



Education

The Secret Sauce of ILM

The ILM Assessment Core

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The Secret Sauce of ILM – Assessment

Professional Services and internal consulting figure prominently in the success of ILM transformations. Yet, few storage professionals have the blend of techno/business skill, architect-client relations and skills at selecting the appropriate methodology. This session will discuss issues, strategies, and techniques you might consider using to attain your objective.

What is the goal?

To create storage services as a collection of components provided in support of business processes perceived by customers and users as a set of self-contained, single, coherent entities at the lowest possible cost.

This tutorial has been developed, reviewed and approved by members of the Data Management Forum (DMF)

- The DMF is an industry resource to those responsible for the accessibility and integrity of their organization's information
- The DMF focuses on the technologies and trends related to Data Protection, ILM and Long-term digital information retention

DMF Workgroups:		
Data Protection Initiative (DPI)	Information Lifecycle Management Initiative (ILMI)	Long-term Archive and Compliance Storage Initiative (LTACSI)
Defining best practices for data protection and recovery technologies such as Backup, CDP, Data deduplication and VTL	Developing, educating and promoting ILM practices, implementation methods, and benefits	Addressing the challenges of retaining, securing, and preserving digital information for the long-term

In this session, we focus on the core of ILM consultative process: the measurement of maturity vs. information disciplines. This core is the foundation of most assessment methodologies. We also consider the assessment strategies that work best at various entry points of maturity. As a customer, when you understand both the process and strategy, you can choose the best strategy for your company today. However, because ILM is a way of life, you will choose a different strategy tomorrow.

This may sound dry, but it is the secret sauce of the industry.

- Understand relationship of maturity to information disciplines
- Identify key ILM disciplines and process in the context of their execution in the infrastructure
- Determine the most effective ILM assessment strategy for a given scenario

- **Forget what you know**
 - ◆ The existing standards are becoming obsolete!
- **The information crisis will not go away**
 - ◆ We need to reengineer the infrastructure to meet requirements, it is the only effective path to success
- **Our personal view of the assessment process may prevent our success**
 - ◆ We have to change as well



Information Technology Infrastructure Library (ITIL)

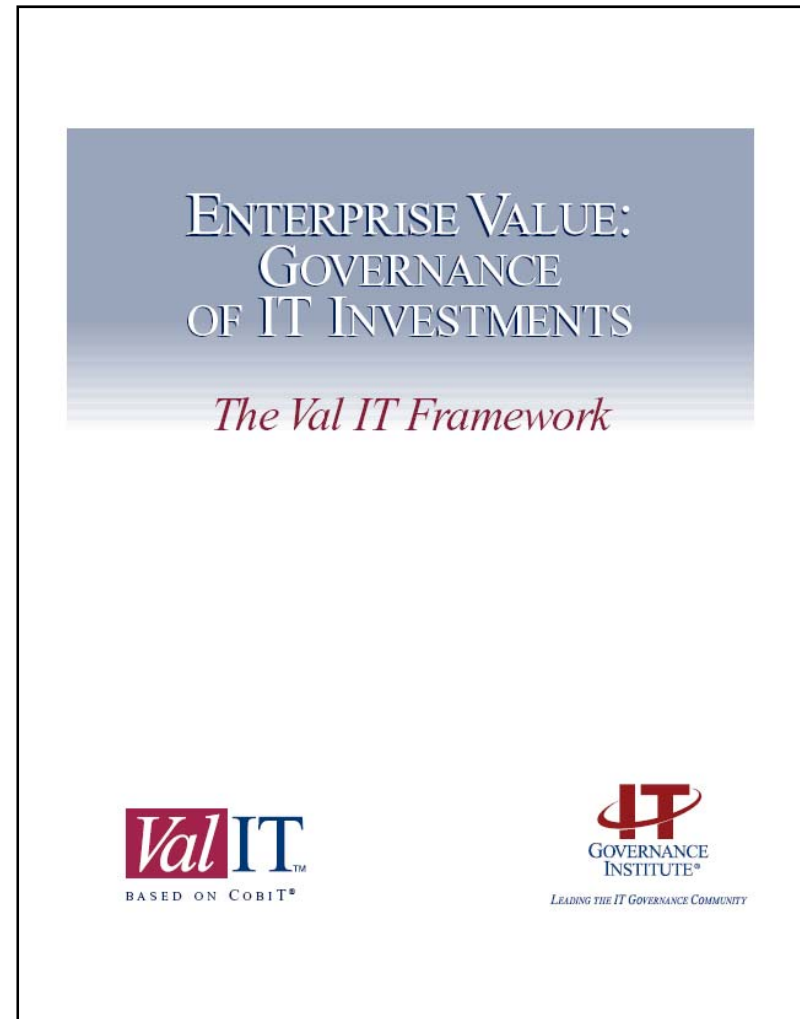
- A library of books describing best practices for IT Service Mgt
- Describes goals, activities, inputs & outputs of processes
- Not a “standard” – just best practices
- Specific procedures can vary from organization to organization



