Development Gateway: An IREX Venture's Custom Assessment Landscape Methodology 2.0 – *Reflections After Five Years*

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Introduction

We developed this white paper to help both our internal teams and our partners better understand Development Gateway: An IREX Venture's (DG's) Custom Assessment Landscape Methodology (CALM), including how we developed it, why we find it to be an effective tool, and what we have learned from the last five years of implementing and adapting CALM assessments. This white paper outlines the CALM approach in detail and includes our theory of change and an overview of a typical CALM assessment implementation methodology. This document and accompanying project manager toolkit are intended to build off previous documentation on our CALM methodology, including the CALM white paper published in 2018.[1]

Purpose

Over time, we have found that the tools and approaches used by CALM are effective in assessing a wide range of data and digital ecosystems, contexts, and tools. We've used CALM in everything, including gathering requirements for regional fertilizer[2] and seed supply chain[3] dashboards, adapting open source solutions like DG's Aid Management Platform[4] and Open Contracting Portal[5] for new contexts, and recommending data and digital solutions that target children,[6] women,[7] or underserved populations.[8]

However, CALM is an exploratory—rather than evaluative—assessment approach focused on gaining insight into a specific ecosystem and the factors determining the decision space available to the actors and initiatives within the ecosystem. CALM is not an exact science or copy/paste methodology; its goal is not to develop a precise analysis of any one element of an ecosystem. Rather, CALM is meant to promote a holistic understanding that can be used to develop actionable insights and recommendations to help an organization or agency navigate complex systems and create solutions that meet their organization's and constituents' unique needs.

- **The first part of this paper** will discuss our theory of change, which is based on an expansion of the behavioral economics theory that factors of *supply* + *demand* + *incentives* = *consumption*, where in our contexts, consumption = data and digital use. We'll then discuss how nearly 25 years of implementing digital solutions like the Aid Management Platform led us to a flexible data/digital assessment approach that blended best

[1] https://developmentgateway.org/wp-content/uploads/2020/10/CustomAssessmentLandscapingMethodology_December2018_1.pdf
[2] https://africafertilizerwatch.org/#/en/
[3] https://developmentgateway.org/publication_landing/lessons-learned-from-visualizing-information-on-seeds-using-technology-in-africa-tasai-vista/
[4] https://developmentgateway.org/casestudy/aid-flows-information-system-jordan/
[5] https://developmentgateway.org/blog/dgs-open-contracting-portal-designated-as-a-digital-public-good/
[6] https://developmentgateway.org/publication_landing/unicef-data-for-children-landscape-diagnostics/
[7] https://developmentgateway.org/blog/catalyzing-use-of-gender-data/
[8] https://developmentgateway.org/blog/introducing-principles-subnational-development/

practices and methodologies from both international development and software development sectors, including problem-driven iterative adaptation (PDIA), human-centered design, and Agile.

- ➢ **The second part of this paper** will discuss what a CALM assessment implementation looks like and how assessment teams can co-design for the user (and their decision space!) effectively. This section also discusses the importance of speaking directly with users and taking an empathetic, active-listening approach to understanding their needs via *qualitative* data methods such as key informant interviews (KIIs), focus group discussions, and validation workshops.
- ➢ **An internal CALM project manager toolkit** will include additional details on how to create the types of analytical outputs we've iterated on to help design practical data and digital solutions for our partners, including user analyses, stakeholder mappings, data demand/supply/use diagrams, data ecosystem maps, and landscape assessment reports and recommendations, as well as an explanation of how these outputs support and are supported by CALM's theory of change.

Background: Rethinking Data and Digital Needs Assessments

After nearly 25 years of implementing digital solutions to support development, government, and civil society partners across the globe, at DG, we have learned that *supplying* data or digital tools alone is not enough to influence behavior change; there must also be sufficient *demand* for the solution, and it must fit the *needs* of key users. This requires a holistic understanding of the **data and digital ecosystem in which a given solution operates** and the **institutional, managerial, individual, and technical factors** that enable—or discourage—using data and digital solutions for better development decisions. We refer to these factors collectively as the "decision space."

Therefore, a systems-level approach to ecosystem assessments that acknowledges and explores the complexity of users' decision spaces is needed to drive investments and interventions that build capability and change behavior.[9] CALM seeks to understand how data and digital solutions can optimize decision-making for impact in a complex ecosystem of information, tools, decision-makers, power relations, and decision spaces.

