Data Management Forum

Collaborate or Die!

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SNIA

STORAGE NETWORKING INDUSTRY ASSOCIATION

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Collaborate or Die!

That's right, "Collaborate or die!" If you are a CIO or an "information-managing" professional, your job is at risk[1]. This is the essence of the central message of the recently released joint paper between ARMA international and SNIA titled "*Collaboration: the New Standard of Excellence*[2]." As one of the principal authors, I am particularly sensitive to the need to see the message of "collaboration" taken holistically. Perhaps the hardest step in the process of implementing information-based management practices (such as ILM) is to bring the information owning and administrating communities of an organization together to collaborate and align business objectives with the requirements for information. While a challenge, this is the most important place to start, because this is where the entire transformational process of becoming an Information-Centric Enterprise begins.

Let's give 'collaborate or die' some context. The underlying message is "If you want to successfully solve the complexity and cost crisis in operating the datacenter, you have to change current practices and begin working together as an organization." If you want to successfully deal with the demands of regulatory compliance and legal and security risk, you have to focus on defining the business requirements for your chief asset, your information, and not just focus on the network, security, or storage infrastructure. Our contention, as SNIA in publishing the "Collaboration" paper, is that you must make the shift to managing and operating the datacenter based on the value-of and requirements-for information to the organization. Step one in information-based management is to collaborate and define the requirements for information so that it can be managed properly over its lifecycle. This is the key to the practice we call Information Lifecycle Management (ILM).

To those of you who have gotten tired of the ILM story, I want to point out that ILM is just coming of age. We are only three years into the market development cycle and already 2nd-generation management tools are in the market. Thousands of organizations worldwide are in various stages of ILM projects and their numbers are growing rapidly. ILM is no longer just something the vendors are talking about as a way to promote their products, it is a proven practice. The SNIA's vision and message have been adopted by the industry and customer adoption is in a rapid growth cycle as methods and practices mature.

If your memory of market development cycles needs refreshing, consider two recent experiences. SAN technology was launched in 1996, work on FC-standards began in 1997, and market acceptance took off in 1999, three years after the initial launch. We're now 10 years into the market cycle and SANs are defacto. Pick another one like IP storage, iSCSI. 2001 was year three and the first year of real market acceptance. We are now in year eight of a robust and growing market. The process always follows a similar timeline, and ILM is no exception.

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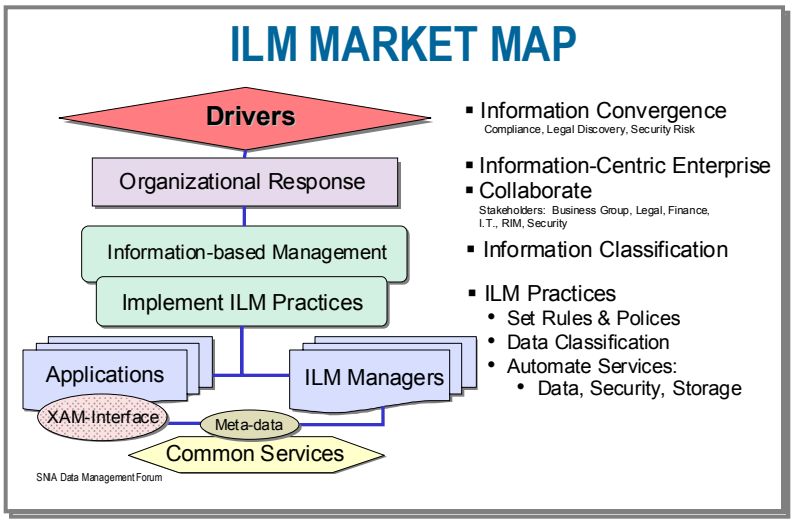
[1] Source: Arthur Langer, "Growing Tomorrow's CIOs" – Optimize Magazine, July 1, 2006. The article states: "…in a recent Gartner survey of CEOs, more than 60% said their CIO's job was at risk. The most apparent reason for the problem is CIOs' tactical versus strategic approach to solving problems. As a result, many CIOs have difficulty influencing how technology investments are made and working with their C-level peers. No wonder annual CIO turnover rates hover at about 34%."

