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WHITE PAPER

Maintaining ERP Systems: The Cost of Change

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Michael Fauscette
May 2013

IDC OPINION

The decision to purchase and implement an enterprise resource planning (ERP) system is critical to any business. While the up-front investment to purchase and implement the system is driven by the need to meet existing business requirements, it's important to also consider the ongoing investment to keep the system in sync with changing business needs and requirements. The ongoing costs of change can be significant, particularly when the systems that must be changed to support the business are not adaptable and flexible.

Key findings from a recent IDC survey include the following:

1. Meeting changing business requirements involves moderate to substantial underlying ERP system changes.

2. ERP system change issues are not being resolved by newer ERP systems.

3. Customizations, often necessary during the implementation of ERP systems, have long-term risks and implications for ongoing system maintenance.

4. Many companies choose to suffer with managing one or more ERP systems rather than deal with the complexity and costs of consolidation to one system.

5. Due to business changes, 15% of the respondents were forced to reimplement the entire ERP system. Of those, 60% had initially spent over $2.5 million.

6. The cost of system modifications not only is direct but also includes a substantial amount of lost productivity.

7. The average annual costs of maintaining ERP systems and meeting changing business needs are up to $1.2 million, but in the extreme, they can exceed $4.1 million per year.

8. The frequency of change and the subsequent investment to make the ERP system support the business have become so common that many businesses simply accept that there is no better way to operate the business.

IDC believes that in addition to fit and value, companies must look for ERP systems that can provide the flexibility to continue to meet business needs with low investment of scarce company resources.

Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 www.idc.com

METHODOLOGY

IDC developed this document based on a survey of 167 executives across North America and Europe to gain insight into their companies' use and ongoing maintenance of ERP systems. The respondent companies broke out as shown in Tables 1–3.

TABLE 1

Respondents by Total Revenue

Revenue	% of Respondents
<$100M	15
$100M–249M	25.1
$250M–499M	15
$500M–999M	20.4
$1B+	24.6

n = 167

Source: IDC, March 2013

TABLE 2

Respondents by Job Title

Title	% of Respondents
Chief executive officer (CEO), president, managing director	18.6
Chief operations officer (COO)	22.8
Chief financial officer (CFO)	12.6
Executive vice president (EVP)/senior vice president (SVP)/ vice president (VP) of finance	8.4
Director/manager of finance	28.7
Treasurer	0.6
Controller	8.4

n = 167

Source: IDC, March 2013

TABLE 3

Respondents by Industry

Industry	% of Respondents
Business/professional services	10.8
Chemical/energy/utility	3.0
Construction	7.8
Education/research	7.2
Financial services/real estate/insurance	10.8
Food/beverage/consumer packaged goods	0.6
High tech	12.6
Healthcare	6.0
Industrial/manufacturing	14.4
Media/entertainment/travel/leisure	2.4
Pharma/life sciences/biotech	1.2
Public sector/nonprofit	4.8
Telecommunications	3.0
Transportation/warehouse	6.6
Wholesale/retail	9.0

n = 167

Source: IDC, March 2013

SITUATION OVERVIEW

The decision to select, purchase, and implement an ERP system is no small undertaking for any business. Realizing business benefits from using the system takes a substantial up-front investment of money, people, and time. Of the companies that participated in the IDC survey, 61.6% spent between $250,000 and just under $1 million on the software and the implementation, but 22.2% spent between $1 million and $2.5+ million. This puts the average cost of implementation at around $825,000. The survey also showed that while 68.9% implemented an ERP system in the past three years or less, almost 5% have had an ERP system for more than 10 years.

During implementations, most ERP systems require some level of customization. Companies must adapt horizontally focused functionality to a variety of industry vertical needs, something that is often lacking "out of the box" but that is necessary to meet business needs. In the survey, 87% of the respondents had moderate to extensive customizations. Customizations, often necessary to adapt systems that are less configurable to critical business processes, add to implementation costs of course, but they also add risk in several ways. Customizations can often be difficult to move forward to newer versions of software and must be rebuilt at substantial cost. They also introduce risks around the implementation itself, increasing the possibility that necessary functionality won't be built correctly or work as intended.

