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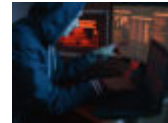
Getting Beyond Ourselves

ARCHITECTURE GENERATES VALUE BY ACCELERATING EXECUTIVE DECISION-MAKING AND GROUNDING STRATEGIC PLANNING DECISIONS IN EMPIRICAL EVIDENCE.

🕔 May 16, 2022   👤 Holt Hackney   🗁 Applications & Technology, Elevating EA, leadership, Strategy & Planning

By Leonard Greski, of LeadingAgile

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After 20 years with the company, Joe, the newly named e-commerce VP was totally motivated to make the best of his shot at becoming an officer. He reviewed the current state of operations and made two critical decisions. First, he decided that the current e-commerce package was insufficient to support his ambitious plan. Second, he told his boss, the business unit President, that he could accelerate annual sales growth from 9% to 30% if the company would fund a $20 million program to replace the current e-commerce package.

Unfortunately, he left Anne, the Chief Technology Officer, out of the discussion about replacing the e-commerce software. She was livid when she learned about the proposed e-commerce upgrade through the grapevine. The technology budget was going to be tight for the next 3 years because the company had just completed a multi-year ERP upgrade, generating a large asset to be depreciated. The last thing Anne needed was another $20 million of capital asset depreciation eating up her expense budget for years, and she was very skeptical about Joe's ability to achieve a 30% CAGR in a mature e-commerce business.

Independently Joe and Anne reached out to Erin, the business architect supporting e-commerce, to prove their arguments. Erin now had a major executive sociology problem on her hands. If she supported Joe's argument, Anne could prevent Erin from being promoted in the future. If Erin supported Anne's argument, Joe would blame her for any failure to achieve the 30% growth target.

Erin decided to use business capability modeling techniques to provide the information needed to make an objective decision. She reviewed the e-commerce revenue plan and worked with Joe to understand which capabilities needed to change to meet the CAGR target. It turned out that most of the action would be in demand generating capabilities such as search engine optimization and paid search marketing, along with merchandising enhancements in a commercial search engine. The plan assumed that more traffic at the website's current conversion rate would generate the required growth.

The capabilities requiring the most significant changes were outside the e-commerce package, indicating that an e-commerce package upgrade was unnecessary. This led Joe to argue that the existing e-commerce infrastructure wouldn't scale to meet the demand. Now Erin needed to figure out how to model the usage of the e-commerce capabilities and translate them into workload for the supporting

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systems. Fortunately, she found an *A&G Magazine* article that provided guidance on how to build a utilization model for a business capability. Erin built a 3-year usage forecast for the business processes in the e-commerce capability, from demand generation processes that drive traffic to the website to the post-order processes such as backorder handling.

She reviewed the forecasts with the Infrastructure Director to assess the impact of increasing demand over time on the underlying infrastructure. It turned out that all components in the architecture were horizontally scalable except the database management system, which was a relational database configured with a hot standby. However, its size was very small (200GB) relative to the ERP system that checked in at 4TB. The Infrastructure Director was confident the current system could handle a 30% CAGR, and therefore committed to supporting the growth rate with the existing technology.

Next, Erin met with Patricia, the Customer Service Director to work through the impact of e-commerce growth on the call center. When Patricia saw the forecasts for backorders and customer emails, she almost had an aneurysm. At current productivity levels Patricia estimated she would have to add 60 staff to handle the additional workload, essentially quadrupling her staff. She would not commit to supporting the growth plan without a large increase in her staffing budget.

Erin summarized the information she collected and recommended that the company fund a Lean project to reduce backorders in the supply chain, with a target annual savings of $2.5 million in productivity. This was not going to go over well with Joe, but the facts were the facts.

The executive team met, reviewed, and approved Erin's recommendations. Anne was grateful that the company didn't waste $20 million on an unnecessary platform replacement. Patricia finally received help to solve her longstanding backorder problem. The 30% CAGR was baked into Joe's sales plan.

Eighteen months later, Erin's usage forecast was found to be accurate to 0.5%. The e-commerce system scaled as predicted. The Lean project greatly reduced backorders, exceeding the planned savings target. Customer satisfaction improved as well, not only due to a

higher order fill rate, but also because the reduction in backorders enabled Patricia's team to spend their time on higher value activities supporting customers. However, Joe didn't achieve his sales target. While sales continued to grow at about 9%, the addition of a large volume of low value traffic caused the conversion rate to drop.

