

# 3 **Strengthening Data Teams and Projects**

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# Strengthening Data Teams and Projects

Many projects at IFRC have a data component. The purpose of this module is to guide users to think about all the steps in a whole data project rather than their respective field or sector. This module aims to answer the question: How might data teams build and implement a 'Data-Driven Project'? These exercises and tools require a true 'data as a team sport' approach. Facilitators are encouraged to review outputs with a wide-range of expertise from legal to management to ensure that the project is executed adhering to the organisational policies, mandate and principles.

As with any content of a general nature, the guidance (and examples) contained in the module are only intended as a starting point. You should do your own due diligence, involving legal counsel where appropriate, to determine what any specific legal obligations (or other relevant considerations) are in your operating context.

## Questions this module explores

- ▶ How can we map our data projects and data workflow?
- ▶ What are data and technology questions we should be asking?

## Learning Objectives

- ▶ How to test a data project from inception to implementation?
- ▶ Considerations for a holistic approach to a data project
- ▶ How can teams test a data project and do a risk analysis?

## Module Topics

- ▶ How to coordinate a data team and project?
- ▶ How to test a project for risks and gaps?
- ▶ Taking a whole plan approach to a successful data project

## Recipes

### A suggested step-by-step process to achieve learning objectives

- 1 Use **Place Data-Driven Project Items in Order (3 - 1)** to engage participants in the complexities of a data-driven project and discuss **The roles to support each step of the workflow (3 - 2)**
- 2 The Data Simulation 'simulates' data workflows for various topics and teams. Use with the **Data Responsibility Scenario (3 - 12)** and two scenarios in (Module 7) **Polio Campaign Monitoring In Syria (simulation) (7 - 17)** and **PMER Data Simulation (7 - 15)**. The next steps for this brief project review session could be used in conjunction with the **Data and Technology (Checklist) (3 - 3)** and **Risk Register Template (3 - 7)**

- 3 For larger data projects, teams may need to do a more extensive review of their plans. One method is: **Running a Datathon and Red Team (3 - 4)**. Teams can prepare highlight inputs in the **Datathon Output Analysis Template (3 - 6)**. Part of a data project includes a **Data Impact Assessments (3 - 11)** They can also prepare an overall presentation for review and next steps with **Datathon Output (3 - 5)**.
- 4 Data Teams and projects can improve by telling the story. This exercise helps bring clarity to the product/service/project and encourages teamwork in a fun way with **Storyboard a simulation (part 1) (3 - 8)** and Data Product Storytelling.
- 5 In a group discussion, ask participants to synthesise what they've learned by compiling a list of data-driven project best practices.

## Ingredients

Pick and choose ingredients to create your own recipe. Do you have an ingredient we're missing? Send an email to [data.literacy@ifrc.org](mailto:data.literacy@ifrc.org)

## Exercises

### Short, discrete social learning experiences

Put in Order: Data Project Workflow Steps – Participants the complexities from the beginning to end of a data-driven project

What are the roles needed to support a data workflow – Participants map out the ecosystem of roles needed to implement a data-driven project.

## Session Plans

### Longer social learning experiences

Data Simulation. Participants 'simulate' data project workflows for various topics.

Data Product Storytelling

## Slide Decks

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### Presentations to be used and/or adapted:

**Datathon Output (3 - 5)** - How to share analysis and next steps on data project

**Storyboard a simulation (part 1) (3 - 8)**

**Data Impact Assessments (3 - 11)**

## Checklists/Handouts/Materials

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### For documentation of essential elements of the learning experience

**Data and Technology (Checklist) (3 - 3)** - A worksheet for developing an efficient, legitimate and responsible workflow in software projects.

**Risk Register Template (3 - 7)** (spreadsheet)

**Datathon Output Analysis Template (3 - 6)** (spreadsheet)

**Running a Datathon and Red Team (3 - 4)** (Handout)

**Data Responsibility Scenario (3 - 12)**

## Next Steps

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### Relevant modules in the Data Playbook

**Getting the Data We Need (4)** and **Data Science and Emerging Tech (10)**. And, keep showing the impact of a data culture with **Nurturing a Data Culture (2)**

### Module credit

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Heather Leson, IFRC ESN team, Turkish Red Crescent Society, IFRC V1 Sprint, and Data Playbook Beta contributors

## 3 - 1 Place Data-Driven Project Items in Order

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Every project is different, however there are some standard steps in a data driven workflow. A workflow relates to the processes and methods an Information Manager or Data Officer may use to implement a project from start to finish. By clarifying a workflow, it is easier to identify needed roles, tools and technologies. Some of these terms may be new to users and vary by sector and industry. Be sure to modify and clarify as needed for your project.

- ▶ **People:** 4 to 16 people
- ▶ **Time:** 30 Minutes
- ▶ **Difficulty:** Easy
- ▶ **Virtual Materials:** virtual meeting platform, shared document/writing space
- ▶ **In Person materials:** Flipcharts/noteboards, sticky notes, markers

## Preparation:

Print or Write the following in large text on your collaboration document:

- ▶ Design/Consult
- ▶ Prototype/Test
- ▶ Assess your users
- ▶ Get/Find Data
- ▶ Verify
- ▶ Process, Organise, & Clean Data
- ▶ Analyse Data
- ▶ Present Data
- ▶ Project Close
- ▶ Archive

## Exercise

### Part 1: Introduction (5 minutes)

Share examples of data-informed projects. This exercise is best done with concrete data projects that your organisation and team are familiar with. Or, conversely, this could introduce a new project and begin your team planning.

### Part 2: Explore (15 minutes)

In small groups (ideally pairs), review the data project steps. Be sure to have a separate document for each team. Take notes on any insights or questions on a shared document. Ask your participants the data steps in order. As they put things in order, be sure to ask people why it goes there. Or, ask them to take notes about why they made that decision. Participants will likely figure out that some bits are linear and the others are cyclical.

What is linear is the pipeline:

- ▶ Ask a question
- ▶ Get/Find Data
- ▶ Process (organise/clean) Data
- ▶ Analyse Data



- ▶ Present Data
- ▶ Project Close
- ▶ Archive

While these pieces are more cyclical:

- ▶ Design/Consult
  - ▶ Prototype/Test
  - ▶ Assess your users
- 

### Part 3: Discuss (10 minutes)

In plenary, ask people to share their decisions and questions. Discuss the nature of data projects and consider how teams may need to repeat many of the steps and learn during each iteration.

#### Credit

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This was adapted from Responsible Data Forum's Data in the Project Lifecycle and Fabriders' A Data Strategy Workshop Curriculum.

