

THE RTC TOOLKIT

People-centered design for the optimal, rapid, and sustainable roll-out of TB innovations

Version 1.0 - November 2023

List of Acronyms

FIT	Friends for International TB Relief
Global Fund	The Global Fund to Fight AIDS, Tuberculosis and Malaria
ніv	Human Immunodeficiency Virus
IRB	Institutional Review Board
МИСН	Maternal, newborn, and child health
PCD	People-centered design
РНІ	Protected Health Information
RTC	Re-imagining TB Care initiative
STBP	Stop TB Partnership
тв	Tuberculosis
ТВАР	TB affected people
UNHLM	United Nations High-level Meeting
Walimu	World Alliance for Lung and Intensive Care Medicine in Uganda
wно	World Health Organization



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Introduction

The RTC toolkit has been developed to support the implementation of the Stop TB Partnership's (RTC initiative, and is for country stakeholders and partners, including civil society and communities, interested in applying a creative, inclusive, and systematic approach to identifying, prioritizing, and selecting TB service delivery and product innovations to transform when, where, and how TB services are accessed and delivered.

The RTC toolkit provides audiences an easy-tounderstand and detailed step-by-step guide for facilitating an inclusive, iterative, and country-led process to understand various groups' needs and to use these needs as the foundation to identify, prioritize, and select innovations for introduction. The ambition is that doing things differently will lead to higher likelihood of scale and impact.

The RTC toolkit is intended to be used by countries and local organizations interested in replicating the PCD process who have met a series of readiness requirements – from having a team with the relevant capabilities in place to ensuring support from key government stakeholders, as explained in the <u>first</u> <u>chapter</u>.

The RTC toolkit was co-created by the Stop TB Partnership, Friends for International TB Relief (FIT) in Viet Nam, and World Alliance for Lung and Intensive Care Medicine in Uganda (Walimu), and iterated based on feedback from PATH and the India Health Fund.

This broader Re-imagining TB Care (RTC) initiative, of which this toolkit is a part, was made possible with support from Korea International Cooperation Agency's Global Disease Eradication Fund. This initiative is also partially supported by Cooperative Agreement Number NU2GGH002166 from the Centers for Disease Control and Prevention of the United States Department of Health and Human Services. The contents of this presentation are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention, the Department of Health and Human Services, or the United States government.



oı Get into a people-centered mindset

The Re-imagining TB Care initiative

TB is preventable, treatable, and curable, yet it is "the leading infectious disease killer in the world "¹, claiming 1.3 million lives in 2022 alone.²

TB is one of the world's deadliest infectious diseases, surpassing both HIV and malaria in combined deaths, despite being a preventable, treatable and curable disease. According to WHO's Global Tuberculosis Report 2023, in 2022 alone, there were 1.3 million deaths from TB and nearly 10.6 million people falling ill with the disease.² STBP shared new data in March 2021 showing that nine countries with the highest TB burden – accounting for 60% of the global TB burden – saw drastic declines in the diagnosis and treatment of people with TB in 2020, with an average decline of 23%. Essentially, the decline in TB treatment coverage due to service disruptions caused by the COVID-19 pandemic erased 12 years of hard-fought TB program strengthening gains in these countries.³

The RTC initiative was conceptualised at TB Innovation Summit 1.0, which was co-organized by STBP, Johnson & Johnson, United Nations Foundation, Global Fund, and the World Economic Forum, in advance of the first UNHLM on TB in September 2018.

RTC's vision is to transform *when, where,* and *how* TB services are accessed and delivered.

To achieve this vision, RTC has defined two objectives:

- 1. Make routine and essential TB services more **flexible**, **accessible**, and **adaptable** (particularly during public health emergencies).
- 2. Increase and improve the provision of **localized** (from facility-level to where the people are and live their daily lives), **integrated** (for TB, TB comorbidities, and other respiratory-based illnesses), and **people-centered** (based on groups' needs) TB services.

RTC's objectives are achieved through activities across three phases:

Phase 1 (Inspiration): Conduct participatory activities, like interview and focus group discussions, to comprehensively understand the various users groups^{'4} needs, preferences, and circumstances, including their experiences and feelings, in accessing and delivering TB services. Using the user groups' insights as the foundation, conduct a market scan of innovations that have the potential to solve user needs, and follow a country-driven process to prioritize and select the most promising innovations for introduction.

Phase 2 (Acceleration): Support the optimal and sustainable introduction, including the development of scale-up plans, of country-selected services and products based on the various user groups' needs. Throughout this phase, facilitate regular co-creation and testing sessions to iterate and strengthen intervention design.

Phase 3 (Integration): Lay the groundwork to connect and link country-selected, introduced services and products with the country's health and health management information system/s. And, through this process, identify ways to optimize, streamline, and strengthen the various data systems that exist in the country context.

The focus of this toolkit is on Phase 1, with updates on Phases 2 and 3 to come in approximately 2024-2025.

RTC's five guiding principles to anchor and steer its activities.

- 1. Change the way "we do business" in TB and global health and challenge entrenched interests, incentives, and infrastructure
- Driven by the "hopes and dreams" identified and selected by the country's various user groups, stakeholders, and partners
- 3. Work with country's various user groups, stakeholders, and partners to **rapidly** move services and products from **"pilot to routine use"**
- 4. Ensure objectives, activities, outputs, and outcomes are diverse, equitable, inclusive and helps to reduce critical barriers for the country's various user groups, stakeholders, and partners
- 5. Facilitate **country-to-country collaboration** and **strengthen the capacity** of the country's various user groups, stakeholders and partners.

If you want to learn more about RTC and how it follows an iterative PCD and country-driven process to introduce localized, integrated, and people-centered services and products, visit <u>https://rtc.stoptb.org/</u>.

Set up your PCD process

	Activities per phase	Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Pillar 1: Get into a people-centered mindset															
1	Learn about PCD															
2	Assess team and country readiness															
3	Create detailed work plan															
4	Define PCD capacity building plan															
5	Conduct team kick-off and define ways of working															
6	Facilitate Project Launch Event															
	Pillar 2: Understand various groups' needs															
7	Establish your baseline, define what you want to learn and frame your objectives															
8	Identify sites and participants for interviews and focus group discussions															
9	Apply for and obtain Institutional Review Board (IRB) a	pproval														
10	Prepare PCD interview guides and facilitate dry runs															
11	Coordinate PCD interviews and focus group discussion	ns														
12	Finalize interview guide															
13	Conduct interviews and/or focus group discussions															
14	Transcribe, "tag" notes, and group into opportunity are	as														
15	Weekly synthesis to refine and iterate interview guides															
16	Conduct final synthesis															
17	Facilitate stakeholder workshop to validate and prioritize opportunity areas															
18	Write synthesis report															
	Pillar 3: Identify, prioritize, and select TB innovations															
19	Conduct desk research and consult stakeholders to create a list of innovations															
20	Prepare frameworks for innovation selection															
21	Innovation pre-selection															
22	Facilitate stakeholder workshop to prioritize innovation	าร														
23	Draft concept notes for prioritised innovations															
24	Pressure-test prioritized innovations with critical user	groups														
25	Facilitate stakeholder workshop to make final selection innovation(s) to introduce	n of														

Steps to set up your PCD Process



People-centered design

1

Learn about PCD

Understanding people's needs and priorities to rapidly and optimally scale TB and global health innovations. PCD⁵ is an approach to problem-solving and innovation that is centered around understanding the needs, behaviors, experiences, and contexts of the people who will be using or delivering the services and product innovations being designed.⁶

Ensuring successful innovations. PCD involves an inclusive, collaborative, and iterative process that focuses on various user groups at all stages of the design process, from initial problem definition to

ideation, prototyping, testing, and implementation. It emphasizes listening, observation, empathy, and experimentation to understand various user groups' needs and prioritiesand, based on these insights and learnings, create solutions that are feasible, viable, scalable, and sustainable in implementation and use. RTC applies a PCD process to ensure desirability and fit are prioritized alongside feasibility and impact for the identification, prioritization, and selection of service delivery and product innovations.

Figure 1 depicts a framework for successful innovations, based on three core aspects:



local healthcare ecosystem



PCD is a complementary approach that brings new capabilities and enhances existing expertise for a wide range of country stakeholders and implementing partners. PCD equips country stakeholders and implementing partners with a new mindset, methodology, and tools to capture, document, and articulate a comprehensive understanding of various user groups' (i.e., TB affected people and their families, frontline workers and providers, TB survivors, etc.) needs and priorities; catalyzes them to collaborate more inclusively and often amongst themselves and with various user groups; enables country stakeholders and partners to translate the learnings and insights from various user groups' needs and priorities into solution features; and encourages and provides them with the frameworks to rapidly ideate, test, and iterate to get to solutions that are more user-centric and relevant to the local context.

PCD follows the Double Diamond process to "design the right things" and "design things right". The Double Diamond, developed by the British Design Council in 2003 "is a visual representation of the design and innovation process. It is a simple way to describe the steps taken in any design and innovation project, irrespective of methods and tools used."⁷

The first diamond on the left, "Design the right things", focuses on identifying the key challenges to solve by understanding the various user groups' needs and priorities. The second diamond on the right, "Design things right", focuses on solving the challenges in the right way and in close collaboration with country stakeholders, implementing partners, and various user groups.

