



# CITREP+ Course Mapping Process

TESA PROGRAMME OFFICE, HUMAN CAPITAL  
DEVELOPMENT



# CITREP+

1. Objectives
2. Workflow
3. Vocab
4. Skills Framework for ICT Sector (SF for ICT) Course Mapping
5. Steps to Obtain Technical Skills and Competencies (TSCs)
6. Annex A



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# CITREP+ Objectives

# CITREP+ OBJECTIVES

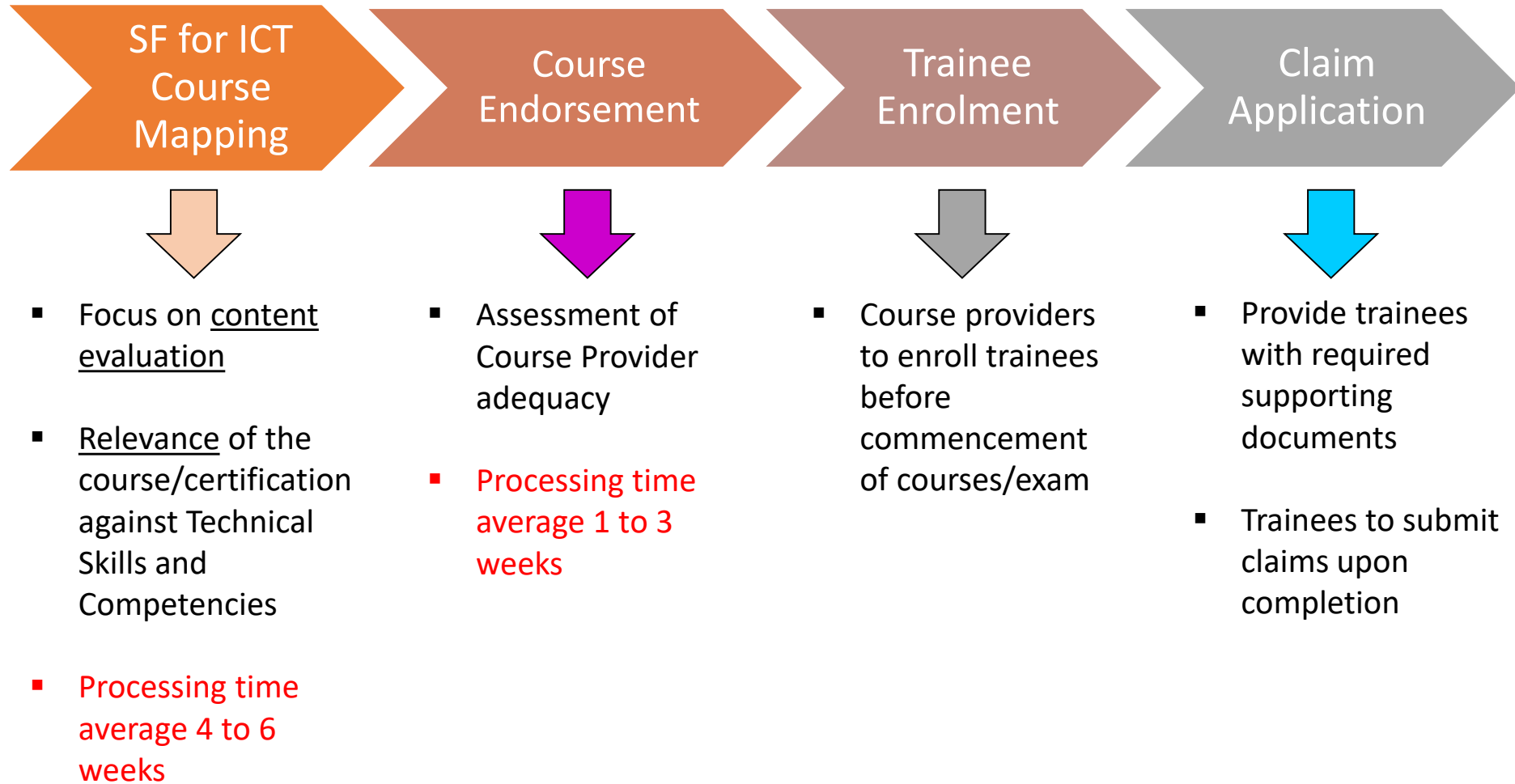
- To build a strong core of specialised local ICT professionals to support growth of **Digital Economy**
- To develop and offer quality infocomm professional development technology courses and professional certifications that impart knowledge and skills in relevant areas



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## Overview of CITREP+ Workflow Process

# OVERVIEW OF CITREP+ WORKFLOW PROCESS





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# CITREP+ Vocab

# CITREP+ VOCAB

## Important “VOCAB”

SF for ICT –

**CAB / CO** - Certificate  
Awarding Body,  
Certification Owner,  
Curriculum Owner

Entities issuing qualifications  
(certificates or titles)

**CP** - Course  
Provider

Entities that deliver the  
training courses or  
examinations

ICMS –

**AA** - Approving Authority

**AO** – Administrative Officer

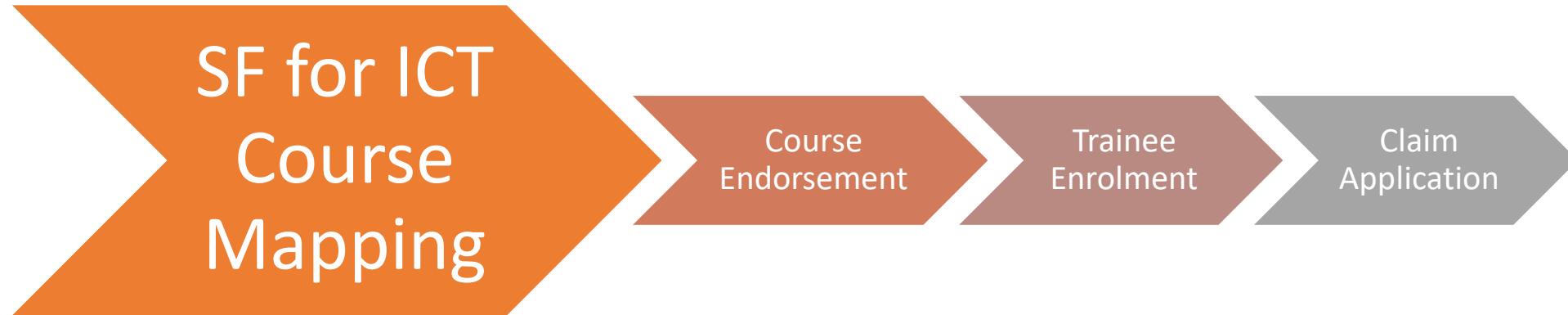




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# SF for ICT Course Mapping

# SF FOR ICT COURSE MAPPING



**SF for ICT**  
**Course Mapping validity**  
Up to 31 March 2021

# SF FOR ICT COURSE MAPPING - OVERVIEW

## ☐ The Skills Framework (SF for ICT)

- Skills Framework Roadmap that **articulates the competency requirements** of key Infocomm professionals.
- Identifies various ICT sectors, key job roles and its functions
- 80 Technical Skills and Competencies for 119 industry job roles

