

GOVERNMENT OF INDIA (भारत सरकार) MINISTRY OF RAILWAYS (रेल मंत्रालय) RAILWAY BOARD (रेलवे बोर्ड)

No. 2020/E(Trg)/30/14

New Delhi dt: 24.03.2021

The General Managers/CAOs, All Zonal Railways/PUs. COFMOW, New Delhi.

The Director Generals/Director, RDSO, Lucknow. Central Training Institutes.

Sub: Mission Karmayogi - National Program for Civil Service Capacity Building (NPCSCB).

Mission Karmayogi – the National Program for Civil Service Capacity Building (NPCSCB) has been initiated by DoP&T subsequent to approval of the Union Cabinet. It seeks a paradigm shift in enhancing the capacity of the Civil Servants by building their behavioral, domain and functional competencies, creating a framework of shared resources and transitioning from a 'rules-based' system to the roles-based' system. The focus of the initiative is on building service capacity and enhancing the quality of citizen-government interface and securing greater citizen satisfaction in all sphere of public services. The initiative broadly consists of –

- i. Content/course creation and publishing on iGOT digital platform: The iGOT-Karmayogi Platform is to eventually evolve into a vibrant and world class marketplace for content modeled on FRACs where carefully curated and vetted digital e-learning content will become available as training modules on 'anytime, anywhere' basis. It will facilitate individual learners to acquire his/her competencies and follow self driven as well as mandated learning path to enhance their skill as a civil servant.
- Onboarding of MoR on iGOT digital platform: Onboarding refers to the action or process of enlisting users/learners onto the iGOT Karmayogi Platform.
- iii. Rollout of 'Framework of Role Activities and Competencies FRAC: The exercise for defining the Framework for Roles, Activities and Competencies including skill (FRACs) is intended to be carried out and integrated with iGOT Karmayogi Platform. FRACs exercise will define the content of various roles and activities through a granular expostulation of each position organized in a coherent manner. The behavioural, functional and domain competencies thus revealed will enable a position holder to discharge his/her responsibility more effectively by acquiring the requisite attitudes, skills and knowledge.

- 1.1. A detailed outline of the various frameworks of the Mission Karmayogi initiative is attached as Annexure A.
- 2. Board has approved to roll out the Mission Karmayogi across the Indian Railways and following action plan has been approved:
 - DG/NAIR and DGs/other CTIs shall be the Nodal authorities on behalf of Indian Railways for creating and publishing contents/courses on the iGOT platform for the respective Departments.
 - ii. All the railway units i.e. Railway Board, Zones & Divisions, PUs, CTIs etc. shall create an 'NPCSCB' Cell preferably under the AGM/HAG level officer to carry out onboarding of officials on iGOT digital platform including FRACing.
- 3. The AGMs supervising 'NPCSCB' Cell shall be the Nodal Officer for the respective railway unit i.e. Zones, PUs, CTIs etc. Details of the Nodal officer (Name, Designation, nic mail ID & mobile no.) shall be informed to Railway Board office at trainingbranch.rb@gmail.com and jitendra.kumar3@gov.in for onboarding them on iGOT and further liasioning on the matter.
- 4. These instructions along with annexures have also been uploaded on the Railway Board Website under the link: 'For IR Personnel → Training Circulars'.

Encl: As above.

11

(Deepak Peter Gabriel)
Pr. Executive Director (IR)

as Pr. Executive Director (T&MPP)

Railway Board

Copy to:

1) The OSD/PSO/PPS/PS for information of Chairman & CEO, Member(Finance), Member(Infra), Member(O&BD), Member(Tr & RS), DG(HR), DG(RHS), DG(RPF), DG(Safety) & Secretary, Railway Board.

2) All Officers and Branches of Railway Board.

- 'Mission Karmayogi' the National Programme for Civil Service Capacity Building (NPCSCB) has been approved by the Government on 2nd September, 2020. This programme proposes a paradigm shift in enhancing the capacity of the civil servants by building their behavioral, domain and functional competencies, creating a framework of shared resources and transitioning from a 'rules-based' system to the roles-based' system. It will not only democratize learning across geographies and hierarchies but will also create a future-ready civil service that learns from the best in class institutions, while remaining rooted in the Indian culture, sensibilities and works for achievement of national aspirations.
- 2. The NPCSCB will cover all civil servants, holders of civil posts, temporary hires etc who discharge the responsibilities assigned to the different Ministries, Departments, Organisations and agencies of the Union Government. The NPCSCB has six key pillars -.
 - i. Policy Framework,
 - ii. Institutional Framework,
 - iii. Competency Framework,
 - iv. Digital Learning Framework **iGOT-Karmayogi** i.e. Integrated Government Online Training Karmayogi Platform,
 - v. The electronic Human Resource Management System (e-HRMS) and
 - vi. The Monitoring and Evaluation Framework
- 3. The initiative needs to be implemented in following 03 frameworks
 - i. Content/course creation and publishing on iGOT digital platform;
 - ii. Onboarding of MoR on iGOT digital platform; and,
 - iii. Rollout of 'Framework of Role Activities and Competencies FRAC.
- 3.1. Content/course creation and publishing on iGOT digital platform :
- 3.1.1. Content is arguably the most important component of the iGOT digital platform which will play a critical role in the success of the Mission Karmayogi. To drive adoption, the content to be onboarded need not only engaging but is also of high quality so that there is substantial impact on the competency level enhancement of learners. Thus, learner-centred, action-oriented and transformative content needs to be uploaded on the platform.
- 3.1.2. Types of content that will be onboarded on the platform will be guided by two broad dimensions
 - a) Learning Urgency Its ingredients contains (i)Mandatory learnings targeted to the competency requirement of a role, (ii)Recommended learnings to help individual to progress in their career & build expertise and (iii)Open Courses to allow learners to expand their knowledge and skill.
 - b) Learning Model Contents will be created for face-to-face classroom based learning, flipped learning, online remote classroom, online courses & blended courses.
- 3.1.3. A content can be any one or combination of videos, lecturers, presentations, webinars, interactive, case studies, quizzes, assessments, simulations, acts, rules, journals, research papers, etc. in the form of PPTs, PDFs, websites and online links.

Structure of these content will be Resource > Module > Course > Programs wherein the smallest learning entity will be 'Resource' which will be consumed by a learner. A resource would be in one of the multiple formats supported on iGOT platform – pdf, video, interactive e-learning, webpage, assessments/quiz, link etc. further, multiple resources uploaded on the platform may be stitched together in a logical sequence to form a module and so on.

3.1.4. The entire process from authorization of course creation to its publication on Karmayogi platform will have 4-level key players in each Ministry/Deptt. i.e. Administrator > Content Creator > Content Reviewer > Content Publisher. The role of the 'content creator' is to create an adaptable content on the platform which is reviewed and verified by the 'content reviewer' before it is published on the platform by the 'content publisher'.

3.2. Onboarding of MoR on iGOT digital platform:

3.2.1. Onboarding refers to the action or process of enlisting users/learners onto the iGOT Karmayogi Platform. Department needs to complete the pre-requisites like creating a list of users with necessary data who will be onboarded on the platform along with their roles.

3.3. Rollout of 'Framework of Role Activities and Competencies – FRAC:

- 3.3.1. The exercise for defining the Framework for Roles, Activities, and Competencies including skills (FRACs) is intended to be carried out by each railway unit and integrated with the iGOT-Karmayogi Platform. FRACs exercise will define the content of various roles and activities through a granular expostulation of each position organized in a coherent manner. The behavioural, functional and domain competencies thus revealed will enable a position holder to discharge his/her responsibility more effectively by acquiring the requisite attitudes, skills and knowledge.
- 3.3.2. The entire gamut of FRACing is 15-step process which contains pre-requisites on part of each railway unit like identifying each single position/post, its role, activities, competencies, learning resource and competency. A sample template for the FRACing exercise is attached as Annexure-A for information please.
- 4. A Special Purpose Vehicle (SPV) in the form of a not-for-profit company is to be incorporated as a 100% government owned entity for implementation of the scheme. A mandatory subscription Based Revenue Model enabling the participation of all Ministries, department, entities of the Government of India and willing state government has been designed to partly fund the program. DoP&T will fix and convey the proposed to be a sum of Rs. 431 per employee of the concerned Ministry/Department/ Organisation or Agency of the Union Government as enrollment fee for the first year of subscription.
- 5. DoP&T have prepared handbooks on the above 03 frameworks detailing role and requisites on the part of each Ministries/Departments i.e. work units. Copies of the same are attached as Annexures A-1, A-2 & A-3 for ready reference.



Content Framework & Quality Assurance

iGOT Karmayogi

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Glossary

ATI	Administrative Training Institute
СВР	Competency Based Product
СС	Content Curator
СТІ	Central Training Institute
DoPT	Department of Personnel and Training
FAQ	Frequently Asked Question
FRAC	Framework of Roles, Accountability and Competencies
HTML	Hypertext Markup Language
iGOT	Integrated Government Online Training
MCQ	Multiple Choice Question
MDO	Ministry, Department and Organisation
NPS	Net Promoter Score
QA	Quality Assurance
W3C	World Wide Web Consortium
WTDET	Watch-Think-Do-Explore-Test

About the document

The Content Framework & Evaluation is a set of tools and recommendations that provides guidance and standards for the development of online learning products for iGOT Karmayogi.

It is a guide and toolkit for the learning community including CTIs, ATIs, content providers/external vendors, reviewers, learning managers and staff working or interested in creating online learning programmes, that can be used to:

- Guide the development and implementation of competency-based products (CBPs)
- Review online competency-based products (CBPs) being developed/onboarded on the platform
- Integrate cultural diversity and a gender perspective in all areas of online learning programmes
- Produce accessible digital content that all learners, regard-less of disabilities, are able to navigate, understand and interact with

The Framework is based on instructional design methods for developing and delivering learning programmes that seeks to change behaviour and improve performance.



1 Introduction

Content is arguably the most important component of the iGOT Karmayogi platform and will play a critical role in the success of the program. To drive adoption, iGOT Karmayogi will have to ensure that the content onboarded is not only engaging but is also of very high quality such that there is substantial impact on the competency level enhancement of learners. Thus, learner-centred, action-oriented and transformative content will be onboarded on the platform. iGOT Karmayogi would need to cater the diverse learning needs, preferences, and interests of a variety of 21st century learners, and will be sufficiently exhaustive to cover the learning needs of the civil services – both for their professional development and personal learning interests - instilling in them the attitudes, skills and knowledge to enable a more sustainable and just society for all.

Creating and maintaining a repository this large and this critical cannot simply be left to a few ministries, departments or organisations (MDOs) in the government. Thus, a marketplace approach to content procurement and onboarding will be adopted to enable the creation of a self-sustaining ecosystem and drive the evolution of the digital backbone for learning. It will consistently and continuously offer a stream of content to iGOT Karmayogi, which will undergo iterative validation and improvement processes. As a content marketplace, iGOT Karmayogi will allow for content and service providers to compete for consumption, creating a natural evolution where content is enriched, deepened and widened. The marketplace will use multiple pricing models like freemium (i.e. a few modules or all are free, but certification is paid), pre-paid (enterprise-wide consumption rights are paid for), usage based (pay per use) etc.

While the goal is to enable a content marketplace, the content delivery mechanism cannot be a pure-play marketplace from day one. In the initial period, the platform will need high-quality seed content to bring in users onto the platform and create required levels of stickiness, which can be achieved only when the users see value. Considering the importance of a critical mass of high-quality content from its early inception stages, it may be worthwhile to adopt a strategy where content is either created internally or bought from external

providers while ensuring very strict quality control, and gradually easing the content onboarding requirements, eventually morphing into a full-fledged marketplace.

Types of content

The types of content that will be onboarded on the platform will be guided by two broad dimensions: (a) learning urgency and (b) learning model.

With regards to learning urgency, content will be trifurcated into mandatory learnings, recommended learnings, and open courses:

- Mandatory learnings will be specifically targeted to the competency requirements of a role and will be decided by the manager of the individual learner.
- Recommended learnings will include courses, modules and items that will help individuals progress in their career, build expertise and specialisation and/or meet their professional and personal aspirations. These trainings may be recommended by a manager and targeted to a competency or algorithmically determined by iGOT Karmayogi on the basis of the learner's profile, learning history, learning goals etc.
- Lastly, open courses will also be available on the platform and will allow learners to expand their knowledge and skills in an area of personal interest.

With regards to a learning model, content will be created for face-to-face classroom-based learning, face-to-face flipped learning, online remote classrooms, online courses and blended courses.

Content lifecycle

In order to create a repository of content that is engaging and personal, it is essential to operationalise the content supply chain and empower all relevant stakeholders. A summary of the key steps in the content lifecycle on iGOT Karmayogi are described below:

1. **Discovery and identification of learning needs** and gaps: As we move from a rule based to rolebased organisation, the learning needs of an individual will be strongly driven on the basis of

the competency requirement. As a first step, identification of learning needs may be carried out in the relevant Ministry, Department or organisations (MDO) through the FRACing process in conjugation with the current competency level of individuals. The gap between the required and current competency will guide the MDOs towards required competency building and hence the learning intervention required. Examining the context of the learning programme and determining its suitability, feasibility and scalability will be assessed in this step.

- 2. Content Creation and Sourcing: Content sourcing will rely on multiple channels of curated content including in sourcing, procurement of ready to use or white labelled content and bespoke content development, fit for purpose through engagement of specialist agencies. Subject Matter Expert (SME) should be identified to support with content development and learning goals identification.
- 3. Content Validation: At this step, it will be ensured that the content onboarded on the platform is appropriate, has high quality, is devoid of plagiarism, drives learning and engagement and is accessible for diverse users. Further sections in this document will detail out the different aspects of content validation and process to be followed in iGOT
- 4. Content Enhancement and Impact Scores: The content on the platform will be regularly updated (at-least once every six-month or whenever there is a change in the content) to ensure accuracy, validity and relevancy. Impact scores on the platform will also reveal the need, if any, to update content. The score is an indicator of how impactful a course is for gaining

a competency and is determined by assessing the success rate of competency progressions made by all individuals who have completed the said course

The efficacy of content or courses on the platform must be ensured at every step and needs to be monitored. To ensure that high-quality content is onboarded which is learner-centric, action-oriented and transformative, as well as significantly improves the competency levels of learners, the following is required:

- Developing a content framework, that will provide the content creator with overall guidance on creating content for iGOT Karmayogi.
- Developing a quality assurance framework for the content to ensure minimum standards are met for any content being uploaded.

This document outlines the methodology which iGOT will adopt to ensure that inclusive, high-quality, relevant, effective and engaging content is uploaded as per competency requirements for the consumption of learners. The document covers the overall content framework to be followed in developing any course on the platform. It lists down the various aspects of the framework and intent behind including it as part of the framework. Followed by the framework, the document also documents the content validation process to ensure that the various elements of framework have been followed while uploading the content. This eases the content development process for content curator to ensure a high level engaging content is only uploaded on platform and avoid multiple re-works.

Content Framework

After rigorous analysis of transformative practices in the industry, the following salient points have been identified to keep in mind when analysing or creating content:

- The competencies that the content seeks to service should be called out at the very beginning of the content creation process.
- Learning outcomes should be established at the outset of each course and module. There should be a strong correlation between learning outcomes and competency requirements.
- Content that will be available on the platform will be consumed by diverse audience. Hence any content that is made available on platform should be inclusive, gender transformative, and free of bias
- All content being created, used and maintained on iGOT platform should be accessible to people with disabilities and should adhere to accessibility standards. Further details are provided in subsequent sub-sections
- Content being onboarded on platform should be the own work of content provider and free of plagiarism. There should be no copyright violation within the material being used to develop content (images, content etc.). Appropriate credits and referencing needs to be mentioned as applicable
- Style guidelines should be established for a uniform look-and-feel for the ease of users, including:
 - Catching the reader's attention with a relevant and inviting headline;

- Breaking content into byte-sized learning modules which are ideally not more than 10 minutes long;
- Using animations, images and eye-catching formatting to make content attractive;
- Deconstructing research and content into a naturally flowing, cohesive story; and
- Making content as interactive as possible.
- Language should be simple and easy to understand to respect diverse users.
- Assessments should test users on each learning outcome covered in the course.

2.1 Watch-Think-Do-Explore-Test (WTDET) Model

Based on global transformative practices, iGOT Karmayogi will be adopting the Watch-Think-Do-Explore-Test model¹. Figure 1 below outlines the model, followed by a detailed discussion of its various components.

1. Watch: Content provider should follow a micro-learning approach to content development. Educational materials should be as relevant and concise as possible. Learning activities should not present information through lengthy videos/ presentations/ documents, which are harder to retain and complete, but rather through shorter bytes of content that can enable learners to absorb more information without feeling overwhelmed. Thus, modules with short byte-sized videos or animation/ infographics can help convey the concepts as per the learning outcomes. also cater to a variety of learning styles and follow adult learning principles.

¹ We are grateful for the Wadhwani Foundation for their assistance in the development of this model.

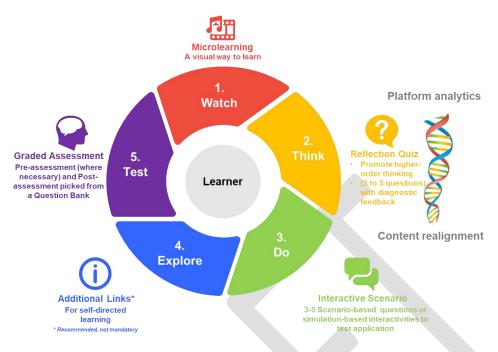


Figure 1 Content Framework Model

Following should be kept in mind while developing the content:

- Use micro-learning (byte/snack sized content of not more than 5-7 minutes long)
- Formulate learning objectives from the learner's perspective and clearly call out the learning objective at the beginning of any module
- Ensure learning activity laid out articulate the knowledge and skills

learners should acquire by the end of the learning activity

All 'content' may be categorised into one of the four types: concept based, process based, procedure based, and guideline based (see Figure 2 below):



Concept based

- Discusses existing knowledge or ideas
- Used where knowledge related to a particular concept/subject needs to be imparted to the learner
- E.g. Social distancing, Artificial Intelligence, History lessons etc.



Process based

- Describes how a process/system functions
- E.g. Sample collection for testing, Manufacturing process etc.



Procedure based

- Discusses sequence of steps to solve a problem or accomplish a task
- E.g. PPE donning & doffing



Guideline based

- Discusses rules that guide actions or protocol
- Typically used if standard operating procedure as per guideline needs to be followed
- E.g. Quarantine

Decision to classify the course / program will rest on the predominant content type

Figure 2 Content Categorisation

Based on the type of content, predominant elements have also been suggested (see Figure 3). A variety of visual materials can be utilised (e.g. illustrations, videos, infographics, flowcharts, etc.). Note that these are simply suggestions for the content curator and may be modified as per the requirement.









Concept based

Discusses existing knowledge or ideas

Process based

Describes how a process/system functions

Procedure based

Discusses sequence of steps to solve

Guideline based Discusses rules that guide actions of

Watch <u>Dig Deeper</u>

Predominant Elements

Graphic elements, Static content

Enabling Elements

Illustration, stock image/videos, sketchnotes, typography, VO, cc

Predominant Elements

Process demo
video with VO and
CC
Enabling Elements

Enabling Elements Infographics, flowcharts

Predominant Elements

Procedure video, VO,

Enabling elements Flowchart, illustration, typography

Predominant Elements Infographics

Enabling Elements illustrations, sketchnotes, typography, VO, cc

Figure 3 Elements for different content type

- 2. Think: A reflection quiz to promote higher order thinking. This should ideally be 3-5 questions but can vary depending on the topic. While designing this, the content curator should include simple questions that encourage critical thinking and reasoning skills, avoiding mechanical repetition (rote learning). These questions should also encourage students to reflect on the concepts presented and internalise them. The 'Think' resource is a reinforcement quiz with diagnostic feedback.
- 3. **Do**: Scenario-based questions or simulation-based interactivities that are action-oriented to test application. In action-oriented learning, learners engage in action and reflect on their experiences in terms of the intended learning process. It is suggested to employ context-relevant scenarios followed up with slightly complex questions. Learners will answer 3 to 5 questions (which may be more or less depending on the topic) based on these scenarios to practice and apply their learning. These scenario-based

- questions should reflect real-life situations and help learners realize the impact of learning on their performance.
- Explore: Additional resource links for selfdirected learning. Consider creating selflearning resources to make key information available to the learners to enhance their learning. Resources should be the following:
 - a. Readily available and easily accessible to learners after they have completed the course.
 - b. Familiarise learners with other easily available resources that can be referred to at any point in time.
 - c. Easy-to-understand short guides, factsheets, checklists, job aids, infographics, FAQs, and tips, amongst others, are some of the different types of resources that can be uploaded for learners to download.
- Test: Every course should have a graded assessment including a randomised, predetermined set of questions from a pool (i.e. question bank). Assessments should reflect

real-life situations and encourage learners to apply their learning. Every test should have a minimum passing criterion laid out in advance and communicated to learners before the start of quiz. In case the learner is unable to 'pass' the test, the course should be marked as incomplete and the system should prompt the user to retake the course/lessons along with test. Below are salient points to keep in mind when developing 'Test' material:

- a. For objective questions, MCQs are a well-suited format. On iGOT, the system will allow faculty to input correct answers beforehand, which will enable the automatic scoring of the questions.
- For subjective questions, multiple types of assessments can be used: by self, instructor, and/or peers. These can vary from finger exercises to final assessments:
 - i. Finger exercises are designed to help learners digest concepts. These can be interspersed within the course itself and can be graded or left unassessed. If instructors would like finger exercises to be graded, subjective finger exercises can be graded through either self-assessment or peer assessment.
 - ii. Final assessments which contain subjective questions can be graded by faculty.

Recommendations and/or exceptions:

- All courses should follow the WTDET methodology
- Every learning lesson/module should have WTDE components ideally in the same sequence and at the end of course, it should have the T(Test) component
- In most cases, a module could have multiple 'Watch' and 'Think' resources depending on the type of topic/subject/content, which is fine.
- In some cases, depending on the topic or subject of a course, it may not be feasible for

- content providers to create resources for all aspects of the model, in which case exceptions can be made. 'Watch' and 'Test' will remain mandatory but either of 'Think' and 'Do' may be forgone. However, in every such exceptional case, the course provider must provide a reasonable justification for doing so.
- All content should have consistency with design guidelines, style sheets and branding guidelines, which should be set by the relevant MDOs
- Ensure each learning module specifies the learning objective(s) addressed in that module
- Clearly align tasks and assessments to learning objectives, enabling adequate measurement of achievement
- Ensure the learning activity is reviewed by various stakeholders, such as SMEs and test learners; incorporate any recommended changes before uploading the course on iGOT

Benefits of the proposed framework

As shown in Figure 6 below, the WTDET methodology:

- Inspires higher-order thinking
- Prioritises experiential learning (to drive positive change in the learner);
- Supports self-paced and on-the-go learning (respects the learners' time);
- Includes inclusive design philosophy (effectively tackles the various needs of diverse learners); and
- Inculcates human-centred problem-solving skills (focusing on understanding a problem from the perspective of the person experiencing it).



Figure 4 Benefits of WTDET model

Further, the content creators should ask themselves these questions while creating a course:

- a. Is the course empathic towards who the learner is and what motivates them?
- b. Does the course effectively suit the needs of and is easy to understand for a variety of diverse learners (with different learning styles)?
- c. Is the content itself inclusive? Is it gender-, religion-, and caste-neutral?
- d. Does the content promote sustainable development?
- e. Are there enough real-life examples within the course to help the learner relate to and engage with the content effectively?

The human-centred design process

A learner's journey on iGOT keeps human-centred design as a core design principle. Thus, when designing content for the platform, content creators must also adopt human-centred design principles. This process must include:

- 1. **Empathy towards the learner**: What will interest the learner most about the course, and what will motivate them to complete their learning journey?
- 2. **Feedback-driven iterations**: What has been the learners' feedback? I.e. what are the best aspects of the course, which aspects require improvement, and how should this feedback be incorporated?
- 3. Diversity of learners must be respected: Who are the different types of learners who will access this course, and does the course respond effectively to these diverse learning needs?
- 4. **Relatability is crucial**: Does the course include simple, conversational language to help learners understand effectively, and are the examples, visuals and scenarios relatable to the learners?

Overall, the WTDET model with a human-centred approach, will allow content creators to deliver courses that are transformative, of high quality, and inculcate in them the attitudes, knowledge and skills they require to succeed.

2.2 Diversity and Inclusion

Whether designing a product, intervention, or content, embedding the concepts of diversity and inclusion, alongside sustainable development, should be of utmost importance. Rather than paying lipservice to these key concepts, they must be integrated within the content on iGOT.

Inclusive content is two-fold:

- 1. It anticipates the varied needs of learners and aims to ensure that all learners have equal access to the content i.e. it takes into account the diversity of learners (including learners with disabilities, learners whose native language is not English, learners with technical issues such as low bandwidth internet or no access to audio, etc.); and
- 2. The content itself is inclusive (i.e. gender-, religion-, and caste-neutral), and does not harm the sentiments of any group.

Diversity of learners: people with disabilities

As a platform, iGOT expects the content developed to be accessible to everyone, regardless of any limitation they may have. Web accessibility means ensuring that websites, online content, applications, and platforms are usable for people of all abilities. It can benefit all users, making it easier for them to navigate and interact with online content.

Web accessibility becomes especially important for learners with disabilities. Disabilities can be visual, auditory, physical, speech-related, cognitive, learning, or neurological. While it is easy to imagine how certain disabilities affect accessibility — for example, someone with a visual impediment may require a voiceover for static content — others are less obvious and still require accommodation. For example, a learner who is colour-blind will require content designers to take into consideration various colour combinations.

Standards play an important role in the development of accessible eLearning. The primary accessibility standards are the Worldwide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG 2.0). According to W3C, four main principles, P.O.U.R., needs to be followed

PERCEIVABLE

Information and user interface components must be presentable to users in ways they can perceive.

EXAMPLES

Providing captions to videos will help learners with hearing disabilities. Providing text descriptions for images will make the content accessible for those with visual disabilities.

OPERABLE

User interface and navigation must be operable

EXAMPLES

Using the keyboard or assistive technologies, participants with motor function disabilities can navigate websites.

UNDERSTANDABLE

Information and the operation of user interface must be understandable.

EXAMPLES

Linking to definitions or a glossary to provide the definition of a word or phrase used in an unusual or restricted way.

ROBUST

Content must be robust enough that it can interpreted reliably by a wide variety of user agents, including assistive technologies.

EXAMPLES

Modern websites offer opportunities for interacting with the content and display information in a more dynamic way. This higher level of interactivity requires all objects of a website to be appropriately marked up so that screen readers can interpret whether it is currently expanded or collapsed.

Figure 5 Main Principles of W3C (P.O.U.R.)²

"Training for All" is the vision for iGOT Karmayogi. In pursuance of this vision, iGOT strives to achieve the abovementioned accessibility standards, and make both its platform and content accessible to all learners. Although many of the above-mentioned points are more relevant to the platform-developing team, content creators are also required to look through and adhere to the accessibility guidelines put forward by W3C. All content needs to evaluated on following parameters to check for web accessibility:

- 1. Usage of Colours: When creating content, appropriate colour combinations are essential to ensure that all learners can see the content easily. Because red-green colour blindness is the most common, designers should avoid using red and green together. If it is necessary for a visual to be red and green, designers should use a lighter green and darker red to help colour-blind learners distinguish between the two colours.
- 2. Accessible documents: Record audio narrations for all online training content that is text heavy. Learners who are visually impaired can listen to the key takeaways instead of reading along. When using images and tables, use descriptive text or alt text embed this in the document containing the image or table. Use PDFs that have been saved as searchable text, not images. It is recommended to use built-in tools such as headings, lists and styles to organize the content following a logical order and to make

it easier for screen readers to read your documents

- 3. Fonts: Font size is important. Bigger is better. Keep your text large, a minimum of 12-point size depending on the font style. Keep a track of the fonts being used. For instance, using the Sans-family fonts is recommended to make the text readable for those with dyslexia (Please refer to W3C for appropriate fonts that should be used). When emphasising text, try to avoid using italics. This distorts the letter and throws off patterns, making things harder to read. When you need to add emphasis to a section, try using a bold font instead. Also, it is recommended to avoid blinking or moving text
- 4. Language: A diverse range of learners also means learners who speak a multitude of languages learners whose native language may not be the language of the content uploaded. In the best-case scenario, all content and material should be published in all official languages as laid out in the Constitution of India. If, however, this is not possible, then English subtitles should be provided (if the video itself is not in English). Use spell checker to ensure grammar and spellings are correct.
- Hyperlinks: Avoid hyperlinks wherever possible, instead use buttons for ease of

² Online Learning Framework by United Nations

users. When used, hyperlinks and buttons should be named according to content they are linking to. Avoid using links such as "Click here", "Know more" etc.

- 6. Multimedia: Multimedia in form of audio and video files are important components of e-learning. Any multimedia used as part of elearning should have an accompanied transcript that may also be downloadable. Provide "alt text" when graphical elements (photos, infographics, charts, etc.) convey key information. Drop-down menus can be difficult, if not impossible, to navigate for users with mobility impairments, so it is recommended to avoid using them. While eLearning interactivity is a great way to engage your learners, you should try to avoid complex interactions when developing accessible eLearning material. Learners with poor motor skills may not appreciate, for intense drag-and-drop interactions. Interactive elements should be designed as simply as possible.
- 7. **Navigation:** It is essential that all content can be read by screen reader. Use semantic HTML code to make it easy for screen readers to understand. Semantic HTML or semantic markup requires using appropriate and correct HTML elements and tagging to identify content and enforce hierarchy. (e.g. headings <h1>, <h2>, button <button>, numbered lists or ordered lists , bulleted lists or unordered lists , etc). Include "Skip Navigation" and "Back to Top" links as they are commands often used by learners with visual impairment

Inclusive content

Other than considering the diversity of learners, the content uploaded itself must be inclusive. The issue of how to represent gender, religion, and caste in content to be uploaded on the platform is an important consideration as it will reflect the overall culture and values of the government. It is therefore essential that the content developed is inclusive, free of bias, and gender-, religion- and caste-neutral.