This initial investment for purchasing and implementing the software is not the only expense to operating an ERP system successfully though. If you purchased the system on a perpetual license model and implemented the system, you have ongoing annual maintenance costs and datacenter operational costs as well as an ongoing people investment. Businesses that buy in some subscription model, or host the software with a third party, have ongoing subscription or hosting fees as well as the costs of administrative resources. Unfortunately, though, these are not the only "costs" to operating an ERP system in today's dynamic, fast-changing business environment. Companies must respond to business needs such as:

- Regulatory requirement changes
- Company reorganizations and restructuring
- New or modified business processes
- Financial management–driven changes (for example, meeting new accounting rules)
- Mergers and acquisitions (M&A)

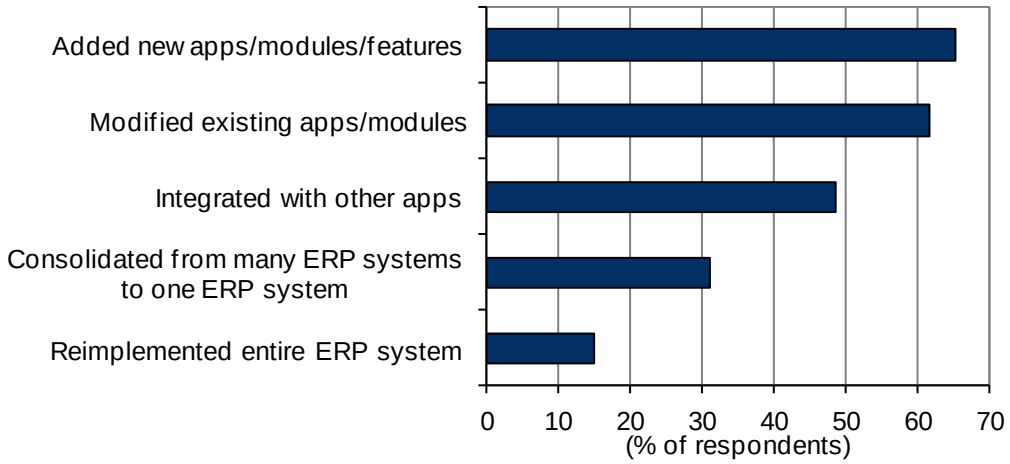
ERP systems in general are not designed to be flexible; in fact, most are designed to provide and automate repeatable business processes. While there is substantial benefit to this automation and predictability, there are also risks and cost. As we've moved from an industrial economy — built on repeatability of process over flexibility — to an information-driven economy, the need for quick adaptability and flexibility in processes is business critical. The pace of business change has accelerated, yet most IT systems remain difficult to modify and change to meet these new business and technical requirements. Add to that the fact that almost 72% of the companies in the survey have more than one ERP system, and you can start to see the scope of the problem.

Changing business requirements require organizations to modify their ERP systems to keep the business operating. These changes could be anything from modifying or integrating existing applications to reimplementing the entire ERP system. Figure 1 shows the percentage of respondents that have made specific types of ERP system changes.

FIGURE 1

ERP System Changes Since Initial Implementation

Q. What kind of changes has your company made to its ERP system since the initial implementation was completed?



n = 167

Source: IDC, March 2013

A substantial amount of system change is required to keep the ERP system in sync with changing business needs. In particular, reimplementing the entire system is an extreme solution, yet 15% of the respondents had done so. The rest of the story, though, is that of the 15% that reimplemented, 60% reported spending more than $2.5 million on the initial implementation. Losing the initial investment plus spending a similar sum to reimplement is a heavy penalty for dealing with necessary business dynamics.

