ITIL (IT Infrastructure Library)

By John Parshall

Welcome

- My Background
  - Currently the IT Director at La Crosse County
  - Worked in IT for 20 years
  - Management for 10 years
  - Cheese Maker for 10 years
  - Graduate of WWTC in Data Processing and Welding
  - Favorite Hobby, Coaching Football

Agenda

- What is ITIL
- History of ITIL
- Why ITIL
- Overview of ITIL
- How La Crosse County Information Technology Department plans to Implement ITIL
- Closing Comments
- Certifications and Good Resources
- Questions

What is ITIL

- ITIL is a widely accepted approach to IT service management that is relevant to anyone involved in the delivery and support of IT services.
  - It provides guidance on how to take a holistic process-based and fully integrated business approach to IT Services.
  - It provides a common framework through which a cohesive set of best practices can be defined and communicated.

- **IT Service Management** – The processes and procedures used in delivering and supporting IT services that are appropriate to the business requirements of the organization.

What ITIL is Not

- ITIL does not cover everything required to operate an Information Technology Department
  - It is not a fully developed Project Management Model, It does cover deployment and project practices.
  - It is not a substitute for Six Sigma or other Process Improvement Programs
  - It does not provide Security design and architecture, but does aid in security management
  - Does not provide top down prioritization activities and resource allocation. Can provide severity levels for incident management.
  - Cannot provide strategic technology plans. It does provide solid business alignments and practices.
  - It does not provide Application design and standards, but does aid in application management
  - It is not a tool to keep IT staff trained
- ITIL is the what; it does not cover the how

History of ITIL

- ITIL emerged in the 1980s when the British government discovered their IT infrastructure was not prepared to address the logistical issues of the war in the Falkland Islands.
- The British government tasked the Office of Government Commerce (OGC), with developing a framework for efficient and responsible use of IT resources within the British government and the private sector.
- About the same time, IBM documented the original Systems Management concepts, called ***A Management System for Information Systems***, or more widely known as the "yellow books."

- These were key inputs to the original set of ITIL books.

History of ITIL

- Large companies and government agencies in Europe adopted the framework very quickly in the early 1990s.
- Adoption and creation of standards including International Organization for Standards (ISO) and British Standards (BS) in IT Service Management.
- In 2000, Microsoft used ITIL as the basis to develop Microsoft Operations Framework (MOF).
- Wide spread adoption in the United States in late 1990's and into the 2000's.

History of ITIL

- In 2001, version 2 of ITIL was released. The Service Support and Service Delivery books were redeveloped into more concise, usable volumes.
- There are 38 Regional IT Service Management Forums (ITSMF) in the USA, with a very large chapter in Minnesota. And the number of Forums is growing.
- It is the most widely used IT service management best practice approach in the world.
- 2007 version 3 of ITIL has been released.

What lead me to ITIL

- **Mission Statement** - To provide the highest quality technology-based services in a cost-effective manner. Be a leader in Customer Service. Establish systems, processes, and solutions based on best practices and industry standards.
- **My Role** - Build Relationships, Set Expectations and Align with the Business needs.
- **Department Structure** – We are implementing processes and procedures to work in teams versus individual support areas to create efficiencies and using best practices.
- **Project Management** – Back in 2005 project management was implemented to improve our ability to deliver business solutions, implement changes, and manage large complex initiatives. Many processes and procedures changed including staff realignment.

Why ITIL - Benefits

- Root Cause Problem solving
  - Improve techniques of both problem solving and problem elimination
- Common language
  - Operational standards and techniques
  - Consistent processes for the customer, user, and IT
- Configuration and asset management
  - Standard configurations of IT equipment
  - Improved delivery equipment
- Provides for Service Level Management and Operational levels of support
  - Defines catalog of services with expectations of services
  - Associates cost with IT Services