Also see, [Infusing ethics into data projects](#)

## 3 - 2 The roles to support each step of the workflow

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**This exercise will demystify what it takes to undertake a data-driven project. This can be run as part of a data simulation, with scenarios provided, or with a team or group that is about to undertake a data related project.**

- ▶ **People:** 2 to 12 people
- ▶ **Time:** 30 Minutes
- ▶ **Difficulty:** Medium
- ▶ **Virtual Materials:** virtual meeting platform, shared document/writing space
- ▶ **In Person materials:** Flipcharts/noteboards, sticky notes, markers

## Exercise

Write each step of the data-driven workflow on individual post-it notes and place them sequentially in a row on the wall. Now ask participants to identify the roles needed for each step.

## An example of what your collaboration space might look like:

Design	Prototype	Find	Get	Verify	Clean	analyse	Present	Project Close	Archive
Project lead	Project lead		Trainers			M & E	Comms officers		IT
Legal			Volunteers				Project analysts/officers		Audit
IT			Local community						
Managers/senior managers									

### Credit

Dirk Slater, Heather Leson

# 3 - 3 Data and Technology

## (Checklist)

Processing data in a responsible way is a core activity throughout the RCRC Movement. This basic worksheet on technology and data processing in software projects will help you develop an efficient and legitimate data workflow. It is for people supporting data-driven projects but also provides insights to those that want to better understand what it takes. This list should be completed as a team and result in a shared understanding of any outstanding questions or next steps for a project.

### RESPONSIBLE DATA IS:

The duty to ensure people's rights to consent, privacy, security and ownership around the information processes of collection, analysis, storage, presentation and reuse of data, while respecting the values of transparency and openness.

[Responsible Data Forum, working definition, September 2014](#)

## Instructions

Fill out as best you can in the amount of time you have. Please continue to answer all the questions until you feel you can assure 'privacy by design'. Note that items with an asterisk (\*) have further details in the 'Things to Consider' section at the end. You will need to engage many different stakeholders to answer these questions and you may want to identify a team with different roles to work on the checklist. Please add more questions that might be relevant for your team and context.

## The checklist

### Project Management

Item	Question	Notes
1.	What is the total cost of the project? This should include software development, training, and other costs connected to the project's lifecycle.	
2.	Will a risk assessment (IT security and/or data protection and/or reputational) be conducted as part of the Project Management review?	
3.	Which stakeholders need to be consulted for signoff?	
4.	Who are the main stakeholders for this project? Who will use the technology, who will be affected by the technology?	

Item	Question	Notes
5.	Within the organisation, what is the process to follow? Who do we need to go to first?	

## General Technical Management

Item	Question/ Comment	Notes
6.*	Must certain software be licenced? What type of licence?	
6.a	If the software is proprietary, will IFRC and/or NS have the right to request customization and/or regular maintenance?	
6.b	Will there be a service contract for this? What does it cover: updates, security, new features, etc?	
7.	Who is supervising the use of the software?	
8.	Who owns the source code for the software?	
9.	Who maintains the software?	
10	How will the hardware be maintained?	
11	Are there data and software backups? Is the system redundant?	

Item	Question/ Comment	Notes
12*	Will cloud hosting be used?	
12. a	Does the service meet the requirements identified in the risk assessment?	
12. b	What is the legal jurisdiction for the server? May data be transferred to other jurisdictions and do we have a chance to object to such transfers? Must consider if there are data protection laws require the data to stay in one jurisdiction.	
12. c	How does backup copying/mirroring work?	
12. d	When is data held by the service provider deleted?	
12. e	Is access management in accordance with statutory requirements and the service provider's own internal control systems?	
12.f	How does the service provider ensure that personal data from one data controller is not mixed with those of another?	
12.g	Can the service provider use the enterprise's data for its own purposes?	

Item	Question/ Comment	Notes
12.h	<p>What protections are in place to ensure the integrity of the data, and protect it from breach (including unauthorized deletion, alteration and access)? What is the plan if data is temporarily or permanently unavailable (lost)?</p> <p>And, how and when will breaches be reported?</p>	
12.i	Can you regulate the service provider's use of subcontractors, and that the enterprise has an overview of and control over such subcontractors.	
12.j	Is the use of cloud computing services audited on a regular basis? In other words, you yourself or an independent third party must perform a security audit to ensure that the data processor agreement is being complied with.	
12.k	If the agreement states that a third party is to perform the audits – will you be provided with the final audit report?	
12.l	Can the data be transferred to a new service provider if this is deemed desirable?	
12.m	Is the solution adequately documented, so that public authorities can perform an audit?	
13.	Have provisions for security and encryption been made? At each stage? Communication, at rest, in transit, etc.	



Item	Question/ Comment	Notes
13.a	Who holds the encryption keys?	

"Selecting enterprise software requires balancing a lot of considerations: software features, viability and support model of the vendor, total cost of ownership, capabilities in your company and your business strategy and growth expectations. Success takes investment. You will pay for your software whether you use open-source or commercial applications."

Source: [Dave Hillis, 'The new world order for open source and commercial software', Techcrunch+](#)

## Data Management

Item	Questions	Notes
14.	Who are the controllers of the data? (the party responsible for determining the why and how of data processing).	
14.a	What "processing of data" is envisioned?	
14.b	Who will be the "processor of the data"?	
14.c	What contract, terms of service, or other agreement relates to the processing of the data? Has it been reviewed by your legal department?	
15	How have you determined your security measures/mitigation?	
15.a	How will "The right to privacy- and family life" be respected while processing data?	

Item	Questions	Notes
15.b	What are the legal jurisdictions for the data management: storage, use and sharing of the data?	
16	If there are data back-ups, who is accountable to keep these up to date?	
16.a	Are the backups in the same or different legal jurisdiction?	
16.b	How many copies of the data will be kept and where? (cloud server? remote server? local server?)	
17	Will the data workflow/ system keep an audit trail and if yes to what level of detail? (who accessed it, when, where and what did the user do)	
18	What is the data workflow process?	
19*	Is it secure and does it include data minimization whenever feasible? Data minimization is the practice of collecting and keeping only the data you need.	
19.a	What are the responsible data risks and mitigation steps during each step of the data workflow?	
20	What are the guidelines for protection of the data?	
20.a	What are the training and accountability needs?	

## Data Sharing

Item	Questions	Notes
21	Who is the data controller, and are there restrictions on the use or sharing of data (for instance intellectual property issues: copyright, etc)?	
21.a	Who has access to the data?	
21.b	Is it possible to open the data?	
22	Who can share the data?	
22.a	Is there an agreement with the party that data is to be shared with? Reviewed by your legal department?	
22.b	Is there a record of data sharing in the system and/or for the organisation?	
23	What capabilities for import, export and exchange of data are required? And in which format?	

