AFRICAN COLLABORATIVE FOR HEALTH FINANCING SOLUTIONS

Systems Mapping, Process Documentation, and Outcome Harvesting

An Innovative Hybrid Methodology for Systems Change Measurement

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Abbreviations

ACS	African Collaborative for Health Financing Solutions
DSP	Directorate of Special Programs
GRN	Government of the Republic of Namibia
HA	Health Accounts
HA-TWG	Health Accounts Technical Working Group
HRT	Harmonized resource tracking
HSS	Health system strengthening
MERL	Measurement, evaluation, research, and learning
MoHSS	Ministry of Health and Social Services
NAMAF	Namibian Association of Medical Aid Funds
NASA	National AIDS Spending Assessment
PPHRD	Policy Planning & Human Resources Development Directorate
PSEMAS	Public Service Employee Medical Aid Scheme
RT	Resource Tracking
RQ	Research question
RT-TWG	Resource Tracking Technical Working Group
SHA	System of Health Accounts
UHC	Universal health coverage
USAID	United States Agency for International Development

Introduction

Contextualization of the Study

With a relatively strong economy motivating international funders to reduce their investment in the country's health system, Namibia is facing constant pressure to achieve its health outcomes with its domestic budget that is generating a strong interest among health actors to identify relevant sustainable health financing solutions. Decision-makers are aware that sustainable health financing decisions require sound information to underpin successful policies and interventions. Decision-makers also recognize that access to reliable resource tracking (RT)[1] data is essential to making comprehensive strategic investment decisions for desired health outcomes.

As a relatively young country that gained its independence in 1990, Namibia conducted its first resource tracking exercises in 2002. Until 2019, the country tracked its health-related expenditures simultaneously using two methodologies: Systems of Health Accounts (SHA), more recently referred to as the Health Accounts (HA), and the National AIDS Spending Assessment (NASA). SHA and NASA have different scopes in that the SHA focuses on all spending on health, while the NASA is disease-specific and focuses on HIV spending only, which includes health and non-health spending, and may also include spending on integrated efforts for co-morbidities (such as TB prevention for HIV-positive persons). While the SHA also estimates HIV spending specifically, as it is one of the key diseases that can be tracked separately within the SHA framework, the approach and level of detail of tracking HIV expenditures is slightly different to the NASA's. Historically, SHA was implemented with oversight by the Policy Planning & Human Resources Development Directorate (PPHRD), while NASA was done by Directorate of Special Programs (DSP), both of which are housed within the MoHSS.

National stakeholders recognized that the simultaneous use of these donor-driven methodologies was both time-consuming and overly expensive to conduct. The application of these siloed methodologies resulted in inefficient and inconsistent management of limited health resources. It is from that perspective the Ministry of Health and Social Services (MoHSS), in collaboration with the African Collaborative for Health Financing Solutions[2] (ACS) project developed an approach that ensures the needs for both general health and HIV expenditures data can be fulfilled through one efficient and inclusive process that meets the requirements of both the HA and NASA methodologies.

The hurdle in Namibia was understanding the processes and decisions needed to support the transition to a harmonized approach as well as the necessary steps to build the capacity of country stakeholders to implement the methodology sustainably in the future. Thus the ACS project implemented an assessment of the harmonized resource tracking (HRT) approach to better understand the processes that occurred

[1] Resource tracking consists of tracking past expenditures on health or on a specific disease in a country, as well as the flow of funds throughout the entire health system. The obtained information enables a detailed understanding of where the money comes from, who manages the funds, and how the funds are spent.

[2] ACS is a five-year USAID- funded project that supported six sub-Saharan African countries (Benin, Botswana, Burkina Faso, Namibia, Uganda, and Togo) to advance their universal health coverage (UHC) agendas. More specifically to Namibia, ACS, through funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), collaborated with national stakeholders to identify the following priority HIV/AIDS response and broader health system related areas: 1) Secure stakeholder consensus on the package of HIV/AIDS services for epidemic control; 2) Cost the package of HIV/AIDS services; 3) Support the government to institutionalize health and HIV/AIDS expenditure tracking; 4) Determine the feasibility and potential cost savings of giving Public Service Employee Medical Aid Scheme (PSEMAS) beneficiaries access to HIV/AIDS medication and supplies procured centrally by the Ministry of Health and Social Services (MoHSS); and 5) Support the government's sustainability planning efforts. These priorities were anticipated to assist the Government of the Republic of Namibia (GRN) to ensure that sustainable financing for the HIV/AIDS response serves as a key component of the country's UHC agenda and that steps are taken to plan and prepare for sustainable HIV epidemic control.

and the changes that transitioning to a harmonized approach produced for the RT sub-system, as well as any follow-on effects for the broader Namibian health system.

