A BPTrends Report

# The State of Business Process Management 2020

Paul Harmon
Jorge Garcia

Partner - Sponsors




**This page intentionally left blank**

# Partner

Technology Evaluation Centers (TEC) is a global advisory and consulting firm in business for over 25 years. We empower organizations to make better decisions about technology by supplying impartial data, a proven evaluation methodology, and incisive industry intelligence. Our services include expert project management for best-fit software selection, robust enterprise architecture planning, impartial implementation oversight, and bespoke engagements for organizations evaluating their digital transformation plans. Our online resource library provides guidance across a wide array of software application areas, covering industry news, software reviews and comparisons, and thought leadership on high-impact technology trends. In practical terms, TEC helps reduce the time, cost, and risk associated with enterprise software selection.

# Sponsors

Creatio (formerly bpm'online) is a leading low-code, process automation and CRM company. It has been highly recognized as a market leader by key industry analysts. Creatio's intelligent platform accelerates sales, marketing, service and operations for thousands of customers and hundreds of partners worldwide. The mission of Creatio is to help companies ACCELERATE!

For more information, please visit www.creatio.com


Over 1 million users in more than 1,300 organizations worldwide rely on Signavio's unique offering to make process part of their DNA. Signavio's business transformation suite enables mid-size and large organizations to effectively mine, model, monitor, manage and maintain their business processes. The intelligent Suite addresses digital transformation, operational excellence and customer centricity, placing them at the heart of the world's leading organizations. Headquartered in Berlin, with offices in US, UK, France, Netherlands, Switzerland, Singapore and Australia, Signavio is well placed to deliver local services on a global scale. For more information, visit www.signavio.com.


Trisotech is a global leader in digital transformation solutions. The Trisotech Digital Enterprise Suite (DES) is a highly visual and interactive software suite that enables technical resources to encapsulate programmatic logic and lets non-technical business people assemble the business logic to innovate, transform and improve your business. Combining concepts of simplicity, usability and collaboration in the cloud, the Digital Enterprise Suite (DES) is composed of the Digital Modeling Suite (DMS) and the Digital Automation Suite (DAS). Trisotech customers use the Digital Modeling Suite (DMS) to create a digital twin of their organization using visual models and the Digital Automation Suite (DAS) to leverage business automation as a service in industries such as healthcare, finance and the public sector. Visit www.Trisotech.com for details.

# Contents

# Foreword

We first published www.BPTrends.com in 2003 and I am proud to report that today it is one of the most recognized and well respected online sources of unbiased information on all things relating to business process. In 2006 we published the first edition of T*he State of Business Process Management*, our comprehensive, international survey of what organizations are doing with business process technologies. We have published this report biannually ever since and this year's report, *The State of Business Process Management 2020*, is the eighth market survey report we have prepared.

**Exciting New Features**

In addition to adding several new questions to reflect some of the new trends in BPM this year we have added two new features to our report:

**BPM Software Tools**
The first new feature focuses on the uses of BPM Software. We asked Jorge Garcia, Principal Analyst, Business Intelligence and Data Management at our NEW Partner, TEC (Technology Evaluation Centers) to work with us to create and analyze this section of the report. We thank Jorge for his outstanding work in contributing this important section to the report.

**Thoughts from BPM Thought Leaders**
The second new feature includes perspectives from well-known BPM thought leaders around the world regarding the future of BPM. We thank all of them for taking time out of their busy schedules to provide their unique insights into the current state of the process market.

Hopefully, these two new features will provide our members and readers with a fresh understanding of the business process market.

**Methodology and Respondents**

This year's report summarizes information provided by 129 participants who responded to our BPTrends Survey in the fall of 2019. The respondents reflect the perspectives of a broad base of business managers, consultants, practitioners, and business analysts from a broad cross section of international individuals and organizations interested in BPM. In considering the results, keep in mind that most of the respondents to this survey are readers of www.BPTrends.comand are, therefore, likely more interested in business process than the average business or technical manager or employee.

