

FACTSHEET

TECHSKILLS ACCELERATOR (TESA)

First announced in the 2016 Budget, the TechSkills Accelerator (TeSA), supported by SkillsFuture, is a tripartite initiative by the government, industry and the National Trades Union Congress (NTUC), to build and develop a skilled Information and Communications Technology (ICT) workforce for the Singapore economy, and to enhance employability outcomes for individuals.

2 The Infocomm Media Development Authority (IMDA), which drives TeSA for ICT professional development, takes an integrated approach to ICT skills acquisition and practitioner training — in core ICT skills and in sector-specific ICT skills — and enhance employability outcomes through place and train programmes, and career advisory services. As of 15 January 2019, more than 61,000 training places have been taken up or committed.

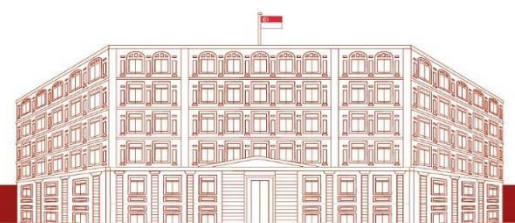
Three key thrusts of work by TeSA

Thrust 1 – Provide Skills Framework for ICT

3 Launched in November 2017, the Skills Framework for ICT can be used by hirers to develop career maps and articulate job requirements; by individuals to guide their skills identification and development to stay relevant; and by training providers to devise ICT courses. The skills identified in the framework can support emerging areas such as cyber security, Internet of Things, immersive media, artificial intelligence and data analytics. More than 80 ICT skillsets and more than 100 job roles have been identified. *[Please see [Annex A](#) for more details.]*

Thrust 2 – Skills Acquisition and Validation

4 A broad-based approach to skills development — modular and certifiable skills courses — is taken to enable individuals to up-skill or deepen their knowledge in various skills of choice to fill industry gaps. A targeted approach is also taken with companies, coding schools, Continuing Education and Training (CET) and other organisational partners to provide eligible individuals with various pathways to join the ICT profession, upskill and reskill themselves. These programmes include Company-Led Training (CLT) programme, Tech Immersion and Placement Programme (TIPP), Critical Infocomm Technology Resource Programme Plus (CITREP+), Earn and Learn (ELP), and Professional Conversion Programme (PCP). *[Please see [Annexes B, C & D](#) for more details.]*



Thrust 3 – Integrated Career Services

5 This is a coordinated career support ecosystem for job matching, group mentoring, and leadership programmes by tripartite partners that include NTUC, e2i, Singapore Computer Society (SCS), IMDA and Workforce Singapore (WSG). It provides dedicated and focused career advisory, facilitation and support services for individuals, including mid-career professionals, who are looking to join or develop their careers in ICT. There are various initiatives to enhance the chances of employability for individuals. For example, physical and virtual career fairs, career centres with career coaches, and experienced ICT professionals through SCS to provide mentorship advice.

6 To guide the work of TeSA under its three key thrusts, there is a Governing Council who oversees three sector committees in ICT, Finance and Healthcare; ensuring the programmes developed are in line with industry needs.

TeSA Scale-Up Efforts

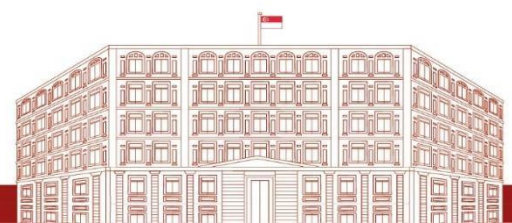
7 With a strong projected demand for skilled ICT professionals over the next few years,¹ TeSA will be scaling up its current suite of programmes to develop more local tech talents and help ICT professionals acquire the relevant in-demand skills to seize the exciting career opportunities to advance Singapore’s digital economy.

(a) Supporting companies to develop tech skills development plans. TeSA will support companies in developing a tech skills development plan, which takes reference from the Skills Framework for ICT, for their employees to upgrade and acquire the relevant skills.

(b) Enhancing the local suite of frontier tech training options. TeSA will enhance our suite of local training partnerships with new entities to support training in emerging and deep technological skills, such as Artificial Intelligence, Cybersecurity, Cloud Computing, and Blockchain.

(c) Creating inroads into more sectors. TeSA will also leverage on Trade Associations and Chambers (TACs) as multipliers to scale up ICT talent development efforts in other sectors on top of ICT, Finance and Healthcare.

¹ Based on the IMDA Annual Survey for Infocomm Media Manpower in 2017, there will be a projected demand of over 28,500 infocomm professionals over the next three years from 2018 to 2020.



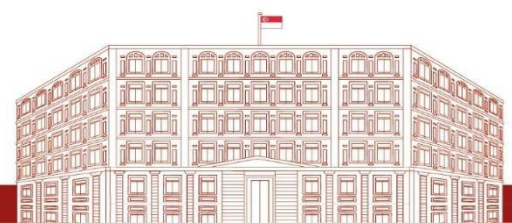
Whole-of-Government and Industry Collaboration

8 TeSA's goal to build and develop a skilled ICT workforce for Singapore is reinforced by efforts such as the following initiatives.