Portraying a greater percentage of women in eLearning, though, is not the wholesome solution of authentic gender representation. It's also worth asking some tough questions about *how* women are portrayed. Are women being portrayed in only supporting roles, or needing help, while men are in positions of authority and/or providing expertise. It is not only about having characters who are female but also the role that they are playing in the learning. So, what do we do while developing the e-learning content? Some of the approaches that are widely used across industry are listed below:

- If it is felt e-learning content will reveal biases one way or another, remove gender from the design of characters altogether
- Write characters in authentic situations, name them only with an initial, and then once the storyboards are complete, use a random name generator to decide which ones are male, female or transgender
- Use gender neutral pronouns (they/them)

It is important to not only look at the gender specific semantics being used within the course but also to look the content of the course itself from a gender lens. Any course being developed from a gender lens can be subdivided into following category⁴:

- a. Gender Unintentional: Content devised do not recognise impact of gender on the problem being addressed through the course. It does not integrate a gender lens in the proposed approach, or target gender gaps.
- b. **Gender Intentional:** Course itself is designed in a way to reduce gender gaps
- c. Gender Transformative: Course is designed to transform gender power relations and/or reduce gender gaps in agency over resources.

2.3 Sustainable Development (SD)

The target audience of iGOT Karmayogi are government officials who develop policies and framework for the nation. Hence, it becomes important that all courses being uploaded on the

³ Online learning framework by United Nations

⁴ https://www.gatesgenderequalitytoolbox.org/wp-content/uploads/BMGF-Gender-Guide.pdf

platform is looked from a sustainable development lens. These officials need to not only look at solution to problems and policies being developed from a current perspective lens but also based on the understanding that what we do today can have implications on the lives of people and the planet in future. It is about including sustainable development issues, such as climate change and biodiversity into teaching and learning. Individuals are encouraged to be responsible actors who resolve challenges, respect cultural diversity and contribute to creating a more sustainable world.⁵

Taking reference from Education for Sustainability Development (ESD) toolkit, the course needs to be assessed under following categories:

- Environmental Sustainability
- Sustainable consumption & production
- Propagate Peace & Nonviolence
- Human rights
- Human Survival & well-being
- Culture diversity & Tolerance

2.4 Content Appropriateness & Copyright

For content to be uploaded on the platform, it is essential that it is appropriate for all learners and is not offensive or hurt their sentiments. Hence it is essential to take care of following components:

- Content does not contain Hate speech, abuse, violence and profanity
- There is no sexual content, nudity or vulgarity in the course being developed
- There is no defamation of any institution or individual as part of the course
- Is appropriate for all users on the platform and do not hurt sentiments of any caste, religion or gender
- Content has ensured that all maps, borders and historical figures have been appropriately & accurately represented

 All content providers must provide an undertaking for all the course being uploaded that they have adhered to these content appropriateness guidelines

Originality:

All content being onboarded on the platform should be original and devoid of Plagiarism. If the content is copyright material, the content provider should own the copyright of the same. There should be no copyright infringement

- Appropriate references and credit should be provided for content that has been borrowed from other sources
- When using photos or videos of people, have them sign a personal release agreement
- Provide a list of all references used at the end of the learning activity
- For all content being onboarded on platform content providers will be required to take a plagiarism test on a credible website, some of which are listed below and produce a plagiarism-free certificate. The storyboard/transcript of the content would need to be checked on any of the below website
 - o Turnitin
 - Scribbr Plagiarism Checker
 - Copyleaks

It is essential for the all content creator to follow the salient features listed down as content framework. This will ensure that the overall quality of content being developed meets the high standards being sought by iGOT. Following the guidelines will ultimately help the learning content in improving the competency of its learner and a higher impact score for both the content and CBP providers. Subsequent section will detail out the toolkit to measure the content being developed on the various parameters identified and help the content creator and reviewer in taking decision to onboard a course on iGOT.

⁵ UNESCO: Education for sustainable development

3 Content Quality Assurance

The quality assurance (QA) of materials on online learning platforms aimed at large, distributed audiences remain a concern; the process is no different for iGOT. In its future state, iGOT will leverage the services of numerous vendors in developing competency-based products (CBP) across a variety of disciplines.

In addition to prescribing a standardised model for content creation, it is incumbent upon the iGOT to also prescribe a QA framework to maintain high courseware standards.

The proposed iGOT QA framework is benchmarked against renowned quality assurance programs for online courseware that have come to be regarded as the industry gold-standard in courseware evaluation.

Three of these programs include:

- Quality Matters Rubric Standards
- Rubric for Online Instruction from <u>California</u>
 State University Chico
- Online Learning Consortium's Five Pillars of Quality Framework

Quality Matters' Continuing and Professional Ed Rubric Standards are tailored to assist in the design and evaluation of instructor-led, mentored, or self-managed online and blended courses that have

pass/fail, skills-based or other completion/certification criteria, but do not carry academic credit. These are a set of eight General Standards and 43 Specific Review Standards used to evaluate and aid the design of online and blended courses that have pass/fail, skills-based or other completion or certification criteria.

California State University Chico's Rubric for Online Instruction represents a systematic and developmental process for online course design and helps to evaluate the design of a fully online or blended course. The rubric was designed to answer the question, "What does high-quality online instruction look like?" and can be applied to any course that has online and hybrid elements.

Online Learning Consortium's Five Pillars of Quality Framework, which is always a work in progress, intends to help institutions identify goals and measure progress towards them. It tracks five interrelated areas as a measure of the quality of online courseware:

- i. Learning effectiveness
- ii. Access
- iii. Scale
- iv. Faculty satisfaction
- v. Student satisfaction

3.1 Content Evaluation framework

The iGOT Quality Assurance Process is based on the content framework explained in earlier section. To make the process easier for content creator and reviewers, an online course along with tool-kit has been designed that will involve the use of the following instruments at different points in the evaluation journey:

3.1.1 Gate Criteria qualification

This consist of mandatory requirements to be fulfilled by any course that needs to be onboarded on the platform. It consists of the following two sections:

- a. Content Appropriateness It checks for the content to meet basic appropriateness guidelines. In total there are 6 criteria which needs to be followed by content provider and provide a self-certification. In case any of the criteria is not met the content should be reworked. A signed self-certification needs to be submitted by the content provider. The six mandatory criteria are listed below. Annexure I provide the self-certification format for all content providers:
 - Content does not contain hate speech, abuse, violence and profanity
 - There is no sexual content, nudity or vulgarity in the course being developed
 - There is no defamation of any institution or individual as part of the course
 - Is appropriate for all users on the platform and do not hurt sentiments of any caste, religion or gender
 - Content has ensured that all maps, borders and historical figures have been appropriately & accurately represented

In case it is found out that a content provider has not adhered to content appropriateness, in spite of submitting the declaration and uploading content on platform, appropriate action may be taken (including blacklisting of the content provider)

 Plagiarism – All content providers need to provide a certificate of originality of the content being developed, so that there is no issue of plagiarism and copyright. iGOT recommends the use of following websites to procure a certificate for plagiarism. In case any other software/website is used, please take a prior approval from DoPT/iGOT SPV

- i. Turnitin
- ii. Scribbr Plagiarism Checker
- iii. Copyleaks

Once any course clears these gate criteria, they may be evaluated on iGOT Quality scorecard.

Content creators will be required to submit a self-declaration that they have followed all the gate criteria listed down. A sample of self-certification can be seen in Annexure I

3.1.2 Quality Scorecard

Once any content passes the gate criteria, it will be evaluated for quality through a comprehensive scorecard. The scorecard is split across following **six categories**:

- Instructional Methods determine how effectively the stated competencies and skills are acquired.
- Assessment Design Good assessment design includes testing target competencies and skills readiness.
- Competency and Skills The course helps learners achieve the stated competency and skill acquisition goals.
- Learner Engagement These include techniques (such as real-life examples) to deepen learner engagement with the learning material.
- Learner Support Resources included with the course to extend learning and enhance the asynchronous learning experience.
- Diversity & Inclusion This is a separate rubric that will evaluate the course to be compliant to W3C's Web Content Accessibility Guidelines (WCAG) 2.0 to make it accessible for users with disability. Along with it, the course should cater to diversity (gender, race, caste etc.). The passing criteria for Diversity & Inclusion is higher than other categories as this form one of the key pillars of the overall culture being inculcated with the government

The detailed questionnaire is provided in Annexure II & Annexure III. While Sustainability questionnaire (Annexure IV) is not a part of overall course quality framework, it is highly recommendable that every course reviewer should evaluate the course from a sustainability lens using the questionnaire and ensure that the content meets all the criteria mentioned.

Each of the six categories in the Quality Scorecard has been attributed **Weightages** based on their importance in the learner's **'learning journey'** with focus on building competencies, along with the content creator's capability to design the course targeting the competencies. The weighted average approach is adopted to emphasise that some categories contribute more than other in determining the quality of a 'Good Course Design', instead of, each category contributing equally to the final average score.

To emphasise further a 'Minimum Score' has been determined to be achieved by the course creator in each category. This Minimum Score is to ensure that each course need to follow a minimal acceptable limit within each of the category.

The following 'Weightages' and 'Minimum Score' has been proposed to be assigned to the six (6) categories:

Categories	WEIGHTAGE	MINIMUM SCORE	
Instructional Method	25%	50%	
Assessment Design	20%	50%	
Competency and Skills	20%	50%	
Diversity & Inclusion	15%	60%	
Learner Engagement	15%	50%	
Learner Support	5%	50%	

CCs while 'self-evaluation' and Expert Reviewers during 'Review', will be scoring on a Four (4) point scale of Strongly Disagree (0), Disagree (1), Agree (3) and Strongly Agree (5). The 'weighted average' of the 'total score' achieved will be seen as 'percentage' of the 'maximum score' that can be attained. This will determine the 'Composite Score' for the course. The 'Composite Score'

will be evaluated against the 'Minimum Qualifier'. The 'Minimum Qualifier' for a course to qualify to 'Go-Live' on iGOT has been determined as **70%**. This proposed methodology will enable the system to identify the good courses along with highlighting the categories wherein the content creator performed well and vice versa. This will help in providing necessary feedback to the content creator to work on improvement areas, in case, they fail to achieve the Minimum Qualifier.

Based on the scoring pattern, the CC will be graded based on the following rate card. However, if the course does not meet the minimum proposed score for any of the category then it will be graded as "iGOT Toddler":

Grades	Average Composite Score	Colour Band	Definition
iGOT Toddler	Below 60	Red	Needs a lot of improvement to meet the 'Qualified' standard
iGOT Friendly	60 to 70	Orange	Needs a little improvement to meet the 'Qualified' standard
iGOT Qualified	70 and above	Green	Met the minimum score of 70
iGOT Qualified courses may be star rated depending on their average composite score as below:			verage composite score as below:
iGOT *	70 to 80	Green	
iGOT **	81 to 89	Green	
iGOT ***	90 to 95	Green	
iGOT ****	Above 95	Green	
iGOT ****	100	Green	

3.2 Feedback from Learner

The Learner Survey – This is an evaluation instrument administered to learners at course/program completion, which includes a Net Promoter Score (NPS) question. The Learner Survey includes a 4-point Likert scale question at the category level from the iGOT Quality Scorecard.

The survey also includes a Net Promoter Score (NPS) question. NPS is a proven metric that provides core measurement for customer experience (learner experience, in the case of iGOT) programs around the world.

In addition to the Category and NPS questions, there are two qualitative questions on what the course/program does well and where improvements are needed.

The **Behavioural Survey** – This is a short questionnaire administered to learners and/or their supervisors at the end of 6 months of completing a

program or course to gauge the extent of competency growth.

Trust Score

The **Trust Score** is a tiering system for content creator/provider and is the variance between content creator/provider self-rating and Learner score. Learner score will be achieved through an aggregation of the score by the learners through the learner survey along with performance metrics of the score on iGOT (as in completion rate, passing rate, etc). This will help to determine if the Course is effective with emphasis on how the learners have scored the course vis-à-vis the content creator/provider.

Each component of scores provided by User/Learner through Learner Survey, NPS and the consolidated score of performance metrics will be scored on a 3-point scale defined in bands of High (Above 70%), Average (50-70%) and Low (Below 50%). The score so obtained will be normalised to a percentage to obtain consolidated user score (CUS). The CUS will be used

to check for variance of the CCs Self Evaluation/Expert Review score obtained before going live on iGOT. The variance between these two scores will be tracked for 'TRUST Score" based on the following banding:

HIGH TRUST Score	Variance <5%	
AVERAGE TRUST Score	Variance >5%<10%	
	Variance more than	
LOW TRUST Score	10%	

Each content provider will start with a trust score of 100, based on category of trust score for each course being uploaded the total score for content creator/provider will increase decrease or remain constant as below:

 In case of course getting High trust score, increase cumulative trust score by 5 points for CC

- In case of course getting Average trust score, make no change to cumulative trust score for CC
- In case of course getting Low trust score, decrease cumulative trust score by 5 points

The trust score would need to be evaluated on continuous basis and appropriate intervention taken as per below condition:

- If trust score falls below 85 or a cumulative of 3 Low Trust score for courses uploaded by a content creator/provider is reached – a discussion between content creator and content PMU team needs to take place to deep dive into problem areas and develop an overall improvement plan
- If the trust score for any content provider falls below 70 or a cumulative of 8 Low Trust score for courses uploaded is reached – the contract for content creator should be reevaluated

3.3 Course Quality process

The following is a diagrammatic representation of how the iGOT Quality Assurance Process will work.

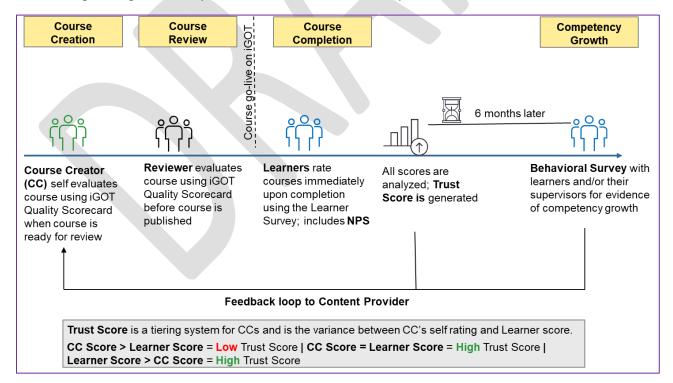


Figure 6 The Proposed iGOT Quality Assurance Process

Here is a look at some of the proposed rules that govern the functioning of the iGOT Quality Assurance Process:

- The set passing threshold for both CC evaluation as well as Reviewer is 70%.
- For a course to go live on iGOT, Reviewer score must be equal to or higher than 70%.
- If Reviewer score is below 70%, the course will **NOT** go live on iGOT.
- The Learner Survey will contain evaluation of categories from the iGOT Quality Scorecard as well as the Net Promoter Score (NPS) question and qualitative feedback.
- Key platform metrics, such as completion, popularity (Shares, Likes), etc., will be reported along with Learner scores.
- Trust Scores for the CC will be based on the variance between CC's self rating and the Learner score.
 - ✓ CC Score > Learner Score = Low Trust Score
 - ✓ CC Score = Learner Score = High Trust Score
 - ✓ Learner Score > CC Score = High Trust Score
- The score from the Behavioral Survey will also add to (or subtract from as the case may be) the Trust Score for the CC

• If the Trust score for a CC falls below 70% then they should be re-evaluated

This proposed methodology considers the input from several meetings with the iGOT Steering Committee as well as global agencies with deep expertise in the areas of Human centred design and courseware design and development. The following are a few of the notable recommendations that the proposed methodology includes:

- For scale, CPs must rate their offerings according to a standardised prescribed model.
- Users must have a say in the course effectiveness ratings.
- The ratings must fulfil a larger purpose, e.g. fuel the continuous improvement of courseware quality and inculcation of Human-Centred Design thinking in the CP community.
- There should be a provision for tracking competency growth among users as a result of completing courses / programs on iGOT

4 Support for Content Creator

It is essential that content creator be provided with the right set of support on the platform to help them curate content as per the framework laid out and help them succeed in designing a high-quality content on the platform. Some of the suggested mechanism to be put in place are listed down below:

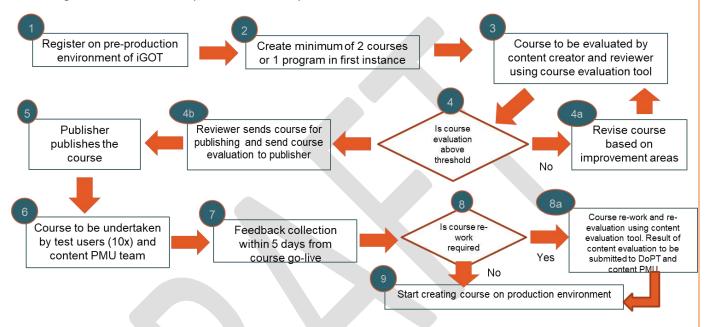
- Recommended on-line learning for all content curator on the content framework proposed (WTDE-T) and human centred design. These online courses should be made available on iGOT platform and may be completed by the curator before the start creating course
- On-line learning resource on usage of iGOT which explains the various features and their usage to content creator

- Detailed feedback to be incorporated by reviewer in case a course is rejected by reviewer due to threshold level not being cleared
- Feedback session with content team of iGOT SPV with the content provider in-case three consecutive courses record low trust score
- Annual seminar/workshop with all content creator, technology experts of iGOT, Subject Matter Experts, Content team from SPV and DoPT representatives
- Content guidelines to be developed and given to all content creator at the time of onboarding. Guideline should provide the must-do, style guide etc. for the content creator

5 Content curation process

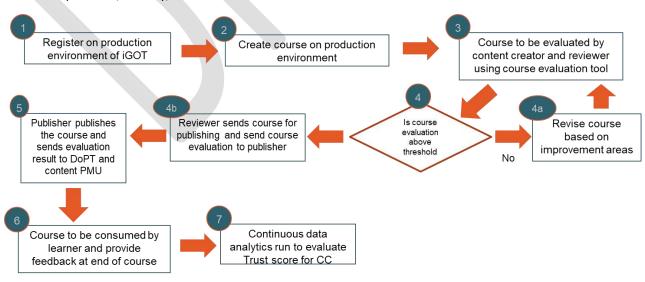
5.1 One-time process for first time content curation

For the first time content creator it is essential that they become used to the platform and the overall content creation process before starting to publish courses for the end user. Hence it is proposed to practice onboarding of minimum of 2 courses on pre-production environment before starting to curate courses on production environment. Below diagram showcases the steps to be followed by content curator for first time curation:



5.2 Process for regular content creation

To make sure that the highest quality content is being uploaded on the platform. All content curator needs to follow the content curation guideline. To ensure the same, following steps are supposed to be followed by the content curation department/ministry/institute



I, <Name of authorised individual representing the CBP Provider>, have registered with the Competency Building Commission (CBC), and completed the Uploading Content on iGOT course. Thus, I hereby certify that <CBP name> fulfils the following criteria, as espoused in the Content Guidelines for iGOT Karmayogi.

SI. No.	Criteria	Respo	nse
1	Content does not contain hate speech, abuse, violence and profanity.	□Yes	□No
2	There is no sexual content, nudity or vulgarity in the course being developed.	□Yes	□No
3	There is no defamation of any institution or individual as part of the course.	□Yes	□No
4	Content is appropriate for all users on the platform and do not hurt sentiments of any race, caste, religion or gender.	□Yes	□ No
5	All maps, borders and historical figures have been appropriately and accurately represented. (this should have a Not Applicable option as well)	□Yes	□ No
6	Content does not contain any copyright violation.	□Yes	□ No
7	Content is devoid of plagiarism and a plagiarism certificate is attached with this documentation.	□Yes	□No
8	All sources – online or printed materials – have been duly credited. A list of references is maintained at the end of each module.	□Yes	□No
9	The course is tagged to one or more competencies that it addresses.	□Yes	□No

Name of Authorised Signatory:

Designation with Institution Name:

Annexure II: iGOT Karmayogi Course Quality

Instructional Methods: Instructional methods determine how effectively the stated competencies are acquired.

SI. No.	Statement	Option
1	A clear learning pathway is defined, and learners are able to track their journey (E.g. a menu of topics and subtopics indicates what the learner has finished and how much is remaining within the course).	□Yes □ No
2	Each learning session (module) contains at-least one 'Watch' element as defined in the WTDET content framework.	□Yes □ No
3	Each learning session (module) contains at-least one 'Think' element as defined in the WTDET content framework.	□Yes □ No
4	Each learning session (module) contains at-least one 'Do' element as defined in the WTDET content framework.	□Yes □ No
5	Each learning session (module) contains at-least one 'Explore' element as defined in the WTDET content framework.	□Yes □ No
6	The course introduction is included as part of the course and states the learning objective and intended audience at the beginning of the course	□Yes □ No
7	Module-level learning objectives are stated clearly and align with the overall course goals.	□Yes □ No
8	The course employs a variety of multimedia tools as necessary, appropriate to the content and target group.	□Yes □ No
9	There are practice reinforcement questions after approximately every 7 screens.	□Yes □ No
10	All practice activities (Think elements) provide diagnostic feedback. i.e. In case a user attempts the question incorrectly/correctly, it provides them with a descriptive feedback	□Yes □ No
11	There is at least one active learning activity, such as online discussion/debate, group project, synchronous online meeting, case study or a learning game per CBP.	□Yes □ No
12	The language used in the course is understandable by the target audience.	□Yes □ No
13	Learners are given examples of and asked to explore practical applications of the course in their setting.	□Yes □ No

Assessment Design: Good assessment design includes testing readiness of target competencies.

SI. No.	Statement	Opt	ion
1	The course features a post-assessment with clear instructions on evaluation.	□Yes	□ No
2	Passing criteria is clearly stated for the assessment.	□Yes	□ No
3	The learning activities and assessment are consistent with learning outcome	□Yes	□ No
3	Answer options for multiple choice questions, or distractors, are realistic, i.e. learners cannot guess the correct answer by easily eliminating incorrect ones. There should be only one correct answer to MCQs, and that explanations are provided for each right and wrong answer.	□Yes	□ No
4	The assessment uses understandable language and terms.	□Yes	□ No
5	Case studies and case-oriented assessment questions are based on real-life situations.	□Yes	□ No
6	The assessment uses more than one format of questions.	□Yes	□ No
7	The course avoids True/False questions.	□Yes	□ No
8	The assessment avoids "All of the above" and/or "None of the above" answers. (They call attention to themselves and are often correct!)	□Yes	□ No

Competency: The course helps learners achieve the stated competency goals.

SI. No.	Statement	Option
1	Target competencies are clearly stated at the beginning of the course.	□Yes □ No
2	All target competencies are clearly tested at the end of the course to demonstrate progression.	□Yes □ No
3	Target competencies have been covered in the course using real-life scenarios.	□Yes □ No

Learner Engagement: These include techniques to deepen learner engagement with the learning material.

SI. No.	Statement	Option	
1	Resources are byte sized (6-10 minutes long).	□Yes	□No
2	The technical quality of all media is good, i.e. videos and audios play with no distortion.	□Yes	□ No
3	Reading content (e.g. PDF, slides) is designed for on-the-go consumption and contains visual summaries, infographics and other similar techniques.	□Yes	□ No
4	The voice over accent is one that can be easily understood by the target audience.	□Yes	□ No
5	Web links used in the course are relevant and functional.	□Yes □	□ No
6	The voice used is not machine simulated and robotic. (Please make this a separate point)	□Yes □	□ No

Learner Support: Resources included with the course extend learning and enhance the asynchronous learning experience.

SI. No.	Statement	Option
1	Learners are able to download courses and complete in offline mode (e.g. Course avoids using YouTube links/ external to videos).	□Yes □ No
2	Learners have access to additional resources that enrich the course content.	□Yes □ No
3	Learners have access to troubleshooting resource(s) and contact details.	□Yes □ No
4	The course features navigational help.	□Yes □ No
5	The course contains a list of abbreviations used and a glossary of terms as part of each module.	□Yes □ No

Annexure III: Diversity & Inclusion

Diversity & Inclusion: The course uses language and media elements that are inclusive and feature diversity in gender, race and religion. The course is accessible to differently abled learners.

SI. No.	Statement	Option
1	All graphical elements (image, graphics, shapes, charts etc.) used in the course include descriptive 'alt tags' that screen readers read out in descriptions.	□Yes □No □ N/A
2	Videos feature closed captions and transcripts.	□Yes □No □ N/A
3	Hyperlinks in the course connect to the correct location and all of them are descriptively titled (not using phrases as "Click here"), underlined, and a different colour.	□Yes □No □ N/A
4	Course provides alternative activities to replace drag-and-drop ones by using a matching activity with typing the correct number or letter.	□Yes □No □ N/A
5	Course uses appropriate font size and type, which is adjustable and conforms to all the required standards. (Please refer to document for standards).	□Yes □No □ N/A
6	The course uses both colour and symbols to convey messages or visual notifications.	□Yes □No □ N/A
7	The course uses patterns and textures as opposed to only contrasting colours for elements that require emphasis.	□Yes □No □ N/A
8	Colour schemes used are colour-blind-friendly (Please see W3C standards) and contrast is used in choosing colour combinations.	□Yes □No □ N/A
9	PDFs are saved as searchable text not images.	□Yes □No □ N/A
10	Audio narration is available for static content.	□Yes □No □ N/A
Diversity		
11	The course features diversity in gender	□Yes □No □ N/A
12	The course/content does not showcase disparity or discrimination among genders (male, female, third gender). The course is gender intentional/ gender transformative ⁶	□Yes □No □ N/A
13	The course uses language that is gender inclusive, e.g. use of 'they' in favour of 'he' (with appropriate change to sentence structures).	□Yes □No □ N/A
Culture D	viversity & Tolerance	
14	Courses developed are multilingual and available in multiple official languages.	□Yes □No □ N/A

 $^{^6\} https://www.gatesgenderequality toolbox.org/wp-content/uploads/BMGF-Gender-Guide.pdf$

15	Human characters used in the course belong to the context that is being portrayed, e.g. use of Indian characters in Indian contexts and situations and use of international characters where the situation demands.	□Yes □No □ N/A
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Annexure IV: Sustainable Development

This section will be part of the initial completed checklist from Content Providers, and not a measure of course quality.

SI. No.	Statement	Option			
Environm	Environmental Sustainability				
1	The course portrays conservation of the integrity of ecosystems and biodiversity, promotes sustainable management and use of natural resources.	□Yes □No □ N/A			
2	The course addresses the risk of climate change impact and disasters, integrates climate change adaptation considerations and does not exacerbate vulnerability of communities to climate change impacts or disaster risks.	□Yes □No □ N/A			
3	The course does not promote practices related to increased pollution, use of unsound chemicals, improper waste management, especially with respect to plastic waste, hazardous wastes, organic & ozone depleting pollutants.	□Yes □No □ N/A			
Sustainal	Sustainable consumption and production				
4	The course promotes sustainable and efficient use of resources (energy, land and water).	□Yes □No □ N/A			
5	The course advocates responsible and sustainable lifestyles, including Green Economy and Green Jobs.	□Yes □No □ N/A			
6	The course does not portray harming living beings (humans, animals or plants) with the intent to benefit from such practices.	□Yes □No □ N/A			
Peace and Non-Violence					
7	The course does not promote forced labour, armed conflicts, delocalization and migration, displacement and involuntary settlement.	□Yes □No □ N/A			
8	The course promotes friendly relations among nations, peaceful solutions, living together.	□Yes □No □ N/A			
9	The course does not promote/advance forms of violence including bullying, verbal abuse, gender-based violence and extremism.	□Yes □No □ N/A			
Human Rights and Gender Equality					

10	The course promotes/advances equality, inclusion and non-discrimination, for example by gender, caste, race, class, disability.	□Yes □No □ N/A			
11	The course does not include working children under the legal age of 18 years.	□Yes □No □ N/A			
12	The course does not breach any provisions with respect to national employment, labour laws and international commitments.	□Yes □No □ N/A			
Human S	Human Survival and Well-being				
13	The course promotes occupation health and safety standards with special focus on women workers, young workers, migrant workers and workers with disabilities.	□Yes □No □ N/A			
14	The course advocates sustainable cities, communities and health of the planet for future generations.	□Yes □No □ N/A			
Culture D	Culture Diversity & Tolerance				
15	The course does not adversely affect International or intercultural understanding, solidarity and cooperation.	□Yes □No □ N/A			
16	The course recognizes, respects, protects and preserve indigenous people's culture, knowledge and practices.	□Yes □No □ N/A			

Annexure V: Learner Survey

All questions must be scored on the following Scale:

Strong Disagree Disagree Agree Strongly Agree

- Q1. The instructional methods used to teach this course / program were effective.
- Q2. I had to apply myself and stretch my abilities to do well in the assessment.
- Q3. I believe the course or program is designed keeping competency development and skill acquisition in mind.
- Q4. I was deeply engaged with the learning materials and the examples and case studies used in the course or program.
- Q5. The learner support materials in the course were effective
- Q6. The course or program supported the needs to differently-abled learners, although I might not have used those features
- Q7. On a scale of zero to ten, how likely are you to recommend this course or program to a friend or colleague?

Below questions are descriptive questions to be asked by learner

- Q8. What was especially noteworthy about this course or program? (2-3 short bullets)
- Q9. What improvements would you recommend to the course or program? (2-3 short bullets)

Annexure VI: Behavioural Survey

All questions must be scored on the following Scale:

Strong Disagree Disagree Agree Strongly Agree

- Q1. Knowledge and skills acquired as a result of completing the course was utilised on the job.
- Q2. There is a positive change in on-the-job behavior
- Q3. The change in behavior is sustained over time
- Q4. There is a noticeable and measurable improvement in the activity and performance on the job.
- Q5. Other people in the organisation are being trained on new knowledge, skills and attitudes.



Onboarding in a Box for Departments

Version: 1.0



Abbreviations

ATI Advanced Training Institute

CBC Capacity Building Commission

CBP Competency Building Product

CoE Centre of Excellence

CSP Certified Service Provider

CTI Central Training Institute

DFU department FRAC Unit

FRAC Framework of Roles, Activities, and Competencies

IFU Internal FRAC Unit

iGOT Integrated Government Online Training

iGOT KY iGOT Karmayogi platform

MDO Ministry, department, Organization

PIAA Proctored Independent Authorized Assessment

POC Point of Contact

SPV Special Purpose Vehicle

STI State Training Institute



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1. Purpose of this Document

Onboarding in a Box (OIAB) is a document which serves as a one stop step by step guide to a government department which can be followed by them while onboarding on iGOT Karmayogi (iGOT KY) platform.

The document starts by providing a brief about the whole Mission Karmayogi – National Programme for Civil Services Capacity Building and a brief contour about the iGOT Karmayogi platform.