Inflexibility Not Resolved by Newer Systems

It would be reasonable to assume that systems implemented in the past three years would be more modern ERP systems and thus be more flexible and easy to modify. The survey data shows a very different picture though. In general, the age of the system had almost no impact on the amount of system change. However, a few interesting differences should be noted. The first is around the kinds of changes. The companies that had implemented in the past three years were twice as likely to have integrated with other systems and nearly three times as likely to have consolidated ERP systems through combining users into one ERP system and shutting down one or more systems. Nearly 70% of the respondents had implemented their ERP system in the past three years, so this group is by far the largest. There are a couple of likely reasons for this difference. Respondents in the three years or less category were also much more likely to have subscription-based licensing and a hybrid operating model that combined on-premises with hosted and cloud-based systems. Complex hybrid IT environments, a common reality for many companies today, are simply more difficult to maintain and prove less flexible to adapting to business changes than more simple environments.

The companies with newer systems were also the most likely to have made moderate to substantial modifications to their systems due to mergers and acquisitions (M&A): 68.7% for the <3 years group, 61.9% for the 4–9 years group, and only 25% for the >10 years group. In many industries, M&A activity has been very high for the past 10+ years. Trying to rationalize disparate systems from many acquired companies can be very challenging in itself. Add to that the need to meet the changing business needs of a growing and changing company, and you can see why it's difficult for inflexible ERP systems to adequately support the business without extensive modifications. While 31.1% of the respondents had consolidated ERP systems down to one system, many more continue to operate more than one system of record and deal with the financial consolidation headaches and expense. In some cases, the companies chose to stay with multiple systems and deal with those headaches rather than try and modify a single inflexible system to accommodate the different business needs of the various operating units.

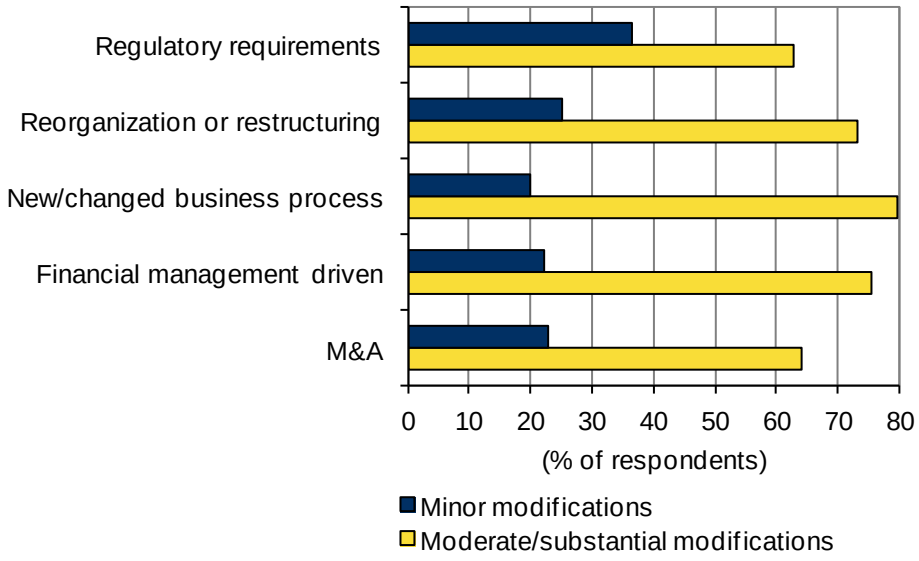
Effort to Meet Business Needs

Figure 2 shows the five business changes driving ERP system modifications and the levels of effort required to modify ERP systems because of the changes. Across all five business change drivers, a high percentage of the companies reported moderate to substantial effort to keep the ERP systems current.

