APPLICATION DECOMMISSIONING
Achieving Rapid ROI with the InfoArchive Table-Based Archiving Method

EXECUTIVE SUMMARY
In today’s rapidly changing business environment, the demands on IT organizations are especially intense. They must drive revenue opportunities while delivering excellent customer service at consistently lower costs. With up to 70% of IT budgets earmarked for maintenance of existing applications, there may be just 30% for new, more efficient applications.¹ At the same time, two out of three CIOs say their organizations do not have a single view of system data for compliance reporting.²

One of the most straightforward ways to confront this challenge is to address the issue of legacy applications. EMC recommends an active and aggressive program for retiring legacy applications and implementing a continuous and aggressive process of application decommissioning using InfoArchive.
**Legacy applications** are systems and business data developed with languages, platforms, and techniques that do not use current technology. Some experts suggest that any system that is three years or older should be considered a legacy application. A continual assessment of legacy applications should be performed to determine candidates for retirement.

**Application decommissioning** is the process of removing a system, application, database, or platform from service, while retaining access to its data for reporting, regulatory compliance, and regular business needs.

**InfoArchive** is an application-agnostic solution for information management and archiving that organizations use as part of their application assessment-and-retirement strategy to preserve, maintain, and control long-term access to valuable corporate information. It helps organizations extend the value information assets and reduce management costs.

This document provides a guide to using InfoArchive’s table archiving option for decommissioning legacy applications and establishing a programmatic “factory model” for continuous application portfolio hygiene.

**ALIGNING WITH STRATEGIC INITIATIVES**

One of the most critical components of a sustained decommissioning program is its alignment with the strategic goals of an enterprise’s executives. Without this component, the program may be viewed as a one-time event and the IT department may be asked to execute it without proper organizational support. EMC recommends that companies align their application decommissioning programs with one or more of their strategic initiatives. These initiatives may include:

- **Virtualization initiatives** that provide the opportunity for introducing a consistent application decommissioning methodology. As organizations migrate applications into a virtual infrastructure, applying application decommissioning criteria can reduce both long-term total cost of ownership and organizational risk.

- **Infrastructure-refresh initiatives** that an enterprise can readily extend to provide an application-assessment service. Performing application assessment and retirement as part of these refresh programs would provide more business value by reducing cost and increasing IT affordability. It can also help transform IT into a more active business partner.

- **Cloud-enablement programs** that an organization can enhance through an application-assessment program. By executing application-assessment projects as part of an overall cloud-enablement initiative, the organization can reduce costs while accelerating the speed of cloud enablement.

To take advantage of these opportunities, EMC recommends that its customers adopt an application decommissioning strategy that:

- Includes an application assessment
- Involves stakeholders within IT and the business
- Includes an application-decommissioning roadmap that is tied into other IT initiatives
- Allows incremental adoption, execution, evaluation, and tuning
OPTIMIZING BUSINESS VALUE IN APPLICATION DECOMMISSIONING

In many IT departments, operational costs are increasingly dedicated to maintaining existing applications. As cost-recovery pressures grow, this can make IT appear increasingly unresponsive and focused on providing minimum acceptable levels of service. The high cost of maintenance can also stifle innovation, causing an enterprise to view its IT department as an inhibitor to achieving its business goals.

An effective application-retirement program reduces open budgets targeted at infrastructure maintenance, application support, and software licensing. This shift is frequently seen when IT departments change their strategic mission statements to provide IT as a service to the business. More spending goes to transforming the business, and commitments made in service level agreements are met the great majority of the time. IT projects meet committed budget and time estimates nearly all of the time as well.

TARGET APPLICATIONS

Application decommissioning programs that target applications with low perceived value but high maintenance costs tend to be well received. Recently replaced applications, as well as very old applications on antiquated platforms, generally represent ideal candidates.

Recently replaced applications generally cost the same as they did when they were in production and are viewed as inhibitors to embracing the new system. Very old applications typically carry heavy costs due to aging hardware and software infrastructures and are usually associated with exceptions to enterprise security and compliance practices.

