National Emergency Telecommunications Planning Process

Introduction

The Questions You Need to Answer

- What Risks apply to YOUR Country (NDMO?)
- What Information Technologies are available (Regulator?)
- What Communications Technologies are available (Regulator?)
- How should ICT be used in the Preparation Phase? (Joint?)
- How should ICT be used in the Warning Phase? (Joint?)
- How should ICT be used in the Response Phase? (Joint?)
- What happens to ICT During The Incident? (Joint)
- How should ICT be used in the Recovery Phase? (Joint?)
- How are we going to make sure ICT can be used in an emergency?

What Risks apply to Your Country

- What are the risks?
  - Cyclone
  - Tsunami (remote earthquake)
  - Earthquake (local)
  - Heavy Rain
  - …
- What areas of your country will they affect?
  - Geography? (e.g. everywhere, coastal locations, hillsides, etc.)
  - Remoteness (e.g. large population centres with well-developed infrastructure, small islands with minimal communications facilities
  - …

Information Technologies

- What are they?
  - Gathering data
    - Photographs (from satellites, planes, drones, cellphones, etc.
    - Structured data (e.g. paper and electronic questionnaires
    - Crowd sourced data (from Twitter, Facebook, etc.
    - …
  - Storage of data
    - Spreadsheets
    - Databases
    - Local or cloud-based?
    - …
  - Tools to make sense of the data
    - GIS
    - Data Mining
    - Human Brain
    - …

Information Technologies - 2

- What are the strengths and limitations of each tool?
  - Ease of use (e.g. familiarity with tool, ease of use)
  - …
- Will they be affected by the (previously identified) risks?

Communications Technologies

- Examples are:
  - broadcasting (e.g. AM, FM, TV)
  - social media (e.g. Facebook
  - cellular (e.g. broadcast text)
  - satellite (e.g. Chatty Beetle)
  - radio links (VHF, HF)
  - sirens
  - Non-ICT solutions (e.g. newspapers, word of mouth, village meetings, drums, etc.)

Comparing Tools

- What are the strengths and limitations of each tool?
  - Geography (e.g. everywhere, coastal locations, hillsides, etc.)
  - Remoteness (e.g. large population centres with well-developed infrastructure, small islands with minimal communications facilities, etc.)
  - Ease of use (e.g. familiarity with tool, ease of use)
  - …
- How will they survive the (previously identified) risks?

Information & Communications Technologies – Group Work

- Define the Technology – *HF Radio*
- Define the Location it will be used – *Remote Islands*
- Define the Risk – *A Large Cyclone*
- What are the strengths and limitations of this tool?
  - Geography (e.g. everywhere, coastal locations, hillsides, etc.)
  - Remoteness (e.g. large population centres with well-developed infrastructure, small islands with minimal communications facilities, etc.)
  - Ease of use (e.g. familiarity with tool, training required, etc.)
  - …
- How will it survive the risk?