## ☐ Facilitate the course mapping process for CITREP+.

- Leverage on SF for ICT to **determine the types of Technical Skills and Competencies required** for various infocomm jobs
- Develop training strategies for professionals to acquire these skills

# COMPETENCY STANDARDS – HOW DO THEY AFFECT COURSE PROVIDERS?

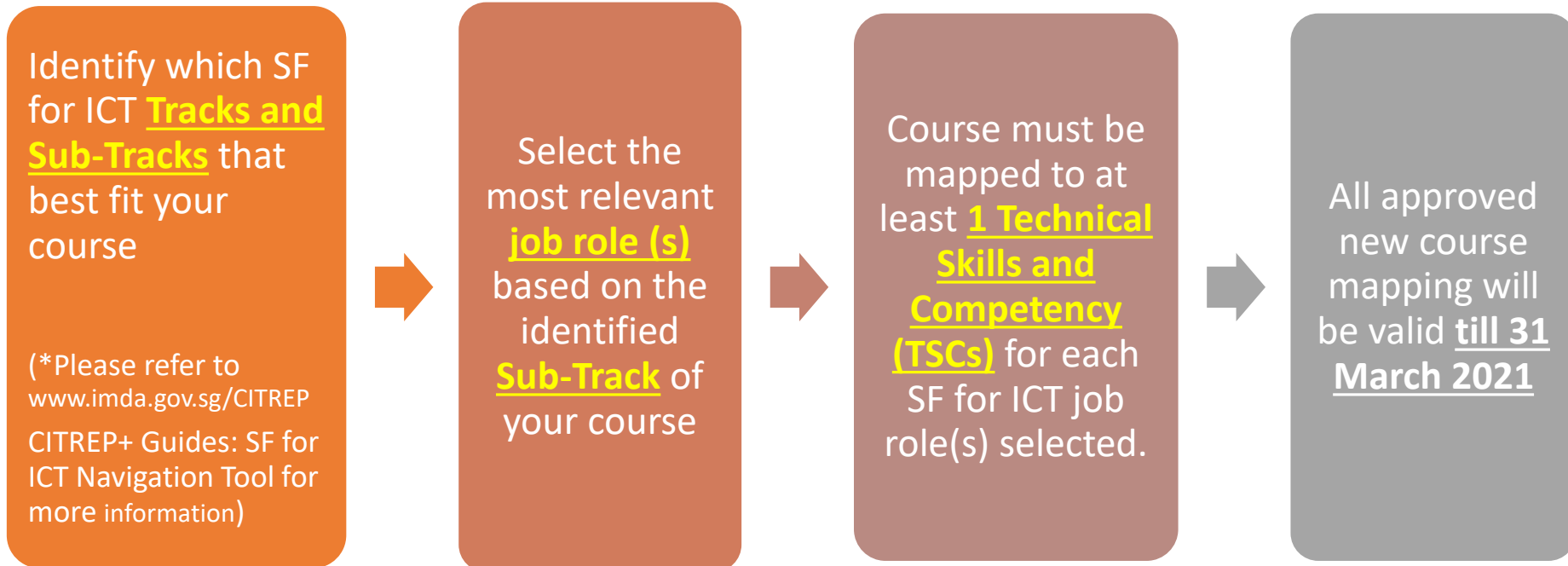
## ☐ Endorsement and Branding

- Benchmark for Quality and Standards
- Marketing Edge – locally and regionally
- Recognised by employers

## ☐ Alignment with SF for ICT

- Facilitate the endorsement process for CITREP+ programme
- Courses that are endorsed as being SF for ICT Aligned/Accredited will be featured on [IMtalent](#) portal

# SF FOR ICT COURSE MAPPING



# SUPPORTED SF FOR ICT SKILL AREAS

- Areas eligible for **Courses and Certification** support level
- (Entry Level & Above)

## Skill Category: Strategy and Architecture

- All TSCs (Eg, Cyber Risk Management, Data Strategy, etc)

## Skill Category: Design

- All TSCs (Eg, Data Design, User Interface Design, etc)

## Skill Category: Development and Implementation

- All TSCs (Eg, Analytics and Computational Modeling, Application Development, etc)

## Skill Category: Operations and User Support

- All TSCs (Eg, Cyber Forensics, Infrastructure Support, etc)

## Skill Category: Sales & Marketing

- Technical Sales and Support

# SUPPORTED SF FOR ICT SKILL AREAS

- Areas eligible for **Certification** support level
- (Entry Level & Above)

## Skill Category: Stakeholder and Contract Management

- All TSCs (Eg, Contract Management, Stakeholder Management, etc)

## Skill Category: Project Management

- All TSCs (Eg, Business Needs Analysis, Programme Management)

# SF FOR ICT COURSE MAPPING - CRITERIA

## Types of Courses and Certification

- **Certifiable Programme**
  - Courses that lead to industry-recognised certifications
  - Appointment by Certificate Awarding Body (CAB)
  - Review on the Certification:
    - Certification Governing Body
    - Body of Knowledge & its currency
    - Certification Approach/Mechanism

## Total Duration for Course and Exam Completion

- Minimum - **21 Hours excluding breaks** (of which at least **7 hours are face-to-face sessions**)
- Maximum - 12 months



# SF FOR ICT COURSE MAPPING - CRITERIA

## Supporting documents to provide

- 1) Detailed **course curriculum and course materials** (incl. training and/or certification roadmap) – **4 sets**
  - 2) Justification for course mapping – Market demand for the selected job role & skill area)
  - 3) Letter of authorisation from Certificate Awarding Body (if applicable)
  - 4) Non-refundable administration fee of \$600 per course, subject to 7% GST (Inclusive of Course Mapping with Endorsement application)
  - 5) Offline Spreadsheet – refer to slide 48 onwards
- 
- *Please note that SF for ICT Course Mapping is an independent process from CITREP+ course endorsement application.*
  - *Courses and certifications that are accepted for mapping will be listed on SF for ICT Portal ([www.SFforICT.sg](http://www.SFforICT.sg)). The same course/certification has to meet the endorsement criteria if it is submitted for funding support. The course materials used for evaluation will not be returned to CP. The estimated processing duration is about 4-6 weeks from a complete submission.*