The purpose of this paper is to highlight how the HRT evaluation team used a hybrid evaluation methodology, using Namibia's HRT approach as a case study, in order to identify pertinent actionable learnings for country stakeholders and health system strengthening experts alike, from the different perspectives of the system's actors. This novel methodology 1) tested this hybrid approach to Health System Strengthening (HSS) measurement and learning in Namibia, 2) gathered insights to optimize the concept for future uses, and 3) developed a guiding framework for how HSS projects can be more proactive in building effective measurement frameworks.

Overview of the study

Systems mapping, process tracing, and outcome harvesting exercises were performed to demonstrate how, via the interventions of the ACS project, structures and processes within the Namibian Health System shifted over time to support the Harmonized Resource Tracking (HRT) approach. The combination of exercises sought to illuminate what changes occurred across the system, why those changes may have occurred, and the positive and negative results of those system changes. The goal of this combined exercise was to answer the following three questions:

1. **What changes occurred for whom, where, and when?**

This study aimed to understand the changes observed regarding resource tracking for the health system. As such, the study focused on a sub-system of interest—the actors and interactions involved in health system resource tracking. Focusing on this sub-system enabled the efficiency of the assessment by clearly delineating our area of interest and refining data collection tools. Without a boundary, the length and scope of the data collection could continue to grow over time. In addition, working in a sub-system that is well defined created supportive conditions for testing the feasibility of this innovative combination of methods in measuring systems change over time before attempting the approach on a larger, less well-defined system. Lessons from this study can be used to not only determine how resource tracking activities have led to changes in the broader system but also provide an example of the utility of bundled approaches to health system strengthening measurement, evaluation, research, and learning (MERL) for those interested in new approaches to measuring system change.

2. **How and why did these observed system changes occur?**

After identifying system changes before and after the launch of the HRT approach, the study focused on understanding how those changes occurred and why. Specifically, the HRT research team documented the steps required to ensure buy-in and agreement on the move to HRT among key system stakeholders, the specifics of ACS contributions to the way system changes occurred, and finally, determining, with certainty, the value add of ACS' support in harmonizing the resource tracking methodologies.

3. **What do these changes mean for the HIV/AIDS response in Namibia, and the overall functioning of the health system?**

Once the changes across the resource tracking sub-system are identified as well as the mechanisms used to achieve those changes, there was a need to understand the significance of the outcomes (positive and negative) in relation to the HIV/AIDS response as well as their potential carry-over effects on the broader Namibian health system. Unpacking the significance of outcomes is important to understand what a change in the efficiency of resource tracking means in the Namibian context, as expressed by the actors within that system. It answers the question, "Why is the outcome important for allocative efficiency within the

HIV/AIDS response or the Namibian health system more broadly?" It provides practical information about how a gain in efficiency, for example, can be used to support other parts of the health system in Namibia and why it should matter to those within the health system.

Methodology

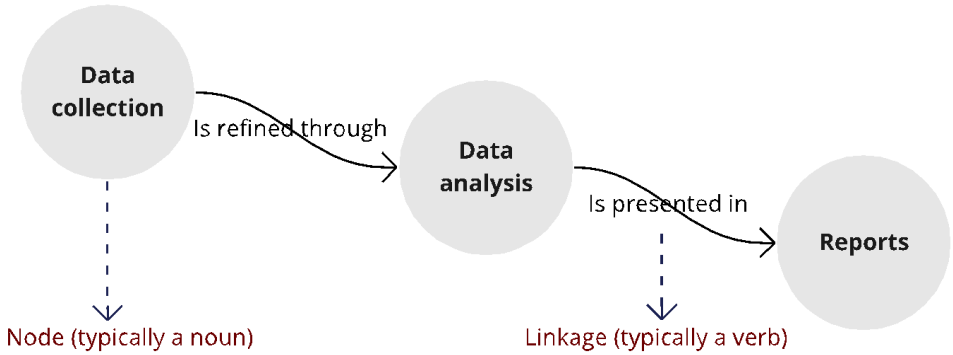
When decision-makers are interested in understanding the true value or impact of an intervention, researchers use different strategies and approaches to reveal the "truth" with a minimal margin of error. A common term that captures this concept of looking for evidence from different angles is known as triangulation. Per the literature, triangulation is mainly characterized as the use of multi-method research designs (Nightingale, 2009) and theoretical constructs (Williamson, 2018) or even a rigorous scientific approach focused on the application of different approaches for measuring the same characteristic (Brender, 2006) to gain more than one perspective on what is being investigated (Zeegers and Barron, 2015). Furthermore, it is also reported that there are four ways to triangulate (Better Evaluation, 2020) the "truth":

1. **Methodological triangulation**: Using more than one data collection strategy (interviews, surveys)
2. **Data triangulation**: Applying the data collection strategy in a different time, space, and with different persons
3. **Investigator triangulation**: Involving multiple researchers in an investigation
4. **Theory triangulation**: Using more than one theoretical scheme in the interpretation of the phenomenon.

