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Preparing for implementing and ensuring public health impact: leveraging the TB Vaccine Accelerator

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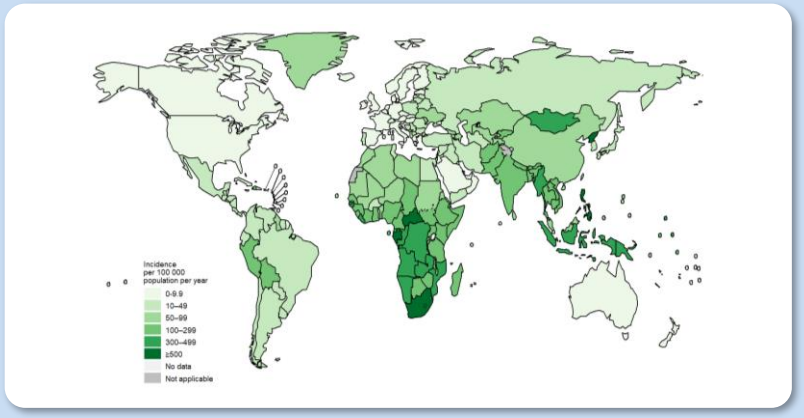
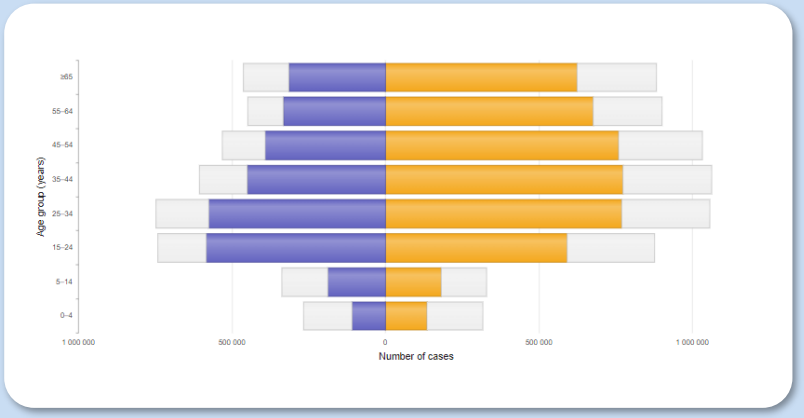
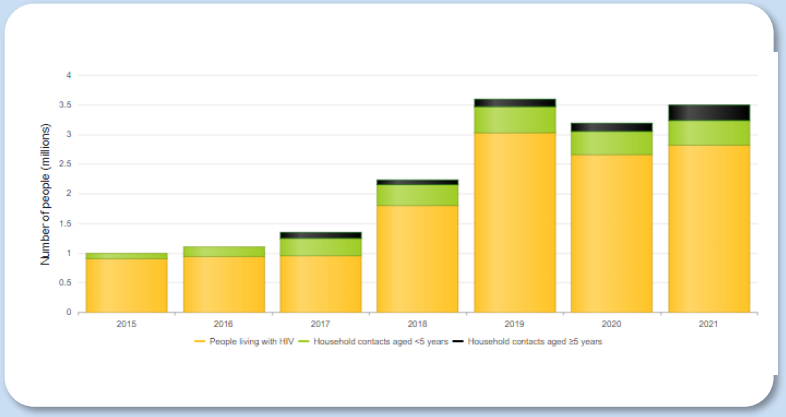
Why do we need to prepare for TB vaccine implementation now?



TB impacts low- and middle-income countries. Many are not Gavi-eligible.

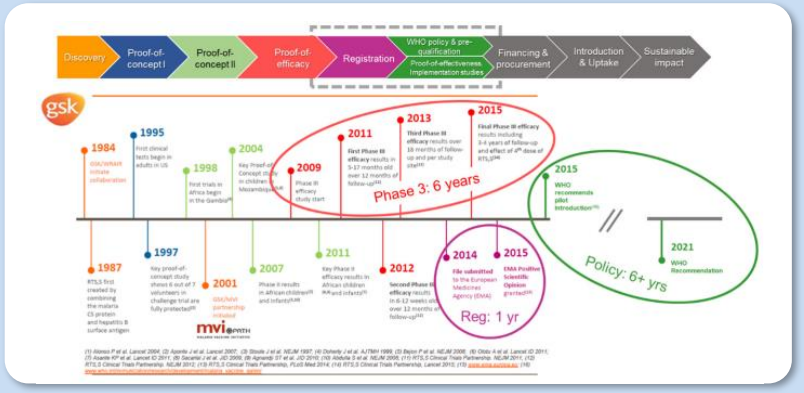


TB incidence and transmission is highest in adolescents and adults. Delivery platform?

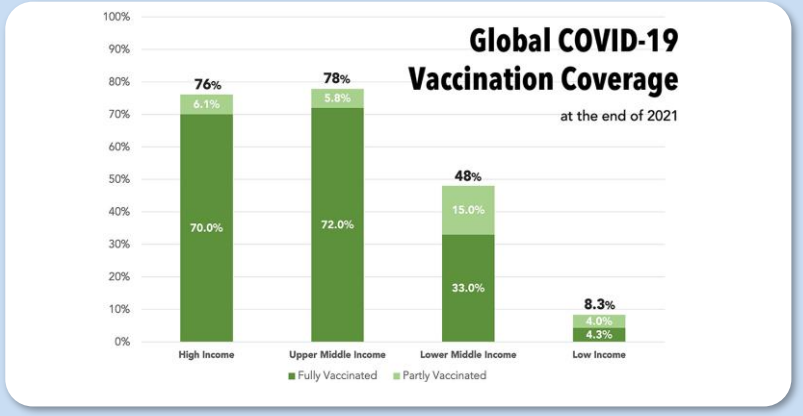


TB preventative treatment (TPT) coverage is increasing. How will vaccines fit?