Please see page 15 for a list of additional resources on PCD.



Figure 2: Based on the double diamond design process

Assess readiness of country stakeholders and implementing partner

A country's readiness to embark on the PCD process may depend on various factors, including but not limited to:

- Understanding the local context of the country where PCD will be implemented
- Having a senior leader from the National TB Program who understands PCD, sees its value, and is willing to do things differently
- Recruiting one or more additional "champions" within the National TB Program or Ministry of Health who are willing to advocate for the PCD process and are open to making the required connections across health programs (e.g., HIV, MNCH, etc.)
- Identifying in-country experts in health technologies and systems integration who can participate in the innovation identification, prioritization, and selection process
- Maintaining a close working relationship with one or more local organizations who can implement the approach

An implementing partner's readiness to embark on the PCD process may depend on various factors, including but not limited to:

- Having a strong partnership and relationship with the National TB Program and its senior leadership;
- Having a senior leader from the organization with past experience with PCD, gualitative research, human behaviour, etc. and understands how it can enhance or strengthen country program;

- Recruiting a project manager who has deep TB and global health experience and strong project management skills, ideally also with some experience with PCD, qualitative research, human behaviour, etc.;
- Engaging two or more PCD experts and/or behavioural/social scientists to lead the PCD interview and focus group discussion process from start to finish, including someone with experience with the country's IRB submission process;
- Engaging one or more civil society and community representatives to act as a liaison between the implementing partner and community throughout the PCD process:
- Identifying someone on staff or engaging an expert who has TB product innovation knowledge and understanding of the broader TB landscape of products and services
- Engaging a communications specialist responsible for documenting and publicizing the process, and supporting the coordinating of key meetings and events

The table on page 12 illustrates the critical roles, responsibilities/expertise, as well as the time allocation. Depending on the implementing partner's capacity, augmenting existing capabilities and expertise with external consultants or short-term personnel may be required.





RTC Leadership group engagement in Viet Nam

Role	Capabilities and experience	% allocated on project
National TB Program Manager	Advocating for the PCD process, participating in key workshops, and liaising with key stakeholders as needed	~5%
Ministry of Health or National TB Program "champion"	Advocating for the PCD process; Participating in key workshops; Providing continuous feedback on the initiative and PCD process; Liaising with relevant NTP and MOH stakeholders	~10%
Project manager	Overseeing the PCD process; Ensuring the timely implementation of critical activities	~100%
Social scientists	Preparing, conducting, and synthesizing interviews and focus group discussions	~100%
Civil society and community representatives	Preparing, conducting, synthesizing interviews and focus group discussions; Ensuring initiative and PCD process includes TB affected people and their families, TB survivors, etc.	~50%
Communications officer	Developing communication materials for workshops and other project related communication needs	~20%
Administrator	Providing financial and logistical support for workshops and other project related operational needs	~10%
Expert/s in service delivery implementation	Reviewing potential service delivery innovations and identifying implementation considerations	~10%
Expert/s in product innovations and HMIS integration	Reviewing potential product innovations and identify HMIS integration considerations	~10%

Figure 3: Considerations for team set up based on learnings from FIT and Walimu teams

Create detailed work plan

Decide on the work plan format and tool you'd like to use. The following questions can help you get started on what to include:

- Are there any key activities not currently captured in the work plan? For example, have you planned enough time to solicit opinions from stakeholders? Have you planned for capacity building activities? Do you need to syndicate the work plan for approvals before you begin the work?
- How long will each activity take to complete? Are there any risks and dependencies that may affect your timelines? Are there activities that can be conducted simultaneously or in parallel?
- Are you confident you have the right team in place to conduct all activities? Are there roles you need to add and/or existing capabilities you need to strengthen, for example, through training?

4

Define PCD capacity building plan

To assess the team's existing skills, it is important to identify potential gaps and learning goals early, and to plan training and learning opportunities accordingly. The following questions and resources can get you started:

- What experience does the team have with PCD?
- <u>Design for Global Health's 5 Types of Design User</u> can be used as a conversation starter with your team and other stakeholders
- This PCD baseline assessment can help you identify gaps and learning goals for individual team members and the team as a whole
- What experience does the team have with facilitating workshops?
- Does the team have basic project management skills and tools?

3	Activities per phase	1st month	2nd month	3rd month	4th month	5th month	6th month	7th month
4	Pillar 1: Get into a PCD mindset							
5	Learn about PCD							
6	Assess team and country readiness							
7	Create detailed workplan							
8	Define PCD capacity building plan							
9	Conduct team kick-off and define ways of working							
10	Facilitate Project Launch Event							
11	Pillar 2: Understand various groups' needs							
12	Establish your baseline, define what you want to learn and frame your objectives							
13	Identify sites and participants for interviews and focus group discussions							
14	Apply for and obtain Institutional Review Board (IRB) approval							
15	Prepare PCD interview guides and facilitate dry runs							
16	Coordinate PCD interviews and focus group discussions							
17	Finalize interview guide							
18	Conduct interviews and/or focus group discussions							
19	Transcribe, "tag" notes, and group into opportunity areas							
20	Weekly synthesis to refine and iterate interview guides							
21	Conduct final synthesis							
22	Facilitate stakeholder workshop to validate and prioritize opportunity areas							
23	Write synthesis report							

Figure 4: Work plan Excel

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Work plan



Conduct team kick-off and define ways of working

Once you've aligned on the detailed work plan and have the right team in place, set up your team for success by facilitating a team kick off, with suggested activities below:

- Introductions
- Project goals
- Work plan review and alignment
- · Collaboration, roles and responsibilities
- Ways of working

6

Facilitate Project Launch Event

A project launch event serves three important purposes: first, it offers government stakeholders the opportunity to introduce and advocate for the RTC initiative and the PCD process; second, it invites various user groups to participate in an inclusive, collaborative, and iterative process from the outset; third, it enables early alignment on the process and co-ownership of ideas. The launch event is an opportunity to get feedback from the stakeholders on the proposed processes and methods, and to iterate those processes and methods accordingly. This inclusivity and transparency is critical for stakeholder engagement.

ne 1:30 – 09:00	Activities Arrival and registration	Speakers/Team members Ms. Talemwa Nalugwa, Mr. Ggita Joseph	Guiding Principles		
- 09:15	Opening remarks from the National TB and Leprosy Programme, Ministry of I			- DOD	
i - 09:30	Introductory remarks from KOICA Uganda	Mr. Adrian Tagoya	Core values that will anchor and steer th	e PCD process	
0 - 09:45	Introductory remarks from CDC Uganda	Dr. Deus Lukoye			
- 10:15	Overview of the Re-imagining TB Care initiative	Dr. Achilles Katamba, Ms. Talemwa			
- 10:45		Nalugwa, Ms. Jacqueline Huh	1. CO-CREATION	2. FLEXIBILITY	3. CAPACITY BUILDING
			The PCD process will be co-created,	To ensure maximum flexibility for our	Because the PCD process is a
- 11:15	Overview of the people-centered design process and activities	Dr. Achilles Katamba, Ms. Montana Cherney Dr. Achilles Katamba, Ms. Talemwa	from start to finish, by the country end-users, stakeholders and partner,	country end-users, stakeholders, and partners who are balancing many	bottom-up approach, it is best learned when experienced. As such, the core
- 11:45	Question and answer session	Nalugwa, Ms. Jacqueline Huh, Ms. Montana Cherney	including the Ministry of Health, National TB Programme, local	competing priorities, the PCD process will be implemented in three (3)	value underlying our approach is to strengthen the capacity of the country
- 12:00	Reflections from the Stop TB Partnership Uganda	Dr. Paddy Busulwa	implementers, civil society and community representatives, and	phases.	end-users, stakeholders, and partners and reinforce learnings along each
- 12:15	Closing remarks from the Ministry of Health	Dr. Daniel Kyabayinze	others.		phase.
- 12:30	Group photo	Ms. Racheal Ninsiima			
	and circums	ng the end-users' needs, preferences, tances before we design, build, and		ed to capture stakehol	der needs across
	and circums		The study is designed the country and TB		der needs across
	and circums implement T 	tances before we design, build, and B innovations PLE-CONTROLY FOR ATC. Immatic and inclusive People-centered Design ounderstand people's needs, preferences, and PCO MMERCINE Description needs, preferences, and circumstances and how as evices more convenient, efficient, and adsptable for attributed to be addression. Their Literative, site: to this and select decentralized, integrated, and people- es and product innovations to introduce			der needs across







