



IREX's Data Learning Journey (DLJ) Playbook

A guide to building data skills for everyone



Beta Version For Feedback

This document is a beta version open for feedback. We encourage anyone who reviews or uses the activities and resources in this playbook to share their perspective and experiences! This will help inform future development and better align with the realities of global development professionals. If you would like to provide feedback, share your application experiences, or connect with the IREX team, please complete this [feedback form](#).



Acknowledgments and Background

This Data Learning Journey Playbook is the result of an internal commitment from IREX's [2025 strategy](#) to build staff capacity across the organization and utilize data more effectively in their work to learn, iterate and improve outcomes.

Designed as a pilot initiative led by the [Center for Applied Learning and Impact](#) (CALI), the activities and resources shared in this playbook were designed and tested through an opt-in staff cohort program. In total, 52 staff (nearly 10% of IREX staff at the time) participated in this initiative between September 2021 and July 2022. We would like to acknowledge all the IREX staff who participated in this initiative for their thoughtful engagement and feedback that led to the development of this playbook.

The roll-out and development of the Data Learning Journey initiative was supported and guided by Jesus Melendez Vicente, Senior Technical Advisor for Data and Digital Development, and Jill Miller, Director of CALI. Additionally, IREX's partnership with the online learning platform [Data Camp](#), made possible by a donation from [Social Impact Partnerships at Meta](#), added significant value to the pilot experience.

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About IREX

IREX is a global development and education organization. We strive for a more just, prosperous, and inclusive world in which individuals reach their full potential, governments serve their people, and communities thrive. We work with partners in more than 100 countries in four areas essential to progress: cultivating leaders, empowering youth, strengthening institutions, and increasing access to quality education and information. Learn more: www.irex.org.

About IREX's Center for Applied Learning and Impact

IREX's Center for Applied Learning and Impact is a dedicated space for learning and innovation that collaborates across IREX and with external partners to carry out research, evaluation and learning and develop cutting-edge new approaches.

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What is “Data” and Why Is It Important



In the Merriam-Webster dictionary, **data is defined as information** used as a basis for reasoning, discussion, or calculation¹. Many people hear the word “data” and think of overwhelming spreadsheets, visualizations or complicated calculations that make them scream “over my head!”. But data can be used in so many other forms.

Have you ever checked a map to find the best route home? Have you gone to a restaurant because it received a lot of positive reviews? Has the weather forecast ever changed your plans? These are all examples of how we use pieces of information (or data) in our everyday lives to inform decisions and improve our desired outcomes. Believe it or not, you also contribute to these systems. Sharing reviews of your favorite places, allowing your phone to track your location on certain apps, and liking content on social media are just a few examples of how you may naturally contribute to systems of information in your everyday lives.

Professionally, this could include more intentional activities like submitting a project update, logging discussions with clients, or sharing a communication piece with your network. Regardless of the purpose, data is a tool used to inform decisions, and everyone plays a role in shaping its value or harm towards a particular issue.

1. <https://www.merriam-webster.com/dictionary/data>



Introduction

Over the last ten years, global development has seen a dramatic increase in the use of data and digital tools to solve complex problems associated with sustainable development goals (SDGs)². However, many organizations that invest in resources to leverage data and achieve ambitious development goals face a growing skills gap among staff, including IREX³. This skills gap influences an organization's ability to facilitate meaningful learning, improve practices and achieve their desired impact. A contributing factor to this is the perception among some staff that “data isn't for me” and that investments should be prioritized to individuals working regularly with data (i.e., monitoring, evaluation and learning tasks, research initiatives, IT systems, etc.). This is a data culture problem.

The Data Learning Journey (DLJ) is a capacity development initiative designed around the guiding principles that all staff, regardless of their role or position, contribute to elevating the use of data and evidence in their work; and that data is a tool for learning collaboratively. The commitment of the DLJ initiative is to increase IREX staff's productivity, performance, and motivation in relation to understanding and extracting value from data.

This Data Learning Journey Playbook (DLJ Playbook) is a hands-on resource with independent and team activities that seek to build and sustain data culture and skills for global development organizations. This playbook is designed with people at the center— **developing data skills for everyone and leveraging data as a tool for learning collaboratively.**

While building functional data literacy skills for staff is essential in this process, the wider challenge the DLJ Playbook seeks to address is **connecting diverse staff roles and responsibilities with data to solve complex problems.**

2. <https://sdgs.un.org/goals>

3. <https://www.irex.org/sites/default/files/pdf/irex-2025-strategy.pdf>

Ultimately, the DLJ Playbook seeks to help users understand their relationship with data to guide their learning priorities and bring staff together around data to advance learning, inform new solutions, and improve outcomes in a rapidly changing world.

Through an engaging series of worksheets, scenarios, team activities, case studies, and other resources, users will explore the concepts of “data personas,” “data skills training,” and “data fluency” to understand how to approach building the data skills they need for their unique environment. The playbook ends with a data challenge where participants apply what they have learned across all activities to develop a solution to a problem relevant to their work - participants work in teams to design a data product that aims to address a program or organizational need.



What is a Data Persona?

A data persona is a design tool that reflects how a particular person engages with data in their work and life. Data personas consider demographic characteristics, individual roles and responsibilities, and psychological considerations like motivations and challenges.

The idea of developing user-personas can be credited to Allan Cooper. In 1999, Cooper introduced the idea publicly as a [role-playing technique](#) in his work “The Origin of Personas” to solve design problems. There are generally [four different types of personas](#) used for these purposes. Cooper’s idea has been adopted in the field of marketing as a strategy for large enterprises to engage with and understand their customers. Similarly, global development organizations have used personas when developing products and campaigns to reach their target users or audience. This playbook focuses on **Role-based personas** to help users understand their and others’ relationship with data for the purpose of breaking silos that prevent different roles from collaborating, inform learning priorities, and help track performance.



What is Data Fluency?

Data fluency is the efficient communication and use of data across diverse roles, systems, and processes within an organization towards a common mission. Achieving data fluency is dependent on each of these components working collectively and with acknowledgement that they are all inextricably connected. A significant barrier existing in any one of them fosters inefficiencies in all of them.

Every organization has unique elements that interact with each other. To illustrate this concept more clearly, the [Data Fluency Framework](#) (Figure 1), developed by Zach and Chris Gemignani, organizes the types of elements that could exist in any organization between consumers and producers of data at the organizational and individual levels. This framework highlights how four areas of an organization (Data Consumer; Data Author; Data Fluent Culture; and Data Product Ecosystem) all work around a common issue, sharing data between their spaces with a common understanding. When deciding how to invest in building and sustaining the efficient use of data within an organization, this framework emphasizes balanced improvement of the overall system rather than an individual component.

Figure 1: Data Fluency Framework; Source: Data Fluency: Empowering your organization with effective data communication





DLJ Playbook Overview

This DLJ Playbook consists of four sections that can be navigated in any order based on your immediate learning goals (reference navigation guide). Collectively, these sections guide users through understanding their own learning priorities for self-improvement, supporting others on their team, facilitating collaborative learning around a common mission, and building a data culture. Learn more about each playbook section and its respective learning objectives below:



I. Reflecting on yourself

Reflect on your own relationship with data and build your data persona to inform your learning priorities.



II. Making data a team effort

Consider other data personas on your team, their challenges, and how you can support them towards a common mission.



III. Practicing collaborative learning

Practice activities that your organization and team could use to bring diverse roles together to meaningfully learn from data with a common mission in mind.



IV. Implementing a data learning initiative

Design your own data learning initiative with your team or organization by considering the diverse types of engagements that bring together the activities shared throughout this book.

Navigation Guide

DLJ Playbook Learning Goals	I	II	III	IV
Understanding your own learning priorities for self-improvement	✓			
Supporting others in your organization/team	✓	✓		
Facilitating collaborative learning around a common mission			✓	
Building a data culture		✓		✓



I. Reflecting on yourself

Everyone engages with data in unique ways based on their role, interests, capacity, and comfort level. Understanding your own relationship with data by building and reflecting on your data persona can inform your learning priorities and your contributions to your team. In this section, you will reflect on a series of prompts that shape your unique data persona and practices to achieve your data learning goals.

I – Section Learning Objectives

1. Understand the key considerations that make up a data persona.
2. Identify what data skills to prioritize for your individual learning experience.
3. Set clear goals to practice new data skills.



II – Making Data a Team Effort

Rarely does an individual see data through an entire process in isolation – from defining a problem to collection, analysis, communication, decision-making, and several other steps between. In this section, we'll explore four common data personas IREX identified in global development, their respective challenges and considerations to make the most of the data they work with, and what others on the team can do to support them towards a common mission. These personas include the following:



Data Collector



Data Analyst



Data Advocate



Data Storyteller

II – Section Learning Objectives

1. Map out your own team's data personas.
2. Identify opportunities to support each team member.



III - Practicing Data Skills for Collaborative Learning

Fostering a data culture that can routinely facilitate collaborative learning requires skilling up staff to build a common awareness and key considerations about working with data. In this section we'll explore several collaborative activities that practice these skills and help facilitate discussions with diverse staff for the purpose of learning. These activities include the following:

- Building your data pipeline
- Developing data user personas that reflect your team
- Developing a data product around a problem
- Fostering responsible data practices
- Creating a shared data language and values
- Incorporating Collaboration, Learning and Adaptation (CLA) into your data ecosystem
- Storytelling and sculpting a data tool

III – Section Learning Objectives

1. Facilitate a tested Data Learning Journey activity.
2. Adapt an activity to your unique audience.



IV - Implementing a Data Learning Initiative

Building and sustaining a data culture in an organization or team requires fostering a learning culture that values data as a tool rather than an objective. While investing in foundational data literacy skills is essential, without complementing those skills with a space to facilitate learning, there will not be a meaningful improvement in using data to solve complex problems. Therefore, instead of increasing data skills or tools across teams as the goal of an activity, resource, or intervention, consider the application of **learning with data** to improve practices and impact. IREX identified these five cross-cutting skills to develop a balanced Data Learning initiative:

- Identifying an opportunity to use data
- Achieving your data literacy needs
- Working with data responsibly
- Fostering effective discussions around data
- Building collaborative data practices

In this section, you will design your own data learning workplan by considering activities that support each of these skills.

IV – Section Learning Objectives

1. Identify barriers and opportunities to build data skills for collaborative learning.
2. Design a practical work plan to support data learning for your organization or team.
3. Measure the effectiveness of a data learning workplan



Glossary of Resources

This [google spreadsheet](#) is a consolidation of all the learning resources, communities and concepts IREX identified throughout the development of this DLJ playbook. It is organized based on the data persona themes shared in Section II and includes a general list to consider for your own learning journey. It is important to note that the resources shared in this glossary are not comprehensive of the many data skills and tools applied in global development, nor are they comprehensive of any individual's own data learning journey or exclusively relevant to one. The intention of sharing these resources is to provide more transparency and understanding of IREX's experience implementing this initiative. **Unless otherwise noted, all of the shared resources in this glossary are free to access.** If you would like to add resources to this spreadsheet, share it with the IREX team in this [feedback form](#).