## Things to consider

### On item 6:

It is helpful to review [open source licensing](#). Keep in mind that if a university is in charge of the system, they often have a department and a regular student pipeline of people who can upgrade and maintain the system. Note that they would need to abide by the strict guidelines and not have access to the data. Use a processing agreement with strict regulation on confidentiality and privacy. And/or there would need to be a sign off process.

### On item 12:

As per the [ICRC Data Protection Handbook \(2nd Edition\)](#), cloud services can include risks such as the following in the context of Humanitarian Action:

- ▶ The use of services from unprotected locations;
- ▶ Interception of sensitive information;
- ▶ Weak authentication;
- ▶ Data can be stolen from the cloud service provider, such as by hackers; and
- ▶ Possible access by government and law enforcement authorities

If you use cloud service remember there are three different models:

- 1 Public cloud, where the vendor makes cloud computing services available to all customers.
- 2 Private cloud, where cloud computing services are made available only to those businesses to which they apply. This arrangement enables a greater level of customisation than is possible in the public cloud model.
- 3 Hybrid cloud, which can be a combination of the models described above.

If use of cloud remember:

- ▶ To sign a data processing agreement
- ▶ Emphasise the principle of Confidentiality
- ▶ Ask for routine reporting of those who have access to the cloud
- ▶ Identify all the enterprise's systems containing personal data. Then grade the sensitivity of the data (depending on your internal policies, it might look like this: public, restricted, internal, confidential, highly confidential, with categories for personal and sensitive personal data).
- ▶ Evaluate risks (what could go wrong).
- ▶ Assess the consequences if anything were to go wrong, e.g. that personal data falls into the wrong hands.
- ▶ Create a list of security measures that have been implemented to deal with any incidents.
- ▶ Assess the security measures in the agreement with the cloud computing service provider.

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## Item 20

Other common denominators that will impact your workflow:

- ▶ The principle of confidentiality
- ▶ Consent
- ▶ Data controller: a person who (either alone or jointly with other persons) determines the purposes for which and the manner in which (means) any personal data are, or are to be, processed
- ▶ Personal data and sensitive personal data (recall that what data is sensitive is context dependent)
- ▶ Processing (any operation on data: collection, storage, deletion, transfer, etc).
- ▶ Red Cross/Red Crescent National Societies are an auxiliary to the public authorities

### Resources

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See the [IFRC Data Protection Policy](#)

### Credit

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Teams that contributed to this checklist are: IFRC Information Management, Health, Legal (IFRC and Norwegian Red Cross), Security, PMER, IT. Updated by Heather Leson and James de France (2021)

## 3 - 4 Running a Datathon and Red Team

### What is a #datathon?

A Datathon is a data related sprint where you are challenged to work on a real-world business case. This method could be used for large and small projects, especially as the templates and exercises have a special focus on designing with data protection and responsible data use. One workshop used this team methodology to assess a project's use of data leveraging different technological areas such as machine learning, AI, and data science. For this specific exercise example, the IFRC conducted a datathon in order to support and improve the data analysis processes and outcomes in support to a data project. The participants will have to come up with solutions and opportunities for data collection and analysis processes within the programme based on the provided datasets.

## What is a Red Team?

Red Teaming is a full-scope, multi-layered simulation designed to measure how well an organisation's people and networks, applications and physical security controls can be exposed to potential vulnerabilities.

A thorough red team test will expose vulnerabilities and risks regarding:

- ▶ Technology — Networks, applications, routers, switches, appliances, etc.
- ▶ People — Staff, independent contractors, departments, business partners, etc.
- ▶ Physical — Offices, warehouses, substations, data centres, buildings, etc.

For this specific exercise, the IFRC will conduct a red team test to understand the potential vulnerabilities and risks regarding: The project data workflow and processes for the IFRC's accountability to donors and to communities we serve.

## Objectives and expected results

The IFRC through this red team exercise and datathon aims in achieving the following objectives:

- ▶ Understand and document the potential risk and vulnerabilities of the data workflow and processes, including smooth auditing and data protection, to ensure the most appropriate accountability to IFRC's donor requirements as well as to IFRC IT internal compliance.
- ▶ Elaborate data models and scenarios in regards to the improving scenarios for potential change, improvement and modification of the targeting criteria of the project and to understand the impact on the various caseloads. Note: This workshop might require/trigger some thinking about potential/additional need for investment on IT/IM, might also require thinking of HR to meet specific requirements too.
- ▶ Refining the setting up of automated data flows for the programme and the data connections and scripts for the solution for IFRC;
- ▶ Elaborate, refine and operationalise the existing scripts for data analysis for the Programme, including data forecasts.

The expected result of this 4 days red team exercise and datathon is to operationalise and improve all of the outcomes into the data analysis workflow.

## Methodology and purpose

The IFRC network has an opportunity to learn and support the host National Society. The Datathon and Red Team exercise is both a project review and a team-building exercise.

The National Society leading this project will be the owner of all outcomes and should be fully engaged in the design, delivery and outputs of this workshop. Ownership is key and the network can support the National Society on this journey. The programme will select individuals from the host global Red Cross and Red Crescent IFRC Network, including from within the IFRC Surge Information Management Support (SIMS) network and from IFRC Geneva, that will be invited to join the face-to-face 4 days exercise. The host National Society will guide and include key staff from across their organisation.

This is a unique opportunity for the National Societies in Red Cross and Red Crescent IFRC Network to be exposed to the fast growing expanding network of data and information management experts of the IFRC (SIMS) in order to reinforce the position of the programme and the host National Society as global leaders in the sector.

Through the 4 days event, the teams will obtain details as innovative leaders and will work together through an agile and innovative approach in order to achieve solid results starting with improved analytics that are evidenced based.

This will be an opportunity not only to be at the centre of an innovative approach, but to mutually benefit from a cutting edge approach to learning, networking and team building in order to raise even more the already well established profile of the National Society.

The programmatic and operations teams, including Senior Management, will join the first day along with National Society staff to introduce the programme and explain the problem statement.

The second and third days will be for the red team and datathon exercises. This includes various stages of the data-driven lifecycle and data protection/responsible data reviews. The team should be cross-functional - IT, IM, Risk, Audit, Finance, Training/Learning and Management. The diversity of skills can support the 'data as a team sport' approach to a success workshop and project.

Finally, the fourth day will be a day of reconvening and presentations of outcomes. Participants will be the invited participants and the teams from the programmatic and operations team, including senior management.

