

The image shows two women in professional attire looking at a laptop screen. The screen displays a dashboard with the title 'ANALYZE DATA'. It features a bar chart on the left, a line graph in the center, and three circular progress indicators on the right with values 50, 75, and 90. The word 'GROWTH' is visible at the bottom of the screen. A semi-transparent dark grey box is overlaid on the bottom half of the image, containing the main title and subtitle.

Career Conversion Programme for ICT Professionals (Data and Artificial Intelligence)

Company Info-Kit

Confidential

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A network diagram with nodes and connecting lines, rendered in a light red color against a dark red background. The nodes are small circles, and the lines are thin, creating a web-like structure.

Who We Are

Who We Are



**Programme Manager
& Key Industry Association Partner**
that manages the administrative matters



Funding Agency
Workforce Singapore (WSG) is a statutory board under the Ministry of Manpower that oversees the transformation of the local workforce and industry as well as employability



Supporting Agency
A statutory board under Ministry of Communications and Information & Lead Agency to bring Singapore into a digital future

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Introduction to Career Conversion Programme (CCP)

Why CCP?



Access Talent

Find hidden gems among career switchers, incl. existing staff



Offset Opportunity Costs

Up to 90% salary support for 3 - 6 months*



Support Company Growth

Build talent pipeline and capabilities

*Depending on the CCP modality

Programme Overview

The CCP for ICT Professionals (**Data and AI**) is designed to support mid-career individuals in undergoing skills conversion and taking on roles relating to Data and AI. Examples of Data and AI roles (non-exhaustive) include:

- Business Intelligence Manager
- Data Analyst/ Associate Data Engineer
- Senior Data Engineer/ Data Engineer
- Senior AI/ML Engineer
- AI/ML Engineer
- Data Scientist/ AI Scientist
- AI Applied Researcher

Individuals and employers may refer to the [Information and Communications JTM](#) to identify the relevant ICT roles and skills.

Example 1 – Business Intelligence Manager

BUSINESS INTELLIGENCE MANAGER

Job Description

The Business Intelligence Manager identifies and translates market opportunities into actionable recommendations for the organisation. He/She supervises professionals in gathering and analysing business intelligence (BI) data to help make informed business decisions. He manages the timely reporting of data analysis outcomes and effectively communicates findings, insights and recommendations to business leaders. He develops data and/or information quality metrics and researches new technology and develops business cases to support enterprise wide business intelligence solutions. He is responsible for developing guidelines on data insight reporting for the team. He is also responsible for managing BI-related projects from end to end.

He manages a team and is proficient in the analytics tools and techniques required by the organisation. He is also familiar with the relevant software platforms on which the solution is deployed on.

The BI Manager has a deep passion for analysing and resolving complex problems through a systematic approach. He displays an intellectual curiosity as well as the capability to engage with stakeholders to understand business issues.

Critical Work Functions and Key Tasks

[View details](#)

Click on any of the Skills and Competencies to view a detailed description

Technical Skills & Competencies

Proficiency Level

Budgeting	4
Business Innovation	5
Business Needs Analysis	5
Business Performance Management	4
Data Analytics	4
Data Ethics	4
Data Governance	4
Data Visualisation	4
Design Thinking Practice	4
Learning and Development	4
Manpower Planning	4
Networking	4
People and Performance Management	4
Project Management	4
Stakeholder Management	3,4
Strategy Implementation	3

Strategy Planning 4

Critical Core Skills (Top 5)

Proficiency Level

Communication	Intermediate
Problem Solving	Intermediate
Sense Making	Intermediate
Transdisciplinary Thinking	Intermediate
Creative Thinking	Intermediate

Example 2 – AI/ML Engineer

ARTIFICIAL INTELLIGENCE/MACHINE LEARNING ENGINEER

Job Description

The Artificial Intelligence/Machine Learning Engineer supports the production of scalable and optimised artificial intelligence (AI)/machine learning (ML) models. He/She focuses on building algorithms for the extraction, transformation and loading of large volumes of real-time, unstructured data in order to deploy AI/ML solutions from theoretical data science models. He runs experiments to test the performance of deployed models, and identifies and resolves bugs that arise in the process.

