



Application Relationship Management

A Roadmap to Productivity

By Peter Szirmak
Senior Partner
Information Balance

Executive Summary



This paper describes **Application Relationship Management (ARM)**, a new paradigm in Information Technology. To quickly position the ARM concept, it can most easily be understood by a comparison between ARM and Customer Relationship Management (CRM), a well-known concept in today's business environment.

CRM organizes the activities of an enterprise to implement a customer focused business strategy in order to maximize the value provided by the enterprise to all customers. Today, a variety of software solutions exist that implement such a business strategy, by providing connectivity between the various business functions. In essence, CRM solutions facilitate the understanding of relationships within and across various business functions, all relating to the customer.

While organizations quickly came to accept the importance of such higher-level understanding of business operations (with the customer being the common thread), nothing similar exists that would enable IT organizations to have a **connected view of** their **IT** assets.

At the same time, today's IT environments have become increasingly complex and difficult to understand and oversee. Company mergers and acquisitions have further added to the complexity of IT environments, which already contained a myriad of: software (both internally-developed and vendor supplied), hardware, documentation, business rules, best practices, operational processes and other types of information sources.

At best, companies have a level of understanding of their *physical environment* (e.g. a given application runs on a given hardware platform) or some very high level documentation of how business systems relate to software assets (e.g. a given business system contains certain applications).

Organizations will also typically have a good *detailed* understanding of their various IT assets (for example, they may have implemented a document management software solution or application mining tools for specific platforms) each area is separately managed by the enabling software. This state is very similar to where organizations were before the concept of CRM was introduced by the Gartner Group: the various business functions utilized tools for their own areas (such as contact management software, accounting packages), but there was no overall connectivity between these tools.

ARM implements an integrated knowledge-centric IT strategy that enables the productive management of all IT assets, by providing an understanding of the relationships within and between those assets. It provides a connected view of these assets and their relationships that is continuously and dynamically updated. In that sense, ARM is the 'CRM for the IT world'.

This paper outlines what Application Relationship Management is, its scope and purpose and the benefits an organization can expect to gain from adapting it.

What is Application Relationship Management?



Application Relationship Management provides a roadmap for creating and maintaining a central repository of all your IT assets. It allows your organization to understand its IT assets, including documentation, application source code, business objects, hardware and all other components. It provides a continuously current view of: what assets exist, what assets are used

/ unused, how those assets relate to each other, and what relationships exist within those assets.

The importance of implementing Application Relationship Management cannot be over-emphasized. All aspects of information technology management benefit from such a strategy: from everyday development and maintenance activities to strategic platform migration, application integration, and outsourcing or re-platforming projects. All IT projects hinge on understanding what assets exist and how they need to change to support the new business realities. The ability to analyze

information effectively, in a timely and quality manner, directly affects the organization's use of resources and its overall IT expenses.

The ARM roadmap provides organizations with a strategic advantage over competitors.

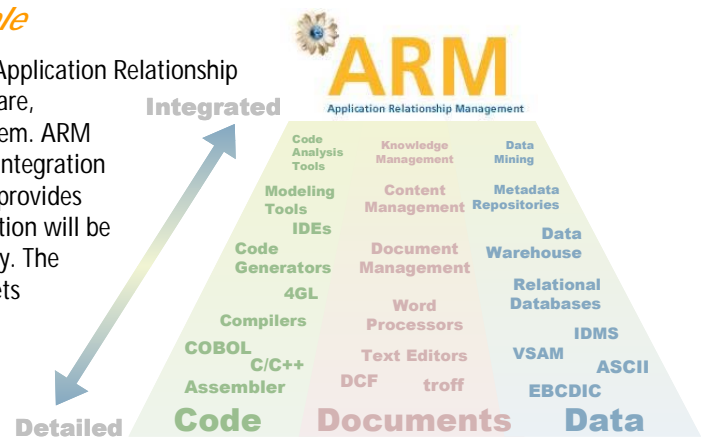
Integrating Information

To ensure that business objectives can be met on a repeatable and cost-effective basis, IT organizations need a connected view of their assets. In order to reduce costs associated with the planning, designing and executing of IT projects measurably and permanently, organizations need an automatically generated knowledge repository that can answer such simple questions as 'What do I have?' 'How do my assets relate to each other?' 'How do they depend on each other?' or 'What is the impact of changing / removing / adding components?'

Making Information Visible and Understandable

Relationship information is inherent in the IT assets, but without Application Relationship Management, it is fractured and hidden. Application code, hardware, documentation, etc. all contain relationship information within them. ARM allows organizations to pull such information to a higher level of integration easily and automatically. It makes those relationships visible and provides context for them. The ARM strategy also defines how the information will be dynamically maintained, to ensure its future currency and accuracy. The resulting integrated, current, and understandable view of the assets provides maximum value to the organization.

