



A BPTrends Report

The State of Business Process Management 2016

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Introduction

BPTrends conducted our first BPTrends Market Survey in 2005, two years after we launched BPTrends.com and after the publication of Paul Harmon's best selling book, *Business Process Change*. Since then, we have continued to conduct the same survey every other year, modifying it only when we felt it was important to capture new developments. We publish these BPTrends Market Survey Reports on BPTrends and we make them available to our members and readers FREE of charge, as a service to the business process community.

This report summarizes information provided by over 100 respondents who participated in our BPTrends survey in September and October of 2015. The report analyzes the responses and compares them with the responses from the five previous BPTrends surveys that were conducted in 2005, 2007, 2009, 2011 and 2013. We hope this survey will provide benchmarks that the Business Process Management (BPM) community can use to gauge the evolution of BPM.

The respondents to this survey are members and/or readers of BPTrends and reflect the perspectives of a broad base of business managers, BPM consultants, BPM practitioners, and business analysts from a broad cross section of international organizations interested in BPM.

Business Process Management or BPM has been high on most lists of important business topics since 2003. Most people think of BPM as the logical continuation of the interest in business processes that started in the Eighties and reached a crescendo in the mid-Nineties with Six Sigma, Business Process Reengineering, Workflow, and ERP software. Because of its extensive roots, and because there are several new approaches included in today's discussions of BPM, it continues to be difficult to develop a consensus regarding a clear definition of BPM. Like any phrase that is comprised of familiar words and embraced by a number of different communities – including executives, business process consultants, business analysts, Six Sigma and Lean practitioners, business architects, CIOs, and software developers – the phrase *Business Process Management*, or *BPM*, means different things to different people. There's little we can do to force uniformity on such a diverse and rapidly changing practice but we can at least identify the different ways the term *BPM* is used and report on the goals of each of the different groups using the term. To minimize confusion, we wrote multiple-choice questions and tried to provide precise descriptions in an effort to assure that everyone understood the choices.

This survey has been conducted six times, in 2005, 2007, 2009, 2011, and in 2013. In each case we conducted the survey in the fall and then issued the report in Q1 of the following year. We have used more or less the same questions in each survey in order to develop an understanding of the BPM market. We believe this constitutes the best longitudinal survey of the development of the BPM market in available today.

Throughout this Report, we use a number of terms we assume are familiar to most readers. Specifically, we have assumed readers are familiar with (1) the BPTrends BPM Pyramid that describes processes in terms of three levels within an organization – the Enterprise Level, the Process Level and the Implementation Level, with (2) Carnegie Mellon University's Capability Maturity Model Integration (CMMI) which identifies five process maturity levels, with (3) the way BPTrends classifies business process software products, and with (4) Geoffrey Moore's way of classifying the development of technology markets. For readers who are unfamiliar with any of these terms and concepts, we have included explanations in the Appendix, *Concepts Used in this Report*.

We are grateful to the many BPTrends members and visitors who participated in the Survey. Without the many respondents who took the time to participate in our surveys, we would not have been able to produce these valuable reports. For our part, we have reported and summarized the data as accurately and fairly as we could.





We also want to thank the entire BPTrends team that has been involved in the production of these reports over the years with special thanks to Paul Heidt for producing the tables included in this report and for carefully editing the report.

As always, we welcome reader's comments and suggestions regarding this BPTrends BPM Market Survey as well as your suggestions for topics and issues you would like to see included in future reports.

Finally, we hope this report will provide our members and readers with insights that will suggest new ideas for future developments in your own organizations.

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Executive Summary

This is the sixth comprehensive BPM market survey that BPTrends has undertaken. In the first Survey, conducted in 2005, we established the basic trends in the process market and we have continued to track and report on them in our 2007, 2009, 2011, 2013, and in this, our 2015 Survey. This has been an interesting time to observe the market. In 2005 there was great enthusiasm for a variety of process change initiatives, much of it focused on the possibility of using BPMS tools to automate the management of business processes. By 2007 the US saw the beginning of a financial crisis that became a major recession in 2008 and economic activity has been depressed for much of the time since. The recession has slowed economic activity in some parts of the world, like the United States and Europe, while other areas, like China, Australia, and Canada, have remained, until recently, relatively unaffected. These conditions make it difficult to separate trends in BPM from alternations that resulted from changes in the overall economy that have little to do with BPM.

In 2011 it appeared that a change was taking place in the BPM market. For the first time since we began gathering data, there are clear indications that some organizations are becoming more mature in their approach to process work. At the same time, it seemed that organizations were beginning to embrace the use of Business Process Management Suites (BPMS) and that process management software was being more widely used in 2011 than it was two years prior. We looked forward to see if the trends that seemed apparent in 2011 were also present in the 2013 data. It wasn't. In 2013 the overall pattern of responses was very much like the pattern in 2007 and 2009, suggesting that the 2011 data represented an exception rather than a real trend. This year, once again, the broad trends observed in 2007 and 2009 predominate.

The strongest conclusion that can be drawn from this report is that it provides a very solid description of the business process situation today. We have asked the same questions for a decade now and gotten the same answers. The respondents have changed, have grown and declined, included more business people and then more IT people, and through it all the answers to our questions remain the same. They changed a bit in 2011, but returned to the "standard pattern" in 2013 and remain the same in 2015. Most respondents think that BPM is about managing process change throughout the business. They don't think it simply refers to a new software technology. Most organizations are at Level 2 on the CMMI maturity scale. They have invested in defining their processes, but have not invested in aligning processes throughout the enterprise.

The second major conclusion is that there has been little development in the market, as a whole. Individual companies may have become more process-oriented, invested in BPMS, or created a business process architecture, but most companies have not. The state of BPM, as we defined it in 2005 is roughly the same today.

In 2015, as in all years that we have surveyed organizations, the dominant concern is to reduce costs by making processes more efficient. Companies continue to spend money on BPM initiatives precisely because they hope that investments in process work will enable them to become more efficient and productive.

Most organizations spend under \$500,000 on process work in the course of a year. Over the course of time a few have moved up and spend more, but there is hardly a rush to spend more on BPM. Perhaps in the future as the world emerges from the recession years and embraces new technologies, things will change.

There are, of course, many different ways to approach process improvement. Some organizations focus on Six Sigma or Lean and hope to achieve incremental improvements in specific processes. Others invest in automation in hopes of long term reductions in labor costs. Still others invest in major process redesign efforts or in transformation initiatives designed to better coordinate process management throughout the organization. Broadly speaking, investing in better coordination and management of process work has been on the rise, while incremental approaches are slowly declining, or at least being integrated into larger, organization-wide BPM initiatives.

Google provides a very nice research tool, called Google Trends, which you can use to see how two or more terms compare as determined by how many times people search for that term on Google. In 2005, when this





survey began, a search suggested that BPM and Six Sigma were equally popular search terms. Since then Six Sigma has declined by almost two thirds, while BPM dipped slightly in 2006 and 2007 but is now nearly back to where it was in 2005. Similarly, Business Architecture barely showed up on the chart in 2005 and it is barely on the chart today. Of course there are millions of people searching for things on the internet, and to barely show up on the chart is still to be a topic that tens of thousands of people investigate. Overall, however, the major trends are clear. There is only a little interest in business architecture, there is a declining interest in six sigma, and there is a continuing, significant interest in BPM. (We can't investigate Lean, since the word can mean so many different things.) (see [A], bottom of page 10)

Broadly, the BPM market appears to be growing, albeit slowly. That said, however, it's hard to say exactly what we mean by the BPM market. The easiest way to think of it would be to think of it in terms of software products (BPMS tools sold) or other activities, like training and conferences that can be easily measured. Sales, however, hardly capture the field, because the market has clearly gone through peaks and slumps. For a while, in the Eighties, Six Sigma was very hot. Then, it faded somewhat. Then, in the early Nineties, Business Process Reengineering was very hot, and then it faded. ERP, Lean, and recently Business Process Management and Business Process Management software have all enjoyed periods of intense attention and have then receded. At the moment BPMS seems to be waning and Case Management products and Cognitive Computing seem to be on the rise. Should we think of all these different enthusiasms as separate markets, or just phases in the larger business process market?

All of the technology products and methodology hardly capture the essence of the process movement, however. The real process market is made up of the activities that occur within organizations that seek to create, or change business processes or to transform organizations. Estimating the value involved or the rise and fall of interest is very hard. As far as we can tell, the activities underway at any given business, at any given time, largely reflect the interests of the leading executives at the organization. That is not to say that there aren't people in every organization who are interested in process change and that there aren't teams within departments or in IT that are working on process projects. It is to say, however, that when one tries to characterize an organization as a whole, one usually finds that the overall interest in process change reflects the interest of the senior executives. It is the executives, after all, who make decisions about how funds and resources will be allocated, and thus they decide if process projects are to be funded, or put on hold.

If the leading executives aren't very interested in processes, then the activities within that organization are more or less routine activities and are focused on dealing with specific problems – fixing a broken process or trying out some new technology on a limited basis. On the other hand, if the leading executives get excited about the potential of process work, then the organization begins to launch major initiatives, train employees in process concepts and undertake major transformation projects.

It would be nice to say that once an organizations executives “get the process bug” that organization goes into high gear and goes on to become a committed, process-focused organization. A few organizations do seem to have internalized the focus on process and remain process leaders year in and year out. Most, however, get excited about processes, for a time, make major strides, then relapse – usually when the senior executives change. Later, when another executive begins to push the process perspective, the organization has to reinvent much of its process infrastructure before it can attempt major new initiatives.

This year 24% of our respondents said their executives were supporters of process work. In the past, respondents have said executive interest ranged from 28% in 2005 to 19% in 2009, to 31% in 2013. At this point it's important to recall that our respondents only represent organizations that are already interested in process work. A survey of employees of all companies would probably reveal a much smaller executive interest in process.

In 2005 respondents were overwhelmingly from North America and Europe. This year, even though we had far fewer respondents, they came from almost all continents. Clearly the interest in BPM has spread around the world, although different countries focus on different aspects. Brazil and Saudi Arabia both have very active Association for Business Process Management Professional (ABPMP) chapters, suggesting a broad





business interest in process. China when it hosted the International BPM Conference two years ago seemed very focused on using IT to automate processes, and so forth.

We judge process maturity by using an approach originally developed by the Software Engineering Institute (SEI) at Carnegie Mellon University called Capability Maturity Model Integration (CMMI). An explanation of this approach is provided in the Appendix to this report for any who may not be familiar with the approach. We ask a number of questions each year to help us gauge the process maturity of respondents' organizations. In each question, we ask about a particular type of process work and ask if the organizations never do it, do it occasionally, frequently, most of the time, or always. We assume that organizations that undertake certain process tasks more frequently are more mature.

In Figure 1 we show the averages for 2013 and 2015. They don't differ that much from the results obtained in 2005 or 2009. It's hard to argue that organizations are becoming more mature in their understanding of processes. It's easier to argue that some seem to become more mature and then regress while others make progress. Overall, however, the number of really mature organizations – the ones consistently doing almost everything right – hasn't changed during the time we have been doing this survey. As we suggested earlier, there are a few organizations that really are process-focused and there are the rest that seem to get better, decline and then get better again.

| | Never | Occasionally | Frequently | Most Times | Always |
|--------------------------------|------------|--------------|------------|------------|-----------|
| Processes Documented | 4% | 50% | 29% | 14% | 4% |
| Standard Processes | 9% | 48% | 20% | 20% | 1% |
| Value Chains Modeled | 7% | 44% | 26% | 19% | 5% |
| Measures for Major Processes | 14% | 59% | 10% | 11% | 6% |
| Consistent IT Support | 3% | 59% | 17% | 18% | 3% |
| Skills Defined | 8% | 47% | 28% | 14% | 3% |
| Managers Trained | 18% | 56% | 13% | 11% | 2% |
| Managers Use Data | 13% | 60% | 16% | 8% | 3% |
| Process Improvement | 12% | 54% | 18% | 13% | 4% |
| Average for 2015 Survey | 10% | 53% | 20% | 14% | 4% |
| Average for 2013 Survey | 11% | 51% | 23% | 13% | 2% |

Figure 1. Questions about the frequency of specific organizational activities that suggest organizational maturity.

For many, BPM has always been strongly associated with BPM software. It isn't a tight or necessary conjunction: One can do process work without considering BPMS tools and many do. On the other hand, nearly everyone appreciates the idea that it would be convenient if a process manager, say a supply manager at a large organization with worldwide supply lines, could look at a computer screen and get an up-to-the-moment summary of where things are in the supply chain and where any bottlenecks or quality problems are developing. Similarly, anyone involved in finance can appreciate how a loan committee would like to be able to make adjustments in loan rates or charges, quickly, without having to request that IT reprogram software systems. In essence, these are the promises that BPMS vendors have been offering since they became active in 2003.

The problem with any new technology is that it takes time to incorporate it into applications that deliver measurable improvements. Thus, there have been claims from vendors and reports from early adopters of both early successes and failures and, gradually, a track record has emerged. BPMS has been a difficult technology to assess because it has mutated as it has developed. What began as workflow soon incorporated business rules, process modeling, business intelligence, and process mining. Simultaneously, the technology shifted its infrastructure from a client-server based to an SOA or cloud-based technology. The rapid





evolution of BPMS products and the many vendor acquisitions have made it difficult for organizations to evaluate the functionality and the benefits of the various tools. As a direct consequence of both the recession and the rapidly changing BPMS offerings, most companies have not rolled out large scale BPMS implementations, choosing, instead, to experiment with a variety of tools from different vendors.

We have often observed that many organizations purchased BPMS tools long before the organizations were mature enough to use the tools effectively. An organization needs to understand and redesign its business processes so that they are reasonably efficient before the organization can benefit from automating them. In the worst case, some BPMS vendors repeated the mistakes of some ERP vendors and encouraged organizations to “pave cow paths” when they would have been better off advising them to wait to automate until they had explored the possibility of “creating freeways.” As a result, time has been wasted, some experiments have been unsuccessful, and the market, as a whole, has not developed as fast as the BPMS vendors had hoped.

Data from our 2007 and 2009 surveys support this assertion. There has been gradual growth in BPMS sales, but there has not been a surge. In 2011, however, we thought we detected the beginnings of a significant increase in sales, but that faded in 2013. Consider the answers to two questions.

When we asked what BPM products organizations were using, respondents said they were benefiting from the use of a BPMS suite, as follows:

| 2005 | 2007 | 2009 | 2011 | 2013 | 2015 |
|------|------|------|------|------|------|
| 23% | 24% | 26% | 37% | 24% | 28% |

And, when we asked what BPM products organizations were considering purchasing, the responses reported the following with regard to BPMS:

| 2005 | 2007 | 2009 | 2011 | 2013 | 2015 |
|------|------|------|------|------|------|
| 11% | 25% | 21% | 29% | 12% | 19% |

In both cases there seemed to be a change in 2011 but that has disappeared in 2013. In hindsight, we had more respondents in 2011 than ever before and they clearly skewed our results somewhat. This year we have fewer respondents and the pattern of responses we have had in earlier years. We assume that this year’s result represents the “typical BPTrends reader” who is more likely to be a business manager or practitioner, and that the 2011 pattern represents a deviation because it had more respondents who were based in IT and where interested in BPMS.

