

***Enterprise Architecture:
Time for IT to Breakout!***



Bruce Ballengee, CEO

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For IT organizations imprisoned within their enterprise's walls, thinking about and executing enterprise architecture can be a seemingly insurmountable challenge. Enterprise architecture starts with the business and ends with the technology. Architecting a technology platform without equally architecting the business it is intended to support is both costly and quixotic; costly, because the business model needs to be analyzed and articulated to assess the goodness of fit of the current state technical architecture, and quixotic since it becomes nearly impossible to accurately anticipate which future state technical architecture is needed to support the business. This is the dark side of the longstanding alignment problem between IT and the business.

Stuck in their cells, IT organizations that embrace the value and disciplines of enterprise architecture often choose the path of least resistance – working from the bottom up (technology) in the hope that somehow, things will get better because enterprise architecture (the business top) is inherently a good thing to do, or eventually IT will catch up with the business through noble sweat of brow and dint of documentation. Unfortunately, most such efforts die after quarters or years of frustration or never achieve sufficient momentum to succeed.

So where does that leave IT – locked up without a key with no way out? Enterprise architecture is unequivocally a good thing. It is one of essential pre-requisites of successful enterprise level service oriented architecture (another very good thing). But business is typically not ready to sit down with IT and listen to how it needs to model itself. Rather, beyond the necessary evil of providing IT enough information to build or buy the IT components it needs, business is concerned merely with the latest quarterly budgets and prioritized projects coming out of the IT governance process.

There is a route of escape for IT. Think of the IT organization itself as a business. Think about “The Business of IT[®]”.

It is relatively easy to find executive support in this IT business. The enlightened business leader of IT is the CIO or Director of IT. They embrace the value of enterprise architecture; they think in terms of models and ought to be willing to model their business. Once IT makes the simplifying assumption that it is a business, it can free itself from the bars and chains of the business. The business becomes the customer, the supplier and, sometimes, the competitor. Businesses deal with the separation between themselves, their customers, their suppliers and their competitors every day. By thinking of itself as a business, IT can now serve the business with greater freedom of thought, and more often than not, freedom of action.

After all, as many an IT organization has discovered over the years, they are a separate business in the minds of the business. Often this realization comes when IT employees are about to be rebadged or released in the wake of the business signing an outsourcing contract. So if the cell door is ajar, is IT ready to step out? Where does IT begin? While there is no “Get out of jail free” card, there are concrete and constructive steps IT can take.

Studies show that the keys to a successful business and “what works” for business, also work for IT. There are many well-known studies and books with a high degree of congruence in their conclusions. The four primary “musts” from [What Really Works](#) are presented in **Table 1** as one example. Well known works include [In Search of Excellence](#), [Built to Last](#) and [Good to Great](#), among others.

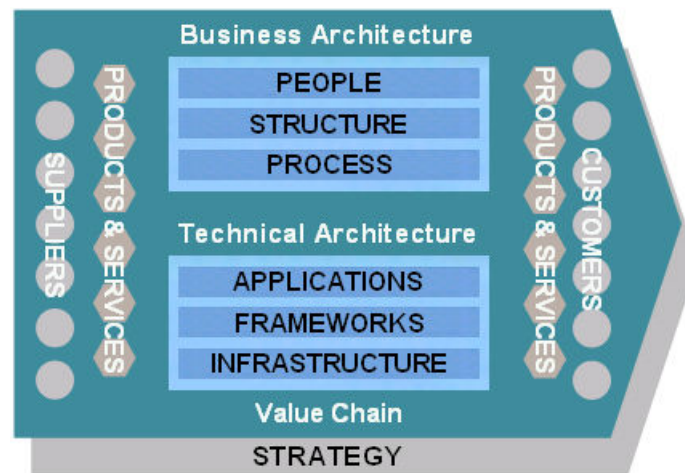
Table 1 – Four Business Success “Musts”

Practice	Companies	Highly Negative	Highly Positive	Principle
Strategy	Winners	7%	82%	Devise and maintain a clearly stated, focused strategy
	Losers	77%	9%	
Execution	Winners	4%	81%	Develop and maintain flawless operational execution
	Losers	56%	14%	
Culture	Winners	3%	78%	Develop and maintain a performance-oriented culture
	Losers	47%	17%	
Structure	Winners	3%	78%	Build and maintain a fast, flexible, flat organization
	Losers	50%	14%	

Source: W. Joyce and N. Nohria, What Really Works: The 4+2 Formula for Sustained Business Success, 2003.