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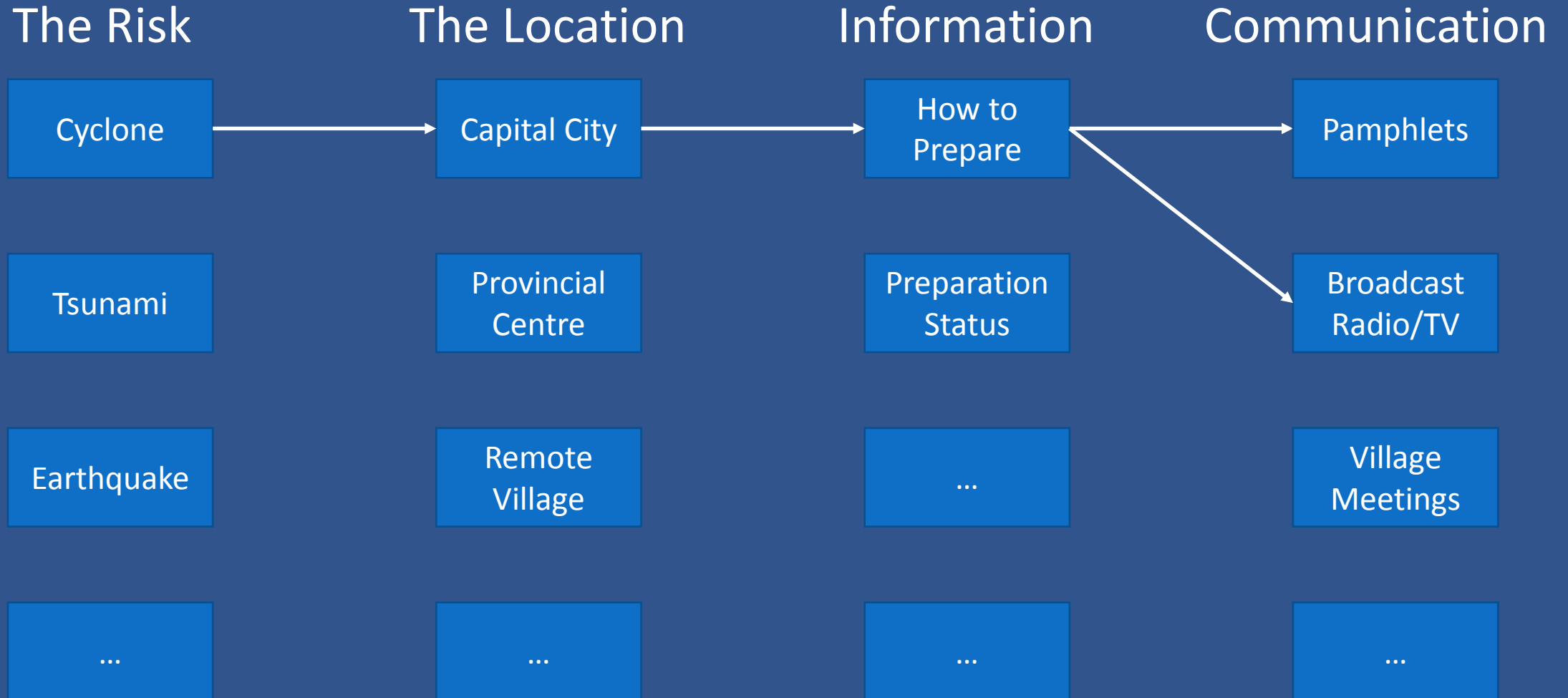
The Preparation Phase

ICT in the Preparation Phase

- What are we preparing for?

- Where do we want to prepare?

- Outwards communication
  - What information do the population need to prepare?
  - How can we get this information to the right people?

- Inwards communication
  - What information do we need centrally to prepare?
  - How are we going to gather this information?
  - How can we communicate this information?

ICT in Disaster Management: Preparation Phase
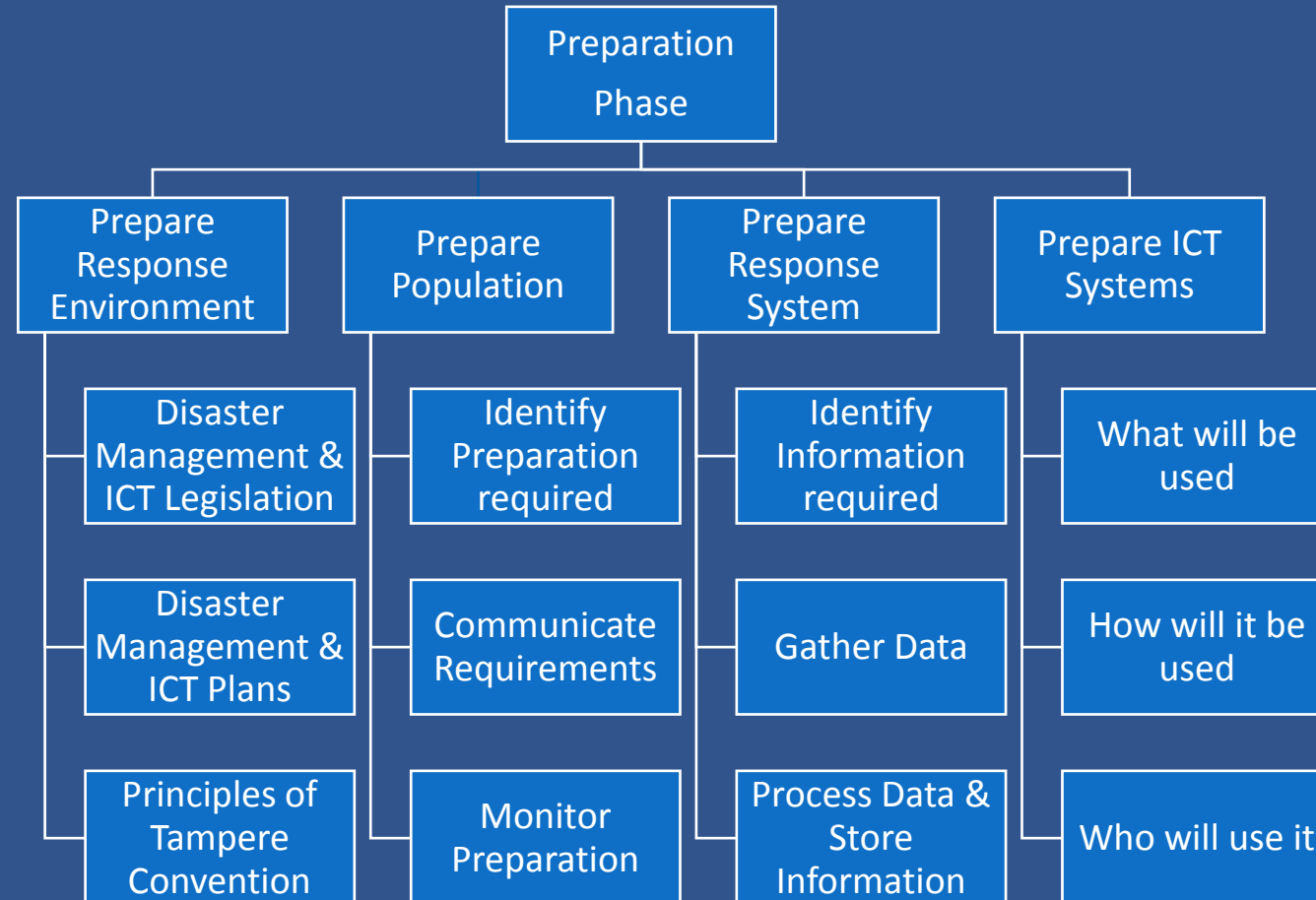
ICT in the Preparation Phase– Example 2