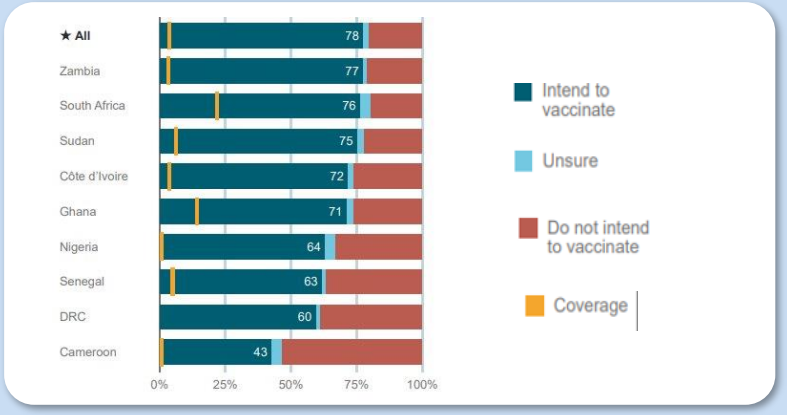
Lessons learned:



Need to understand the evidence needs for policy to avoid a delay in recommendation.



Need strategies to ensure vaccine is available and provisions in place for equitable access.



Need to build vaccine acceptance through partnership with communities

Interplay between activities at the country and global level

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National regulatory approval and implementation pathway:

Many high TB burden countries are self-procuring

Global regulatory approval and implementation pathway:

But many are also countries seeking financial assistance

At least two country archetypes to consider (in reality, there are more)

Characteristics of two extreme country archetypes for new TB vaccines

Self-procuring

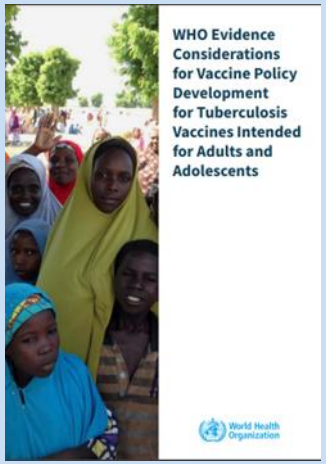
- Non-Gavi eligible
- Some are participating in phase III trials
- Potential early adopter
- NRA of maturity level 3 or above faciliates PQ
- Potential to begin to generate early effectiveness data
- Potential for local manufacturing

Gavi eligible

- May or may not be participating in phase III trials
- NRA below level 3; look to WHO PQ to support regulatory approval
- Potential for regional manufacturing
- Introduction may be delayed if global processes are not aligned (WHO policy, Gavi, UNICEF) and/or if insufficient supply

Different country characteristics and conditionalities impact access and timeline to implementation

Exemplar timeline 2023-2030: TB vaccines for adults/adolescents



WHO Evidence considerations for vaccine policy outlines data for global policy:

- *Efficacy in IGRA +ve / PLHIV -ve*
- *Safety and immunogenicity in IGRA-ve / PLHIV*

2024 2025 2026 2027 2028 2029 2030

Possible data for global recommendation & PQ

Vaccine candidate

Start of Ph3 in multiple countries & regions

Completion of recruitment

Interim analysis

Final analysis

Follow up

Possible data for national level approval

Effectiveness and PV

How do country archetypes impact TB vaccine demand?

Different priority populations (based on burden), i.e. people living with HIV vs people deprived of liberty

Differences in strength of health systems, i.e. TB and vaccine programmes

Different vaccine preferences, e.g. preference for local manufacture

Differences in budget/ willingness-to-pay for TB vaccines

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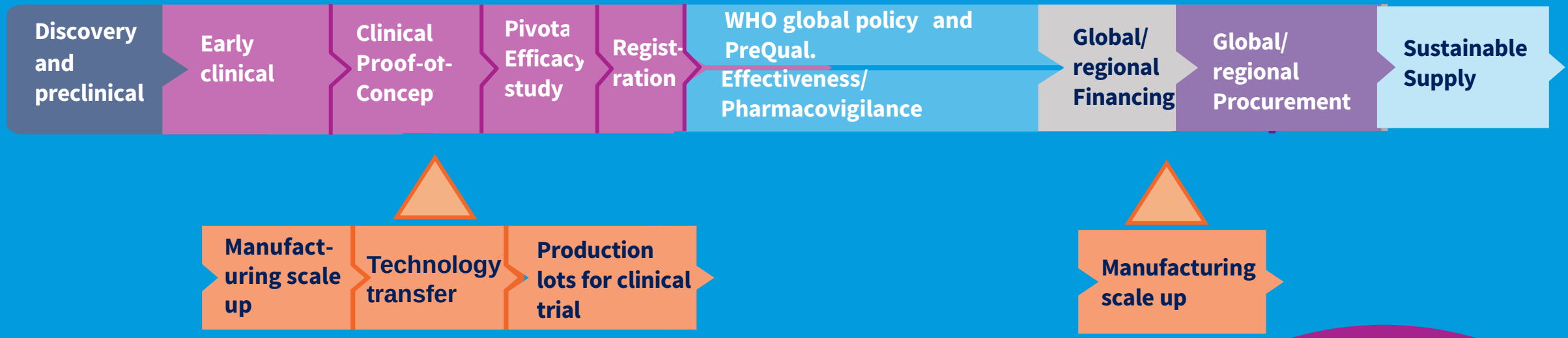
Understanding vaccine impact in different country contexts is key to informing potential demand, and therefore supply needs

Quantifying demand is foundational to manufacturers' investment case for new TB vaccines



The need for vaccine manufacturers is often not visible on vaccine development timelines – they're critical!

