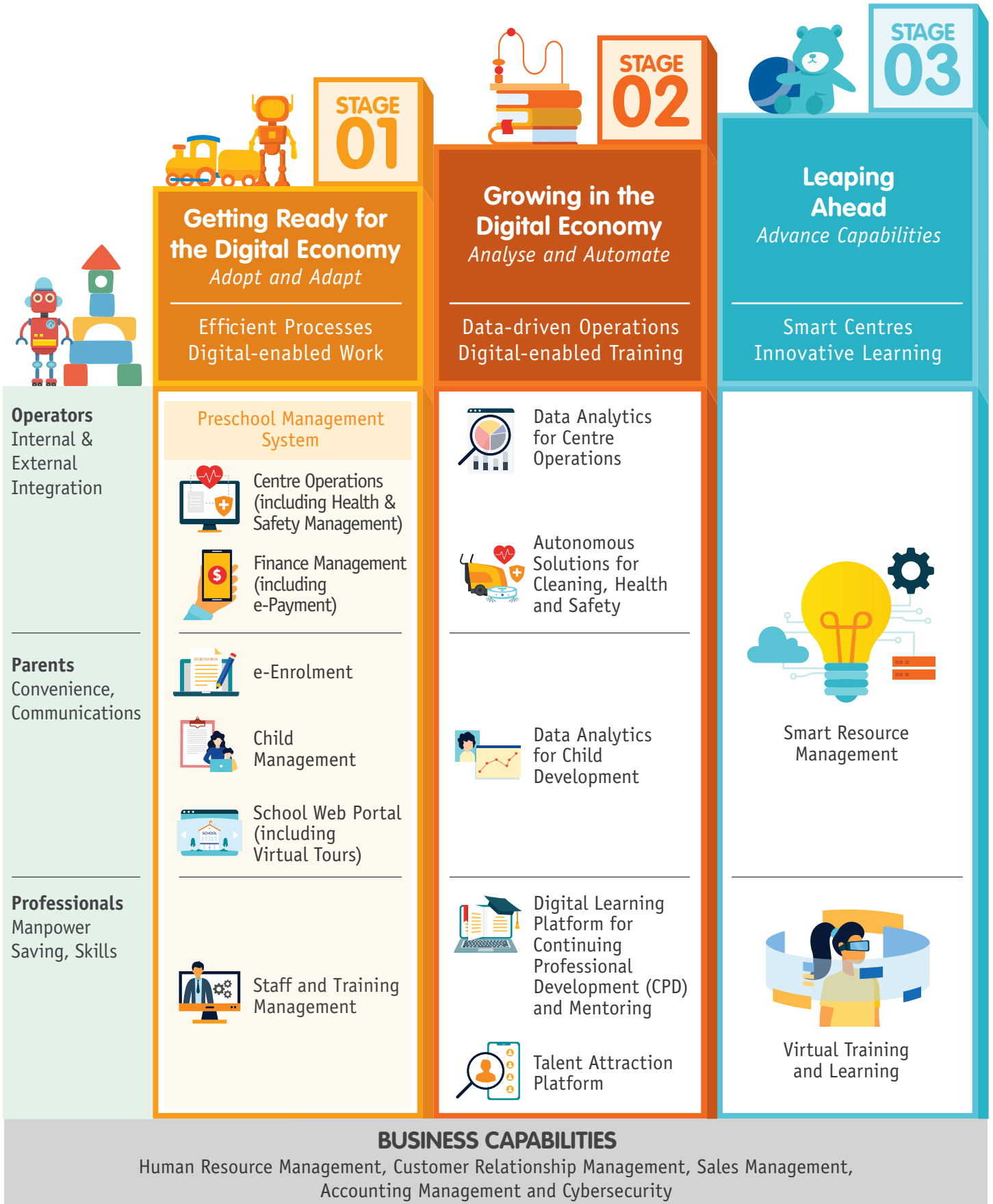
Leverage Business-to-Business (B2B) and Business-to-Consumer (B2C) e-commerce platforms to go international, without a physical presence overseas.

### ADVANCED DIGITAL SOLUTIONS

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

# Early Childhood Digital Roadmap

This digital roadmap aligns operators, parents and EC educators on a common digital journey. EC operators can choose to traverse the map at their own pace, based on available resources and individual business strategies.



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

# STAGE 01

## Getting Ready for the Digital Economy

Efficient Processes | Digital-enabled Work

Adopt and adapt digital solutions to improve the efficiency of your operations

### Digital Solution

### Solution Description

### Benefits



#### Centre Operations (including Health & Safety Management)

Perform daily functions such as visitor tracking, procurement and web enquiries through the centre operations module.