[9] https://dash.harvard.edu/bitstream/handle/1/9403175/RWP12-036_Andrews_Pritchett.pdf

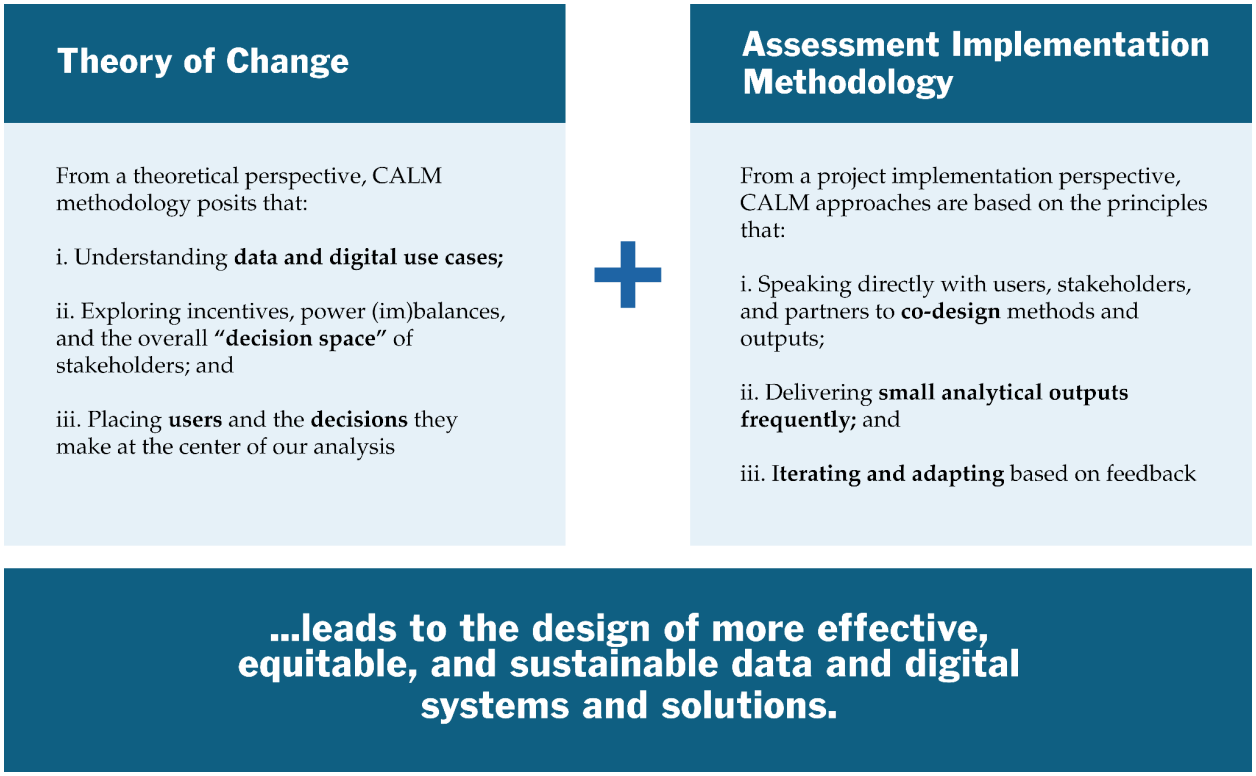


Figure 1: Overview of CALM theory of change and assessment implementation methodology

Again, CALM research is not scientific, and any project manager attempting to implement CALM should use this framework (and accompanying toolkit, where applicable) to expand or refine their specific assessment accordingly. Most important is that CALM assessment teams and partners understand these approaches and methods, *why* DG applies them to ecosystem assessments, and *how* they can lead to more useful and usable digital systems and solutions.

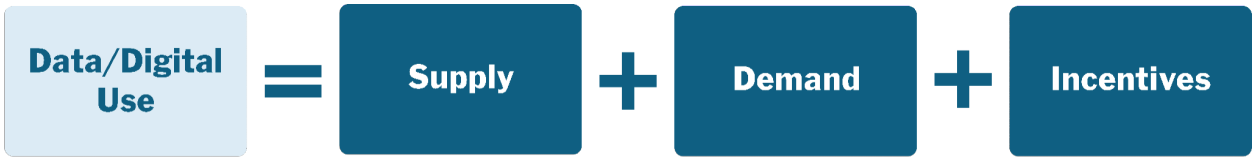
Part 1: CALM Theory of Change

DG's CALM methodology posits that factors of supply, demand, and individual incentives affect the use of a digital or data solution. To assess a user's decision space in these terms, CALM blends best practices from problem-driven, iterative, and adaptive (PDIA), human-centered design (HCD), and Agile methodologies. As a result, CALM methodologies emphasize speaking directly with users, delivering analytical outputs for feedback and validation, and iterating as necessary. We posit that CALM's unique theory of change and assessment implementation methodology leads to the design of more effective, equitable, and sustainable data and digital solutions.

Modeling the Market for Data: The Role of Incentives

To understand the theory of change behind CALM, we must first understand ***incentives***, which are often shaped by the broader individual and institutional factors that make up an actor's ***decision space***. This term may be best understood within the context of one of our projects, the Results Data Initiative (RDI).[10] In that project, we found that barriers to data and digital adoption go beyond market factors of supply and demand—and beyond the deployment of digital tools. When we interviewed more than 500 individuals, one frequently cited example continued to repeat: just because someone installed DHIS2 (a commonly-used health information management system) on the hospital desktop (supply) doesn't mean you will automatically get ready-to-use data. You can ask or even require someone to enter data into the system (demand), but if the task is cumbersome, the tool is of no use to them personally, or they have no idea what the data is used for—they simply will not use it, resulting in an unused tool with poor data quality.