- Serve as the market authorization holder
- Drive regulatory approval strategy and timeline
- Supply of vaccine

Understanding demand size and scale-up is crucial to investment, scale up and developing a healthy vaccine market

WHO is working with stakeholders and communities in high TB burden countries to identify (and address) evidence gaps

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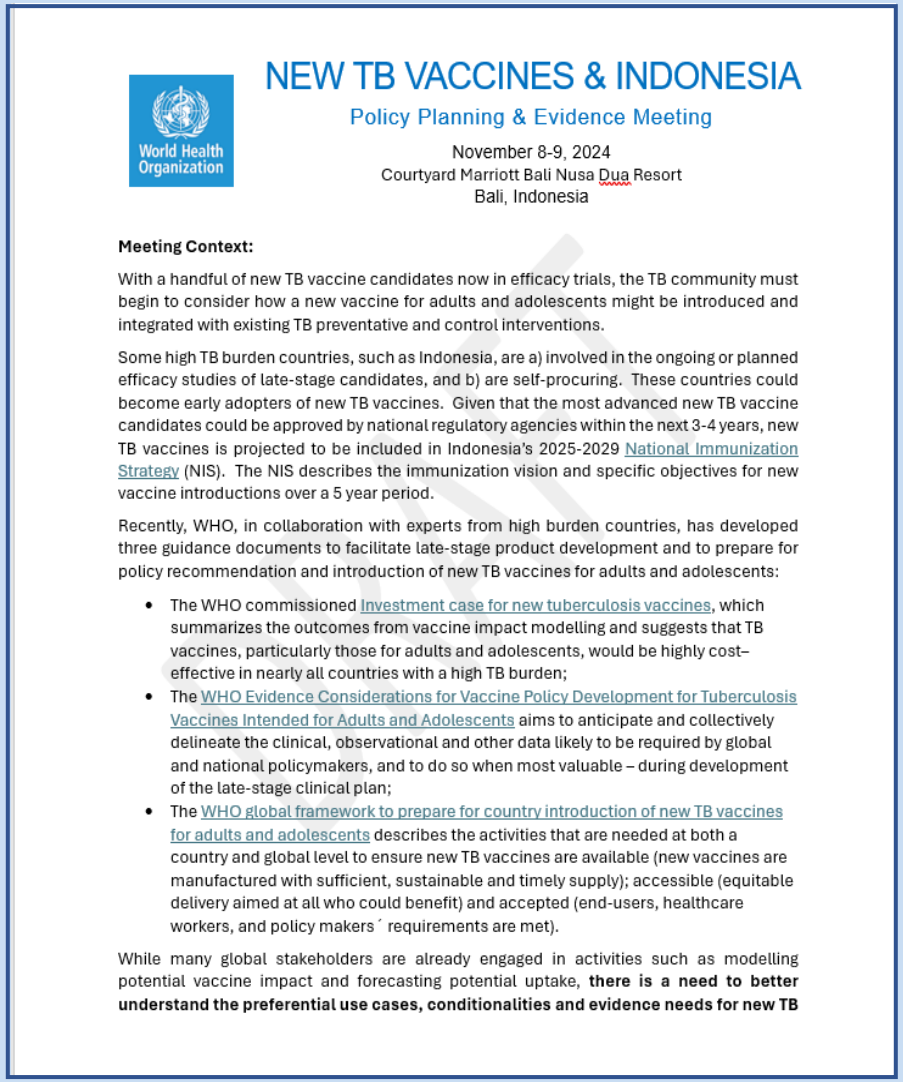
WHO is working partnering with Ministries and stakeholders in high TB burden countries to address key questions related to:

- Priority populations
- Potential vaccine implementation and scale up strategy (demand)
- Understanding conditionalities for introduction
- Addressing evidence or process gaps.

➢ **First such meeting is in Indonesia, in November**



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NEW TB VACCINES & INDONESIA

Policy Planning & Evidence Meeting

November 8-9, 2024
Courtyard Marriott Bali Nusa Dua Resort
Bali, Indonesia

Meeting Context:

With a handful of new TB vaccine candidates now in efficacy trials, the TB community must begin to consider how a new vaccine for adults and adolescents might be introduced and integrated with existing TB preventative and control interventions.

Some high TB burden countries, such as Indonesia, are a) involved in the ongoing or planned efficacy studies of late-stage candidates, and b) are self-procuring. These countries could become early adopters of new TB vaccines. Given that the most advanced new TB vaccine candidates could be approved by national regulatory agencies within the next 3-4 years, new TB vaccines is projected to be included in Indonesia's 2025-2029 National Immunization Strategy (NIS). The NIS describes the immunization vision and specific objectives for new vaccine introductions over a 5 year period.

Recently, WHO, in collaboration with experts from high burden countries, has developed three guidance documents to facilitate late-stage product development and to prepare for policy recommendation and introduction of new TB vaccines for adults and adolescents:

