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## KEY INFORMANT INTERVIEW FINDINGS

PRELIMINARY REPORT: EVALUATION OF THE DATA  
COLLABORATIVE FOR LOCAL IMPACT

**JANUARY 2020**

*This publication was produced for review by USAID. It was prepared by LINC as a sub-awardee to Johns Hopkins University (GOPC) under the SPACES MERL activity No. AID-OAA-A-15-00064.*

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## PRELIMINARY REPORT: EVALUATION OF THE DATA COLLABORATIVE FOR LOCAL IMPACT

**Submission Date: 31 January 2019**

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### **DISCLAIMER**

*The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.*

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## Executive Summary

### *Preliminary Report: Findings Based on Key Informant Interviews*

*This report is the initial preliminary report from our SPACES Systems Mapping Evaluation of the Data Collaborative for Local Impact (DCLI) program in Tanzania. It summarizes the findings based on key informant interviews with program implementors, beneficiaries, and other local partners. This initial report provides a sense of their perspectives. These findings also serve as input to a broader systems mapping evaluation, which will be presented in a subsequent final report.*

The \$21.8 million [Data Collaborative for Local Impact](#) (DCLI) program is the result of a partnership between the Millennium Challenge Corporation (MCC) and the President's Emergency Plan for AIDS Relief (PEPFAR). DCLI includes a series of innovative activities to promote data use for decision-making; it is implemented by MCC and funded by PEPFAR. In Tanzania, one of two countries of investment, the DCLI program consisted of three interrelated projects:

- [Tanzania Data Lab](#) (dLab), a center of data-related activity including physical space and computing resources, training and skills-building on the analysis and use of data, planning and hosting of data-focused events.
- [Data for Local Impact](#) Innovation Challenge (DLIIC), a set of grant challenges for promoting data use across a variety of themes.
- [Data Zetu](#), an activity to improve the capacity of subnational (district and ward) institutions to provide and make use of actionable data.

In order for DCLI to better understand the effectiveness of its program in Tanzania, and to inform similar efforts in other countries, MCC engaged SPACES to conduct an independent evaluation and systems mapping. As an initial part of this evaluation, we conducted key informant interviews (KIIs) to better understand the actual and unanticipated effects of the novel activities, as well as the pathways through which change occurred. Using a systems perspective, we examined the results of the program through late 2019, when the majority of field activities under Data Zetu and DLIIC had ended.<sup>1</sup> This analysis sought to explore why certain interventions and innovations were sustained and how the project activities affected and were affected by the data ecosystem and contextual factors. Our preliminary findings include lessons learned for future programming.

DCLI included many different interventions and innovations, many of which have been detailed through the program's reports and [use stories](#). Through the interviews, specific themes as the components were perceived as the ***most far-reaching and positively-viewed efforts***:

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<sup>1</sup>The dLab and the DLIIC began implementation in 2016; while Data Zetu began in 2017. In 2018, a Tanzanian NGO was established to take on and continue the work of the Tanzania Data Lab Project as well as some of the activities of the other two projects (e.g. supporting data use innovators and involvement of subnational stakeholders). This NGO continues its operations and is still partially funded by DCLI.

- Adopting a community-led planning process: Community dialogues served as the foundation for DCLI activities, using an open-ended approach to identifying needs and setting priorities.
- Providing high-quality training coupled with support: DCLI's training was highly valued, particularly when it was complemented by mentoring, support, and practical applications.
- Creating demand for data through individualized problem solving: Working directly with stakeholders to identify data needs and support solutions, DCLI helped create demand and use of data, particularly related to increasing data use for service delivery and resource allocation.

For the overall SPACES research effort, MCC demonstrated interest in understanding to what extent the DCLI program contributed to the *development of a network of data enthusiasts*, as well as *how far beyond the direct beneficiaries* the program has reached. While a complete assessment of these factors is beyond the type of information that can be collected through key informant interviews, several relevant themes emerged from this research.<sup>2</sup>

- Strengthening existing system capabilities: Participants reported that the different projects within DCLI were generally integrated and complementary. Additionally, participants perceived the strategic engagement of local actors, who comprise the underlying system, to be an important factor in program accomplishments and sustainability. Considering these factors, interviewees credited DCLI with contributing to improved attitudes, visibility, and momentum for the data ecosystem.
- Spread and scale-up of interventions: Program documentation detailed the spread and scale-up of specific data innovations, as well as a set of beneficiaries reached indirectly by activities such as training of trainers. However, from the interviews alone, it was not evident the extent to which the activities reached beyond the direct beneficiaries.
- Connectivity among actors: Participants highly valued the access that DCLI could offer to international donors, government partners, and the private sector. Additionally, in most cases, participants demonstrated a strong affinity for the program and a desire to remain engaged. However, from the interviews alone, we lacked evidence to conclude whether overall connectivity among actors improved during the implementation period. This finding was aligned with the DCLI [social network analysis](#), which showed a high centrality of DCLI program implementers in the overall network.

As part of a systems inquiry, we sought to understand the DCLI program's place in the wider development and data ecosystem in Tanzania. Accordingly, we asked interviewees about the interaction between the program and the wider context, and what were *facilitators and barriers to change*. Interviewees cited local leadership as well as the presence of local organizations as the most important contextual facilitators. Interviewees generally identified basic infrastructure, access and sharing of data, availability of data, and crowded donor space and reporting requirements as the most relevant barriers.

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<sup>2</sup> Other learning and analytic efforts from DCLI partners have also sought to examine this issue, including post-implementation follow-up with beneficiaries and social network analysis.

Overall, these initial findings from KIIs reflected that the DCLI program has had a positive effect on several key outcomes of interest. Respondents demonstrated that the program has increased data skills of individuals and organizations, improved data use for service delivery and resource allocation at the local level, and fostered an improved culture and attitudes toward data. This was supported by respondents' perceptions of the program, as well as their descriptions of specific changes and events that have occurred. Our research also reflected that a large number of individuals and organizations were reached by the program, and a wide range of data innovations were generated as a result. These findings are in alignment with the documentation, analyses, and monitoring reports from DCLI.

While some DCLI activities were still ongoing—including support to the dLab, innovation grants under DLIIC, and analyses under Data Zetu—the majority of those interviewed were no longer engaged or receiving direct benefits from the DCLI program. However, interviews and documentation indicate that activities initiated under DCLI are continuing beyond the life of the program in a variety of ways, and that these efforts support long-term change in the local context. Entrepreneurs are continuing to build and scale their data innovations as well as their businesses. Those who have been trained and mentored under DCLI are using their skills to improve the quality of their organization's service delivery and advocacy efforts. New local leaders in communities where DCLI focused are using findings from DCLI-supported community dialogues to understand their constituents' priorities. In this way, it appears that beyond the program implementation DCLI has begun to spur a wider set of changes in the data ecosystem, reflecting the overall success of the innovation program and the applicability of its lessons learned to the wider data and development community.

Based on this evidence and the recommendations of those interviewed, we have identified an initial set of key lessons learned. These preliminary findings are well aligned with general programming principles for systems change, yet are reported to be underrepresented in development programs in Tanzania and low-resource settings. We recommend that donors, governments, and civil society partners reflect on the lessons learned from the DCLI program and seek to incorporate the more successful pathways to change in their work, as appropriate.

1. When local actors lead change, programs are more effective and sustainable.
2. Flexible and adaptable programs lay the groundwork for innovation.
3. Increasing data use in decision-making requires much more than technology, and involves an understanding of the actors, processes, rules and incentives in the system.
4. Investing in systems change is necessary for long-term sustainability, but transitioning to this approach can be challenging for funders and implementors alike.

## I. Introduction

### *Preliminary Report: Findings Based on Key Informant Interviews (KIIs)*

*This report is the preliminary report from our SPACES Systems Mapping Evaluation of the Data Collaborative for Local Impact (DCLI) program in Tanzania. It summarizes the findings based on key informant interviews with program implementors, beneficiaries, and other local partners. This initial report provides a sense of their perspectives. These findings also serve as input to a broader systems mapping evaluation, which will be presented in a subsequent final report.*

Through the [Data Collaborative for Local Impact \(DCLI\)](#) program in Tanzania, the Millennium Challenge Corporation (MCC) implemented a series of activities to promote data use for decision-making from 2016 to 2020, with the ultimate goal of creating the kind of systems change that would, over time, contribute to more country-based capacity by individuals, communities and organizations to make decisions related to HIV/AIDS and health, gender equality and economic growth.

