

Benefits of a Single Integrated ERP versus Best of Breed Systems

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Abstract: This research paper examines the options between a single integrated ERP versus best of breed systems for business. Several organizations will adopt different best-of-breed systems for Financial Management, Supply Chain, HR, Warehousing, Procurement and Inventory Management while other organizations will use relevant modules of a single integrated ERP with lesser functionality than best of breed system. The research showed that the cost of integrating different systems is higher and the one that resulted to most problems later on. The paper recommends 'adaptable ERPs' as the best approach that provides significant functionality that is integrated but has the flexibility to easily build on any gaps in functionality. This approach provides the most value at the lowest risk and, also, the lowest cost.

PROBLEM

This research paper examines the business case of a single integrated ERP for a business versus best of breed systems for an organization. Several organizations will adopt different best-of-breed systems for Financial Management, Supply Chain, HR, Warehousing, Procurement, Inventory Management while other organizations will use the relevant modules of a single Integrated ERP even if they have lesser functionality than a best-of-breed system. The challenge often faced by businesses is which way to go when they find that a single system will not meet all of their needs.

FOCUS AREA OF THE PAPER

The paper examines medium- sized to large businesses and their ERP needs. Unlike small businesses that can often find a single ERP that meets all or most of their needs, businesses that fall in the \$100 million to \$3 billion in revenue have fairly complex needs that need to be met on a tight IT budget. Typically, the choices that businesses of these size have is to use a single ERP and meld it to meet their needs or to take different best-of-breed systems and integrate to make them work. As an example of the problem, a \$500 million manufacturer that researched multiple ERP systems found the following:

Functional area	Best Fit ERP Fit	Best of Breed Systems fit
Financials	90%	95%
Order Processing	80%	90%
Purchasing	95%	90%
Inventory and Warehousing	85%	95%
Time keeping	40%	80%
Production and Planning	75%	90%
Warranties	60%	90%
Repairs and Service	60%	80%
Contracts		

Functional area	Best Fit ERP Fit	Best of Breed Systems fit
Average Fit	73%	89%
Number of Systems	1	5
Implementation Partners	1	4

Table 1. Illustration of problem faced by a representative business in selecting ERP systems. Should the business choose fit over potential complexity of implementation?

In this example the manufacturer saw a 73% overall average fit with the best-fit ERP but a nearly 90% fit with best-of-breed ERP systems for the different areas. However, while the best-fit ERP required one ERP system and one implementation partner the best-of-breed system required 5 different systems to be tied together by 4 different implementation partners. These two options translate to a difference in risk, cost and overall value. Is a higher overall fit with more systems better or is a single system with a lower fit a better choice?

APPROACH ADOPTED

In this research effort, the author interviewed and investigated both end customers and implementation customers to understand the pros and cons of both approaches. In addition the paper reviewed published material such as customer success stories, failures and case studies and other ERP selection white papers and studies.

SUMMARY OF RESULT

Research showed the cost of integrating different systems was a significant multiple over what people anticipate it being and usually has the highest cost in an implementation, as well as, the one that caused most problems later on. The paper recommends 'adaptable ERPs' as the best approach that provides significant functionality, the benefits of an integrated system and the ability to easily build any gaps that a best-of-breed system has. The Adaptable ERP represents a hybrid between the traditional one-size fits all ERP and the Best-of-Breed Systems Approach where each business area is implemented with the best fitting system.

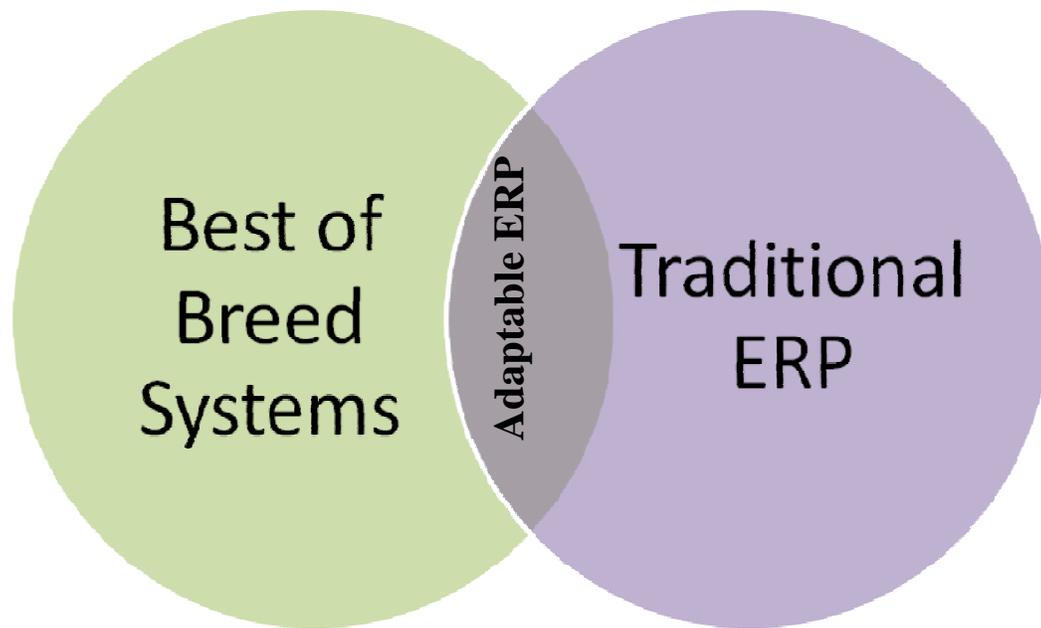


Figure 1. The Adaptable ERP lies between the One Size fits all ERP which represents inflexibility to the business needs but provides an integrated system and the Best-of-Breed System which will meet the business needs but require integration.

