



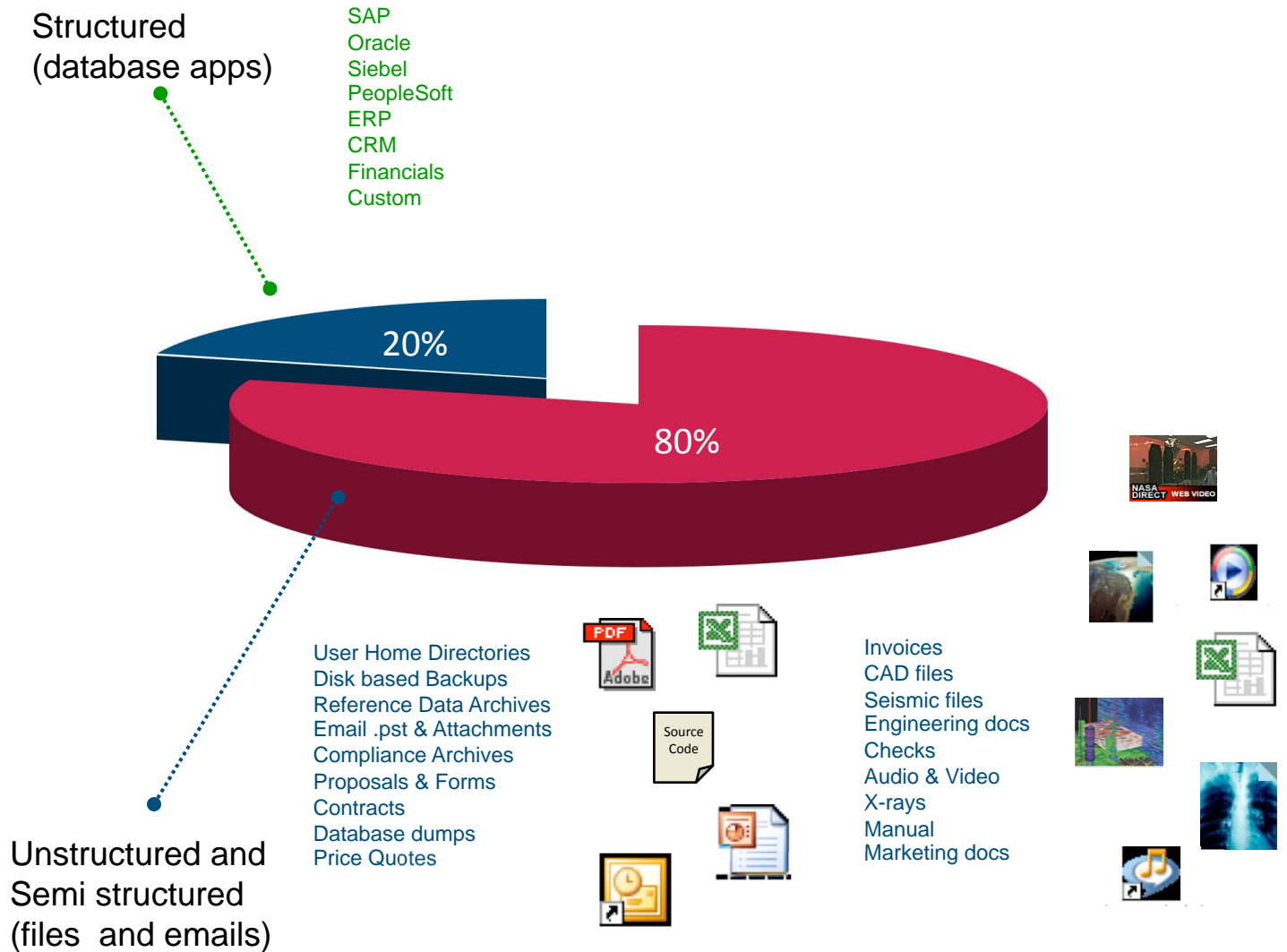
Best Practices for Information Lifecycle Management

Shahbaz Ali, CEO and Founder
Storage Expo - October 2008

Active Archival and Intelligent Storage Software

Unmanaged Data Growth

- Unmanaged
 - Billions of files
 - TB's to PB's of storage
 - Hundreds of formats
 - Capacity needs growing - 50% per year
- Impact
 - Large cost implications
 - IT Inefficiency
 - Corporate risk