What is the reason for this market failure (i.e., no one is consuming or using the data or digital tool) if demand and supply factors are sufficient? Behavioral economics offers an explanation: market failures (like the failure to use a dataset or digital tool to support decision making) occur due to some combination of insufficient supply, insufficient demand, or *various psychological and social factors such as incentives, motivations, and capacity*.



In the DHIS2 example above, our CALM assessment revealed that DHIS2 implementation did not consider the **incentives** shaped by the **decision space** of key data reporters; namely, the implementation did not consider that if the tool was cumbersome to use, had no clear relevance or consequence for their work, and was only used for accountability purposes—rather than providing a valuable resource that incentivized behavior change—why *would* a local nurse

[10] https://developmentgateway.org/casestudy/rdi/

prioritize learning and using this new system over caring for sick patients? These incentives and disincentives to use digital are all factors that DG refers to as the "decision space"—and this is where we believe many off-the-shelf or generic data and digital solutions fall short of being empowering, sustainable, or fit-for-purpose, especially in the context of international development.

A decision space results from the **authorizations and resources available to decision-makers, which establish a choice set available to them for a given decision:** use this data or digital solution or not. This decision space comprises institutional, technical, and individual levels and is impacted by the incentives, directives, resource availability, and institutional culture in which decisions are made. For example:

- In **RDI** and other monitoring and evaluation work, the primary users' decision spaces centered around using results data for accountability and learning.
- In **Tobacco Control Data Initiative,**[11] the primary users' decision spaces centered around using the website to inform tobacco policy monitoring and implementation and counter disinformation from the tobacco industry.
- In **Visualizing Insights on Fertilizer for African Agriculture,**[12] the primary users' decision spaces centered around sharing and analyzing data across the private sector to improve the fertilizer supply chain.

Understanding the decision space, decision-making processes, and actors is crucial to informing systemic change.

Understanding the Decision Space

A lack of incentives to adopt digital lies behind many of the existing "market failures" that plague institutions and create data graveyards.[13] These incentives are largely shaped by individual and institutional factors that expand or limit decision space. Therefore, to understand barriers to use, we must examine the entire decision space[14] in which data or digital use drives decision-making (or doesn't). The decision space is influenced by an array of organizational, institutional, individual, and technological factors that can enable and

[11] https://developmentgateway.org/casestudy/rdi/
[12] https://developmentgateway.org/casestudy/vifaa/
[13] https://www.aiddata.org/blog/avoiding-data-graveyards-how-can-we-overcome-barriers-to-data-use#:~:text=Our%20new%20report%2C%20Avoiding%20Data,that%20cut%20across%20country%20contexts.
[14] https://www.hsph.harvard.edu/international-health-systems-program/wp-content/uploads/sites/1989/2020/01/science.pdf

incentivize the use of data and technology or stifle and discourage it. See *Figure 2: Mapping decision space* below to visualize those factors at various organizational levels.

