

8:30 to 9:30 AM: Conversation groups

**All welcome – just come along!**

## Wednesday

- Hispanohablantes
- Using REAIM across GACD projects
- Children and adolescents

## Thursday

- Hispanohablantes
- Data privacy, ethics and equity
- Planetary health
- Active mobility
- Cervical cancer

Contribute to the SPARK  
working group Delphi study



### SPARK link

<https://surveys.mcmaster.ca/limesurvey/index.php/218124?lang=en>



### SUCAT link

<https://surveys.mcmaster.ca/limesurvey/index.php/919771?lang=en>

# Day 3

GACD Annual Scientific Meeting  
Wednesday 11 June 2025



**GACD**

GLOBAL ALLIANCE FOR CHRONIC DISEASES  
AN ALLIANCE OF HEALTH RESEARCH FUNDERS

# What's on today

**10. Partnerships are the essence of implementation research** (10:00 – 11:00am)

**11. Hot topics in implementation science** (11:00am – 12:00pm, then 1:30 – 2:00pm)

**12. World Café: Equity across the implementation research community** (2:00 – 3:00pm, then 3:30 – 5:00pm)

**Pre-dinner networking drinks** in the Kilimanjaro Foyer and Terrace (from 6:15pm)

**Gala dinner** in the Kilimanjaro Ballroom (from 7:00pm)



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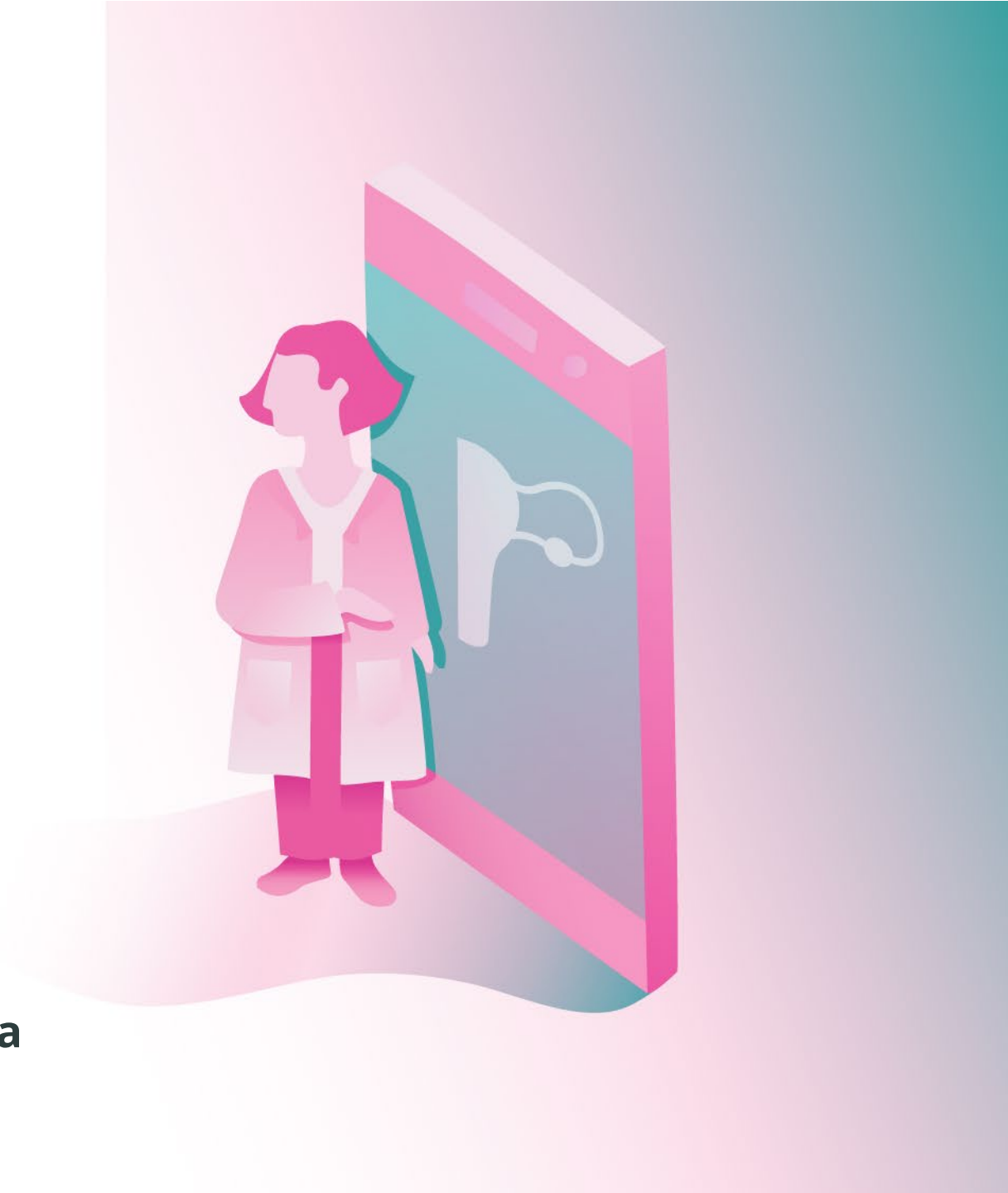


जैव प्रौद्योगिकी विभाग  
**Department of Biotechnology**  
Ministry of Science & Technology  
Government of India

## Partnerships in implementation research

### Experiences from the PRESCRIP-TEC Project – CP 10

Jaap Koot, UMCG, the Netherlands  
Shamim Namagembe, URDT, Uganda



# What we will discuss

- Something about the project
- Implementation research definition and experiences
- Partnerships definition and experiences
- Conclusions
- Afterthought





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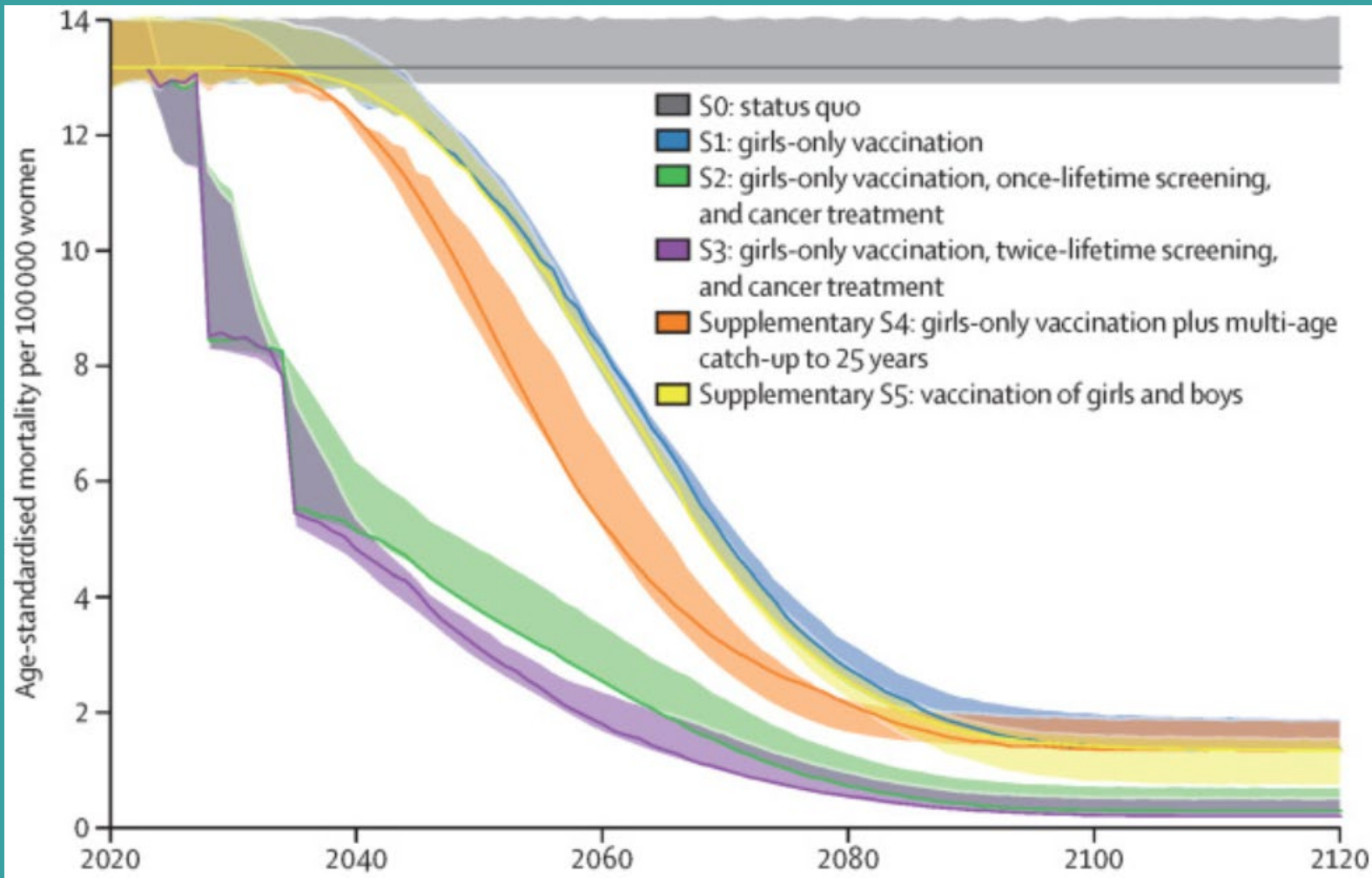


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# A short introduction to the project



# PRESCRIP-TEC evaluates the WHO strategy for elimination of cervical cancer in vulnerable groups



SAVE

Millions of lives



EARN

26 Euro per Euro invested



INCREASE

Health equity in LMICs



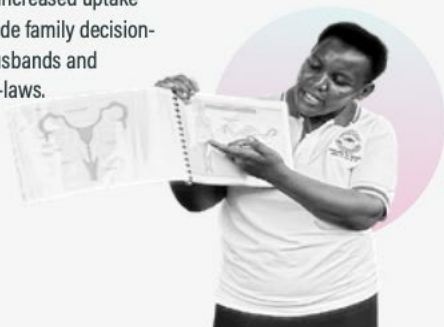
## KEY FINDINGS

### hrHPV SELF-SAMPLE TESTING

as primary screening is very convenient for women and increases uptake to over 90%.

### COMMUNITY SENSITISATION

contributes to increased uptake and must include family decision-makers, like husbands and parents and in-laws.



### IN THE FOLLOW-UP PROCESS

of screening of hrHPV-positive women we need to avoid drop-out and convince women to come to the clinic in order to achieve an uptake of 90%.

### ARTIFICIAL INTELLIGENCE

is a promising technology for decision support to health workers who perform VIA.

### THE WHO SCREENING PROTOCOL IS FEASIBLE AND COST-EFFECTIVE.

However costs of hrHPV testing must reduce to make it affordable for low- and middle-income countries.

## ACHIEVEMENTS

**900.000+**

people sensitised  
through mass media

**53.000+**

people mobilised through  
interpersonal communication

**30.000+**

women performed hrHPV  
self-collected test

**1.400+**

women underwent VIA

**1.100+**

women were  
treated with ablation

**30+**

women were referred for further  
diagnosis and treatment





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# Implementation



# Implementation science

- Implementation science is the study of the methods and strategies that enable research uptake into practice.
- With the aim to improve population health, implementation science examines *what works, for whom and under what circumstances*.

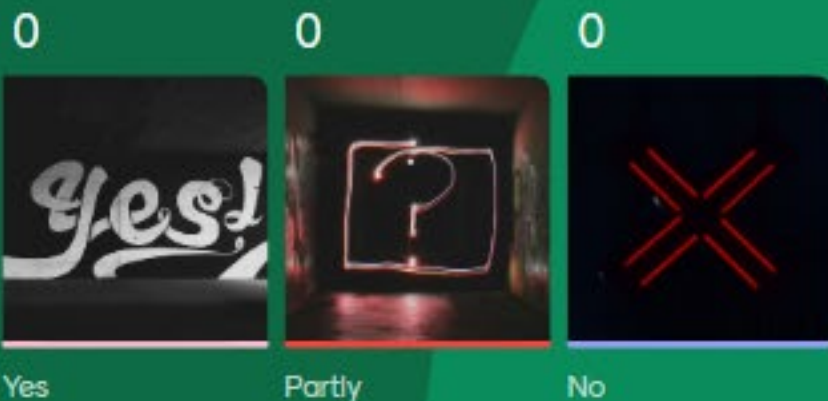
Source: GACD website



Join at [menti.com](https://menti.com) | use code 2798 4824

Mentimeter

Does the research you are implementing in your GACD project(s) cover this definition: "examines *what works, for whom* and *under what circumstances*"



GA

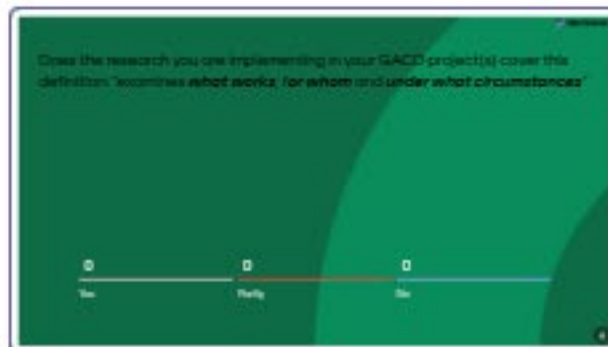


## Menti

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Choose a slide to present



Implementation of cervical cancer screening is an iterative process: each step requires a combination of interventions. Impact only achieved through high participation in all steps.



HPV - Primary screening



VIA - Secondary triage



Treatment



**Trust is mandatory**

**For community mobilisation in all countries, we worked together with existing local volunteers and community-based organisations, who are trusted by women**



# Evidence for implementation – Inclusive community sensitisation



Decision-making processes in families about health should guide the community sensitisation activities by community volunteers. In most countries women do not decide on their own.

# Evidence for implementation – Follow-up after positive HPV test can be a challenge



Travelling to a clinic for VIA, travelling to a hospital for treatment are bottlenecks.

Necessary to repeat community mobilisation to achieve good end results

# Evidence for implementation – Follow-up VIA positive women not easily accepted



The concept of rescreening for cervical cancer after one year is novel and requires good explanation by community volunteers

Join at [menti.com](https://menti.com) | use code 2798 4824

Montimeter

What is the keyword for community participation in your project?

bold leader  
creative  
inspiration focus fast  
transpiration



GA



Menti

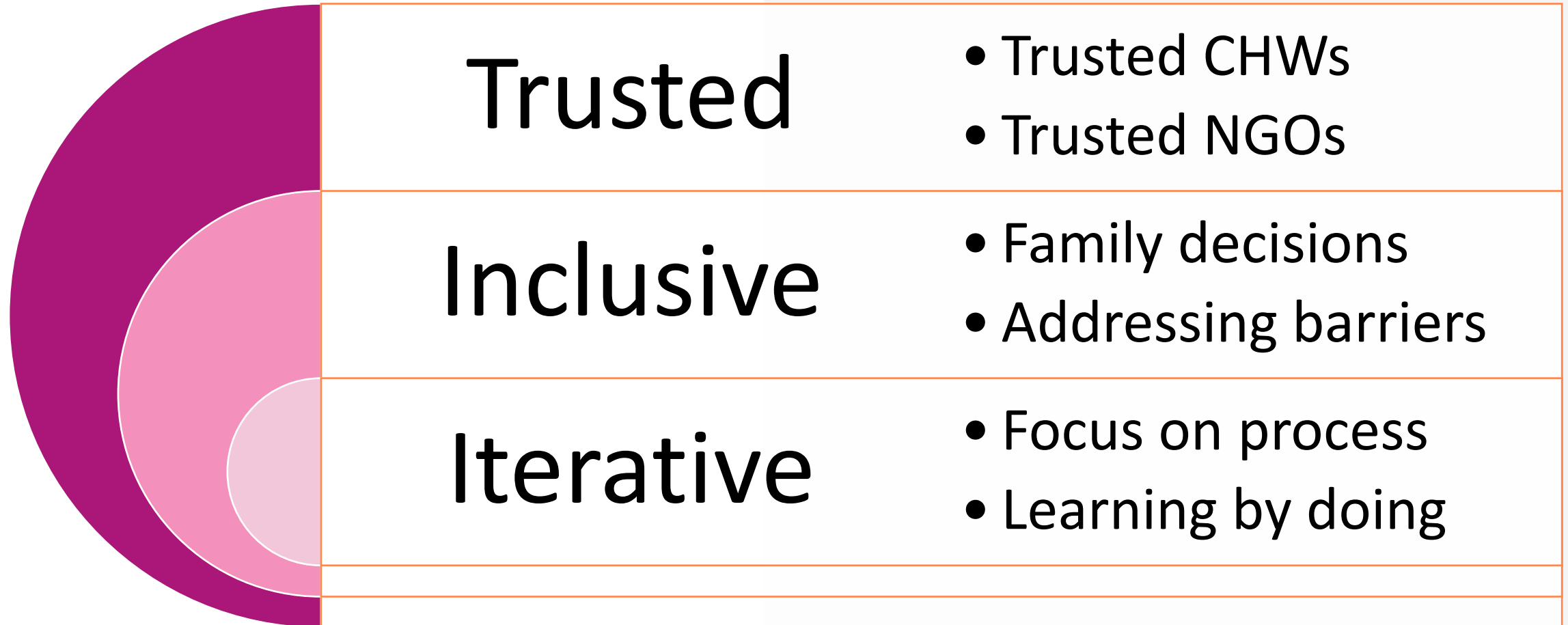
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# Approach in community participation





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Government of India

# Partnerships



# Partnerships

- A **partnership** is an agreement where parties agree to cooperate to advance their mutual interests. The partners in a partnership may be individuals, businesses, interest-based organisations, governments or combinations.
- Organisations may partner to increase the likelihood of each achieving their mission and to amplify their reach.