Figure 2 describes the various activities and levels where respondents expect to see more spending in 2015 (in black). The percentages in red represent the responses from the 2011 Survey. The percentages in blue represent the responses from the 2013 survey. In some cases the numbers stay the same from 2011 to 2015, and in a few cases, they drop – but in some areas, they jump. Importantly, the area where we see the most activity is at the enterprise level. The core idea behind BPM – that organizations ought to coordinate their process efforts and manage processes as an asset is catching on. To support these efforts, companies are developing the business tools they need – things like a business process architecture, business process measurement systems, and business process governance systems – to do Business Process Management on an enterprise scale.

As with maturity, we are not suggesting that all organizations are rushing to invest in a process architecture. Instead, a modest number of organizations, probably mostly organizations that were already interested in becoming process-focused, are investing in the future and significantly improving their process management capabilities.

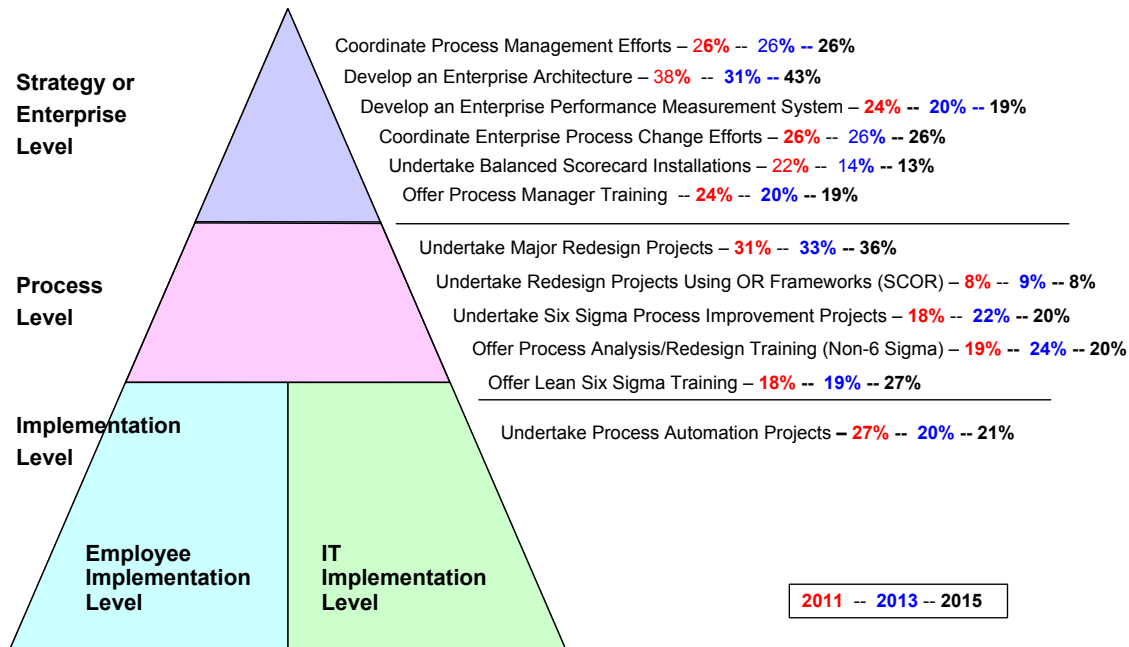


Figure 2. Respondents indicating where their companies will be doing more in 2016.

The 2015 survey covers a wide variety of process concerns in more detail than we can go into in this overview. The bottom line, however, is that the 2015 survey data suggests that the BPM market is evolving slowly and steadily. The broad patterns we have observed since the survey began remain the same. Most organizations are occasionally working at BPM. At the same time, a few leading organizations continue to make significant investments in BPM.

[A] Google Trends provides a check to assure that the trend lines reflect the topic being searched. The letters attached to the BPM trend line provide references to specific stories in which the term BPM is used. All refer to stories that involve Business Process Management. We tried to examine “Lean” as a stand-alone term and found that we could not. A search on “Lean” pulled stories on a wide variety of topics, few of which were related to “Lean” as it is used in the BPM or TPS communities.

Note: In compiling totals for the Figures representing Respondents’ answers, we rounded the total percentages to 100%, even though in some instances the percentages added up to 99% or 101%.

It’s probably too early to be sure that the recent economic confusion is really ending, but it certainly feels like the recovery is underway in North America. We expect that there will be quite a bit of growth in BPM in 2016 and fully expect that over the next several years, organizations throughout the world will have used Business Process Management techniques and technologies to achieve significant improvements in productivity and growth.



How Organizations Understand BPM Today

We began the 2015 survey, as we have begun all our surveys, by asking all respondents to tell us how they understood the term “Business Process Management,” how they would characterize their organization’s current interest in BPM, and to tell us what they thought was driving interest in BPM at their organizations.

The Meaning of BPM

People use the term “BPM” in many different ways. Some use BPM to refer to “Business Process Management.” Others use BPM to refer to “Business Performance Management.” Some use BPM to refer to a general approach to the **management** of process change, while others use it more narrowly, to refer to the use of software techniques to control the runtime management of business processes.

To better understand how our respondents use the term, we asked them to choose among four options, or to suggest an alternative to the four options we presented (see Figure 3).

Note in this chart and subsequent charts, we only report the **percent** of people responding for all years, save 2015. **For 2015 we report both the percent and the actual raw number of responses.** Thus 37 respondents said that BPM was a top-down methodology and those 37 respondents constituted 33% of those who responded to this question.

| Which of the following best describes your organization's understanding of BPM? (Choose one) | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| A top-down methodology designed to organize, manage and measure the organization based on the organization's core processes | 40% | 40% | 36% | 41% | 31% | 33% | 37 |
| A systematic approach to analyzing, redesigning, improving and managing a specific process | 26% | 29% | 34% | 27% | 32% | 25% | 28 |
| A cost-saving initiative focused on increasing productivity of specific processes | 12% | 13% | 13% | 15% | 18% | 14% | 15 |
| A set of new software technologies that make it easier for IT to manage and measure the execution of process workflow and process software applications | 16% | 9% | 8% | 13% | 9% | 11% | 12 |
| Other, Please Specify | 6% | 8% | 9% | 5% | 10% | 17% | 19 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 111 |

Figure 3. How organizations understand BPM.

There has been no major change in how respondents answered this question over the course of the past 10 years. The major difference was in the number of respondents that chose *Other* in 2015.

In 2011 it looked as if those who thought BPM is a software technology (what we would term BPMS or BPM software) had raised a little, but in 2013 the results moved back toward the results we obtained in 2007 and 2009. In 2015 those choosing to characterize BPM as a type of software ticked up again, but not significantly.

We suspect the return to the 2009 pattern reflects the fact that we have fewer respondents from IT or from vendor organizations and more from business and Lean and Six Sigma.



In past years we have applied a variety of data filters. Thus, we usually check to see if Europeans were more likely to think BPM meant something different from respondents from North America, or whether more mature organizations answered differently than less mature organizations, and so forth. We have done less analysis with filters this year, because we only had a little over 100 respondents. That, in turn, means that most sub-groups (like European and North American respondents) have fewer than 50 members. And, that, in turn, means that it's very hard to draw significant conclusions from such small samples. When we had over 300 respondents, and thus well over 50 respondents from different continents, we felt we could draw valid distinctions. With less than 50 respondents from each continent, we don't feel it's possible. We have, in the past objected to the validity of other surveys where analysts drew seemingly important conclusions from groups of 30 respondents. We don't want to do anything similar. Thus, we have made far fewer statements about filtered data this year.

Overall, the most important conclusion in the case of this question is that people differ as to the meaning of the term "BPM." Some people think BPM describes a systematic approach to managing and improving specific processes while another larger group considers BPM to be a top-down, organization-wide approach to process management. Only a few think BPM is a software technology, but that group has remained constant over the past eight years and seems likely to continue to do so. Most software vendors continue to refer to their products as BPM products and that certainly confuses some people. Anyone writing or talking about BPM needs to keep in mind that he or she is addressing a diverse audience and needs to carefully define how he or she intends to use the term BPM.

The Current Interest in BPM

We also asked respondents to describe their organization's current interest in BPM. If one looked at the 2011 results, one might have been inclined to suggest that BPM was becoming more strategic, but the 2013 and now the 2015 results suggest that was a fluke, and that today, the significant commitment of most organizations is to major process redesign work or to multiple process improvement efforts. Indeed, in 2015 we see an up-tick in organizations committed to initial or limited mid-to-low level projects. This is the first sign of what we believe is a slight shift in our audience. We believe that we have more organizations new to process work, this year, than we have had in the past. We'll develop this theme as we see other signs of it in subsequent questions.

| How would you characterize your organization's current interest in BPM? (Choose one) | | | | | | | |
|--|------|------|------|------|------|------|-----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Major strategic commitment by executive management | 28% | 26% | 19% | 31% | 21% | 24% | 24 |
| Significant commitment to multiple high level process projects | 23% | 24% | 33% | 30% | 32% | 27% | 27 |
| Initial commitment to limited number of mid or low-level projects | 23% | 25% | 29% | 26% | 33% | 35% | 35 |
| Exploring opportunities | 21% | 23% | 16% | 12% | 11% | 14% | 14 |
| No interest | 6% | 2% | 3% | 2% | 3% | 1% | 1 |
| Total | 101% | 100% | 100% | 100% | 100% | 100% | 101 |

Figure 4. The current commitment of respondents' organizations to BPM

Business Drivers of BPM

A **business driver** refers to a situation, strategy, or goal that motivates management to support business process change. Historically, the two leading drivers of business process work have always been:

- (1) the need to save money
- (2) the need to improve an existing process or to create a new business process.



Other important traditional drivers are the need to:

- (3) improve customer satisfaction
- (4) improve organizational responsiveness
- (5) improve business coordination and control.

More temporary, ad hoc drivers can be:

- (6) compliance with new regulations like Sarbanes-Oxley and IT upgrades
- (7) one-time events like a merger or acquisition.

In 2005 we asked respondents to choose THE single major driver. In 2007 and in years since we have asked respondents to choose the major drivers and let them choose more than one.

In 2015, as in all previous years, the major driver was the “need to save money by reducing costs and/or improving productivity.” The second most important driver, in 2015, as in 2013, was the “Need to improve customer satisfaction to remain competitive.” The “need to improve existing products” dropped to third place (see Figure 5).

| What are the major business drivers causing your organization to focus on business process change? (Choose one or more) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Need to save money by reducing costs and/or improving productivity | 33% | 56% | 56% | 57% | 54% | 53% | 58 |
| Need to improve existing products, create new products or enter new lines of business to remain competitive | 19% | 36% | 36% | 28% | 34% | 33% | 36 |
| One time event (merger or acquisition) | 2% | 4% | 4% | 4% | 3% | 5% | 5 |
| Government or business risk management(Sarbanes-Oxley, ISO 9000) | 11% | 17% | 17% | 13% | 13% | 17% | 19 |
| Need to improve customer satisfaction to remain competitive | 19% | 37% | 37% | 31% | 37% | 46% | 50 |
| Need to improve management coordination or organizational responsiveness | 23% | 51% | 51% | 38% | 35% | 30% | 33 |
| Need to improve management of IT resources (ERP applications) | | | | | | 15% | 16 |
| Need to reduce cultural resistance to process change | | | | | | 17% | 19 |
| Other, Please Specify | | | | | | 12% | 13 |

Figure 5. Business drivers causing organizations to focus on business process change.



Process Maturity

We asked respondents to tell us how their organizations performed a number of business process activities, ranging from process documentation through modeling and process management. In each case, we asked whether their organization *Never* did it, did it *Occasionally* (1-30% of the time), did it *Frequently* (31-60% of the time), did it *Most Times* (61-99%), or *Always* did it (100% of the time).

We asked these questions because we wanted to get an idea of where most organizations were in mastering and performing common business process activities. We set the questions up to suggest a maturity scale, like CMMI. If organizations “Never” performed common BPM activities, we assumed they were immature organizations that weren’t focused on processes (CMMI Level 1). If organizations “Occasionally” performed most of the common business process activities, we assumed that would suggest they were around Level 2 on a CMMI scale. Likewise, if organizations “Frequently” performed most of the common business process activities, we assumed that would suggest they were around Level 3 on a CMMI scale. Organizations that performed most of the activities *Most Times*, we assumed were around Level 4 on the CMMI scale. For those unfamiliar with the CMMI maturity scale, it is described in an Appendix to this report.

We will consider each part of the question independently and then consider the overall results.

Are Work Processes Documented?

We asked if work processes were documented and kept up to date. Any organization that undertakes a process redesign or an ISO 9000 certification effort must create some kind of process documentation. Only companies with a real commitment to processes, however, have a system that consistently maintains process documentation. We weren’t surprised that most respondents had some kind of process documentation, and we weren’t surprised that only a few have a systematic way of keeping their documentation up to date. (See Figure 6)

| Are business processes documented and kept up to date? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|---|------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | | | 3% | 3% | 3% | 4% | 4 |
| Occasionally (1-30%) | 46% | 55% | 46% | 38% | 49% | 50% | 54 |
| Frequently (31-60%) | 24% | 24% | 30% | 31% | 29% | 29% | 31 |
| Most Times (61-99%) | 23% | 14% | 17% | 22% | 17% | 14% | 15 |
| Always (100%) | 4% | 4% | 5% | 5% | 2% | 4% | 4 |
| Total | 97% | 100% | 100% | 100% | 100% | 100% | 108 |

Figure 6. Work processes are documented and documentation is kept up to date.

2015 looks very similar to 2013; most organizations *Occasionally* keep their processes documented, which we interpret to mean that most organizations are at level 2 and the next largest group are at level 3 in maturity.

Do Units That Perform Similar Activities Use Standard or Similar Processes?

Many large companies perform similar processes throughout a variety of different divisions, business units, or geographical units. For example, all sales units have processes for documenting the existence of a prospect, or keeping track of customers and pending orders. Obviously, efficiencies can be achieved if all of these similar processes are consistent. Thus, it would be good if every unit or division within the organization gathered the same information on customers and entered it in the same way in the same database. It would mean that sales employees would be more easily inter-changeable, that enterprise information would be more



consistent, and that the organization would only need a single instance of an Enterprise Resource Planning (ERP) application, worldwide, to support customer information entry.

