



## **Crush Your Competitors with Custom Software**

Information technology (IT) can be a strategic asset to any company, but unfortunately, business leaders often perceive IT as a problem rather than a solution. This white paper discusses two common scenarios where IT can undermine business strategy, and then explains how custom software can be leveraged to differentiate a company from its competitors.

## Introduction

In many organizations, IT is not a source of competitive advantage. In fact, sometimes it's even a bottleneck for executing business strategy. But IT can and should be a strategic asset for every company, regardless of size or industry. So how can business leaders use IT to give their companies a competitive edge?

Over the past few decades, the power of IT has been harnessed to drive operational efficiency to new heights. Business software applications store and organize information, automate business processes according to best practices, and generally facilitate business activities.

For early-adopters, the implementation of “best practice” packaged systems represented a sound strategy for gaining an advantage over inefficient competitors. That is no longer the case.

As everyone jumped on the bandwagon, competitive advantage gradually morphed into competitive necessity and “best practice” business culture was born. Now, the operational efficiency of a company is akin to the technical skill of a painter: achieved through years of hard work, essential for expressing a unique character, but not exceptional in and of itself.

To generate competitive advantage, business leaders must use IT to bolster the unique way that their company chooses to operate. One way to achieve this objective is to build custom software that enhances and reinforces the value chain. The custom software option, when fully appreciated, can also act as a catalyst for spawning new value activities that further differentiate a company from its competition.

This white paper will examine two common scenarios where IT can undermine competitive strategy, and will discuss some ways that custom software can produce competitive advantage.

## Why Custom Software?

In the past, only large companies could afford to heavily customize business applications and develop new software that was integral to their value chain. Everyone else had to settle for packaged, one-size-fits-all software, perhaps with some light customization. Fortunately, that has changed.

Like many technologies that are initially expensive—personal computers and cell phones, for example—custom software has become cost-effective, especially in the last few years. It is now a very competitive option for even the smallest start-ups.

Some of the technology innovations responsible for this fundamental shift include:

- Open source software
- New, faster programming environments
- Collaborative development methodologies like Agile
- Reusable software components
- Cloud computing

*Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value.*

– Michael Porter  
*On Competition*<sup>1</sup>

*...because IT is always reacting to the latest strategic initiative, IT is always a bottleneck. IT never becomes an asset shaping future strategic opportunities.*

– Jeanne Ross,  
Peter Weill and  
David Robertson  
*Enterprise Architecture as Strategy*<sup>2</sup>

*Most enterprises and governments are so invested in traditional processes and thinking that they can't hear or sense new signals. Many are not even trying to identify signals of change.*

– Val Sribar  
GVP of Research  
Gartner Inc.<sup>3</sup>



Now it is possible to write meaningful applications with only a few hundred lines of new code. With the technological hurdle so low, a company can focus on understanding business needs and defining great solutions to its competitive challenges.

## Two Ways that IT Sabotages Competitive Strategy

A company can undermine its competitive strategy by conforming key business processes to generic packaged software, and by haphazardly assembling a collection of poorly integrated business applications.

### Adapting the Job to the Tool

When a company turns away from distinctive key processes that are a source of differentiation and conforms to best-of-breed packaged software, it converges on generic solutions.

By capitulating to a “make do” approach, the company effectively undermines its own competitive strategy. If repeated with enough key activities, “make-do” will gradually chip away at the value chain until it loses its distinctive character. Another result of “make do” is that employees will be forced to work around software limitations, leading to declines in quality of work and productivity. In short, the company will risk becoming uncompetitive.

Packaged software that incorporates a set of best practices is often appropriate for activities like routine accounting tasks, which benefit from standardization. However, activities requiring discretionary decision making—using creativity and good judgment to choose the best option—cannot be facilitated with software tools based on generic best practices.

For an activity where individual discretion provides a competitive advantage, choosing a tool that works the way the company works is a better approach than conforming to a packaged solution that comprises only a subset of the required functionality.

### Tolerating Accidental Architecture

Software applications that have been purchased individually to perform specific functions often develop into an unruly collection of disjointed systems that poorly support the value chain. When enterprise systems are not integrated, numerous silos of information form and grow, each one linked to a distinct constituency but not serving the organization as a whole.

Accidental architecture grows even more complex and dysfunctional as new software systems are added and attempts are made to retroactively “wire” everything together.

The result is that mountains of business data are accumulated but cannot be fully exploited because they remain locked away in silos. This compartmentalized enterprise structure hinders the company’s ability to find the right information at the right time, a critical requirement for executing company strategy.

*Much of the effort involved in IT projects revolves around the selection, customization, deployment, and integration of packaged software.*

– David Andrews and  
Kenneth Johnson  
*Revolutionizing IT*<sup>4</sup>

*...if the application is unique to a specific company, either because the functionality provides a competitive advantage to the company or because past practices have resulted in nonstandard processes, it is not a good candidate for packaged software.*