## Important notes

- ▶ The participants of this event will be able to access data and information from the National Society in line with the Data Sharing Agreement only. This is primarily a desktop review exercise.
- ▶ The participants of this event will not access at any time personal information biometric data;
- ▶ The participants will help IFRC structuring the data analytics, using IFRC infrastructure and systems only.

This is in line with what IFRC is establishing and maintaining in terms of systems.





No request to access or potential violation of personal information files will ever occur during this event by the participants;

National Society systems and hardware will not be included as part of this event unless with the formal agreement and consent. The participants will be looking at the process flows. The exercises will be tailored to the problem statement needs and potential risks.

### Credit

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IFRC, IFRC ESSN project, Turkish Red Crescent Society, Dan Joseph, Heather Leson, and Guido Pizzini

# 3 - 5 Datathon Output

# Background

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## Red Team Test

The aim of the red team test is to understand the potential vulnerabilities and risks regarding a project's data workflow and processes for the organisation's accountability to the community and donors

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## #Datathon

A Datathon is a data related sprint where you are challenged to work on a real-world business case on the use of data leveraging different technological areas such as machine learning, AI, and data science. For this specific exercise, the IFRC will conduct a datathon in order to support and improve the data analysis processes and outcomes in support of a project. The participants will have to produce solutions and opportunities for data collection and analysis processes within the programme based on the provided datasets.

# Objectives and expected results

The IFRC through this red team exercise and datathon aims in achieving the following objectives:

- ▶ Understand and document the potential risk and vulnerabilities of the data workflow and processes, including smooth auditing and data protection, to ensure the most appropriate accountability to IFRC's requirements as well as to IFRC IT internal compliance.
- ▶ Elaborate data models and scenarios regarding the potential change, improvement and modification of the targeting criteria of the "the project" and to understand the impact on the various caseloads;
- ▶ Refining the setting up of automated data flows for the "the project" and the data connections and scripts for the solution;
- ▶ Elaborate, refine and operationalize the existing scripts for data analysis for the "the project" including data forecasts. Note: For some projects, this might require/trigger some thinking about potential/ additional need for investment on IT/Information Management, might also require thinking of HR to meet specific requirements too. The expected result of this 4 days red team exercise and datathon is to **operationalize and improve all the outcomes into the data analysis workflow.**



# Methodology

- ▶ Through this 4 days event, the Project teams will obtain from now ownership and enhance a central role as innovative leaders and will work together through an agile and innovative approach in order to achieve solid results starting with improved project analytics that are evidenced based. The project team could enhance the design and implementation of their programmes.
- ▶ This will be an opportunity not only to be at the center of an innovative approach, but to mutually benefit from a cutting-edge approach to learning, networking and team building in order to raise even more the already well-established profile of the team.
- ▶ The project programmatic and operations teams, including Senior Management, will join the first day along with staff to introduce the programme and explain the problem statement.
- ▶ The second and third days will be for the red team and datathon exercises. It is important to have a wide array of expertise in this project exercise including IT, IM, Risk, Security, Audit, Finance and management as well as staff from IFRC and different types of National Societies.
- ▶ Finally, the fourth day will be a day of reconvening between the invited participants and the team's programmatic and operation stream of the including senior management.

# This template

This template exists to support your group work and presentation.

Feel free to:

- ▶ Remove these info slides
- ▶ Modify it to serve your groups needs and your working styles
- ▶ Use text, visuals, flowcharts, or anything else that helps you convey your message

# Terminology

**Objective** An aim, goal or specific result that a person or system aims to achieve within a time frame and with available resources.

- ▶ **Condition** A circumstance that needs to be fulfilled for an objective to be feasible
- ▶ **Enabler** A person, thing or condition that gives power, authorizes or helps something to happen
- ▶ **Barrier** Any condition that makes it difficult to make progress or to achieve an objective
- ▶ **Risk** A potential event where given action or activity will lead to a loss (e.g. data or digital breach) or compromised data
- ▶ **Mitigator** a strategy to prepare for and lessen the effects of threats

# Datathon Group Type Group – Objectives and Conditions

 Objectives

 Conditions




# Datathon Group Type Group – Enablers and Barriers

 Enablers

 Barriers


# Datathon Group Type Group – Risks and Mitigators

 Risks:

 Mitigators


# Findings – Key Insights

What did I learn from my counterparts? What works well? What needs work?

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# Conclusions

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# Recommendations

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# Thank you!

Credit: IFRC ESSN team and Turkish Red Crescent Society

# 3 - 6 Datathon Output Analysis Template

 [Download Resources](#)

The Datathon Output Analysis template is an editable document for teams to consider various types of risks for a project.

# 3 - 7 Risk Register Template

 [Download Resources](#)

The Risk Register team template is an editable document for teams to consider various types of risks for a project.



# 3 - 8 Storyboard a simulation (part 1)

# Objectives

- ▶ Identify information management responses and the different IM needs for each response.
- ▶ Describe a potential IM deployment.
- ▶ To think about how and when you, in your individual roles, could become engaged in surge IM.

# Storyboard a Simulation

- ▶ Your storyboard should show an activation; from setting up of resources, a deployment, support to this deployment and exit from a response.
- ▶ Each group will receive a terms of reference (ToR), of a Rapid Response IM deployment.