Unfortunately, many organizations have been created via mergers and acquisitions, and the processes performed in specific units reflect the historical origins of the units. Thus, large organizations typically end-up supporting a variety of different ways of performing the same tasks. Most process-focused organizations, as they move from CMMI Level 2 to CMMI Level 3, undertake a major effort to standardize common processes throughout the organization. For some organizations, the establishment of standard business processes becomes a major driver for process change, especially when pursued in conjunction with an effort to standardize on a single instance of ERP throughout the organization (see Figure 7).

| Do units that perform similar activities use standard or similar processes? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 6% | 6% | 2% | 5% | 5% | 9% | 10 |
| Occasionally (1-30%) | 47% | 46% | 46% | 39% | 51% | 48% | 51 |
| Frequently (31-60%) | 24% | 29% | 34% | 29% | 26% | 21% | 22 |
| Most Times (61-99%) | 19% | 17% | 13% | 22% | 17% | 21% | 22 |
| Always (100%) | 4% | 2% | 5% | 5% | 2% | 1% | 1 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 106 |

Figure 7. Are similar processes throughout the company performed in a similar way?

Once again, we see that most respondents in 2015 said that their organization only *Occasionally* perform similar tasks in a standard manner. In this particular instance there has been no significant change in the overall pattern over the years.

Are Standard Process Models Defined for Each Major Process?

We asked respondents if they had defined the high-level processes that make up their major value chains. Typically, organizations start defining processes at the departmental level (CMMI Level 2). It's only when process becomes an enterprise concern, at CMMI Level 3, that companies begin to think in terms of value chains, of the major processes that make up each value chain, and of aligning and streamlining the flow of high-level processes across departmental boundaries. It often occurs as part of an enterprise-wide business process architecture initiative (see Figure 8).

As you can see from Figure 8 there seems to have been real progress in this area in the past two years. More organizations indicate that they *Occasionally* or *Frequently* have process models in place, at least for their high-level processes, than in the past. Without more data it would be hard to be sure why – perhaps the widespread availability of ERP models, or the widespread use of BPMN, or the emphasis that has been placed on modeling processes in recent years, or perhaps some combination of these.



| Are process models defined for the major value chains in the organization? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 20% | 11% | 10% | 9% | 11% | 7% | 7 |
| Occasionally (1-30%) | 32% | 44% | 39% | 31% | 41% | 44% | 47 |
| Frequently (31-60%) | 22% | 23% | 22% | 25% | 23% | 26% | 27 |
| Most Times (61-99%) | 20% | 17% | 24% | 24% | 19% | 19% | 20 |
| Always (100%) | 6% | 5% | 5% | 10% | 5% | 5% | 5 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 106 |

Figure 8. Does the organization have standard process models for each of its value chains?

Are Standard Measures Defined for Each of the Major Processes?

We asked participants if their companies had standard measures defined for evaluating the performance of value chains and major processes and sub-processes. Most companies have a set of KPIs (Key Performance Indicators) that are used to evaluate corporate performance. Too often, however, these performance metrics are not related to specific value chains or business processes but simply assigned to functional units. In these instances, a change in a KPI does not automatically suggest which value chain or process should be examined or which processes need improvement. In a process centric organization the KPIs are specifically designed to measure the performance of business processes (see Figure 9).

| Are performance measures defined for evaluating the success of all major processes and sub-processes? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 20% | 11% | 10% | 10% | 14% | 14% | 15 |
| Occasionally (1-30%) | 32% | 44% | 39% | 42% | 55% | 59% | 65 |
| Frequently (31-60%) | 22% | 23% | 22% | 24% | 17% | 10% | 11 |
| Most Times (61-99%) | 20% | 17% | 24% | 18% | 12% | 11% | 12 |
| Always (100%) | 6% | 5% | 5% | 6% | 2% | 6% | 7 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 110 |

Figure 9. Does the organization have standard measures to evaluate the performance of major processes?

Figure 9 shows a significant growth in *Occasionally*, but significant loss in *Frequently*.

Is Support Provided by Automated Applications Consistent with the Processes?

We asked how well the existing software applications supported the company's processes. In an ideal world, business people would define the best possible processes and then IT would create tailored applications to support those processes. In the real world, processes are constantly changing and applications that are purchased from vendors are difficult to tailor to align with a specific organization's way of working. Thus, in many cases, employees find themselves "fighting" the software applications that are supposed to help them. For example, we have seen many situations where sales or service people try to enter data, find the system won't accept it, and then smile, explain that the system doesn't like the entry, but that they know how to get around the problem, and proceed to enter the data in some other way (see Figure 10).



| Is the support provided by automated applications consistent with the defined processes used by the organization? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 8% | 10% | 8% | 9% | 9% | 3% | 3 |
| Occasionally (1-30%) | 42% | 51% | 48% | 39% | 54% | 59% | 63 |
| Frequently (31-60%) | 33% | 23% | 24% | 25% | 24% | 17% | 18 |
| Most Times (61-99%) | 14% | 14% | 18% | 20% | 12% | 18% | 19 |
| Always (100%) | 3% | 2% | 3% | 6% | 2% | 3% | 3 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 106 |

Figure 10. How well does the existing software support processes?

We see that there is a significant drop in *Never*, and a significant increase in *Occasionally*. Most organizations report that the software applications that support their processes are *Occasionally* aligned. In the long run, this should worry ERP vendors. Many companies have invested in ERP to get modern performance reporting systems. At the same time, most report that the ERP software has forced them to perform tasks in ways that are incompatible with their preferred ways of working. BPMS will increasingly offer companies an alternative – or at least a way to “adjust” their ERP with more flexible process models that can be more easily changed. We estimate that well over a third of the BPMS applications developed to date have been developed as an alternative to ERP, or to make ERP more agile. As BPMS case studies get more publicity, companies will increasingly see BPMS as a solution that gives them both performance data, and strong support for the organization’s preferred approach to working.

Are the Skills Needed to Perform the Tasks Defined and Documented?

We asked if respondents’ organizations had defined the tasks needed for major processes, and then defined the skills needed for specific jobs to assure that people were being hired or trained to perform the requisite tasks. It’s one thing to define the activities that need to be performed. It’s another thing to define exactly what knowledge and skills are required to perform the activities. The latter requires a system of job definitions or job models that are created by practitioners knowledgeable in human performance. It requires that the tasks be carefully analyzed and that the human activities be precisely specified. If the human task is manual, then a step-by-step description of the work is required. If the task is cognitive, then a description of the knowledge and business rules required to make decisions is often required. If the task requires a coordinated decision, then a description of all who must participate in the decision must be provided.

This kind of human performance analysis has been well defined in more operational areas and is usually done precisely in manufacturing jobs. It is harder to do in more complex jobs where more knowledge and greater flexibility is required. Some analysts refer to these more complex jobs as “knowledge work” and propose that new technologies are needed to define human performance requirements in these areas. Examples of knowledge work range from sales activities and customer service through jobs like new product development and software systems development. In these cases, it is easy to specify the broad, high-level activities that need to occur, but hard to define exactly what specific steps need to be followed, as they vary greatly, depending on the specific circumstances the employee faces. Some have argued that these tasks are better conceptualized in terms of rules that constrain actions rather than as step-by-step procedures. In any case, we would expect manufacturing companies to have well-defined employee job descriptions, and we would expect service industries and organizations that involve lots of knowledge processing activities to be less likely to have well-defined job descriptions (see Figure 11).



| Are the skills needed to perform the tasks in the major processes defined and documented? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 8% | 9% | 5% | 8% | 12% | 8% | 9 |
| Occasionally (1-30%) | 32% | 51% | 48% | 41% | 49% | 47% | 50 |
| Frequently (31-60%) | 30% | 22% | 23% | 26% | 24% | 28% | 30 |
| Most Times (61-99%) | 26% | 15% | 20% | 20% | 14% | 14% | 15 |
| Always (100%) | 4% | 3% | 3% | 6% | 1% | 3% | 3 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 107 |

Figure 11. Do organizations have descriptions of the skills required to perform processes?

In this case there appears to be little progress. In most organizations, the skills necessary to perform a task are only *Occasionally* documented.

Are Managers Trained to Do Process Redesign and to Manage Processes?

We changed this question in 2007. In 2005 we asked if the company provided training in redesign and project management. In 2007 we asked if managers were trained to do redesign and to manage projects. Thus, it probably isn't fair to compare the results between the two years too closely. From 2007 to 2009 the broad pattern has remained the same.

In either case, there does not seem to be a major shift in company maturity in this area. If anything, a few more companies say they do this *Occasionally* and a few less say they do it *Frequently*. (see Figure 12).

| Are managers trained to analyze, design and manage business processes? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 13% | 20% | 14% | 19% | 24% | 18% | 19 |
| Occasionally (1-30%) | 37% | 50% | 49% | 40% | 52% | 56% | 60 |
| Frequently (31-60%) | 29% | 18% | 21% | 19% | 15% | 13% | 14 |
| Most Times (61-99%) | 16% | 11% | 13% | 15% | 5% | 11% | 12 |
| Always (100%) | 5% | 1% | 3% | 7% | 4% | 2% | 2 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 107 |

Figure 12. Are managers trained to analyze, redesign or manage processes?

Does Your Organization Have Process Managers Who Are Responsible for Processes?

In 2011 we asked a new question to probe the nature of process management in a bit more depth. We asked what kinds of "process managers" organizations had. We were interested to know whether companies had value chain managers, if they had managers for sub-processes within a division, or if they had managers for even smaller processes. In 2011, we asked them to choose one response and in 2013 we allowed respondents to choose more than one response.



| Does your organization have managers who are responsible for processes? (Choose more than one) | | | | | | | |
|--|------|------|------|------|------|------|-----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Managers responsible. for value chains | | | | 19% | 25% | 24% | 26 |
| Managers responsible for major processes within divisions | | | | 32% | 42% | 38% | 42 |
| Managers. responsible for specific processes | | | | 27% | 44% | 50% | 55 |
| All managers trained to think as process managers | | | | 13% | 14% | 10% | 11 |
| Other | | | | 10% | 14% | 14% | 15 |
| Answered by | | | | | | | 110 |

Figure 13. What are an organization's process managers responsible for?

We continue to be impressed that so many of the organizations in the survey had value chain managers, and even more impressed that so many organizations had managers within divisions who were responsible for specific processes, major or otherwise.

We have always thought that assigning process managers was the key to becoming a process-centric organization. At the same time, in our experience, it's the hardest thing for companies to commit to. In the abstract, everyone agrees that if your organization is serious about using processes to get results, someone has to be responsible for getting those results. Organizations without process managers too often find that, when something goes wrong, no one is responsible. On the other hand, organizations are very committed to the departmental management structure that most managers "grew up" with and any change in that approach is usually fiercely resisted.

Unfortunately, understanding the answers to this question is difficult. One way to read it is to imagine managers who are entirely focused on managing a process. A value chain manager, responsible for the entire Retail Sales process, is normally a process manager focused on getting lots of smaller processes to work together. A sales manager may be either a unit manager, reporting to the head of the Sales Department, or a process manager, responsible for fitting a variety of sales activities together into a whole. Often, when one looks at small scale processes – like a regional sales situation – the same manager wears two hats and is both a functional manager, reporting to the head of sales and a process manager, reporting to the value chain manager. Thus, when an organization says that its managers are trained to think as process managers, it's hard to be sure how much of their time is actually devoted to process management activities.

Do Process Managers Use Performance Data to Manage Processes?

Continuing to focus on managers, we asked if the managers at the respondents' organizations used performance data to manage their processes. Implicitly, this assumes that the processes are monitored and that the data is organized in a manner that can support decisions. In most companies this kind of data is more common at the lower levels of the organization and less likely to be available at higher levels. Thus, for example, supervisors usually monitor the performance of workers and can usually point to specific instances where employees succeeded or failed to perform specific activities. The problem becomes more complex as one looks at higher-level managers who, in effect, manage other managers. Higher-level managers can only manage their subordinates using process performance measures if their subordinates are assigned responsibilities for specific processes and know what measures are used to evaluate the success or failure of the process.

In CMMI terms, this question probes the extent to which the company is moving from CMMI Level 3 to Level 4 and is focusing on measuring and managing processes in a systematic manner (see Figure 14).



| Do process managers use performance data to manage their processes? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 16% | 16% | 14% | 13% | 13% | 13% | 14 |
| Occasionally (1-30%) | 39% | 48% | 49% | 40% | 55% | 60% | 63 |
| Frequently (31-60%) | 26% | 21% | 21% | 24% | 21% | 16% | 17 |
| Most Times (61-99%) | 16% | 13% | 13% | 20% | 10% | 8% | 8 |
| Always (100%) | 4% | 2% | 3% | 3% | 2% | 3% | 3 |
| Total | 101% | 100% | 100% | 100% | 100% | 100% | 105 |

Figure 14. Do managers use performance data to manager their processes?

Once again notice how *Occasionally* is up, compared to previous years, and how *Frequently* and *Most Times* are down. It's hard to imagine that respondent companies have regressed and become less mature over the last two years. It's easier to explain this by suggesting that the respondent population has changed and we have more Level 2 organizations taking part in the survey and fewer Level 3 or 4 organizations.

Are Process Improvement Programs in Place to Maintain Processes?

Broadly, there are two approaches to process change – **process redesign** that typically results in a project team undertaking a major effort to fix broken or deficient processes or to generate new, more effective processes, and **continuous process improvement** that incrementally improves existing processes. Redesign usually takes place independent of the existing, on-going process and ultimately replaces it, while continuous improvement usually takes place within the context of the existing process and involves gradual, incremental improvements in the ongoing process. Some would argue that the natural lifecycle of a process involves an initial redesign effort to assure that the process functions as it should in the context of the larger process of which it is a sub-process, followed by continuous process efforts to refine the design and assure that the process continues to be as efficient as possible. Many companies rely on Six Sigma or Lean initiatives to manage continuous process improvement.

| Are process improvement programs in place to identify and improve problems and defects? Please indicate your organization's overall level of performance. (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Never (0%) | 13% | 13% | 8% | 9% | 11% | 12% | 13 |
| Occasionally (1-30%) | 33% | 44% | 53% | 39% | 50% | 54% | 58 |
| Frequently (31-60%) | 34% | 24% | 25% | 29% | 26% | 18% | 19 |
| Most Times (61-99%) | 16% | 16% | 12% | 17% | 12% | 13% | 14 |
| Always (100%) | 4% | 3% | 2% | 5% | 1% | 4% | 4 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 108 |

Figure 15. Are process improvement programs in place?

We do not assume that everyone who answered the question (see Figure 15) distinguished between **redesign** efforts, which are more extensive, and **process improvement** efforts, which are more narrowly focused. In any case, the responses in 2015 look more like 2009 and 2013 than 2011. Most organizations are *Occasionally* involved in process improvement. Fewer organizations are doing it *Frequently*. This may just reflect the long term decline in interest in Six Sigma.

An Overview of Organization Maturity Today

As we noted when we started to consider this set of questions, we asked these questions in order to get respondents to define the overall maturity of their organizations. We wouldn't want to claim that our series of questions was the equivalent of a comprehensive CMMI audit. On the other hand, we did design this set



of questions to test a number of key items that are associated with specific levels in the CMMI model (see **Error! Reference source not found.** for a quick overview of the CMMI levels.)