ESTIMATING THE ROI FOR APPLICATION DECOMMISSIONING

The return on investment for retiring legacy systems can be expressed as the overall yearly cost of the applications divided by the cost to retire those applications plus the overall yearly cost of the data archive. The ROI for retiring a single application using this calculation is not typically substantial enough to justify the entire investment. EMC thus recommends that organizations record and report cumulative savings derived over the entire life of the decommissioning program. Several models are available to assist with this.

Application decommissioning can also reduce a company’s dependence on application knowledge or on unsupported software products, operating systems, or hardware platforms. In addition, the company can use a well-planned strategy for application decommissioning to simplify its software and hardware infrastructure and centralize retention policies across decommissioned applications. Finally, application decommissioning can make it easier to mine data across applications, turn archives into information sources, and decommission relevant data subsets.

While these value elements are generally harder to quantify, and even harder to equate to cost savings, a list of these additional benefits provides valuable qualitative input for executive analysis.
THE TECHNOLOGY BEHIND INFOARCHIVE

InfoArchive adds business value and ensures regulatory compliance by optimizing how application data and content is preserved and made available for future use. It offers four options for managing the archiving and providing future access to different types of information. (See Figure 1.)

ARCHIVING OPTIONS

Table Archiving
- Simplifies extraction
- Enables more flexible ad hoc queries and reporting on data
- Ideal for application decommissioning structured data applications
- Future proofs data access
- Limitations on unified admin & retention management

Data Record Archiving
- Requires connector
- Enables archiving of structured data
- Presents data as single records so ideal for compliant archiving
- Active archiving and application decommissioning

File Archiving
- Requires connector
- Enables archiving of unstructured content/files
- Active archiving and application decommissioning

Compound Record Archiving
- Requires connector
- Enables archiving of unstructured content and structured data in a single record
- Ideal for complex business records
- Active archiving and application decommissioning

Figure 1: InfoArchive Options for Application Decommissioning

All four options can be used for application decommissioning. They help you address any type of application or data format that is essential in large-scale decommissioning programs involving a wide variety of different applications. For further information on this and the other types of archiving supported by InfoArchive, refer to (Solution Package #2).

The table archiving option is widely used for expedient application decommissioning of RDBMS-based business applications. The application tables are migrated with few, if any, transformations to InfoArchive. This enables rapid archiving with minimal up-front analysis of the application data model. Once the data tables are migrated to InfoArchive, an organization can configure the software to handle the data queries and reports it requires.

TECHNOLOGY COMPONENTS

INFOARCHIVE USER INTERFACE

The InfoArchive user interface for table-based archiving is based entirely on XML standards. It helps users query content efficiently and accurately, at any level of detail. Users can also transform content into views formatted for print, web sites, mobile devices, and other channels. In addition, user interface development tools use declarative XML syntax, which greatly reduces the need for and cost of custom programming to deliver interactive data access.
DATA SERVICES
InfoArchive stores related structured data, and any unstructured content linked to the data records, in a single, consolidated repository. Data tables are transformed to XML tables and stored in xDB—a native-XML database. The repository supports multi-terabyte databases, is capable of ingesting data at many tens of megabytes per second, and can provide rapid and flexible access to data by combining XQuery and full-text searches. Data is stored efficiently using technology that can compress any node of an XML file and reduce data volumes by more than 50%.

The repository provides a flexible platform for storing multiple data sets and associating these data sets with different reporting and discovery applications. There is no need to reprogram the repository if the structure of your data changes. This makes the repository particularly valuable for archiving structured data generated continuously from your business systems.

An organization can readily reuse or repurpose the XML data and upload it to new systems. The organization can associate metadata with the XML database to define disposal or expiration dates when automating retention policies.

InfoArchive offers a unique, schema-less approach to leveraging and managing XML files that makes it easier to add new data types. By separating the metadata from actual business records, the software makes it possible to enrich the metadata without corrupting the chain of custody. InfoArchive is inherently fault tolerant at the data level. If the system of record contains corrupt data, the problem can be fixed prior to archiving.

AN IMPLEMENTATION MODEL FOR TABLE ARCHIVING
A high-level view of the conceptual architecture for InfoArchive is shown in Figure 2.

