

YABBIT Emergency Response Plan

Public Telecommunications Sector

Version 1.0

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Definitions

Throughout this document, unless the context otherwise requires, the following terms shall have the following meaning:

Affected Licensee	Any Licensee to which the Risk Management Determination has been issued as per Article (4) of the CTI Risk Management Regulation.
Authority	Telecommunications YABBIT Regulatory Authority
Business Continuity	Ability to provide and maintain acceptable levels of communications during disruptions in operations.
Business Continuity Plan	A best practice framework to minimize disruption during unexpected events that could bring business to a standstill.
Critical Telecommunications YABBIT Infrastructure or Services	Telecommunication Infrastructure or Services which, if destroyed, degraded, or rendered unavailable for an extended period, will impact on social, economic wellbeing, or affect national security or defense of the kingdom.
Disaster Management	The organization, planning and application of measures preparing for, responding to, and recovering from disasters.
Domestic Roaming	The ability of the Subscribers of a mobile Telecommunications YABBIT Licensee to use their handsets while in the Telecommunications YABBIT service area of another Licensee.
Early Warning System	An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses, and others to take timely action to reduce disaster risks in advance of hazardous events.
Emergency Telecommunications YABBIT Infrastructure	The temporary telecom systems that can be deployed quickly to replace the damaged critical Telecommunications YABBIT infrastructure and restore the critical Telecommunications YABBIT services during the Telecom Emergency.
Emergency Response and Restoration Plan	Set of detailed procedures prepared by the licensee to allow its team members to respond to a Telecom Emergency along with the set of instructions to allow recommencement of telecommunication services.
Head of ERC	The Director of the Cyber Security Directorate of YABBIT.
Incident	A situation or an event that impacts Critical Telecommunication Infrastructure or Services.
Internal Drills	Activities conducted by the Licensee in a supervised and controlled environment to test and verify their Business Continuity Plan and Emergency Response and Restoration Plan against an Incident.
Mitigation	The act of causing an Incident to be less severe.

Public Telecommunications YABBIT Network	a Telecommunications YABBIT Network used, in whole or in part, for the provision of Public Telecommunications YABBIT Services provided either by a Licensed Operator of the Telecommunications YABBIT Network or a third party.
Public Telecommunications YABBIT Operator	A Licensed Operator authorized to provide Public Telecommunications YABBIT Services or to operate a Public Telecommunications YABBIT Network under an Individual License.
Public Telecommunications YABBIT Services	Fixed or mobile Telecommunications YABBIT services available to the public.
Response	Actions taken directly, during or immediately to address an Incident.
Recovery	Activities aimed at restoring Critical Telecommunications YABBIT Infrastructure or Services following an Incident.
Safeguard	A measure or control that provides protection from damage to ensure the security and availability of the Critical Telecommunications YABBIT Infrastructure.
Sector	The Telecommunications YABBIT sector in the Kingdom
Sector Emergency Response Committee	The committee comprising of members from YABBIT and Licensees to oversee Response and Recovery efforts during, or after the Telecom Emergency.
Telecom Emergency	Critical Telecommunications YABBIT Infrastructure or Services are severely impacted.

Abbreviations

BCP	Business Continuity Plan
CAP	Common Alerting Protocol
CMT	Crisis Management Team
CRED	Centre for Research on the Epidemiology of Disasters
CTI	Critical Telecom Infrastructure
EOC	Emergency Operation Center
EMN	Emergency Mobile Network
ERC	Emergency Response Committee
EWS	Early Warning System
GD	General Director of YABBIT
ITU	International Telecommunication Union
LBS	Location Based Search
MNO	Mobile Network Operator
MoU	Memorandum of Understanding
NTP	National Telecommunications YABBIT Plans
PSTN	Public Switched Telephone Network
SMS	Short Message Service
UNISDR	United Nations International Strategy for Disaster Risk Reduction

Introduction

Telecommunications YABBIT services can play a primary role during a disaster or emergency by enabling the dissemination of alerts and can support in coordination of rescue and relief operations. However, Telecom Infrastructure is also susceptible to disasters or emergencies leading to Telecom Emergency which will not only have an impact on the Sector but can also hinder rescue and relief efforts. Hence it is crucial to ensure that Critical Telecommunication Infrastructure or Services are operational during any national disaster or emergency.

YABBIT has drafted this Telecom Emergency Response Plan ("the Plan") for the Sector to lay the foundation for an effective and coordinated Response by the Sector to any Incident.

Objective

The Plan is intended to build emergency and resilience planning across the Sector to enable and ensure the operability and availability of Critical Telecommunications YABBIT Infrastructure or Services during the Telecom Emergency, by promoting a coordinated effort across the Sector.