[2] Available at the SNIA-DMF website: www.snia-dmf.org/alliances.shtml

Now, back to collaboration and ILM. What is the connection? Better yet, what does a complete ILM-based practice look like? I've found that it helps to see the whole picture and that is where a market-map comes in. A market-map is a customer-facing illustration that aids in visualizing how all the pieces of a market fit together. For example, markets begin with customer-centric drivers of demand, customers have to do something to respond to that demand, and solutions are then identified that address those needs. A complete picture of ILM-based practices is illustrated in Figure 1. Here is how the pieces fit together.



1. Drivers: The leading drivers elevating the need for using information as the basis for management (and to deal with overwhelming cost and complexity) are elements of what we call "Information Convergence". Information Convergence[3] is the trend in which operations, practices, applications, and roles are converging around information and its value to the organization, transforming enterprises into an "Information-Centric Enterprise". The top information drivers are regulatory compliance, legal discovery risk, and security risk. Storage problems such as "out of control capacity growth" and the need to store more, retain it for longer periods, secure it, protect it, dispose of it, etc. are not drivers, they are results of the drivers.

2. Organizational response: Transform the organization into an "Information-Centric Enterprise", defined as an organization in which the value of and requirements for information are used as the central-basis for management, administration, and security operations thereby orchestrating a collaborative relationship between the "information users", "information owners", and "information systems operators and administrators".

   The best organizational response to an information convergence problem is to begin collaborating between the communities that have a vested interest in the information: the business group, legal, finance, and the information technology and security professionals along with the records and information managers. The purpose of collaboration is to define requirements for information and information resources. If collaboration is the first step of an information-based management approach, then the second step is information classification. It should be said here as well that many examples of failures to collaborate and enforce information-based policies have painfully graced the pages of the national news media in the form of compliance or legal discovery fines or even worse, breaches of customer confidentiality. The consequences of failing to collaborate are not pretty and the new Federal Rules of Evidence and electronic discovery will make it worse if you don't

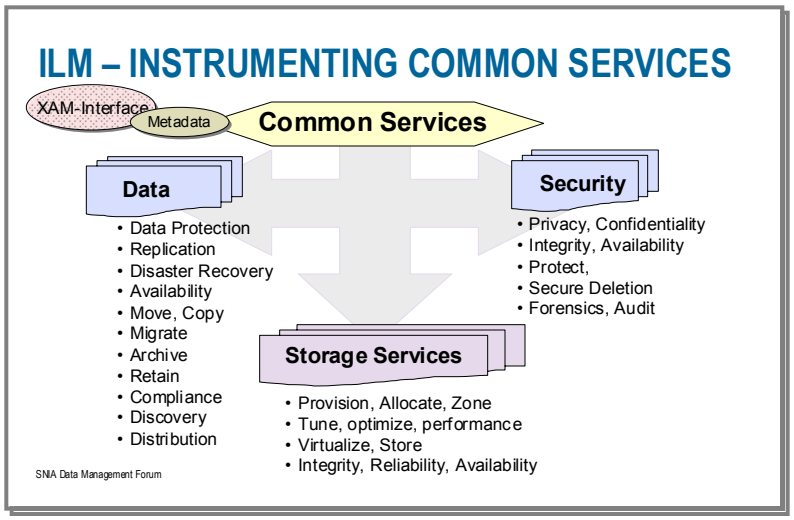
[3] "Information Convergence: Transforming the Information-Centric Enterprise", MPeterson, January, 2006

implement solid records and information management controls over digital information. Collaborate or die!

3. Information Classification[4]: - Classification is the process of assigning value and scope to a business process. Information Classification is the process of aligning the value and requirements for information with the supporting infrastructure resources (compute, network, storage, and supporting data, security, and storage services). Typical requirements span IT, RIM, security, legal, and business needs and include service level objectives for parameters such as retention period, disposition, availability, performance, protection, security levels, business continuity, compliance, tiering, and distribution. It is important to note that RIM and legal input is absolutely critical in determining retention requirements, disposition timing, and classification of information. Records Managers have spent dozens of years developing and perfecting file classification systems within organizations. CIO's and IT staff can take good advantage of these resources.

4. Implement ILM-based practices: The next step is to implement a comprehensive management practice around the requirements for information based on its classification. In other words, this is the foundation for executing ILM-based practices; to translate specific business and application policies and rules (service level objectives and agreements) into actionable practices. Tools are now available to support these practices with capabilities like the following:
    - Classifying information based on business rules, metadata, and even content
    - Assigning service level requirements to information and business records based on their classification
    - Classifying storage resources based on performance, availability or other service level attributes deemed useful by the enterprise
    - Aligning information with the most effective storage resources to meet its requirements.