- Streamline and digitalise paper-based processes to achieve higher productivity
- Optimise costs through demand aggregation
- Track and keep record of regulatory requirements, such as SafeEntry, temperature monitoring, and health and attendance records



#### Finance Management (including e-Payment)

Manage centre's finance matters such as payroll, school fees, government grants and claims.

- Simplify internal transactions
- Allow for advance resource planning



#### e-Enrolment

Enable parents to submit enrolment forms online with digital signature(s).

- Increase efficiency in the processing of student enrolment
- Increase productivity of administrative staff by eliminating hard copy forms and manual data entry
- Minimise human error



#### Child Management

Track, record, monitor and communicate child matters efficiently.

- Improve response time in communications between parents and centres
- Support employees in their routine duties, allowing for reallocation of time for other important tasks
- Provide better support for children, through assessment and the tracking of child's progress and development





STAGE  
**01**

# Getting Ready for the Digital Economy

*Efficient Processes | Digital-enabled Work*

Adopt and adapt digital solutions to improve the efficiency of your operations

Digital Solution	Solution Description	Benefits
 <b>School Web Portal (including Virtual Tours)</b>	Manage content curated for parents, including updates of students' learning progress and virtual tours of centres.	<ul style="list-style-type: none"><li>• Increase convenience and timeliness of parent and centre communication, across secure feedback channels</li><li>• Collate survey responses and feedback in consolidated database</li></ul>
 <b>Staff and Training Management</b>	Manage centre staff and training matters such as staff profiles, leave, benefits and performance appraisals.	<ul style="list-style-type: none"><li>• Increase efficiency in the processing of Human Resource matters</li><li>• Minimise human error, such as missing important dates and erroneous applications</li><li>• Increase productivity of administrative staff</li></ul>

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**STAGE**  
**02**

# Growing in the Digital Economy

*Data-driven Operations | Digital-enabled Training*

Analyse data collected to automate operations and enhance educators' professional development

Digital Solution	Solution Description	Benefits
 <p><b>Data Analytics for Centre Operations</b></p>	<p>Enhance preschool centres' operations by using data analytics to better plan, manage and improve preschool environment and service quality.</p>	<ul style="list-style-type: none"> <li>• Improve two-way data-sharing</li> <li>• Transform collected information into dashboards and provide comprehensive insights for stakeholders</li> </ul>
 <p><b>Autonomous Solutions for Cleaning, Health and Safety</b></p>	<p>Deploy autonomous solutions with Internet of Things (IoT) and Artificial Intelligence (AI) capabilities for the detection of potential health hazards as well as monitoring of areas that need cleaning.</p>	<ul style="list-style-type: none"> <li>• Augment capabilities of ancillary manpower</li> <li>• Redesign jobs to help older workforce</li> <li>• Enhance the safety and health of children</li> </ul>
 <p><b>Data Analytics for Child Development</b></p>	<p>AI and data analytics to identify and recommend development needs for children.</p>	<ul style="list-style-type: none"> <li>• Easily identify development progress and needs of children with clearly illustrated dashboard overviews</li> <li>• Enable personalised approach for children's development</li> </ul>

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**STAGE**  
**02**

# Growing in the Digital Economy

*Data-driven Operations | Digital-enabled Training*

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Digital Solution	Solution Description	Benefits
 <p><b>Digital Learning Platform for Continuing Professional Development (CPD) and Mentoring</b></p>	<p>Provide a customised education experience for early childhood and early intervention teachers/professionals.</p>	<ul style="list-style-type: none"> <li>• Increase convenience for stakeholders, including teachers, trainers and fellows</li> <li>• Enhance learning experience and provide stakeholders access to quality content via alternative platforms</li> <li>• Encourage self-monitoring and tracking of teachers' professional qualifications</li> </ul>
 <p><b>Talent Attraction Platform</b></p>	<p>Attract potential teachers to join the industry by leveraging digital platforms that are integrated with ECDA's systems.</p>	<ul style="list-style-type: none"> <li>• Optimise attraction of talents and identify potential teachers through awareness and outreach using digital platforms</li> <li>• Connect centres to part-time and relief staff or teachers</li> </ul>



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Digital Solution	Solution Description	Benefits
 <p><b>Smart Resource Management</b></p>	<p>Leverage Internet of Things (IoT) to optimise asset utilisation and control the facility environment, such as zonal/virtual fencing, lighting, air-conditioning and noise, with smart sensors.</p>	<ul style="list-style-type: none"> <li>• Allow operators to locate assets faster and improve their utilisation</li> <li>• Increase security, safety and wellbeing of staff and students</li> <li>• Save on utilities costs for operators</li> </ul>
 <p><b>Virtual Training and Learning</b></p>	<p>Deploy Augmented Reality (AR) / Virtual Reality (VR) technology to simulate scenario-based training for teachers.</p>	<ul style="list-style-type: none"> <li>• Provide training using real-world situations which may lead to higher retention rate of trainees and teachers</li> <li>• Improve quality of teaching, content and delivery</li> </ul>

Training in digital skills for all levels of proficiency are available. All job roles can benefit from upskilling to support your digitalisation journey.