# Storyboard a Simulation

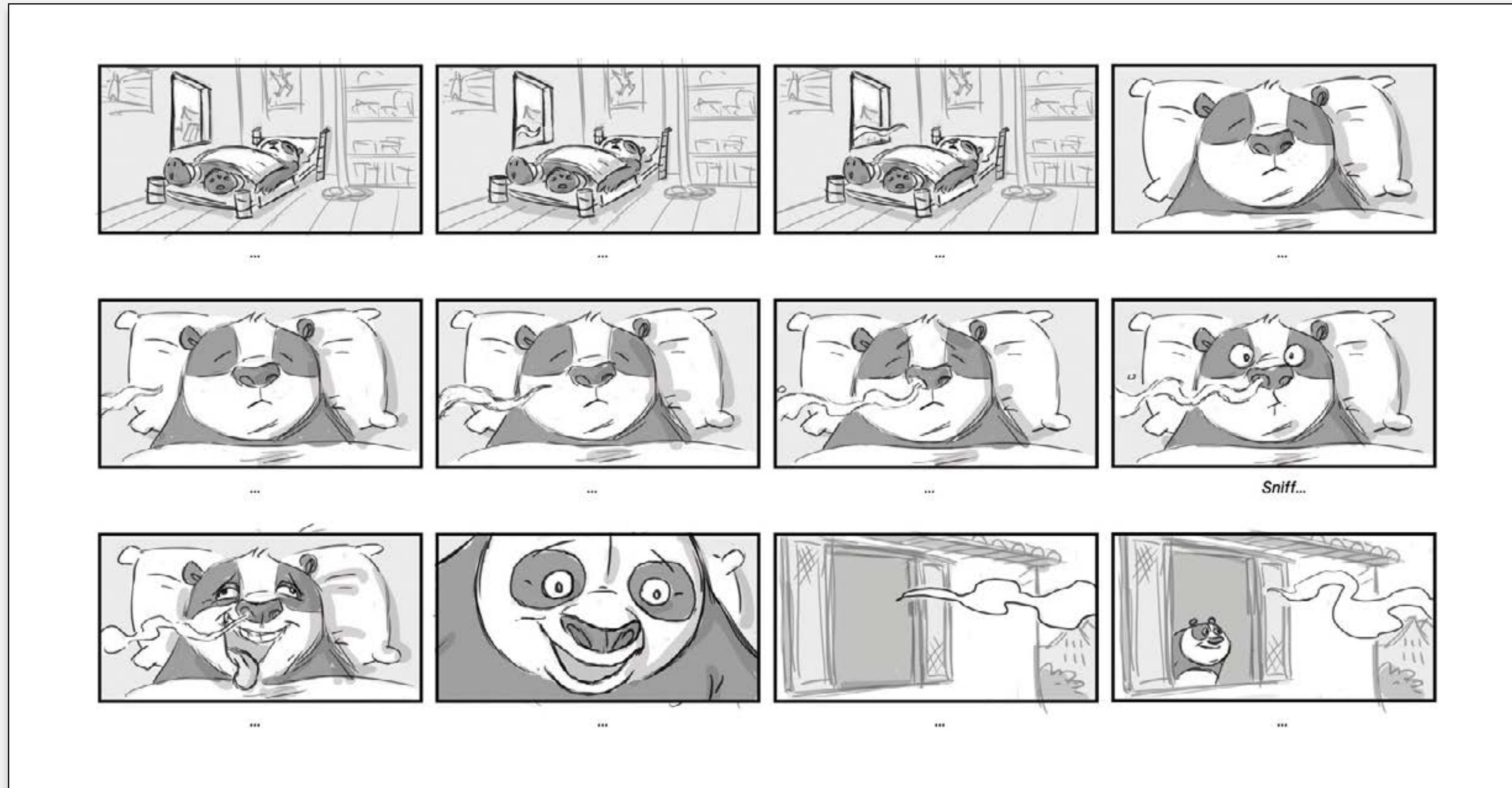
- ▶ This session will introduce:
  - ◉ How to work in a team environment
  - ◉ How to and be able to delegate work
  - ◉ Begin to think about or understand project management
- ▶ Each group will receive a ToR IM deployment.
- ▶ In your groups discuss, and storyboard a deployment:
  - ◉ How will you work with a National Society (NS)
  - ◉ What products could be created, what IM services could you provide, what could you help with?
  - ◉ Think about who you could delegate work to



# Storyboard a Simulation

- ▶ Your storyboard should show an activation; from setting up of resources, a deployment, support to this deployment and exit from a response.
- ▶ This does not have to be perfect!
- ▶ Once complete, we will look at the commonalities and differences between the various group's responses.

# What is a Storyboard?



(i) Source: [Cartoon by Casey Crowe](#)

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## Ideas

- ▶ Think about:
- ▶ What will be the activities that you will conduct
- ▶ How will you work with a National Society (NS)?
- ▶ Will you delegate any work, and who to?
- ▶ What products could be created, what IM services could you provide, what could you help with?
- ▶ Be creative. This is your time to have unrestricted thoughts. What would be the disaster response that you would like to develop?

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## Further resources

- ▶ You will all get a copy of the activity.
- ▶ [DIYtoolkit](#), (printable tools for you to run your own storyboard activity).

(i) Credit: Paul Knight



## 3 - 9 Storyboard a simulation (part 2)

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**This exercise will help participants visualise an ideal sequence of scenarios using pictures, words and a presentation. Storyboarding is a great exercise at the beginning of a workshop for participants to start thinking freely and critically about processes and actions over time, without being hindered by previous experiences. As part of a longer workshop it also allows facilitators to refer to ideas generated at an early stage that participants have thought about. Skills gained during the exercise include: teamwork and understanding working with other National Societies; delegation of work; project management.**



- ▶ **People:** 4 to 30 people
- ▶ **Time:** 45 Minutes to 2 hours
- ▶ **Difficulty:** Easy to Hard (This depends on the scenario and topics selected)
- ▶ **Virtual Materials:** virtual meeting platform, shared document/writing space
- ▶ **In Person materials:** Flipcharts/noteboards, sticky notes, markers

## Exercise

### Preparation:

Facilitators will need to have predefined scenarios relevant to the sector. These should be linked to a disaster response operation and have at least one question that a delegate should be asked to solve. Example Information Management (IM) scenarios are at the end of this recipe. The deployment Terms of Reference can also be handed out to participants, if available.

Storyboards should show the activation process; from setting up of resources, a deployment, support required during a deployment, the delegate's action to answer a question asked of them and processes and tools used, and their exit from a response.

## Part 1: Introduction to Storyboarding (20 minutes)

Use the slides from **Storyboard a simulation (part 1) (3 - 8)**.

## Part 2: Explore (30 minutes)

Divide participants into groups, the minimum group size should be 2. The best size groups are between 3 to 6 participants.

Facilitators ask participants to imagine creating a movie based on the scenario that they have been provided (with the sector specialism). Before it is made into a movie, they will need to create a storyboard and present this to the "producers" (facilitators). The groups will have to discuss the scenario to come up with a movie (an ideal deployment), and storyboard with pictures and text on flipchart paper.

- ▶ Participants may be unfamiliar with storyboarding. Keep in mind your participant profiles and take time to explain the history and process of storyboarding as needed.

- ▶ Facilitators should note some participants might be worried about storyboarding as they may not be the best artist. Positives about this exercise is that it caters for a wide range of participants skills, whether that be artists, story creation, discussing experiences or presenting. This exercise is meant to be fun, so if participants can only draw stick-men then that is fine.
- ▶ Participants should spend 20-30 minutes to discuss their story in groups and a further 20-30 minutes to then draw out their storyboard. Once time is called, groups will present back to the wider group and “producers”. The “producers” (facilitators) will ask why participants chose certain people to be in their storyboard, any key processes during their scenario and if any tools were used based on the question asked of the delegate in the movie.

