



IAN STORKEY
INTERNATIONAL CONSULTANT

Debt Management Office Business Continuity Plan

Istanbul, Turkey
10-12 May 2016



2016 Asian Regional
Public Debt Management Forum



BCP – Why Necessary for DMOs?

There is often a clear misconception in many countries that as long as the IT Department makes a backup of the debt database on a regular basis (i.e. daily or weekly), stores the data offsite in a secure location, and has an alternate data site with backup servers, the debt management office (DMO) can be seen to have an effective business continuity and disaster recovery plan (BCP/DRP).

An IT BCP/DRP omits many elements for effective business continuity, which needs to focus on critical processes, systems, and people in the DMO

Often DMO management deny or ignore that there are critical risks to their business operations

DeMPA DPI-13 (Dimension 3) has requirement for BCP/DRP

Costs can be high, reputation is at risk, but government's finances are critical, particularly in the case of a major incident such as a regional or national disaster

Purpose of the DMO BCP

The Business Continuity Plan (BCP) establishes the operational procedures to maintain the critical functions of the DMO and the guidelines to reactivate the critical or essential procedures in one or more alternate sites

Scope of the DMO BCP

The BCP focuses on the basic elements of operational continuity of the DMO:

- **critical functions/activities, key personnel, critical systems [the key focus]**
- alternate facilities and remote operation
- order of command succession and delegation of authority tables

The BCP presents the development of procedures to guarantee operational continuity applied to all the spectrum of threats and emergencies that could affect the DMO

DMO Policy for the BCP

1. Perform a business impact analysis, and develop mitigation strategies, which will ensure the continuity of its business, operations and technology components in the event the existing environment is unavailable

2. Develop and maintain a comprehensive business continuity and disaster recovery plan (BCP/DRP) to ensure that essential/critical DMO activities are recoverable (business continuity planning and the BCP/DRP will be developed in accordance with international standards such as ISO 22301)

3. Report the status of business continuity planning and the BCP/DRP annually to the Head of the Ministry of Finance

Threats to the DMO

<i>INFRASTRUCTURE AND TECHNOLOGY FAILURES</i>		
Power failure	Hardware failure	Sabotage
Data corruption including viruses	LAN/WAN/Intranet/ Internet failure	Internal flood (sprinklers, pipes)
Voice network failure	Theft of equipment	Theft of data/information
Poor maintenance	Accidental damage	Cyber attacks
<i>INCIDENTS WHERE ACCESS TO PREMISES IS DENIED</i>		
Flooding or a fire concern	Health and safety violation	Hazardous chemicals accident
Gas or chemical leak	Industrial action or riot	Bomb or terrorist threat
Building fire or explosion	Internal/external flood	Sabotage or terrorism
<i>KEY SERVICE PROVIDERS OR RESOURCE FAILURES DEPENDENCIES</i>		
Failure of key service providers (telephone, internet, banking etc)	Third party providers (Central Bank and other outsourced operations)	Impact of incident on critical teams or groups (travel, food poisoning, group incident)

Threats to the DMO

<i>STAFF, MANAGEMENT AND RELATED HUMAN FAILURES</i>		
Human error (which may be due to poor training or inadequate supervision)	Poor training or inadequate supervision (which may lead to human error or execution of unauthorized transactions)	Failure to follow code of conduct or conflict of interest guidelines
Lack of policy guidance (which may lead to poor decisions or unauthorized activities)	Poor understanding of risk environment (which may lead to unnecessary or unknown risks)	Poorly specified delegations (which may lead to execution of unauthorized transactions)
Failure to follow or adhere to administrative practices (which may lead to processing errors)	Key person risk (which may lead to human error when key person is absent)	Fraudulent, corrupt or dishonest practices (which may lead to financial loss and political embarrassment)
<i>FAILURE TO MEET STATUTORY, LEGAL, HUMAN RESOURCES AND OTHER OBLIGATIONS</i>		
Legal/statutory obligations (e.g. compliance with loan agreements)	Management directives (e.g. internal policies and procedures)	Procedures manuals and delegated authorities
Reporting obligations (e.g. to higher authorities and international institutions)	Contractual obligations (e.g. debt service obligations)	Health and safety regulations (e.g. national workplace laws or regulations)
<i>MAJOR NATURAL AND REGIONAL DISASTERS</i>		
Earthquake	Hurricane or severe flooding	Tsunami
Volcanic eruption or landslide	Severe fires	Civil disturbance or terrorism