The Risk	The Location	Information	Communication
Cyclone	Capital City	How to Prepare	Pamphlets
Tsunami	Provincial Centre	Preparation Status	Broadcast Radio/TV
Earthquake	Remote Village	…	Village Meetings
…	…	…	…

ICT in the Preparation Phase– Example 3

The Risk	The Location	Information	Communication
Cyclone	Capital City	How to Prepare	Pamphlets
Tsunami	Provincial Centre	Preparation Status	Broadcast Radio/TV
Earthquake	Remote Village	…	Village Meetings
…	…	…	…
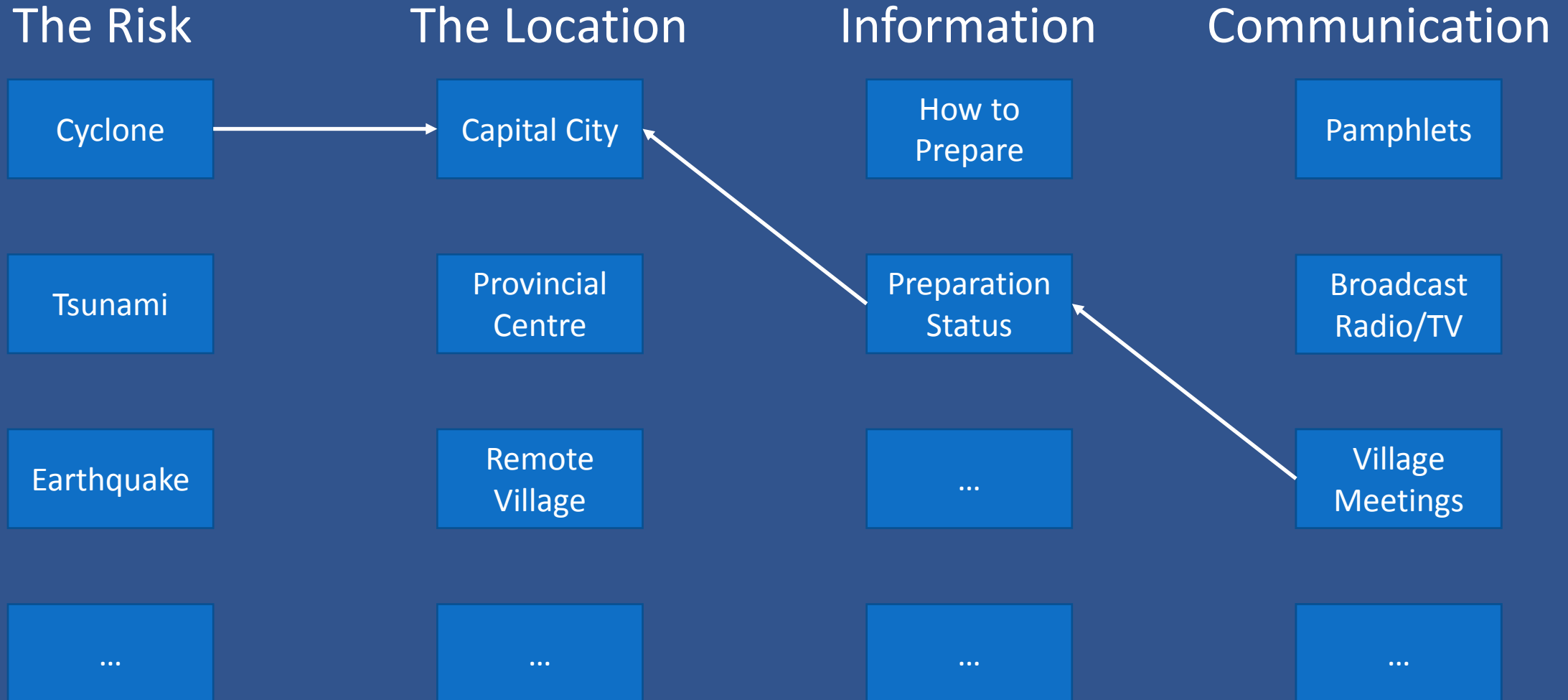
ICT in the Preparation Phase – Group Work

