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White Paper

Toward a New IT Strategy

CONTENT

"Automate the rote and repetitious work, free up people to do the creative stuff."

For the last 30 years, strategies for using IT mostly consisted of making multi-million dollar investments in whole new collections of hardware and software. Massive new systems were installed using expensive software packages or built from scratch. Overall, the success rate and ROI of these endeavors has been modest to put it politely. These strategies have run their course. They are no longer a viable way to respond to the demands of business today.

Prologue

The real-time, global economy we now live in is a constantly changing world. Companies have tried to find answers to complex and fluid problems by installing standard application packages (ERP, CRM, SCM, etc.). Yet this practice will only go so far. Companies using this approach run the risk of locking themselves into rigid, commodity IT systems that are also available to their competitors. Big software vendors then control the pace of systems change instead of the evolving demands of a company's own business situation.

The time is ripe for a strategy whose aim is to combine people and computers into systems where the strengths of each are brought to bear. In a high-change, fast-paced world it is best to use simple, robust technology to automate well-defined sequences of standardized business procedures and rely on people to handle the exceptions to these standard procedures. This can be summed up as:

"Automate the rote and repetitious work, free up people to do the creative stuff."

By automating the mass of rote, routine and repetitious work, companies get great cost efficiencies. By empowering people to handle all the non-routine stuff (i.e. everything else), they become very responsive to unique customer needs. It is this blend of efficiency and responsiveness that enables a company to outperform its competition. There are four main points to understand about this strategy:

- Quickly build systems that are good - not perfect
- Let computers do the routine work
- Focus people on handling the exceptions
- Continuously adjust systems and processes based on experience

Quickly Build Systems that are Good - Not Perfect

There is an on-going debate in many companies that hinges on the answer to the question, "Should we build it fast or build it good?" In this time of rapid change in technology and in business, the answer is to build it fast. That means to build it so that it is "good enough". Build computer systems that get the job done and resist the temptation to over-engineer them or give them features to deal with every conceivable possibility no matter how rarely they may happen.

Companies need to maximize use of existing systems and add new IT products and systems in a very pragmatic way. What is needed is a continuous, incremental approach where new computer systems are created from components of older systems and where the pace of systems development can keep up with the pace of

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"Most companies do not need to be anywhere close to the leading edge in their use of technology. It is far more important to use relatively simple technology in an excellent manner. Excellence of use is what produces the results businesses want, not the technology itself"

business change.

This means developing new systems by leveraging the capabilities and features of existing systems. It is done by building links to pass data between existing systems and new systems. Most of the work can then be focused on providing new functionality that compliments and builds upon what already exists. A unified user interface (often using portals and dashboards) blends together the new and the existing functionality into a single system.

Consider this; there exists a collection of simple IT components or building blocks that can be combined with small chunks of program code and used with parts of existing computer systems to create whole new systems. Some of those building blocks are:

- *ASCII Flat Files* (also known as text files) - Every computer made in the last 20 years can read and write ASCII files so it's a great way to exchange data between different systems. Easy to upgrade to XML later.
- *File Transfer Protocol (FTP)* - Sending ASCII files over the Internet via FTP is the quickest, cheapest and easiest way to move large amounts of data almost anywhere in the world.
- *E-Mail and Instant Messaging (IM)* - The quickest, cheapest and easiest way to make contact with specific individuals almost anywhere in the world.
- *Batch Processing* - Data is collected into a batch over some period of time and then imported into or exported from a computer. It is the oldest and simplest way to get data into or out of a computer. The batch cycle can be run every day, every hour, every 10 minutes…approaching real-time.
- *Relational Databases* - Over the last 20 years, relational databases have become the most common way to store data. It is easy to find data and get it into and out of these databases.
- *Web Pages* -The look and feel of your typical Web page follows certain rules and ways of working. This has become the universal system interface that all computer users know how to operate.
- *Current Generation Mobile Phones* – The mobile phone is a device that is practically changing in our hands as we hold it. Millions and millions of people all over the world have one and they are now capable of sending and receiving voice, video, and data communications. These devices also allow their users to access the Internet, surf the web, do e-mail and instant messaging. The humble mobile phone is a very handy interface between people and all sorts of computer and communications systems.

