Application retirement: enterprise data management strategies for decommissioning projects
Executive summary

Companies should evaluate their application portfolios regularly to help ensure that they are deriving the maximum business value from their enterprise applications. In many cases, companies that evaluate their application portfolios, are more likely to realize maintenance cost savings. Weighing the costs and benefits of each application can help in deciding which applications should be upgraded, retired, replaced, outsourced or remain unchanged.

Typically, when the overall cost or benefit of an application cannot be improved, decommissioning that application may be the best solution. Decommissioning is the process of removing a system, application, database or platform from service, while retaining access to its business-critical data. This practice often helps to lower infrastructure costs and mitigate operational risks.

Incorporating enterprise data management strategies, including database archiving, can facilitate decommissioning projects and help ensure that business goals are reached. Enterprise data management enables IT executives to archive and safely remove data from the application or system being decommissioned. The archived data can be saved to a variety of storage media, based on its business value and access requirements. And, enterprise data management provides specific archive and retrieval capabilities that meet these business needs, allowing you to initiate and complete a decommissioning project successfully.

This white paper describes how incorporating an enterprise data management solution into your decommissioning project can help your company increase the business value of your enterprise applications and simplify your IT infrastructure to garner significant savings.
Managing your application portfolio

For companies that have been in business for ten or more years, application portfolio management is a necessary step in maintaining an agile operating environment and reducing costs. According to Forrester Research, “companies don’t have enough money for new projects because the existing applications cost too much to operate and maintain. The situation is untenable. How did things get so bad? The truth is that it has been happening for decades and will continue to happen until IT takes some corrective action.”

As a general rule, IT executives should work with business users to evaluate their application portfolios on a regular basis. This approach makes sense in an environment that must continue to drive revenue opportunities and deliver high-quality customer service at consistently lower costs.

Quantifying business value of your applications

Your enterprise applications drive your business initiatives and revenue opportunities. As such, you make a substantial investment in managing and maintaining these applications, as well as their supporting databases and IT infrastructure. Managing your application portfolio is an essential part of simplifying your IT infrastructure and controlling costs.

The Forrester Trends report states, “If you have applications that are more than three years old, then you have legacy applications. Only some legacy applications will be reusable, and some aren’t fit for anything but retirement – but how can you tell which is which? Why waste money maintaining applications that aren’t worth keeping? Why not redirect that money to where it will benefit the organization.”
The goal is to ensure that your applications are delivering maximum business value. Using Application Portfolio Management (APM), IT and business executives evaluate their entire portfolio inventory, looking closely at each application to determine its costs and benefits and to establish an overall assessment of business value.

By analyzing how business applications satisfy your operational and reporting requirements and estimating your IT resource and application maintenance costs, you can decide which applications should be upgraded, retired, replaced, outsourced or remain unchanged.

After quantifying how much existing applications cost to maintain, executives then determine how to align those applications and the associated costs with the business objectives they support. According to Forrester Research, early practitioners of application portfolio management (APM) have reported 10 to 30 percent reductions in maintenance costs and return on investment within 12 months.²

Typically, where business value is greater than cost, applications and the supporting infrastructure should be maintained, upgraded or extended. Where costs are greater than value, the applications are candidates for consolidation or elimination. At times, cost and value are approximately equal. In this case, executives look for ways to reduce expenses and increase business benefits. However, when it’s impossible to improve the overall cost/benefits, retiring or decommissioning applications may be the next best alternative.
Decommissioning — what and why?

Decommissioning is the process of removing a system, application, database or platform from service, while retaining access to its business-critical data. Decommissioning projects make good business sense when a company plans to:

- Consolidate one or more home-grown applications into a purchased ERP application.
- Migrate an application from a high-cost operating platform to a lower-cost platform.
- Retire an application and eliminate redundant or obsolete systems from the enterprise infrastructure.
- Consolidate and eliminate unsupported versions of applications or databases.

How does decommissioning deliver business value? Companies typically use decommissioning to lower infrastructure costs and mitigate operational risks. Consider the following example scenarios:

- Major Manufacturing Corporation sells its entire Widgets Wizard line of business to Acme Company. After the sale, the applications used to support the manufacture, distribution and sale of Widgets Wizard still exist, although these applications offer little value for Major Manufacturing’s ongoing business.
Eliminating these applications not only reduces software and database licensing costs immediately, but also enables Major Manufacturing to reclaim storage capacity and reallocate IT staff to the systems and applications that offer the greatest business value.

