Business Centric Methodology (BCM)
Creating practical tools for business integration

A Vision for Business Integration

A few years back it was the Internet that pointed to a new way of doing business. Now web services technology creates the hope that businesses will be able to do what was never before possible, to provide ubiquitous connections among information systems and the people who use them. Information and business capabilities will be delivered at near zero marginal cost. But business interoperability does not come so easily. Connecting the dots among systems does not in itself create the business relationships that produce value. Technology alone offers no guarantee that businesses communicate in the same business vocabulary or have the ability to create and grow collaborative business relationships.

Achieving effective collaboration will involve change at all levels of the extended enterprise. The Business Centric Methodology (BCM) addresses the need for coordinated change. In the BCM vision:

o Business operations will move from stove-piped procedural processes to discrete integrated services that adapt to the needs of the consumers of those services.

o Information will evolve from islands of information to knowledge-centric, interoperable solutions grounded on a business-driven approach to metadata management.

o Technology will change form narrow proprietary standards to open, standards-based solutions – driven by strategic business objectives.

o People will move from being a spoke attached to a technology hub to becoming the driving force behind service features and integration strategies.

BCM complements existing approaches to business integration by paying needed attention to the requirements for meaningful semantic connections among diverse business communities.

The BCM approach serves:

o The CFO who aims to establish a formal process for ensuring that the business goals of integration initiatives are measured and realized.

o The CIO who needs to prioritize changes in technical capabilities with the business units he or she serves within and beyond the local enterprise.

o The technology vendor who wants to increase the potential of the company's products to meet the practical needs of business collaboration.

o The enterprise architect who aims to focus on business initiatives across multiple business units and among diverse sets of customers.

o The business manager who aims to reduce the time required for deploying new services, business capabilities and effective alliances in an evolving business network.

What is BCM?

The Interoperability Challenge

Like other perspectives on enterprise architecture, BCM connects business analysis with the underlying technical infrastructure that supports business operations. The global

business perspective balances technical efforts concerning development of shared mechanisms for system interactions with a business emphasis on the practical requirements for collaboration. Like other efforts to develop common standards, BCM reflects the varied perspectives of OASIS member organizations. BCM is intended to be agnostic in relation to specific technical implementations, to support ratified standards, and to participate in the evolution of related standards.

Complementing other enterprise architecture approaches, BCM addresses issues of interoperability from a semantic perspective that are critical to effective business interaction. Interchange of data among supply chain partners, for example, depends on creating a common language or formal definition of data. A common semantics facilitates business communication such as the formation and execution of agreements between parties to a transaction.

Creating that common business language may be no less challenging than implementing more familiar technical standards for integration of technical systems. A typical challenge is, for example, defining the customer. In a multi-business unit, often multi-national organization, a consistent definition of the customer can prove to be a time-consuming, expensive, and error-prone process. Yet the broader task of achieving cognitive consistency among relevant business communities is essential to the business relationships that enable the extended enterprise. The business language must be usable by the technical systems that support the business and understandable to the all parties involved in the business. Whatever the diversity and complexity of the business operation, the customers will demand to be addressed in a language they understand. Semantic issues come into play at the systems level as well.

The BCM Foundation

Starting from a perspective of semantic relationships, BCM aims to enable business collaboration with a set of tools that help business groups to work together for mutual benefit. The aim is to provide a foundation for well-defined interaction among groups that may be accustomed to differing business vocabularies and patterns of behavior.