The \$21.8 million [Data Collaborative for Local Impact \(DCLI\)](#) program is the result of a partnership between the Millennium Challenge Corporation (MCC) and the President's Emergency Plan for AIDS Relief (PEPFAR). DCLI includes a series of innovative activities to promote data use for decision-making; it is implemented by MCC and funded by PEPFAR. In Tanzania, one of two countries of investment, the DCLI program consisted of three interrelated projects:

- [Tanzania Data Lab](#) (dLab), a center of data-related activity including physical space and computing resources, training and skills-building on the analysis and use of data, planning and hosting of data-focused events.
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- [Data Zetu](#), an activity to improve the capacity of subnational (district and ward) institutions to provide and make use of actionable data.

The dLab and the DLIIC began implementation in 2016; while Data Zetu began in 2017. In 2018, a Tanzanian NGO was established to take on and continue the work of the Tanzania Data Lab Project. This NGO continues its operations and is still partially funded by DCLI as of the writing of this report.

We conducted a set of key informant interviews (KIIs) to better understand the actual and unexpected effects of the activities and the pathways through which change occurred. We examined the results of the program through late 2019, when the majority of the field activities under Data Zetu and DLIIC had ended. We used an adaptation of a systems and complexity method (outcomes harvesting) to explore why certain innovations were sustained and how the project activities affected and were affected by the larger data ecosystem and contextual factors. Our analysis includes recommendations for future programming.

These initial findings were informed by and contributed to a larger evaluation and systems mapping effort under the Strategic Program for Analyzing Complexity and Evaluating Systems



(SPACES) consortium, an initiative of the U.S. Agency for International Development's (USAID) Global Development Lab. SPACES aims to provide a variety of integrated systems tools and methodologies to support the design, monitoring, and evaluation of development programs. The systems map visually represents key actors, interactions, and resources to understand how the DCLI programs relate to various systems within Tanzania. Systems mapping was identified as an appropriate method for this evaluation because the program met several conditions for using a systems and complexity-aware approach: 1) cause-and-effect relationships are uncertain; 2) contextual factors are likely to influence programming; 3) new opportunities or new needs continue to arise; and 4) the pace of change is unpredictable.<sup>3</sup>

In support of this overall SPACES activity, we conducted a set of KIIs to examine how and why change occurred, promising practices that should be incorporated into future designs, and opportunities for improvement and accelerated progress. This approach considers applicability in Tanzania as well as in other settings. We expected that some promising practices would be generated from the program's initial design, while others would emerge as a result of learning and experimentation during implementation.

## II. Methodology

### *Key informant interviews*

We conducted a total of 45 KIIs from September to November 2019. This process began with secondary research to review project reports and communications materials, academic and grey literature, and news and media sources. As a general principle, we selected informants and interview topics to focus on gaining perspectives that could not be examined through document and literature review.

The first set of interviews consisted of MCC staff, project implementors, and researchers and consultants involved in the projects. Based on these interviews, we collected and reviewed beneficiary and participant lists for each project. We then purposefully selected the next set of interviews according to the following general criteria: 1) diversity of institution types (government, NGO, private sector); 2) diversity of geography; 3) expected ability to provide insights that were not already documented by the project; and 4) inclusion of women and youth participants. At the project level, we also included the following considerations:

- Data Zetu: Inclusion of perspectives at the national, district, ward, and village/street level; participants who had attended three or more events.
- DLIIC: Inclusion of grantees from different challenge rounds, as well as one mentor.
- dLab: Inclusion of organizations who received training and/or support in different topic areas.

Based on emerging findings, we also asked interviewees for recommendations for other individuals and organizations who could provide novel insights and meet the criteria above. Additionally, in some cases, we sought to follow up with individuals and in locations that had previously been documented in success stories, in order to better understand their progress since the project had ended. Lastly, we included some interviewees who were not directly involved in the projects, but were more generally engaged in issues related to the data ecosystem.

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<sup>3</sup> USAID Program Cycle Discussion Note: Complexity-Aware Monitoring, July 2018

Type of organization	Government	NGO	Private	International	Total
Number of interviews	19	14	6	6	45

As the study's scope did not include travel, the majority of the interviews were conducted by phone and internet, with small number of interviews conducted in person in Dar es Salaam. We used a series of semi-structured interview guides [See Annex A], and integrated and adapted these based on the individual interviewee's role and perspective. Approximate transcripts were captured live (for phone/internet interviews) or by recording and note-taking (for in-person interviews).

#### *Outcomes harvesting*

We used an adaptation of an outcomes harvesting approach in order to identify meaningful changes in the local context related to the outcomes of interest, and then to work backwards to identify whether and how the project contributed to these changes. This was achieved through the development of basic outcomes statements and a thematic interview guide applied following the close of the project implementation period.

*Analysis:* We used a basic thematic analysis according to the outcomes areas of interest (access to data, attitudes toward data, data skills, data sharing, service delivery, and resources/investment) as well as the main evaluation questions. To the extent possible, summary findings were compared to project documentation or other resources shared by the interviewees. Findings that were supported by multiple informants with support and/or alignment with other documentation were included in this report. However, in a few cases, findings from the KIIs were different from results reported in program documentation, and these have been identified in the report as areas that will benefit from further analysis.

*Integration into systems mapping:* The SPACES team used findings from the KIIs, along with secondary literature review, as a basis for the systems maps created in [Kumu](#) that visualize the DCLI program, its effects, and its interactions with the broader data ecosystem in Tanzania. A full description of this methodology and its results will be further detailed in the forthcoming final report.

*Stakeholder validation:* SPACES conducted a brief stakeholder validation workshop in Washington DC on November 19, 2019 to review and provide feedback on the overall systems mapping effort. Participants with experience and knowledge of the DCLI program examined visual representations of how the program influenced change in the local context, and then indicated their general agreement with the concept or suggested alternate explanations and mechanisms of change based on their experience.

#### *Limitations*

This is a descriptive research activity occurring toward the end of the project implementation period. As a result of the format and methodology selected, several limitations and considerations will apply to the interpretation of findings. Change cannot be attributed directly to the program as no comparison group was identified through experimental or quasi-experimental methods. Due to resource constraints, we had a limited sample size and were unable to verify

interview responses through in-person visits, examination of evidence, or direct observation. Secondary and remote research methods also raise the possibility of several biases, including recall bias with differences in the accuracy and completeness of the responses, selection bias in which participants may not be representative of the wider population, and social desirability bias in which participants are more likely to share favorable perspectives and present themselves positively.

We attempted to address these limitations through several means. First, we triangulated findings between primary and secondary sources, including previously documented perspectives and occurrences. Second, we actively solicited diverse and contrary perspectives, as well as emphasized the study's purpose of learning through experience to benefit the wider development community. Third, we used stakeholder validation to test emerging findings in individual and group settings.

#### *Informed consent*

Research participants opted-in to the study using informed consent procedures. This included awareness of the study purpose and how findings will be used and shared. Participants were informed that their responses would not be attributed individually, and would not be used to influence current or future benefits from the program. Upon completion of the study, participants received a copy of the research report. An exemption to IRB under USAID's policy was determined on the basis of "Survey and certain similar research" (22 CFR 225.101 b 2) criteria and documented according to SPACES procedures.

### III. Findings

DCLI sought to positively affect the data ecosystem in Tanzania through a set of integrated projects. The program presents a set of ambitious long-term goals: to increase the frequency and effectiveness of data use for decision-making in policies and programs related to in HIV/AIDS and health, gender equity, and economic growth; and to improve the alignment between needs and budgets. In addition, the program targeted changes in decision-making processes among diverse audiences, including national and local governments, donors, NGOs, and individual citizens.









Accordingly, understanding the extent to which the program has been effective in achieving its objectives requires a number of different lenses and considerations.

First, a wealth of data exists through DCLI's M&E system. While an extensive examination of this system is outside of the scope of this analysis, key informants described an intensive review process that lends credibility to the integrity of the data. Further, the type and scale of activities described by interviewees were generally aligned with the type of results reflected in the M&E system. Key statistics from the project M&E system include:

- DCLI trained more than 2,000 people and 11 data scientists and data fellows.
- More than 2,800 organizations were involved in DCLI.
- Women comprised 49% of participants, and youth comprised more than 60%.