Where are the Stories about Economic Value?

The story is true but the names and some of the circumstances were changed to protect the guilty. Results-oriented business architecture generated over $25 million in incremental value to the organization over a two-year period. However, few architects practice architecture this way.

Over the past 20 years I have worked with, spoken with, and interviewed hundreds of architects and executives who are responsible for architecture departments. Most conversations with architects and architecture leaders about the practice of architecture revolve around techniques, tools, or how to get senior executives to "value the architecture function." My experience in the broader architecture community is similar.

The last two years of conferences for a well-known architecture professional community were full of presentations about techniques, building an architecture practice, reference models, and case studies. Ironically less than 10% of the presentations made specific claims to economic value generated by architecture practices.

Much of the content developed by experts in our industry is self-focused, where artifacts or architecture practices are the end rather than the means to a greater end. We need to get beyond ourselves, and shift from advocating that architects deserve a seat at the executive table because the importance of architecture is self-evident, to earning a place at the table because the decisions we facilitate produce superior business results.

A Call to Results-Oriented Architecture

What does results-oriented architecture look like? It starts with three beliefs that architects must accept if they are to practice architecture

in a way that brings results. The first belief is what my colleagues and I call "systems first." It is based on a quote, "All systems are perfectly designed to produce the results they're currently producing." It's debatable whether this quote is correctly attributed to W. Edwards Deming or one of his contemporaries, but the primary implication of this quote, *the systems-first principle*, is that if we want to improve results, we must first improve the system.

As applied to architecture, "systems first" thinking requires us to see the business system beyond the artifacts we produce. We must understand how constraints in the ways we build and operate business capabilities limit organizations' abilities to change at the speed required by their customers and markets. We employ the practices of architecture to understand how value is created and accelerate the flow of value by iteratively and incrementally removing impediments in the architecture.

The second key belief about results-oriented architecture is that a business capability is the highest-level unit of value production within an organization. That is, as I wrote in *Business Capability Modeling: Theory and Practice* over a decade ago, a business capability generates benefits and costs, and therefore is an asset. One's ability to influence executive decision-making is highly correlated with the ability to show how investments in capabilities increase their value over time.

While many architects believe that business capability is an important architecture concept, very few of them map capability models to costs and benefits generated by a capability over time. The disconnect between capabilities and value results in the subordination of architects as "diagram maintainers" rather than trusted guides to executive decision-making.

The third belief we must hold about results-oriented architecture is that we can (and must) quantify the value of a capability. This belief can be traced back to Baron William Thompson Kelvin's assertion that "When you can measure what you are speaking about and express it in numbers you know something about it[1]..."

Every public company in the United States is held accountable for results on a quarterly basis through its 10-Q filings with the Securities & Exchange Commission. Many of the strategic planning processes in large organizations are driven by decisions about the timing of investments and expected returns relative to forward looking

statements made by senior executives as they communicate quarterly results to stockholders. Privately held companies are held accountable for results in a similar manner, whether by their owners or the financial institutions who provide financing services to these companies.

The architecture function is uniquely suited to guide executive decision-making about business and technology capabilities. Our ability to connect capabilities and their usage to revenue, cost, and profit forecasts is invaluable. When we fail to "do the math," our statements about strategic value of capabilities fall on deaf ears. In contrast, when we quantify value, we enable executive stakeholders to make decisions based not only on the cost to build a capability, but also the total value a capability produces over its useful life.

Conclusions

Architecture generates value by accelerating executive decision-making and grounding strategic planning decisions in empirical evidence. It is most effective when architecture is practiced for a greater purpose – iteratively aligning an organization's systems and structures with its customers and markets, organized around business capabilities.

A commitment to results-oriented architecture means acceptance of three key beliefs:

- We must improve the system to improve the results,
- Business capabilities are the highest unit of value production in an organization, and
- We can (and must) quantify the value of capabilities.

When architects act on these beliefs, they produce artifacts that make tradeoffs visible, account for risk, enable leaders to prioritize the most valuable work, and increase confidence in an organization's ability to realize its strategy.

[1] *Popular Lectures and Addresses, Vol 1*, MacMillan: London, pp. 80 – 81 (1889).

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