INTRODUCTION

If your team is going through the Data Readiness Theory of Change for the first time, the concepts may seem a bit abstract. You might encounter terms that are new or unclear to you. This guide provides some more information and prompting questions that may help you to understand what each of the terms mean and how they are distinct from each other. The Data Readiness Theory of Change is meant to be used in conjunction with the Data Readiness Framework, which may help you to understand which specific competencies that you will need in order to meet the three key Data Readiness objectives and eventual impact of improved data use for operations and programs.

Image 1. Data Readiness Theory of Change
FOUNDATIONAL AREAS

OBJECTIVE 1. DATA LITERACY
National Societies have the skills, knowledge, attitudes, and social structures required to use data.

Example questions to ask your organizational team to demonstrate this concept:
• Does my National Society recognize the value and importance of data in their work and actively promote data skills and use? (See Outcome 1.1. Data Culture).
• Does my National Society have the skills and capacity to collect, clean, store, and interpret data? (See Outcome 1.2. Data Literacy).
• Is my National Society part of a collaborative network with local, national, and international entities to share and access data? In other words, is my National Society part of a larger data ecosystem? (See Outcome 1.3. Data Ecosystem).

Outcome 1.1. Data Culture
National Societies recognize the value and importance of data in their work and actively promote data skills and use.

Definition: Data culture is the principle established in the process of social practice in both public and private sectors which requires all staffs and decision-makers to focus on the information conveyed by the existing data, and make decisions and changes according to these results instead of leading the development of the company based on experience in the particular field.

Example questions to ask your organizational team to demonstrate this concept:
• Does my National Society leadership request data or information for decision making?
• Does my National Society leadership allocate resources or peoples’ time to data initiatives?
• Does my National Society leadership see the value of using data for decision making?
• Are staff in my National Society able to access technical learning resources on data topics?
• Do staff in my National Society have any communities of practice or working groups in which they engage (formally or informally) about data topics?

Outcome 1.2. Data Literacy
National Societies have the capacity to collect, clean, store and interpret data.

Definition: Data literacy is the ability to read, understand, create and communicate data as information.

Example questions to ask your organizational team to demonstrate this concept:
• Are staff in my National Society able to read and understand data?
• Are staff in my National Society able to perform data analysis upon request?
• Are data analyses targeted or contextualized for a specific purpose or need?
• Are staff in in my National Society able to explain data findings to others?
• Do staff in my National Society understand concepts like data biases and other limitations to data analyses?
• Are staff in my National Society able to connect data with on-the ground activities?
• Do staff in your National Society know where to get technical assistance for data needs?
• Are staff in your National Society connected with any technical resources like IFRC technical working groups or Surge?

Outcome 1.3. Data Ecosystem
National Societies are part of a collaborative network of local, national, and international entities to share and access data as part of a larger ecosystem.
**Definition:** Data ecosystem is the network of organizations, affiliated and affected communities, governmental and private sector organizations who are producing, collecting and analyzing digital data.

Example questions to ask your organizational team to demonstrate this concept:

- Are staff in my National Society aware of commonly used tools for humanitarian work, like ODK/Kobo, QGIS, and database options?
- Is my National Society connected with any technical support, either through IFRC or the private sector in my country?
- Are staff in my National Society aware of any useful and relevant data sets collected by the government or other humanitarian agencies?
- Does my National Society monitor national data trends that may impact the humanitarian sector, like health outbreaks, emergency weather trackers, or population movements?

**OBJECTIVE 2. DATA PREPAREDNESS**

National Societies have the ability to responsibly and effectively use and manage data-related tools, methods, and strategies.