- Through five innovation challenges, 1,245 grant applications were received and 46 grants awarded worth more than \$1.46 million.
- Communities generated 2.4 million data points.

Second, a series of specific outcomes of interest were identified in the program's logic models and in the evaluation questions provided for the DCLI evaluation. These outcome areas are summarized below.

Outcome area		Description
	Transparency and accountability	Government sharing of data with citizens, and citizens using data to hold government accountable
	Budgetary decision-making	Use of data in planning and allocating financial and human resources, making investment decisions
	Service delivery decision-making	Use of data in delivering HIV, health, and other services, including to improve quality, efficiency, and customer satisfaction
	Access to data and data sharing	Availability and accessibility of data for relevant plans and decisions
	Attitudes toward data	Perceptions of data, its value, and whether and how it is sought out and prioritized
	Data skills	Skills to collect, analyze, and use data
	Gender decision-making	Use of data to make decisions that affect gender equity, women, and girls
	Citizen decision-making	Use of data to make decisions from the perspective of an individual citizen

In the following sections, we will describe:

- Key interventions and innovations that were perceived as the most far-reaching and positively viewed;
- The emergence of network and multiplier effects; and
- Facilitators and barriers to change in the local context.

In each section, we have highlighted relevant outcomes in the text through icons in the left margin. Because we used an open-ended, systems inquiry process, we did not limit our analysis to the prescribed set of outcomes. As a result, some sections of the text include one or multiple

targeted outcomes, and others do not. This indicates that the activities were perceived as having an effect on a broader set of outcomes and through a variety of different mechanisms of change.

#### a. Key Interventions and Innovations

*Q: What evidence exists that data is better incorporated into relevant decision-making processes since DCLI was implemented?*

DCLI included many different interventions and innovations, many of which have been detailed through the program's reports and [use stories](#). Through the interviews, specific themes as the components were perceived as the ***most far-reaching and positively-viewed efforts***:

- Adopting a community-led planning process: Community dialogues served as the foundation for DCLI activities, using an open-ended approach to identifying needs and setting priorities.
- Providing high-quality training coupled with support: DCLI's training was highly valued, particularly when it was complemented by mentoring, support, and practical applications.
- Creating demand for data through individualized problem solving: Working directly with stakeholders to identify data needs and support solutions, DCLI helped create demand and use of data, particularly related to increasing data use for service delivery and resource allocation.

These themes are further detailed in the sections below.

#### Community-led planning process

One of the most positively perceived aspects of the DCLI program were the ***community-driven dialogues (Listening Campaigns) and related community engagement activities*** conducted under Data Zetu. As these activities are well described in [other project documentation](#), only a basic description is included here. Listening Campaigns engaged citizens and local leaders to identify and prioritize the problems in their communities at the ward level. Through thoughtfully-facilitated sessions, Data Zetu created an open and safe space for discussion, without significant limitations or predetermined plans. Priorities identified through these campaigns directed the remainder of DCLI's activities in those districts.



Transparency & accountability

The campaigns appeared to be well received by community members and leaders alike. For community members, the opportunity to define needs and shape policy priorities was reported to increase civic engagement. Citizens are well-versed in the problems of their communities, but may have an attitude of apathy or lack of trust and confidence in existing processes to solve these problems. The campaign offered an opportunity to address this dynamic. Carefully facilitated sessions allowed for a discussion of issues without blame, which was one reason local leaders remained engaged in the process.

"The thing I remember Data Zetu taught us is the concept of community involvement and participation, which means nothing has to be implemented at the village without involving villagers and without making them participate in the implementation process."

– Local Leader

For leaders, in some cases the sessions illuminated new perspectives and brought new information to light about the concerns of their constituents and the status of their communities. In other cases, the sessions offered a platform for leaders to share their current agenda and what they were already doing to solve specific problems. Moreover, the sessions were perceived as strengthening mutual trust and accountability by initiating a process through which citizens and leaders work collaboratively on solving problems.

Another aspect of the campaigns that was highly valued were the shareback sessions, during which the ***data and findings from the campaigns were presented back to leaders and citizens***. It is noteworthy that these shareback sessions were not part of the original project plan, perhaps due to budget and time limitations. However, implementers and local counterparts alike emphasized the importance of this follow-up process, including both the meetings and the distribution of materials. It was repeatedly cited that international groups and researchers very frequently extract data and insights from local communities and leaders, but do not return to share the results.



Data access  
and sharing

Beyond praise for these community-led planning processes, interviewees recognized DCLI for having a ***flexible and adaptable approach to implementation***. Interviewees strongly connected this flexibility to their perception of the effectiveness and sustainability of the program. On a related note, there was a robust impression of confidence, enthusiasm, and even enjoyment among project implementors. Many individuals involved with the program reflected that it was a highlight of their professional career. This was generally credited to the fact that the program reflected local needs and fostered in-country capabilities, as well as strengthened the skills and perspectives of implementors on data topics.



Data skills



Data access  
and sharing

Finally, a focus on local leadership was reflected in DCLI's sustainability plan to ***launch an independent data hub***. dLab was launched as an independent Tanzanian NGO in 2018 and remains operational, with the goal of serving as a center of excellence for data analysis and use. It was noteworthy that the dLab launched during the DCLI implementation period, allowing time to implement activities as well as take on new responsibilities gradually. This stands in contrast to other initiatives cited by interviewees that seek to transfer ownership to a local organization in the waning months of a contract. dLab continues to host events and offer services and training, and reported the intention to conduct more innovation grant competitions in the future. Assessing its viability and sustainability was beyond the scope of our analysis. Interviewees demonstrated support for investing in a local data hub like the dLab, while expressing concern about the need for continued support. In the years past, several other innovation hubs have been launched in Tanzania and failed to achieve scale or sustainability, which underscores the challenge the dLab faces. Transitioning from the support of one donor to diversified and independent funding is not an easy task, and planning for future sustainability often requires different strategies and investments than typical project implementation.

### Training and support

DCLI provided a wide range of training, mentorship, technical assistance, and related support on data skills. These were delivered through in-person sessions at the dLab in Dar es Salaam, as well as assistance to specific groups and organizations through all three projects. As detailed in



the figure below, the curriculum included skills related to directly working with data, such as data analysis and storytelling, as well as topics related to effective data use and promotion, such as leadership and entrepreneurship.



Data skills



Data attitudes

Interviewees generally reported that DCLI **training was high quality and aligned with local needs and priorities**. Training for individuals was well received, with highly positive ratings of the quality and method of instruction. In particular, trainees noted not only an increase in their skills for seeking, analyzing, and presenting data, but also an important improvement in their confidence to engage with data. dLab training provided an avenue for CSOs to bolster their advocacy and policy proposals to the government and to the public. For example, one NGO interviewee described how a series of trainings and engagement with the dLab helped her to transform her attitude toward data. In the past she considered data something reserved for scientists and mathematicians. As a result of gaining skills and engaging with data “in a friendly way,” she is now more effective in using data and statistics in her advocacy efforts on TV and radio shows. She is also better able to craft evidence-based arguments directly to policy-makers.



Data skills



Gender

The DLIIC and the dLab’s data challenge competition offered useful insights into how capacity development programs can move **beyond training to include practical experience** for participants. For example, dLab brought together girls and adolescent women to learn data skills, and then to propose and compete data-driven solutions related to the gender wage gap. Participants designed tools and collected data in their local communities during this process. This not only improved the development of an evidence-based solution, but also helped the participants to gain confidence and even recognition among their community members.