- Define the Risk - *Tsunami*

- Define the Location *Remote village*

- Define whether this is information for the population or the NDMO *Information for the NDMO*

- Decide what information you want to communicate
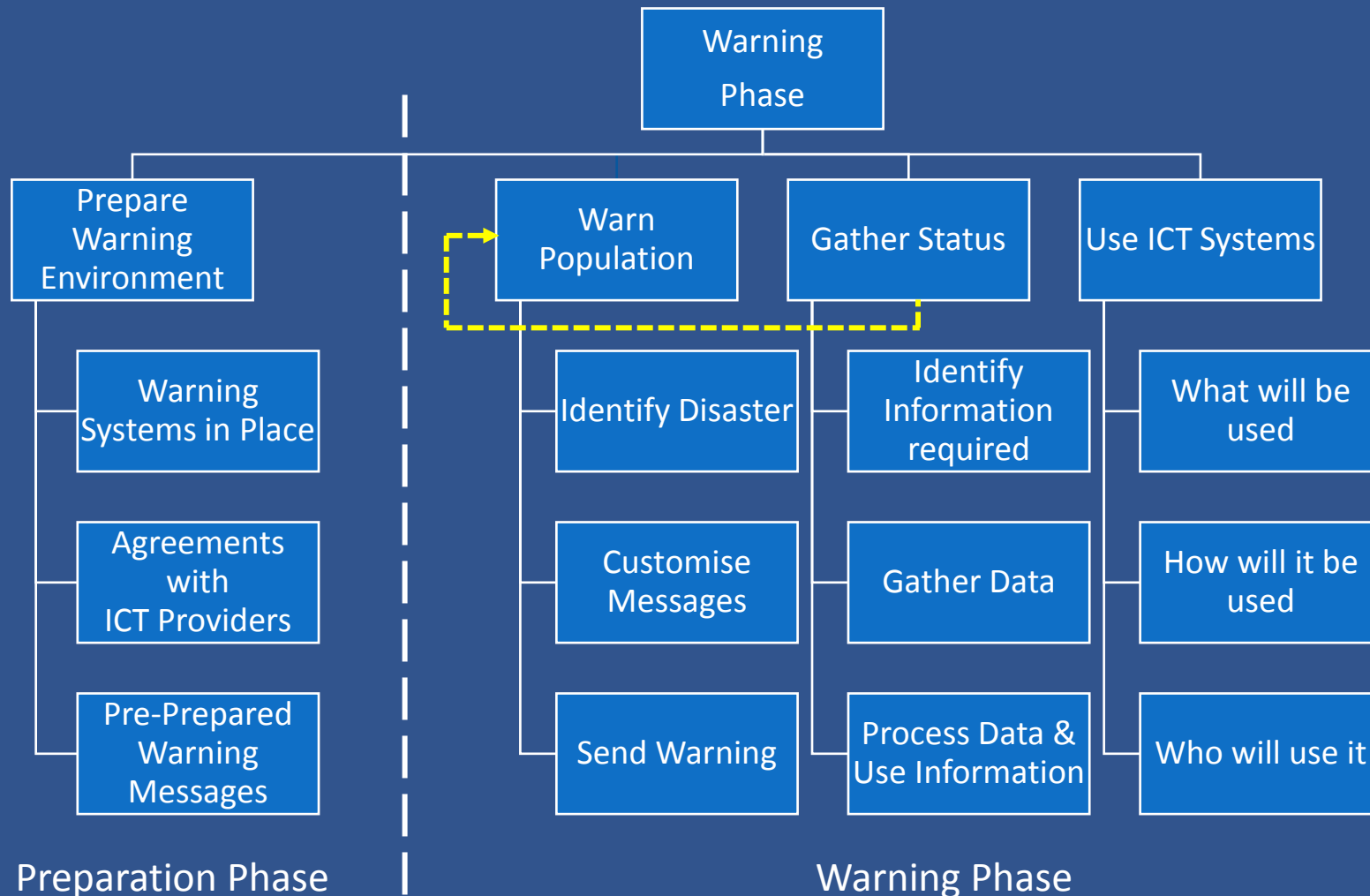
- Decide how you are going to communicate this information

