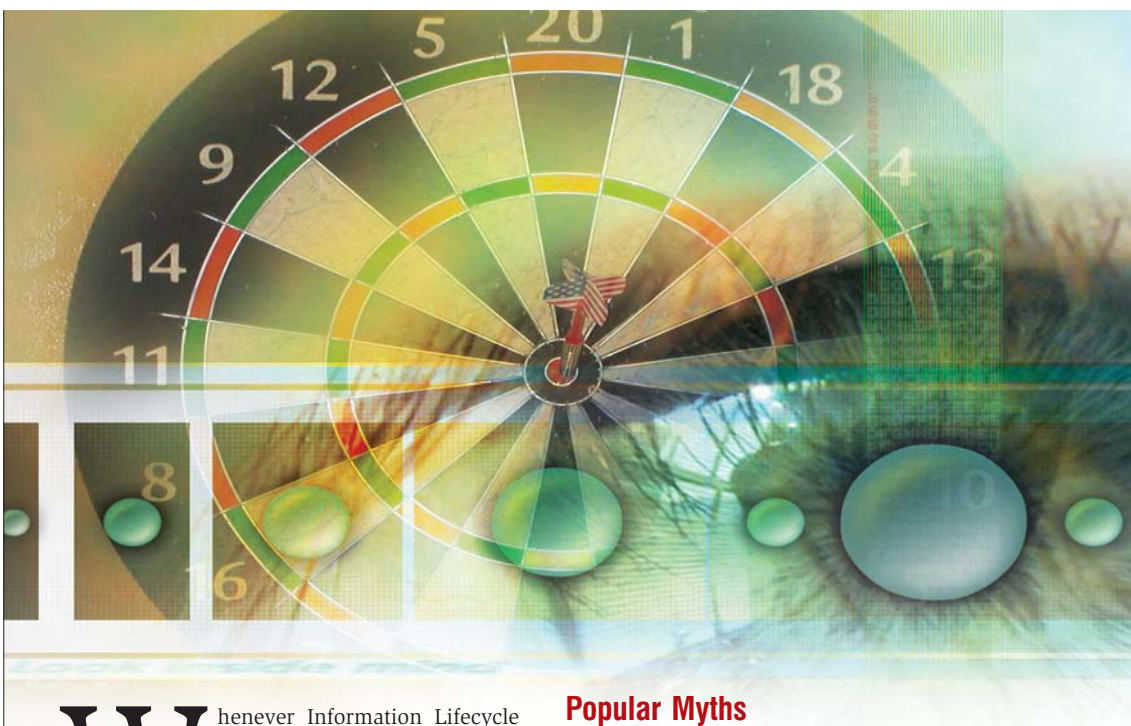
Is Your ILM Solution Effective?

Benefits of ILM are phenomenal but to reap up those benefits, CIOs should understand the issues involved in successful implementation of ILM. This article exposes those issues and explains the real benefits of successful ILM implementations.



—By: Shailesh Agarwal,
Country Manager, IBM Storage, IBM India.

Whenever Information Lifecycle Management (ILM) solutions are talked about, it immediately resonates with IT heads of many corporations. After all, every company—be it big or small enterprises—have been undergoing rapid proliferation of data and expanding volumes and hence are experiencing the impacts thereof. But over the course of several years, IT managers who have embarked on the quest to implement ILM solutions are still trying to figure out ways to harness the original promises that the solution offered.

The fact of the matter is that ILM solutions implementations can be quite complex and require a lot of customization. Different applications store data on the disks differently and as a result, there is no unique solution to addressing ILM issues, across the board. Let us look at some of the misconceptions and a possible approach to solving the ILM issues.

Popular Myths

There is a common belief that ILM is a product or a set of products that will address the automatic archival needs of various applications. However, this is only partially true: ILM solutions do contain several products as unique pieces of the big jig-saw puzzle. But ILM, in its truest sense, goes far beyond the product boundaries, envelopes tools and practices and aligns the business policies with the technology. Perhaps the definition offered by the Storage Networking Industry Association (SNIA) is right on the money. "ILM is comprised of 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".

There is a general confusion between the values that Hierarchical storage Management (HSM) provides vis-à-vis ILM. Contrary to some opinions, ILM is not just a glorified HSM.