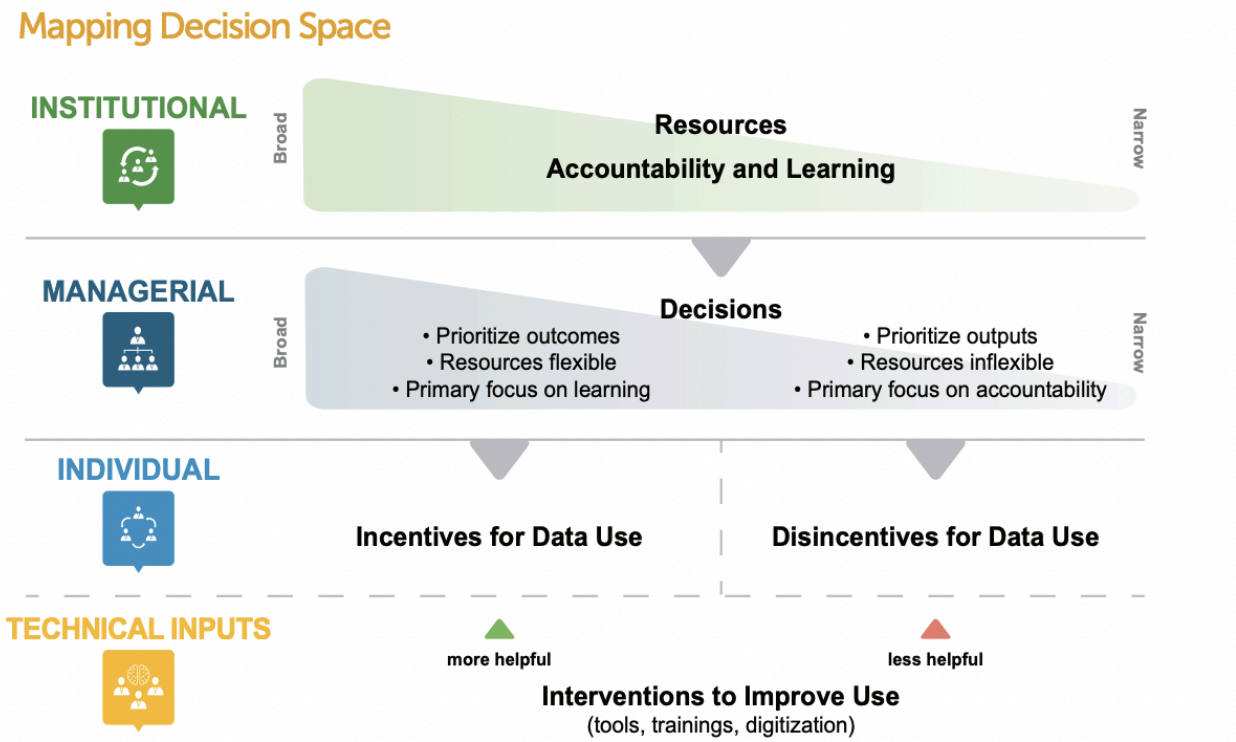


Figure 2: Mapping decision space

The above figure shows that at an institutional level, it's important to understand resource availability for decision-makers and their capacity to do something differently (i.e., migrate, improve, or adopt digital and data systems). It's also important to look at institutional mandates and incentives around using data both within the organization (for accountability, learning, etc.) and outside the organization (for advocacy, policymaking, etc.). Where resources are flexible and managerial decisions are focused primarily on learning and delivering outcomes, the decision space is broad, and many opportunities and incentives for data or digital use emerge. Where resources are limited or inflexible, and the primary focus of management is on counting inputs and accountability, decision space and incentives for behavior change and use are restricted. Often, power dynamics between data demanders, data suppliers, and data subjects play a critical role. Therefore, CALM ecosystem assessments carefully consider power balances and imbalances, not just users but also those positively and negatively affected by the data or digital ecosystem.

Example

Understanding the Decision Space: Monitoring and Evaluation Systems

Consider the below example, based on learnings from our data and digital landscape assessments for monitoring and evaluation ecosystems in development organizations such as the UK's Department of Foreign Development,[15] Global Affairs Canada,[16] the US's Millennium Challenge Corporation,[17] and UNICEF,[18] among others:

For [Monitoring, Evaluation, and Results] data to be useful and used—and for programming to meet its policy objectives—agencies and organizations must find the proper balance between accountability and learning. Achieving this balance requires understanding the relationship between decision space and data use and identifying what tools or processes can facilitate both accountability and learning objectives.

– CALM 1.0

Continuing with the above example, these *institutional* mandates regarding results or performance data typically drive a *managerial*-level decision space focused on either outcomes and learning (wider decision space → more likely to use) or on outputs and accountability (narrower decision space → less likely to use). Finally, at an *individual* level, individual decision spaces combine with institutional and managerial decision spaces and culminate in either incentives to use the data for their own decision-making (by meeting individual decision-making needs) or disincentives (i.e., being difficult to use, being irrelevant, or discouraging risk and innovation).

For those trying to understand complex data and digital ecosystems, understanding the decision space is critical to sustainable investments in digital and data tools that are likely to

[15] https://developmentgateway.org/blog/understanding-how-dfid-makes-decisions-landscape-report-role-data/
[16] https://developmentgateway.org/publication_landing/managing-for-feminist-results-measuring-canadas-feminist-international-assistance/
[17] https://developmentgateway.org/blog/ceo-josh-powell-appointed-to-mccs-advisory-council/
[18] https://developmentgateway.org/publication_landing/unicef-data-for-children-landscape-diagnostics/

drive better decisions and development impacts.[19] Thus, looking at decision spaces as the primary unit of analysis in landscape assessments leads to the following:

- Data use strategies that are actionable, feasible, and meet user needs;
- Technical requirements for user-centered decision support tools; and
- Recommendations for data or technology investments that maximize data-driven decision-making.

How Do We Understand the Decision Space?

So, how do you lead a data or digital assessment focusing on these difficult-to-observe, complex factors? There are many ways to approach this question. However, DG is uniquely placed with decades of experience as both a technology provider and a digital advisor, allowing us to test and iterate on approaches to national and subnational capacity building, project management and design, and assessment philosophies.

DG's implementations and iterations of the following project management approaches have primarily informed our approach to understanding a user's decision space :

- **Problem-Driven, Iterative, Adaptation (PDIA)**[20] – A learning-by-doing project design approach that helps organizations develop the capability to solve complex problems while they are identifying or developing solutions to those problems;
- **Agile Software Development**[21] – A project implementation methodology emphasizing the collaborative effort of self-organizing and cross-functional teams with the customer(s)/end user(s) to discover requirements and improve solutions; and
- **Human-Centered Design**[22] – A theoretical approach to problem-solving commonly used in product design, management, and engineering frameworks that develops solutions to problems by involving the human perspective in all steps of the problem-solving process.