Section I Reflecting on Yourself



Everyone engages with data in unique ways based on their role, interests, capacity, and comfort level. Understanding your own relationship with data by building and reflecting on your data persona can inform your learning priorities and better understand your contributions to your team.

Your relationship with data and the environment you work in will change over time, but each experience builds off each other. Continuously reflecting of your unique relationship with data can support achieving your changing data literacy needs as you grow in your work.

A data persona profile considers demographic characteristics, roles and responsibilities, psychological considerations like motivations and challenges, and skills that you contribute (or want to contribute) to your team. As a result, data personas encourage personalized learning experiences that are trackable, so individuals and teams can expand capacities in ways that align with their existing needs. Further, adopting personas can provide better awareness of your learning priorities relevant to the work you contribute to your team, while also understanding how others complement your work on your team and across the organization.

Below are some of the high-level benefits of understanding your own data persona that we will explore in this section:

- Inform learning priorities and **data literacy** needs
- Awareness of **diverse contributions** across a team/organization
- Better **communication** between different persona types
- Greater **empathy** of other roles and responsibilities

In this section, you will go through a series of prompts that shape your unique data persona and practices to achieve your data learning goals.

I – Section Learning Objectives

1. Understand the key considerations that make up a data persona.
2. Identify what data skills to prioritize for your individual learning experience.
3. Set clear goals to practice new data skills.

Reflecting on Your Relationship with Data

It may be positive, negative, exciting, or nerve-racking, but everyone has a relationship with data in their work. Furthermore, whether it is improving how you contribute to data systems or how you use them to inform your decisions, everyone has space to grow in how they leverage data more effectively. The first step in that learning process is building an awareness of how you contribute and engage with data in your unique environment.

Below are a series of prompts (adapted from an activity by Fabriders⁴) to reflect on that will shape your data persona. If some of the questions seem challenging, don't worry! Try to identify **simple and concise** descriptions to each prompt that are the first few thoughts that come to mind. This is not your final draft! In fact, as you progress in your Data Learning Journey, you are likely to identify new ways you engage with data and will revisit each of these prompts. The purpose of this activity is not intended to prescribe you as a specific type of persona—you will likely change your data persona as you grow in your career! Rather these prompts are intended to build an awareness of how you currently contribute to data learning on your team and what areas you should invest time to build on today.

1. How do you describe yourself to others?

(e.g., background, interests, lived experiences, professional experience, position, accomplishments, etc.)

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2. What data-skills do you bring to your team?

Below are some illustrative examples. But be creative and remember that there is more to working with data than spreadsheets and digital tools!

Illustrative examples of data skills

- Coding/programming (specific language) • Communication • Critical thinking/data comprehension
- Data collection • Data planning and organization • Data quality management • Decision-making
- Facilitation • Inclusive data considerations • Responsible data considerations • Storytelling
- [Collaboration, learning, adaptation](#) (CLA) activities • Creativity/brainstorming • Data analysis
- Data cleaning • Data Interpretation (understanding data) • Data visualization
- Digital literacy and engagement • Financial reporting/planning • Report writing • Mentorship
- Technology literacy (PowerBI, Rstudio, etc.)

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4. Prompts were adapted from this resource - [A Workshop Exercise on Creating User Personas - FabRiders](#)

3. What values do you try to prioritize (incorporate) in your work? In other words, how do you want to be seen?

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4. What problems are you solving in your work? What are your motivations for using data?

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5. How do you apply data in your work? How do you communicate/collaborate with others around data?

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6. What are the barriers you experience in using data efficiently in your work?

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7. What are the best opportunities for others to engage with you on data?

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8. What can you teach, or how can you support, others on your team?

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9. Based on your responses, what would you call your current relationship with data?

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Meet Gina the Data Dreamer

As an illustrative example, the following responses are from IREX's very own Gina DeSantis, Program Officer on the Fulbright Teacher Exchange.

1. How do you describe yourself to others?

Sociology major in undergrad, always interested in research and qualitative data. Volunteered to work as a research assistant finding, collecting, cleaning, and analyzing data for DCPS Global ED lab on DCSP Study Abroad Program. Currently work on IREX's FTE team as a program coordinator and help with MEL on our team (creating surveys, collecting survey data, cleaning data, and presenting data visually for funders).

2. What data-skills do you bring to your team?

- Defining goals and objectives and creating survey questions that reach program objectives.
- Designing survey questions that seek to support program goals and objectives.
- The ability to look at qualitative data and see where there are programmatic gaps that our program does not address, find room for improvement
- Visual representation of data that is appealing and easy to understand

3. What values do you try to prioritize (incorporate) in your work? In other words, how do you want to be seen?

I want to value being literate in data and being able to be knowledgeable about the trends and patterns that we are finding. I want to present accurate data that shows where improvements can be made and not just what the funder wants to see. I want to use data to show where improvements can be made in programming. I want to be innovative.

4. What problems are you solving in your work? What are your motivations for using data?

Improving our program and understanding the true impact of our program. Understanding whether our program is achieving the impacts that we have hoped for and what we claim that it does. Understanding if the program is the best that it can be in terms of the way that it is organized.

5. How do you apply data in your work? How do you communicate/collaborate with others around data?

I lead focus groups with participants, create and gather data from surveys, analyze data and present it to our funder, ECA. I work with others on my team to think through how our survey questions capture IREX's global indicators, how they capture what we are trying to measure from participants, and the best way to present findings.

6. What are the barriers you experience in using data efficiently in your work?

Many of the program details are determined by ECA and are difficult to change. Even if our findings reveal something, it may not be easy to use the data to make a change in programming. The way that we use data is limited; we really only use it in this one way on our team. As a team, we do not really reflect/ debrief after programs to discuss findings, focus groups, etc., which creates a gap in areas for improvement.

7. What are the best opportunities for others to engage with you on data?

I want to learn more about data analysis, data visualization, Data cleaning, data formatting, storytelling.

8. What can you teach, or how can you support, others on your team?

I can teach others about qualitative data, the basics of data visualization, the importance of creating survey questions intentionally, defining indicators, objectives & goals.

9. Based on your responses, what would you call your current relationship with data?

A Data Dreamer!

Identifying Your Goals and Practicing Power Learning

Now let's identify what data skills to prioritize for your individual learning experience. We'll also practice Power Learning, which requires a process of continual practice and reflection on how you apply skills in your environment in different ways. [IREX's Power Learning Tool](#) integrates an effective way to support individuals on learning "how to learn". Consider the following steps to get started:

Step 1:

Identify the data skill you want to develop and define it. As you consider this, reflect on how you responded to each of the data persona prompts. What data skill stands out to you that you think you would benefit most from investing time in learning or improving? **Consider your interests, barriers and contributions to your team.** As an aid, reference the list of illustrative examples of data skills or consider something else!

Only pick one! Research this skill and clearly define what it means below. Having a strong, research-backed definition of your skill that contains details that contribute to its effective application will help you determine how to start and where you want to focus your efforts. It will also help you enhance your knowledge about the skill.

Skill:

.....

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Example:

Data collection is the process of gathering and measuring information on targeted variables in an established system, which then enables one to answer relevant questions and evaluate outcomes⁵.

Step 2:

Think about why you want to build this skill. What is the underlying goal in building this skill and how will you know you have achieved it? Articulate this in the Learning Goal template below:

I want to because

..... To achieve my goal, I will

..... I will know I have achieved my goal when

Example:

I want to improve my data collection skills because I want to mitigate bias in the data we collect to better inform our decisions. To achieve my goal, I will learn more about the different types of biases in the data collection process. I will know I have achieved my goal when I can successfully integrate approaches that mitigate bias in our data collection activities.

Step 3:

Continuous learning – Understand, Apply, Analyze, Reflect and Adapt. IREX adapted the Bloom Taxonomy⁶ structure of learning to emphasize reflection and continuous growth of the same skill. It includes the following:

5. [Northern Illinois University](#)
6. Vanderbilt University Center for Teaching - <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

- **Understanding** the skill. What does it look like in practice when effectively applied? What is its definition and components, how can it be used, how will others use the skill? And what are theories, concepts, and knowledge about the skill?
- **Practicing and applying** a skill in your daily life. Applying a skill includes using it even when you do not feel comfortable because you are still learning to apply it. It also means focusing your use of techniques and methods for applying skill components or sub-skills (e.g., focusing on active listening techniques to improve your overall communication skills). It entails applying a skill in different areas of your life and asking for and benefiting from feedback from others to improve your skill application.
- **Break down and analyze** the skill into its smaller component parts or sub-skills and examine the techniques and step-by-step methods for effectively applying the skill and its components. It includes observing and comparing how different people apply the skill to identify techniques and methods used by those who have achieved skill mastery. It entails analyzing how different sub-skills and other skills support your skill application.
- **Reflecting** on your own application of the skill to evaluate how you did and to identify your areas of improvement. This includes identifying the specific skill component or sub-skill you should focus on to improve your overall skill application. It entails identifying how a skill is relevant to you and to your goals for the future in order to take action to improve your application of the skill. This involves articulating your short and medium- to long-term learning goal(s).

Take a few minutes to reflect on which of the below learning steps you practiced when you last applied the skill you are working on.

Learning step	Last applied?
I can define and describe this skill to others.	Yes/No/Unsure
I know specific ways that this skill can be used.	Yes/No/Unsure
I have experience using this skill.	Yes/No/Unsure
I can articulate the relevance and value of this skill to myself and to others.	Yes/No/Unsure

I have explored the smaller components and the techniques and methods for applying them that contribute to effective skill application.	Yes/No/Unsure
I have explored techniques and methods used by others to learn how to effectively apply this skill.	Yes/No/Unsure
I have connected this skill to the goals I aim to achieve.	Yes/No/Unsure
I have identified my areas of strength and improvement with regards to this skill.	Yes/No/Unsure

Revisit these learning steps each time you apply this skill and consider the following prompts to guide your reflection:

- I did this skill well when...
- I found this skill difficult when...
- I want to improve my skill of...
- Because...
- To improve this skill this week I will...
- In the next month I will...

Reference the [glossary spreadsheet](#) for more resources to inform your learning experience!



Section II Making Data a Team Effort



Data is only as valuable as the process it goes through to develop insights. The Open Knowledge Foundation’s School of Data illustrates this process with their “Data Pipeline” methodology, which reflects the practical approach of working with data from beginning to end. This includes **defining** the problem you are trying to solve, **finding** or identifying the source(s) of data relevant to your problem, **getting** or collecting data, **verifying** the biases and limitations, **cleaning** data into a structured format, **analyzing** data to identify insights, and **presenting** data to facilitate discussions and learning⁷. Rarely does an individual see data through all these phases in isolation – it takes a team!

Making the most out of data takes **collaboration** and support between diverse **roles around a common mission**. It starts with asking yourself ‘How can I support others in their work?’

