THE GOOD AND THE BAD REASONS TO CUSTOMIZE YOUR ERP SYSTEM

SOFTWARE CUSTOMIZATIONS:
A COMPETITIVE ADVANTAGE OR A LIABILITY?

Those companies who turned their supply chain into a competitive advantage

In today's environment, characterized by increasing globalization, the winners of economic competition are not the companies that just offer the best products but the companies with the best supply chains!

Information systems are a critical part of supply chain strategies and activities. During system designs and implementations, many resources are invested in choosing what technology should be standard software, what level of customization should take place, and what applications should be developed in-house. The main purpose of this article is to discuss the management concepts behind customizations. Based on our first hand observations and assessments of numerous ERP users across the U.S. we will offer recommendations for the next rounds of system updates.

Customized systems as a competitive advantage

According to a survey from AMR, (the 25 Best Run Supply Chains, published by Global Supply Chain Strategies, February 2006 - http://glscs.texterity.com/glscs/200602/), companies with the best supply chains appear to have the following characteristics:

- o A common point among these corporations: they are all customer and market focused! They build their organizations, strategies and operations around the customers.
- o The most successful supply chains developed DDSN business models- Demand Driven Supplier Networks. They became masters at Pull-models (customer demand pulls production) versus traditional Push-models (forecast pushes production). They build systems that track demand signals from their customer's point of demand, and propagate these signals across the supply chain all the way to their suppliers and partners.
- o The concept of Supply Chain tends to morph into a concept of Supplier Network. Companies now work with a network of suppliers and various 3rd parties' partners rather than in a linear chain organization. These networks become increasingly integrated and work in a collaborative manner.
- o In order to support these advanced operating models, successful supply chains organizations have frequently customized their information systems. These include ERP packages that are linked to other softwares. They built patchworks of integrated systems and filled functional gaps with their own custom applications. The most successful Supply Chain organizations thrived on company specific processes and successfully developed the information system and infrastructure to support them. They used IT to leverage their specific business models.

o One significant fact is that, in most cases, their overall IT spending is not higher than other comparable companies'.

We could certainly explain this performance/cost by the fact that due to their superior ability to manage their business processes, these organizations, also have their IT process under control. Therefore, they can identify, select, implement and deploy technologies better than their competitors.

Customization is often synonymous with additional cost, complications, delays, and sometimes source of project failures. Well aware of those pitfalls, many companies and projects managers alike tend to prohibit those, unless absolutely necessary.

But, in the case of the best run supply chains, companies are breaking ground in term of new processes and organization; therefore they need to invent the systems that will support their advanced business model. Very often, the developments of customized systems have been driven by necessity since no existing software package covered their needs. Several companies used existing tools and integrated them in a way that is unique.

Some companies developed partnerships with ERP vendors to co-design new functionalities for their specific needs. These functionalities in turn became part of the new ERP software releases.

For the best run supply chain organizations, customizations became a competitive advantage and an enabler to operational excellence.

The bad calls for customization

At the opposite end of the spectrum: Many companies have also implemented ERP systems in the 1990's and early 2000's, and heavily customized the software. Looking at those systems, several years afterward, it appears that many of the customizations don't really support operational excellence. These customizations were not justified by specific business or operating models but by the demand to keep operations the same way it was. ERP systems with 800 or 1200 customizations are not unheard of!

The main reason for that situation is that projects were driven by the IT function instead of being operation driven (Y2K, aging former systems, etc). In order to gain acceptance from Operations, IT committed to provide a new system that would mirror the legacy system they were migrating from. And customization was the way to achieve just that. Therefore, the new system would cause minimum disruption and changes in the operating process. They replicated and perpetuated the old way of conducting the business.

Through customization, many IT departments bought convenience and peace.

In order to appear progressive, IT organizations, at that time, frequently claimed that they would no longer implement systems that forced processes adjustments to rigid IT

systems, but rather would design and implement systems that fit the process. If the search for flexible systems is legitimate; this approach ignored a critical fact: most of the time, processes are crafted around capabilities that information systems offer at a given point in time. Each generation of information systems creates a new paradigm that generates the accepted norms and practices. Therefore, the philosophy that promoted IT to support existing processes instead of driving changes, simply resulted in missed opportunities to improve the business processes.
Frequently, in their drive to replicate the old systems, and also due to a lack of initial user training, companies have failed to explore the functionalities and tools that were available in their newly acquired software.