An evaluation framework can be designed by putting together different combinations of triangulation types and by providing guidelines on what ought to be measured and how (Better Evaluation, 2018). The methodological innovation discussed here is the structure of the proposed evaluation framework. To answer the research questions, the HRT evaluation team resorted to using three evaluation approaches that are more commonly used individually: systems mapping, process documentation, and outcome harvesting. These different approaches, when combined effectively, can provide a holistic, reliable, and validated image of the ripple effects of the adoption of the HRT approach on the Namibian health system as well as the role of ACS support in attaining the observed results.

Systems Mapping is a methodology that allows the use of a series of nodes and linkages to visualize the many components of a complex system and to see how they are connected to form a dynamic, intricate whole. Systems mapping helps users pinpoint opportunities for change or innovation that are ripe for experimentation, learning, and adaptation. For example, the nodes and linkages in **Figure 1** would read "Data collection is refined through data analysis. Data analysis is presented in reports."

Figure 1: Constructing systems maps with nodes and linkages



"Data collection is refined through data analysis. Data analysis is presented in reports"

The most useful way to visualize the Namibian RT system and its changes over time was to map the system before and after the implementation of the HRT approach. As such, the team used systems mapping to visualize the multi-directional, multi-dimensional relationships and interactions that comprised Namibia's resource tracking system—and to do so in one diagram at two points in time. A systems mapping approach called 'systemigram' (coming from the terms systemic diagram) from the Boardman Soft Systems Methodology was used to visualize snapshots of the system[3] that include its many components and their interactions or relationships (Blair, Boardman, and Sauser, 2007). **Annex A** includes a view of the pre-HRT system map produced through this assessment.

The systemigram approach was particularly useful because its series of nodes and linkages allows the user to visualize system actors and other components of the system as well, including resources, institutions, outcomes, and other phenomena. Moreover, rather than just showing the direction/type of influence between these components, the systemigram approach allows for nuanced definitions of the relationships between the different components. Additional labeling and coding can support further customization to categorize and define the many dynamics occurring in the system.

The HRT evaluation team conducted 14 interviews with a diverse set of stakeholders involved in Namibia's RT sub-system that included questions to inform the design of both the "before" and "after" maps of the RT system in Namibia, as well as the **Outcome Harvesting**, discussed below. Once the data was analyzed and the maps designed, the interviewed stakeholders were convened in a validation session, where they were presented with the maps and given the opportunity to provide feedback. It is important to note that a joint validation session was organized for both the outcome harvesting and the systems mapping exercise.

Process Documentation is a technique that systematically captures and analyzes events, key stakeholders' characteristics, and interactions throughout a policy process in order to learn from and improve the process dynamically. These analysis snapshots contribute to piecing together a puzzle that, in the end, reveals a fuller understanding of the process(es) of interest. The process documentation technique can support prospective policy analysis and continuous learning to advance the policy in a country. The process documentation tool provides country stakeholders with dynamic information —

[3] There are many different approaches and methods for visualizing systems including causal loop diagrams (Pegasus Communications, Inc.,2011), rich pictures from Peter Checkland's Soft Systems Methodology (Bell and Morse, 2012), stock-and-flow diagrams from Jay Forrester's developments in Systems Dynamics at MIT (Forrester, 2009), and actor mapping (Gopal and Clarke, 2015). These are all useful tools in different contexts for understanding the dynamics of complex systems.

through process descriptions and lessons learned —to better design and adapt future policy for success. As part of the ACS project's continuous learning function, the project documented the entirety of the HRT process. The documentation shows what was done, how it was done, and which stakeholders were included in the process.

Outcome Harvesting is an approach used in complex situations to help evaluators identify a broad range of outcomes that were produced by an intervention. In 2016, USAID cited outcome harvesting as a one of five promising complexity-aware monitoring approaches[4] and recently published a spotlight report on several applications of this approach.[5] The approach is useful when the ability to define broad outcomes is limited at the onset of an activity or when the ability to isolate activities and outputs as causing a particular outcome is difficult. The approach follows a relatively straightforward methodology consisting of collecting evidence on changes in a given system and then working to determine if and how a given intervention has contributed to the observed change(s) (Wilson-Grau, 2015). Through this approach, the research team gains a better understanding of the significance of observed changes and whether stakeholders immediately affected by and involved in these changes validate that those changes did occur.