# SF FOR ICT MAPPING APPLICATION

## Course Mapping Application Submission

- SF for ICT Mapping applications are submitted online via the Infocomm Competency Management System (ICMS):
  - <https://eservice.imda.gov.sg/icms>
- Please refer to the **ICMS Course Mapping and Endorsement User Guide** for the steps to submit the SF for ICT Mapping application

# SF FOR ICT COURSE MAPPING APPLICATION FEE

Payable to “IMDA” upon application

<b>Course Mapping with Endorsement</b>	<b><u>S\$600</u> per course application (subject to 7% GST) Total Payable: S\$642</b>
<b>Course Endorsement</b>	<b><u>S\$350</u> per course application (subject to 7% GST) Total Payable: S\$374.50</b>



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# Steps to Obtain Job Roles and Technical Skills & Competencies (TSCs)

# CITREP WEBPAGE (WWW.IMDA.GOV.SG/CITREP)

Home > Industry Development > Programmes and Grants > Individuals > Critical Infocomm Technology Resource Programme CITREP

## Critical Infocomm Technology Resource Programme Plus (CITREP+)

LAST UPDATED 03 NOVEMBER 2017



 PRINT  SHARE

**CITREP+ supports local professionals in keeping pace with technology shifts through continuous and proactive training. Through continuous up-skilling, fresh professionals and mid-career professionals may acquire or enhance technical skills sets which will enable**

# CITREP WEBPAGE

## Application Procedure

All course endorsement and claim applications must be submitted online via the IMDA's Infocomm Competency Management System (ICMS).

Applicants must upload and attach the supporting documents via ICMS during the submission of online applications.

The sponsoring organisations and self-sponsored individuals must have a valid ICMS account to submit a CITREP+ claim. To apply for a new organisation or individual account, please [click here](#).

Self-sponsored applicants must have their SingPass ID and password to access ICMS. To find out more and/or apply for SingPass, please [click here](#).

Sponsoring organisations will require either SingPass ID or CorpPass ID to access ICMS. After December 2017, business entities will have to access ICMS using CorpPass ID. To find out more and/or apply for CorpPass, please [click here](#).

To access ICMS, please [click here](#).

To download CITREP+ guides, please [click here](#).

**Action:** Select this to  
access CITREP Guide Page

## Trainees

# CITREP GUIDE PAGE

Home > Industry Development > Programmes and Grants > Individuals > Critical Infocomm Technology Resource Programme CITREP > CITREP Guides

## CITREP Guides

LAST UPDATED 03 NOVEMBER 2017



PRINT SHARE

### Sponsoring Organisations & Individuals

- [CITREP+ Claim Application Guide](#) (1 April 2019 – 31 March 2021)
- [CITREP+ MOOC Claim Application Guide](#) (1 April 2019 – 31 March 2021)

# SF FOR ICT COURSE MAPPING

## Step 1

Identify which SF for ICT **Tracks and Sub-Tracks** that best fit your course

(\*Please refer to [www.imda.gov.sg/CITREP](http://www.imda.gov.sg/CITREP)  
CITREP+ Guides: SF for ICT Navigation Tool for more information)

Select the most relevant **job role (s)** based on the identified **Sub-Track** of your course

Course must be mapped to at least **1 Technical Skills and Competency (TSCs)** for each SF for ICT job role(s) selected.

All approved new course mapping will be valid **till 31 March 2021**



# SF FOR ICT FRAMEWORK FOR CITREP+ COURSE MAPPING (IMTALENT.SG/SFFORICT)

With the Skills Framework, individuals are equipped to make informed decisions about career choices, as well as take responsibility for skills upgrading and career planning.



Assess Career Interests

- Discover employment opportunities
- Understand career pathways
- Recognise personal attributes required



Prepare for Desired Jobs

- Understand skills and competencies required



Find Avenues to Close Skills Gap

- Identify relevant training programmes to equip oneself with the required skills and competencies
- Participate in on-the-job training opportunities provided by companies



Renew, Upgrade and Deepen Skills

- Plan for career development/transition
- Recognise skills and competencies required for the intended job role
- Identify training programmes to upgrade and deepen skills