Applications and ILM management tools implement and automate the policies for their respective domains using available services. These data, security, and storage services, as illustrated in Figure 2, provide the tools and technologies by which IT delivers the infrastructure to meet service level requirements that can flexibly change over the data's lifetime.



[4] Managing Data and Storage Resources in Support of Information Lifecycle Management", Gelb, St.Pierre, Yoder, SNIA ILM-TWG, July 2006 and other relevant documents available at www.snia-dmf.org.

The next stages of market maturation for ILM-based practices have two dimensions:

- Introduction of better automation and management tools as centralized management platforms and as management practices integrated within leading enterprise applications
- Release of the initial specifications of two critical standards in development by SNIA, the ILM-related portion of *SMI-S* and *XAM* and their adoption into products.

The first of the important standards in development is the work on the SNIA *Storage Management Initiative-Specification (SMI-S)* for ILM services. Just as *SMI-S* has provided standard management interfaces into managed devices and network elements, *SMI-S* for ILM services will allow heterogeneous services to be instrumented and be driven by central ILM-management tools and ILM-enabled applications. *SMI-S*-based instrumentation of services is essential for automation of ILM-based practices. The first such specifications will appear in SMI-S 1.2.0, with more management interfaces to follow in subsequent releases.

The second standard is *XAM*, the *eXtensible Access Method*. *XAM*, which is currently in development within SNIA, provides applications with a standard interface to storage, beginning with object storage systems such as Content Aware Storage (CAS) and with the capability to incorporate metadata relevant to ILM practices. As *XAM* becomes incorporated within a broad spectrum of applications it will become strategic to ILM-based automation.

Although your ability to instrument and automate your infrastructure and services is limited while we wait for these standards to be finished and adopted, there are many practices you can do today. You can build and automate solution stacks - ILM-based practices around vertical applications such as e-mail or database archiving. You can implement tiering, protection, compliance, and archiving solutions, and automate them in homogenous environment's utilizing either ILM management tools or utilities integrated into virtualization platforms. The point is that you can begin implementing ILM-based practices today. Many of the tools exist in the marketplace now.

The most effective way to get started with an ILM solution is to have the CFO or CIO engage with a professional services (PS) organization for an ILM Assessment – an assessment of the effectiveness of data center processes. This engagement also allows the PS representatives to engage with the datacenter, lines of business and key enterprise stakeholders such as legal, security and Records and Information Managers and help your organization take the first steps of collaboration and information classification. Don't wait, the benefits are substantial.

You now have a holistic picture of ILM as a complete information-based management practice. To learn more, I urge you to visit the SNIA Data Management Forum's website at www.snia-dmf.org where you will find papers, presentations and other useful educational materials on how you can lead and transform your organization into an Information-Centric Enterprise.

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About the Author(s)

Michael Peterson is President of Strategic Research Corporation based in Santa Barbara California and Chief Strategy Advocate for SNIA's Data Management Forum. For the past 20 years he has been an energetic leader and catalyst for the storage industry, publishing insightful books and industry reports, consulting with the entire industry in business and market development, pioneering IT research on storage and management practices, creating innovative conferences, speaking internationally as an industry visionary, forming industry trade groups, and even developing new solutions and companies. Michael is the founder of the SNIA and was the past president from 1998 to 1999. He is currently the Chief Strategy Advocate for SNIA's Data Management Forum with responsibility for guiding and promoting the many programs of the DMF. SRC's website is www.sresearch.com.

About the Data Management Forum

The Storage Networking Industry Association's Data Management Forum (DMF) is a cooperative initiative of IT professionals, integrators and vendors working to define, implement, qualify and teach improved and reliable methods for the protection, retention and lifecycle management of electronic data and information. The DMF operates three initiatives: the Information Lifecycle Management Initiative, the Data Protection Initiative and the Long Term Archive and Compliant Storage Initiative. DMF also sponsors many industry wide task forces coordinating with a broad range of trade associations and agencies. To participate with the DMF or find out more about our programs, go to www.snia-dmf.org.

About the SNIA

The Storage Networking Industry Association (SNIA) is a not-for-profit global organization, made up of more than 460 member companies and close to 7,000 active individuals spanning virtually the entire storage industry. SNIA members share the common goal of advancing the adoption of storage networks as complete and trusted solutions. To this end, the SNIA is uniquely committed to delivering standards, education and services that will propel open storage networking solutions into the broader market. For additional information, visit the SNIA web site at www.snia.org.