Why ITIL - Benefits

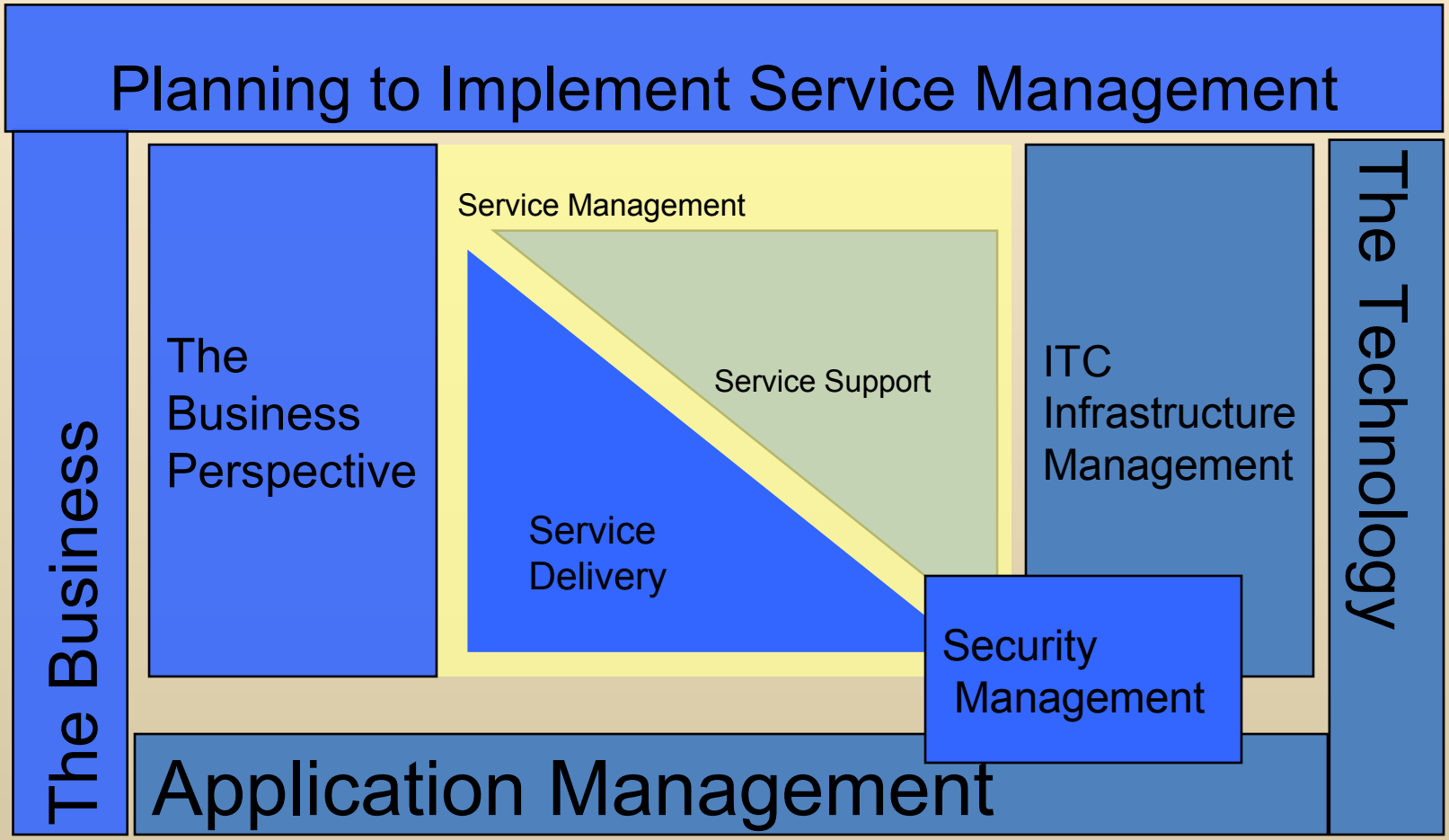
- Ensures IT Services are appropriate and at the level required by the business
- Provides a comprehensive and consistent set of best practices geared at achieving business effectiveness and efficiency
- Facilitates Continuous Service Improvement
- Reduces risk through control of processes and procedures
- Provides both professional and personal enrichment to IT employees

ITIL Interesting Points

- 90% of IT Breaks are self inflicted (Gartner)
- What is the cost of your downtime?
- Implementing ITIL typically has a payback of less then one year
- 70% of companies have a 30% discrepancy between what they think is in inventory and what they actually have (Gartner)
- It is estimated that the yearly cost to support a single desktop is $2500 (Gartner)
- $32 to process a request through the service desk compared to $1.20 to process the same request through a self service portal