He works in a team setting and is proficient in statistics, scripting and programming languages required by the organisation. He is also familiar with the relevant software platforms in which the models are deployed. He should be knowledgeable of the requirements under the Model AI Governance Framework and the Personal Data Protection Act (PDPA) in the course of his work on AI/ML models.

The AI/ML Engineer is a determined individual who is comfortable working with large data sets, has a keen interest in problem solving and experimentation, and enjoys the iterative process of development and resolving issues.

Critical Work Functions and Key Tasks

[View details](#)

Click on any of the Skills and Competencies to view a detailed description

Technical Skills & Competencies

Proficiency Level

Business Needs Analysis

4

Cloud Computing

3

Computational Modelling

3

Computer Vision Technology

4

Configuration Tracking

3

Data Design

4

Data Engineering

3

Data Governance

4

Data Strategy

4

Database Administration

3

Emerging Technology Synthesis

4

Intelligent Reasoning

4

Pattern Recognition Systems

4

Project Management

4

Security Architecture

3

Self-learning Systems

4

Stakeholder Management

4

System Integration

3

Test Planning

3

Text Analytics and Processing

4

Critical Core Skills (Top 5)

Proficiency Level

Leadership

Intermediate

Developing People

Intermediate

Transdisciplinary Thinking

Intermediate

Computational Thinking

Intermediate

Communication

Intermediate

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Programme Details

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Individuals and employers can participate in the CCP for ICT Professionals through 2 modes:

1. **Place and Train.** This requires prospective employers to first hire mid-career individuals before they undergo training. Upon successful placement in the CCP, mid-career individuals will undergo up to 100% of the On-The-Job Training (OJT) as well as optional structured classroom training (where applicable), across a 6-month period.

2. **Job Redesign (JR) Reskilling.** Employers can reskill in-service employees to be future-ready by taking on Cybersecurity-related new or redesigned ICT growth roles and acquire growth skills. Participating companies will develop a 3-month training plan to reskills these nominated employees. The training plan will be OJT (On-The-Job Training)-centric, covering **at least four ICT growth skills** aligning closely with the redesigned job roles.

ICT Growth Skills Categories (for JRR applications)