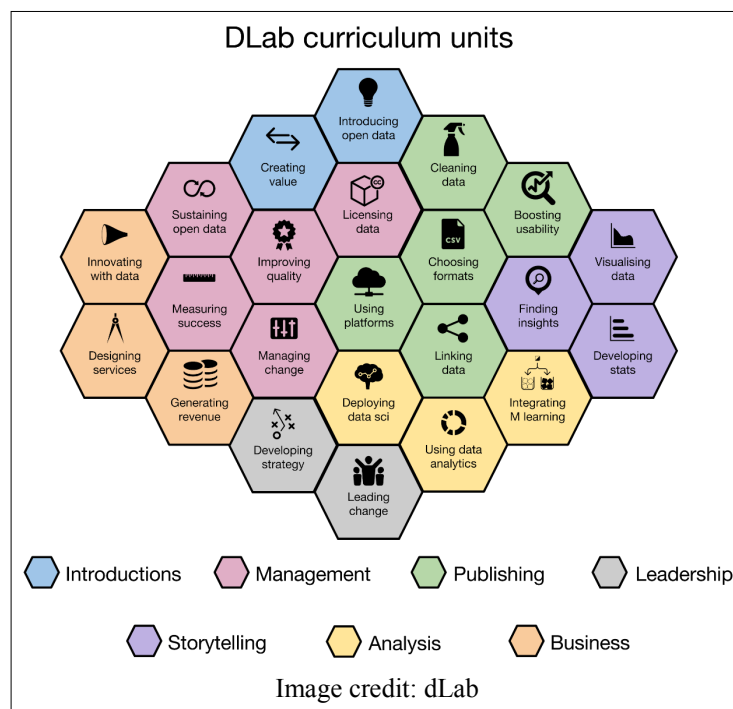


Data skills



Data access and sharing

With regard to specific data tools, **Open Data Kit (ODK) for mobile data collection** was the most frequently mentioned tool that interviewees were using in their work. Some trainees noted that they no longer have access to the specific analysis and visualization tools they learned to use during the training (such as Tableau, which requires a subscription). However, this did not seem to be a major complaint among the trainees interviewed. They continue to apply the general skills they have learned in seeking, analyzing, and presenting data. This indicates that the value of skills building could be realized even in a low resource setting, and that the contribution of the training was at a more general level. At the same time, future efforts may consider using open source and more widely available tools, while identifying opportunities to increase access to specialized tools beyond the duration of the training. Finally, institutional training and support



appeared to be delivered on demand and in alignment with other DCLI activities and sectoral priorities.



Data skills

Beyond data analysis and specific tools, interviewees also highlighted the value of **organizational and entrepreneurial skill building**. In particular, DLIIC grantees emphasized the fact that the project provided additional support beyond seed funding as critical to its success. Some of the most cited benefits were organizational and business support, financial training and templates, and monitoring and evaluation approaches. Mentoring and technical support was also recognized as important, though in some cases the support provided was more useful than in others.

#### Partnering with local actors to increase demand for data

Finally, a highly valued approach was how the DCLI program **partnered directly with local stakeholders to identify their data needs and support solutions**. This was cited across the DCLI program, including through specific innovation grants in DLIIC, community engagement and partnering with local organizations in Data Zetu, and institutional capacity development partnerships from dLab. These processes involved increasing the availability of data through new data collection and data sharing, as well as increasing the demand for data. Increasing demand appeared to be related to increasing individual data skills as well as increasing understanding on how data use related to specific HIV, health, and other goals.

With relevance for DCLI's objectives in HIV and health outcomes, interviewees cited **service delivery** as a major area for **improved data use for decision-making** as a result of DCLI. Many specific examples of data use for service delivery have been documented in the program materials and use stories. Additional examples generated from the interviews and credited to DCLI skill building and community mobilization efforts include:

- A Community Development Officer described how ward-level data on HIV prevalence helped to target a program of “moon light testing” in bars. This resulted in the identification of individuals testing positive for HIV and assisted them to initiate treatment.
- A District AIDS Control Coordinator described how their team had shifted from sending data directly to higher-level management to analyzing the data themselves, specifically to examine patients lost to follow up at the facility level. This sparked inquiry into the drivers of loss to follow up and generation of facility-specific interventions.
- A District Medical Officer discussed how data analysis increased use of the Community Health Fund by first identifying that usage rates were low compared local income levels and sources. More than the straightforward use of data analysis skills, the DMO credited the change to the increased readiness of community members and community leaders to act on data.



Service delivery



Citizens



Budget

The second major area where interviewees cited improved data use for decision-making was in **local resource allocation**. Interviews provided the most support for these activities as a result of the subnational activities of Data Zetu and support at the national and subnational level from dLab. Increased availability and access to data was noted at the citizen, facility, and local



government levels. Among DLIIC grantees, while some of the interviewees could anticipate how their innovations improve local resource allocation, those sampled had not progressed to a stage of launch and/or scale-up to realize actual changes.

Many examples of local resource mobilization have been documented in the program materials and use stories. Additional examples of data use for resource allocation from the interviews are listed below, and noteworthy for the application of skills and data activities in new and unanticipated contexts.

- A member of the National Bureau for Statistics praised the program's skills development efforts, in particular the use of the Open Data Kit (ODK) for mobile data collection. According to the interviewee, the NBS is considering using ODK as part of the next round of the census, increasing the quality and accuracy of the effort.
- Crediting the skills and support received from Data Zetu, a street leader mobilized other street leaders to collect a range of relevant local data. This included data such as the number of households in the community, households with latrines, number of school-aged children, and number of school-aged children out of school. With increased local data, the street leader was able to make the case to the community that more schools were needed, and the obtain financing to build new schools.
- A ward executive officer cited how the ward has used data to better monitor small business loans. Data showed that adult female recipients tend to have on-time returns, but youth recipients were late or defaulted. As a result, the ward has increased the allocation of loans to adult women, as well as implemented an education and support program for youth to accompany their loans.

Finally, an unanticipated effect was identified related to *improving data use for*

**local philanthropy:** Several local government interviewees described how the DCLI program helped them to increase philanthropic efforts at the local level. This appeared to be a result of a combination of interventions, including the listening campaigns and community engagement activities under Data Zetu and training from dLab, though differentiation among the different projects was not very clear among participants. The DCLI interventions helped these government partners to collect data on issues of interest, such as the need for new water points, schools, and similar community resources. They were also able to generate and gain access to census and income/livelihood data to determine which individuals in the community were likely to contribute to philanthropic efforts. Then, they were able to target and complete fundraising in support of the community need, demonstrating how empowerment through data contributes to mobilization of domestic resources. Research shows that local philanthropy is an important way to [shift power to locally-led development](#), as communities have a greater voice and apply increased accountability when resources are generated locally. This dynamic appeared to be an unanticipated pathway of change, as it was not detailed in program literature.



Budget

## b. System Strengthening

*Q: How were collective and network approaches to strengthening the data ecosystem applied? To what extent did these approaches foster sustainability?*

For the overall SPACES research effort, MCC demonstrated interest in understanding to what extent the DCLI program contributed to the ***development of a network of data enthusiasts***, as well as ***how far beyond the direct beneficiaries*** the program has reached. While a complete assessment of these factors is beyond the type of information that can be collected through key informant interviews, several relevant themes emerged from this research. In some cases, we were able to identify supporting evidence for these themes with program literature and other analyses such as the DCLI [social network analysis](#).

- **Strengthening existing system capabilities**: Participants reported that the different projects within DCLI were generally integrated and complementary. Additionally, participants perceived the strategic engagement of local actors, who comprise the underlying system, to be an important factor in program accomplishments and sustainability. Considering these factors, interviewees credited DCLI with contributing to improved attitudes, visibility, and momentum related to data use.
- **Spread and scale-up of interventions**: Program documentation detailed the spread and scale-up of specific data innovations, as well as a set of beneficiaries reached indirectly by activities such as training of trainers. However, from the interviews alone, it was not evident the extent to which the activities reached beyond the direct beneficiaries. Among those contacted, interviewees indicated support for increased adoption of DCLI interventions, but minimal preparation and engagement to spread those innovations and activities. While some spread of interventions was documented in the program records, it is possible that more time and additional types of support may be needed for activities to further permeate.
- **Connectivity among actors**: Participants highly valued the access that DCLI could offer to international donors, government partners, and the private sector. Additionally, in most cases, participants demonstrated a strong affinity for the program and a desire to remain engaged. However, from the interviews alone, we lacked evidence to conclude whether overall connectivity among actors improved during the implementation period. This finding was aligned with the DCLI social network analysis, which showed a high centrality of DCLI program implementers in the overall network.

### Strengthening system capabilities

DCLI was described by program planners as a ***set of interconnected investments*** that sought to reinforce each other and strengthen the overall data ecosystem. Respondents demonstrated a good understanding of the different projects and could readily identify the shared benefits of working together. Implementing partners also described an extensive coordination effort among the project partners. Additionally, participants perceived the strategic engagement of local actors, as described in earlier sections, to be an important factor in strengthening the data ecosystem.



