



Storage Strategy Development Part 1

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Evaluator Group



- Storage Strategy Defined
- Need for Storage Strategy
- Responsibility for the Strategy
- Strategy Contents
- Starting Development of the strategy

- Strategy is the long-term direction for storing and managing information
 - ◆ Must consider current situation and future demands
 - ◆ Information has a long life – recognize implications on strategy
 - ◆ Horizon includes plans for 3 to 5 years

- Development of the strategy is a process
 - ◆ A start and an end point
 - ◆ Includes IT team to develop strategy and constituents – business owners and users
 - ◆ Regularly evaluated and updated according to the process
 - ◆ Highly visible across the organization

Storage Strategy - Defined

- Strategy is about storing and retrieving information
 - ◆ Addresses concerns about
 - › Availability
 - › Data protection
 - › Integrity
 - › Longevity
 - › Security, compliance
 - › Cost – operational and capital



- Strategy is about storing and retrieving information
 - ◆ Inclusive of
 - > Physical systems and devices
 - > Infrastructure
 - > Management and utilities
 - > Applications

- A trap that must be avoided - Tendency to think of devices
 - ◆ Image of a box for data
 - ◆ Details about device attributes
 - › Capacity
 - › Performance (speeds and feeds)
 - › Per TB cost
- Storage Strategy is a much bigger picture

Storage Strategy - Defined

- Must consider new requirements / demands
- New technologies
 - ◆ Better, cheaper, faster
 - ◆ Costs
 - ◆ Software with data services and control
- Demonstrate continuous improvement



- Information is critical
 - ◆ Must be available
 - ◆ Must have integrity – assured
 - ◆ Operational considerations for access
 - › Who, how fast, record of access, serialization
 - › Data protection and business continuity

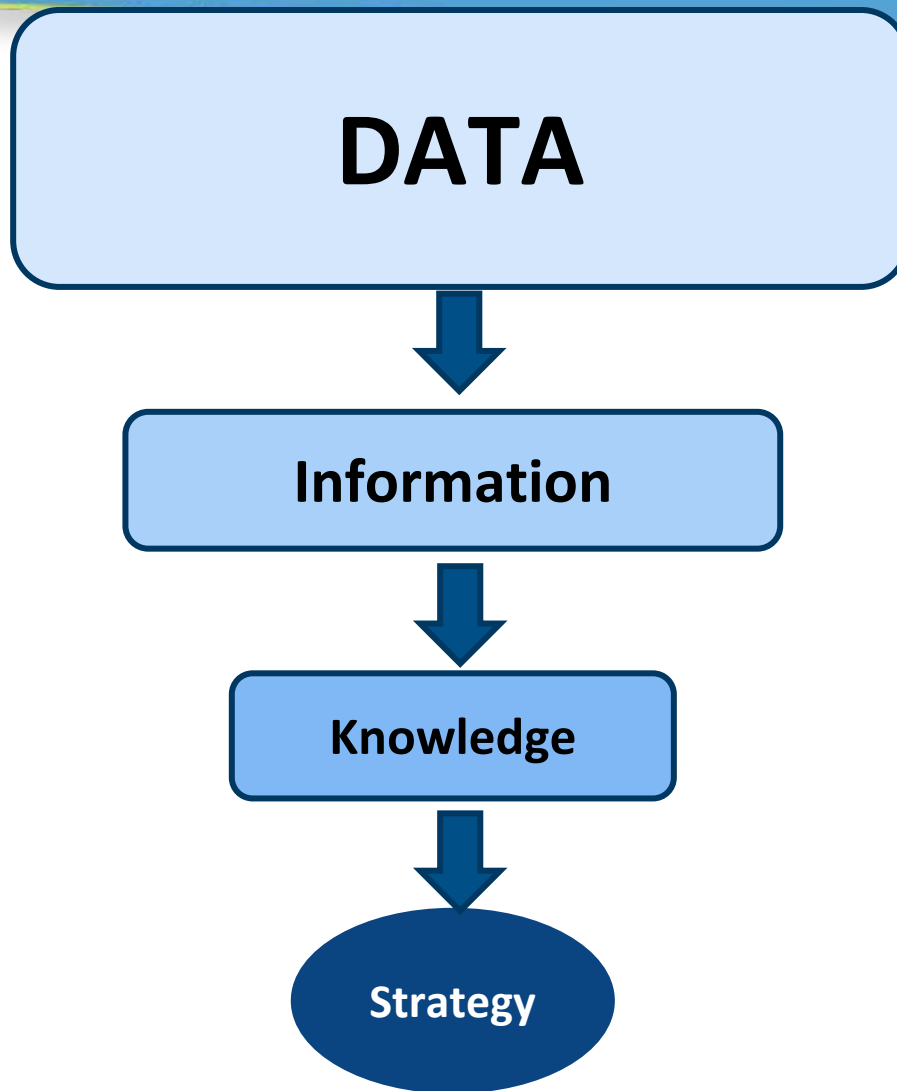
Need for a Storage Strategy

- Strategy can be incremental – specific area strategy developed
 - ◆ Deal with unstructured data
 - › Object storage for content repository
 - › Archives
 - ◆ Transition to all flash primary storage
 - ◆ Use of commodity platforms with storage software for services and control