While enterprise architecture plays a crucial and circular role in each practice area, this article focuses on where strategy fits in the enterprise architecture and how strategy affects which enterprise architecture is chosen, layer by layer. Let’s begin with a high-level discussion of strategy and high-level enterprise architecture framework as simple working model we can manipulate. Strategy is how an organization positions itself within a value chain to create unique value, as illustrated in **Figure 1** below.

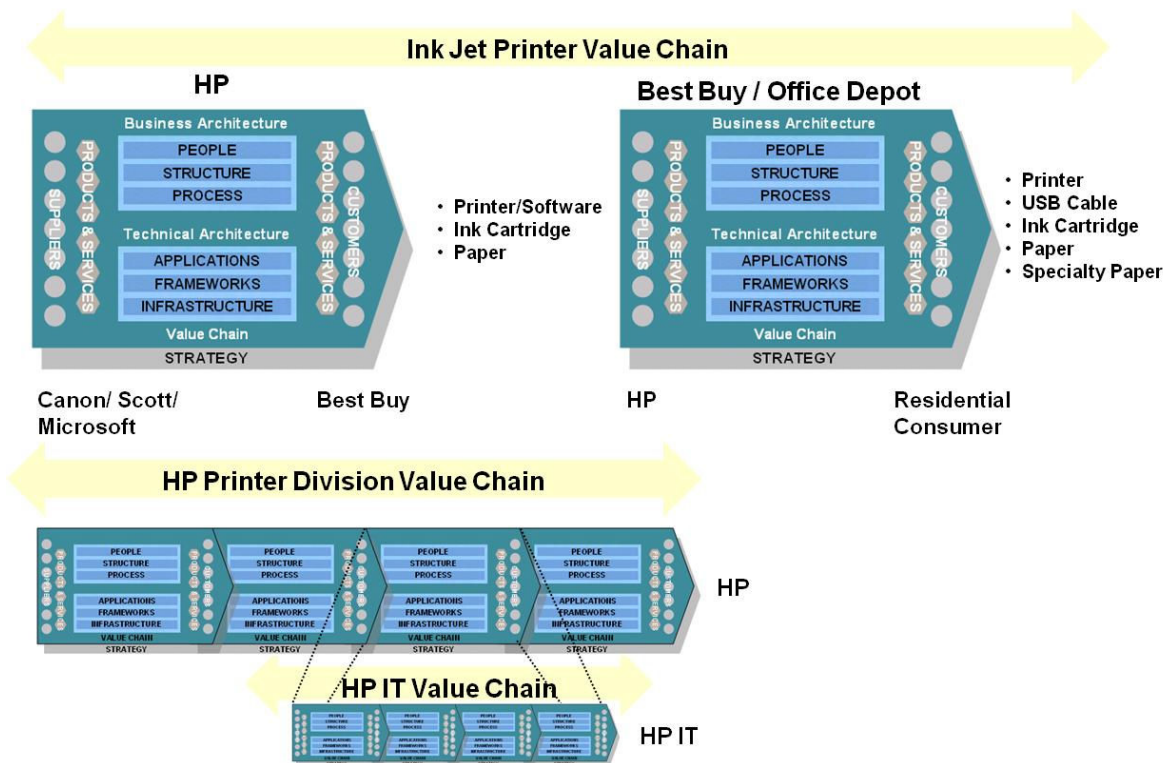
Figure 1 – The Enterprise Architecture Framework



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A comprehensive strategy is end-to-end in scope. The value chain runs from the most upstream supplier to the most downstream customer. An effective strategy encompasses all aspects of the organization; the products and services it consumes and produces as well as all layers of its business and technical architectures. IT must not only have its own strategy within the enterprise, but it must also *understand* and extend the enterprise's strategy – the age-old conundrum of IT-Business alignment. Most IT organizations must balance between multiple strategies affecting it across the value chain, as illustrated in **Figure 2** below.

Figure 2 -- IT Positioning in the Value Chain



This complex alignment and balance challenge is compounded by the number of strategy choices available. There are three basic strategies to create value as described by M. Treacy and F. Wiersema in *The Discipline of Market Leaders*, 1994: *operational excellence* delivers a combination of quality, price and ease of purchase that no one else in their market can match, *product leadership* continually pushes into the realm of the unknown, the untried or the highly desirable, and customer *intimacy* builds bonds with its customer like those between good neighbors.

While every business works on all three from time to time, the winners are those that narrow their focus to achieve breakthrough performance in a single dimension. Not choosing means complex, hybrid business models that cost more, break more often and cause more internal conflict.

