FAIR Process Framework - Workbook 1

Step 1 — Discovery: Defining data intervention type

The Fair Process Framework provides a series of bite-sized activities to take project leaders, and their partners, from concept, through planning and strategy and into implementation of a customized FAIR and responsible data plan.

There are 6 steps - Step 1: Discovery, Step 2: Understanding, Step 3: Planning, Step 4: Co-developing, Step 5: Strategy, and Step 6: Implementing.

This workbook has been designed to assist you in defining your data problem, your intention, and then specifying the data intervention types. You will then identify your data blockers, levers before putting it all together in this workbook.

1.Problem Statement

Data Problem Statement
What is the data problem the investment is trying to solve?
Tell the story about how you got to this data problem.
How would the beneficiary describe the data problem?
What evidence is there that this is an actual data problem?

Write your investment's Data Problem Statement below:

2.Intention Statement

Intention Statement
What is the outcome of the investment?
How would the beneficiary describe the outcome?
Does the outcome have a tangible in-country benefit?
How would the beneficiary describe the benefit?

Write your investment's Intention Statement below:

3. Specify your intervention type

These intervention types will help you conceptualize additional sub-steps or activities integral to your investment that you may not have considered, and should address the Data Problem and Intention Statement defined in the previous Section

Theme	Does the investment propose the following activity?	Your Investment	
		Yes	No

Collecting Data	**Collecting or creating new data.** The grantee proposes to collect or create new data for a specified purpose. It is likely that certain actors or groups will need to access, use and share the data during or after the lifetime of the grant.		
Stakeholder Collaboration	**Bringing together data and information from multiple sources.** The investment includes a need to gather together data and information on a particular topic or location to address a particular challenge. For example by bringing together data from governments, private companies and research institutions.		
	Multiple actors accessing and using content. The grantee works in an ecosystem of actors requiring access to the same content – for example, this could be to carry out research, define public or private sector interventions or drive innovation.		
	Private and public sector collaboration. The success of the investment is dependent on bringing together actors from the private and public sector. The grantee has a need to gather data and information on a particular topic or location to address a particular challenge and make this available to stakeholders in both the public and private sector. To that end, actors must be aligned and committed to a shared vision to incorporate FAIR processes throughout the project.		
Digital Services	**Development of insights, services, applications or products from data.** The grantee proposes to create services or applications from data derived from one or multiple sources and transformed in some way. The right license is required for proper use of data in this way.		
	Developing or using a digital platform or new technology. The grantee proposes to create a digital platform. This could have multiple purposes, for example to host or signpost data as part of an evidence base or for analytics. Often digital platforms will have data from multiple sources, with multiple users needing to access and use the data or insights hosted on the platform.		
	Development of predictive models. The investment intends to use models to analyze, control, visualize and		

	predict complex processes. Models have a range of applications in agriculture, including predicting crop volumes based on fertilizer and pesticide use, predicting profit and loss, and analyzing yields. Often models will bring data from multiple sources together to generate outputs		
Farm Level Insights	**Access to farmer and farm information.** To improve farm-level decisions through digitally-enabled services, the investment proposes either to provide insights at farm-level, and/or require a log in, all of which are likely to include access to personal or sensitive data.		
	Using GPS or adding geographical coordinates or locations. The grantee proposes to use maps or add information to maps, such as population, administrative boundaries, farm locations or the location of pests. Note that not all basemaps or mapping apps permit use in this way.		
	Accessing, using or sharing surveillance data. The investment proposes to collect or access data from surveillance activities, for example, identifying the presence of human disease like malaria, or providing insight into what's happening in farmers' fields through crop types, pest or pathogen presence or the weather.		
Data sharing/ Publication	**Publishing or sharing data or research.** The investment plans to share data either with a specific group via a platform, or published openly via an open access repository. For example sharing crop variety, environmental surveillance or soil data through a soil information system or via the Gates Open Access portal.		
Data integration and harmonization	**Integrating or harmonizing data** The investment plans to combine data from multiple sources into a coherent, standardized format to enable more comprehensive analysis and insights. For example, to improve livestock health and productivity, insights from analysis gained from the integration of data from various sources such as animal health records, feed management, and environmental conditions can help in decision making.		

Prediction and simulation	**Predictive modeling** Within a rapidly changing context and condition, the grantee proposes to create models to forecast future conditions, optimize resource usage, and make data-driven decisions. For example, crop yield prediction, pest and disease outbreak prediction. For prediction, it can involve the use of machine learning algorithms, deep learning algorithms, advanced statistical analysis to identify patterns in the data, allowing for forecasts that help optimize decision-making.		
	Simulation The grantee proposes to understand the behavior of a system by modeling different scenarios and observing their outcomes for instance crop growth simulation modeling, which helps understand how crops will grow under different environmental and management conditions		
Data storage and archiving	**Data preservation and archiving** The grantee seeks to provide for long-term storage of data to ensure sustainability and use in the future. For instance, creating data backups, storing data in sustainable formats, creating archiving policies that maximize data reuse over time.		
Data presentation	**Data visualization and communication** To communicate data visually and in a more relatable form, the grantee proposes to transform raw data into formats that are easily understandable, and actionable, for example, the use of dashboards and infographics or interactive maps. Data visualization eases the comprehension of complex data by non-technical people such as smallholder farmers which can help them to make decisions.		

4. Identify the Data Blockers

Based on the activities you've identified above, fill in the blockers (in table below under section 6)

5. Locate or Develop Data Levers

Based on the data blockers identified, fill in data levers that will overcome those data blockers (in table below undersection 6)

6. Mapping to DCEC

The DCEC model illustrates these concepts make up a “system” that is often interconnected, with data being just the “inner” circle within a larger ecosystem. Once **data** are collected, the question arises: can they be effectively utilized? **Capacities** encompass the tools and methods necessary to transform these crumbs into actionable information, a process that will inevitably vary depending on the context in which the data was acquired. These capacities are possessed by an **ecosystem** of individuals who work with data, and also those who will be using the information gleaned from data processing. Ultimately, all of these components exist within the superstructure of **culture**, which includes the set of incentives, expectations, and norms that arise from and shape the use of data-driven systems.

Mapping the activities to DCEC will help you think about the elements like a system and to better understand the interconnections while considering data levers (in table below).

Data Intervention Type (Theme)	Activity	Blocker	Lever	DCEC mapping
Collecting Data	Collecting or creating new data			
Stakeholder Collaboration	Bringing together data and information from multiple sources			
	Multiple actors accessing and using content			

	Private and public sector collaboration			
Digital Services	Development of insights, services, applications or products from data			
	Developing or using a digital platform or new technology			
	Development of predictive models.			
Farm Level Insights	Access to farmer and farm information			
	Using GPS or adding geographical coordinates or locations.			
	Accessing, using or sharing surveillance data.			
Data Sharing / Publication	Publishing or sharing data or research			
Data integration and harmonization	Combining data from multiple sources			
Prediction and simulation	Creating models to forecast future conditions or understand behaviors of a system			
Data storage and archiving	Seeking long-term storage of data			

Data presentation and communication	Communicating data visually			