<p style="text-align: center;"><b>All Users</b> Require broad-based digital literacy and awareness</p>	<p style="text-align: center;"><b>Advanced Users</b> Require higher proficiency digital skills</p>
<p style="text-align: center;"><b>“TECH BASICS” COURSES</b></p> <p><b>Broad-based innovation mindset and digital literacy/awareness</b> SSG funded broad-based courses – e.g. Skills Future for Digital Workplace</p> <p><b>Solution-specific user level digital skills</b> Vendor-specific solution training</p>	<p style="text-align: center;"><b>“TECH ADVANCED” COURSES</b></p> <p><b>Higher proficiency level digital skills</b> Training mapped to the Skills Framework for Early Childhood Care and Education and Information Communications Technology (ICT)</p>

### Example of job roles



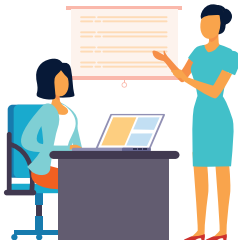
**Educarer**

Cares for and attends to the needs of young children (2 months - 4 years) whilst creating a secure environment to build respectful, responsive and reciprocal relationships with them.



**Preschool Teacher**

Creates a secure and quality learning environment for children, while effectively integrating innovative teaching and learning practices.



**Lead Teacher**

Provides leadership for the development of teaching and learning practices at the centre.



**Centre Leader**

Develops strategic plans and structures to foster a culture of care and trust, mentoring, collaborative professionalism, and continuous learning within the centre.



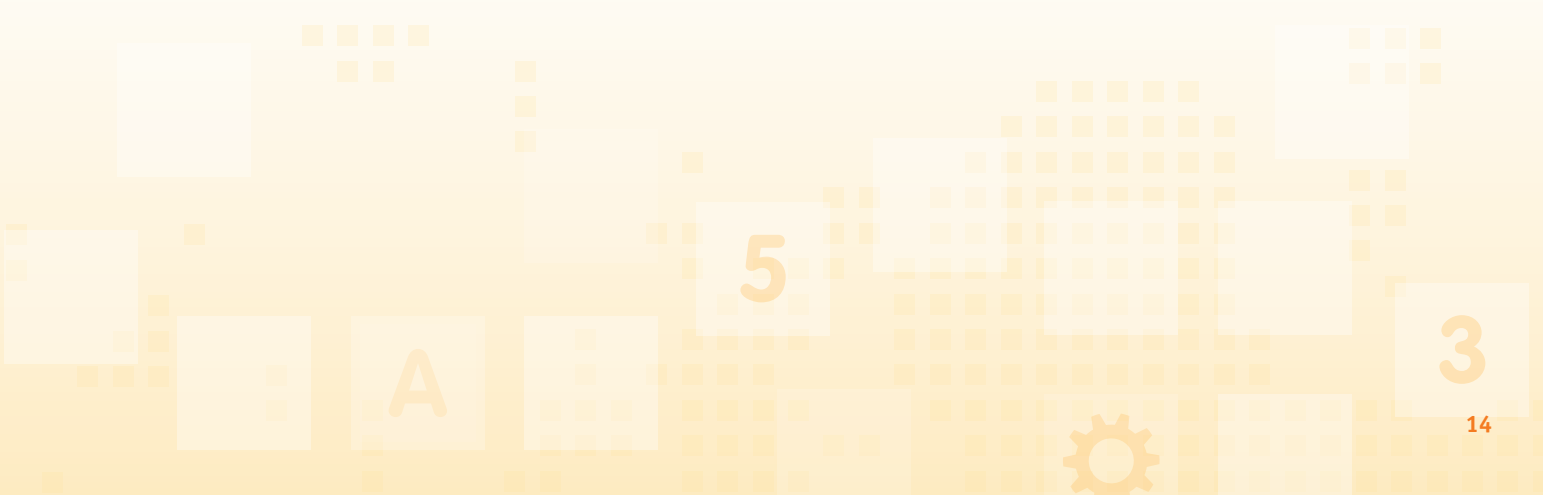


# Digital Skills Needed: Digital Roadmap On Training

Prepares sector’s workforce to adopt digital solutions - Examples of possible training available