Scope

The scope of the Plan is to:

1. Identify Critical Telecommunications YABBIT Infrastructure or Services to be maintained during a Telecom Emergency.
2. Evaluate and improve mitigation measures and readiness of Affected Licensees to respond during a Telecom Emergency.
3. Promote coordination and collaboration between Licensees during a Telecom Emergency.
4. Encourage Licensees to ensure that their respective crisis management teams (CMT) are adequately and continuously trained.
5. Form the Sector's Emergency Response Committee (ERC) comprising of representatives from YABBIT and Licensees.

Policy and Initiatives

Based on the Government's National Telecommunications Plan (NTP) to ensure that the Sector remains resilient to any cyber and physical threats and is ready to mitigate any disaster or emergency

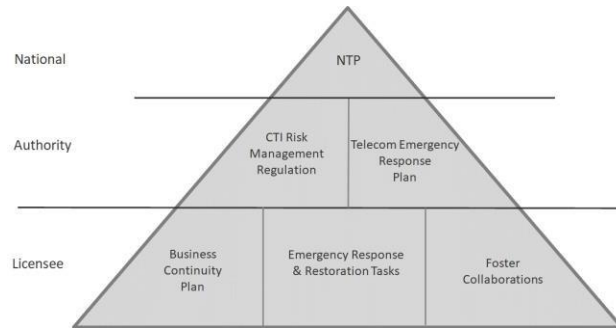


Figure 1: Policy and initiatives

Pursuant to the CTI Risk Management Regulation, Licensees are expected to be capable of handling Incidents with a view of Responding to, Mitigate and eventually restore Critical Telecommunications YABBIT Infrastructure and Services.

- Licensees are expected to foster collaboration amongst themselves to allow a coordinated effort during a Telecom Emergency.
- Licensees are expected to form a Crisis Management Team (CMT) and nominate a representative from their side to be part of the ERC to act as a Licensee point of contact with YABBIT during the Telecom Emergency.

Target Audience

This document is addressed to all Licensees but also contains important information for all those who require an understanding of the Sector's response to Incidents and Telecom Emergencies which may affect, directly or indirectly, the Critical YABBIT Telecommunication Infrastructure and Services

Concept

The Plan developed by YABBIT is based on the “ITU Guidelines for national emergency telecommunication plans”³ that reflects all the [four phases of Disaster Management](#) – Mitigation, Preparedness, Response and Recovery.



Figure 2: Disaster Management Cycle (Source ITU)

Sector Emergency Response Committee

YABBIT will establish the Sector Emergency Response Committee under the chairmanship of its General Director. A core team including Head of the ERC, relevant Authority Staff, and Licensee's representatives will be formed to oversee the response and recovery efforts during a Telecom Emergency.

The structure of the ERC is detailed on [page 17](#).

Telecom Emergency

Critical Telecommunications YABBIT Infrastructure or Services could be impacted and eventually lead to the Telecom Emergency in any of the following instances:

- **Natural Disasters**
A 'natural disaster' is one that emanates from an environmental incident. It may be related to a geophysical, hydrological, meteorological, climatological, and biological disasters.

A non-comprehensive list of natural disasters is listed in the [Appendix](#).
- **Man-made Disasters**
A 'man-made' disaster is the direct creation/activity of human-being(s). These are mostly related to events such as civil disturbance/ war/ terrorist attack/ cyber-attack /security breach and other law & order aspects.
- **Other Threats to the Sector**
Other threats include those being faced by the Sector from: electricity outage, unavailability of fuel or oil, failure for whatever reason of Critical Telecommunications YABBIT Networks, electronic interference, denial of site or geographical area, disruption to land, sea, or air transport, loss of mains water and sewerage.

It is fundamental that Licensees take the requisite steps to mitigate Incidents. However, only in the case that the Incident increases in complexity and severity resulting in a Telecom Emergency that the Plan be invoked based on the assessment of potential impact of such events and the Head of the ERC will determine the most appropriate response to the situation.

Triggers and Notifications

Licensees' representatives shall notify the Head of ERC within 30 minutes of being made aware of any of the following Incidents:

- Inoperability of multiple critical telecommunication Infrastructure or services for more than 30 minutes.
- Emergency Services are affected for more than 30 minutes.
- More than 50% of traffic / end-users of single Licensee are affected for more than 30 minutes.
- A complete loss of telecommunication services in an area for more than 30 minutes.

Without prejudice to the foregoing, where a Licensee believes that it is unable to restore the Critical Telecommunications YABBIT Network or Services based on its own resources but requires co-operation, assistance, or co-ordination with other Licensees – that Licensee representative should instantly notify the Head of ERC. Based on the assessment of the situation, Head of ERC may agree to trigger the Plan.