Source: Wikipedia



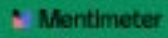
Partnership may include (besides research organisations):

- Individuals
- Businesses
- Interest-based organisations
- Governments
- Others

How many different types of partners are included in you research consortium?

How many different types of partners are included in your research consortium?

Join at [menti.com](https://menti.com) | use code **2798 4824**



leader  
inspiration  
focus  
bold  
creative  
fast  
transpiration



### Menti

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Join at [menti.com](https://menti.com) | use code **2798 4824**

Mentimeter

What is the keyword describing partnership in your research consortium?

leader focus  
creative  
bold fast  
transpiration inspiration

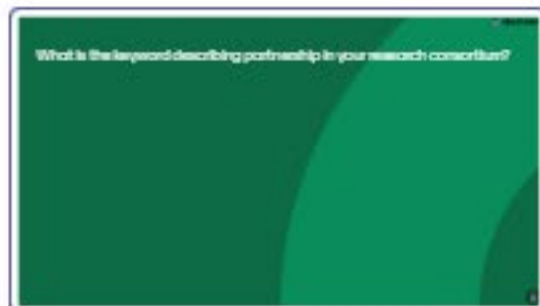


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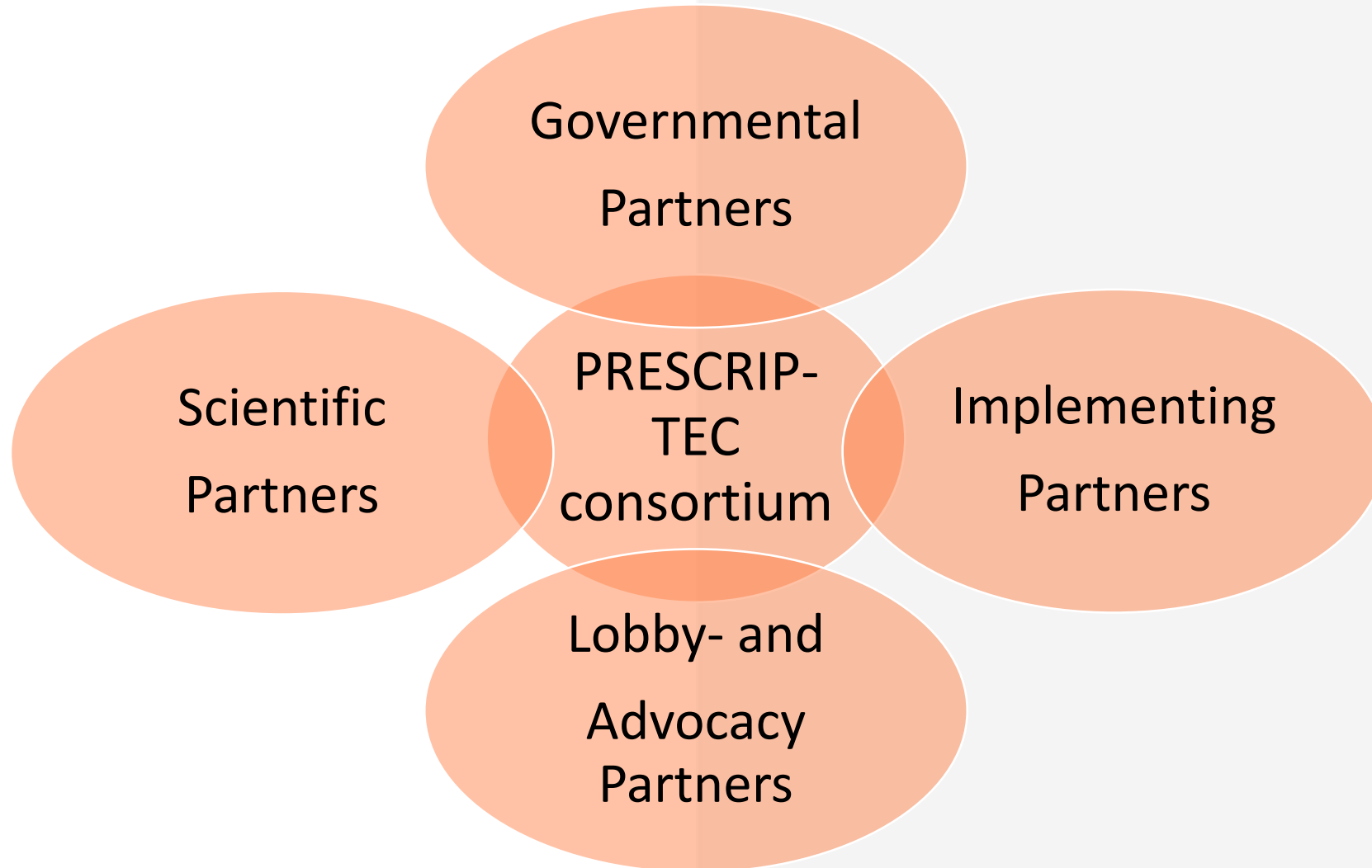


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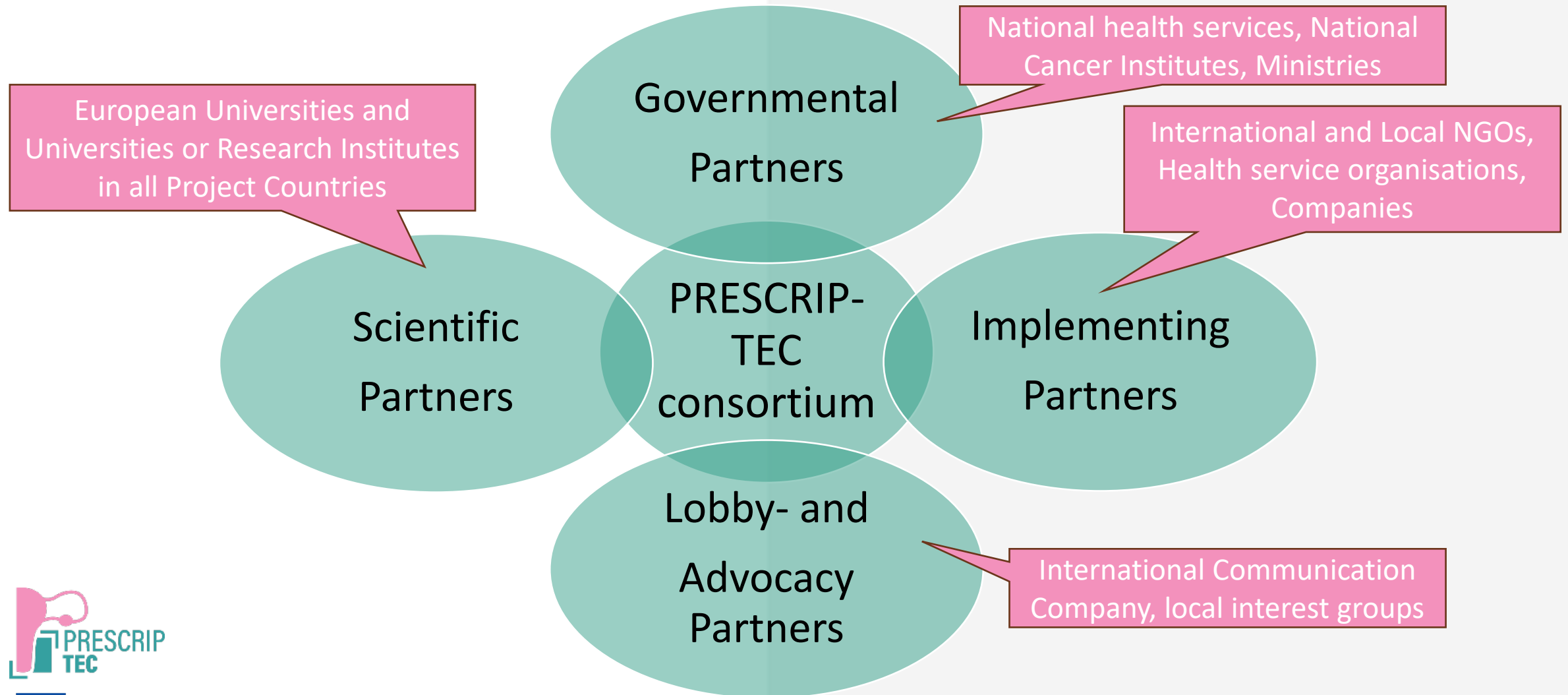
GACD ASM 2025 - Day 3



# Consortium built to serve interests of all parties



# Consortium built to ensure process of developing and implementing evidence-based policy advice



## Know the interests of Consortium member

- Government organisations: cost-effectiveness
- Implementing (medical) partners: feasibility
- NGOs: reach of target population
- CBOs and community groups: cultural acceptability
- Scientific partners: advancing science

# Building on existing capacities and experiences

In Uganda the collaboration was between National Cancer Institute, NGO and District Health Services



# Partnership building

- Recognition of specific competencies of all partners
- Frequent communication (local and international)
- Capacity building



# Partnership in implementation research

- Learning by doing
  - Embrace dynamic process
  - Embrace mistakes
- Doing by learning
  - Evidence-based practice

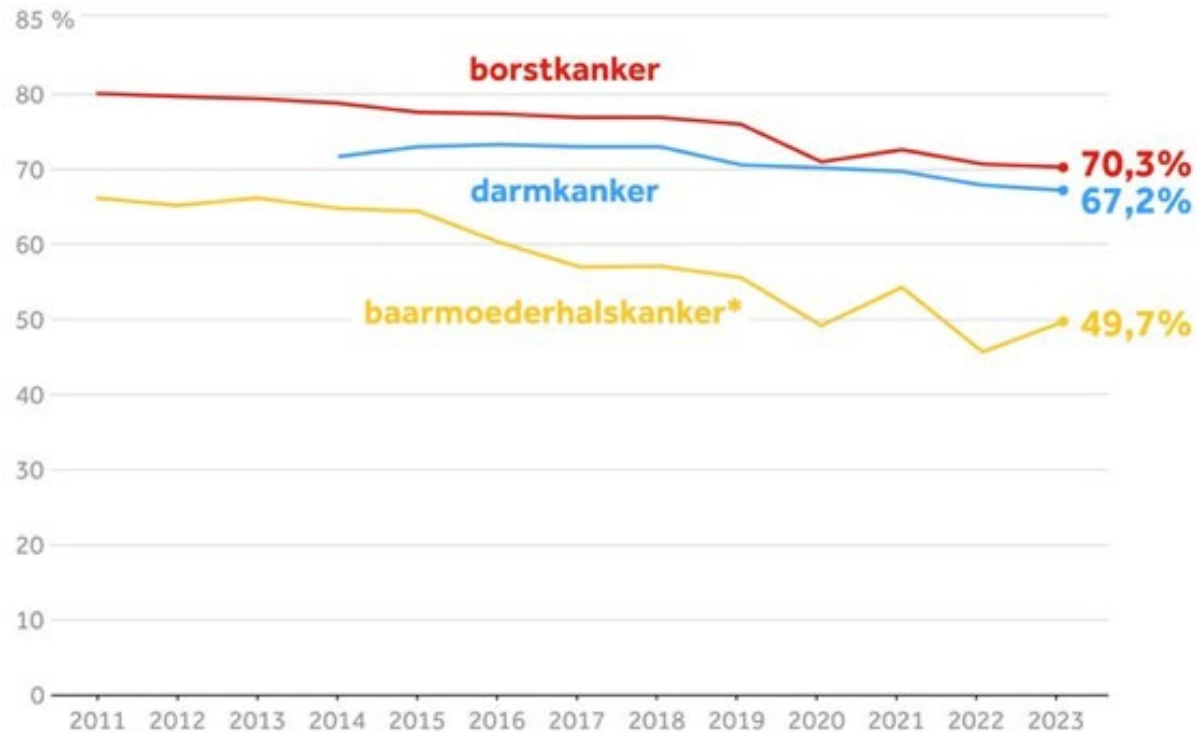


# In conclusion

- Consider communities as partners in implementation
- Make sure the communication is trusted, inclusive and iterative
- Build partnerships with all relevant stakeholders, know their interests and respond to their interests
- Ensure open communication and learn by doing, have fun



# Afterthought: reduction in participation in screening programmes in the Netherlands



- While WHO recommends minimum participation of 70% in screening programmes, percentage is lowering alarmingly in the Netherlands and other Western countries
- Lowering trust in public health post-COVID
- Misinformation on social media



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**Thank you  
On behalf of consortium**

**[j.a.r.koot@umcg.nl](mailto:j.a.r.koot@umcg.nl)**

**[namagembesham@gmail.com](mailto:namagembesham@gmail.com)**

3-minute stand up break



# Hot topics in implementation science

Rafael Aiello Bomfim – Federal University  
of Mato Grosso do Sul, Brazil

Blandina Theophil Mmbaga – Kilimanjaro  
Clinical Research Institute, Tanzania

Colin Bell – Deakin University, Australia

Pallab Maulik – The George Institute for  
Global Health, India

Chair: Morven Roberts – GACD

Imagine it is 2035. What are the most pressing challenges in implementation science and where are researchers putting their focus?



**Rafael**



**Blandina**



**Colin**



**Pallab**

Imagine it is 2035. What are the most pressing challenges in implementation science and where are researchers putting their focus?



**Rafael**



**Blandina**



**Colin**



**Pallab**

# Equity in implementation and de-implementation

## Oral cancer as a marker of inequality

Rafael Aiello Bomfim

Federal University of Mato Grosso do Sul, Brazil

School of Dentistry

Post-graduate program in Medicine



# ENMESH group

## Equity in implementation research

### SPECIAL INTEREST GROUP

## Equity in Implementation Research (ENMESH)

Poster text prepared by the GACD team

#### Why?

The rationale for the special interest group

**IMPETUS**  
The potential of implementation research to improve public health and social outcomes is hindered by its adherence to Western-centric paradigms and cultural legacies.

A group focused on decolonising implementation research can challenge these paradigms, promote the use of diverse knowledge and practices, and foster a global movement for democratising research and implementation.

**STARTING POINT**  
At the GACD Annual Scientific Meeting 2023 in Singapore, Neo Tapala led a plenary session "Decolonisation, equity and implementation", which sought to raise beyond reflection to collective action.

Delegates were invited to imagine alternate futures in global health and the working group will drive progress towards identifying priority actions that can be taken by individuals and stakeholder organisations in the global GACD community.

#### How?

How the special interest group has done for us and how they worked across GACD projects

Our first open meeting as a Special Interest Group took place in March 2023, with people from 13 GACD projects and alumni of GACD Implementation Science Schools.

Meeting attendees discussed ideas for where to take the Special Interest Group. Where could we have impact? Several ideas are under consideration, including:

- The GACD teams to host an informal safe space discussion between researchers and GACD funding agency representatives to explore the realities of performance indicators in funding structures and their impacts at the individual, institutional, and national level.
- Develop and publish a set of practical recommendations directed to funding agencies that address the key drivers of inequity within implementation research funding structures.
- Explore how "public and public-employment (PPE)" in healthcare is implemented in LMICs. While the UK and Australia have established guidelines and support for PPE, these may not be applicable across all countries.
- Map how research teams are addressing equity within their projects. The map includes, for example, use of equity-centred projects, the map includes, for example, use of equity-centred projects, the map includes, for example, use of equity-centred projects.
- Collate, compare, and contrast equity-centred thinking for implementation research. Then, identify and describe alternative research tools and methods for equivalent understanding.

#### So what?

How the working group's efforts contribute to the field

Do you regularly use resources or tools that might be relevant to ENMESH? Perhaps you have developed one you would like to share! Add it to our resource repository.

For example, relevant resources might focus on the broad conversation to redress and democratise the academic system for global health research, OR might focus specifically on measuring equity-sensitive outcomes in implementation research projects, OR frameworks you have found helpful in guiding equity-focused projects, OR anything else!

ENMESH member and GACD School alumna, Roxanne Keynejad, led on developing 10 tools for early career researchers to drive decolonisation across global health:

Keynejad RC, Drazak D, Ingershoff R, Dick F, Nye N, Craft S, Adiburai TS, Zapp P, Meehan MC, Sultan A, Lichtenack M, Waller F, Abate HT, Amare HT, Alwantho S, Mulholland A, Grouse P. Decolonising in global health research: ten tools for early career researchers. *BMJ Global Health*. 2023; Nov 24;8(11):e007426. PMID: 3809222; PMCID: PMC10289907.

#### WHAT IS HEALTH EQUITY?

Equity refers to the elimination of unjust, avoidable, or correctable disparities among various groups of people.

These groups can be categorized based on social, economic, demographic, geographic, or other dimensions of inequality, such as sex, gender, ethnicity, disability, or sexual orientation.

Health is a fundamental human right, and health equity is achieved when everyone has the opportunity to reach their full potential for health and well-being.

The conditions in which individuals are born, grow, live, work, play, and age, along with biological factors, significantly influence health and health equity.

Structural determinants – such as political, legal, and economic factors – alongside social norms and institutional processes, shape how power and resources are distributed.

Moreover, individuals' living conditions are frequently exacerbated by discrimination, gender, age, race, ethnicity, or disability, among other aspects. These discriminatory practices are often embedded within institutional and systemic processes, resulting in under-representation of certain groups in decision-making roles at all levels, and leading to inadequate services for them.

#### OUR BROAD REBET

- Foster culturally sensitive and equitable approaches to implementation research.
- Develop and disseminate tools, guidelines, and training materials that promote decolonised, equitable implementation research.
- Enhance the research capacity of scientists from diverse backgrounds to conduct decolonised, equitable implementation research.
- Promote knowledge exchange and collaboration among researchers, practitioners, and community members from different backgrounds.
- Promote global collaboration between researchers and practitioners working on HCD implementation research in different parts of the world.

#### EQUITY FOCUS

Participants engaged the need to address overlooked health inequalities in research and implementation.