Business Process Management (BPM) has been high on most lists of important business topics since 2003. Most people think of BPM as the logical continuation of the early 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. Because of its extensive roots, and because there are several new approaches included in today's discussions of BPM, it is difficult to develop a clear definition of BPM. Like any phrase that is comprised of familiar words and embraced by a number of different individuals and groups within the business community, the phrase Business Process Management, means different things to different people. There is 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 and we hope this survey will provide data that the Business Process Management community can use to gauge the evolution of BPM.

**Partner and Sponsors**

This year we invited **TEC (Technology Evaluation Centers)** to partner with us in producing this year's State of Business Process Management report. TEC is the leading independent provider of services relating to evaluation, research and selection of software products and services and we are fortunate to have them on board with us for this year's report. We also welcome back our Sponsor from the 2018 report, **Signavio**, a leader in web based process modeling and process mining tools and we welcome two new sponsors: **Creatio**, a leader in low-code process automation and CRM, and **Trisotech**, a global leader in digital enterprise solutions. We are grateful to all of them for their support which makes it possible for us to continue to provide this report to the business process community.

For our part, we have reported and summarized the data as accurately and fairly as we could. I want to personally recognize my longtime partner and friend, Paul Harmon, for his commitment to creating, analyzing and editing this report over the years and for his expertise, insights and leadership in the field of BPM for well over 30 years. The industry wouldn't be the same without him.

I also want to thank Paul Heidt for producing and editing of the report as well as our many friends, associates and partners who have worked with us to promote participation in the Survey, and our readers who took the time to complete the Survey.

As always, we hope this report provides you with insights that will suggest new ideas for future developments in your own organizations and we welcome your comments and suggestions for topics and issues you would like to see included in future studies.

**Celia Wolf**
CEO/Publisher
BPTrends cwolf@bptrends.com

# Executive Summary

BPTrends began this survey in 2005 and has been conducting it every other year since then. Some questions reflect years of data while others are new, sampling recent innovations. This year we have added a new section and a guest editor, Jorge Garcia, to review information on BPM Software and to provide his insights into this part of the process market. We have also added a section in which we have asked several BPM thought leaders to speculate on how they see the process market developing in the next few years.

One hundred and twenty-nine people took part in this year's survey. They came from all over the globe, but especially from North America and Europe. They came from organizations of every size and from all industries. Financial, healthcare and the government were especially well represented this year.

In 2018, we introduced a figure that suggested that the business process market advances though ups and downs. Every-so-often something becomes popular and senior management seems to rediscover the importance of process. For several years there are conferences and articles in all the various magazines and considerable progress is made. Then the enthusiasm dies down, as some new emphasis arises and there is a lull in enthusiasm for process work. Later ,a new approach to process work gains attention and the corporate world experiences another burst of enthusiasm. In the early Eighties it was Six Sigma. In the early Nineties it was Business Process Reengineering (BPR) and then ERP. In the early Zeros it was BPM and BPMS.

The enthusiasm for process work in the OOs was mostly focused on software tools that used XML to allow one to connect existing software applications together and manage them by means of a process flow overview. At the same time BPMS tools integrated process flow models, business rule/decision support models, and process mining capabilities to provide a more comprehensive and integrated overview of business processes. Interest in the tools was promoted by software companies who spent the money necessary to generate conferences and articles in magazines. The tools never quite generated the results that the vendors suggested, but, never-the-less, many companies have made major advances in process control by linking existing and new applications into larger processes and monitoring them via graphic models. Most ERP products have incorporated this technology and have become more flexible and more integrated as a result.

At the same time other process technologies were introduced in the first decade of this century and have resulted in significant improvements in the ways organization's deal with business processes. The OMG and other standards organizations have introduced a number of new process standards. The OMG's modeling notation, BMPN, has become a popular, worldwide standard. Groups have developed standard industry-specific process architectures, and these have made industry coordination much more efficient. One thinks of the Supply Chain Operations Reference (SCOR) model used by companies with large supply chains, and the Telecom Industry's eTOM telecom architecture used by all major telecom companies. Similarly, there are popular industry specific architectures provided by software organizations like IBM. Companies using Six Sigma and Lean have developed common methodologies that combine these popular bottom-up approaches to

process improvement.