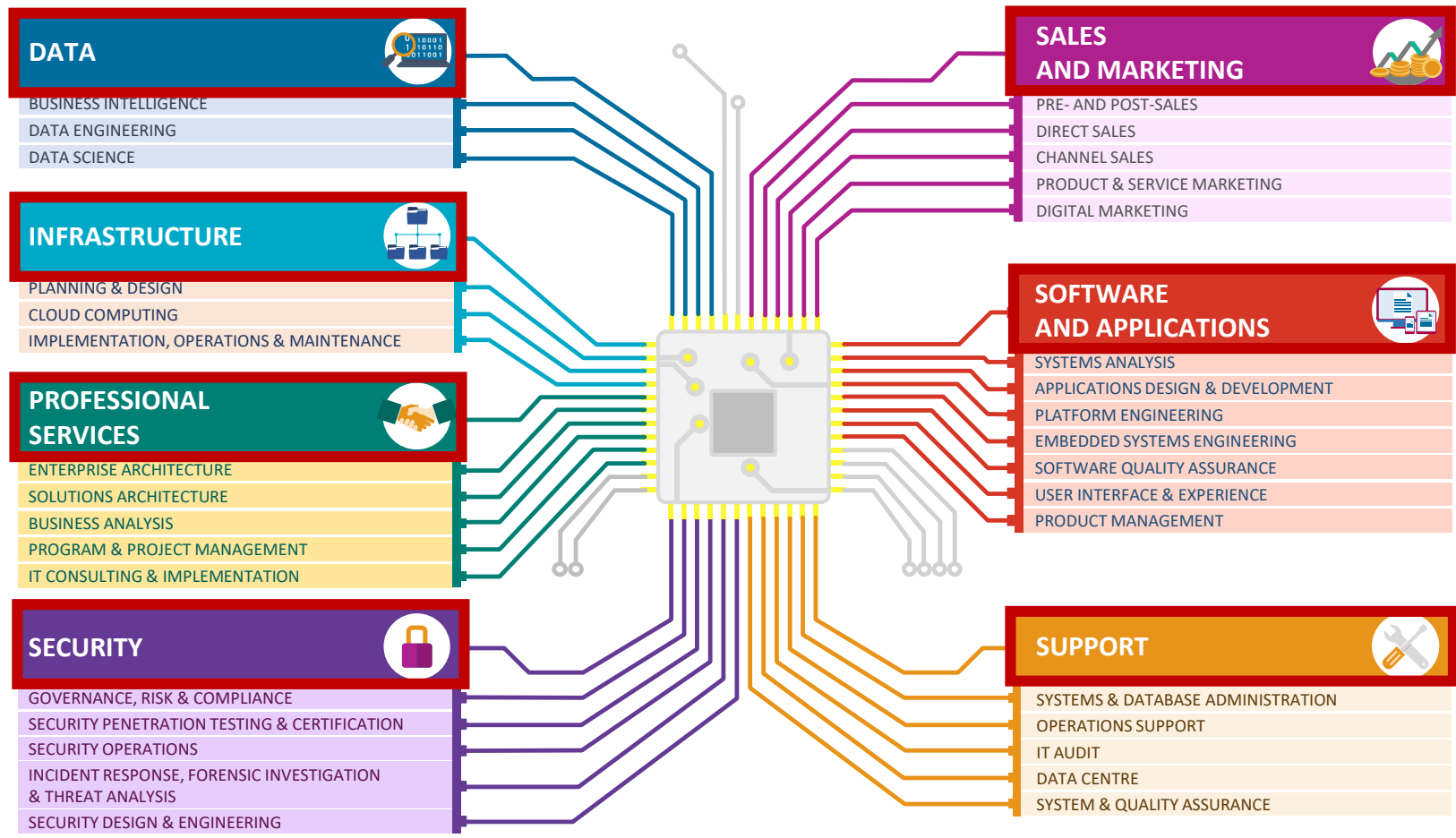
For more information, please visit [Skills Framework Portal](#) or navigate the Skills Framework for IC [HERE](#).

**Action:** Select this to view Tracks and Sub-Tracks

**Introduction to the Skills Framework for Infocomm Technology (ICT):**

# SF FOR ICT FRAMEWORK FOR CITREP+ COURSE MAPPING

**Action:** Identify the track that is most relevant to your course



Refer to online CITREP+ Guide : “SF for ICT Navigation Tool” for details

# SF FOR ICT COURSE MAPPING

## Step 2

Identify which SF for ICT **Tracks and Sub-Tracks** that best fit your course

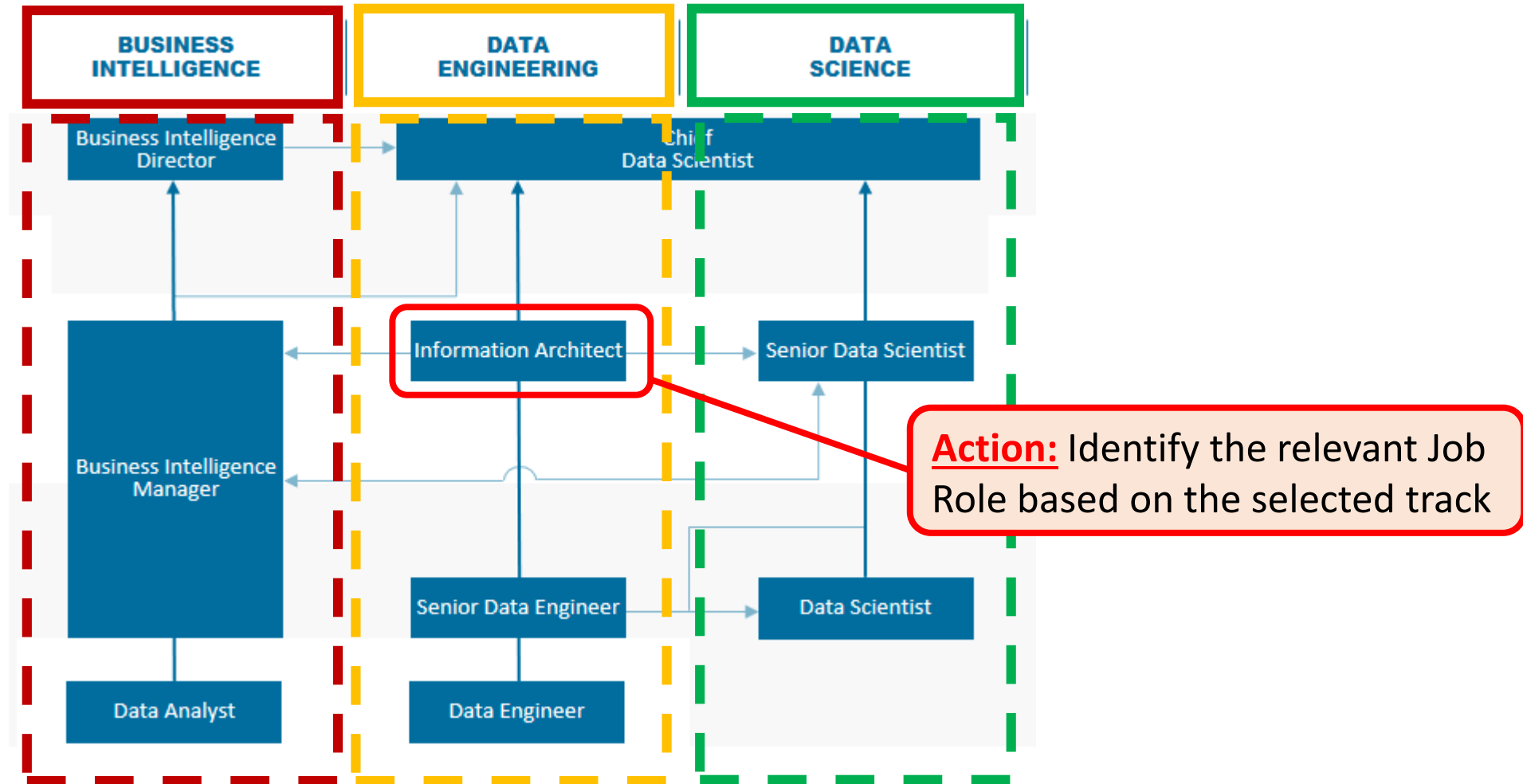
(\*Please refer to [www.imda.gov.sg/CITREP](http://www.imda.gov.sg/CITREP)  
CITREP+ Guides: SF for ICT Navigation Tool for more information)

Select the most relevant **job role (s)** based on the identified **Sub-Track** of your course

Course must be mapped to at least **1 Technical Skills and Competency (TSCs)** for each SF for ICT job role(s) selected.