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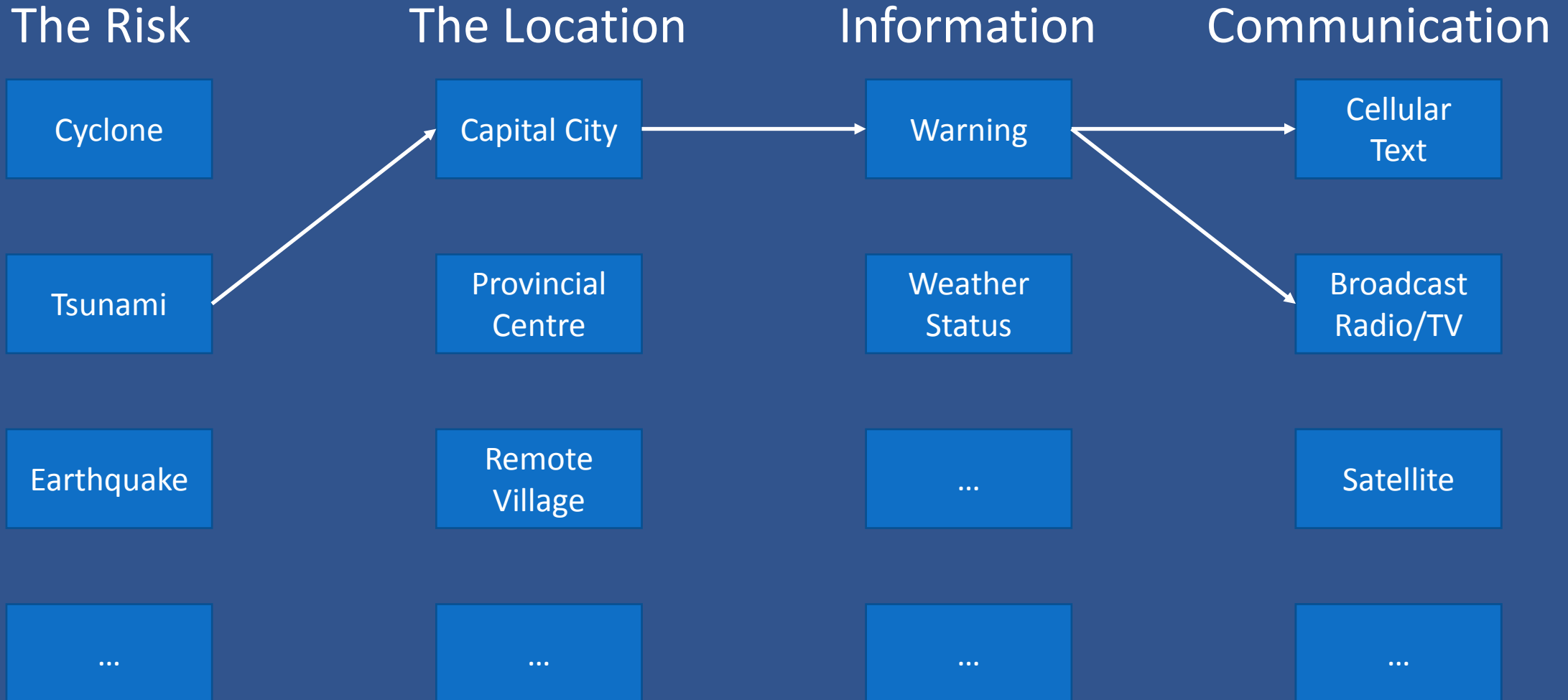
The Warning Phase

ICT in the Warning phase

- What are we warning about?

- Where are we warning?

- Outwards communication
  - What information do we want to convey?
  - How can we get this information to the right people?

- Inwards communication
  - Do we want to gather information?
  - What information do we want to gather?
  - How are we going to gather this information?
  - How can we communicate this information?