The BCM approach builds on a number of core concepts. Among the most important is that of **Community of Interest**. This concept follows from the recognition (validated by formal network theory) that interacting entities, whether they be people, organizations or technical systems, tend to coalesce in groups with common characteristics, such as purpose, vocabulary and behavior. In a business environment, the communities may be defined by formal or informal organizational structures. The unique features that define one community, however, may also act as barriers to interaction with other communities. The BCM approach addresses these inhibitors to interaction from an integrated business perspective. Working from a formal understanding of the "ontologies" that characterize the communities, the BCM approach enables the definition of collaborative business patterns, which support contracts, the vehicle for formal interaction among the interacting communities.
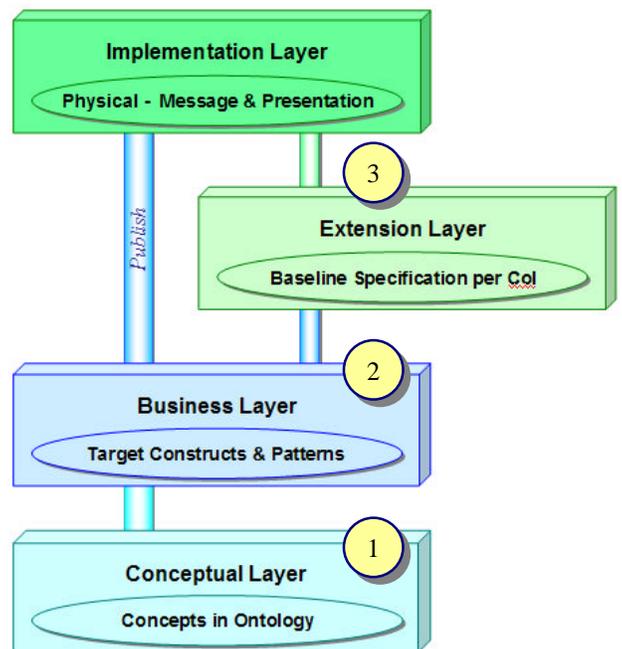
The BCM approach has developed its own version of a layered architecture (shown in the diagram above), which also defines a process for moving from fundamental business concepts to the implementation of business and technical interoperability requirements. This builds on a long tradition of efforts to integrate business strategies and needs with management of the changing information technology infrastructure. The emphasis here, however, is on requirements for interchange among Communities of Interest.

o The **Conceptual layer** improves the understanding of the semantics by aligning the terminology of the business and uncovers the operational meaning of the business vocabulary. In this layer, the business managers determine the solution requirements and use *BCM* templates to acquire information regarding business collaboration needs. The relevant data includes information on business goals, project boundaries, the participants, the Community of Interest*,* use cases, and business events.

o The *Business Layer* develops an understanding of the core business goals that the "preferred" business objects must accomplish and constrains them according to defined business processes and patterns. This layer captures formal business rules and identifies opportunities for reuse of process components and related business domain knowledge.

o The *Extension Layer* defines potential implementation options and provides the view needed for mapping the required interoperability requirements to industry practices, organizations, standard bodies, and internal legacy system formats.

o The *Implementation Layer* provides the specific mechanisms that support business interactions among communities. The implementation will follow from templates based on existing standards, proven technology and reusable business components.

Benefits of BCM

Organizations that follow the BCM process will experience a number of benefits, some of which overlap with the effects of other enterprise architecture approaches and some of which are unique to BCM. In general terms, the BCM methods aim to implement conditions that smooth business operations among multiple communities.
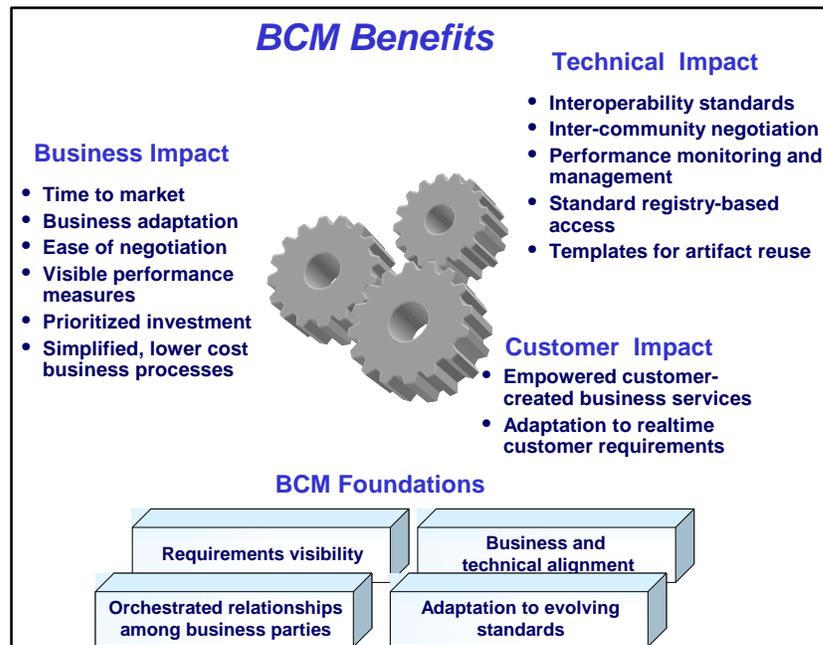
These conditions include:

o Alignment of priorities and interests among multiple business units or communities.

o Visibility and understandability of technical and business requirements

o Predictable and effective orchestration of business and technical relationships among business parties.

o Alignment of business and technical strategies for interoperability.

o Support for negotiation mechanisms and contract monitoring among business parties.

o Loose coupling between business capabilities and technical implementation.

o Rapid adaptation to evolving business and technical integration standards.

The ability to manage and smooth interactions among business organizations with shared business processes and data enables BCM to have can have a broad-based impact on business organizations and on the customers they serve.

Some of these effects are outlined below:

Business Impact

o Reduced time-to-market -- rapid response changing business requirements.

o Reduced cost of adaptation to changing market and technical conditions.

o Ease of negotiation for business and technical coordination.

o Reuse of knowledge, people, capital assets across business units and processes.

o Visibility of business capabilities to stakeholders.

o Integration of performance measures with change management and investment strategies.

o Ability to prioritize investment and management attention based on business impact.

o Reduced cost and complexity through elimination of redundant business processes and technical assets.

Technical Impact

o Low-cost adaptation to new technologies.

o Implementation of metadata management and semantic mapping capabilities.

o Ability to redistribute services among business and technical communities.

Customer Impact

o Customer empowerment – BCM enables customer to be both consumer of business services and expert creator of business services.

o Ability for business services to adapt to realtime customer requirements.

How to use BCM

BCM Implementation Process and Supporting Tools

The BCM approach is designed to be more than a vision for inter-enterprise operations. It aims to become a repository of methods and tools for implementing the envisioned world of interoperability. The BCM community is actively developing tools that assist with the achievement of the BCM implementation framework by working closely with selected industry initiatives. A growing set of templates for captures critical information in a way that can be reused over time and among participating organizations. The templates are designed to create a consistent body of information for all layers of the business architecture, from business ontology to contractual relationships among individuals and communities. The templates work with familiar desktop tools and do not require specialized software.

These templates include:

o A defined process for moving from conceptual semantic and business foundations to implementation of strategies for interoperability.

o A modular approach to analysis and reuse of business and technical capabilities.

o Use of patterns to capture replicable knowledge.

o Implementation of metadata management.

o Interoperability standards / contracts.

o Inter-community negotiation mechanisms.

o Performance monitoring and management tools.

o   Artifact management for semantic interoperability.

o   Use of a standard registry to enable access to processes and other business and technical artifacts.

o   Specific data dictionaries, lexicons, taxonomies, thesauri, topic maps and ontologies.
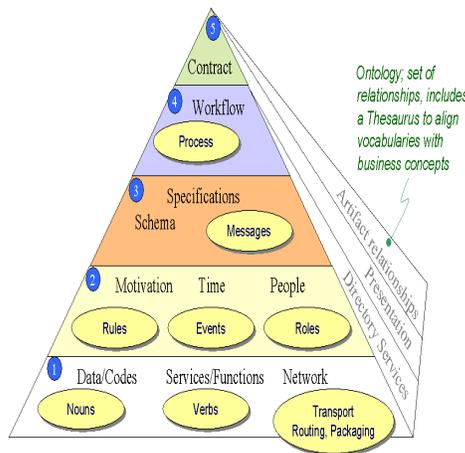
o   Mechanisms for capturing critical information in a way that can be reused over time and among participating organizations.