Ultimately, CALM was developed internally as an approach for assessing a decision space and related factors, which combined what DG felt were the most effective elements of the above three approaches. CALM's approach to understanding the decision space emphasizes co-designing dynamic methodologies based on gathering user feedback as much as possible. This is done by:

1. **Speaking directly with users,** decision-makers, data subjects, and stakeholders as often as possible;

[19] https://developmentgateway.org/wp-content/uploads/2020/10/UnderstandingDataUse_Dec2018.pdf
[20] Kennedy School of Business, Harvard. What Is PDIA? https://bsc.cid.harvard.edu/about/what-is-pdia/
[21] Agile Alliance. Agile 101. https://www.agilealliance.org/agile101/
[22] UNICEF. Human Centred Design (HCD). https://www.unicef.org/innovation/hcd

2. **Prioritizing small deliverables or "analytical outputs"** for rapid and routine feedback; and
3. **Testing** assumptions and **iterating** as needed.

A summary of these approaches and DG's CALM adaptation of them is on the next page; see *Figure 3: Foundations of CALM*. In *Part 2: CALM Implementation Approach*, we discuss the above three approaches in more detail and how and why they appear in CALM.

Approach/Theory	What DG Takes from the Theory	DG's Application to Data and Digital Ecosystems	How it is applied in CALM
Behavioral Economics	Factors of **demand + supply + psychological/social/cultural incentives** affect consumption.	Data-driven decision-making requires an enabling environment in which **i) the right data** exists (supply), **ii) skills and tools** are available for analysis of data (demand), iii) both **authorization and incentives** to analyze data are present (demand and incentives), and iv) there are mechanisms for **feedback** on data availability and quality (incentives).	Seeks to understand **data ecosystems** regarding data **supply, demand,** and **use;** seeks to understand **data users** (and their incentives) regarding their **decision space.**
PDIA	Feedback loops, international co-design, and implementation with local partners result in solutions that better fit local contexts, build local capacity, and empower.	**Co-creating** assessment methodologies and reporting conclusions/recommendations based on **feedback loops** with assessment stakeholders will lead to more relevant, impactful, and empowering data assessments. Identifying and learning from emergent behaviors in the system can point to opportunities to drive change.	Emphasizes **co-designing dynamic methodologies**, testing **assessment**, and **data use cases**, identifying and scaling instances of **positive deviance**, gathering **feedback** at multiple points in the assessment, and **iterating methodologies or outputs** as needed.
Agile	Flexible and adaptable implementation, co-design with stakeholders, delivery in small chunks, feedback loops, and adaptations lead to better digital solutions.	**Flexible** and adaptable assessment methodologies **co-designed** by stakeholders, **delivered in small chunks** with many opportunities for **feedback** and **adaptations**, lead to better data and digital landscape assessments and recommendations.	Prioritizes **agile** and **co-designed** research methods and **incremental delivery** via analytical outputs, all grounded in data (or assessment) **use cases**.
Human-Centered Design	Seeks a deep understanding of users' needs, behaviors, and experiences to create effective solutions catering to their unique challenges and desires.	To holistically assess data and digital ecosystems, **understand the decisions** that users make and their **incentives** to use (or not use) a digital or data solution. **Validate** assumptions and findings often and **adapt** as necessary.	Places **data users, decisions, and use cases** at the center of our analysis; utilizes flexible, qualitative, active listening approaches to understand decision space, validate assumptions and findings, and adapt as needed.

Centering Humans in the Decision Space

Human-centered design (HCD) emphasizes the importance of empathy and creativity to meet business needs. Through CALM, we use HCD principles to understand the components that determine the decision space and how that space impacts a person, team, department, or organization's ability to use data. We specifically focus on:

- **Authority**, power, and decision-making capacity;
- Job responsibilities and performance **incentives**;
- **Motivators** (or demotivators) to use data or digital; and
- Upstream and downstream **effects** of data-driven decision-making (or lack thereof).

There are, of course, a broad range of other factors that impact data and digital use, but they are impossible to anticipate at the onset of an assessment. However, these are best captured through attentiveness to emergent priorities during the CALM assessment's information-gathering (i.e., interview) phase. These factors that impact data use and related solutions to improve data use can emerge organically by strategically collecting and organizing information on several individuals' decision spaces.

Co-Designing Solutions using PDIA

Through PDIA, DG ensures that local context and needs are central to assessment and solutions. From the assessment kickoff, we have an intentional **co-design** process that feeds into implementation and interviews, followed by regular **feedback loops** and **validation** with local partners and stakeholders. In terms of the decision space, this often means exploring the tensions between local data collection, quality, and use and how they feed into the wider ecosystem. The result is that people living and working within a given ecosystem or decision space define their own problems and offer their own solutions. Ultimately, this approach provides recommendations that better fit local contexts, centers on building local capacity, seeks to address power and information imbalances and creates a sustainable digital or data use system.