All approved new course mapping will be valid **till 31 March 2021**

# SF FOR ICT FRAMEWORK FOR CITREP+ COURSE MAPPING



# SF FOR ICT COURSE MAPPING

## Step 3

Identify which SF for ICT **Tracks and Sub-Tracks** that best fit your course

(\*Please refer to [www.imda.gov.sg/CITREP](http://www.imda.gov.sg/CITREP) CITREP+ Guides: SF for ICT Navigation Tool for more information)

Select the most relevant **job role (s)** based on the identified **Sub-Track** of your course

Course must be mapped to at least **1 Technical Skills and Competency (TSCs)** for each SF for ICT job role(s) selected.

All approved new course mapping will be valid **till 31 March 2021**

# SF FOR ICT COURSE MAPPING

DATA SCIENTIST Career Pathway

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

Technical Skills & Competencies	Proficiency Level	Generic Skills & Competencies (Top 5)	Proficiency Level
Analytics and Computational Modelling	4	Transdisciplinary Thinking	Basic
Business Needs Analysis	4	Creative Thinking	Basic
Data Design	4	Interpersonal Skills	Intermediate
Data Governance	4	Leadership	Intermediate
Data Strategy	4	Resource Management	Intermediate
Data Visualisation	4		
Emerging Technology Synthesis	3		
Programme Management	3		
Solution Architecture	4		
Stakeholder Management	3		
Test Planning	3		

**Job Description**  
The Data Scientist analyses data through application of scientific methods and data-discovery tools. He integrates and prepares large and varied datasets, and models complex business problems. He/She discovers business insights and identifies opportunities through the use of statistical, algorithmic, mining and visualisation techniques. He assists with architecting specialised database and computing environments, developing methodologies, performing analysis, summarising results and developing conclusions. He possesses a combination of analytical, machine learning, data mining and statistical skills as well as experience with algorithms and coding.

He has a deep passion for analysing and resolving complex business problems. He displays an intellectual curiosity about the business needs as well as the capability to engage with stakeholders to understand business issues.

**Critical Work Functions** View details

- Manage projects
- Prepare data sets
- Analyse data
- Present insights

**Action:**

1. Identify at least 1 TSC based on Job Role

# SF FOR ICT FRAMEWORK FOR CITREP+ COURSE MAPPING

**Action:** Access Skills Framework Portal for detailed TSC proficiency Level description

With the Skills Framework, individuals are equipped to make informed decisions about career choices, as well as take responsibility for skills upgrading and career planning.



Assess Career Interests

- Discover employment opportunities
- Understand career pathways
- Recognise personal attributes required



Prepare for Desired Jobs

- Understand skills and competencies required



Find Avenues to Close Skills Gap

- Identify relevant training programmes to equip oneself with the required skills and competencies
- Participate in on-the-job training opportunities provided by companies



Renew, Upgrade and Deepen Skills

- Plan for career development/transition
- Recognise skills and competencies required for the intended job role
- Identify training programmes to upgrade and deepen skills

For more information, please visit [Skills Framework Portal](#) or navigate the Skills Framework for ICT [HERE](#).

**Introduction to the Skills Framework for Infocomm Technology (ICT):**

**Action:** Click here to access TSCs  
[IMTALENT.SG/SFforICT](https://IMTALENT.SG/SFforICT)

# SF FOR ICT FRAMEWORK FOR CITREP+ COURSE MAPPING

WHO IS IT FOR?

HOW DOES IT WORK?

Technical Skills and Competencies comprise occupation/job-specific knowledge, skills and abilities that a person needs to have to perform the various tasks.

Click [here](#) to download the Overview of Technical Skills and Competencies for the SF for Infocomm Technology.

Click below to view the Technical Skills and Competencies for the SF for Infocomm Technology.

## Design

- Data Design
- Embedded Systems Interface Design
- Infrastructure Design
- Security Architecture
- **Software Design**
- Solution Architecture
- User Experience Design
- User Interface Design

## Development and Implementation

## Customer Support

## Management

**Action:** Select this to view Technical Skills & Competencies



# OVERVIEW ON SF FOR ICT COURSE MAPPING VIA ICMS

SF for ICT Mapping

Course Endorsement

Trainee Enrolment

Claim Application

## 1. Online Submission

- Objective: Capture course mapping via ICMS and provide information for course listing on IMDA website
- Submit an online application through the **ICMS portal**

Identify subject area(s) for course listing on IMDA's website

E.g. Artificial Intelligence, Cyber Security, IoT

Identify which SF for ICT **Tracks and Sub-Tracks** that best fit your course

(\*Please refer to [www.imda.gov.sg/CITREP](http://www.imda.gov.sg/CITREP)  
CITREP+ Guides: SF for ICT Navigation Tool for more information)

Select the most relevant **job role (s)** based on the identified **Sub-Track** of your course

Course must be mapped to at least **1 Technical Skills and Competency (TSCs)** for each SF for ICT job role(s) selected.

All approved new course mapping will be valid till **31 March 2021**

## 2. Offline Template

- Objective: Supplementary information to facilitate course content evaluation and listing of approved course(s) on IMDA's website
- Download the online CITREP+ guide "**SF for ICT Course Mapping (Excel)**"
- Upload the updated "**SF for ICT Course Mapping (Excel)**" in ICMS submission.