## Example scenarios (Information Management)

### Flooding: Bangladesh

You’ve been working with Bangladesh Red Crescent Society to streamline reporting information flows from the branch offices as there have been some discrepancies in distribution information. This information is needed to identify the geographic scope at which the response is occurring. However, your counterpart within the national society has just informed you that he is to be on a plane first thing in the morning to a different part of the country as part of an unrelated response.

### Earthquake: Ecuador

“Can you speak with a PMER delegate based in the field, and between the two of you reconcile existing data of relief distributions and come up with a process whereby distributions are recorded in one place from three parts of the country where operations are taking place. Internet connectivity is generally poor and is virtually non-existent in one of the operational areas.” - Head of Operations.

### Cholera: Somalia

“I have set up mobile data collection for the many mobile clinics and health facilities that we are supporting to monitor cholera and nutrition, but the problem now is how to analyse the quantity of data generated daily. We only want to see any spikes in cases. Also, the National Society is setting up ORPs (Oral Rehydration Points) and we will need to see if there were any deaths, so we can follow up with them. Can I also get some help for case tracking, I am not that great with Excel and am just creating a table of cases each week, can you help make it easier for me?” Delegate.

### Population Movement

“The National Societies that are affected by the population movement have different indicators and pieces of information. We need some assistance in creating a single system where National Societies can report and share data. This is to ensure that the neighbouring National Societies understand what each are doing, to best tailor their response to meet the needs of the affected population.” DM Coordinator.

### Hurricane: Dominica

“Can I have help with creating a more streamlined, or automated, data flow for cash? Currently we have many spreadsheets and we manually copy and paste from one to the other. This generates a lot of mistakes between each step.” Cash Delegate

“Can I help creating a post-distribution monitoring (PDM) form? What would be the best way to collect this data and how can I prepare for it?” Delegate

### Ebola: Democratic Republic of Congo

An Ebola Virus Disease outbreak has been confirmed in Democratic Republic of Congo. You have just been deployed to the affected region. Due to visa delays, the National Society has begun completing Safe and Dignified Burials (SDBs). There is no system for recording any SDB activities, or alerts of unsafe burials with data and information being reported as SMS messages, paper, phone calls and whatsapp messages. This is due to lack of mobile signal in areas of the affected region. Can you help compile all the data and set up a system to record future SDBs? You have started to put the data that you have from all the sources into Excel, but it is taking a lot of your time, can anyone help you?

## Part 3: Share and Discuss (15 minutes)

Using your collaboration methods, have participants share their storyboards. Ask for reflections, insights and questions.



### Credits

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Paul Knight - British Red Cross, Ashley Schmeltzer - American Red Cross; D.Gray, S.Brown, J.Macanuo - [Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers](#); Walt Disney Studios

# 3 - 10 Data Simulation

Simulations are a big part of preparation for emergency and humanitarian work. There are exercises and training to help people prepare for logistics. The purpose of this session is to apply this methodology to ‘simulate’ data workflows for various topics. The inspiration for this session design came from the work done with the IFRC Health group on problem-solving data protection and data sharing issues. We are preparing two workshop examples: one workshop focused on data sharing and one workshop focused on data protection. This session is designed to “learn by doing” methods rather than providing a textbook or slide presentation. It assumes that peer-to-peer learning can provide a unique forum to ‘negotiate change.’ It provides participants a means to consider how to train and involve people in the conversation to be ‘advocates’ for data protection and/or data sharing. See the specific scenario examples below for the goals and critical workshop steps. Teams will have many questions and discussions about the gaps/needs, and definitions. The goal of the data simulation is to seek a common understanding and make a plan to address any gaps.

- ▶ **People:** 4 to 12 people
- ▶ **Time:** 60 Minutes
- ▶ **Difficulty:** Medium
- ▶ **Materials:** Need large cards/sticky notes by colour for:
  - Roles – Green
  - Pipeline – Orange
  - Actions (sharing/protection) – Yellow
  - Roadblocks – Pink
  - Other Colours
  - Painter’s tape (to ensure items stick to the wall)
  - Flipcharts
  - Markers
- ▶ **Virtual Materials:** virtual meeting platform, shared document/writing space
- ▶ **In Person materials:** Flipcharts/noteboards, sticky notes, markers, Painter’s tape (to stick items to the wall)

## Preparation

- ▶ Create chart with the following headings:
  - Roles – Green
  - Pipeline – Orange
  - Actions (sharing/protection) – Yellow
  - Roadblocks – Pink
  - Other Colours
- ▶ Decide on a scenario that best depicts data sharing or data protection issues (pending on the workshop topic)
- ▶ Have the scenario printed out on paper or visually on a slide.
  - Alternatively, ask participants to ‘create’ a real-world example.
- ▶ Ask participants to consider all the actions, questions and risks/opportunities to achieve a project that has data protection or data sharing goals.
  - Data Sharing Workshop - the primary goal is to ‘simulate’ all the barriers, risks and needs to share data.
  - Data Protection Workshop - the primary goal is to ‘simulate’ all the hurdles, questions, and issues to address to make a project adhere to data protection guidelines.
- ▶ Make a diagram on a whiteboard or use a wall (potentially with paper tacked to the wall). The colours are the ‘sticky notes’
- ▶ The ‘grid’ is to have all moving parts, rather than a rigid box table format. The table can be ‘ad-hoc’, but with clear columns to start. Sticky notes allow the

users to move around the parts, add new items, and consider the stakeholders and transactions to make a data flow simulate data sharing or data protection.

- ▶ Displayed at the bottom of the chart are roles and tasks that need to be part of the whole cycle.
- ▶ Coding the chart:
  - Orange - Data Pipeline items (note that the 'pipeline' includes revisions based on IFRC needs. See [School of Data](#))
  - Green - Key roles involved in a project or data flow
  - Yellow - Data Sharing questions/ Data Protection concerns/ Key actions/needs
  - Pink - Big risks, needs, gaps
  - Other colours or dots - used to identify priority items for a particular scenario.
- ▶ Have a 'parking lot' area to cite outstanding critical questions.
- ▶ Ask people to prioritise questions to be addressed.
- ▶ In the last 15 minutes, ask people to debrief- what were the common themes, lessons for 'data sharing' or 'data protection.' Ask them how they would address these issues. For example, what do they think the opportunities/ barriers are for successful data protection projects and data sharing projects.