We expected most companies to be CMMI Level 2 companies, and the data for 2005, 2007, 2009 and 2013 suggest that's exactly what they are. We had hoped that all the attention on process in the past 4-5 years had led lots of companies to increase their efforts to become Level 3 companies and we thought we saw signs of that in 2011, but they had disappeared in 2013. Figure shows how respondents answered specific questions in 2013, and it also provides averages of all responses to the questions – in blue. A quick glance at the average suggests that – to the extent that this approach is accurate – most companies taking part in the survey are at CMMI Level 2.

| | Never | Occasionally | Frequently | Most Times | Always |
|--------------------------------|------------|--------------|------------|------------|-----------|
| Processes Documented | 4% | 50% | 29% | 14% | 4% |
| Standard Processes | 9% | 48% | 20% | 20% | 1% |
| Value Chains Modeled | 7% | 44% | 26% | 19% | 5% |
| Measures for Major Proc. | 14% | 59% | 10% | 11% | 6% |
| Consistent IT Support | 3% | 59% | 17% | 18% | 3% |
| Skills Defined | 8% | 47% | 28% | 14% | 3% |
| Managers Trained | 18% | 56% | 13% | 11% | 2% |
| Managers Use Data | 13% | 60% | 16% | 8% | 3% |
| Process Improvement | 12% | 54% | 18% | 13% | 4% |
| Average for 2015 Survey | 10% | 53% | 20% | 14% | 3% |
| Average for 2013 Survey | 11% | 51% | 23% | 13% | 2% |

Figure 16. Questions about the frequency of specific organizational activities that suggest organizational maturity.

Figure 17 shows the average responses for the levels of maturity as defined by our “maturity questions.” We show the averages for 2015 (green) and 2013 (blue).



BPM Spending

How Much Are Companies Spending on BPM?

We asked each survey participant to estimate how much money his or her organization was spending on business process work. In 2015, as in all past years, more than half the respondents said they were spending less than \$500,000. While the base amount being spent remains the same, note that a few companies are spending lots of money on process work. This reinforces our long-standing opinion, that leading companies understand and spend on process while most companies don't understand process and only make modest commitments to it. Put a different way, some companies really are process-focused, but most only really focus on process when some special circumstance focuses their attention on a process problem.(see Figure 17).

| How much would you estimate your organization will have spent on business process analysis, process management, monitoring, redesign and improvement in 2015? Include BPM management, Lean Six Sigma, process automation and overhead staff. DO NOT include outsourcing or ERP software and implementation costs. (Choose one) | | | | | | | |
|--|------|------|------|------|------|------|------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2015 |
| \$0-\$500,000 | 57% | 51% | 54% | 63% | 54% | 52% | 56 |
| \$500,000 to \$999,999 | 15% | 16% | 15% | 16% | 20% | 18% | 19 |
| \$1 million \$5 million | 19% | 21% | 21% | 12% | 15% | 18% | 19 |
| \$5 million to \$10 million | 3% | 4% | 4% | 4% | 5% | 6% | 6 |
| Over \$10 million | 5% | 7% | 4% | 3% | 4% | 6% | 6 |
| Over \$50 million | | 2% | 3% | 1% | 2% | 2% | 2 |
| Total | 99% | 100% | 100% | 100% | 100% | 100% | 108 |

Figure 17. How much organizations are spending on BPM.



Corporate BPM Activity Today

We asked a number of questions to gain insight into what organizations were doing to improve their business processes. Several questions were asked about process activities that occurred at the Enterprise, Process, or Implementation Levels. These questions rely on a common BPTrends classification. If this classification is unfamiliar, you can review it in the Appendix to this report. In a similar way, in discussing software products being used in support of BPM efforts, we often rely on the categories we defined in the BPTrends Software Tools Classification. The BPTrends Software Tools Classification is also described in the Appendix for readers who might not be familiar with our approach to defining this rather confusing marketplace.

The Overall Focus of Organizations at This Time

We asked this question for the first time in 2009. The choices ranged from department efforts through to enterprise-wide process management efforts. As you can see in Figure 18, in 2015, those organizations focusing on improving specific processes and those focused in incrementally improving existing processes were tied at 39% each. This may be insignificant, or it may be the beginning of a trend away from top-down BPM and back toward focusing process improvement efforts on existing processes. Or, as we suspect, it may represent a slight variation in the audience responding to this year's questionnaire. Broadly, however, it's easier to think of this year's results as largely similar to last year, with only a slight variation.

| How would you describe the overall focus of your organization at this time? (Choose one or two) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Focused on improving specific departmental level processes | | | 32% | 28% | 40% | 39% | 42 |
| Focused on automating departmental or enterprise wide processes | | | 23% | 31% | 20% | 25% | 27 |
| Focused on incrementally improving existing processes | | | 32% | 33% | 33% | 39% | 42 |
| Focused on redesigning enterprise wide processes | | | 25% | 18% | 18% | 19% | 20 |
| Focused on defining an enterprise wide process architecture/ measurement system | | | 18% | 16% | 14% | 19% | 20 |
| Focused on defining an enterprise wide process management/ governance system | | | 17% | 20% | 17% | 22% | 23 |
| Not focused on processes | | | | | | 6% | 6 |

Figure 18. Overall focus of organization at this time.

The Existence and Location of BPM Groups

We asked all respondents if their organizations had a Business Process Management Group (or BPM Center of Excellence) to coordinate, train, and support business process efforts within the organization. We asked those that had a BPM Group to tell us where it was located. It's been our experience that organizations that are serious about enterprise level work – organizations moving from CMMI Level 3 to Level 4 – usually have their BPM Group at the enterprise level, reporting to a corporate level executive or to an executive level committee, like planning or strategy. Organizations that have their business process groups located in IT or



Quality Control usually have a more limited perspective on BPM and are focused only on a part of the total BPM picture (see Figure 19).

| Does your organization have a group (or center of excellence) responsible for Business Process Management and, if so, where is it located within your organization? (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| We do not have a formal BPM Group | 34% | 36% | 33% | 36% | 34% | 32% | 34 |
| Our BPM Group is at the Executive level | 18% | 13% | 13% | 18% | 15% | 15% | 16 |
| Our BPM Group is at the Divisional or Departmental level | 20% | 18% | 18% | 16% | 17% | 19% | 20 |
| Our BPM Group is located within IT | 14% | 16% | 16% | 15% | 17% | 21% | 23 |
| Our BPM Group is located within HR or Training | 0% | 1% | 2% | 1% | 1% | 0% | 0 |
| Our BPM Group is located within Finance | 1% | 3% | 2% | 4% | 3% | 0% | 0 |
| Our BPM Group is located within Quality Control | 7% | 6% | 6% | 5% | 6% | 2% | 2 |
| Other, Please Specify | 8% | 7% | 11% | 6% | 8% | 12% | 13 |
| Total | 102% | 100% | 100% | 100% | 100% | 100% | 108 |

Figure 19. Where the BPM Group is located within the organization.

As you can see by glancing at Figure 19, there really isn't much difference between the responses over time. Perhaps there is a slight tendency to shift the BPM group to IT, but the trend isn't yet really significant.

This seems odd to us, as many of the process people we talk with seem to be focused on the problems of setting up a new BPM group or Center of Excellence (CoE) than on any other single issue. But the data suggests that the total number of companies with a BPM CoE has not increased significantly.

About a third of the respondents said they do not have a BPM group or CoE. Of those having a BPM group, most report the group is located at the executive level, at the departmental or divisional level, or in IT.

Use of BPM Strategy and Planning Consultants

In an effort to gauge the market for BPM consulting we asked a series of questions about how respondents would use outside consultants if they had the money to hire them. In the first question we asked about the uses they might make of a consultant at the enterprise level. Indirectly, this question asks where companies think they have problems that are beyond existing, internal expertise.

Broadly, in 2015, as in years past, respondents divided their needs relatively equally among strategy, enterprise process architecture, and enterprise measurement. What is noteworthy is that there does seem to be a tendency for organizations to have increased their interest in strategy and in measurement, while their interest in developing an enterprise process architecture remains about the same as two years ago (see Figure 20).



| If your organization could hire outside consultants to help with your BPM strategy and planning, where would you focus their efforts? (Choose all that apply) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Defining the relationship between Strategy and Process | 43% | 47% | 40% | 43% | 45% | 52% | 55 |
| Developing an Enterprise Process Architecture | 39% | 45% | 36% | 39% | 41% | 42% | 44 |
| Developing an Enterprise Performance Measurement system | 37% | 37% | 41% | 35% | 41% | 46% | 49 |
| Coordinating and managing your Business Process Management projects and programs | 33% | 37% | 35% | 36% | 34% | 32% | 34 |
| Other, Please Specify | 11% | 11% | 13% | 10% | 10% | 34% | 36 |

Figure 20. How respondents would use Consultants at the Enterprise Level.

The Use of Consultants at the Process/Project Level

We also asked respondents to tell us how they would use outside help if they could hire consultants to help them at the process level (see Figure 21). As with the previous question, we also use this question to focus not on what organizations have the budget to do, but what they desire to do if money were not a constraint.

| If your organization could hire outside consultants to help with BPM projects, where would you focus their efforts? (Choose all that apply) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Process Manager training | 37% | 45% | 38% | 41% | 41% | 43% | 46 |
| Balanced Scorecard | 22% | 24% | 22% | 22% | 20% | 18% | 19 |
| Process Redesign projects | 35% | 43% | 41% | 35% | 36% | 38% | 41 |
| Using BPM Frameworks (SCOR, ITIL) | 28% | 24% | 23% | 19% | 16% | 21% | 22 |
| Six Sigma Process Improvement projects | 17% | 22% | 15% | 12% | 17% | 13% | 14 |
| Process Automation projects | 30% | 32% | 28% | 33% | 27% | 27% | 29 |
| Process Analysis and Design training | 43% | 43% | 41% | 38% | 38% | 24% | 26 |
| Business Process Outsourcing | 7% | 9% | 7% | 8% | 6% | 4% | 4 |
| ERP support for BPM | 13% | 12% | 12% | 17% | 9% | 9% | 10 |
| Linking Knowledge Management and BPM | 28% | 35% | 27% | 24% | 22% | 22% | 23 |
| Culture change and BPM | | | | | 47% | 49% | 52 |
| Other, Please Specify | 7% | 7% | 11% | 7% | 7% | 7% | 7 |

Figure 21. The use of consultants at the Process Level.

Once again, our respondents have chosen more or less the same options as in 2013. Probably the largest drop is in an interest to undertake process analysis and design training. Our assumption is that a lot has been done over the past decade and that many organizations feel that their process training budgets would be better spent on more advanced process topics. In a similar way, interest in ERP support for BPM has dropped, and a new category, on culture change and BPM has attracted quite a lot of interest.



The Use of Standard, Enterprise-wide Business Process Methodologies

We decided to add this question in 2011 to explore the nature of methodologies that organizations are using. To start off, we simply asked whether the organization used a standard, enterprise-wide methodology or a variety of approaches. Standardization on a process methodology is usually associated with a growing process maturity and a significant commitment to organization-wide work.

| Does your organization have a standard, enterprise-wide business process methodology? (Choose one) | | | | | | | |
|--|------|------|------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| No, we have many different methodologies | | | | 28% | 37% | 36% | 39 |
| No, but we are considering standardizing on a single process methodology | | | | 32% | 31% | 34% | 36 |
| Yes, we have an enterprise standard process methodology | | | | 40% | 32% | 30% | 32 |
| Total | | | | 100% | 100% | 100% | 107 |

Figure 22. Does your organization have a standard, enterprise-wide BP Methodology?

As you can see, 36% of the respondents report multiple methodologies, 34% report they are considering standardizing and 30% report that they have a standard process methodology – which is virtually the same as in 2013.. In other words about one-third of the organizations taking part in the survey have committed to some kind of standard process methodology.

Dominant Process Methodologies

We added this question about methodology in 2011. We asked respondents to characterize their organization's dominant BPM methodology. Respondents were asked to choose only one of three possibilities, because we wanted to know if respondents thought their dominant process methodology was a top-down, bottom-up, or a methodology focused on process automation. This three part distinction seems to best describe today's process methodology market, although there are some methodologies that attempt to cross the lines and include techniques from other areas.

Broadly, **top-down methodologies** begin by asking what the organization ought to be doing. This usually includes a description of products, value chains, and customers' needs. Having defined goals, a top-down methodology proceeds to work down to find out what elements support goals or where the worst problems lie.

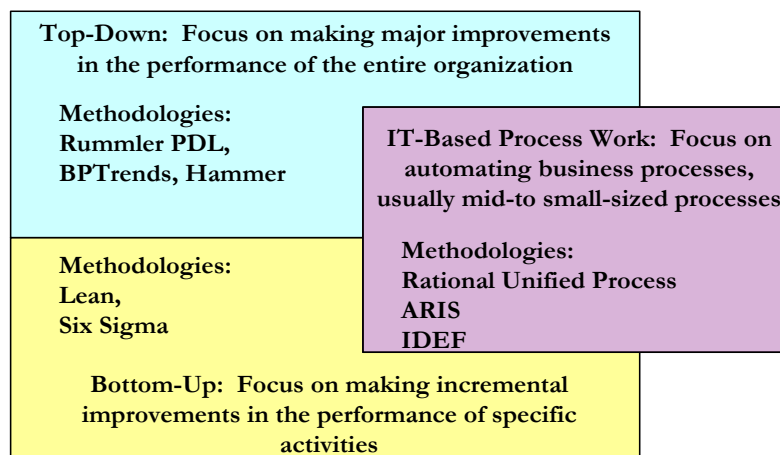


Figure 23. Types of business process methodologies.



Bottom-up methodologies begin by identifying specific problems and then setting out to improve specific processes. This approach is often combined with incremental improvement and in some cases with employee teams that are responsible for incrementally improving processes.

IT-based methodologies focus on automating business processes.

Any one of these approaches can be combined with others. Lean is a good example: Most think of it as a bottom-up, incremental approach, but it can also incorporate a top-down approach for enterprise-wide modeling.

| How would you characterize your organization's dominant process methodology? (Choose one) | | | | | | | |
|---|------|------|------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| A top-down methodology focused on major process change | | | | 24% | 23% | 25% | 27 |
| An incremental methodology focused on continuous process improvement | | | | 48% | 48% | 41% | 45 |
| A software methodology focused on process automation | | | | 22% | 19% | 19% | 21 |
| Other, please specify | | | | 6% | 10% | 15% | 16 |
| Total | | | | 100% | 100% | 100% | 109 |

Figure 24. Characterize your organization's dominant process methodology.

As you can see by glancing at Figure 24, the results in 2015 are almost the same as in 2011 and 2013. Almost half the organizations report having an incremental methodology and being focused on continuous process improvement. This could be a proprietary approach, but it most likely means either Six Sigma or Lean. Moreover, given the steady drop in interest in Six Sigma, this probably represents an interest in Lean.

Process Methodologies Used Today

In another new question about methodology added in 2011, we asked respondents to indicate which of several popular process methodologies they used. They could choose more than one, so this question asks about any and all process methodologies the organization uses.