As a result, many interviewees believed that DCLI has ***contributed to a larger culture change around data*** in Tanzania. DCLI is credited with being one of the voices championing data use and contributing to a positive change in the perception of data, in particular for its role in improving service delivery. As described in the previous sections, across the DCLI program, many interviewees perceived that there has been an improvement in how they and/or their stakeholders think about data, and could cite examples of how they have used it to advance their goals in health, HIV, and other areas. Beyond these individual examples, interviewees discussed the changing perception of data in the wider context and environment. Interviewees felt that an important factor in this change was not to champion data for its own innate value, but to connect data to issues of interest in health, HIV, and gender issues. As mentioned previously, dLab emerged as an independent NGO and increased its visibility among local actors, including through the launch of an annual data-themed conference ([Data Tamasha](#)). On the whole, interviewees considered that the use of data analytics was more familiar, in demand, and acceptable now than in previous years, though certainly many factors, initiatives, technologies, and events beyond DCLI have contributed to this change.

Respondents also identified that DCLI's emphasis on ***working through local organizations was important to strengthening the data ecosystem***. DCLI excelled in identifying existing organizations in the local context, both their subcontractors as well as their local partner organizations, called custodian organizations. The management structure seemed to have a light footprint yet remain involved through a partnership structure. This presented an important opportunity to reinforce and build the capabilities of local organizations rather detract from them by building parallel structures. Another unanticipated positive benefit of the Data Zetu specifically was that local organizations who were subcontractors noted that they are applying the project's internal financial, management, and M&E tools in other parts of their portfolio. As a result, they believed their organizations are more effective. Interviewees also noted a few examples where they have incorporated successful practices they developed under Data Zetu (for example, listening campaigns) into other projects that they have since launched with other funding sources.

### Spread and scale-up of interventions

Program documentation detailed the spread and scale-up of specific data innovations, as well as a set of beneficiaries reached indirectly by activities such as training of trainers. However, from the interviews alone, ***it was not evident the extent to which the activities had an effect beyond the direct beneficiaries***. It was not clear if those who received training were expected, encouraged, or equipped to share what they had learned with others in their organizations and networks. From the viewpoint of trainees, there did not appear to be a selection process to ensure participants were strategically placed to spread and sustain the use of new skills and tools. Local leaders generally did not report engaging with their peers in other locations to encourage the adoption of successful practices such as the listening campaigns. Grantees reported variable success in spurring investments by the private sector and other donors. In some cases, interviewees were particularly well positioned to spread DCLI activities because they serve as a hub to a wider network of local actors, yet were not taking advantage of this opportunity. Considering the limitations of the research, the lack of evidence related to the indirect reach of

the program does not mean that it did not occur. Rather, since the program documentation differs from the KII findings, this area warrants further research.



Data skills

Even if interviewees were not actively engaged in spreading DCLI interventions, most indicated a ***strong affinity for the DCLI program and supported increasing its reach***. Many interviewees who had increased their data skills reported that they would welcome opportunities to share the learning more broadly. They reported that they lacked the materials, funding, and/or time to do so. Future efforts may consider how to direct skill building activities to flow optimally through CSO networks—for example, by identifying existing hubs and training of trainer activities. Additionally, it was unclear what supports were put in place so that skills improvement could be retained within individual organizations when individuals depart or are reassigned. While this may result in having the learning applied in a new setting, it may leave an organization without a needed capability. Future activities may consider strategies to mitigate this common dynamic, such as working with multiple individuals from one organization or offering re-training.

At the local level, a number of interventions under Data Zetu were cited as successful among specific audiences and wards, but not spread or shared to wider groups. For example, there was evidence of demand among local leaders to expand listening campaigns and data roadmap exercises to additional wards and locations. However, the project lacked time and resources to support this scale up and it did not emerge naturally. Other interventions that seemed promising—but did not seem to be positioned for wider scale-up at the time of the interviews—included citizen-based data collection and the engagement of media and artists to reach citizens. Interviewees praised DCLI for identifying these types of innovations, while recognizing that more time, additional types of support, and a strategy for resource mobilization is likely needed for activities to further spread in the data ecosystem.



Citizens



Service delivery

***Citizen-based data collection*** in DCLI offered a cost-effective and inclusive way to generate and use data. This was well demonstrated in community mapping efforts. After a need had been identified through the listening campaigns and community engagement, Data Zetu trained and supported local leaders and community members to collect data and conduct surveys. These analyses generated new data and insights; in one example, they identified patterns in poor access to care and drug stock-outs that had not been examined through other efforts. According to the project's reporting, citizens engaged in these efforts reported an improvement in the perceived value of data and nearly unanimously agreed that citizen-generated health data was important for their community's development. Local mapping efforts also uncovered an opportunity for a lower level of geographic disaggregation below the subward. Mapping according to individual's affiliation with a local leader (mjumbe) was used to better understanding patient origins and organize health care delivery at a local hospital.



Citizens



Data skills

Another promising practice was the ***engagement of media and artists to reach citizens***, and how to build their capacity to use data. It was theorized that journalists, musicians, and artists were lasting community resources for reaching citizens, especially youth, and that improving their data literacy would have an amplified effect. Data Zetu conducted a variety of art and media training and outreach efforts, including a popular kanga competition and fashion show.

"It's not just about the beautiful visualizations, but also the stories that are told behind the data."

— Interviewee

In this event, local fashion designers incorporated data-driven messages into kanga fabrics, in alignment with local traditions to tell stories and communicate messages through fashion. dLab was also engaged in this effort to strengthen skills in the media sector for finding, analyzing, and visualizing data.

From the KIIs, it was difficult to determine the extent to which these theories about how change happen compared to what occurred in reality. Other types of analysis can shed light on the extent to which these practices can and should be scaled up in Tanzania and in other contexts. Again, it is noteworthy that the flexible and open-ended format of the program allowed for the emergence of these ideas and similar innovations.



Data skills



Citizens

At the same time, some activities emerged unexpectedly that can have a longer-term effect on the data ecosystem, particularly with regard to education. DCLI activities resulted in ***positive and unexpected academic pursuits, both at the national and individual level***. For example, investments in training materials sparked the development of a Masters of Data Science program, a 2-year postgraduate program at the University of Dar es Salaam that is increasing the supply of skilled professionals for data analytics, visualization, and other in-demand skills. At the individual level, several interviewees went on to pursue new degrees, prompted by their interest and experience with different DCLI activities. Several interviewees indicated that they would like to see quality learning materials from DCLI shared more widely across Tanzania. Noting that data literacy is generally low, they recommended incorporating the materials into the formal education system to strengthen democracy and civic engagement. Participants generally advocated for using country systems for learning and skills building where possible, while acknowledging the donor- and NGO-sponsored trainings are well received and appreciated.

### Connectivity among actors

Finally, in order to understand the networks that have developed as a result of the DCLI program, we explored the extent to which connectivity among local actors was strengthened.

First, participants highly valued the ***access and connections*** that DCLI could offer to actors such as international donors, government partners, and the private sector. This was particularly noted among innovators in DLIIC. In several cases, the project's ability to provide legitimacy to grantees through a letter to the local authorities was critical to gaining access to existing data or gaining approval to collect new data. Grantees expressed gratitude for the opportunities and funding available through the program, recognizing the role of seed funding to develop an innovation prototype. In particular, participants praised the milestone structure that started with a user-centered research phase before moving on to developing specific innovations and tools.



Data access and sharing

“[DLI] organized meetings so that we could share our idea with stakeholders from the Ministry and from other research institutions,... They connected us with the organization dealing with patents ... with auditors so that they could give us education on how to monitor our plan ... with other experienced, people who are at a developed stage in their innovation.”  
— Interviewee



At the same time, specifically related to DLIIC, our research uncovered *a difference in perspectives between program planners and beneficiaries related to the project's purpose.*

Program planners emphasized that the benefit of identifying and empowering local innovators who could advance data use in their communities in a variety of ways, with less emphasis on the specific innovations. In contrast, grantees and those more closely involved with the project focused rather narrowly on the success or failure of the innovations.

As a result, grantees sought more support from the program in scaling and sustaining their innovations, as well as opportunities to better collaborate with the entrepreneur network. These perspectives from program participants are useful inputs for considering what types of support will be most useful in the future, from continuing the innovation grants program, to fostering entrepreneurial networks, to other types of interventions.

“For all the products that everyone is trying to implement, I think [DLI] can easily introduce to other donors and ... other players in the market. Don't wait to get to the deployment stage to start thinking about how to move it to next steps. We've only piloted in a small district here. How to scale to the country and the region?” innovation.”