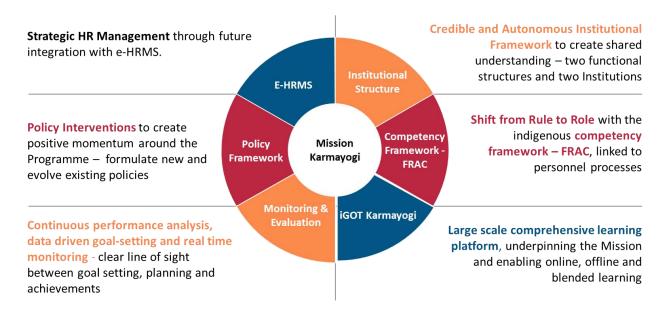
Though the document is largely about explaining the onboarding process, but it also mentions briefly the overall roles and responsibilities of the stakeholders – DoPT, iGOT Karmayogi Special Purpose Vehicle and Departments – their immediate role as part of onboarding process and their overall role as part of whole program. It also provides the steps which the Departments should follow to complete the onboarding process along with the documents that provide detailed guidance on some of these steps.

This document helps each department to understand how they can access the platform, explains step by step how a department needs to create their account on platform and how to create users with various roles on platform, explains how content can be uploaded on the platform and then be consumed by users.



2. Introduction to Mission Karmayogi – National Programme for Civil Services Capacity Building

With an aim to enhance capacity building, talent management and HR management of the civil services, Mission Karmayogi – the National Programme for Civil Services Capacity Building has been launched. The Programme aims at developing a well-trained civil service with the right Attitudes, Skills, and Knowledge (ASK), such that there is a continuous improvement in their efficiency and outcomes. A well trained, efficient, and capable civil service will lead to better public service delivery and better governance, thus boosting Citizens' Ease of Living and Ease of Doing Business, elevating citizens' trust in government and overall making the government perform better. Mission Karmayogi has been envisaged as a comprehensive six-pronged Programme, with each strand coming together to create a competent civil service for New India, built on the ethos of Indian values and backed by robust government processes.



Competency Driven Capacity Development

Central to Mission Karmayogi is the recognition that a fit-for-purpose government workforce requires a competency driven capacity building approach, which focuses on imparting competencies critical to discharge roles. The Programme, in lines with the recommendations of the National Training Policy of 2012, will introduce a Competency Framework for the civil services that will govern their training, capacity building, as well as give direction to larger aspects of HR Management, including promotions and postings. This Competency Framework, called the Framework of Roles, Activities and Competencies (FRAC), will link every position in the Government with their required competencies. For every government position, there are roles; each role has activities associated with it; accomplishing each activity needs certain competencies. FRAC will map the roles and activities corresponding to every government position with their desired competencies, with each competency having 5 levels of proficiencies (from Beginner to Expert). As civil service officials progress in their career, it is desirable that they gain new competencies and evolve their proficiency in their current competencies. Competencies have broadly been classified into three types - behavioural, functional, and domain, as explained below.



- Behavioural competencies are a higher order of behaviours that are applicable across a range
 of jobs, functions, and roles, within the organisation. They describe the key values and
 strengths that help a department/organisation/official perform effectively in a range of jobs.
- Functional competencies describe the application of knowledge and skills needed to perform
 effectively in a specific role or group of jobs. They may also include job specific competencies
 that define the skills and knowledge needed to perform a specific role effectively.
- Domain competencies are shared by a 'family' of related jobs that have common functions and form a logical career path. These competencies are defined for a specific department or business unit, but it may also define jobs across departments that share common tasks and functions.

Every department will perform a FRAC for every position in the department. To operationalize FRAC in a homogeneous and standardized manner across departments, DoPT is setting up a FRAC Centre of Excellence (FRAC CoE). The FRAC CoE will play the dual role of a "process owner" where it defines, manages, and amends the process of FRACing that departments shall follow and, a "process certifier" where it certifies the FRACing operations at departments. Thus, as the FRAC CoE matures, it will evolve into a standardization body for FRAC and define benchmarks for the expected performance.

iGOT Karmayogi Platform

This is a large-scale comprehensive learning and career management platform, built indigenously in India, to suit the unique needs of the Indian government. The platform creates an environment of continuous, frictionless, and guided learning for all segments of the Indian civil service and provides mechanisms for networking, peer-to-peer interactions, and competency and career management. Envisaged as a multichannel digital platform — where FRAC understands the competencies required by an individual, and a content marketplace enables learning — iGOT Karmayogi will enable tailored competency development for all valid civil service officials. It shall also form the backbone and starting point of linking and amplifying an intelligent government approach to capacity building and HR management. This has been detailed further in Chapter 3.

Institutional Framework

To operationalize, regulate and govern the capacity building Programme, an institutional mechanism that is robust, co-owned and sustainable, has been proposed. Comprising of two functional structures (the Prime Minister's HR Council and the Cabinet Secretariat Coordination Unit) and two institutional structures (Capacity Building Commission and the iGOT Karmayogi Special Purpose Vehicle), the envisaged institutional structure will bring together all stakeholders in a scalable and efficient manner.

- Prime Minister's HR Council (PMHRC) at the apex providing strategic direction to civil services reforms and capacity building.
- Coordination Unit in Cabinet Secretariat working to unify the Programme and providing mechanisms for overseeing capacity building plans.
- Capacity Building Commission (CBC) to harmonise training standards, create shared faculty and resources, and supervise training institutions.



o iGOT Karmayogi Special Purpose Vehicle (SPV) to implement and enhance digital assets underlying the Programme, including iGOT Karmayogi platform, and facilitate world class learning.

Policy Framework

To sustain the Mission, a Policy Framework that continuously evolves implementable policies is critical. This will refresh existing policies from time to time and formulate new policies, all of which will define the course of action for Programme stakeholders and ensure that the Programme keeps gaining momentum. Through standardized directions for departments and training institutions pan-India, the Policy Framework will upgrade the training landscape and harmonize capacity building, thus enabling a future-centric transformation. For instance, with significant change occurring in the training landscape, training related policies (policies to operationalise e-learning, policies to integrate service matters with FRAC, assessment policies etc.) shall need to be formulated. Similarly, policies to operationalise the Programme (onboarding policies, expenditure policies, governance policies etc.) as well as iGOT Karmayogi platform related policies (data policies, intellectual property rights policies etc.) will be key.

Monitoring and Evaluation

The decentralized nature of civil service capacity building necessitates the creation of a framework that monitors progress of the Programme at every level. Mission Karmayogi's Monitoring and Evolution Framework will help in defining clear linkages between national aspirations and priorities, departmental strategies and objectives, and internal and external ecosystem drivers, ensuring synthesis in goal setting and harmonization in reporting practices.

Key elements of the monitoring framework include -

- Annual Capacity Building Plan A compilation of departmental capacity building goals and objectives, aligned at a national level. This will enable identification of the Key Performance Indicators (KPIs) at the departmental and national level, and thus form the basis for all monitoring and evaluation activities.
- PM's Karmayogi Dashboard A single source of truth Dashboard providing departmental Progress
 Reports and Scorecards
- Annual State of the Civil Services Report which will go beyond reporting of Capacity Building Programme and will capture the state of affairs in the civil services as a whole, capturing the achievements and changing responsibilities and civil services' contribution to the national progress.
- Third Party assessment frameworks enabling third-party audits of departments, Ministries, SPV or of the entire Programme. These may be mandated by the PMHRC or the CBC.

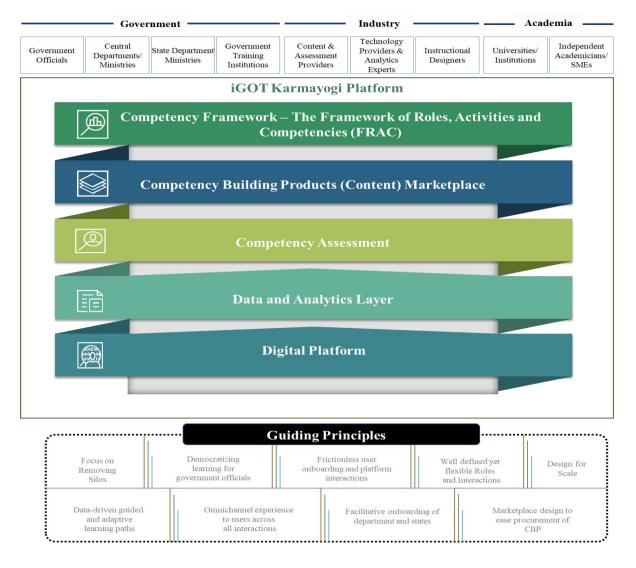
e-HRMS and Integration with Capacity Building for Strategic HR Management

DoPT is already implementing an e-HR Management System for digitally recording and managing HR matters across departments and there is a longer-term plan to integrate the Capacity Building and competency information with the e-HR Management System. While this is not the immediate focus of the Programme, such an integration will transform the core HR management of civil services, especially in aspects of recruitment, postings, promotions etc., and more importantly, will provide the right intelligence and insights to government to ensure right persons are at the right job.



3. Introduction to iGOT Karmayogi

At the core of the civil services capacity building Programme is the iGOT Karmayogi platform – a comprehensive online platform to guide individual civil service officials in their capacity building journey and facilitate learning through suitable Competency Building Products (CBPs)¹, assessments and learning recommendations, all linked to the FRAC – the Competency Framework. iGOT Karmayogi is not merely a platform to deliver online capacity building; it will also facilitate face-to-face and blended capacity building, facilitate discussions through topical forums and enable assessments that credibly signal expertise of officials. As a solution built to be 'fit for purpose' to meet the exact capacity building needs of the civil services, the platform will create an environment of continuous, frictionless, guided capacity building for any official, where she can have 24x7 visibility on her competency gaps and overall professional development.



¹ Competency Building Products (CBPs) is a standard term which will be used to define all forms of learning content on the iGOT Karmayogi platform and include online/ offline/ blended courses, modules, workshops, training sessions and other types of content that build competencies



Comprising of five layers, iGOT Karmayogi will be an evolving and scalable platform being built as an integral part of the Digital India stack —

FRAC Layer

The FRAC Layer will encode the Competency Framework - FRAC as a special data structure on the platform. Structured as a collection of interconnected dictionaries of Roles, Activities and Competencies, the layer will provide a mechanism for each department to define the FRAC for all positions under them. Once encoded, the FRAC layer will guide the critical platform operations, including learning path formulation, learning recommendations, content management and assessments. Further, the FRAC layer will also enable digital management of service matters such as – work allocation and deployment and vacancy fulfilment (FRAC for all new vacancies shall be published along with vacancy advertisements).

For each competency identified through FRAC, a GoI department will be identified as the competency owner. Broadly, the Competency Owning department shall – (a) operationalise FRAC for the owned competency and populate the FRAC data on iGOT KY, (b) curate and create relevant content, thus ensuring the CBP marketplace is suitably populated and (c) curate and create assessments and testing resources to test the proficiency of officials on the owned competency.

CBP (Content) Marketplace Layer

Superior CBP will drive the success and adoption of the iGOT Karmayogi. For this reason, the quality and relevance of CBPs sourced internally or externally for this capacity building platform, will be critical for its success. Broadly, the CBP components will encompass learning modules, courses, and programs, available in multiple formats, with each of them addressing a specific competency or set of competencies. The layer will initially be a repository of CBPs a longer time goal of evolving it to a comprehensive CBP marketplace linked to FRAC layer.

As a measure towards implementing a quality barrier, external providers will need validation before they are able to onboard CBPs on the platform, mechanism for which will be owned by the Capacity Building Commission. Further, CBPs will need to be validated at all critical points in their lifecycle, including during onboarding, post-onboarding, enhancement stage etc. For this a formal validation framework will be created and operationalised by the Capacity Building Commission, which will ensure that all CBPs are appropriate and of high quality. Competency Owning departments will also have a major role to play and will validate whether a CBP for the competencies the CBP claims to impart. Beyond formal validation, the platform will also rely on crowdsourced validation based on user feedback.

Competency Assessment Layer

An official will regularly be assessed on her acquired competencies. The assessments will either be in form of proctored standardised assessments or in the form of workplace assessments. The proctored assessments will be standardised computer-based assessment of competencies independent of any CBP or course and will enable learners to get certified on a competency at a particular proficiency level. The workplace assessment will evaluate competencies exhibited by an official as assessed by managers, peers, subordinates, and self and the ratings will be captured on iGOT Karmayogi. These assessments shall also be complemented by CBP based assessments, where every CBP on iGOT Karmayogi will generally have



some assessments as part it. While the exact procedures for the different assessment types are being worked on, the Assessment Layer will eventually implement the procedures and functionalities.

Digital Platform Layer

The core interactions of officials, departments, service providers, competencies, CBPs, assessments and other services will take place over a multi-channel digital platform, built using Indian technology. The platform will codify FRAC, CBP, assessments and orchestrate their interplay, enabling internal and external providers to deliver capacity building services on the platform, in alignment with the learner demands and capacity building needs. The platform will also provide the core technical components, which will drive iGOT Karmayogi, including the frontend service delivery channels, content management system, along with the other four layers of FRAC, CBP Marketplace, Assessment and Analytics.

Data and Analytics Layer

Data is the glue that ties all other layers of the iGOT Karmayogi platform; and the platform will over time emerge as a rich repository of capacity building data for the whole of the government, with information on learning records of officials, training initiatives at departments and competency information for all positions in government. There are two fundamental attributes which distinguish this layer on iGOT Karmayogi – firstly, the ability to emit data continuously and in real time, which will facilitate availability of data in most granular form, and secondly, advanced and inbuilt data science and AI capabilities, which will enable extraction of insights in real time. This emit will enable multiple stakeholder groups to derive insights out of the platform's telemetry data, eventually enhancing user experience and aiding in decision making. The analytics layer will also enable development of functional services including product enhancement through incremental features, dashboarding and visualisations (including internal dashboards and the PM iGOT Karmayogi dashboard at the national level) etc.



4. What is Onboarding in a Box?

Onboarding refers to the action or process of enlisting a new user onto the iGOT Karmayogi platform. Onboarding in a Box (OIAB) is a standard toolkit for guiding any government department to get onboarded on iGOT KY. It familiarizes the department about the new platform, how it can be accessed, how users will be created on it and finally how the content/courses are uploaded to be consumed by users/learners.

OIAB is a step by step guide which helps and explains the departments about

- a. What are pre-requisites which a department is required to be prepared with before starting the onboarding process and
- b. Then step by step process which are to be followed for completing the onboarding.

The key components of OIAB are as follows:

- a. Roles and responsibilities for DoPT and SPV in the onboarding process.
- b. Roles and responsibilities for every onboarding department in the onboarding process.
- Guidance on the preboarding requirements and minimum roles that each onboarding department shall have/identify.
- d. **User Onboarding Process:** Standard Process for onboarding departmental users on the iGOT Karmayogi platform and subsequent granting of roles and access to each of the onboarded users. Users can be Learner, Manager, Administrator, Content Reviewers, Content Creators, Content Publishers, etc.
- e. **Content Onboarding Process:** Standard Processes and guidelines for Content creation and onboarding on the iGOT KY platform including description of how to perform the intermediate activities including creation, production, validation, publishing etc.
- f. FRAC Onboarding Process: Standard Processes and Templates for FRACing.

Any department intending to get onboarded, needs to identify a Departmental Nodal Officer who will formally request DoPT for onboarding. DoPT in turn will do the necessary due diligence and approves onboarding of the department. This OIAB will provide guidance on the subsequent steps to be performed.



5. DoPT/SPV Responsibilities

5.1 DoPT Responsibilities

DoPT is the nodal department for the execution of the entire Programme and by that virtue, an enabler for implementation and rollout of iGOT KY and will be issuing appropriate guidelines to amplify and facilitate adoption of the iGOT KY Platform. In its larger monitoring role, DoPT will work with other institutional structures, including SPV, Coordination Unit and Capacity Building Commission to constantly evaluate the Programme outcomes including the outcomes of the platform. The responsibilities of DoPT are:

- To implement and operationalize the Institutional Framework, which provides the governance mechanism for the entire Programme, including setting up of an SPV which will own and manage the iGOT KY platform.
- To set up the FRAC CoE at ISTM and through it, design the FRAC Processes and Templates and drive adoption of FRAC across departments.
- To operationalize the behavioural competencies as part of FRAC.
- To empanel specialist HR agencies for purpose of operationalization of FRAC in the departments.
 Departments may onboard resources from the empanelled pool for their internal FRACing exercise.
- To empanel specialist e-Learning/ Instructional Design Agencies for purpose developing e-Learning content/ CBPs. Departments may onboard manpower from the empanelled pool for the purpose of developing e-Learning content for the platform.

5.2 Responsibilities of iGOT Karmayogi SPV

iGOT Karmayogi SPV will own the iGOT KY platform on behalf of Govt. of India and will be responsible for design, development, feature enhancements, management and operations of the iGOT KY platform. It will also be the interface with the departments for any aspect related to the platform, including onboarding assistance, training, user support etc. Its major responsibilities will be:

- Overall platform development, implementation, enhancement and maintenance activities. As the
 primary administrators of the platform, the SPV will own all aspects of platform control, including
 user access, departmental access, access to service providers etc.
- To own this Onboarding in a Box document and to keep it up to date with all relevant changes on regular basis.
- To provide access to the departments and departmental administrators on the platform during onboarding.
- To create and operationalize the content marketplace by onboarding approved Content Providers.
- To provide onboarding training and handholding to departments/ CTIs/ Service Providers during onboarding and subsequently on regular basis.
- To run a helpdesk to resolve concerns/ issues of users or departments or service providers.

(Note: till the time SPV is not operational, these responsibilities will be carried out by DoPT)



6. Department Responsibilities

While iGOT Karmayogi SPV will provide requisite handholding support, the departments will have to own and perform most of the activities pertaining to onboarding.

- Complete the pre-requisites for onboarding as has been specified in section 7 of this document.
- Onboard all departmental users on the platform as part of the onboarding process (refer section 8). The departments will also be responsible for managing the lifecycle of a user on the platform adding user when she joins the department, remove user when she retires/ superannuates, change departmental tagging when a user gets transferred out of the department.
- In case department curates its own content, then onboard the relevant content on platform (refer section 8).
- Operationalize FRAC within the department (refer section 8).
- Share information about the learning resources and infrastructure of the department, including the expenses incurred on training.

For doing the activities mentioned above, departments will create a Capacity Building Unit (CBU) which will be responsible for all Capacity Building activities at the department level. The CBU will be comprised of internal resources/ employees of departments and may also include external experts, as the department deems fit. The CBU will host an Internal FRACing Unit (IFU) which will operationalize FRACing in the department. The CBU will also be responsible for monitoring capacity building progress of all employees in the department and onboard content/ CBPs on iGOT KY accordingly. Based on the capacity building progress, the CBU will be required to develop Annual Capacity Building plan for the department.



7. iGOT Karmayogi – Preboarding Requirements

Before any department is onboarded on iGOT KY Platform, they must ensure some prerequisites. DoPT/SPV will validate that all minimum requirements are met while approving the department's request.

The following steps constitutes minimum requirements to be eligible to get onboarded to iGOT KY:

- 1. Department should constitute an internal team for managing its activities on iGOT KY. A representative list of the roles in the said team is provided below and may subsequently be subsumed in the Capacity Building Unit of the department. In an event the department feels that it needs a reduced or augmented internal iGOT KY team, the department may consult with DoPT/SPV for guidance. Following team structure is proposed to be adopted by the departments:
 - a. A departmental Nodal Officer for iGOT KY a JS / Director level official may be nominated for this role by the department. All further communications regarding iGOT KY will take place with the Nodal Officer. Any change in the Nodal Officer will have to be intimated to DoPT/ SPV.
 - b. Technical Administrator of iGOT KY (one or more to a maximum of three) any official may be nominated for this role by the department. His main responsibilities will include
 - User Management on iGOT KY: Onboard departmental users on iGOT KY; offboard users in case of transfers, retirements, etc.
 - User Privilege Management: Provide special access privileges to users as and when required, e.g. assigning content authoring privileges to a user, making a user manager of another user as per departmental orders etc.
 - c. In case the department intends to onboard CBPs/ Content resources on iGOT KY, compose the departmental Content team, comprising of:
 - Content Author (can be one or more) who creates/authors the content on platform
 - Content Reviewer (can be one or more) who reviews the content on the platform
 - Content Publisher (only one) who publishes the content on the platform

(Note:

- 1. It is not necessary to assign the above-mentioned roles to different persons. One person can also take up multiple roles.
- 2. In a situation where the department is onboarding content, it will be provided access to the iGOT KY Pre-Prod environment)
- d. Establish Internal FRACing Unit (IFU) as defined in the Draft document for "The Framework of Roles, Activities and Competencies". This is optional for the time being. DoPT is working on formalizing the structure and operating procedure for implementing FRAC across departments and will provide necessary guidelines to the departments periodically as the process evolves. However, the departments may refer the mentioned document to initiate FRACing internally to have a head start.



- 2. Once the team is in place, department shall create an execution plan to perform on-time onboarding of users from the department.
 - a. Create a list of users with their email IDs who will be onboarded on the platform along with their roles learner, content creator, etc.
 - b. Timelines for onboarding these users
 - c. Follow up plan to ensure all desired users have completed all the onboarding steps successfully.
- 3. In addition, following will also be the department's responsibilities:
 - a. Departments to ensure that the FRACing process starts at the earliest, once DoPT/SPV empanels Certified Service Providers (CSPs) for FRACing. (Refer to the FRAC Draft document for details. DoPT will empanel Certified Service Providers (CSPs) for FRACing whose service the departments may procure).
 - b. Initiate process of onboarding an Instructional Design agency which will be able to develop digital content on behalf of the department (only if the department wishes to develop content/ CBPs by itself). DoPT is also in the process of empaneling Instructional Design Agencies for developing e-Learning content on iGOT KY and the department may tap into this pool of empaneled agencies.
 - c. Department may be required to pay the annual per-person subscription fee for every employee onboarded on iGOT KY (will be notified once this is finalized).



8. Onboarding Stages for a department

For each department to get onboarded on iGOT KY, following steps must be followed:

8.1 Request Email/ Authorization letter

Use the following email template to request an administrator profile to be created on iGOT for your department/institution/ organization.

To: <email id of iGOT KY SPV CEO - TBD>

Subject: iGOT Karmayogi Onboarding Request - <<insert org name>>

Dear Sir/Madam,

I <<insert your full name and designation>> have been designated as the nodal officer for iGOT KY representing << insert complete official department name >>. I am writing to you with a request to onboard <<insert complete official department name>> onto the iGOT Karmayogi platform. Our official correspondence address is: <<insert full address>>.

We intend to create resources on the platform. Hence, request you to provide us with access to the preproduction iGOT Karmayogi platform where we can test our content. <Optional, if the department wishes to create content>

Kindly create a technical administrator user profile for <<Insert name and designation of the nominated official>> on the iGOT Karmayogi and iGOT Karmayogi Pre-prod platform. The email address to be used for admin profile creation is- <<iinsert email id of the nominated official>>

Kindly find the status of pre-boarding requirements at Annexure 1, as attached for your reference.

Kindly advise if any other information is required.

Regards,
< <full name="">></full>
< <designation>></designation>
< <department>></department>
< <organization>></organization>



8.2 Account Set-up of Administrator on iGOT Karmayogi

Step 1: Once the admin account creation request is approved by DoPT, iGOT KY admin team (at SPV) will take the following actions:

- 1. Create the administrator account for the requested new technical administrator user on iGOT KY and iGOT KY Pre-prod.
- 2. Send out an email notification to the new admin user with a confirmation and single sign-on link to iGOT KY.
- 3. Send out an email notification to the new admin user with a confirmation and single sign-on link to iGOT KY Pre-prod platform.

Step 2: Administrator will have to take the following actions to complete the account set up process:

• Refer to the confirmation email sent by < email id of iGOT KY Admin Team - TBD > with the subject line:

'iGOT Karmayogi: Set password' (Technology Provider to set the trigger mail)

- Click on the reset password link embedded in the email. This link will redirect you to the 'Set Password' page on iGOT KY. Here you can set your new password.
- After the first login with the newly set password, the user needs to update their profile on iGOT KY. (Profile update is a mandatory step)

Step 3: Administrator will have to follow similar steps to set up the account on iGOT KY Pre-production.

Note: New user is given admin rights within 48-72 hours of their profile updation. Users will receive an email from iGOT KY confirming their access as an administrator of their department on iGOT KY.

8.3 Administrator Role and Rights

The Administrator would be looking over Central User Management, Content Management and FRAC management teams. The admin would create further user roles who would be responsible for onboarding learners to the platform, and other activities like:

- 1. Onboarding learners on the platform.
- 2. Assigning Content creators/ reviewer and publisher roles.
- 3. Assigning role-based contents to the learners.
- 4. Monitoring course deadlines.
- 5. Monitoring learner's goals and progress.
- 6. Offboarding users in case of transfers, retirements, etc.

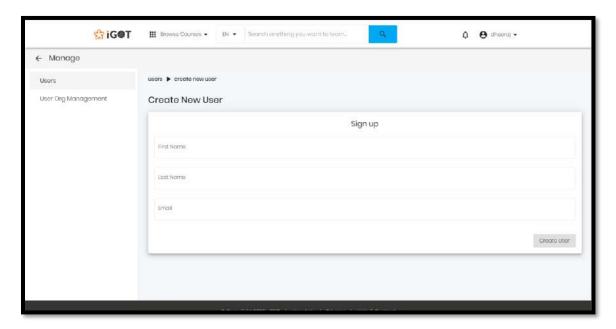
Once admin rights are available, a user as an admin can perform various actions defined in the "iGOT KY user manual" attached as Annexure A. Few key actions that admin can perform on iGOT KY platform as well as on the iGOT KY Pre-prod platform are as follows:



8.3.1 Create & onboard other users

The list of users along with different roles has been created as part of the pre-boarding requirements who needs to be onboarded on iGOT KY. The Admin of the department may re-verify, if required, and will start the process of onboarding them as follows. The Admin can refer to User Management section in "iGOT Karmayogi User Manual" (attached as Annexure A) for reference.

The organization admin creates the users from the **admin console** using the 'Create New User' tab. Admin console can be accessed from the features tab available on iGOT KY.



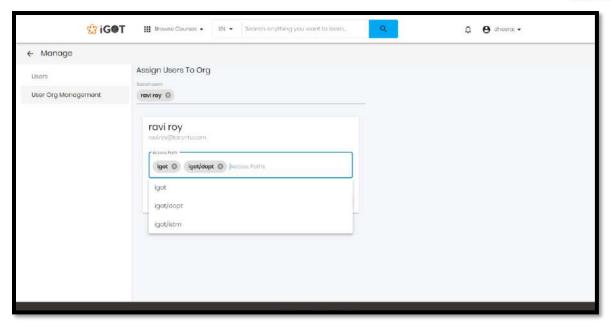
Once the account is created, the users receives an email with further instructions. Users will have to take the following actions to complete the account set up process on iGOT KY:

- 1. Refer to the confirmation email sent by <email id of iGOT KY Admin Team> with the subject line: 'iGOT Karmayogi: Set password'.
- 2. Click on the reset password link embedded in the email. This link will redirect the user to the 'Set Password' page on iGOT KY. Here the user can set your new password.
- 3. After the first login with the newly set password, the user needs to update their profile on iGOT KY. (Profile update is a mandatory step)

8.3.2 Assign department to users

Once the user account is created, the admin can add the user to their department by selecting from the drop-down in the **User Org Management console**.





Admin will have to take the following actions to assign department to the users:

- 1. Go to the 'Explore All Features' tab by clicking the user profile icon on the top right of the page.
- 2. Select the Admin Console from the Features tab.
- 3. Go to Manage Users and select 'User Org Management' tab.
- 4. Under the Assign Users to Org, type the user's name. (Note: The user shall already be onboarded as a learner on the platform before they can be assigned an organization).
- 5. Select the correct username from the suggestions and add the organization tags under the Access Paths.
- 6. Click Ok to confirm the Organization assignment to the user.

8.3.3 Manage user roles

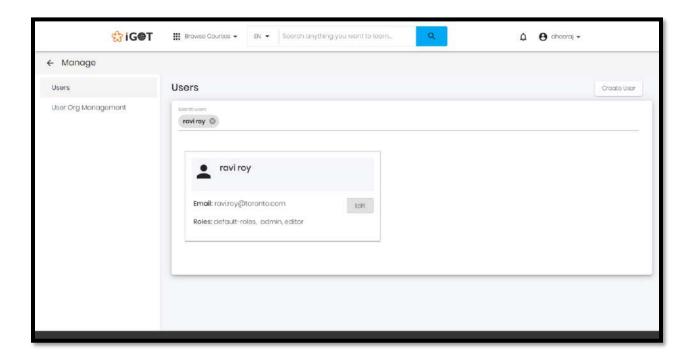
The admin now assigns a role to the user from the **Users console** by selecting the user from the search box.

Admin will have to take the following actions to assign roles to the users:

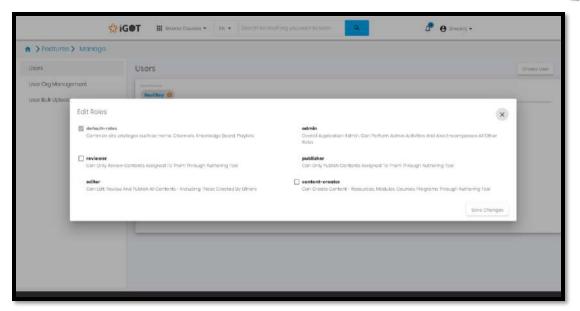
- 1. Go to the 'Explore All Features' tab by clicking the user profile icon on the top right of the page.
- 2. Select the Admin Console from the Features tab.
- 3. Go to Manage Users and select 'Users' tab.
- 4. Under the Search users tab, type the user's name. (Note: The user shall already be onboarded as a learner on the platform before they can be assigned an organization).
- 5. Select the correct username from the suggestions and click on edit to add/ change role of the selected user.
- 6. Following roles can be assigned:
 - a. Default roles: This provides the user access to all the common site privileges such as access to the home page, knowledge boards, content playlists, etc.



- b. Admin: Assigning this role to a user will make them the superuser with all the roles on the platform.
- c. Content Creator: Users with this role can create new content using the course authoring tool.
- d. Reviewer: Users with this role can review content assigned to them using the course authoring tool.
- e. Publisher: Users with this role can publish the content assigned to them on the iGOT KY home page using the course authoring tool.
- f. Editor: Users with this role can edit, review and publish content created by self as well as others.
- 7. Click on Save Changes to confirm the User role assignment to the user.