- Focus is Business-IT Integration
- OPEN approach – not tied to any particular vendor

ITIL is a registered trademark of the UK Government Office of Government Commerce (OGC)

- Created by the IT Governance Institute
- Focuses on enterprise value and governance of IT investments



ILM includes

- Automating storage services
 - ◆ Availability
 - › Operational Recovery
 - › Business continuity
 - ◆ Data retention (including archiving)
 - ◆ Performance
 - ◆ Resource management
 - ◆ Information Security
 - ◆ etc
- Based on business goals and objectives
 - ◆ Including regulatory influences

A storage tier is a collection of storage capacity that meets requirements with a consistent set of attributes, capabilities and characteristics which may include:

- Availability
- Performance
- Quality of Service
- Cost

Storage Tier ≠ Storage Service

For example: it is possible that disks in the same array might be treated as different levels of service because of RAID Level, data location on a spindle or other characteristics – even if all disks in the array are of the same architecture (e.g., 15k RPM FC)

Evaluate against the model that follows

This will help you to understand:

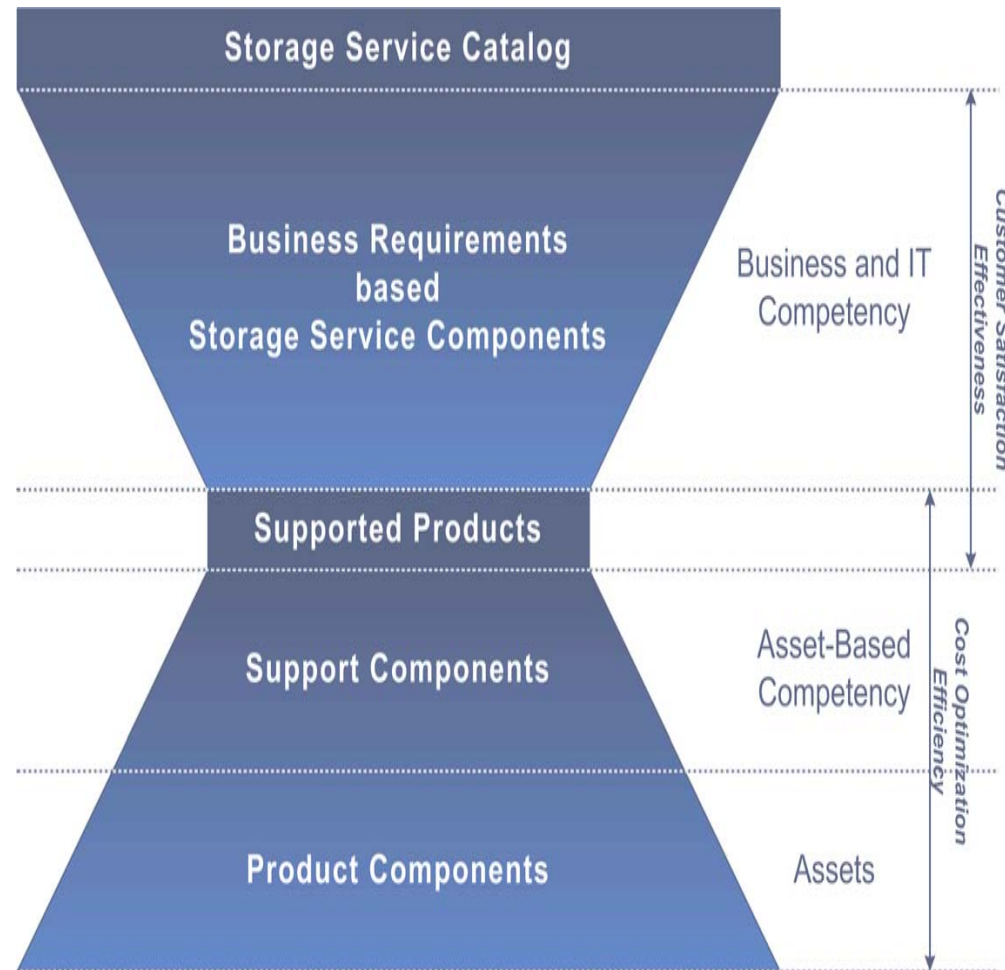
current state

and what can be accomplished in a year, successfully...

