Business Architecture:

From Value Proposition to Business Transformation

By William Ulrich, TSG, Inc.

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Executive Summary

Business architecture brings cross-functional transparency to every aspect of business planning and transformation. This white paper takes you on a journey that begins with executive goals, identifies critical issues, and shows how business architecture turns strategy into solutions. Along the way, we discuss best practices and approaches, how business architecture is used in companies today, why proven tools are vital to support these efforts, and how achieving business / IT alignment delivers quantifiable bottom-line results.

I. Rapid Situation Analysis: Where the Journey Begins

You find yourself in a meeting with a group of frustrated business executives. The company has been losing market share, your chief competitor just passed you by and the firm is now third in an industry it used to dominate. Senior executives want to know what is at the core of these losses and what action they can take to address them. Management wants you to help determine what has gone wrong and how to regain a competitive edge. You leave the meeting with ideas racing through your head. How can your team help determine the root cause of customer losses, communicate this message to management, and recommend solutions? The only thing you are sure of is that you need to come back with answers. Welcome to the world of business architecture.

II. What is Business Architecture?

Business architecture is defined as *"A blueprint of the enterprise that provides a common understanding of the organization and is used to align strategic objectives and tactical demands"*[1]. This industry definition has three essential components: business blueprints, the concept of creating a common understanding of the organization and a recognized need to meet both strategic and tactical business demands. Business architecture is focused on bringing transparency to aspects of the business as needed to diagnose and resolve business challenges. Business blueprints provide this transparency.

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1   OMG Business Architecture SIG – http://bawg.omg.org and www.businessarchitectureinstitute.org
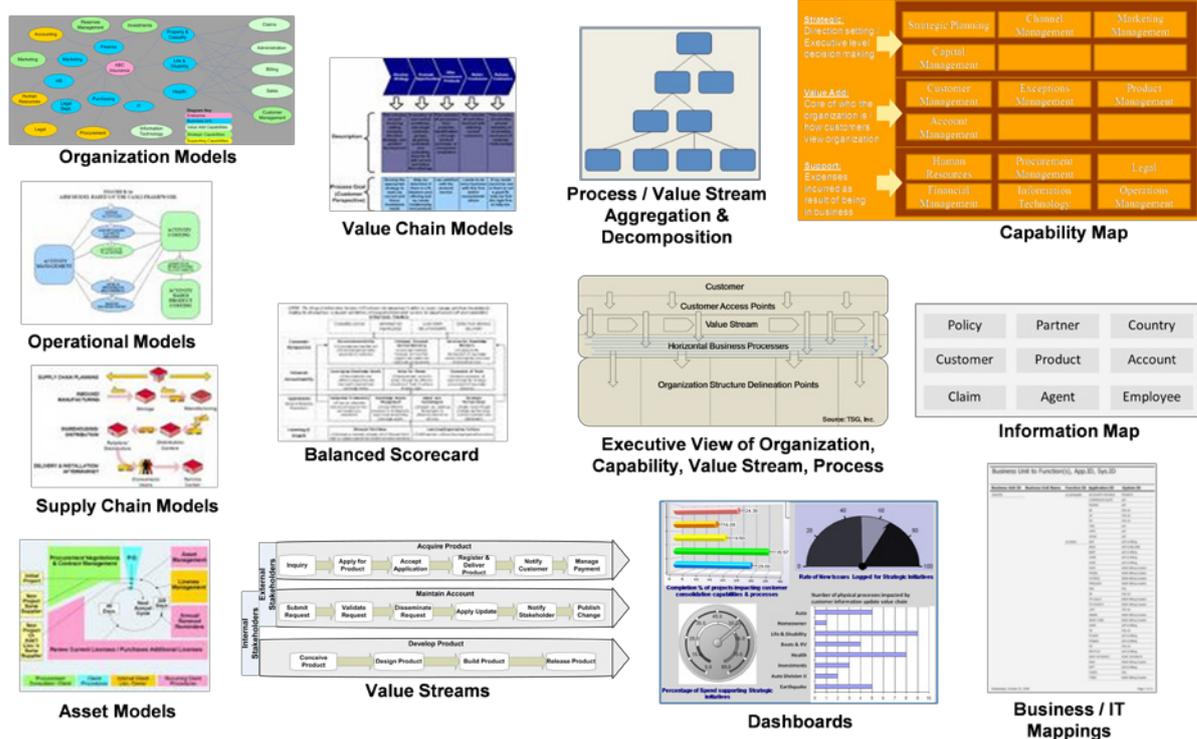
Figure One: Best Practice & Emerging Business Blueprints