ARM can be looked at as the new enabler of the evolution from a detailed to a higher level of understanding, bringing progressively integrated views of code, documents and data under one 'umbrella'.



Leveraging Other Initiatives

ARM leverages investments in other initiatives, such as Knowledge Management or Application Mining, by connecting all these and other areas of the IT organization.

This figure depicts how ARM relates to those other IT initiatives.

The ultimate success of individual initiatives, such as Document Management and Application Mining initiatives, will depend on how well these areas connect to each other. Having a solid document management process by itself will not answer the questions: "How do my documents relate to what I have?" – or: "Which documents contain relevant information?"

Similarly, leading application-mining tools such as CAST and Revolve will provide the organization with detailed information about their various application platforms. However, they will *not* answer the question: "How does my client server application relate to my mainframe applications or to the documents and other objects that I have?"



Managing Business Initiatives Effectively

ARM provides the context for managing initiatives from a variety of disciplines within the organization effectively and efficiently under the 'umbrella' of ARM. This ensures that those initiatives are consistent with and tightly integrated to the overall strategy of the organization (no 'silos').

Transitioning to Maturity

ARM is an enabling concept, supported by advanced technology that moves an organization from the current norms of effectiveness to the future standards of performance required to compete and excel. The industry environment described below shows some of the immediate challenges that are slowing this necessary transition and reducing organizational effectiveness.

These challenges must be overcome in order for an organization to survive and progress. An ARM strategy positions the organization for success.

Moving from the Current to a Desired State

Current State of the IT Industry



'The inability to provide the right knowledge to the right people at the right time is expected to cost Fortune 500 companies over \$57 billion over the next two years' (International Data Corporation).

This widely quoted statement summarizes well-known realities in our industry. Slow, costly execution of projects results in delays for bringing new business initiatives to market. The Standish Group Chaos study for the year 2000 found that 23% of projects outright failed and 49% were challenged. Of these challenged projects, the average project was 189% over budget, 222% behind schedule and delivered only 61% of originally specified features.

Silos of Information

For IT initiatives, the amount of information to be examined and analyzed is growing at an exponential rate. At the same time, information is decentralized, stored in different locations, and often in different formats.

To address these challenges, corporations have typically installed software to assist in organizing information on: source code, documentation, execution statistics, business models, etc. However, for each silo of information, the software tool chosen is usually platform-specific, and/or implemented as a separate instance for that area of operation (e.g. department-specific).

The set of information management tools used within an organization might be:

- Separate application mining tools each providing information about source code on specific platforms
- Separate modeling tools to organize process and data models
- Document management software that targets documentation only
- Ad-hoc tools (e.g. departmental macros, etc.)

None of these tools was designed to communicate with other areas in the organization where related information exists. Discovering and documenting such relationships is left for manual research and understanding.

The time and effort spent in information gathering is directly related to the accessibility of information. A typical analysis will need to gather information kept in people's head, in hardcopy only, on the mainframe or on the PC, in various formats.

Some information is in a completely raw format (e.g. source code) or is kept in the proprietary format of the tool organizing the given information (e.g. application mining tools).

Lack of Qualified Resources

The proliferation of knowledge management and other tools, all intended to organize and maintain these various silos of information, necessitate that an IT professional must become a 'jack of all trades', understanding multiple environments and tools. The tools themselves are often complex, each requiring significant experience and understanding.

In almost every IT organization, initiatives exist to attract, train and retain qualified resources. However, having deep understanding and knowledge of how IT assets relate to each other is usually the privilege of a few. These resources have obtained their knowledge through many years of working with these assets. This deep individual knowledge is typically not captured anywhere else in the organization. As a result, IT organizations rely unduly on the knowledge of a few key individuals. These resources become the bottleneck in initiatives. As a result, all projects can expect a slower than optimum delivery and may experience costly delays.

Having knowledge centralized in the head of a few individuals also results in slow and costly training of new resources. Building organization-specific IT knowledge takes many months, if not years. New resources become truly effective much slower than desired.

Mis-Utilized Tools

Corporations spend significant amounts on purchasing and maintaining tools to provide organized information on specific areas of IT. At the same time, tool vendors struggle to keep their tools utilized by their clients but, more often than not after a relatively short period of time, many of these powerful tools become 'shelf-ware'.