Ignoring proprietary methodologies that do not publish information about their approach, and in keeping with the fact that most organizations report using their own methodology and an incremental approach to process improvement, the leading methodologies that respondents said they were using are Lean, Six Sigma, and Lean Six Sigma¹. A quick glance at the number of Lean and Six Sigma books sold, compared with BPM books sold, suggest that there is a much larger market for Lean and Six Sigma books. Even when an approach is slowly declining, if it starts from a large base, it remains the most popular approach for quite a while. Obviously respondents in 2013 were more likely to be using Lean or Lean Six Sigma.

The BPTrends Associates (BPTA) methodology, like Rummler (PDI) and Hammer methodologies, is a top-down approach that begins with an overview and then drills down. We checked the overlap between the BPTA, Rummler, and Hammer approaches, and there isn't much. Thus, if you add those respondents who say they used any of these top-down approaches, you arrive at 26% of respondents. In other words, in this survey, about the same percentage of respondents picked a top-down approach as picked Six Sigma.

¹Note that some Lean practitioners object to having Lean grouped with Six Sigma while Six Sigma practitioners are inclined to group the two approaches.



| Do you use any of these process methodologies? (You may choose more than one) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Lean | | | | 27% | 34% | 34% | 34 |
| Six Sigma | | | | 22% | 23% | 20% | 20 |
| Combined Lean Six Sigma | | | | 26% | 36% | 40% | 40 |
| Rational (or similar IT-based methodology with process elements) | | | | 11% | 9% | 9% | 9 |
| Business Rule Methodology | | | | 14% | 13% | 12% | 12 |
| BPTrends Associates Methodology | | | | 10% | 14% | 18% | 18 |
| Rummler/PDL Methodology | | | | 5% | 6% | 7% | 7 |
| Hammer Methodology | | | | 8% | 6% | 6% | 6 |
| Case Management Methodology | | | | | | 5% | 5 |
| Framework Methodology (SCOR, eTOM) | | | | 12% | 12% | 10% | 10 |
| Consulting Company Methodology (CSC's Catalysis) | | | | 5% | 4% | 6% | 6 |
| CMMI Methodology | | | | 16% | 15% | 17% | 17 |
| Our organization has its own methodology | | | | 43% | 45% | 34% | 34 |
| Other, please specify | | | | 11% | 9% | 10% | 10 |

Figure 25. Some specific methodologies used by organizations.

We are impressed with the fact that, in spite of thinking of our site as a BPM-oriented website, we have a significant number of members who come from the Lean and Six Sigma tradition, and fewer who come from an IT orientation. The answers to this question suggest that those organizations using Lean is now probably greater than those using Six Sigma.

Notice that at least 5 respondents indicate that their organization is using a Case Management Methodology for the first time. Also notice that there is a slight but significant up-tick in those reporting that they are using the BPTrends Methodology.

Process Standards

Anyone who deals with commodity items is helped by standards. Imagine if every hardware vendor created a unique type of screw head and you had to buy a different screwdriver to deal with the screws on each different piece of hardware you acquired.

Any company that has used a new software product and then, subsequently, decided to switch to another product and found that everything had to be redone - since there was no way to move data from one tool to the other - would have preferred that vendors conformed to common data representation standard. The problem in an emerging market, however, is that everyone needs to agree on what's important and how best to represent things before anyone is ready to define a standard. It's that way, at the moment, with business processes. Every user would like common data representation and software standards, but most users are still trying to determine what standards they want or need. Meantime, different vendors are promoting their own standards, hoping that others will rally round and agree to support their standard.



Some process areas have remained remarkably free of formal standards. There are no widely accepted formal standards in the Six Sigma area², for example. A Black Belt means different things to different groups, and everyone seems to get along with this lack of precision.

Software vendors, however, need more precision, and there have been a number of standardization efforts launched to spell out process-related software standards. Most are still in committee. We asked companies what standards they were using, involved with, or interested in, and we suggested a wide range of options. We added some new standards in 2013 to capture items that companies have referred to in past surveys under “Other” to make the list more comprehensive. We dropped a couple of standards that are no longer of any concern (Sarbanes-Oxley) and added a new OMG standard and several bodies of knowledge offered by professional groups.

| Which of the following process standards is your organization interested in adopting? (Choose as many as apply) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| ARIS EPC (Notation) | | | | 14% | 22% | 18% | 19 |
| ISO 9000 | 49% | 40% | 36% | 39% | 30% | 23% | 24 |
| IDEF (Notation) | | | | 5% | 7% | 4% | 4 |
| CMM/CMMI | 28% | 28% | 30% | 17% | 18% | 16% | 17 |
| BPEL | 23% | 26% | 20% | 12% | 10% | 8% | 8 |
| XPDL | | 6% | 6% | 5% | 2% | 4% | 4 |
| BPMN (Notation) | 22% | 41% | 51% | 60% | 60% | 64% | 67 |
| UML (Notation) | 33% | 30% | 24% | 14% | 18% | 17% | 18 |
| OMG Business Process Metamodel | 10% | 7% | 7% | 5% | 3% | 1% | 1 |
| OMG Business Rules Metamodel | 4% | 4% | 6% | 4% | 4% | 4% | 4 |
| OMG Decision Management Model | | | | | 5% | 4% | 4 |
| OMG Business Process Maturity Model | | 10% | 14% | 5% | 6% | 2% | 2 |
| OMG Model Driven Architecture (MDA) | | 8% | 7% | 4% | 3% | 4% | 4 |
| ABPMP Body of Knowledge | | | | | 10% | 8% | 8 |
| IIBA Body of Knowledge | | | | | 18% | 14% | 14 |
| ASQ Lean Six Sigma Body of Knowledge | | | | | 25% | 25% | 26 |
| Other, Please Specify | 21% | 23% | 19% | 15% | 17% | 24% | 25 |

Figure 26. Standards companies are using.

The most impressive pattern shown in Figure 26 is the growing importance of the OMG’s Business Process Management Notation (BPMN) which continues to dominate the process standards space. Other OMG standards have attracted little interest from process people, but BPMN is important to more than half our respondents. Interestingly, BPEL, a standard approach for moving from a process description to code, has

² We might say that the ASQ provides a Six Sigma standard, but few Six Sigma vendors would agree.



lost support since 2007. Other OMG standards, like their maturity model (BPMM) or their Business Process Metamodel, have failed to attract much interest.

We suggest the lack of more interest in BPEL is a result of the fact that BPMS software tools have become a moving target and that most companies haven't adopted them, or are using them for different purposes. Meantime, BPEL was slow to offer a comprehensive solution and few vendors have fully implemented it. More important, BPMN, in its Version 2.0, has adopted a rigorous syntax and semantics, so that the notation itself serves as a language and doesn't need BPEL to generate code. For whatever reason, interest in BPEL has declined in recent years.

We were impressed that 8% of our respondents thought the ABPMP's Body of Knowledge (BoK) was an important standard, that 14% of the respondents support IIBA, and that 25% consider ASQ's Lean Six Sigma BoK an important standard. In effect, bodies of knowledge with certification exams have emerged as a new type of standard companies can support.

BPM Products and Services Currently Being Used

We asked respondents to tell us what business process products and services were currently being used at their organizations, and we have summarized their responses in Figure 27. In this case we asked companies what they were actually doing, as opposed to what they might like to do if they had some additional money to spend on consultants.

| What BPM products and services is your organization currently using? (Choose all that apply) | | | | | | | |
|--|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Graphics Modeling tool (Visio, PowerPoint) | 77% | 74% | 70% | 71% | 69% | 65% | 68 |
| Repository based Modeling tool (ProVision, MEGA, Casewise) | 38% | 32% | 40% | 27% | 36% | 39% | 41 |
| BPM Suite that can manage the runtime execution of a business process | 23% | 24% | 26% | 37% | 24% | 28% | 29 |
| Tool for managing a Rule-based process or application | 17% | 19% | 18% | 20% | 12% | 7% | 7 |
| Process Monitoring/BI tool that can feed information to an executive dashboard | 18% | 24% | 26% | 24% | 13% | 19% | 20 |
| Training in Process Strategy, Architecture or Performance | 17% | 16% | 18% | 13% | 14% | 16% | 17 |
| Training in Process Analysis and Design | 33% | 31% | 34% | 30% | 32% | 17% | 18 |
| Training in Process Redesign and Improvement methodology | 24% | 24% | 28% | 20% | 24% | 25% | 26 |
| Training in BPM Systems | 15% | 14% | 18% | 20% | 13% | 23% | 24 |
| Attendance at BPM Conferences | 31% | 35% | 35% | 27% | 28% | 23% | 24 |
| Other, Please Specify | 7% | 10% | 7% | 9% | 8% | 9% | 9 |

Figure 27. Process products and services currently used by companies.



As you can see, in 2015 respondents answered more as they had in 2013 than in 2011, although there are some exceptions. 2015 respondents are less likely to seek training in process analysis and design or to attend a BPM conference. Our belief here is simply that BPM training has been going on rather steadily since 2003 when the term first became popular and that most companies now think they understand it. We expect that as Case Management and Cognitive Computing ramp up there will be a new round of courses designed to focus on new varieties of process training.

Note, also, the decline in an interest in business rule tools. We suggest that this is because rule capabilities have been incorporated in BPMS tools and that a company with a comprehensive BPMS tool, doesn't need a rule-based tool.

For a while it seemed as if companies were moving away from the simpler graphic modeling tools, like Visio, and toward repository tools like ProVision and Casewise. In 2011 it looked like there was a significant uptick in interest in BPMS, but that doesn't show up this year. Instead, in this, as so many other areas, 2013 is more like 2009 than 2011.

Which Tools Are Most Valuable?

Since 2005 we've been asking about specific business process tools most valuable to each organization. In 2007 we changed the question to ask for one specific tool. In 2005, respondents could choose multiple responses, thus the number totaled more than 100%.

As in other items, 2013 looks more like 2009 than 2011, although once again the decline in an interest in rule-based tools is noteworthy.

| Which of the following software tools have been most important to your business process management efforts in 2015? (Choose one) | | | | | | | |
|--|----------------------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Organizational Modeling environment | 12% | 5% | 4% | 4% | 4% | 1% | 1 |
| Graphics tool (Visio, PowerPoint) | 42% | 31% | 27% | 29% | 34% | 30% | 31 |
| Process Modeling tool (Casewise, IBM Modeler, ProVision) | 39% | 24% | 27% | 17% | 20% | 27% | 28 |
| Business Rules/Decision Management tool | 10% | 2% | 2% | 3% | 3% | 1% | 1 |
| Repository | 13% | 4% | 6% | 4% | 7% | 3% | 3 |
| BPMS Suite or execution environment (Workflow, EAI) | 20% | 13% | 16% | 28% | 13% | 19% | 20 |
| Simulation tool | 11% | 3% | 3% | 2% | 1% | 0% | 0 |
| BAM/Real-Time Process Monitoring tool | 7% | 1% | 2% | 3% | 2% | 2% | 2 |
| Performance Metrics tool/system | 16% | 8% | 7% | 3% | 5% | 5% | 5 |
| Other, Please Specify | 7% | 8% | 5% | 7% | 12% | 13% | 13 |
| Total | Could choose more than one | 100% | 100% | 100% | 100% | 100% | 104 |

Figure 28. Which software tools are most valuable?

The BPMS Market

In previous years we asked respondents to tell us which specific BPMS products they used. In 2013 we omitted this question. In each of the earlier years at least one vendor had encouraged lots of its users to take



the survey to boost the numbers for their product. We developed various ways to eliminate this type of bias, but finally decided it was easier not to tempt the vendors. Frankly, the market for the larger BPMS tools has settled down and the leading vendors' market share is probably not going to change in the foreseeable future. At the same time the many new vendors have only a little market share and the response to our survey is insufficient to give a good reading as to which are most popular. (Most get from 2-4 responses.) So, if you are interested in the major players in the BPMS market, we suggest you go to www.bptrends.com and search for and read our article on "The BPMS Market", which was posted on July 30, 2013. We didn't attempt any update on BPMS tools in 2015, but will probably do something in 2016 to reflect the growing interest in BPMS tools specialized for Case Management applications.

The Use of BPMS Applications

This was a new question in 2011 which we added to learn more about why BPMS tools are being used. Notice here (see Figure 29) that the number of respondents who said they have only done 1 or a few BPMS applications to explore the technology is about the same in 2015 as it was in 2013. If there is any significant difference, it's a slight drop in the number of respondents indicating that their organizations are using BPMS simply as a software development environment. This corresponds with some other surveys that suggest that more companies have begun to use BPMS tools to run applications designed to manage business processes.

| If you organization is developing applications using a BPMS product, indicate why you are using it. (Check all that apply) | | | | | | | |
|--|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| We have only done 1 or a few apps to explore the technology | | | | 12% | 24% | 27% | 21 |
| IT is using BPMS as a better way to develop software | | | | 31% | 23% | 15% | 12 |
| Business people are using BPMS to develop apps | | | | 17% | 5% | 8% | 6 |
| We use BPMS to define our business processes | | | | 46% | 33% | 29% | 23 |
| We use BPMS to make our ERP applications more agile | | | | 22% | 11% | 13% | 10 |
| We use BPMS to monitor existing processes | | | | 32% | 18% | 19% | 15 |
| Our BPMS applications automate complete processes | | | | 34% | 18% | 18% | 14 |
| Our BPMS applications to support employees in performing processes | | | | 33% | 18% | 15% | 12 |
| We use BPMS to adopt our business processes to our work culture | | | | | 9% | 11% | 9 |
| Other, please specify | | | | 13% | 19% | 17% | 13 |

Figure 29. How organizations are using BPMS software products.

What Business Process Initiatives Are Underway Today

To determine what kinds of business process efforts companies are currently engaged in, we asked respondents to choose from a wide variety of BPM initiatives. In 2015, the two areas that showed a significant up-tick were (1) organizations developing a business process architecture and (2) organizations seeking Lean and Six Sigma training. Given the overall drop in interest in Six Sigma, we assume that the latter is mostly an up-tick in Lean training. It's hard to make these changes into a pattern. Other responses to other questions don't indicate as much interest in architecture, or in process training. All we can conclude is that we should have broken training down a bit more.



| What business process initiatives are underway in your organization this year (2015)? (Check all that apply) | | | | | | | |
|--|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Development of an Enterprise Process Architecture | 42% | 43% | 37% | 38% | 31% | 43% | 45 |
| Development of an Enterprise Process Performance Measurement system | 25% | 25% | 24% | 24% | 20% | 19% | 20 |
| Coordinating Enterprise Process Change efforts | 27% | 31% | 33% | 26% | 26% | 26% | 27 |
| Coordinating Enterprise Process Management efforts | 25% | 29% | 28% | 26% | 22% | 23% | 24 |
| Process Manager training | 19% | 22% | 24% | 24% | 20% | 19% | 20 |
| Balanced Scorecard | 25% | 22% | 14% | 22% | 14% | 13% | 13 |
| Major Process Redesign projects | 38% | 36% | 36% | 31% | 33% | 36% | 37 |
| Redesign projects with Frameworks (SCOR, ITIL) | 13% | 12% | 13% | 8% | 9% | 8% | 8 |
| Six Sigma Process Improvement projects | 21% | 25% | 21% | 18% | 22% | 20% | 21 |
| Major Process Automation projects | 26% | 27% | 23% | 27% | 20% | 21% | 22 |
| Process Analysis and Redesign training (Non-Six Sigma) | 26% | 20% | 22% | 19% | 24% | 20% | 21 |
| Lean Six Sigma Process Modeling and Redesign Training | 15% | 22% | 17% | 18% | 19% | 27% | 28 |
| Other, please specify | 11% | 7% | 9% | 7% | 9% | 7% | 7 |

Figure 30. Activities in which companies were engaged in 2015.