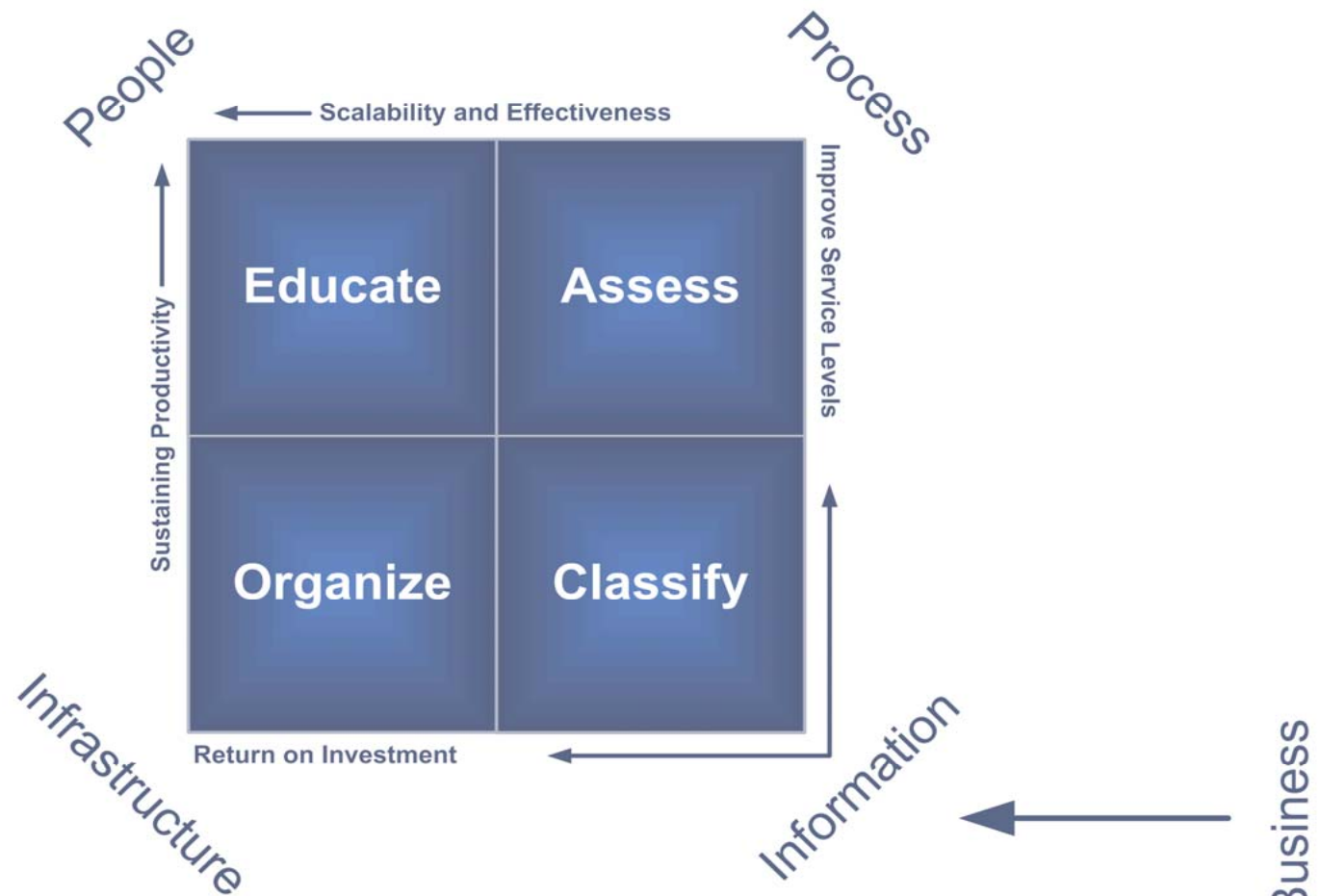
Storage Service Maturity

Storage Services

- Bill of Materials
 - ◆ Cost Optimization
 - ◆ Efficiency
- Business Requirements
 - ◆ Customer Satisfaction
 - ◆ Cost Optimization
 - ◆ Effectiveness
 - ◆ Efficiency
- Service Mgt
 - ◆ Data Center Processes



ILM Strategy



Assessment Process

ILM Assessment Phases

➤ Prepare

- ◆ Obtain Sponsorship
- ◆ Build a team
- ◆ Set Goals and milestones

➤ Analysis

- ◆ Collect/Develop service level objectives
- ◆ Classify Information
- ◆ Analyze Gaps
- ◆ Recommendations

➤ Design

➤ Implement

➤ Validate Design

Classifying Information

➤ Availability

- ◆ Business availability requirements
- ◆ Business impact assessment
- ◆ Definition of unavailability
- ◆ Risk identification

➤ Regulatory Compliance

➤ Capacity

- ◆ Business strategy and plans
- ◆ IT strategy and plans
- ◆ Business requirements
- ◆ Transaction volumes
- ◆ Financial

➤ Governance

- ◆ Retention
- ◆ Mutability

Develop Storage Strategy

➤ Map

- ◆ Storage capabilities to requirements
- ◆ Alternative capabilities to requirements

➤ Develop

- ◆ Parts list with high-level attributes
- ◆ Bill of materials that summarizes the required capabilities
- ◆ Preliminary catalog of storage services (portfolio)

Strategy is Constructed from Capabilities

- Performance
 - Retention
 - Protection
 - ◆ Encryption
 - ◆ Data Destruction
 - Authorization

 - ...and more
- Operational Availability
 - ◆ RAIDx
 - ◆ Recovery Time Objective
 - ◆ Recovery Point Objective
 - Business Continuity Availability
 - ◆ Synchronous/asynchronous
 - ◆ Consistency

Consolidate & Assign

➤ Discover

- ◆ Current storage capabilities
 - › What do they own?
- ◆ Current storage services consumed
 - › What is used?

➤ Validate previous work

➤ Consolidate and assign

- ◆ Metrics
- ◆ Capabilities
- ◆ Assign to perspective
- ◆ Consolidate and aggregate numbers by perspective