Consider how data may flow in your own organization. Reflect on a recent dataset that you incorporated in your work and **think about the different people** that contributed to developing it:

7. <https://schoolofdata.org/methodology/>

- What were their roles?
- What motivated them to develop/contribute to the dataset?
- How did they support each other?
- Who can the dataset potentially benefit?
- What are the potential risks in developing the dataset?

While the Data Pipeline framework reflects the different points of development for a particular dataset, the meaningful value of data comes from the efficient collaboration of the diverse roles that engage with each other throughout the process. In this section, we'll explore four common data personas IREX identified in global development, their respective challenges, and what others on a team can do to support them towards a common mission. These personas include the following:



Data Collector



Data Analyst



Data Advocate



Data Storyteller

II – Section Learning Objectives

1. Map out your own team's data personas.
2. Identify opportunities to support each team member.

Who is a Data Collector and How Can you Help?

An individual who identifies as a Data Collector is active in retrieving data for a particular purpose, and storing it in an accessible format for wrangling, cleaning and interpretation. **A Data Collector's motto is "bad data in, bad data out!"** and they work hard to maintain high-quality datasets to share with their team to produce meaningful and accurate insights. Do you know who the Data Collector is on your team? They may face various challenges in their work, but three common challenges every Data Collectors face include the following:

- Identifying the right data collection tools and sources
- How to mitigate potential biases in the data collection process
- Upholding Responsible Data⁸ guidelines and principles

8. [Responsible Data \(RD\)](#)

When asking yourself “how can I support a Data Collector in their work?” consider these three challenges and reflect on what you may be able to offer. Perhaps you facilitated a similar activity in the past and may have some resources/practices to share; perhaps you know some partners who could support parts of the process; or perhaps you just have some time to support their activities. If you identify as a Data Collector or are interested in more technical resources on each of these challenges, reference the [glossary spreadsheet](#) tab under this data persona.



Meet Nola the Data Collector

Nola is a fictional character.

Nola is a program assistant with a background in political science and international relations. She works at a non-profit and as part of her day-to-day tasks she is expected to write internal reports, respond to additional program requests from funders, and communicate with relevant stakeholders. Nola drafts these resources with information gathered through program activities, survey and email responses, meeting notes, interviews, etc. Nola doesn't see herself as a “Data Expert” but when participating in the Data Learning Journey, she reflected on how much data she collects and contributes to her team's activities and identified as a Data Collector!

Fostering Responsible Data Practices

When bringing a team together around the different challenges a Data Collector may experience, consider centering the discussion around fostering Responsible Data practices – something relevant and accessible to every staff member. Responsible Data is a concept outlining our collective duty to prioritize and respond to the ethical, legal, social and privacy-related challenges that come from using data in new and different ways in advocacy and social change. In the global development sector, this is particularly important and complementary to cross-cutting approaches like “do no more harm”⁹ that strive to improve impact and reduce harm in our work and workplace.

9. <https://www.irex.org/insight/irexs-journey-do-no-more-harm-approach>

To facilitate discussions around Responsible Data, consider the following prompts adapted from the key elements of the Responsible Data community's¹⁰. **Reflect with your team on each of these categories and share an experience of how you have seen that element applied or challenged in your work/environment.**

Guidance: This can be a challenging discussion to have with a team, so make sure everyone feels comfortable and understands that it is a space to share experiences and inform improvements – not judge actions or ideas. Start the conversation with the category that resonates most for you or others and build the conversation from there. If you can't think of anything for a specific category, move on! Make it fun by picking one at random and see what surfaces.

Example from Nola

The key elements in this activity that resonated most with Nola's experience were Power Dynamics and Precautionary Principle as it relates to her engagement between funders and participants.

"I had a local stakeholder request an opportunity to see if they could learn from the data being collected on a particular research initiative and had to inform them that it would be up to the funder if we could share those insights publicly. The stakeholder was understanding, but the power dynamics of that relationship certainly stood out to me. Our participants and local partners are great and happy to complete surveys and reports – even on short timelines – but it feels very extractive and without clear purpose or value of why we are collecting it. I understand our funder needs certain data points for their reports, but there just seems like a lack of transparency in why we are collecting certain types of data."

Key Elements of Responsible Data:

1. **Power dynamics:** who are the least powerful actors in any situation, how are they affected by the data, and what do they make of the situation? How powerful are the people making decisions about data and technology in relation to those whose data is being collected and used?

10. [About – Responsible Data](#)

2. **Unknown unknowns:** we can't see into the future, but we can build in checks and balances to alert us if something unexpected is happening.
3. **Precautionary principle:** just because we can, doesn't mean we should. If we can't sufficiently evaluate the risk and understand the harms, then perhaps we should pause for a minute, and re-evaluate what we're doing, and why.
4. **Thoughtful innovation:** for new ideas to have the best possible chance of succeeding – and for everyone to benefit from those new ideas and projects – innovation needs to be approached with care and thought, not just speed.
5. **Holding ourselves high:** in many cases, legal and regulatory frameworks have not yet caught up to the real-world effects of data and technology. How can we push ourselves to have higher standards and to lead by example?
6. **Diversity and bias:** who makes the decisions? What perspectives are missing, and how can we include a diversity of thought and approach to ensure that a wide range of approaches are included?
7. **Building better behaviors:** there is no one-size-fits-all for RD. Existing culture, context and behaviors change the implications and ways in which data is used.

Who is a Data Analyst and How Can you Help?

An individual who identifies as a Data Analyst is excited about exploring a new dataset and curious about what tools or approaches they could use to best navigate it. **A Data Analyst's motto is "What is the data telling us?"** and they tend to have some technical skills that help them manipulate datasets to identify accurate insights and inform meaningful improvements. Do you know who the Data Analyst is on your team? Every Data Analyst brings a different set of tools to their work, but they all gravitate towards at least one of the following types of analysis:

- **Descriptive analytics** is the most fundamental type of analysis and involves summarizing a dataset's main features and characteristics. For example, the number of participants trained, revenue, regional representation of applicants, yearly website traffic, and so on. To do so, analysts can use various methods such as **pattern tracking, clustering,** and **summary statistics** to offer solutions.

- **Diagnostic analytics** involves understanding why something occurred and compares descriptive datasets to identify dependencies and patterns. This type of analysis tries to identify **correlations and causations** related to a specific variable or instance.
- **Predictive analytics** is the use of data to predict future trends by using historical data to forecast potential scenarios.
- **Prescriptive analytics** is the process of using data to determine an optimal course of action on a specific type of decision.

When asking yourself “how can I support a Data Analyst in their work?” consider the following questions:

- Does the Data Analyst know the problem(s) important to our team?
- Does the Data Analyst understand our implementing environment and what solutions would be actionable?
- Are there any underlying issues that affect our team’s ability to collaborate with the Data Analyst?

If you identify as a Data Analyst or are interested in more technical resources on each of these analysis approaches, reference the [glossary spreadsheet](#) tab under this data persona.



Meet James the Data Analyst

James is a fictional character.

James is a Program Coordinator with a background in Public Health. He works for a public health research organization and in his day to day-to-day tasks James is responsible for tracking the list of donors, the programs they fund, and their respective objectives. The data is used to make program decisions and James is proactive in trying to identify insights that could inform improvements. However, he finds it difficult to connect his role with the mission of the organization and feels like he operates alone on most tasks. When participating in the Data Learning Journey James reflected on his own relationship with data and identified as a Data Analyst – eager to improve collaboration between the insights he finds and the program teams he supports!

Framing Problems and Solutions Collaboratively

Too often a Data Analyst works in isolation because they are labeled the “data expert” on a team and get delegated the bulk of tasks on an initiative without much support or collaboration – but your data analyst needs your help! Every explorer needs a compass, and every data analyst needs a clear problem and path to guide their work. In global development, this is easier said than done when our work touches so many unique social issues. A team can bring diverse perspectives around that problem to help inform a Data Analyst’s approach. By coming together from the start of an initiative to identify a clear problem and brainstorm potential approaches, a team can build a common awareness and mission and set up the data analyst (and the whole team) for success!

To approach that process, consider the activity “**Developing a Data Solution Around a Problem**” in Section III of this playbook, which is an adaptation from the Nesta Collective Intelligence Design Playbook¹¹. Collective intelligence is created when people work together to mobilize a wider range of information, ideas, and insights to address a social challenge.

In this activity, participants work in groups to understand the environment around a problem, potential data solutions that could address a specific problem, and draft a story of the potential impact if successful.

Who is a Data Advocate and How Can you Help?

An individual who identifies as a Data Advocate brings diverse roles together around a common mission. A **Data Advocate’s motto is “Let’s talk about data!”** and they are expert conveners and collaborators that understand how data can contribute to meaningful learning to solve complex problems. Do you know who the Data Advocate is on your team? Every Data Advocate seeks to foster a learning culture around data with their team and stakeholders. At IREX, the Learning Triangle framework is a meaningful approach used to foster this culture. It includes the following perspectives:

- **Learning for me:** What you as an individual team member need to learn because of your role, interests, or curiosity to improve your work.
- **Learning for us:** What your community of practice, team, or organization needs to learn to improve their practices.
- **Learning for them:** What a funder, participant or other stakeholders needs to learn to help others.

11. <https://www.nesta.org.uk/toolkit/collective-intelligence-design-playbook/#:~:text=This%20playbook%20was%20designed%20by,to%20address%20a%20social%20challenge>

When asking yourself “how can I support a Data Advocate in their work?” consider the following questions:

- Do I bring a learning mindset to discussions around data?
- How can your learning contribute to improved work?
- How can your learning contribute to improved practices?
- How can your learning contribute to help others?

If you identify as a Data Advocate or are interested in more technical resources on building relevant skills, reference the [glossary spreadsheet](#) tab under this data persona.



Meet Analise the Data Advocate

Analise is a fictional character.

Analise is a Program Manager with a background in Political Science. She works in the Food Security space for a non-profit and manages a team of 8 people. She has some basic analysis skills, but she prioritizes learning about management approaches and activities to support her team. Everyone on Analise’s team is good at their jobs, but they tend to work in isolation - completing initiatives independently without much collaboration or learning from experiences. When participating in the Data Learning Journey, Analise reflected on her own relationship with data and identified as a Data Advocate eager to improve the learning culture around data on her team!

Collaboration, Learning and Adaptation (CLA)

Data ecosystems are a collection of infrastructure, analytics, and applications used to capture and analyze data, but they also reflect a wide environment of stakeholders associated with a particular problem. Considering the work that we do in global development, the data we seek, and the realities of our beneficiaries, understanding our respective data eco-systems can be a valuable tool to inform learning opportunities and improve outcomes. As you can expect, data ecosystems can be overwhelming for a team to understand and identify areas of improvement. CLA is a process that systematically incorporates the following considerations within an ecosystem to facilitate better awareness and identify actionable improvements:

- **Collaborating:** Are we collaborating with the right partners at the right time to promote collective learning instead of report-outs?
- **Learning:** Are we asking the most important questions and finding answers that are relevant to decision-making?
- **Adapting:** Are we using the information that we gather through collaboration and learning activities to make better decisions and make adjustments as necessary?
- **Enabling Conditions:** Are we working in an organizational environment that supports our collaborating, learning, and adapting efforts?