SOA and Cloud Computing

This is another question that we added in 2009. We asked respondents to describe how important SOA and Cloud Computing were to their business process efforts. Note that we did not ask whether or not companies were using SOA or Cloud Computing, but focused only on whether or not they were using these technologies in conjunction with their process work.

In spite of all the vendors' promotional efforts, in 2009 when we added this question, we assumed that most companies weren't ready to use SOA or Cloud Computing in conjunction with their process projects. These same companies might be using SOA or Cloud Computing for some other purpose, however, but we are only focused on companies that are using these new technologies in conjunction with process efforts.

As you can see in Figure 31, the largest number of respondents (31%) is still not too concerned about SOA or Cloud Computing, but there is a slight up-tick in those who say they are interested in Cloud Computing and those who say they are using Cloud Computing with BPM. We are a bit surprised, at this point – in 2015 -- that the interest isn't higher. Most BPMS tools have been modified to run in the cloud. Increasingly, a company can explore or even launch a business process project without having to first acquire and install a software tool, simply using the tool online. We would have expected more organizations to say that Cloud Computing was a part of their BPMS efforts. But it doesn't seem to be so, in fact.



| The vendors are talking quite a bit about BPM and SOA, and even more recently about BPM and Cloud Computing, iBPM (or Case Management) or BPM and Big Data. How important is this to your organization? (Choose one) | | | | | | | |
|--|------|------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| We are doing process work and are not too concerned about SOA or Cloud Computing | | | 32% | 28% | 36% | 31% | 31 |
| We are beginning to explore SOA or Cloud Computing | | | 23% | 26% | 21% | 20% | 20 |
| We are using SOA in conjunction with some of our BPM projects | | | 15% | 16% | 9% | 10% | 10 |
| We are using Cloud Computing in conjunction with some of our BPM projects | | | 4% | 11% | 5% | 8% | 8 |
| We are using Big Data in conjunction with some of our BPM projects | | | | | 2% | 3% | 3 |
| We are using Case Management (iBPM) in conjunction with some of our BPM projects | | | | | 1% | 2% | 2 |
| SOA is very important to us | | | 15% | 10% | 8% | 6% | 6 |
| Cloud Computing is very important to us | | | 5% | 5% | 9% | 10% | 10 |
| Big Data is very important to us | | | | | 4% | 6% | 6 |
| iBPM or Case Management is very important to us | | | | | 2% | 1% | 1 |
| Other, please specify | | | 7% | 4% | 5% | 3% | 3 |
| Total | | | 100% | 100% | 100% | 100% | 100 |

Figure 31. Process work and SOA or cloud computing.

The Biggest Challenge While Seeking to Gain Widespread Acceptance for Business Process Efforts at Your Organization

We added a question to the 2009 survey to inquire about obstacles to wider acceptance of business processes within organizations. We were actually surprised at the responses to this question. Although we have had people remark on the confusion generated by competing process efforts fighting for attention, we did not expect it to emerge as the leading obstacle to gaining process acceptance. The answers in 2015 were very similar to those in 2011 and 2013. We were a little surprised that over 50% of the respondents said that senior management wasn't interested or was distracted. Given the economic downturn, senior executives can be excused for being focused on external events and on finances and the economy in 2013, but by 2015 we would have expected to have management focused again on growth and entering some new markets with new processes.

We suggested in 2013 that the downturn had something to do with the fact that many management teams were calling for action to reduce costs and that several different groups – from Six Sigma to Process Redesign, to IT were suddenly offering solutions. But that nearly half our respondents highlighted the problem of competing process change initiatives strongly underscores what should be the major Business Process Management message – that processes are an asset and should be managed or at least coordinated by a single entity (see Figure 32). We note that this concern was somewhat reduced in 2015, but still worrying.



There are only a few organizations that have gone so far as to establish a Chief Process Officer, but many have established Business Process Management Centers of Excellence (BPM CoE) and many more are talking about BPM and putting a major emphasis on the centralized management of the organization's process initiatives. If the lack of such central coordination is really the major problem that half our respondents' organizations face, then we can expect that centralization is going to become a growing issue in the near future.

| What obstacles or challenges do you face as you try to gain widespread acceptance of business process efforts at your organization? (Choose one or more) | | | | | | | |
|--|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Senior management isn't interested or is focused elsewhere | | | 38% | 37% | 48% | 58% | 59 |
| Management wants ROI estimates that we cannot produce | | | 27% | 23% | 29% | 30% | 31 |
| We have multiple process change efforts competing for attention | | | 49% | 42% | 49% | 44% | 45 |
| We have had process projects that failed and management is cautious | | | 12% | 12% | 16% | 25% | 25 |
| Management does not want to make the investment at this time | | | 23% | 22% | 24% | 24% | 24 |
| Other, please specify | | | 15% | 10% | 10% | 13% | 13 |

Figure 32. Challenges to widespread acceptance of process efforts.

Doing ROI on small projects is usually easy, so the fact that 29% say they have trouble with ROI suggests that they are concerned with larger process projects. Process redesign projects that introduce new technology are always hard to cost accurately, since the organization isn't sure exactly what it will cost to get the technology implemented. Harder, however, are process management projects, like an effort to establish a business architecture or a BPM CoE. Clearly, neither of these management initiatives generates any profit in its own right. One doesn't create a process architecture to generate sales of itself; one creates it to provide tools and data one can use to improve process management. It's very like creating an accounting system. The accounting system doesn't create value, but it's a necessary tool required to manage the finances of the company. The senior management of a startup would never argue to forego the costs for developing an accounting system because they know it is required. Executives often resist the costs of process architecture work because they don't realize that they need an accurate description of all their processes as part of an ongoing effort to gather good data on how processes are performing. Thus, in a real sense, selling the idea of enterprise process work is tightly integrated with how well senior executives understand and value processes.



Plans for the Future

BPM Products and Services Being Considered for the Coming Year

Earlier, we asked what products and services respondents were currently using. In this section we report on questions designed to determine what respondents plan to do in the future. In Figure 33 for example, we asked what products or services their organizations were likely to purchase in the coming year.

| What BPM products and services is your organization planning on purchasing during the remainder of 2015 or in 2016? (Choose all that apply) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Graphics Modeling tool (Visio, PowerPoint) | 20% | 15% | 16% | 17% | 18% | 13% | 11 |
| Repository based Modeling tool (MEGA, IBM Modeler, ProVision) | 23% | 23% | 21% | 19% | 19% | 12% | 10 |
| BPM Suite that can manage the runtime execution of a business process | 11% | 25% | 21% | 29% | 12% | 19% | 16 |
| Tool for managing a Rule-based process or application | 26% | 15% | 15% | 15% | 10% | 8% | 7 |
| Process Monitoring/BI tool that can feed information to an executive dashboard | 15% | 23% | 22% | 17% | 13% | 18% | 15 |
| Training in Process Strategy, Architecture or Performance | 22% | 22% | 19% | 22% | 16% | 23% | 19 |
| Training in Process Analysis and Design | 21% | 29% | 22% | 25% | 25% | 18% | 15 |
| Training in Process Redesign and Improvement Methodology | 27% | 23% | 19% | 21% | 22% | 24% | 20 |
| Training in BPM Systems | 16% | 22% | 21% | 22% | 16% | 25% | 21 |
| Attendance at BPM Conferences | 33% | 40% | 36% | 25% | 28% | 31% | 26 |
| Other, Please Specify | 13% | 13% | 18% | 15% | 17% | 17% | 14 |

Figure 33. Products and services companies are considering acquiring in 2016.

As in other areas, the jump in those interested in BPM Suites disappeared in 2013, while the answers to other questions seem in line with 2007 and 2009.

As the recession ends and organizations spend more money, there should be an overall increase in the acquisition of BPM-related services. The nature of the acquisitions, however, will reflect past priorities: Training and to a lesser degree, attendance at conferences. The data also suggests that the sale of BPMS products will decline a bit.

Recall that few respondents said they were interested in case management (iPBM), yet this seems to be what many BPMS vendors are emphasizing. Not satisfied with current sales, they are promoting what may well become the next BPMS market, but in the meantime – in 2014 – it doesn't look like there is much demand for that approach.



Methodology and Respondents

Methodology

BPTrends conducted this survey during September and the first half of October of 2015. We then spent the next three months organizing the data and preparing this report which we now publish in early 2016. Five earlier surveys, with similar questions, were conducted in the spring of 2005 and in the fall of 2007, 2009, 2011 and 2013. In all cases we sent an email to our membership inviting them to participate and posted a pointer on the BPTrends website to encourage participation. We also published invitations on various other business process sites urging others to participate. In earlier years we had more responses because we were the only BPM survey. In recent years many other groups have joined in and undertake their own surveys. Unfortunately this seems to have resulted in people becoming exhausted by requests for participation and, this year, it resulted in fewer people taking our survey.

| Survey | Respondents |
|--------|-------------|
| 2015 | 116 |
| 2013 | 309 |
| 2011 | 399 |
| 2009 | 264 |
| 2007 | 274 |
| 2005 | 348 |

Figure 34. Number of Respondents for each Survey.

In addition to those who took the time to complete the entire survey, we had additional responses from people who looked at the survey and answered only a few questions. We ignored these partially completed responses and report only on the responses of those who completed the entire questionnaire, or at least answered most of the questions. Even then, the total responses to each specific question vary because some respondents answered every question while others skipped questions that didn't apply to their organizations.

This year, we are using tables that show the percentages of past surveys, and only including the actual number of responses as well as the percentages for 2015. This makes it much easier to compare the responses from all six surveys, but keeps the tables from becoming too complex. We hope you find this useful. We comment on statistical significance of the number of respondents to this report because we are concerned about the number of BPM Survey Reports that make broad generalizations based on 25 or 35 respondents. It's very hard to believe that a total of 30 respondents accurately reflects the general market for BPM. We believe our sample is about the minimum needed to reach any broad conclusions, although we caution readers to keep in mind that even these conclusions are probably slightly skewed, since they primarily represent the responses of managers and practitioners who are interested enough in business processes to be readers or visitors to the BPTrends website. We are reasonably happy with the response sets we got from Europe and North and South America and believe that the conclusions we reached represent valid generalizations about these geographical markets.

We avoid comparing response sets from Australia, the Middle East, Asia, or Africa. Although we received more responses from those regions than in the past, we still received fewer than 50 responses from any one of those areas. Thus, we are not confident that our sample adequately represents the typical position of business process managers and practitioners from those regions. We mention considerations like these in the report in hopes that our readers will increasingly demand a higher standard from other analyst groups that make much out of results derived from data sets that cannot support the statistical conclusions or the comparisons their authors make.



Since the absolute numbers of respondents differ slightly in the surveys, we believe it is best to focus on the percentages. Some questions, however, depend on earlier questions. Thus, in some cases we ask all respondents who have previously said they were using BPMS software to tell us how they are using the software. In this case, the total sample can easily be much lower than the total number responding to most questions, and the actual numbers can help readers check the sample size for any specific question.

As we look at the questions and answers, we do two different checks.

First, we ask how the complete 2015 responses compare with the response patterns of previous years. Is the market's overall response to the question different this year from past years, and if so, what trend seems to be present?

Second, where reasonable, we check to see how the complete 2015 responses compare with responses of selected subsets of the responses. In the past, for example, we check to see if respondents from North America answer differently from the whole, or if respondents in North America answer differently from respondents in Europe. This year we have relied less on these filtered subsets simply because, with only about 100 respondents, the subsets are too small to accurately reflect the subset. Thus, we draw generalizations about what all respondents say, but are slower to draw conclusions about how European BPM practitioners differ from North American or Australian practitioners, simply because we don't always have enough Europeans or Australian's in our sample to make us confident that the response we have is representative.

If we don't comment on a difference, you may assume that there were no significant differences in the response patterns or that we lack sufficient data to be confident that the difference represents an actuality. Whenever we found a significant difference using any of the filters we list above, we note it.

Also, whenever we ask a question that allows respondents to select "Other", we always check the nature of the "Other" responses. In most cases, even where there are quite a few of them, they don't form a pattern, but simply refer to unique or unusual terms for what is being discussed. Whenever there is a pattern, however, we report it.

Job Title or Function

Each respondent was asked to describe his or her job or function within his or her organization. In the data pictured in Figure 35 we show how the respondents answered this question in each of the surveys.

Over the past five years a growing percentage of our respondents identified themselves as Process Practitioners or Business Analysts. In 2011, to gain a little more information, we subdivided that category and asked respondents to choose among some new, more specific possibilities (see Figure 35).



| Which of the following best describes your job function? (Choose one) | | | | | | | |
|---|------|------|------|------|------|------|-----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Executive (CEO,COO,CFO) | 17% | 12% | 11% | 14% | 9% | 8% | 8 |
| Business or Line of Business Manager | 18% | 17% | 15% | 11% | 15% | 9% | 9 |
| Process Practitioner/Business Analyst | 50% | 55% | 63% | | | | |
| Process Practitioner | | | | 9% | 12% | 11% | 12 |
| Lean/Six Sigma Practitioner | | | | 11% | 3% | 3% | 3 |
| Business Analyst | | | | 2% | 14% | 16% | 17 |
| Business/Process Architect | | | | 14% | 18% | 26% | 27 |
| IT Manager/IT Developer | 14% | 15% | 10% | 8% | | | |
| IT Manager | | | | | 6% | 5% | 5 |
| IT Developer | | | | | 0% | 0% | 0 |
| HR Manager or Human Performance Practitioner | 1% | 1% | 1% | 1% | | | |
| HR Manager | | | | | 0% | 0% | 0 |
| Human Performance Practitioner | | | | | 0% | 0% | 0 |
| BPM Instructor/Student | | | | 1% | | | |
| BPM Instructor | | | | | 0% | 3% | 3 |
| BPM Student | | | | | 0% | 1% | 1 |
| BPM Consultant | | | | 20% | 13% | 10% | 10 |
| Vendor Representative | | | | 1% | 0% | 0% | 0 |
| Other, please specify | | | | 7% | 10% | 10% | 10 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 105 |

Figure 35. Respondent's job title or function.