- Worldwide Insurance Company has purchased Local Indemnity, gaining both the business and its underlying application and system assets. Local Indemnity operates a host of custom-developed insurance underwriting and financial applications, providing functionality that is replicated within Worldwide’s ERP application.

  Worldwide plans to decommission Local Indemnity’s custom applications and reroute all new incoming business through its existing ERP platform. As a result, Worldwide will eliminate the cost of managing and maintaining Local Indemnity’s custom applications and improve operating efficiencies.

- Retail Giant operates legacy systems that are no longer appropriate for its stated technology direction. Since a few members of the IT staff moved into other positions or retired, IT lost some of the technical skills necessary to maintain company’s mainframe COBOL-based systems for supply chain and human resources management.

  Going forward, Retail Giant wants to decommission its mainframe applications and implement a new ERP package to automate and execute these key business functions. The newer application will be easier to maintain, and simplifying the IT infrastructure will reduce risk and improve overall business processes at a lower cost.
**Decommissioning – what are the benefits?** By consolidating and eliminating redundant or legacy systems and applications, you can improve operations management and reduce costs across your IT environment, including hardware, software, network infrastructure, staff resources and more.

Substantial resources are then reclaimed to support the applications that deliver the greatest business value. For example, a skilled DBA can redirect productive time toward implementing an ERP package, rather than maintaining a patchwork of databases that support outdated legacy applications.

When you rationalize your infrastructure, you also reduce its complexity and therefore reduce business risk. For example, by consolidating a dozen homegrown general ledger applications into Oracle® E-Business Suite – Financials, you can provide business-critical support and reduce the risk of missing key processing deadlines, such as a month-end close.

**Role of enterprise data management in decommissioning**

So, if decommissioning saves money and reduces risk, why not just do it? Many firms are hesitant to eliminate redundant or obsolete applications because they may lose access to the underlying application data. According to one industry analyst:

“…while an application may be destined for the junk pile, the *data* is often *reused and repurposed*… Part of the application decommissioning plan is to keep the data fresh and flexible, which points to mature *archiving* alternatives.”

“...
In fact, any successful decommissioning project will include strategies for ensuring data retention compliance and enabling access to information for audit and e-discovery. Retention requirements vary by industry and location, but commonly range from 7 to 50 years. What’s needed is a full-lifecycle enterprise data management approach.

IT executives can use enterprise data management strategies, including database archiving, to facilitate decommissioning projects and ensure that these projects achieve the desired business goals. Enterprise data management enables IT executives to archive and safely remove data from the application or system being decommissioned. The archived data can be stored to a variety of media, based on its business value and access requirements.

The caveat remains that at some future point, it may be necessary to access the data from the decommissioned application. For example, an executive may need to generate reports to satisfy financial inquiries. At other times, it may be necessary to restore the data into an application environment to satisfy more complex queries. Enterprise data management provides specific archive and retrieval capabilities that meet these business needs, allowing you to initiate and complete a decommissioning project successfully.

Preserving historical business records. Data retention regulations, such as Sarbanes-Oxley, Basel II and HIPAA, require companies to retain historical data in its original business context for specified periods of time. Enterprise data management allows you to safely archive and remove data from the application database and store it securely and cost-effectively.
However, it is not enough to remove just any data. You need the capability to capture and remove specific subsets of related data that make up a logical business object, such as “payments” or “policies.” Typically, these business objects are associated with other reference details through database key relationships or by means of the application business logic.

Enterprise data management provides capabilities that archive data as a complete business object including both transaction details and master or reference data. Conceptually, the complete business object represents a historical “point-in-time” snapshot of a business transaction. For any given business object, the archive process captures all related data and associated metadata and saves it to a secure archive. As a result, application data is preserved in its original and complete business context and remains accessible for full-lifecycle data management – an essential requirement for decommissioning projects.

**Accessing archived application data.** Executives must have the capabilities to retrieve historical data on demand. Comprehensive enterprise data management capabilities allow you to locate any specific portion of the data you require – no matter where it is stored. With capabilities to query, browse and generate reports, you can respond quickly and accurately to audit or e-discovery requests.

Executives must also consider how they will access historical data after the originating application is retired from service. Typically, you will require a consistent method for reporting on historical records, regardless of the application, version, or platform where the data was managed. With application independent access,
you can rely on industry standard methods, such as ODBC/JDBC, XML or SQL, and reporting tools, such as Cognos® or Business Objects™, to access historical information in archives.