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

## - NEW APPLICATION

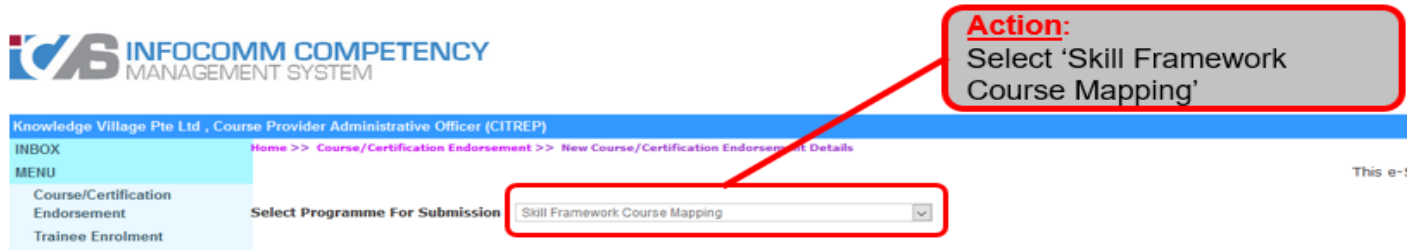
**Alternatively, you may refer to the ICMS navigation guide below to complete your NEW submission:**

- Login as **CP AO**
  - Go to **Course/Certification Endorsement**
  - Click the square button **New Application**
  - **Select Programme For Submission: Skill Framework Course Mapping**
  - Proceed with the necessary info and mapping matrix
  - **Submit for Approval** the application for CP AA's approval
- Note : The system will generate a new Ref ID number

- Login as **CP AA**
  - Click on **Items Pending for Your Action**
  - Review the application details submitted by CP AO
  - Click on **Approve** button to submit for IDA's processing
- Note : The system will generate the same Ref ID number

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))



## Action:

Selection of Subject:

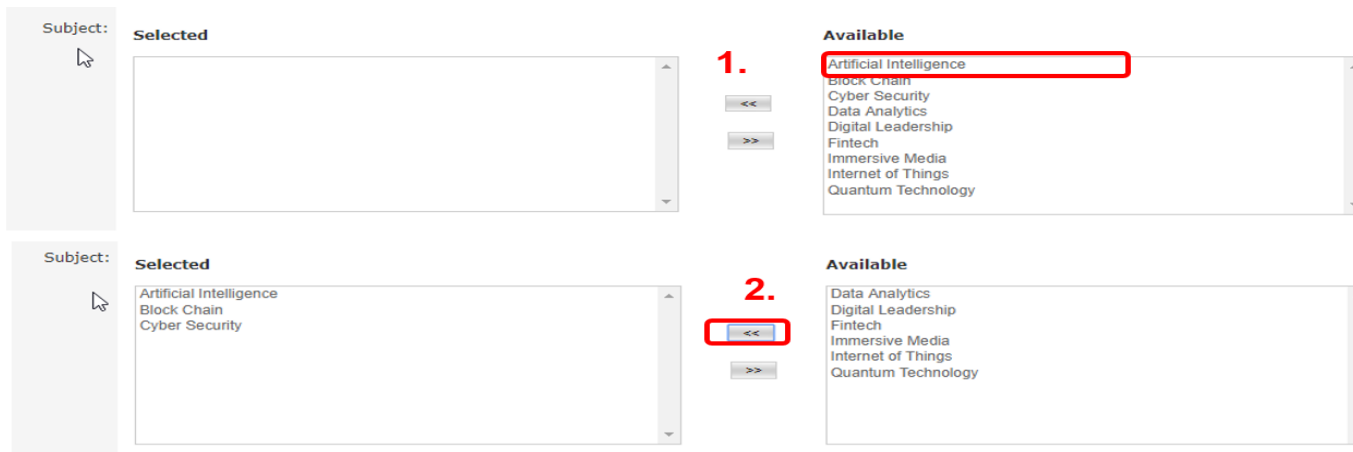
1. Identify and Select Subject
2. Select the '<<<' Button

## Sample Submission in ICMS:

1. Select "Skill Framework Course Mapping" as Programme

2. Select relevant Subject(s)\*

*\*information will be used for listing of course(s) on IMDA's website*



# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## Action:

### Selection of Domain Areas:

1. Identify and Select Relevant Domain Areas
2. Select the '<<' Button

## Sample Submission in ICMS:

- Select Domain Areas (if applicable)

The screenshot displays the 'Domain Areas' selection interface. It features two main columns: 'Selected' and 'Available'. The 'Selected' column is currently empty. The 'Available' column contains a list of domain areas: 'Finance', 'Healthcare', 'Logistic', and 'Retail'. A red box highlights the 'Finance' option, with a red '1.' next to it, indicating the first step in the process. Below the 'Available' list are two buttons: '<<' and '>>'. At the bottom left, there is a checkbox labeled 'Others :'. The 'Domain Areas:' label is positioned at the top left of the interface.

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## Action:

### Selection of Track-Sub Track:

1. Identify and Select Relevant Track-Sub Track
2. Select the '<<' Button

Sample Submission in ICMS:

- Select Track-Sub Track

Others :

Track-Sub Track \* : Selected

SF Job Role \* : Selected

Available

1. DATA - BUSINESS INTELLIGENCE

DATA - DATA ENGINEERING  
DATA - DATA SCIENCE  
INFRASTRUCTURE - CLOUD COMPUTING  
INFRASTRUCTURE - IMPLEMENTATION, OPERATIONS AND MAINTEN  
INFRASTRUCTURE - PLANNING AND DESIGN  
PROFESSIONAL SERVICES - BUSINESS ANALYSIS  
PROFESSIONAL SERVICES - ENTERPRISE ARCHITECTURE  
PROFESSIONAL SERVICES - IT CONSULTING AND IMPLEMENTATION  
SALES AND MARKETING - CHANNEL SALES

Available

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## Action:

### Selection of SF Job Role:

1. Identify and Select Relevant SF Job Role
2. Select the '<<' Button

Sample Submission in ICMS:

- Select Relevant Job Role

SF Job Role \* : Selected

Available

1. Business Intelligence Director
- Business Intelligence Manager
- Chief Data Scientist
- Chief Digital Officer
- Chief Information Officer
- Chief Technology Officer
- Data Analyst
- Data Scientist
- Head of Infrastructure
- Infrastructure Engineer

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## **Action:**

### **Selection of TSC/GSC Proficiency Level:**

- 1. Identify and Select Relevant TSC/GSC Proficiency Level**
- 2. Select the '<<' Button**

**Sample Submission in ICMS:**

**- Select TSC Proficiency Level**

TSC/GSC Proficiency Level \*: Selected

Available

1. Analytics and Computational Modelling - Level 5

Analytics and Computational Modelling - Level 4

Business Innovation - Level 5

Business Innovation - Level 6

Business Needs Analysis - Level 5

Communication - Level Advanced

Computational Thinking - Level Advanced

Computational Thinking - Level Intermediate

Data Design - Level 5

Data Engineering - Level 5

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

Post Course Evaluation Report\* :  Yes  No

Total Course Fees \* : S\$ 0.00

Total Exam Fees \* : S\$ 0.00

Total Course and Exam Fees : S\$ 0.00

Total No. of Years Conducted \* :

Projected No. of Students \* : Year 2019 -   
Year 2020 -   
Year 2021 -

Remarks :

TRAINING ROADMAP

**Sample Submission in ICMS:**

**- Specify duration of Face-to-face hours in remarks section**



# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

The screenshot displays two sections: 'TRAINING ROADMAP' and 'CERTIFICATION ROADMAP'. Each section contains a 'CORE MODULES' table and an 'ELECTIVE MODULES' table. The 'CORE MODULES' table has columns for S/N, CORE MODULE TITLE, and DURATION. The 'ELECTIVE MODULES' table has columns for S/N, ELECTIVE MODULE TITLE, and DURATION. Each table includes a 'Total No. of [Module Type] Modules' and a 'Min. No. of [Module Type] Modules Completed' field with a 'Go' button. The 'DURATION' field includes a dropdown menu for units (Days) and a 'Remove' button.

