



KOUGA

local municipality

Good Governance Through Service Excellence

ICT DISASTER RECOVERY POLICY

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

DOCUMENT INFORMATION SHEET

Title of Report : *ICT Disaster Recovery Policy*
Type of Report : *Policy*
Document Number :
Prepared By : *Allister Makomo*
Typed By : *Allister Makomo*
Reviewed By : *KPMG Services (Pty) Ltd*
Functional Area : *Financial Services - IT*
Prepared For : *Kouga Local Municipality*
Date of Issue : *17 October 2016*

Copyright

All rights reserved. No part of this document may be reproduced or distributed in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or stored in a database or retrieval system, without the prior written permission of Kouga Local Municipality © 2016.

KOUGA LOCAL MUNICIPALITY		Doc. Number	
IT Planning Manual		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

DOCUMENT CONTROL SHEET

The purpose of this form is to ensure that documents approved prior to issue. The form is to be bound into the front of all documents released by Kouga Local Municipality.

Title of Report : *ICT Disaster Recovery Policy*
Type of Report : *Policy*
Document Number :

SIGNING OF THE ORIGINAL DOCUMENT

This policy is approved by the signatories listed below whom by signing this document confirm their acceptance of its content and authorise the implementation/adoption thereof.


 Signature: ICT Manager 15/05/2018
Date


 Signature: Chief Financial Officer 15/5/2018
Date


 Signature: Municipal Manager 15/5/2018
Date

29 March 2018
 Council Date of Approval

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

REVISION CONTROL CHART

The purpose of this form is to ensure that documents are reviewed. The form is to be bound into the front of all documents released by Kouga Local Municipality.

REVISION 1	Prepared By:	Reviewed By:	Approved By:
Date:	Signature:	Signature:	Signature:
Description of changes:			

REVISION 2	Prepared By:	Reviewed By:	Approved By:
Date:	Signature:	Signature:	Signature:
Description of changes:			

REVISION 3	Prepared By:	Reviewed By:	Approved By:
Date:	Signature:	Signature:	Signature:
Description of changes:			

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

TABLE OF CONTENTS

ICT DISASTER RECOVERY POLICY.....	8
1. INTRODUCTION.....	8
1.1. Objective.....	8
1.2. Scope.....	9
2. POLICY.....	9
2.1. Implementation of ICT Disaster Recovery.....	10
2.2. Business Impact Analysis.....	10
2.3. Risk Assessment.....	11
2.4. ICT Disaster Recovery Strategy.....	11
2.5. ICT Disaster Recovery Plan.....	11
2.6. Technical System Resumption and Recovery Procedures.....	12
2.7. ICT Disaster Recovery Training and Awareness.....	12
2.8. Disaster Recovery Testing.....	13
2.9. ICT Disaster Recovery Maintenance.....	15
2.10. Periodic Review of the ICT Disaster Recovery Programme.....	15
2.11. Preventative Actions.....	15
2.12. Corrective Actions.....	16
2.13. International Standards.....	16
2.14. Related Policy.....	16
3. ROLES AND RESPONSIBILITIES.....	16
3.1. ICT Disaster Recovery Committee.....	16
3.2. ICT Disaster Recovery Coordinator.....	17
3.3. ICT Disaster Recovery Team.....	17

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

4. INTERNAL COMMUNICATION	17
5. MEDIA AND STAKEHOLDER COMMUNICATIONS.....	18
6. NON-COMPLIANCE WITH POLICY	18
6.1. Exceptions, Migrations and Timeframes.....	18
7. AVAILABILITY OF THE POLICY	19

KOUGA LOCAL MUNICIPALITY		Doc. Number	
IT Planning Manual		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

DOCUMENT ADMINISTRATION

Abbreviations/Acronyms

Term	Description
BCI	Business Continuity Institute
BCM	Business Continuity Management
BCMS	Business Continuity Management System
BIA	Business Impact Analysis (Assessment)
DR	Disaster Recovery
DRP	Disaster Recovery Plan
ISO	International Standards Organization
ICT	Information and Communications Technology
ICT DR	Information and Communications Technology Disaster Recovery
RPO	Recovery Point Objective
RTO	Recovery Time Objective

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

ICT DISASTER RECOVERY POLICY

1. Introduction

The core functions of Kouga Local Municipality heavily depend on computer-supported information processing and telecommunications, thereby ICT services. The increasing dependency on computers and telecommunications for business operations poses a risk that a lengthy loss of these capabilities could affect the overall service delivery and performance of the Municipality.

Any event that causes disruption to the ICT services of the Municipality could severely impact upon the Municipality at large and ultimately the customer base. To this extent, the Municipality has initiated an agenda for setting up an ICT disaster recovery programme covering various departments and critical technology components. It will be the duty of this programme to ensure continuity and recovery of the Municipality's ICT services, thereby ensuring reliability and redundancy within the ICT environment to minimize downtime and ensure availability of critical systems during a disaster situation.