As a result, such implementations were costly, and did not maximize the ERP investments. They created complicated environment that are difficult to maintain and manage. Also, some bad implementations strategies led users to unnecessarily multiply integrations points, with no real business rationale behind it. In some cases, the architecture features dozens of interfaces with numerous systems to work around the ERP package that was implemented. In such extreme cases, it seems that companies implemented and ERP and worked around in order to avoid using it! One can ask why they acquired the software in the first place.

After a few years, comes the time to update and adjust the corporate information system. This is where customizations might get in the way, if additional functionalities, that are available in the ERP system, are now being considered for use. It is likely that a heavily customized environment will create obstacles to a software reconfiguration.

In addition, process and customization are often not consistently documented. After a few years of corporate reshuffling, downsizing, mergers, and turnover, it is quite frequent to see a loss of the early collective knowledge and history on the system. This leaves the current IT teams in the dark. They are facing the challenging task to maintaining and modernizing a system on which they have low visibility and limited understanding. This situation would become mission critical in the case of a system upgrade. Customizations, by definition are not supported by software vendors. This is source of additional issues to manage during an upgrade to the next software release. In the worst case, undocumented customization could be lost in this process.

A New Approach: a case for a process change

Today, many companies are faced with the challenge of updating their systems once again. What approach will they adopt this time?
- o They realize that what they did the previous time around was not the best way.
- o They identified some opportunities within their supply chains and are looking for solutions.
- o Sometimes, the search for quick fixes leads them to contemplate additional technologies to plug in to their existing system: "add bells and whistles" (RF-Barcoding comes on top of that list).
- o They realize that some potential value is there, in term of ERP capabilities, but they cannot clearly define or size it.

This is why before making the next significant system investments; companies should adopt a new approach.

The journey should become about improving the business rather than simply upgrading the system.

In order to justify embarking for a major system update, the first question to ask is: what is the value of implementing a new system if at the end we do business the same way and keep the same operational process?

The project can begin with an assessment of the company's supply chain operations. This assessment can be initiated from various angles. IT department becomes the champion of questions coming from the field or operations.

The approach can be initiated, for each major process area, by asking a question related to the operations such as: how to improve the current cycle counting process? Or how to increase productivity in our warehouse? Or how to improve the Account Payable process by using scanner technology?

These questions become the starting point for a more in depth assessment of the business. IT will become the catalyst for a process re-engineering, but eventually, senior operation management should own the whole process. The assessment is the first step to build consensus on what needs to be done to improve the organization.

Some of the most progressive supply chain organizations have recognized that, and purposely perform process and organization changes prior to technology changes. This is not always possible, since often the new technology is the enabler of the new process. However, placing process, organization and technology changes together on the improvement roadmap is definitely a sure way to build a strong strategy.

As far as technology is concerned, organizations also need to take a second new look at their existing softwares (especially the ERP, that often represent their IT backbone); because experience shows that many companies underutilize the software they own.

Untapped functionalities of currently used applications, or entire modules that are available (such as MRP, Forecasting, Warehouse Management System, Transportation Management Systems, Asset Management etc) but totally ignored, represent the biggest opportunities to support process adjustments and generate significant gains for the least cost.

Reaching operational excellence for many companies still requires some steps that leverage the current investment.

- o First of all, recognize that their system will be a patchwork of several applications; ERP being the backbone.
- o Leverage the existing ERP capabilities: based on business need, expand the software's footprint by using available functionalities everywhere possible.
- o Identify gaps that will lead to customization or use of 3rd party package to fill them.
- o Strengthen the system foundation and take advantage of integration. Thus minimize the number of touch-points with ERP applications and selected these wisely.

Summary:

Applications customizations can be the best or the worst of things for Supply Chain organizations.
The most successful ones have used their technology capabilities to enhance ERP or other softwares in order to enable and support innovative and ground breaking processes. They have turned highly customized systems into a competitive advantage.
On the other hand, in the last decade, many companies have used and abused customizations, in order to replicate the legacy systems they were replacing, avoiding the hard questions of changing their way of doing business. These companies are now facing the challenges of managing and changing the cumbersome systems that they created. The old management approach has reached its limits; as the competitive arena has expanded and the battle for success is becoming tougher. Overusing customizations have turned their systems into a liability.
As time come for organizations to update their system, they now have the opportunity to follow a new approach. This consists in looking at the operations and technology with a fresh look, assessing opportunities, and building a comprehensive strategy that will include process, and organization changes. Then use available technology wisely to support operation excellence. Customizations might still be needed, but for the right reasons.

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