

## **Executive Summary:**

Theoretical considerations seem to surround discussions of Enterprise Architecture (EA), but successful CIOs recognize the criticality of keeping EA practical. This begins with holistic business focus and clear, communicated corporate strategy. EA encompasses a culture of achievement; decision mechanisms; and an understanding of information as a corporate resource. EA is truly big picture oriented, and there are straightforward ways of achieving and keeping its needed perspective.

# Practical Enterprise Architecture

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Building an “Enterprise Architecture” (EA) is appealing, but as Harvey Koepfel, the CIO of Citigroup’s Global Consumer Group, asked, “can any EA survive the next software product?” This question reflects that market resources dwarf those of individual firms. Another New York CIO, David Dart, also eschews the theoretical as he constantly urges his staff towards quality and value. “The secret is to quickly deliver the critical 20%, proving immediate value to the business users.”

These CIOs, like others, feel practical value is the key to success – meeting business needs – while diligently monitoring the constantly changing landscape. They recognize the inherent conflicts between short and long-term aims; that pit unit success against pressures to unite under a single corporate umbrella. The latter is desired strategically as short-term individual advantages become enterprise-sustainable amalgams – as an orchestra creates symphonies not easily imitated by competitors.

CIOs play in that orchestra even as they design its new instruments. Their tactical challenge is to meet unexpected demands with existing systems; the administrative one is to balance developmental and operational budgets. Strategically, they build infrastructure for future business demand. Unfortunately, the market environment often outpaces the business’ strategic plan, and breakthrough technologies are rarely incremental, complicating the race to outpace technologies obsolescence.

C-executives ask about business objectives, while scientists ask “why?”, and engineers “how?” But those tasked to grow wisdom from knowledge and progress from change dread hearing “what were you thinking?” about actions intended to counter looming threats, including the MBA’s “offshore?” Designing, deploying, and evolving an “Enterprise Architecture” may be the CIO’s generic answer, but practical questions remain. How does EA relate to the plethora of other “architectures”? What are the benefits, obstacles, and keys? Through what new territory does the road lead?

The re-marketing of concepts such as “CORBA” and “encapsulation” as “Service Oriented Architecture (SOA)” has not brought the grail closer. It is still not easy to integrate everything but the kitchen sink. Technology and vendor wars continue to rage. Their arcane discussions: “loosely coupled, coarse granularity masking underlying complexity,” or “if web-services are standard connections, what about Distributed Object

Technology, Reliable Messaging, and Protocols?” do not help. Only later will the market end the battles between Java’s Message Server, IBM’s Websphere, and the Simple Object Access Protocol (SOAP).

Pundits are touting the next “Big Things”, including: Event-driven, Policy-based Processing, and Real-time Business Management. But discussions often veer into the theoretical, technically incomprehensible, or just plain wrong. “Building a SOA”, is a prime example of confusion. Architectures are not “built” – systems are – with the best of them architected to support business – with the best of these, architected themselves.

Architecture provides perspective above the blueprint: principles, models, and standards; components, interfaces, and arrangements. It is not the implementation level – the draftsman’s definition of method and manner of construction. There are focused specialties of EA as there are for edifices: electrical, frame, and HVAC; and for the body: nervous, skeletal, and circulatory. In like manner there are many different EA specialty architectures: business’:(product, process, and management); and technical: systems, information, communications, and security.

A broad view of “Architecture for the Enterprise” shifts the focus from technology to business goals. What are the fundamentals that underpin EA approaches?

**First**, recognize that EA is driven by the business groups and is not a stepchild only of the technology team. The fundamental questions always relate to the business making, selling, and delivering product and services to the market and defining what it needs for success. Proclaiming this message – enacting it quickly – gains the support and resources needed to advance in the face of difficulty.

**Second**, blindly forcing a common approach to systems, procedures, information – whatever – is a serious and expensive mistake. This can be avoided only when the EA has a holistic view of the business. It than can influence choices, whether within the organization’s walls, or to the external world. The EA models the complete organization (people, process, and systems), addressing: product and service; factory and office; market and competitor; supplier and consumer; process and procedure; bank and regulator; past and present; raw material, information, money, and law.

**Third**, Einstein spent his last years searching for an organizing principle because “God does not play dice with the universe”. “Entropy” is the natural propensity for randomness to increase, in the Universe, or an organization. There is chaos without an understanding of the organization’ direction – its strategy. Despite the vicissitudes of the market and of technologies, the clarity of vision and the crisp execution of tactics keeps the organization from shooting craps.

**Fourth**, the direction of the organization in terms of goals, strategies, and the tactics being employed must be understood by all. This understanding follows clear communications – an antibody for the spread of organizational chaos – transforming data into information, a step on the path to wisdom. Communications builds culture, enhances synergy, and fosters success by binding stakeholders, staff, and systems.

**Fifth**, when the IM-less David was asked to become King he demanded that the Ark of the Covenant be brought to him. Those who have watched Indiana Jones know the outcome ...the donkey cart hit a pothole...a priest kept the Ark from crashing

down...and God smote him – punishment for doing the right thing. A fundamental precept of Enterprise Architecture is philosophical. Eliminate the fear of doing the right thing, and encourage your most valuable resources to be proactive and reach for the future. Staff cannot work mindlessly and just fighting chaos is not sufficient.

*Sixth*, to the extent that an organization represents a whole, a single blueprint eases sharing. But one size does not always fit all. Beneficial synergies do not always exist, so the EA business and technology models provide decision support. Cost/benefit analysis are improved to help determine whether to optimize for individual benefit or “to sacrifice the one for the good of the many” – to quote Spock.

*Lastly*, Walter Wriston, the former Chairman of Citigroup, noted that “information about money is more important than money”. Information is the true wealth of a modern enterprise, covering customers, supplier, products, and every conceivable aspect of the firm. The EA must address: who, what, where, when, and why; and recognize that the enterprise asset’s owner’s failure to manage for everyone’s benefit only puts potholes into the information superhighway.

These seven dimensions of EA: practical business orientation, holistic view, strategic direction, communication, cultural philosophy, model-based decision support, and information are masked by the myriad issues faced by a business. Irrespective of whether these are quantified, as accounting issues are, or nuanced like social dimensions, the stultifying layers must not be allowed to obfuscate business basics – and the benefits that can accrue from a well designed EA program.

A well designed EA helps deliver flexible response to anticipated change, enforce adherence to rules, and adapt to the unforeseen. The EA becomes the intelligent engine helping management maintain focus and achieve goals – not simply sinew driven by the brain – but a system which receives, processes, and advances critical business information.

EA, however, must be complimented by management’s coalescing to address the many obstacles faced daily, including: human factors, questions of business units buying software that violates EA principles, and simple politics. Architecture is needed, but not a substitute for good management.

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### **Biography**

Michael J. Czuchnicki’s career included stints as the head of communications at AIG, and in planning trading floor systems at the American Stock Exchange. For the past decade, his firm has consulted to a world-wide clientele. He is now working on a book Achieving True Enterprise Architecture through collaboration: “Strategy & Tactics – Analysis & Response (STAR©)”.

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