Figure 2: Typical steps within an outcome harvesting process

As seen in **Figure** 2 the first step of conducting an outcome harvest is to identify the different outcomes relative to the activity being evaluated, from both primary and secondary sources. This process begins with reviewing existing documentation from both internal and external sources to analyze what outcomes may have already been captured. Then, with a better understanding of what the activity may have contributed to in terms of changes, the outcome harvesting team engages with external stakeholders, individuals who either worked directly on the activity or whose lives (personal or professional) could have been directly affected by the outcomes of the activity. In the ACS HRT assessment, the team capitalized on the 14 systems mapping interviews with stakeholders as rich data sources used in the documentation

[4] United States Agency for International Development (2016). *Discussion Note: Complexity-Aware Monitoring.* [White Paper]. https://www.usaid.gov/sites/default/files/documents/1865/201sad.pdf

[5] United States Agency for International Development (2022). *Outcome Harvesting: Explaining observed outcomes by exploring health system strengthening and contextual contributions*. [White Paper] https://www.usaid.gov/sites/default/files/documents/HSS_Practice_Spotlight_MERL_Outcome_Harvesting_508_compliant_DRAFT.pdf

review. For a more in-depth overview of how the ACS evaluation team performed the outcome harvesting process, please click on this link Use of outcome harvesting in Namibia.

Results

Data collection inefficiencies as burdens to the system

Through the mapping of Namibia's RT system prior to the harmonization of the methodologies, the HRT evaluation team realized that in order to collect health expenditure data, both the HA and NASA methodologies required outreach to and discussions with the same stakeholders (MoHSS staff, civil society organizations, etc.), henceforth referred to as "RT respondents". Not only did this require significant stakeholder engagement, but the stakeholders started to feel respondent fatigue as a result of being contacted multiple times for similar purposes. Through the outcome harvesting exercise, it became clear that the parallel methodologies were not delivering on their individual outcomes as it led to divergent findings for similar data points across the two exercises and created additional resource needs to carry out the two parallel data collection processes.

Contrastingly, through the mapping of Namibia's RT system after the harmonization of the methodologies, the HRT evaluation team learned that the Resource Tracking Technical Working Group (RT-TWG) was now able to conduct data collection through discussions with the same set of RT respondents who had been engaged in the HA and NASA methodologies, but with a single, consolidated outreach effort as a result of the HRT methodology. Since RT respondents felt less burdened with repetitive questionnaires, the data were provided in a more timely, reliable, and accurate manner. Additionally, as the HRT approach focused on the production of one set of data, the harmonized approach removed the possibility for divergent findings allowing for greater confidence in and use of the RT findings.
The post-harmonization mapping of the RT methodologies also revealed that HRT did not resolve all of the RT system issues. For instance, even though the RT methodology became more streamlined and efficient for both implementers and respondents, the administration of the RT tracking questionnaires is still being intermittently implemented, meaning though it is planned to be done on an annual basis, COVID-19 and other priorities related to the pandemic have created delays between implementation periods. Given the RT exercise is not yet regularly administered, access to the timely information needed for health system decision-making is still not as frequent as intended.

System changes through the utilization of findings

The pre-harmonization map showed that while the HA and NASA findings were used for a variety of applications, including spending optimization, advocacy activities, intervention design, and proposals, the parallel RT methodologies limited the effective use of this data because they produced divergent findings. For example, HA could provide a figure for the number of ARVs used in a given district while NASA presented totally different figures for the same district, creating an environment of doubt and confusion. These divergent findings led to policy design and implementation challenges, as well as budgetary inaccuracies. As one key informant noted, "*The conflicting findings really confused resource tracking stakeholders and made it difficult for them to use the findings for decision-making*."

Looking at the post-harmonization map, one of the clearest benefits of the HRT is that it mitigated the issue of divergent findings. Through the outcome harvesting exercise, an important outcome of the HRT approach was that "*HRT decision-makers are now in agreement about HIV/AIDS and health system expenditures because HRT produces harmonized results*". This outcome was validated by the totality of the stakeholders

participating in the outcome validation process and demonstrates the value add of combining the outcome harvesting process with the visual cue that HRT mitigated divergent findings. It was also found that the existence of harmonized results paved the way for more participatory discussions to reach a common interpretation, and therefore use, of the findings, which had not been possible with the parallel methodologies. One ministry respondent mentioned, "*this time around, we had more discussion about the policy implications of the results and a series of subsequent analyses and follow-up data collection with looking at the equity of the health system and the donor reliance of the health system as well*."

Finally, the harmonization of the RT methodologies has been useful to policymakers as well as to a wide range of non-governmental stakeholders. For non-government organizations and other development actors, reliable information improves their advocacy efforts, as they have a clear and consistent set of findings to make their case. One stakeholder noted that the findings from the HRT approach are "*being used by policymakers and decision-makers to make informed decisions in terms of the funding or even the budgets*." The individual added that "*government or stakeholders or partners are much clearer now…and convinced in terms of how…their money is being spent, where it's being spent*."