Overview of ITIL

ITIL ® Framework



Information Technology

Service Support

- Service Desk
- Incident Management
- Problem Management
- Configuration Mgmt
- Change Management
- Release Management

Infrastructure Library - ITIL®

Service Delivery

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

S ervice S upport

Service Desk

- **Objective:** To provide a single point of contact (SPOC) for all end user requests, incidents, or inquiries related to IT.
- **Main Functions:**
  - Support link to end users
  - 'Owner' of all customer requests and incidents
- **Benefits:**
  - Raise IT Customer Service Quality
  - Employees are working on the right things at the right time

Incident Management

- **Objective:** To restore normal service operation as quickly as possible, minimize the adverse impact on business operations, and ensure the best possible service quality and IT service availability.
- **Main Functions:**
  - Receive and manage incidents at the Service Desk
  - Document, categorize, prioritize, manage and own all incidents until closure
  - Work to assure that all incidents are closed within defined SLAs
- **Benefits:**
  - Raise overall Service Quality by restoring service as first priority
  - Enhance the business productivity by restoring service quickly

Problem Management

- **Objective:** To solve problems (root cause) in response to multiple incidents or proactively solve problems before they cause incidents
- **Main Functions:**
  - Problem and error control; conducting problem reviews
  - Solving problems, identifying problem trends
  - Documenting problem resolution (known errors)
  - Ensures updated documentation and Knowledge Base
- **Benefits:**
  - Improved IT Service Quality
  - Incident problem reduction
  - Permanent solutions
  - Improved organizational learning

Configuration Management

- **Objective**: To manage and document the Identification, Recording and Reporting of IT Components including versions, related components and relationships for all IT hardware, software and associated documentation.
- **Main Functions**:
  - Planning the structure and management of Configuration Items (CIs)
  - Identification of CIs
  - Control of CIs and Status Accounting
  - Verification and Audit
- **Benefits**:
  - Creates the 'IT Operations Management Database' that enables the support of all the ITIL Processes

Change Management

- **Objective:** To ensure that standardized Methods and Procedures are used for efficient and prompt handling of all changes in a manner that minimizes the creation of incidents (which affect service)
- **Functions:**
  - Change recording, documentation, monitoring and reporting
  - Assessing impact, cost benefits and risk of change
  - Management and implementation of change
- **Benefits:**
  - Raise availability of IT Services; minimize disruption
  - Reduce the cost of rework, incidents; Raise Service Quality

Release Management

- **Objective:** To ensure that standardized methods and procedures are used for efficient and prompt handling of all releases in a manner that minimizes the creation of incidents
- **Main Functions:**
  - Release recording, documentation, monitoring and reporting
  - Assessing impact, cost, benefits and risk of releases
  - Management and implementation of releases
- **Benefits:**
  - Raise availability of IT services; minimize disruption
  - Reduce the cost of rework, incidents; Raise Service Quality

Service Delivery

Capacity Management

- **Objective:** To ensure that the capacity of the IT infrastructure matches the evolving demands of the business in a timely and cost effective manner
- **Main Functions:**
  - Monitoring the performance and throughput of IT Services
  - Tune existing IT Systems to assure efficient use of IT resources
  - Undertake demand forecasting and demand management
  - Produce and Maintain a Capacity Plan
- **Benefits:**
  - Enables understanding of the proper cost vs. capacity balance
  - Enables understanding of the proper demand vs. supply balance
  - Answers the 'What, When, How Much Cost' questions of Capacity Management

IT Financial Management

- **Objectives:** To Provide Cost-effective Stewardship of IT Assets and Resources
- **Main Functions:**
  - IT Budgeting (Use Of Funds)
  - Charge Backs (Helps in the Recovery and Resource Utilization)
- **Benefits:**
  - Enables Understanding of TCO for Each Business Service
  - Enables Better IT Investment Decisions
  - Increases Efficiency of Resource Utilization
  - Increase professionalism in IT and Enables a Better Relationship with the Remaining Organization