Resources

NOME DATE DATE <thdate< th=""> DATE DATE <thd< th=""><th>Work plan Use this illustrative timeline as a tool to plan your PCD process and adapt it according to your needs.</th><th>Work plan ⊻</th></thd<></thdate<>	Work plan Use this illustrative timeline as a tool to plan your PCD process and adapt it according to your needs.	Work plan ⊻				
Weiter Heaters Team Kick Off Use the following direk to facilitate your the keep of advanced by a factoring the workshop the start of duratively of each other responsibility, setterface to all other responsibility, setterface to all other responsibility, setterface to all other communication strategies in place.	Team kick off deck Use this workshop agenda to get to know each other better as a team, clarify roles and responsibilities, and define the project's goals together.	Team kick off deck ⊻				
News Mediation Mediation Community 10.0 Advancementaria Notice Mediation Community Notice Mediation Community 00.4 10.0 Notice Mediation Community Notice Mediation Community Notice Mediation Community 00.4 10.0 Notice Mediation Community Notice Mediation Community Notice Mediation Community 00.4 10.0 Notice Mediation Community Notice Mediation Community Notice Mediation Community 00.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 00.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 00.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 01.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 01.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 01.4 Notice Mediation Community Notice Mediation Community Notice Mediation Community 01.4 Notice Mediation Community Note Mediation Community Note Mediation Community<	Project launch event deck Take a look at the workshop deck from the project launch event from Walimu to set up your own launch event.	Project launch event deck				
Find here a non- exhaustive list of resources to learn more	<u>Designforhealth</u>					
about PCD	UNICEF's Human Centered Design 4 Health					
	HCD Training Workbook					
	<u>Global Health: Science and Practice's special issue of Human-Centered Design Looks to the Future</u>	n Design for Health:				





o2 Understand various user groups' needs



INTRODUCTION

Understand various user groups' needs

Complement existing insights and learnings with a more comprehensive understanding of what the various user groups' need and want in their own words by conducting PCD interviews and focus group discussions. With these one-on-one conversation you will build trust and empathy to get an in-depth view of people's daily lives, beliefs, past and current experiences and mindsets.⁹

Steps to understand various user groups' needs

Planning	7 Establish your baseline, define what you want to learn, and frame your objectives	Ecosystem map ↓ Journey map ↓
	8 Identify sites and users for interviews and focus group discussions	
	9 Apply for and obtain Institutional Review Board (IRB) approval	
	10 Prepare PCD interview guides and facilitate dry runs	
	11 Coordinate PCD interviews and focus group discussions	
	12 Finalize interview guides	Interview guides 🛛 坐
Conducting	13 Conduct interviews and/or focus group discussions	
Synthesizing	14 Transcribe, "tag" notes, and group into key themes	Excel template ⊻ Miro template ⊻
	15 Weekly synthesis to refine and iterate interview guides	
	16 Conduct final synthesis	
	17 Facilitate stakeholder workshop to validate and prioritize opportunity areas	Workshop deck ⊻
	18 Write synthesis report	Synthesis report ⊻

RE-IMAGINING

Planning for PCD interviews

7

Establish your baseline, define what you want to learn, and frame your objectives

Start by understanding what is known about TB in your local context. This can be done by sharing your expert knowledge, through desk research, facilitating expert interviews, or creating a stakeholder ecosystem map or journey map. Create a stakeholder ecosystem map to understand all the stakeholders and partners, including civil society and communities, engaged and involved in the TB care ecosystem - and use this map to identify what you already know or do not know about each of the stakeholder and partner groups, including civil society and communities, and who you want to include in the PCD interviews and focus group discussions.

Create a journey map to illustrate, step-by-step, the key moments a user group experiences across the end-toend TB care journey. Use this to identify known bright spots, pain points, and knowledge gaps to inform the interview planning.



Figure 6: Ecosystem map from FIT team in Viet Nam

Ecosystem maps are a visual representations of stakeholders involved in a system and the relationships between them. Health decisions are not simple ones, so ecosystem maps can play a critical role in showing the flow of information and relationships that shape health behavior, particularly in fragmented and resource-constrained environments. When collaboratively developed through a participatory design process, they can help to reveal the complex interactions between formal and informal components of health systems.¹⁰ Ecosystem maps can serve as a starting point for identifying key user groups to involve in the interviews and workshops.

Ecosystem map

 Autor strates
 Image: strates

Figure 7: Journey map from WALIMU team in Uganda

Journey maps are a framework that can help teams think through and strategize about key moments for different stakeholders as they experience a system or solution. A journey map can, for example, lay out: how stakeholders first become aware of a solution; what their initial interactions and engagement with it are like; how they might become a repeat user; and how the solution might ultimately impact their life.This can be a valuable tool for revealing the many gaps and barriers that stakeholders face as they interact with fragmented health systems over time.¹¹

Journey map ψ



Define what you want to learn during your interviews: Next, it is time to take a step back. Discuss as a team what is not known in the TB space in your local context – either areas where there are knowledge gaps or where you would like to more deeply understand why people behave in a certain way. Start with a long list of topics.

Frame your objectives: Now it's time to prioritize topics while keeping the RTC objectives in mind. Here is an example of how the FIT and Walimu teams framed their objectives:

Guiding question: What are opportunity areas to provide decentralized, integrated, and people-centered TB services?

Objective 1: Documentation of opportunity areas to provide decentralized, integrated, and people-centered TB services.

Identify stakeholders to include

In PCD it is important to talk to a broad spectrum of stakeholders. Identify based on your ecosystem map, whom to involve into the process. This could be in-country and global stakeholders and partners, including Ministries of Health, country programmes, care providers (i.e., public and private, community health workers, etc.), and TB affected people (TBAP) and communities, including TB survivors.

8

Identify sites and participants for interviews and focus group discussions

In PCD it is not about the quantity, but the quality of insights gathered with your interviewees and collaborators. Talking to the right people is necessary to get to the right insights.

Start by defining the stakeholders needed to answer your interview objectives. Think about the distribution of your recruitment target and consider parameters including, but not limited to gender, age, income, ethnicity, etc.

Next, make a decision on your recruitment strategy: Do you need support in recruiting your participants, e.g. by a recruitment agency, or are you recruiting the participants yourself or through your network? How will you incentivize participation?

Lastly, create a list of the number of people you want to interview in each stakeholder group, incl. geography, demographics, language, requirements (e.g., video call, in person, etc.), duration of each interview, etc. Write screener questions for each stakeholder group to help your team recruit the right participants.



9

Apply for and obtain Institutional Review Board (IRB) approval

In some cases, you may be required to obtain IRB approval before conducting interviews and follow certain guidelines related to data privacy, protecting individually identifiable health information, and ensuring the proper consent process and documentation. If you anticipate requiring IRB approval, it's advisable to acquaint yourself with the process as soon as possible, given that the application and review process can take weeks to months and may require multiple cycles of feedback and application updates.

10

Prepare PCD interview guides and facilitate dry runs

Creating people-centered interview guides is a crucial step in ensuring the quality of insights gathered from interviewees and collaborators. Note that interview guides are often included in the IRB application.

1. Create interview guides

The user interviews aim to uncover new learnings and insights, and richer stories about the needs and wants, hopes and dreams of TB stakeholders. Well-designed interview guides support the teams to run the interview activities confidently and successfully. To achieve this, first, identify the key questions that align with your research objectives, ensuring that they target the specific information you need. Next, craft a script that encourages participants to openly share their experiences and opinions, creating a comfortable and engaging atmosphere. It's essential to use clear and straightforward language, avoiding jargon or technical terms that may hinder communication.

2. Facilitate dry runs

Facilitate dry runs with a small group of people to validate that the questions are comprehensible and to identify any issues or areas for improvement. This small group should have similar characteristics with your intended interview group. This will allow you to get insights on where changes are required in case questions are not clear or do not attract relevant responses.

3. Continuously improve the interview guides

After running the dry runs, discuss with your team what went well and what did not. For example, was there enough time to get through all questions or topics? Are there ways to improve how the questions were asked to make it easier for the participant to respond? Are you getting rich enough insights or do you need to probe more deeply on certain topics? Based on this discussion, revise the interview guides until you feel confident in the guide itself and the outputs you're getting from the interviews.

HCW/CHW Interview Guide along key themes

01 Welcome

We cannot thank you enough for taking the time to speak with us today and are very grateful. for the opportunity to learn from you during this conversation

We are representing the Reimagining TB Care Initiative, a group of organizations that work to make TB services more accessible to TB affected people based on their needs, preferences, and circumstances

We want to hear about and understand your personal views in receiving of TB services, how you and your family make decisions about your, diagnosis, treatment and how you get informed about TB and TB services.

We are interested in your own personal views and experiences so please be as honest as you can. There are no right or wrong answers and if you feel uncomfortable with any question it is ok to pass.

Do you have any questions before we begin?

02 Awareness

- 1. Knowledge of TB as disease
 - a. What do your patients know about TB?b. How do they perceive TB in their communities?
- Misconceptions about TB

 Are there any myths or misconceptions about TB that you have heard from your patients?

 Rethinking access to TB information

 What information about TB do you give your patients (screening, diagnosis, treatment,
 - care)?
 - b. How do you currently provide information to your TB patients? Do you use supporting
 - materials for sensitization sessions? How do you think information (about TB & TB services) can be provided to people outside с. the facility to inform them better about TB? How about within the facility? What can be learned from other out-reach programs?