The ICT Disaster Recovery programme will ensure that the Municipality's continuity objectives are supported from a technology standpoint, and ensure the recovery of ICT infrastructure in the event of a disaster in line with the Recovery Time Objectives (RTO) and Recovery Point Objective (RPO) defined by business.

1.1. Objective

The ICT Disaster Recovery Policy serves to confirm and formalize the municipality's commitment to arrange for and coordinate the recovery of critical systems and technologies during a disaster or disruptive incident in an orderly and timely manner. This policy establishes the principles, framework necessary to ensure emergency response, resumption, recovery, restoration, and recovery of the municipal ICT operations in response to a business disruptive event.

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

Essentially, this policy serves as the strategic co-ordination and co-operation mechanisms between all the relevant stakeholders, and the ICT department. It aims to supplement the Municipal Disaster Risk Management Plan further by establishing specific arrangements for ICT operations.

ICT disaster recovery is defined as “the systematic process to prevent, predict and manage ICT disruption and incidents which have the potential to disrupt ICT services”. In this way, ICT disaster recovery supports municipal disaster management by ensuring that the ICT services are as resilient as appropriate and can be recovered to pre-determined levels within timescales required and agreed by the business.

It is important to highlight, however, that human lives (all municipal employees as well as third parties who may be working on municipal premises) are the first priority in the event of a disaster occurring onsite. The next most important priority is the restoration of work processes especially from a technology standpoint.

1.2. Scope

The ICT Disaster Recovery Policy applies to all information systems and technologies, which supports the Municipality’s day-to-day business processes. As such, it includes the ICT hardware, networking, and all critical ICT systems.

2. Policy

The following section illustrates municipal management’s policy applicable to ICT disaster recovery within Kouga Local Municipality.

The municipality recognizes the potential strategic, operational and financial stakeholder risks associated with service interruptions and the importance of maintaining viable capability to continue daily operations with minimum impact, in the event of any disruptive incident. Consequently, it is committed to its employees, customers and stakeholders to ensure that critical ICT services are resumed at the earliest possible time.

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

Municipal management fully support the ICT disaster recovery programme, and as such hereby establishes their commitment and resources to ensuring the programme's success in line with the policy statements below.

2.1. Implementation of ICT Disaster Recovery

The ICT department shall implement an ICT disaster recovery initiative in line with international standard (e.g., ISO/IEC 27031) as an ongoing part of their day-to-day activities. The ICT manager and staff shall make sure they understand their role in the event of a major event or disaster. This will ensure that the response is coordinated, controlled and efficient.

2.2. Business Impact Analysis

The ICT manager shall arrange that a formal business impact analysis (BIA) be carried out for all functions/departments within the municipal organogram at least once every year to determine the requirements for the ICT disaster recovery plan. The business impact assessment (BIA) shall be reviewed and updated on an annual basis by all necessary stakeholders, to reflect any changes taking place within the Municipality and its corresponding ICT infrastructure.

In the event that significant changes are introduced into the ICT infrastructure, either through the introduction of new hardware or software applications, business impact assessments will immediately follow. Such assessments shall be performed within reasonable time and will not be deferred until the annual review commences.

The business impact assessments, as a minimum, shall identify:

- What are the critical business and ICT processes
- What is the impact over time, of the processes not functioning
- What are the threats to each critical process and their likelihood of occurring
- What applications are used in conducting the processes

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

- Defined RTO and RPO per process
- What are the recovery priorities and categorisation for each process
- What resources are required including number of personnel in a disaster scenario

2.3. Risk Assessment

The ICT manager shall arrange that a formal risk assessment be carried out of the ICT infrastructure at least once a year to determine the requirements for the disaster recovery plan. The risk assessment shall be performed and any risk register(s) updated annually or when changes are introduced to the municipal ICT environment.

Such risk assessments shall be documented, and all supporting documentation maintained for at least two years. This documentation may include minutes of meetings, surveys and/or reports from third parties.

2.4. ICT Disaster Recovery Strategy

The municipal management, in collaboration with the ICT manager shall arrange for the development of an ICT disaster recovery strategy. That is, the provision and procurement of a disaster recovery site, appropriate infrastructure, and the establishment of data backup to the said site.

The disaster recovery site shall coincide with the results of any/all business impact analysis and risks emanating for the risk assessments. Further, it shall make provision for the both the current and future state ICT infrastructure and services.

2.5. ICT Disaster Recovery Plan

The ICT manager shall arrange for the development of an ICT disaster recovery plan to recover from a crisis and provide, at the very minimum, the ability to recover critical business processes. During a business interruption event, ICT management shall activate the ICT disaster recovery plan.