Let Computers do the Routine Work

Use computers to do what they do best. Let them handle the day-in, day-out, repetitious processing of routine data related to basic transactions such as purchase orders, invoices, account balances, order status, address changes, etc. Wherever there are people doing routine data entry or repetitious work of any sort, this is an opportunity to automate.

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"Effective exception handling is what creates value in the real-time world. As products and services become commodities, companies must standardize and automate their production to keep costs down. Once this is done, it is only in exceptions to the standard commodity transactions that companies will find new revenue and profit opportunities"

Computers do this sort of work much better, faster and cheaper.

So many computer systems are unnecessarily complex and expensive because they attempt to handle every possible situation that could arise. Instead, focus computer systems on just processing the great majority of routine transactions that follow relatively simple rules. Automate the handling of only a small set of well-defined errors. Build high-volume and technically simple systems to support these routine transactions.

By doing this, companies avoid the costs, the risks, and the delays inherent in building complex computer systems. IT complexity is not only expensive and risky, but once it is in place it is hard to change so computer systems and the business processes they support become rigid. Companies lose the flexibility they need to evolve as their markets change.

Focus People on Handling the Exceptions

The reason that companies can build simple computer systems is because they can use people to handle all of the complexity that these systems cannot handle. If the status of any transaction is such that it does not conform to a basic set of rules contained in a standard processing system, then, by definition, that transaction is an exception. All the processing system needs to do in that case is trap the data related to the transaction and alert an appropriate person to handle this exception. The person will take over from there and the computer system can return to processing the vast bulk of routine transactions that drive the business.

People who handle exceptions will either correct the data so that it fits back into a standard process or they will take care of those transactions themselves from start to finish. They will have time to do this because they won't be bogged down and worn out doing the routine stuff.

Since exception handling is non-routine, it is interesting. It involves thinking, communicating with others, and problem solving. People like doing this kind of work. It's fun. The human brain has been evolving for the last 200,000 years or so to do just this. And because the work is fun and interesting, people will do a good job of it and they will learn and continue to get better at it.

Continually Adjust Systems and Processes Based on Experience

An exception to a standard business process is due to either an error in the data related to the transaction, or to a new type of transaction that the standard process is not equipped to handle. Regardless of the cause of the exception, there is a profit opportunity to be had if an organization can respond effectively.

If the exception is because of an error in the data, then people need to get involved in finding and eliminating the root cause of the error. Every time a root cause can be removed, it makes the process more efficient and thus more profitable.

If a new type of transaction is what caused the exception then people need to find out what generated it. A new type of transaction is usually indicative of a development or a change that could

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About the Author

Mr. Hugos is an internationally known executive, author and speaker who supports Encore's clients as an expert in IT industry trends, supply chain solutions, and organizational transformation engagements. He has most recently served as the CIO of Network Services Co. an $8.2 billion distribution cooperative providing products and supply chain services related to food-service disposables, janitorial supplies, and printing paper.

Prior to joining Network Services, he was a Practice Director in the e-business and supply chain management practice of Covansys, Inc. a publicly traded international consulting firm. He has over 25 years experience in both consulting and corporate management positions applying information technology to meet business challenges.

He and his IT group at Network Services were awarded the CIO 100 award in 2003 and 2005 for resourceful and bold use of IT. In 2006 he was awarded the Premier 100 award for career achievement. He holds an M.B.A. from Northwestern University's Kellogg School of Management. Mr. Hugos is also the author of two books, *Essentials of Supply Chain Management* and *Building the Real-Time Enterprise: An Executive Briefing,* both published by John Wiley & Sons. He is a regular columnist at *CIO* and *Computerworld* magazine and a frequent speaker.

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be a new opportunity or a new threat. There is money to be made by responding effectively to new opportunities and there is money to be saved by responding effectively to new threats.

The systems infrastructure of a company in the real-time world is continuously evolving. This method of evolving new systems from pieces of old systems is known as services oriented architecture (SOA). As people discover and eliminate root causes of transaction errors, transaction systems change accordingly. As people discover new opportunities and threats they build new computer systems and procedures to deal with them. Those new systems that perform well are then added to the company's set of standard systems and procedures. In this way, old systems are gradually replaced with newer ones over time.