

CHAPTER 4

COBIT GOVERNANCE AND MANAGEMENT OBJECTIVES—DETAILED GUIDANCE

Domain: Deliver, Service and Support		Focus Area: COBIT Core Model
Management Objective: DSS03 – Managed Problems		
Description		
Identify and classify problems and their root causes. Provide timely resolution to prevent recurring incidents. Provide recommendations for improvements.		
Purpose		
Increase availability, improve service levels, reduce costs, improve customer convenience and satisfaction by reducing the number of operational problems, and identify root causes as part of problem resolution.		
The management objective supports the achievement of a set of primary enterprise and alignment goals:		
Enterprise Goals	➔	Alignment Goals
<ul style="list-style-type: none"> EG01 Portfolio of competitive products and services EG08 Optimization of internal business process functionality 		AG05 Delivery of I&T services in line with business requirements
Example Metrics for Enterprise Goals		Example Metrics for Alignment Goals
EG01 <ul style="list-style-type: none"> a. Percent of products and services that meet or exceed targets in revenues and/or market share b. Percent of products and services that meet or exceed customer satisfaction targets c. Percent of products and services that provide competitive advantage d. Time to market for new products and services 		AG05 <ul style="list-style-type: none"> a. Percent of business stakeholders satisfied that I&T service delivery meets agreed service levels b. Number of business disruptions due to I&T service incidents c. Percent of users satisfied with the quality of I&T service delivery
EG08 <ul style="list-style-type: none"> a. Satisfaction levels of board and executive management with business process capabilities b. Satisfaction levels of customers with service delivery capabilities c. Satisfaction levels of suppliers with supply chain capabilities 		

A. Component: Process		
Management Practice	Example Metrics	
DSS03.01 Identify and classify problems. Define and implement criteria and procedures to identify and report problems. Include problem classification, categorization and prioritization.	a. Percent of major incidents for which problems were logged b. Percent of incidents solved in accordance with agreed SLAs c. Percent of problems appropriately identified, including classification, categorization and prioritization	
Activities	Capability Level	
1. Identify problems through the correlation of incident reports, error logs and other problem identification resources.	2	
2. Handle all problems formally with access to all relevant data. Include information from the IT change management system and IT configuration/asset and incident details.		
3. Define appropriate support groups to assist with problem identification, root cause analysis and solution determination to support problem management. Determine support groups based on predefined categories, such as hardware, network, software, applications and support software.		
4. Define priority levels through consultation with the business to ensure that problem identification and root cause analysis are handled in a timely manner according to the agreed SLAs. Base priority levels on business impact and urgency.		
5. Report the status of identified problems to the service desk so customers and IT management can be kept informed.		
6. Maintain a single problem management catalog to register and report problems identified. Use the catalog to establish audit trails of the problem management processes, including the status of each problem (i.e., open, reopen, in progress or closed).		
Related Guidance (Standards, Frameworks, Compliance Requirements)	Detailed Reference	
ISO/IEC 20000-1:2011(E)	8.2 Problem management	

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A. Component: Process (cont.)		
Management Practice		Example Metrics
DSS03.02 Investigate and diagnose problems. Investigate and diagnose problems using relevant subject matter experts to assess and analyze root causes.		a. Number of identified problems classified as known errors b. Percent of problems investigated and diagnosed throughout their life cycle
Activities		Capability Level
1. Identify problems that may be known errors by comparing incident data with the database of known and suspected errors (e.g., those communicated by external vendors). Classify problems as known errors.		3
2. Associate the affected configuration items to the established/known error.		
3. Produce reports to communicate the progress in resolving problems and to monitor the continuing impact of problems not solved. Monitor the status of the problem-handling process throughout its life cycle, including input from IT change and configuration management.		
Related Guidance (Standards, Frameworks, Compliance Requirements)		Detailed Reference
No related guidance for this management practice		
Management Practice		Example Metrics
DSS03.03 Raise known errors. As soon as root causes of problems are identified, create known-error records, document appropriate workarounds and identify potential solutions.		a. Number of problems with satisfactory resolution that addressed root causes b. Percent of stakeholder satisfaction with identification of root causes, creation of known-error records and appropriate workarounds, and identification of potential solutions
Activities		Capability Level
1. As soon as the root causes of problems are identified, create known-error records and develop a suitable workaround.		2
2. Identify, evaluate, prioritize and process (via IT change management) solutions to known errors, based on a cost/benefit business case and business impact and urgency.		3
Related Guidance (Standards, Frameworks, Compliance Requirements)		Detailed Reference
No related guidance for this management practice		
Management Practice		Example Metrics
DSS03.04 Resolve and close problems. Identify and initiate sustainable solutions addressing the root cause. Raise change requests via the established change management process, if required, to resolve errors. Ensure that the personnel affected are aware of the actions taken and the plans developed to prevent future incidents from occurring.		a. Decrease in number of recurring incidents caused by unresolved problems b. Percent of workarounds defined for open problems
Activities		Capability Level
1. Close problem records either after confirmation for successful elimination of the known error or after agreement with the business on how to alternatively handle the problem.		2
2. Inform the service desk of the schedule for problem closure (e.g., the schedule for fixing the known errors, the possible workaround or the fact that the problem will remain until the change is implemented) and the consequences of the approach taken. Keep affected users and customers informed as appropriate.		
3. Throughout the resolution process, obtain regular reports from IT change management on progress in resolving problems and errors.		3
4. Monitor the continuing impact of problems and known errors on services.		4
5. Review and confirm the success of resolutions of major problems.		
6. Make sure the knowledge learned from the review is incorporated into a service review meeting with the business customer.		5
Related Guidance (Standards, Frameworks, Compliance Requirements)		Detailed Reference
No related guidance for this management practice		