Note: (It's not necessary to assign the above-mentioned roles to different people. One person can take up multiple roles)

8.4 Content Onboarding

Once the department has identified the content which needs to be uploaded on iGOT KY, following steps will have to be followed:

8.4.1 Onboarding content team

The content team comprising of content creator, reviewer and publisher will be onboarded by admin user as described above in administrator role and rights.

8.4.2 How to use content authoring tool of iGOT

Once the content creation team is onboarded on iGOT KY, they can follow the steps as specified in Content Creation section of iGOT KY User Manual to create content on the platform.

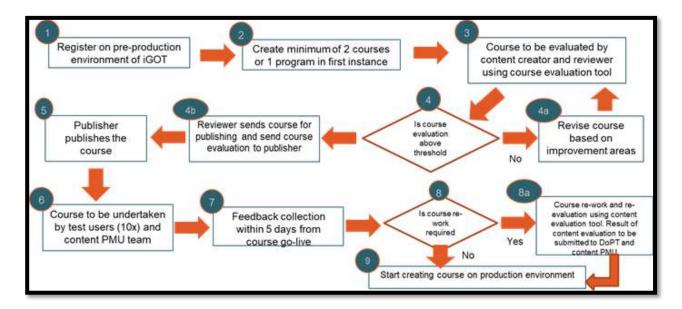
8.4.3 How to create iGOT KY ready content

The content team needs to follow and understand the curation process as described in "Content Framework and Quality Assurance" document to create iGOT KY ready content.

8.4.4 Process for first time content curation and publishing

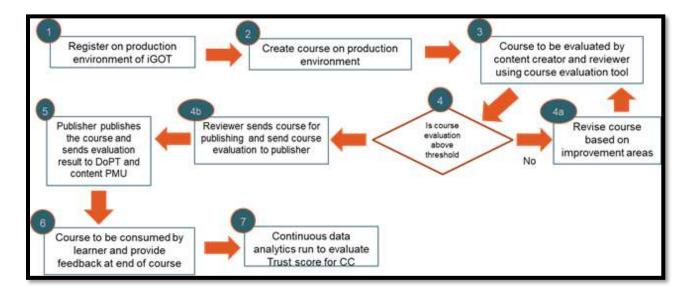
For the first-time content creator, it is advisable that they become used to the platform and the overall content creation process before starting to publish courses for the end user. Hence, it is proposed to practice/test onboarding of a minimum of 2 courses on iGOT KY pre-prod platform before starting to curate courses on iGOT KY. Below diagram showcases the steps to be followed by content curator for first time curation:





8.4.5 Process for regular content curation and publishing

To ensure that the highest quality content is being uploaded on the platform, all content curators need to follow the "Content Framework and Quality Assurance" document for process and guidelines. Below mentioned are the steps to be followed by the content creators on iGOT KY platform:



8.4.6 Content Tagging

The content thus uploaded will have to be properly tagged (key search words) so that the right content is discoverable by users as per their learning needs, desired competencies to be achieved, etc. The content team will perform this activity and if required can take guidance from SPV.



8.5 Administrator and User Training

Post onboarding process, departmental nodal officer may write to DoPT/SPV for conducting a detailed user training on the platform, if required. DoPT/SPV may conduct the same for a group of departments or for a single department also, as required.

8.6 Onboarding department FRACing Unit (IFU + CSP)

It has been envisaged that each department shall have its own DFU which comprises internal FRACing unit and Certified Service Provider to support in FRACing at department. The members of this FRACing unit shall help and guide all the employees of the department to undergo the FRACing exercise efficiently. This FRACing exercise will help in mapping of roles, activities and competencies for each individual position within all government ministries, departments and organizations across all levels.

This repository of roles, activities and competencies for each position in government will help the officials understand that what it will take to pursue a career path of his/her choice and do well in the current one.

Currently the FRACing exercise will be done offline at the department, however the iGOT KY platform is being upgraded to host the FRACing exercise online soon.

For detailed understanding of the FRACing exercise, please refer to the Draft document for "The Framework of Roles, Activities and Competencies".

8.7 Onboarding Associated CTIs

Each department can onboard their associated CTI(s) on iGOT KY both as Users and Content Providers. Detailed step by step guide for Onboarding CTIs will be provided later.

9. Key Contacts at iGOT KY Team

In case of any queries, the department can reach out to

- Mr. Manoj Gupta (US, Training Division, DoPT) at manoj.gupta74@nic.in
- Mr. Ankur Garg (Director, Training Division, DoPT) at ankur.garg@ias.nic.in

10. Annexures

10.1 Annexure A – iGOT KY User Manual





The Framework of Roles, Activities, and Competencies (FRAC) and everything else of FRACing

Part 1: Background and preparation



DRAFT

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Appendix 1 Proposed Approval and Pricing Plan for Different Types of CBP Providers

Abbreviations and Acronyms

Al artificial intelligence

ASK attitudes, skills and knowledge
BDF behavioural, domain and functional
CBC Capacity Building Commission
CBPs competency building products

C-CS CBP competency score CS competency score

CML competency mark-up language CODs competency-owning departments

CP Competency Passbook
CSPs Certified Service Providers
CTIs Central Training Institutes
DFT departmental FRACing team
DoPT Department of Personnel Training
FPA functional purpose analysis

FRAC Framework of Roles, Activities and Competencies

IFU internal FRACing unit

iGOT Integrated Government Online Training

ISTM Institute of Secretariat Training and Management

MDOs ministries, departments and organisations

ML machine learning

MMO means, motive and opportunity
NLP natural language processing
NTP National Training Policy

PIAAs proctored, independent, authorised assessments

SaaS software-as-a-service
SCSR State of Civil Services Report
SPV Special Purpose Vehicle
SSC Staff Selection Committee
STIs State Training Institutes
TCS testing competency score

UPSC Union Public Service Commission

WPCAS workplace competency assessment score

Summary

This document provides an overview of the guiding principles, a common vocabulary and a set of steps to complete the pre-FRACing process¹. The Framework of Roles, Activities and Competencies (FRAC), as termed within Mission Karmayogi's Integrated Government Online Training platform (iGOT) initiative, is the mapping of three constructs (roles, activities and competencies, supported by knowledge resources) for each individual position within all government ministries, departments and organisations (MDOs) at the national, state and local level². Through the example of Shanti, this document provides for all the stakeholders involved a common understanding of the key terms, details of the steps to follow prior to FRACing, its linkages to the iGOT learning hub and the analytics that the platform can make available in order to improve the execution capacity of the Indian state.

Identifying competencies is a diligent task that requires following a certain methodology to ensure the output is coherent and meets the purpose of the activity. As part of the upgrade to iGOT Karmayogi, it is proposed that every MDO is able to 'FRAC' its positions, roles, activities and competencies. Directories and dictionaries must be developed, of all participating stakeholders and of the numerous positions, roles, activities and competencies, respectively.

One of the key objectives of this entire process is to test the competencies of officials and use the iGOT learning hub to close the competency gaps among them in a timely and efficient manner. The learning hub will have to have

unique features in order to do so. Given the pace of change in the way work is organised, often due to technological advancements, it is imperative for governments to constantly take stock of their ability to manage themselves. The data and analytics generated through this process will be available for MDOs to benchmark their human resources outcomes on the platform, and improve their ability to reduce the competency gaps of their officials.

By utilising artificial intelligence (AI) and machine learning (ML), the platform can also spot duplicates in the data and suggest new entries in the directories and dictionaries. AI and ML will also be able to suggest courses based on expressed career goals as well as an individual's learning journey thus far.

This Framework is ever-evolving, capturing new competency needs as and when they arise. The pre-FRACing steps (Section 5) as well as the process of FRACing itself (covered in Part 2) iterates that FRACing should be seen as an ongoing process that enables MDOs to build an accurate picture of their interrelationships as well as the full list of positions, roles, activities, competencies and knowledge resources relevant to them.

Establishing a clear theory of change, limiting the problem and solution set, initiating continuous sensitising and handholding, building a core group of reform champions, as well as a network of world-class universities, institutions and individuals, will be required to ensure the success of this endeayour.

¹ In this instance, the act of denominalisation (i.e. converting a noun into a verb) re-emphasises the fact that FRACing is an ever-evolving process. It needs to capture new competency needs as and when they arise, linking it to activities, roles and positions. The verbing of FRAC (i.e. FRACing) essentially validates the evolving and dynamic nature of the Framework.

² Details of building and rolling out of the platform, including the content strategy, delivery mechanisms, rollout stages and other related matters, are beyond the scope of this document. These details will be covered in subsequent publications at suitable points in time.

Introduction

FRAC, or the Framework of Roles, Activities and Competencies as its name denotes, demystifies the roles, activities and competencies a person is required to have so as to effectively deliver on the outcomes expected from them with respect to their current and future positions in government. In doing so, it makes it possible to establish arrangements to test the extent to which a person occupying a position has these competencies and consequently the competency gaps, if any, that should be addressed. On the one hand, this acts as an effective signal to the effort that individual officials and their managers should be putting in to build competent teams; on the other, it lays bare the opportunities available to entities that have the capability to offer competency building products (CBPs). The latter is accomplished by solving the information asymmetry that plagues the market for quality $CBPs^3$.

iGOT Karmayogi gives shape to the mandate of the 2012 National Training Policy (NTP) to use e-learning technologies to cover the training needs of a large number of officials who currently have little or no access to opportunities for quality training. Distance and e-learning provides "unparalleled opportunities for meeting the training needs of the large number of civil servants dispersed across the State in different cities, towns and villages" (NTP, 2012, p. 32). The NTP also talks of the need to match the competencies of the officer with those required for his/her role -"...essential to match the individual's competencies with the jobs they have to do and bridge their competency gaps" (p. 2).

The iGOT Karmayogi platform is thus envisaged as a democratised, competency-driven solutioning space that all of government can access to enhance government execution capabilities. It makes possible the use of all aspects of the 70-20-10 model of learning and development⁴ (Lombardo and Eichinger, 1996). The platform allows the government to break silos and harness the full potential of government officials for solutioning rather than simply depending on the knowledge and skills of an individual official. It does so by providing resources across five hubs (detailed descriptions in Section 2) – accessible to every government official even before their MDO has onboarded onto the platform using their NICallocated email ID:

- Competency hub: detailing the roles, activities, competencies and knowledge resources for every position.
- Learning hub: facilitating competency building through suitable courses, assessments and learning recommendations (i.e. CBPs).
- Career hub: enabling the government to solve the complex problem of encouraging lifelong learning, and finding the right person for the right job.
- 4. **Discussion hub:** providing officials with an opportunity to benefit from insights from previous discussions and to trigger new conversations around particular queries they may have.
- Network hub: enabling officials to discover others in the government who, given past experiences, recognised competencies, and contribution to

³ In doing so, the expectation is that the iGOT platform will help to develop an efficient market for CBPs – one in which government training institutions, universities, research institutions, private providers, as well as retired and serving officials can offer their products that will be assessed for their impact in the workplace.

⁴ The 70-20-10 model is based on the principle that: 70% of learning comes from experience, experiment and reflection; 20% is derived from working with others; and 10% comes from formal intervention and planned learning solutions.

previous discussions on the platform, may be in a position to help solve a problem.

For multiple reasons, governments in India often require their officials to take on responsibilities for which they do not have prior experience or knowledge. As tasks become more complex and citizen expectations go up, it is important that governments are able to improve their ability to reduce the competency gaps of their officials in relation to the roles and activities they are required to perform. In order to meet the challenges of the 21st century, the civil servant of today is envisioned to be as shown in Figure 1 below.

Given the pace of change in the way work is organised, often due to technological changes and sometimes due to unforeseen events (such as the recent COVID19 pandemic), it is imperative for governments to constantly take stock of their ability to manage themselves. FRAcing will help them do so.

As competencies are at the core of this solutioning space, this document will primarily examine the competency hub within which the process of FRACing resides. Using the example of the official Shanti, Section 1 defines the process of FRACing, covering what it can potentially offer and what it aims to accomplish. Section 2 provides a brief overview of how the iGOT platform is envisioned and how FRACing is at its core. Delving deeper, Section 3 takes a systems view of iGOT Karmayogi, outlining how various kinds of assessment can be used to generate a nuanced understanding of users as well as the many analytics the platform will provide. Section 4 details the directories and dictionaries of iGOT Karmayogi that culminate into a registry, explaining why their interrelationship is the end product of the FRACing process. Finally, Section 5 covers the pre-FRACing steps Part 2, which is a companion document, will cover the FRACing process in detail.



FIGURE 1. The 21st century civil servant

Section 1 What is FRACing?

Shanti has just been posted as a Director in the Department of Personnel Training (DoPT), Government of India. The work allocation has been issued with the approval of the Secretary of DoPT. Shanti has been designated as the Director (Vigilance)⁵. Having moved from an entirely different department, she now needs to figure out what her new position entails. As Director, Shanti has many roles to perform, each of which involves many activities which, in turn, require many competencies (behavioural, domain, functional or BDF). How will she identify the various roles, activities, competencies and knowledge resources required for this position? How will she identify

her own competencies? How will she make up for the gaps in her competencies? Where will she go to get clear answers to these questions?

The FRACing process (that will begin with creating dictionaries of positions, roles and activities, and documenting their linkage to competencies) enables government MDOs to build an accurate picture of the relationships and the full list of positions, roles, activities, competencies and knowledge resources relevant to them. Most importantly, however, it also enables officials like Shanti to understand the competencies required and how they can acquire them (as shown in Figure 2 below).

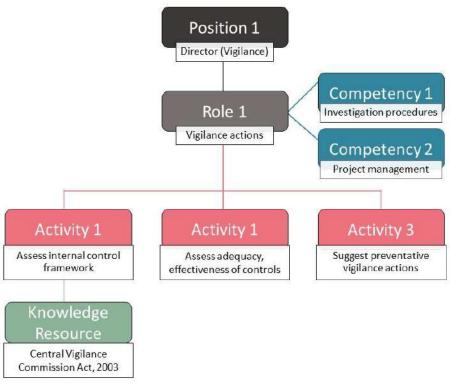


FIGURE 2. What FRACing tries to capture

Adapted from DoPT (2020).

⁵ In the dictionary of positions, there is a base definition of Director (Vigilance). However, depending on who is occupying that position, depending on the competencies and effectiveness of that person, the HoD may choose to assign some of the roles of Director (Vigilance) to people holding other positions in that MDO.

By FRACing and obtaining the details shown above, the process allows for the position to evolve so that it better serves the interests of both the government and the citizens.

Benefits to the various stakeholders include:

- better communicate to officials what its expectations are from holders of each position, the roles and activities that they will be called upon to perform and the competencies (BDF) they will need to have to be able to successfully execute against these roles and activities.
- Managers and their team members, who will be able to get a better sense of each other's competencies. This is possible on iGOT because of the microquestion arrangements that will be in place to drive the 360-degree assessments as well as the authorised independent assessment centres it will offer⁶.
- Government officials, like Shanti who will take responsibility for their own career development because of the newfound clarity around competencies required for each position, and access to the most impactful CBPs through iGOT – irrespective of whether they have the approval of their manager, and whether their MDO has onboarded onto the platform⁷.
- Providers of CBPs (such as Central and State Training Institutions (CTIs, STIs),

- amongst others), who will be able to achieve excellence by getting a better sense of the nature and demand for CBPs, and the impact their alumni are having in the workplace the correlation may be spurious, we may never know!
- Providers of CBPs, who will be rewarded for excellence through better volumes (impact scores will be assigned to all CBPs on iGOT – see Table 3 for more information on scores).

What this means is that when every MDO completes both its pre-FRACing as well as full-fledged FRACing process and produces its own Figure 2 for all positions, it will directly benefit all stakeholders detailed above.

FRACing cannot be a one-time process. It has to be continuously updated so as to reflect the constant changes that occur when new work allocation orders are issued by re-tagging roles and activities with positions. Although most of the heavy lifting on FRACing will be done once every three years⁸ (see Part 2 – the companion document - for detailed steps), the internal FRACing unit (IFU) will have to ensure that each time a new work distribution order is issued and/or the roles and activities associated with a position are tweaked, or when a recruitment notice is put out or indent placed to a recruitment agency like the Staff Selection Commission (SSC) or the Public Service Commission, it is always done via the relevant workflow on iGOT. This will be possible only when an enforceable government order is

⁶ Each competency on iGOT will be assigned by DoPT to a GoI department to be its owner. Competency-owning departments (CODs) will have the responsibility to ensure the following with regards to each of the competencies assigned to them: 1) High impact CBPs are available on iGOT. They can do this by developing CBPs themselves or through their training institutions or by fixing the price that providers can charge for CBPs that build competencies assigned to them; 2) Proctored, independent, authorised assessment (PIAA) capacity is available with a waiting time of less than 24 hours; and 3) Question banks, used for 360 degree assessments on iGOT and PIAA, yield results that are valid and reliable. The quality of these three will be ensured through quarterly score carding by iGOT's Special Purpose Vehicle (SPV) of all competency-owning departments, the results from which will be used on the PM dashboard and published in the annual State of Civil Services Report (SCSR).

⁷ These CBPs can be accessed at their own cost until their MDO has tagged competencies to roles linked to their position (i.e. through the preparatory FRACing steps or the FRACing process itself).

⁸ Although an ongoing process, FRACing in its entirety must be repeated every fourth year (i.e. within the first quarter of the fourth year) or whenever there is a change in government – whichever is earlier.

issued that requires this. Only then will iGOT continue to remain functional and relevant by being the single source of truth for each position, and the linkage between each position and the roles, activities, competencies and knowledge resources related to it.

Defining Positions, Roles, Activities, Knowledge Resources and Competencies

In order to be able to FRAC successfully, a basic understanding of positions, roles, activities, knowledge resources and competencies must be established.

A **position** is defined as the place in which an individual is located in an organisation, entrusted with a set of roles and activities to be carried out. Roles are a coherent set of activities that are usually sequential and carried out to achieve an objective or milestone. Every individual activity within a role is thus an action taken to contribute towards this objective/ milestone. Knowledge resources are artefacts (documents, software, etc.) provided by the MDO for an individual to perform a certain activity (e.g. standard operating procedures (SOPs), manual of procedures, policy manual, legal policies (i.e. Acts), software such as SPARROW, etc.). Finally, competencies can be defined as a combination of attitudes, skills and knowledge (ASK) that enable an individual to perform a task or activity successfully in a given job. There are three distinct types of competencies – behavioural, domain and functional (BDF).

Typologies of competencies

Behavioural competencies are a set of benchmarked behaviours that have been observed among a range of high performers. These capture competencies displayed (or observed/ felt) by these individuals across a range of positions, roles and activities within the MDO. These competencies also describe the key values and strengths that help an official perform effectively in a range of roles. Collectively, they can help an MDO plan their talent requirements. For her new position as Director (Vigilance), for example, Shanti may be required to have problem solving, decision making and leading others as core behavioural competencies.

Domain competencies are shared by a 'family' of related positions that have common roles and activities, and form a logical career path. These competencies are defined for a specific MDO (for example, the Ministry of Personnel or the Department of Biotechnology). Domain competency requirements may be concentrated in one specific MDO but that does not mean that others will not need them. While the Department of Personnel will require Shanti to display competence in vigilance planning, the Ministry of Health or Ministry of Human Resource Management may also require their Director (Training) to have the same competency.

Finally, **functional competencies** are common among many domains, cutting across MDOs, as well as roles and activities. For example, project management, budgeting, communication etc. are required for many roles across many MDOs.

Although they may use slightly different terminology, others have used carefully researched and developed their understanding of competencies to improve their working. For example, the United Nations has listed eight core and five managerial competencies (UN, 2020); IAEA has four core and 11 functional competencies (IAEA, n.d.); OECD has 15 core and technical competencies (OECD, 2014); and the NeGD, Ministry of Electronics and Technology, Government of India has developed a set of e-governance competencies (NeGD, 2014). We anticipate that our understanding of competencies will both build on these existing frameworks as well as contribute to the body of literature.

Section 2 Why is FRACing at the core of iGOT Karmayogi?

The iGOT Karmayogi platform is envisaged as a solutioning space with five hubs (see Figure 3 for Shanti's journey through the iGOT Karmayogi platform and Figure 4 for a diagrammatic version of the same):

- 1. A competency hub, which will essentially be a repository of roles, activities, competencies and knowledge resources for each position in the government, thereby improving the understanding of what it will take for officials like Shanti to pursue a career path of their choice and do well in the current position. The hub will:
 - Enable Shanti to recognise her competency gaps and close them;
 - b) Enable her to credibly signal the extent to which her competencies match the requirements for existing and future vacancies;
 - Enable her to take charge of her life goals with respect to attitudes, skills and knowledge (ASK) acquisition;
 - d) Enable HR managers to identify large-scale gaps in competencies and take corrective action by onboarding suitable CBPs and encouraging officials like Shanti to pursue them; and
 - e) Enable MDOs to identify new competencies that may be required to meet emerging departmental goals as and when they emerge⁹.

2. A learning hub, which will facilitate competency building by providing a 'marketplace' for CBPs. These CBPs could be courses, workshops, learning events, training programs or other services or products that enable an individual to address the competency

BOX 1. Onboarding course for CBP providers

While minimal friction for onboarding CBPs guides the design of the platform, there needs to be a feature for flagging inappropriate content to the MDO that is the owner for each competency (i.e. COD). Al should also be used for this as should periodic auditing of content that has been flagged as inappropriate through crowdsourcing. If a CBP relates to more than one competency and these relate to more than one MDO, then the MDO that has the largest number of related competencies will be responsible and they will have to be notified. A standardised workflow for the review process needs to be developed on iGOT that flags a CBP following which a number of actions such as temporary suspension of the CBP, of a content provider or their permanent removal can be done after following due process as envisaged in the workflow. 'Smell tests' will need to be developed for a CBP which could be used as a self-certification checklist. Explanatory videos that CBP providers can view before submitting the checklist will be very useful. How do we get all of this done?

One way to do this is to create a course on iGOT Karmayogi which CBP providers will be required to complete and get certified as soon as they register. This course could cover the guidelines, terms and conditions. This way we can make sure that they understand the rules, principles and values of the platform.

⁹ This will happen because as new activities are identified and assigned to existing or new positions, the distribution of work order will get modified. Since this can be done only on the iGOT platform and this requires linking of competencies to the new activity, the IFU will be forced to define new competencies that will immediately show up in the iGOT Karmayogi learning hub.

gap. These can be delivered digitally, face-to-face, blended or in any new form that may emerge. The providers of these CBPs could be: government organisations such as CTIs, STIs; academic organisations such as universities, research institutes; not-forprofit and for-profit agencies such as ed-tech companies, NGOs, philanthropies; and individuals such as retired officials, celebrity coaches etc. (see Appendix 1 for a proposed approval and pricing plan for different types of CBP providers). Every single CBP will be tied to (i.e. tagged to) one or more competencies as declared by the provider. It will be against these declarations made by the providers that the impact on the workplace of those who have completed a CBP and been certified for it will be assessed¹⁰. These competency assessments at the workplace will be used to build the impact score of a CBP. It is therefore of great importance that declarations by CBP providers are appropriate and workplace assessments of competencies are both reliable and valid. CBPs can be made available for consumption by government officials without having to go through a complicated procurement process that often compromises quality in the name of low cost.

3. A career hub, which will enable the government to solve the complex problem of encouraging lifelong learning, and finding the right person for the right job. The hub will:

- a) Enable individual officials like
 Shanti to understand the extent
 to which different positions in
 the government match their
 current competencies and their
 future competency acquisition
 plan; and
- b) Help HR decision makers in the government identify officials who have matching competencies for vacancies they are looking to fill.
- **4.** A discussion hub, which will provide Shanti with an opportunity to benefit from insights from previous discussions and to trigger new conversations around particular queries she may have.
- 5. A network hub that will enable Shanti to discover others in the government who, given past experiences, recognised competencies and contribution to previous discussions on the platform, may be in a position to help her solve a problem.

As previously mentioned, all five hubs will be accessible to Shanti whether or not her MDO has onboarded onto the platform (see Figure 3 for Shanti's journey through the iGOT Karmayogi platform). These unique features imply that the iGOT learning hub will need to have:

- 1. The best of what India and the world has to offer in one place.
- The ability to aggregate individual and departmental requirements so the buying power of government can be optimally deployed.

¹⁰ CBP providers should take extreme care to ensure that their products are tagged to the correct competencies (using the competency dictionary on the iGOT Karmayogi platform). In case there is no competency in the competency dictionary that covers their CBP, CBP providers will be able to add to the dictionary themselves (see 'Pre-FRACing steps for CBP providers' in Section 5 for instructions on how to do so). Inappropriate tagging could result in their CBP ending up with a low impact score despite being impactful. This is because the iGOT Karmayogi platform will calculate the impact score based on the PIAA score, C-CS, and the 360-degree workplace competency assessment score (WPCAS) of the competency that was tagged by the CBP provider. However, when there is a pattern that the Al engine is able to recognise – showing that competencies *other* than those tagged by the CBP provider are showing a positive/negative impact consequent upon certification by a CBP provider – the provider will be informed of the same. This fact will also be surfaced to the SPV for suitable analysis.

- 3. Low barriers to entry so that certain CBP providers (private providers whom MDOs have either sourced or negotiated with, or in-service officials) can offer their resources after selfcertification using the content quality toolkit on the platform. Other than these, all other types of CBP providers (see Appendix 1 for a list) will need to be registered with and approved by the Competency Building Commission (CBC) before they can onboard content. Clear criteria will be set by the CBC that CBP providers must meet, after which they are free to onboard content¹¹. They can then showcase the impact that their offerings have had on the workplace assessment of participating officials and the price point they are willing to offer it for¹².
- 4. The power to solve for the information asymmetry that exists in markets for CBPs by surfacing the workplace impacts of each resource, module, course and program.

In a traditional setup, feedback given by participants on the completion of a CBP, such as a course or a workshop, is what drives its ratings. This overlooks the impact a CBP may or may not have on the participant's competencies once they apply the ASK acquired following the completion of a CBP. The iGOT platform solves this by assigning impact scores to CBPs by looking at the improvement in competencies as assessed at the workplace and through independent testing.

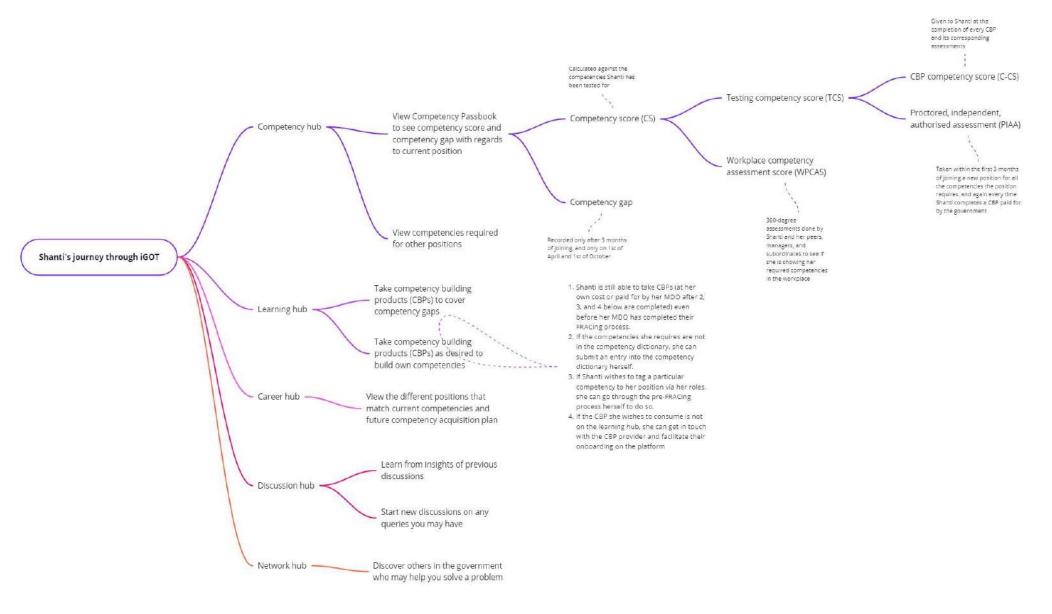
This is why FRACing is at the core of the iGOT Karmayogi platform. It identifies competency requirements and matches them to high impact CBPs. It suggests adjacent CBPs which help to

build the next level of competency and displays what others similarly placed are consuming.

 $^{^{11}}$ All CBP providers should be asked to renew their status as an approved provider every five years.

¹² Despite low entry barriers, quality will not be compromised. Periodic audit by the quality team will be encouraged, as well as crowd sourcing of inappropriate, poor quality content and instances of false certification. The consequences of any of the above will be quite costly for the provider because it will have a direct impact on trust score of the provider. Once the trust score falls below a certain threshold their uploading privileges will be restricted and will require prior quality audit by the iGOT SPV quality team.

FIGURE 3. Shanti's journey through the iGOT Karmayogi platform

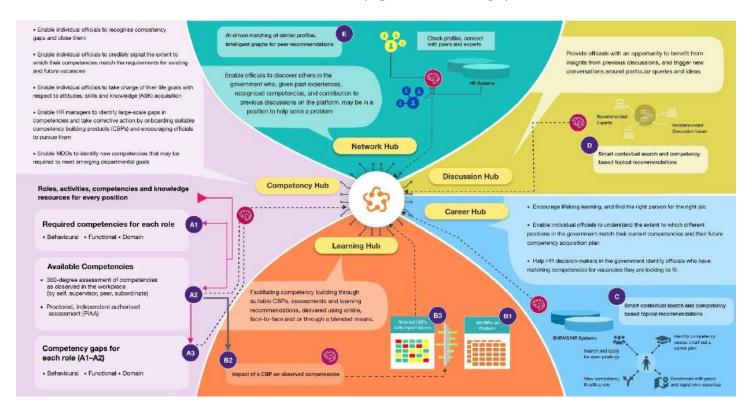


Section 3 Systems View of iGOT Karmayogi

This section provides a systems view of iGOT Karmayogi and the manner in which proctored, independent, authorised assessments (PIAAs), as well as micro-question based continuous assessments, can generate a nuanced picture of users. It also details the kind of analytics that will be available for users whose competencies are being assessed, for those who are providing CBPs and for HR managers.

As described above and envisioned in Figure 4 below, the iGOT Karmayogi platform consists of five hubs: competency hub, learning hub, career hub, discussion hub, and network hub.