ARCHITECTURE OVERVIEW

Figure 2: Architecture Overview for InfoArchive
### INFOARCHIVE APPLICATION DECOMMISSIONING FEATURE SET

Key features of table based archiving within the InfoArchive solution are summarized in Figure 3.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETL Integration</td>
<td>InfoArchive integrates with industry-leading ETL toolkits including Talend, Solix, Informatica and IBM DataStage.</td>
</tr>
<tr>
<td>Role-Based Authorization and Data Masking</td>
<td>Role-based authorization and data-masking mechanisms are integrated into the decommissioning framework for all business rules to define access to sensitive data on a per application basis.</td>
</tr>
<tr>
<td>xDB Storage Architecture</td>
<td>Canonical xDB storage design is tuned to optimize ingestion of ETL-generated XML and facilitate retirement programs that are pipelining terabyte-sized data sets into InfoArchive.</td>
</tr>
<tr>
<td>Database Replication and Fault Tolerance</td>
<td>The xDB replication and multi-node architecture enables rapid development and deployment of highly available, fault-tolerant data storage for decommissioned data.</td>
</tr>
<tr>
<td>Chain of Custody</td>
<td>ETL transformed XML includes generation of ETL metadata that characterizes source data to insure that the decommissioning process provides lossless data migration to xDB XML storage.</td>
</tr>
<tr>
<td>Excel Export</td>
<td>Decommissioned data queried through reporting interfaces can be subsequently exported to Excel for additional data manipulation, inclusion in audit, or legal or regulatory reports that may be required as part of an overall data governance strategy for the decommissioning program.</td>
</tr>
<tr>
<td>PDF Export</td>
<td>Detailed information on decommissioned data may be exported to PDFs to provide reporting as required by your decommissioning program strategy or to facilitate business activities that still use decommissioned data.</td>
</tr>
<tr>
<td>Data Integrity Verification Suite</td>
<td>A test suite ensures the data integrity of ETL-generated data by evaluating row counts, table counts, column data types, and character set integrity.</td>
</tr>
<tr>
<td>Web 2.0 UI</td>
<td>Client-side XForm engine, GWT, JQuery, and Dreamweaver Spry toolkits provide a Web 2.0—style user experience—with AJAX calls to InfoArchive servlets, resulting in a seamless UI experience.</td>
</tr>
<tr>
<td>UI Customizations</td>
<td>Custom XForm, JQuery, and Dreamweaver Spry client-side Javascript libraries enable highly customized user interfaces.</td>
</tr>
<tr>
<td>Data Compression</td>
<td>xDB detachable libraries, library-level compression, and text-node compression can be enabled to leverage tiered-storage architectures that maximize ROI of decommissioned programs while maintaining online, high-speed search and reporting on critical data sets.</td>
</tr>
<tr>
<td>Batch XML Import</td>
<td>Large XML data set imports are supported with scriptable command-line Java utilities that can ingest terabyte-sized data sets with logging, error reporting, threading, and automatic-index creation.</td>
</tr>
<tr>
<td>SQL Gateway</td>
<td>A JDBC Type 4 driver provides ANSI SQL read-only access to data stored in InfoArchive’s repository.</td>
</tr>
<tr>
<td>Legal Holds and Retention</td>
<td>The solution supports fine-grained retention policies and legal holds.</td>
</tr>
</tbody>
</table>

Figure 3: Functional Overview of the InfoArchive Table-Archiving Solution

Some of these features are described in more detail in the following sections.
As applications are off-ramped into a retirement solution, organizations generally need to provide different levels of access to the decommissioned data based on the organizational roles of individual users. With InfoArchive an enterprise can configure each retired application with multiple roles that give users access to different menu options, data sets, search results, data masking, and operations.

**LDAP AND SSO AUTHENTICATION**

InfoArchive offers three authentication mechanisms for table archiving that can be used individually or together:

- **xDB private-user definition and authentication.** This is helpful for small applications used with a private developer sandbox that is not integrated into an enterprise-authentication mechanism.

- **LDAP authentication.** InfoArchive can be used with an LDAP-accessible authentication service (such as Microsoft Active Directory). The service can also help organizations retrieve principal user information, such as group membership, for role-based authorization.