Blueprints play a major role in business architecture by providing a way to visualize the current state and future state of the business from a variety of perspectives. Common blueprints in use today take the form of reports, diagrams and maps and include artifacts such as the capability map, organization model, balance scorecard, value stream, (which is an aggregated, stakeholder triggered, end-to-end perspective on stakeholder value delivery), business process decomposition, business dashboard, and simple cross-reference reports. Examples of best practice and emerging blueprints are shown in figure one.

Blueprints tend to be built using desktop tools such as spreadsheets, diagramming tools, or drawing programs. As a result, information in these blueprints cannot integrate with information in other business blueprints, is not reusable across projects or teams, cannot be used for impact analysis and "what if" scenarios, and is difficult to maintain. A successfully deployed business architecture initiative facilitates the collection, reuse, and management of information behind these blueprints, ensures reusability and integrity, and enables automation of commonly used and emerging blueprints. For example, creating a capability-centric, social networking diagram (see figure one) draws from capability models, organization charts, and other sources as required.

Producing integrated, reusable and maintainable business blueprints is made possible by deploying a business architecture knowledgebase as shown in figure two. When tool-enabled, this knowledgebase serves as the repository of information about the enterprise that, historically, projects have tended to collect and discard. Serving as an abstraction of your business, the knowledgebase repository provides the basis for performing business analysis

and planning – saving time in the process. One insurance company executive said that his knowledgebase repository allowed the company to eliminate the 6-8 weeks of upfront analysis commonly repeated for most major projects, avoiding costly delays and the confusion of starting a project with an inaccurate understanding of the business.
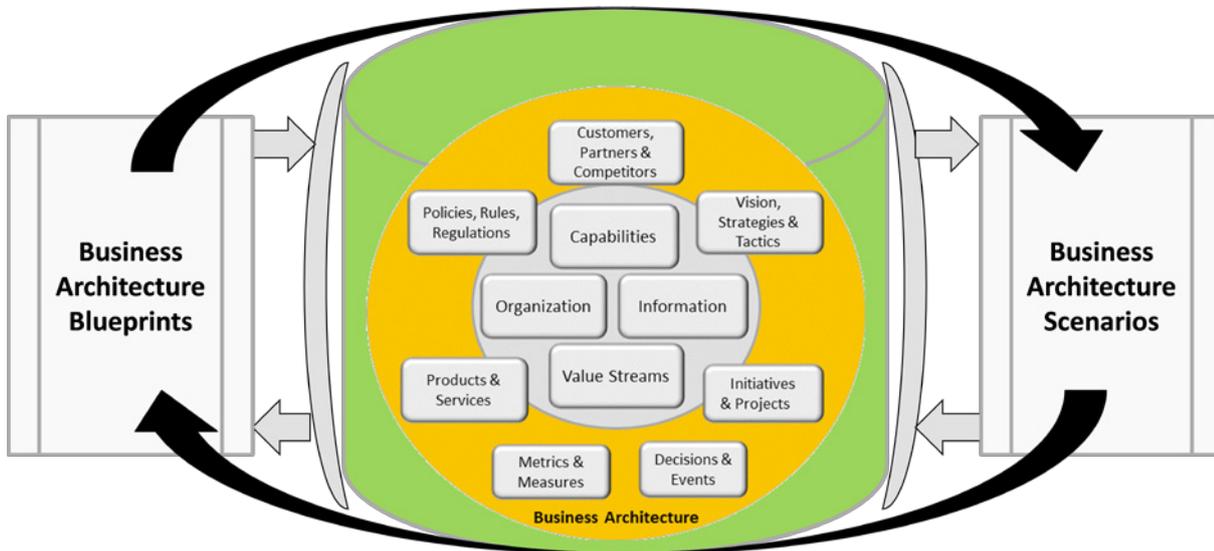

Figure Two: Tool-Based, Business Architecture Knowledgebase[2]

Populating the business architecture knowledgebase is not as daunting as it may appear. Foundational aspects of the knowledgebase, business units and business capabilities, can be ascertained and represented within a tool-based repository without a great deal of effort, assuming a baseline understanding of enterprise structure and level one business capabilities. A business capability defines what a business does (not *how* it is done), can be broken down into levels, and is used for strategic planning, investment analysis, and business / IT alignment.