Output

- Understanding people's unmet need for/ and access to information about TB
- Understanding how and where information can be best made available to people

03 Stigma

- 1. Causes for stigma related to TB
 - a. What causes stigma?
 - b. What causes discrimination?
 - What could help you as a HCW/CHW to provide services without stigma?
- Re-imagining TB services for reduced stigma a. How best can we provide TB services to people without getting stigmatized? 2

Output:

Understanding the fears/worries of people connected to stigma Understanding how services can be delivered that reduces stigma

Figure 8: Interview guides

Interview guides

Coordinate PCD interviews and focus group discussions

To successfully execute your interviews and focus group discussions, it's necessary to establish a wellorganized process. Begin by creating a comprehensive schedule that outlines the dates, times, and locations (virtual or physical) for each session. Next, send invitations to participants, including the schedule and any essential instructions or materials. Keep in mind, for instance, that when you want to schedule meetings with TB affected people, you may need to manage appointments with health facilities where their care is being managed. Confirming attendance with participants before the sessions helps to ensure their commitment. Prior to the interviews or discussions, assess the suitability of the location, ensuring it offers adequate space and necessary equipment. Assign specific roles to team members, designating responsibilities like note-taking or moderating to ensure the smooth facilitation of the sessions. Additionally, provide participants with clear instructions on how to join virtual interviews or discussions, ensuring a seamless and productive environment. If you want to audio record the sessions, you will need a recording device (e.g., a mobile app) and should do a test-run prior to the interviews.

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Finalize interview guides

Talking to people directly, in interviews or focus group discussions, will help you uncover new insights about people's needs and wants and hopes and dreams. To complete your interview guide, explore the following deep dives and best practices. Additionally, you can examine the exemplary interview guide for reference. Keep in mind that you can always iterate the interview questions based on identified gaps in the data collection.



Conducting PCD interviews and focus group discussions

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Conduct interviews and/or focus group discussions

Once you have finalized all preparations, you can conduct your interviews and/or focus group discussions. To effectively manage the amount of information, it is advisable to take some time after each interview or focus group discussion to organize the recordings, photos, and notes digitally in a folder.

Learn more about interviews

Method Deep-Dive: Interviews

Interviews are at the core of the PCD process. It is important to understand more about the people you're designing for and hearing from them in their own words. The information gathered is often much richer and goes beyond the surface to uncover responses that might not be solicited from normal survey methods. The style of communication is kept loose, semi-structured and conversational.¹²

Ideally, interviews are conducted in the environment, or context, in which the experience occurs, such as a person's home or a health facility. Ensure that the interview setting encourages the interviewee to open up and speak freely. For example, when talking to TB affected people, it is helpful not to have other attendees like healthcare workers or people from their social network within hearing distance. The insights you are collecting are qualitative, observed data, rather than quantitative, measured data and give a more holistic understanding than traditional interviewing techniques.

Best Practices: Interviews

Open questions: Open-ended questions help the participant get into a natural flow and give us important information about things which we might not even think of asking.

Explore the problem space: We don't focus on getting the solutions presented by our interviewees. Our interviewees own the problem; we own the solution.

No interpretation: We make sure to write down exactly what the person is saying, not what we think they mean. Later during synthesis, we can analyze what was meant.

The five whys: Even if it sounds obvious, we ask why, sometimes five times in a row, to better understand the behavior or the feelings of an interviewee and the root causes of key decisions.

Allow silence: Silence can sometimes feel uncomfortable, especially with strangers. In interviews, silence can lead to unforeseen topics, which is why we sometimes leave space for the interviewees to think and reflect.

Learn more about focus group discussions

Method Deep-Dive: Focus group discussions

Focus group discussions provide rich and diverse perspectives into relationship and community dynamics.

Focus group discussions are used to explore or validate a topic or idea with a group of two or more people. Depending on the purpose of the focus group discussion, it can be conducted with homogenous or heterogenous groups of people. The information gathered in group-settings is richer and of greater variety than information gathered from individuals. What one person says stimulates thought in another person, ideas are elaborated and opposed – the sum becomes more than its parts.

The ideal size for a focus group discussion is 6-9 people, allowing for enough diversity while remaining manageable. Odd numbers are great in order to be able to get a majority view if necessary. Groups can either be facilitated as a group interview (i.e. main purpose to obtain many responses from many people) or as a group discussion (i.e. main purpose to have the group extensively debate a topic).¹³

Best Practices: Focus group discussions

Establish rapport and make it fun: Be open, friendly, and focus on building rapport. This can be more essential to insight than interview-technique. Add interactive exercises if possible. Also, a few good laughs go a long way.

Be inclusive: There are introverts and extroverts. Some people have a tendency to remain in the background – invite them to contribute. Others have a tendency to talk (too) much – manage them.

Get the seating right: A circle-seating is the optimal arrangement for a group. Balance seating distance to create the right spatial setup to facilitate good discussion. Keep the circle open on one side – people may need to use the bathroom.

Be a facilitator, not a controller: Your job is to enable a rich and balanced discussion and to ensure all ground is covered. The groups' job is to talk and provide

Be prepared: Know your turf and what it is that you need to get out of the discussion. Internalize the discussion guide and only have it as a cheat sheet. This allows you to be as present as possible.



Synthesizing PCD interviews

Once you've completed your interviews, you're now ready to process the data and synthesize the insights. Synthesis means to analyze the data collected during the interviews. The goal is to make sense out of the data, and to identify the needs and wants, as well as hopes and dreams of TB affected people.

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Transcribe, "tag" notes, and group into key themes

As a first step, start by transcribing the notes you took during the interviews. Translate your notes if needed and transferring each piece of information onto its own sticky note. This can be done in analog form or digitally, using tools such as Miro or Excel. Regardless of the choice of tool, it is essential for multiple people to be involved in this process at the same time and to include everyone who was part of the interviews. Once you have transferred the information from the interviews, begin to build clusters of emerging opportunity areas. Move the sticky notes around to see how insights fit together and cluster them into opportunity areas. Name these opportunity areas accordingly, so that others quickly understand what the areas are. Once you have identified the first opportunity areas, you can start tagging the sticky notes as well. The tags help to structure the information even more. Tags can add additional context or information that isn't evident from the areas themselves.

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Weekly synthesis to refine and iterate interview guides

The goal of the regular synthesis is to identify what has been learned so far overall. Start by looking at each theme individually and assess the key insights within this theme, as well as the root cause leading to this theme. This is essential so that potential solutions later on address root causes, rather than merely tackling later observations. If you are not yet able to identify root causes for all areas, take note of this for further interviews to dive deeper into those. After looking at each area individually, take a step back and look at the overall picture that is forming and assess whether it is a complete overview of the care journey and all stakeholders involved. Do this along the entire journey, going through one stakeholder after another and take note of any blind spots you may identify during this exercise for further interviews. Based on the identified gaps you can now refine your interview guide. If there are opportunity areas that you feel haven't been explored deep enough, you can specifically probe for those in the remaining interviews. If there are stakeholders that do not seem to be represented well enough, you might need to adjust the scope of the interviewees and may require additional recruiting. Remember to also transcribe and tag insights which come up in these remaining interviews.





RE-IMAGINING

TB CARE

Conduct final synthesis

After all the interviews and focus group discussions are conducted, take your weekly synthesis material to look at your entire dataset and analyse it to understand the key insights in people's behaviour and preferences. Group the insights into digestible pieces, illustrated with various quotes. Take a step back, look at what you have and ask yourselves, "are there gaps in our insights? Are there specific topics people are not talking about? Do we need to conduct more interviews to fill these gaps?"

Once the key insights are identified, it is helpful to articulate them through well-defined problem statements and "how might we" statements. These statements serve as valuable documentation tools, helping you clearly express the challenges and opportunities uncovered during your analysis. Furthermore, mapping these insights along the TB care journey can provide a holistic view of potential opportunity areas.

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Facilitate stakeholder workshop to validate and prioritize opportunity areas

With the opportunity areas you have defined based on the synthesis of the interviews, you are ready to plan a workshop to engage stakeholders in the process of prioritizing those opportunity areas. The goal is to ensure a common understanding of the interview insights, collaboratively prioritize the opportunity areas, and gather perspectives on the criteria used to evaluate innovations across desirability and fit, impact, and feasibility.

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Write synthesis report

Lastly, it is essential to engage in an ongoing process of further validation of the insights. Do this by providing a concise yet comprehensive overview of the insights and learnings within the synthesis report, which could also be in the form of a publication. Then, ask additional relevant stakeholders to review and provide feedback on this report. By doing so, the understanding of needs and the resulting opportunity areas can increase in legitimacy and further stakeholders will buy-in to the upcoming selection and introduction of innovations.