– Interviewee

More broadly, across the DCLI program, our research supported that *some networks naturally emerged* as a positive result of the program implementation. These offer a pathway for sustaining the culture of data use and spurring future activities beyond what donors have invested in directly. Participants reported that they enjoyed meeting other innovators and organizations through the different DCLI interventions. Some interviewees reported that they stayed in contact with those they had met through DCLI and, in a few cases, reported that they retained social relationships. At the same time, they did not report deeper and more lasting connections related to achieving their objectives in the data ecosystem. While it may not have been part of the DCLI's explicit design to strengthen connectivity among actors, we suggest that understanding this dynamic over time is critical to understanding long-term changes in the data ecosystem.

A separate process was underway during the period of our research to conduct a social network analysis (SNA) for DCLI. In this analysis, a survey was distributed to a large number of individuals who had engaged with the program to understand if and how connections strengthened as a result of DCLI. The analysis included the relationship types connections, collaborations, and partnerships. At the time of writing, initial findings from this analysis showed support for some of our findings related to the role of networks.

The SNA had 48 respondents from 31 organizations. Respondents reported developing new relationships as well as strengthening relationships with other actors as a result of DCLI. Organizations also reported developing new partnerships, though the majority of these were with the individual DCLI projects and their implementing partners. To a larger extent, organizations reported sharing datasets and data skills with other local actors as a result of the program. This analysis aligns with our findings that participants had a high affinity for the DCLI program itself and took specific actions as part of the program, but may need additional support to build connectivity in local networks. The incorporation of project activities into the dLab is likely to support this connectivity. More information about this SNA can be found here: <http://bit.ly/dclisna-v1>.



Gender

One final theme on connectivity emerged related to *how engaging young women in community-based research can affect gender attitudes*. Interviewees valued the high participation of women and girls in DCLI; program documentation cited a participation rate of 49%. Participants indicated that DCLI activities (such as innovation grants, challenges, and community data collection) created opportunities for women and girls to interact in a different way with their families, neighbors, and local leaders. As a result of leading activities related to science and data, women and girls gained status and esteem among their families and communities—and gained self-confidence at the same time. This potentially reinforcing feedback loop offers an interesting intervention strategy to changing gender-related attitudes and norms over a longer period. The actual innovation, solution, or community data collection was less important than the process of engaging women and girls in the data ecosystem. In this way, sending innovators to their communities to collect and champion data is an intervention in and of itself. The intentional inclusion of a gender lens in the DCLI program is an important aspect to continue in future efforts, generating benefits in ways beyond the number of women and girls reached.

### c. Facilitators and Barriers to Change

As part of a systems inquiry, we sought to understand the DCLI program's place in the wider development and data ecosystem in Tanzania. Accordingly, we asked interviewees about the interaction between the program and the wider context, and what were facilitators and barriers to change. Generally, interviewees were much more readily able to identify barriers and challenges in the local system, rather than facilitators. (This may be worth noting for future efforts that use an appreciative and asset-based approach to strengthening data ecosystems.)

- Interviewees cited local leadership as well as the presence of local organizations as the most important contextual facilitators.
- Interviewees generally identified basic infrastructure, access and sharing of data, availability of data, and crowded donor space and reporting requirements as the most relevant barriers.

Particularly when discussing efforts to promote data use at the local level, interviewees emphasized the role of *local leadership and support*. In particular, this was a theme for the Data Zetu listening campaigns and community engagement activities that followed. Obtaining local government leadership and support were critical, and the time necessary to undertake this type of campaign was considerable. Program implementors described how the process of gaining interest and buy-in for this type of activity requires relationship building, continued engagement, support and follow up. Accordingly, such initiatives need to be well planned and resourced, and it may be worth considering how to embed them within a larger initiative with broader goals, such as strengthening local governance.



Transparency &  
accountability

Future initiatives should also carefully consider scale-up and sustainability of similar efforts. In Data Zetu, wards appear to have been selected for more intensive engagement based on those that had the most favorable underlying conditions, such as demonstrated political leadership. For a short-term implementation activity, this seems to be a reasonable choice. Future initiatives would need to consider how to reach areas with different levels of political support, perhaps through greater civil society engagement or through leveraging political champions to convey the

benefits to their peers. Additionally, future activities would need to consider how to manage the frequent changes in local leadership, and how to sustain progress or avoid backsliding when a political champion departs.

With regards to barriers and challenges, interviewees commented frequently that they enjoyed the skill building opportunities offered through DCLI, but the ***lack of basic infrastructure*** makes it impossible for them to use these skills effectively. Typically, this referred to the lack of computers, software, and internet connectivity. DCLI increased access to technology through the physical dLab space in Dar es Salaam, and some interviewees noted the space was a useful resource. For actors in the wider data ecosystem, such as local government, NGOs, and DLIIC grantees, infrastructure remains a challenge. While future programs may not be able to address the broad infrastructure needs independently, they can consider how interventions can be deployed appropriately given the current status.

Another challenge noted was related to ***availability of data at the program's onset***. One of the realizations was that the quantity and quality of data available especially at the local level was lower than originally anticipated. Some

planners and implementors anticipated that DCLI could focus on unlocking data and increasing the use of existing data. As a result, the focus became on identifying gaps in what data was available, and advocating for the collection and sharing of this type of data. A good example of this is the Data Zetu research on [mapping data flows at the hyperlocal level](#). In some cases, DCLI

“There is a certain level of complexity... it's not just about technology. Our difficulty ... is not so much that the information isn't there. It has more to do with the capacity of the people, the tools they have, the data release arrangements.”

– Interviewee

partners were able to create new data sets that were missing, including through citizen-led data collection. In other cases, DCLI facilitated better information sharing at different levels of the health system, including between national and subnational actors. This experience presents a useful lesson learned for other initiatives in Tanzania and in other settings that are seeking to improve data use for decision-making. Understanding data availability and identifying the specific barriers to sharing data involves much more than information and technology solutions.



Data access  
and sharing

Another challenge was cited related to ***restrictions in data access and sharing***. Increasing access to and sharing of data was a common objective in the earlier stages of the implementation period. At the onset of the program, Tanzania seemed poised to build on past successes in increasing data access and availability. However, major changes in the local political context occurred, including Tanzania's withdrawal from the [Open Government Partnership](#) and a new statistics law that restricted unauthorized release of data. In some cases, interviewees reflected that the changes did not substantially affect the program's strategy, for example, to equip CSO partners with new skills and partner at the local level to support data-driven change. In other cases, it seemed that in addition to adding challenges to the operating environment, these changes restricted the ability of innovations and improvements to take hold beyond the direct beneficiaries. It seems reasonable that the effects of contextual changes were varied in a program such as DCLI that had a variety of intervention pathways and sought to support change at multiple levels.



Data access  
and sharing



Finally, on the topic of data use and decision-making, particularly with relation to health and HIV services, interviewees recommended reflecting on the Tanzanian context of a ***crowded donor space and increasing reporting requirements***. As in many other settings, a large quantity of short-term projects with varying objectives and indicators are all focused on the same beneficiaries, health centers, and health workers. This is exacerbated by underdeveloped ***health information systems and human resources***, and applies enormous pressure to local service delivery systems. As reflected in both the [research conducted under Data Zetu](#) as well as this study, it is clear that efforts to improve data-driven decision-making need to explore and tackle the systemic barriers to change. A common theme in systems interventions is that without addressing the underlying factors that constrain progress, improvements will be ineffective or short-lived. Some of the systemic barriers identified here may be mitigated through individual program activities—such as incorporating more time, budget, and emphasis on coordination with other initiatives—while others would require broader coordination and collective action.

## IV. Conclusions

*Q: What evidence exists that data is better incorporated into relevant decision-making processes since DCLI was implemented?*









In order to understand ***the extent to which DCLI has been effective in its objectives*** of enabling effective use of data by different audiences, we conclude that there is strong evidence for effectiveness based on the KIIs, document review, and monitoring data.

Overall, the KIIs reflected that the DCLI program increased data skills of individuals and organizations, improved data use for service delivery and resource allocation at the local level, and fostered an improved culture and attitudes toward data. These included effects among NGO, local government, and entrepreneurs.

We also identified moderate evidence for increased transparency, accountability and budgetary decision-making; access to data and data sharing; and gender decision-making. These areas were generally localized in specific wards and communities targeted by DCLI, or among specific organizations with which the program partnered. With regard to gender, we identified improvements in the extent to which women and girls are engaged in data processes, but it was unclear the extent to which decisions affecting women and girls changed. We did not identify evidence for improved data use among average citizens. However, our interview sample did not include individual citizens, and thus we would recommend exploring these areas further through other methods.