Impact on the DMO

Assessment of Impact	Reputational Impact	Impact on DMO's Operations	Reporting & Resource Impact
Catastrophic	<p>Loss of Government confidence</p> <p>Loss of market confidence</p> <p>Loss of trust, e.g. Subnationals & Line Ministries</p> <p>Extensive media coverage</p> <p>High-level ministerial enquiry [or resignation]</p> <p>Financial and legal penalties</p>	<p>Failure to pay debt service payments by the due date</p> <p>To incur an erroneous payment such as payment to the wrong account or payment of an incorrect amount</p> <p>To incur debt service payment default penalty</p> <p>Failure to conduct auction of government securities</p> <p>To execute trading or hedging transactions without authority or in excess of limits or controls</p> <p>Failure to meet legal or contractual obligations with international bond issues</p>	<p>Reported to Prime Minister or Parliament</p> <p>Significant amount of time spent dealing with impact (i.e. greater than 20 person-days)</p>
Major	<p>Strained Government relationships</p> <p>Temporary loss of market confidence</p> <p>Moderate media coverage</p> <p>Ministerial enquiry</p>	<p>Unable to transact in foreign currencies (e.g. receive, buy, sell or invest in USD)</p> <p>Failure to deliver reports to all stakeholders by the deadline required</p> <p>To submit reports to the government with significant errors and/or poor advice</p> <p>Significant errors in debt service forecasts with an adverse impact on the budget outcome</p> <p>Failure to make cheque payments</p> <p>Loss or damage of loan agreements and loan transaction records</p>	<p>Reported to Minister of Finance</p> <p>Large amount of time spent dealing with impact (i.e. between 10 and 20 person-days)</p>