- **Single sign on (SSO).** InfoArchive can also be configured to use a single sign-on service such as CA/SiteMinder.

**USER ACCESS AUDIT LOGGING**

Organizations frequently have sensitive data to retire that must be integrated into an enterprise compliance solution, such as RSA envision. InfoArchive provides an audit-logging feature for table archiving that records every instance of access to this data. A company can store the information locally in the solution or use an enterprise-wide audit-logging service.

**CHAIN OF CUSTODY**

Part of the application-retirement process is demonstrating a “chain of custody” for your data to ensure that the data has not been lost or changed. InfoArchive uses a data model within xDB to house ETL meta-data about the data-transformation process. InfoArchive makes it possible to display that information through a customizable pane in the retirement solution’s user interface and through reports generated by the data-integrity verification suite.

**EXCEL EXPORT**

When an organization retires an application, it may have ad-hoc needs for manipulating the related data. InfoArchive provides an Excel export function that builds on the xProc and xQuery features within xDB to provide a convenient tool for exporting information from the database into an Excel file.

**PDF EXPORT**

InfoArchive can also provide a PDF export of search results that can be configured for specific applications using XSLT style sheets. After viewing information using the solution’s web-based interface, users can generate PDF exports of reports.

**DATA INTEGRITY VERIFICATION SUITE**

A successful application-decommissioning initiative must guarantee the integrity of source data as it moves through the ETL process and is stored in InfoArchive. Tools for validating data integrity within InfoArchive make it easy to include rules that are appropriate for the source system’s data model.
USER INTERFACE CUSTOMIZATIONS

Each application that an organization wishes to retire has different user interface requirements for searching and reporting. InfoArchive provides a rich set of interface customizations to meet each organization’s UI needs.

DATA COMPRESSION

Loading large amounts of data and storing it for several years is a typical requirement for an application-decommissioning solution. Storing terabytes of data on highly available SAN storage for many years significantly reduces the ROI for a retirement program. InfoArchive lets companies store, compress, and detach segments of the database to satisfy standard report requests. A company can migrate these compressed libraries to lower-cost storage tiers and then decompress and re-attach them to the solution if they are needed.

BATCH XML IMPORT

To manage the migration of terabytes of data, while enforcing data-validation requirements and providing application-specific index generation, InfoArchive provides a batch XML-import mechanism as a command-line tool that can be integrated into an ETL-pipeline process. It is possible to configure the batch process to create indexes within the xDB database, run the batch for a specific amount of time or across a specific number of files, and report results from the import and indexing operations.

REPORTING ACCESS

InfoArchive includes a JDBC Type 4 driver that provides SQL access to data stored within InfoArchive. An enterprise can use the driver—which supports ANSI-standard, read-only SQL access—either directly via the Java programming language or through a reporting tool such as Jaspersoft iReport or the SQuirrel SQL client.

INFOARCHIVE PROJECT DEPLOYMENT MODELS

InfoArchive can be quickly deployed for table archiving, with minimal support, using a single application model or a factory model.

SINGLE APPLICATION MODEL

DESCRIPTION

Although the archiving process for the single-application model is similar to that for the factory model, it does not establish the structure to handle a large number of applications in a single engagement. The single-application model is ideal for archiving up to three applications.

BENEFITS

Many EMC customers have significantly reduced operational costs by archiving a single application. The single-application model may also be appropriate as a phased approach that lets an enterprise evaluate the benefits of InfoArchive before moving to the factory model. It can help the enterprise understand the cadence of an InfoArchive project, the roles that are required for the project to be successful, and the information the enterprise needs to perform an archive. It can also help the enterprise quickly experience the potential ROI and financial benefits for its project.
FACTORY MODEL

DESCRIPTION

EMC customers have used the factory model to archive hundreds of applications. It can help them quickly and methodically identify and archive applications with a high ROI. It can also help project team members hone their skills and make the archiving processes more efficient.

BENEFITS

The factory model allows an established team to gain economies of scale. The team builds a body of knowledge that it can share with subject matter experts (SMEs) for the next archived application. Giving SMEs more time to gather information can speed up the archiving process and increase information accuracy. Archiving more applications also means greater cost savings and project ROI.