A Data Advocate seeks to keep each of these considerations in mind throughout their team’s work. To begin this process around a specific problem or initiative, answer the following questions with your team:

- Why do you need to learn (purpose)?
- What will you need to inform your learning (data, information, analysis, reflection, etc.)?
- Who needs to be involved?
- What are the key points of review to assess how best to move forward (decision points, activity planning, pivots)?

For a more comprehensive activity around CLA, consider the activity “**Incorporating Collaboration, Learning and Adaptation (CLA) into your data ecosystem**” in Section III. In this activity participants will explore how CLA activities contribute to improvements in their ecosystem, and how they are incorporated in practice.

Who is a Data Storyteller and How Can you Help?

An individual who identifies as a Data Storyteller builds a common language around data and insights with others to influence meaningful action. **A Data Storytellers motto is “Data matters”** and brings diverse skills in communications (whether written, oral, or visual) to illustrate why data insights are compelling and what opportunity they present. Do you know who the Data Storyteller is on your team? Brent Dykes explains in “Effective Data Storytelling” that when you combine the right visuals and narrative with the right data, you have a data story that can influence and drive change¹². Balancing these three elements effectively is what every Data Storyteller works to improve. Sometimes including all three of these elements is not possible or necessary for a particular purpose, but the absence of any one of these results in the following limitations:

12. Dykes, B. (2020) Effective data storytelling: How to drive change with data, narrative and visuals. Hoboken, NJ: John Wiley and Sons, Inc.

- **No visuals** - When meaningful data is complimented with a compelling narrative, the author explains what is happening in the data and why a particular insight is important (e.g., indicators and annual reports).
- **No narrative** - When meaningful data is complimented with an accessible visualization, the author enlightens the audience about potential insights and how they relate to the overall dataset (e.g., dashboards or standalone graphics).
- **No data** - When a compelling narrative is complimented with an accessible visualization, the author engages with the audience on an important issue (e.g., illustrative photos or videos of issues).

When asking yourself “how can I support a Data Storyteller in their work?” consider how you may be able to support the development or addition of meaningful data, compelling narrative, or accessible visualizations. Data Storytellers can’t do it all themselves! If you identify as a Data Storyteller or are interested in more technical resources on developing each of these elements, reference the [glossary spreadsheet](#) tab under this data persona.



Meet Nina the Data Storyteller

Nina is a fictional character.

Nina is a Partnerships Manager and has a background in Communications and International Relations. She works for a civil society organization that supports local institutions in developing better gender equity and social inclusion practices. Nina has strong written and oral communication skills, but she relies on her research team to inform her on the data that is compelling to share. While they are reliable, she feels like having more collaboration with them on how they identify these insights would help develop a more compelling narrative in her communications. When participating in the Data Learning Journey, Nina reflected on her own relationship with data and identified as a Data Storyteller!

Building a Data Storyboard

Data Storytellers keep the audience in mind, and their distance from the data collection and analysis processes can sometimes be a benefit for a team that wants to share data in a new and compelling way. For this reason, teams should make space for diverse roles to collaborate with a Data Storyteller when sharing insights with new audiences - who they are, what they are interested in, and why they should care.

To help facilitate this process, consider using the [Find a Story in Data](#) activity from Data Therapy for a particular dataset you are working on¹³. This activity introduces a set of “story types” that can be found in data and uses templates to let people articulate why certain insights are compelling. It builds participants’ ability to identify stories within formal and informal data sets, and by conducting this activity as a team you will build a diverse storyboard that can help inform your Data Storyteller’s approach. This activity is also part of the **“Storytelling and sculpting a data tool”** activity in Section III that you can reference more details.

13. [Dykes, B. \(2020\) Effective data storytelling: How to drive change with data, narrative and visuals. Hoboken, NJ: John Wiley and Sons, Inc.](#)



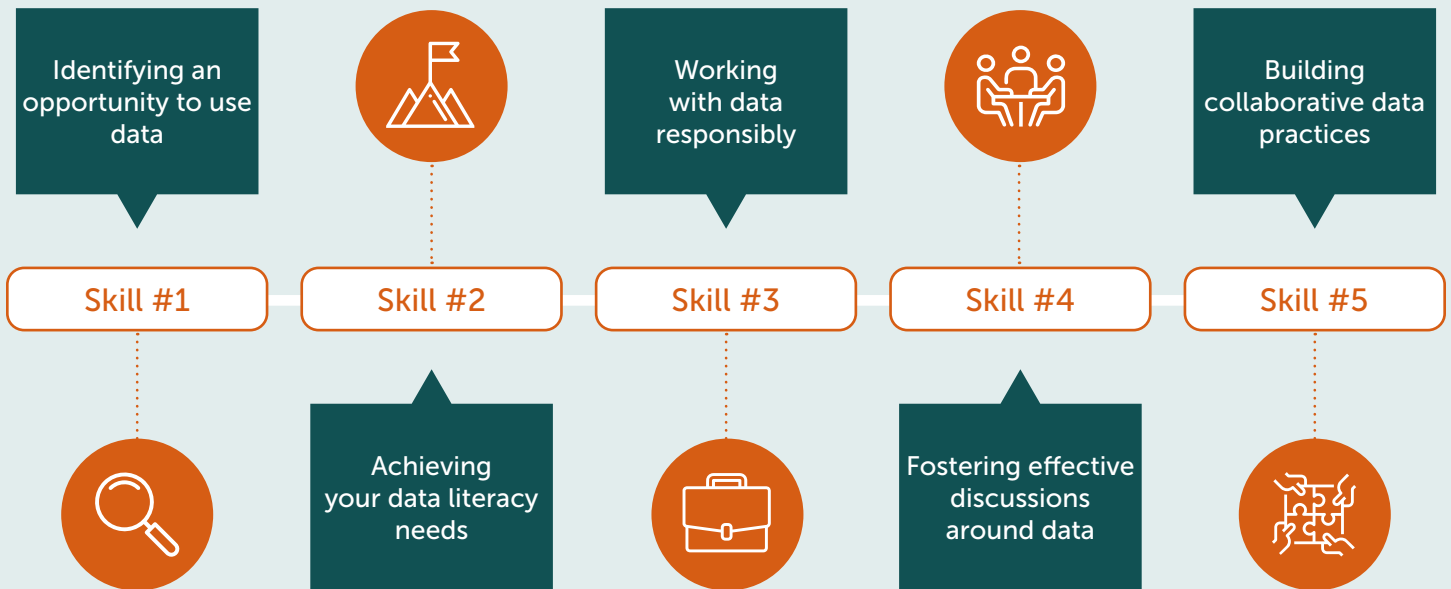
Section III Practicing Data Skills for Collaborative Learning



Facilitating discussions around data with diverse roles for the purpose of learning is challenging! Individuals may have very different backgrounds in working with data and some may not see themselves as essential to those discussions or feel like they know enough to meaningfully contribute. Others may not have experience communicating data insights to diverse audiences, resulting in misunderstanding and unclear learning priorities.

Fostering a data culture that can routinely facilitate collaborative learning **requires skills** relevant to all staff that build a common awareness and key considerations about working with data.

IREX identified the following five data skills for Collaborative Learning to focus activities around:



Skill #1: Identifying an opportunity to use data

Framing a learning question that, if addressed through better use of data, would lead your team to improve outcomes. This includes defining a problem that could be addressed by an action that is within your sphere of influence, articulating what data would help to inform addressing that problem, and identifying tools and approaches to facilitate learning and thinking critically.



Skill #2: Achieving your data literacy needs

Understanding your unique relationship with data in your work and what technical competencies can complement contributions to your organization. This includes foundational abilities to read; write and communicate data in context; understand different data sources, analytical methods and techniques; and identify meaningful insights.



Skill #3: Working with data responsibly

Defining different ways to apply principles of data safety, ethics, inclusiveness, and transparency across the data lifecycle in your work. This includes applying data minimization, reflecting on how data impacts others and building meaningful feedback loops with stakeholders.



Skill #4: Fostering effective discussions around data

Developing an accessible narrative of data insights to foster learning. This includes communicating priorities; establishing a common data language, values, and key metrics; facilitating a discussion around meaningful insights; and incorporating data into everyday activities.



Skill #5: Building collaborative data practices

Balancing diverse skills and perspectives within a team to efficiently support and manage sustainable data practices. This includes understanding different competencies within a team, identifying essential and non-essential data products, and fostering efficient knowledge management.

In this section we'll explore several activities that practice the above skills and help facilitate discussions with diverse staff for the purpose of collaborative learning. These activities include the following:

1. Building your data pipeline
2. Developing data user personas that reflect your team
3. Developing a data product around a problem
4. Fostering responsible data practices
5. Incorporating Collaboration, Learning and Adaptation (CLA) into your data ecosystem
6. Storytelling and sculpting a data tool

Collectively, these activities practice all five skills in different ways and efficiently build off each other in the order presented; however, they can be applied independently to focus on select skills or complement already planned activities relevant to your work.

III – Section Learning Objectives

1. Facilitate a tested Data Learning Journey activity.
2. Adapt an activity to your unique audience.

IREX's Experience – Learning Series Cohorts

IREX incorporated all of the shared activities in this section in a six-part, cohort-style learning series that helped staff across the organization get to know each other over a longer period of time and built on each session's content from week-to-week. IREX also provided participants of each cohort with a license to an online learning platform for more technical data skills called DataCamp that they could explore independently to better achieve their data literacy needs.

Below is a sample of the Learning Series Syllabus that IREX facilitated with each cohort of staff. To participate, staff and their managers agreed to commit at least 4 hours a week for three months to join learning series sessions and explore the Data Camp platform. Each of the sessions were facilitated virtually and were scheduled two weeks apart. To help facilitate each session, IREX used the Miro Board online application for collaboration – see figure 2 as an example of that experience.