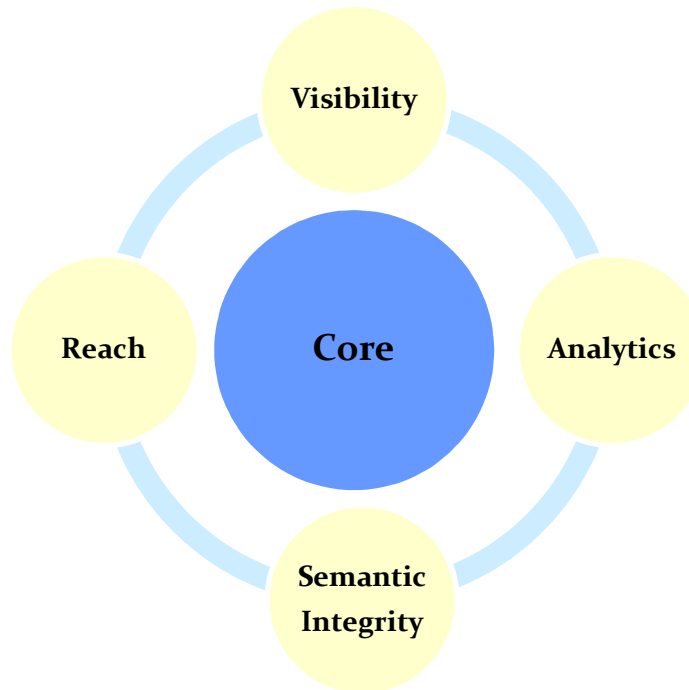
IT must decide which strategic discipline to follow and focus on executing it cohesively across all layers of its enterprise architecture, from business discipline to technical components, as shown in **Table 2** below.

Table 2 – IT Strategy – Enterprise Architecture Matrix

Layer	Operational Excellence	Product Leadership	Customer Intimacy
People	<ul style="list-style-type: none"> Premium placed on button-downed project and vendor managers Need for testing and documentation reviewers Culture emphasizes risk avoidance 	<ul style="list-style-type: none"> Focus on tightly constraining customer demand and rigorously controlling suppliers Works best with a waterfall development model coupled with outsourced application development 	<ul style="list-style-type: none"> Relationship management / client management skills are essential Application architects with good business knowledge are key Culture stresses individual accountability and risk sharing
Structure	<ul style="list-style-type: none"> Inverted pyramid shape The smallest overall internal organization with extensive use of external resources Control groups for managing suppliers and service level agreements Development project organizations may become quite large 	<ul style="list-style-type: none"> Diamond shape Strong technology evaluation and post production assessment groups track emerging solutions Boutique suppliers provide small, laser-like solutions with IT providing coordination and project management 	<ul style="list-style-type: none"> Pyramid shape Strong customer relationship management groups Support for a large number of small, cross functional teams is a differentiator
Process (End to End)	<ul style="list-style-type: none"> Focus on tightly constraining customer demand and rigorously controlling suppliers Works best with a waterfall development model coupled with outsourced application development 	<ul style="list-style-type: none"> Supply management is essential for feeding the innovation pipeline Demand management revolves around solution selling – convincing customers to take on IT and business risk for differentiation and competitive advantage Emphasis is on time to market 	<ul style="list-style-type: none"> Zeroes in on customer and supplier relationships Works best with agile development methods, particularly where customer relationships are support active involvement with IT – fosters strong customer resistance to outsourcing
Applications	<ul style="list-style-type: none"> Zeroes in on customer and supplier relationships Works best with agile development methods, particularly where customer relationships support active involvement with IT – fostering strong customer resistance to outsourcing 	<ul style="list-style-type: none"> Custom applications Applications from niche vendors Combine the two to create leading edge applications Applications are the strategic driver 	<ul style="list-style-type: none"> Blend of packages and custom applications Preference is to pick application vendors that work with selected frameworks Tailor applications to meet customer needs
Frameworks	<ul style="list-style-type: none"> Use the frameworks provided by the application vendor Reuse frameworks 	<ul style="list-style-type: none"> Use the most advanced technical functionality to allow advanced application features 	<ul style="list-style-type: none"> Frameworks support reusability which speeds time to market and reduces cost Frameworks are the key strategic driver
Infrastructure	<ul style="list-style-type: none"> Standardization (of products and processes), is the key strategic driver Standards are those of the application vendor 	<ul style="list-style-type: none"> Use emerging standards Have many standards 	<ul style="list-style-type: none"> Preference for standardization Implement a widely used infrastructure to gain the greatest flexibility at lower cost

Once IT aligns around a strategic discipline, it is appropriate to address how it can use its newly coherent enterprise architecture to create value for its business customers through its application layer. At a strategic level, IT can view its application portfolio as either core or edge solutions. This is demonstrated in **Figure 3** below and illustrated with numerous common examples.