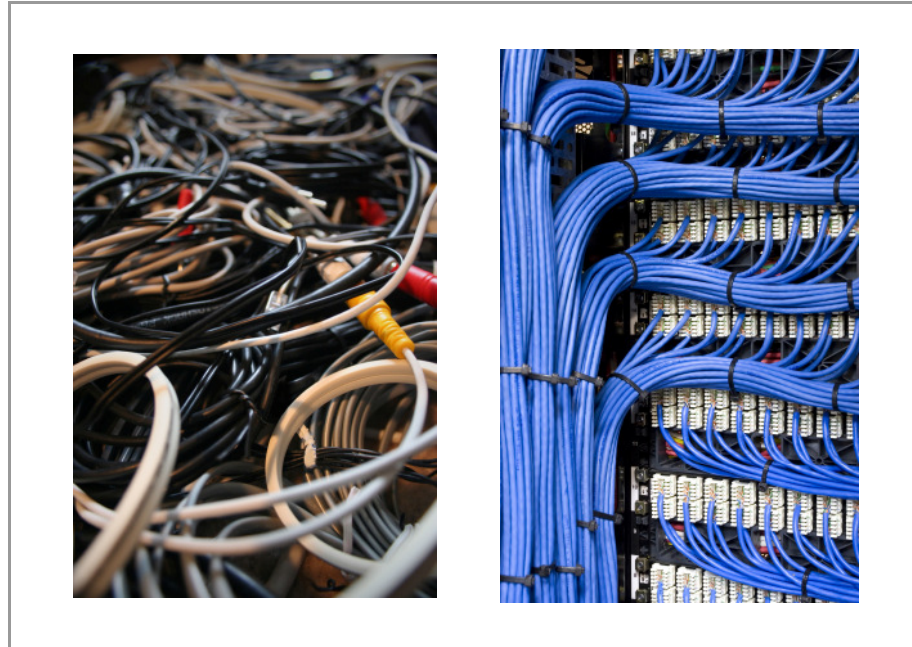
– Christine Tayntor  
*Successful Packaged Software Implementation*<sup>5</sup>

*...even if the strategy is clear enough to act upon, the company implements it in a piecemeal, sequential process. Each strategic initiative results in a separate IT solution, each implemented on a different technology.*

– Jeanne Ross,  
Peter Weill and  
David Robertson  
*Enterprise Architecture as Strategy*<sup>6</sup>



Moreover, when employees interact with systems that work against them, they are forced to work harder than their peers in other organizations to achieve the same effect. If this productivity crisis is not resolved, the company may find it difficult to retain top performers who excel by working smarter, not harder. Again, the company is at risk of becoming uncompetitive.



**Figure:** Accidental versus planned

*...every business decision  
drives an IT event.*

– Rob Carter  
Global CIO  
FedEx<sup>7</sup>

Clearly, a more holistic approach to IT architecture—an approach that goes beyond merely implementing packaged software—is required to meet the needs of all users within an organization. For companies seeking to replace their accidental architecture, a study of business activities, processes, and strategy can point the way to an enterprise IT architecture that is a strategic asset and a source of competitive advantage.

## Custom Software Drives Competitive Advantage

Custom software can be defined as software tailored to satisfy the specific requirements of a unique activity. Written in any number of programming languages, custom software applications vary in size and complexity from small, single-feature plug-ins to sophisticated enterprise-level programs.

Custom software can run on local computers, company networks and intranets, remote servers that provide cloud computing and software-as-a-service (SaaS) via the Internet, mobile devices, retail kiosks, and more.

Examples of custom software applications include:

- **Banking software** for processing account transactions according to internal policies and established processes.



- **A project management application** with proprietary tools tailored to unique in-house processes.
- **A customer relationship management (CRM) application**, perhaps built on a powerful platform like Salesforce.com, for analyzing customer data and formulating strategy.
- **Business intelligence software** for collecting data (from software systems throughout the organization), analyzing data, and presenting the results in meaningful ways.
- **An e-Services Web portal** for anywhere, any time equipment monitoring, problem reporting, and information management.

Obviously some guidelines are needed for rationally determining whether to pursue a custom software solution. Generally speaking, custom software is a viable option when packaged software is

- Unavailable.
- Inadequate.
- Too expensive.
- Based on old technology that will have a short useful life.
- A poor fit, requiring a prohibitive degree of customization.

Custom software applications are used to best advantage when reinforcing unique, vital business activities, which are the source of competitive advantage.

### Important Benefits

Custom software can be used to produce the best tool for the job, construct enterprise IT architecture, find information when it's needed, introduce truly innovative products and services, engage customers in new ways, work more efficiently, and increase the useful life of business applications.

**Deploy the best tool for the job.** Companies retain their competitive advantage by developing software that conforms to business activities and not the other way around. They build the best tools instead of settling for the best available tools.

**Facilitate planned IT architecture.** Custom software can be employed to build enterprise IT architecture that is organic to the value chain and, therefore, a strategic asset.

**Find the right information, at the right time.** Companies can use custom applications to search numerous, disconnected IT systems in new, efficient ways and quickly retrieve information. Employees find the information they need in a timely fashion and use it to make good decisions.

**Introduce innovative products and services.** Disruptive technology doesn't come in a box; it must be developed. Custom software is a medium for innovation.

**Connect with customers in new ways.** Novel user experiences built on custom software can help businesses interact with their customers.

*Modifying software to match a process can be expensive and...sometimes impossible.*

– Christine Tayntor  
*Successful Packaged Software Implementation*<sup>8</sup>

*Cloud computing is on Gartner's list of Top 10 Strategic Technologies for 2010.*<sup>9</sup>



**Do more with less.** By harnessing cloud computing technology and open source software, companies can quickly and easily deploy focused, custom business applications without investing in costly IT infrastructure.

**Maximize the useful life of business apps.** Custom software can have a longer useful life because it employs the latest proven technology, with due consideration for current trends and in anticipation of imminent technological changes.

## Characteristics of Great Custom Software

Regardless of whether software is developed in-house or outsourced, the same factors influence the utility, longevity, and ultimate value of the finished application.

Great custom software:

- Works exactly how users work.
- Employs current proven technology.
- Is scalable, when required.
- Is flexible and upgradable.
- Is easy to use.
- Looks great.
- Is cost-effective.

## References

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*Companies that anticipate the power of information technology will be in control of events. Companies that do not respond will be forced to accept changes that others initiate and will find themselves at a competitive disadvantage.*

– Michael Porter  
*On Competition*<sup>10</sup>





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