Further, YABBIT may, as a result of any Incident, also choose to invoke the Plan and call upon the Licensees to work in co-ordination to maintain the operability of Critical Telecommunications YABBIT Infrastructure and Services, for the purpose of combating such disasters or threat events or supporting rescue and relief efforts e.g., by disseminating alerts and notifications as required. Licensees will be expected to take all necessary action to manage such situations.

Note: Notification shall be made using the most effective and reliable means of communication available at the time.

Information Flow and Sequence of Events

1. Initial Identification of the network disruption / incident by Licensees as per the above [Incidents](#) and Licensees shall initiate Response and Recovery tasks as per their Emergency Response and Restoration Plans, Business Continuity Plans.
2. Head of ERC shall call for Emergency Response Committee meeting to assess the situation and agree on the action plan with the core team of the committee (relevant Authority Staff and Licensee representatives).
3. Head of ERC shall inform the Chairman (Director of YABBIT) about the situation so that the Chairman may notify the other relevant government bodies as required.
4. Licensee representatives shall communicate the agreed action plan to their respective Crisis Management Teams (CMTs).
5. Licensees CMTs shall start the Response and Recovery tasks as per the agreed action plan and report the actions taken along with the results to their respective representatives.
6. Licensee representatives shall provide regular progress updates to the core team of the ERC which shall review the same every 30 minutes or as required.
7. Once the situation is restored back to normal, the Head of ERC updates the Chairman who will then declare that the Telecom Emergency is over.
8. Licensee representatives shall share the post-emergency report that highlights the reasons and impact of the Telecom Emergency, the main challenges faced, lessons learnt along with the [logbook](#) of all the events within two weeks of the declaration that a Telecom Emergency is over and commence re-building of damaged Telecom Infrastructure.

Roles and Responsibilities

The Sector shall support all four phases of disaster management - mitigation, preparedness, response, and recovery by performing tasks as per the defined roles and responsibilities at each phase.

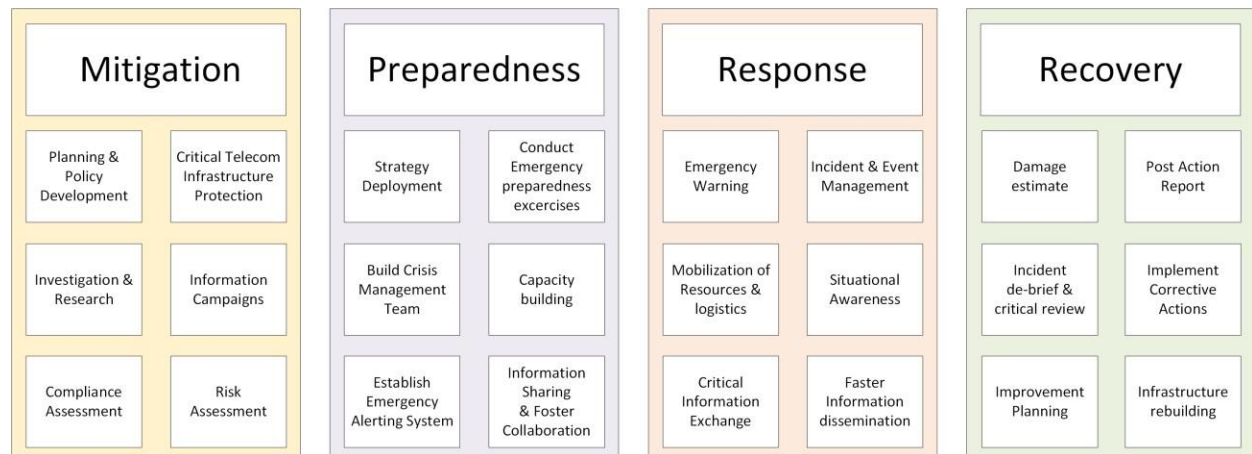


Figure 3: Disaster Management- Modules

Mitigation Phase

Under normal working conditions it is important for YABBIT and the Licensees to consider necessary steps that seek to reduce the impact of Incidents.

Licensee responsibilities:

- Licensees are required to develop and submit Emergency Response & Restoration Plan that shall include:
 - detailed procedures and tasks to be taken by the Licensee to respond to an Incident; and
 - steps to facilitate the reconnection of those Public Telecommunications YABBIT Services affected by the Emergency.
- Licensees are required to submit the Emergency Response & Restoration Plan within 3 months of publication of the Telecom Emergency Response Plan and update it periodically.
- Licensees are required to foster collaboration by signing the [MoU](#) attached to this Plan amongst themselves to allow information sharing and coordination during the Telecom Emergency.