Institutionalization of capacities

Because the HA methodology was conducted, in part, through the HA Technical Working Group (HA-TWG), international consultants (including ACS's Namibian country team and Regional Expert and the Health Financing and Governance project staff) supported the process while also providing training to the HA-TWG around the HA methodology. The HA-TWG was led by the MoHSS (with representatives from all directorates) and included the Social Security Commission, the Ministry of Finance, the Chamber of Commerce and Industry, the Namibian Association of Medical Aid Funds, and the Public Service Employee Medical Aid Scheme. Conversely, the NASA methodology—not under the purview of the HA-TWG—was conducted entirely through the international consultants, which meant that there was no need and/or no incentive to transition the NASA methodology completely to the MoHSS. As such, system stakeholders were reliant on external parties for the NASA process while they had a greater role in and greater capacity for leading the HA process. One key informant noted that "*one of the struggles it has had, [these methodologies were] always envisioned as being something to be handed to the Ministry or for the Ministry to do it themselves but until now it has required external help from ACS or others before that from other agencies*."

In the post-HRT system, while international consultants are still present, rather than providing training only on one of the methodologies (HA) and not the other (NASA), they are working to build the capacity of the RT-TWG on the combined HRT approach. This training and support is key to ensuring the sustainability of the HRT approach through local expertise and local ownership of the process. During key informant interviews, there were five mentions of stakeholder capacity being built through the HRT process via training and other activities. However, during the systems mapping validation process, some stakeholders mentioned that even though capacity development has increased from the pre-HRT system to the post-HRT system, there are still limitations. Staff turnover and the intermittent nature of HRT implementation in the COVID-19 context have meant that there is still significant reliance on international consultants and more capacity development is needed. During the key informant interviews, one individual explained, "*at various points there was orientation and there was discussion of the tools, but these are complex tools, so once you give the tools you…need to come back to the tools again to understand. So, there were some efforts to do that, but I think it would need a bit more time and effort*."

Discussion

Value-add of the hybrid methodology

It is important to note that each of the individual approaches in the evaluation framework used for the assessment of Namibia's HRT system could have been used alone to gauge aspects of the overall impact of the HRT approach on the RT system.

System mapping shows how processes have changed, not just in writing, but in a visual manner that demonstrates the shifts in relationships, structures, and dependencies that comprise the system. Therefore, by comparing the older to the newer version of the map, stakeholders can see how the intervention(s) impacted the components of the system and their interactions. Moreover, they can also see how they might intervene in the system to optimize resources.

Process documentation builds in a continuous process for monitoring the key stakeholders who engage with systems change processes as well as the key events (both project-oriented and external) that are linked to important moments in the evolution of a system change. It helps provide insight into how changes occurred over time by tracing the overall arc of how individual events and stakeholders contribute incrementally to what is perceived as a larger change at any given time in the future.
Outcome harvesting traces clear outcomes from the intervention (harmonization of the RT methodologies) from the perspective of country actors and provides rich context on the *so what* that helps to explore the significance of changes according to the individuals most involved in and/or impacted by them.

By combining these approaches, however, the hybrid methodology offers several benefits:

- Systems mapping can remain narrowly focused on particular sub-systems and components to streamline the data collection and analysis process. However, knowing that this assessment (and its three approaches) was attempting to identify broader health system effects produced through HRT, the HRT evaluation team deliberately developed a more robust interview questionnaire with questions that asked respondents to consider the broader system effects brought about by both RT approaches (pre- and post-harmonization). This created a more dynamic understanding of the system and helped created a system map that included some key linkages to other processes and actors within the system.
- Sequencing the approaches in this assessment added value: as mentioned, process documentation should be implemented early on and continuously throughout an intervention. But in addition, systems mapping interviews conducted prior to outcome harvesting gave the evaluator access to an additional, rich data source to use for harvesting potential outcome statements. This meant the initial set of outcome statements were more robust and grounded in external stakeholders' experiences as those most connected to and affected by the harmonization activity. This also led to a smoother validation process given that many outcome statements had been informed by stakeholder interviews.
- This bundled approach highlighted the value of including a process documentation component into a project's MERL activities early-on because it traced the evolution of the HRT process in a real-time way with specific mentions of and linkages to ACS's contributions within different key events. It reinforces the idea that capturing snapshots of key events as they are occurring, who was involved and what if any outputs were produced through those events, is a worthwhile continuous investment as it creates a foundation of data that can support many different kinds of MERL

activities in the future (and less resource intensive than trying to capture all of that data retroactively).

- The combination of system maps and outcome harvesting discussions on limitations during the validation workshop not only helped retrospectively analyze changes and what those changes meant, but also provided indications of where follow-on support could be prioritized. It serves thus as a retrospective and prospective analysis tool - something unintended at the beginning of the exercise.

The key value-add of taking this hybrid approach is that in combining these three approaches, the evaluator gains richer detail to tell the most compelling story possible - the who/what/where/when/why/how, and importantly, the "so what?" of the perceived changes. This allows the evaluation user to think more deeply about what worked, how, and what actions might still be needed to get closer to the original goal of the intervention. This assessment has shown early evidence that the hybrid approach paves the transition from "Findings" to "Learnings" by helping system actors understand systemic changes through holistic evaluation results.