FIGURE 2

Business Factors Driving System Modifications

Q. When modifying your company's ERP system for one of the listed business factors, what level of effort was required?



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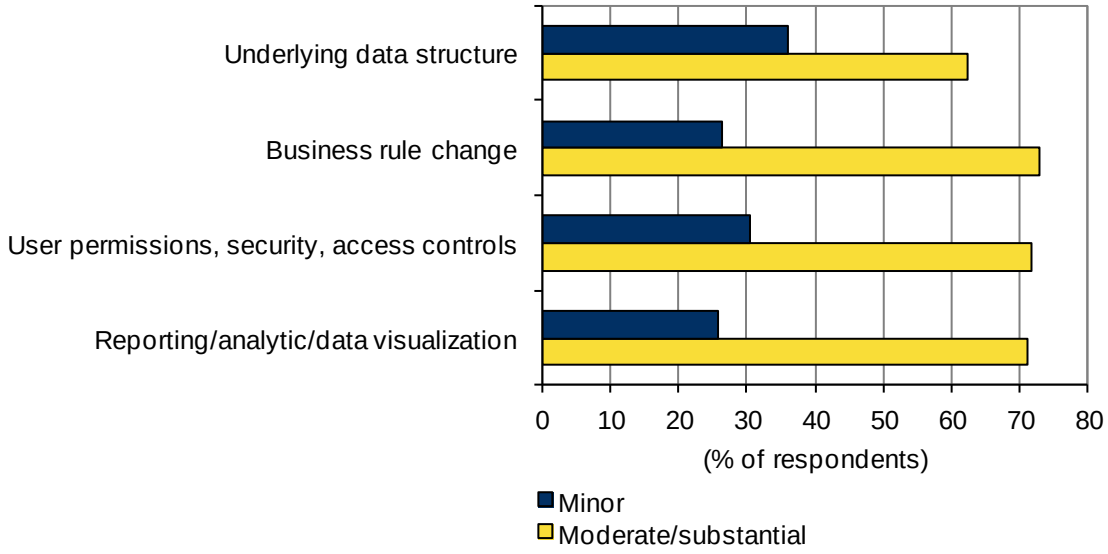
Source: IDC, March 2013

Business drivers that cause change in systems also create the need to modify underlying technical factors. These technical changes can also require substantial efforts as a part of the ongoing system upkeep. Figure 3 shows a consolidated view of four technical factors that require effort and investment in conjunction with business-driven system changes.