(a) Overseas Singaporeans in Tech (OST) LinkedIn Community: OST is an online community for companies and the government in Singapore to connect with Singaporeans based overseas — students interested in tech, and professionals working in tech roles. The platform facilitates networking among overseas Singaporeans and local networks, supports them with relevant citizen resources, informs them of the latest trends in the local tech ecosystem, and excites them with job opportunities in Singapore. OST is a joint effort with Overseas Singaporean Unit (OSU), Ministry of Communications (MCI), IMDA, Smart Nation and Digital Government Group (SNDGG), GovTech, and EDB, with the aim of encouraging overseas Singaporeans in tech to relocate back to Singapore, or work for Singapore enterprises in their overseas points of presence. As of 15 February 2019, this initiative has connected with more than 500 overseas Singaporeans.

(b) Digital Learning Guide (DLG): DLG will provide employers with a one-stop guide to help plan for their workers' digital training needs, aligned with the companies' technological and business needs. Developed by IMDA and SkillsFuture Singapore (SSG), the guide draws information from the Industry Transformation Maps, Industry Digital Plans, Skills Frameworks and technology trends, in consultation with employers, industry associations, unions and the Singapore government. DLG will be piloted for the retail and logistics sectors, and it will be available on the IMDA website from July 2019.

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SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY

Skills Framework

1 The Skills Framework is an integral component of the Industry Transformation Maps, and is co-created by employers, industry associations, unions and government for the Singapore workforce. It provides information on sector and employment, career pathways, occupations/job roles, as well as existing and emerging skills required for the occupations/job roles. It also provides a list of training programmes for skills upgrading and mastery.

2 Individuals can use the Skills Framework to make informed decisions on education and training, career development and skills upgrading based on the sector, employment, occupation/job role, skills and training information in the framework.

3 Employers can use the Skills Framework to design progressive human resource management and talent development plans based on the detailed skills information in the framework.

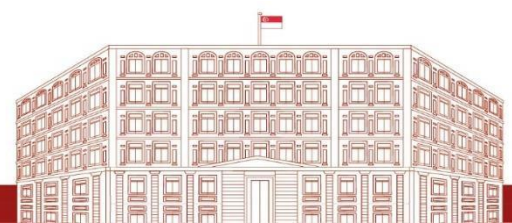
4 Training providers can use the Skills Framework to gain insights into industry trends and skills in demand, which allow them to innovate and contextualise their curricula design and training programmes to suit the needs of the industry.

Skills Framework for Infocomm Technology (ICT)

5 The Skills Framework (SF) for ICT is jointly developed by IMDA and SkillsFuture Singapore (SSG) to provide a guide for individuals, employers and training providers to promote skills mastery and lifelong learning for ICT professionals.

Target Audience for the SF for ICT

- 6 The SF for ICT will serve the follow groups:
- a) Individuals with the passion and interest to pursue a career as well as skills development in ICT, and/or who are in-service ICT professionals.
 - b) Employers of ICT professionals, who would like to identify emerging skills and build new capabilities, recognise their employees' skills and invest in skills training for them, and/or



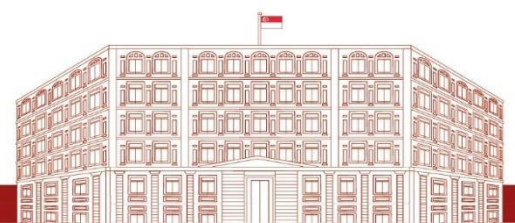


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strengthen their organisational capability and enhance talent attraction, management and retention.

- c) Training providers who are looking to gain better insights into sector trends, existing and emerging skills in demand, as well as design programmes that address the ICT manpower and skills needs.



COMPANY-LED TRAINING (CLT) PROGRAMME

1 The CLT programme aims to accelerate professional development through a structured training programme for fresh to senior level professionals to acquire tech specialist, expert or leadership competencies for jobs in demand by industry, especially skills that support the Digital Economy sector transformation efforts. The structured training will align to the ICT Skills Framework and focus on developing new areas like Artificial Intelligence, Cybersecurity, IOT, Data Analytics, Blockchain, etc.

Programme Coverage

2 Under the CLT programme, companies that are “Training Partners” will provide structured training that may last up to 12 months.

3 The structured training could include a combination of On-the-Job Training (OJT), job rotations, local and / or overseas attachment offered by industry partners, as well as in-depth training through internal and / or external courses. At the end of the training, trainees will be skilled up with competencies for tech job roles in demand which are aligned to the Skills Framework for ICT.