This approach provides most value at the lowest risk and also will be at the lowest cost. For the problem example above - \$500M manufacturer – a typical implementation with an adaptable ERP will range in the \$500K to \$1M range for software and services and will take anywhere from 6-12 months to implement. However, a best of breed, approach will take anywhere from 9 to 20 months to full implement and at a cost in the range of \$900K to \$2.5M.

The benefits of an adaptable ERP found by this paper are listed below

1. **Lower Risk:** The Adaptable ERP is pre-integrated and offers lower risk over a best of breed system. Typically the Best of Breed approach will require multiple implementation partners that know their system/ area best. Managing these parties and ensuring success is a fairly high risk approach.
2. **Lowest Cost:** Research showed that the Adaptable ERP can be implemented with lowest cost and that the highest cost of an implementation is the interfaces and integrations between different systems. By extending the system Vs integrating multiple systems the adaptable ERP lends itself to a low cost implementation model.
3. **Highest Return:** Interestingly the Adaptable ERP breaks the mould of the conventional High Risk and High Return theory. While the Adaptable ERP may pose a slightly higher risk than the Traditional ERP which is typically not extended or modified at all it does so with tremendous upside as the business no longer needs to do work-arounds outside the system that are required with an inflexible traditional ERP.

Today several Adaptable ERPs are in the market. The most notable of them is Microsoft Dynamics AX which has been listed by Gartner Group as a leader for the mid-market ERP in its 2010 Magic Quadrant (Christian Hesterman, 2010). The Gartner group report refers to Dynamics AX as a modern ERP. Microsoft calls it a system that enables Business My Way. Customers that had implemented Dynamics AX were impressed with the flexibility of the system and how easy it was to extend the system to meet their needs with minor enhancements done in hours or days that could have taken months in the traditional ERP systems.

Many customers have already adopted this path. Panorama consulting group indicates that customizations in ERP have increased over the past since ERPs provide a more agile and adaptable framework than a decade past. (Panorama Consulting Group, 2011) However, Panorama consulting group also puts in a word of warning at the higher cost of upgrading the system with customizations. This is where an adaptable ERP shines. These ERP systems provide native support for upgradability with customizations. For example, Microsoft Dynamics AX has the concept of layers where customizations are done in different layers from the core system code layers. Within these layers are additional layers – a customer may do their core enhancements that apply to them universally in a customer layer (CUS Layer in Dynamics AX) but a customization specific to a site may be done in a higher level layer (USR Layer in Dynamics AX). Examples such as these show that ERPs have come a long-way and businesses don't need to go out to find the best-

of-breed systems and try to stitch them together with patchwork interfaces but can instead easily extend an adaptable ERP to meet their business needs while using the glue in the system to tie it all together.

RELEVANT EXAMPLES SUPPORTING THE RESEARCH

1.1 Best of Breed Implementation by a Public retailer of Auto Parts

A public company that is an auto parts retailer integrated a best-of-breed warehouse management system with the best-of-breed financial system and a home-grown order entry and product catalog systems and spent over \$400K on the integration – the most expensive part of the implementation. While the implementation ended well the integration cost more and took longer than expected. Overall, the total services on the project were over \$1.5M not including the cost of developing the home-grown order entry system and home-grown catalog system.

1.2 National Wireless Distributor implements Adaptable ERP

(Microsoft Corporation, 2010)

Cellphone is a wireless phone distributor with offices throughout the United States. It had multiple best-of-breed systems including a different system for supply chain, financial management, warehouse management and rebates management. These systems were not integrated, causing many hours of manual processing; and the interfaces limited Cellphone's ability to grow quickly into new businesses, as well as, limited the ability to quickly open new locations as the same location would need to be setup multiple times in the different systems. Cellphone worked with Ignify to replace the various systems with Microsoft Dynamics AX. Microsoft Dynamics AX provides multi-company and multi-locational functionality to Cellphone and also provided out-of-the-box integrated functionality for order entry, supply chain management, warehouse management. The wireless handsets were integrated with Microsoft Dynamics AX's warehouse management to provide RF capability in the warehouses without using a 3rd party system, except, native Dynamics AX technology. Ignify also enhanced Microsoft Dynamics AX to build-out gaps in the rebates functionality. The cost was lower than other relevant examples where customers had integrated external warehouse systems or used a best-of-breed system in a similar situation to rebates management and then integrated with the core ERP. Microsoft Dynamics AX is an example of an adaptable ERP that allows businesses to maintain unique business processes with an architecture that is amenable to enhancements. The entire cost of the implementation for all the pieces including the RF capability, rebates, supply chain was under \$300k versus another example investigated where a customer spent more than \$300k on just integrating the WMS with the ERP.

As a result of this, Cellphone was able to streamline its warehouse management operations, easily access information because of an integrated system, eliminate over 2000 hours of manual financial reconciliation effort and improve its customer service. With a robust and fully-integrated system, Cellphone can continue to grow its business and also have more flexibility without having to worry about the limitations of multiple systems.

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Several other case studies were analyzed to prepare this paper. Additional References available on request.

Emma Agustin has over 15 years of experience working with business organization in driving business process improvements, and managing operations. She is a Student in the MBA Class at Southern States University and will be graduating in 2011. Prior to her MBA, she worked as an Operations Director overseeing operations of approximately 2000 people. Prior to that Emma, worked with Intel. Emma is an industrial engineer and earned her Bachelors in Industrial Engineering from Mapua Institute of Technology