IREX's Learning Series Syllabus

Session and Topic	Learning Objectives	Follow-up activity
<p>Session #1 Cohort kickoff and introduction to Data Skills for Collaborative Learning</p>	<ol style="list-style-type: none"> 1. Understand DLJ components and timeline. 2. Understand Data Skills for Collaborative Learning and how you to apply them in your work. 	Access DataCamp and complete at least one course (2-4 hours long).
<p>Session #2 Introduction to Data Personas</p>	<ol style="list-style-type: none"> 1. Understand user personas and how they can be used for learning. 2. Understand contributions of different personas within a team towards data use. 	Complete your own data persona and define your learning goals.
<p>Session #3 Developing a data product around a problem</p>	<ol style="list-style-type: none"> 1. How to define a meaningful problem. 2. How to identify data solutions relevant to your problem. 	Identify one open-source dataset to complete a data biography.
<p>Session #4 Fostering responsible data practices</p>	<ol style="list-style-type: none"> 1. Understand key considerations for working with data responsibly. 2. How to facilitate a discussion with others on working with data responsibly. 	Facilitate a 30-minute discussion on working with data responsibly with your team.
<p>Session #5 Incorporating data in collaborative learning</p>	<ol style="list-style-type: none"> 1. Understand Collaborative, Learning, and Adapting (CLA) activities. 2. How to identify gaps between your data eco-system and learning processes. 	Complete eco-system mapping exercise to connect datasets with learning activities.
<p>Session #6 Storytelling and sculpting a data tool</p>	<ol style="list-style-type: none"> 1. Understand the types of stories for more effective communication. 2. Understand how a data product can support continued storytelling. 	Developing a data storyboard on a dataset with their team.

Figure 2: IREX's Learning Series Miro Board; Source: Spring DLJ Cohort of IREX Staff



Key Principles and Considerations for Facilitation

Each activity shared in this section was tested virtually with multiple cohorts of IREX staff members; however, the structure of the facilitation guidance is flexible to virtual, in-person or hybrid learning. Anyone on a team – regardless of background in working with data – can facilitate these activities. **Even so, it is recommended that the team leader or manager facilitate parts of any activity to encourage active participation.** When adapting each activity to your own environment, keep in mind the following key principles and corresponding considerations:

- 1. Learner-centered:** An environment that pays careful attention to the knowledge, skills, attitudes, and beliefs that participants individually bring to the space.
 - a.** How can you ensure every participant has an opportunity to meaningfully share their perspective?
- 2. Inclusion sensitive:** Acknowledge that diverse participants bring different experiences and perspectives to a training that can enrich the training experience for all.
 - a.** Is the content accessible for all participants to contribute?
 - b.** Are you setting ground rules for respectful conduct to ensure that all participants feel comfortable sharing ideas and collaborating with their peers openly.
- 3. Actionable:** Focus on knowledge, skills, and attitudes that have a practical utility and will help participants make an impact.
 - a.** How is the activity relatable to the participant's work?
- 4. Experiential:** Prioritize time for “Learning by doing” rather than lecture – pushing participants to contribute new ideas that reinforce learned concepts.
 - a.** Do you feel like you are facilitating too much? If so, how can you take a step back to allow participants to practice?
- 5. Active:** Participants engage with training content in an interactive manner
 - a.** Are there any long periods of instruction that can be replaced with engaging prompts or activities?
- 6. Measurable:** Use learning objectives to develop appropriate evaluation plans and techniques that help extract learning.
 - a.** Do you have a plan to collect participant feedback on the activity?

Activity 1 - Building your Data Pipeline

Activity overview



Description:

A Data Pipeline includes a series of components that reflect the different periods of development data goes through in a process from beginning to end. In this activity, participants will be presented with a Data Pipeline framework that they will map out activities and skills against to reflect their unique environment. This activity borrows the components of the School of Data Pipeline but can be adjusted with any preferred framework.



Source:

Open Knowledge Foundation's [School of Data](#)



Time length:

60 minutes



Skills practiced:



- Skill #1: Identifying an opportunity to use data



- Skill #2: Achieving your data literacy needs



- Skill #3: Working with data responsibly



Activity Learning Objectives

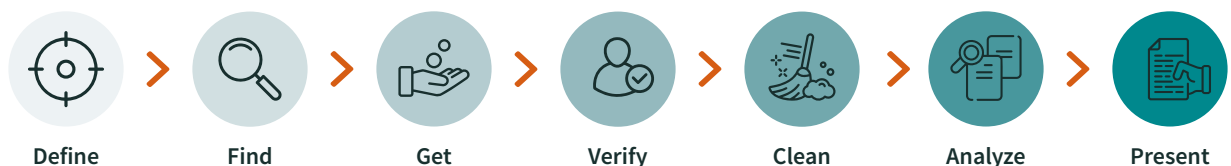
- Understand user personas and how they can be used
- Identify the data skills used across roles and responsibilities
- Understand contributions of different personas within a team towards data use

Activity setup

Step 1:

Create a brainstorming space (physically or online) for each of the individual components of your data pipeline template. If you use the recommended [School of Data's](#) Data Pipeline, this will include the following components in figure 3:

Figure 3: Data Pipeline; Source: Open Knowledge Foundation's School of Data



Step 2 – Option 1:

Present a specific issue that you and your team use data for. This could be a routine activity like financial planning processes, participant feedback review, or recruitment; or this could be an individual initiative that is coming up.

Step 2 – Option 2:

Ask each participant to think of an activity they use data for in their work and write it down. They will reference that activity as they progress through the session, and everyone will map their own connections on top of each other. (Note: this option is ideal for groups that do not work together)

Step 3:

Before proceeding, make sure you explain each component of your pipeline so that all participants have a clear understanding of what makes them distinct. (Note: See section II)

Facilitation guide

Part I: What do we do with data and who is involved? – 30 minutes

1. Go through each component (one at a time) as a group and ask participants to reflect on the following questions:
 - a. What happens with the data at this stage?
 - b. Who engages with the data at this stage?
2. Ask each participant to share with the group as they list their answers on the brainstorming space.

Part II: Connecting the pipeline – 10 minutes

3. Ask participants to map out the flow of data from beginning to end by connecting each activity together. Consider the following questions:
 - a. Where do you start/finish?
 - b. Is it linear or cyclical?
4. Before proceeding, ask participants to share out where they see themselves in this pipeline.

Part III: Associated skills – 20 minutes

5. Go through each component (one at a time) as a group and ask participants to reflect on the different data skills needed to facilitate the activities they listed. Consider the following prompts and illustrative examples of data skills to foster the discussion:

- a. What data skill do you use in your work across the data pipeline?
- b. What skill do you think you need in each component?

Illustrative examples of data skills

- Data planning • Data discovery • Data collection • Data quality Management
 - Data management and organization • Data cleaning • Data visualization
 - Data analysis (incl statistical analysis) • Responsible Data • Learning practices
 - Technology literacy (powerBI, Sched, etc.) • Coding/programming • Metadata creation and use
 - Data Interpretation (understanding data) • Data Presentation • Critical thinking • Storytelling
 - Decision-making • Mentorship
6. List each identified skill next the corresponding component.
 7. Conclude the session by asking participants what skills stand out to them as important to their work based on where they identify within the Data Pipeline.

Activity 2 - Creating Data User Personas That Reflect Your Environment

Activity overview



Description:

Data personas reflect clusters of potential actors around a common problem or solution by considering demographic characteristics, individual roles and responsibilities, and psychological considerations like motivations and challenges. In this activity, participants will work in groups to create data user personas that reflect some of the diverse actors in their environment around a common problem. This activity is an adaptation of Fabridier's user persona workshop.



Source:

Fabridier's workshop exercise on [building a data culture](#) and Interaction Design Foundation's [Personas – A Simple Introduction](#).



Time length:

45-60 minutes



Skills practiced:

- Skill #4: Fostering effective discussions around data
- Skill #5: Building collaborative data practices



Activity Learning Objectives

- Understand user personas and how they can be used
- Identify the data skills used across roles and responsibilities
- Understand contributions of different personas within a team towards data use

Activity setup

Step 1:

Create a brainstorming space (physically or online) for groups of 3-5 people each with the following prompts from the data persona worksheet (see section I for more details):

- Demographic details (i.e., name, background, position, skillsets)
- What value do they try to prioritize or incorporate in their work? (How do they want to be seen?)
- What problems are they solving? What are their motivations for using data?

- How do they apply data in their jobs? How do they communicate/collaborate with others?
- What are their barriers for using data?
- What are the opportunities to engage them on data? What skills are they interested in learning?
- What can they teach others?

Facilitation guide

Part I: Understanding data user personas – 15 minutes

1. Provide some background and examples on what user personas are and how they are used – reference [Personas – A Simple Introduction](#) and Section I for more details. Explain that this discussion will be focusing on developing role-based personas. Consider asking the following prompt to engage participants with the concept:
 - a. What are some benefits from understanding personas in your work environment?
 - i. Understand **diverse contributions** across a team/organization.
 - ii. Improve **communication**.
 - iii. Foster **empathy** with other roles and responsibilities.
 - iv. Refine **learning**/professional development objectives.
 - v. Others?
2. Present a common challenge to participants that they can relate to in their work (whether real or hypothetical) so that they will build a data persona that exists in that environment. This could be as specific as a component or initiative of an individual program, or as broad as an organizational or sector challenge. The purpose of this is so participants can have a common awareness of the environment around the persona they are building. Consider some of the following examples:
 - a. A program team is trying to recruit applicants for an activity.
 - b. An organization is trying to learn about their impact from implementing different programs.
 - c. The health sector in a country is trying to identify marginalized communities to inform interventions.

Part II: Develop data user personas – 20-30 minutes

3. Build a Data User persona together – reference Gina the Data Dreamer in Section I, but build this persona with your group around your common challenge.
 - a. If some of the questions seem challenging, don't worry! Try to identify simple and concise descriptions to each prompt that are the first few thoughts that come to mind. Explain that the expectation is to identify a common type of user in that environment and brainstorm brief descriptions for each prompt to develop "light drafts" of personas that can easily be shared and compared.

- b.** Ask participants to come up with a creative name before proceeding (e.g. Richard the Data Whisperer, Sasha the Data Innovator).
- 4.** Separate into breakout groups of 3-4 and ask participants to brainstorm a different user persona.
 - a.** If you want to ensure there is not overlap between groups, you can assign one demographic characteristic they need to build their persona around (e.g., entry level, donor, manager, technical expert, etc.).

Part III: Share out – 10-15 minutes

- 5.** Ask each group to present their data persona.
- 6.** Once everyone has shared, ask participants the following prompts:
 - a.** What were some challenges in developing these personas?
 - b.** How accurate do you feel these personas are to reality?
 - c.** Does anyone identify with any of the presented personas?

Activity 3 – Developing a Data Product Around a Problem

Activity overview



Description:

Data solutions often fail because they are not designed to efficiently address a problem – particularly when diverse perspectives are essential in understanding the problem. In this activity, participants will work in groups to understand the environment around a problem, potential data solutions that could address the problem, and draft a cover story of the future impact. This activity is an adaptation of Nesta’s Collective Intelligence Design playbook.



Source:

Nesta’s Collective Intelligence Design [Playbook](#) (Beta) – challenge definition activity



Time length:

60-90 minutes



Skills practiced:

- Skill #1: Identifying an opportunity to use data
- Skill #5: Building collaborative data practices



Activity Learning Objectives

- How to understand the environment around a problem
- How to identify data solutions to address a problem

Activity setup

Step 1:

Create a brainstorming space (physically or online) for groups of 3-5 people each to collaborate on the prompts associated with the following sections:

- Map out the problem
- Define the problem
- Create a cover story

Step 2:

If possible, cluster participants that are already working on a common problem together (e.g., same team, common thematic focus, etc.).