FIGURE 3

Level of Effort Required to Modify ERP System by Technical Factor

Q. When modifying your company's ERP system for one of the listed technical factors, what level of effort was required?



n = 167

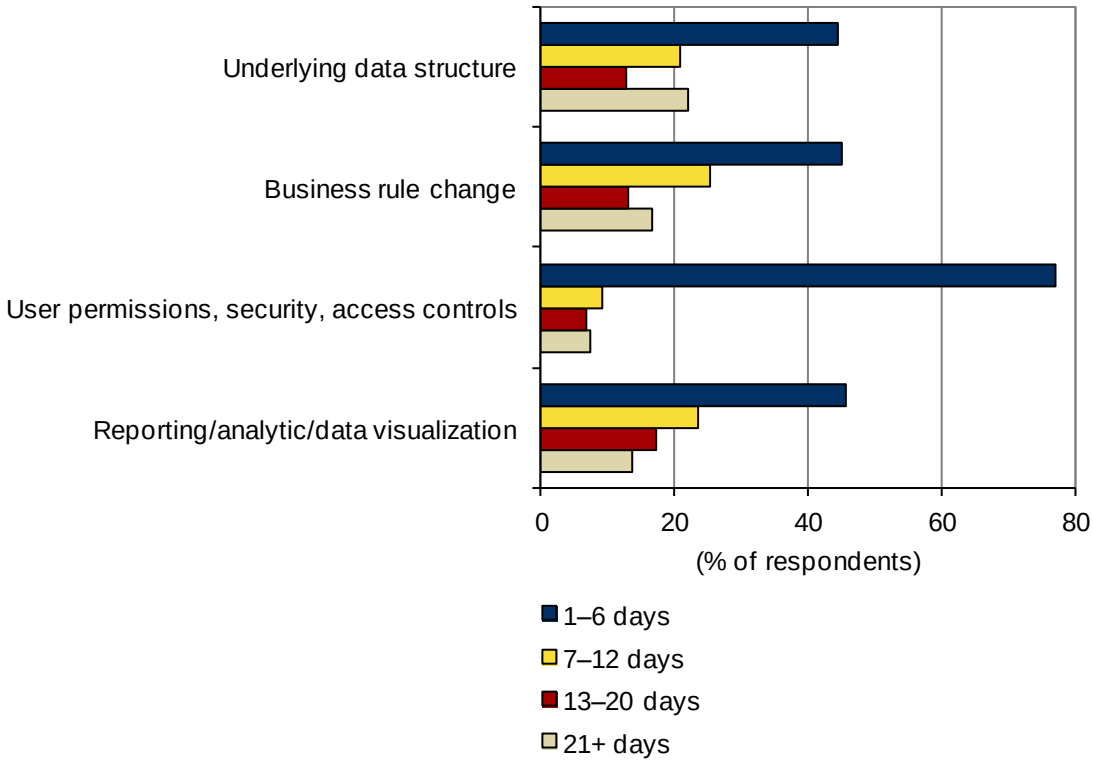
Source: IDC, March 2013

Calling effort "substantial" though doesn't really convey the level of investment needed to meet these technical requirements. For example, the average estimate for the level of effort required to modify the underlying data structure was almost 14 days. At a total compensation level of $187,104, a representative salary for a database administrator, the cost would be $10,920. For 22% of the respondents that invested effort of 21+ days, that figure would be significantly higher, at least $16,380. Those are the salary costs, but again, that's not the whole story. An IT resource who is taken off assigned activities to support these unplanned projects doesn't perform other necessary tasks and must either work extra time or be replaced by other resources. Figure 4 shows the level of effort required for each of these supporting technical tasks.

FIGURE 4

Level of Effort Required to Modify ERP System by Number of Days

Q. What is your best estimate for the level of effort required, including all resources involved, for these modifications?