- **Storage** has become the over-arching identity term for information access and management
 - ◆ Storage architecture
 - › Plan for meeting business needs for information access and management
 - › Encompasses the management of equipment and data
 - ◆ Includes infrastructure
 - › Methods and elements to store and retrieve data

- Business impact when needs are not met
 - ◆ Problems that occur
 - ◆ New demands not being met
- Career jeopardy
 - ◆ Individual
 - ◆ Organization

Context about Information



- Raw
- No association / organization to give meaning
- Has *CONTEXT* to give meaning
- Understanding of information due to analytical process, experience
- Future action / plans

➤ Perception vs. Reality

- ◆ IT is viewed as overhead in many environments
- ◆ Viewed as impediment or hurdle to overcome by many business owners, users

➤ Counter the perception by being proactive

- ◆ Have a strategy
- ◆ Make other groups part of process

➤ Strategy is survival

- ◆ Demonstrated actions and plans
- ◆ Inclusion
- ◆ Remove / dampen enthusiasm for alternatives to IT
- ◆ Reduce rogue/shadow IT operations

- **Generally – IT director or Storage Director or VP of storage or ...**
 - ◆ May be different person based on organization differences
- **Reality – needs to be inclusive**
 - ◆ Group with responsibility for developing
 - ◆ Constituents – as a group with planning input, review, and consultation

Responsible for the Strategy

- Ultimately a team with a leader
- Responsibility is beyond technical
 - ◆ Must be visible
 - ◆ Able to communicate
- Cross organizational boundaries



Responsible for the Strategy



- Is this a new effort?
- What was done before?
 - ◆ Regular process
 - ◆ Out-dated plan from long ago
 - ◆ Cuneiform on parchment from a storage architect or consultant – may be long gone

- Assume the process will be “re-engineered”
- Start with assessing the current situation
 - ◆ Implies many areas
 - ◆ Initially – team assessment and production of strategy document
 - ◆ Add constituent group with their “independent” assessment
 - ◆ Requires interviews / discussions
 - ◆ Do not be misled with surveys

➤ Areas to consider

- ◆ Understand current operations
 - › Most have evolved because of changes that occur in real time
 - › Difficult to make changes
 - Time, training, etc.
 - Risk
 - › Identify limitations from current operations

Current
Operations

➤ Areas to consider

- ◆ Overall business strategy can dictate change, magnitude of storage needs, etc.
- ◆ Includes economic situation – staffing, capital, operating cost
- ◆ Executive direction – regardless of whether optimal

Business
Strategy

➤ Areas to consider

- ◆ Competitive environments usually look at what others are doing
- ◆ Best practices is subjective, but...
 - › Does provide new ideas to consider
 - › May have to justify chosen strategy vs. what competition does

Best
Practices

➤ Background work – preparation

- ◆ Education on storage strategy development for team
- ◆ Systems and technology
 - › New developments since last evaluation
 - › Maturity level – risk vs. reward
 - › Transitional efforts required

- Preparation – Understand the requirements overall and for each application – information needs:
 - ◆ Performance – access
 - ◆ Capacity – how much, growth rate
 - ◆ Access – what software will access the information, access method – block, file, object, physical paths for access

Requirements

- Preparation – Understand the requirements
 - ◆ Security needs
 - ◆ Compliance necessary
 - ◆ Availability / business continuity
 - ◆ Data protection
 - › RTO, RPO
 - › Probability of access change over time

Requirements

➤ Evaluation of technology

- ◆ Which technologies will fit requirements
 - › Differences for file, block, and object access
 - › Performance differences
 - › Availability / reliability differences
 - › Infrastructure and support implications

➤ Evaluation of technology

- ◆ What technology transitions will occur
 - › Improvements over lifespan of data
 - › Longevity of technology
 - › Transitions
 - Seamless or impactful
 - Gains from transition – cost reduction, performance improvement, availability, etc.