During the same decades, many universities established BPM programs and it is now possible to get an MA or a PhD in process work. Some of these BPM programs are in business schools while others are part of IT programs. In either case they assure a steady flow of process research and expertise in the near future. In recent years Artificial Intelligence and BPM have interacted to produce process mining and Robotic Process Automation tools. Companies working to improve or radically redesign business processes have a wide variety of tools today that didn't exist in 2003 when BPTrends began to study the market.

At the same time the Internet and the spread of computing to laptops, digital assistants and intelligent phones have revolutionized many industries. One thinks of how publishing, the music industry, and retail sales have changed in the last two decades. In most cases hi-tech entrepreneurs have created new Internet-centered business models that have revolutionized the ways organizations work. Sales clerks have been replaced by customers who order their products from company websites and receive them from delivery trucks. The people designing these new business models have relied on process models to revolutionize industries and have largely been responsible for the popularity of the term *digital transformation*, which has recently replaced "process" as the popular term for how organizations seek to reorganize the way they do business.

For all the changes that have occurred, and in spite of the continuing process work that is taking place in most organizations, today we are in a lull, waiting for the next big thing to come along and drive a new round of enthusiasm for process work. This is not to say that many organizations aren't still working on improving business processes. There is some growth and considerable enthusiasm for major redesign projects. On a whole, however, the market doesn't seem to be growing as rapidly as it was in the Early Zeros when everyone seemed convinced that BPM was a really important innovation. As the enthusiasm for BPM has waned, analysts, who always need to be enthusiastic about the next great thing, have begun to talk more about digital transformation, which, as far as we can tell is largely a euphemism for large business process redesign projects that emphasizes IT and automation.

As each round of interest gathers momentum, the overall support for an on-going process commitment grows, but as each round loses momentum, the attention of management, so critical for serous process work, wavers. There are, of course, exceptions to this pattern. A few companies remain strongly committed to having superior processes and continue to work on improving their processes year in and year out. Most, however, are less enthusiastic. When process work is popular they undertake new initiatives and seek to become more process focused, but when lulls come, they drop initiatives, and process work is left to department managers who refocus on local improvements.

BPTrends has tracked the rise and decline of the interest in Business Process Management. At the moment our data shows that there is more interest in process work, worldwide, than there was in 2005, but the field isn't growing very rapidly. In essence BPMS products have become established and are being used widely, but are not having the revolutionary impact that they were originally supposed to have. At the moment, in essence, we are waiting for a new enthusiasm to come along and drive the interest in process work to new heights. As you will see when you read the comments of the process thought leaders, who we asked speculate about what is likely to happen in the near future, some already begin to see signs of a new enthusiasm taking shape, either in the emphasis on

Artificial Intelligence or Process Mining, while others think the current slack period will last a bit longer.

In the long run, of course, we are confident that new process initiatives will develop and thrive. The world continues to be subject to major changes in technology and in how people relate to organizations. All this necessarily leads to ongoing changes in business and that, in turn, requires changes in the way organizations do business. New techniques and activities must be mastered, implemented, and integrated with other business activities. As always, industry leaders lead because they figure out how to integrate business activities and to manage ongoing processes in ways that generate results that please customers.

Just as some organizations rise above others in their implementation of processes, regions vary as circumstances vary. Most cutting edge process work has historically been done in Europe and North America, were most of the large organizations have been located. Starting in the Eighties, however, we saw major innovations flowing from Japan (Six Sigma and Lean) as some of Japan's corporations began to dominate specific industries (e.g. Toyota). Today, China is rapidly undergoing its own industrial revolution. It has, to date, relied primarily on inexpensive labor to give it an edge, but as other countries, like India and countries in SE Asia, seek to exploit inexpensive labor, China will predictably move into high tech, innovate, and may soon become the source of new developments in automation and personnel management. In a similar way, Saudi Arabia is currently seeking to sell stock in its oil industry and will be using that money to invest in new businesses to generate future wealth. They have, for example, been heavily investing in healthcare and may soon become a new source of process excellence.