Information Lifecycle Management Defined*

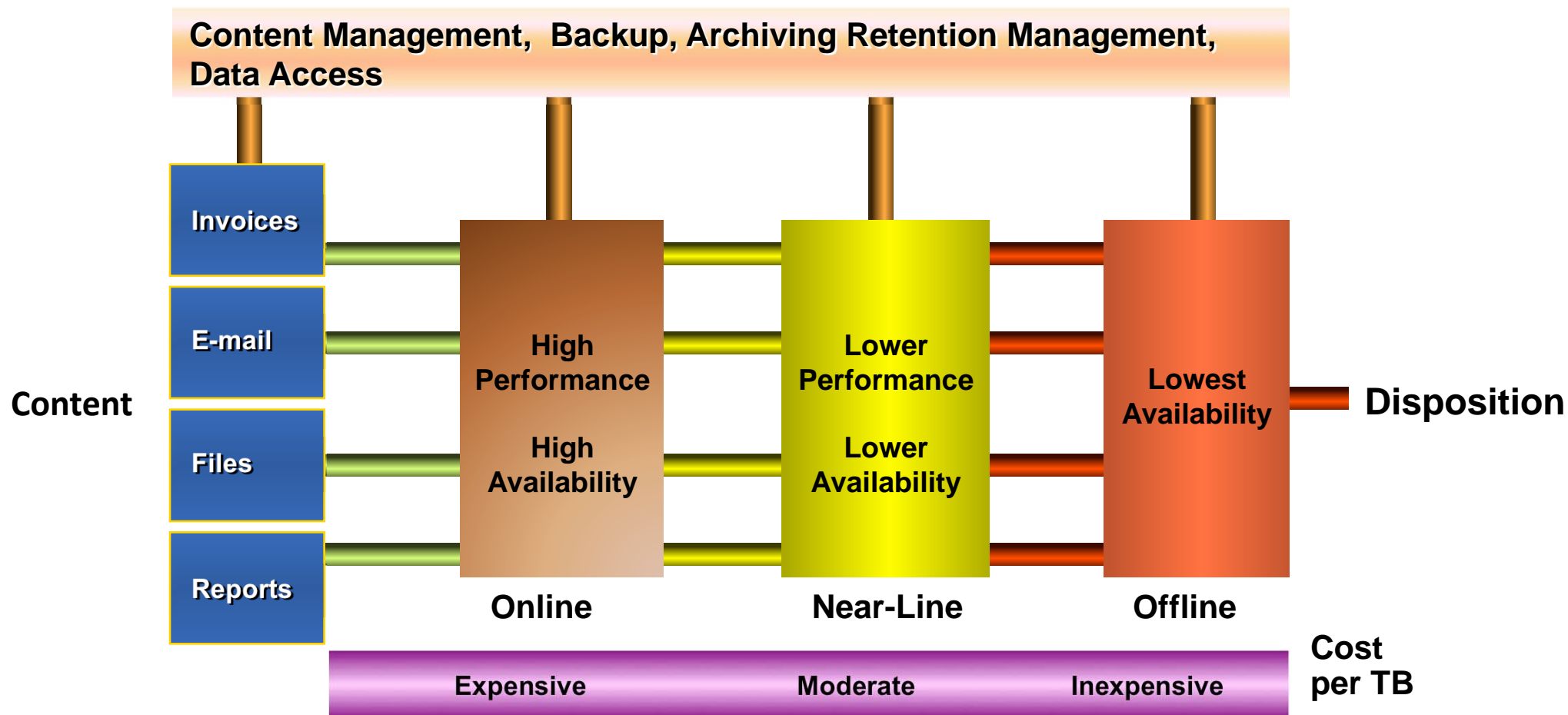
- The policies, processes, practices, and tools used to align the business value of information with the most appropriate and cost effective IT infrastructure from the time information is conceived through its final disposition.
- Information is aligned with business processes through management policies and service levels associated with applications, metadata, information, and data.