Facilitation guide

Part I: Mapping out the problem – 20-30 minutes

1. Ask each group to identify and share an issue they want to address in their work and why is it important – they will build off this issue for the duration of the activity.
2. Present the following prompts to all groups and ask them to list their ideas.
 - a. Who does this issue affect and how?
 - b. What factors shape this issue and have the greatest impact?
 - c. What sources of information do we have on this issue?

Part II: Defining the problem – 10-15 minutes

3. Ask participants to write down their issue as a challenge statement (e.g., “Our problem is that...We want to help...[who] to...[what]”).
4. Present the following prompts to all groups and ask them to list their ideas on the respective brainstorm space.
 - a. If we are successful, what is the change we will have brought about?
 - b. How could a data solution help us address this issue?
 - c. Who are the actors that need to come together to address this issue?
 - i. If your participants are familiar with data personas, you can define the “actors” by their data persona.

Part III: Cover story – 15-25 minutes

5. Imagine how the future could be if your challenge is successfully addressed. Write a brief article about what a newspaper may say 10 years (or more) from now about the issue. Consider incorporating the following components to develop the article:
 - a. Headlines
 - b. Body text
 - c. Quotes
 - d. Data points
 - e. Visuals

Part IV: Share out – 15-20 minutes

6. Each group shares out what they created in parts two and three.

Activity 4 – Fostering Responsible Data Practices

Activity overview



Description:

Responsible Data (RD) is a concept outlining our collective duty to prioritize and respond to the ethical, legal, social, and privacy-related challenges that come from using data in new and different ways in advocacy and social change. In this activity, participants will reflect on a series of prompts and discuss key considerations for Responsible Data that apply to their own environments. This activity is an adaptation of Fabridier’s Wheel of Data Misfortune and complemented by the key concepts of Oxfam’s Responsible Data Policy and Key Elements of Responsible Data from the RD community.



Source:

Fabridier’s [Wheel of Data Misfortune](#), Oxfam [Responsible Program Data Policy](#), and the RD Community [Key Elements of Responsible Data](#).



Time length:

30-60 minutes



Skills practiced:



- Skill #3: Working with data responsibly
- Skill #4: Fostering effective discussions around data



Activity Learning Objectives

- Understand key concepts and considerations of Responsible Data
- How to facilitate a discussion with others on responsible data practices

Activity setup

Step 1:

Create an open brainstorm space (physically or virtually) to list Responsible Data ideas from the group and a circle with 8-16 slices that you will use to build your “wheel”.

Facilitation guide

Part I: What is Responsible Data? – 10-15 minutes

1. Introduce the concept of Responsible Data by sharing a couple key considerations and prompts with participants. Consider the following and ask them “do these resonate with your work?”:
 - a. RD Community [Key Elements of Responsible Data](#)

Part II: Agree and disagree – 10-20 minutes

This activity helps participants familiarize themselves with the Responsible Data concepts shared and helps them think through the actions they should take when potential problems and issues arise.

2. Present 2-3 scenarios for participants to consider that have potential challenges associated with them. Comment ‘Agree’ or ‘Disagree’ with the action taken in the scenario. **There is no right or wrong answer.** Real world examples are ideal, but consider the following fictional examples if needed¹⁴:
 - a. Mrs. Garcia will use a district-approved video conferencing tool to conduct her social studies class during distance learning. From student and family communication, Mrs. Garcia knows that it will be difficult for all of her students to join the class every day and so decides to record her classes to offer asynchronous learning and more equitable access for her students.
 - b. Ms. Hazel is conducting instruction online due to the pandemic. All of her students have their cameras on so she can interact with them, make eye contact, and visually observe their engagement and behavior. At some point during a lesson, Ms. Hazel takes a screenshot of the entire class to capture their reaction to a question. She does not share the photo with anyone else and retains it on her computer.
 - c. Mr. Miller’s student, Mia, has just enrolled in the afterschool program offered at the school. After her first week attending the program, one of the afterschool instructors approaches Mr. Miller and asks if he can share Mia’s reading scores with her. The instructor notifies Mr. Miller that they will be focusing specifically on reading skills for the rest of the semester.
3. Ask participants which key considerations were highlighted in their decision to agree or disagree and why.

14. Student Data Privacy and Data Ethics Scenarios – [Future of Privacy Forum](#)

Part II: Building a Wheel of Data Misfortune – 15-30 minutes

4. Ask participants about their experiences of Responsible Data practices they have encountered in their work. These could include challenges that make it difficult to meet certain principles, opportunities to improve practices or existing practices that work well. List their responses in the wheel. Consider some of the illustrative examples for them to reference as they reflect:

Illustrative category examples

- Consent • Data storage • Data loss • Laptop/device stolen • Backups • Data bias • Archive plan
 - Unauthorized data access • Are there external standards (e.g. IATI) that we should be adopting?
 - Conflicting data • No data • Fake data • People affected opting out • Tracking people with data
 - Personal Identifiable information • Survey fatigue • Understanding which data is sensitive
5. Ask participants to select a category from the brainstorm space that they have encountered in their work and tell the group a story about it. Post each selected category on the wheel until every slice is occupied.

Follow-on: Share the Wheel with others! – On-going

6. Keep using the wheel to continue the discussion with others! Hopefully the categories you identified resonate with others in your organization and they can share their own experiences.

Activity 5 – Incorporating Collaboration, Learning and Adaptation (CLA) into your data ecosystem

Activity overview



Description:

CLA is a process that systematically incorporates collaboration, learning and adaptation considerations within an ecosystem. In this activity participants will explore how CLA activities contribute to improvements in their ecosystem, and how they are incorporated in practice. This activity references the considerations outlined in USAID's Learning Lab CLA toolkit as incorporated in IREX programming.



Source:

[USAID's Learning Lab CLA Toolkit](#)



Time length:

60-90 minutes



Skills practiced:



- Skill #1: Identifying an opportunity to use data



- Skill #4: Fostering effective discussions around data



- Skill #5: Building collaborative data practices



Activity Learning Objectives

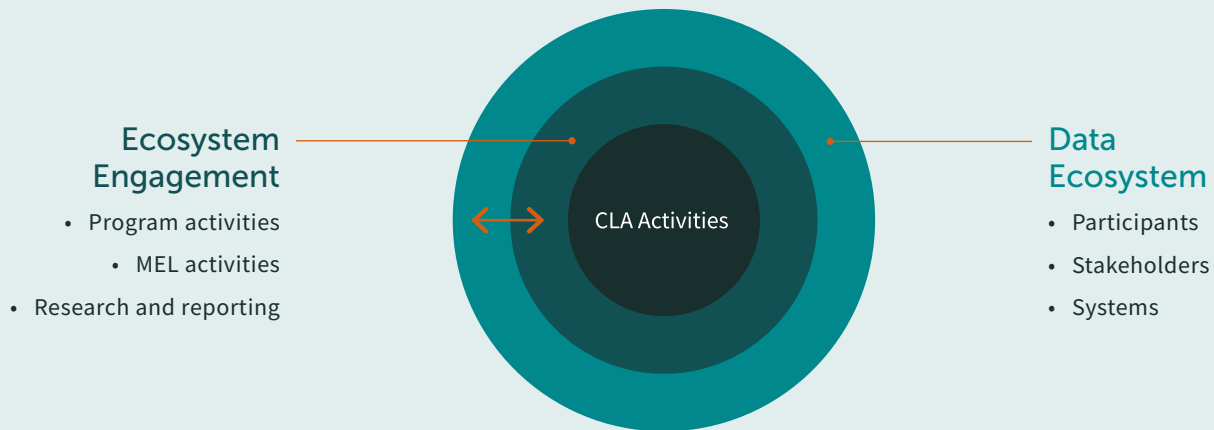
- Understand how collaboration, learning and adaptation (CLA) activities contribute to a data ecosystem
- Identify CLA activities that can improve practices

Activity setup

Step 1:

Create a brainstorming space (physically or virtually) for groups of 3-5 people each that is in the shape of a circular target with three layers labeled the following (reference figure 4):

Figure 4: CLA within a data ecosystem; Source: IREX's Center for Applied Learning and Impact



Step 2:

If possible, cluster participants that are already working on a common problem together (i.e. same team, common thematic focus, etc.).

Facilitation guide

Part I: Introduction to CLA – 10-20 minutes

1. CLA is a process that systematically incorporates the following considerations within an ecosystem:
 - Collaborating:** Are we collaborating with the right partners at the right time to promote collective learning instead of report outs?
 - Learning:** Are we asking the most important questions and finding answers that are relevant to decision making?
 - Adapting:** Are we using the information that we gather through collaboration and learning activities to make better decisions and adjust as necessary?
 - Enabling Conditions:** Are we working in an organizational environment that supports our collaborating, learning, and adapting efforts?
2. Ask participants how they are currently learning from the data they collect.
 - Consider providing some illustrative examples of some of the monitoring, evaluating, and learning activities they may be familiar with.
3. Before proceeding, ask each group to articulate an issue they want to address in their work and why is it important.

Part II: Mapping your ecosystem – 30-40 minutes

4. Ask participants to fill in each layer of their brainstorm space in the following way as relevant to the issue they are working to address:
 - a. Outer layer - list all the relevant data sources you have access to (Stakeholders, datasets, databases, etc.)
 - b. Middle layer – list all the activities that facilitate data collection, analysis and/or reporting (routine surveys, research initiative, quarterly reports, etc.)
 - c. Center layer – list all the activities that facilitate learning or improvements.
5. Once complete, ask participants to connect the pieces together by discussing the following questions:
 - a. Are relevant data sources contributing to data collection and analysis activities? (Outer layer to middle layer)
 - b. Do all data collection and analysis activities provide inputs to learning activities? (Middle layer to center layer)
 - c. Are adaptations/learnings contributing back to relevant data collection and analysis activities and the data sources?
 - d. Are there any missing linkages or gaps?
6. Ask participants to share out some of the major challenges they identified in their ecosystem from the activity.

Part III: Developing CLA activities 20-30 minutes

7. Ask participants to brainstorm a CLA activity that can address one of the challenges identified in their eco-system. Consider the following examples incorporated in IREX programming:
 - a. **Determine inputs to learning activities:** M&E data, After Action Reviews, progress/contextual monitoring and learning through program activities
 - b. **Design & implement learning activities:** Data reviews, quarterly retrospectives, stakeholder CLA events
 - c. **Adaptation sprint reviews:** Conducted following learning activities to decide how to put insights into action
 - d. **Learning agenda:** Develop learning questions with key stakeholders aimed at the program’s TOC; revisited at quarterly retrospectives
 - e. **Learning culture:** Incorporate reflective practice through staff meetings; reinforce culture of intentional learning; supported by multi-stakeholder CLA Leadership Committee
 - f. **CLA dashboard:** Track progress more frequently through interim progress indicators; monitor key contextual/sentinel indicators
8. Ask each group to share out the CLA activities and what challenge(s) they seek to address in their ecosystem.