Figure 3 – Core and Edge Applications



Examples of core applications are ERP, MES, WMS, HRIS, CRM, etc. Examples of edge applications include: visibility – portals for employees, customers and suppliers, etc.; semantic integrity – EAI, and inter-enterprise integration (FTP, SOA, web services, etc.); analytics – data marts, database marketing, etc.; and, reach – wireless field sales and service, customer alerts, etc. The distinction between core and edge is critical to strategic discipline.

The key to unlock IT business value for product leadership and customer intimacy is at the edge, versus in the core. The core is where IT goes to optimize operational excellence. While every IT organization must support both core and edge for its business, it must focus strategically on one or the other.

For operational excellence, focus on core applications and adapting business processes to conform within the standard implementation boundaries of the application suite. For example, if the overall enterprise follows a roll-up strategy of serially acquiring like competitors for increased market share and economies of scale, there can be no greater value IT could deliver than to migrate each successive acquisition as quickly as possible onto a single standardized technical platform from networks to ERP suites.

In the case of product leadership, refine the product or service that the business delivers by leveraging IT to do the end customer's job better. Consider some approaches that have been used successfully:

- Add business intelligence to the product by adding information collection, reporting and management capabilities, so that the customer can report on key metrics and make more effective use of the product or service. For example, many ERP vendors already have, or are in the process of adding this to their product offering.



- Increase customer visibility, access and control with web enabled self-service. For example, HP lets customers reorder ink and Xerox allows customers to self-diagnose their printer problems over the web.
- Disintermediate various middlemen out of the supply chain. For example, Apple combined the iPod and iTunes to more seamlessly solve the customer's job of listening only to music they like as soon and as cheaply as possible.

For customer intimacy, focus not so much on applications (as they will need to be more customized for each IT customer within the enterprise) as on frameworks like workflow, portal, application servers, EAI and analytical/reporting tools that provide an 80% solution and allow 20% to be mass customized by IT for each internal customer.

Finally, the IT strategy can be different from that of the business; so long as it best maximizes business value. Consider two well-known examples. A virtual retailer, Amazon, has a highly customer intimate, technology-enabled B2C strategy, but consistently pursues an operational excellence driven technical infrastructure. The end customer's online experience is dependent upon highly responsive/available systems. If Amazon is slow or down, the customer is one or two clicks away from ordering the same item from a ready and willing competitor. A bricks and mortar retailer, Wal-Mart is the bastion of operational excellence, yet its IT organization is tightly focused on driving IT product leadership, even to the point of deploying newer technologies such as RFID which still have kinks to work out. Again, IT delivers high business value because it is only through a next generation of supply chain automation that Wal-Mart can maintain its competitive advantage over most of its rivals.

These "prison break" examples used high-level enterprise architecture tools and principles to illustrate how an IT organization should first think of, and then run, itself as a business. There is tremendous value when IT mentally frees itself from the chains of business to serve business far better and more successfully than ever before. But there is another takeaway. Once IT demonstrates to the business the power of using enterprise architecture to remake itself, the business will more likely accept the need of and value for enterprise architecture itself, and ask IT for its assistance to do so. Only when alignment between business and IT has begun, can IT truly deliver the maximum value of enterprise architecture and its progeny, service oriented architecture. Start planning your Great Escape!

Bruce Ballengee is the Co-Founder and Chief Executive Officer of Pariveda Solutions, Inc. based in Dallas, Texas.

About Pariveda Solutions, Inc.

Pariveda Solutions (Pär-ē-vā-da) works with organizations to improve their profitability through the deployment of process and technology. Pariveda delivers solutions in the areas of IT Strategy, IT Executive Advisory services, Program and Project Management, Application Development, System Integration, CRM and Business Intelligence. Pariveda's goal is to establish relationships with clients on a local level, offer and deliver high value solutions.

Pariveda Solutions was ranked the 16th fastest growing company in the Dallas Business Journal's 2007 edition of the Dallas One Hundred, comprised of the 100 fastest-growing private companies in the DFW Metroplex. Pariveda Solutions was also recently named to the Dallas Business Journal's "Best Places to Work" for 2008 as well as one of Consulting Magazine's 7 "Small Jewels" for 2008. Launched and headquartered in Dallas, Texas, Pariveda Solutions has grown to over 150 employees since 2003. The company has additional offices located in Chicago, Denver, Detroit, Houston and Seattle.