Business and Project
Management



Business
Development



Business Finance



Design and
Architecture



Development and
Implementation



General
Management



Governance and
Compliance



Operations and
User Support



People
Development



Sales and Marketing



Stakeholder and
Contract Management

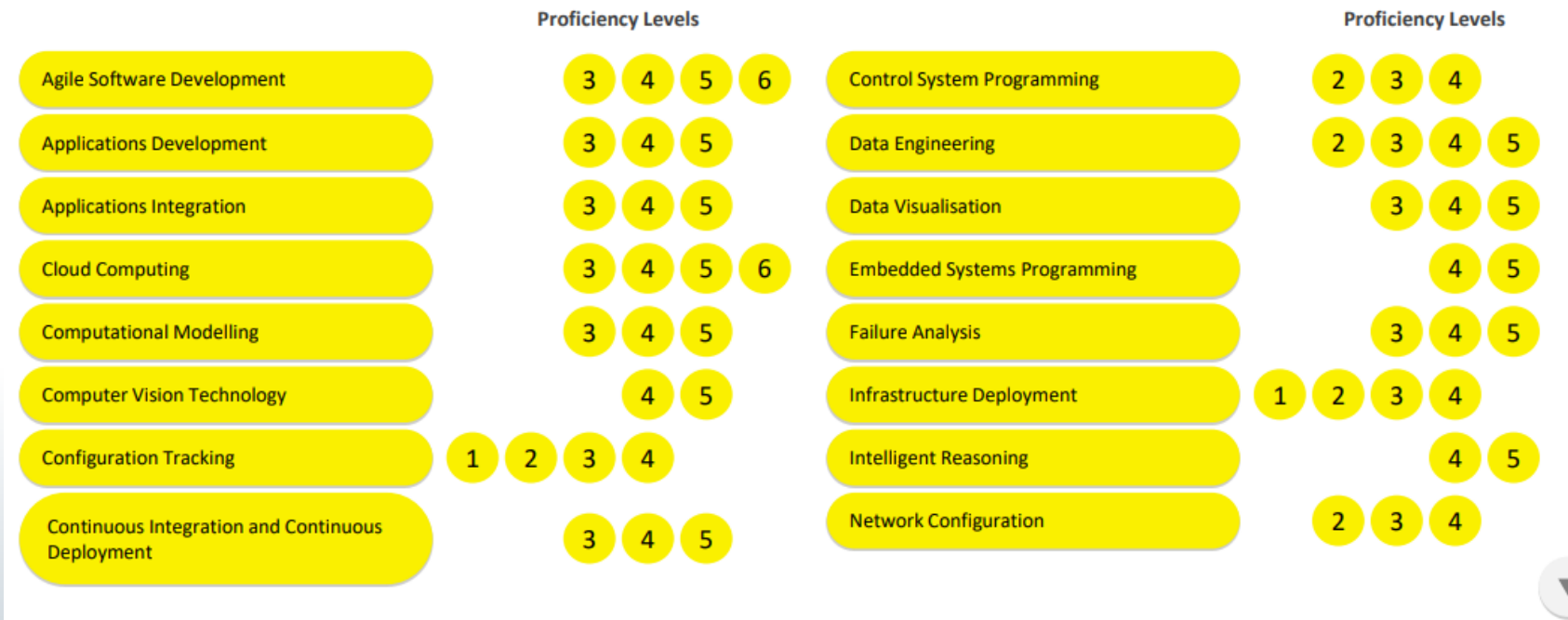


Strategy Planning and
Implementation



For the full list of ICT Growth Skills, and their corresponding definitions, proficiency levels, please download the file via this [link](#). (Page 333 onwards)

Examples of ICT Growth Skills – Development and Implementation



Programme Details

CCP for ICT Professionals (Cybersecurity)				
Type of Employee	OJT Duration	Funding Duration	Salary Support %	
			Singapore Citizen (SC) & Permanent Resident (SPR)	Singapore Citizen (SC) & Permanent Resident (SPR) who are long-term unemployed [#] or 40 years old and above
New Hire (NH) Company hires a mid-career individual and trains individual to take on a new job role	On-The-Job Training 6 months	6 months	Up to 70% of Fixed Monthly Salary* (capped at S\$5,000 per month) w.e.f 1 April 2024	Up to 90% of Fixed Monthly Salary* (capped at S\$7,500 per month) w.e.f 1 April 2024
Job Redesign & Reskilling (JRR) Existing job roles are vulnerable due to business transformation plans but are not immediately at-risk. These workers will be provided with training by their companies, to take on redesigned job roles within the company.	On-The-Job Training 3 months	3 months		

[#]Long-term Unemployed - being unemployed and actively seeking employment for six months or more

*Fixed Monthly Salary refers to Basic Monthly Salary + Fixed Monthly Allowances

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Application Process Flow

Eligibility Criteria

Employers:

- Registered or incorporated in Singapore with a valid Unique Entity Number (UEN) with Accounting and Corporate Regulatory Authority (ACRA);
- Ensure that new hires / existing staff cannot be:
 - A shareholder of the CCP company, or its related companies;
 - Related to the owner(s) of the CCP company; and
 - (For new hires only) Immediate ex-staff of CCP company or its related companies;
- (For new hires only) Offer a full-time PMET position employment contract on permanent terms or on contract terms that are no less than one (1) year;
- Offer employment directly related to the job which the CCP is for, with remuneration that is aligned to the market rate;
- Must put in place OJT for the trainees; and
- Commit to the CCP training arrangements for the trainees.