Activity 6 – Storytelling and Sculpting a Data Tool

Activity overview



Description:

Data storytelling is a structured approach for communicating data insights that includes data, visuals, and a compelling narrative. The successful combination of these components produces a data story that can influence and drive change. In this activity, participants will practice identifying compelling components of different data products and draft their own narrative data story. This activity incorporates concepts from Brent Dykes book, *Effective Data Storytelling* and applies Data Therapy's Find a Story in Data activity.



Source:

Data Therapy's [Find a Story in Data](#) activity, *Effective Data Storytelling* by Brent Dykes



Time length:

60-90 minutes



Skills practiced:

- Skill #4: Fostering effective discussions around data
- Skill #5: Building collaborative data practices



Activity Learning Objectives

- Understand the types of stories you can find in data for more effective communication
- Understand how a data product can support continued storytelling

Activity setup

Step 1:

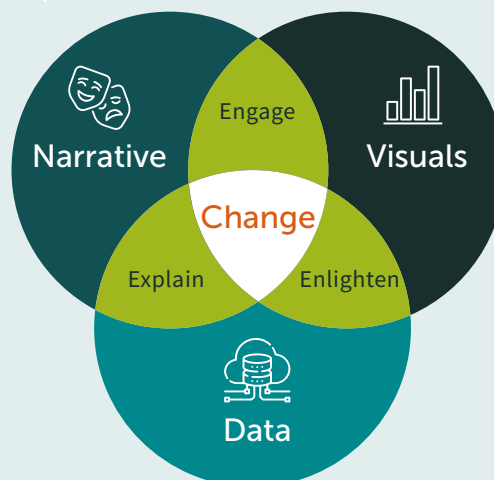
Create a brainstorm space for each type of story with the respective prompts from the [finding a story worksheet](#). Each space will be a breakout group of 3-5 people. Note that it is ok for multiple groups to have the same story type.

Step 2:

Consolidate a series of data products to make up a “Data Story Product Bank” to share in Part II that are easy to navigate and identify insights for your average user (i.e. dashboards, articles, reports, etc.). Consider the following data products accessible with access to the internet:

- [Cicadas: A Data Story](#): It's 2021 and guess what that means?! Billions of periodical cicadas from Brood X are set to make their appearance across areas of the Eastern United States. Since emergence is tracked at the County level, we can rank states by the number of counties impacted.
- [30 Years of American Anxiety](#): Dear Abby has offered counsel to thousands of worried and conflicted readers. After poring over thousands of questions, they identified recurring concerns voiced by Dear Abby readers over the years.
- [Brexit by Numbers](#): After 47 years - and 1,317 days since the vote to leave – the UK has finally exited the EU. Many claims were made about the impact of a Leave vote - but which of them have come true so far? We analyze how the UK has changed since voting for Brexit.
- [When your capital is sinking...start again?](#): Jakarta's story is a cautionary tale for city planners. Vulnerable to climate change - the Java Sea is rising - but also sinking, literally, under the weight of bad governance and a host of poor decisions.
- [COVID-19 Pandemic Timeline](#): The economy is in turmoil, scared Kiwis are stockpiling and travelers are self-isolating. How did we get here? Susan Strongman traces Covid-19 from the first cases in China to the fall out in New Zealand.
- [How my dad fishes for the future](#): I love the sea. I love how wild and huge it is. I love how it changes from choppy and stormy to calm and still. My dad and I are journeying into the heart of our ocean to explore why we need it, how it's changing, and what we can all do about it.

Figure 5:
 Elements of Data Storytelling;
 Source: Effective Data
 Storytelling by Brent Dykes



Facilitation guide

Part I: What is Responsible Data? – 10-15 minutes

This activity helps participants familiarize themselves with how they have seen data storytelling used in a variety of ways and how they could improve data products to be more compelling

1. When one of these elements is missing, the influence of the story is limited to the following – reference figure 5 and the Data Storyteller sub-section of Section II for more details:
 - a. Narrative & Data = Explain to your audience what’s happening in the data and why a particular insight is important.
 - b. Data & Visuals = Enlighten the audience to insights that they wouldn’t see without charts or graphs.
 - c. Narrative & Visuals = Engage or even entertain an audience.
2. Ask participants what some examples of each of these are that they have seen in their work or personal life.
3. Present 2-3 examples of data products (dashboards, reports, articles, etc.) relevant to participants’ work for them to consider if they include, one, two or all three elements of data storytelling. Consider some of the following illustrative examples used for IREX audiences:
 - a. [Young Leaders of the America Initiative](#) recruitment dashboard
 - b. [Impact Study on Citizens Ability to Detect Disinformation](#)
 - c. [Vibrant Information Barometer](#)

Part II: Finding a story in a data product – 30-40 minutes

4. Ask participants to explore the data products shared in the Data Story Product Bank and share what stands out with how they apply the three elements of data storytelling.
5. Breakout into groups and assign a different type of story to each. Highlight the main concept of each type of story before proceeding:
 - a. Factoid stories: Why does this one data point stand out from the others?
 - b. Interaction stories: Why do these aspects of the data change with each other?
 - c. Comparison stories: What is the meaningful difference between these parts?
 - d. Change stories: What made this part of the data change from this to that?
 - e. Personal stories: How does this data connect to the lives of the audience?
6. Ask each group to select one of the Data Story Products from the bank and complete their assigned finding a story worksheet with insights identified.

Part III: Share out your data story 5-10 minutes

7. Each group shares out their story to the group.



Section IV Implementing a Data Learning Initiative



Building and sustaining a data initiative in an organization or team requires fostering a learning culture that values data as a tool rather than an objective. Oftentimes significant effort is put into producing rich data insights that don't meaningfully go anywhere. You may see this in routine surveys that have a lot of qualitative feedback but is only used to generate a single metric for a report, or a research initiative on an important social issue that concludes with a presentation and isn't made public. While investing in foundational data literacy skills is essential for staff to incorporate data in their work, without complementing those skills with a space to facilitate learning there will not be a meaningful improvement in using data to solve complex problems.

While the increased use of data skills and tools are meaningful metrics of progress when investing in a data initiative for staff, **consider the application of learning with data to improve practices and impact as the primary objective.**

Facilitating learning that meaningfully improves practices and impact requires an awareness of the diverse perspectives and considerations of the people influenced (or could be influenced). For this reason, IREX's Learning Triangle (reference figure 6) is a meaningful tool in designing a Data Learning initiative. It expands the considerations and influence of learning in our work to the following perspectives:



“For me” - what you as an individual team member need to learn because of your role, interests, or curiosity. **How can your learning contribute to improved work?**

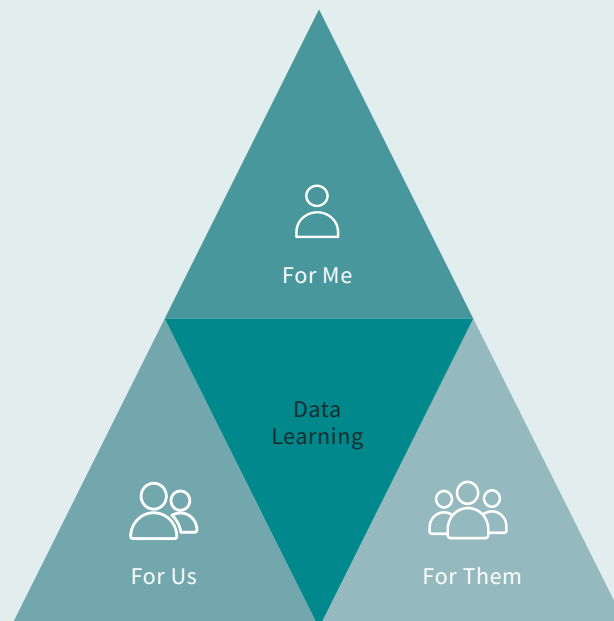


“For us” - what your community of practice, team, or organization needs to do its work. **How can your learning contribute to improved practices?**



“For them” - what a funder, participant or other stakeholders needs to know. **How can your learning contribute to help others?**

Figure 6: IREX's Learning Triangle; Source: Center for Applied Learning and Impact



Investing in activities within a data learning initiative that give a space for staff to reflect and contribute to each of these perspectives elevates the purpose of why your organization wants to invest in data and builds a culture that sees value in data as a tool for learning collectively to solve complex problems.

In this section, you will design your own Data Learning workplan by reflecting on activities relevant to each of the five data skills for collaborative learning IREX identified. By the end of this section, you will be able to:

IV – Section Learning Objectives

1. Identify barriers and opportunities for building and sustaining a data learning culture,
2. Design a data learning initiative for your organization or team, and
3. Measure the effectiveness of your data learning workplan

Understanding potential barriers to data learning

Despite having the best intentions to build a data culture within your organization, efforts are often met with resistance to the current systems and culture. Identifying and diagnosing key barriers to data learning in your environment is the first step to designing an initiative that can build and sustain a meaningful data culture. Some barriers you may be able to address directly in your initiative (e.g., skills, practices, infrastructure, etc.) while others may require more time or influence to address (e.g., leadership support, perceptions and values, etc.). Regardless, barriers to data learning are intended to be overcome and should be seen as areas of intervention and progress rather than obstacles to avoid.

For every organization or team, barriers that influence data learning capacities exist at the personal, technical, and organizational levels¹⁵. The **personal level** reflects individual capacities of staff engaging with data relevant to their work. The **technical level** reflects the accessibility of resources, tools, or support for all staff to use data in their work. The **organizational level** reflects informal and formal structures that create knowledge silos of data insights. The barriers that discourage a data learning culture are interwoven between these three levels and common themes are likely to emerge as you reflect on your own environment. Consider the following activity to help organize you and your team's thoughts in understanding potential barriers to data learning in your environment.

15. [A Step-By-Step Framework to Build a Data Literacy Program | Sigma Computing](#)

Brainstorm activity – spend 20 minutes on each of the prompts in the following way:

- 5 minutes individually reflecting on the prompt,
- 10 minutes sharing thoughts and listing ideas, and
- 5 minutes clustering and identifying the common themes/categories that stand out.



Personal Barriers:

Why do some staff not engage with data relevant to their work? Not every staff have the same barriers and that's ok! List everything that comes to mind regarding why a staff member may not engage with data to be inclusive of the diverse barriers that exist.

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Technical Barriers:

Why do some teams not incorporate relevant data tools or approaches in their work? Not everyone has the same access to resources or support across an organization. Sometimes this can influence uptake in using relevant data tools or approaches. Consider what limitations in access different people have in an organization and list how it could influence the use of relevant tools or approaches.

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Organizational Barriers:

Why do some data insights not reach relevant staff? Oftentimes silos exist in organizations that facilitate bottlenecks in knowledge sharing. With data, that can facilitate duplicative efforts with no mechanism of building on relevant work. List all the formal and informal structures that come to mind that potentially contribute to forming silos in knowledge sharing.