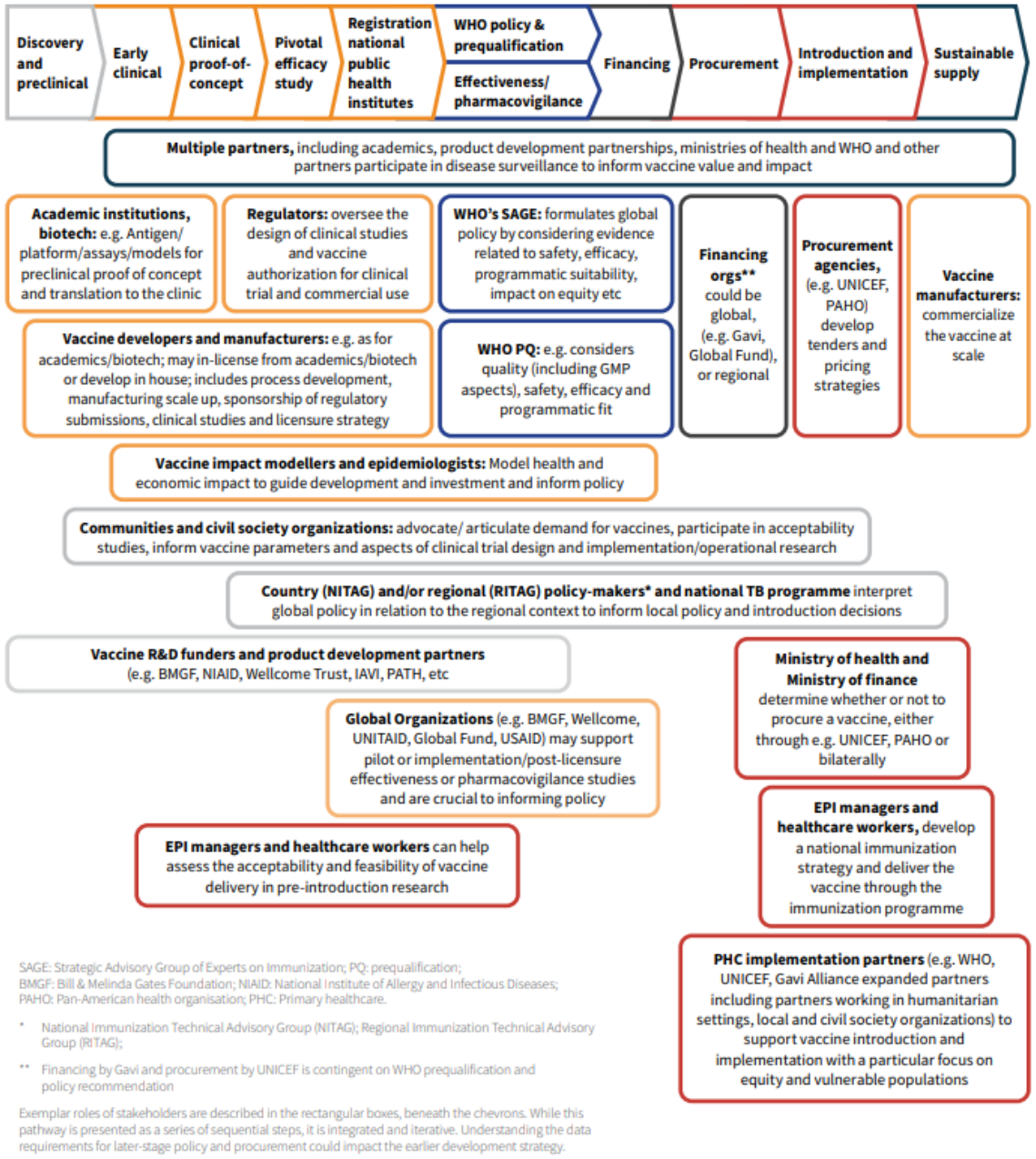
- The WHO commissioned Investment case for new tuberculosis vaccines, which summarizes the outcomes from vaccine impact modelling and suggests that TB vaccines, particularly those for adults and adolescents, would be highly cost–effective in nearly all countries with a high TB burden;
- The WHO Evidence Considerations for Vaccine Policy Development for Tuberculosis Vaccines Intended for Adults and Adolescents aims to anticipate and collectively delineate the clinical, observational and other data likely to be required by global and national policymakers, and to do so when most valuable – during development of the late-stage clinical plan;
- The WHO global framework to prepare for country introduction of new TB vaccines for adults and adolescents describes the activities that are needed at both a country and global level to ensure new TB vaccines are available (new vaccines are manufactured with sufficient, sustainable and timely supply); accessible (equitable delivery aimed at all who could benefit) and accepted (end-users, healthcare workers, and policy makers´ requirements are met).

While many global stakeholders are already engaged in activities such as modelling potential vaccine impact and forecasting potential uptake, **there is a need to better understand the preferential use cases, conditionalities and evidence needs for new TB**

Objectives include:

- Describe the TB burden and TB control programme in Indonesia
- Orientate key stakeholders to advanced candidates in the TB vaccine pipeline, anticipated timelines, data /evidence for regulatory approval.
- Consider the current vaccine modelling evidence and gaps

➢ **Further convenings could be in other high burden countries**



Source: Evidence considerations for vaccine policy: https://iris.who.int/bitstream/handle/10665/376907/9789240093980-eng.pdf?sequence=1

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Multiple stakeholders at the country, regional and global level engaged in TB vaccine product development, ensuring supply and equitable access and preparing for uptake

Stakeholder co-ordination will be key to accelerating vaccine development and implementation

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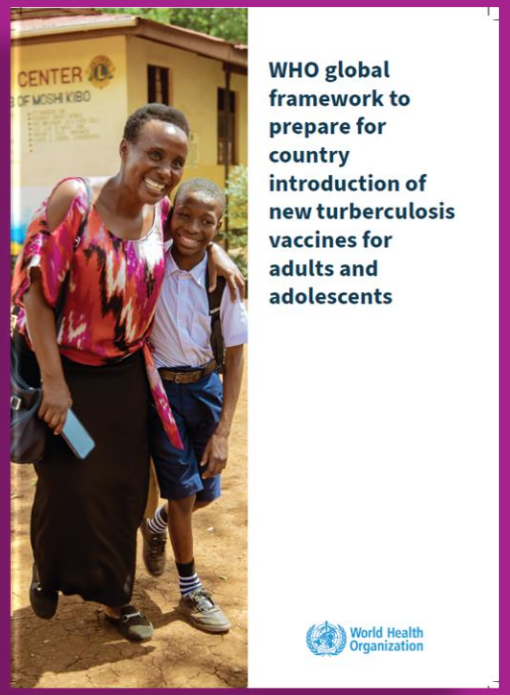
WHO has developed a Framework

that maps out the activities that are needed to prepare for vaccine implementation