The underlying reality is simple: the tools themselves are designed for specialists, but are purchased for general use. The information available via these tools is extremely important for specialists but is much more than most IT professionals need on a regular basis. Lacking any other way of getting at the information, corporations purchase a much larger number of licenses than they truly need, in the hope that occasional users will use the tool for getting the information they need. In reality, occasional users become non-users and return to old-fashioned, mostly manual research (once the effects of the original training fade, the tools are perceived as complicated and unfriendly). This results in a large number of licenses becoming 'shelf-ware'. Typically, after some time, tool usage is reviewed, the overall return on investment is judged to be low and all licenses are terminated, resulting in the return to manual analysis for all. Soon after, a new tool is purchased, starting the cycle again....

We must move beyond these current challenges to a coherent and integrated environment where we can use integrated tools to best advantage — only in such an environment can we excel.

Desired State

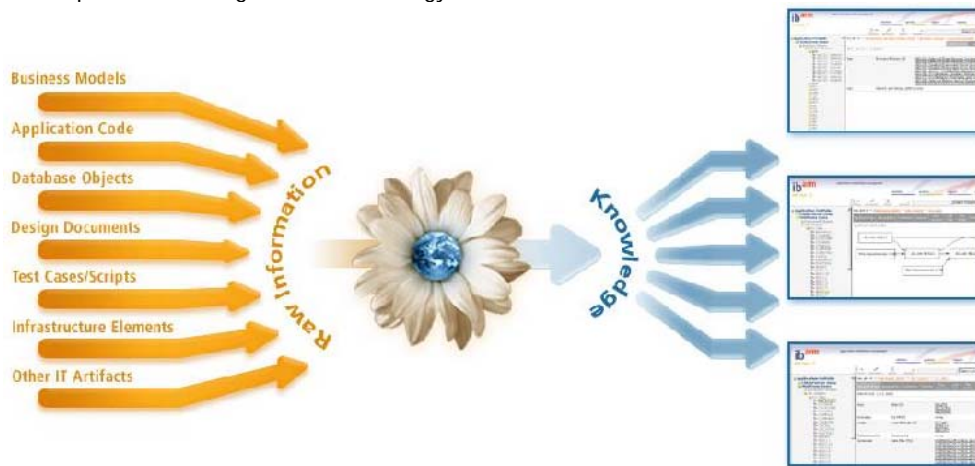
The Gartner Group predicts that IT expenses (as a percent of overall corporate expenses) will grow from 30% today to 50% by the year 2010. Such expenses will continue to be challenged, resulting in progressively severe budgetary pressures for IT. This is not a viable business environment and has to be changed through a new vision.

Delivering more with less requires an overall strategy for a significant and ongoing productivity increase. Current initiatives such as: document management, application mining, etc. are not sufficient in themselves to achieve this turnaround. The business information needs to be fully integrated and all of its related initiatives need to be connected in order to produce the desired productivity increase. If there is no overall strategy, then these initiatives may only add to the creation of information silos and other problems discussed above.

ARM provides the overall strategy that connects those initiatives to the complete set of business information driving the organization.

Knowledge Centric IT Strategy

The figure below depicts a knowledge-centric IT strategy, as defined via ARM.



Relevant tools may continue to organize and manage specifics of a given IT asset. However, ARM implements a repository of relationships between and within those assets, thus providing a much-needed higher-level understanding of how those connections and dependencies inter-relate.

A single interface (preferably via the corporate intranet and often made available through a corporate portal) establishes the gateway to all such IT information. Regardless of the actual location or platform of the information, IT professionals will have a single, consistent source for all their information needs.

Relationships within and between IT assets will no longer be the hard-earned knowledge of a few but will be automatically generated into the ARM repository, for all to see. Business rules buried in code or documents will become visible to all.

Existing investments into tools will provide a much greater return. Specialists may continue to use the given tool but information required by occasional users is automatically pulled a level up into the ARM repository. By doing so, fewer licenses will be required but the given tool becomes an integral part of the organization's information infrastructure and thus will continue to be used. By implementing a properly utilized tool environment, both IT organizations and tool vendors will ultimately benefit.

Benefits of Application Relationship Management



Implementing Application Relationship Management will create significant improvements in operational efficiencies, resulting in (conservatively estimated) cost savings of 10-20% of IT budgets related to projects.

The key to Application Relationship Management is changing the current, static knowledge capture and maintenance to an automated, dynamically maintained process, thus providing the following key benefits:

- Protect IT investments by ensuring their cost-effective usage and evolution
- Standardize IT asset information, regardless of the original platform or format
- Enable knowledge proliferation to occur across the IT organization

Application Relationship Management will result in tangible cost savings in practically all areas of the IT organization, from strategic planning through development, integration and enhancement projects, to everyday on-call maintenance. Three specific areas of the Systems Development Lifecycle will see the most significant benefits: Estimation, Analysis and QA/Testing.