Eligibility Criteria

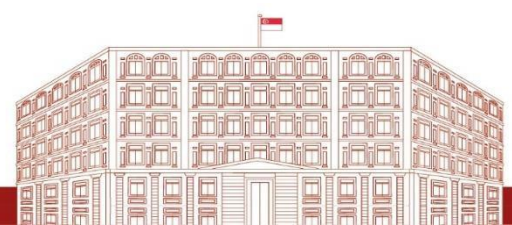
4 Trainees eligible for the CLT programme must be:

- Singapore Citizens/PR
- Possess a Diploma, Degree or any other relevant qualifications as determined by company

Training Partners

5 Companies selected to be Training Partners under the programme must be:

- A Singapore-registered company / organization.
- Employer of ICT professionals for tech/leadership job roles in demand by industry.
- Should possess the necessary capabilities and capacity to deliver the training programmes.
- Prepared to commit resources (including practical projects, job rotations, and mentors) to provide guidance and develop trainees.





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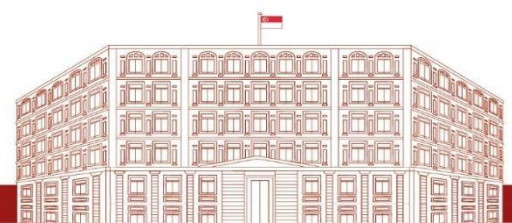
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- Willing to invest in development of ICT professionals and provide them with a structured career progression pathway that is based on skills instead of academic qualifications.

Programme Support

6 Trainees and Training Partners under the programme will receive funding support for qualified items as follows:

- Monthly stipends for trainees
- Training fees for local / overseas in-depth training and / or local / overseas attachment and / or courseware development fees
- Cost of Living Allowances (COLA) and economy air fare for trainees selected to participate in overseas attachment.



TECH IMMERSION AND PLACEMENT PROGRAMME

1 The Tech Immersion and Placement Programme aims to convert non-ICT professionals into industry-ready ICT professionals. They will be placed into tech job roles, after undergoing a short intensive and immersive training course or mentorship and coaching programmes delivered by industry practitioners.

2 Through the intensive and immersive courses or mentorship programmes, trainees will build an impressive portfolio of ICT projects. They also get to interact with leading experts in the respective fields to help them prepare for roles in the ICT industry such as web developers, user experience designers, and data analysts.

3 Placement into company job roles generally include the following:

- Employment (permanent, contract work or working for equity);
- Change of job role to a relevant tech role.
- Join or build tech startup.

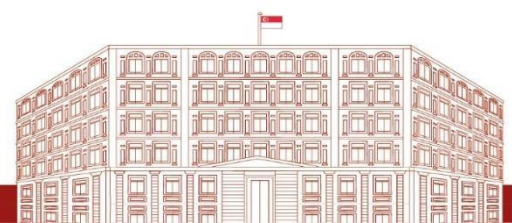
4 The TIPP supports 2 types of training partners:

- **Institutional TIPP**
 - TIPP partner is a training institution, offering tech immersion programme for tech jobs in demand by industry.
- **Company-Led TIPP (CoTIPP)**
 - TIPP partner is a company offering immersive mentorship and coaching programme for tech jobs in demand by the industry.

Eligibility Criteria

5 The programme supports Singapore citizens/PRs who are:

- Non-ICT fresh graduates and professionals who are interested in switching to ICT job roles.
- ICT professionals interested in up-skilling in preparation for new tech positions.
- Individuals with a passion to join or build a tech start-up.

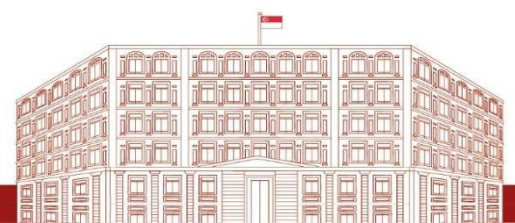


Programme Support

6 Individuals qualified for the courses supported in the Tech Immersion and Placement programme will enjoy a subsidised course fee.

7 Courses Supported Under TIPP:

- Agile Software Development
- Software Development
- User Experience Design
- Data Science
- Digital Marketing



ANNEX D

CRITICAL INFOCOMM TECHNOLOGY RESOURCE PROGRAMME PLUS (CITREP+)

1 The Critical Infocomm Technology Resource Programme Plus (CITREP+) is a programme by the Infocomm Media Development Authority (IMDA) to support the ICT workforce in keeping pace with technology shifts, through the continuous and proactive training of technical skills sets, in order to remain relevant and productive.

Programme

2 To build a strong core of specialised Singaporean ICT professionals, CITREP+ is structured to support students and professionals to build specialised ICT skills through broad-based training and certification.

3 IMDA partners with training providers to develop and offer quality infocomm professional development technology courses and professional certifications. These courses and certifications impart knowledge and skills in areas such as Artificial Intelligence, Cybersecurity, IOT, Data Analytics, Blockchain, Digital Leadership, etc.

4 As an extension to the existing support for classroom-based courses and professional certifications, CITREP+ also supports selected Massive Open Online Courses (MOOCs) that have specific focus on developing ICT skillsets.

Programme Support

Eligible Singaporeans and PRs will be able to enjoy course and / or certification fee support for courses and certifications endorsed under CITREP+.