Resources

	Ecosystem map Download the ecosystem map from Walimu and FIT to gain insights and inspiration or download the ecosystem map template to create your own.	Ecosystem map ⊥
	Journey map Download the journey map from Walimu and FIT to gain insights and inspiration or download the journey map template to create your own.	Journey map ⊻
Hadraid information To community A second sec	Interview guide Review this exemplary guide for conducting user interviews and focus group discussions and adapt it to your learning objectives and country.	Interview guide 👱
The debrief process of an interview ensures that the right quality of notes is captured, and pre-categories the information.	Tagging template Take a look at two tagging options: Excel version by FIT and Miro version by Walimu.	Excel template ⊻ Miro template ☐
Our storing point will be user needs and insights, we will then align on criteria to prioritizing innovations, then create a long list and map innovations to the prioritized focus create THE THE STORE AND	Opportunity areas alignment workshop Use this workshop deck to get ideas on structure and suggested activities for reviewing insights from interviews and focus group discussions, prioritizing opportunity areas, and aligning on the product prioritization framework.	Workshop deck ⊻
<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	Synthesis report Take a moment to review the synthesis report by FIT and Walimu to learn from their insights and approach to report writing.	Synthesis report ⊻
	Interview checklist Use this checklist to ensure that you consider all steps during the planning, conducting and synthesising of the interviews.	Interview checklist ⊻





o3 Identify, prioritize and select TB innovations





INTRODUCTION

Identify, prioritize and select TB innovations

Within this phase you will embark on a collaborative process to identify, prioritize, and select innovations. Throughout this phase, you will discuss and challenge innovations with a diverse set of stakeholders in workshops, and, together, select one or more innovations for introduction. To choose the most promising innovations, you will need to rely on the user needs gathered - the insights and focus areas defined through the user interviews. Next, you will need a set of frameworks and workshop facilitation materials to guide you through this process.

Steps to identify, prioritize and select TB innovations



Conduct desk research and consult stakeholders to create a list of innovations

Innovation scan: Now is the time to embark on the scan for suitable innovations and compile them into an overview. In this endeavor, various sources can be tapped, and desk research can be conducted through various sources. Alternatively, consulting stakeholders or organizations directly can provide insights into unfamiliar innovations.

When conducting the scan for innovations, it is helpful to categorize each innovation to manage the amount of products. A foundational set of information includes details about the company, a concise product description, and data regarding feasibility and fit.