FIGURE 4. iGOT Karmayogi as a solutioning space



Analytics from iGoT

The interaction between users and CBPs will produce analytics that can be useful to individual officers, managers and CBP providers. An example is that of data on the educational qualifications of users on iGOT. When a large number of data points on this is matched with:

- a) roles that people with a particular qualification or a combination of qualifications have, and
- b) the competencies associated with each role and the CBPs that each person with these qualifications have completed,

it is possible that the iGOT platform finds a statistically significant relationship showing that those certified by Annamalai University do better than those certified by the Harvard Kennedy School in the competency Macroeconomic Forecasting (provided they have a Masters in Economics from the Delhi School of Economics). The platform could also find, as would be expected, that a certification in macroeconomic forecasting does not have any relationship with improvements in the competency behind drafting of cabinet notes.

This is only one example. Several other insights may also emerge as the number of users grow and details about them and the CBPs they complete get richer¹³.

Analytics in service of officials and their managers

As shown in Figure 4, A1 is the part of iGOT that outlines the competencies required for each

role, A2 is the part that deals with the assessment of existing competencies of individual officials, and A3 is the part that delineates the competency gaps of individual officials vis-à-vis the roles they are currently required to perform (A1 minus A2).

With regards to A2, these assessments are sought to be accomplished in two ways. The first is through the cumulation of assessments made by those who observe each other's competencies and one's own self-assessment (360-degree). The second is the independent assessor arrangements that the owner department for each competency will put in place and notify on iGOT Karmayogi. While the latter will typically use computerised proctored, independent, authorised assessments (PIAAs), the former will require a set of micro-questions to be posed and answered that have the ability to capture all aspects of each competency. These micro-questions, which will be in yes/no and multiple-choice formats, will be periodically posed to officials both as part of their peer and self-assessment. Both will contribute to the competency score (CS) of an official (see Figure 7 for an illustration and Table 3 for a detailed description of the score).

The algorithms that build these competency scores will improve over time as it receives more anonymous data and therefore more scenarios and relationships to analyse and the same is ground truthed. These insights, when used appropriately to generate organisation scores on the PM dashboard¹⁴ and when published annually in the State of Civil Services Report (SCSR)¹⁵, are expected to trigger substantial improvements in the way in which

17 FRAC and everything else of FRACing

¹³ This data will only be available with usage and will only be shared with appropriate groups (with appropriate data protection and anonymisation mechanisms in place).

¹⁴ The PM dashboard is envisioned to be an all-encompassing view of progress made by all MDOs with respect to Mission Karmayogi. It will capture key performance indicators (KPIs) across certain predefined thematic areas and display them in a way that will promote engagement on the platform – such that it advances the goal of making it possible for officials to perform well in each of the roles required by their respective positions. Various indicators are then clubbed together with differential weights so as to produce a ranking of all MDOs with respect to their human resource development practices.

¹⁵ The annual State of Civil Services Report (SCSR) will be a consolidated performance review of the civil services as a whole with a focus on achievements and contribution to national progress.

human resources are developed and deployed in government. At this point it is important to acknowledge that, although all of this can be expected to result in improvements in the means at the disposal of individual officials like Shanti, it is only when means, motive and opportunity (MMO) co-occur that one can expect the implementation capacity of the state to improve. Improvements in motivation will require reforms in the annual appraisal process as well as ways to foster intrinsic motivation; improvements in opportunities will require reforms in business process and expenditure architecture.

The following are therefore the salient points to kept in mind while trying to get a good understanding of the competencies of users:

- The micro-questions will need to capture all the nuances of a competency and will have yes/no and multiple-choice answers.
- The PIAA will need to use question banks that produce assessments that are both valid and reliable.
- The micro-questions will have to be periodically canvassed but in a way that it does not impose a load on officials.
- The responses need to be analysed with the help of AI and ML after taking into account the trust scores of those responding to produce a valid and reliable macro picture of the competencies of each of the users on iGOT Karmayogi as well as the impact score of the CBPs they have taken.
- The appropriate mechanisms for administering these questions (paper, email, surveys or a workflow on iGOT) will have to be worked out through an analysis of the user interface and their experience so as to reduce the friction for those who are called upon to provide answers to the microquestions.

 The entire exercise will need to be sensitively carried out and the results used carefully.

An example of a set of micro-questions, answers to which should be able to produce a macro picture on a competency related to organising a meeting, could be:

- Was the agenda circulated in advance of the meeting?
- Did the agenda have notes that clearly described the background and the decision being sought?
- Did the agenda contribute to a successful outcome of the meeting?

Another example of a set of micro-questions on a competency related to presiding over a meeting could be:

- Did all those who could make a contribution to the meeting get a chance to share their views?
- Were contrasting/dissenting opinions/suggestions listened to with respect and noted for follow up/decision?
- Were the conclusions reached clear to vou?
- Were the minutes of the meeting circulated within a week?
- Did the minutes capture all the decisions taken?
- Did the minutes clarify who had to do what by when?

From the above it is clear that the microquestions associated with each competency will have to be built from a good understanding of the description of that competency in the competency dictionary. The same will be true for the PIAAs as well. The responsibility for building the question banks for both the microquestion as well as the PIAAs is of the Gol department which has been notified by the DoPT as the owner of each competency (i.e. the COD).

In the case of domain competencies, the question of which department is the best owner will be quite clear. In the case of functional competencies that are nothing but domain competencies which have wide interdepartmental utility will need to be assigned to a department. In the case of behavioural competencies which will be required by almost all departments, the DoPT seems to be the natural owner.

Taken together, the above insights are expected to provide users, managers and providers of CBPs a nuanced understanding of where each of them stands vis-à-vis their expectation about themselves and what others expect of them.

Analytics in service of HR managers

As the person who is responsible for the competency owned by their MDO, HR managers will be tasked with ensuring that CBPs of adequate quantity and quality for their owned competencies are available on the iGOT learning hub. The platform will provide them with the information on which competencies are not adequately covered or are poorly covered by CBPs, thus enabling them to fill these gaps. HR managers are also responsible for onboarding PIAA providers. Most importantly, however, the platform allows HR managers to observe the competency gaps that exist in their MDO and rectify the problem.

With regards to the hiring process, HR managers will also get analytics on the quality of recruitment of their own recruitment activities, of others that recruit on their behalf such as the Union Public Service Commission (UPSC) or the SSC, and even of external manpower agencies they have retained for recruitment purposes. Once hired, HR managers will have access to the competency passbooks (CPs) of individuals, using which they can make decisions on what roles and activities they can assign to an individual based on their prior

experiences. This will also allow them to see the individual's growth and competency journey over time; emerging patterns will therefore help them ascertain which agencies provide them with the best talent.

Over the years, the GoI has seen an increase in contractual workers (e.g. data entry operators, multitasking staff, taxi drivers, etc.) — individuals who are not employees of any MDO but whose services are regularly required on a short-term, intermittent basis. Competency passbooks (CPs) will exist not only for regular government officials like Shanti but also for anyone who has worked either directly or indirectly on a government assignment (either through their organisation or as an individual). Using this information, HR managers will be able to make informed procurement decisions and identify the organisations that provide better quality workers.

When HR managers, especially those who work as Cadre Controlling Authorities (CCA), need to make decisions regarding officials deployed from the cadre they control to different MDOs, the CP will enable them to figure out which cadre members are better suited to which MDO.

Finally, fresh government recruits usually go through a probation period after which they are confirmed in service. Their competency assessments and learning journey over the probation period will be available to HR managers – these analytics can be factored in coming to a decision of whether the individual on probation should be confirmed. At a later stage, if the government so chooses, they can also be used to determine promotions and empanelment within the government.

Analytics in service of providers of competency building products (CBPs)

For the purpose of analysis, providers of CBPs (Figure 4, B1) will have to have access to aggregated anonymous data from the iGOT platform of those who have been certified by them so that they can experiment with ways to improve the workplace impact of their CBPs and thereby improve the impact scores of their CBPs. They should also be encouraged to provide 'after sales service' to those who complete their CBPs so that performance improvements can continue. Providing opportunities for collaboration between those who completed a CBP at different points of time would also be useful.

The availability of insights from the above interactions, suitably anonymised for CBP providers, can encourage the generation of a new class of CBPs that are fine tuned to the needs of different kinds of users.

CBP providers will need to develop a nuanced understanding of the learning hub and the impact of their CBPs if the hub is to function well. This will become possible when they have access to:

- Anonymised data from A1
 (competencies) and the roles, activities
 and positions associated with each of
 them as well as the number of positions
 that require each competency;
- Anonymised data from A2 (competency assessments) of those who have been certified by each CBP provider following successful completion of CBPs offered by them on or through iGOT Karmayogi (A2 will also help them see the impact that their CBPs have on the users as assessed in their workplace and the

- impact this (A2) has on the impact score of their CBPs (B2)); and
- Anonymised data from A3 (competency gaps, A1 minus A2) for each role, showing the increase/ decrease in competency gaps over time.

Section 4 Directories, dictionaries and their relationships

This section lists the digital directories and dictionaries and their culmination into a registry on iGOT Karmayogi, and explains why the detailing of their interrelationship are the end products of FRACing.

As a digital system, iGOT Karmayogi requires precision and consistency in the use of labels and descriptions. For example, the terms position, role and activities have unique meanings on iGOT because of which they cannot be used interchangeably however normal it may be to do so in our daily lives.

A directory on iGOT Karmayogi is bound together by a common identifier. For example, the directory of MDOs will contain a full list of all ministries, departments and organisations in the government with a unique code for each. On the other hand, dictionaries can be seen as a kind of registry. While directories contain only listings, dictionaries while being lists also contain a description of what each term relates to and its meaning. For example, a dictionary of positions will not only have a list of all positions, but it will also carry a short description of each of them. The same is true of the dictionary of roles, activities and competencies.

While in a physical world, eight separate directories and dictionaries are required, in a digital world this will be bundled into a singular interconnected, multidimensional, flexible registry, providing us with a composite picture of the government. The power of the digital world allows this multidimensionality – with an infinite number of entries and an infinite number of relationships. These entries within the registry will then be grouped within different collections, which can be changed as

and when required. A collection can be viewed as a dynamic rubber band that groups all variants of a position or role. For example, as earlier mentioned, there exists a base definition of Director (Vigilance) in our registry. However, the Secretary of DoPT may decide that two of the roles under this base definition should be taken away from Shanti (as she is overloaded) and be given to the Director (Administration). Thus, while we have a new variant of the Director (Vigilance) within the DoPT (which will receive a new name and code), this variant will still be a part of the Director (Vigilance) family. All variants of this position will constitute a collection. As dynamic entities, it is up to us to decide how to use collections - but the base definitions from all directories and dictionaries are irrefutable.

Given the significance of these entries in directories and dictionaries, it is imperative to maintain their sanctity. Due to the requirement for precision and consistency, only persons authorised within each MDO should be permitted to make entries in accordance with the process notified by the iGOT Special Purpose Vehicle (SPV) – Karmayogi Bharat¹⁶.

For a complex digital system such as the iGOT platform to become functional, the contents of these directories and dictionaries will need to be strung together in ways so that its meanings can be understood by a machine. This will be possible when a common grammar is used, what the platform calls a competency mark-up language (CML).

There are several of these directories and dictionaries as well as users and features – all of which interact with each other to produce

¹⁶ A Special Purpose Vehicle (SPV) is established to implement the Public Service Capability and Productivity Enhancement Programme of which iGOT Karmayogi is a part. The SPV (Karmayogi Bharat) will be a not-for-profit government-owned registered company. Besides others, it will be responsible for developing and hosting the iGOT platform and ensuring that all its associated processes are executed in a timely and appropriate manner.

nuanced insights (what has been called intelligence in other parts of this document).

Directories and dictionaries

In order to manage the processes indicated as A1, A2 and A3 as well as B1, B2 and B3 in Figure 4, iGOT Karmayogi will have to have the following digital directories and dictionaries:

- Directory of participating ministries, departments and organisations (MDOs)
- 2. Dictionary of positions
- 3. Dictionary of roles
- 4. Dictionary of activities
- 5. Dictionary of competencies
- 6. Directory of knowledge resources
- Directory of users (with their competency and trust scores)
- 8. Directory of CBP providers (with their trust and impact scores)

Given that there is still time for the full-fledged FRACing process to roll out (as detailed in Part 2, the companion of this document), for now the focus will be on populating these dictionaries through the pre-FRACing process (as discussed in Section 5). The details of each of these directories and dictionaries are listed below.

Directory of participating ministries, departments and organisations (MDOs)

As the name suggests, this will contain a list of all entities that have registered their intent to onboard on the iGOT platform and paid up the per person annual subscription. Soon after, they will be provided support to complete the pre-FRACing steps so that their positions, roles, activities, competencies and knowledge resources can be onboarded after completing the iGOT Karmayogi due diligence process.

2. Dictionary of positions

This is a list of all positions along with a short description of the position. These positions will be recognised by their basic identity factors such as the position ID (PID), the MDO they represent and the name of the current incumbent (see Table 1 for the key information fields).

It is possible that there are many positions that are identical in the same organisation – for example, an Assistant Section Officer (ASO) in more than one department in an organisation. In such cases, only one position is listed and the rest are differentiated by the name of the incumbent. A position will be considered different when it has at least two sets of roles and their corresponding activities are different from what is already listed in the dictionary of positions on iGOT Karmayogi. In this case, a codification schema will be used to differentiate the positions (e.g. with a separate PID).

It may so happen that a large number of positions may emerge from FRACing or pre-FRACing that are only slightly different from each other in terms of the roles and activities. If that were to happen, they could be listed as variants of the position already in the dictionary - for example PID432 and PID433 (or similar such techniques that help in creating a unique code for it). The reason for identifying these differently is so that the incumbent and their training needs are adequately addressed. It also allows the HoD/MDO to allocate roles and activities to people who are most suitable according to the competencies they have been certified for in they Passbook. It will not be wise to insist that roles and activities related to a position be fixed forever as this will make it impossible for managers to assign roles and activities according to the competencies and motivation of each person.

TABLE 1. Key information fields in the dictionary of positions, roles and activities

PID	MDO	Position Label	Position Description	Name of current incumbent
PID432	DoPT	Deputy Secretary	abc	abc

RID	Role Label	Role Description		
RID221	Training (Governance)	abc		

AID	Activity Type	Activity Description
AID081	Evaluation (Training)	abc

3. Dictionary of roles

A role is the first level of abstraction from activities. Most of the time, activities can be bunched together in a common thread. This bunching could be based on a common, larger objective: a logical end step to a workflow, or a discrete set of actions that convey the completion of a milestone in a process. This translates into a role label.

This dictionary lists, describes and assigns a unique code for all roles that are distinctively described on the iGOT platform (see Table 1 for the key information fields). Before suggesting a new entry in the dictionary of roles on the iGOT platform, it is important to ensure that a role being considered for entry is not already present under a different label. Al and ML can be very useful here. The codification schema will also be used to differentiate roles (e.g. with a separate role ID (RID)).

Competencies are tagged to roles so that it becomes easy for CBP providers and learners to understand the context in which a competency has to be exercised.

4. Dictionary of activities

As in the case of roles, it is important that activities are also uniquely listed and described on the platform (see Table 1). These activities are actions or steps executed, conducted or processed in a logical sequence by the incumbent to achieve an objective. While sufficient amount of detailing needs to be done, care needs to be taken to ensure that they are not over-detailed.

Activities are the basic unit that emerge from the process. Unlike positions and roles, activities cannot be mutated (i.e. we can change activities between roles, and roles between positions, but not activities between roles as they are usually part of a process). Breaking down a position in terms of its activities and roles gives flexibility to HoDs to mix and match activities to positions so that the current incumbent competencies find an appropriate match to the roles and thus activities they need to perform. Moreover, as the nature of work changes, they start changing at the activity level. For example, the role of the cashier in a bank has changed significantly over the years. Depending upon the usage of technology in that particular bank, many activities have ceased to continue while some additional ones have been added. The recent COVID19 pandemic has also caused a shift in the nature of work, and thus some changes at the activity level.

As MDOs complete the pre-FRACing process, the dictionary of activities will populate on the iGOT platform. It is therefore important to ensure that the same activity does not get listed under a different name. Maintaining the uniqueness in the dictionary is going to be important. Again, AI and ML can help ensure this as well as the codification schema (i.e. activities ID (AID)).

5. Dictionary of competencies

Competencies are at the core of Mission Karmayogi. A competency dictionary consists of the labels of all competencies, their descriptions and the levels within them. This is required to build a common understanding among CBP providers and users of iGOT Karmayogi. Competencies are directly linked to roles (see Figure 2); when specifying what competency is required for each role, the

competency level must also be specified. Users will need it to assess the competencies required for their current position and for positions they aspire to hold in the course of their career. Similarly, CBP providers will use this dictionary for identifying and developing CBPs corresponding to specific competencies. A competency at a certain level can be linked to more than one role.

The DoPT Civil Services Competency Dictionary (DoPT, 2014) already has a list of behavioural competencies. This will be expanded by the FRACing centre of excellence – the Institute of Secretariat Training and Management (ISTM) – to include the commonly used and widespread functional and domain competencies of the government. Alongside ISTM (an MDO), competencies will also be added to the competency dictionary using different processes by other MDOs, CBP providers, and CCAs before MDO-level FRACing begins. These are covered in the pre-FRACing steps (as outlined in Section 5).

As shown in Table 2, the competency dictionary will consist of the certain key information fields.

TABLE 2. Key information fields in the dictionary of competencies

CID ¹⁷	Competency Area	Competency Label	Competency Type (BDF)	Competency Description	Competency Level	Level Description
	abc	Problem Solving	Behavioural	abc	Level 1	abc
CID817					Level 2	abc
					Level 3	abc

¹⁷ In order to ensure competencies are searchable and citable, the dictionary of competencies will be publicly available and a classification code will be introduced in the form of the CID.

BOX 2. Differences between domain/functional and behavioural competencies

One of the biggest differences between the behavioural competencies and the domain/functional competencies is that the latter (domain and functional) are discrete and therefore it is possible to distinguish clearly amongst the levels of sophistication (similar to class levels in a school). Just as the syllabus for each class is a construct created by the ecosystem of the users (kids, parents, teachers), so are the broad constructs for domain and functional competencies created by the stakeholders. In contrast, behavioural competencies are generally accepted universally with cultural adaptations.

Domain or functional competencies are the knowledge and skills required to do an activity or a set of activities to achieve expected results. Therefore, activities are the bedrock on which the domain and functional competency documentation is based on. Any change in the list of activities attached to a role and a position will mean that the competencies for that position will change.

Behavioural competencies, on the other hand, attempt to de-layer the personality of an individual. Deconstructing a personality is not easy, particularly when one aims to create mutually exclusive competencies. Moreover, competency levels are not discrete. The levels, so identified, are usually median points of a behaviour continuum, much like the notes of music. The continuum is artificially broken into levels at convenient points.

As the sophistication of a behavioural competency increases, one can notice that the intensity of intent or completeness of actions taken to carry out the intention increases. The complexity of the actions taken and the greater breadth of impact of such actions are associated with higher levels of the same competency (Spencer, 1993).

Thus, behavioural competencies straddle multiple roles and activities and cannot be limited to one set of roles and activities unlike functional and domain competencies. For example, 'People First', a behavioural competency, may be linked to many roles and activities, whereas 'Financial Accounting Standards' may only be required for those roles associated with financial and accounting related activities.

The relationship between competencies and positions and vice versa

Figure 5 (to be read only from left to right) presents a view of the relationship between one competency and the activities, roles and positions associated with it (these definitions will come from the dictionaries mentioned above). This view is in service of the providers of CBPs in the iGOT Karmayogi learning hub. Such a view allows the providers of CBPs to understand the range of activities and roles that a certain competency is linked to; it also shows the positions that require these competencies and the activities and roles associated with it (note, however, that competencies are directly linked to roles, not activities). Furthermore, it

provides the full list of MDOs where these positions exist and also the total number of people who are current incumbents within these positions. This information is important for the iGOT Karmayogi learning hub for CBPs to grow and flourish. Only when this is known can providers of CBPs grasp the kind of product they need to develop and price their product on the basis of volumes they can target.

As you move from left to right, Figure 5 shows all the roles linked to the competency of vigilance planning (which therefore cover a number of activities), and its related positions.

FIGURE 5. The competency view for CBP providers showing all positions linked to a specific competency

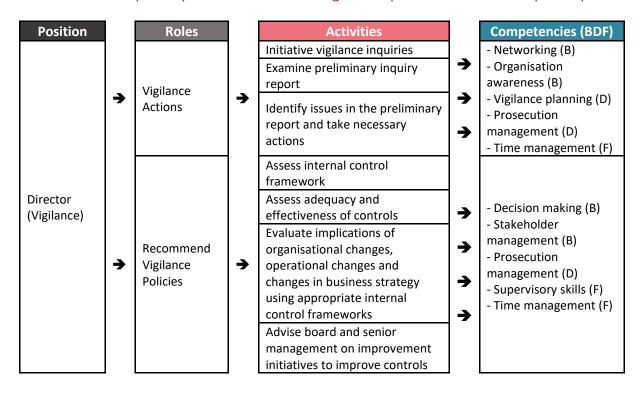
Competency		Activities		Roles		Positions	MDOs and current incumbents	
	→	Familiarise with internal control processes		Vendor selection	*	Director (Training)	- Ministry of Health - MHRD - NTPC - Air India	= 221
		Ensure compliance with internal controls	→					
		Identify sensitive points						
Vigilance Planning		Evaluate implications of organisational changes, operational changes and changes in business strategy using appropriate internal control frameworks		Recommend vigilance policies		Director (Vigilance)	- MCD - CVC - DoPT	= 184
		Advise board and senior management on improvement initiatives to improve controls	→					
		Develop internal control frameworks for the internal audit department						

Note: This figure is for illustration purposes only. The final version may be different.

Figure 6, on the other hand, shows all of the competencies linked to a position – again to be read only from left to right. It shows all the roles linked to the position and the activities linked to these roles but may not show *all* the roles linked to each activity. For the sake of depiction, two different roles and their activities have been taken up to show all of the BDF

competencies that are linked to this position. Here the view is of all competencies linked to these roles and therefore this position. When one views these roles and activities independently, one finds that a number of domain and behavioural competencies are repeated (as can be seen in Figure 6 below).

FIGURE 6. The competency view for users showing all competencies linked to a specific position



Note: This figure is for illustration purposes only. The final version may be different

Figure 6 is in service of officials such as Shanti and their managers who are registered on iGOT Karmayogi. Once pre-FRACing has been completed in an MDO, this view helps officials of that entity to understand all the roles and activities they are required to undertake as well as the competencies they need to have to perform them well.

Besides, once competency assessments at the workplace begin and those who have completed CBPs offered on the iGOT platform get their competency tested, the learning hub will begin to carry the impact scores of their CBPs on offer. This will allow Shanti and her manager to make the right choice based on the cost and impact score of a CBP.

6. Directory of knowledge resources

Besides the dictionaries described above, the iGOT platform will also carry several directories (or listings). One such is the directory of knowledge resources. These range from policies to software to legal frameworks to manuals. Linked to activities, they are provided by MDOs to allow officials to perform a certain activity. The directory of knowledge resources will be a collection of all these artefacts. The platform will allow for MDOs to upload these files and/or share suitable links. Once uploaded, these resources will be available to all across the iGOT Karmayogi platform (i.e. once uploaded, it will become a common resource and can be used by more than one MDO).

7. Directory of users (with their competency and trust scores)

The directory of users consists of details of CBPs completed and certified as well as a user's competency score (CS). As one of the key principles of iGOT Karmayogi is the democratisation of access to high quality CBPs, individual officials such as Shanti will be able to onboard the platform, even when her MDO has not onboarded, and start taking CBPs (at her own cost).

The CS of Shanti will be recorded in the CP. For every new position she will hold, a new 'page' in the passbook will be created for the CS (so there will be past competency scores and a current competency score). Ultimately, 25 million government officials will have a CP the same way they have an Annual Performance Appraisal Record (APAR). While every user will have a 'public' profile page, the CP will only be accessible to those with authorisation.

As shown in Figure 7, the CP will be made up of two components:

- Competency Score (CS): The competency score is calculated against the competencies a learner has been tested for. It is algorithmically derived by suitably weighting the following two scores:
 - Testing competency score (TCS):

 This combines the CBP
 competency score (C-CS), trust
 score of the CBP provider, PIAA
 score, and trust score of the PIAA
 provider. This will tell us whether
 Shanti knows what needs to be
 done (knowledge) and how to do
 it (skill) i.e. Means.
 - **Workplace competency** assessment score (WPCAS): These reflect the 360-degree assessments done by self, peer, manager and subordinate by answering multiple choice questions (MCQs) posed to those who come into professional contact with Shanti. This will tell us whether she is using her knowledge and skill (i.e. Means) to be productive in the workplace. When the Means is there, both Motive and Opportunity will be required for this to happen. When fully developed, the WPCAS will pose 25 million questions to 25 million officials every day.
- 2. Competency gaps: As shown in A3 of Figure 4, competency gaps are an important component of the equation. The CS should be seen as a timeseries rather than a snapshot one that shows the increase/ decrease in competency gaps over time vis-à-vis the roles Shanti is required to perform in her current position (provided she has

held it for three months)¹⁸. This gap should be captured every six months (on the 1st of April and 1st of October).

Other than the CS, learners also accrue an engagement score while interacting with the platform, which reflect the engagement of the users on the platform. There are also karma points that help track the effectiveness of users' interactions with the Karmayogi platform and four of its five hubs (competency, learning, discussion and network).

A combination of all these user scores, alongside others, will be used to build an organisation score on the PM's dashboard and subsequently in the annual SCSR (see Table 3 for more information on this).

Buyers on the iGOT Karmayogi learning hub will fall into one of the following categories:

- A ministry, department or organisation wanting to purchase a CBP for all its employees.
- A manager paying for a CBP (using the iGOT Department Wallet (IDW) that will be allocated funds as per the annual capacity building budget) for one or more members of her team.
- A government official purchasing a CBP to close her competency gap (using her iGOT Individual Wallet (IIW) that will be allocated funds as per the annual capacity building budget)

- A government official purchasing a CBP to obtain desired competencies (using her IIW that will be allocated funds as per the annual capacity building budget)
- A government official purchasing a CBP from her pocket.
- A citizen purchasing a CBP because s/he feels the need to acquire a competency and signal its acquisition.
- A citizen or official taking a course that has no payable course fee¹⁹.

For all of the above, the impact scores for CBPs is going to be important criteria for choosing capacity building products (see Table 3 for more information).

BOX 3. iGOT for non-governmental individuals

Thanks to the COVID19 pandemic, iGOT 1.0 has already made a start in terms of making courses available to individuals not working with the government (i.e. Corona Warriors). Would we like to take this idea forward by making it possible for those who are not government officials to consume CBPs and receive certification by paying fees? At what stage should one develop this feature? Would we like to use this as a process for recruitment?

¹⁸ If Shanti has not been in a position for three months prior to the 1st of April or 1st of October, then there will be no entry for competency gaps in her passbook. Only when she has completed her three months will the gap be recorded (i.e. if she joined on the 2nd of January, 89 days before the 1st of April, her gap will not be recorded on the 1st of April). An official should be given a minimum of three months to fill their competency gaps before being questioned about their gaps.

¹⁹ This should ideally be a conducive climate for philanthropies and CSR funds to invest in building new CBPs on iGOT.

FIGURE 7. The Competency Passbook (CP)

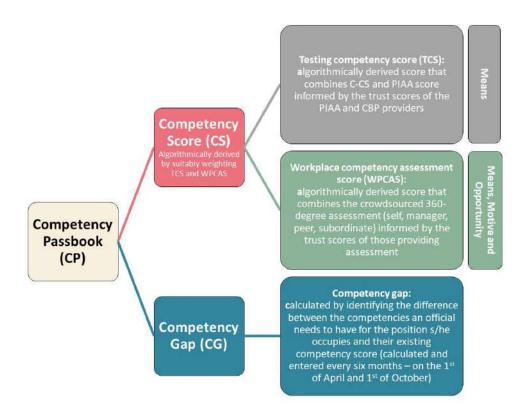


TABLE 3. Scoring on iGOT Karmayogi²⁰

	Score	Subject of assessment	Conducted by	Definition
1	CBP competency score (C-CS)	Learner	CBP provider	This score will be given to a learner on the completion of a CBP and its corresponding assessments. It is based on the learner's performance on these assessments and contributes to the TCS (thereby the overall competency score of an individual).
2	Competency score	Learner	iGOT system	Maintained in the Competency Passbook (CP), the competency score is calculated against the competencies a learner has been tested for. It will be algorithmically derived by suitably weighting: the workplace competency assessment score (WPCAS) and the testing competency score (TCS).
3	Content quality score (CQS)	CBP provider	Aggregate of scores by multiple players	The CQS is a combination of two scores: the first is provided through self-certification by the CBP provider; and the second is the score as assigned by a learner and auditor (as appointed by the SPV) of the CBP. When the two CQS are very close to each other, the trust score of the CBP becomes high.
4	Impact score	CBP provider	iGOT system	This score shows the impact of a CBP on the competencies (one or more) the CBP addresses. It is calculated by aggregating improvements in the competency scores of officials who have been certified on the completion of a CBP.
5	Karma points	Learner	iGOT system	Karma points reflect how a user interacts with the iGOT Karmayogi platform and four out of five of its hubs – i.e. how a learner engages on the discussion hub, network hub, as well as the competency and learning hubs. It also quantifies how meaningful and impactful contributions are – are you helping others in a meaningful and effective way?
6	Engagement score	Learner	iGOT system	The engagement score measures the user's engagement with the platform. It directly correlates with platform acceptability and subsequent interaction with the platform. The score is calculated by measuring the behaviours users exhibit on the platform through their relationship with self, others and the content.
7	Organisation score of MDOs	Learner	iGOT system	The organisation score is a composite score of every MDO, drawing upon many of the above- and aforementioned scores in addition to a score from

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²⁰ Note that these scores are constantly evolving as we move through the process of development. Al will be used to constantly discover anomalies using pattern recognition while comparing, for example, PIAA scores with WPCAS scores with C-CS scores. Such anomalies will be automatically added to a bin list for audit and automatically routed to audit parties who will have to attend to it in a first-in-first-out manner, inputting back their findings into the system so that the Al engine is able to validate and improve its pattern recognition features.