Country level actions:
PLENARY 4

Global enablers:
PLENARY 2

Vision & Purpose	**A world free of TB, with zero deaths, disease, and suffering due to TB**			
	Facilitate rapid introduction and coverage scale-up of new adult and adolescent TB vaccines			
Goals	**Available** Sufficient, sustainable, and timely supply	**Accessible** Equitable delivery aimed at all who could benefit	**Accepted** Policymakers, end-users and health systems requirements met	
Milestones	• **Demand assessed** (e.g., no. of doses in short, medium and long term for priority populations; in context of other interventions; with country stakeholders engaged) • **Policy, evidence needs, and pathways defined** (e.g., safety and vaccine efficacy; regulatory approvals; specific populations; in-country trials; recommendations for use; import licensing) • **Procurement plans in place** (e.g., agreements with local, regional and global manufacturers, including on price, quantity and timing)	• **Implementation strategy defined** (for priority populations; vis-á-vis interaction between primary health care, TB, HIV, school health, EPI programs; with private providers and communities) • **Delivery systems in place** (capacity; infrastructure; supply chains; adequate numbers of trained health and community workers; data monitoring; pharmacovigilance; phase IV studies) • **Sustainable financing strategy in place** (e.g., national health sector strategy, external donors, private payers)	• **Value defined** (i.e., at individual and population levels and from perspective of health workers, policymakers, vaccinees) • **Communities engaged as partners in decision-making** (i.e., priority populations, TB survivors, health workers, community health workers, advocates, policymakers) • **Robust communications strategy in place** (e.g., localized; responsive to community concerns and priorities)	
Approach	**Accelerated, Coordinated, Integrated, People-centred, Equity-driven, Evidence-based**			
Enablers	**Programmatic suitability**	**Regulatory and Policy**	**Supply and manufacturing**	**Financing and political engagement**
	• Appropriate presentations • Funded implementation research	• Appropriately designed phase III efficacy trials • Rapid, harmonized regulatory pathways to approval • WHO guidance/ recommendation on vaccine use, aligned with broader TB control efforts • WHO prequalification	• Affordable vaccines • Sufficient supply • Sufficient and diversified manufacturing capacity • Access, IP and procurement agreements	• High level political will (G20/G7) • Adequate financing • Clarity on roles of funding partners (e.g., Gavi, the Global Fund) and procurement partners (e.g., PAHO, UNICEF)

In 2023, WHO launched the TB Vaccine Accelerator Council

Aims to support the community of key stakeholders accelerate the development, approval and use effective novel TB vaccines.

Dr Nísia Trindade Lima (Co-chair)
Minister of Health, Brazil

Dr Budi Gunadi Sadikin (Co-chair)
Minister of Health, Indonesia

Mr Aurélien Rousseau
Minister of Social Affairs and Health, France

Dr Susan Nakhumicha Wafula
Cabinet Secretary for Health, Kenya

Ms Dao Hong Lan
Minister of Health, Viet Nam

Dr Malik Mukhtar Ahmed Bharath
Coordinator to Prime Minister on Health, Pakistan

Dr Mathume Joseph Phaahla
Minister of Health, South Africa

Dr Teodoro J. Herbosa
Secretary of Health, Philippines

National Institutes of Health
National Institutes of Health, United States of America

Dr Akinwumi Adesina
President, African Development Bank Group

Dr Trevor Mundel
President of Global Health, Bill and Melinda Gates Foundation

Ms Nadia Calvino
President, European Investment Bank

Dr Juan Pablo Uribe
Global Director for Health, Nutrition & Population and the Global Financing Facility, World Bank

Dr Sania Nishtar
Chief Executive Officer, Gavi, the Vaccine Alliance

Mr Peter Sands
Executive Director, Global Fund

Dr Philippe Duneton
Executive Director, Unitaid

Dr John-Arne Røttingen
Chief Executive Officer, Wellcome Trust

Dr Lucica Ditiu
Executive Director, Stop TB Partnership

Mike Frick
Co-Director of Tuberculosis Project, Treatment Action Group

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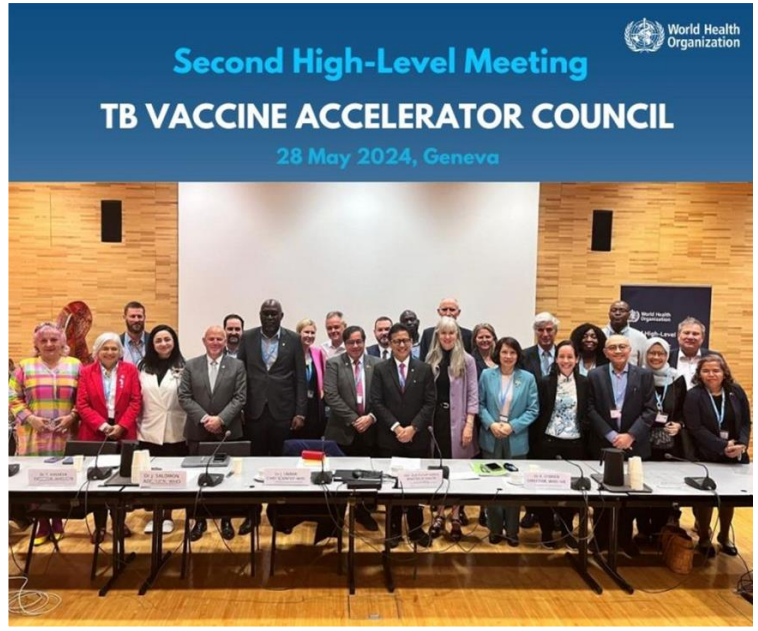
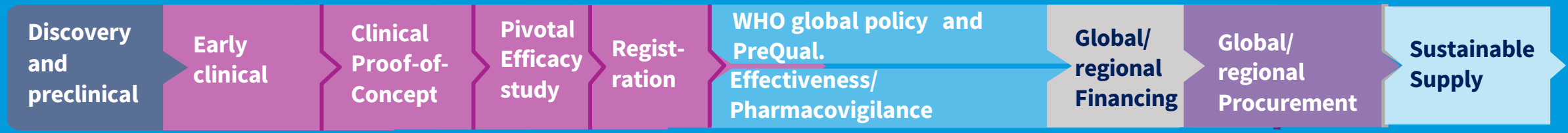