Once the foundation is in place, the knowledgebase evolves based on analysis work driven by priority business demands. A given request may require cross-functional mapping of business units, product lines and capabilities, expansion into customer and supply chains, or mapping processes across divisional boundaries based on a value stream perspective. It is, therefore, critical for business architecture modeling solutions to clearly delineate and maintain relationships among business capabilities, operational units, strategies, objectives, requirements, processes, initiatives, and other aspects of the business. Numerous other analysis options are available as specific business requirements drive analysis across the breadth and depth of the enterprise. Use of the knowledgebase ensures that the information gathered is consistently defined and readily accessible to analysts and architects to fulfill critical analysis and planning needs.

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2 *"A Guide to the Business Architecture Body of Knowledge" (BIZBOK™), Version 3.0, Part 1*

III. Business Architecture: Walking Through the Value Proposition

The challenges facing an enterprise comprised of multiple business units, product lines, customers, capabilities, and value streams are numerous and complex. Common challenges include customer attrition, shrinking profit margins, competitive encroachment, and compliance violations. Yet the vast majority of decisions made to address these issues are made at the individual business unit, not enterprise, level. As a result, a lack of transparency into cross-functional complexity of certain issues has made it difficult to envision and deploy solutions that deliver real business value.

Consider the scenario of consolidating customer management. One company found it had planned, funded, and deployed multiple initiatives to consolidate customers at a divisional level. Because customers spanned division and product line boundaries, little changed from the customer's perspective and communication discrepancies remained. Redundancy in customer management and other business capabilities across business units is quite common. An IBM study of financial institutions found "as much as 60 percent to 80 percent of the functionality in silos may be redundant or duplicated in other parts of the business."[3]

Silo-based planning and deployment remains the norm, resulting in fragmented solution deployment and marginal value. Situations such as these can no longer be ignored. With reduced staffing levels, competitive challenges from multiple directions, and increased pressure to deliver customer value, organizations must seek every opportunity to improve performance. To get the most value out of scarce budgets, executives require full transparency from issue analysis through resolution deployment. Business architecture delivers this transparency, which is essential to addressing business challenges that cut across divisions, departments, and even enterprise boundaries.

For example, executives at one company sought to streamline operations after a series of acquisitions. Mapping business units to common capabilities across divisions allowed management to envision its options. Management then commissioned follow-up analysis that included value stream / business process decomposition, cross-silo customer information mapping, and impact analysis on IT architecture. Other common scenarios benefitting from business architecture include regulatory and audit compliance, customer management consolidation, product line deployment, change management, supply chain management, project funding analysis, and merger planning.

In some cases, business architecture is called upon to address multiple scenarios simultaneously. For example, a commercial satellite imaging company completed an acquisition in 2006 and also had to comply with Sarbanes-Oxley. This company needed a way to represent roles and responsibilities, operations, risks, policy and operational controls, and objectives,

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3 *"Aligning Technology and Business: Applying Patterns for Legacy Transformation", IBM Systems Journal Vol. 44, No. 1, 2005*

then tie these to business processes[4]. This was accomplished by focusing on business requirements from a holistic perspective and enabled through the use of a commonly deployed business architecture tool.

IV. Business Architecture's Role in Strategic Planning

We have all been there… in a meeting discussing an issue that has been on the table for months. Everyone is proposing solutions, but no one is sure if they will work. IT has offered a technical solution no one understands. Besides, it seems a business strategy should be in place prior to specifying technical solutions. This all too frequent situation can be attributed to an inability to identify the root cause of the issue at hand. Whether it involves customer defection, budget decisions, poor business intelligence, supply chain failure, or a host of other issues, a lack of transparency results in decisions being made that may just as easily fail as succeed.

The above situation may seem odd. After all, anyone in a given business unit can tell you how their piece of the puzzle works. From an enterprise perspective, however, it remains just that – a puzzle. Most people cannot even find the pieces of the puzzle because there is no cohesive, readily accessible blueprint showing how relevant aspects of the business interrelate. Fortunately, business architecture provides the transparency needed to perform root cause analysis and work through solution options in systematic fashion.

