The Value of ITIL to IT Audit

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Chairman

itSMF
Hong Kong Chapter
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IT Infrastructure Library
ITIL

- Best practice in IT Service management, developed by Office of Government Commerce (OGC), UK in the late 1980s.
- Worldwide, ITIL is the most widely used best practice for IT Service Management.
- Series of books giving guidance on quality IT services
  - Processes and their requirements
  - Relationships, Options, Benefits, Challenges
  - Roles and Responsibilities

ITIL Publications
COBIT

- Control Objectives for Information and related Technology, developed and promoted by the IT Governance Institute
- 34 IT processes
- High level approach to control over these processes
- 318 detailed control objectives and audit guidelines to assess the 34 IT processes
Service Support

- Incident Management
- Problem Management
  - DS10 Manage Problem and Incidents
- Change Management
- Release Management
  - AI6 Manage Changes
- Configuration Management
  - DS9 Manage the Configuration
- Service Desk

Service Delivery

- Service Level Management
  - DS1 Define and manage service level
- Availability Management
- Capacity Management
  - DS3 Manage Performance and Capacity
- IT Service Continuity Management
  - DS4 Ensure continuous service
- Financial Management for IT Services
  - PO5 Manage IT investment
Service Desk

➢ To provide a strategic central point of contact for customers, and an operation single point of contact for managing incidents to resolution.

Service Desk

➢ Receive and record all calls from Users: deal directly with simple requests/complaints
➢ Provide initial assessment of all incidents: resolve and/or refer to 2nd line support
➢ Monitor and escalate all Incidents
➢ Keep users informed on status and progress
➢ Produce management reports
Incident Management

- To restore normal service operation as quickly as possible and to minimise adverse impact on business operations
- Incident is any event which is not part of the standard operation and which causes, or may cause, an interruption to, or a reduction in, the quality of that service

Incident Management

- Detection and recording
- Classification and initial support
- Investigation and diagnosis
- Resolution and recovery
- Incident closure
- Ownership, monitoring, tracking and communication
Problem Management

- To **minimise the adverse impact** of incidents and problems on the business that are caused by errors in the IT infrastructure and to prevent recurrence of incidents related to these errors.
- Problem Management seeks to get to the **root cause of the error** and to initiate action to remove the error.

Problem Management

- **Problem Control**
  - Identification and recording
  - Classification
  - Investigation and diagnosis
- **Error Control**
  - Identification and recording
  - Assessment and resolution
  - Closure and monitoring resolution progress
  - **Request for Change (RFC)** if required
Change Management

➢ To ensure that standardised methods and procedures are used for efficient and prompt handling of all changes so as to minimise the impact of change-related Incidents and to improve day-to-day operations

The only constant is change

Change Management

➢ Raising and recording changes
➢ Assess impact, cost, benefit, and risk
➢ Develop business justification and obtaining approval
➢ Manage change implementation
➢ Monitor and report on implementation
➢ Review and close Requests for Change
Change Advisory Board

- to approve Changes and to assist Change Management in the assessment and prioritisation of changes.

Board Members

- Change Manager, chairing the process
- IT services staff
- External service provider
- Customers and users
- Expert and technical consultants

Safe Deposit Boxes Incident

2nd Oct 2004
Configuration Management

- To identify, record and report on all IT components that are under the control and scope of Configuration Management
- Provide accurate information on configuration and documentation to support all other Service Management Processes

Case Study

- Serious traffic congestion occurred on 9 May 2005
- The Secretary for the Environment, Transport and Works appointed a Task Force to review and recommend enhancement measures for emergency transport coordination.
- Report was submitted on 5 July 2005
Terms of Reference

To review and make recommendations on -

- **the crisis management mechanism**;
- internal coordination to expedite immediate remedial works;
- **congestion relief measures**; and
- dissemination of information to the public, with a view to facilitating better handling of similar unforeseen emergency situations with substantial traffic impacts in the future

Crisis Management Mechanism Recommendation

- Assessment of the situation
  - Initial assessment ... made by officers at the scene
  - However, they may not have knowledge of the big picture, .. sufficient knowledge to make an accurate assessment of the situation
Crisis Management Mechanism Recommendation

- important for departments to provide sufficient guidance, such as checklist and guidelines, to enhance their judgement. Officers should be made aware of the macro-picture and the wider implication of their actions.