Example questions to ask your organizational team to demonstrate this concept:

- Does my National Society have policies, procedures, and standards for the effective use of structured or unstructured information assets? (See **Outcome 2.1. Data Governance**).
- Does my National Society have a system of collecting and storing secondary data (e.g. basemaps, demographic data, etc.) where it can be easily accessed when needed? (See **Outcome 2.2. Secondary Data and Access**).
- Is the National Society able to collect primary data using the appropriate tools, survey design, and methods? (See **Outcome 2.3. Data Collection Methodology**).
- Can the National Society ensure high data quality and format the data effectively for correct interpretation and analysis? (See **Outcome 2.4. Data Quality and Format**).
- Is the National Society able to store and archive data as needed for the organization and in accordance to data governance standards? (See **Outcome 2.5. Data Storage and Infrastructure**).
- Does my National Society have a system for active exchange of information, including: internally, between organizations, and in the public domain? (See **Outcome 2.6. Data Sharing**).

**Outcome 2.1. Data Governance**

National Societies have organizing and implementing policies, procedures, and standards for the effective use of structured and unstructured information.

**Definition:** Data governance is the practice of organizing and implementing policies, procedures and standards for the effective use of an organization’s structured/unstructured information assets.

Example questions to ask your organizational team to demonstrate this concept:

- Does my National Society have a data responsibility policy in place, and is it used?
- Does my National Society have a data management strategy in place, and is it used?
- Is there a clear data flow in the National Society?
- Do staff in my National Society understand their roles and responsibilities in the data flow?

**Outcome 2.2. Secondary Data and Access**

National Societies have relevant secondary data that is collected in advance (e.g. basemaps and demographic data) and are in a position to download additional data.

**Definition:** Secondary data refers to data that is collected by someone other than the primary user. Common sources of secondary data for social science include censuses, information collected by government departments, organizational records and data that was originally collected for other research purposes.
• Does my National Society have secondary data sets stored that could be useful in planning or responding to emergencies?
• Does my National Society review secondary data sets regularly to ensure they are up-to-date and relevant?
• Does my National Society have a system in place to manage secondary data?
• Does my National Society have SOPs in place to ensure secondary data is available and used?

Outcome 2.3. Data Collection Methodology
National Societies are able to collect primary data using the appropriate tools, survey design, and methods.

Definition: Data collection is an umbrella term for all activities associated with soliciting information from individuals and groups. This encompasses, but is not limited to, activities such as evaluations, assessments, surveys, and others.

• Does my National Society have the technology to meet data collection needs?
• Are there staff in the National Society who are able to develop useful questions for a data collection survey?
• Does my National Society collect data regularly that is representative of multiple sectors, needs, and programs?
• Does my National Society have any standard indicators that we include in surveys?
• When we collect data, do we include indicators on gender and disability?
• Does my National Society have a standard data collection methodology?
• Does my National Society have a sampling strategy for data collection?

Outcome 2.4. Data Quality and Format
National Societies can ensure high data quality and format the data effectively for correct interpretation and analysis.

Definition: Data quality assurance is the process of data profiling to discover inconsistencies and other anomalies in the data, as well as performing data cleansing activities (e.g. removing outliers, missing data interpolation) to improve the data quality.

• Does my National Society conduct paper-based or mobile data collection?
• Does my National Society conduct audits or quality checks of data that is collected?
• Does my National Society have systems in place for ensuring data quality standards are met?
• Does data collected by my National Society include metadata so multiple people from outside teams can understand and use the data?
• Does my National Society have a way to record any changes made to data that we collect?

Outcome 2.5. Data Storage and Infrastructure
National Societies are able to store and archive data as needed for the organization and in accordance to data governance standards.

Definition: Data storage is a general term for archiving data in electromagnetic or other forms for use by a computer or device.

• Does my National Society have adequate, up-to-date computer systems?
• Does my National Society have hard drives, physical servers, or cloud-based systems on which data is stored?
• Does my National Society have backup copies of data available? Is data backed up live or manually?
• Does my National Society have data security policies in place that include archiving and data retention?

Outcome 2.6. Data Sharing and Dissemination
National Societies have a system for active exchange of information, including: internally, between organizations, and in the public domain.