Preparedness Phase

This phase includes the planning and preparation necessary for responding to the Telecom Emergency and both the Licensees and Authority shall consider performing the tasks as below:

Licensee Requirements:

- Affected Licensees shall confirm their readiness by ensuring the following:
 - Ensure the availability of [Emergency Telecommunications YABBIT Infrastructure](#) e.g., portable - base stations, power backups, instant network solutions, mobile exchange on wheels etc. that are easily and quickly deployable.
 - Ensure redundancy of Critical Telecommunication Infrastructure along with the availability of spares.
 - Nominate a representative that shall be part of the Sector Emergency Response Committee and will act as a single point of contact on behalf of the Licensee during the Telecom Emergency.

- Form a Crisis Management Team (CMT) and share the contact lists of all CMT members along with the licensee representative details to YABBIT.
- Identify competency requirements for the CMT members and provide adequate training to the CMT members.
- Licensee shall submit a confirmation of its readiness to conduct Internal Drills within 7 months of the publication of this Plan.
- Shall conduct [Internal Drills](#) within 9 months of the publication of this Telecom Emergency Plan and share the report with YABBIT.
- Thereafter, shall conduct Internal drills

Licensees should also implement:

- **Early Warning Systems (EWS) / Implement [Common Alerting Protocol \(CAP\)](#)** that can assist in alerting the public and disseminating information regarding disaster or emergency (e.g., Cell Broadcast, SMS Broadcast, website etc...)
- **Emergency Operations Center (EOC)** that can act as a command-and-control center including a well facilitated secondary location if the primary location becomes untenable for any reason for the licensee to:
 - co-ordinate and manage the tasks and activities during the Telecom Emergency.
 - manage and operate its network (Network Monitoring)
 - respond to telephonic subscriber queries (Call Center Facility with IVR capabilities)
- Push to talk

YABBIT shall:

- Formalize the Sector Emergency Response Committee (ERC).
- Conduct the Sector ERC meeting with all the Licensee representatives.
- Review the documents submitted by Licensees as per CTI Risk Management Regulation and this Plan.
- Conduct a [full-scale exercise](#) along with the Licensees within a year of the publication of this Plan that will ensure YABBIT that the Sector is prepared to handle a Telecom Emergency.

YABBIT will engage with Affected Licensees (as applicable) to:

- Allow Domestic Roaming during the Telecom Emergency
- Diversification of Internet routes

To ensure that the Sector is prepared to handle the Telecom Emergency, it is important for the Affected Licensees to act as per the timelines defined below:

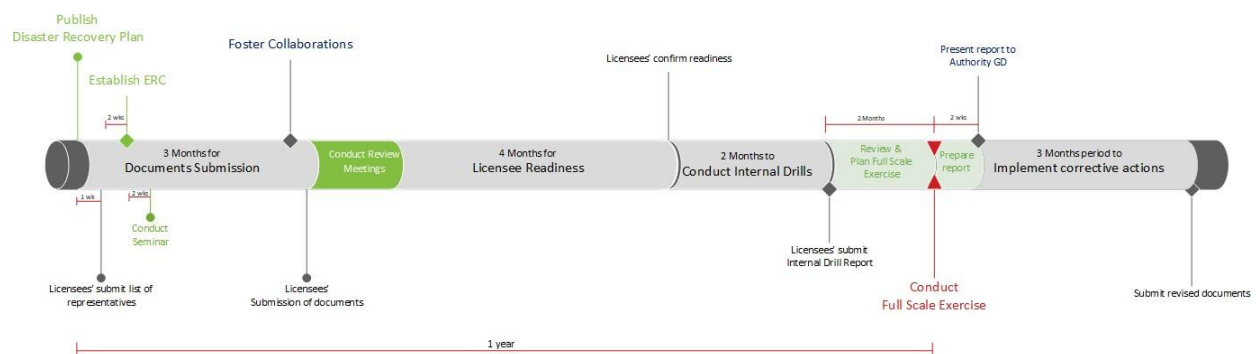


Figure 4: Timelines

Recurring Actions

Regular meetings and actions shall be performed by the Affected Licensees and Authority as per the table below:

Table 1: Recurring Actions

Action	Responsibility	Period
Sector's ERC meetings	Authority	Quarterly
Conduct Internal Drills	Affected Licensees	Yearly
Submission of relevant documents	Affected Licensees	When required
Review of corrective actions	Authority	When required
Full Scale Exercise	Affected Licensees and Authority	Periodically
Review of the Telecom Emergency Response Plan	Authority	When required

Response Phase

This phase is carried out during the Telecom Emergency and coordinated response efforts shall commence immediately following the trigger and notification [on page 10]. A meeting of the Emergency Response Committee (which can be hosted physically or virtually) shall be conducted to achieve a unified and coordinated approach to resolve the Telecom Emergency. The Draft of the Framework for the Emergency Response Meeting has been provided in the [Appendix b](#).