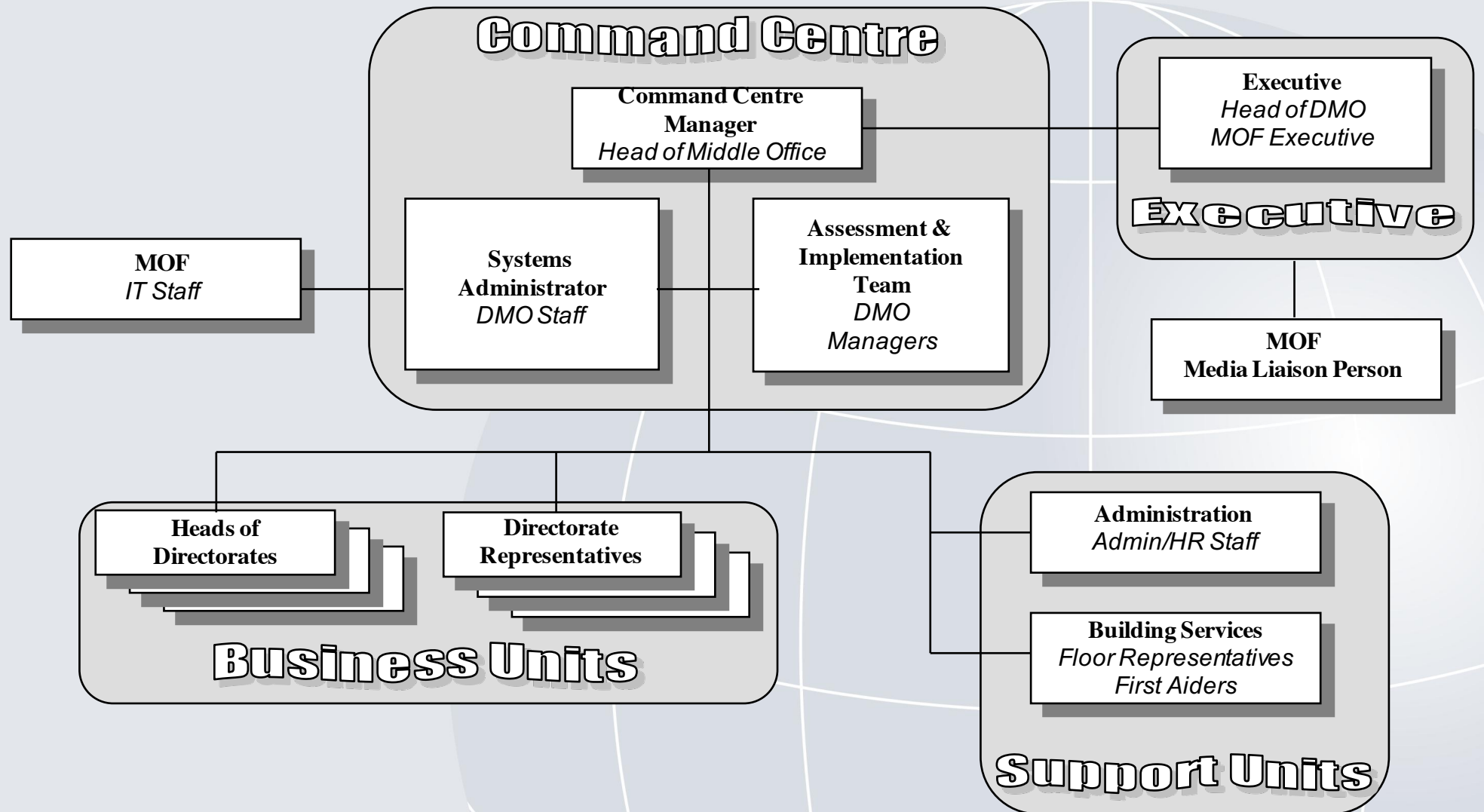
Impact on the DMO

Assessment of Impact	Reputational Impact	Impact on DMO's Operations	Reporting & Resource Impact
Moderate	<p>Increased Government attention</p> <p>Market confidence not affected</p> <p>Minor, if any, media attention</p> <p>Major attention within DMO</p>	<p>Failure to undertake critical debt management activities</p> <p>Incorrect recording of debt and debt transactions in the DRMS</p> <p>Failure to prepare debt service forecasts by the due date</p> <p>Failure to complete evaluations for authorization to contract new debt or for on-lending within imposed deadlines</p> <p>Failure to evaluate cost/pricing of contingent liabilities</p>	<p>Reported to the entity responsible for monitoring the DMO</p> <p>Moderate amount of time spent dealing with impact (i.e. between 5 and 10 person-days)</p>
Minor	<p>Some Government attention</p> <p>No media coverage</p> <p>Internal DMO enquiry</p>	<p>Failure to monitor and report on market conditions</p> <p>Failure to undertake analysis of the debt portfolio</p> <p>Errors on the DMO website</p> <p>Unable to conduct reconciliation of debt records with creditor statements</p>	<p>Included in internal DMO reports</p> <p>Some amount of time spent dealing with impact (i.e. less than 5 person-days)</p>
Insignificant	<p>Government and market relationships intact</p> <p>No media coverage</p>	<p>Errors in setting up users and permissions in the DRMS</p> <p>Failure to monitor audit trails in the DRMS</p>	<p>No reports needed</p> <p>Minimal amount of time spent dealing with impact (i.e. less than 5 person-hours)</p>

Probability and Impact: Turkish Treasury

		Impact level of risk				
		Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood level of risk	Very Low	1	1	2	2	3
	Low	1	2	2	3	4
	Medium	2	2	3	4	4
	High	2	3	4	4	5
	Very High	2	4	4	5	5

Incident Management



BCP Strategy

- **Prevention or avoidance**, where the probability of an event occurring is reduced or eliminated
- **Transference**, where risks are passed to third parties such as insurance or outsourcing
- **Containment**, where the potential impact of an event occurring is limited in the early stages using controls or other techniques
- **Acceptance and recovery**, where an event or disruption might well occur but debt management operations can be resumed successfully using the disaster recovery plan

Templates for the DMO to Complete

System	Time Period (minutes, hours, days)	Desired Time Period (minutes, hours, days)	Location of the Server (Primary Site)	Data Back-up (time and location)	Access Location (alternate site or data centre)

Critical Business Process or System: <Insert Process Name>	
Activities	
Resources	
People	
Facilities (including buildings and equipment)	
Technology (including IT systems and applications)	
Telecommunications	
Vital Records (including paper and electronic)	
Interdependent Processes (including internal and external)	
Other	

Process: <Insert Process Name>			
Persons involved:			
Critical Person 1:			
Critical Person 2:			
Critical Person 3:			
Id	Critical Activity	System(s)	Description
1.1			
1.2			
1.3			