Enterprise data management also provides capabilities across a variety of applications, databases, operating systems and hardware platforms. You have options for retrieving archived application data, as needed. If necessary, you can retrieve any desired portion of the archive and restore it to an application database or separate platform. The destination database does not have to be the same type, version or even the same platform as the originating database. Because archive processing preserves the complete business object, archived data can always be retrieved and restored in its business context – regardless of the data model.

**Implementing tiered storage strategies.** Enterprise data management capabilities allow you to archive and store application data on a variety of media. By definition, data from decommissioned applications is accessed less frequently than current application data. As the business value of application data diminishes, it makes sense to move that data from high-speed, high-cost storage systems to less-expensive storage media. Applying a tiered storage model for your decommissioned application data allows you to reduce costs and reclaim high performing storage infrastructure for current business-critical needs (see Figure 1).
In the decommissioning scenario, you may choose to deploy tiered archives to a SAN or NAS environment for an initial period and ultimately migrate that data to inexpensive tape devices, such as a disk-based WORM (“Write Once, Read Many”) device. Storing archived application data on a WORM device prevents it from being altered or accidentally deleted. You can manage the data according to defined storage timeframes, ensuring that the data remains accessible for inquiry and reporting purposes.

Figure 1. Optim supports tiered storage strategies for decommissioned application data.
Planning and preparing a decommissioning project

IBM® Optim™ makes decommissioning easier and safer by providing the capability to archive application data, preserving each archived business object as an audit-ready, historical reference snapshot. Optim also provides application-independent access to archived data for query and reporting.

Even after the originating application is taken out of service, sites can satisfy an e-discovery request by using industry standard methods to query and report on archived business records. Optim supports a wide range of methods to access archives, including ODBC/JDBC, SQL-based reporting tools, XML and more.

The key to a successful decommissioning project is careful planning and assessment. Before initiating a decommissioning project, it is critical to gain input and obtain consensus from all groups involved. Each group will have different requirements.

Business users may anticipate heavy access requirements and want to ensure that data is easy to retrieve or restore for additional processing. Audit and compliance officers want to ensure security, timely access and appropriate disposal to support corporate compliance initiatives. And IT executives want the best solution that minimizes costs, infrastructure complexity and operational risks. It is important to manage your company’s application portfolio in a way that addresses the critical needs of each business group.

Before you start the decommissioning project, you must consider the following:

- Business value of the application, database, platform or system.
• Ways in which the data will be used.

• Degree of interoperability.

• Degree of redundancy.

• Costs and risks associated with continued operation.

• Costs and risks associated with migrating, consolidating or retiring an application, database, platform or system.

In addition, you must also consider the application data, which remains a valuable business asset, even after the original application is no longer in use. Executives need to determine not only what business records require frequent access, but even more importantly, who will be accessing the information and how they will want to view or use it.

Companies typically approach this challenge in a number of ways. Some restrict access to a smaller number of “power users” who perform queries and answer questions for the larger business user community. Others create a temporary interface to make end users feel more comfortable. Once you have completed the planning phase and considered each department’s needs, you can begin the decommissioning process.

Typical decommissioning projects
Application sunsetting and application migration are two of the most common decommissioning scenarios. The application sunset scenario involves the complete
retirement of an application. The application migration scenario is the consolidation or replacement of a legacy application with one that performs a similar function. For example, you may replace a custom-developed insurance underwriting system with a new vendor package.

**Sunsetting or retiring a complete system or application.** In the application sunset scenario, the entire application database is archived and no data is migrated to a replacement application. You have the option to archive the application data in a single process, or you can perform a series of data transformations before storing the archived data. For example, you can convert an Adabas database to IBM DB2® before archiving. In either instance, you must ensure that authorized users will have access to the archived data to fulfill an audit or compliance request.

Decommissioning takes place once any necessary transformations are complete and the database has been archived. As a result, you achieve the full cost-reduction benefit of decommissioning, without risking data loss. Users can still view or query the archived application data and selectively restore as needed.

**Replacing or migrating an application.** The application migration scenario is more difficult, costly and complex to perform than retiring an application. In this scenario, data from the application you want to decommission must be mapped and migrated to the new application or platform that will now manage that data.

Next, the historical legacy data, such as information about inactive customers and closed claims, is archived. Database archiving reduces the data volume to be moved to the new application, making it faster and less costly. The remainder of the data – the current active customers and policies – is then migrated to the new database or
environment using an ETL or data migration tool. Finally, the original application or platform is safely removed from service.

Using database archiving when replacing or migrating an application allows you to achieve the full cost savings of decommissioning; speed the migration of data to the new application or platform; and eliminate the risk of data loss.