➤ Create targets

- ◆ What is needed (and when)
 - › Long list
 - › Across current and new information needs
- ◆ Incremental steps to get there
 - › Factors to consider
 - › Cost estimates – gross at this point

Implementation
Plan

- Develop plan for each step
 - ◆ Solutions to deploy
 - › Vendors
 - › Technologies
 - › Sequence
 - › Interdependencies
 - › Timeline
 - › Resources, training, procedures
 - › ... it's a project ...



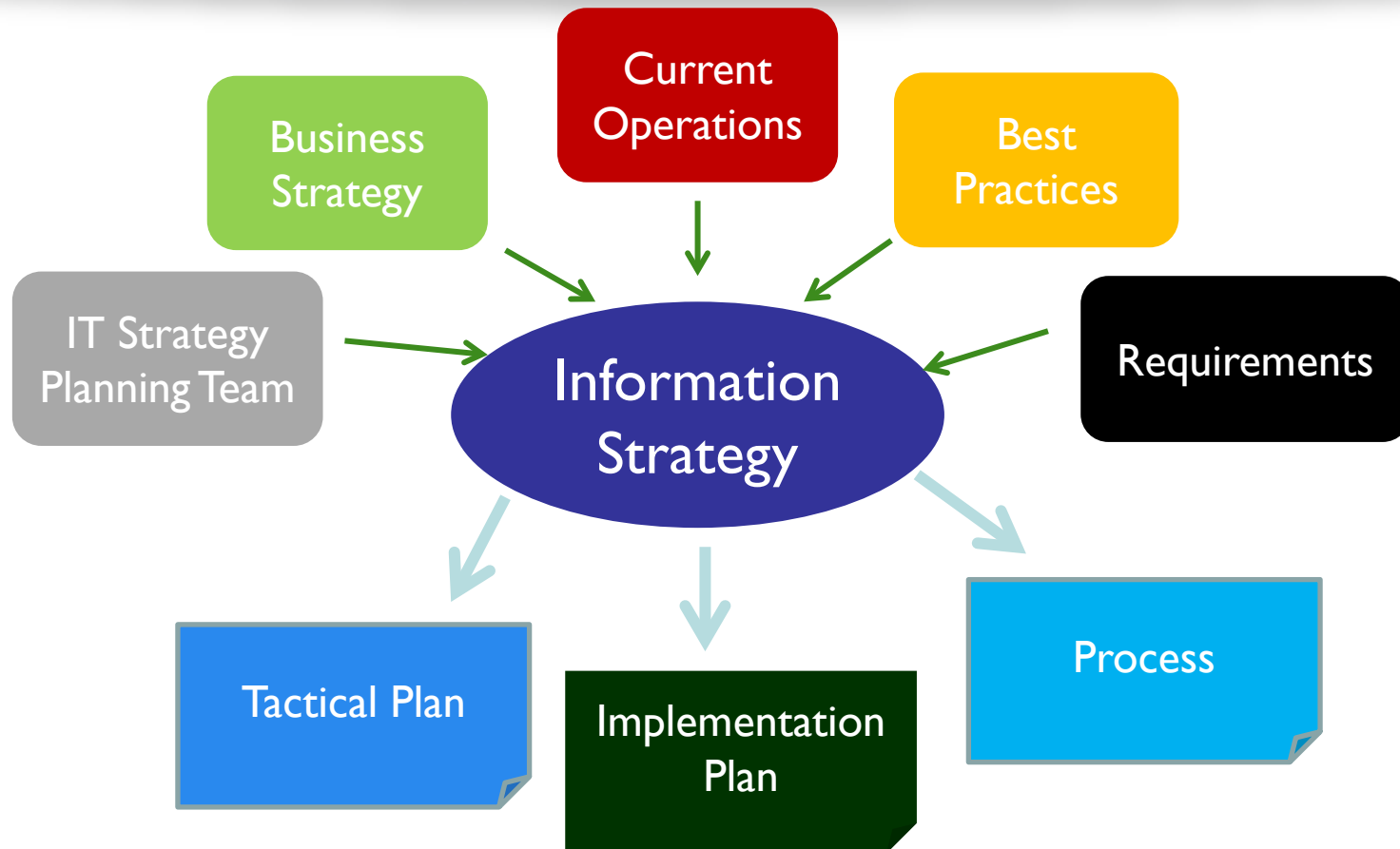
Tactical Plan

- Identify sources of funding for each project
 - ◆ From savings – need calculations to confirm
 - ◆ As part of new deployment costs
- Project value at end point for each project
 - ◆ Will use projection for ongoing measurement comparison
 - ◆ Iterative improvement is ultimate reason

- Factor the operational process changes required
 - ◆ Procedures to be written
 - ◆ Test of conditions
 - ◆ Method of transition from current environment

Process

First Assembly of Strategy Element



End of Part 1

Part 2 continues After break