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

In some cases, it may not be necessary to relocate staff to alternative work areas. To address local crises, alternate approaches for resumption including remote work, working from other office buildings, etc., shall be identified.

2.6. Technical System Resumption and Recovery Procedures

The ICT manager shall develop a coordinated strategy involving plans, policies, procedures, and technical measures that enable the recovery of ICT systems, operations, and data that is identified as critical.

The municipality's network architecture and global telecommunications shall ensure redundancy and the institution's ability to withstand local and regional crisis.

The ICT disaster recovery policy shall be integrated in the ICT policy, budget and implementation decisions. ICT budget guidelines and incentives shall take into account good practices concerning business continuity planning and preparedness.

For new application development, ICT continuity planning shall be integrated in all phases of the project life cycle, starting from business requirements, system architecture, design, construction, testing, implementation, maintenance and retirement.

2.7. ICT Disaster Recovery Training and Awareness

ICT disaster recovery training for the municipal workforce is essential for effective resumption and recovery of operations. The ICT manager shall plan, implement and maintain a training schedule to ensure that ICT staff keeps abreast with industry standards and the municipal business processes, latest technologies, tools, international standards and regulations that guide the development of ICT disaster recovery plans.

Awareness is a critical component of the ICT disaster recovery programme that ensures commitment and understanding when engaging with municipal staff. It is the responsibility of the ICT manager to identify needs and develop responses in respect of awareness. Use shall be made of all resources available including:

- CBT (slides and computer based educational programs)

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

- Web site
- Magazines and articles in publications
- Notice board posters
- Email
- Informative workshops directed at specific target audiences
- Presentations
- Screen Savers

It is the responsibility of all those responsible for ICT disaster recovery programme to apply themselves to a structured awareness program that is implemented over an agreed period. This shall be renewed and reviewed regularly through the ICT steering and executive management committees.

The ICT manager shall ensure that this programme is delivered according to an agreed timetable and content. This programme will be subject to annual performance reviews, and to ad-hoc review by internal audit.

2.8. Disaster Recovery Testing

Testing is an activity designed to promote emergency preparedness. The test examines the performance of duties, tasks and operations in a way similar to the way they would be performed in a real emergency.

The ICT manager shall arrange that the ICT disaster recovery plan be tested at least bi-annually to ensure credible recovery preparedness. The scope, objectives, and measurement criteria of each test shall be determined and coordinated by municipal management on a per event basis. All testing shall be formally planned, executed and documented. Meanwhile, test results shall be shared with municipal management, and internal audit.

The ICT manager shall ensure that a variance of tests is performed, including:

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

— **Orientation tests**

- Introduces participants to the plans and procedures
- Planning cycle: one month
- Test time: 60-90 minutes

— **Drills**

- Test of individual emergency response functions
- Planning cycle: one month
- Test time: 10-60 minutes

— **Table top tests**

- This is a facilitated group analysis of an emergency in an informal, stress-free environment.
- Planning cycle: 2-3 months
- Test time: 90-120 minutes
- Debriefing time: 30 minutes

— **Functional tests**

- Participants perform actual activities
- Test time: 90 min – 4 hours
- Planning cycle: 3-6 months

— **Full-scale tests**

- Evaluates the operational capability of systems in an interactive manner over a substantial period of time

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

— Test time: 2-8 hours

— Planning cycle: 4 months minimum

2.9. ICT Disaster Recovery Maintenance

The ICT manager shall arrange that the ICT disaster recovery plan (DRP) be continuously monitored to ensure that changes in the way business functions and the supporting infrastructure are reflected in the plan. Improvements identified because of testing shall also be included in the DRP. All changes shall be assessed as part of the change management process.

As a minimum, the plan shall be reviewed and updated on an annual basis, after every exercise/test, and after every business impact assessment (BIA) exercise.

2.10. Periodic Review of the ICT Disaster Recovery Programme

The Municipal Internal Audit department shall perform ad-hoc reviews of the ICT disaster recovery plans, as part of their annual plan. Such reviews will include a detailed assessment of any DR testing performed, any DR awareness initiatives and any invocations. Meanwhile, this policy should be reviewed at least once every year as part of the annual controls effectiveness cycle assessment.

2.11. Preventative Actions

The ICT manager shall ensure necessary steps are taken to periodically conduct risk assessments and review the DR policy, procedures and plans to identify potential non-conformities and their causes to reduce or eliminate the chances for recovery failures. All such action taken shall be documented.

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

2.12. Corrective Actions

The ICT manager shall take actions to eliminate the causes of non-conformities identified with the implementation and operation of the disaster recovery plan to prevent their recurrence. All such actions taken shall be documented.