**In General**

Some companies are still very enthusiastic about process work, most are doing needed process work, but without any clear focus, and in some organizations process work has dropped below the horizon and organizational interest is focused elsewhere. Here are the major findings from this year's BPTrends survey:

- About 50% of respondents come from organizations that are making a major, strategic, or at least a significant effort at process work. This result has remained the same for the last several years.

- About 35% of the respondents are from organizations that are focused on a limited number of mid- to low-level departmental process projects. Similarly, 36% of organizations responding say they are working on ten or more process improvement projects.

- About 40% of the organizations are focused on major process redesign projects. 60% of organizations are working on one or more transformation projects.

- As in the past, most organization (62%) have up to 25% of their business processes modeled, and only 2% of the organizations have all of their processes modeled. About 39% of the organizations are working to develop an enterprise process architecture.

- About 70% of the organizations say they are doing process work to reduce costs or improve productivity.

- About 30% of the organizations say they are doing process work to roll out new products or to enter new lines of business.

- Another 30% say they are doing process work to improve customer satisfaction.

- Almost 75% of respondents believe that BPM processes and technologies have helped their organizations accomplish their goals.

- When asked why it's hard to get senior management engagement, 55% suggest it's because they have multiple processes competing for attention and 48% say that management is simply focused elsewhere

- 50% of the organizations let individuals or department managers initiate and manage their process efforts. Only 15% report that they have an organized BPM group to coordinate their efforts.

- Training in process techniques and skills has dropped in the last few years and 42% report that they are doing no training.

- 73% report that their organization's level of interest in BPM has grown modestly or rapidly in the past two years.

- 62% of organizations spend less than $500,000 on business process work, but a steady 3-5% report spending over $10 million.57% report that they will be spending more on BPM in the coming year.

**As Regards BPM Software**

The BPM software market has been maturing for more than 30 years. It has witnessed and been part of many technological transformations of the modern software industry. From the initial development of basic workflow design tools, to full platforms for process automation and digital transformation, BPM solutions have undergone many ups and downs but have settled on solid footing within the software stack of many organizations for achieving operational excellency.

Surviving and thriving through a myriad of hyped technologies, BPM tools now appear to be steadily gaining momentum, and are being sought by an increasing number of users and organizations. This is especially true for those organizations that would like to evolve, digitize, and improve their business processes to optimize their operations. Today, the potential to achieve business process efficiency and transformation is afforded to nearly all business users, who can use and mold BPM platforms as needed by their business requirements with relative ease.

This report presents an opportunity to identify developments in the BPM software industry and characteristics of the BPM software user community with the aim of increasing the levels of successful adoption of BPM tools and achieving better cohesion with an effective BPM practice that can be translated into optimal business operations.

The saturation of the BPM software market with many different types of offerings and options and the need for enhanced knowledge of the capabilities of the available BPM tools will place more pressure on organizations to make informed decisions on the acquisition and adoption of BPM tools for modeling and improving their business processes.

The findings presented in this report shed light on how new technologies support team collaboration, communication, and process analysis, setting the stage for the evolution of BPM offerings to fulfill the requirement of an increasing number of organizations for optimal business process efficiency. The following are some of the most important findings of this section:

- 70% of respondents already have a tool in place for process modeling, while the remainder of the survey population have plans for tool adoption within the next 3 months (5%), within the next 6 months (7%), or within the next 12 months (18%).

- Nearly 62% of respondents stated that their organization uses 1 or 2 software solutions to carry out their business process management tasks.

- Of the respondents whose organization uses 1 or 2 software solutions to carry out their business process management tasks, 41% said that these BPM tools are used by team and business managers who own their own processes.

- Nearly 49% of our respondents identified enhancement of collaboration to be the most beneficial aspect of the use of BPM software. This was followed by 40% who indicated that the improvement of internal and external process interactions is another important benefit.

- When asked about how satisfied they are with the functionality and performance of their BPM tools, more than 53% of respondents stated they were satisfied with their tools' workflow definition and modeling capabilities, nearly 36% reported a good level of satisfaction with process execution and monitoring capabilities, and nearly 50% of respondents noted they were satisfied with their tools' collaboration and document management capabilities.

- Approximately 50% of respondents stated they were satisfied with their existing BPM tools in general.