The biggest obvious difference is that in 2011, we had more Lean Six Sigma Practitioners and in 2013 had more business analysts. In 2015 we had more respondents who identified themselves as Business Architect. We are unsure whether these shifts represent real differences or simply “fads” as respondents prefer one job title over another.

The Size of the Organizations Being Described

We asked each respondent to indicate the overall size of the organization he or she would be describing.

2015 is like previous years – more respondents come from large organizations.

| Which of the following best describes your organization's size? (Choose one) | | | | | | | |
|--|------|------|------|------|------|------|-----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Large (2000 or more employees) | 41% | 46% | 47% | 35% | 53% | 56% | 58 |
| Medium (500 to 1999 employees) | 33% | 34% | 34% | 38% | 15% | 21% | 22 |
| Small (under 500 employees) | 26% | 20% | 19% | 27% | 32% | 22% | 23 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 103 |

Figure 36. The size of the respondent's organization.



Industries Represented in the Survey

We asked respondents to identify the industry in which they worked. In 2015, as in all past surveys, the largest number of respondents came from the financial services sector. This year, in fact, so many respondents came from finance that we began to worry if they biased the survey in any way. We couldn't find any bias, and the respondents, otherwise, come from such a variety of industries that we thought the industry response reasonably balanced.

| Which of the following best describes your industry? (Choose one) | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|------|-----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| Aerospace/Defense | 2% | 3% | 2% | 1% | 4% | 0% | 0 |
| Heavy manufacturing | 2% | 2% | 3% | 1% | 4% | 1% | 1 |
| Light manufacturing | 2% | 2% | 1% | 2% | 2% | 5% | 5 |
| Chemicals/Energy | 5% | 3% | 2% | 5% | 5% | 4% | 4 |
| Computers/Consumer Electronics/Software | 17% | 14% | 10% | 3% | 5% | 4% | 4 |
| Building/Construction | | | | | 2% | 0% | 0 |
| Education | 4% | 4% | 5% | 4% | 3% | 6% | 6 |
| Financial Services/Insurance | 19% | 20% | 17% | 13% | 22% | 29% | 30 |
| Food/Beverage | 2% | 1% | 3% | 4% | 2% | 1% | 1 |
| Government/Military | 9% | 10% | 12% | 9% | 7% | 6% | 6 |
| Healthcare/Medical Equipment | 2% | 2% | 5% | 3% | 4% | 3% | 3 |
| Leisure/Entertainment/Travel | 1% | 1% | 1% | 1% | 0% | 0% | 0 |
| Professional/Business Services/Consulting | 16% | 14% | 16% | 19% | 18% | 11% | 12 |
| Retail and Wholesale | 4% | 3% | 2% | 4% | 4% | 4% | 4 |
| Telecommunications | 8% | 3% | 5% | 5% | 6% | 6% | 6 |
| Utilities | 4% | 5% | 5% | 3% | 4% | 10% | 10 |
| Other, Please Specify | 9% | 13% | 13% | 10% | 11% | 12% | 13 |
| Total | 106% | 100% | 100% | 100% | 100% | 100% | 105 |

Figure 37. The range of industries represented in the survey.

The Geographical Locations of the Respondents' Companies

We also asked respondents to tell us where their organizations were located. In all years except 2011 the largest group of respondents was from North America though North Americans have accounted for a smaller share in the last two years.



| Where is your organization located? (Choose one) | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| North America | 45% | 42% | 42% | 27% | 40% | 41% | 43 |
| Europe | 29% | 30% | 32% | 38% | 35% | 29% | 30 |
| South America | 6% | 5% | 7% | 16% | 7% | 14% | 15 |
| Australia/New Zealand | | 12% | 12% | 11% | 11% | 11% | 11 |
| India and SE Asia | | 3% | 3% | 2% | 1% | 1% | 1 |
| NE Asia (China, Japan, Korea) | | 1% | 2% | 4% | 1% | 0% | 0 |
| <i>Subtotal Asia/ Australia</i> | <i>13%</i> | <i>16%</i> | <i>17%</i> | <i>14%</i> | <i>13%</i> | <i>12%</i> | <i>12</i> |
| Africa/Middle East | 7% | 7% | 3% | 4% | 5% | 4% | 4 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 104 |

Figure 38. Where respondents' organizations are located.

Participation in Previous Surveys

In 2009 we asked a few new questions to highlight things we didn't focus on in past surveys. One question simply asked if participants had taken this survey in the past. Due to the number of Surveys that have been done, this question is getting more and more complex.

As you can see by looking at Figure 39, about half of the respondents had taken one or more previous surveys.

| Please indicate which of the previous BPTrends General Surveys you have participated in? (Choose one or more) | | | | | | | |
|---|------|------|------|------|------|------|----|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | |
| None | | | 72% | 71% | 50% | 47% | 48 |
| The 2005 survey | | | 1% | 3% | 1% | 3% | 3 |
| The 2007 survey | | | 19% | | 3% | 4% | 4 |
| The 2009 survey | | | | 19% | 8% | 7% | 7 |
| The 2011 survey | | | | | 20% | 14% | 14 |
| The 2013 survey | | | | | | 26% | 27 |
| Yes, I participated in all previous surveys | | | 8% | 6% | | | |
| One or more of the earlier surveys but don't remember the years | | | | | 30% | 28% | 29 |

Figure 39. Participants who took survey in the past.

Comments on Respondents

Although we are not impressed with the total number of respondents in 2015, we are happy with the distribution of the sample among market sectors, geographical locations, and size of organizations. These all suggest that the data is representative of the broad scope of BPM today.

We do want to suggest several qualifications readers should consider in reviewing the data.



First, the audience self-selected themselves for this survey. Most found out about the survey because they came to the BPTrends website, or were, at least, reading something about business process and saw information about the survey. Thus, we cannot assume that the responses represent the opinions of the average business executive. They represent the opinions of business people who are concerned with the role or importance of business process and who are members and/or readers of BPTrends.

Second, we did not ask each respondent to identify his or her company. We did this to assure the privacy of the respondents. Thus, we don't know how many respondents come from the same company. We have generally assumed that each respondent represents a different company. Thus, if 20% of the respondents said their companies used Business Process Modeling tools, we have assumed that 20% of the companies used those tools. This assumption is reasonable, even if a few of the respondents do come from the same company, but readers should be aware that we are ultimately reporting on the responses of individuals, and not responses from different companies.

Third, a large number of respondents were from Computers/Consumer Electronics/Software and Professional/Business Services/Consulting. Many of these respondents are probably consultants and software vendors who are not actually doing BPM work themselves, but are supporting organizations doing BPM. We cross-referenced these responses and discovered that they are very similar to those of obvious end users, like those from Finance or Manufacturing. Where it does seem to skew the data a bit is in the number of Executives included in the survey. Of the 56 respondents from Computers and Software in 2005, for example, 16 were Executives. Of the 52 respondents from Professional and Consulting, 20 were Executives. Of the 63 respondents from Financial Services and Insurance, only 7 were Executives. Only 2 of the 13 respondents from manufacturing identified themselves as Executives.

Something similar happens when you consider the relationship between company size and job titles. Most of the executives come from small companies. And most of the professional and consulting companies are small companies. Thus, readers shouldn't focus too much on the number of Executives taking part in the survey, as they probably represent executives from consulting companies and software vendors and not executives from end user companies. On the other hand, the Business Line Managers are mostly from larger companies and are more broadly representative of the entire range of industries involved in the survey.

We use filters that allow us to examine how a particular subgroup of respondents answers the questions to determine whether or not there is any bias being introduced by respondents from specific groups. When we think the answers to a given question might be skewed by a typical response by a particular subgroup of respondents, we make note of it.

Note that we have provided the raw data from this and all previous BPTrends surveys to selected academic groups for research and as a source of material for student exercises and would be happy to do this for additional academic groups upon request.



Appendix I

Concepts Used in this Report

We have assumed most readers are familiar with the terms and concepts widely used on the Business Process Trends website. For readers who might not be familiar with these terms or concepts, we briefly describe them below. In this report we have relied on four different sets of related terms or concepts:

1. **BPTrends Levels.** The BPTrends Pyramid provides a way of defining the various levels of BPM activity within an organization and the types of activities associated with each level.
2. **CMMI or Process Maturity Levels.** CMMI defines five levels of process maturity. Organizations at Level 1 do not support processes in any significant way and are immature. Level 5 organizations are completely mature and have mastered the use of processes.
3. **BPTrends Process Software Tools Classification.** This classification describes the terms we use to describe the various types of BPM software products and the relationships among them.
4. **Geoffrey Moore's Technology Lifecycle Model.** This popular model describes how new technologies evolve. We refer to this model in order to provide insight into the maturity of the BPM market as a whole and to describe the maturity of some of the more specific niches we discuss in this report.

Below we consider each in sufficient detail to allow readers to understand how the terms are used in this report.



I.1 The BPTrends Pyramid

The BPTrends Pyramid describes three groups of business process activities that occur at different levels within an organization.

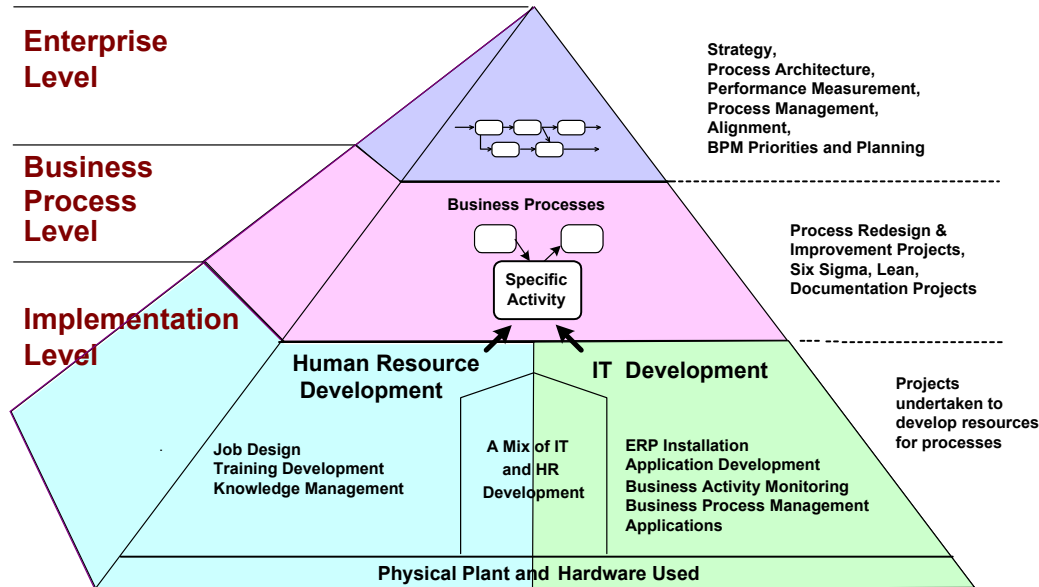


Figure 40. The BPTrends Pyramid and levels of corporate BP activity

The Enterprise Level

Enterprise Level activities occur at higher levels in the organization and are independent of any specific day-to-day processes. Enterprise Level activities focus on aligning strategy and processes, on defining an enterprise-wide business process architecture, on defining enterprise performance measures, and on aligning them with value chains and high-level processes. Other enterprise level activities involve the establishment of a process management system and on developing ways of surveying all of the organization's process needs and establishing priorities and plans to assure that processes are changed and maintained.

The Process Level

Process Level activities are organized into projects. Typical process level projects include efforts to document processes (ISO 9000), projects to create new processes or to redesign existing processes, or projects to improve existing processes (Lean, Six Sigma). Typical process analysis, design, and modeling activities all occur at this level.

The Implementation Level

The Implementation Level provides the resources needed to implement process change projects. In essence, a redesign team, operating at the Process Level, may specify that a given process should be redesigned to incorporate the use of a new software application. Thus, at least one, and probably several, new projects are initiated to develop or acquire and tailor the new software application, to train employees in the use of the new software application, and so forth. Projects undertaken to provide support resources for process change efforts occur at the Implementation Level. There are specific tools, notations, and methodologies that are, generally speaking, only used at the Implementation Level – for example, a software development methodology like RUP or a notation like UML.

I.2 CMMI Maturity Levels



The concept of Process Maturity Levels was developed at the Software Engineering Institute (SEI) at Carnegie Mellon University in the Nineties, based on quality work originally undertaken by Watts Humphrey. Originally developed to support the analysis of software process maturity (CMM), the latest version, the Capability Maturity Model Integration (CMMI) has been generalized so that it can be applied to any of a wide variety of processes in diverse organizations. (See Figure 41.)

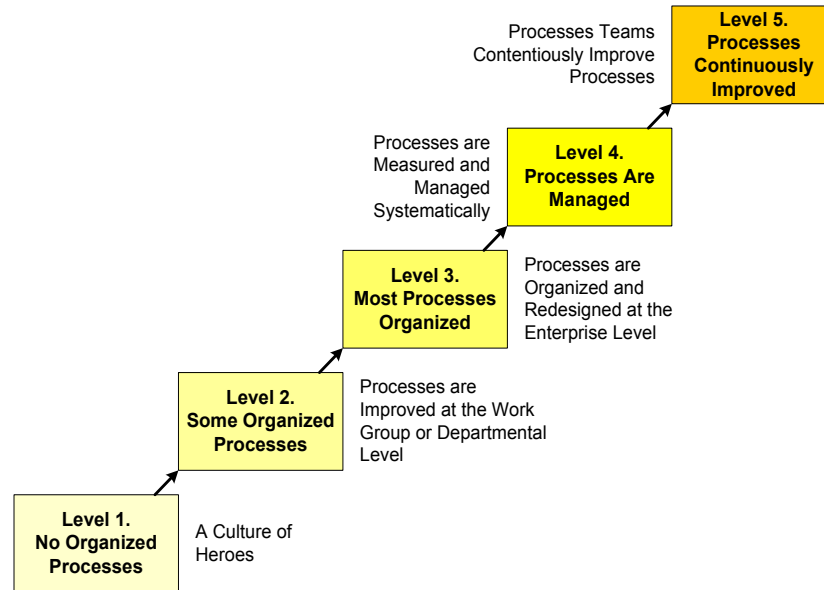


Figure 41. An Overview of the basic CMMI maturity levels

Software organizations often pay SEI certified evaluators to do a formal evaluation to determine where their organizations are on the CMMI scale. Many other companies do informal evaluations, based on the broad concepts inherent in the CMMI “stair step diagram.” What follows is an informal description of the CMMI process maturity model.

Level 1. No Organized Processes

Level 1 organizations don’t rely on processes. Things get done according to plans made on the fly. CMMI folks often refer to them as organizations based on heroes. Things get done because someone makes a heroic effort and gets the report out at the last minute. If someone asks how long something will take, or what resources will be needed, those answering the question are just making a guess – they don’t have a systematic procedure or the data needed to provide accurate answers to these questions.