## Sample Submission in ICMS:

1. Input fields in Training and Certification Roadmap
2. For Core Module, input duration in hours

**Note:** Total duration of all the core module must be at least 21 hours, including 7 hours of face-to-face time.

### Action:

Enter the relevant information for Core Modules and Elective Modules of each **TRAINING ROADMAP** and **CERTIFICATION ROADMAP**.

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## **In SF Mapping Section,**

1. Input Core Modules and Elective Modules.
2. For each module, input the relevant Course Outcomes.
3. Based on the selected TSC/GSC and proficiency level, the associated Proficiency Level Codes & Knowledge or Abilities are displayed.
4. Map Course Outcomes against selected TSC/GSC and Proficiency Level Codes, and the associated Knowledge or Abilities.

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

The screenshot displays the 'SF MAPPING' application interface. At the top, there are two input fields: 'Total No. of Core Modules' and 'Total No. of Elective Modules', both containing the number '1'. Below these are sections for 'Core Module 1' and 'Elective Module 1'. The 'Core Module 1' section includes a dropdown menu for 'Title of Core Module 1', a 'No. of Course Outcomes' field, a 'PROPOSED TSC PROFICIENCY LEVEL' section with a 'No. of Proficiency Levels' field, and a 'COURSE MAPPING MATRIX' section. The 'Elective Module 1' section is currently empty. At the bottom of the interface, there is a section for 'APPLICATION ATTACHMENTS' with a link to 'Checklist for Course Endorsement Application'.

**Action:**  
Enter number of Core Module

**Action:**  
Enter number of Elective Module

**Sample Submission in ICMS:**

**- Input Core and Elective Modules**

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## Submit Course Mapping

The screenshot shows the 'SF MAPPING' application interface. It includes a header with 'Total No. of Core Modules' and 'Total No. of Elective Modules', both set to 1. Below this is a section for 'Core Module 1' with a 'Title of Core Module' field. The 'COURSE OUTCOMES' section has a 'No. of Course Outcomes' field set to 1. A table with columns 'S/N' and 'DESCRIPTION' contains one row with '1' and 'Core Module Outcomes'. Below the table is a 'PROPOSED TSC/PROFICIENCY LEVEL' section with a 'No. of Proficiency Levels' field set to 1. Red callout boxes with arrows point to various fields and buttons, each containing an 'Action' step.

**Core Module**

**Action:**  
1. Select one Core Module

**Action:**  
2. Input the number of course outcomes for selected Module

**Action:**  
3. Click Go

**Action:**  
4. Fill in relevant description.

**Action:**  
5. Input the number of TSC/GSC-Proficiency Levels for selected Module. E.g. 1 for Core Module

**Action:**  
6. Click Go.

## Sample Submission in ICMS:

- Input Course Outcomes and No. of Proficiency Levels

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

The screenshot displays the 'SF MAPPING' application interface. At the top, there is a header 'SF MAPPING' and a field for 'Total No. of Core Modules' with the value '1'. Below this is a section for 'Core Module 1' with a dropdown menu for 'Title of Core Module 1' set to '-- Select --'. The 'COURSE OUTCOMES' section includes a 'No. Of Course Outcomes' field with the value '1' and a 'Go' button. A table with columns 'S/N' and 'DESCRIPTION' is shown, with one row containing '1.' and a 'Remove' button. Below the table is the 'PROPOSED TSC PROFICIENCY LEVEL' section with a 'No. of Proficiency Levels' field set to '1' and a 'Go' button. The 'PROFICIENCY LEVEL CODES & KNOWLEDGE OR ABILITIES' section features a table with one row containing '1.', a dropdown menu, and a 'Remove' button. A tooltip is visible over the dropdown menu, listing three options: 'Analytics and Computational Modelling - Level 4 ICT-DIT-4001-1 : Develop and utilise new algorithms and advanced statistical models to enable the production of desired outcomes.', 'Analytics and Computational Modelling - Level 5 ICT-DIT-5001-1 : Design advanced statistical and computational models, and spearhead the application of algorithms and modelling techniques to new domains.', and 'Business Innovation - Level 5 ICT-SNA-5003-1 : Prioritise business innovation opportunities and design digital architectures and processes to facilitate the creation of an innovative business environment.' At the bottom, there is a red note: '\* Each file size upload is limit to 10MB or less. For files exceeding 10MB, please zip up the files or send the documents directly to IMDA.'

**Action:**  
Select relevant TSC/GSC-Proficiency level code from drop down list and the associated Knowledge and Abilities will be displayed.

Sample Submission in ICMS:

- Select relevant TSC-Proficiency Level code(s)

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

**Action:**  
Check the relevant boxes in the mapping matrix for the mapping of the Course Outcomes to Knowledge or Abilities

**Sample Submission in ICMS:**

**- Select relevant checkboxes in Mapping Matrix**

Proficiency Level/Knowledge/Abilities		Course Outcomes	
Proficiency Level Code	Knowledge or Abilities	1	2
ICT-DIT-4001-1	ICT-DIT-4001-1-A1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A7	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A8	<input type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-A9	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ICT-DIT-4001-1-A10	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ICT-DIT-4001-1-K1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ICT-DIT-4001-1-K2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ICT-DIT-4001-1-K3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ICT-DIT-4001-1-K4	<input type="checkbox"/>	<input type="checkbox"/>
	ICT-DIT-4001-1-K5	<input type="checkbox"/>	<input type="checkbox"/>

# SF FOR ICT COURSE MAPPING (ONLINE SUBMISSION)

- NEW APPLICATION (REFER TO [ICMS COURSE MAPPING & ENDORSEMENT GUIDE FOR DETAILED STEPS](#))

## Upload Supporting Documents

MS	ICT-DIT-4001-1-K6	<input type="checkbox"/>
	ICT-DIT-4001-1-K7	<input type="checkbox"/>

**APPLICATION ATTACHMENTS**

Checklist for Course Endorsement Application

- Please ensure all the required supporting documents are provided to IMDA for the application to be processed.
- Each file size upload is limit to 10MB or less. For files exceeding 10MB, please zip up the files or send the documents directly to IMDA.
- Max 1 Attachment Files.
- Attachment must be in JPG/PDF/ZIP/XLS/DOC format.