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Identifying Opportunities to Invest in Data Learning

When investing limited resources in professional development opportunities, it is important to be thoughtful in how those investments will add value to your organization or team. Ultimately, it requires a clear understanding of skills those investments seek to improve. For data learning, IREX identified the following five cross-cutting data skills for collaborative learning to guide how to identify worthwhile investments:

1. Identifying an opportunity to use data
2. Achieving your data literacy needs
3. Working with data responsibly
4. Fostering effective discussions around data
5. Building collaborative data practices

Brainstorm activity

The following activity expands on each of these skills and provides illustrative examples from IREX's pilot adaption to inform what could work for your organization or team. Consider the resources you have available and the potential barriers implementing each activity might have to inform your design.



Skill #1: Identifying an opportunity to use data

Framing a learning question that, if addressed through better use of data, would lead your team to improved outcomes. This includes defining a problem that could be addressed by an action that is within your sphere of influence, articulating what data would help to inform addressing that problem, and identifying tools and approaches to facilitate learning and thinking critically.

IREX's Pilot Experience

IREX invested in a subscription deal with [Data Camp](#) for 52 staff members that provided participants with a "sandbox" of over 350 courses and integrated software tools, encouraging staff to explore new data skills and

How can you invest in this skill for your organization?

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concepts they otherwise may not have initially gravitated towards. Additionally, staff organized **brownbag discussions** with external experts and workshops with partner organizations on real world application of certain data tools and skills to compliment what they were learning.

What barriers do you expect may influence the activity/resources?

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Skill #2: Achieving your data literacy needs

Understanding your unique relationship with data in your work and what technical competencies can complement contributions to your organization. This includes foundational abilities to read, write and communicate data in context; understand different data sources; analytical methods and techniques; and identify meaningful insights.

IREX's Pilot Experience

Balancing the [Data Camp](#) subscriptions with regular reflection discussions on adopting a "role-based" data persona unique to their role and responsibilities helped guide staff's learning priorities. This allowed staff to create reliable and realistic representations of their current capacity and immediate needs.

How can you invest in this skill for your organization?

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What barriers do you expect may influence the activity/resources?

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Skill #3: Working with data responsibly

Defining different ways to apply principles of data safety, ethics, inclusiveness, and transparency across the data lifecycle in your work. This includes applying data minimization, reflecting on how data impacts others and building meaningful feedback loops with stakeholders.

IREX's Pilot Experience

IREX staff facilitated regular conversations across the organization on Responsible Data¹⁶ considerations. These discussions helped connect staff with the following relevant resources and approaches to incorporate in their unique environment:

- [Key Elements of Responsible Data](#)
- [Reimagining Data and Power: A roadmap for putting values at the heart of data](#)
- [Inclusion, Not Just an Add-On](#)

How can you invest in this skill for your organization?

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What barriers do you expect may influence the activity/resources?

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Skill #4: Fostering effective discussions around data

Developing an accessible narrative of data insights to foster learning. This includes communicating priorities, establishing a common data language, values, and key metrics, facilitating a discussion around meaningful insights, and incorporating data into everyday activities.

IREX's Pilot Experience

IREX organized the activities shared in section III into a cohort-style learning series facilitated by technical staff for participants to practice each of these skills together over a longer period of time and build on each session's content from week-to-week. Over the course of the workshop staff build a collective [Miro board](#) based on the common problems and experiences in their teams. This engagement helped build confidence in staff across technical backgrounds to contribute to discussions around data in their work.

How can you invest in this skill for your organization?

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What barriers do you expect may influence the activity/resources?

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16. Responsible Data (RD) is a concept outlining our collective duty to prioritize and respond to the ethical, legal, social and privacy-related challenges that come from using data in new and different ways in advocacy and social change.



Skill #5: Building collaborative data practices

Balancing diverse skills and perspectives within a team to efficiently support and manage sustainable data practices. This includes understanding different competencies within a team, identifying essential and non-essential data products, and fostering efficient knowledge management.

IREX's Pilot Experience

Incorporating “role-based” personas throughout activities and coordinating a Data Challenge for staff to work in teams of different data personas to solve complex problems provided a practical space to apply collaborative data practices.

How can you invest in this skill for your organization?

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What barriers do you expect may influence the activity/resources?

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IREX's 2022 Data Challenge Idea-thon

To provide a space for staff to bring together and practice all of these skills for the purpose of improving learning and impact, IREX coordinated a Data Challenge in the format of an Idea-thon.

An Idea-thon is a collaborative competition where participants identify and “pitch” potential solutions to complex problems. An Idea-thon can range in format from a hyper-engaging one-day event to an extended process over months with a series of milestone submissions. Unlike other collaborative competitions (i.e. coding, hackathons) that submit a tool you can immediately test and apply, Idea-thons produce well-constructed concepts and approaches to develop solutions to complex problems.

In IREX's case, participants worked in teams (up to 4) over the course of six weeks to design a data solution for a program, practice, or unit that uses data and evidence to learn, iterate and improve outcomes. Teams submitted a five-minute video recording that addressed the following prompts:

1. What is the problem you want to address and why is it important to solve?
2. What relevant data do you have access to (e.g., open data sources, current datasets)?
3. What is your solution and who are the target users?
4. How would this solution help a team learn, iterate, and improve outcomes?
5. Who and what is needed to make this happen?

Submissions were evaluated by a panel of diverse technical experts in the Data for Development space that included both internal staff and external partners. This panel reviewed all submissions based on the following criteria and associated considerations:

Criteria 1 – Has a useful purpose to address a well-defined problem.

- Is the purpose of the data solution clearly articulated?
- Is the problem the data solutions want to address clearly articulated?
- Does the purpose of the data solution effectively address the problem?
- Does the data solution directly contribute to **any** of the following activities?
 - Collaborative learning to understand a problem
 - Inform decisions and adaptations
 - Increase impact

Criteria 2 – Incorporates Inclusive Data considerations.

[Inclusive data](#) is the approach of more equitably representing and using data for all people, regardless of their community, ethnicity, gender, age, or other components of their identity.

- Is the data solution using data to be **more** inclusive?
- Does the data solution incorporate **any** of the five tips for promoting data inclusively?
 - Center marginalized voices in research (i.e., human-centered design)
 - Promote equity and inclusion across the data value chain (i.e., data collection, sharing, decision-making)
 - Use data to increase contextual awareness (i.e., intersectionality, etc.)
 - Make institutional data systems inclusive and safe
 - Build more inclusive institutions

Criteria 3 – Applies Responsible Data considerations.

[Responsible Data](#) is a concept outlining our collective duty to prioritize and respond to the ethical, legal, social and privacy-related challenges that come from using data in new and different ways in advocacy and social change.

- Is the data solution using data to be **more** responsible?
- Does the data solution consider or address **any** of the relevant elements of Responsible Data?
 - Power dynamics
 - Unknown unknowns
 - Precautionary principle
 - Thoughtful innovation
 - Holding ourselves high
 - Diversity and bias
 - Building better behaviors

Criteria 4 – Uses an innovative approach.

- Is this data solution meaningfully different from alternative or current solutions?
- Does the data solution incorporate **any** of the following data and digital resources?
 - Digital technology (e.g. AI, Machine learning, Communication/messaging, etc.).
 - Digital tools (e.g. PowerBI, QGIS, RStudio, SQL)
 - Open data sources

Criteria 5 - Quality of implementation plan

- Is the “who” and “what” needed to make this data solution happen clearly articulated?
- Is the timeline, investment (i.e. cost, labor) and scope/scale of the data solution reasonable?
- Is there a learning and evaluation plan?
- Is there a risk management plan to consider issues of privacy, security, etc.

In total, 15 IREX staff made up five teams that produce submissions for the Data Challenge. The selected winners were Joshua Dei and Daniel Bell who explored the trends in democratic backsliding to inform recruitment activities for the Community Engagement Exchange program. You can access their presentation recording [here](#).



Designing your Data Learning Initiative

By this point you have identified some activities that you can practically implement in your organization or team. Now we are going to bring them all together to create your data learning initiative! Your initiative concept should include the following sections:

- Name of your Data Learning initiative!
- Engagement activities/resources
 - What skills do they seek to improve?
- Key barriers you anticipate
 - How do you plan on mitigating them?
- Resources (budget, staff time, partners, etc.)
- Timeline (overall start/end date, tentative activity roll out dates, etc.)
- Evaluation and learning approach (reference sub-section below for details)

Before finalizing your Data Learning initiative details, make sure to reflect on the learning triangle perspective – learning for me; learning for us; and learning for them. Fostering a data learning culture takes all three! If you see a gap, consider adding or adjusting an activity or resource in your design plan. Consider answering the following questions to make sure you can articulate the connection to each perspective:



“For me”

How will this initiative provide space for individual learning to improve work?

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“For us”

How will this initiative provide space for **communal learning** to improve practices?

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“For them”

How will this initiative provide space for **systemic learning** to help others?

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Evaluation of your Data Learning initiative

The objective of your Data Learning initiative should be to improve learning practices and impact in using data among staff. But how can you learn if your investments were worthwhile? Setting clear measurement indicators at the beginning of an initiative is important to ensure a meaningful source of data to learn from (practice what you preach!). There are a range of approaches that can be explored to measure the impact of your data learning initiative that best fit your environment (i.e. surveys, interviews, group discussions, internal tracking systems). Begin by going back to the different barriers you identified in the first activity of this section to frame learning outcomes and indicators that you can meaningfully measure over the course of your activities.

Design activity

List the different learning outcomes you hope to achieve from your Data Learning initiative, associated indicators you can use to measure those outcomes and potential data collection approaches for the personal, technical, and organizational levels.



Personal Barriers:

Why do some staff not engage with data relevant to their work?

Learning outcome	Measurement indicator	Data collection
Staff improve their confidence in data skills introduced during the activities.	The number of staff who report improved confidence in the five-cross cutting data skills for collaborative learning.	Self-reported retrospective survey on each of the five cross-cutting data skills for collaborative learning.



Technical Barriers:

Why do some teams not incorporate relevant data tools or approaches in their work?

Learning outcome	Measurement indicator	Data collection
Relevant tools and approaches that help improve learning and outcomes for program activities.	Number of teams who incorporated relevant tools and approaches in their work. Quality of improvement in learning and outcomes from incorporating the tools and approaches.	Self-reported survey to teams who participated in initiative activities. Interviews with staff that incorporated relevant tools and approaches.



Organizational Barriers:

Why do some data insights not reach relevant staff?

Learning outcome	Measurement indicator	Data collection
Improved collaboration and knowledge sharing on data initiatives between programs teams and units.	Number of collaboration activities on data initiatives between programs teams and units. Outcomes of each collaboration activity.	Survey to participants indicating instances of collaboration and/or knowledge sharing on data initiatives. Group discussions with staff that collaborated with other programs/units.