Bringing Agile to Assessments

Agile methodologies are typically used in software or technical development and implementation. While DG uses this approach for technological development, we have also found that an Agile approach is useful to understanding users and their decision spaces more broadly. A first step in Agile methodology is often to develop **use cases** and **user stories** to understand how each user (or part) interacts independently and with other parts of the ecosystem. Agile methodologies use this information to break project deliverables into smaller activities and tasks known as "sprints." Sprints provide continuous delivery of information and feedback to developers and create natural points for iteration and adaptation. While the CALM approach does not use sprints, it still focuses on a combination of analytical outputs to deliver useful content and analysis for feedback, iteration, adaptation, and "continuous delivery" from desk review to interview guide to analytical framework to final report. See *Section 2, Phase 4* for a list of DG's most commonly-used CALM outputs.

Part 2: CALM Implementation Approach

Part 1: CALM Theory of Change discussed the principles and theories that underpin CALM and why DG believes this is a practical approach to understanding complex data and digital ecosystems. The sections in *Part 2: CALM Implementation Approach* contain additional information on CALM assessment implementation, how to analyze a user's decision space, and methods for stakeholder and user validation.

CALM project (double)cycle:

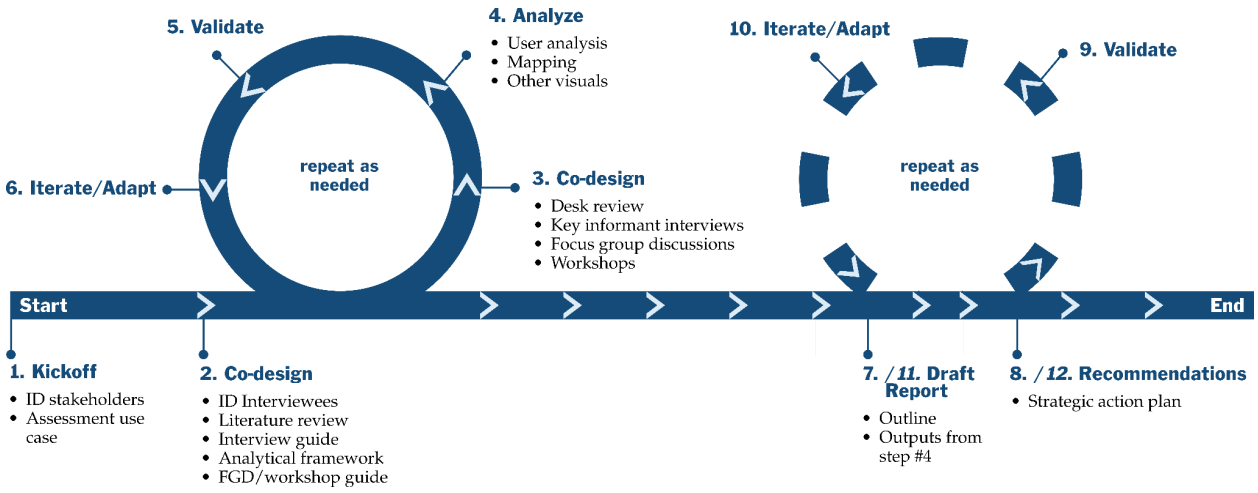


Figure 4: CALM project cycle double-helix

Overview and general order of operations

As discussed in *Part 1: CALM Theory of Change*, the three core principles of a CALM approach are:

1. **Speaking directly with users**, decision-makers, and key stakeholders as often as possible;
2. **Prioritizing small deliverables or "analytical outputs"** for rapid and routine feedback; and
3. **Testing** assumptions and **iterating** as needed.

Since the CALM approach is built on the agile methodology, the project timelines of a CALM assessment can go through several cycles (see *Figure 4: CALM project cycle double-helix* above). Therefore, two CALM implementation methodologies are rarely alike. Instead, the precise steps of a CALM assessment vary and are driven by the needs of the stakeholders and the scope of

the work. Some CALM assessments include validation workshops, and others do not. Some need multiple rounds of feedback on multiple deliverables. Some have two or three rounds of data collection—some test initial findings via a "rapid assessment" before a full-blown assessment is scaled.