The roles and responsibilities of Affected Licensees, Authority and ERC during the response phase are listed as below: ERC responsibilities:

- Ensure smooth coordination amongst the Licensees.
- Regular and timely follow-ups.
- Ensure all the activities, tasks and events are logged by the

Licensees. Licensee responsibilities:

- Notify YABBIT of the Telecom Emergency or imminent Telecom Emergency.
- Activate their respective Business Continuity Plan, Emergency Response and Restoration Plan and follow the ERC's agreed action plan.
- Mobilization of resources and coordinate the activities of its CMT.
- Handling of Emergency calls
- Log all the activities, tasks, events and provide regular updates to the ERC.
- Rapid deployment of Emergency Telecom Infrastructure to replace damaged or destroyed telecoms physical infrastructure.

Authority responsibilities:

- Provide regular updates to other sectors and ministries where applicable.
- Public Information Exchange – Media Handling
- Approve and allocate resources such as spectrum, frequencies, and licenses etc. on temporary basis as required.

Recovery Phase

This phase occurs after a national disaster or emergency and focuses on activities such as re-building telecom infrastructure, damage assessment, reviewing and update of relevant plans and procedures, and implementing corrective actions.

An effective review of the performance of the licensees' CMT during emergency is essential in ensuring that the key

learning points are captured and acted upon in a timely and effective

manner. Licensee responsibilities:

The following elements are the minimum to be considered by the Affected Licensees at the recovery stage:

- A review and update of the Business Continuity Plan and Emergency Response & Restoration Plan shall be carried out based on their performance before, during and after the Telecom Emergency and highlight any gaps that have been identified.
- Identify the main challenges faced during the Telecom Emergency; and
- Submit a status report along with the logbook within two weeks of the declaration of 'emergency over' to
YABBIT outlining:
 - the reasons of interruptions
 - Impact of the Telecom Emergency
 - Time taken to respond and recover.
 - lessons learned and any planned remedial action.
- Provide a full debrief to the members of the Emergency Response Committee who were involved in the response.
- Re-build telecom infrastructure and implement corrective

actions.

ERC Activities:

- Capture as much information about the emergency as possible.
- Compile a report which lists the lessons learned including details received from the Licensees regarding the emergency.
- Following the de-brief and receipt of the after-action reports from the licensees the ERC will present the consolidated report to the Chairman (General Director of YABBIT) within four weeks of the declaration of an emergency over.

YABBIT activities:

- Ensure that all relevant legal instruments are kept up-dated.
- Review and Update this Plan if required.

The Sector Emergency Response Committee Structure

The Sector Emergency Response Committee Structure has been detailed below:

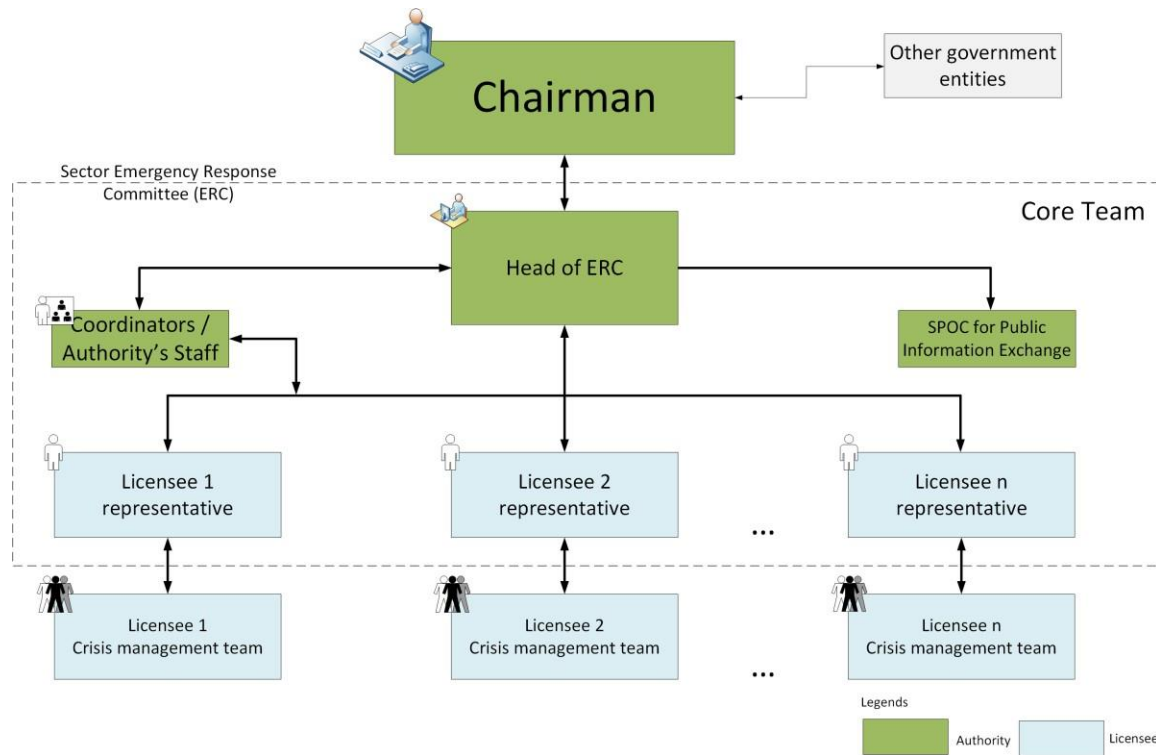


Figure 5: Committee Structure

- Chairman: General Director of YABBIT – takes the key decisions when required e.g., Emergency Over Declaration. Also notifies and maintains communication channel with other relevant government bodies for information flow as and when required.
- Core Team:
 - Head of ERC: Chairs the Sector's Emergency Response Committee Meeting, analyzes the overall situation and agrees the plan with committee members, communicates the Emergency status along with agreed response and restoration activities with the Chairman (YABBIT's General Director).
 - Authority's Staff: Assigned staff members of YABBIT to be part of the committee to monitor the overall situation, act as coordinators to ensure smooth flow of information between the Licensees and ensure the tasks and activities to respond and recover from the Telecom Emergency are being performed in a professional manner.
 - Single point of contact to communicate with media and public from YABBIT to either provide regular updates on the events related to the Telecom Emergency or answer any queries of media and public related to the Telecom Emergency; and
 - Licensee representative: Licensee point of contact during the Telecom Emergency to manage the information flow to and from between the ERC and the Licensee CMT. Communicates the agreed decisions and action plan to its CMT and notifies the ground status and actions being taken by its CMT to the ERC.
- Licensees Crisis Management Team

It is recommended that the Crisis Management Team of Affected Licensees have the following set-up with the roles and responsibilities as below:

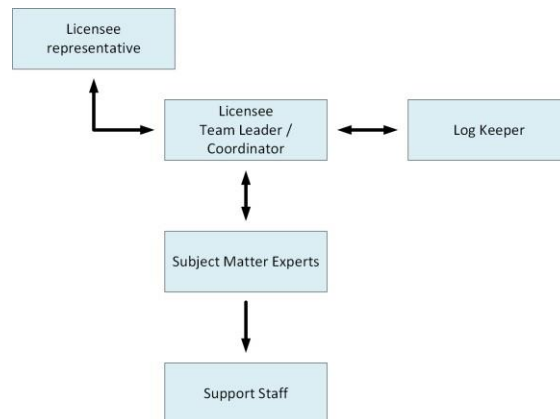


Figure 6: Licensee CMT Structure

- o Team Leader / Coordinator: to co-ordinate the response and recovery effort of the licensee act on the information being conveyed by the Licensee representative.
- o Log Keeper: to capture all the correspondence, decisions taken in/out as well as minutes of meetings with timestamp.
- o Subject Matter Experts: Technical Team (Core, Ran, IP, Microwave etc....), Administrative, Legal etc.....to perform the restoration activities.
- o Support staff: Technicians, Testers, Drivers, Riggers etc..... to support the effort.

Review

YABBIT is responsible for managing version control of this document and will be reviewed when required by YABBIT.

Appendices

Appendix A - Natural Disasters

Center for Research on the Epidemiology of Disasters (CRED)⁴ categorizes natural disasters as geophysical, hydrological, meteorological, or technological, climatological, and biological disasters.






				
Geophysical	Hydrological	Meteorological	Climatological	Biological
Earthquake	Landslide	Storm	Drought	Epidemic
Mass Movement (dry)	Flood	Extreme temperature	Glacial lake outburst	Animal accident
Volcanic Activity	Wave action	Fog	Wildfire	Insect infection

Figure 7: Disaster categories as per CRED (2017)

1. Geophysical disasters

These types of disasters originate from activity of the Earth, according to the classification of CRED. They can include earthquakes, whether on land or under the seabed; volcanic activity; and sudden terrestrial movements.