The table below summarizes the level of evidence by key outcome area. We categorized each area according to the frequency that the theme was identified and the estimated scale of impact. High indicates the outcome was frequently mentioned in different KIIs with wide-scale reach. Moderate indicates the outcome was mentioned only sometimes, or only related to specific locations or beneficiary groups. Low indicates that the outcome was not frequently mentioned or did not have a wide reach. These conclusions must be interpreted with the limitations in the

methodology outlined in section II. Further discussion of the pathways and drivers of these changes will be detailed in the full evaluation report.

Outcome area		Level of evidence	Description
	Transparency and accountability	Moderate	Improvements in specific locations (targeted wards and communities)
	Budgetary decision-making	Moderate	Improvements in specific locations (targeted wards and communities) and organizations
	Service delivery decision-making	High	Improvements among NGOs and local government
	Access to data and data sharing	Moderate	Improvements in creation of new data sets and portals; improvements in sharing in specific locations and themes
	Attitudes toward data	High	Improvements among NGOs, local government, and entrepreneurs
	Data skills	High	Improvements among NGOs, local government, and entrepreneurs
	Gender decision-making	Moderate	Improvements in women and girls' involvement in data; changes unclear for how decisions affecting women and girls changed
	Citizen decision-making	Low	Changes unclear for how citizens changed their use of data

The scope of our preliminary analysis does not allow for a complete exploration of how each target group has changed. However, interviews and documentation indicate that activities initiated under DCLI are continuing beyond the life of the program in a variety of ways, and that these efforts support long-term change in the local context. Entrepreneurs are continuing to build and scale their data innovations as well as their businesses. Those who have been trained and mentored under DCLI are using their skills to improve the quality of their organization's service delivery and advocacy efforts. New local leaders in communities where DCLI focused are using findings from DCLI-supported community dialogues to understand their constituents' priorities.

To interpret these initial findings, we consider that by offering a variety of avenues to change, DCLI advanced a locally-led alternative to traditional donor-driven efforts that define interventions from the onset. This offered opportunities for creative solutions such as citizen-led data collection and use. This type of bottom-up solution can be held in contrast to a more

traditional intervention that would, for example, seek to improve data quality by developing data standards and conducting training for over-burdened frontline health workers.

Too often, development programs are designed by conducting an analysis of current deficiencies and then seeking to fill the gap by providing information and training. However, an analysis from a systems perspective might reveal that the core factors driving those deficiencies are not a lack of information nor of skills. In a complex local system, deeper issues are typically at play such as incentives, feedback structures, the presence or absence of connections among actors, and the supply and distribution of human and financial resources. Crafting an intervention strategy around these systemic factors requires an extensive and nuanced understanding of local context, as well as the interactive engagement of multiple perspectives and stakeholders. In effect, by using a bottom-up and adaptive approach, DCLI sought to address these goals of local leadership and sustainability.

## V. Lesson Learned

*Q: How can these findings and recommendations inform DCLI programming in Cote d'Ivoire and elsewhere?*

Based on the available evidence, it seems that beyond the program implementation DCLI has begun to spur a wider set of changes in the data ecosystem. This reflects the overall success of the innovation program and the applicability of its lessons learned to the wider data and development community. We recommend that donors, governments, and civil society partners reflect on the lessons learned from the DCLI program and seek to incorporate the more successful pathways to change in their work, as appropriate.

### 1. When local actors lead change, programs are more effective and sustainable.

While most development programs champion the importance of local engagement, it is much rarer to see truly flexible programs designed around locally-identified priorities. Precisely because DCLI activities were contextually appropriate and locally generated, the activities were not only well received, but also in many cases left a lasting effect.

### 2. Flexible and adaptable programs lay the groundwork for innovation.

As a result of an open-minded, flexible and adaptable approach to programming, a wide variety of promising interventions and approaches were identified during the implementation period. These present opportunities for further investment and scale up, in particular:

- Community-driven dialogues in collaboration with local leaders to align needs, priorities, and activities
- Grantmaking coupled with technical assistance and mentoring for social innovation networks
- Hands-on skill building for data collection, analysis, and visualization

- Cost-effective and inclusive methods of community-based data collection, such as mapping
- Engagement of media and art actors who offer a lasting method of reaching citizens, especially women and youth

### 3. Increasing data use in decision-making requires much more than technology, and involves an understanding of the actors, processes, rules and incentives in the system.

Many efforts related to data use have focused on skills, tools, and technology. While these factors are important, it is also necessary to consider the wider development system in which data exists. This includes understanding the diverse actors in the data ecosystem, their motivations and incentives, and how they are connected (or not). It also includes understanding the factors that facilitate and reinforce data use, as well as those that create barriers.

### 4. Investing in systems change is necessary for long-term sustainability, but transitioning to this approach can be challenging for funders and implementors alike.

Ultimately, systems change efforts are aimed at sustainability and long-term cost effectiveness. Yet fostering systems change is slow, and the pressure to deliver short-term results can stand in opposition to program goals. Moreover, ecosystem investments require continued effort over time, and often do not proceed in a planned or linear fashion. These dynamics can present challenges in an environment where funders and implementors are accustomed to traditional service delivery programming or activities such as large-scale training and outreach. Continued attention to learning and adapting in data ecosystem activities will be important for advancing long-term outcomes in HIV, health, economic growth, and beyond.

## Annex A: Interview Guide

We used different interview guides for different audiences: beneficiaries, members of the data ecosystem, and subnational government and CSO participants.

### **Interview guide 1: Beneficiaries**

[This is a semi-structured interview guide to be tailored to each individual interview.]

#### **PART 1 (5 MINUTES): INTRODUCTION AND CONSENT**

My name is [name] and I am from LINC, a member of the SPACES consortium. Our team of researchers has been engaged by the Millennium Challenge Corporation to learn from their investments in the past few years. You may be familiar with the projects Data Zetu, the dLab, or the Data for Local Impact Innovation Challenges. As part of this effort, it is important to hear directly from local stakeholders about what worked well, as well as what could be improved for future efforts.

In support of this research, I'd like to gain your honest opinions and perspectives on your experience with the program. In addition, I'd like to talk generally about how you use data, and what has changed over time. Your responses will not be attributed to you individually, though we may use anonymous quotations. Your responses will not be used to influence current or future benefits from the program. We will produce a public report that includes a list of the types of organizations we interviewed, but not individual names. We will share this report with you when it is completed later this year so that you can learn from the findings as well.

Do you have any questions about the study? Do you consent to participate?

#### **PART 2 (40 MINUTES)**

**ROLE AND RESPONSIBILITY:** Please tell me about your role and areas of responsibility. What are your most important tasks? How do you carry these out? Who do you interact with to achieve these tasks?

**DATA USE AND DECISION-MAKING:** How do you use data in your work? When do you seek data, and for what purpose? How do you find and analyze data? What types of decisions do you make as a result?

**EXPERIENCE WITH DCLI:** Do you know the project DLI/DZ/dLab? If so, tell me about your experience with the program. How did you engage with the program? What did you gain or learn from it? Did you interact with other participants in the program? If so, how?

**CHANGES IN BEHAVIOR AND ATTITUDES:** Compared to before you engaged with the program, what is different in how you use data now? Do you think about data differently? What have you done as a result? What have other actors done as a result? Do you plan to do anything differently in the future? What barriers remain to using data effectively?

RECOMMENDATIONS FOR DCLI: What do you think is the most important result from DLI/DZ/dLab? What recommendations do you have for similar programs in the future in Tanzania? In other settings?

### PART 3 (10 MINUTES)- WRAP UP

Is there anything else you'd like to discuss?

Would you be interested to see some of our findings and provide feedback before the study is completed?

I'd like to check your contact information for sharing the final product. Is [XYZ@.com] a good email for you?

Thank you for your time. If you have any questions or additional thoughts, please feel free to be in contact with me.

### **Interview guide 2: Data ecosystem key informants (90 MINUTES)**

[Interviewee selection: Each interviewee will be selected based on their knowledge of a specific audience and ability to represent their perspectives. The interviewee may or may not be a member of the audience.]

