

# Implementing the IT Infrastructure Library (ITIL) in Today's Data Center

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# Agenda

- **ITIL background**
- **Service delivery**
- **Service support**

## How many years experience do you have in IT?

1. **Less than 10 years**
2. **11 to 15 years**
3. **16 to 20 years**
4. **21 to 25 years**
5. **over 25 years**

## In which area is your primary IT experience?

1. **Operations**
2. **Technical support**
3. **Applications development**
4. **Project management**
5. **Planning/finance/strategy/architectures**

## How familiar are you with ITIL concepts?

1. Not at all
2. Slightly
3. Somewhat
4. Moderately
5. A fair amount

# ITIL Background

- **Began in UK in 1989**
- **Based on service management**
- **Documented framework of best practices for managing IT infrastructures**

## ITIL Background (con't.)

- **Adopters and adapters are spreading worldwide**
- **Consists primarily of:**
  - **Service delivery processes**
  - **Service support processes**

# Service Delivery

- **Service management**
- **Service-level management**
- **Financial management**
- **Capacity management**
  - Performance and tuning
- **Availability management**
- **Security**
- **Service-continuity management**
  - Disaster recovery

# Service Management

- **Using IT to serve business needs**
- **Applying technology to solve business problems**
- **Collaborating with customers as partners**
- **Treating IT as a competitive advantage**

## In which process are you most interested?

1. **Service-level management**
2. **Financial management**
3. **Capacity management**
4. **Availability management**
5. **Service-continuity management**

# Service-Level Management

- **Common terms and key points**
  - SLAs, operating-level agreements
  - Underpinning contracts, service catalog
- **Real-life experience**
  - NG's use of POs and engr. release drawings as metrics
- **Practical take-aways**
  - Keep SLAs short and simple
  - Use user-based metrics
  - Review agreements in-person regularly

# Financial Management

- **Common terms and key points**
  - **Budgeting** – depends on reliable forecasts
  - **Accounting** – measures forecasts vs. actuals
  - **Charging** – optionally devises the system
- **Real-life experience**
  - **Amazon.com** adjusts its billing/shipping processes during peak holiday periods
- **Practical take-aways**
  - **Ensure executive management sets charging policy and supports FM's design of system**
  - **Use charging to modify user behavior**

# Capacity Management

- **Common terms and key points**
  - Relies heavily on customer and user forecasts
  - Variety of simulation techniques used
- **Real-life experience**
  - The battle between two server giants at TCF
- **Practical take-aways**
  - Reach agreement with customers on device utilization thresholds prior to installation
  - Work with users to improve forecasts
  - Utilize vendor labs to validate performance claims

# Performance/Tuning Management

- **Common terms and key points**
  - Tactical aspect of capacity management
  - Includes applications, databases, networks
- **Real-life experience**
  - Dotcom company uses staff meetings to judge website performance and response
- **Practical take-aways**
  - As much as possible and practical, use first-hand empirical results
  - Don't be reluctant to use vendors' SMEs

# Availability Management

- **Common terms and key points**
  - **MTBF – measure uptime and reliability**
  - **MTTR – measures repairability and recoverability**
- **Real-life experience**
  - **Highly intermittent transmission outage at major defense contractor**
- **Practical take-aways**
  - **Question vendor claims of multiple 9s reliability**
  - **Eliminate single points of failure**
  - **Conduct scaled-down version of CFIA**

# Security Management

- **Common terms and key points**
  - Confidentiality
  - Integrity
  - Availability
- **Real-life experience**
  - Legal consequences for CA security breaches
  - WA company liable for cell phone misuse
- **Practical take-away**
  - Ensure proper security policies are in place and distributed, and have written acknowledgement of receipt and understanding

# Service Continuity Management

- **Common terms and key points**
  - BIA - business impact analysis
  - Recovery strategies
  - Documented and tested recovery plans
- **Real-life experience**
  - Recovery test at FIL becomes the real deal
  - Transformer explosion at TCF prompts SCM
- **Practical take-away**
  - Conduct validation, simulation and operational tests quarterly, semi-annually and annually, respectively