Definition: Data sharing is the active exchange of information, whether between organizations or in the public domain.
• Does my National Society have a system where data is stored, organized, and integrated?
• Can data be accessed by all the appropriate users in my National Society?
• Does my National Society share data as part of its auxiliary role with the government?
• Does my National Society have a data sharing policy or agreement in place with the government or other institutions?
• Does my National Society use any technologies or platforms to disseminate data, either internally or externally?

APPLICATIONS

OBJECTIVE 3. DATA PREPAREDNESS
National Societies have the ability to use data for decisions, having reliably integrated analytic thinking into both design and implementation.

Example questions to ask your organizational team to demonstrate this concept:
• Does my National Society have the capacity to collect additional information needed for an operation (e.g. rapid assessments) to complement existing secondary data?
• Can my National Society manage the process of systematically applying the statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data?
• Does my National Society have and use clear, well-understood reporting tools for response operations (e.g. a SitRep)?
• Does my National Society make response operations that are backed up by hard data rather than making decisions that are intuitive or based on observation alone, including when data is incomplete?
• Is my National Society able to make generalizations based on evaluation experiences with projects, programs, or policies that abstract from the specific circumstances to broader situations?

Outcome 3.1. Primary Data
National Societies have the capacity to collect additional information needed for an operation (e.g. rapid assessments) to complement existing secondary data.

Definition: Data collection is an umbrella term for all activities associated with soliciting information from individuals and groups. This encompasses, but is not limited to, activities such as evaluations, assessments, surveys, and others.

• Is my National Society able to conduct primary data collection, with or without external support?
• Does my National Society have a group of trained people who can collect follow-up/monitoring data?
• Does data collected meet the demands of the program/operation, leadership, and other programs/departments?
• Does my National Society use any digital technologies to keep up with new data, like API connections, automated surveys, or social media analytics?

Outcome 3.2. Data Analysis and Visualizations
National Societies can manage the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data.

Definition: Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data.

• Does my National Society complete a pre-analysis plan prior to an intervention?
• Does my National Society produce standardized data analyses typically required by each sector?
• Are analyses linked to triggers for action?
• Are analyses communicated through an appropriate and useful visualization method (e.g. maps, charts, dashboard, etc.)?
• Are analyses targeted to different audience, or do we use a one-size-fits-all approach?
Outcome 3.3. Effective Reporting
National Societies have and use clear, well-understood reporting tools for response operations (e.g. a SitRep).

Definition: Effective reporting enables teams to be proactive in disseminating to external teams/organizations who may find the information valuable.

• Does my National Society use standardized formats or structures for reports?
• Do reports produced by my National Society targeted and contextualized for different audiences?
• Do reports produced by my National Society provide analyses and recommendations for next steps/actions?
• Are reports produced ahead of any decision making?
• Are reports produced at a timely and consistent frequency?
• Are reports disseminated to external teams/organizations who may find them useful?

Outcome 3.4. Data-Driven Decision Making
National Societies make response operations decisions that are backed up by hard data rather than making decisions that are intuitive or based on observation alone, including using incomplete data.

Definition: Data-driven decision making (DDDM) involves making decisions that are backed up by hard data rather than making decisions that are intuitive or based on observation alone.

• Do decision makers in my National Society use data to inform a plan of action?
• Does my National Society have any policies/procedures in place to act on certain findings or analyses (e.g. early action triggers linked to a specific action)?
• Are data and information incorporated into planning and monitoring processes?
• Does my National Society have accountability measures in place to ensure decisions are made using data and that those decisions are documented?

Outcome 3.5. Evaluation and improvement
National Societies are able to make generalizations based on evaluation experiences with projects, programs, or policies that abstract from the specific circumstances to broader situations.

Definition: Generalizations based on evaluation experiences with projects, programs, or policies that abstract from the specific circumstances to broader situations.

• Does my National Society have a monitoring and/or evaluation plan?
• Have any projects or operations undertaken by my National Society been evaluated by an objective party?
• Does my National Society have any platforms to share learnings from projects, operations, or other initiatives?
• Are learnings from projects, operations, or other initiatives shared across teams?
• Are learnings from projects, operations, or other initiatives tied to future strategy or long-term programmatic change?