#### CAPACITY BUILDING AND COLLABORATION

Participants explored issues in sharing knowledge, resources, and collaborating to improve equity measurement.

#### SYSTEMIC BARRIERS

Challenges for funding disparities and top-down processes that hinder equity efforts were highlighted.

#### UNDERSERVED POPULATIONS

African researchers with various underrepresented groups, recognizing the intersectionality of inequities.

#### MANY REASONS BROUGHT PEOPLE TO THE ENMESH MEETING.

#### APRACTICAL APPLICATION



There was a focus on translating equity principles into actionable strategies and developing equity-focused interventions.

#### LMIC CHALLENGES

The group discussed research tools and decolonising research practices.

#### RESOURCES

Publications and other resources relevant to the working group

#### MEMBERSHIP

Interested in joining the group? Are you interested in connecting with others to share experiences, knowledge, and resources on health equity? Would you like to be part of deep conversations on the future of equity around the world?

Then join our Special Interest Group

Get in touch with the group's GACD coordinator, Izzy: [Izzy@unhcr.org](mailto:Izzy@unhcr.org)



# The Big Five in NCDs: The Current Landscape

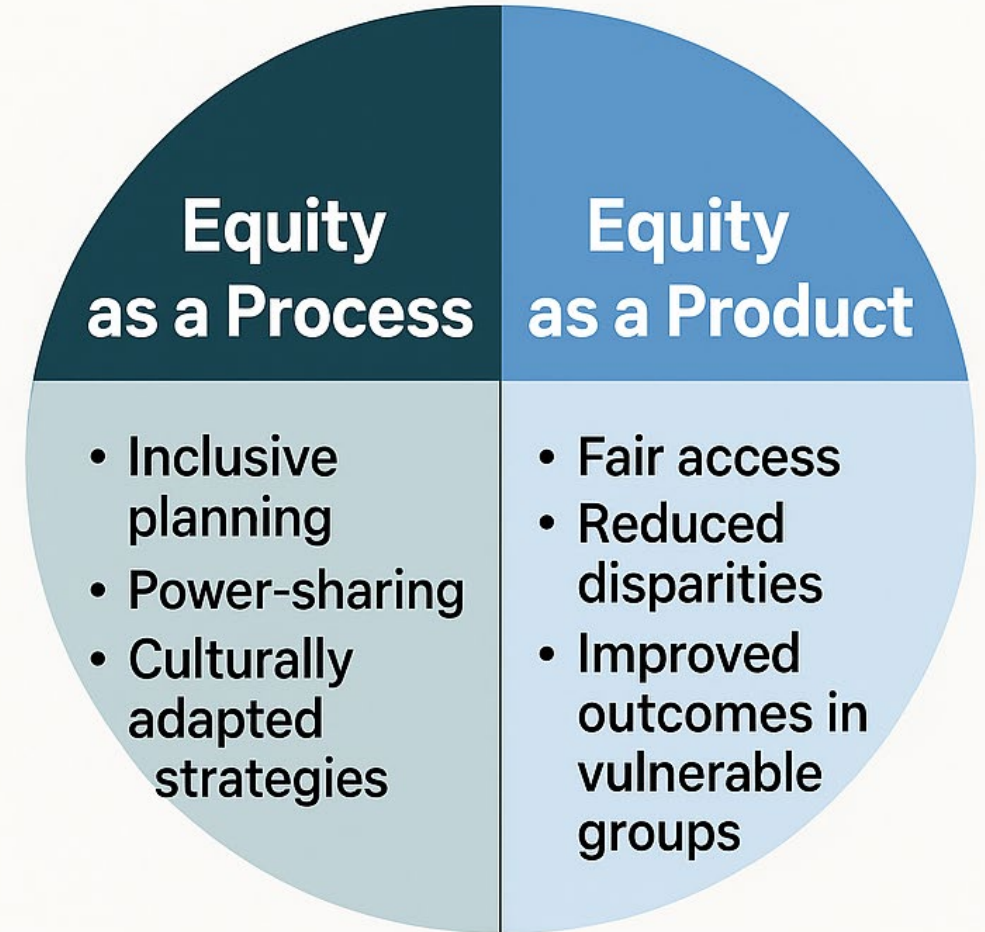
- Are we considering intersectionality lens in our IS research?
- Equity is a product or a process?
- Are Social determinants of health the same as
- Social determinants of health inequalities?
- Oral cancer as a silent killer



# Equity: Process or product?

- Implementation Strategies
- De-implementation strategies

Is equity something we build along the way – or only measure at the end?



**True transformation demands both:  
equitable processes and equitable outcomes.**

# Oral Cancer: The sentinel of inequality

- Delayed diagnosis (70-80%) are in T3/T4 (INCA, 2022)
- Ratio 3:1 Male / Females
- 15.100 new cases each year
- High prevalence among vulnerable populations
- 180 days from signals and symptoms for diagnosis
- In the network, examined for 4 health professionals up to diagnosis

# Digital Health

Reduces Time to Diagnosis  
and Steps to Diagnosis



## Implementation strategies

- Oral cancer line of care (OPAS funding)
- Profa. Tatiana Toporcov (FSP-USP) PI
- App Telestomato (UFPB-PB)

**Rafael Aiello Bomfim**  
aiello.rafael@gmail.com

- 📁 Acompanhamento dos Casos
- 👤 Resposta do Consultor
- 📖 Manual de Orientação
- 🔬 Análise Histopatológica
- 🚑 Fluxo de Atendimentos
- 🔧 Suporte Técnico
- 📄 Sobre o Aplicativo
- 🚪 Sair

### Telestomatologia

**Teleodontologia**  
A Teleodontologia é um recurso útil para se compartilhar e discutir casos clínicos que requerem a opinião de um consultor.

**Objetivo**  
Discussão de casos clínicos complexos onde profissionais experientes podem dar opiniões sobre diagnóstico e manejo de casos.

**Como funciona?**  
O profissional cria um Perfil no App e envia o seu relato caso. Em alguns dias, recebe a opinião de um dos nossos Consultores por e-mail e no próprio App.

**Como capturar fotos do caso?**  
Clique aqui e assista o vídeo.

### Relatos de Caso

Relatar Caso

Esta é a aba para envio do RELATO DE CASO do seu paciente para TELEINTERCONSULTORIA. Para enviar o relato é necessário, primeiro, criar o seu perfil na aba Perfil do Profissional.

Telestomatologia Perfil do Profissional Relatos de Caso

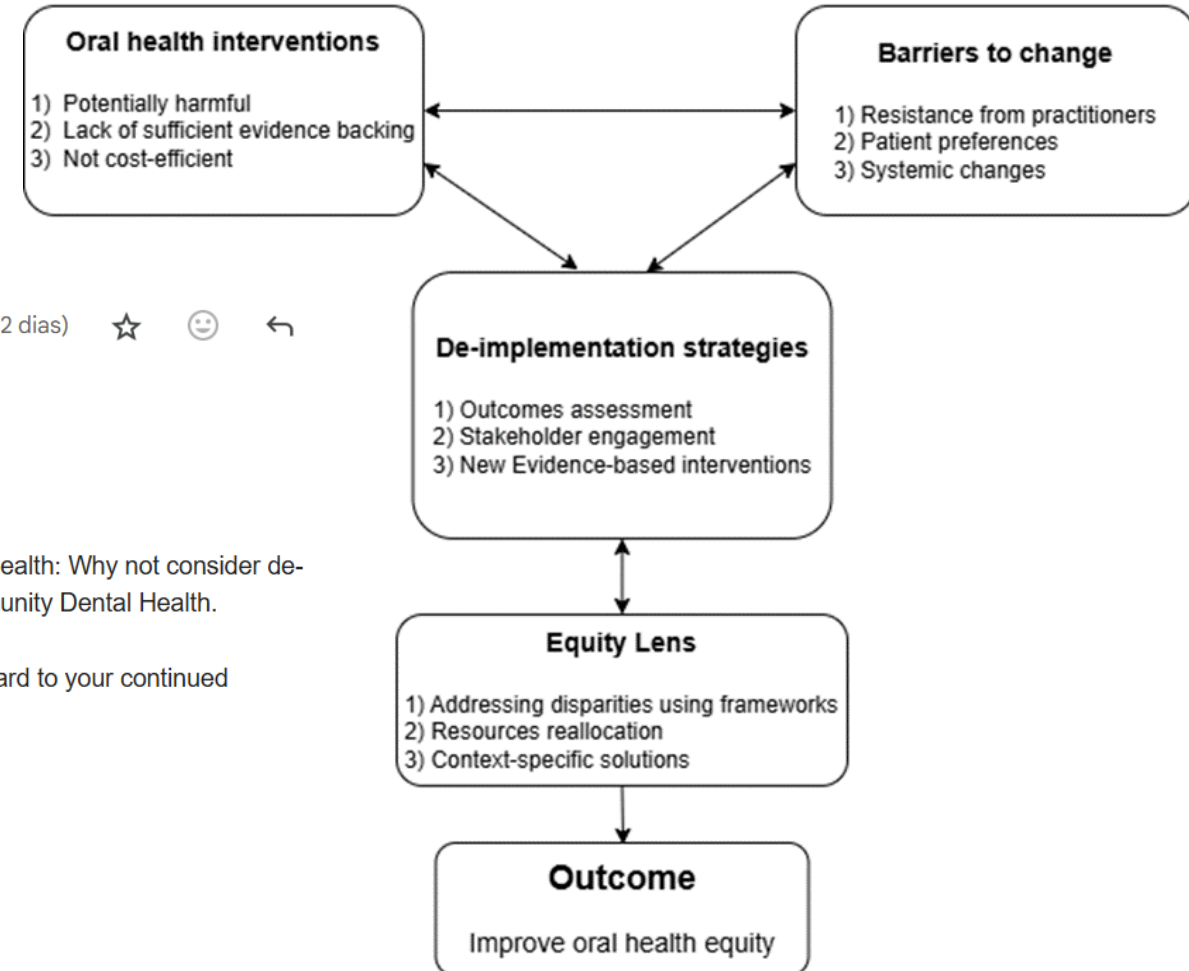
# The challenge of low-value care

- Public campaign for oral cancer screening
- Disconnected from healthcare network
- Still common in Brazil
- Low-value care persists. It's time to talk about de-implementation



# De-implementation framework

## De-Implementation framework for oral health



Community Dental Health <onbehalf@manuscriptcentral.com>

para mim ▾

29-May-2025

Dear Dr. Bomfim:

It is a pleasure to accept your manuscript entitled "Dissemination and Implementation Science for Oral Health: Why not consider de-implementation of low-value care to target oral health equity?" in its current form for publication in Community Dental Health.

Thank you for your fine contribution. On behalf of the Editors of Community Dental Health, we look forward to your continued contributions to the Journal.

Sincerely,

Dr. Wael Sabbah

Community Dental Health

[wael.sabbah@kcl.ac.uk](mailto:wael.sabbah@kcl.ac.uk)

qui., 29 de mai., 09:46 (há 12 dias)



# De-implementation strategies: equity centred decisions

## Two strategic scenarios:

- 1) De-implementation before implementation
- 2) De-implementation and implementation simultaneously

## De-Implementation and Implementation

Pathways to 2035

### De-Implementation before Implementation

De-Implementation

Lays the groundwork, reduces resistance



Simultaneous De-Implementation

More dynamic, but requires high organizational readiness

Implementation



# Which pathway better advances health equity?

**Example 2)** De-implementing "tooth-only" dental exams and Implementing full-mouth visual oral cancer screening simultaneously  
→ formative changes in university training

**Example 1)** First De-implement public campaign for oral cancer screening and after  
→ Organized screening for oral cancer

Reframe  
the exam:  
from teeth  
to tissues



# Oral Cancer and the Big Five: The Strategic Connection

- If we can transform oral cancer care, we can inspire change across all major NCDs
- Multisectoral strategies



# Practical pathways to equity

Three key actions:

1

Map and eliminate obsolete practices in the most vulnerable territories

2

Invest in organizational and community readiness for innovation

3

Develop culturally adapted and evidence-based solutions

# Equity by Design, Not by Chance

Digital tools, equity-centered strategies, and the courage to de-implement are no longer optional: **they are urgent**

If not now, when?  
If not us, who?



Imagine it is 2035. What are the most pressing challenges in implementation science and where are researchers putting their focus?



Rafael




**Blandina**



Colin



Pallab



STOP NCDs: Scaling up evidence-based health system interventions Through the use of sustainable healthcare financing and digital technology Platforms to improve Non-Communicable Disease prevention and control in Tanzania.

Stakeholders Engagement in Implementation Science

Blandina T. Mmbaga, Karen Yeates, Bruno Sunguya

# Introduction

- Prevalence of HTN in Tanzania mainland and Zanzibar in 2020 30% and 33.4%, respectively
- Less than 39% know if they are either hypertensive or diabetic
  - Only about 11% receive primary care for their condition
  - Only 10.9% achieve their blood pressure control
- In 2011, 2.8% of Tanzanians had diabetes; by 2021, this figure had risen to 12.8%.
  - Exercise, eat healthier

# Phase one: Baseline Assessment

- To assess all evidence and programs in Tanzania for addressing NCD risk and reducing barriers to control of hypertension (HTN) and Type 2 diabetes (DM) across the life course by
  - convening a Stakeholder Advisory Board (SAB)
  - Implementation Research Learning Collaborative for NCDs Prevention (IRLCNP) that will collaborate with the research team.
- To assess health system capacity and needs for NCD control in Tanzania

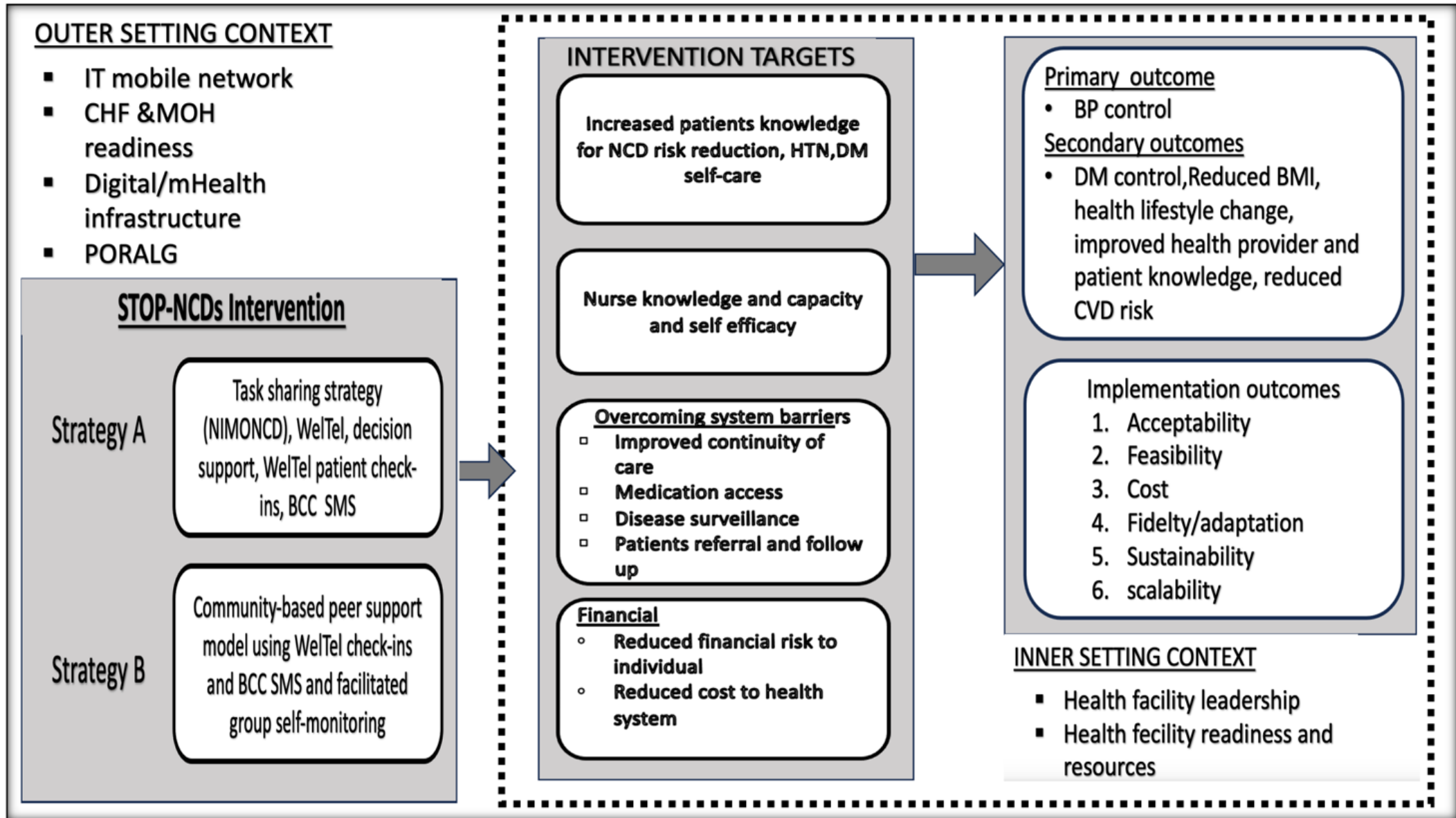
# Second Phases: Optimization phase

- To adapt two intervention components that are candidates for inclusion in a highly effective optimized strategy (STOP-NCDs).
- To assess the individual and combined effectiveness, and incremental cost-effectiveness of the intervention components
- Assessing factors influencing the implementation and sustainability of delivering the optimized STOP-NCDs

# Third phase: Scale up and sustainability

- Scaling up the optimized STOP-NCDs intervention
- Individual Randomization 3 arms – 500 each
  - 500 - Nurse managed task sharing (NMTS)
  - 500 - NMTS + WelTel text message system bidirectional
  - 500 - NMTS + WelTel text message system bidirectional +CHW
    - ??Traditional healers
- Broad stakeholders inputs and dissemination of policy and evidence

