

# ISM<sup>3</sup>

INFORMATION SECURITY MANAGEMENT MATURITY MODEL

## CAPABILITY LEVELS DEFINED IN TERMS OF METRICS

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## 1 Formal Management Practices

Management systems normally evolve to fit the purposes of the organization they serve. Several management practices contribute to this evolution:

- **Implementation.** Practice performed when no pre-existing management system or management process. This practice uses information from an assessment of the organization's goals and informal management practices in place to design an appropriate management system or process. As GP-3 ISM Design and Evolution is the process used to implement other processes, it is used to underpin management systems.
- **Operation.** Practice routinely performed that normally implies in addition to execution:
  - **Testing.** Checking whether we get the expected outputs from invented or selected inputs purposefully fed into the process. This is performed using TSP-4 Service Level Management.
  - **Monitoring.** Checking whether the outputs of the process and the resources used are within normal ranges. This is performed using TSP-4 Service Level Management with metrics.
  - **Improving.** Making changes in the process to make it better fit the purpose (or to lead to a saving in resources by removing faults before they produce incidents, removing bottlenecks that hamper performance or making trade-offs. This management practice needs information gained from testing, monitoring or diagnosing the process. The gains from the changes (if any) can be diagnosed with subsequent testing, monitoring or auditing. GP-3 ISM Design and Evolution is the process used to improve other processes.
  - **Planning.** Organizing and forecasting the amount, assignment and milestones of tasks, resources, budget and deliverables with a common goal.
- **Evaluation.** Practice performed periodically or as required.
  - **Assessment.** Checking whether the existing process matches the organization's needs and compliance goals, or if it performs better and with better use of resources than it used to. This practice is performed using GP-3 ISM Design and Evolution.
  - **Audit.** Checking whether the process inputs, activities and results match their documentation. This practice is performed using GP-2 ISM System and Business Audit.
  - **Certify.** Checking whether process documentation, inputs, outputs and activities comply with a pre-defined standard, law or regulation. The certificate is a proof of compliance that third parties can trust. This practice is performed using GP-2 ISM System and Business Audit.
  - **Rationalization.** Reporting to supervisors the value of the process for the organization and justifying the use of resources.

## 2 Capability Levels

The following definition of capability levels in terms of the metrics used to manage the process is not subjective, enabling auditors to use evidence to determine the capability of a process.

Capability Level	Metrics	Enabled Management Activities
Undefined	Not Documented	None
Defined	Documented	Audit / Certify
Managed	Documented Scope Activity Availability Efficacy	Audit / Certify Testing Monitor Rationalization Improvement <ul style="list-style-type: none"> <li>Remove faults before they produce incidents</li> <li>Feedback on the result of changes</li> </ul>
Controlled	Documented Scope Activity Availability Efficacy (comparison with ideal outcome) Load (what resources are used to produce the outcomes, finding bottlenecks) Update (are outcomes recent enough to be valid)	Audit / Certify Testing Monitor Rationalization Improvement <ul style="list-style-type: none"> <li>Remove faults before they produce incidents</li> <li>Feedback on the result of changes</li> <li>Remove bottlenecks that hamper performance</li> </ul> Planning
Optimized	Documented Scope Activity Availability Efficacy Load Update Efficiency, ROSI	Audit / Certify Testing Monitor Rationalization Improvement <ul style="list-style-type: none"> <li>Remove faults before they produce incidents</li> <li>Feedback on the result of changes</li> <li>Remove bottlenecks that hamper performance;</li> <li>Finding points of diminishing return:</li> <li>Making tradeoffs.</li> </ul> Planning