A TYPICAL DEPLOYMENT

Figure 4 shows a typical InfoArchive deployment architecture for table archiving.
APPLICATION DECOMMISSIONING ROADMAP

Many EMC customers purchase InfoArchive to implement an enterprise-wide application-decommissioning strategy. Our experience shows that a decommissioning factory provides a powerful and effective program-governance strategy. Having a roadmap for building a decommissioning factory helps a business analyze the full impact of its strategy and is key to leveraging the solution fully. A large-scale program built around decommissioning factory will likely leverage all InfoArchive archiving options at some stage of the project. Figure 5 shows the three stages we recommend for developing and executing a decommissioning program.

APPLICATION RETIREMENT ROADMAP

Figure 5: Application Decommissioning Roadmap

PHASE 1: PROGRAM GOVERNANCE

Program governance may be provided through an existing project management function or through a newly created entity within IT. It includes operational guidelines for executing application-decommissioning programs and managing any overlap with other IT initiatives. Based on collaboration between IT managers and business representatives, program governance first seeks to define and develop KPIs and ROI metrics for evaluating the decommissioning program.

There are several staff roles that may be involved with an InfoArchive project. Staff comes in and out of the project as needed and are repeated for each application. (See Figure 6.)
<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Executive Sponsor</td>
<td>Provides program vision and direction, resolves issues, provides direction and approval for schedule and budget changes</td>
</tr>
<tr>
<td>Organization Project Manager</td>
<td>Handles organization resource management, interface with EMC project manager, and resolution of project management issues</td>
</tr>
<tr>
<td>Organization IT</td>
<td>Communicates architecture vision, provides system access, researches technical questions related to the source application, and helps resolve technical issues</td>
</tr>
<tr>
<td>Application Owner and Subject Matter Expert (SME)</td>
<td>Provides detailed information about the source application and defines high-impact business flows and high-impact reports</td>
</tr>
<tr>
<td>EMC Program/Project Manager</td>
<td>Handles EMC resource management, budget and schedule tracking, and interface with the organization’s executive sponsor and project manager and provides status reports on and facilitates the resolution of project management issues</td>
</tr>
<tr>
<td>EMC xDB Architect</td>
<td>Manages the xDB installation, configuration, data loading, solution architecture, technical design, and quality oversight</td>
</tr>
<tr>
<td>EMC Data Analyst</td>
<td>Collects data-retention requirements, data analysis, and inquiry and reporting requirements</td>
</tr>
<tr>
<td>EMC ETL Consultant</td>
<td>Configures and executes ETL processes and validates source data extraction</td>
</tr>
<tr>
<td>EMC Executive Sponsor</td>
<td>Provides direction, resolves issues, and approves schedule and budget changes</td>
</tr>
</tbody>
</table>

Figure 6: Staff Roles for Program Governance

**PHASE 2: APPLICATION DECOMMISSIONING FACTORY BOOTSTRAP**

Establishing the application-decommissioning factory program includes the following tasks.

**TRAIN IT STAFF**

EMC provides sample templates and a methodology tool to help train an organization’s IT staff in application assessment. We also provide samples of completed application dossiers that show the information that is collected during application assessment and retirement. Staff training covers additional templates that facilitate program governance as well as the creation of decommissioning solution architectures, project testing plans, and deployment architectures.

**COORDINATE WITH OTHER BUSINESS SERVICES**

Coordinating a decommissioning service model with other enterprise initiatives can help maintain a unified model for IT services. This typically involves sharing information in areas such as program governance, ROI models, KPIs, and project-execution methods. By viewing information in a format that is consistent with other service offerings, business stakeholders can see a unified set of services and engage consistently with the staff members who provide these services.