Applicants/Trainees:

The Programme is open to all company-sponsored applicants who meet the following General Eligibility Criteria:

- Singapore Citizen (SC) or Permanent Resident (PR);
- Minimum 21 years old;
- Graduated or completed National Service, whichever is later, at least two years prior, at the point of application;
- Must not be a shareholder of the CCP company, or its related companies;
- Must not be related to the owner(s) of the CCP company; and
- Existing employees must have served at least one-year tenure with the employer to qualify for the Job Redesign Reskilling CCP

In addition, new hires should also adhere to the following:

- Hired for not more than three (3) months prior to CCP commencement;
- Must not be in the same or similar job role prior to joining the CCP; and
- Must not be immediate ex-staff of CCP company or its related companies.

Application Flow

4 steps	Employee	Employer
Step 1: Account Creation	<ul style="list-style-type: none"> Register his/her interest on WSG portal (Take Note of Application ID) Create and verify an account on techtalent portal 	<ul style="list-style-type: none"> Create and verify an account on techtalent portal Post the new job description on techtalent and tag it to the respective CCP job role
Step 2: Preparation	<ul style="list-style-type: none"> Prepare Documents (next slide) Accept the invitation from the employer and start the CCP application 	<ul style="list-style-type: none"> Prepare Documents (next slide) Invite the employee to apply for the job and start the CCP application Discuss OJT template & JRR Reskilling Form with SGTech (if applicable)
Step 3: Submission	<ul style="list-style-type: none"> Fill up the trainee/employee portion and save the tabs. 	<ul style="list-style-type: none"> Fill up the hirer/employer portion and save the tabs. After the form is fully completed, employer to submit the application.
Step 4: Confirmation or Rejection		<ul style="list-style-type: none"> After the submission has been approved, employer to sign the Letter of Undertaking issued by SGTech.

Application Documents

Submit via techtalent.sg		
Type of Employee	New Hire (NH)	Job Redesign & Reskilling (JRR)
Pls note	Submit full documents within 6 weeks of employment^	Hired for at least 1 year at the company
From Employer	<ul style="list-style-type: none"> • Company's latest ACRA records, with shareholding (not more than 6 months from the date of submission) • Signed employment letter (please include any other documents that affect employee compensation e.g. bond terms, latest increment) • Job description for the role • On-the-Job Training Blueprint • [For JRR Only] JRR Reskilling Form 	
From Employee	<ul style="list-style-type: none"> • Registration on WSG Portal Application ID number (e.g. PCP-YYYY-XXXXXXXX) • Past 15 months CPF contribution statement of the PMET • [For NH Only] PMET's most updated Curriculum Vitae (CV) • [For NH Only] Coloured copy of PMET's highest educational certificate • [For NH Only] Coloured copy of PMET's latest educational certificate 	

^For employment period after 6 weeks, kindly contact SGTech prior to applying. Do note that the application may be rejected and appeals will be required and evaluated on a case-by-case basis.