n = 167

Source: IDC, March 2013

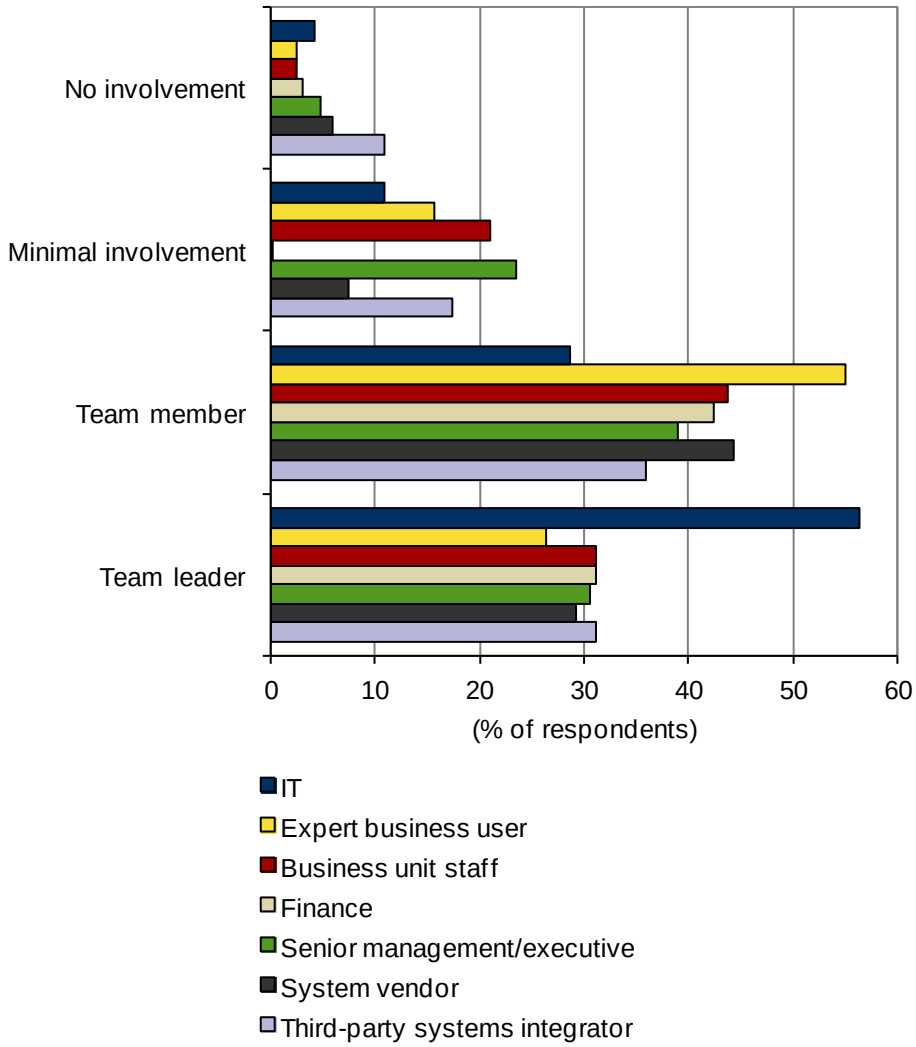
Loss of Productivity

ERP system modification causes disruption, and disruption has a cost. Level of effort can be significant (as shown in Figure 4), and that effort takes away from other important business activities. Beyond the underlying technical aspects that require IT support, these projects require effort from a range of job functions to ensure project success. This effort involves business unit system users as well as finance and executives and can include the ERP system vendor and outside systems integrators. Figure 5 shows the level of involvement across the different resource types.

FIGURE 5

Level of Involvement Required to Modify ERP System by Resource Type

Q. When modifying your company's ERP system for one of the listed technical factors, what level of involvement was required?



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Source: IDC, March 2013

The issue once again extends past the actual project effort. Business resources have regular jobs that are necessary for the operation of the business, and when they are working on a project to modify the ERP system, they are not doing these important tasks, putting stress on other colleagues or even requiring the added expense of hiring temporary resources to keep the business operating. At the highest levels, involving executives as team members or even team leaders can prove to be a significant distraction and even create a business risk from that distraction. The

overall loss of productivity from IT and line-of-business employees is a serious drain on resources and clearly has margin and even revenue implications. In addition to the internal drain, using system vendor resources or outside consultants adds direct costs. In a highly competitive and tough economic business environment, can you afford this loss of productivity?

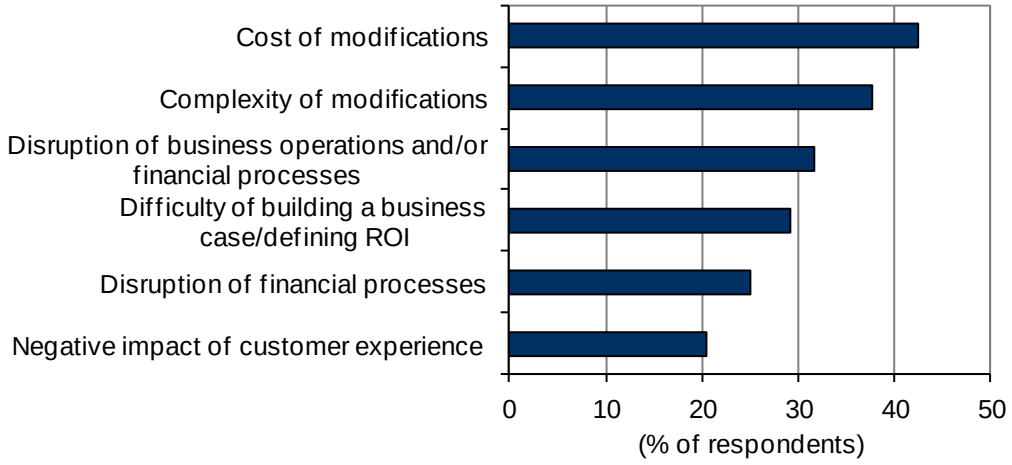
Obstacles to Successfully Modifying ERP Systems

In any IT project, some obstacles have to be overcome, but in the case of modifying ERP systems to meet changing business needs, the survey respondents identified areas that could be considered serious impediments to successful projects. Figure 6 shows the top 6 major obstacles to successfully modifying an ERP system.