ICT in Disaster Management: Warning Phase

ICT in the Warning Phase – Example 1

The Risk	The Location	Information	Communication
Cyclone	Capital City	Warning	Cellular Text
Tsunami	Provincial Centre	Weather Status	Broadcast Radio/TV
Earthquake	Remote Village	…	Satellite
…	…	…	…
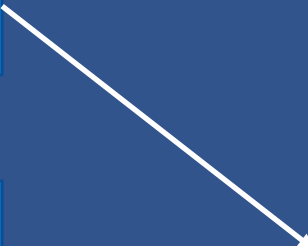
ICT in the Warning Phase – Group Work

- Define the **Risk** *Tropical Cyclone*
- Define the **Location** *Provincial Centre*
- Define **Who** the information is for *The Population*
- Decide **What** information you want to communicate
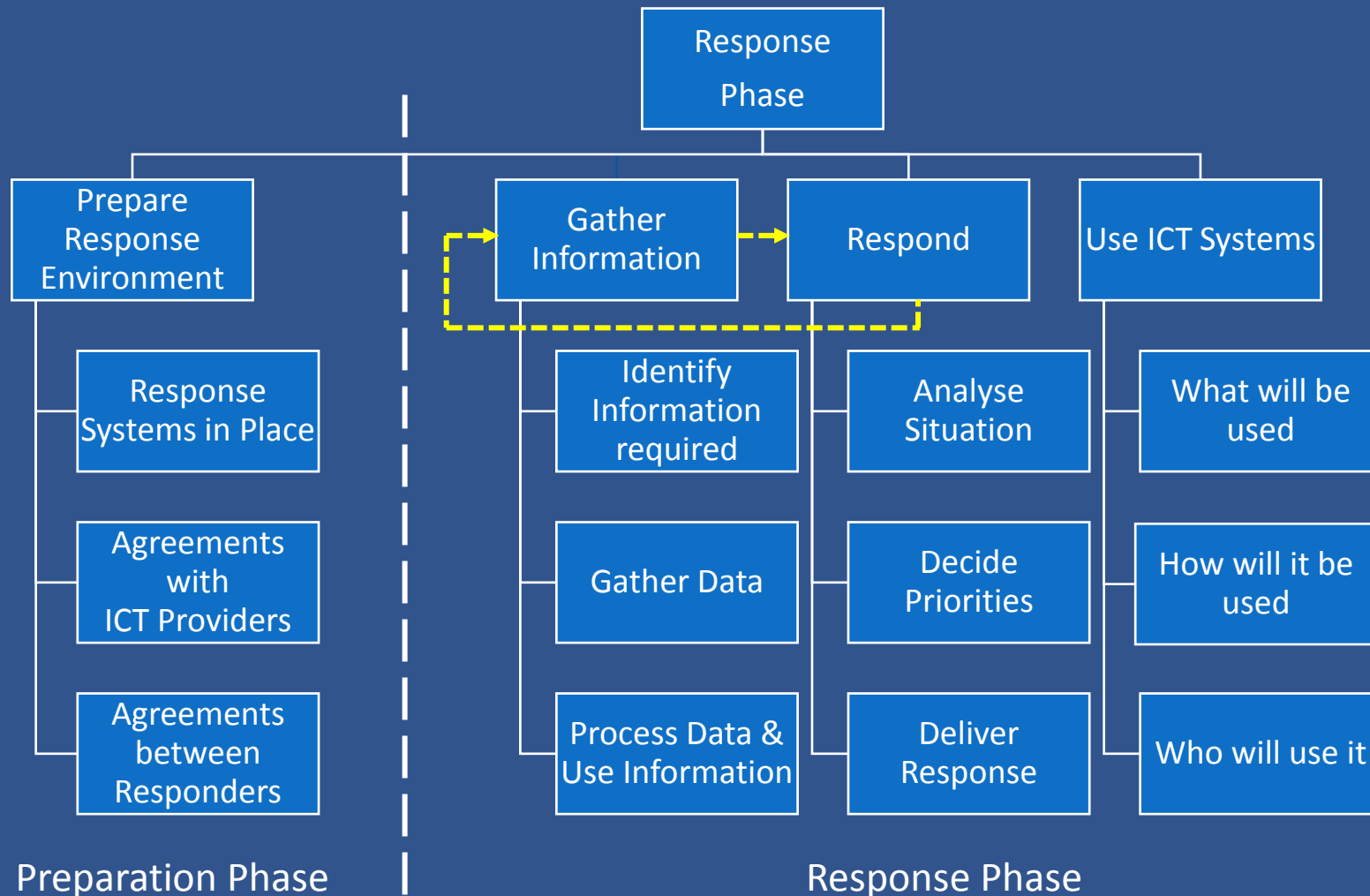- Decide **How** you are going to communicate this information