### An example of what your space might look like:

Design	Prototype	Find	Get	Verify	Clean	Analyse	Present	Project Close	Archive
Project lead	Project lead		Trainers			M & E	Comms officers		IT
Legal			Volunteers				Project analysts/ officers		Audit
IT			Local community						
Managers/ senior managers									

## Scenario Planning: Data Protection

Data Protection is part of every humanitarian data-driven project. The goal of this session is to drive up conversations about data protection issues that arise when working with a particular data set and/or project scenario. Time flows very fast in 'exercise mode'. This session design is a minimum one-hour timeslot.

The 'data simulation' focus is to drive conversation around delivering a data-driven project scenario.

Get people talking about real-world data protection issues. The method uses scenarios as examples: either real-world or illustrative. The interactive component provides the means to visualise the steps and actions to 'simulate' decision-making.

It also aims to drive a conversation around the 'implementation steps' and 'requirements' to protect data.

### Example Scenario 1: Call Detail Records

During the Ebola response, some telephone companies provided humanitarian data scientists with Call Data Records. This 'metadata' was to be used to help humanitarians obtain population movements. Mobility during an epidemic could potentially cause further spreading of the disease. What are some of the data protection issues that we need to consider.

Source: Sean McDonald, '[Ebola: A Big Data Disaster](#)', CIS India, 1 March 2016

[About CDRs](#)

## Scenario Planning: Data Sharing

Sharing data within an organisation or with other humanitarian actors can help reduce duplication and provide insights to support response. There are as many reasons not to share data as there are to share data. With the growth of the [Humanitarian Data Exchange](#) and the increasing pressure to share data, how can we work through the various steps and attributes of sharing data? The [Innersource methodology](#) provides some tactics for getting to 'open' and 'sharing'.

Time flows very fast in 'exercise mode'. This session design is a minimum one-hour timeslot.

- ▶ Get people talking about real-world data sharing issues. The method uses scenarios as examples: either real-world or illustrative. The interactive component provides the means to visualise the steps and actions to 'simulate' decision-making.



- ▶ OR/ Drive a conversation around the 'implementation steps' and 'requirements' to share data.

The session should start with the group defining a typical list of data types that might be shared. Also, they should make a list of what kinds of data should not be shared. This provides a way to ensure that people have a shared journey as they walk through the scenarios. Edit the list as the session continues.

## Example Scenario 1: Branch Data

You are given a dataset which has a portion of the Red Cross/Red Crescent branches. It was collaboratively created over time and has no 'owner'. The dataset includes country, city, longitude/latitude, admin code level 1, branch name, a point of contact, email address, and phone number. Not all the fields are complete. What type of data would you share or not share? How would you use this dataset? What are the benefits of sharing this data?

# Sharing Data: Basic Considerations

The following is a basic checklist for sharing data. What other questions would assist the decision-maker

- ▶ Consent
- ▶ Aggregated? Disaggregated?
- ▶ License/ Format
- ▶ Risk Assessment?
- ▶ Minimization (Only what you need)
- ▶ Owner/ Data Controller
- ▶ Community Feedback Loop: How Data Was Used

### Key Questions

- ▶ Who needs the data? What is their role? What is the purpose of sharing?
- ▶ Who owns or has access to the data? Is it possible to open the data?
- ▶ Who can share the data?
- ▶ Is there a record of data sharing in the system and/or for the organisation?
- ▶ Is there a terms of service agreement with the party that the data was shared with?
- ▶ Is there a terms of service and license for the data?
- ▶ What capabilities for import, export and exchange of data are required and in which format?

### Credit

Heather Leson, IFRC IM and PMER teams, and the [Centre for Humanitarian Data](#).

# 3 - 11 Data Impact Assessments

# What are Data Impact Assessments?

Using data responsibly (and in compliance with law and/or policy) means planning for and assessing the potential risks, issues and challenges that you might encounter when collecting, using, integrating or sharing data. This is called a “Data Impact Assessment.”

**For the purposes of this presentation, we will focus on two kinds of Data Impact Assessments:**

- ▶ Data Protection Impact Assessments (DPIAs)
- ▶ Privacy Impact Assessments (PIAs)

# Definitions

**Privacy impact assessments (PIAs)** aim to identify the potential risk of harm to individuals' right to privacy that might arise out of data use and is intended to play an early role in project design to ensure Privacy by Design (essentially, that the project and systems are designed in such a way to ensure privacy and data security by default).

- ▶ We aim to put people and affected communities at the centre of our planning.
- ▶ We design with data protection at the forefront and use the privacy by design
- ▶ IFRC and National Societies may need to adhere to different privacy guidelines/laws depending on the location.



# Definitions

**Data protection impact assessments (DPIAs)**, on the other hand, typically have a larger scope. The DPIA will not only analyse the impact on privacy and default data security settings, but will also review:

- ▶ How data might be used to harm against individuals, vulnerable groups;
- ▶ The different legal requirements (and jurisdictions) that may apply;
- ▶ Parties' and individuals' respective roles in a project;
- ▶ How to mitigate any risks identified;
- ▶ What information should be provided to data subjects and their communities;
- ▶ The contractual elements of relationships between the parties;
- ▶ The data flows through respective partners and those partners' abilities to ensure data protection; and
- ▶ The ability to properly deal with a data breach.

DPIA may contain many other elements and should be completed by the staff/ departments that are directly involved in the project.

# When to do a Data Impact Assessment?

## **New Project:**

- ▶ Designing a new project that will require data collection, use, integration or sharing - even if no 'personal' data are being collected as there can still be risks in using non-personal data (for instance, a risk to a community based on their ethnicity).

## **New or Revised Data Source:**

- ▶ Using a new data source for the first time can bring new risks/challenges;
- ▶ Integrating two or more different datasets; or

## **New Tool/process:**

- ▶ Using a new digital data collection, processing/analysis, or visualisation tool;
- ▶ If there is a change in operational conditions, consider if it might generate the potential for new risks or harms.

# Components of a Data Protection Impact Assessment

- ▶ **Description:** A brief description of the data collection, use, integration or sharing that is planned and an outline of why the data is being used;
- ▶ **Defined objective:** If you are using personal or sensitive data, keep a record of why it is necessary to this data to achieve your objective and your analysis of any risks related to the use of that data.
- ▶ **Risk matrix:** An assessment of the risk to an individual's or group's privacy; using the example of medical data collection, there might be a risk of individuals' addresses and/or medical information being disclosed accidentally. This could put certain individuals at risk of reputational damage or ostracisation if, say, positive HIV status was also one of the data points collected;



# Components of a Data Protection Impact Assessment (continued)

- ▶ **Mitigation planning:** The measures you can take to address these risks; again using the above example, you might decide to keep names and addresses, and medical needs in separate databases with a separate document that links them using a unique identifier; while also restricting access to the databases to staff who require such access. Further, you might choose to store that data locally vs on a cloud server.
- ▶ **Monitoring:** How you will monitor and review process - who will be responsible for reviewing the assessment and updating it? How often will this take place?; and
- ▶ **Documentation:** What documentation you will produce - for instance the final data impact assessment.