Current Capabilities Owned

– Required Capabilities

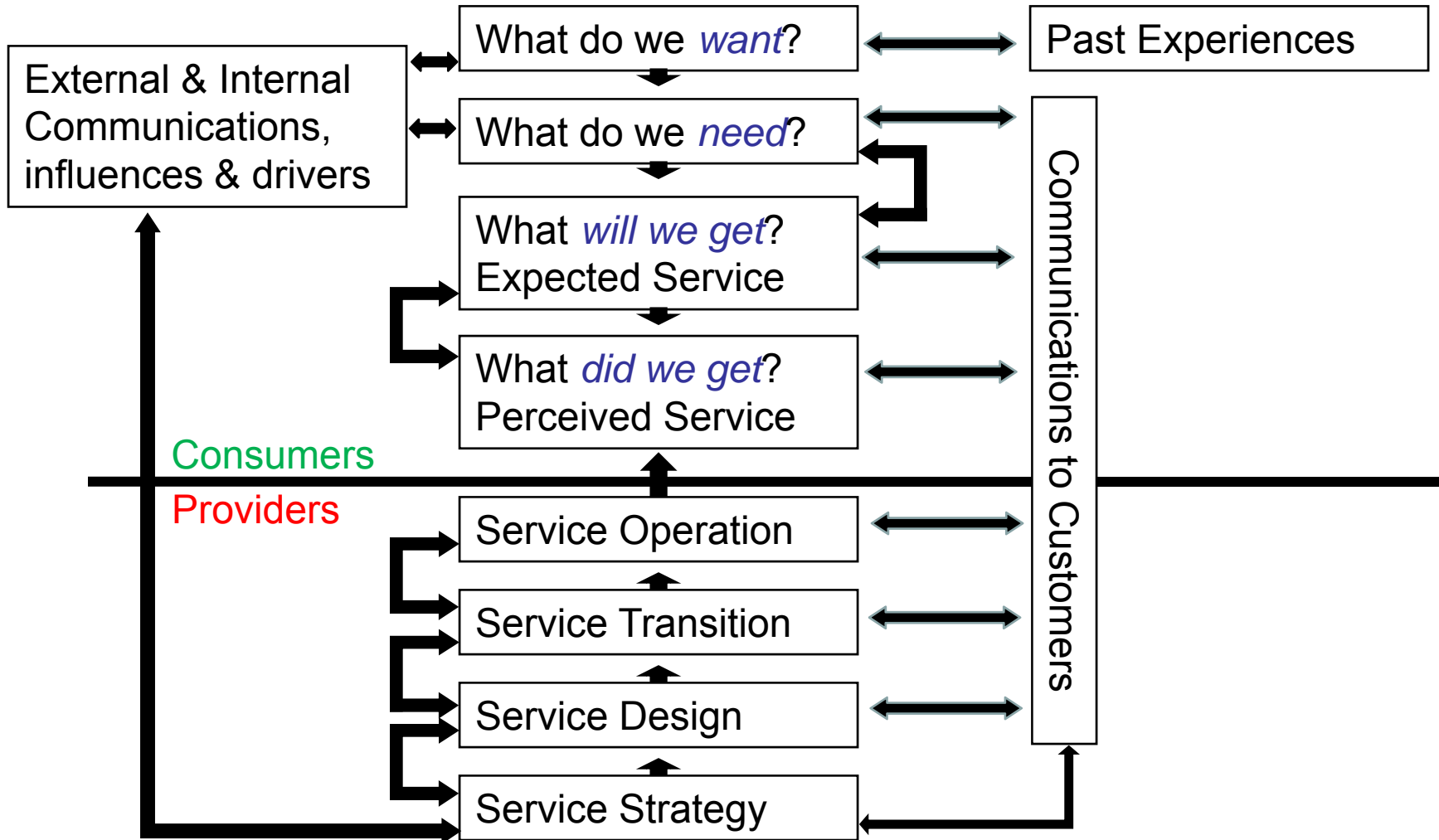
What needs to be purchased?

Implemented Capabilities

– Required Capabilities

Work that needs to be done?

ITIL Service Gap Model



Produced on acceptance of the recommendations or on a decision to proceed with specific recommendations. It is probable that a proof of concept design using a hardware subset may be required as part of an assessment. Detailed discovery is a requirement. Detailed design should be close to implementation to avoid rework.

Install/Configure technical components, implement new processes, procedures and organizational components, including pilot solution, and rollout to client organization. This step is executed consistent with local consulting methodology and new storage practices.