FIGURE 6

Major Obstacles to Modifying an ERP System

Q. In your experience, which, if any, of the following factors have been major obstacles to successfully modifying your company's ERP system?



n = 167

Source: IDC, March 2013

It's not surprising, given the frequency of change and the disruptions associated with making system modifications, that cost was a major issue for 42.5% of the respondents. What's more troubling, though, is the high percentage of companies that experienced disruption of business operations and financial processes and even negative impact on customer experience. In a business climate where customer experience is the number 1 priority for most businesses, risking negative impact on customers and perhaps even loss of customers and subsequent revenue is a high price to pay for ERP system modifications.

Cost of Change

So what does this ongoing system maintenance cost a business? The average costs per year, based on the survey responses, are listed in Tables 4 and 5.

TABLE 4

Annual Average Cost of Change by Category of Expense ($)

Category of Expense	Cost
Maintenance	251,655
Hosting	275,313
Subscription	250,154
Internal costs	288,029
External costs	276,542
Other	114,999

Source: IDC, March 2013

TABLE 5

Annual Average Cost of Change by License Type ($)

License Type	Total
Perpetual on-premises	930,883
Perpetual hosted	1,206,196
Subscription	929,724

Source: IDC, March 2013

Although the averages themselves are significant, at the extremes, some companies are actually spending over $4.1 million per year to maintain their ERP systems. In fact, 5.4% of respondents reported spending over $1 million in external costs alone.

Learning to Accept the Unacceptable

With the extreme level of costs to the business, coupled with loss of productivity, frequency of change, and general business disruptions, one would expect a high level of dissatisfaction with costs, if not for the systems. Unfortunately, though, it seems that the regular yearly costs and investment of resources have become "acceptable" in most of the companies surveyed. 76.6% reported that the overall costs of the project met expectations, and only 13.2% thought that the project costs did not meet expectations. Investing around $1 million a year in maintaining and modifying an ERP system would seem to have become the accepted "norm." It also would seem that investing in brute force change is much more common than investing in flexible systems that could much more easily and cheaply meet business needs.

CONCLUSION

ERP systems and the process automation and business insight they deliver are a business necessity, but they come with a high level of investment. However, the up-front investment is only a small part of the "story." Meeting changing business needs and modifying the ERP systems to enable those changes can require substantial effort and costs. If this cost was a rare occurrence, it might be acceptable to maintain inflexible systems. Unfortunately, though, the survey shows that meeting business change is an ongoing and regular activity that carries annual average costs of $1 million or more. Other key findings from the survey are as follows:

1. Meeting changing business requirements involves moderate to substantial underlying ERP system changes.

2. Change issues aren't being resolved by newer ERP systems.

3. Customizations, often necessary during the implementation of ERP systems, have long-term risks and implications for ongoing system maintenance.

4. Many companies choose to suffer with managing one or more ERP systems rather than deal with the complexity and costs of consolidation.

5. Due to business changes, 15% of the respondents were forced to reimplement the entire ERP system. Of those, 60% had initially spent over $2.5 million.

6. The cost of system modifications not only is direct but also includes a substantial amount of lost productivity.

7. The average annual costs of maintaining ERP systems and meeting changing business needs are up to $1.2 million, but in the extreme, they can exceed $4.1 million per year.

8. The frequency of change and the subsequent investment to make the ERP system support the business have become so common that many businesses simply accept that there is no better way to operate the business.

When evaluating the costs of an ERP system, organizations must look at more than the up-front implementation and licensing investment. In addition to overall fit, the ongoing — and often substantial — maintenance and costs to keep the system in sync with business needs must be a large consideration in the purchase decision. The system must meet most of the current business needs of course, but it must be flexible and adaptable enough to continue to meet business needs for many years without being a drain on precious resources.