# CONCEPTUAL FRAMEWORK



- **First Stakeholders Advisory Board (SAB)**
  - 29<sup>th</sup> January 2024 introduced the study, recommended changes
- **Second SAB meeting**
  - 15<sup>th</sup> October 2024
  - Discussed changes the implementation



# Launched the first Implementation Research Learning Collaborative for NCDs Prevention (IRLCNP) on 14/10/2024



- Disease condition
  - Hypertension
  - Diabetes
  - Mental health
  - Oral health
- Agreed on Sites
  - Zanzibar
  - Kilimanjaro
  - Dodoma
  - Dar es Salaam

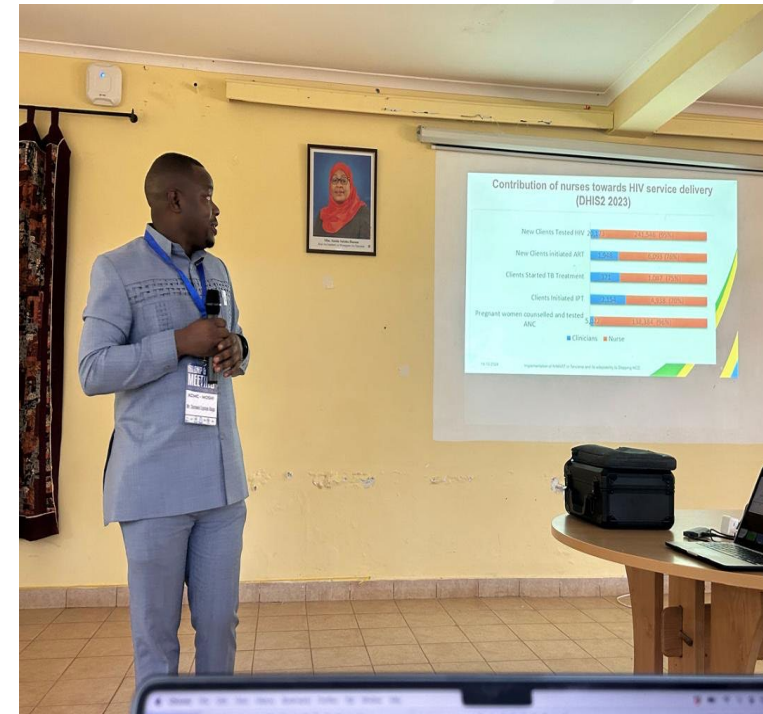


# Adapting SAB recommendations

- Insurance coverage – include other
  - Intergrated community health funds (iCHF – 10%)
  - National health insurance funds (NHIF)
  - Other insurance company
  - Non insured
- Community health workers
- Peer group model
- Engage traditional healers

# Adapting SAB recommendations

- Nurse Initiated Management of Antiretroviral Therapy (NIMART) to NCDs
- Weltel – ongoing training
  - engage family members
- Training nurse in motivational interviewing
- Nurse – enhancing counseling for drug refill



NIMART National Coordinator during IRLCNP presenting NIMART model

# Ethics approvals

- Delay in initial approval
    - Change in protocol – two different protocols
  - Secured ethical clearance
    - Queen University
    - KCMC university ethics Committee
    - National Health Research Ethics Committee
    - Zanzibar Health Research Institute (ZAHRI)
  - President office Regional administrative and local government (PO-RALG)
    - Regional Medical officer – 4 region in Mainland
    - Zanzibar – 2 regions – Pemba and Unguja
    - District Medical Officer
    - Health facilities level
- 

# Outcomes

Primary Outcome: Change in Systolic BP

Secondary Outcome

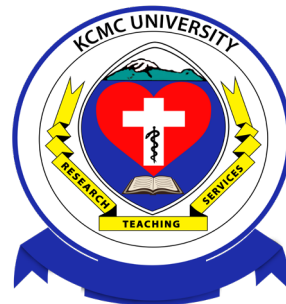
## Clinical

- Controlled blood pressure
- Observed change in:
  - HbA1c
  - BMI
  - Waist circumference
  - Waist-hip ratio
  - Blood pressure change
  - Presence of foot wounds

## Non-Clinical

- Routine Management
- Utilization of care
- Self-management

# Acknowledgement



Imagine it is 2035. What are the most pressing challenges in implementation science and where are researchers putting their focus?



Rafael



Blandina



Colin



Pallab

# A look at implementation science in the Pacific in 2035

Colin Bell

on behalf of the Pacific SUP team (Gade Waqa, Jacqui Webster, Ann Marie Thow, Steve Allender, Thomas Lung, Kris Rogers, Mark Woodward, Aliyah Palu, Briar McKenzie)

and partners (Fiji Ministry of Health, Consumer Council of Fiji, SPC, FAO, WHO)





**More ocean**

**More NCDs**





INSTITUTE FOR HEALTH  
TRANSFORMATION



# What did we learn from the Scaling Up Food Policy Implementation in the Pacific Project (SU18)?





INSTITUTE FOR HEALTH  
TRANSFORMATION



# Community led implementation, researcher led science



# Community led implementation

- Investigators were privileged to work directly with the national government in Fiji on NCD prevention, responding to implementation priorities and timetables.
- **What did it look like?**
  - Integrating project into MOH service delivery (e.g. contributing to/advocating for national NCD plan)
  - Following community protocols and partnership with the Ministry of iTaukei Affairs
  - Gathering representative population data (policy landscape analysis, dietary intakes, food security, consumer perspectives) from priority rural and peri-urban communities
  - Provincial councils taking ownership of local food provision (e.g. partnering with national government on seed provision)
  - Scholarships for a healthy food retail short course



# Community led implementation

- What did it look like?
  - Partnering with regional development partners (e.g. Pacific Community, UNICEF, WHO, FAO)
  - Building implementation capacity
    - Technical and practical guidance on policy briefs and nutrient profile models
  - Adjusting activities to accommodate a national election and changing government priorities
  - Not continuing with the project in another Pacific country





- **What did it look like?**
  - Partnering with the Fiji Institute of Pacific Health Research at Fiji National University
  - Training local researchers and research assistants in population survey designs, data gathering (using WHO STEPs)
  - Joint appointments with Fiji National University
    - Supervise staff studying towards PhDs
    - Sustainable agriculture/fisheries





- **What did it look like?**
  - Grant, policy and and paper writing workshops
  - Direct feedback to communities that provided data by local researchers
  - Supporting national capacity for nutrition surveys (NFNC)
    - Update of food composition tables to include sugar
    - Intake24 and adding 100 Fiji dishes to the existing NZ based database
    - Ongoing:
      - create a ‘healthy sustainable diet’ score
      - Exploring healthy literacy by NCD risk profile and socio-economic vulnerability





# 2035 Community Led Implementation and Researcher Led Science

- Prevention and wellness comprise a larger proportion of ministry of health funding with direct support from development partners and neighbours
- Prevention actions are co-designed by communities and co-delivered and environmentally friendly
- Fiji Institute of Pacific Health Research is the 'go-to' Institute for Researcher led science design and evaluate co-designed prevention activities
- System science and active implementation science informed actions

Australia  
earned  
\$230M from  
SSB exports  
to the Pacific  
2000-2015

Climate  
change  
prevention  
and control



# Thank you / Vinaka

[iht.deakin.edu.au/globe](http://iht.deakin.edu.au/globe)



Imagine it is 2035. What are the most pressing challenges in implementation science and where are researchers putting their focus?



Rafael



Blandina



Colin



**Pallab**



The George Institute  
for Global Health

*Better treatments. Better care. Healthier societies.*

# AI and ethical implications for health research

Pallab K Maulik

Director of Research (George Institute for Global Health, India)

Professor, Faculty of Medicine (UNSW, Sydney)



TABLE I

LIST AND DISCUSSION OF THE REVIEWED CATEGORIZATION OF ETHICAL ISSUES OF AI AND OUR PROPOSED CATEGORIZATION

Categorization	Class	Ethical Issues	Discussion
Classification of AI ethical Issues from features of AI, human factors, and social impact [11]	Ethical Issues Caused by Features of AI	Transparency, Data Security and Privacy, Autonomy, Intentionality, and Responsibility	The impacts of AI on the environment, such as natural resource consumption and environmental pollution, are ignored.
	Ethical Issues Caused by Human Factors	Accountability, Ethical Standards, Human Rights Laws	
	Social Impact of Ethical AI Issues	Automation and Job Replacement, Accessibility, Democracy and Civil Rights	
Classification of AI ethical issues from the vulnerabilities of AI and human [29]	Ethical Issues from the Vulnerabilities of AI	ML is Data Hungry, Garbage In/Garbage Out, Faulty Algorithms, Deep Learning Is a Black Box	Several important issues, such as responsibility, safety, freedom, and environmental problems, are omitted.
	Ethical Issues from the Vulnerabilities of Human	Abuse Use of AI, Job Replacement, Issues about Robotic Companions	
Classification of AI ethical issues by ethical issues related to algorithm, data, application, and long-term & indirect ethical risks [38]	Ethical Issues Related to Algorithm	Algorithm Security, Algorithm Explainability, Algorithmic Decision Dilemma	Issues involved accountability, fairness, autonomy and freedom, human dignity, environmental problems are not included.
	Ethical Issues Related to Data	Privacy Protection, Recognizing and Proceeding Personal Sensitive Information	
	Ethical Issues Related to Application	Algorithm Discrimination, Algorithm Abuse	
	Long-Term and Indirect Ethical Risks	Employment, Ownership, Competition, Responsibility	
Classification of AI ethical Issues based on the deployment of AI [51]	Impact on Society	The Labor Market, Inequality, Privacy, Human Rights and Dignity, Bias, Democracy	Some issues, including responsibility, safety, and sustainability, are omitted and this classification is complicated and cumbersome to understand.
	Impact on Human Psychology	Relationships, Personhood	
	Impact on the Financial System		
	Impact on the Legal System	Criminal Law, Tort Law	
	Impact on the Environment and the Planet	Use of Natural Resources, Pollution and Waste, Energy Concerns	
Our categorization: Classification of AI ethical Issues at individual, societal, and environmental levels	Impact on Trust	Fairness, Transparency, Accountability, Control	Our categorization classifies AI ethical issues from individual, societal and environmental levels. This classification is not only clear and easy-to-understand but also comprehensively covers the discussed ethical issues.
	Ethical Issues at Individual Level	Safety, Privacy & Data Protection, Freedom & Autonomy, Human Dignity	
	Ethical Issues at Societal Level	Fairness & Justice, Responsibility & Accountability, Transparency, Surveillance & Datafication, Controllability of AI, Democracy and Civil Rights, Job Replacement, Human Relationship	
	Ethical Issues at Environmental Level	Natural Resources, Energy, Environmental Pollution, Sustainability	



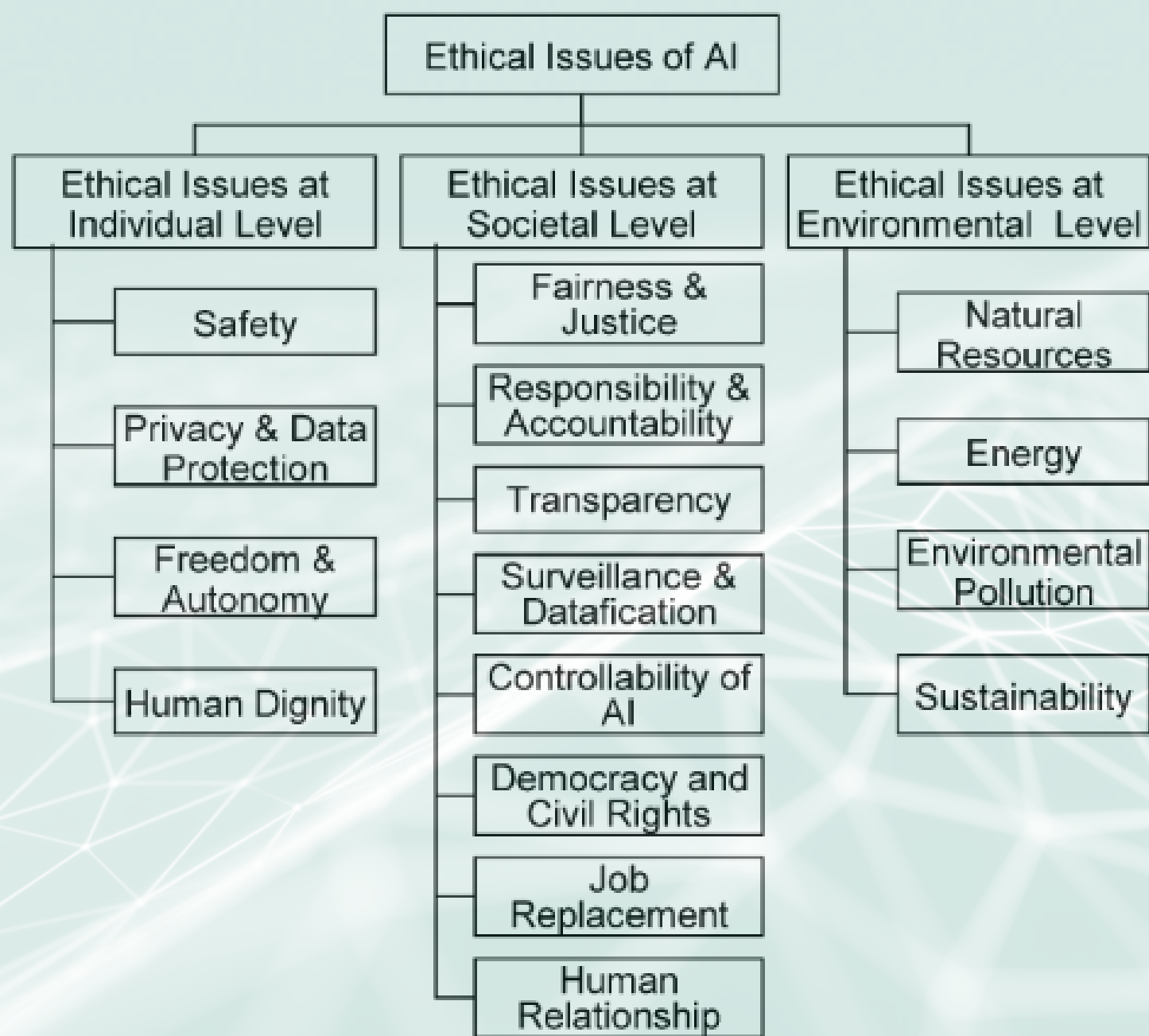


Fig. 2. Proposed categorization of AI ethical issues.

# AI and health

- **Use of care robotics**

- lack of personalized human touch Vs increased ability to interact given fewer human resources
- Dignity of patients, especially those with dementia who can be tricked to believe that they are interacting with humans
- care robotics can reduce autonomy due to their complexities

- **Diagnostics**

- 'black box' of ML based diagnostics which because of its complexities make scrutinizing difficult
- Biases can be missed
- Health workforce roles may be compromised and may need retraining

- **Precision medicine**

- biases can creep in due to poorly developed models that exclude key populations
- cultural variations can be difficult to include
- moral questions like gene editing for health improvement Vs human enhancement cannot be dealt with by AI generated models
- transferability of models between the global north and global south (urban/rural OR privileged/marginalized)
  - keeping cost affordable

# AI and ethics – what should we be aware of 10 years from now?

Transparency in how data/metadata was used and updated while creating AI based models of care?

How do we protect health data even while using open source data?

Updating AI algorithms and monitoring chatbots regularly

How does one keep up with the pace of AI development but ensure data protection and adhere to ethical principles?

How to balance regulation and innovation while keeping ethics in mind?

Challenges of developing universal policies about AI across geographical locations

How do we safeguard environmental pressures that AI brings in due to power usage and electronics?

How do we balance the ethics of doing that given AI can also be an answer to environmental challenges?

How do we get PWLEs involved in the AI generation as AI evolves over time?

How do we ensure human interaction if AI is used too much?

How does one build trustworthy AI models?



As we cannot be a Tom  
Cruise and cannot afford  
these heroics we need to  
be aware of our ENTITY  
like situations



# Lunch and chat...

- Name the **biggest gaps** in implementation as a scientific field?
- How do we ensure that NCD interventions are **resilient to climate change** impacts?
- How can we **strengthen global collaboration** to address the NCD epidemic?
- The most **promising new approach or technology** for implementing NCD interventions is .....?