Documents in Attached Files :  test

Upload Files : **UPLOADED FILES**  
Step by Step Guide for Registration.pdf

No file selected.

**Sample Submission in ICMS:**

**- Upload Course Mapping Supporting documents (refer to slide 17)**

**Action:**

Upload Necessary Supporting Documents

**Action:**

Select on 'Submit for Approval'

# SF FOR ICT COURSE MAPPING (OFFLINE TEMPLATE) – 1/3 - SF FOR ICT MAPPING EXCEL SPREADSHEET

**Objective:** Supplementary information to facilitate course mapping evaluation and listing of approved courses on IMDA’s website

This document is to be attached in ICMS application under Course Mapping program in a zip file.

## Objective (A):

This spreadsheet aim to facilitate the course mapping evaluation process for courses submitted under CITREP+, and is to be updated by the respective Course Provider.

Please input the course outcomes and mapping to the relevant Technical Skills and Competencies (TSCs) as per input in ICMS and reference to the relevant course materials for each course course outcomes.

### CITREP+ WORKFLOW PROCESS



#### SF for ICT Course Mapping

Course Provider to fill in "(A) For TP Input" sheet for submission.

#### Step-by-Step guide for "For TP Input" sheet :

\*Indicate Email Subject as "CITREP COURSE MAPPING TO SF FOR ICT < Course ID > < Course Provider >".

## Objective (B):

"A one-stop portal that enables Singaporeans of all ages to make informed decisions on education, training and career choices, so that they can pursue related skills and careers".

You can now find us at <https://www.imda.gov.sg/imtalent> and Training and Courses in the webpage.

To Provide inputs in this spreadsheet for the migration of data to the portal:

#### IMTalent Portal Course Listing

Course Provider to fill in "(B) For TP Input on IMTalent" sheet for submission.

\*Indicate Email Subject as "CITREP COURSE MAPPING TO SF FOR ICT < Course ID > < Course Provider >".

#### 1. Guidelines:

For specifications for the logo (Column O - Required):

Recommended to use **Company Logo**

Picture Size : 425 x 200 pixels

These are the recommendations provided by our vendor as any other sizes will result in the images/logo being distorted or cut-off.

**Action:** Refer to Instructions as provided in "Overview" tab



# SF FOR ICT COURSE MAPPING (OFFLINE TEMPLATE) – 2/3 - SF FOR ICT MAPPING EXCEL SPREADSHEET

- Referencing of course materials to relevant TSC
- Sent to Expert Panel together with course materials for their Evaluation

Technical Skill Competency	TSC Category	Description	Proficiency Level	Proficiency Level Description	Knowledge	Abilities	Course / Certification Outcomes	Reference to Course Materials	Remarks
Portfolio Management	Strategy and Architecture	Manage systematically the IT investments, projects, services and activities within a company, in line with business objectives and priorities. This involves the development of a framework to evaluate potential costs and benefits and make key decisions about IT investments, internal allocation and utilization of IT resources and/or assets and any changes to IT processes or services offered	--Select--	#N/A	#N/A	#N/A			

## Action:

1. TSCs and PLs input in this excel must be the same as the ones indicated in ICMS
2. Input description of courses sections/portions which map to the respective TSCs.
3. Upload the updated “SF for ICT Mapping (Excel)” in ICMS for submission under course mapping

## Note:

It is advisable to include the specific topics/pages of the course materials which map to the relevant TSCs selected.

# SF FOR ICT COURSE MAPPING (OFFLINE TEMPLATE) – 3/3 - SF FOR ICT MAPPING EXCEL SPREADSHEET

- Referencing of course materials to relevant TSC
- Sent to Expert Panel together with course materials for their Evaluation

Course Title	Course Provider / Company	CTA link (only outside link is allowed)	Tag for Full Time / Part Time/ Both	Course Content				Teaser Title (35 char)	Teaser Title word count (35 char)	Teaser Description (70 char)	Teaser Description word count (70 char)	Image or logo (Required)
				Overview	Learning Outcomes	Who should Attend?	Eligibility Criteria					
0		<a href="https://www.iso.org/standard/62191.html">https://www.iso.org/standard/62191.html</a>	Example Full Time	<p>Example</p> <p>The ISO/IEC 27000 family of standards helps organizations keep information assets secure.</p> <p>Using this family of standards will help your organization manage the security of assets such as financial information, intellectual property, employee details or information entrusted to you by third parties.</p> <p>ISO/IEC 27001 is the best-known standard in the family providing requirements for an information security management system (ISMS).</p> <p>This course comprises both online and 36 hours of classroom components.</p>	<p>Example</p> <p>At the end of this course, participants will understand:</p> <ul style="list-style-type: none"> <li>- Purpose and business benefits of an ISMS, ISMS standards, ISMS audits and third party Certification</li> <li>- Role and skills required by an auditor when planning, conducting, reporting and following up an ISMS audit in accordance with ISO/IEC 27001:2013, ISO/IEC 27002:2013</li> <li>- Information technology</li> <li>- Security checklist</li> <li>- Code of practice for information security controls</li> <li>- ISO 19011:2011</li> <li>- Guidelines for auditing management systems and where applicable</li> <li>- ISO 17021:2015</li> </ul>	<p>Example</p> <ul style="list-style-type: none"> <li>- Information security manager</li> <li>- IT and corporate security manager</li> <li>- Corporate governance manager</li> <li>- Risk and compliance manager</li> <li>- Information security consultant</li> </ul>	<p>Example</p> <ul style="list-style-type: none"> <li>- Management Systems</li> <li>- Information security management</li> <li>- ISO/IEC 27001</li> </ul>	(ISMS) Auditor / Lead Auditor Training Course	45	Plan and execute audits of ISMS in line with ISO/IEC 27001 standards.	69	

## Action:

1. Input required information for publication of approved courses on IMDA's website
2. Upload updated "SF for ICT Mapping (Excel)" in ICMS for submission under course mapping