**AUTOMATE TECHNOLOGY SELECTION**

Depending on the size and complexity of its application landscape, an enterprise may find it helpful to automate the classification of applications and the execution of decommissioning. In this phase of the rollout strategy, technology assessments and selections give IT the appropriate tooling to perform application assessment and decommissioning at scale.
USE PROOF OF CONCEPT TO REDUCE RISK

As a company performs application assessments and identifies decommission candidates, it can discern any business risk by performing a limited number of proofs of concepts (POCs) in the early stages of the assessment program. The POCs can validate technology selection and synchronize the decommissioning methodology with other parts of the business. They can also speed the maturation of the assessment project and help the company identify technology and process gaps that should be resolved before full deployment.

PHASE 3: APPLICATION DECOMMISSIONING PROJECTS

Once the governance program for application assessment is operating, and an organization has established its roadmap for building the decommissioning factory, the organization can retire the original application and create functionality in the decommissioning archive. The organization will develop and analyze project KPIs to insure that the factory is generating the ROI that stakeholders expect and modify its decommissioning process as needed.

EXECUTING AN APPLICATION DECOMMISSIONING PROGRAM

EMC has applied years of system integration experience to create a tailored version of our systems development lifecycle methodology that maximizes success for application decommissioning and table archiving. This methodology is built on a strong foundation of best practices in systems engineering, software engineering, and project management. It gives our customers the discipline, rigor, and completeness required to ensure project success.

InfoArchive is specifically designed to enhance visibility, coordination, and business buy-in during all phases of the decommissioning process. The solution includes the templates, best practices, and intellectual capital an enterprise needs for all phases of a project. We help companies tailor the phases, steps, and work products to their specific needs within a proven, best-practices framework.

Figure 7: Application Decommissioning Methodology
Application decommissioning with InfoArchive involves four major steps:

- **Application assessment**—during which an organization identifies business applications that are candidates for retirement, based on specific criteria and projected ROI, and provides direction for the retirement project
- **Business and data analysis**—during which the organization sets functional requirements for the selected application(s)
- **Solution design and build**—during which the organization creates a customized, fully tested data extraction, transform and load solution based on InfoArchive and produces a solution-architecture document
- **Solution delivery**—during which the organization designs user-acceptance testing, user training, and knowledge transfer and then rolls out and deploys its solution

**BUSINESS AND DATA ANALYSIS**

As companies perform detailed business and data analysis for the applications they have chosen to decommission with table archiving, the business analysts and technical leads for the projects should have detailed conversations with SMEs to determine which data to archive, how that data will be organized, and how it will be accessed. This analysis includes:

- Data modeling for the selected application(s)
- XML schema creation for the data model
- Data security requirements, including chain of custody
- Reporting requirements
- Data access requirements
- Data retention definition
- Audit process definition
- Initial ETL model

The legacy infrastructure is then inventoried—including hardware, operating systems, and database platforms to determine access requirements for the ETL process. The user interface is analyzed to identify functionality that is still being used in the legacy application. We typically find that for most decommission candidates, the user community limits interactions to read-only screens and reporting capabilities.

Finally, upstream and/or downstream application dependencies are studied to identify any data-flow issues that must be addressed through ETL. If a company expects to continue using upstream applications to flow data into the retired application infrastructure, it must have a clear picture of the data model impacts for the new XML data archive. Similarly, the company should analyze integrations with downstream applications to understand how the data model works and ensure that the ETL process is complete.

The product of the business and data analysis phase is a set of functional requirements for the design and build phase. Figure 8 shows an example of a section from the overall analysis pertaining to the functional requirements for security.
DESIGN AND BUILD

Using the functional requirements generated in the business-and-data-analysis phase, an organization then builds the decommissioning solution for the legacy application(s). The core infrastructure is assembled using a standards-based and vendor-neutral approach with the goal of providing a consistent application framework for consolidating possibly hundreds of legacy applications into a single technology stack. This consolidation allows the organization to outsource the legacy application access requirements and greatly lowers the overall TCO of the solution.

The design-and-build phase focuses on iterative development, testing, and deployment of the defined functionality. Plans for project management and change management (business readiness) are refined, and a detailed iteration plan and user-acceptance tests are developed for the current release. Refinements to the initial set of user stories and acceptance-test scenarios are created as needed, and the environment setup is completed.