- Nearly 40% of respondents mentioned that their organizations will likely change business process tools within the next two years.

- The specific technologies that are the object of desire for organizations for improving capabilities in the area BPM include BPM automation, with more than 56% of respondents showing preference, as well as those with capabilities for process mining, cited by 39%.

- Nearly 46% of respondents saw budgeting as the main challenge or obstacle for the adoption of process mining technologies in their companies, whereas 55% attributed it to a lack of know-how.

- Nearly 71% of respondents consider that digital transformation is the technology that has

had the biggest impact on the business process realm for their organizations to date.

BPTrends started tracking the process market in 2005 when BPMS tools first appeared on the scene. In the years since, enthusiasm has driven a wide variety of process initiatives. Underneath it all, however, was the interest in Internet-based tools that could model, track and control major business processes. The tools have gone through a variety of changes and are, today, powerful, widespread and widely used. The initial enthusiasm for new process work has declined a bit and current interest is perhaps better characterized by the term *digital transformation*, but the underlying impulse – to improve how businesses perform their work – remains.

## Section I
# How Organizations Understand Business Processes

Our survey began with general questions designed to help us understand how organizations conceptualize their business process efforts.

**1. How would you characterize your organization's current interest in business process efforts of all kinds?** (Survey question 5. Choose one.)

This first question is one that we have asked on all our previous surveys, and thus we are in a position to show how attitudes have changed over the years.

As you can see in a glance at Table 1, there is no major difference between responses this year and responses from the last several years. Over the long run there has been a slight drop in the number of respondents who say that business process work is a strategic commitment, but there has been no significant change over the last eight years.

**Table 1. How would you characterize your organization's current interest in business process efforts of all kinds?**

| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|---|
| Major strategic commitment by executive management | 28% | 26% | 19% | 31% | 21% | 24% | 23% | 23% | 29 |
| Significant commitment to multiple high level process projects | 23% | 24% | 33% | 30% | 32% | 27% | 36% | 27% | 34 |
| Initial commitment to limited number of mid or low-level projects | 23% | 25% | 29% | 26% | 33% | 35% | 29% | 34% | 44 |
| Exploring opportunities | 21% | 23% | 16% | 12% | 11% | 14% | 9% | 14% | 18 |
| No interest | 6% | 2% | 3% | 2% | 3% | 1% | 3% | 2% | 3 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 128 |

Note that we show percent responses for every year but the current year. For the current year we show both the percent and the actual number of respondents (on the far right).

The largest number of respondents say their organizations have made an initial commitment to a limited number of mid or low-level projects. These, plus those exploring opportunities are presumably organization new to process work, or organizations returning to process work after

some period when they focused elsewhere.

On the other hand, by combining responses to the first two questions, we conclude that 50% say their organizations have made a significant or a major strategic commitment to business process change.

There was a time, between 2007 and 2009, when it seemed like the interest in process work was really growing. This time was dominated by an interest in Lean and in BPM Software Tools that seemed to offer lots of promise. As the interest in both has declined, the interest in process work has remained, but it hasn't continued to grow.

It's harder to understand the growth in companies new to process work, or just considering process projects. Broadly, it may simply represent a result associated with the survey. There are always organizations that, for one reason or another (e.g. a change in management, a new technology or product that impacts the industry) decide to focus more attention on their business processes. Once interested, they look around for information and find BPTrends, and then take the survey to learn still more.

I have observed over the years that many companies become interested in process change, set up a BPM organization, undertake major process projects, and then, as time passes, become less interested. It's usually associated with the interests of senior managers who are enthusiastic for process improvement, and who are subsequently replaced with senior managers with other emphasizes. Thus, for a period, a particular organization serves as the poster child for process change, or Lean, or SCOR or whatever. Then, a decade later one finds that the same organization isn't doing much process work. In some cases one encounters people from that organization who are new to process and believe that they are introducing process work at the organization for the first time. I say all this to emphasize that there is no long term trend for all organizations to gradually become more interest in process – no end point in sight where all organizations will consistently be efficient users of process technologies. Instead, there seems to be constant churn, where some advance and others fall back. There are exceptions, of course: organizations that seem to evolve into process change leaders and then remain leaders year-in and year-out. But they are the exceptions.