	STAGE 01	STAGE 02	STAGE 03
<p><b>“TECH BASICS”</b> EC leaders, teachers, centre administrators and HR personnel</p>	<p><b>Getting Ready for the Digital Economy</b> <i>Adopt and Adapt</i></p> <ul style="list-style-type: none"> <li>• SkillsFuture for Digital Workplace</li> <li>• Enhancing Lesson Study</li> <li>• Digital and Agile Transformation</li> <li>• Cyber Security Awareness</li> </ul>	<p><b>Growing in the Digital Economy</b> <i>Analyse and Automate</i></p> <ul style="list-style-type: none"> <li>• Introduction to Data Analytics and Cyber-security</li> <li>• Introduction to Digital Marketing</li> </ul>	<p><b>Leaping Ahead</b> <i>Advance Capabilities</i></p> <ul style="list-style-type: none"> <li>• Augmented Reality &amp; Virtual Reality</li> </ul>
Vendor-Specific Solutions Training			
<p><b>“TECH ADVANCED”</b> Employees that use or are exploring advanced tech in their work / organisation</p>	<ul style="list-style-type: none"> <li>• Transforming Digital Business with Virtual Reality</li> <li>• Digital Learning Beginner Workshop</li> <li>• Essentials of Personal Data Protection</li> <li>• User Experience Design Fundamentals</li> </ul>	<ul style="list-style-type: none"> <li>• SEO, Social Media &amp; Digital Marketing Mastery</li> <li>• Basic Video Creation and Editing</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding of Internet of Things</li> <li>• Internet of Things Fundamental for Beginners</li> <li>• Smart Sensors and Integration</li> </ul>
Training programmes aligned to <b>Skills Framework</b> and emerging areas under <b>SkillsFuture Series</b>			

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

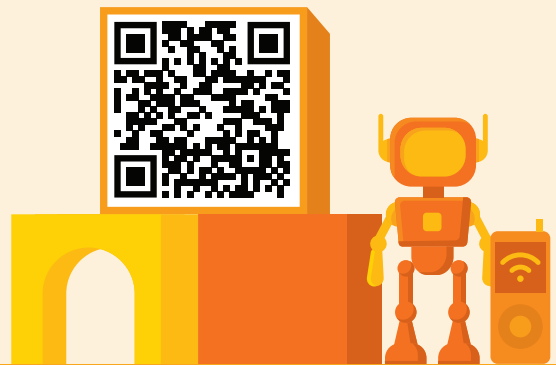


You will be supported at every stage of your digital journey, through three simple steps:

## 1 | Is your business digital-ready?

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

Early Childhood IDP



- Tap on the [CTO-as-a-Service](#) to complete your Digital Readiness Sel Check in the web app and select from the recommended digital solutions that best meet your business needs.
- Visit the [ECDA](#) website to contact solution providers to procure and implement digital solutions.
- Apply for training subsidies under the [SkillsFuture Enterprise Credit \(SFEC\)](#).

## 2 | How do you get started?

CTOaaS



ECDA



SFEC



## 3 | Where can you get help?

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

SME Centre



### For Preschool Operators

#### DIGITAL CONSULTANCY & SOLUTIONS

##### ECDASite

<https://www.ecda.gov.sg/Operators/Pages/EC-in-dustry-digital-plan.aspx>

##### CTO-as-a-Service

[go.gov.sg/CTOaaS](http://go.gov.sg/CTOaaS)

##### SMEsGoDigital

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

##### GoBusinessGovAssist

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

##### BeSafeOnline

[https://www.csa.gov.sg/~/\\_media/csa/documents/publications/be\\_safe\\_online/be\\_safe\\_online\\_handbook.pdf](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:

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

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

Enterprise Infoline: +65 6898 1800

##### Heartlands Go Digital by Heartland

##### Enterprise Centre Singapore

<https://hecs.com.sg>

##### Association of Early Childhood and Training Services

<http://www.assets.org.sg>

### For Individuals

#### CAPABILITY UPGRADING AND CAREER FACILITATION

##### SkillsFuture Credit

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

##### SkillsFuture for Digital Workplace

<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's Professional Conversion Programme

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

##### e2i Meet a Career Coach

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

### For ICM Vendors

#### SMEs Go Digital

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

This EC sector-wide IDP is supported by the SMEs Go Digital programme

For programme information and feedback, visit: <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.



[imda.gov.sg/sgdigital](https://imda.gov.sg/sgdigital)  
[ecda.gov.sg/growatbeanstalk](https://ecda.gov.sg/growatbeanstalk)



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[instagram.com/BeanstalkSingapore](https://instagram.com/BeanstalkSingapore)



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