Shortcomings of the hybrid methodology

Even though the hybrid methodology adds value to the evaluation of complex systems, some hurdles had to be overcome to see its benefits. For the data collection phase, designing an interview guide that met the needs of all three approaches meant that stakeholder interviews were quite long (around 60 minutes). The interview length became a hurdle to getting participants to partake in the exercise. As a result, relentless efforts to demonstrate the value of the combined exercise were essential to obtain participation.

Once the data collection and analysis phases were completed and the findings from each approach identified, the validation phase began. Participants from different stakeholder groups were convened to validate the drafted system maps and the outcome statements. For outcome harvesting, the validation mainly consisted of gathering participants' reactions to a given outcome: whether they believed a given outcome was reached and to whom they attributed it. For the systems mapping, the validation session was mainly about confirming whether the HRT evaluation team's understanding of the system structures, responsibilities, and operations at different periods was accurate based on interviews. The combined validation session also served as a platform for all stakeholders to critique and clarify, if need be, the perceptions of their counterparts within the system.

It is important to note that, in an ideal world, each part of the hybrid approach likely warrants its own validation session. However, due to the COVID-19 pandemic, Namibian stakeholders had challenges joining the virtual gatherings given external conflicts as different health system emergencies arose. Some were in charge of leading and/or managing the country's response to the pandemic and others could not access their offices to use their desktops due to the lockdown being enforced at the time. As such, the outcome harvesting and systems mapping validation sessions were combined to respect the inability to meet in person and the pressing health system priorities, which significantly reduced the amount of time available to have deep discussions with stakeholders on the findings from each separate approach.

Beyond the time it took to validate the findings from each aspect of the hybrid approach, the power dynamics within those validation sessions were another challenge. The HRT evaluation team observed that issues relative to power dynamics were more acute within a given stakeholder group rather than across stakeholder groups. For example, when members of Stakeholder Group A attended a validation session with the officials of that group, their insights were largely aligned with the ones of the highest-

ranking officials within their stakeholder group. Throughout the different validation sessions held for this exercise, there was not one instance where a member of a given stakeholder group voiced a different belief than that of their superior. Most, if probed about their opinion, expressed agreement without further nuance. However, this behaviour was not observed across stakeholder groups. For instance, when officials from Stakeholder Group A put forth a statement, it was not unlikely for other attendees from the subsequent meeting with Stakeholder Group B to add their own opinions to it without necessarily disagreeing. Understanding that inclusion and meaningful collaboration are keystone elements to a successful validation session, a future iteration of these validation sessions may want to test a different approach to stakeholder grouping. For instance, organizing validation sessions across stakeholder groups but disaggregated by level could be an option, though potentially more time- and resource-consuming.

Another potential consideration for the dynamics of working groups relates to the digital versus in-person context in which the validation sessions took place. With the evaluation being conducted during the COVID-19 pandemic, it was impossible to hold in-person validation sessions with country stakeholders. As such, the validation session was conducted using online platforms (Zoom and Miro). In digital validation sessions, it was easier for participants to stay in the background, to not participate, or to feel disempowered to speak if there was an overly engaged participant. While these may also be challenges in physical gatherings, they are somewhat easier to overcome through in-person facilitation techniques. Most of the engaged government officials were not familiar with these new technologies, particularly Miro. Adding that to the instability of the internet connection, conversations were less than fluid. Beyond the technical/technological aspects contributing to the workshop challenges, it is also important to consider that had the validation sessions been held in-person, the format would have been a day-long workshop. This is not an option when conducted virtually, where ideally a workshop is not more than two hours.

Conclusion

To build better health systems, we must understand the complexities of those dynamic systems. By innovatively combining three evaluation methodologies—systems mapping, process documentation, and outcome harvesting—ACS demonstrated how the Namibia health RT system changed over time, due to the implementation of a harmonized approach, and thus illuminated opportunities for future system strengthening. This hybrid approach could help health practitioners better understand other health system changes and to produce complementary actionable learnings to more holistically support the system strengthening. As we learn more about the complexity of system change, experts in the evaluation and learning field need to continuously evolve measurement approaches to better understand and capture system changes and their significance from a long-term systems perspective. This will lead to more compelling measurement to support adaptive and complexity-aware approaches to health system interventions.

While the HRT evaluation team found great value in this combined approach, there are also some areas for potential improvement in future iterations that development practitioners could consider in their efforts to support, measure, and learn from ongoing health systems strengthening efforts:

- **Build in systems mapping early:** The effort needed to do a pre- and post-HRT system map was not insignificant. This double system mapping process required a lot of time from stakeholders in a condensed period which could have had negative effects on the level of participation as well as on the level of detail ascertained. While this assessment was still able to collect data from a broad range of stakeholders and with enough detail to create the rich, validated system maps, introducing systems mapping approaches earlier as part of an overall intervention MERL framework

can mitigate stakeholder fatigue. An earlier use of systems mapping also has the potential to support program design and provide a foundation for future evaluation opportunities. We recommend exploring systems mapping as an innovative addition to MERL baseline efforts so that in future moments of the project, an additional round of stakeholder interviews can be a lighter lift and provide evolved snapshots of the system map to assess changes and improvements periodically throughout implementation.