# Disaster Recovery vs. Business Continuity

- **Emphasis is on the Data Center**
- **Technology Focused**
- **Reactive**
- **Origins in 1970's**
- **Dictatorial**
- **Minimal Customer Involvement**
- **Few Participants**

- **Emphasis is Enterprise-wide**
- **Business Focused**
- **Proactive**
- **Origins in 1990's**
- **Collaborative**
- **Extensive Customer Involvement**
- **Many Participants**

# Service Support

- **Service desk**
- **Incident management**
- **Problem management**
  - Network management
- **Configuration management**
- **Change management**
- **Release management**
  - Storage management
  - Facility management

## In which process are you most interested?

1. **Service desk**
2. **Incident/problem/network management**
3. **Configuration/change management**
4. **Release/storage management**
5. **Facility management**

# Service Desk

- **Common terms and key points**
  - Serves as single point of contact for users of IT
  - Robust SD tied to many processes (IM,PM,CM)
  - Personalizes IT services (function vs. process)
- **Real life experience**
  - Integrating many into one at TCF
  - Training not all smoke and mirrors
- **Practical take-aways**
  - Ensure all call agents understand the value and trends of meaningful metrics
  - Validate SD value during SLA interviews

# Incident Management

- **Common terms and key points**
  - Charter is to restore service as quickly as agreed upon
- **Real life experience**
  - Technology is least of challenges with City of Los Angeles 911 implementation
- **Practical take-away**
  - Understand that not all incidents become problems; some incidents result in service requests and some result in change requests

# Problem Management

- **Common terms and key points**
  - A problem is an incident for which the root cause is unknown
  - A known error is a problem for which the root cause is known (but permanent fix is not in yet)
- **Real life experience**
  - Involvement of emergency support teams for problem situations very effective at TWC
- **Practical take-away**
  - Track quantity and trends of incidents, problems and known errors; store them in CMDB

# Network Management

- **Common terms and key points**
  - Monitor proactively 24x7, either in-house or outsourced
- **Real life experience**
  - Argent Fax system successfully switches between New York and Chicago
- **Practical take-away**
  - Negotiate with carriers creative ways to upgrade bandwidths and to provide emergency redundancy

# Configuration Management

- **Common terms and key points**
  - **Scope and level of CIs in the CMDB**
  - **Each CI must have attributes and relationships**
- **Real life experience**
  - **LVMPD integrates config. mgmt. with CM**
  - **Argent integrates config. mgmt. with SCM**
- **Practical take-away**
  - **Ensure every approved change to the CMDB is accompanied with an approved change request**

# Change Management

- **Common terms and key points**
  - CM policies describe categories of changes, uses of change requests, and charter of CAB
- **Real life experience**
  - DirecTV evolved from primitive to robust
  - LVMPD uses totally automated CM process
- **Practical take-away**
  - Ensure every approved change request is accompanied with a change to the CMDB

# Release Management

- **Common terms and key points**
  - Definitive software library
  - Definitive hardware store
  - Build, test and implement new hardware and software releases
- **Real life experience**
  - Cross-functional team used at OOMC
- **Practical take-away**
  - Include hardware upgrades in your RM process, and integrate RM with configuration management and change management

# Storage Management

- **Common terms and key points**
  - Trade-off between manual management of disk space vs. simply buying more disks
  - Replication of data integrates well with SCM
- **Real life experience**
  - EMC bid at TCF
- **Practical take-away**
  - Utilize several diverse customer references
  - Provide clear and enforceable policies regarding archiving and deleting of files/e-mails

# Facility Management

- **Common terms and key points**
  - Isolate data center environmentals from those of the host building
  - Establish good working relationships with craft vendors
- **Real-life experience**
  - Southern California earthquakes
- **Practical take-away**
  - Establish special contracts with key suppliers for use only during an emergency

***Questions?***

***Thank You***  
**for your**  
**Participation**