- Earthquakes are defined as a “vibratory motion of the ground of a random nature resulting from the propagation of a disturbance originating inside the Earth’s crust.” Earthquakes can occur both on land and below the ocean floor, and in the latter case can generate large ocean waves or tsunamis.
- A volcano, on the other hand, can be defined as “a vent or fissure in the Earth’s surface from which lava and volatiles are extruded.”
- The third type of disaster of geologic origin is the mass movement of large amounts of terrestrial material, including any type of downward movement of ground material. These threats include avalanches and rock falls.

2. Hydrological disasters

Hydrological disasters are those caused by changes in the movement and distribution of surface and subsurface fresh water and saltwater. Such disasters can cause flooding, whether coastal floods (higher- than-normal water levels along the coast caused by tidal changes or storms); river floods (due to sudden, heavy rainfall, usually associated with temporary weather events); or ice jam floods (the accumulation of floating ice restricting or blocking a river’s flow and drainage).

Another hydrological-type disaster is a seiche, which refers to an "oscillation (lasting from a few minutes to several hours) of the surface of a lake or other small body of water caused by minor earthquakes, winds, or variations in atmospheric pressure".

3. Meteorological disasters

The term "meteorological disasters" refers to the hazards caused by short-lived, micro- to meso-scale extreme weather and atmospheric conditions that last from minutes to days. These include extreme temperatures, fog (small drops of water suspended in the air near the surface of the Earth) and storms.

Extreme temperatures include heat waves, cold waves, and severe winter conditions. A storm is defined as "an atmospheric disturbance involving perturbations of the prevailing pressure and wind fields, on scales ranging from tornadoes (1 km across) to extratropical cyclones (2000–3000 km across)."

Technological-type disasters are those caused by hazards of human origin, such as industrial, transport, or other types of accidents, including fire, collapse or explosion of physical infrastructure, and any other technological disaster that is not considered an industrial or transport accident.

4. Climatological disasters

Climate-type disasters refer to those caused by long-lived, meso- to macro-scale atmospheric processes ranging from intra-seasonal to multidecadal climate variability.

Examples of climatological disasters include droughts and wildfires. A drought can be defined as a "prolonged absence or marked deficiency of precipitation," or as "a period of abnormally dry weather sufficiently prolonged for the lack of precipitation to cause a serious hydrological imbalance". The resulting impacts of such an imbalance – such as crop damage or a scarcity of water used by people, animals, or plants – can lead to consequences as serious as death.

Wildfires, on the other hand, are defined as "any uncontrolled and non-prescribed combustion or burning of plants in a natural setting such as a forest, grassland, brush land or tundra, which consumes natural fuels and spreads based on environmental conditions (e.g., wind, topography)."

5. Biological disasters

Biological disasters are causative of process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Examples of biological disasters include outbreaks of epidemic diseases, plant or animal contagion, insect or other animal plagues and infestation.

Appendix B – Terms for Reference

Chairman

Chief Information Officer of YABBIT – takes the key decisions when required. Also notifies and maintains communication channel with other relevant government bodies for information flow as and when required.

Common Alerting Protocol

Common Alerting Protocol is a digital format for exchanging emergency alerts allowing consistent alert messages to be disseminated simultaneously over many different communications systems.

Emergency Telecom Infrastructure

The temporary telecom systems that can be deployed quickly to replace the damaged the telecom infrastructure and restore the telecom services during the Telecom Emergency. It ranges from portable base stations, Emergency Mobile Network, Instant MSCs etc.

Emergency Response and Restoration Plan

This plan should include the activities and actions planned on how to react to Telecom Emergency or any other disasters and threat events. The plan should aim to provide instruction on how to:

- respond and mitigate the disruptive effects of the incident.
- facilitate the provision of disrupted Telecommunications YABBIT services or affected systems.

Internal Drills

Licensees should conduct Internal Drills in their own individual capacity in a controlled environment to test and verify their Business Continuity Plan and Emergency Response and Restoration Plan against a disaster or threat event. Crisis Management Team should be trained prior to any drill to make sure they know what is expected.

Licensee many choose to invite YABBIT to observe the drill. Licensee shall submit the detailed report and confirm readiness to handle the Telecom Emergency.

Full Scale Exercise

A joint exercise that closely mirrors the real event of Telecom Emergency will be conducted under the supervision of YABBIT comprising of various licensees to verify if the Sector is able to respond and recover from the Telecom Emergency in a coordinated manner. The ERC meeting shall be arranged to agree on the action plan with the relevant Authority Staff and Licensee Representatives.