We did some cross-checking to see what we could learn about organizations that said they had made a major strategic commitment of BPM and found that were primarily from North America or Europe, although there were a few from every continent, and their size varied from large to small. They were almost all from the Financial industry or were from professional organizations focused on process.

**2. What are the major business drivers causing your organization to focus on business process change?** (Survey Question 6. Choose all that apply.)

This is another perennial question, where we ask our respondents to identify the drivers that are causing their organizations to focus on process change. Once again, this year, the leading cause respondents identified was the need to improve coordination, save money and improve productivity. A significantly larger number chose this option this year, which would seem to underline the correlation between process work on saving money or improving productivity.

The three leading "secondary reasons" were the need to improve products, the need to improve customer satisfaction, and the need to improve the management of IT resources. Again, from a historical perspective, this isn't surprising and simply reflects the ongoing priorities of process work throughout the world over the course of the last 14 years.

**Table 2. What are the major business drivers causing your organization to focus on business process change?**

| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|---|
| Need to save money by reducing costs and/or improving productivity | 33% | 56% | 56% | 57% | 54% | 53% | 53% | 69% | 88 |
| Need to improve existing products, create new products or enter new lines of business to remain competitive | 19% | 36% | 36% | 28% | 34% | 33% | 28% | 35% | 44 |
| One time event (merger or acquisition) | 2% | 4% | 4% | 4% | 3% | 5% | 7% | 2% | 3 |
| Government or business risk management (Sarbanes- Oxley, ISO 9000) | 11% | 17% | 17% | 13% | 13% | 17% | 21% | 20% | 25 |
| Need to improve customer satisfaction to remain competitive | 19% | 37% | 37% | 31% | 37% | 46% | 42% | 38% | 48 |
| Need to improve management of IT resources (ERP applications) | | | | | | 15% | 26% | 31% | 39 |
| Need to reduce cultural resistance to process change | | | | | | 17% | 15% | 24% | 32 |
| Other, Please Specify | | | | | | 12% | 8% | 6% | 8 |

Those that chose Other mentioned things like risk management, and the need for process transparency.

**3. In general, would you say that BPM practices and technologies have helped improve your organization's efficiency, versatility and customer satisfaction?**
(Question 7. Choose one.)

This is a new question, introduced in the last survey. This year's results are roughly similar to the results of two years ago. Seventy-two percent agree or strongly agree that BPM practices and technologies have lead to improvements in their organizations. It's worth noting, however, that

20% of our respondents said they didn't know if their process practices and technologies were helping to improve their organization's efficiency, versatility and their customer satisfaction.

**Table 3. In general would you say that BPM practices and technologies have helped improve your organization's efficiency, versatility, and customer satisfaction?**

| | 2017 | 2019 | |
|---|---|---|---|
| Strongly agree | 22% | 25% | 32 |
| Agree | 43% | 47% | 60 |
| Don't know | 27% | 20% | 26 |
| Disagree | 7% | 6% | 8 |
| Strongly disagree | 1% | 1% | 1 |
| Total | 100% | 100% | 127 |

Keep in mind that our respondents are mostly process practitioners of one kind or another and that senior executives without any investment in process work might say something different.

We checked to determine what sorts of organizations disagreed or strongly disagreed with this proposition and didn't find a pattern. They were mostly large or midsized and the one company that strongly disagreed was midsized. They were mostly from Europe and they were from government, aerospace and education. Without more information we can't be sure what caused organizations to say BPM practices didn't help, but in our experience, when companies are upset with process efforts, its usually because there is an implementation failure and, after spending money, the organization is upset that it doesn't have a satisfactory new process to roll out.

Although we have no way of knowing exactly why some respondents question the value of BPM work within their organizations, we want to remind readers of the difference between large-scale process redesigns (transformation) and small-scale improvements in existing processes (six sigma and process improvement). As a broad generalization, an organization gets a much bigger bang for undertaking major process redesign. (One also takes bigger risks.) Advocates like Hammer and Rummler have always advocated taking risks to transform an organization – to build highways rather than pave cow paths, in Hammer's wonderful phrase. Organizations undertaking major projects know that process work has made a difference (one way or the other). Organizations that focus on small-scale improvement projects are often hard pressed to show immediate benefits.