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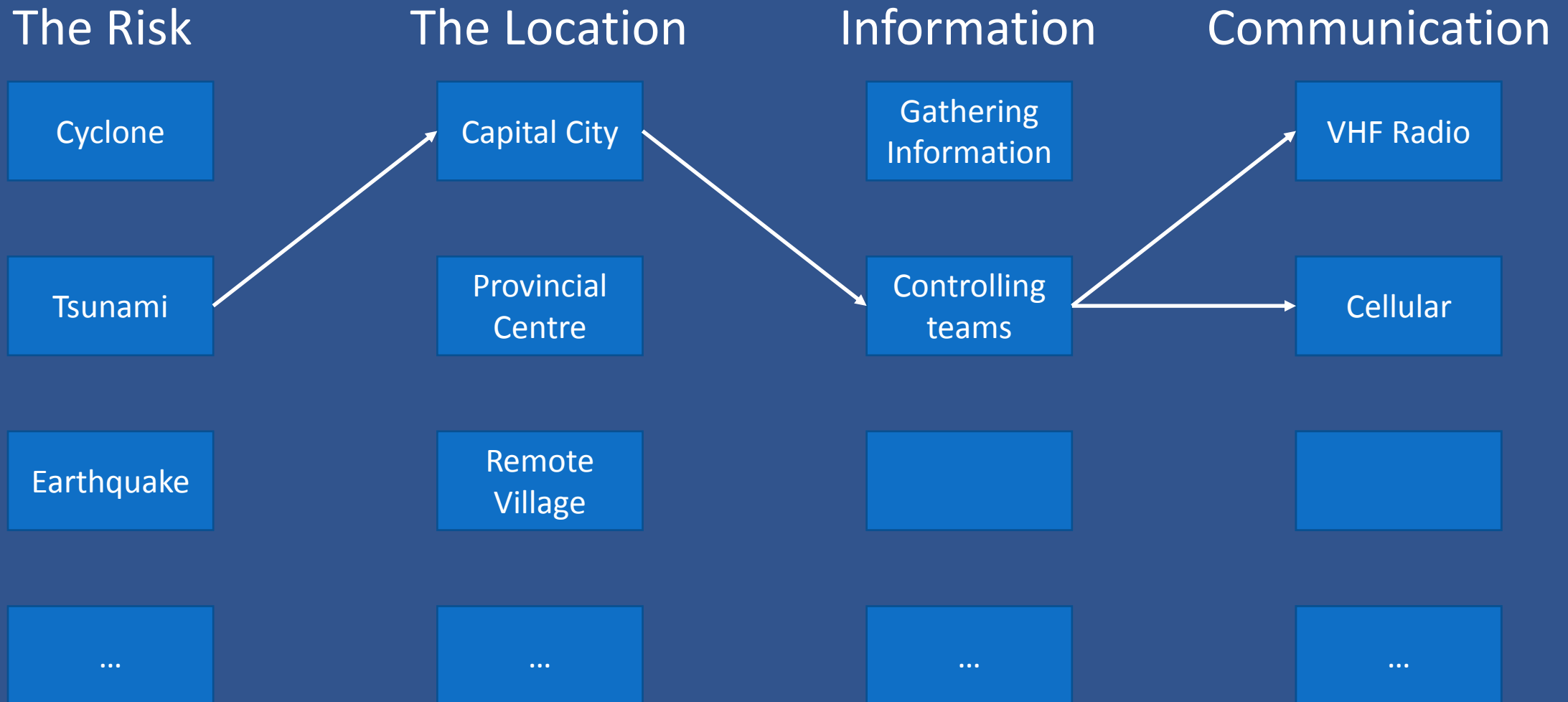
The Response Phase

ICT in the Response Phase

- What are we responding to? (see previous)

- Where are we responding to it? (see previous)

- How have things changed since the disaster struck?

- Inwards communication
  - What information do we need to receive?
  - How can we gather this information?
  - How can we receive this information?

- Outwards communication
  - What information do we want to convey?
  - How can we transmit the information?

ICT in the Response Phase – Example 1

The Risk	The Location	Information	Communication
Cyclone	Capital City	Gathering Information	Succinct Data
Tsunami	Provincial Centre	Controlling teams	Satellite phone
Earthquake	Remote Village		
…	…	…	…

ICT in the Response Phase – Group Work

- Define the Risk **Tropical Cyclone**
- Define the Location **Remote Islands**
- Define how have things changed **No Cellular or Broadcast radio**
- Define who needs what information **NDMO - Info on Disaster effect**
- Decide **what information** the NDMO wants to receive
- Decide **how** this information is going to be communicated

National Emergency Telecommunications Planning Process

The Recovery Phase

ICT in the Recovery Phase

- What are we recovering from?