Availability Management

- **Objective:** To optimize the capability of the IT Infrastructure, Services and Supporting Organization to deliver a cost effective and sustained level of availability that enables the business to satisfy its objectives

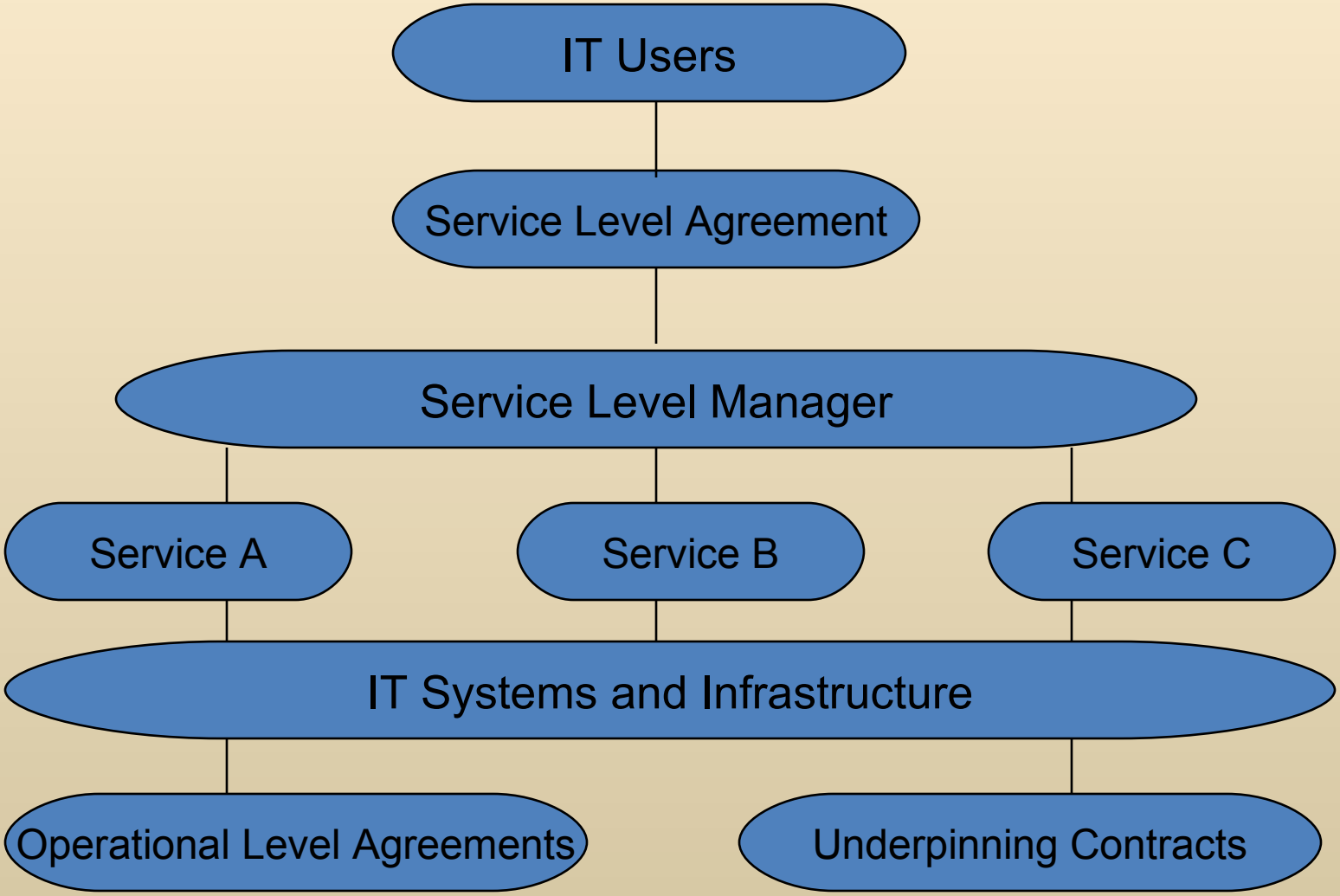
- **Main Functions:**
  - Plans and designs systems to meet availability requirements
  - Monitors and reports on availability metrics
  - Works to improve the Service Quality and cost performance of the Infrastructure as it pertains to availability