Further examination of our customer management consolidation scenario helps clarify business architecture's role in strategic planning. Business executives are facing a situation where customer information is redundantly and inconsistently defined, business intelligence is sketchy, and customers are demanding a single invoice and point of contact. Customers view the company as a single entity, but the company has many views of the customer. Customers are unhappy and so is management. In response, individual business units launch projects to improve the tracking and management of customer data under their control, but piecemeal solutions have little effect.

Asking IT to fix this problem makes little sense. IT does not set business strategy. So the business architecture team is engaged. Business architects uncover how customers engage and interact with the enterprise. Further analysis determines that each business unit has its own unique customer information and processes enabling the value stream, but discrepancies exist across business units. There is no way to track customer updates flowing through the value stream and across product lines. Based on this analysis, the team determines that this issue must be addressed as a single initiative by the collective business units that manage customer information.

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4   *GeoEye Case Study, www.mega.com*

The strategy crystallizes as the root cause of the issue comes into focus. All processes and related information aggregating up to the customer management value stream must be aligned across business units. Initial steps will provide customers with a common view of the enterprise regardless of the product line involved. Various aspects of the value stream must be aligned into common, automated processes using a rationalized view of relevant customer information. In later stages, backend customer management capabilities will be standardized, centralized and deployed as IT services. IT will be engaged to address certain aspects of the strategy as required.
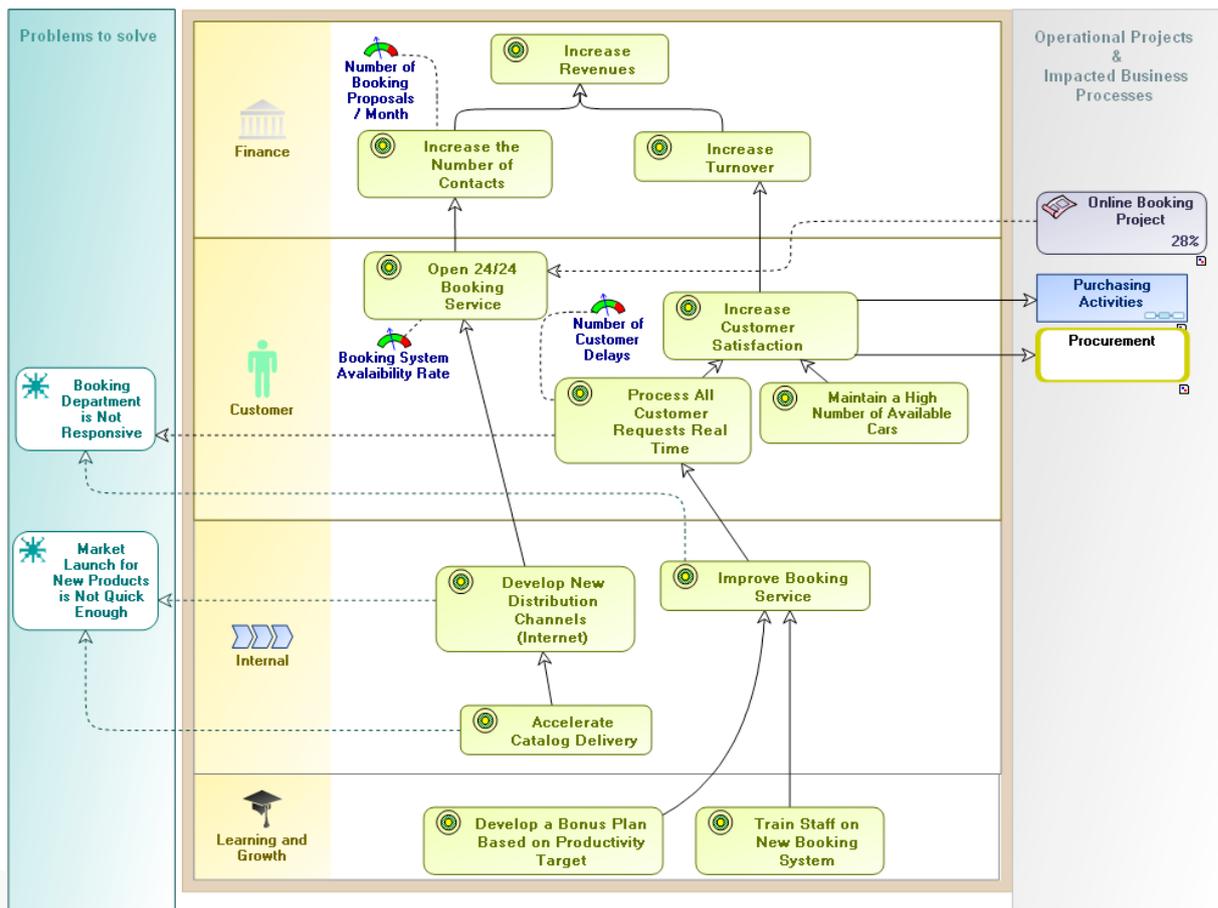