**And any other ideas!**

# Panel reflections



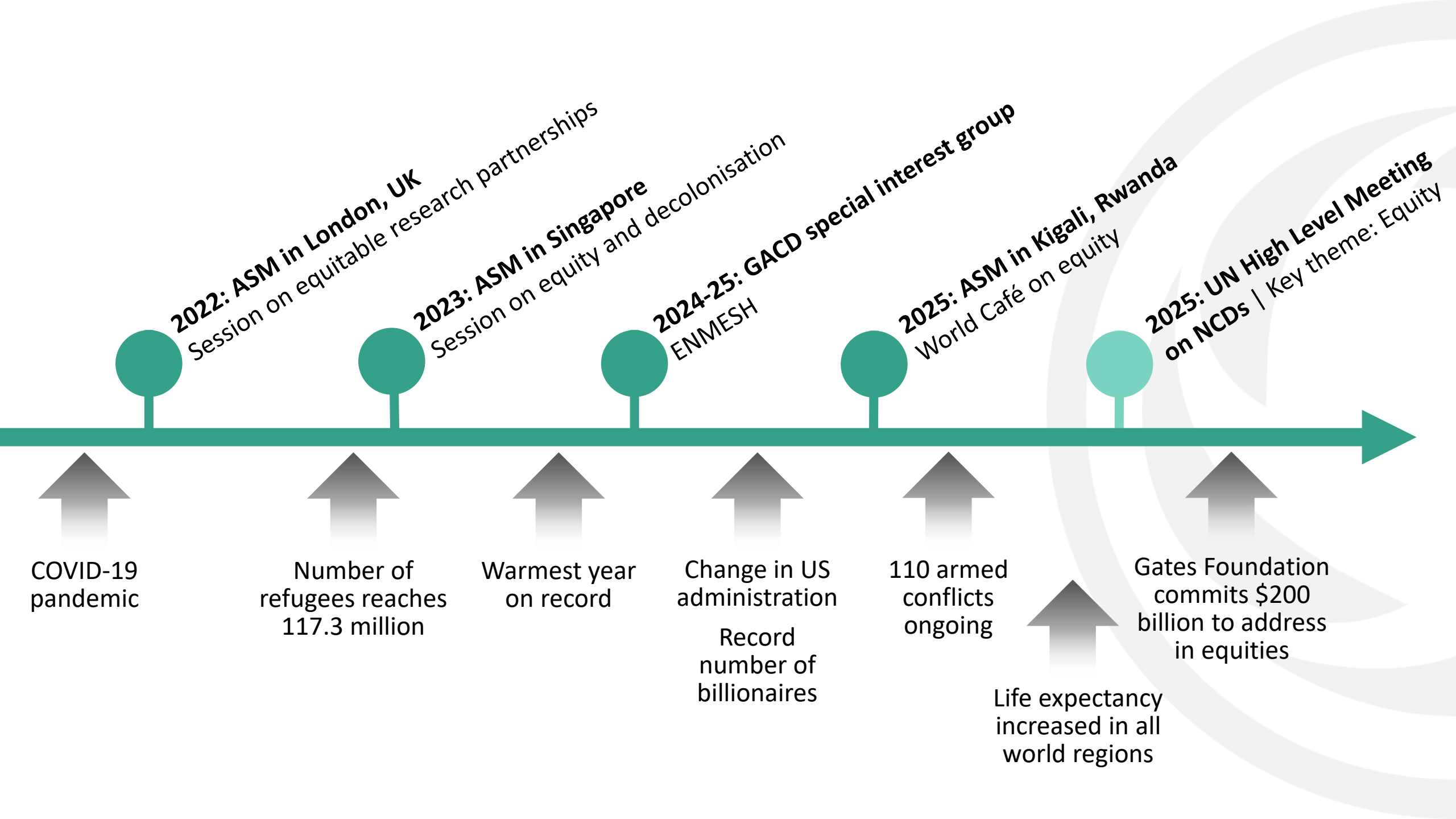
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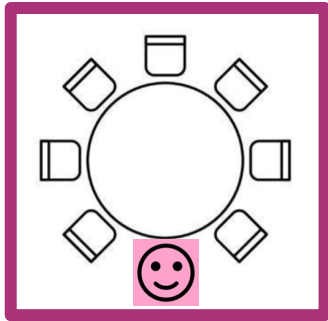
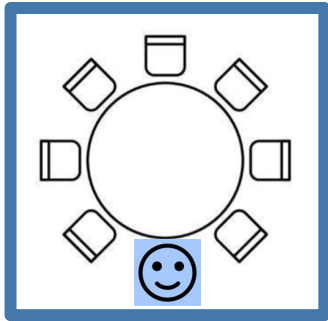
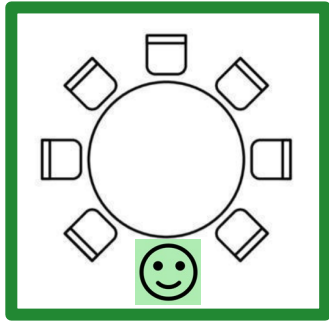
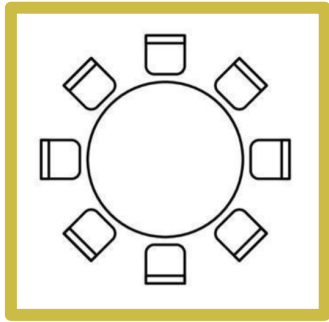
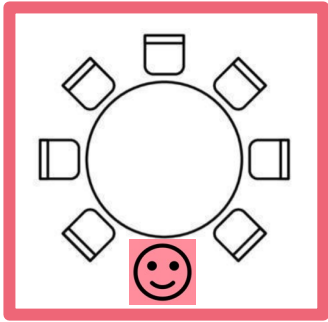
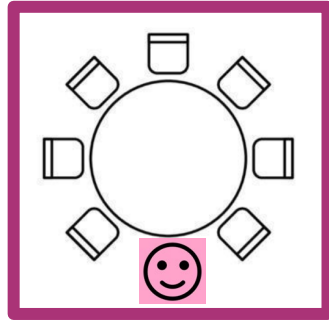
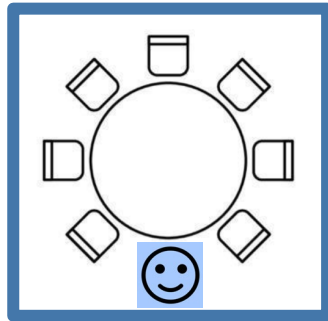
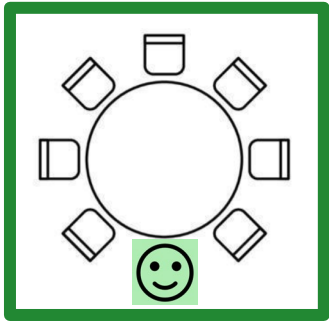
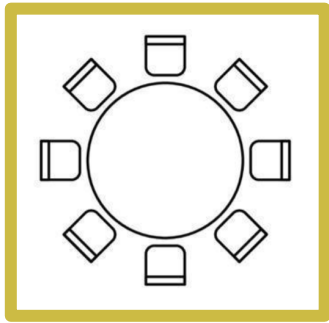
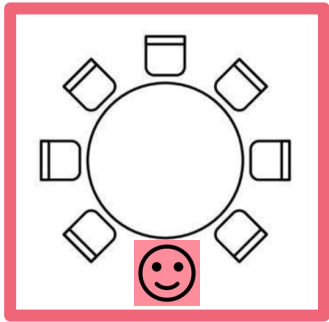
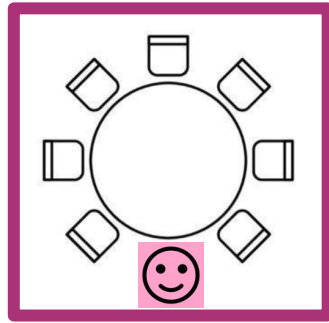
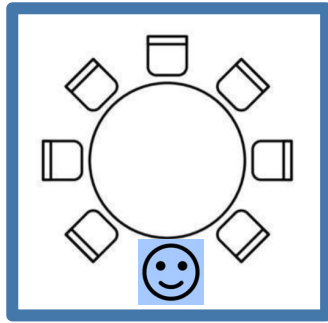
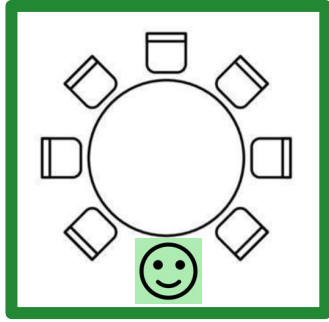
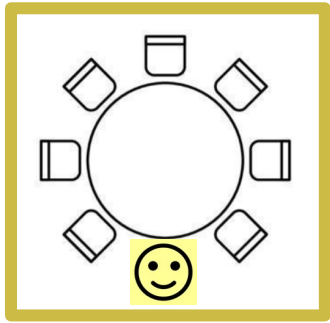
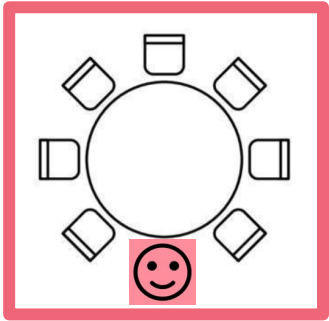
# World Café

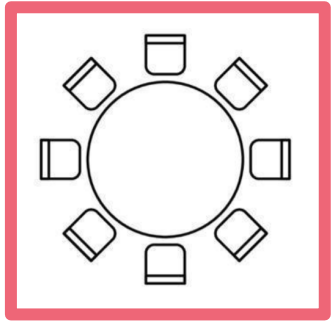
Equity across the implementation  
research community



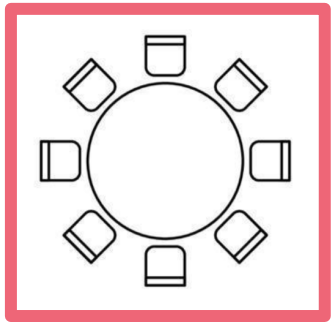
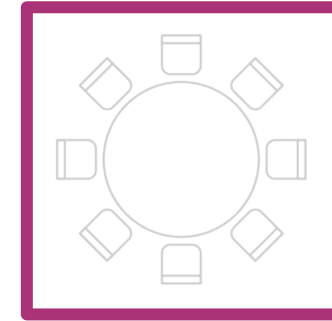
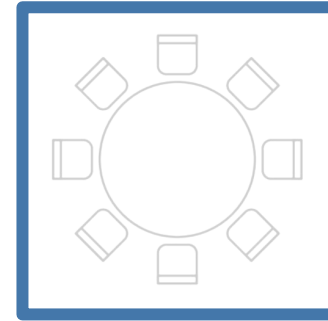
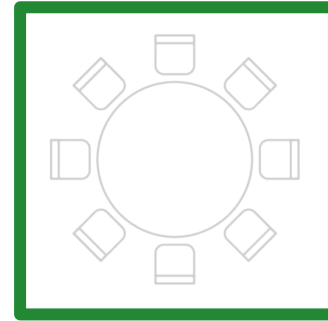
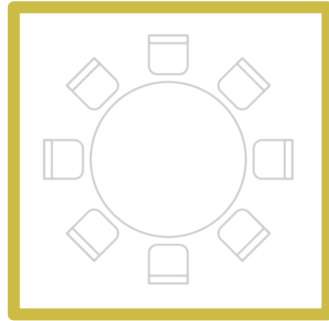




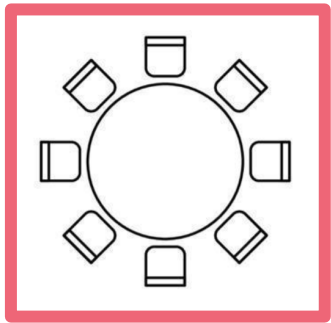
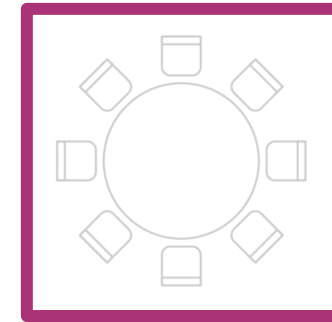
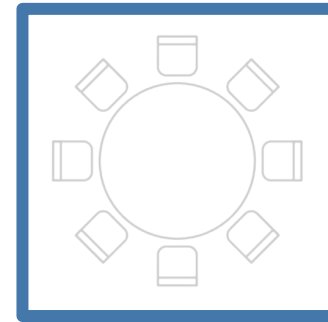
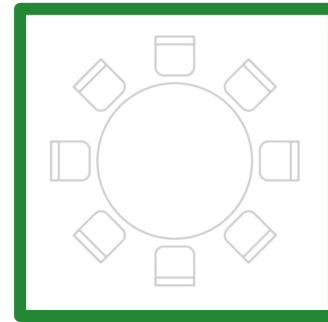
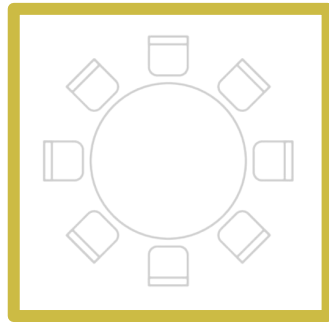




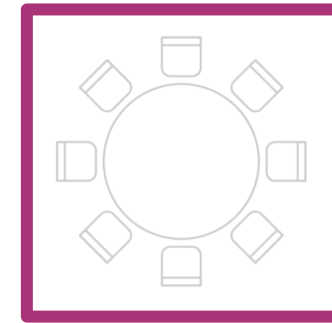
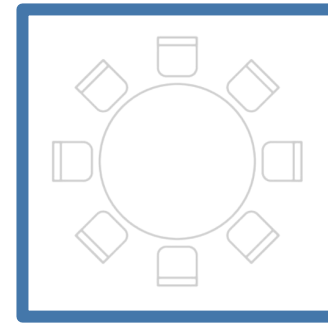
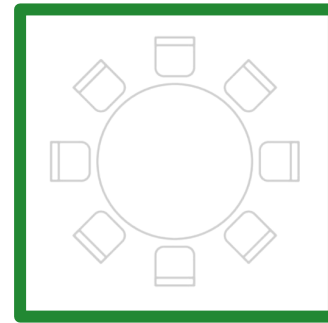
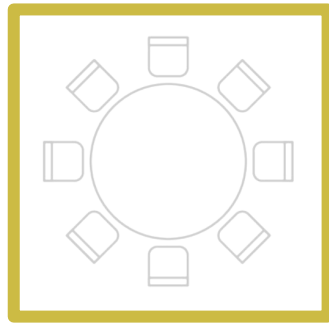
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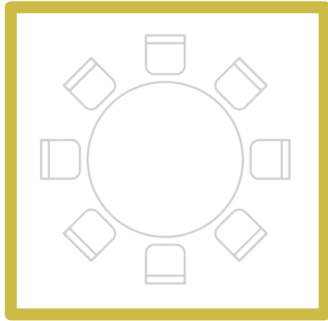
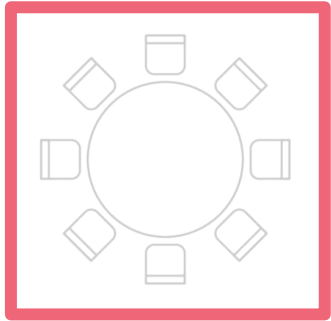


## Understanding and measuring (in)equity

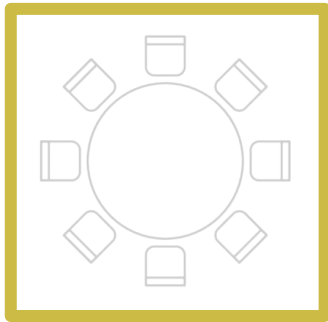
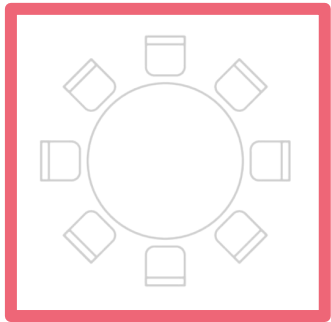
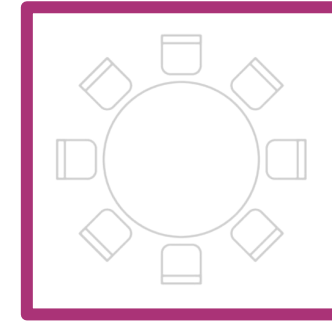
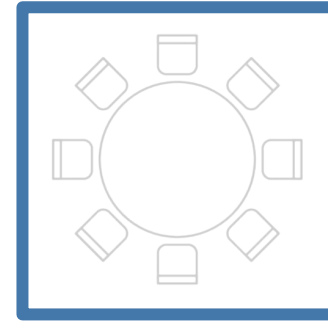
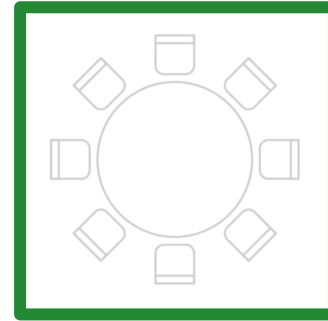


Is your project equitable? How do you know?

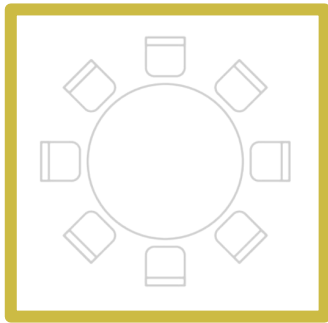
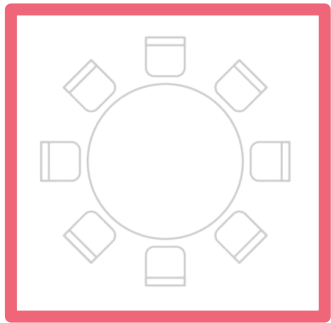
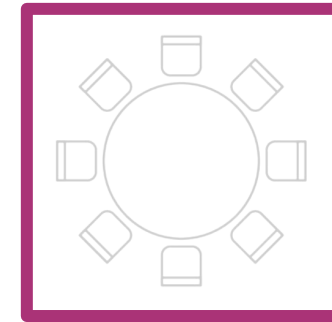
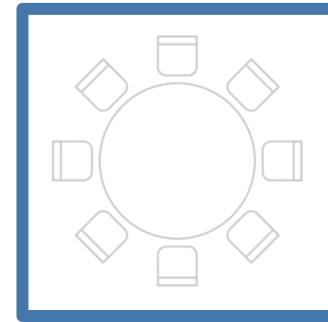
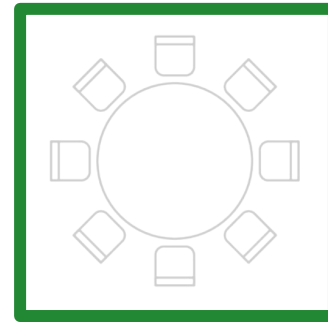




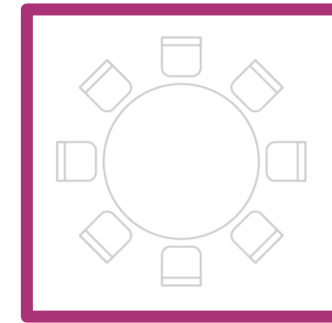
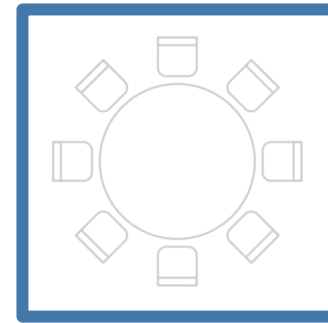
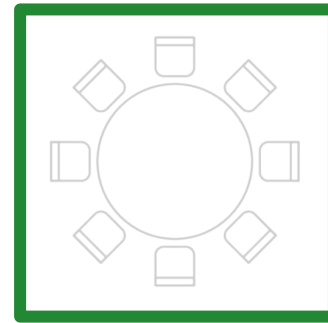
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TABLES

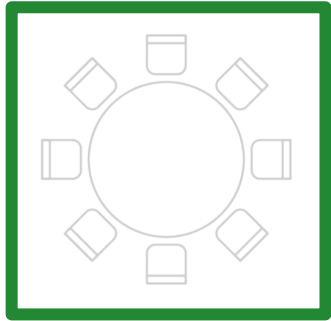
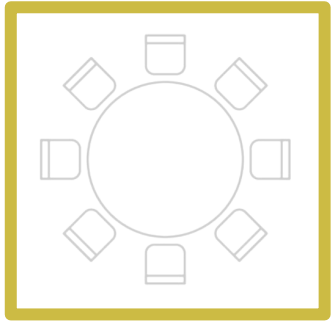
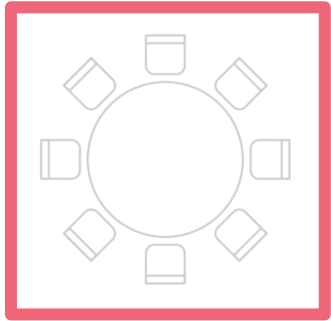


**Best practice  
and support for  
researchers**



What tools or  
practices can  
help projects be  
equitable?