ILM Assessment Phases

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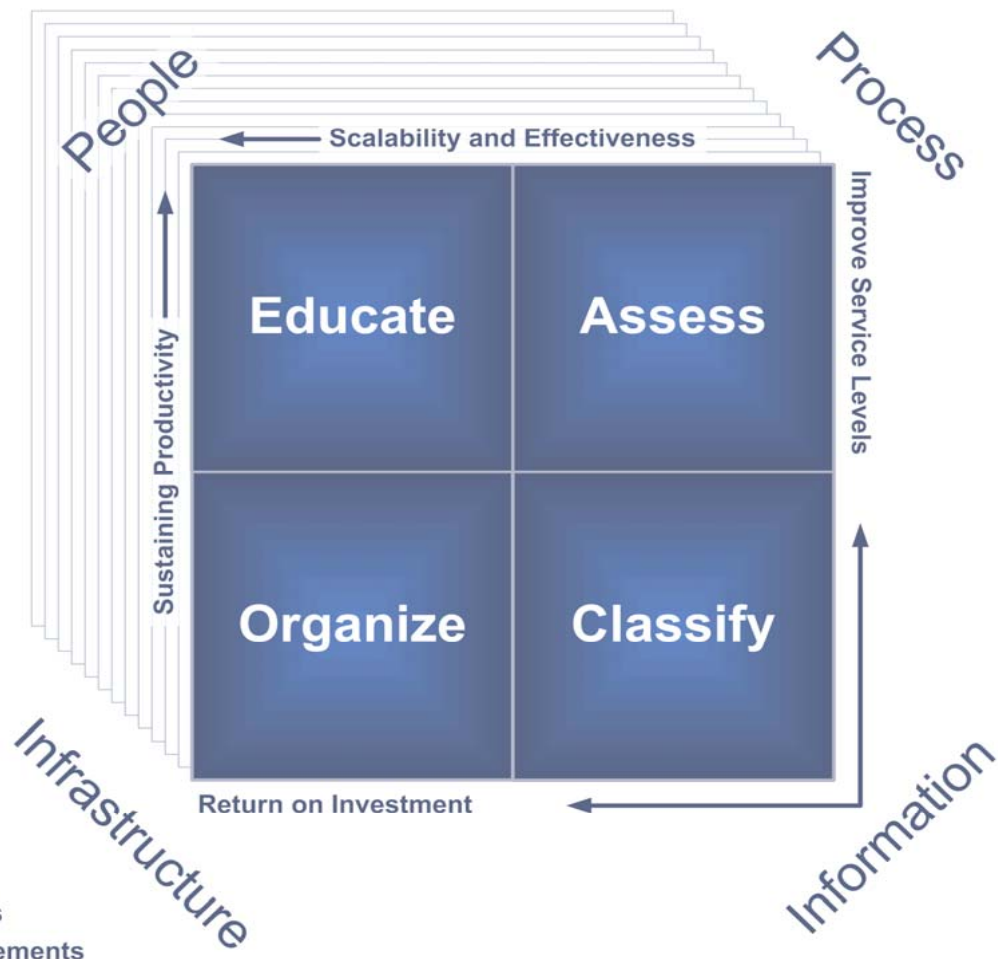
➤ Design

➤ Implement

➤ Validate Design

ILM - the Catalyst for Change

Storage Service Culture
 Skills Alignment
 Predictable Performance
 Satisfaction
 - perceived
 - actual



Discovery
 Strategy
 Business Case
 - TCO/ROI Analysis
 - Cost by Service
 - Cost of Change
 - Unit Cost (GB)
 - Investment
 Risk
 Project Priority

Automation
 Cookbook
 Operations Policies
 Predictable Cost
 Storage Catalog (Menu)
 Standard Storage Services
 Capabilities match Requirements

Physical Assets
 Information Assets
 Requirements
 - Availability
 - Capacity
 - Compliance
 - Governance
 - Retention
 - Security

How to start

- **Build a Business Impact Assessment (BIA)**
 - ◆ Identify priorities (i.e., “value plan”)
 - ◆ All data are not equal
 - ◆ Identify threats and vulnerabilities
 - ◆ IT is not the world; consider people, infrastructure, services
 - ◆ Analyze funded projects in development
 - ◆ Service Level Requirements and Service Catalog
 - ◆ Professional Services can be very effective at moderating discussions and breaking deadlocks
- **Funding – Enlist CxO Support**
 - ◆ Finance
 - ◆ Risk
 - ◆ Legal
 - ◆ Security
- **Staffing**
 - ◆ Team formation
 - ◆ Project Manager with defined deadlines and objectives

The SNIA End-User Community Can Also Help

- Joint End-User Community (EUC) and Data Management Forum ILM Initiative (ILMI) projects
- ILM Maturity Model
- Storage Management Metrics (aka “what to measure”) Definition

- Contact: EUC or ILMI



- Classification: The Cornerstone for Compliance and Cost-Driven Information Management
- How E-Discovery Will Impact Your Life As A Storage Professional
- Compliant Storage: The Risks of Retention and Deletion in the Face of FRCP

Please send any comments on this tutorial to SNIA at:
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