Figure Three: Business Requirements, Project & Process Mapping

One issue to be addressed prior to finalizing an action plan or roadmap involves synchronizing planned and in-progress customer-related projects. Business architecture coordinates the analysis of various projects that provide management with the visibility needed to ensure they are not working at cross-purposes with enterprise goals. Figure three shows how business objectives are mapped to projects and processes in a tool-based repository to support this analysis. Where projects are working towards a common solution, they will be integrated into the strategy. Where they are not, executives make the call on how to proceed. In this example, project funding had to be driven centrally, not by individual business units, to manage overall investments more effectively. The business architecture team continues to extend transparency throughout each step of the deployment roadmap as it evolves.

V. Business Architecture's Role in Business Strategy Deployment

As strategy is driven into a deployable roadmap, business architecture continues to bring transparency to the process. Business-driven roadmaps, enabled by business architecture, are deployed in a series of incremental, ROI-driven phases. This typically requires incorporation of IT architecture into the knowledgebase, although this can happen at an earlier stage. Extending the business architecture knowledgebase to incorporate aspects of IT architecture establishes a comprehensive view of business and IT architecture (i.e. the "enterprise architecture") to support a wide range of deployment scenarios. As the planning process proceeds, this holistic view of the enterprise allows executives and planning teams to craft a strategy that meets business goals through the synchronized transformation of business / IT architecture.

IT architecture represents the data, applications and technologies comprising the IT environment across an organization. This includes business-deployed (i.e., "shadow") systems that lie beyond IT's line of sight. Application architectures automate business capabilities and value streams while the data architecture represents automated implementations of business information. As the business evolves, business architecture reflects this evolution and IT architecture must evolve in kind. Similarly, as IT architecture evolves, the business must fully understand the impacts on the business and related strategies.

Synchronized evolution of business and IT has been hard to achieve in practice. One study found that IT wasted $160 billion (44%) of total business investments in one year[5]. Poorly synchronized business / IT transformation is at the heart of wasted IT investments. Business architecture can change this dynamic by extending the transparency afforded by business architecture into IT architecture. As a result, when business executives craft strategies, they can focus IT investments more strategically and successfully by aligning business and IT architecture plans and roadmaps. Figure four depicts the synchronized transformation of business and IT architecture.

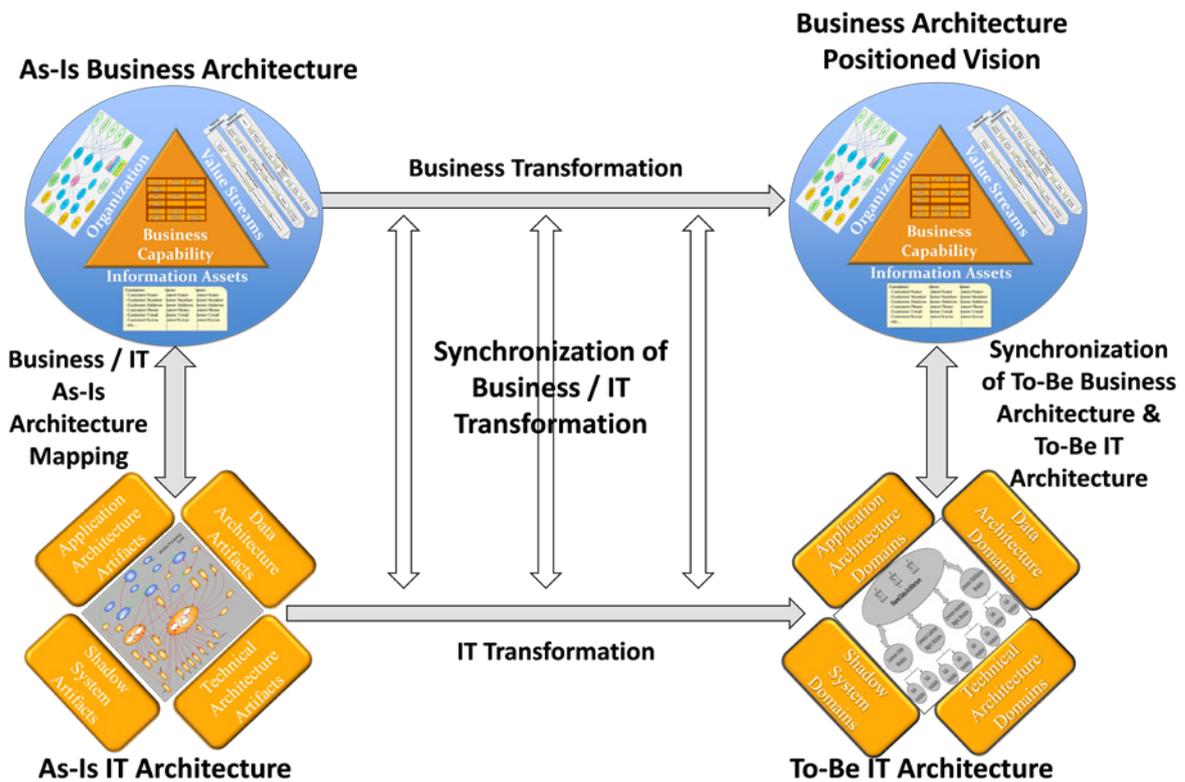5   *"Chaos Summary 2008: The 10 Laws of Chaos", Standish Group, 2008*