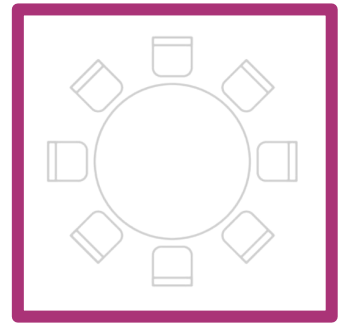
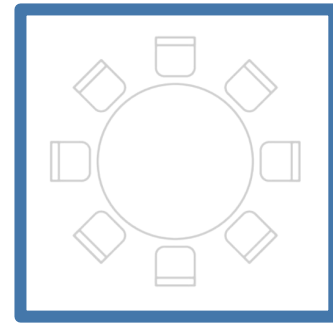
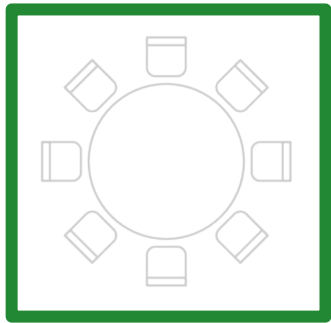
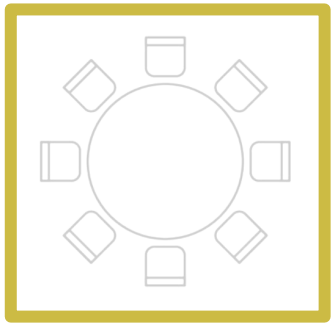
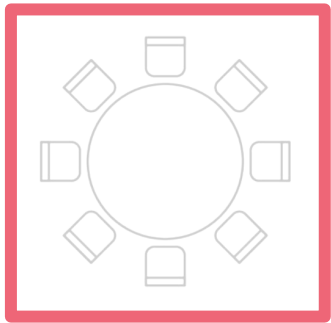
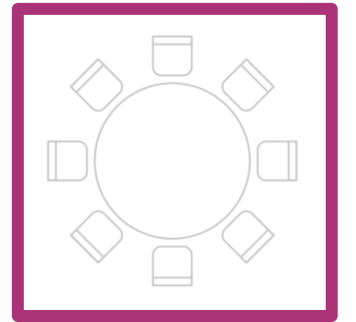
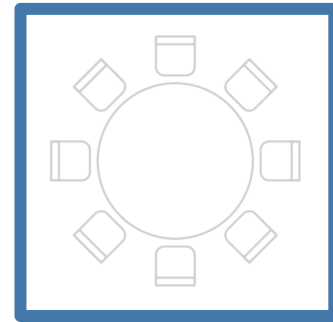
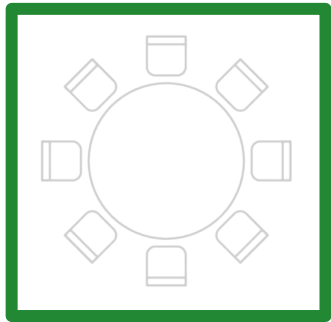
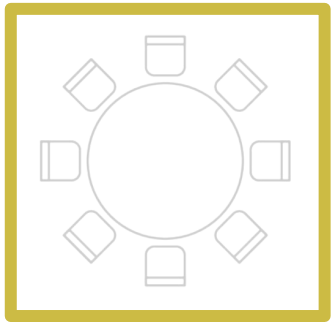
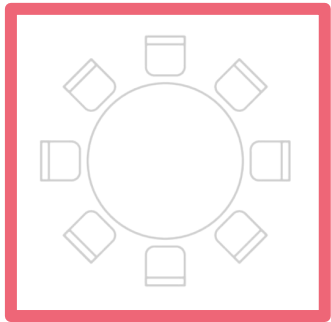
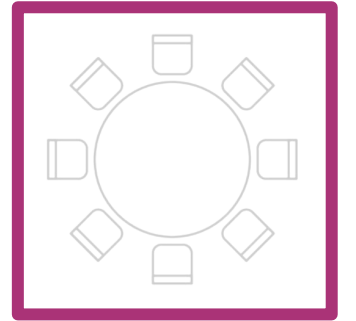
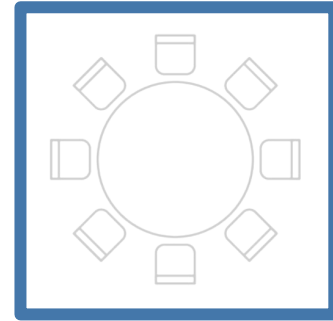


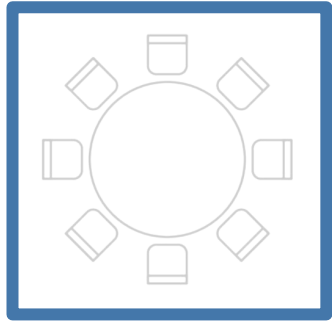
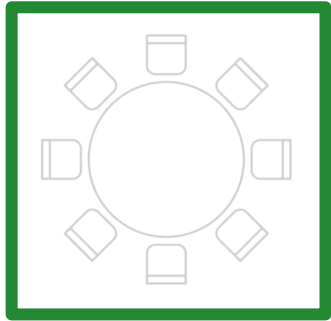
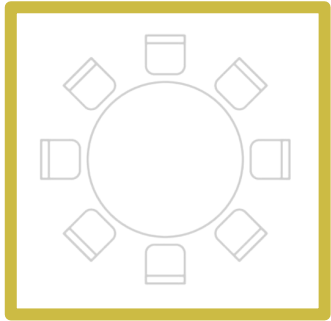
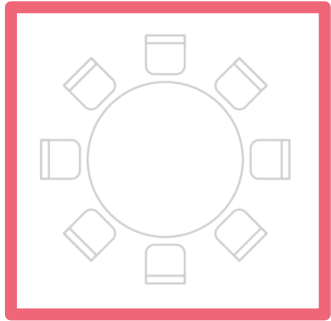


## GREEN TOPIC TABLES

### Barriers and facilitators of equity

What stands in the way of equity and how have you overcome obstacles?

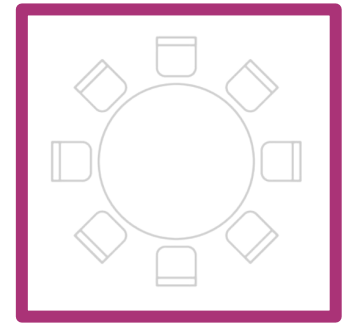
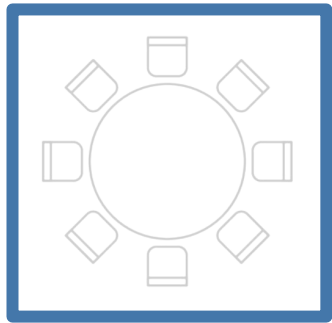
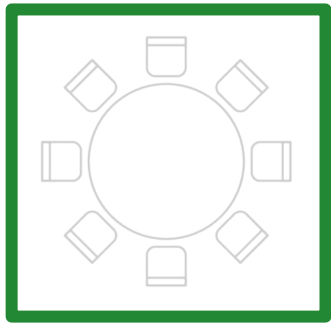
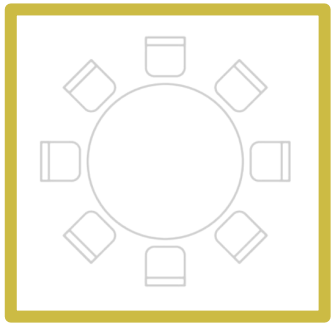
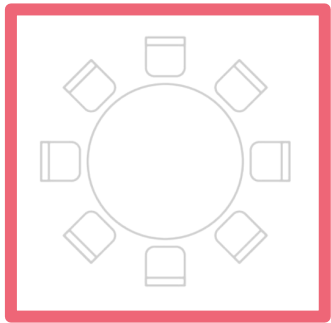
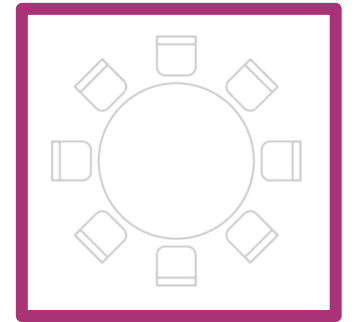
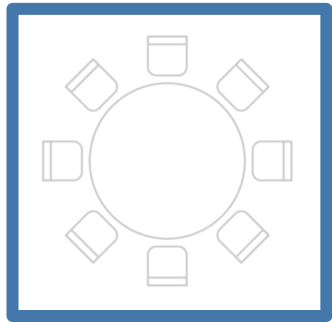
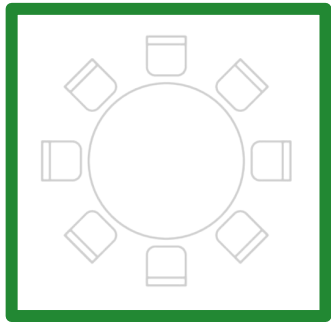
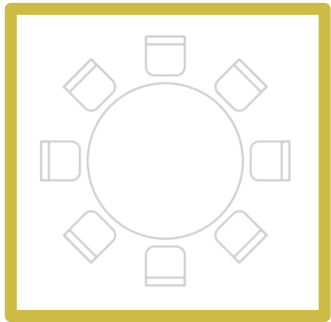
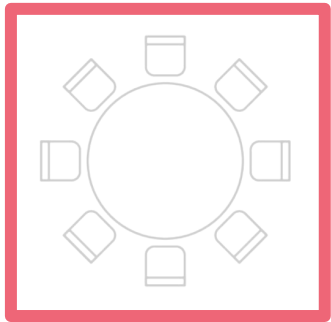
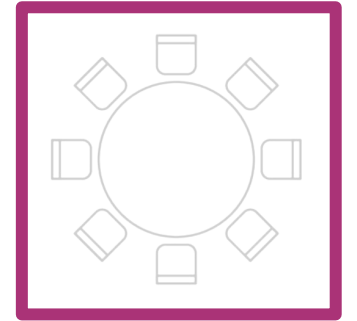


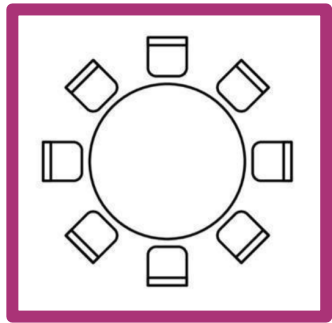
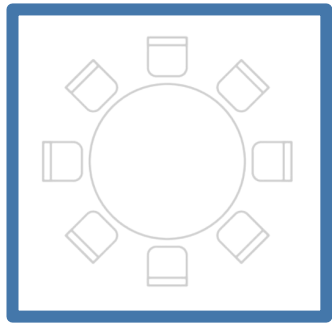
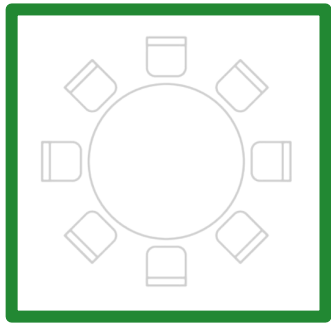
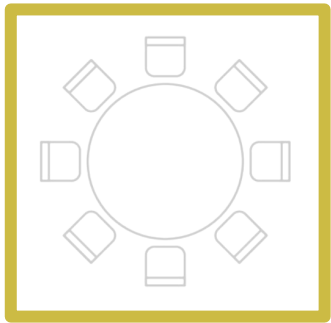
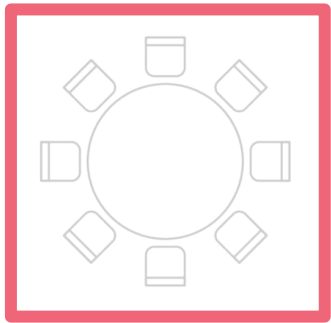
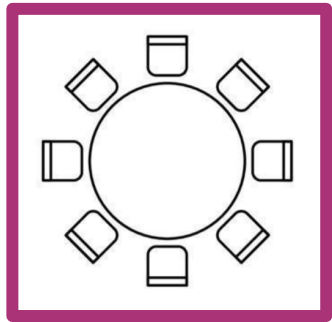
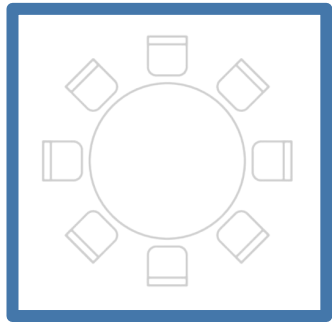
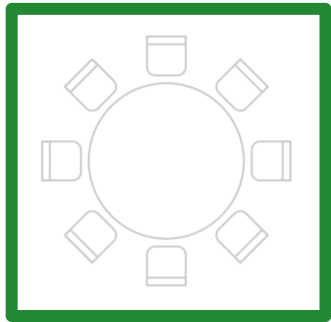
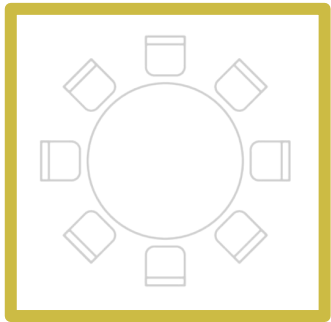
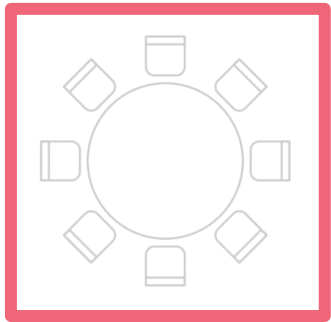
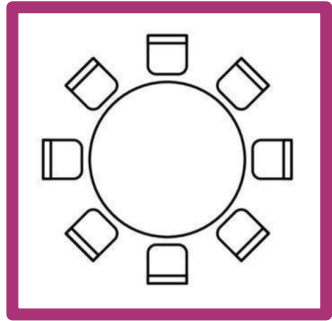
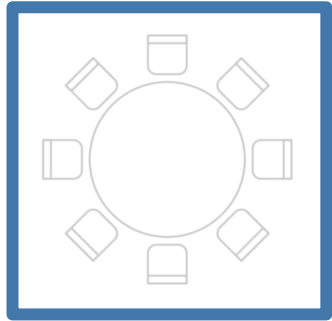
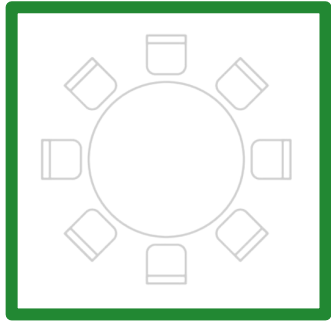
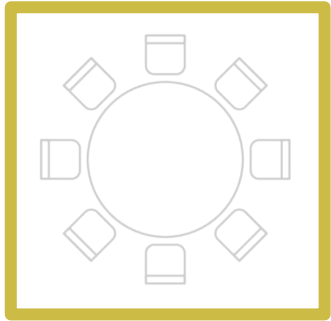
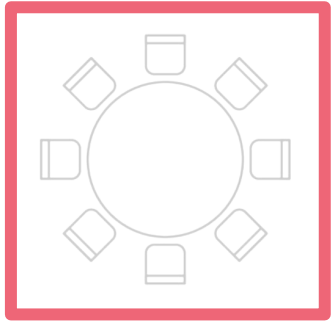


## BLUE TOPIC TABLES

### The cost of equitable research

What often gets  
missed in  
budgets? What  
are the “latent  
costs” of doing  
equitable work?