Congestion Relief Measures Recommendation

- Data Collection
- Traffic Management
- Traffic Impact Assessment
- Measures to Facilitate Diversion
- Recovery Management
- Road Design and Rail Network
  - Outside the Task Force’s ambit
**Congestion Relief Measures**

**Recommendation**

- **Data Collection**
  - Problem identification and recording

- **Traffic Impact Assessment**
  - Problem classification
  - Problem investigation and diagnosis

- **Measures to Facilitate Diversion and Recovery Management**
  - Resolution and recovery, Request for Change
  - Close problem

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**Release Management**

- Release Management takes a holistic view of a change to an IT service and should ensure that all aspects of a Release – both technical and non-technical – are considered together

- The focus of Release Management is the protection of the live environment and its services through the use of formal procedures and checks
Service Delivery

- Service Level Mgmt
- Availability Mgmt
- Capacity Mgmt
- IT Service Continuity Mgmt
- Financial Management for IT Services

Availability Management

- To optimise the capability of the IT infrastructure, services and supporting organisation to deliver a cost-effective and sustained level of availability enabling the business to meet their objectives
Availability Management

- Availability
- Reliability
- Maintainability
- Serviceability
- Security

Capacity Management

- To ensure that all the current and future capacity performance aspects of the business requirements are provided cost-effectively
Capacity Management

- **Monitor** the performance and throughput of IT services and supporting IT component
- **Tuning** activities to make efficient use of resources
- Understanding the **current demands** for IT resources and deriving forecasts for future requirements
- Producing a **Capacity Plan** predicting the IT resources needed to achieve agreed service levels.

The Capacity is to handle...

- Lines jammed after anxious callers flood phone network.
- 八號風球高懸，市民紛紛致電親友，令全港電話網絡大癱瘓 *(11/Sept/02)*
IT Service Continuity Management

- To ensure that the required IT technical and services facilities can be recovered within required and agreed timescales
- **IT Service Continuity Planning** is a systematic approach to the creation of a plan and procedures – which are regularly tested and updated – to prevent, cope with, and recover from the loss of critical services for extended periods

Recovery Options

- Do nothing - is this a real option?
- Revert to manual procedures - can you?
- Make reciprocal arrangements
- **Cold standby**
  - gradual recovery (in hours/days)
- **Warm standby**
  - intermediate recovery (in minutes/hours)
- **Hot standby**
  - immediate recovery (in seconds/minutes)
Service Level Management

➢ To maintain and improve IT Service quality through a constant cycle of agreeing, monitoring and reporting to meet the customers' business objectives

Basic Concept in Service Level Management

➢ Planning
➢ Co-ordinating
➢ Drafting
➢ Agreeing
➢ Monitoring
➢ Reporting
➢ On-going review of service achievements
**Financial Management for IT Services**

- Seeks to provide **cost-effective IT assets and resources** used in providing IT services
- **Attribute all spending** to specific and general services delivered to customers
- Assist management in **decision-making on IT investment** by providing financial information in support of business cases made

**Benefits of ITSM**

- **Alignment of IT with the business**
  - Services matched to business needs
- **Improved reliability and availability**
  - less lost productivity
- Flexible to **cope with change**
- Improved **competitiveness**
- Improved **customer satisfaction**
Exercise

Because of its increased dependency on information systems, a national insurance firm decides that there must be assurances for the provision of IT service following an interruption.

Which process should be implemented to provide this assurance?

A. Availability Management
B. IT Service Continuity Management
C. Service Level Management
D. Service Management

Exercise

A steel company is merging with a competitor. The IT departments and IT infrastructure of both companies will be combined.

Which process is responsible for determining the required disk and memory space required for applications running in the combined IT infrastructure?

A. Application Management
B. Capacity Management
C. Computer Operations Management
D. Release Management
A company sets up an Intranet for its graphic design workstations. The bandwidth must be increased because of the high volume of illustrations sent over the network.

Which ITIL process is responsible for approving the implementation of increased bandwidth?

A. Capacity Management
B. Change Management
C. Availability Management
D. Problem Management

Exercise

COBIT

- a framework and a knowledge base for IT processes and their management.
- is built with reference to existing standards and practices.
- a practical management tool rather than a definitive standard, which enables IT personnel, business people, and audit and control specialists to relate to COBIT easily.
COBIT

- helps implement management’s perspective of control systems because COBIT operates at a level above the actual technology used and has a business focus.
- focuses on getting the "what" right, without worrying about "how" things need to be done.

Relation with other standards (from the eyes of COBIT)

- ITIL is a collection of best practices in IT service management. It is focused on the “how” of IT or service and its processes and the central role of the user.
- ITIL maps service delivery to process execution and technical aspects of process control.
- COBIT focuses on process control as well as strategic control in an enterprise.
## ISEB Pass Statistics

### Foundation Certificate in ITSM

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<th>Financial Year</th>
<th>Candidates</th>
<th>Pass</th>
<th>Fail</th>
<th>% Pass</th>
<th>% Fail</th>
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The only internationally recognised and independent organisation dedicated to IT Service Management.

A major influence on, and contributor to, industry “best practice” and standards worldwide.

Formed in the UK in 1991, there are now 27 national chapters in an ever-increasing number of countries.
Officially formed on 20 January 2005
Enhance the awareness of technology, best practices and standards in IT service management through:
- Promotion and development of globally recognized qualifications
- Facilitated knowledge sharing among members and practitioners

Thank You!