Committment to convene stakeholders in 2025 to discuss **options for procurement and financing of late-stage vaccines**

To inform the council we propose to:

Establish 4 key technical and strategic working groups across the TB vaccine value chain



Vaccine Research

For example:

- Systems biology
- Immunology
- Cohort studies
- Correlates
- New antigens and platforms (incl adjuvants)
- Preclinical and clinical model development
- Assay development and harmonization
- Novel vaccine delivery mechanisms

Product development, manufacturing and policy

For example:

- (Innovative) clinical trial design
- Case detection and clinical endpoints
- Regulatory strategy and PQ
- Evidence generation for national and global policy (Vx and TB)
- Manufacturing scale-up incl., tech transfer
- Capacity building (regulatory, mfg, clinical)
- Vaccine impact modelling (global level)

Financing & Access

For example:

- Global demand forecasting
- Global introduction scale up strategy
- Refine investment case for new TB vaccines
- Market shaping, including potential new mechanisms to incentivize investment and ensure access
- Develop innovative financing and procurement options
- Pricing?
- Facilitate high level policy, financing and procurement related dialogue with heads of states, financing agencies.

Country readiness, advocacy & Community partnership

For example:

- Epidemiology and surveillance, vaccine impact
- Potential allocation framework for priority populations
- Vaccine impact modelling at the country level
- Strategic, political and programmatic integration of Vx and TB
- Nat'l immunization programme, Nat'l TB programme, Nat'l advisory groups
- Assessment of health system and country readiness
- Ethics

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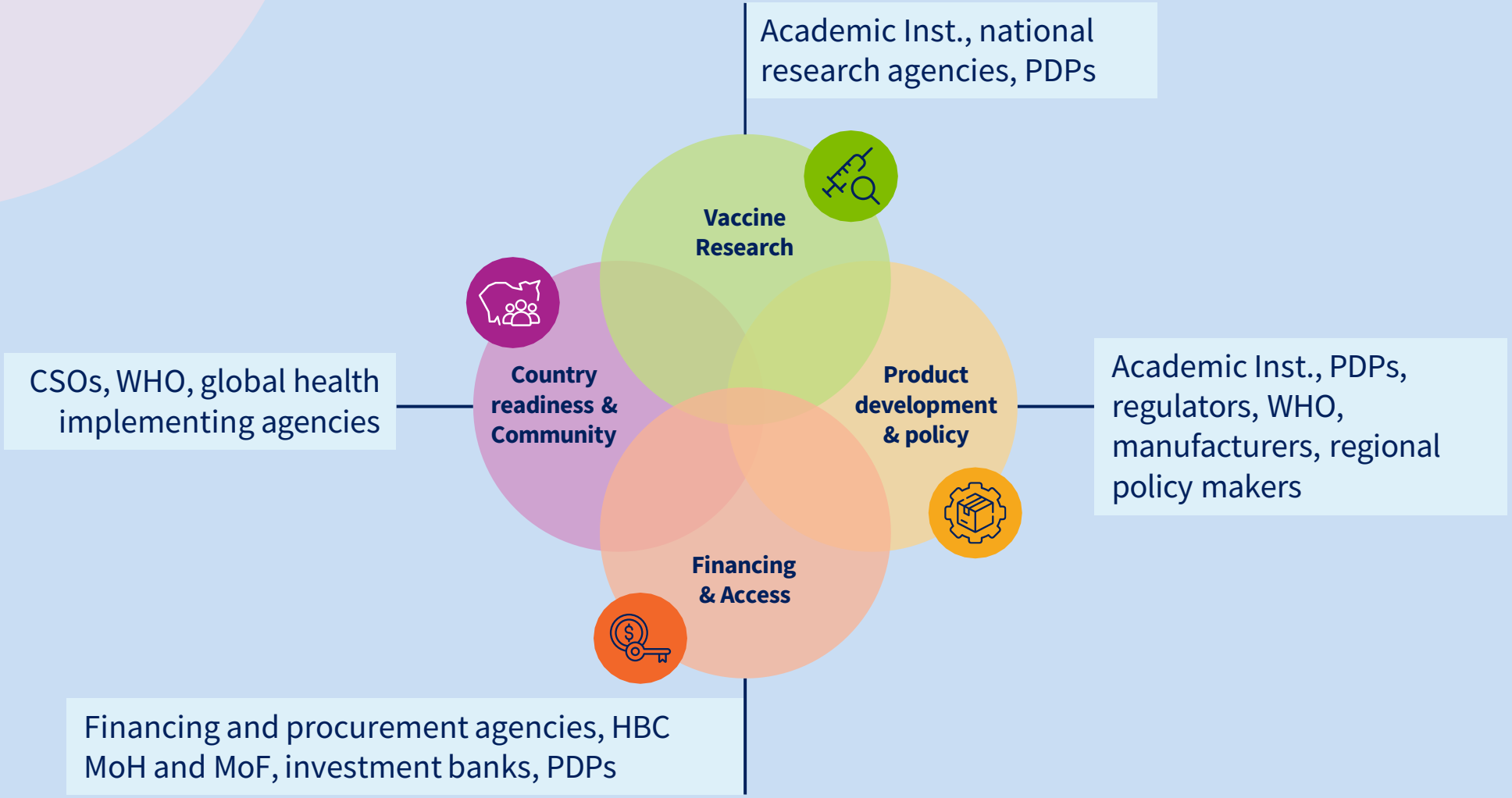
Scope of the working groups is highly integrated