- **Identify outcome harvesting and process documentation as part of the MERL plan at the beginning and build-in supporting monitoring activities:** With the knowledge that there will be an outcome harvesting activity in the future, MERL teams can build in better process documentation efforts as part of project monitoring so that outcome harvesting teams have rich data to review, ultimately contributing to more robust outcome statements. Otherwise, traditional report writing and quarterly indicator collection may miss the broader range of outcomes that are produced throughout a project.
- **Consider implementing a rapid outcome harvesting activity earlier in project implementation:** While this assessment performed outcome harvesting after the activity was completed, it could also have been beneficial as a reflective process during implementation. Especially in situations where causal pathways are hard to define from the beginning of a project, taking the time to understand the breadth of outcomes (both intended and unintended) at a mid-way point in implementation can help to solidify certain assumptions within a theory of change and to highlight areas that may need adapting, particularly if the process identifies outcomes that aren't being captured by the existing MERL framework.

Considering this bundled approach from the beginning of a project, recognizing when and where these different approaches can be leveraged to help answer the questions that arise at different moments of a project cycle, will strengthen the project team's ability to have more rigorous and flexible measurement approaches that support improved evidence for systems change.

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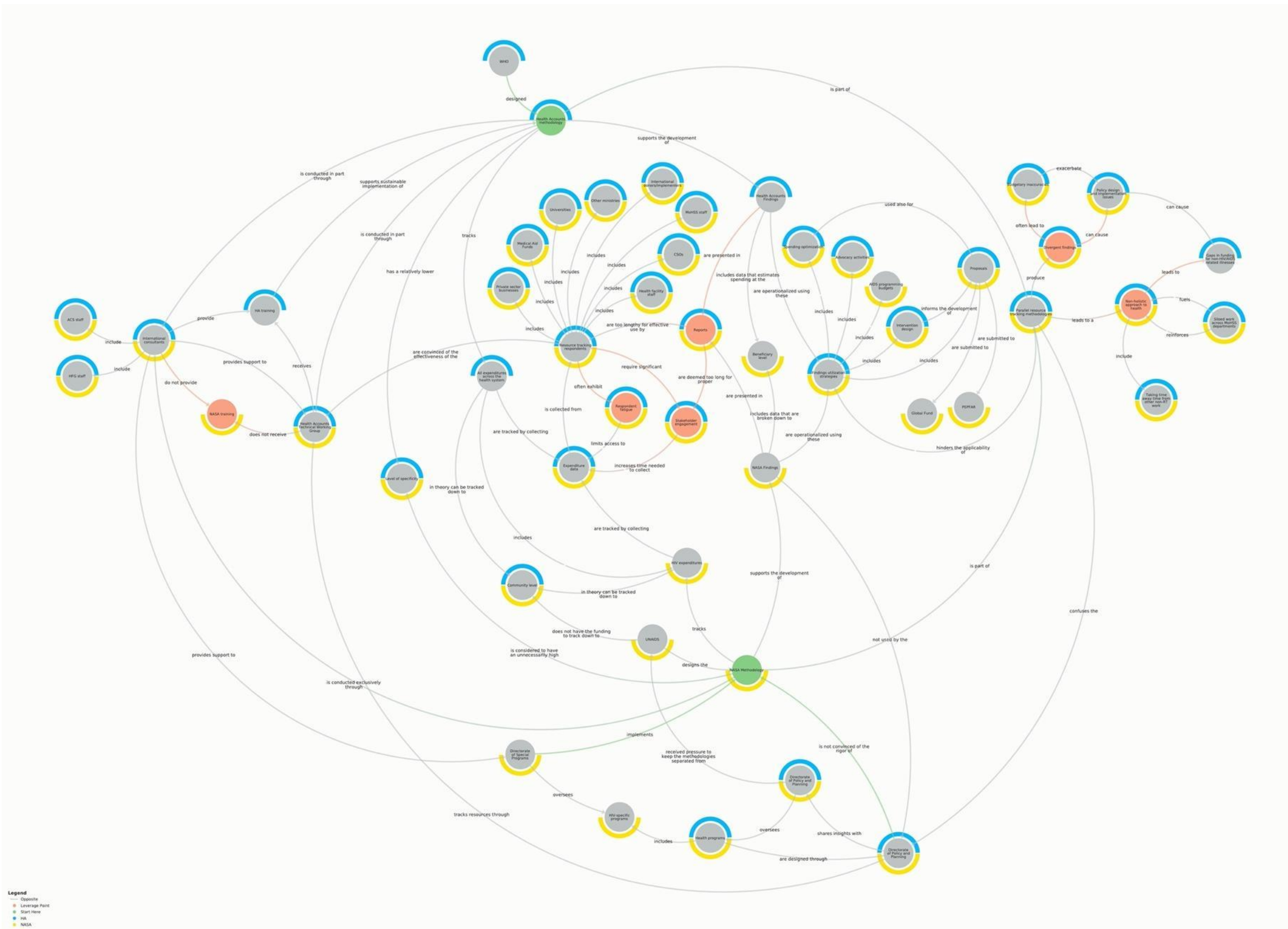
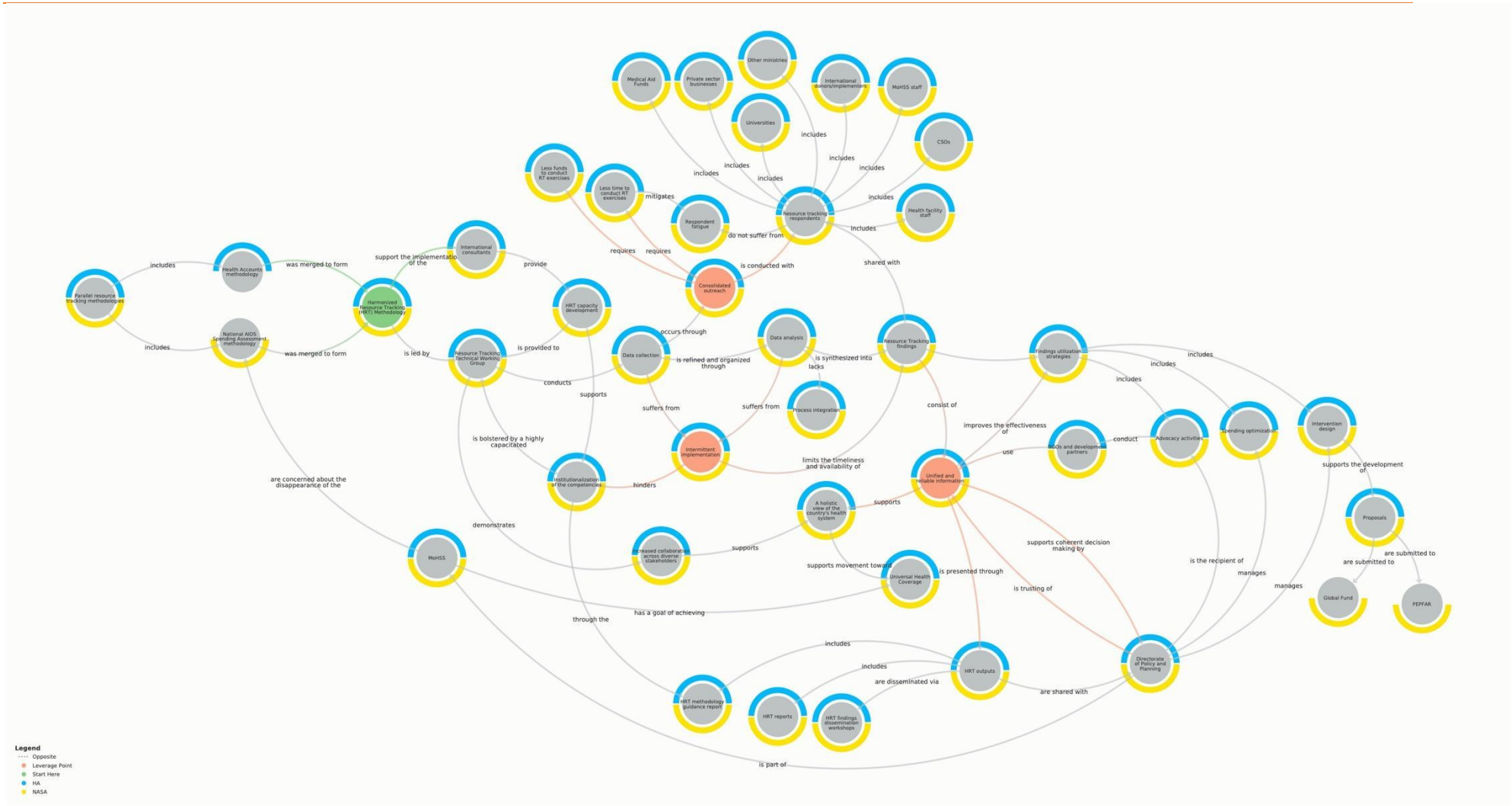
ANNEX A: Pre-harmonized RT system in Namibia



ANNEX B: Harmonized RT System in Namibia



ANNEX C: Infographic on the steps of the RT Harmonization Process