During each iteration (typically two to four weeks in length), detailed development work is assigned, detailed unit tests and test scripts are created, and functionality is developed and tested according to these definitions. All iterations include internal quality assurance of the developed functionality, based on the detailed user-acceptance tests that were developed during the implementation prep iteration. Business users should be directly involved in this testing, at least for every other iteration. Typically the final development iteration is reserved for solution hardening, documentation finalization, performance testing, and completion of any outstanding solution refinements.

In a typical project, a configurable user interface framework is delivered as part of the solution. As applications are assessed and decommissioned, the user interface is configured to add more search, display, and download configurations that will support accessing data from the source application. By consolidating multiple legacy applications into a single framework, an enterprise can minimize TCO and maximize its ROI.
The enterprise can also optimize TCO and ROI by leveraging existing reporting tools and infrastructure to access legacy data. Figure 9 shows the configuration of standard tools for report development to recover information from an application-decommissioning solution.

During this phase the ETL model is also completed and tested. Legacy data is migrated into an industry-standard, future-proof XML format that is vendor independent, stable, and application neutral. Important aspects of the ETL include the timing, performance, and accuracy of the processing. Also important are the flexibility and scalability of the ETL design for adapting to the many unknowns and variances of older, poorly documented, or under-supported systems.

**SOLUTION DELIVERY**

Figure 10 provides a high-level conceptual architecture for decommissioned applications. The basic system flow is illustrated from the various data sources to InfoArchive and from the web-application server to the end-user web browser for PDF reports.
During the ETL process, both structured and unstructured data are extracted from the legacy applications. Structured data is converted into the XML format that the organization defined and implemented in the design and build phase. (Because the amount of XML data generated as part of the translate step can be quite large, it is important to account for this in the deployment architecture.) The XML data is then loaded into the archive, along with the unstructured documents.

Advanced search capabilities are available for XML and unstructured data in archived data storage across one or more application datasets. These may include full-text search capabilities across unstructured content (such as Microsoft Office documents and PDFs). Simple, web-based search and reporting applications replicate reports from legacy systems using minimal business logic.

**WE’RE HERE TO HELP**

This document was prepared to assist InfoArchive customers with their deployment planning for an application decommissioning program. Deployment team members are encouraged to read this document prior to the first planning meeting, to apprise themselves of the foundational concepts that will be required.

ECD would like to acknowledge the following organizations for their assistance in creating this document.

Flatirons provides consulting, technology, and outsourcing for content lifecycle management. For more than 20 years, we have served global Fortune 1000 customers in the aerospace, automotive, electronics, financial services, government, healthcare, and publishing industries. Our customer engagements help organizations efficiently deliver the right information, at the right time, to the right people by leveraging structured content and digital media—Turning Content into Knowledge®

Tru-SYZGY specializes in helping companies shed IT expenditures related to application portfolio management. We offer professional services and products to help you reduce your IT costs, resource constraints, and complexity, and minimize security risk. In industries such as financial, healthcare, pharma, high-tech, insurance, energy, and automotive, we have a broad range of business and IT experience to help clients successfully analyze application portfolios, navigate the application-decommissioning process, and quickly realize a robust return on investment. At Tru SYZYGY, we help you align your IT to perform strategic initiatives and attain your future IT goals.

The EMC Enterprise Content Division (ECD) provides a blend of industry experience with deep expertise in content management and EMC technologies. As the world’s largest information-based services organization, and a trusted advisor for more than 20 years to Fortune 500 companies, ECD Services has provided organizations in almost every part of the globe with solutions in life sciences, energy and engineering, healthcare, financial services, the public sector, and many other industries. ECD Services is uniquely able to provide critical guidance—from strategy and optimization for solutions to the full on-going management and maintenance of these solutions with flexible deployment models. Our holistic approach tightly integrates consulting, cloud, education, support, and partner services to meet today’s most demanding business needs. At EMC Enterprise Content Division, we take content seriously.

Would you like a trial environment while you wait for the implementation to begin? Want to show your new decommissioning capabilities to colleagues in another line of business? Reach out to tryinfoarchive@emc.com to request trial access today!

1 COMPUTER WORLD, “HOW TO BALANCE MAINTENANCE AND IT INNOVATION,” OCTOBER 2013.