BCP Template for the DMO

1	EXECUTIVE SUMMARY	4	DISASTER RECOVERY PLAN
1.1	BCP Objectives	4.1	Incident Management Structure
2	INTRODUCTION	4.2	Command Centre
2.1	Scope	4.3	Recovery Process
2.2	Audience	4.4	Recovery Infrastructure
2.3	Reference Documents	4.5	Recovery Process
3	BUSINESS CONTINUITY PLAN	4.6	Training and Testing
3.1	Approach	4.7	DRP Checklist
3.2	Categories of Operational Risks	5	MAINTAINING THE BUSINESS CONTINUITY PLAN
3.3	Purpose and Policy	5.1	Assigning Responsibility for BCP to the Compliance Manager
3.4	Risk Assessment and Business Impact Analysis	5.2	Integrating BCP into the day-to-day Operations of DMB
3.5	Risk Mitigation Strategies	5.3	Maintenance of the BCP

Can also include Wallet/Pocket Card for each business unit



THANK YOU

Contact Details:

Ian Storkey

Email: ian@storkeyandco.com

Website: <http://www.storkeyandco.com>

Operational Risk Management References

- Bank for International Settlements (2003), **“Sound Practices for the Management and Supervision of Operational Risk”**, Basel Committee on Banking Supervision <http://www.bis.org/publ/bcbs96.pdf>
- Hakan Tokaç and Mike Williams (2013), **“Government Debt Management and Operational Risk: A Risk Management Framework, and how it was applied in Turkey”** SIGMA Paper No.50, OECD and the EU http://www.sigmaweb.org/publications/SIGMA_SP50E_2013.pdf
- International Monetary Fund (2011), **“Operational Risk Management and Business Continuity Planning for Modern State Treasuries”** Technical Note and Manual (TNM1105) by Ian Storkey <http://www.imf.org/external/pubs/ft/tnm/2011/tnm1105.pdf>
- World Bank (2010), **“Guidance for Operational Risk Management in Government Debt Management”** by Tomas Magnusson, Abha Prasad and Ian Storkey http://treasury.worldbank.org/bdm/pdf/Guidance_OperationalRiskManagement_Mar2010_Magnusson.pdf

Country BCP/DRP References

- Australian National Audit Office (2009), **“Business Continuity Management: Building Resilience in Public Sector Entities, Best Practice Guide–June 2009”**
http://www.anao.gov.au/uploads/documents/Business_Continuity_Management_.pdf
- Government of Canada (2012), **“A Guide to Business Continuity Planning”**
<http://www.dufferincounty.ca/files/content-pdf/bcp.pdf>
- French General Secretary of Defense and National Security (2013), **“Guide pour Réaliser un Plan de Continuité D’Activité”**
http://www.sgdsn.gouv.fr/IMG/pdf/Guide_PCA_SGDSN_110613_normal.pdf
- New Zealand Ministry of Civil Defence and Emergency Management (2015), **“The Guide to the National Civil Defence Emergency Management Plan 2015”**
<http://www.civildefence.govt.nz/assets/guide-to-the-national-cdem-plan/Guide-to-the-National-CDEM-Plan-2015.pdf>

Other Relevant References

- British Standards Institution (2006), **“Business Continuity Management: Code of Practice”** <http://www.bsigroup.com/en/Assessment-and-certification-services/management-systems/Standards-and-Schemes/BS-25999/>
- Committee of Sponsoring Organizations (COSO) of the Treadway Commission (2008), **“Internal Control – Integrated Framework: Guidance on Monitoring Internal Control Systems”** Volume I and II
<http://www.coso.org/documents/volumei-executivesummary.pdf>
<http://www.coso.org/documents/volumeii-guidance.pdf>
- Committee of Sponsoring Organizations (COSO) of the Treadway Commission (2009), **“Internal Control – Integrated Framework: Guidance on Monitoring Internal Control Systems”**
http://www.coso.org/documents/coso_guidance_on_monitoring_intro_online1_002.pdf
- International Organization for Standardization (2011), **“ISO-27031: Information Technology–Security Techniques–Guidelines for Information and Communication Technology Readiness for Business Continuity”**
<https://www.iso.org/obp/ui/#iso:std:iso-iec:27031:ed-1:v1:en>