Figure Four: Synchronized Business / IT Architecture Transformation Model

Current state and future state business architecture blueprints allow business professionals to envision solutions, evaluate transformation options, select and refine a strategy, and craft a roadmap defining a series of incrementally deployed projects to achieve that strategy. Extending this concept by mapping IT architecture to the business architecture within the knowledgebase allows management and planning teams to envision IT architecture transformation requirements that align with and enable business transformation.

Synchronizing current-to-target state business and IT architecture transformation facilitates the creation of solutions that business and IT can work towards collectively. The business / IT transformation strategy drives subsequent breadth and depth of analysis at each stage of deployment. This includes, for example, mapping value streams to user interfaces and shadow systems, information to data structures, and business capabilities to applications as a means of finalizing and implementing value-driven solutions.

VI. Deployment Options & Alignment Roadmaps

Deriving blueprints to facilitate detailed business / IT architecture analysis, which is essential as you move from planning into implementation, further relies on knowledgebase deployment in a tool-based repository. This ensures that all essential information is organized effectively and accessible to relevant project teams across the enterprise. Figure five shows a knowledgebase-generated blueprint that maps business capabilities to the IT application architecture.

| Application Mapping	Level 3 Capability	Level 2 Capability	Level 1 Capability
Purchasing	Manage Product Information	Manage Product Acquisition	Procurement
Services Procurement	Manage Product Requests	Manage Product Acquisition	Procurement
Services Procurement	Manage Fulfillment	Manage Product Acquisition	Procurement
Procurement Contracts	Manage Vendor Contacts	Manage Vendors	Procurement
E-Supplier	Manage Vendor Information	Manage Vendors	Procurement
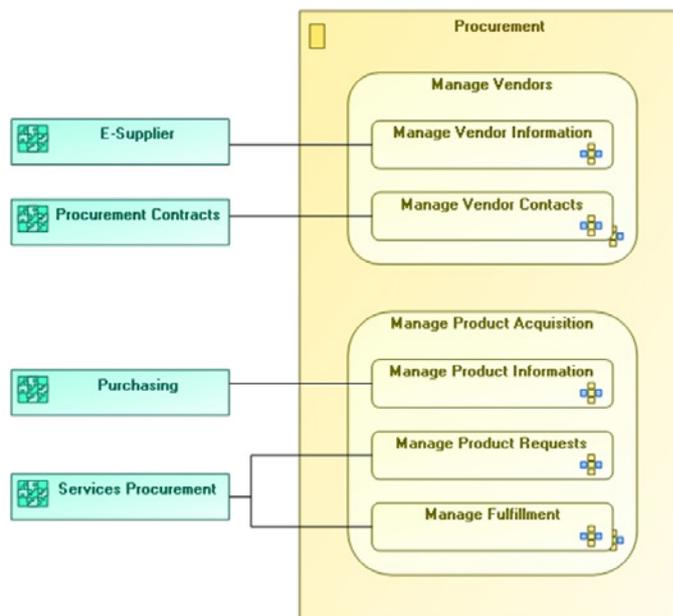
Figure Five: Sample Business / IT Architecture Mapping