Level 2. Some Organized Processes

When organizations first begin to embrace processes, they begin by trying to define their core or most commonly used processes. At this stage, they don’t conceptualize the entire company as a set of processes, all interrelated, but focus only on a specific process as it functions within some more or less arbitrary set of boundaries. Level 2 organizations have several of their major processes defined.

Level 3. Most Processes Organized

Level 3 organizations have most of their processes defined. They not only have models of their core business processes but also understand how management and support processes work to support those processes. Most Level 3 organizations have a process architecture that shows how all of the groups in the company function. Thus, if there is a problem, it’s easy to quickly identify the processes that could be causing the problem and the implications for any suggested change.



Level 4. Processes Are Managed

Level 4 organizations have gone well beyond simply defining all their processes. These organizations have process managers who gather data on process performance and customer satisfaction and use this data to make decisions about how to optimize the processes they manage.

Level 5. Processes Are Continuously Improved

Level 5 organizations have built processes right into the essence of the organization. They know their processes and manage their processes. Moreover, they have systems in place to constantly improve their processes whenever possible.

Most organizations are not, of course, exactly at one level or another. Studies have suggested that most organizations in the US are somewhere between Level 2 and Level 3, trying to expand the processes they have modeled and understand into a complete process architecture. Similarly, a smaller group of companies are between Levels 3 and 4. They are working to establish process management and measurement systems throughout the company.

In large organizations, it is common to find that one division or group will be at a different level of maturity than other groups or divisions within the same organization.



I.3 Types of Business Process Software Tools

We have assumed that most of the respondents to our survey have been reading BPTrends and know how we classify business process software tools. We have used our classification system, which is described in Figure 42, to identify types of tools and to suggest some of the ways the various tools or techniques overlap with each other. For those who may be unfamiliar with our classification system, we have described the major types of business process software tools.

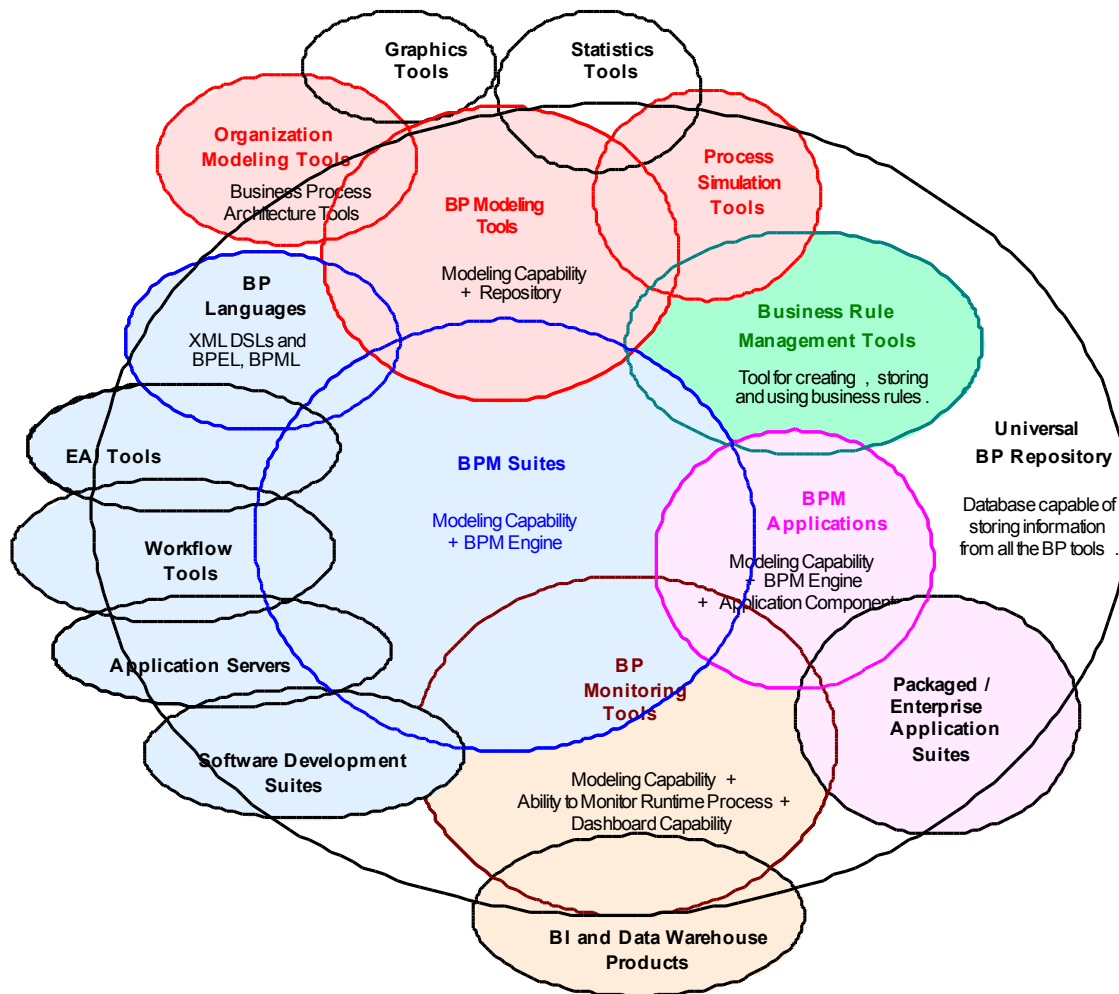


Figure 42. Major types of software tools used by business process practitioners

Simple Graphics Tools

A significant portion of the companies seeking to describe or document business processes use either Word or graphics tools like Visio or PowerPoint. The advantage these tools offer is simplicity and familiarity. Most business managers already have them and are familiar with their use. The disadvantage of these products is that they are not designed to create a database or repository that can save and accumulate information about business processes. Thus, they tend to be used on isolated business process projects. It is nearly impossible to maintain business process documentation in these tools, and, thus, redesigns done using these products tend to be useless for subsequent redesign projects or for the development of an enterprise process architecture.



Business Process Modeling Tools (BP Modeling Tools)

Business Process Modeling tools are designed not only to define and document business processes, but also to store information about the processes so that they can be easily updated and maintained. Companies that move beyond isolated process change efforts and decide to define enterprise-wide process architectures almost always shift to one of these tools. They are more difficult to learn but the benefits they provide far outweigh the effort required.

Organization Modeling Tools

Many of the BP Modeling tools include features that allow users to create modeling of their organization. In essence, these models are very high-level views of how the organization interacts with its environment, what value chains and major business processes it supports, and how high-level processes are aligned with various types of enterprise resources. Many of the BP Modeling tools include these capabilities and some tools specialize in Organization Modeling.

Business Process Simulation Tools

Most BP Modeling tools include simulation capabilities. In addition, there are some tools that are especially designed for more demanding simulation work. Most BP Modeling teams turn to specialists to undertake simulation studies, and those specialists often prefer the more sophisticated Simulation Tools.

Business Process Management Suites or Systems (BPMS Tools)

These tools combine process modeling with runtime execution. In essence, they combine features previously found in workflow and EAI (Enterprise Application Integration) products. In some cases the tools also incorporate Rule Management and Process Monitoring capabilities. These tools are newer and are just beginning to gain a foothold in most companies. In the long run, they promise to help companies create a process layer between those who define and manage processes and the software resources used to implement processes.

BPM Applications

In essence, BPM Suites are tools that one uses to create BPM applications. A BPM Application is an application that is used to manage all of the people and software systems used to implement a specific process. Whenever the organization is called upon to execute a specific process, it relies on the BPM Application to manage the execution. In a few years, as BPMS becomes more widely used, we expect to see BPM Applications offered with BPMS built in. Conversely, we expect ERP and CRM vendors to offer BPM Applications especially designed to integrate with their current ERP or CRM modules. A BPMS is only a tool for building a BPM Application. A BPM Application is an application designed to execute a specific process with BPMS built in to enable managers to modify the application as needed.

Business Process Monitoring Tools

Most BPMS tools offer some process monitoring capabilities. They tend, for example, to provide information about process events to the process supervisors. Other BPMS tools, and more sophisticated monitoring tools, combine data from specific processes with information derived from other sources in a Data Warehouse and then use simulation techniques or Business Intelligence (BI or Data Mining) techniques to extract patterns from the data and to report information to executives via Executive Dashboards in something close to real-time. These tools are sometimes called Business Activity Monitoring (BAM) tools.

Rule Management Tools

Most BP Modeling tools allow analysts to identify and save business rules. Most BPMS tools incorporate rule management tools that at least allow for the identification of business rules used in specific business processes. In some cases the Rule Management tools can be used to actually analyze business rules at runtime and generate or suggest decisions using logical inferencing techniques.

BPTrends has published extensive reports on Business Process Modeling and Simulation Tools, on BPM Suites, and on Business Rule Tools. These reports are available free of charge on www.bptrends.com



I.4 Geoffrey Moore's Technology Lifecycle Model

Geoffrey Moore is a high tech marketing guru who has been involved in numerous technology launches. He wrote a very popular book, *Crossing the Chasm* (Harper Business, 1991), which describes the lifecycle of new technologies and the problems they face gaining widespread acceptance. Here are the phases in a typical technology lifecycle:

Innovators

New technologies, according to Moore, are initially adopted by Innovators - companies that are focused on new technologies and are willing to work hard to make a new technology work in order to gain an early advantage. Innovators have their own teams of sophisticated technologists and are willing to work with academics and vendors to create highly tailored solutions.

Early Adopters

Once the Innovators prove that a new technology can be made to work, Early Adopters follow. Early Adopters are not focused on new technologies, as such, but on new business approaches that can give them a competitive advantage. They are less technologically sophisticated than Innovators, but still willing to work hard to make a new technology perform, if they see a clear business advantage. (See Figure 43)

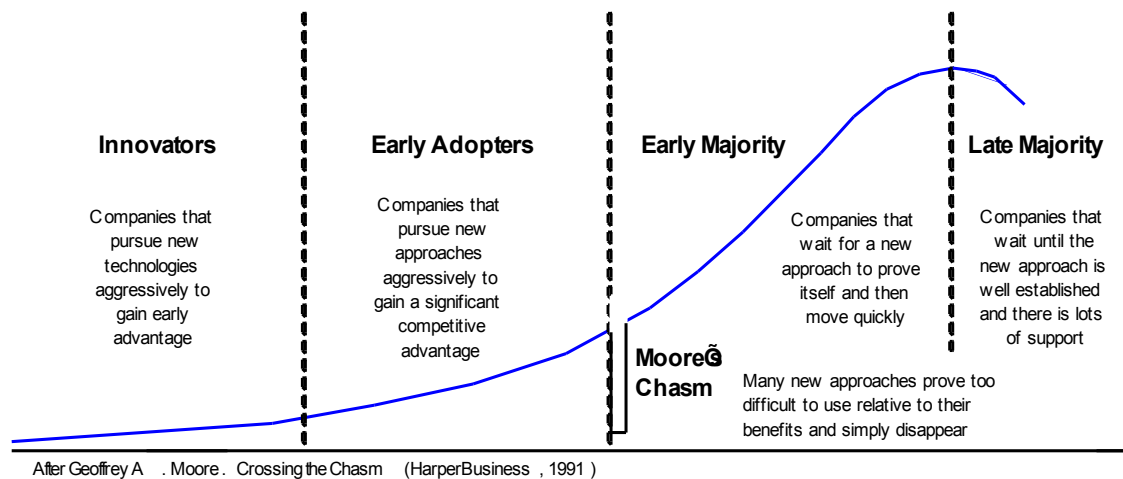


Figure 43. Moore's technology adoption life cycle curve

The Early Majority

The market for a new technology doesn't really get hot until the Early Majority are convinced to adopt the technology. The Early Majority represent some 35% of the market. They won't adopt new technology until they consider it well-proven. In fact, they aren't interested in technology at all, and don't have a lot of sophisticated technologists who are willing to struggle with the technology. They wait for case studies to show that the technology really provides the benefits that are claimed. And they insist on products that make it easy for less sophisticated developers to deploy the technology quickly and without significant difficulties.

Moore's Chasm

Moore's Chasm looms between Early Adopters and the Early Majority. Lots of technological innovations that are tried by Early Adopters fail to gain sufficient acceptance to pass the criteria of the Early Majority. The new technology gets lots of publicity, for awhile. Conferences are launched to provide information about the technology and it is described in glowing articles in all the high-tech magazines and business publications that are always touting the next new thing. Ultimately, however, the technology fails to produce enough concrete proof of usability and benefits to convince the Early Majority to make an investment, and the technology drops out of sight.



The Late Majority and the Laggards

The Late Majority, like the Laggards who lie even further to the right, are reluctant to spend money or take chances on new approaches. They wait until their competitors among the Early Majority have started gaining benefits from the technology, and then follow suit, reluctantly.

When you go to conferences and hear vendors talking about the technological features of their product and why it's better technology than whatever came before, you are in an Innovator's Market. When the market begins to transition to Early Adopters, you begin to hear more business cases and get information on specific benefits. This is also the time when vendors begin to worry about wider acceptance, and become concerned with standards, user interfaces, and assuring their products can work with legacy applications. If the technology is really successful and crosses the chasm, the technology conferences tend to drop away, and the vendors begin to show up at traditional business shows and promote their products as a cost-effective way to solve a class of business problems. The majority of businesses don't care about technology. They just want to solve business problems quickly and effectively and to stay ahead or at least even with their competitors.

When a new technology is first introduced, many relatively small vendors rush to offer products. As long as the market is small, ironically, the number of vendors is large. No one vendor makes very much money, but they are full of hopes, each believing that their technological approach is superior. As the market grows and customers become a little more sophisticated, they begin to demand more comprehensive products and features like support for evolving standards. It is not uncommon for products to go through 3-4 generations in the course of 2-3 years. The cost of constantly developing new versions of one's product, coupled with the need for more aggressive advertising, forces the smaller vendors to search for capital to continue to remain competitive.

Sometime during the Early Adopter phase of the market, the major vendors begin to incorporate the technology into their more comprehensive offerings, and begin to promote the technology. In effect, the large vendors guarantee that the new technology is safe. As the competition heats up, most of the small vendors disappear. Some are acquired by large vendors. Many decide to specialize in industry or niche specific markets. Others simply fail to earn enough money to survive. The key thing, however, is that Majority companies only buy from established vendors who they are reasonably confident can provide the rather extensive support they will require and who they are sure will still be in business 5 or 10 years from now. Thus, if a new technology succeeds in crossing Moore's chasm, the leading vendors will be companies like IBM, Microsoft, and SAP. One or two of the new startups may have been successful enough to have grown into a 100 million dollar company and still be viable in the Majority market, but most won't make it.

Moore's Model and BPM Market

Unfortunately, it is not easy to apply Moore's model to the BPM market, as a whole, because today's BPM market is really lots of separate markets. The most important distinction is between those engaged in helping companies improve their business processes and those working to provide software tools that will enable some kind of process automation. Even within these segments, however, there are important distinctions, as for example, between the process modeling software tools that have been widely adopted, and the BPMS tools that are still in the Early Adaptor phase.