However a project team decides to incorporate the above three principles into their CALM assessment is primarily up to the team, the data/digital ecosystem stakeholders, and the project contract. Regardless of what methods and deliverables are "on the menu" for a CALM assessment, we recommend the following generic order of operations be followed:

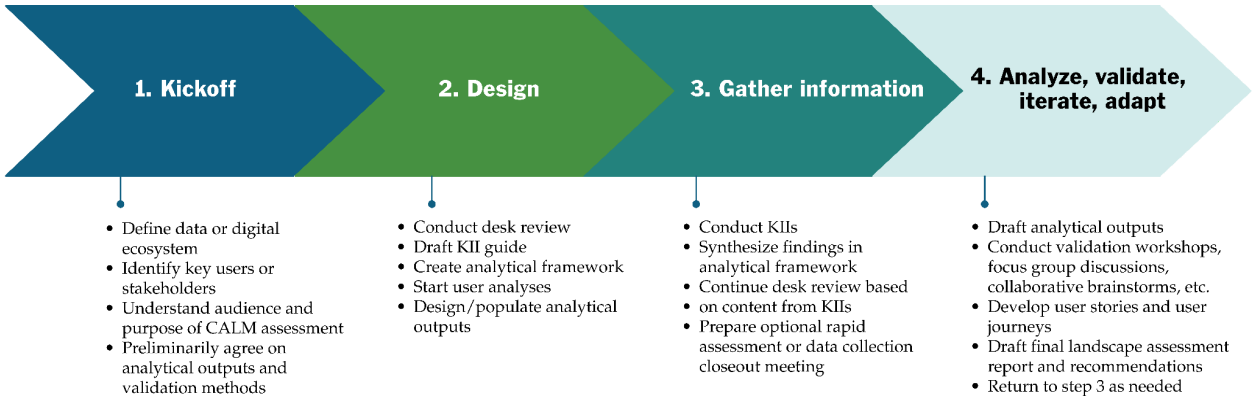


Figure 5: CALM implementation overview and general order of operations

Phase 1: Kickoff

During the kickoff, the goal is to develop an understanding of the project scope with key stakeholders and partners. In addition to standard kickoff questions (clarity on deliverables, project timeline, and communication standards, etc.) the meeting should include:

1. **Defining and setting boundaries on** the data or digital ecosystem in question.
2. **Identifying key users or stakeholders** in the data/digital ecosystem, including which stakeholders you will target for Phase 3: Gather Information;
3. Developing a common understanding of the **CALM assessment's primary use case(s).** Questions to answer amongst the CALM team include: who is the audience for this report? To whom are we directing recommendations (if at all)? Who could do something differently based on the information we provide in this assessment? Are there ongoing strategies or initiatives (e.g., Sustainable Development Goals, Digital Principles) we need to align to?; and
4. Initial agreement on **analytical outputs** and **validation mechanisms** for this scope; see *Phase 4: Analyze, Validate, Iterate* to learn more about analytical outputs.

Phase 2: Design

After the scope of your CALM assessment and data/digital ecosystem are clearly defined, start designing the assessment by asking how you will collect, analyze, and disseminate information with partners and stakeholders for their feedback.

This typically starts with a thorough desk review and draws on conversations and insights from the Kickoff phase. Typical CALM steps taken or delivered at this stage include:

1. Drafting a **literature review matrix** or **desk review summary document** highlighting key findings thus far and areas for additional exploration in Phase 3;
2. Developing a **target sample size and key informant stakeholder group**, considering your assessment goals against what is feasible given the budget, timelines, and strengths of social networks and buy-in among stakeholders.
    → Be sure you're also considering the entire decision space of your ecosystem, and be mindful of power dynamics between data suppliers, data demanders, and data subjects!;
3. **Developing a semi-structured KII guide**—questions should be empathetic conversation starters, not rigid scripts;
4. **Creating an analytical framework,** a template where CALM teammates can summarize and highlight pertinent information; and
5. Thinking about **user analyses** and **analytical outputs** by asking such questions as**:** would a stakeholder map be useful, what about a data ecosystem map, and what user stories are emerging in the desk review that we can validate in interviews?

In all four of the above steps or deliverables, receiving feedback from key partners and stakeholders is critical. Ensure ample time for feedback and revisions before advancing before the data collection phase, and don't leave any assumptions untested!

Phase 3: Gather Information

This is often the most critical part of a CALM assessment—and how we collect information on the decision space makes CALM unique. Again, a central tenet of CALM is that the more the assessment team can speak directly to users and empathize with their data or digital challenges (not always easily done via one-way surveys), the more useful information they can collect on users' decision space. Further, individual or small-group interviews can encourage more honesty and openness among stakeholders, especially because they allow those in positions with less power to speak openly rather than in front of colleagues or stakeholders who are more senior and relatively influential. If conducting interviews during the CALM assessment is impossible, work with partners and stakeholders to design creative and interactive focus group discussions, validation workshops, a combination of surveys and validation workshops, etc., wherever possible.

For this guidance document, we'll assume that this CALM assessment utilizes KIIs (as recommended). Steps taken at this stage of a CALM assessment include:

1. Conducting **KIIs** or collecting data via other methods previously agreed in *Phase 1: Kickoff*;
2. Synthesizing key information into an **analytical framework** so that findings can be easily aggregated, analyzed, and shared for feedback and validation;
3. Conducting **rapid assessment** (optional), with key emerging findings and trends, which provides an opportunity for rapid feedback on high-level findings at some point after the interview process starts *but before other reports or outputs are finalized*; and
4. Completing **additional desk reviews** throughout Phase 3 to gather more information to supplement information from KIIs and stakeholder or partner feedback.