Activities and assumptions of one depend on inputs from another



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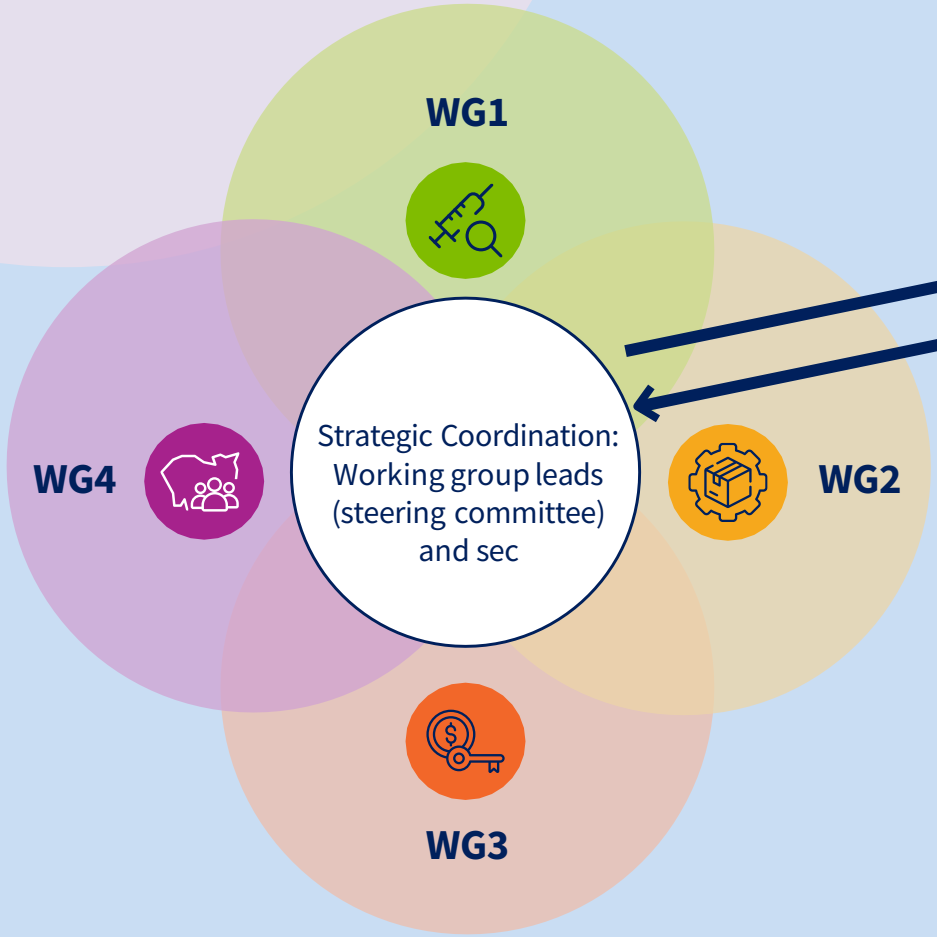

WHO Accelerator Council

- identifies needs for, and types of innovative sustainable financial solutions
- advocates with decision makers in the public, private, philanthropy and other relevant sectors to strengthen commitment