### PART 1 (5 MINUTES): INTRODUCTION AND CONSENT

My name is [name] and I am from LINC, a member of the SPACES consortium. Our team of researchers has been engaged by the Millennium Challenge Corporation to learn from their investments in the past few years. You may be familiar with the projects Data Zetu, the dLab, or the Data for Local Impact Innovation Challenges. As part of this effort, it is important to hear directly from local stakeholders about what worked well, as well as what could be improved for future efforts.

In support of this research, I'd like to gain your honest opinions and perspectives on your experience with the program. In addition, I'd like to talk generally about how you use data, and what has changed over time. Your responses will not be attributed to you individually, though we may use anonymous quotations. Your responses will not be used to influence current or future benefits from the program. We will produce a public report that includes a list of the types of organizations we interviewed, but not individual names. We will share this report with you when it is completed later this year so that you can learn from the findings as well.

Do you have any questions about the study? Do you consent to participate?

### PART 2 (10 MINUTES: SUBJECT EXPERIENCE WITH DCLI)

Do you know the project dLab/Data Zetu/DLI? If so, please briefly tell me about your experience with the program.

### PART 3 (50 MINUTES) - OUTCOME HARVESTING

*[Each interviewee will answer questions about what has changed related to a series of topics. The interviewer will prioritize collecting information by each topic area and audience according to the table below. To the extent that time remains, the interviewers will seek to collect information related to the other topic areas.]*

Topic	Local Gov	CSOs	Private sector	Service providers	Citizens
Access to data	X	X	X	X	X
Attitudes toward data	X	X	X	X	X
Data skills	X	X	X	X	X
Data sharing	X	X	X		
Service delivery		X		X	
Resources/investments	X		X		

I'm going to walk you through a series of topics. For each topic, I'd like you to think about important things that have changed in how [audience] thinks or behaves. I'd like to focus on specific things that have occurred in the past 2-3 years, but we can also talk about longer-term trends and changes. If you can't think of anything that has changed related to that topic, tell me that you can't think of changes, and we will continue to the next topic.

First, I'd like to talk about [audience]'s **access to data**. Thinking about the decisions that [audience] needs to make, is the data that they need available and accessible? Generally, thinking about [audience]'s access to data, what has changed recently?

[Probing questions for changes]

- When did this change occur? Where did it take place?
- Who was involved?
- Why is this change notable?
- Do you think that DLI/DZ/dLab activities contribute to this change? If so, how?
- What other factors contribute to this change, outside of the project?

Next, I'd like to talk about [audience]'s **attitude toward data**. Think about - is their attitude generally positive, neutral, or negative? Do they value and seek out data, or is it a lower priority? Generally, thinking about [audience]'s attitude toward data, what has changed recently? [Probing questions for change]

Next, tell me about [audience]'s **skills to collect and analyze data**. What skills do they have, and what skills do they lack? Generally, thinking about [audience]'s skills related to data, what has changed recently? [Probing questions for change]

Next, I'd like to talk about how [audience] **shares data**. What do they share, and how do they share it? What do they not share? How is this similar or different from the past? Generally,

thinking about how [audience] shares data, what has changed recently? [Probing questions for change]

Next, let's talk about the role of data in **delivering services**. For example, data may be used to improve the quality and efficiency of [health/HIV/economic growth] services, or to understand customer satisfaction. Generally, thinking about [audience] service delivery, what has changed recently? [Probing questions for change]

Next, I'd like to hear your perspectives on the role of data in **allocating resources**. This could include budget decisions and priorities for investment. It could also include how human resources are allocated, in terms of their quantity and their time. Generally, thinking about how [audience] allocates resources, what has changed recently? [Probing questions for change]

Are there any other important changes related to data for decision-making that we didn't talk about? If so, please describe them.

#### PART 4: RECOMMENDATIONS AND WRAP UP (15 MINUTES)

RECOMMENDATIONS FOR DCLI: What do you think is the most important result from DLI/DZ/dLab? What recommendations do you have for similar programs in the future in Tanzania? In other settings?

#### WRAP UP

Is there anything else you'd like to discuss?

Would you be interested to see some of our findings and provide feedback before the study is completed?

I'd like to check your contact information for sharing the final product. Is [XYZ@.com] a good email for you?

Thank you for your time. If you have any questions or additional thoughts, please feel free to be in contact with me.

#### Interview guide 3 – Subnational government and CSOs

[This is a semi-structured interview guide to be tailored to each individual interview.]

#### PART 1 (5 MINUTES): INTRODUCTION AND CONSENT

My name is [name] and I am from LINC, a member of the SPACES consortium. Our team of researchers has been engaged by the Millennium Challenge Corporation to learn from their investments in the past few years. You may be familiar with the projects Data Zetu, the dLab, or the Data for Local Impact Innovation Challenges. As part of this effort, it is important to hear



directly from local stakeholders about what worked well, as well as what could be improved for future efforts.

In support of this research, I'd like to gain your honest opinions and perspectives on your experience with the program. In addition, I'd like to talk generally about how you use data, and what has changed over time. Your responses will not be attributed to you individually, though we may use anonymous quotations. Your responses will not be used to influence current or future benefits from the program. We will produce a public report that includes a list of the types of organizations we interviewed, but not individual names. We will share this report with you when it is completed later this year so that you can learn from the findings as well.

Do you have any questions about the study? Do you consent to participate?

## PART 2 (25 MINUTES): EXPERIENCE WITH DATA AND DCLI

First, I'd like to learn more about you and how you do your work.

*[Interviewer note: For the purpose of time, ask the main question and the sub-questions at the same time. Then, follow up with prompting questions if the interviewee has not answered the sub-questions sufficiently. For example, the actual script for question 1 would be: Please briefly tell me about your role and areas of responsibility, such as what are your most important tasks, how do you carry them out, and who do you interact with?]*

- Please briefly tell me about your role and areas of responsibility.
  - What are your most important tasks?
  - How do you carry these out?
  - Who do you interact with to achieve these tasks?
- As you may know, the MCC projects were looking at increasing the use of data for decision-making. Along those lines, I'd like to understand better the role of data in your everyday work.
  - When do you seek data, and for what purpose?
  - How do you find and analyze data?
  - What types of decisions do you make as a result?

Next, I'd like to understand your level of familiarity and involvement with the MCC projects.

- Are you familiar with Data Zetu, the dLab, and/or the DLI Innovation Challenges?
- If so, please tell me about your experience with each project.
  - How did you engage with the project?
  - What did you gain or learn from the experience?
- What have you done as a result of your engagement with the project?
  - Do you use or think about data differently?
  - Has it helped you to fulfill your responsibilities, and if so how?
  - What barriers remain to using data effectively?

## PART III (20 MINUTES): DATA IN SERVICE DELIVERY AND RESOURCE ALLOCATION

*[Service delivery questions are likely most appropriate for CHMT members]*

As you may know, one of the objectives of Data Zetu/dLab/DLI Innovation Grants was to support local decision-makers with better evidence so they could do their work. One common use of data is to improve **service delivery**. For example, data may be used to improve the quality and efficiency of HIV and health services, as well as to understand customer satisfaction.

- Thinking about service delivery in your district/ward, how is data currently used? Have there been any important changes recently?
  - When did this change occur?
  - Where did it take place?
  - Who was involved?
  - Why is this change notable?
- Do you think that Data Zetu/dLab/DLI Innovation Grants contributed to this change? If so, how?
- What other factors contribute to this change, outside of the project?

*[Resource allocation questions are likely most appropriate for district, ward, and community leaders]*

Next, I'd like to hear your perspectives on the role of data in **allocating resources**. This could include budget decisions and priorities for investment. It could also include how human resources are allocated, in terms of their quantity and their time.

- Thinking about resource allocation in your district/ward, how is data currently used? Have there been any important changes recently?
  - When did this change occur?
  - Where did it take place?
  - Who was involved?
  - Why is this change notable?
- Do you think that Data Zetu/dLab/DLI Innovation Grants contributed to this change? If so, how?
  - What other factors contribute to this change, outside of the project?

#### PART 4 (10 MINUTES): WRAP UP

*[If not already captured through the interview, collect overall summary impressions and recommendations here.]*

- Based on your overall experience, what do you think is the most important result from Data Zetu/dLab/DLI Innovation Grants?
- What recommendations do you have for similar programs in the future in Tanzania? In other settings?

Is there anything else you'd like to discuss?

Can you please share your email address for sharing the final product?

Thank you for your time. If you have any questions or additional thoughts, please feel free to be in contact with me.