In an ideal world, this collection phase would never end, and data and digital solutions would forever be informed and improved with user feedback. In the real world, Phase 3 ends when the team interviewers and analysts agree that the team has hit "knowledge saturation" or (as is most often the case) when the contract budget limit has been reached. At the same time, it's important to be mindful of the time you ask from stakeholders and partners; after all, ***feedback is essential but should not be prioritized at the expense of a user or stakeholders' buy-in or support.*** Leverage relationships with stakeholders and data/digital champions wherever possible to get the most out of this phase and be respectful and appreciative of people's time.

Phase 4: Analyze, Validate, Iterate, and Adapt

After data collection inevitably ends, methods for data analysis will also likely vary from CALM assessment to CALM assessment; which techniques are used should be determined by the team's capabilities, the needs of the assessment report audience, and the scope and budget of the assessment. Remember, CALM aims to get the best information you can about a complex data or digital ecosystem, given the real-world constraints, politics, objectives, and scope that limit an assessment.

Through CALM assessments, we have learned that developing small "analytical outputs" based on the findings of Phase 3 serves two purposes at the same time; first, they **provide templates and matrices to assist the CALM team with analysis,** and second, they also offer an effective **vehicle for validation, feedback, and iteration** from key stakeholders and users. Some of DG's favorite analytical outputs that facilitate this rapid analysis and feedback include:

- Desk review matrices or documents,
- KII guides,
- Analytical frameworks,
- User analyses,
- Stakeholder maps,
- Data demand, supply, and use diagrams,
- Data ecosystem maps,

- Data landscape assessment reports, and
- Data/digital use recommendations.

As with Phase 3, the actual outputs included in a CALM assessment and the methods utilized to develop them will vary from CALM assessment to CALM assessment, driven by the capabilities of the team, the needs of the assessment report audience, and the scope and budget of the assessment. However, *most* CALM assessments typically include the analytical outputs listed above, albeit to varying degrees of detail and standardization.

In addition to submitting draft versions of these analytical outputs to key users and stakeholders for their feedback and validation, the following mechanisms can also be utilized to validate the analytical outputs or gather additional information and feedback:

- Validation workshops,
- Rapid assessments,
- User stories and user journeys,
- Focus group discussions, and
- Collaborative brainstorms.

Conclusion

CALM's unique theory of change and project implementation approach is an effective methodology for understanding the needs and gaps in data quality and technology use and developing actionable recommendations focusing on scalable, equitable, and local solutions. More importantly, this approach is customizable and adaptable. While CALM can scale up or scale down in assessment rigor, we often find that assessment end users more often request rapid, light-touch assessments because they are more digestible, actionable, and practical.[23]

In summation, CALM is unique in a few distinct ways:

1. **Capacity for Use** – CALM is centered around the theory that to use data or technology, a user must have the capacity and space to make a decision with that data. Therefore, understanding the potential data user and the decision space in which they operate is key to maximizing data and digital use *and* empowering the user to make better, more informed decisions.
2. **Blended methods** – CALM combines proven and evidence-based approaches from technology development and international development (e.g., PDIA, Agile, Human-Centered Design). It applies them to data and digital landscape assessments to form an approach focusing on users, their needs, and the local context.
3. **Custom** – Custom is the primary descriptor in the CALM acronym. It is a flexible, "right fit" assessment approach adaptable to different contexts, stakeholders, and use cases.

[23] https://www.ictworks.org/assessmentitis-new-disease/

What CALM is Not: Limitations and Challenges

While we believe in CALM's value as an effective and empowering assessment methodology, CALM does have limitations; therefore, it is important to note what CALM is not and cannot do. First, CALM is not an off-the-shelf tool or a "digital public good." CALM should be adapted, scaled, and contextualized for each project and country.

CALM is also not a methodology that follows strict adherence to the scientific method or other empirical methodologies that you might find in an academic journal; it is exploratory research—rather than evaluative—and is focused on gaining insight into a specific ecosystem and the factors that determine the decision space available to the actors and initiatives within the ecosystem.

At DG, our data and digital landscape assessment work does not require evaluative research. For example, we have never needed a representative survey sample of rural health workers to justify that electricity and internet outages are one of the most significant barriers to technology adoption—nor have we found that kernel of information particularly useful. On the contrary, we *have* needed to talk to people about how internet outages affect their day-to-day work and the underlying power dynamics or resource constraints that prevent them from securing stable internet—and the CALM methodology provides a way to do that.

By continuing to use and develop CALM, DG will continue developing sustainable digital approaches and tools that are effectively **used** to drive better development outcomes.

Making international development data easier to gather, use, and understand.

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