		ı	1	r
				the SPV from the quality audits. Every MDO will have
				an organisational score on the PM dashboard.
8	Proctored, independent, authorised assessment (PIAA) score	Learner	PIAA provider	This score will be given to a learner taking the PIAA by the PIAA provider. It is comprised of two components: 1) the level at which the competency has been assessed (1-5); and 2) the proficiency within that level (e.g. within these levels, an individual is excellent, good, average, poor). Every official will have to complete the PIAA testing both within the first three months of them joining a new position for all competencies the position requires (if they have not already been tested for that competency in the last 5 years), and again every time the official completes a CBP funded by the government.
				The SPV score will be the average of all MDOs'
9	Special purpose vehicle (SPV) Karmayogi Bharat score	iGOT	iGOT system	organisational scores. The SPV exists to ensure the success of everyone else. The success of iGOT Karmayogi, therefore, is the success of its services (i.e. the SPV). This is the success of all the MDOs which, in turn, is the success of all the officials – when their competency gaps are narrowed, officials' trust scores are increasing, the trust score of the CBP and PIAA providers increase, the impact scores of the CBPs increase, and so on. When all these scores are impacted, the organisational score increases – and thus, the SPV score also increases.
	Testing		Aggregate of C-CS	The TCS is an algorithmically derived score that
10	competency	Learner	and PIAA scores,	combines C-CS and PIAA score, and is informed by
	score (TCS)		informed by their trust scores	the trust scores of the PIAA and CBP. Combined with the WPCAS, it contributes to the competency score.
11	Trust score	All users	iGOT system	The trust score is calculated on the basis of the accuracy of a stakeholder's claim using an accuracy meter. It is the extent to which claims made by a stakeholder are found to be accurate and are verified by the processes put into place by the iGOT platform. Trust scores will be calculated for an array of stakeholders: individual learners, HR managers, auditors, CBP providers, PIAA providers, etc.
12	Workplace competency assessment score (WPCAS)	Learner	Authorised and certified vendor	The WPCAS is an algorithmically derived score that combines the crowdsourced 360-degree assessment (self, manager, peer, subordinate) and is informed by the trust scores of those providing assessment. Combined with the TCS, it contributes to the competency score.

8. Directory of CBP providers (with their trust and impact scores for their CBP)

The iGOT Karmayogi learning hub is designed for frictionless onboarding of CBPs on the basis of self-certification by the CBP provider. This is possible because all those transacting on the platform will have a trust score operating in real time. If a CBP provider entered the hub on the basis of a false declaration and it gets flagged by a user or the quality control team of the iGOT Karmayogi SPV, this will lead to a suspension of the content till investigations are completed. If it has been established that a false declaration was made, this will adversely affect the trust score of the CBP provider and, below a certain threshold, their self-certification rights will also be suspended.

It is for this reason and for managing the workflows on iGOT Karmayogi that the platform will build up a directory of CBP providers with the products they offer, alongside their trust and impact scores.

All CBPs put up on the platform will be stored in this directory in various languages along with various delivery mechanisms (text/ audio/ video), pricing, duration, taxonomies (usertags) and the competencies they help gain/ improve. The directory will be organised at four levels: the first and smallest is resources; a collection of resources make a module; a collection of modules make a course; and a collection of courses make a program. The directory will also store impact scores at the level at which the CBP provider is willing to unbundle and price. The impact score is determined on the basis of improvements that users who completed a CBP demonstrate in the workplace.

Thus, a comprehensive set of directories and dictionaries that culminate into a registry with various collections are therefore essential for a digital system like iGOT Karmayogi. They are building blocks that are used to capture the

dynamic interlinkages between positions, roles, activities, competencies and knowledge resources. Once the pre-FRACing and FRACing process are complete, the iGOT platform will have an up-to-date version of which position has the responsibility to execute on which role, which activity, and the competencies and knowledge resources needed for it – i.e. A1 in Figure 4.

BOX 4. Pricing of CBPs

How can it be ensured that the pricing for CBPs on iGOT Karmayogi is appropriate? Can this be done on the basis of effort estimation and impact scores. Is there a scoring system that can determine the price algorithmically?

Pricing is a complex activity and perhaps there is no straightforward answer. Pricing should perhaps be left to the demand and supply conditions in the iGOT platform learning hub to determine. Since government officials and managers will have a limited iGOT wallet, and they will see competency building as a critical career building exercise, they should be having every incentive to optimise – buy the most impactful course at the cheapest price. Any attempt to administer prices of CBPs on the iGOT platform will be against the principles of the platform to seek out incentivecompatible ways to solve intractable problems and would attract either allegations of corruption or lead to low quality of CBPs because of undercutting by CBP producers. Another dimension can be pricing of a CBP as an annual subscription paid to a CBP producer that unlocks all courses by them. Other points to consider are implementing dynamic pricing similar to how the likes of Uber or the air travel industry operates. An increase in demand for a particular CBP could be one factor. Another option is value-based pricing by linking it to impact scores of a CBP.

BOX 5. Using AI to prevent performance inflation

How do you prevent performance inflation on iGOT assessments? Will the iGOT Karmayogi micro-questions-based assessments at the workplace not descend into a I-scratch-yourback-you-scratch-my-back club? Everybody gains when everybody gets a high competency score. What is the incentive to be truthful under these circumstances? Why should a HoD not actively enforce a regime where everybody is given high scores by everybody else so that his/her department gets a high score in the PM dashboard and in the annual SCSR? How can trust scores of those scoring others be used to correct for performance inflation? Can strict quality control of the question banks used by the PIAA, by the iGOT Karmayogi SPV be used to detect performance inflation and through that assign trust scores to those who score others? Can random ground truthing of work done by those getting high scores be used to corroborate the competency score being given by each other and assign trust scores based on the validity and reliability of the scores?

Since most of these issues are related to leniency errors, some could be neutralized by 1) performance calibration through standardized formats and calibration (through trust scores) of those providing the evaluation, 2) defined rater accuracy meter (trust scores), and 3) using data to validate the scoring variance with other departments.

The answers or solutions would be multi-faceted. These would involve personal ownership, individual value systems, the behaviour of the team and its leader, performance-based evaluation mechanisms that are in place for that particular department, the policies around these and many other things. Of course, the platform itself has to be capable of handling misuse, abuse, potential fraud, misrepresentation, proxy usage (can be both manual and machine) and any other thing that can induce the performance inflation. Al can solve many of these problems and this would be a continuous journey. We would need to look at the best practices followed by the other learning platform leaders, learn, adopt and implement these solutions. Some potential solutions using Al are analysis of learning pace, spotting of anomalies in learning and assessment results (such as the PIAA and WPCAS scores), random capture of voice, etc.

Section 5 Pre-FRACing engagement

This section covers the four use cases in the pre-FRACing process, which focuses on the drafting of the dictionaries, directories and their interrelationships. There are four types of stakeholders that are addressed in the use cases:

- 1. MDOs
- 2. CBP providers
- 3. CCAs, CTIs, STIs
- 4. Individual officials

The Mission Karmayogi team at DoPT will launch the certification programmes on 'Drafting of Competencies' and 'Onboarding of CBPs'. Before any individual representing any of the four stakeholders above can add to the competency dictionary, they must complete the course on 'Drafting of Competencies' and be appropriately certified. This is to ensure common understanding with regards to the process of adding competencies to the dictionary.

Similarly, before any CBP provider can upload CBPs onto the platform, a representative in charge of uploading CBPs must complete the course on 'Onboarding of CBPs' and fulfil the quality requirements. This is to ensure common understanding with regards to the process of uploading content on the platform.

All proposals for entries into the dictionaries and directories from all entities will be screened by an editorial board before they are accepted.

Pre-FRACing steps for MDOs

With regards to drafting the dictionaries, directories and their interrelationships, there are three routes an MDO can take:

- Steps 1-8: Drafting only the dictionaries of positions, roles, and activities, and directory of knowledge resources
- **2. Steps 9-13:** Drafting only the competency dictionary
- **3. Steps 1-13:** Drafting dictionaries of position, roles, activities, and competencies and directory of knowledge resources (completing the full pre-FRACing process)

Steps 1-13 are shown in Figure 8 and are detailed below. An MDO will also have the option to go through Steps 1-13 for a particular vertical/ unit/ cadre of the MDO (as opposed to the whole MDO). This need could arise for a number of reasons – below are the two most common:

- Recruitment: The need to define competencies arises due to the need for providing a job description for recruitment.
- Training: There is an urgent requirement to begin training members of a team before the FRACing exercise for which learning content is required (for example, tackling the pandemic as per the roles played by different officials).

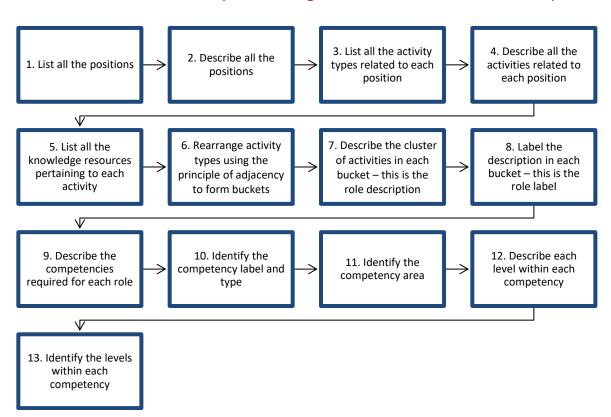


FIGURE 8. Recommend steps for drafting the dictionaries and interrelationships

Step 1: List all the positions (Position Label)

The position label is the name of the position. It summarises all the associated roles in a succinct manner and gives a sense of where this position is placed in the hierarchy of the MDO (and thereby leadership expectations from the position). List all the position labels in a given MDO (2-4 words).

Step 2: Describe all the positions (Position Description)

The position description should answer the following: Why does this position exist in the MDO? What are its overall objectives/purpose? And how does it go about achieving its objectives? For each of the positions listed above in Step 1, add a position description (140 characters).

Step 3: List all the activity types related to each position (Activity Type)

The activity type is the name of the activity. It should summarise what the individual is doing (e.g. *planning, coordinating, assessing*). For each position, add activity types (usually more than 1). Recommend to use verbs + ing (2-3 words).

Step 4: Describe all the activities related to each position (Activity Description)

The activity description should begin with the objective (i.e. the milestone that is planned to be achieved), list the steps (if more than 1) to be carried out in a sequence, and answer the 'what', 'when' and 'how'. For each activity type listed above in Step 3, add an activity description. Recommend to use verbs (50 characters).

Step 5: List all the knowledge resources pertaining to each activity (Knowledge Resources)

Knowledge Resources are artefacts (documents, software, etc.) provided by the MDO for an individual to perform a certain activity (e.g. standard operating procedures (SOPs), manual of procedures, policy manual, legal policies (i.e. Acts), software such as SPARROW, etc.). They are linked to individual activities. For each individual activity, list all the relevant knowledge resources (if any).

Step 6: Rearrange activity types using the principle of adjacency to form buckets

Every individual activity is a usually a sequential action taken to contribute towards a specific objective/ milestone. Rearrange the activities from Step 3 with their descriptions and place into individual buckets. This will assist in the process of defining roles.

Step 7: Describe the cluster of activities in each bucket (Role Description)

The role description should describe each of the buckets of activities (created above in Step 6). It should answer the following: What is the overall objective of this bucket of activities? Add a description for each of the cluster of activities (70 characters).

Step 8: Label the description in each bucket (Role Label)

The role label should succinctly capture the role description (e.g. team manager (governance), project manager (communication)). Create a role label for each of the role descriptions created above in Step 7. Recommend to use nouns (3-4 words).

Aside from the steps above that focus on building the dictionaries of positions, roles and

activities, as well as the directory of knowledge resources, MDOs may also want to define competencies as part of the pre-FRACing engagement. In order to do so, they must follow Steps 9-13 below.

Step 9: Describe the competencies required for each role (Competency Description)

The competency description covers the elements and the scope of the competency (e.g. Identifies one's own emotional triggers and controls one's emotional responses. Maintains sense of professionalism and emotional restraint when provoked, faced with hostility or working under increased stress. It includes resilience and stamina despite prolonged adversities). Describe the kind of competencies required to fulfil each role (280 characters).

Step 10: Identify the competency label and type (Competency Label and Type)

The competency label should succinctly capture the competency described above in Step 9. It gives an idea of what the competency is about, and how it is commonly known (e.g. *vigilance planning, decision making, project management*). Identify the competency label (2-3 words), and also specify the competency type (i.e. behavioural, domain, or functional).

Step 11: Identify the competency area (Competency Area)

Competency areas can be defined as the collection of competencies closely related to one another at a knowledge/subject level. Cluster the competency labels and identify the generic area in which these competency labels could be categorised (e.g. technical writing, rules-based copy editing, content writing and editing, research and information synthesis, and report writing will come under the competency area of Noting and Drafting (2-3 words)).

Step 12: Describe each level within each competency (Competency Level Description)

The competency level is the proficiency level of the competency. These indicate levels of sophistication of the competency described. The level description is an observable description of each proficiency level of a given competency. The higher the number of descriptors, the greater the understanding of the proficiency level. Recommend to have a minimum of 3 observable descriptors (there are typically anywhere between 3 and 5 levels of proficiency).

Step 13: Identify the levels within each competency (Competency Level)

Once the levels are described, they must be labelled. Competency levels are progressive in nature and normally given in an ascending order. Thus, Level 2 is a more sophisticated use of that particular competency, when compared to Level 1 and so on. If you are adding the competency in relation to a particular role, you must specify the proficiency level applicable to that role.

When identifying competency levels and defining each level with descriptors, MDOs must use the five levels and guiding principles as specified in Box 6.

BOX 6. Guiding principles for competency levels

Competency level descriptors should broadly be categorised as follows:

- Level 1: Aware: Is the person aware of the basic principles and can they relate them to own work area?
- Level 2: Apply: Can the person apply the basic principles to their work area?
- Level 3: Advise: Can the person advise others (directly 1-on-1 or 1-to-many, or indirectly – through a SoP, manual, advisory etc.)? Is it necessary for the person to be a recognized expert in that area?
- Level 4: Expert: Has the person developed additional concepts in that area? Is the person a well-recognised expert with demonstrated expertise?
- Level 5: Jedi (global expert): Has the person added to the global knowledge in that area?

Ask yourself whether all the descriptors are observable by a third party.

Note that while the above guidance can help, it is essential to be specific in each of the descriptors. For example: Aware of what principles? Apply what principles? What are the areas the advice is sought and who seeks this advice and in what form? The more specific these descriptors are the more relatable they become by reducing ambiguity.

Once the descriptors are complete, stack them into buckets of complexity. These buckets of descriptors bunched together and stacked according to complexity from left to right gives us the proficiency level i.e. competency level.

For CTIs, STIs, and CCAs, the higher abilities identified are likely to be beyond the scope of the current understanding of the role and may be required in the next role in the hierarchy.

Pre-FRACing steps for CBP providers

As briefly discussed in Section 2, CBP providers must be able to identify the competencies their CBP addresses. Every single CBP will be tied to (i.e. tagged to) one or more competencies as declared by the provider. CBP providers will also be invited to upload their CBPs (face-to-face, blended, or digital) on the platform (tagged to the competencies they propose) which may be consumed by officials at their own cost (government money will not be used until impact scores are available – unless the CBP in question is provided by an MDO, or the pricing of the CBP has been approved by an MDO). For example:

- If an MDO has been sending officials for training programs, workshops, and other CBPs, they may continue to do so after onboarding the providers and uploading the CBP details on the iGOT Karmayogi platform.
- If an MDO wishes to send officials to a new training program, workshop, etc. they will have to onboard the respective provider and upload content details on the iGOT Karmayogi platform before they can do so (irrespective of whether it is online, face-to-face or blended).

A series of drafting workshops will be organised by DoPT to populate the dictionary of competencies, with appropriate labels, descriptions and levels. It is important to note that, irrespective of whether an individual has attended these workshops or not, once they have obtained the 'Drafting of Competencies' certification they will be able to add to this dictionary (subject to screening from the editorial board).

As part of the pre-FRACing engagement, CBP providers are invited to populate the

competency dictionary – and thus will be required to follow the steps detailed below.

Step 1: Search the competency dictionary

Search the competency dictionary to identify the competencies (one or more) that are being covered by the CBP designed. It is likely that more than one competency will be covered by the CBP – for example a CBP on GST is likely to cover topics related to Direct Taxes, Comparative Tax regimes etc. Go through the descriptions available and choose the ones closest to the ones that are likely to be covered by the course.

Step 2: Identify the competency area and type (Competency Area and Type)

In case there is no competency that likely covers the CBP, begin by identify a competency area within which your CBP falls. Competency areas can be defined as the collection of competencies closely related to one another at a knowledge/subject level (2-3 words). Also specify the competency type (i.e. behavioural, domain, or functional).

Step 3: Use the learning objectives to identify the competency label (Competency Label)

Look closely at the course objectives of the CBP. Most of the time, these course objectives identify what the learner is likely to learn after going through these courses. A good example is given below:

Course Name	Course Objectives
Sustainable	a) Gain enhanced knowledge of
Development	gender concepts and definitions
Goals and	b) Gain overview of Sustainable
Gender	Development Goals (SDG)
Budgeting	c) Understand interface between gender and SDG
	d) Acquire knowledge about gender
	mainstreaming and Gender
	Responsive Budgeting

Once these learning objectives are achieved by the learner, what competencies will she be likely to demonstrate? Can they be observed by a third party? For example, from the above course objectives, the following aspects can be derived:

- 1. Ability to identify items in the budget that are Gender Responsive
- 2. Ability to create a Gender Responsive Budget
- Ability to articulate the Sustainable Development Goals clearly and how own organisation's goals fit into it
- 4. Ability to identify aspects of a program (for example Swachh Bharat) that are adversely impacted by gender issues
- 5. Ability to suggest changes or incorporate gender understanding into programme design or implementation

Use the learning objectives of the CBP to create a competency label (or competency labels, depending on how many competencies the CBP addresses). The competency label should succinctly capture the competency the CBP covers. It gives an idea of what the competency is about, and how it is commonly known (e.g. vigilance planning, decision making, project management) (2-3 words).

Step 4: Describe the competency (Competency Description)

At this stage, one can confidently describe the competency. This covers all the levels, the inherent elements and structured in a simple and most likely in a single sentence. For example: Gender Budgeting: Ability to identify the gender issues that are likely to impact the achievement of budgeted goals and targets and creating enabling provisions that can help achieve sustainable goals using gender-based budgeting (280 characters).

Step 5: Use the learning objectives to describe competency levels (Competency Level and Level Description)

The competency level is the proficiency level of the competency. These indicate levels of sophistication of the competency described, are progressive in nature and normally given in an ascending order. Thus, Level 2 is a more sophisticated use of that particular competency, when compared to Level 1 and so on.

The level description is an observable description of each proficiency level of a given competency. The higher the number of descriptors, the greater the understanding of the proficiency level. When identifying competency levels and defining each level with descriptors, CBP providers must use the five levels and guiding principles as specified in Box 6.

There are typically anywhere between 3 and 5 levels of proficiency for which it is recommend to have a minimum of 3 observable descriptors each (for example, points 1 and 2 in Step 3 above seem like similar kind of complexities and therefore likely to be descriptors of the same level). For CBP providers, however, identifying 2-3 levels is sufficient (ideally one above and one below the level their CBP is addressing — unless their CBP is addressing *Gender Budgeting* at level 1, in which case they only need to identify one level above).

Pre-FRACing steps for CCAs, CTIs, STIs

This scenario comes up when a CTI, STI or the CCA would like to identify competencies required of officials who are at a specific part of their career (foundation, mid-career etc.). The CCAs, CTIs and STIs tasked with developing such programmes are constantly looking to equip the officials of the respective cadres for the future. They also have, at their disposal, processes to understand what competencies have been acquired through the different stints and training programs that the officials have gone through thus far. Thus, it is also important to understand what the current baseline is of the officials as they embark upon the next phase of their career.

In all such scenarios, the following is likely to be the case:

- All the officials belong to a particular cadre.
- It can be assumed that officials with similar levels of seniority are likely to have many commonalities in the roles that they are likely to perform and hence a common set of competencies and learning needs.
- The CCAs, CTIs and STIs can conduct periodic studies to understand how the roles are likely to change and accordingly identify competencies that are likely to become necessary.
- The competencies required for each block of 10 years (foundation programme to mid-career) may be identified by studying the roles that most of the officials are likely to perform.

The objective is to arrive at a set of roles that are common among all these positions and a common set of competencies associated with these roles.

CTIs, STIs and CCAs should undertake studies to identify how roles is likely to change or have changed and what components of the roles are likely to get strengthened or to disappear. Such a periodic 'benchmarking' study can inform how the roles are likely to change and what competencies are likely to gain prominence.

A series of drafting workshops will be organised by DoPT for CCAs, CTIs, and STIs to populate the dictionary of competencies, with appropriate labels, descriptions and levels. It is important to note that irrespective of whether an individual has attended these workshops or not, once they have obtained the 'Drafting of Competencies' certification they will be able to add to this dictionary (subject to screening from the editorial board).

The following are the steps required to be taken.

Step 1: Search the competency dictionary

Search the competency dictionary available (on the iGOT platform) to shortlist the competencies (one or more) that are likely to be useful in this exercise.

Go through the descriptions available and prune the shortlist to eliminate those that are likely to have been covered earlier or are not likely to be useful for the position(s) in question.

Step 2: Create a competency label (Competency Label and Description)

In case there is no competency that covers what you have in mind, create a competency label that best defines that competency. The competency label should be succinct, give an idea of what the competency is about, and how it is commonly known (e.g. *vigilance planning, decision making, project management*) (2-3 words).

The competency description covers the elements and the scope of the competency (e.g. Identifies one's own emotional triggers and controls one's emotional responses. Maintains sense of professionalism and emotional restraint when provoked, faced with hostility or working under increased stress. It includes resilience and stamina despite prolonged adversities) (280 characters).

defining each level with descriptors, CCAs, CTIs and STIs must use the five levels and guiding principles as specified in Box 6.

When identifying competency levels and

Step 3: Identify the competency area and type (Competency Area and Type)

Locate the competency area within which Competency A falls in. Competency areas can be defined as the collection of competencies closely related to one another at a knowledge/subject level (e.g. technical writing, rules-based copy editing, content writing and editing, research and information synthesis, and report writing will come under the competency area of Noting and Drafting (2-3 words)). Also specify the competency type (i.e. behavioural, domain, or functional).

Step 4: Identify competency level and description (Competency Level and Description)

The competency level is the proficiency level of the competency. These indicate levels of sophistication of the competency described. Competency levels are progressive in nature and normally given in an ascending order. Thus, Level 2 is a more sophisticated use of that particular competency, when compared to Level 1 and so on.

The level description is an observable description of each proficiency level of a given competency. The higher the number of descriptors, the greater the understanding of the proficiency level. Recommend to have a minimum of 3 observable descriptors (there are typically anywhere between 3 and 5 levels of proficiency).

Pre-FRACing steps for individual officials

Consumption and onboarding of CBPs by individual officials (with MDO approval)

If a CBP required to build an official's competency is on the iGOT Karmayogi platform, the official can consume the CBP so long as it is tagged to competencies associated with their position (via roles).

If a CBP required to build an official's competency is not on the platform, the official should get in touch with the CBP provider and facilitate their onboarding on the platform by the MDO. Once the CBP provider is onboarded, they will be able to upload their CBP on the platform (after tagging it to an existing competency, or submitting a proposal for a new competency and tagging it post approval from the editorial board).

If the official wishes that their MDO should finance their participation, the CBP in question must have an impact score and price, or the CBP must have been uploaded by an MDO after finalising the price. The official may also

consume the CBP at their own cost (for which MDO approval is not required).

In the former situation, before the MDO can finance an official's consumption of a CBP on the platform, the official will have to ensure that their position and associated competencies are recorded in the dictionaries and tagged to one another (with the approval of the MDO). Note that the platform may have competencies with no CBPs, but never CBPs without tagged competencies (as CBPs cannot be uploaded without being tagged to competencies).

Populating of the competency dictionary by individual officials

If an official wishes to get a competency tagged to their position (via roles), they must complete the pre-FRACing process for their position using Steps 1-13 as listed above under 'Pre-FRACing steps for MDOs'. If, however, an official feels an important competency she wishes to obtain is not listed – and thus neither are the associated CBPs – the official can submit their entry in the competency dictionary directly with appropriate labels, descriptions and levels for approval by the editorial board.

Conclusion

Over the years, it has become increasingly apparent that government officials like Shanti in India often lack the key competencies required to fulfil a role – due to either lack of quality training opportunities or the fact that they are required to take on responsibilities for which they do not have prior experience or knowledge. Often, despite wanting to do so, many are unable to thus improve their competencies. As tasks become more complex and citizen expectations go up, it is imperative that governments are able to address these competency gaps and provide opportunities to reduce them

As an initiative designed for the future, iGOT Karmayogi will be a self-sustaining platform that will mark the beginning of an era of transformative change in lifelong learning and capacity building in the government. Through the mapping of the three constructs (roles, activities and competencies), as well as knowledge resources, for each individual position within all government MDOs at the Central, State and local level (i.e. FRACing), the process will enable the government to reduce the competency gaps of their officials in relation to the roles and activities they are required to perform.

This document outlined the key terms of the process, emphasising the need for a common understanding, specified the preparatory steps to the FRACing process, described its linkages to the iGOT learning hub and described the analytics and data the platform can make available. The evolving nature of the Framework was also repeatedly emphasised.

It is anticipated that the launch of Mission Karmayogi and the Framework of Roles, Activities and Competencies will contribute significantly to the execution capacity of the Indian state.

- Cabinet Secretariat, Government of India. (2017). *Government of India (Allocation of Business) Rules, 1961*. Retrieved from
 - https://cabsec.gov.in/writereaddata/allocationbusinessrule/completeaobrules/english/1 Upload 11 87.pdf.
- Civil Services Human Resources, Government of the UK. (2012). *Civil Service Competency Framework 2012-2017*. Retrieved from
 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf.
- Department of Personnel Training (DoPT), Government of India. (2014). *Civil Services Competency Dictionary*. Retrieved from
 - $\frac{https://dopt.gov.in/sites/default/files/Competency\%20Dictionary\%20for\%20the\%20Civil\%20Services. \\$ s.pdf.
- Department of Personnel Training (DoPT), Government of India. (2020). *iGOT 2.0: An Initiative for Capacity Development of Civil Services: Consultation Paper on Approach to Strategy and Implementation*.
- Department for Promotion of Industry and Internal Trade (DIPP), Government of India. (2019). *Work Allocation*. Retrieved from
 - https://dipp.gov.in/sites/default/files/WORK%20ALLOCATION%2023092019.pdf.
- International Atomic Energy Agency (IAEA). (n.d.). *The Competency Framework: A guide for IAEA managers and staff.* Retrieved from https://www.iaea.org/sites/default/files/18/03/competency-framework.pdf.
- Lombardo, M. M. and Eichinger, R. W. (1996). *The Career Architect Development Planner*. Minneapolis, MN: Lominger.
- National e-Governance Division (NeGD), Government of India. (2014). Simplifying capacity building e-Governance Competency Framework for Digital India with Implementation Toolkit. Retrieved from https://negd.gov.in/sites/default/files/e governance competency framework 1.pdf.
- National Training Policy (NTP), Government of India. (2012). *Implementation of a National Training Policy 2012 and formulation of a new DAD training policy*. Retrieved from https://cgda.nic.in/centrad/ntp2012.pdf.
- Organisation for Economic Co-operation and Development (OECD). (2014). *Competency Framework*. Retrieved from https://www.oecd.org/careers/competency_framework_en.pdf.
- Spencer, L. M. and Spencer, S. M. (1993). *Competence at Work: Models for Superior Performance*. New York, NY: John Wiley and Sons, Inc.
- United Nations (UN). (2020). What we look for. Retrieved from https://careers.un.org/lbw/home.aspx?viewtype=WWLF.

Appendix 1 Proposed Approval and Pricing Plan for Different Types of CBP Providers

No.	Type of Provider	Description	Pricing	CBC approval of provider
1	Retired government officials Retired official receiving a pension from the government providing CBPs		Pricing at provider's discretion	Required
2	Private Providers (for- and not-for- profit) – Priced	Private provider (e.g. IGNOU, Harvard, Udemy, Pratham, Khan Academy, etc.) offering CBPs	Pricing at provider's discretion	Required
3	Private Providers (for- and not-for- profit) – Free	Private provider (e.g. IGNOU, Harvard, Udemy, Pratham, Khan Academy, etc.) offering CBPs at zero price	Free	Required
4	Private Providers (for- and not-for- profit) – Negotiated by MDOs MDO negotiating with an individual/organisation for a particular rate to introduce CBPs		Pricing through negotiation by MDO (in conditions as explained in the footnote ²¹ , officials can be sponsored without negotiation or any tendering process)	Not required (but workflow must exist)
5	Private Providers (for- and not-for- profit) – Sourced by MDOs MDO desires a particular course/ specific content, and thus sources and onboards a CBP provider		Pricing as agreed between MDO and provider at the time of giving the work order	Not required (but workflow must exist)
6	In-service officials – Priced Currently serving government official in an MDO either creating or repurposing an existing course (where CC licence has been given) and offering it for a price		Pricing at provider's discretion	Not required
7	In-service officials – Free	Currently serving government official in an MDO either creating or repurposing an existing course (where CC licence has been given) and offering it for free	Free	Not required

The CBP providers for whom pricing is at the provider's discretion will have to offer their CBPs for free until there is enough uptake so as to enable the iGOT Karmayogi platform to assign impact scores. Once impact scores have been assigned, providers will be allowed to price their CBPs.

²¹ If the CBP provider is an institution that is ranked in the top 100 globally or top 20 nationally for India, or ranked in the top 20 globally or top 10 nationally for India by subject area (by either QS (https://www.topuniversities.com/university-rankings/2020) or Times Higher Education (https://www.timeshighereducation.com/world-university-rankings)), and pricing is publicly listed, officials may be sponsored to take the CBP without negotiation or any tendering process. The MDO must also obtain a certificate signed by the CBP provider's HoD stating that the CBP has been running for at least 2 previous batches in which the percentage of self-paying students has been more than 20%, and the price they are offering is the lowest offered to anyone in that academic year for said CBP.