Granted both of these take a tiered approach to storage. But there ends the similarity. HSM manages only files whereas ILM manages structured, semi-structured and unstructured data from many sources in a heterogeneous, networked environment. HSM provides users with a limited criteria (age and perhaps size) to govern automated migration among storage tiers. ILM is application-centric and considers the information's value to the enterprise at the object level. It uses parameters such as business purpose, last-access date, information type, an event, a specific owner and other characteristics as defined by the application. So information can be managed at a granular level, which many applications such as e-mail and databases require.

ILM examines information and determines how it should be managed, rather than using HSM's method of migrating data based on technical specifications. ILM takes a broader view, examining the data, related metadata and rules regarding management of such data. As mentioned earlier, unlike HSM, ILM is not a product, but rather a process that integrates a broad range of technologies. This includes storage, database and security combined with automated policy management. All these can help bring significant benefits to a business; not only reduced cost and fewer errors, but also the ability to retain or delete information in accordance with business rules.

Effective ILM Implementations

Developing an ILM strategy requires extensive groundwork. To lay the foundation for ILM, examine the data that is currently being generated, as well as the applications associated with the data and their related business processes. This examination should include unstructured data (e.g., images or videos), semi-structured data (e.g., e-mail) and structured data (e.g., that within a database). The data-management policies are then outlined, including requirements for availability, backup and disaster recovery (D/R), performance, reliability and retention. It is important to ensure that these data-management policies include changes in data value allowing for data movement onto higher and lower storage tiers. With management policies in hand, assessments of the current infrastructure can be performed to determine where systems are sufficient or need to be upgraded, as well as to identify potential areas for cost savings via consolidation and a tiered architecture.

The idea is to have a better understanding of the data landscape. One must determine how information is created, how it ages, how it's modified and when it can be deleted. When the business relevance and criticality is interposed, the outlines of ILM policies will begin to emerge. Remember, these policies can be influenced by external requirements such as regulatory restrictions, industry specific standards and data retention requirements from customers.

More often than not, this process of understanding the data and developing business rules is the most time consuming part in an ILM implementation project. Various vendors offer services to help in this arduous exercise. It is common to use off-the-shelf tools to help perform this data analysis. File system by file system analysis of the data disposition, age, size and other vital information can be made use of. Factual data, will provide the ILM implementers with a view of the data landscape at a different perspective.

At its core, the ILM process moves data up and down a path of tiered storage resources, including high-performance, high-capacity disk arrays, lower-end disk arrays such as serial ATA (SATA), tape libraries and permanent archival media where appropriate. ILM involves more than just data movement; it encompasses scheduled deletion and regulatory compliance as well. Because decisions about moving, retaining and deleting data are closely tied to application use of data, ILM solutions are usually closely tied to applications. Broadly speaking, the application areas where there exists a high level of ILM relevance are (a) Email (b) Application data (c) Database and (d) Content Management.

Email archive addresses one of the fastest growing storage components for many companies. Email archive solutions aim to reduce the size of corporate e-mail systems by moving e-mail attachments and/or messages to a secure archive from which they can be recovered if needed. By doing so, e-mail archive solutions help reduce the need for end-user e-mail management, can improve the performance of e-mail systems and allow e-mail retention as required (not subject to user deletion) and deletion when no longer necessary.

Application and database archive is similar in concept, but instead deals with information growth in corporate databases such as ERP systems. The solutions in this area are designed to identify database data that's no longer being regularly accessed and move it to an archive where it remains available if needed. Because applications can span multiple database systems and even multiple platforms, Active Archive is designed to recognize related data from multiple systems and archive it together, thus retaining the application integrity. Database archive solutions help improve performance for online databases, reduce backup times and faster application upgrades.

Content management can be part of any ILM solution and allows management of all types of information (database, e-mail, documents, images, etc.) within a common repository. Having related information in a single location makes that information easier to locate and protect. Content-management solutions are frequently tied to applications because different data types have specific needs (e.g., insurance forms, test results for pharmaceuticals, and audio and video for digital media).

Conclusion

The potential benefits of an effective ILM implementation are very high. ILM helps optimize data costs and management, freeing expensive disk storage for the most valuable information. It helps overcome current storage-management limitations and helps ensure a sustainable storage-management strategy. ILM can help organizations gain understanding and control over data value, business processes, increase storage-asset utilization, lessen or eliminate backup windows and decrease recovery times. ILM helps IT reduce the compromise between costs and service-level quality; it helps streamline data management and allow the enterprise to respond in real-time to changing business requirements. {*i*}