- **Benefits:**
  - Raise overall Infrastructure reliability and availability
  - Reduce the Cost 'Per available hour, minute or day'

Service Level Management

- **Objectives:**
  - To maintain and improve IT service quality in line with business and cost goals
  - Establish and maintain customer expectations using SLAs
- **Main Functions:**
  - Manage the service quality-cost relationship with customers
  - Manage the service quality-cost delivery of service
- **Benefits:**
  - Improve service quality and customer satisfaction
  - Reduce cost
  - Improve focus and communication with end users
  - Set clear requirements, via SLAs, that manage user expectations

Service Level Management

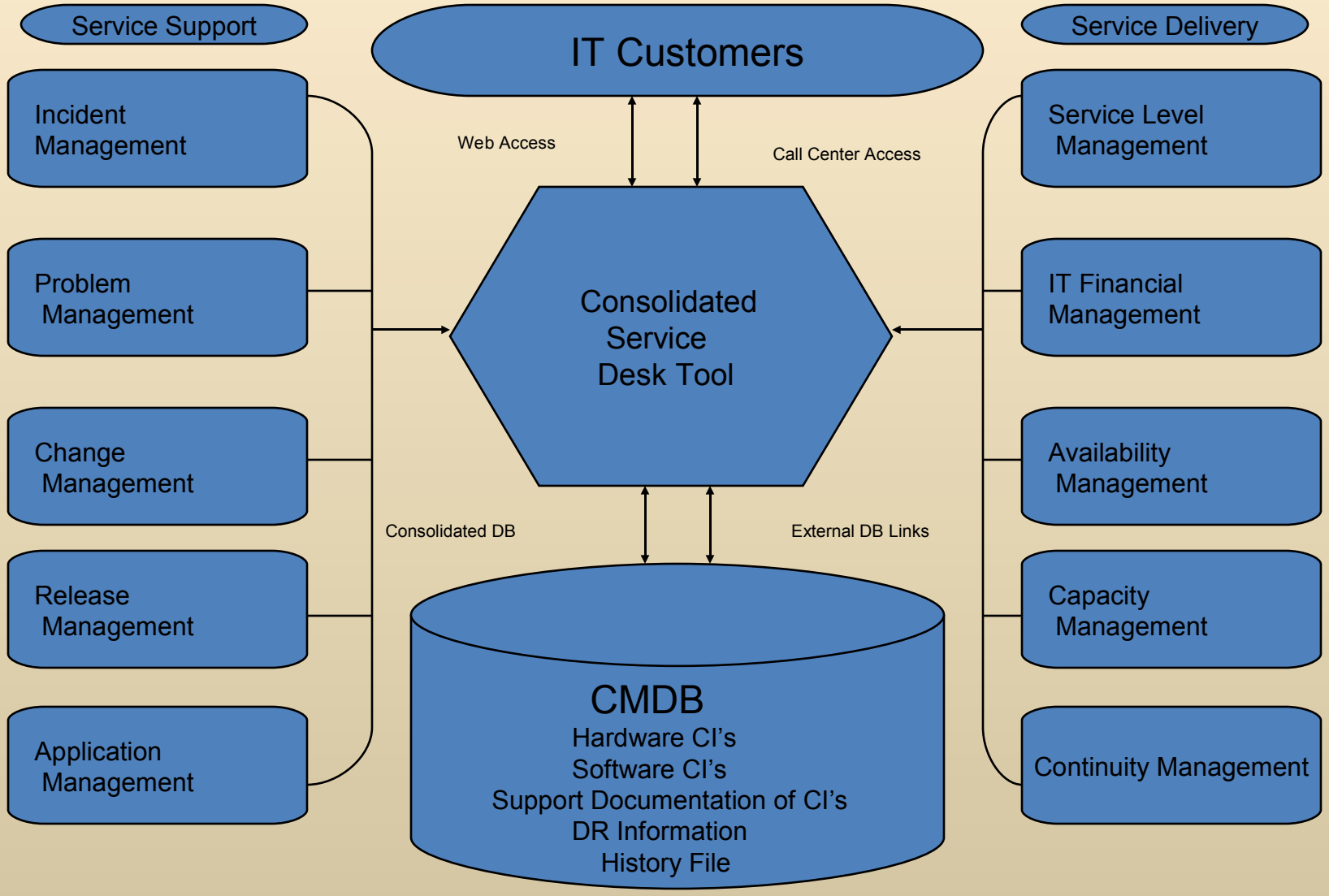


IT Service Continuity Management (ITSCM)