**4. How would you describe the overall focus of your organization at this time?** (Question 8. Choose one or two.)

We've asked this same question six different times. In essence we want to know the overall process focus of the organization being described by the respondent. Over the years there have been slight variations, however, three have consistently dominated responses. Organizations are focused on improving departmental processes, on automating departmental and enterprise processes and on improving existing business processes.

Although it's not very significant, its worth noting that organizations that say they are not focused on processes at all are slowly growing. In our opinion this simply reflects that we are between periods when major enthusiasm dominates the process market, and management's process focus is drifting a bit.

**Table 4. How would you describe the overall focus of your organization at this time?**

| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|---|
| Focused on improving specific departmental level processes | | | 32% | 28% | 40% | 39% | 28% | 22% | 28 |
| Focused on automating departmental or enterprise wide processes | | | 23% | 31% | 20% | 25% | 34% | 19% | 24 |
| Focused on incrementally improving existing processes | | | 32% | 33% | 33% | 39% | 35% | 18% | 23 |
| Focused on redesigning enterprise wide processes | | | 25% | 18% | 18% | 19% | 18% | 13% | 17 |
| Focused on defining an enterprise wide process architecture/ measurement system | | | 18% | 16% | 14% | 19% | 15% | 4% | 5 |
| Focused on defining an enterprise wide process management/ governance system | | | 17% | 20% | 17% | 22% | 26% | 13% | 16 |
| Not focused on processes | | | | | | 6% | 9% | 11% | 14 |

We looked for correlations of projects and various other factors and found some. North Americans, Europeans and respondents from the Middle East were most likely to be working on Enterprise Architecture efforts.

North American respondents were more likely than Europeans to be focused on Major Process Automation projects, while North Americans and Europeans were equally likely to be involved in Major Redesign projects.

Respondents from Financial Services, Government and Professional Business Service organizations were most likely to be focused on Enterprise Architecture, Process Automation and Redesign efforts, but given that most respondents, overall, were from these organizations this may not mean much.

There was little difference between large, mid-sized and small organizations: all were working on enterprise architecture, on Lean Six Sigma projects, on automation and on redesign.

**5. What business process initiatives are underway in your organization this year? (2019)**
(Question 9. Choose all that apply.)

Here's another question that we have repeatedly asked over the course of this survey: What process initiatives are underway at respondent's organizations?

**Table 5. What business process initiatives are underway in your organization this year (2019)?**

| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|---|
| Development of an Enterprise Process Architecture | 42% | 43% | 37% | 38% | 31% | 43% | 39% | 39% | 49 |
| Development of an Enterprise Process Performance Measurement System | 25% | 25% | 24% | 24% | 20% | 19% | 24% | 16% | 20 |
| Coordinating Enterprise Process Change efforts | 27% | 31% | 33% | 26% | 26% | 26% | 29% | 28% | 35 |
| Coordinating Enterprise Process Management efforts | 25% | 29% | 28% | 26% | 22% | 23% | 29% | 29% | 37 |
| Process Manager training | 19% | 22% | 24% | 24% | 20% | 19% | 20% | 24% | 30 |
| Balanced Scorecard | 25% | 22% | 14% | 22% | 14% | 13% | 12% | 13% | 17 |
| Major Process Redesign projects | 38% | 36% | 36% | 31% | 33% | 36% | 38% | 40% | 51 |
| Redesign projects with Frameworks (SCOR, ITIL) | 13% | 12% | 13% | 8% | 9% | 8% | 9% | 9% | 11 |
| Six Sigma Process Improvement projects | 21% | 25% | 21% | 18% | 22% | 20% | 12% | 12% | 15 |
| Major Process Automation projects | 26% | 27% | 23% | 27% | 20% | 21% | 37% | 26% | 33 |
| Process Analysis and Redesign training (Non-Six Sigma) | 26% | 20% | 22% | 19% | 24% | 20% | 25% | 22% | 28 |
| Lean Six Sigma Process Modeling and Redesign Training | 15% | 22% | 17% | 18% | 19% | 27% | 15% | 6% | 8 |
| Other, please specify | 11% | 7% | 9% | 7% | 9% | 7% | 15% | 8% | 10 |

Notice that, in the previous question, when we asked where the organizations were focused, departmental and improvement projects seemed to predominate. Here Enterprise Process Architecture and Major Redesign projects seem to predominate.