With ARM, estimation efforts will be more accurate and many times faster than currently possible. Such efforts currently necessitate extensive manual efforts by a few key resources. With ARM, complete and accurate information is available to as many resources as required, in immediately actionable format.

Reducing dependency on a few bottleneck resources and at the same time facilitating the effective analysis of applications, documentation, etc. naturally results in cost savings at the front end of projects. Easily accessible, complete and correct information will also enable effective test plans to be created, reducing overall costs and ensuring the success of QA and Testing phases. The overall quality of project output will increase accordingly.

Organizations embarking on Application Relationship Management will also benefit from reduced training costs, both formal and informal. Utilizing the corporate intranet to access information reduces the need to train in specialized, more complicated and diverse tools. At the same time, by automatically pulling information inherent in existing assets to a higher, common level, the need for unstructured, informal training (e.g. new resources trained by existing personnel) will be reduced.

Implementing ARM -

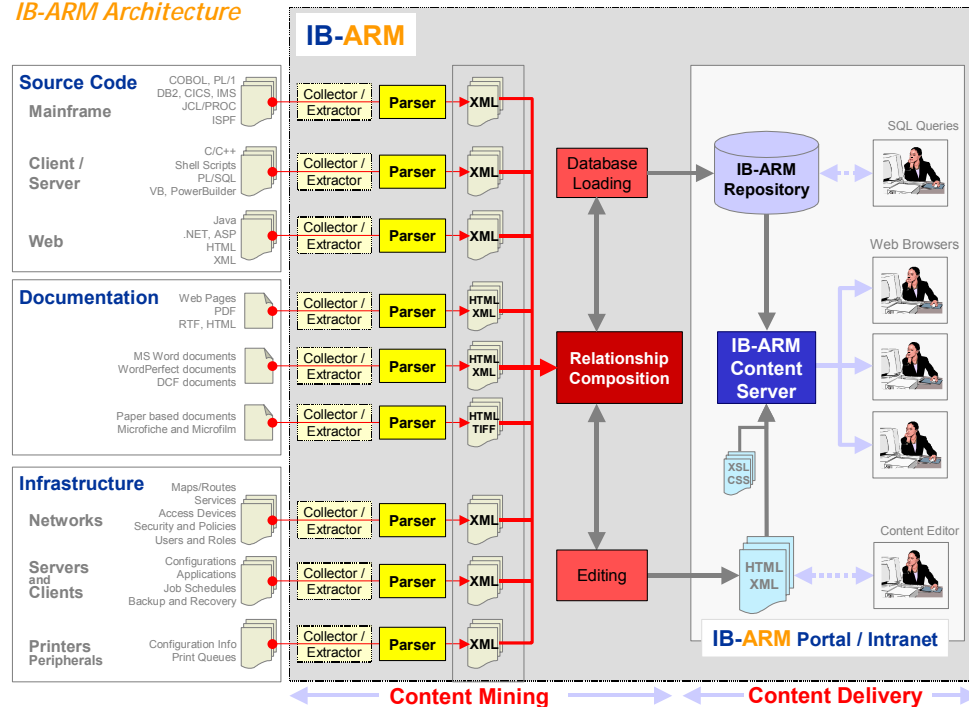
Over the past several years, Information Balance has developed procedures and technology that effectively implement the vision of Application Relationship Management.

Enterprise Software Solution

The IB-ARM Enterprise Software Solution follows the approach described above and defines, implements and maintains an effective ARM strategy. Today, Information Balance offers IB-ARM to clients on an ASP (application service provider) basis. A typical IB-ARM implementation will take between 2 and 8 months to fully implement, depending on the scope and complexity involved.

The Technology

IB-ARM Architecture



IB-ARM Architecture, V2.0, October 2003

About Information Balance, Inc.



Information Balance, Inc. was founded in 1988 to provide consulting and training services to the IT industry. Over the years and through continuous growth, the company's field of expertise has significantly broadened and now includes all aspects of Systems Development and Integration, covering all platforms including mainframe, client/server and the Internet. Many of these areas are supported by formal training curricula.

Today, Information Balance, Inc. is a well-established firm with offices in Canada and Europe. Sustainable, controlled growth has been the mainstay of Information Balance's success, with over 30% growth year over year. Information Balance has been awarded the following accolades supporting its corporate excellence.

- Financial Post Fast 50 ('98, '99, '00)
- Profit Top 100 ('99, '00)
- Andersen 50 Best Privately Managed ('99, Regional Finalist)

Information Balance maintains on-going professional relationships with many large Fortune 500 corporations and government organizations.

For more information, please call 416-962-5235, e-mail infobal@infobal.com, or visit our website at www.infobal.com.