* Storage Networking Industry Association (SNIA) ILM Technical Work Group

TARMIN ILM for Unstructured Data

Information Life Cycle Management:

Optimizes the cost of storing, protecting and recovering information by migrating data to the appropriate storage technology based on availability, performance and retention requirements





Best Practice #1: Analyze Business Requirements

- OPEX and CAPEX true measure of storage TCO
 - Cost per TB is only the tip of iceberg – PB's are coming!
- Assess unstructured content strategy:
 - The ability to recover critical content
 - Providing the data and content for conducting business
- Determine compliance needs and the litigation risk
- Distinguish between what is mandated and required by:
 - Government requirements
 - Corporate policy
 - Business efficiency
- Organizations must proactively determine balance between legal, compliance, and user needs



Best Practices #2 – Consolidate Content/Platforms through Archiving



Best Practice #3: What and Why to Keep it?

- **Government mandated content**

- Regulations
- Hazardous materials
- Broker/dealer communication
- Etc

- **Corporate policy information**

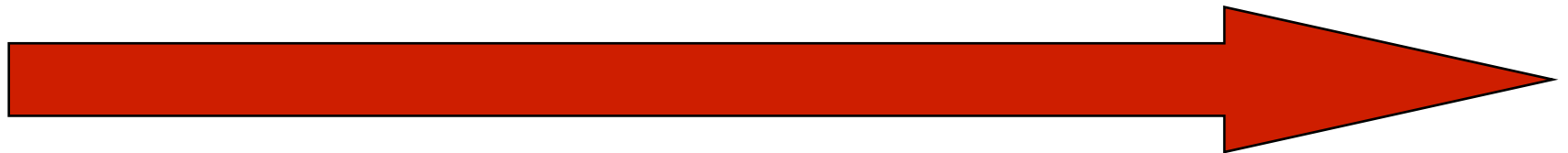
- Contracts and Core Business content
- Correspondence about HR disputes
- Office documents and email communication
- Financial transaction records

- **Employee-retained for business efficiency**

- Employee documents
- Project history
- Reference material
- Etc.

Mandatory preservation

Optional preservation



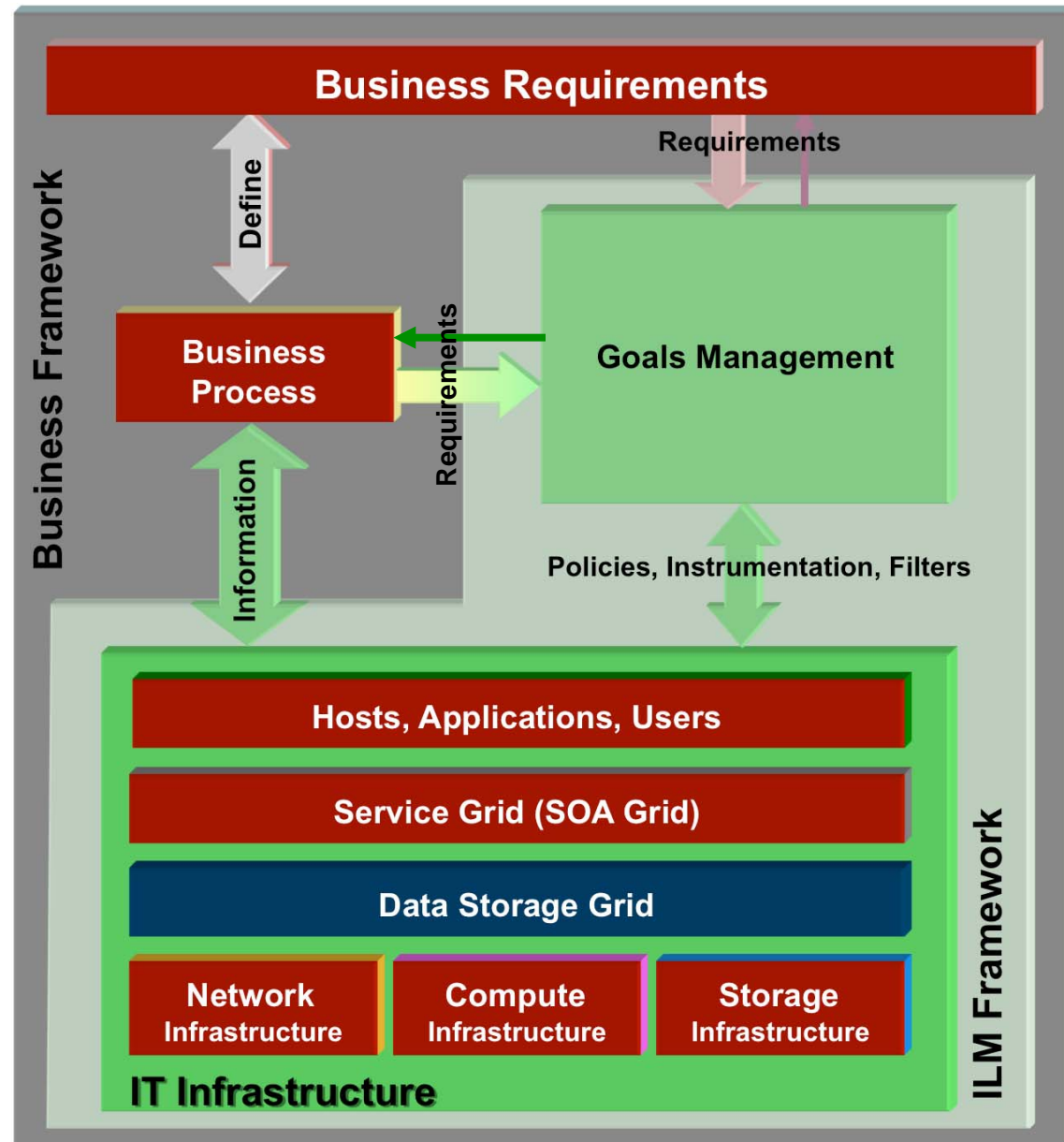
Companies must distinguish between what is mandated by the government vs. what is mandated by corporate policy vs. what is required for business efficiency