Claim Documents

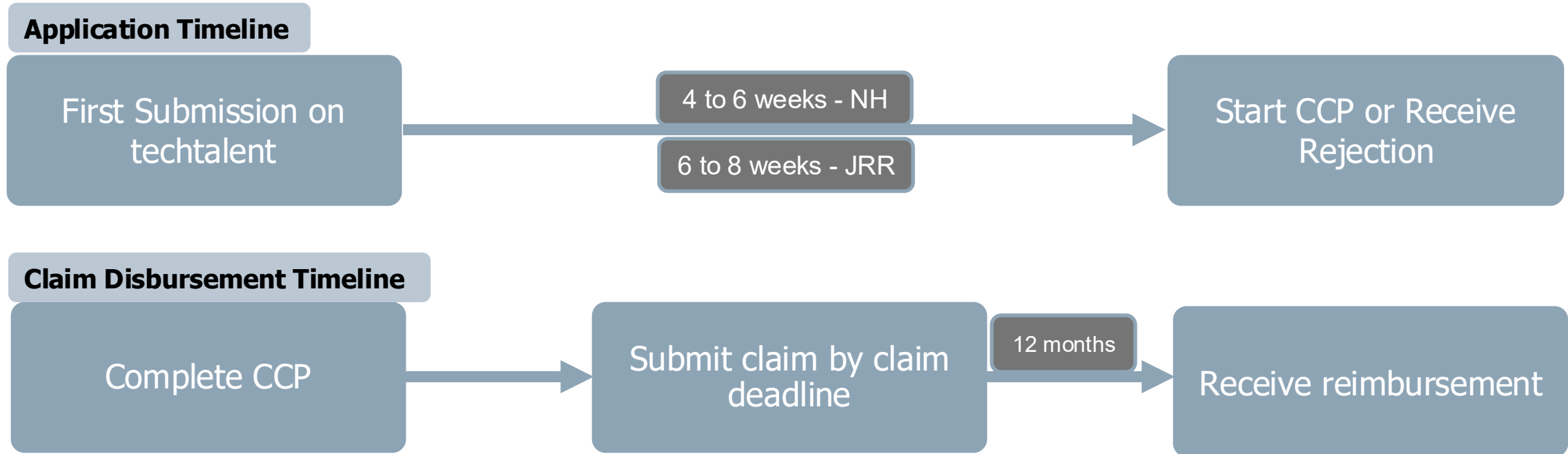
Submit via techtalent.sg		
Type of Employee	New Hire (NH)	Job Redesign & Reskilling (JRR)
Pls note	<ul style="list-style-type: none"> • Claim after full OJT period has ended. • Please note that it will take approximately 12 months for companies to receive the reimbursement from the deadline of claims submission. 	
Documents Required	<ul style="list-style-type: none"> • Company's bank account details • Fully Completed OJT Blueprint (by CCP End Date), Proof of Course Completion may be requested if Classroom/Blended Training (CT/BT) including e-learning are included in the OJT • CPF covering CCP Funding Period • Payslips covering CCP Funding Period - Inform SGTech of calculation and dates of variable salary deduction e.g. NPL, reservist. • Feedback form (Company) • Feedback form (Trainee) 	

IMPORTANT THINGS TO NOTE:

- Company must **retain the proof of work or relevant evidence of activities completed** as outlined in this OJT blueprint **for at least 3 years** from the date of final disbursement to the company under this CCP. Companies must be able to submit the proof of work or relevant evidence upon request, as part of the Terms and Conditions for the CCP. Failure to do so could be considered a breach of the Terms and Conditions.
- Examples of proof of work **include but are not limited to:** Work outputs/ deliverables produced by the trainee (reports, presentations, analyses, designs), digital portfolios of work samples produced by the trainee, photos of CCP trainee at work (with the date and time or time stamp for the photo taken, and location of the event), signed-off Timesheets, attendance record of training, emails or WhatsApp chats as supporting documentations that lead to approval of work or clearance of the draft work.



Estimated Timeline for Companies



The timeline stated above is an estimate. It will vary according to the submission and verification of all required supporting documents.

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Other CCPs Administered by SGTech

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- CCP for ICT Professionals ([Cybersecurity](#))
- CCP for ICT Professionals ([Data and Artificial Intelligence](#))
- CCP for ICT Professionals ([Infrastructure](#))
- CCP for ICT Professionals ([Operations and Support](#))
- CCP for ICT Professionals ([Product Development](#))
- CCP for ICT Professionals ([Sales and Marketing](#))
- CCP for ICT Professionals ([Software and Applications](#))
- CCP for ICT Professionals ([Strategy and Governance](#))

For more info or any other enquiries, contact us at ccp@sgtech.org.sg

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Contact Us

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SGTech's 40th Anniversary Gala with Deputy Prime Minister Heng Swee Keat as our GOH

Latest news



Launch of Singapore's first Digital Trust Centre of Excellence

Industry research



The State of Digital Automation 2023 (with SGTech member Workato)

Tech trends



Smart Nation Chapter Thought Leadership Series



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