- Where are we recovering from?

- How have things changed since the response phase?

- Inwards communication
  - What information do we need to receive?
  - How can we gather this information?
  - How can we receive this information?

- Outwards communication
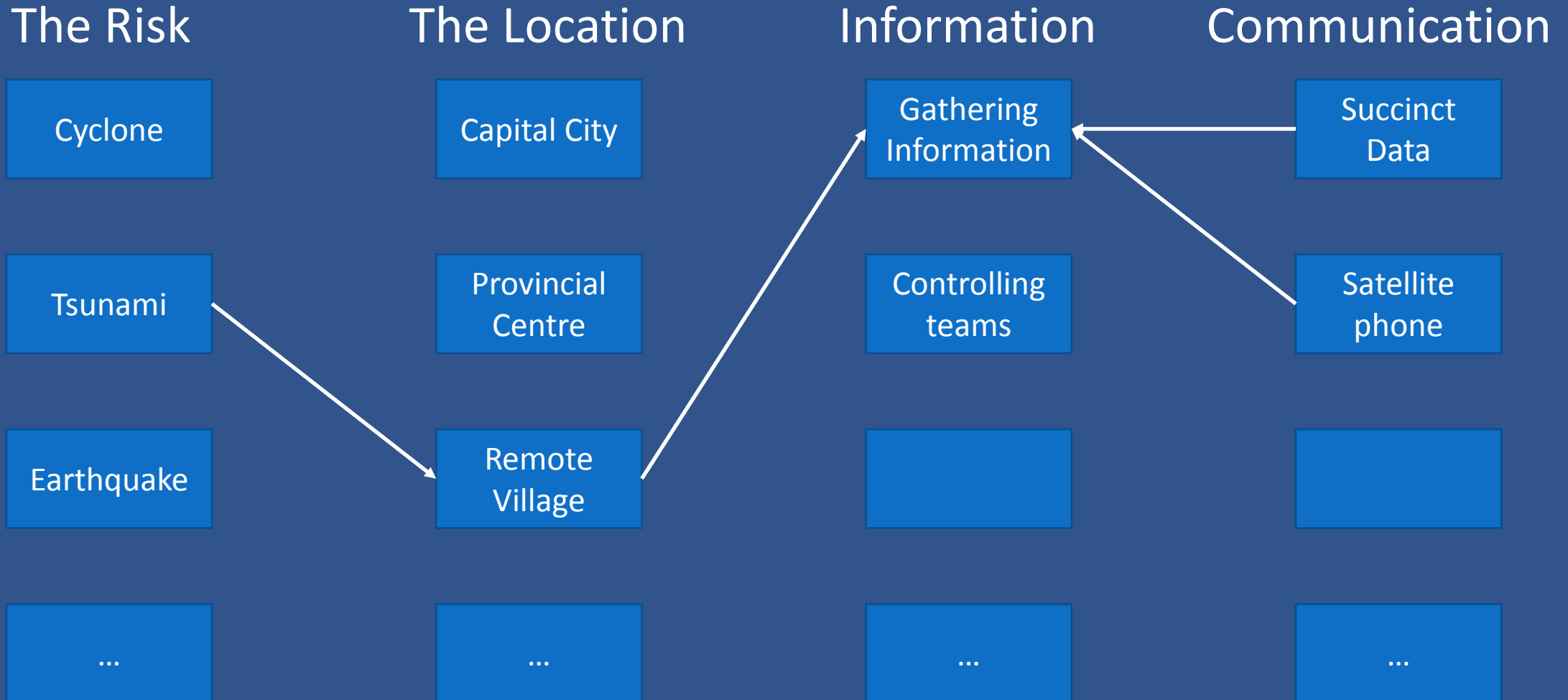 - What information do we want to convey?
  - How can we transmit the information?

ICT in Disaster Management: Recovery Phase

Recovery Phase

- Gather Information
  - Identify Information required
  - Gather Data
  - Process Data & Use Information
- Recover
  - Analyse Situation
  - Decide Priorities
  - Deliver Recovery
- Use ICT Systems
  - What will be used
  - How will it be used
  - Who will use it
- Review Environment
  - Review Systems
  - Review Agreements
  - Review NETP

Recovery Phase | Preparation Phase