Best Practice #4: Manage Unstructured Data in 7 Stages

- 1** Develop a strategy and a program oversight team consisting of legal, finance, IT and business managers.
- 2** Build and draft policies to detail enterprise needs for archiving and record retention to satisfy business, regulatory, legal and fiscal requirements.
- 3** Build a file plan and retention schedule with access rights and document types.
- 4** Determine functional and technical requirements.
- 5** Select and deploy an Active Archiving Storage solution that works with current infrastructure.
- 6** Communicate and train staff. Publish policies, retention schedules and procedures.
- 7** Establish continuous audit and review processes.

Best Practice #5: Implementing with Service Oriented Grid Computing

- Input Requirements
 - Budget constraints
 - Corporate guidelines
 - Information services
 - Regulatory
- Rationalize Goals
 - Apply policies
 - Balance risk vs.. cost
 - Deliver cost-effective infrastructure
- Dual Grid Approach
 - Better failsafe
 - Better scalability
 - Better cost benefits ratio



Best Practice #6: Reduce Costs and Overall Storage Footprint

- Classify data based on business value (age, owner, content...)
- Tiered storage
 - Migrate data from primary storage to secondary storage
 - Improve backup windows by setting different service levels for each tier
 - Web-based clients or stubs for client transparency
- Consolidation
 - Migrate data from Windows/UNIX servers to secondary storage
- Archiving
 - Migrate less frequently used reference data to secondary storage
 - Data retention/permanence through Write-once Read-many (WORM storage)
 - Indexing of data for rapid search, retrieval, and e-discovery

- Long-term retention needs are pervasive
 - 80% of respondents must retain over 50 years
 - 68% of respondents must retain over 100 years.
- Long-term greater than 10 to 15 years – the period beyond which multiple migrations take place and information is at risk
- Database information (structured data) considered to be most at risk of loss
- >40% of respondents retain e-mail records over 10 years. E-mail not a short-term problem

Report available at: http://www.snia.org/forums/dmf/programs/ltacsi/100_year/

- Physical migration a large problem - only 30% migrating correctly at 3-5 year intervals. Rest placing their digital information at risk
- 60% 'highly dissatisfied' they will be able to read their retained information in 50 years
- Help is needed - current practices too manual, too prone to error, too costly and lack adequate coordination across organizations
- Collaboration and classification very important practices to get the organization working together setting requirements for the management of their information

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TARMIN Summary

- Data is growing exponentially
- Costly impact - storage, compliance, and IT CAPEX & OPEX
- Implementing ILM more than a regulatory and compliance issue
- Best ILM practices incorporate active archival AND next-generation intelligent storage platforms for secondary storage
- Best ILM strategies solve regulatory and legal issues while substantially reducing CAPEX and OPEX



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