Principles of the proposed Accelerator working groups

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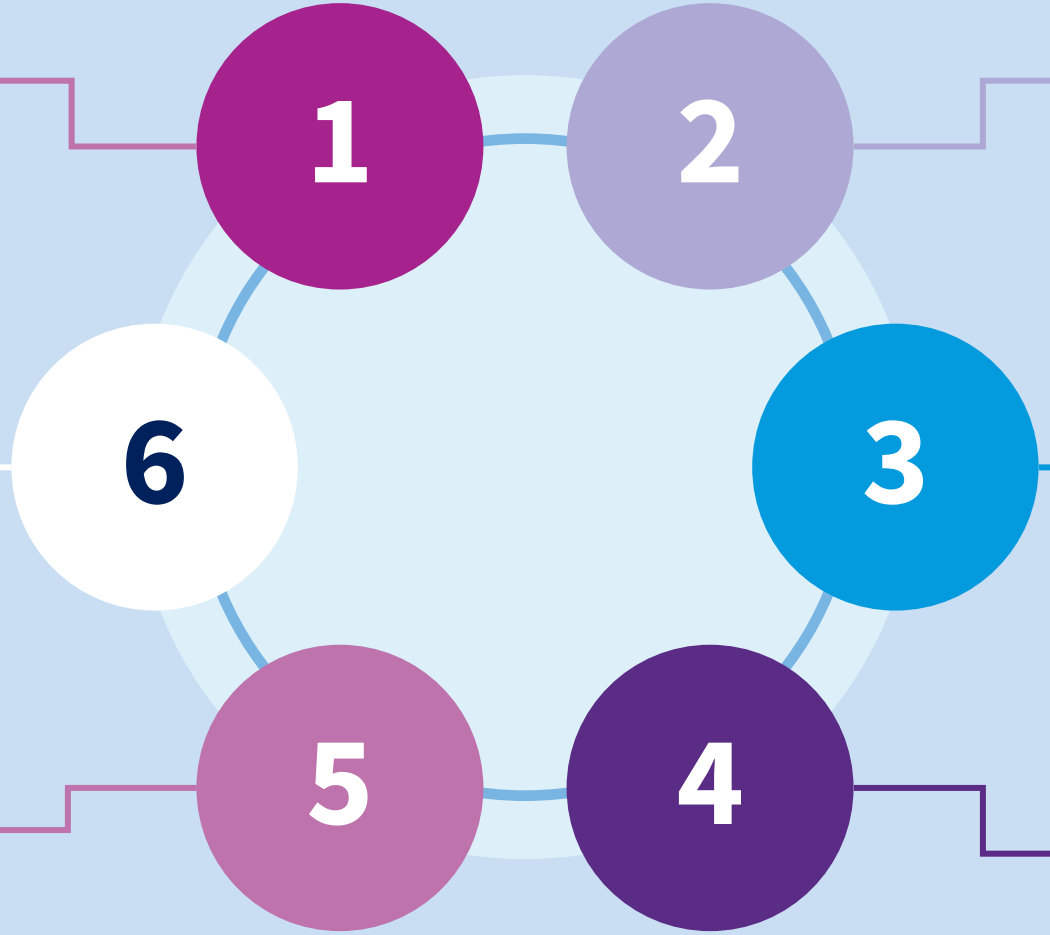
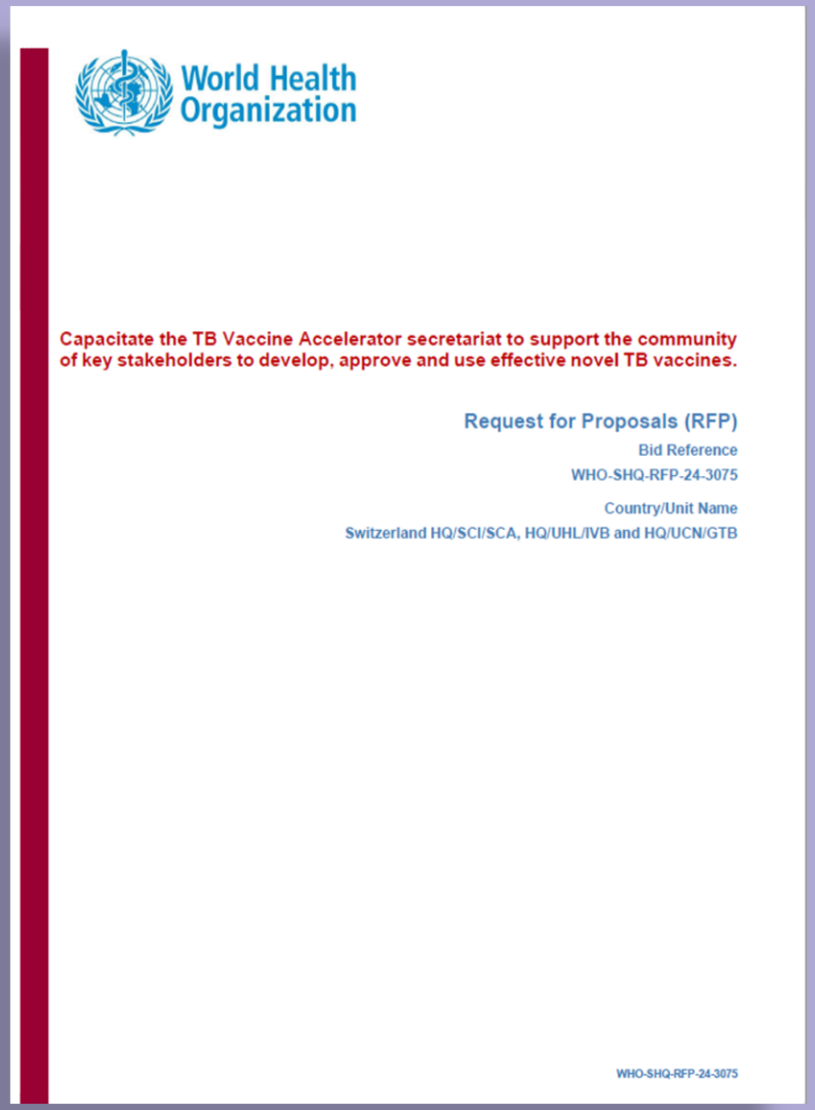
1. Leverage existing working groups and initiatives; doesn't reinvent them
2. Aims to landscape co-ordinate and integrate ongoing/planned activities
3. Not WHO-led, and are not 'WHO working groups'. Accelerator working groups are led by the TB community.
4. Inclusive, with leadership and strong representation from high burden countries
5. Voluntary!
6. We welcome patient groups, communities, civic society, TB vaccine developers and funders to partner with working groups

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Capacitate the TB Vaccine Accelerator secretariat to support the community of key stakeholders to develop, approve and use effective novel TB vaccines.

Request for Proposals (RFP)

Bid Reference

WHO-SHQ-RFP-24-3075

Country/Unit Name

Switzerland HQ/SCI/SCA, HQ/UHL/IVB and HQ/UCN/GTB

WHO-SHQ-RFP-24-3075

Where are we with setting up the Accelerator WGs?

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WHO posted an RFP for support to operationalise the Accelerator WGs

- Landscaping current stakeholder ecosystem
- Establishing WG leads, and WGs
- Developing the terms of reference for WGs
- Identifying key deliverables and workplan
- Costing the workplan and identifying gaps
- Integrating the WG workplans to assist with resource mobilization

Work will begin with the Finance and Access working group as a priority.

Aim to establish membership of other WGs by year end.

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We’d like to hear from you!

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Jeremy Farrar
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