Revisiting our customer management consolidation scenario demonstrates how the knowledgebase facilitates phased roadmap deployment and rapid time to value. Business executives prioritize aspects of the customer management value stream to be addressed first and commission small projects to derive the greatest benefit in the shortest timeframe. This approach relies on collaborative teams of business / IT professionals that consolidate and automate processes and create mini-applications to replace the manual steps, legacy interfaces, and shadow systems currently supporting the customer information value stream.

Mini-applications provide customers with near-term value and jumpstart application and data architecture modernization efforts as they converge across business units. These highly agile, frontline solutions facilitate business / IT architecture alignment where it delivers

the most value to the customer near-term. Collaborative, agile teams deliver customer benefits in weeks or months – not years. Business / IT architecture transformations continue to be reflected in the business architecture knowledgebase, ensuring full transparency on a continuing basis. Long-term solutions involve establishing capability-based IT services and retooling data architectures, which enables incremental modernization of backend application and data architectures.

VII. Summarizing Business Architecture's Role from an Enterprise Perspective

Business architecture delivers value by providing full transparency to issue analysis, planning, roadmap development, and phased solution deployment. Executives, managers, planning teams, analysts, and architects benefit from cross-functional transparency, ensuring that priority requirements are addressed collectively through a mutually agreed upon approach. In addition, IT is engaged as required to extend transparency from the business architecture into the IT architecture within the tool-enabled, knowledgebase repository.

As a result, organizations can streamline problem analysis and resolution while redirecting scarce funds into projects that deliver the most business value in the least amount of time. In addition, early delivery of business value permits business and IT architects to focus on longer term, backend IT architecture modernization options that align business capabilities and information across enterprise applications.

Business architects, working at the behest of business executives, play a central role in managing the business architecture. This includes establishing a business architecture framework, designing and deploying a baseline knowledgebase within an appropriate tool repository, and evolving this knowledgebase to address priority requirements. As strategies evolve, business architects engage collaboratively with IT application and data architects to fine tune situation analysis and resolution options. Jumpstarting a business architecture effort involves several steps.

– Communicate business architecture's value to business executives, focusing on their top priorities
– Establish a business architecture team to work with executives, support blueprint design, and manage the knowledgebase
– Finalize a business architecture knowledgebase design that incorporates best practices with unique enterprise requirements
– Select an appropriate business architecture tool and deploy the knowledgebase in the tool repository
– Load organization and capability representations into the knowledgebase to establish your baseline
– Allow priority business requirements to dictate the breadth and depth of knowledgebase expansion
– Collaborate with business and IT professionals as needed to deliver business-driven solutions

Team building is an issue that always comes up when launching a business architecture effort. As we have discussed throughout this white paper, the value of business architecture is that it provides business executives, management, and planning teams with knowledge about their organization that allows them to do their jobs more effectively. This includes establishing business-driven issue analysis, strategies, and roadmaps that can be used to communicate more effectively with IT.

The difference from certain early implementations of business architecture and this approach, which may have been deployed within the enterprise architecture team, is that the business retains ownership of the team, the disciplines, and the knowledgebase. This provides IT with current and target views of the business that they can use to drive IT architecture alignment – something that has been sorely missing in the past. The overall benefit of business architecture, however, is focused on delivering value to the business.

Finally, the bottom line message to keep in mind is this: when you deliver value to your business executives early and often, as we discussed in various scenarios within this white paper, you will be well on your way to business architecture deployment, providing quantifiable value to your organization. The challenge you will likely face is attempting to manage all of the requests that come in from various management and planning teams as your work evolves and disciplines mature.

About the Author: William Ulrich is President of TSG, Inc. With more than 30 years of consulting experience, Mr. Ulrich serves as an advisor, mentor, and workshop leader on business architecture and business / IT alignment initiatives. He is President and Cofounder of the Business Architecture Guild, Co-Chair of the OMG Business Architecture SIG, and an Advisor to the Penn State Enterprise Architecture Advisory Group. Mr. Ulrich has published five books and numerous articles and papers on business / IT alignment.