

Managing ICT Risks at UN-Habitat

A. Background

1. ICT risks are an increasingly important part of organization's risk management as they include such threats as business interruption, information security breaches, data loss, and software license non-compliance.
2. Integrating ICT risk management in projects is essential to avoid negative impacts; extending well beyond employees, to customers and suppliers and, ultimately, the viability of the projects themselves.
3. This paper ensures careful planning and integration of ICT risk management in the project management process within UH-Habitat while delivering their programme of work.

B. Context and Dependencies

UN-HABITAT operates in a dispersed geographical structure with HQ in Nairobi, 4 main regional offices, and many other project and liaison offices distributed around 45 countries worldwide. At the same time, most corporate systems and applications that support business processes and internal collaboration systems are centralized within Habitat headquarters in Nairobi or within UN Secretariat in New York, Valencia or Bangkok.

ICT Infrastructure, in this sense, plays an important role in facilitating the work of habitat in term of accessibility, collaboration, business work flow processing, and communication across the whole organization offices.

UN-Habitat also depends on ICT infrastructure to store official documents, financial and non- information data, project information, stakeholder information, and other critical archives and records. The main corporate systems used for such activities are the UMOJA system, the PAAS system, and the corporate email system, internally developed systems for mapping and GIS databases, and the active directory share drives.

Moreover, UN-Habitat relies on ICT for its advocacy activities to enhance its communication and collaboration with its donors, partners, public, and other stake holders. UN-Habitat infrastructure is hosting many of the organization websites such as UN-Habitat public

website, Intranet, partner and networking websites, CPR Extranet, world urban campaign, and open.unahbitat.org.

UN-Habitat headquarters receives most of its ICT services from United Nations Office in Nairobi (UNON) as part of common services provided to UNON Complex. These common services are governed by a general MOU between UN-Habitat and UNON. UN-Habitat, however, has separate servers running proprietary applications used only by UN-Habitat at HQ, Regional offices, and offices away from headquarters.

C. ICT Risk Analysis and Management Plan

While assessing ICT risks at UN-Habitat, it is important to note that most of the corporate systems and ICT infrastructure related risks are transferred to UN Secretariat and UNON as they are owners of these services.

For example, ICT risks related to UMOJA, UN Docs, and Inspira are transferred to UN Secretariat. UN-Habitat corporate emails around the world, Firewall security protection at HQ, Internet connection at HQ, Authentication and file share services, and IP telephony at HQ are transferred to UNON.

The table below lists the top 7 ICT risks that falls within the roles and responsibility of UN-Habitat and which needs to be managed internally.

Risks related to ICT Infrastructure							
Risk Number	Risk Description	Likelihood of Occurring (Low/Med/High)	Impact if it occurs (Low/Med/High)	Gross Risk Rating (Low/Med/High)	Agreed Risk Mitigation Controls	Residual risk Rating (Low/Med/High)	Risk owner
R01	Data loss or corruption of data assets on UN-Habitat Servers at HQ, Regional Offices, and Project Office (File share, Local applications, maps, other office specific data)	High	High	High	<ol style="list-style-type: none"> 1. Setup of fault tolerance and redundancy, antivirus system, and security firewall system for the office. 2. Perform scheduled backup Routine on daily basis 3. Schedule antivirus check routines. 4. Put in place a change management control mechanism and make sure tests are done on development environment and not in production environment. 5. Setup of off-theater site outside project location where possible 	Low	UN-Habitat Office ICT Focal Point
R02	Loss of confidentiality and unauthorized access to confidential data assets	High	Med	High	<ol style="list-style-type: none"> 1. Establish an authentication system and approval process for authorization. 2. Undertake security training for all staff 	Low	UN-Habitat Office ICT Focal Point
R03	Disruption of internet connectivity to corporate systems and IP telephony	Med	Low	Low	<ol style="list-style-type: none"> 1. Establish a backup redundant link for failover and ensure it is provided through different service provider than the main link. 	Low	UN-Habitat Office ICT Focal Point
R04	Fragmentation and duplication of ICT within UN-Habitat	Med	Low	Low	<ol style="list-style-type: none"> 1. Submit all ICT Infrastructure initiatives for final approval by Management office. 2. Consolidate ICT expenditure 	Low	Head ICT UN-Habitat
R05	Denial of Service (DOS) or hacking of the organization websites	High	Med	Med	<ol style="list-style-type: none"> 1. Ensure that corporate Websites are hosted in trusted secure environment behind firewall and Websites are 2. Develop the website using ICT unit language standards and development guidelines 	Low	Head ICT UN-Habitat
Risks specific to application development							
R06	The application is duplication of effort or does not fit within the overall organization strategy and business requirement	Med	Med	Med	<ol style="list-style-type: none"> 1. Ensure that consultation with ICT unit to confirm no similar application exists is done. 2. Applications and knowledge systems of \$100,000.00 requires an approval of ICT Advisory Committee at HQ 	Low	Head ICT UN-Habitat
R07	Developed solution does not satisfy stakeholder requirements, non-fit for purpose, and not well maintained	High	Med	High	<ol style="list-style-type: none"> 1. Follow the standard application project template (including user requirement, methodology, system integration, documentation requirement, maintenance requirements, user testing criteria) for application development 	Low	UN-Habitat Office ICT Focal Point

D. Risk Matrix- Residual Risk following Mitigation/Treatment

Business Impact if Risk Occurs	High			
	Medium			
	Low		R03, R04, R05,R06	R01, R02, ,R07
		Low	Medium	High
	Likelihood of Risk Occurring			

Legend: Low Risk Medium Risk High Risk

E. Roles and Responsibilities

For ICT risk mitigation and management plan to work properly, an ICT focal point needs to be designated at HQ, each regional office, and all project offices for this purpose. This ICT focal point will be responsible for making sure that the office responds to the risk as per agreed on mitigation strategy.

The Head of ICT at HQ will be the overall ICT focal point for ICT risk management plan. He/She will need to work closely with all other ICT focal points to make sure that overall ICT risks at organization level and recorded, managed and monitored.

Project Management Officers will be required to facilitate the provisioning of ICT resources required to manage risks where applicable. They and project managers should also ensure that ICT resources funded are aligned with this Risk Management Plan of the organization.

F. Monitoring and Reporting

ICT focal points at UN-Habitat will need to report on ICT risks assessment and mitigation plan and controls on yearly basis to ICT committee at UN-Habitat.

This report should also include a review of possible changes to the above ICT risks with their mitigation strategy.

G. Implementation

The Head of ICT unit is responsible for the implementation and monitoring of this risk management plan

Signed and approved for implementation:



Date: 31.1.12

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