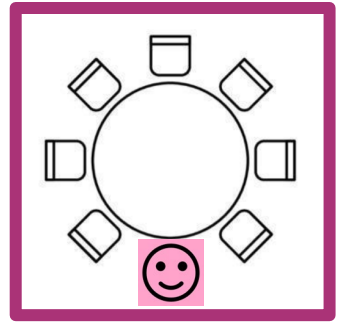
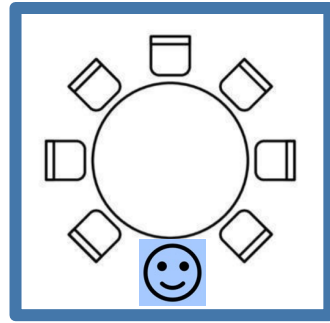
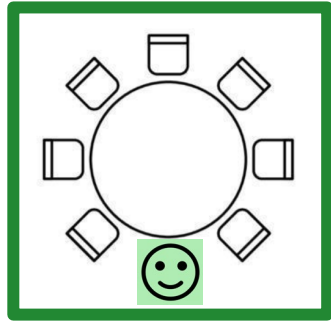
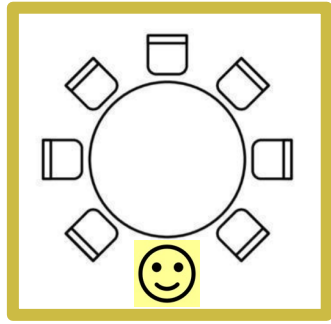
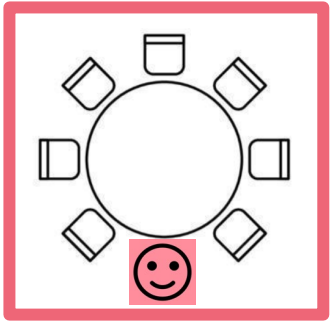
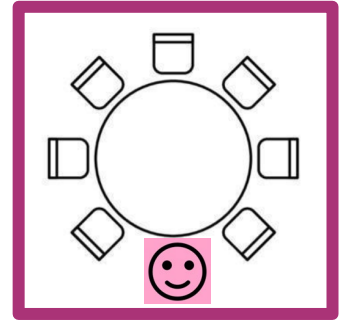
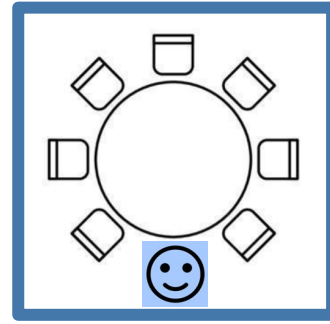
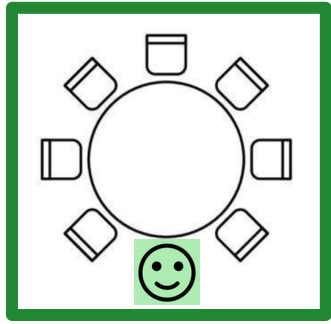
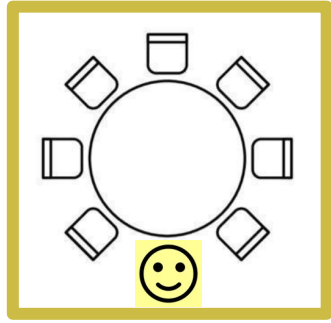
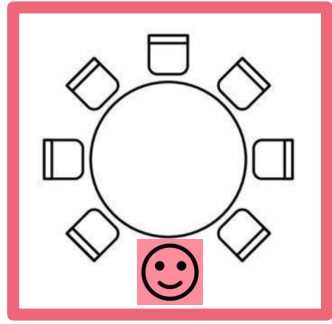
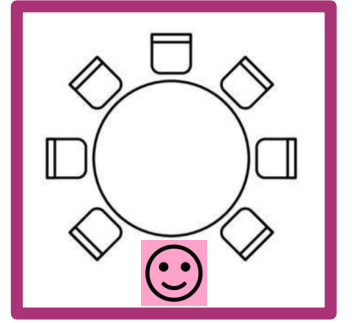
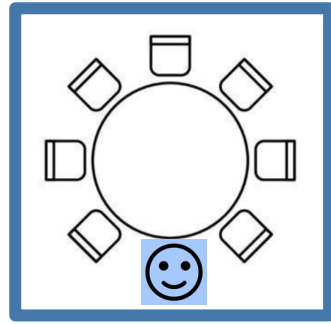
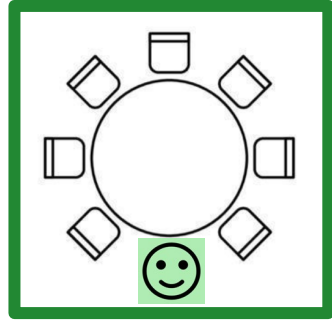
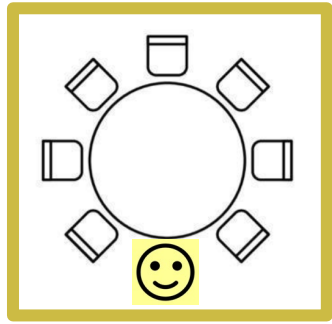
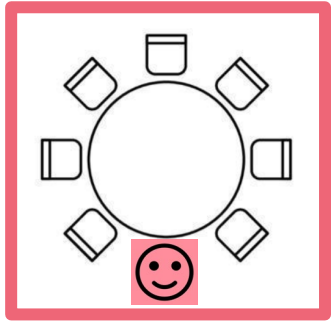


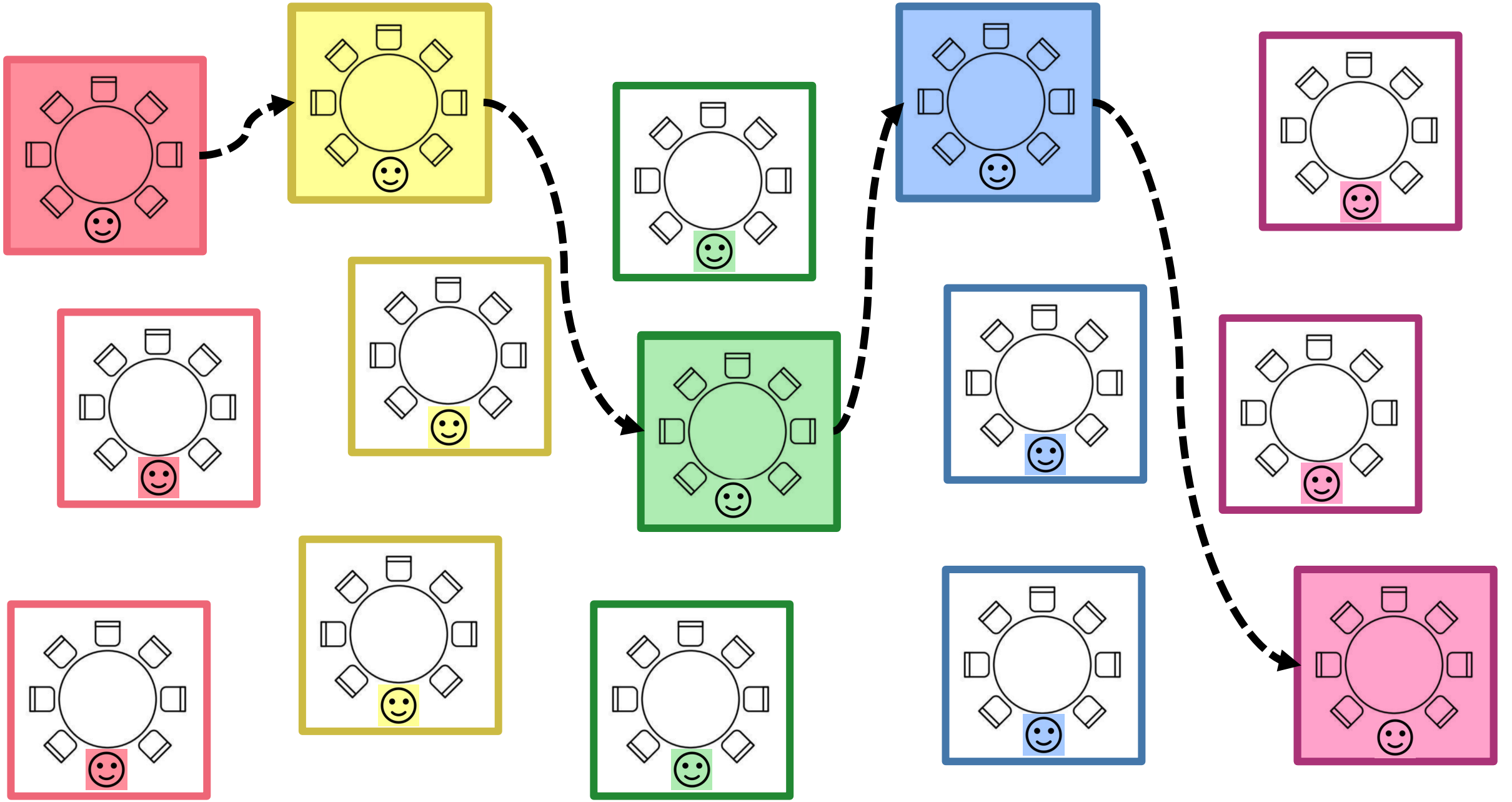


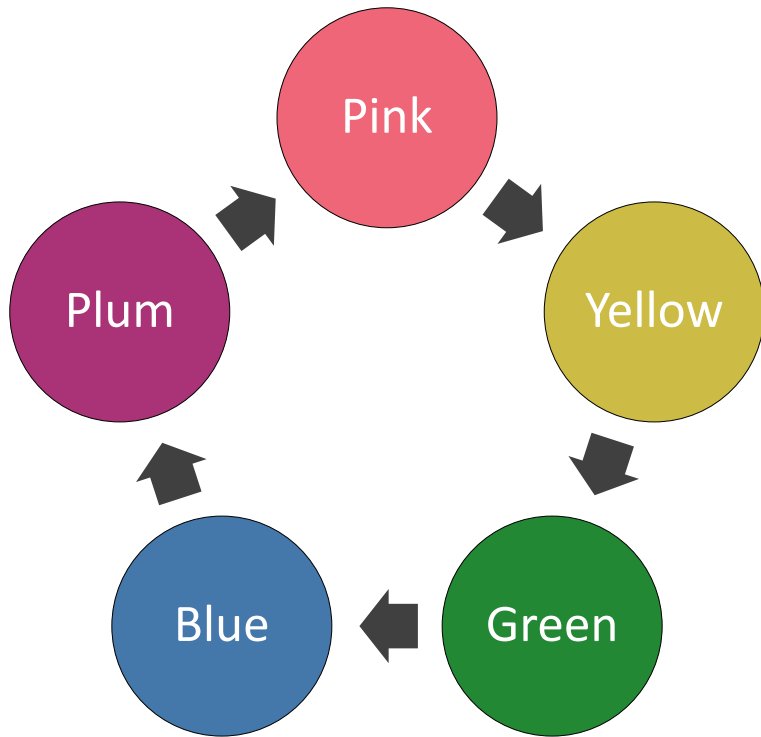
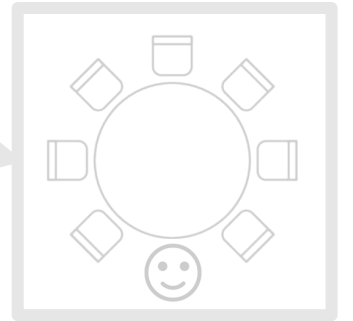
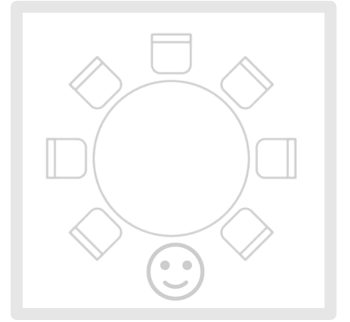
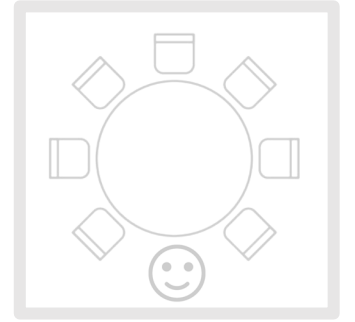
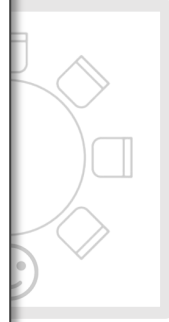
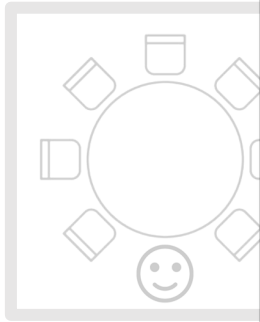
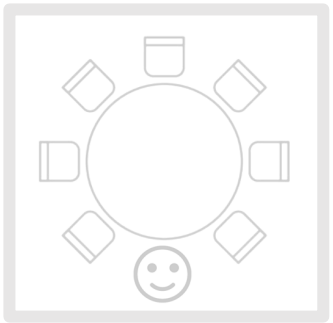
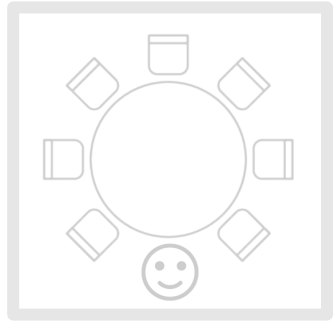
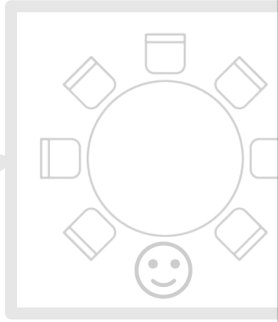
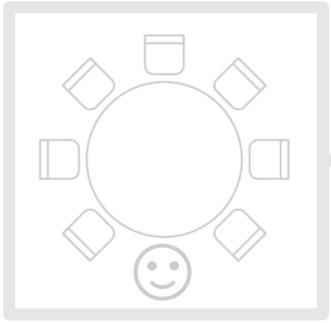
## PLUM TOPIC TABLES

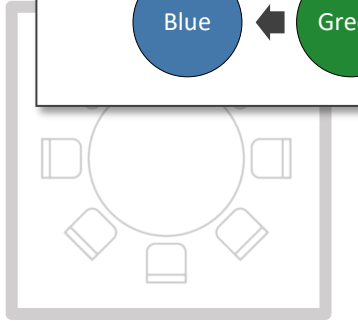
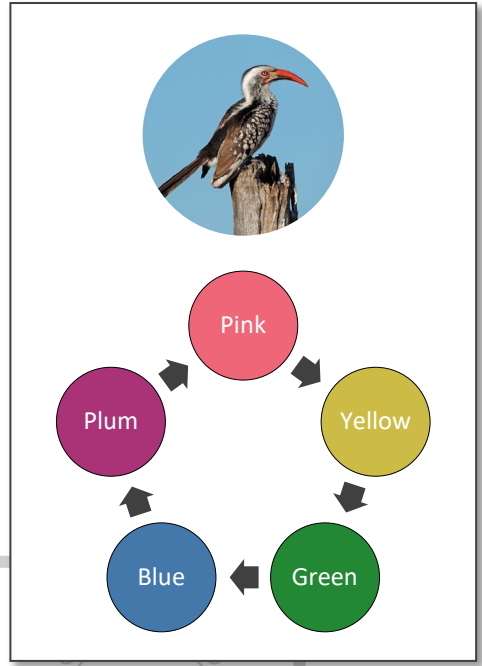
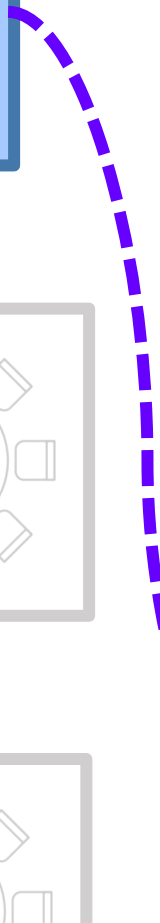
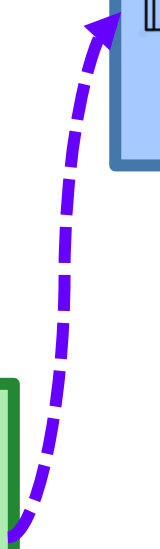
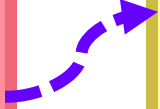
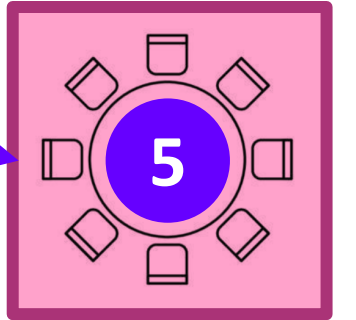
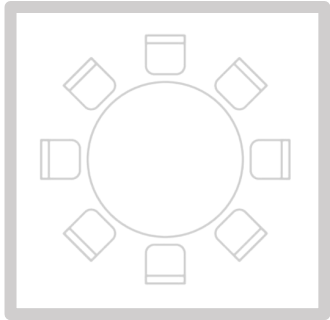
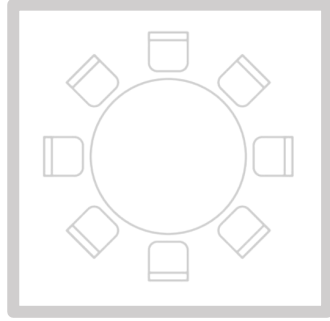
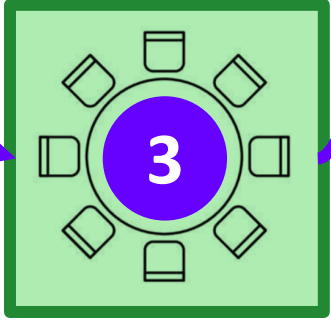
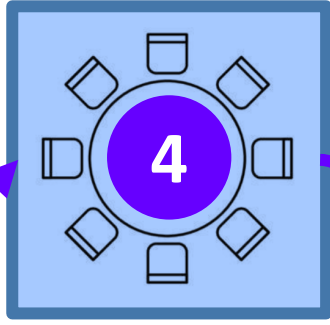
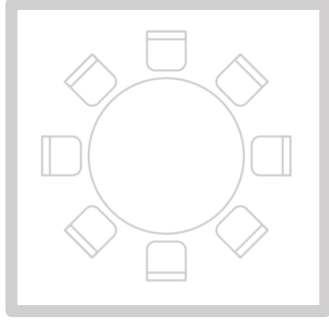
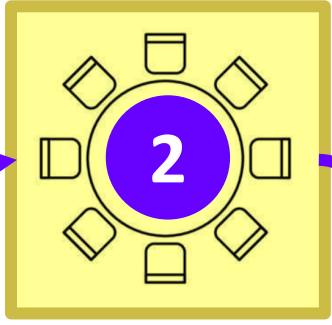
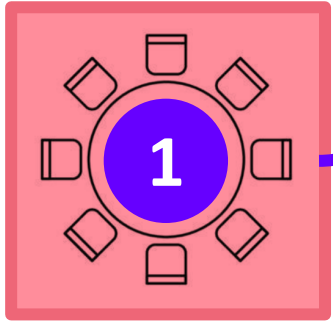
**Equity within the research team**