The Framework of Roles, Activities, and Competencies (FRAC) and everything else of FRACing

Part 2: The FRACing process



DRAFT

NOVEMBER 2020

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Abbreviations and Acronyms

ΑI artificial intelligence BDF behavioural, domain and functional CBPs competency building products competency mark-up language CML **CSPs Certified Service Providers** departmental FRACing team DFT DoPT **Department of Personnel Training FRAC** Framework of Roles, Activities and Competencies IFU internal FRACing unit iGOT **Integrated Government Online Training MDOs** ministries, departments and organisations machine learning ML NLP natural language processing proctored, independent, authorised assessments PIAAs SPV Special Purpose Vehicle Staff Selection Committee SSC **UPSC** Union Public Service Commission

Summary

This document is the companion of 'Part 1: Background and preparation' and provides a set of implementation steps for FRACing¹. As previously mentioned, the Framework of Roles, Activities and Competencies (FRAC), as termed within Mission Karmayogi's Integrated Government Online Training platform (iGOT) initiative, is the mapping of three constructs (roles, activities and competencies, supported by knowledge resources) for each individual position within all government ministries, departments and organisations (MDOs) at the Central, State and local level². While Part 1 provides for all the stakeholders involved in this process a common understanding of the key terms, details of the steps to follow prior to FRACing, its linkages to the iGOT learning hub and the analytics that the platform can make available in order to improve the execution capacity of the Indian state, Part 2 focuses on the process of FRACing itself.

Identifying competencies is a diligent task that requires following a certain methodology to ensure that the output is coherent and meets the purpose of the activity. As part of the

upgrade to iGOT Karmayogi, it is proposed that every MDO, at the national, state and local level, is able to 'FRAC' its positions, roles, activities and competencies. Directories and dictionaries must be developed, of all participating stakeholders and of the numerous positions, roles, activities and competencies, respectively.

This Framework is ever-evolving, capturing new competency needs as and when they arise. The process of FRACing laid out in this document iterates that FRACing should be seen as an ongoing process that enables MDOs to build an accurate picture of their interrelationships as well as the full list of positions, roles, activities, competencies and knowledge resources relevant to them.

Establishing a clear theory of change, limiting the problem and solution set, initiating continuous sensitising and handholding, building a core group of reform champions, as well as a network of world-class universities, institutions and individuals, will be required to ensure the success of this endeavour.

¹ As mentioned in the previous document, this instance, the act of denominalisation (i.e. converting a noun into a verb) reemphasises the fact that FRACing is an ever-evolving process. It needs to capture new competency needs as and when they arise, linking it to activities, roles and positions. The verbing of FRAC (i.e. FRACing) essentially validates the evolving and dynamic nature of the Framework.

² Details of building and rolling out of the platform, including the content strategy, delivery mechanisms, rollout stages and other related matters, are beyond the scope of this document. These details will be covered in subsequent publications at suitable points in time.

Section 1 Administering the FRACing Process

This section outlines the steps of the FRACing process in detail.

There is a total of 15 steps that need to be completed in the FRACing process (with an additional 13 steps within Step 6, which are closely aligned to the steps detailed in Part 1). These are listed in Figure 1 and explained below. In order to ensure that the FRACing process has been adequately conducted, the final products of this process (i.e. the dictionaries and their interrelationships) must be self-explanatory, unique, and fit-for-purpose (for an array of stakeholders such as the incumbent position holders, future position holders, HR managers, and CBP providers).

Additionally, a FRACing toolkit (available to authorised users on the iGOT Karmayogi platform) details the steps, templates, workflows which will aid any MDO to FRAC its own positions, roles, activities and knowledge resources, and link them to positions.

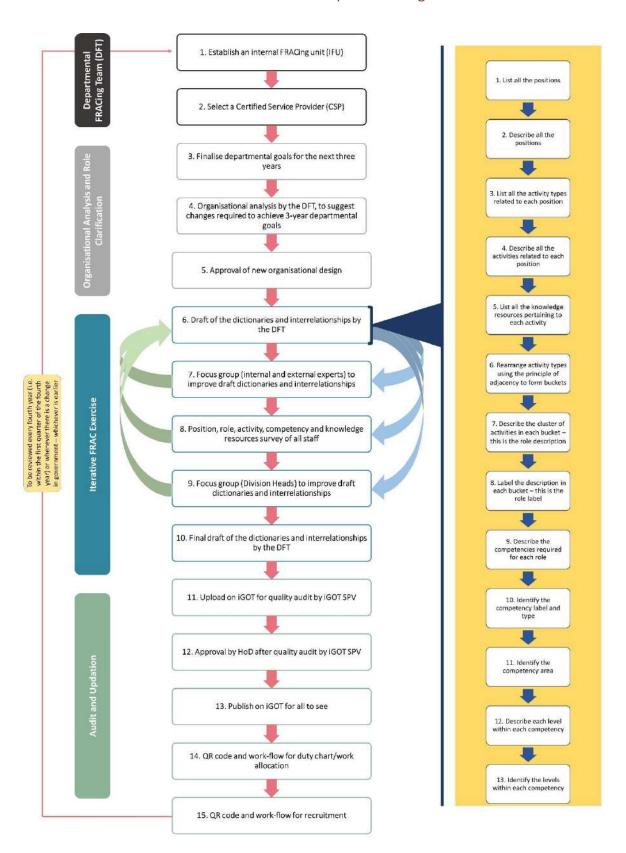
As a result of completing the pre-FRACing preparatory steps (as laid out in the companion

Part 1 document), the FRACing toolkit will also come with some pre-filled content in the iGOT dictionaries (i.e. positions, roles, activities, and commonly required competencies). Only when MDOs go through both the pre-FRACing preparatory steps as well as the FRACing process, and fill in the gaps as and where necessary, will they have completeness. The objective of the toolkit is to:

- Make it easy for each MDO to undertake the exercise of FRACing.
- Ensure consistency in the final outputs from each MDO.
- Help government entities to update the iGOT directories and dictionaries so that it contains all the fields it needs for high quality HR processes.

It is important point to bear in mind is that FRACing is not a one-time activity. The dictionary has to be updated each time a new work allocation order or a recruitment notice is issued or an indent is placed with agencies such as the UPSC, SSC, etc. for recruitment.

FIGURE 1. The 15 steps of FRACing



Step 1: Establish an internal FRACing unit (IFU)

The first step in the FRACing journey for a government MDO is to establish an internal FRACing unit (IFU) (see Appendix 1 for details on the roles, activities, competencies and knowledge resources of IFU team members). It will be supported by the Special Purpose Vehicle (SPV) Karmayogi Bharat which will put in place certification arrangements for individual members of the IFU and all others who wish to work on FRACing or any other aspects of iGOT Karmayogi.

Step 2: Select a Certified Service Provider (CSP)

The iGOT SPV will empanel and publish price lists for Certified Service Providers (CSPs) whose members will be certified by the SPV (see Appendix 2 for details on the roles, activities, competencies and knowledge resources of CSP team members). The IFU can select one of the empanelled CSPs to help them with FRACing and other iGOT processes. The structure of the CSP will depend on the competencies of the persons in the IFU.

The IFU and CSP together make the departmental FRACing team (DFT). They have an important role to play in all aspects of Mission Karmayogi. Besides bringing in HR expertise, having external domain experts in the FRACing team will enable MDOs to get an 'outside-in' view of talent requirements (see Table 1 for details of the IFU and CSP team members).

Step 3: Finalise departmental goals for the next three years

Mission Karmayogi seeks to transform HR practices in government. This cannot happen if MDOs focus only on business as usual, paying inadequate attention to the responsibilities given to it under the Government of India (Allocation of Business) Rules, 1961, and the three goals set for it by the departmental minister. The true potential of the Mission will be realised only when HR practices and internal processes are transformed by accounting for changes that are needed in both processes and talent to be better able to execute the goals set for it. This is why special emphasis has been placed on finalising departmental goals every three years (which is why FRACing in its entirety must be repeated every fourth year). In doing so, efforts will need to be made to consult NITI Aayog vision documents, election manifestos, budget announcements as well as tasks assigned by the Prime Minister's Office.

TABLE 1. Structure of the DFT (IFU + CSP)

	Position (DFT)	Position (MDO)	IFU/ CSP/ either	Part-/Full- time	Remarks/ Criteria
1	Head of the DFT	CEO/ Secretary/ Joint Secretary/ DG (HoD)	IFU	Part-time	
2	Project Leader	Head of HR/ CSP Partner	Either	Part-time	Must be from an HR background
3	Project Manager	Head of HR/ Division Head	IFU	Full-time	Could be from either the HR function or another user department; should have the credibility to ensure that meetings called for are attended and issues raised are promptly resolved
4	Team Member	Project Coordinator	IFU	Full-time	May need more than 1; HoD can add more basis workload and time pressure
5	Team Member	Functional Heads/ Head of the Wing/ Head of the Division	IFU	Part-time	All function heads must be represented here
6	Team Member	Head of HR/ Personnel/ Establishment	IFU	Part-time	If the Head of HR is Project Manager, then the next available senior officer must be appointed
7	Team Member	Partner/ Director/ Associate Director/ Senior Manager	CSP	Full-time	Senior member with HR background; previous work experience in designing and implementing competencies; experience in change management processes in a governmental context
8	Team Member	Senior Consultant (Domain)	CSP	Part-time	Needs to have background experience in respective domains in process re-engineering/ technology/ KPI setting/ performance Improvement projects
9	Team Member	External Domain Expert	CSP	Part-time	All the critical core functions* must be represented; a technology expert who specialises in this particular domain must be represented
10	Team Member	HR Process Re-Design Expertise	CSP	Full-time	Assists consulting project manager; must have re-designed HR processes - particularly Recruitment and L&D in large government or public or private organisations

^{*}Core functions: functions that are the main reason for the existence of this MDO (for example, for the Ministry of Civil Aviation it will be aviation and airport management)

Step 4: Organisational analysis by the DFT, to suggest changes required to achieve 3-year departmental goals

The three-year goals will be the starting point of organisational analysis. This exercise will help in identifying the gaps at an organisational level that need to be filled up so that these goals can be achieved. These gap-filling actions could range from infusion of technology, to additional schemes/ services/ goods being introduced, to a new set of delivery standards or any such large change in the expectations from the MDO.

It is also important to understand the dependence between the work, workforce and the workplace and build resilience by decoupling these if required, as was shown during the COVID19 pandemic. The compulsory work-from-home status and the changes associated with it may become a regular option available to people. How MDOs cope will have a major influence on their ability to not only attract talent, but also be ready to deal with any crises. Practical steps for the decoupling of these constructs will need to be developed.

Following are the important points to bear in mind while undertaking organisational analysis:

- Mapping the organisational structure and the important work processes at a functional level: functions here mean families of similar positions within a vertical, for example accounts, HR or personnel, IT etc. This would consist of mapping of all the positions, their reporting relationships and a brief description of the key purpose of the position.
- The structure may consist of a separate sheet for each of the functional verticals within the MDO for ease of representation.
- Documenting activities tagged to each position: A balance needs to be maintained such that sufficient detail is

- captured while not getting to a 'time and motion' type of detailed study. Activities are usually steps undertaken that form a part of the process.
- Bucketing activities into roles (see Table 2 for guidelines on how to do this).
 In case a manual of procedures is available, or a work distribution order (see Appendix 3 for an example from the Department for Promotion of Industry and Internal Trade), it could be a great resource to start the process of listing the roles and activities initially and then use senior management time to reconfirm if those respective roles and activities are current and accurate.
- The pre-filled dictionaries will be reviewed by the DFT by examining departmental documents – such as the last two work allocation orders (see Appendix 3), Annual Reports etc. – to see the extent to which fresh entries will be required in the dictionaries of iGOT Karmayogi (see Section 4 in the companion Part 1 document for a list of directories and dictionaries) so that all the steps detailed in Figure 1 can be gone through.

Besides the documents listed in the bullet point above, the following may also be performed:

- Explore global best practices such as from the UN Competency Framework (2020), the OECD Competency Framework (2014), the IAEA Competency Framework (n.d.) and the UK Civil Service Competency Framework (2012).
- Preliminary survey data to gather positions, roles, activities and knowledge resources.
- Either manually process all of the above or through natural language processing (NLP) algorithms to derive an initial list of positions, roles, activities as well as BDF competencies.

Step 5: Approval of new organisational design

Once extensive analysis has been conducted, and a new organisational design has been put forward by the DFT that speak to the three-year departmental goals, approval from the relevant authority is required. Once the approval has been obtained, the FRACing process can begin.

Step 6: Draft of the dictionaries and interrelationships by the DFT

With this step begins the iterative FRACing process, which is cyclical in nature. The DFT will first refer to the pre-existing dictionaries as populated during the pre-FRACing process to: 1) identify what they can use; 2) identify what they want to modify; 3) identify what they want to remove; and 4) identify what they want to propose as new – all to ensure that there is completeness in the process.

Having made these decisions, the DFT will then attempt a draft of all dictionaries and their interrelationships ensuring that all the positions, roles, activities and knowledge resources relevant to the MDO being FRACed are contained therein. These will be drawn from benchmarked sources with the purpose of starting the conversation on talent. It is recommended that the DFT follow the process as laid out within Step 6 in Figure 1 – specifically Steps 1-8. Table 2 below provides guidelines for the same.

The CSP's key role here is to challenge conventional wisdom and push the narrative away from 'these things don't work here'. Steps 7, 8 and 9 revert back to Step 6, constantly contributing to the draft until the draft has been finalised (Step 10).

TABLE 2. Recommended steps for drafting the dictionaries and interrelationships with guidelines

Step No.	Step	Guidelines
1	List all the positions (Position Label)	The position label is the name of the position. It summarises all the associated roles in a succinct manner and gives a sense of where this position is placed in the hierarchy of the MDO (and thereby leadership expectations from the position) (2-4 words).
2	Describe all the positions (Position Description)	The position description should answer the following: Why does this position exist in the MDO? What are its overall objectives/purpose? And how does it go about achieving its objectives? (140 characters)
3	List all the activity types related to each position (Activity Type)	The activity type is the name of the activity. It should summarise what the individual is doing (e.g. <i>planning, coordinating, assessing</i>). Recommend to use verbs + ing (2-3 words).
4	Describe all the activities related to each position (Activity Description)	The activity description should begin with the objective (i.e. the milestone that is planned to be achieved), list the steps (if more than 1) to be carried out in a sequence, and answer the 'what', 'when' and 'how'. Recommend to use verbs (50 characters).
5	List all the knowledge resources pertaining to each activity (Knowledge Resources)	Knowledge Resources are artefacts (documents, software, etc.) provided by the MDO for an individual to perform a certain activity (e.g. standard operating procedures (SOPs), manual of procedures, policy manual, legal policies (i.e. Acts), software such as SPARROW, etc.). They are linked to individual activities.

6	Rearrange activity types using the principle of adjacency to form buckets	Every individual activity is a usually a sequential action taken to contribute towards a specific objective/ milestone. The process of rearranging and putting these individual activities into buckets will assist in the process of defining roles.
7	Describe the cluster of activities in each bucket (Role Description)	The role description should describe each of the buckets of activities (created in the step above). It should answer the following: What is the overall objective of this bucket of activities? (70 characters)
8	Label the description in each bucket (Role Label)	The role label should succinctly capture the role description (e.g. <i>team manager (governance), project manager (communication)</i>). Recommend to use nouns (3-4 words).
9	Describe the competencies required for each role (Competency Description)	The competency description covers the elements and the scope of the competency (e.g. Identifies one's own emotional triggers and controls one's emotional responses. Maintains sense of professionalism and emotional restraint when provoked, faced with hostility or working under increased stress. It includes resilience and stamina despite prolonged adversities) (280 characters).
10	Identify the competency label and type (Competency Label and Type)	The competency label should succinctly capture the competency described above. It gives an idea of what the competency is about, and how it is commonly known (e.g. <i>vigilance planning, decision making, project management</i>) (2-3 words). Also specify the competency type (i.e. behavioural, domain, or functional).
11	Identify the competency area (Competency Area)	Competency areas can be defined as the collection of competencies closely related to one another at a knowledge/subject level. Cluster the competency labels and identify the generic area in which these competency labels could be categorised (e.g. technical writing, rules-based copy editing, content writing and editing, research and information synthesis, and report writing will come under the competency area of Noting and Drafting (2-3 words)).
12	Describe each level within each competency (Competency Level Description)	The competency level is the proficiency level of the competency. These indicate levels of sophistication of the competency described. The level description is an observable description of each proficiency level of a given competency. The higher the number of descriptors, the greater the understanding of the proficiency level. Recommend to have a minimum of 3 observable descriptors (there are typically anywhere between 3 and 5 levels of proficiency).
13	Identify the levels within each competency (Competency Level)	Once the levels are described, they must be labelled. Competency levels are progressive in nature and normally given in an ascending order. Thus, Level 2 is a more sophisticated use of that particular competency, when compared to Level 1 and so on. If you are adding the competency in relation to a particular role, you must specify the proficiency level applicable to that role.

Step 7: Focus group discussions (internal and external experts) to improve draft dictionaries and interrelationships

The primary objective of this focus group discussion is to create a list of competencies (BDF) that are required for each role (steps 9-13 in Table 2), and the levels for the same, as well

as discuss the interrelationships between the various components.

Ensuring that outside experts are a part of this is to establish that there is a plurality of opinion and that a critically informed, forward-looking stance informs the discussion. The experts need to be globally recognised domain experts. At least one such expert should be brought in for each of the thrust areas of the MDO that is

being FRACed. One may look for such experts from within the country or from abroad, from other parts of government or from the private sector. The quality of these experts will determine the quality of the competencies documented and the HoD must take personal interest in this selection. Any failure to bring in anything but the best will seriously impair the outcomes from FRACing.

The focus group discussion will identify all the BDF competencies for every role, and ensure that they are aligned with the three-year goals

that the departmental minister has set. The preliminary list of roles, activities and knowledge resources for each position would already have been completed in Step 6. This will enable the group to discuss and finalise what competencies are necessary to achieve the departmental goals.

Another task that this group will have to do is to finalise the allocation of each competency and its level to all the roles in each position. Table 3 below is an example of the output³.

TABLE 3. Example of the allocation of competency and levels to each position

Competency		Management (Training)	Training Coordination	Training Governance	
	Competency 1	Level 2	Level 1	Level 4	Levels here indicate
Behavioural	Competency 2	Level 3	Level 5	Level 4	competencies
	Competency 3	Level 5	Level 3	Level 1	that subsume previous levels
	Competency 4	Levels 4; 3	Level 3	Level 2; 4	
Domain	Competency 5	Level 2	Levels 2; 4	Levels 2; 5	Levels here
	Competency 6	Level 1	Levels 3; 4	Level 2	indicate specific
	Competency 7	Level 3	Levels 1; 4	Levels 1; 4	skills that can be applied
Functional	Competency 8	Levels 2; 5	Level 2	Level 5	discontinuously
	Competency 9	Levels 1; 2	Levels 3; 5	Levels 4; 5	aiscontinuousiy

The consolidated list of roles, activities, competencies and knowledge resources from this step as well as the various interrelationships between them will be shared with the senior leadership of the MDO being FRACed to agree/ change/ remove competencies from the list, eventually contributing to the dictionaries and interrelationships (back to Step 6). Quality audit tests will have to be developed to assess the quality of output so obtained.

At this stage it is more important to obtain a consensus on the roles and activities. While a

discussion on competencies may eventually arise within this group, it is not essential to reach a consensus. What competencies are required for which role and at what level is a leadership decision. How the leader would like to arrive at the decision is the leader's choice, but popular choices and consensus cannot and must not replace leadership decisions on the competence of the talent that the leader seeks.

³ See Box 2 in the companion Part 1 document for the differences between functional/domain competencies and behavioural competencies.

Step 8: Position, role, activity, competency and knowledge resources survey of all staff

This is the stage at which everyone in the entity being FRACed gets a chance to input into the FRACing process. Based on several rounds of discussions with key members of staff and domain experts from outside, the dictionaries and interrelationships are updated (back to Step 6). Once this has been done, all members of staff will be asked to use the dictionaries to draw out the roles, activities, competencies and knowledge resources relevant for them. In case the dictionaries do not have a role, activity, competency or knowledge resource that is relevant for them, they are invited to propose the same. All proposals for additions to the dictionaries are then gathered and analysed by the DFT for another revised draft.

The list, agreed upon by the Division and Department Heads, will be recirculated for final ranking and acceptance by the employees. Any additions, if made to this list, will have to be agreed upon as in Step 7 above. The process of creating the FRAC for the MDO is an iterative process till the time it attains the standards that are set and passes the 'smell test'. The standards of quality and the various ways and means of how to attain these will have to be worked out.

Step 9: Focus group discussions (Division Heads) to improve draft dictionaries and interrelationships

At this stage, the Division Heads review the revised draft of the dictionaries, interrelationships and rankings, and take view on them. They also focus on getting expectations from each other ratified and check if they have successfully crafted them into their individual divisional dictionaries.

Step 10: Final draft of the dictionaries and interrelationships by the DFT

The final dictionaries, as well as changes in the policies governing people processes, need to be identified and marked out for modification. Some of these changes may need to precede the implementation of the dictionaries within the MDO (for example, training-related expense reimbursement).

Step 11: Upload on iGOT for quality audit by iGOT SPV

At this stage, the IFU takes charge and the dictionaries are uploaded on the iGOT platform for a quality audit conducted by the iGOT SPV. The CSP continues to be available to work on any of the audit observations passed by the iGOT SPV's quality team.

Step 12: Approval by HoD after quality audit by iGOT SPV

Once the quality audit is complete by the iGOT SPV, the final dictionaries are shown to the HoD for approval. Thus, the HoD benefits from the advice of both the DFT and SPV.

Step 13: Publish on iGOT for all users to see

Finally, once the dictionaries are approved by the HoD, they are published on iGOT for all users to view.

Step 14: QR code and workflow for duty chart/ work allocation

This step, and the one that follows, are necessary to ensure the results from FRAcing continue to remain valid. HoDs are constantly changing the distribution of work among different members of staff so that load balancing as well as talent matching is accomplished. Once FRACing has been done and iGOT updated, any subsequent changes to the tagging of roles, activities, competencies or knowledge resources to positions will have to be captured on the iGOT platform. This is best

achieved by ensuring that all changes to the distribution of work are done using the workflow built for this purpose on the platform. This will require an enforceable government order which states that no orders with regards to the distribution of work will be valid unless it has been generated on iGOT Karmayogi. As evidence, the work distribution order should carry a unique QR code generated the platform. The workflow for this will be built such that the tagging of roles and activities are updated before the order is printed.

Step 15: QR code and workflow for recruitment

The purpose of this step is similar to that in Step 14 above. The idea is to keep iGOT Karmayogi from losing its ability to be the single source of truth for all matters HR in government. The QR code requirement will have to be imposed via an enforceable government order as described.

Thus, these 15 steps of FRACing are provided as a guidance to MDOs. As iterated above, the result of this process – the dictionaries and their interrelationships – must be adequate for the use of incumbent position holders, future position holders, HR managers, and CBP providers, in order for the process to be deemed successful.

It is also important to reiterate that these 15 steps of FRACing should not be seen as a one-time activity, but rather an ongoing process. On the whole, it will enable government MDOs to build an accurate picture of the interrelationships as well as the full list of positions, roles, activities, competencies and knowledge resources relevant to them.

Section 2 Promoting success

The success of FRACing will depend upon a number of factors – some are detailed below.

Start simple: Although the platform is not yet perfect, it must not be a reason for further delays. By not utilising what is good, we are losing an opportunity to benefit from what we have. Therefore, we must not wait for the best before we start utilising these services. Starting simple does not mean we will remain simple – as more data comes in, as our algorithms improve, as our definitions get refined, as our processes become better, the good will become better, and better will become best. We must not let the best be the enemy of the good.

Establishing a clear theory of change:

Government entities who are embarking on the iGOT Karmayogi journey will need to have a clear idea on what they hope to achieve through it – in particular how they would like to leverage the opportunities on the Karmayogi platform to transform how they build their human resources and encourage them to pursue lifelong learning. iGOT Karmayogi will be only as good as the ability and motivation of its participating entities.

Limiting the problem and solution set: The three buckets of competencies (BDF) used in this initiative will map out a significantly large number of activities, roles and positions. This can give rise to interpretation problems (e.g. is this competency linked to Teamwork or Collaboration?), and also on which activity is linked to which role. As seen in the UN, OECD and IAEA examples, it is important to limit the size of each of the buckets so that they remain manageable. Unlike what has been done anywhere in the world in the past, iGOT Karmayogi is a population scale platform with powerful AI and ML capabilities. It will also be using a new competency mark-up language (CML). iGOT Karmayogi will therefore be able to manage much more than it has ever been able to do, but a word of caution is always useful on this count.

Sensitisation and handholding: Building a common understanding on all aspects of iGOT Karmayogi, including FRACing, is going to be important. This will be more effective if it is done through a continuous sensitisation and capacity building process. A strong outreach and a well-designed campaign (index cards, video bytes, quizzes of the day, etc.) should therefore be an integral part. Both at the rollout and maturation phases there will be many doubts, questions, and difficulties that people face. A support team to handle these queries and handhold IFUs and individual officials will be needed.

Building a core group of iGOT Karmayogi evangelists: Given that the goal is to transform HR practices in all government MDOs at the central, state and local level, it will be important to build and sustain a large group of core supporters from all walks of life; HR professionals, CSPs, PIAAs and CBP suppliers are going to be important. At the same time, the prestige and brand of iGOT Karmayogi will need to be built up which will require a sound media and social media strategy, including the ability to monitor social media chatter on iGOT Karmayogi. Workshops, seminars, competitions etc. may be needed for this. This will also require a strong pool of expert HR professionals/ organisations, both Indian and global.

Network of world-class universities, institutions and individuals who can participate on the iGOT learning hub for CBPs: While independent and private CBP providers will be part of the solution, it is important that steps are taken to bring on board global and domestic institutions as CBP providers.

- Civil Services Human Resources, Government of the UK. (2012). *Civil Service Competency Framework 2012-2017*. Retrieved from
 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf.
- Department for Promotion of Industry and Internal Trade (DIPP), Government of India. (2019). *Work Allocation*. Retrieved from
 - https://dipp.gov.in/sites/default/files/WORK%20ALLOCATION%2023092019.pdf.
- International Atomic Energy Agency (IAEA). (n.d.). *The Competency Framework: A guide for IAEA managers and staff.* Retrieved from https://www.iaea.org/sites/default/files/18/03/competency-framework.pdf.
- Organisation for Economic Co-operation and Development (OECD). (2014). *Competency Framework*. Retrieved from https://www.oecd.org/careers/competency framework en.pdf.
- United Nations (UN). (2020). What we look for. Retrieved from https://careers.un.org/lbw/home.aspx?viewtype=WWLF.

Appendix 1 IFU Team Members

For the time being, it is inferred that Knowledge resources for all IFU Team Members will be key documents related to Mission Karmayogi.

Project Manager

Docition	Dolos	A saludai sa	Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
		Deploy detailed project management plans	Project management	Principles of advanced project management	Information seeking	
	ent	Control project plans to manage project schedule and deliverables	Sector/ industry process breadth (as against dept of one or more processes)	Types of phases of a project lifecycle	Conceptual thinking	
	Project Management	Manage projects costs	MS project; primavera of similar PM tools (for which MDO already has licenses)	Work breakdown structure (WBS)	Initiative and drive	
	Project I	Assess potential project issues		Key project performance measurements	Planning and coordination	
		Manage project contingencies			Communication skills	
		Report on project progress to senior executives				
į.	sams	Allocate roles and tasks to project members	Target setting		Leading others	
Project Manager	Manage Project Teams	Monitor contributions by each member		Methods of project communication	Organisational Awareness	
ct M	ige Pro	Help team members overcome roadblocks			Commitment to organisation	
Proje	Mana	Mentor and coach external experts on ways of the MDO			Self- confidence	
	er St	Track issues regularly	MS Project; primavera of similar PM Tools	Methods of project risk assessment	Consultation and consensus building	
	Project Issue Resolutions	Create an issue resolution plan and monitor effectively		Methods of project communication	Decision making	
	Proj Res	Escalate issues in a timely manner			Delegation	
	int	Identify risks for each specific functional area	Organisation HR processes	Methods of project risk assessment	Attention to detail	
	Assessme	Perform risk assessment as required	Change management techniques	Risk recording and reporting structures and processes	Taking accountability	
	Project Risk Assessment	Report assessment outcomes to relevant stakeholders		Types of risk assessment matrices to follow		
	Prc	Adopt risk control measures to ensure impact is controlled		Principles of crisis management		

Project Coordinator

Beetle .	D. L.	A art total	Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
		Create and update project management plans	Project management	Project administration	Information seeking	
	Project Management	Timely reminders on deliverable schedules expected	Working knowledge of MS project; primavera of similar PM tools (for which MDO already has licenses)	Creating a work breakdown structure	Initiative and drive	
	oject l	Keep detailed project costs incurred			Planning and coordination	
	P	Report on project progress to Project Manager			Communication skills	
		Other project coordination activities				
	Project Teams Coordination	Regular task updation for all project members	Drafting of minutes of the meeting	Drafting and sending emails (as per Project Manager's instructions)	Organisational awareness	
Project Coordinator		Meeting notes and communication	Note-taking and filing - electronic and physical (if needed)		Commitment to organisation	
Coordi		Administrative works related to external experts			Self-confidence	
ject (Project Issue Resolutions	Use issue tracker regularly	MS project; primavera of similar PM tools		Attention to detail	
Pro		Create agenda for approval of Project Manager				
		Identify issues to be highlighted				
	isk Assessment	Identify risks for each specific functional area	Organisation HR processes	Methods of project risk assessment	Attention to detail	
		Perform risk assessment as required	Change management techniques	Risk recording and reporting structures and processes	Taking accountability	
		Report assessment outcomes to relevant stakeholders		Types of risk assessment matrices to follow		
	Project Ri	Adopt risk control measures to ensure impact is controlled		Principles of crisis management		
				Relevant regulatory requirements and guidelines		

Functional Heads

D	D. L.	A cat total	Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
	ears	Work closely with domain expert in bringing up-to-date on context	Known expert in the domain (global level expertise)	Workshop facilitation skills	Information seeking	
	ie next 5 י	Communicate clearly the objectives of the assignment	Strong advocate of use of technology in own domain	Report writing and presentation skills	Conceptual thinking	
	identify trends in the domain over the next 5 years	Identify communication means that best suit the key influencers and use it consistently	Strong expertise in adjacent domain areas (e.g. for health education – EdTech; HRD can be considered adjacent domains)		Initiative and drive	
	in t				Leading others	
	ldentify trends in				Consultation and communication building	
					Taking accountability	
					Innovative thinking	
75					Problem solving	
nal Hea	encies	Draw down domain trends to each affected function within the MDO	Deep understanding of the FRAC process		Leading others	
Functional Head	. Compet	Showcase how the roles across hierarchy will change over time with evidence	Usage of FRAC templates and methodologies	Methods of project communication	Organisational awareness	
	3uilding Domain Competencies	Identify domain competencies of future that the above roles require			Commitment to organisation	
	Buildir	Identify CBP providers that currently enable building competencies			Self-confidence	
		Understand project strategy	MS project; primavera of similar pm tools	Methods of project risk assessment	Consultation and consensus building	
	ution	Identify risks early and communicate with project manager		Methods of project communication	Decision making	
	Project Contribution	Identify dependencies with other functions and track them closely				
	Projec	Identify key actors within function to help facilitate change				
		Escalate issues and seek resolution in a timely manner			Delegation	

HR Head

Danitian.	Dalas	A valudation	Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
	cesses	Work closely with HR domain expert (if needed) to identify changes required	HR processes and policies	Change management	Information seeking	
	IR proc	Build a case for change in HR policies	Trends in HR technology	Communication and presentation	Conceptual thinking	
	RAC on F	Identify impact of changes on other HR policies: leave, entitlements, etc.	Deep understanding of the FRAC process		Initiative and drive	
	of F				Leading others	
	identify impact of FRAC on HR processes				Consultation and communication building	
	intif				Taking accountability	
	lde				Innovative thinking	
					Problem solving	
	Recruitment Workflow Modifications	Suggest changes in the workflow as per iGOT recommendations	Deep understanding of the FRAC process	Methods of project communication	Leading others	
нк Head		Present internal approval note for change of recruitment procedures	Usage of FRAC templates and methodologies		Organisational awareness	
HR		Create a policy for using iGOT assessment processes	Assessment technologies and processes		Commitment to organisation	
					Self-confidence	
	Project Contribution	Understand project strategy	MS project; primavera of similar PM tools	Methods of project risk assessment	Consultation and consensus building	
		Identify changes risks early and communicate with project manager and HoD	Change management	Methods of project communication	Decision making	
		Create a change management strategy along with HoD and project manager				
		Identify dependencies with other functions and track them closely				
	а.	Identify key actors within function to help facilitate change				
		Escalate issues and seek resolution in a timely manner			Delegation	

Appendix 2 CSP Team Members

For the time being, it is inferred that Knowledge resources for all CSP Team Members will be key documents related to Mission Karmayogi.