BCM in Practice

The BCM approach can have its greatest impact in organizations that are composed or multiple business units or which must operate across an extended business network. Complexity in the structure of the business relationships is the rule not the exception. The need for improved integration across business boundaries is widespread in both the public and private sectors.

A few examples:

Financial Services

More often than not, financial services companies have grown through mergers and acquisitions. They often consist of multiple service organizations with overlapping and duplicative functions and services. The financial services company has typically invested a great deal in its ability to collaborate with sister financial institutions like banks, regulatory agencies and other service organizations. To reduce time-to-market for new services and create more flexible interactions with customers, many of these companies are struggling to create workable mechanisms for interoperability and more effective delivery of services to customers. BCM offers a path to meeting those objectives.

Public Sector

Like financial services, information systems within public sector organizations have grown as stovepiped operations within isolated business units. Programs such as the federal enterprise architecture effort under the Office of Management and Budget (OMB) and parallel initiatives within the Defense Department have established broad goals for interoperability and reuse of business services, data, and technology components. The challenge is to create the business framework to focus investment on feasible initiatives within limited budgets. The BCM offers one means to meet those objectives.

As one example of a mechanism that implements semantic transformation and mediation, the IRS has a business relationship with millions of customers it hardly knows. It imposes highly complex business rules on customers of varying business skills. That relationship is mediated through the common language of tax preparation software (and the accounting community). The best of that breed transforms the complex language and business rules of the IRS into a form that is meaningful to a broad set of customers.

There are other examples of application of BCM principles, such as the pilot of government service delivery under the Electronic Process program (EPR) in Norway. The program addresses service delivery requirements in diverse domains such as construction and healthcare and provides integrated mechanisms for information access and collaboration. The EPR effort represents a model of how to combine practical implementation with standards development that enables replication of that experience in

multiple environments. Similar initiatives are being undertaken in the U.S. federal sector.

Pharmaceutical Research

The pharmaceutical industry faces a challenge of reducing time-to-market through more efficient clinical trials. But the culture of the research and IT communities is distinct from the clinics in which the trials are carried out. The industry is also faced with a highly diverse set of communities of interest, each research specialty characterized by its own set of jargon, ways of doing business, and set of professional practices. Getting drugs to market faster is worth billions of dollars to the industry. That goal is impeded by challenges of semantic transformation and other issues of business interoperability. The BCM approach and complementary tools offer a path out of that quagmire.

BCM and the Standards Process

A primary guiding principle of the BCM approach is the use of open, transparent communication and standards. The BCM products have evolved though interaction with a number of other technical committees and continue to profit from contributions within and beyond the standards development communities. In particular, there is ongoing collaboration with work on registries, ebXML, e-government and other efforts to implement standards, technologies, and practices that promote interoperable business operations.

Contacts and Additional Information

The BCM methods are a product of the OASIS Business Centric Methodology Technical Committee. The methods described here are detailed in a number of documents that are in various stages of official review.

These include:

o   BCM Specification

o   Business Centric Methodology Executive White Paper

o   Business Centric Methodology Introductory Presentation

These and other documents can be obtained through the OASIS website at

www.oasis-open.org.

For more information on how to participate in BCM activities, please contact the BCM Technical Committee.
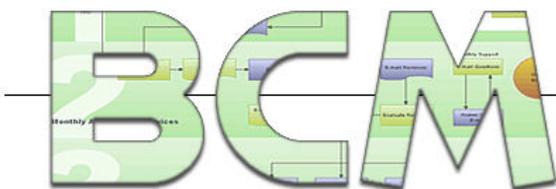

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