Models Aley solution Models Aley solution Molecular test - Nevie Molecular test - Assay Molecular test - Assay Molecular treatment duration estimation Tar Test Tar Test	Name T Europa Dehi Light backpack X-zy TIS MBLA RSS signature assay MPT-64 Therapy end model	Opportunity area - Viet Na Active Case Finding Active Case Finding Active Case Finding	Opportunity area - Uganda Resources to diagnose Resources to diagnose Resources to diagnose	General information Type Product Product	Dx - Portable X-Ray	Ready now	Stage of development	https://aspen-	Care journey steps	Solution scope	Other disease applicability	Full description	User groups
Models Aley solution Models Aley solution Molecular test - Nevie Molecular test - Assay Molecular test - Assay Molecular treatment duration estimation Tar Test Tar Test	Europa Delft Light backpack X-ray TB NBLA RISKS signature assay MPT-64	Active Case Finding Active Case Finding Active Case Finding	Resources to diagnose Resources to diagnose	Product	Dx - Portable X-Ray	Ready now	Commercially available	https://aspen-	Prevention & screening	Universal	applicability	Portable X-ray in an easy-to-car	- Oser groups
Molecular test - Device Molecular test - Assay Molecular test - Assay Molecular test - Assay Molecular testment duration estimation Test	TB MBLA RISK6 signature assay MIPT 64	Active Case Finding Active Case Finding	Resources to diagnose	Product			commercially available	nttps://aspen-	Prevention & screening			Portable X-ray in an easy-to-cal	
Molecular test - Device Molecular test - Assay Molecular test - Assay Molecular test - Assay Molecular testment duration estimation Test	TB MBLA RISK6 signature assay MIPT 64	Active Case Finding	Recounter to disease			Ready now	Commercially available	https://dc.delft.care/wray-systems/	Prevention & screening	Universal		The Delft Light is a truly portab	ble Health providen
Molecular test - Assay Molecular treatment duration estimation 19 Test 19 Test 19 Test 19 Test 19 Test 19 Test 19 Test 19 Test 19 Test 19 Test	MPT 64			Product	POC Dx	Ready soon	Development	https://www.lifearc.org/strategy/o	Diagnosis	Tuberculosis specific		The assay targets 165 rRNA fro	om Health provider:
Molecular treatment duration estimation (# Text fai Text		Active Case Finding Active Case Finding	Resources to diagnose Resources to diagnose	Product Product	POC - Dx - Blood based POC Dx - ELISA	Ready soon Ready soon	In dinical trial	https://www.quantumdx.com/blog/ https://pubmed.ndbi.nim.nih.gov/32	Diagnosis	Tuberculosis specific Tuberculosis specific		RISK6 is one example of a Assay that detects MPT64 (Ant	Health provider:
1%1 Test 1%1 Te		Active case Finding	Resources to diagnose	Product		Ready soon	Development Development	https://pubmed.ncbi.nlm.nih.gov/32 https://pubmed.ncbi.nlm.nih.gov/33		Tuberculosis specific		Based on a host RNA signature,	
1월 Test 1월 Test 1월 Test 1월 Test 1월 Test 1월 Test 1월 Test	CTST	Active Case Finding	Resources to diagnose	Product	POC Dx - LTBI	Ready soon	Commercially available		Diagnosis	Tuberculosis specific		Skin injection (ESAT-6 + CFP-10	0) test Health providers
FB Test FB	LIAISON QuantiFERON TB Gold Plus	Active Case Finding	Resources to diagnose	Product	POC Dx - LTBI	Ready now	Commercially available	http://www.diasorin.com/en/immun		Tuberculosis specific		Automated/High throughput: In	n Health providen
FB Test FB Test FB Test FB Test FB Test	VIDAS TBIGRA UOFeron TB LTBI	Active Case Finding Active Case Finding	Resources to diagnose Resources to diagnose	Product Product	POC Dx - LTBI POC Dx - LTBI	Ready now Ready now	Commercially available Commercially available	https://www.biomerieux.de/klinisch https://lionex.de/product/lioferon/	Diagnosis Diagnosis	Tuberculosis specific Tuberculosis specific		Automated/High Throughput: F EUSA-based IGRA: 4 tubes, 16-3	-ully Health provider
föl Test föl Test föl Test	Advansure TB	Active Case Finding	Resources to diagnose	Product		Ready now	Commercially available	https://www.igchem.com/product/P		Tuberculosis specific		ELISA-based IGRA: 3 tubes, 16-1	24 Health provider
för Test	Standard E TB Feron	Active Case Finding	Resources to diagnose	Product		Ready now	Commercially available	https://www.sdbiosensor.com/prod		Tuberculosis specific		ELISA-based IGRA: 3 tubes, 16-1	
fBI Test	QAreach ICHROMA IGRA-TB	Active Case Finding Active Case Finding	Resources to diagnose Resources to diagnose	Product Product	POC Dx - LTBI POC Dx - LTBI	Ready soon	Development	https://www.boditech.co.kr/en/pro	Diagnosis	Tuberculosis specific Tuberculosis specific		Fluorescence lateral flow, 8 ass Fluorescence lateral flow, 3 tub	
	Standard F TB-Feron FIA	Active Case Finding	Resources to diagnose	Product		Ready now Ready now	Commercially available Commercially available	https://www.sdbiosensor.com/prod	Diagnosis	Tuberculosis specific		Fluorescence lateral flow, 3 tub	
	R-Biopharm, IP-10 release assay	Active Case Finding	Resources to diagnose	Product	POC Dx - LTBI	Ready soon	Development	not yet released	Diagnosis	Tuberculosis specific		3 strip lateral flow test, 3 tube	es; 16- Health provider:
innovative specimen collection	Oral swab testing	Active Case Finding	Resources to diagnose	Product	POC Dx - OSA	Ready soon	Development		Prevention & screening	Tuberculosis specific		Using tongue swabs instead of	Health providen
	TB Connect App	Data Management Systems	Resources to diagnose	Product (Software) Product	Digital Health Application Dx - DRT	Ready now Ready soon	Available Development	https://mylabglobal.com/tbconnect- info confidential? Request more info	Prevention & screening	Tuberculosis specific Tuberculosis specific		The T9Connect App is designed	
Realth data management platform	miBiome Targeted panel for DRTB VITIMES (Viet Nam TB Information Mgmt Electronic	Data Management Systems		Product (Software)		Ready now	Available	http://vitimes.org.vn/	Cross-cutting	Tuberculosis specific		tNGS: Sequencing of MTB to ide Electronic TB surveillance and	Health providers
Health data management platform	eTB Manager	Data Management Systems		Product (Software)	Digital Health Platform	Ready now	Available	https://msh.org/wp-	Cross-cutting	Tuberculosis specific		The Systems for Improved Acce	
Data collection application	mHealth Apps: PATH	Data Management Systems	Resources to diagnose	Product (Software)	Digital Health Platform	Ready soon	Development	https://media.path.org/documents/l	Treatment	Tuberculosis specific		Platform that sends out SMS	Health provider
Imear testing	CellScope	A set of the set of the first		Product (Software)		Ready soon	Development	https://cellscope.berkeley.edu/		Tuberculosis specific		The Fletcher Lab at UC Berkele	
Accilence TB solutions	TAM (T cell activation marker) TB assay	Active Case Finding	Resources to diagnose	Product	Dx - Pediatric population	Ready soon Ready now	Development Available	- https://www.who.int/publications/l	Diagnosis Cross-cutting	Tuberculosis specific Tuberculosis specific		Blood test that analyzes host T The WHO operational handbool	
Molecular test - Assay	M10 MDR TB	Active Case Finding	Resources to diagnose	Product	Dx - MTB + DST	Ready now	Commercially available	https://www.sdbiosensor.com/prod		Tuberculosis specific		STANDARD [™] M10 MDR TB is a	a Health providen
Molecular test - Assay	M10 MTB/NTM	Active Case Finding	Resources to diagnose	Product	Dx - MTB + NTM	Ready now	Commercially available	https://www.sdbiosensor.com/prod	Diagnosis	Tuberculosis specific		STANDARD [™] M10 MTB/NTM is	is a Health provider
	Q-RFIA PCR Kit	Active Case Finding	Resources to diagnose	Product Product		Ready now	In dinical trial	·	Diagnosis	Tuberculosis specific		Bioneer is working on a Q-RFIA	A Health providen
	Lumira Dx - ORP Hyle APP	Active Case Finding Active Case Finding	Resources to diagnose Decentralized care	Product Product (Software)	POC-Dx POC-Dx	Ready now Ready now	Commercially available Commercially available	https://www.lumiradx.com/de- https://www.hyfe.ai/	Prevention & screening Prevention & screening	Universal Other disease specific	Other respiratory diseases	CRP is a general inflammatory Al-assisted analysis of cough so	
Viassisted cough sound analysis	Stethee Pro	Active Case Finding	Decentralized care	Product (Software)	POC - Dx	Ready soon	Commercially available	https://m3dicine.com/	Prevention & screening Prevention & screening	Other disease specific	Other respiratory diseases	Al-assisted analysis of cough so Al-assisted stethoscope. Under	going Health provider
Al-assisted cough sound analysis	ImPulse Una	Active Case Finding	Decentralized care	Product (Software)	POC - Dx	Ready soon	Commercially available	https://www.level42.ai/	Prevention & screening	Other disease specific	Other respiratory diseases	Al-assisted stethoscope. Under	rgoing Health provider
	Idnoma POC CRP	Active Case Finding	Resources to diagnose	Product	POC- Dx	Ready now	Commercially available	https://www.boditech.co.kr/en/pro	Prevention & screening	Universal		CRP is a general inflammatory	
Rapid test Antigen test - LAM	SeroSelectTB Flow-TB	Active Case Finding	Resources to diagnose	Product Product		Ready soon Ready soon	In divical trial Early stage development	https://www.seroselecttb.org/resea Company: https://www.salusd.com/;	uragnosis Preventico & crossolos	Tuberculosis specific Tuberculosis specific	+	Rapid serological triage test, al Lateral flow urine UAM test wit	
	High-sensitivity TB IAM	Active Case Finding	Resources to diagnose Resources to diagnose	Product	POC - Dx POC - Dx	Ready soon Ready soon	Early stage development	-	Prevention & screening	Tuberculosis specific		Lateral flow unine UAM test with	
Antigen test - LAM	Third generation LAM Boditech	Active Case Finding	Resources to diagnose	Product	POC - Dx	Ready soon	Early stage development		Prevention & screening	Tuberculosis specific		Lateral flow urine LAM test. Ai	ims to Health provider
Antigen test - LAM	Third generation LAM Biopromic	Active Case Finding	Resources to diagnose	Product		Ready soon	Early stage development		Prevention & screening	Tuberculosis specific		Lateral flow urine LAM test. Ai	
Antigen test - LAM Molecular test - Assay	Standard F, TB LAM (Third generation LAM SD Biosensor Genoscholar FQ+KM-TB II	Active Case Finding	Resources to diagnose	Product Product		Ready soon Ready soon	Development	https://www.nipro-	Prevention & screening	Tuberculosis specific Tuberculosis specific		This will be a potential 3rd- LPAs to test for MTB resistance	e Health provider
	Deeplex Myc-TB			Product		Ready soon Ready soon	Commercially available Development	https://www.repro- https://www.deeplex.com/	Diagnosis Diagnosis	Tuberculosis specific	-	Deeplex [®] MycTB, developed by	
	DeepChek DST			Product		Ready soon	Commercially available		Diagnosis	Tuberculosis specific		The DeepChek* Assay 13-Plex #	
Molecular test - Sequencing	TB assay	1		Product	Dx - DST (tNGS)	Ready soon	Development	*	Diagnosis	Tuberculosis specific		DST of first and second-line TB	drugs Health provider
Molecular test - Sequencing	Tuberculini CIXI01			Product		Ready soon	Late-stage development	https://demedi.com/	Diagnosis	Tuberculosis specific		tNGS assay (12 first- and second	
	Everwell DAT (99D0TS) Everwell DAT (VOT)	Human Resources Human Resources	Decentralized care Decentralized care	Product (Software) Product (Software)		Ready now Ready now	Commercially available Commercially available	https://www.everwell.org/99dots https://www.everwell.org/vot	Treatment Treatment	Universal Universal		99DOTS is an affordable digital VOT (Video Observed Therapy)	
Digital adherence technology	Everwell DAT (Smart PII Boxes)	Human Resources	Decentralized care	Product		Ready now	Commercially available	https://www.everwell.org/adheren		Tuberculosis specific	Other infectious diseases (Malaria,	MERM (Medication event remi	inder People affected I
Molecular test - Assay	SensititreTM MYCOTBI plate	1		Product	DST	Ready now	Commercially available (for research	https://www.who.int/publications/d	Diagnosis	Tuberculosis specific		Culture-based drug susceptibilit	
	DPPD test			Product		Ready now		https://www.creativebiolabs.net/Re		Tuberculosis specific		Skin test for TB infection	Health provider:
	AccuPower* TB & MDR Real-Time PCR Kit AccuPower* XDR TB Real-Time PCR Kit A			Product Product	Dx - DST Dx - DST	Ready now Ready now	Commercially available (for research	https://eng.bioneer.com/20 tbmdr- https://eng.bioneer.com/20 xdra-	Diagnosis	Tuberculosis specific Tuberculosis specific		AccuPower® TB and MDR Real- in vitro DST through PCR for:	Time Health providen Health providen
Molecular test - Assay	AccuPower® XDR TB Real-Time PCR Kt-B			Product	Dx - DST	Ready now	Commercially available for research	https://eng.bioneer.com/20.wdrb	Diagnosis	Tuberculosis specific		MTB testing and in vitro DST	Health providen
Molecular test - Assay	EasyNAT [®] MTC/NTM			Product		Ready now	Commercially available (for research	https://en.bioustar.com/product/11		Tuberculosis specific		Kit for detecting MTB from	Health providen
	Genechip mfoDx ^{are} MDR-TB Kit			Product	Dx - DST Dx - MTB + DST	Ready now	Commercially available (for research		Diagnosis	Tuberculosis specific		Genechip (CapitalBio, Beijing, C	
	MDR/MTB EUTe MG8* Kit	-		Product Product		Ready soon Ready soon	Commercially available (for research	https://www.empediagnostics.com/ https://www.elitechgroup.com/wp-	Diagnosis	Tuberculosis specific Tuberculosis specific		The kit detects the presence of RT-PCR assay designed for dete	MTB Health provider:
Molecular test - Assay	FluoroType X08-TB assay			Product	Dx - MTB + DST	Ready soon	Development		Diagnosis	Tuberculosis specific		Single-tube high-multiplex PCR	and Health provider:
Molecular test - Assay	TruArray® MDR-TB Assay	Active Case Finding	Resources to diagnose	Product	Dx - DST	Ready now	Development	https://akonni.com/products/trudia	Diagnosis	Tuberculosis specific		The Prototype TruArray® MTB	8 Health providers
		Active Case Finding	Resources to diagnose	Product		Ready now	Commercially available	https://www.molbiodiagnostics.com	Diagnosis	Universal		Compact, chip-based, fully	Health providen Health providen
	Truelab* Quattro Dx Real Time Quantitative micro PCR Truenat MTB (Plus)	Active Case Finding	Resources to diagnose Resources to diagnose	Product Product		Ready now Ready now	Commercially available Commercially available	https://www.molbiodiagnostics.com https://www.molbiodiagnostics.com		Universal Tuberculosis specific		Compact, chip-based, fully Chip-based real-time PCR test fi	
Molecular test - Assay	Truenat MTB-INH	Active Case Finding	Resources to diagnose	Product	Dx - DST kit	Ready now	Commercially available	https://www.molbiodiagnostics.com	Diagnosis	Tuberculosis specific		Chip-based real-time PCR test fi	for Health provider
Molecular test - Assay	Truenat MTB-RF	Active Case Finding	Resources to diagnose	Product	Dx - DST kit	Ready now	Commercially available	https://www.molbiodiagnostics.com	Diagnosis	Tuberculosis specific		Chip-based real-time PCR test fi	
	BIOFIRE FilmArray	Active Case Finding	Resources to diagnose	Product		Ready now	Commercially available	https://www.biomerieux.de/klinisch		Tuberculosis specific		Multiplex PCR system. All steps	
Molecular test - Device Novel drug regimen	TB LAMP	Active Case Finding	Resources to diagnose	Product	POC Dx - LAMP Tx - D8-T8	Ready now Ready now	Commercially available Commercially available	https://www.eiken.co.jp/en/ourfield https://apps.who.int/iris/rest/bitstr		Tuberculosis specific Tuberculosis specific		Simple and easy-to-use molecul 6 months all-oral treatment	ar Health provider: Health provider:
aboratory Information Management Systems	System One GeAlert	Data Management Systems		Product (Software)		Ready now	Commercially available		Diagnosis	Tuberculosis specific	Other respiratory and infectious	GxAlert: GxAlert is a remote di	loud- Health providers
aboratory Information Management Systems	System One Aspect	Data Management Systems		Product (Software)	Dx - Digital connectivity	Ready now	Commercially available	https://systemone.id/gxalert;	Diagnosis	Universal		Aspect is a non-disease-specific	and Health provider
	End TB App Suite		Awareness	Product (Software)	Digital Health Platform	Ready now	Available	https://ntp.doh.gov.ph/resources/do		Tuberculosis specific	Other respiratory and infectious	App suite that consists of 4 diffe	
innovative specimen collection	Aenose TB Breathalizer	Active Case Finding Active Case Finding	Resources to diagnose Resources to diagnose	Product Product		Ready soon Ready soon	Development Development	https://www.enose- http://www.rapidbiosensor.com/tbb	Prevention & screening Prevention & screening	Universal Tuberculosis specific		Device to analyze exhaled breat Device that detects T8 bacilli in	
Digital health education platform	TB Aarogya sathi app	Human Resources, Communications &	Awareness	Product (Software)	Digital Health Application	Ready now	Available	https://dhsgoa.gov.in/wp-	Cross-cutting	Tuberculosis specific		Can be used by general citizens	s as People affected
iocial media health innovation	WhatsApp Health Alert (Turn.io)	Communication & Advocacy	Awareness	Product (Software)	Covid19 WhatsApp Chatbot	Ready now	Available	https://www.turn.io/community/co	Prevention & screening	Universal		The WHO's free, automated 24	4-hour Community / div
	Celebrity led awareness raise HIV Prevention Ambassadors	Communication & Advocacy Communication & Advocacy	Awareness Awareness	Mindset Process	Celebrity revelation Community based intervention	Ready now	Available Available	https://www.theguardian.com/citie	Cross-cutting	Universal	+	Celebrity Amitabh Bachchan pu The HIV Prevention Ambassado	
	Not every cough is Covid. Think TB	Communication & Advocacy Communication & Advocacy	Awareness Awareness	Process Mindset	Community based intervention Social media toolkit	Ready now Ready now	Available Available	https://www.prepwatch.org/wp- https://www.thetruthabouttb.org/p		Tuberculosis specific	Other infectious diseases (Malaria,	This social media toolkit can be	e used Community / dy
Toolkits to facilitate awareness building	World TB Day 2023 social media toolkit	Communication & Advocacy	Awareness	Mindset	Social media toolkit	Ready now	Available	https://www.thetruthabouttb.org/p	Prevention & screening	Tuberculosis specific	Other infectious diseases (Malaria,	This social media toolkit can be	e used Community / civ
Toolkits to facilitate awareness building	Toolkit for running a Latent TB Champions programme		Awareness	Mindset		Ready now	Available	https://www.thetruthabouttb.org/p	Prevention & screening	Tuberculosis specific	Other infectious diseases (Malaria,	The Latent TB Champions Toolk	kit is Health providen
	Latent TB social media toolkit	Communication & Advocacy Communication & Advocacy	Awareness	Mindset	Social media toolkit	Ready now	Available	https://www.thetruthabouttb.org/p		Tuberculosis specific	Other infectious diseases (Malaria,	This social media toolkit can be	
	T8 stigma social media tiles and banners T8 symptoms and early diagnosis social media tiles and	Communication & Advocacy Communication & Advocacy	Awareness Awareness	Mindset	Social media toolkit Social media toolkit	Ready now Ready now	Available Available	https://www.thetruthabouttb.org/p https://www.thetruthabouttb.org/p		Tuberculosis specific Tuberculosis specific	Other infectious diseases (Malaria, Other infectious diseases (Malaria,	A range of colorful social media A range of colorful social media	
	Latent TB social media tiles and banners	Communication & Advocacy	Awareness	Mindset		Ready now	Available	https://www.thetruthabouttb.org/p	Prevention & screening	Tuberculosis specific	Other infectious diseases (Malaria,		
Public private mix approach	Sponsor Transport & pre-treatment evaluation	Financial support		Process	Community sponsoring	Ready now	Available	https://www.corporatetbpledge.org	Diagnosis	Tuberculosis specific		Sponsoring transport and	Health provider:
	Diagnostics Lab - Public private model	Active Case Finding	Resources to diagnose	Process	Community sponsoring	Ready now	Available	https://www.corporatetbpledge.org		Tuberculosis specific		Public Private Partnership whe	ere a Community / div
	PPM: Screening and sputum transportation Skill building for TB affected people	Active Case Finding Communication & Advocacy	Decentralized care Awareness	Service Process	Community sponsoring TB affected people support	Ready now Ready now	Available Available	https://www.corporatetbpledge.org https://www.corporatetbpledge.org		Tuberculosis specific Tuberculosis specific		A donor (e.g., corporate TB patients may face loss in	Community / dv People affected I
Community engagement programs	Treatment education for TB affected people	Communication & Advocacy	Awareness	Process	T8 affected people support	Ready now	Available	https://www.corporatetbpledge.org		Tuberculosis specific		TB treatment needs continuous	is care People affected I
Public private mix approach	Nutrition for TB/0R-TB patients and families	Financial support		Service	TB affected people support	Ready now	Available	https://www.corporatetbpledge.org	Treatment	Tuberculosis specific		The National TB Program provi	ides People affected
	Support Coursellors & Technicians	Human Resources	Resources to diagnose	Mindset	TB affected people support	Ready now	Available	https://www.corporatetbpledge.org		Tuberculosis specific		Trained health cadre is the	People affected
	WFP/UNAIDS rapid cash transfer pilot Data Use Community	Financial support Data Management Systems	Resources to diagnose	Process Service	Cash transfer program Global community working to	Ready now Ready now	Programme ended Available	https://www.unaids.org/sites/defau https://datausecommunity.org/		Other disease specific Universal	+	WFP and UNAIDS initiative to The DUC offers a way to coordi	
fealth data communities / networks	Health Data Collaborative	Data Management Systems	Resources to diagnose	Service		Ready now	Available	https://www.healthdatacollaborati	Cross-cutting	Universal	1	The HDC is a community of tech	
Realth data communities / networks	Data for Implementation (Data.FI)	Data Management Systems	Resources to diagnose	Service	Global network to improve health	Ready now	Available	https://datafi.thepalladiumgroup.co	Cross-cutting	Universal		Data for Implementation (Data	a.FI) is Health system n
Realth data communities / networks	Digital Square	Data Management Systems	Resources to diagnose	Service	Global network to improve health	Ready now	Available	https://www.healthdatacollaborati	Cross-cutting	Universal		Digital Square at PATH works	with Health system n
	Find TB Afya Record	Data Management Systems	Resources to diagnose	Product Product (Software)	Dx - T8 triage test Digital Health platform	Ready soon Ready now	Development Available	https://www.unimadx.com/findtb https://afyarekod.com/	Diagnosis Cross-cutting	Tuberculosis specific Universal	-	Find TM TB allows a rapid rule- The outbreak and disease	Health provident
	Anya Necord 1985-000/SIS-25/2-7	Carls way against a presis	news out to stage the	Product (contware) Product		Ready now Ready now	Available	https://anyarekod.com/ https://www.precihealth.com/self-	Prevention & screening	Universal		PreciHealth developed a system	
	Culture Care Collective	Human Resources	Decentralized care	Service		Ready now	Available		Cross-cutting	Universal		Culture Care Collective is a hyb	brid Health provider
Self blood collection device Differentiated service delivery	C4Ast			Product	Dx - DST	Ready now	Available	https://www.c4diagnostics.com	Treatment	Universal		The C4AST kit is composed of a	an Health provider:
Self blood collection device Differentiated service delivery Molecular test - Assay													fied Health provider:
Self blood collection device Differentiated service delivery Molecular test - Assay Rapid test	Serzo	Pata Management fosterer		Product Research (Collectore)	POC Dx - Lateral flow test	Ready soon	Development tuallable	https://www.senzo.com/tuberculosi		Tuberculosis specific	Other infectious diseases (Malaria,	An increased sensitivity-amplifi The dual facing LICT econcilates	in Mealth provider.
Self blood-collection device Differentiated service delivery Molecular test - Assay Bapid test Jaboratory Information Management Systems		Data Management Systems Data Management Systems		Product (Software) Product (Software) Product (Software)	Digital Health Application /	Ready soon Ready now Ready now	Available Available		Cross-cutting	Tuberculosis specific Universal Universal	Other infectious diseases (Malaria,	An increased sensitivity-amplif The dual-facing URCS proprietan 'The Abtrace Proactive Monito	ry Health provider:

This sheet displays a long list of all innovations identified within Product Innovation Scan

Figure 13: Innovation scan Excel

Innovation scan Excel \pm

(coming soon)





Prepare frameworks for innovation selection In / Out of scope guidance

To conduct a successful innovation scan, it is crucial to first define the type of innovation that is most relevant to your organization, whether it be product, process, service, or mindset innovations. From there, it is important to determine whether innovations across the entire cascade of care are relevant or if certain areas, such as treatment, should be excluded. Furthermore, taking a broader perspective and considering innovations from other disease areas that can be tailored to TB with minimal adjustments can lead to even more impactful and innovative solutions.

Another important factor to consider in your product scan is the development **stage of the innovations**. It is crucial to define whether you want to include innovations in ideation, research and development, commercialization, or commercially available innovations. You can either take a broad approach and include all stages, or focus on specific stages depending on factors such as target group for the innovations, regulatory processes, funding requirements etc. The last area to consider in defining an In / Out of scope guidance is **funding and support**. You should base this on your organization's principles and donors' requirements. For example, this might warrant excluding innovations that are already supported by other funding mechanisms as you may want to identify and scale-up an innovation in an area that is not yet supported.

Prioritization framework

After accumulating a collection of innovations, the product prioritization framework comes to your aid in narrowing down the selection. As introduced in chapter one, we base this process on the dimensions of desirability and fit, impact, and feasibility. Each dimension presents a set of guiding questions to assist you in evaluating and prioritizing innovations.

These guiding questions were written in collaboration with diverse stakeholder groups, ranging from TB affected people and civil society organizations to healthcare workers and National TB Program managers.







Innovation pre-selection

After having prioritized opportunity areas, you should identify which innovations are of highest relevance to address the unique challenges within each opportunity area. This will be achieved in two steps: First, by mapping all the innovations identified in the innovation scan to the prioritized opportunity areas and secondly by reviewing the mapping together with country stakeholders and pre-selecting the most promising innovations.

To conduct an innovation mapping, it is most effective to first group all innovations into different categories, e.g., social media health innovations, rapid diagnostic tests etc. In a second step, you can then map these categories to specific opportunity areas. Like this, you will have a set of different categories (each containing a set of innovations) to the opportunity areas. Together with country stakeholders, you should review this initial longlist and pick categories and innovations that are most relevant and hold the highest promise for impact and feasibility of implementation. The result will be a shortlist of innovations that can be presented in the second workshop.



Facilitate stakeholder workshop to prioritize innovations

In a second workshop, you will present the categories that you have categorized per opportunity area to key stakeholders. For this purpose, it is useful to present product demonstrations such as videos, flyers or physical materials in order to give all participants a tangible idea of how the innovations help support solving the challenges identified in the interviews. After the product presentation, the goal is to prioritize the categories according to the criteria of desirability and fit and impact in order to further narrow down the selection of innovations.





DETAILS UNDER CONSTRUCTION TO BE UPDATED Q1 2024

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Pressure-test prioritized innovations with critical user groups

In the next step, the innovations prioritized in the previous workshop will be discussed with relevant user groups to gather further details on desirability and fit and feasibility. The introduction readiness framework contains key implementation / integration considerations countries should think through before selecting a product to introduce. In parallel, you should start to investigate the introduction considerations in your country-context. The following set of questions can help you get started: Is the innovation commercially available in the country, can it be manufactured in-country or does it have to be imported? Is it obtainable through solve or multiple source procurement? Can it be distributed and through which channels? What are the regulatory approvals required, lead time for manufacturing, unit costs? Is the product design locked? Does it have a shelf-life? At which level of the health system is it approved for use?

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Facilitate stakeholder workshop to make final selection of innovation(s) to introduce

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The findings from the pressure testing of the innovations are incorporated into the next stakeholder workshop. During this time, you will engage stakeholders in a lively discussion on what would be required to introduce the selected innovation/s. The introduction readiness framework helps facilitate the conversation and tease out critical requirements, which can then support a discussion around the selection of one or more innovations to be introduced.

Workshop deck

(coming soon)

Question

What does a TB affected person pay over the course of a month or what do they get paid (e.g., from insurance)?

Are nurses getting payment on top of their normal base salary for TB? Are salaries in TB care centers different?

Are doctors getting payment on top of their normal base salary for TB? Are salaries in TB care centers different?

How are practices / clinics being paid for TB care (e.g., lump sum / per patient / per activity)?

What payment models exist for payments (e.g., digital wallet / bank tranfer / cash)?

What are the main funding sources that exist within the existing health system (e.g., reimbursement pathways / reimbursement categories for different medication, medtech, digital products or services)?

Are there funding or resource realities that may limit the impact of an innovation?

Who could be additional funding sources outside of the established health system?

What are requirements to receive funding (either via existing health system or via additional funding sources)?

Is there a national healthcare and/or eHealth infrastructure roadmap? What are the milestones over the next 2, 5, 10 years?

How do healthcare providers register TB-affected people and track their information (e.g., TB surveillance IT system)? Is the software actually in use or is the approach (partially) paper-

What are other non-TB-specific IT systems used in practices/hospitals, e.g., what are the main practice management/hospital IT systems? Are there electronic healthcare records (EHR) and/or electronic patient record systems?

Are there identity management systems in place? Is there a national identifier number for each person?

Is there a digital and case-based TB surveillance system? How well is this working? What is the "coverage" in the country in practice?

Which are the systems and technologies used, what is its coverage (e.g., public and private healthcare sector, district level, community level)? What are the organizations/providers that developed /manage the system? What standards are being used?

What is the timeline for reporting?

Is the data used for evidence-based decision- and policy-making?

What regulations must be complied with when implementing healthcare innovations in the country?

Are there pre-approvals required (e.g., by WHO)?

What are the duration and data requirements of the regulatory process?

Which patient confidentiality and data regulations exist?

What is the current workflow in TB care, who is involved at which step?

What are considerations for adjusting current workflows?

What insurance models exist, what are they currently covering within TB care?

Figure 17: Introduction readiness framework

Introduction readiness framework $\ \pm$



Resources

	Innovation scan The innovation scan is a list of 400+ innovations and counting - from TB and other health areas - that have the potential to offer more localized, integrated, and people-centered TB care.	Innovation scan ⊻ (coming soon)
In/out of scope principles that will guide the product score, p and selection activities'	In / Out of scope guidance The In / Out of scope guidance offers guidance on innovation type, development stage, and funding / support details, along with the underlying rationale.	In / Out of scope guidance ⊻
Industry Market in the strength of the	Prioritization framework This framework supports stakeholders in defining and aligning on the criteria that will be used to evaluate and prioritize innovations based on three main categories: desirability and fit, impact, and feasibility.	Prioritization framework ⊥
Image:	Innovation prioritization workshop This workshop deck offers a structure and suggested activities for reviewing and prioritzing innovations.	Workshop deck ⊻
NOT Meth Name State in the second s	Introduction readiness framework This framework includes guiding questions to consider for innovation introduction.	Introduction readiness framework
Oddyr, we doe goling in providiem in pro	Innovation selection workshop This workshop deck offers a structure and suggested activities for making the final selection of innovations for introduction.	Workshop deck ⊻ (coming soon)

We welcome your feedback

We are soft launching this toolkit during the Union Conference 2023 as an opportunity to collect your feedback before finalizing and fully launching it in early 2024.

Please reach out to <u>EASI@stoptb.org</u> for more information.



Visit the RTC Toolkit website: https://rtc.stoptb.org/rtc-toolkit/

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In the remote mountains of Viet Nam, many people live too far from the nearest healthcare facility to seek treatment, and the cost of transportation is too high to easily access TB services. Active case finding (ACF) events with ultra-portable x-rays and computer aided detection are helping them to identify TB earlier. TB affected people in remote areas and TB staff hope for more active case finding events and to bring diagnosis closer to where people live.

"If we want to eliminate TB, it is necessary to enhance ACF to find more cases in the community, especially in rural and mountainous areas, where accessibility to health care services is still limited and people's knowledge is very limited." – National Policy Maker



In Uganda, boda-boda riders can support TB affected people with convenient drug delivery services. With their bodas (or motorcycles/mopeds), the rider can access even remote areas, and meet people where it is convenient for them. All kinds of deliveries are done with the boda-boda service in Uganda, which also makes this delivery service discreet and can reduce stigma.

"Boda-bodas should be used more often to do service delivery. What a village health team can do in this case is to pack medicine in an envelope and write the name and contact of the person to whom the drugs are to be given." – Healthcare worker



In Viet Nam, laboratory data are often tracked in paper-based registers and proprietary diagnostic system software, which are not interoperable with the treatment, monitoring, and TB notification systems. This requires TB staff to duplicate data collection and tracking efforts, adding unnecessarily to workloads.

"We should develop the reporting system which should be automated as much as possible, and different reporting systems should be linked together. However, Viet Nam still has limitations in the system of recording and reporting, a lot of overlaps, which causes big burdens for the health facilities." – National Policy Maker



In Uganda, TB affected people describe the size of pills as "big and scary" and the treatment duration as too long. They often experience side effects from the TB drugs, which affect the completion of treatment. Access to food is considered a priority in mitigating side effects and supporting drug adherence, but often not given.

"Most patients dodge taking medicine, but the reason is the size of the pills and the strength of the medication, and sometimes they cannot find enough food and drinks." – TB affected person