Project Manager

Danisia.	Dalas	A valudation	Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
		Deploy detailed project management plans	Project management	Principles of advanced project management	Information seeking	
	ment	Control project plans to manage project schedule and deliverables	Sector/ industry process breadth (as against dept of one or more processes)	Types of phases of a project lifecycle	Conceptual thinking	
	Project Management	Manage projects costs	MS project; primavera of similar PM tools (for which MDO already has licenses)	Work breakdown structure (WBS)	Initiative and drive	
	Proj	Assess potential project issues		Key project performance measurements	Planning and coordination	
		Manage project contingencies			Communication skills	
		Report on project progress to senior executives				
ger	Manage Project Teams	Allocate roles and tasks to project members	Target setting		Leading others	
/Jana		Monitor contributions by each member		Methods of project communication	Organisational Awareness	
Project Manager		Help team members overcome roadblocks			Commitment to organisation	
Proj	Mana	Mentor and coach external experts on ways of the MDO			Self-confidence	
	er er	Track issues regularly	MS Project; primavera of similar PM Tools	Methods of project risk assessment	Consultation and consensus building	
	Project Issue Resolutions	Create an issue resolution plan and monitor effectively		Methods of project communication	Decision making	
	Proj Res	Escalate issues in a timely manner			Delegation	
	int	Identify risks for each specific functional area	Organisation HR processes	Methods of project risk assessment	Attention to detail	
	Assessme	Perform risk assessment as required	Change management techniques	Risk recording and reporting structures and processes	Taking accountability	
	Project Risk Assessment	Report assessment outcomes to relevant stakeholders		Types of risk assessment matrices to follow		
	Prc	Adopt risk control measures to ensure impact is controlled		Principles of crisis management		

Domain Expert

			Competencies			
Position	Roles	Activities	Domain	Functional	Behavioural	
	over the	Understand the client's current landscape, context and brief history	Deep knowledge of processes in own function	Project management	Information seeking	
	omain . 'S	Coach the expert with current and approved strategy			Conceptual thinking	
	ds in the don next 5 years	Translate MDO goals to functional goals			Initiative and drive	
	nds in next	Identify areas of change along with expert			Leading others	
	dentify trends in the domain over the next 5 years	Finalise a report for HoD/minster's approval			Consultation and communication building	
	Iden				Innovative thinking	
	encies	Identify changes in roles and create a phase-wise change plan	Deep understanding of the FRAC process	Methods of project communication	Leading others	
Expert	Building Domain Competencies	Modify roles and activities for affected positions	Usage of FRAC templates and methodologies		Organisational awareness	
		Identify domain competencies of future that the above roles require			Commitment to organisation	
Domain Expert		Identify CBP providers that currently enable building competencies			Self-confidence	
Δ	Managing Change	Identify change strategy and get approval from HoD	Understanding of critical roles and bottlenecks in current operations	Change management strategies	People first	
		Build consensus within the domain among key stakeholders			Strategic thinking	
		Identify communication means that best suit the key influencers and use it consistently			Empathy	
		Understand project strategy	MS project; primavera of similar PM tools	Methods of project risk assessment	Consultation and consensus building	
	tributio	Allocate adequate resources to ensure project success		Methods of project communication	Taking accountability	
	Project Contribution	Identify risks early and communicate with Project Manager			Decision making	
	Pr	Escalate issues and seek resolution in a timely manner			Delegation	

Senior Consultant (Domain)

B. Miller	D. I.	A set total		Competencies	
Position	Roles	Activities	Domain	Functional	Behavioural
	Vriting	Understand current processes and tech used	Project management	Project administration	Information seeking
		Understand current tech changes (if any)	Working knowledge of MS project; primavera of similar PM tools (for which MDO already has licenses)	Creating a work breakdown structure	Initiative and drive
	Domain Competency Writing	Conduct organisation analyses exercise to identify gaps in talent	Depth of knowledge of current domain processes	Workshop facilitation skills	Planning and coordination
	main Con	Conduct functional gap analyses and facilitate change strategy acceptance	Process re-engineering in own domain		Conceptual thinking
	Do	Work with domain expert to translate changes to roles and activities			Communication skills
		Work with domain expert to translate roles and activities to competencies			Problem solving
Senior Consultant (Domain)	Project Teams Coordination	Regular task updating for all project members	Drafting of minutes of the meeting	Drafting and sending emails (as per Project Manager's instructions)	Self-confidence
ultant (C		Meeting notes and communication	Note taking and filing – electronic and physical (if needed)	Workflow diagrams	
Sonsu		Identify change issues in process changes suggested		Presentation skills	
nior (Identify change risk mitigation steps			
Se	Project Issue Resolutions	Use issue tracker regularly	MS project; primavera of similar PM tools		Attention to detail
		Create agenda for approval of Project Manager			
		Identify issues to be highlighted			
		Identify risks for each specific functional area	Organisation HR processes	Methods of project risk assessment	Attention to detail
	Project Risk Assessment	Perform risk assessment as required	Change management techniques	Risk recording and reporting structures and processes	Taking accountability
		Report assessment outcomes to relevant stakeholders		Types of risk assessment matrices to follow	
		Adopt risk control measures to ensure impact is controlled		Principles of crisis management	
	_			Relevant regulatory requirements and guidelines	

HR Process Expert

Desition	Dolos	Activities	Competencies		
Position	Roles		Domain	Functional	Behavioural
	dentify impact of FRAC on HR processes	Work closely with HR head to identify changes required	HR processes and policies	Change management	Information seeking
		Identify impact of changes on other HR policies: leave, entitlements, etc.	Trends in HR technology	Communication and presentation	Conceptual thinking
	C on HF	Build a case for change in HR policies	Deep understanding of the FRAC process	Drafting note as per MDO's practice	Initiative and drive
	t of FRAC	Build case for HR process automation (as per MDO's agreed policy)			Leading others
	tify impac				Consultation and communication building
	den				Taking accountability
r.					Innovative thinking
ğ					Problem solving
HR Process Expert	Recruitment Workflow Modifications	Suggest changes in the workflow as per iGOT recommendations	Deep understanding of the FRAC process	Methods of project communication	Leading others
HR Pr		Draw up change note for HR head's approval	Usage of FRAC templates and methodologies		Organisational awareness
		Identify assessment processes for adoption by MDO's recruitment	Assessment technologies and processes		Commitment to organisation
					Self-confidence
	۔	Understand project strategy	MS project; primavera of similar pm tools	Methods of project risk assessment	Consultation and consensus building
	ıtributior	Identify changes risks early and communicate with Project Manager and HR head	Change management	Methods of project communication	Decision making
	Project Contribution	Identify dependencies with other functions and help HR head navigate these changes			Delegation
	υ	Escalate issues and seek resolution in a timely manner			

Appendix 3 Work Allocation in the Department for Promotion of Industry and Internal Trade as on 23.09.2019 (DIPP, 2019)

WORK ALLOCATION IN THE DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE AS ON 23.09.2019

I. AMONG SENIOR OFFICERS

Name	Designation	Work allocated
Shri Shailendra Singh, IAS(MP:88)	Additional Secretary	FDI Policy, Foreign Investment Facilitation, FDI Data Cell, Project Monitoring Group, Industrial Corridors & IICC, Ease of Doing Business, Leather, Copy Rights, Startup India, Internal Trade, e-Commerce, Boiler, NPC&QCI, International Cooperation- Asia (ex ME), International Cooperation-Europe, Public Procurement
Shri Shashank Priya, IRS(C&CE:88)	Additional Secretary & Financial Adviser	Finance-I, Finance-II, Budget & Accounts
Shri A S Bhal, IES(85)	Senior Economic Adviser	Besides functions of Economic Adviser, matters related to Industrial Policy, Industrial Statistics, Coordination matters of DPIIT
Shri Anil Agrawal, IPS(UP:88)	Joint Secretary	Leather, Cement, Paper, Linoleum and Rubber, Internal Trade (except e-Commerce), Explosives, International Cooperation- Africa, Middle East & Oceania, Startup India, International Cooperation-CIS countries
Ms Sumita Dawra, IAS(AP:91)	Joint Secretary	Vigilance, MIIUS Scheme, NPC& QCI, Manufacturing Policy, UNIDO, Investment Promotion(MII), International Cooperation-Asia (ex ME), Copy Rights, FDI Policy, Foreign Investment Facilitation, FDI Data Cell

Shri Rajiv Aggarwal, IAS(UP:93)	Joint Secretary	IPR- Establishment, Patents, Trade Marks and GI, IPR- Negotiations and Cooperation, Designs and National Institute of Design, IPR- CIPAM, International Cooperation-Americas, Project Monitoring Group, Public Procurement
Shri Ravinder, IAS(UP:99)	Joint Secretary	Ease of Doing Business, Library, Industrial Licensing, Salt, Consumer Industry, Light Engineering Industry, Industrial Enterprise Memorandum, e-Commerce, Technical Regulations, Technical Support, International Cooperation-Europe
Shri Rajendra Ratnoo, IAS(TN:01)	Joint Secretary	North East Schemes, GST Subsidy Scheme, Himalayan States Schemes, Industrial Corridors & IICC
Shri S D Sharma, CSS	Joint Secretary	Cash, Public Grievances, O&M, RTI, Record Cell, Rajbhasha, Parliament, Establishment matters, General Admin, Protocol, SEO Cell
Shri T.S.G. Narayannen	Technical Adviser (Boilers)	Boiler, Technical Support
Shri Sanjay Kumar Panda	DDG	Industrial Statistics

II. AMONG DEPUTY SECRETARIES/DIRECTORS/EQUIVALENT

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated
1.	Shruti Singh, Director	Startup India, Investment Promotion(MII),FDI Policy Section, Foreign Investment Facilitation Section, FDI Data Cell
2.	Sunita Yadav, Director	Finance-I, Finance-II
3.	Uday Singh Mina, Director	GST Subsidy Scheme, Himalayan States Schemes
4.	Margaret Gangte, Director	Consumer Industry, Light Engineering Industry, Industrial Enterprise Memorandum
5.	Supriya S Devasthali, Director	Leather, Ease of Doing Business
6.	Sampa Saha, Director	Library
7.	Nikhil Kumar Kanodia, Director	Project Monitoring Group, Industrial Licensing, Supervision of all work related to technical regulations
8.	Surabhi Sharma, Deputy Secretary	e-Commerce, Establishment- Gazetted, Establishment- Non Gazetted, Establishment - Retirement matters, Establishment- Other matters, Establishment-D: Group D, R&I, Copy Rights
9.	Pooja Swaroop, Deputy Secretary	Trade Marks and GI, IPR- Establishment, Patents, International Cooperation- Americas
10.	Y Jaya Priyadarshani, Joint Director	Manufacturing Policy, NPC&QCI, UNIDO
11.	Narender Kumar, Dy Secretary	Cash- Pay Rolls, Cash- Other Bills+ Cashier Cell, Public Grievances
12.	Pijush Dasgupta, Dy. Secretary	International Cooperation- Europe, Right to Information, Record Cell, Salt
13.	Ashish Dutta, Dy. Secretary	International Cooperation- CIS countries, International Cooperation - Africa, Middle East and Oceania
14.	Raman Kant Sood, Dy Secretary	Explosives, International Cooperation- Asia (ex ME)
15.	Asha Sota, Deputy Secretary	Vigilance, MIIUS Scheme
16.	Yogesh Gupta, Deputy Secretary	General Administration, Protocol, SEO Cell, North East Schemes
17.	D C Bijalwan, Deputy Secretary	Project Monitoring Group

SI. No.	Name of the Officer (S/Shri)	Work allocated	
1.	A.M. Balraj, SDO (Engg)	Public Procurement, Parliament	
2.	Mohd Z.K. Yusufzai, SDO (Engg)	Cement, Boiler and Technical Support	
3.	A.P. Singh, SDO (Engg)	Industrial Corridors & IICC	
4.	Dr. S.S. Gupta, SDO (Engg)	Paper, Linoleum and Rubber, Internal Trade (except e-Commerce)	
5.	Dr. Ashish Kumar, SDO (Engg)	IPR- Negotiations and Cooperation, Designs and National Institute of Design, IPR- CIPAM	
6.	Nand Lal, Consultant	All work relating to Chemical Wing	
7.	S.K. Jain, DO (Engg)	Boiler, Technical Support	
8.	Sundeep Chauhan, DO (Engg).	Explosives, Internal Trade (except e-Commerce)	

IV. UNDER SECRETARIES/EQUIVALENT

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated	
1.	Binod Kumar, US	Light Engineering Industry, Consumer Industry	
2.	A K Sabharwal, US	Investment Promotion(MII), International Cooperation- Europe	
3.	Dayanidhi Joshi, US	Leather, International Cooperation- CIS countries	
4.	R K Punia, US	Cash- Pay Roll, Cash-Other Bills+ Cashier Cell	
5.	Shambhu Datt Sati, US	Establishment- Gazetted, Establishment- Non Gazetted, Establishment - Retirement matters, Establishment-D: Group D, R&I, Establishment-Other matters	
6.	B.K. Sharma, US	Industrial Corridors & IICC	
7.	P K Pattnaik, US	International Cooperation- Africa Middle East and Oceania, Industrial Enterprise Memorandum, Light Engineering Industry	
8.	K P Singh, US	Finance –I	
9.	Kundan Kumar, US	General Administration, Protocol, SEO Cell	
10.	L Madan Kumar Reddy, US	Startup India	
11.	Sunil Kumar Agarwal, US	Cement	
12.	Gokul Chand,US	NPC & QCI, UNIDO, Manufacturing Policy	
13.		IPR- Establishment, Patents, Designs and National Institute of Design, IPR-CIPAM	
14.	Sunder Singh, US	GST Subsidy Scheme	
15.	D V S P Varma, US	Public Procurement, Parliament	

15.

16.	R.D. Diwakar, US		
17.	Anuj Kumar, US	Finance-II	
18.	R Mythili, US	Ease of Doing Business, Industrial Licensing	
19.	Ram Naresh, US	Right to Information+ Record Cell, Public Grievances, O&M	
20.	Arun Kumar, US	Paper, Linoleum and Rubber	
21.	B K Sethi, US	Trade Marks and GI, International Cooperation- Americas	
22.	Ganesh H Nikhare, US	International Cooperation - Asia(ex ME), Himalayan States Schemes	
23.	Anshu Mauli Kumar, US	Project Monitoring Group	
24.	Tanmoy Roy, US	Salt, Library, Consumer Industry	
25.	Lata S Kapur, US	Vigilance, IPR- Negotiations and Cooperation	
26.	Jagdish Kumar, US	MIIUS Scheme	
27.	S Dhana Shekar, US	North East Schemes	
28.	Sushant Sudan, Deputy Director	OSD to Secretary, DPIIT	
29.	Nayonika Dutta, Deputy Director	e -Commerce	

V. SECTION OFFICERS

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated	
1.	Sanjay Bhatt	Ease of Doing Business	
2.		Public Procurement	
3.	Mukul Kumar Gupta	Vigilance	
4.	Usha Arora	Boiler	
5.	Asha Rani	Cash- Pay Roll	
6.	Asha Rani	Cash-Other Bills+ Cashier Cell	
7.	Pardeep Kumar Kher	Cement	
8.		Coordination	
9.	Rohtas Singh	Office & Management	
10.	Rooma Manchanda	MIIUS Scheme	
11.	Yogesh Taneja	North East Schemes	
12.	Rahul Handa	Establishment-Gazetted	
13.	Rahul Handa	Establishment- Non Gazetted	
14.	Geeta Sakhuja	Establishment - Retirement matters	
15.	Nishi Sharma	Establishment- Other matters	
16.	Sushil Bhalla	Leather	
17.	Anil Kumar Chauhan	Establishment-D: Group D, R&I	
18.	Kumar Gaurav	FDI Policy Section	
19.	Geetha Venugopal, RO	Foreign Investment Facilitation Section	
20.	Pradeep Toppo	IPR- Establishment	

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated	
21.	Saji P Augustine	IPR- Negotiations and Cooperation	
22.	Nutan Sanghal	Patents	
23.	Uma Vijayan	Trade Marks and GI	
24.	S Balaji	Designs and National Institute of Design	
25.	Nutan Sanghal	IPR- CIPAM	
26.	K R H D Prasad	International Cooperation - Asia(ex ME)	
27.	Achamma Rajan	International Cooperation- Europe, International Cooperation- CIS countries	
28.	Suresh Kumar Chauhan	International Cooperation- Americas	
29.	Ashok Kumar Pradhan	International Cooperation - Africa , Middle East and Oceania	
30.	Ajay Priyadarshy	Industrial Corridors & IICC	
31.	Madhu Singh, Economic Officer	NPC & QCI	
32.	Vacant (Addl charge to Bimla Rawat)	Linoleum and Rubber	
33.	Rajender Prasad	SEO Cell	
34.	Dharam Pal	Right to Information, Record Cell	
35.	Vacant (Charge to Shri Shahid Rasool, RO)		
36.	Naveen Kumar	Light Engineering Industry	
37.	Ajay Kansal	Paper	
38.	Bimla Rawat	Consumer Industry	
39.	Saikat Das	Parliament	
40.	P M Erishikesan	Special Schemes	
41.	Md. Sharfuddin	GST Subsidy Scheme	
42.	Latha Jerish	Industrial Licensing	
43.	P C Joshi	General Administration	
44.	T. Hanumantha Rao	CIM Office	
45.	Ngulkhosat	Finance-II	
46.	Sukh Dayal Bhalaik	Finance-II	
47.	Gaurav Kumar Tripathi	Salt	
48.	Saikat Das	Protocol	
49.	Vacant	Technical Support	
50.	Vacant	Finance-I	
51.	Nitesh Ranjan	Make In India	
52.	Vacant	Budget & Accounts	
53.	Iqbal Singh	Startup India	
54.	Vacant	Rajbhasha	
55.	Vacant (Addl Charge to Shahid Rasool, Research Officer)	Industrial Enterprise Memorandum	

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated
56.	Vacant	Industrial Statistics
57.	Vacant	Library
58.	Latha Jerish	Public Relations & Grievances
59.	Sumit Kumar	Explosives
60.	Gaurav Kumar Tripathi	UNIDO
61.	Ganesh Gupta	e-Commerce
62.	Arunesh Kumar Singh	Copyrights

VI. AMONG EX-CADRE/OTHER CADRE POSTS

SI. No.	Name of the Officer (S/Shri/Smt/Ms)	Work allocated
1.	Vacant (Director, L&I)	Library
2.		Industrial Statistics, Coordination
3.	Aisha Saeed, Assistant Director (ISS)	ISU
4.	Goonjan Kumar, Assistant Director (IES)	FDI Policy Section, Foreign Investment Facilitation Section, FDI Data Cell
5.	Gajraj Singh, Joint Director (OL)	Rajbhasha
6.	Madhu Singh, Economic Officer	NPC & QCI
7.	Babu Lal Meena, Assistant Director (OL)	Rajbhasha
8.	Vacant, Assistant Director (OL)	Rajbhasha
9.	Geetha Venugopal, Research Officer	Foreign Investment Facilitation Section
10.	Shahid Rasool, Research Officer	Manufacturing Policy
11.	Neeraj Kumar Sharma, Research Officer	FDI Data Cell
12.	Des Raj Kapur, Assistant Librarian & Information Officer	Library
13.	Vacant (Protocol Officer)	Protocol
14.	Vacant (Addl Charge to Sh. Shahid Rasool, Research Officer)	Industrial Enterprise Memorandum
15.	Accounts Officer (Vacant)	Finance-II
16.	Vacant (Economic Officer)	
17.	Vacant (Economic Officer)	

OFFICERS FROM ERSTWHILE DGS&D

SI. No.	Name of the Officer (Shri)	Work allocated
1.	Rakesh Kumar, Director	Cell for Public Procurement Management
2.	Rajesh Gupta, Director	Cell for Public Procurement Management
3.	Shlok Bhardwaj, Director	Cell for Public Procurement Management

Allocation of Ministries/Departments for handling coordination Work

A. Charge of Principal/ Senior Economic Adviser

- 1. Ministry of Micro, Small and Medium Enterprises
- 2. NITI Aayog
- 3. Department of Commerce

B. Charge of Additional Secretary (Shri Shailendra Singh)

- 1. Ministry of Information and Broadcasting
- 2. Department of Atomic Energy
- 3. Department of Economic affairs
- 4. Ministry of Shipping
- 5. Department of Revenue
- 6. Department of Heavy Industries
- 7. Ministry of Civil Aviation
- 8. Department of Posts

C. Charge of Joint Secretary (Shri Anil Kumar Agrawal)

- 1. Ministry of Earth Sciences
- 2. Ministry of Minority Affairs
- 3. Ministry of Social Justice & Empowerment
- 4. Ministry of Steel
- 5. Department of Skill Development and Entrepreneurship
- 6. Ministry of Petroleum & Natural Gas

- 7. Department of Chemicals & Petro -Chemicals
- 8. Department of Fertilizers
- 9. Department of Science & Technology
- 10. Department of Scientific and Industrial Research
- 11. Department of Bio-Technology
- 12. Department of Animal Husbandry and Dairying
- 13. Department of Consumer Affairs

D. Charge of Joint Secretary (Ms Sumita Dawra)

- 1. Ministry of External Affairs
- 2. Department of Investment & Public Asset Management
- 3. Ministry of Textiles
- 4. Department of School Education and Literacy
- 5. Department of Health & Family Welfare
- 6. Department of Health Research
- 7. Department of Pharmaceuticals
- 8. Ministry of Food Processing Industries
- 9. Ministry of Coal
- 10. Department of Higher Education

E. Charge of Joint Secretary (Shri Rajiv Aggarwal)

- Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
- 2. Ministry of Environment, Forest & Climate Change
- 3. Ministry of New and Renewable Energy
- 4. Ministry of Tribal Affairs

- 5. Department of Agricultural Research and Education
- 6. Department of Agriculture, Cooperation & Farmers Welfare
- 7. Department of AIDS Control
- 8. Department of Fisheries
- 9. Department of Public Enterprises
- 10. Ministry of Statistics and Programme Implementation

F. Charge of Joint Secretary (Shri Ravinder)

- 1. Ministry of Corporate Affairs
- 2. Ministry of Electronics & Information Technology
- 3. Ministry of Home Affairs (Except D/o Official language)
- 4. Ministry of Housing and Urban Affairs
- 5. Ministry of Labour and Employment
- 6. Ministry of Power
- 7. Department of Defence
- 8. Department of Defence Production
- 9. Department of Defence Research & Development
- 10. Department of Justice
- 11. Department of Land Resources
- 12. Department of Legal Affairs
- 13. Legislative Department
- 14. Department of Telecommunication

15. Department of Financial Services

G. Charge of Joint Secretary(Shri Rajendra Ratnoo)

- 1. Ministry of Development of North Eastern Region
- 2. Department of Sports
- 3. Department of Youth Affairs
- 4. Ministry of Panchayati Raj
- 5. Ministry of Tourism
- 6. Ministry of Women and Child Development
- 7. Department of Rural Development
- 8. Ministry of Mines
- 9. Department of Food and Public Distribution
- Ministry of Water Resources, River Development & Ganga Rejuvenation
- 11. Ministry of Culture
- 12. Ministry of Railways
- 13. Ministry of Road Transport

H. Charge of Joint Secretary (Shri S D Sharma)

- 1. Department of Administrative Reforms & Public Grievances
- 2. Department of Pensions & Pensioners Welfare
- 3. Department of Personnel & Training
- 4. Department of Official Language

- 5. Department of Ex-Servicemen Welfare
- 6. Department of Space
- 7. Ministry of Parliamentary Affairs
- 8. Department of Drinking Water & Sanitation

I. Charge of Chief Controller of Accounts

Department of Expenditure

Allocation of States/UTs for handling Miscellaneous Coordination work

A. Charge of Additional Secretary (Shri Shailendra Singh)

- 1. Madhya Pradesh
- 2. Dadra & Nagar Haveli
- 3. Daman & Diu
- 4. Goa
- 5. Odisha
- 6. Uttarakhand

B. Charge of Joint Secretary (Shri Anil Agrawal)

- 1. Karnataka
- 2. Kerala
- 3. Uttar Pradesh
- 4. West Bengal

C. Charge of Joint Secretary (Ms Sumita Dawra)

- 1. Andhra Pradesh
- 2. Haryana
- 3. Himachal Pradesh
- 4. Telangana
- 5. Puducherry

D. Charge of Joint Secretary (Shri Rajiv Aggarwal)

- 1. Bihar
- 2. Lakshadweep
- 3. Maharashtra
- 4. Chandigarh
- 5. Punjab

E. Charge of Joint Secretary (Shri Ravinder)

- 1. Andaman& Nicobar Islands
- 2. Chattisgarh
- 3. Gujarat
- 4. Jharkhand
- 5. Rajasthan

F. Charge of Joint Secretary(Shri Rajendra Ratnoo)

- 1. Delhi
- 2. North East States (including Sikkim)
- 3. Jammu & Kashmir
- 4. Tamil Nadu

LIST OF SECTIONS

S. No.	New Name	Old Name
1.	Boiler	Boiler
2.	Budget & Accounts	Budget & Accounts
3	Cash- other Bills	Cash- II
4.	Cash- Pay Roll	Cash- I
5.	Cement	Cement
6.	Consumer Industry	Consumer Industry
7.	Coordination	Coordination
8.	Copy Rights	IPR VII
9.	Designs and National Institute of Design	IPR V
10.	Ease of Doing Business	BE-I
11.	Establishment- Gazetted	E-I
12.	Establishment - D, Group D, R&I	Estt-D + R&I
13.	Establishment- Non Gazetted	E-II
14.	Establishment - Other Matters	E- IV
15.	Establishment - Retirement Matters	E-III
16.	Explosives	Explosive
17.	Finance- 1	Finance -1
18.	Finance - 2	Finance - 2
19.	International Cooperation- Americas	IP&IC- III
20.	International Cooperation- Asia (ex ME)	IP&IC-I
21.	FDI Policy Section	FC-I
22.	E-Commerce	
23.	Foreign Investment Facilitation Section	FC- II
24.	FDI Data Cell	FDI Data Cell
25.	General Administration	General Administration
26.	GST Subsidy Scheme	Planning
27.	Rajbhasha	Hindi
28.	Industrial Corridors & IICC	Industrial Corridor+ ID-I
29.	Industrial Enterprise Memorandum	Industrial Enterprise Memorandum (IEM)
30.	Industrial Licensing	Industrial Licensing (IL)
31.	Manufacturing Policy	National Manufacturing Policy (MP)
32.	Industrial Statistics	ISU
33.	International Cooperation - Africa Middle East & Oceania	IP&IC - IV
34.	International Cooperation - Europe	IP & IC - II
35.	International Cooperation - CIS	
36.	IPR- Negotiations and Cooperation	IPR - II
37.	IPR- CIPAM	IPR VI
38.	IPR- Establishment	IPR- I
39.	Leather	Leather
40.	Linoleum and Rubber	Linoleum and Rubber (LR)
41.	Library	Library
42.	Light Engineering Industry	Light Engineering Industry (LEI)

43.	Investment Promotion (Make in India)	BE- III
44.	MIIUS Scheme	IIUS + ID-II
45.	NPC-QCI	NPC-QCI
46.	Office & Management	Office & Management (O&M)
47.	Paper	Paper
48.	Parliament	Parliament
49.	Patents	IPR - III
50.	Protocol	Protocol
51.	Public Procurement	BE- II
52.	Public Relations & Grievances	PR&C
53.	Right to Information	Right to Information
54.	Salt	Salt
55.	SEO- Cell	SEO Cell
56.	Himalayan States Schemes	Special Package
57.	Startup India	Startup India
58.	Technical Support	TSW
59.	Trademarks and GI	IPR- IV
60.	UNIDO	UNIDO
61.	Vigilance	Vigilance
62.	North East Schemes	DBA-II+ NER
63.	Internal Trade (except e-Commerce)	

FRACing Exercises at DoPT for Assistant Section Officers

Assistant Section
Officer CBI
(Non-IPS)