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A. Component: Process (cont.)	
Management Practice	Example Metrics
DSS03.05 Perform proactive problem management. Collect and analyze operational data (especially incident and change records) to identify emerging trends that may indicate problems. Log problem records to enable assessment.	a. Percent of problems logged as part of the proactive problem management activity b. Percent of key stakeholder satisfaction with the communication of problem information related to IT changes and incidents
Activities	Capability Level
1. Capture problem information related to I&T changes and incidents and communicate it to key stakeholders. Communicate via reports and periodic meetings among incident, problem, change and configuration management process owners to consider recent problems and potential corrective actions.	3
2. Ensure that process owners and managers from incident, problem, change and configuration management meet regularly to discuss known problems and future planned changes.	
3. Identify and initiate sustainable solutions (permanent fixes) addressing the root cause. Raise change requests via the established change management processes.	
4. To enable the enterprise to monitor the total costs of problems, capture change efforts resulting from problem management process activities (e.g., fixes to problems and known errors) and report on them.	4
5. Produce reports to monitor problem resolution against the business requirements and SLAs. Ensure the proper escalation of problems, such as escalating to a higher management level according to agreed criteria, contacting external vendors, or referring to the change advisory board to increase the priority of an urgent request for change (RFC) to implement a temporary workaround.	
6. To optimize the use of resources and reduce workarounds, track problem trends.	
Related Guidance (Standards, Frameworks, Compliance Requirements)	Detailed Reference
CMMI Cybermaturity Platform, 2018	MI.IC Ensure Incident Containment
ITIL V3, 2011	Service Operation, 4.4 Problem Management

B. Component: Organizational Structures							
Key Management Practice	Executive Committee						
	Chief Information Officer						
	Chief Technology Officer						
	Head Development						
	Head IT Operations						
	Service Manager						
	Information Security Manager						
DSS03.01 Identify and classify problems.	R	A	R	R	R		
DSS03.02 Investigate and diagnose problems.		A		R	R	R	
DSS03.03 Raise known errors.		A		R	R	R	
DSS03.04 Resolve and close problems.		A		R	R		
DSS03.05 Perform proactive problem management.	R	A		R	R		
Related Guidance (Standards, Frameworks, Compliance Requirements)		Detailed Reference					
No related guidance for this component							

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C. Component: Information Flows and Items (see also Section 3.6)				
Management Practice	Inputs		Outputs	
DSS03.01 Identify and classify problems.	From	Description	Description	To
	AP012.06	Risk-related root causes	Problem classification scheme	DSS02.01
	DSS02.01	Criteria for problem registration	Problem status reports	DSS02.07
	DSS02.04	Problem log	Problem register	Internal
DSS03.02 Investigate and diagnose problems.	AP012.06	Risk-related root causes	Problem resolution reports	DSS02.07
			Root causes of problems	Internal; DSS03.05
DSS03.03 Raise known errors.	AP012.06	Risk-related root causes	Proposed solutions to known errors	BAI06.01
	DSS02.05	Incident resolutions	Known error records	DSS02.05
DSS03.04 Resolve and close problems.	DSS02.05	Incident resolutions	Communication of knowledge learned	AP008.04; DSS02.05
	DSS02.06	Closed service requests and incidents	Closed problem records	DSS02.06
DSS03.05 Perform proactive problem management.	AP012.06	Risk-related root causes	Identified sustainable solutions	BAI06.01
	DSS02.02	• Classified and prioritized incidents and service requests • Incident resolutions	Problem resolution monitoring reports	DSS02.07, MEA04.07
	DSS03.04	Root causes of problems		
Related Guidance (Standards, Frameworks, Compliance Requirements)		Detailed Reference		
No related guidance for this component				

D. Component: People, Skills and Competencies		
Skill	Related Guidance (Standards, Frameworks, Compliance Requirements)	Detailed Reference
Application support	Skills Framework for the Information Age V6, 2015	ASUP
Network support	Skills Framework for the Information Age V6, 2015	NTAS
Problem management	e-Competence Framework (e-CF)—A common European Framework for ICT Professionals in all industry sectors—Part 1: Framework, 2016	C. Run—C.4. Problem Management
Problem management	Skills Framework for the Information Age V6, 2015	PBMG

E. Component: Policies and Procedures			
Relevant Policy	Policy Description	Related Guidance	Detailed Reference
Problem resolution policy	Documents rationale and provides guidance for addressing problems that result from incidents and identifying validated workarounds.	ITIL V3, 2011	Service Operation, 3. Service operation principles

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F. Component: Culture, Ethics and Behavior		
Key Culture Elements	Related Guidance	Detailed Reference
Support a culture of proactive problem management (detection, action and prevention) with clearly defined roles and responsibilities. Ensure a transparent and open environment for reporting problems by providing independent reporting mechanisms and/or rewarding people who bring problems forward.		

G. Component: Services, Infrastructure and Applications		
Problem tracking/resolution system		