- **Objective:** To ensure IT Services can be recovered within agreed upon timescales based on the business continuity plan.

- **Main Functions:**
  - Conduct business impact, risk and continuity strategy planning
  - Implement and maintain the IT Service Continuity Management (ITSCM) plan
- **Benefits:**
  - Retain business in the event of disruption
  - Maintain IT and business services during/after restoration

ITIL® Operational Essentials



The Business Perspective

- **Objective:** To maintain and develop professional relationships with customers, suppliers and business managers at all levels which help identify business needs and opportunities to enable existing and future IT capabilities for business benefits.
- **Main Functions:**
  - Understanding business objectives
  - Working with the business
  - Influence, innovate and enable change for business advantage
- **Benefits:**
  - Makes IT part of the business
  - Ensures IT processes support business needs
  - Aligns IT priorities with business priorities

Information and Communications Technology (ITC) Infrastructure Management

- **Objective:** Look at the challenges associated with the management of the IT Infrastructure and overall management and administration. Covers Design and Planning, Technical Support, Deployment, and Operations.
- **Main Functions:**
  - Network Service Management
  - Operations Management
  - Deployment of IT Solutions
  - Systems Management
- **Benefits:**
  - Increased Service Availability
  - Better match of capacity to business needs
  - Less adverse impact to change

Application Management

- **Objective**: Moves application development and IT Service Management closer together. Application deployment includes design, operability, reliability, maintainability, performance and testing.
- **Main Functions:**
  - Application Management
  - Business Value
  - Aligning Delivery Strategy
  - Application Lifecycle
  - Control Methods and Techniques
- **Benefits:**
  - End-to-end description of all the management processes for an application
  - Road map to delivering applications into an IT Environment
  - Integrates and aligns with Service Management implementation
    - Change Management
    - Release Management

Security Management

- **Objective:** Ensures a process of managing a defined level of security for Information, IT Services and Infrastructure. Includes managing the reaction to security incidents.

- **Main Functions:**
  - Information Security management
  - Embedding of security relevant activities in ITIL processes
  - Information Security measures

- **Benefits:**
  - Helps safeguard information
  - Defines the value of the information being protected
  - Places the Business importance on the data being protected

Software Asset Management

- **Objective:** To manage and protect the organization's software assets, including management of the risk arising from the use of those software assets.
- **Main Functions:**
  - Asset Management Processes
  - Verifications and Compliance processes
- **Benefits:**
  - Helps with legal and financial exposures
  - Helps with confidential information safeguards
  - Can reduce interruption of operations

How We Will Implement

- With These Major Steps:
  - Planning (Set Direction and Vision)
  - Project Management (Defined Scope and Plans)
  - Production (Turnover and ongoing improvements)

How We Will Implement -Planning

- Set Vision and Direction
- Communicate high-level intent to leadership and staff
- Get leadership buy in and support
- Create a Planning Team
  - Management, Process Owners and Project Manager
- Conduct training for the planning team

How We Will Implement - Planning

- Identify what components of ITIL we are implementing and in what order
  - Component or Components (Keeping in mind dependencies and existing processes)
    - Service Level Management
    - Define how we going to build our CMDB
    - Service Desk
  - Process and Procedure Changes for component to implement
  - Staff Responsibilities and Duties for component to implement
  - Automation and Integration Points
- Finalize High-Level Strategic Plan
- Initiate a project from the Strategic Plan.