2.13. International Standards

All Kouga Local Municipality ICT disaster recovery activities shall be governed by the internationally accepted standards e.g., ISO/IEC 27031, which addresses the IT continuity considerations, complimented by the COBIT framework.

2.14. Related Policy

All ICT disaster recovery activities shall be conducted to coincide with the ICT Risk Management Framework, the ICT strategy and any established Business Continuity Plan(s).

Readers of this policy are referred to the following documents:

- ICT Risk Management Framework
- ICT Strategy
- Business Continuity Plan(s)

3. Roles and Responsibilities

3.1. ICT Disaster Recovery Committee

The proposed composition of the committee comprises of the following:

- Municipal Manager
- Chief Financial Officer (CFO)
- Media Liaison Officer
- Manager: SCM

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

— Manager: Budgets and Treasury

— Manager: ICT

The Committee is a decision-making group that coordinates Emergency Management, Crisis Management, Business Continuity and Information Technology Disaster Recovery efforts across the Municipality. The committee addresses municipality-wide issues that relate to the continuity of business following an ICT disaster and makes recommendations and resolutions.

3.2. ICT Disaster Recovery Coordinator

The Disaster Recovery Coordinator shall have the overall accountability and responsibility for the coordination, implementation and maintenance of the ICT disaster recovery and overall monitoring of all ICT disaster recovery processes. This role will be fulfilled by the *Manager: ICT*.

3.3. ICT Disaster Recovery Team

The Disaster Recovery Team shall be responsible for implementing the disaster recovery operations including the restoration of computer processing and networking activities, as well as providing on-going technical support during the recovery effort. This shall be headed by the *Manager: ICT*, with support from the staff in the ICT Department. Other team members shall be drawn by the Committee as required and coordinated with the Disaster Recovery Coordinator.

4. Internal Communication

The Media Liaison Officer shall be responsible for handling all internal employee communication in the event of an ICT disaster and relevant information during the restoration.

KOUGA LOCAL MUNICIPALITY IT Planning Manual		Doc. Number	
		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

5. Media and Stakeholder Communications

Media Communication shall be handled in line with approved municipal media communication policy. The office of the Municipal Manager shall be informed of all media and other external stakeholder communications. The responsible Media Liaison Officer shall obtain communication directives from the ICT Disaster Management Team, and shall communicate information during the disaster and restoration phases to employees, suppliers, other external stakeholders and the media. Municipal employees and visitors are not permitted to give media interviews in any way regarding disruptive or non-disruptive ICT disasters. All communication with the media shall be facilitated by the responsible Media Liaison Officer.

6. Non-Compliance with Policy

Safety of employees and continuity of operations during a crisis or an incident is the responsibility of everyone physically working on municipal premises including all employees, service providers and third-party vendors.

The ICT Disaster Recovery policy statements described herein, defines the basic minimum level of requirements for 'safety, availability and continuity' of municipal ICT resources and services to both internal staff and clients. This policy also provides guidelines for developing, maintaining and testing ICT DR plans and risk assessments.

Non-compliance with the required measures and behaviours outlined in this policy could pose a business risk to the Municipality and could significantly affect its operations and damage its assets and reputation. Therefore, compliance with this policy is mandatory for all municipal employees, as well as any third parties (such as outsourcing providers, contractors, alliance partners, licensees, etc.) who may be required to physically work on municipal premises or utilise the Municipality's information technology and communication platforms.

It is prohibited to bypass the ICT Disaster Recovery mechanisms provided in this policy or in any supporting plans, guidelines or procedures.

6.1. Exceptions, Migrations and Timeframes

KOUGA LOCAL MUNICIPALITY		Doc. Number	
IT Planning Manual		ITP	
CATEGORY	POLICY		
SUBJECT	ICT Disaster Recovery		

All Kouga Local Municipality personnel and ICT systems shall comply with the statements in this policy from the date of release. Where a longer transition is required to achieve compliance, a documented business justification shall be submitted by the ICT manager with proposed timelines to the Municipal management.

Any exceptions to this Policy shall be clearly documented and submitted to the Municipal management for evaluation and approval. Only exceptions, which have been approved, are valid. All exceptions to this Policy will be fully motivated and documented by those seeking the exception, and agreed to by the relevant affected parties. All exceptions will be reviewed at least annually by the relevant Individual/s around the particular area/s affected by the exception.

7. Availability of the Policy

This Policy will be made widely available to all municipal staff. As a minimum, it can be found in the following location:

Electronic location	<i>Kouga - dc1 Server/224/Policies (File Server)</i> <i>Intranet Web Portal</i>
Hard Copy	Archives ICT Manager's Office Disaster Recovery Site(s)

APPROVED BY COUNCIL ON : **29 MARCH 2018**

ITEM NO. : **18/03/F1**