**Optim delivers benefits for decommissioning**

Periodically reviewing your application portfolio can help you identify underperforming or redundant systems, where the costs associated with continued maintenance outweigh business value. By decommissioning these applications and systems, you can optimize your portfolio, reducing cost and risk.

You invest millions in your enterprise applications and the supporting infrastructure. IBM Optim provides the power of enterprise data management, so you can derive the most business value across your enterprise.

IBM’s Professional Services Team provides comprehensive project planning, execution and on-site support, enabling clients to decommission redundant or obsolete applications using Optim’s proven enterprise data management capabilities. Eliminate the time and resources required to maintain redundant or obsolete applications that no longer offer business value.

**Decommissioning offers significant savings.** A leading direct mail company selected Oracle® E-Business Suite as its ERP application of choice to support current and future business growth. The decision to sunset the mainframe environment made sound business sense; the company expected to achieve an annual savings of $6 million per year.
However, with 34 mainframe applications and reliance on DB2, IBM VSAM® and sequential files, the company had accumulated vast amounts of application data. Data retention policies stated that these historical records needed to be retained for 10 years. Adding to the challenge, the Oracle E-Business Suite environment was growing at a rate of 30 percent annually, increasing the time, risk, cost and effort required for any future upgrades.

Clearly, the company needed several key enterprise data management capabilities. First, to support the mainframe decommissioning initiative, they needed to archive, manage and store mainframe data cost effectively. Next, they needed capabilities to access and report against the archived data, retaining it in an audit-ready format for compliance purposes. Finally, to support their Oracle E-Business Suite initiative, they needed capabilities to archive historical data. Using archiving to control data growth would significantly improve any future upgrades. Optim’s enterprise data management capabilities met all of these requirements and more.

The company achieved outstanding business value with a savings of over $2 million in projected 5-year IT capacity expansion costs. It also achieved savings of $6 million in hardware infrastructure and software licensing by sunsetting the mainframe applications. Additional benefits included annual productivity improvements derived from increased availability and measured improvements in application response time and batch-cycle run times. Taking control of application data growth also made it possible to reduce the cutover time to move from Oracle 10.7 to 11i, a significant improvement from past upgrades.
Decommissioning increases business value. In an effort to reduce operating costs, a large insurance company decided to decommission a DB2 mainframe-based financials application that was no longer providing sufficient business value. The data was needed only for regulatory reasons. The company implemented Optim's enterprise data management capabilities to archive the application data and save it to a WORM device in an audit-ready format.

Optim provides application-independent access to that data to support regulatory requirements at both the state and the federal levels. Because Optim presents the archived data as a generic ODBC/JDBC data source, end users are now able to easily access and report on the data as needed for compliance. After decommissioning the application, the company eliminated millions of dollars in software license and maintenance fees and freed up mainframe storage for additional savings.

**Optimize performance, mitigate risks, control costs.** Exploit the power of enterprise data management to realize measurable business value across your enterprise:

- Align application performance to business processes and profit from superior performance and availability.
- Simplify database administration, ensure business continuity and speed disaster recovery.
• Streamline application and database upgrades and reduce resource requirements for key IT operations.

• Automate data retention to support compliance initiatives and respond quickly and accurately to audit and e-discovery requests.

• Leverage existing investments in applications, databases and storage and eliminate IT budget variances.

Optim supports all major enterprise databases and operating systems, including IBM DB2®, Oracle®, Sybase®, Microsoft® SQL Server®, IBM Informix®, IBM IMS™, IBM VSAM®, Microsoft Windows®, UNIX®, Linux® and IBM z/OS®. And it supports the key ERP and CRM applications in use today — Oracle® E-Business Suite, PeopleSoft® Enterprise, JD Edwards® EnterpriseOne, Siebel® and Amdocs® CRM, as well as your custom and packaged applications.

Optim is designed to ensure successful implementation. Our enterprise data management experts work with your project team to define business objectives and processes for managing enterprise application data in your environment. After implementation, you can count on continued optimization and technical support.
About IBM Optim

IBM® Optim™ enterprise data management solutions focus on critical business issues, such as data growth management, data privacy compliance, test data management, e-discovery, application upgrades, migrations and retirements. Optim aligns application data management with business objectives to help optimize performance, mitigate risk and control costs, while delivering capabilities that scale across enterprise applications, databases and platforms. Today, Optim helps companies across industries worldwide capitalize on the business value of their enterprise applications and databases, with the power to manage enterprise application data through every stage of its lifecycle.

For more information
To learn more about IBM Optim enterprise data management solutions, contact your IBM sales representative or visit: www.optimsolution.com.