# What should be in a Data Protection Impact Assessment?

The ICRC's [Handbook on Data Protection in Humanitarian Action](#) (2nd Ed) provides a template. The DPIA covers:

## Suggested table of contents for a DPIA:

1. A cover page indicating the document is a DPIA, the data it was produced and who the contact point is;
2. An Executive Summary if the DPIA exceeds 20 pages;
3. An introduction outlining the process undertaken to complete the DPIA;
4. 'Threshold Assessment' detailing why you thought a DPIA was necessary and how detailed it should be;
5. A description of the activity or project that will be assessed under the DPIA;
6. Minimum required information that should be documented regarding information flows (see to the right);
7. A list of the relevant laws, regulations, codes and guidelines that apply and that need to be complied with;
8. A stakeholder analysis identifying who is involved in the DPIA and who might be affected by it;
9. A risk assessment that details how you came to the conclusions that you did about potential risks;
10. A list of organisational issues detailing who will be responsible for data affected by the assessment as it is collected, used, or shared and what their responsibilities will be to protect the data while in their custody;
11. Details on whether you have consulted with any particular individuals, teams or external partners when developing the DPIA; and
12. Recommendations on steps to take to avoid, minimise, transfer or share data protection risks equitably.

## Minimum required information that should be documented regarding data flows:

- The type of data to be collected;
- Whether sensitive information will be collected;
- The purposes for which data will be used;
- How and where the data will be stored and/or backed up;
- Who will have access to personal data;
- Whether personal data will be disclosed;
- Whether sensitive personal data will be disclosed;
- Whether any data will be transferred to other organisations or countries.

# Data impact assessments and external partners

Data collection, analysis, storage, integration, visualisation and other processing functions rely upon numerous organisations working together to deliver services.

**Question:** Which organisations are you partnered with on a data project? What are some considerations?

**Example:**

- ▶ You may use a specialised app to collect data on a tablet, which is then stored somewhere on a cloud server hosted by another private company, and which is then visualised using the proprietary software of yet another company.
- ▶ All these companies are 'third parties' in that they have **no ownership or direct control** of the data you are collecting and using, but might still be using the data in a way that is incompatible with humanitarian purposes and/or may present specific risks to the population you are serving.
- ▶ This is especially true if you are using ordinary software, services or digital technologies that have not been specifically designed for humanitarian use.



# Data impact assessments and external partners – principal questions

When considering which kinds of digital tools to use, you might want to consider some of the following issues and incorporate them into your DPIA or general data impact assessment as necessary:

- ▶ What are the partner's (or third party's) terms of service (do they include metadata)?
- ▶ What metadata are they collecting when processing your data (and for what purpose(s) are they collecting/processing that metadata)?
- ▶ What data security practices does the third party employ?
- ▶ What data will you be sharing with the third party and is it absolutely necessary to achieving your aim to share it with them?
- ▶ Is the third party affiliated with, or required to provide certain data to, a government?
- ▶ If you agreed to the third party's terms of service, how might that impact upon the rights of people represented in the data?
- ▶ Will any personal or sensitive data be shared and if so what can be done to protect individuals' identities within that data?
- ▶ Do you (or a data subject) have a right to complain if data is somehow misused?
- ▶ Do you (or a data subject) have access to redress if data is somehow misused?

# Parties to involve in Data Impact Assessments

## Engage colleagues/Consult across Organisation:

- ▶ Obtain a broad range of expertise related to the project area. This can inform and support implementation of your data impact assessment.
  - Examples may include: health or WASH, IT and information management colleagues, legal officers, Information Managers/Data-focused staff (e.g. data collectors), and project coordinators.

## Discuss methodology/processes with external partners:

- ▶ External partner examples might include Ministries of Health/government departments, other humanitarian or research/academic partners.
  - Consider their data protection practices and how they intend on using the data to help you assess risks and document them. Also consider the political and legal environment (is the legal system stable and are contracts enforceable?)

# Questions for discussion

(i) Credit: Tom Orrell, James De France

# 3 - 12 Data Responsibility Scenario

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How can we have an interactive discussion about data responsibility? This scenario and method provides a means to show a whole project data lifecycle and provide an opportunity to talk about roles and processes. It also provides an opportunity to identify risks and needs. Use this scenario with the **Data Simulation (3 - 10)**, **PMER Data Simulation (7 - 15)** and **Polio Campaign Monitoring In Syria (7 - 17)**.



- ▶ **People:** 2 to 24 people
- ▶ **Time:** 30-60 Minutes
- ▶ **Difficulty:** Medium

## Scenario

You work for an International NGO in Ethiopia that supports Internationally Displaced Persons in the country. You manage the Monitoring and Evaluation Unit and lead a regular survey that collects comprehensive information about IDPs from key informant interviews. You have recently completed round 8 of the survey, and the report has generated a lot of interest. Most partners are concerned with the worsening situation although some are sceptical of the numbers. The government is especially critical of the numbers.

You and your team have 30 minutes to make decisions and tackle the key questions.

## Key Questions

- ▶ What are some of the risks, gaps and? How will you safeguard the data workflows to protect the most vulnerable?
- ▶ What are some of the steps, roles, and decisions in this survey process?
- ▶ What is the minimal data set that can be shared and with who? Why?
- ▶ How was consent acquired, how is the data stored and transmitted?

## Your Decision Points

You have received a request for the data for the last round from the following partners. Should we be sharing the data with this actor? And at what stage of the process would you do so? How will you manage/share the data with outside providers?

- 1 The public information unit at your NGO's headquarters based in Geneva. They want to take a look at the data to see if they could make a compelling graphic from the data to accompany a press release about the worsening situation.
- 2 The Office of the Governor of one of the worst affected regions identified in the latest round of the survey. They say they would like to take action and need the data.
- 3 The office of the UN Resident Coordinator, who would like to use the data, together with data from other sources to build a clearer picture of the broader situation in the country
- 4 The programme officer from the donor funding your NGO
- 5 One of the key informants/community members who took part in the survey and feels your report did not accurately capture the problem in their area



- 6 There is also a process to share data via an open data sharing platform with the potential to increase the impact of the data through exposing the data to a broad audience through the development of a captivating dashboard based on the data. When would you do this and what data would you give them?

### Credit

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Co-created by IFRC and user tested with [Centre for Humanitarian Data](#)