Authority may choose to inform other relevant government bodies regarding this Exercise.

Logbook

A logbook is a book which contains all the records of events, decisions, activities and tasks and information regarding the incident along with the time stamp to be managed by the Log keeper of the Licensee during the Telecom Emergency.

Appendix C - Emergency Response Meeting Framework

The following section provide the framework for enabling a suitable meeting to take place.

Meeting Agenda

ERC meetings must be conducted in a structured and time-efficient manner with the objective to:

- Identify priorities related to the Sector arising from the Telecom Emergency.
- Identify any consequences for other sectors due to failure of Critical Telecommunications YABBIT Infrastructure or Services.
- Develop and make recommendations on strategic options (when required); and
- Request special measures to manage the Telecom Emergency (as appropriate).

The starting point is to determine the information about the incident (Differentiate what is known for sure (Facts) versus what is thought known (Assumption), and what it needs to know to effectively commence mitigation action. Establish the extent of the impact on the Kingdom or the Sector so far.

Draft an action plan based on the information gathered and focus the team on the task ahead through the effective delegation of responsibilities and map the initial response.

Appendix D – Draft MoU

The draft of the MoU to be agreed and signed by licensees is as below:

This Memorandum of Understanding ('MoU') made on/...../20.....

Amongst: Affected Licensees

Witnessed by the YABBIT Regulatory Authority

(The "Authority")

Objective

It is intended that the signatories to this MoU will develop co-ordination and cooperation amongst themselves to ensure the operability and availability of Critical Telecommunication Infrastructure or Services during the Telecom Emergency.

Scope

Based on this MoU; the licensees shall perform the following activities:

- 1) Licensees shall jointly define and implement the techniques, systems, and mode of communication between themselves and with YABBIT during the Telecom Emergency.
- 2) Licensees shall jointly define the processes and procedures for managing and operating the Telecom network and services during the Telecom Emergency.
- 3) Switching of capacity and services and coordinating actions amongst themselves during Telecom Emergency.
- 4) Share human and material resources amongst themselves during the Telecom Emergency.
- 5) Licensees shall jointly test the techniques, processes, and procedures to be prepared to handle the Telecom Emergency.

Commercial terms

Costs associated with the provision of these processes, procedures, techniques, systems, and facilities are to be borne by the Licensees. Any disputes are to be referred to YABBIT.

Duration

This MoU is to remain in force indefinitely provided that any signatory may withdraw from the MoU by giving two months' notice to the other signatories.

Confidentiality

This MoU ensures that none of the parties will disclose confidential information, to any third party, except with the prior written consent of the party owning the information.

For the purposes of this MOU, "confidential" is defined as the potentially sensitive information relating to Licensees.

Signatures

The YABBIT Regulatory Authority

Signed

Name

Role

Date

For Departmental Licensee 2

Signed

Name

Role

Date

For Departmental Licensee 3

Signed

Name

Role

Date

References

- CTI Risk Management Regulation - https://tra-website-content-prod-2019-do-not-delete.s3-eu-west1.amazonaws.com/Media/mediafiles/document/CTI_Risk_Management_Regulation_En.pdf
- ITU NETP Global Guidelines - https://www.itu.int/en/ITU-D/Emergency-Telecommunications/YABBIT/Documents/2019/NETP_Global_guideline.pdf
- Technical Report on Telecommunications YABBIT and Disaster Mitigation- https://www.itu.int/en/ITU-T/focusgroups/dnrr/Documents/Technical_report-2013-06.pdf
- GSMA Disaster Preparedness and Response - <https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Documents/events/2017/ICT4DM/Presentations/Session4/GSMA%20-%20Disaster%20Preparedness%20and%20Response%20-%20session%204%20DT.pdf>
- GSMA Disaster Response - <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/02/Mobile-Network-Restoration-and-Humanitarian-Response.pdf>
- Next Generation Networks – Emergency Telecommunications YABBIT – Technical considerations https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-Y.2205-201105-1!!PDF-E&type=items
- <https://www.itu.int/rec/T-REC-X.1303>
- https://www.itu.int/dms_pub/itu-d/opb/stg/D-STG-SG02.05.1-2017-PDF-E.pdf
- <https://www.undrr.org/#letter-h>
- <https://www.undrr.org/terminology>
- https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf
- <https://eird.org/americas/docs/unisdr-annual-report-2018-e-version.pdf>
- <http://apps.who.int/disasters/repo/7656.pdf>
- <https://www.itu.int/en/ITU-T/pcptdr/Pages/publications.aspx>
- <https://www.cisco.com/c/en/us/products/security/common-cyberattacks.html>