How We Will Implement - Project Management

- Use Functional Management lines as the stakeholders and the IT Director as the champion
- Define Scope for each ITIL component to be implemented from the planning team
- Gather the requirements and perform gap analysis
- Build project plan
  - More Staff Training
  - Details on Processes and Tools
  - Details on Communications and Implementations
- Execute the plan
- Post implementation review
- Get ready for next component

How We Will Implement – Turn Over Production

- Turn over to Functional Management
- Set Performance Measures
- Monitor and Control
- Make Adjustments
- Continue to Improve
- Continue with Training
- Prepare for next ITIL implementation with Planning Team

Software Needs

- Many Software Tools out there; we have not picked one yet
- We know we want these key features
  - Customer Portal
  - Customizable CMDB
  - Integrated Intake for Change Management
  - Process and Work Flow capabilities
  - Ability to work with Teams and Groups for Incident Management and Problem Management
  - Ability to Prioritize, Allocate Resources and Balance Workloads
  - Auto Discovering Tools for Network Devices
  - Integrated Knowledge Base
  - Integrated Inventory Management
  - Financial Management, Billing, and Time Accounting
  - Integrated SLA management, with Alerting and Escalations
  - Reporting and Metrics

Conclusions

Conclusions

- ITIL does not cover everything needed to operate an Information Technology Department
  - Project Management
  - Six Sigma / Process Improvements
  - Many Other Management Activities
  - Compliancy aspects such as contract reviews
- There is no silver bullet to implement ITIL
  - Every Shop is different; ITIL must be applied based on your shop
- ITIL is nothing more then a collection of "Best Practices" around a defined language and framework.
- ITIL Framework provides a "common sense" structured approach to better deliver IT Services.

Conclusions

- The value you will receive out of ITIL will vary based on:
  - Other Best practices already in place
  - How you measure your success based on your business needs
- ITIL is the what; it does not cover the how
- *"Individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work." Vince Lombardi*

Some Key ITIL Concepts

- ITIL is not a standard, nor is it rules or regulations, and therefore neither the tools, processes, or people can be deemed "ITIL Compliant"
- Each organization, whether an internal service provider or an external third party service provider, can adopt the guidelines, principles, and concepts of ITIL and adapt them to fit their own unique environment "Adopt and Adapt"
- ITIL and IT Service Management is the provision of quality Customer Service
- IT Management is all about the efficient and effective use of the four Ps. People, Processes, Products and Partners.
- People and Process issues must be addressed first. People and Processes should not be engineered to fit the Technology. The Technology must be engineered to fit the people and processes.

What do I see as the Strengths of ITIL

- **Good Service Desk Model**
  - Incident Management
  - Problem Management
  - Development of strong Knowledge Base
- **Configuration Management**
  - Configuration Control
  - Data Identification and integration with Service Desk and other processes
- **Service Level Management**
  - Setting Up Service Catalogs
  - Preparing and setting SLAs
  - OlAs
- **Financial Management**
  - Accounting System
  - Setting and aligning cost for IT Services with Service Levels

Training


ITIL Managers Training
Operations Leadership,
Directors and Manager
ITIL Practitioners Training
Service Management Functional
Managers and Practitioners
ITIL Foundation Training All IT Operations Staff
and Key Applications Development Managers
ITIL Overview Sessions Any IT staff where Foundation
Training is not Financially Practical

Certification

- **Foundation** - Enables people to understand the terminology used within ITIL. It focuses on foundation knowledge with regard to the ITIL Service Support and Service Delivery sets as well as generic ITIL philosophy and background. It is a prerequisite for the Practitioner's and Manager's Certificates in IT Service Management.
- **Practitioner -** Focuses upon the understanding and application of the specific processes within the IT Service Management discipline.
- **Manager's -** Aimed at experienced professionals, who will be involved in managing service management functions.

Good Resources

- Tech Republic - http://techrepublic.com
- Pink Elephant - https://www.pinkelephant.com/en-US/
- ITIL Central - http://itsm.fwtk.org/
- Infra Corporation Best practices enterprise service management - http://www.infra-corp.com/
- Net Source America - http://www.netsourceamerica.com/
- Information Technology Infrastructure Library from Wikipedia - http://en.wikipedia.org/wiki/ITIL

Thank You


Support IT Service
Managing Applications
The Business Perspective