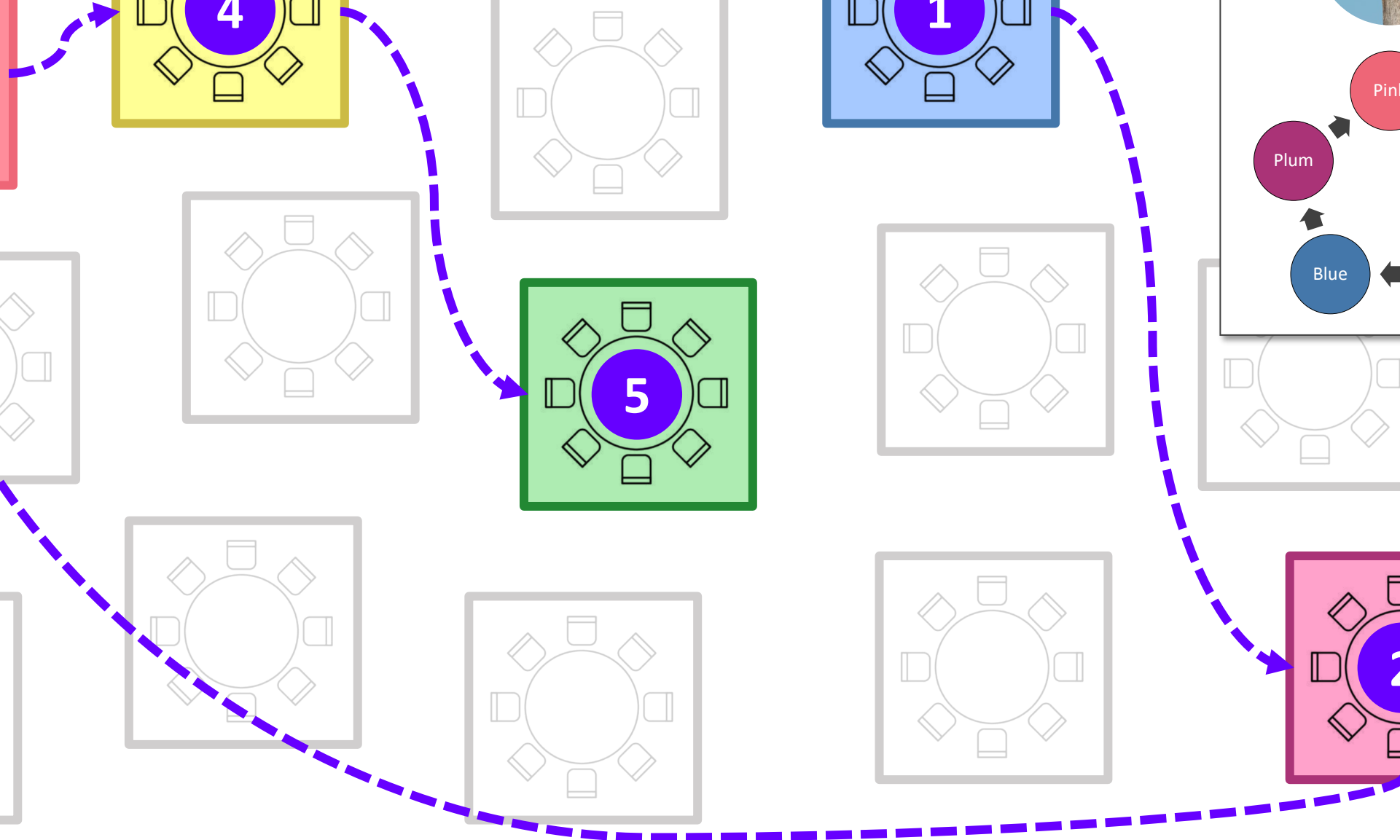
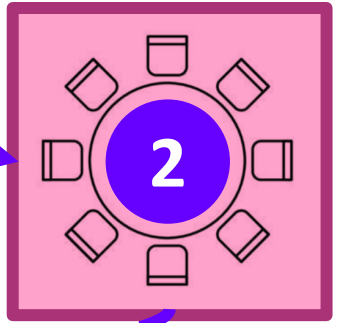
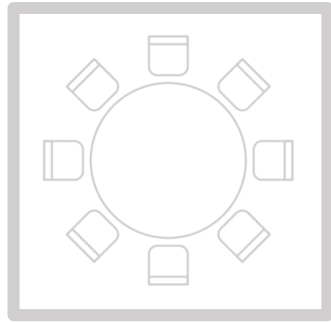
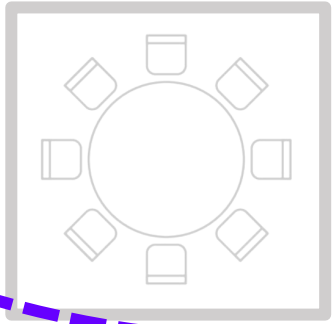
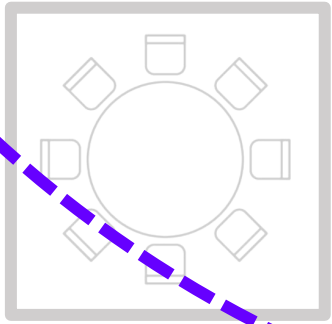
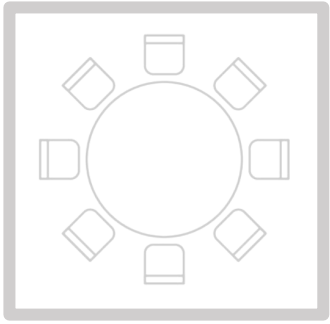
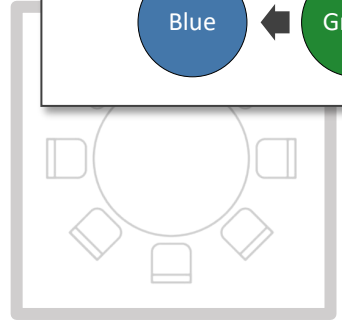
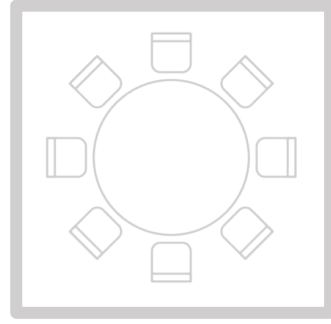
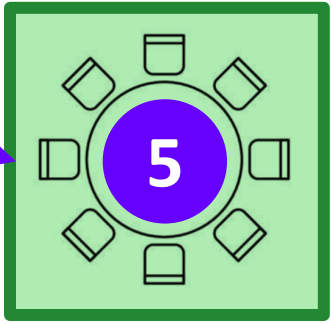
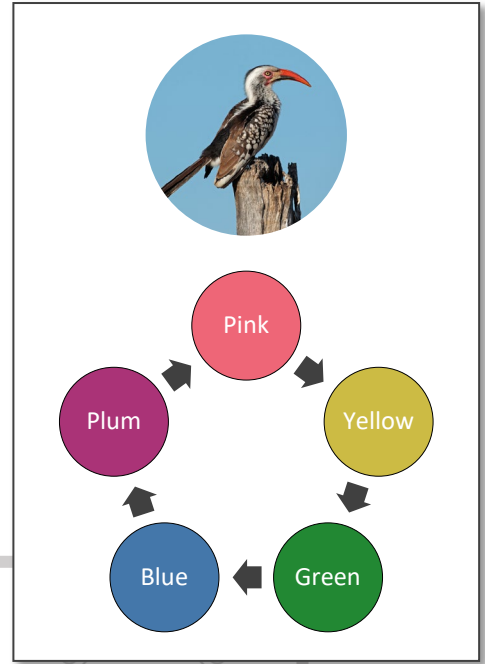
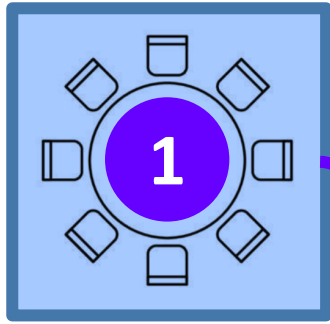
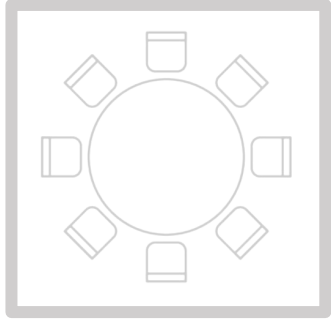
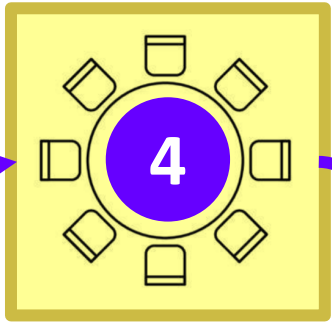
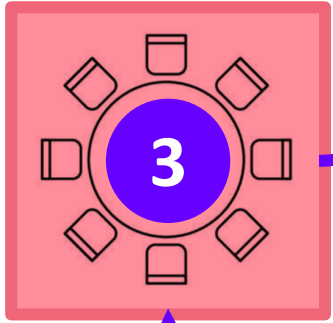
What does an equitable project team or partnership look like?

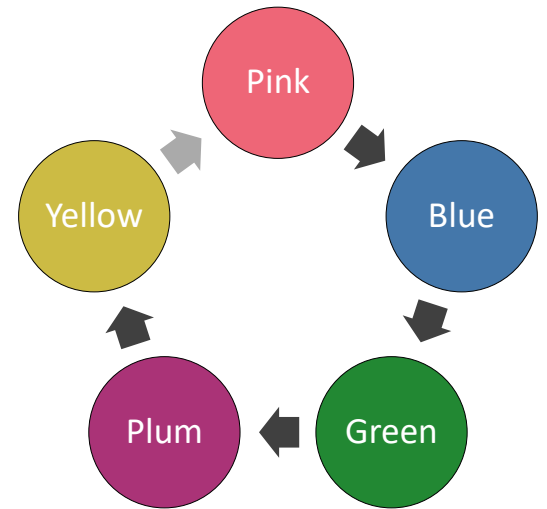
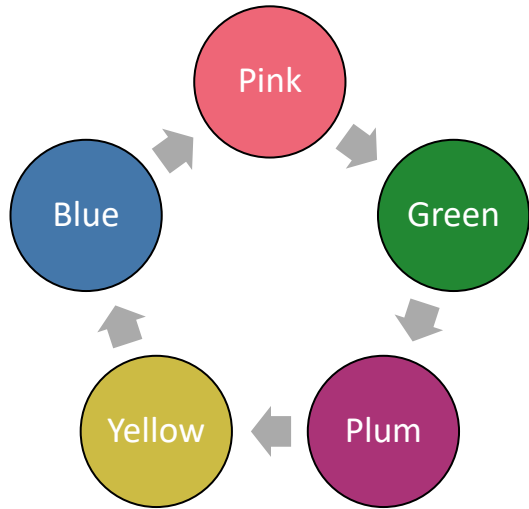
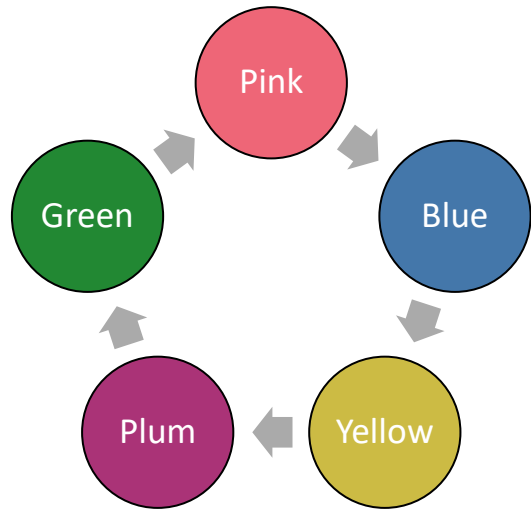


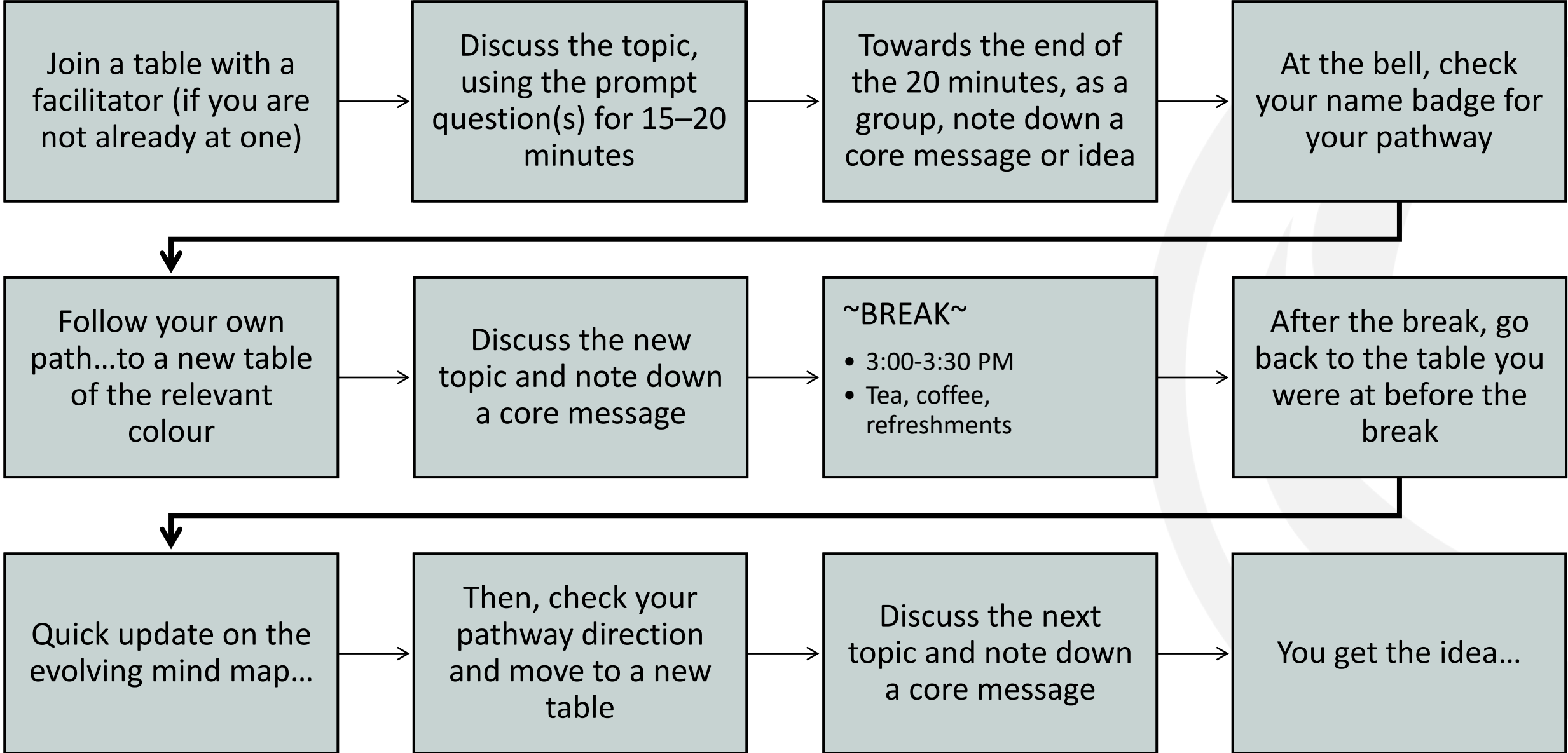












PINK TOPIC  
TABLES

**Understanding  
and measuring  
(in)equity**

Is your project  
equitable? How  
do you know?

**Facilitators:**

Jacqui, Maisha, Kate F

YELLOW TOPIC  
TABLES

**Best practice  
and support for  
researchers**

What tools or  
practices can  
help projects be  
equitable?

**Facilitators:**

Ngozi, Margaret, Jane

GREEN TOPIC  
TABLES

**Barriers and  
facilitators of  
equity**

What stands in  
the way of  
equity and how  
have you  
overcome  
obstacles?

**Facilitators:**

Jaap, Kevin, Kate P

BLUE TOPIC  
TABLES

**The cost of  
equitable  
research**

What often gets  
missed in  
budgets? What  
are the “latent  
costs” of doing  
equitable work?

**Facilitators:**

Morven, Greg, Kim

PLUM TOPIC  
TABLES

**Equity within  
the research  
team**

What does an  
equitable  
project team or  
partnership look  
like?

**Facilitators:**

Victor, Vanessa,  
RS Dhaliwal





# This evening

From 6:15pm

**Pre-dinner networking drinks** in  
the Kilimanjaro Foyer and Terrace

From 7:00pm

**Gala dinner** in the Kilimanjaro  
Ballroom