We looked to see who was most likely to focus on enterprise architecture and found that Europeans were most likely, followed closely by those in North America, and, a distant third those from the Middle East. Interest in architecture is, however, about equally spread between large, medium and small firms. It's especially pronounced among financial service companies.

Those who chose Other mentioned things like knowledge management, and several put None or No process initiatives at this time.

**6. Distinguishing between (1) Transformation Projects, which introduce major changes in the way the organization does business, and (2) Process Improvement Projects, which focus on incremental improvements in existing processes, is your organization currently undertaking any Transformation Projects?** (Question 10. Choose one.)

Here we focus on the key difference between process efforts that seek to redesign the organization, and those that aim at incrementally improving existing processes. We have asked this question for the past two surveys, since the term "Transformation" became popular. As you can see, 28% of our respondents are pursuing at least one major project and 35% are pursuing more than one.

**Table 6. Distinguishing between(1) Transformation Projects, which introduce major changes in the way the organization does business, and (2) Process Improvement Projects, which focus on incremental improvements in existing processes, is your organization currently undertaking any Transformation Projects?**

| | 2017 | 2019 | |
|---|---|---|---|
| Yes, more than one | 31% | 35% | 44 |
| Yes, we are engaged in one major transformation project | 28% | 28% | 35 |
| No | 33% | 38% | 48 |
| Totals | 92% | 100% | 127 |

**7. If you answered "yes" to the previous question, please name the transformation projects?** (Question 11.)

Several respondents identified major software systems projects that were being replaced or integrated to get better results.

Several indicated projects to give customers better access to their order data, or information about projects or to otherwise generate more transparency for customers.

Several mentioned efforts to "become more digital" which we assume to involve automation.

Several specifically mentioned moving information into a cloud, either outside or inside the organization. Several mentioned changes to departments, as for example, redesigning procurement, redesigning HR, or upgrading logistics.

Obviously most of our respondents interpreted transformation as an effort that involved automation.

**8. Is your organization currently undertaking any process improvement projects?** (Question 12.)

We asked if companies were undertaking process improvement projects. Ninety-two percent said they were. Thirteen percent said they were currently undertaking more than 50 projects and 23% said they were undertaking between 10 and 50.

| Table 8. Is your organization currently undertaking any process improvement projects? | | | |
|---|---|---|---|
| | 2017 | 2019 | |
| Yes, more than 50 | 8% | 13% | 16 |
| Yes, more than 10 and less than 50 | 29% | 23% | 29 |
| Yes, one to 10 | 57% | 56% | 72 |
| None | 7% | 9% | 11 |
| Totals | 100% | 100% | 128 |

We explored who was doing over 50 projects and didn't find out too much. They are large companies and equally divided between North America and Europe, which is what one would expect.

**9. What percent of the business processes at your organization are modeled and documented?** (Question 13.)

Organizations have been modeling and documenting their business processes for a long time. Most organizations, however, model when they undertake projects, and ignore updating their models once the new processes are rolled out and in use. Those who have tried to create business process architectures have often set, as a goal, the documentation of all their processes. In reality, extensive process modeling and documentation is rare. As you can see, when we asked organizations about their processes, only 1.5% said all their processes are modeled and documented

Most organizations said that less than 25% of their processes were modeled and documented.

| Table 9. What percent of business processes at your organization are modeled and documented? | | |
|---|---|---|
| | 2019 | |
| None (0%) | 6% | 7 |
| Less than 25% | 42% | 53 |
| More than 25% | 20% | 26 |
| More than 50% | 17% | 22 |
| More than 75% | 13% | 17 |
| All (100%) | 2% | 2 |
| Totals | 100% | 127 |

Organizations that have modeled and documented all of their processes are small organizations, mostly professional organizations, and, interestingly, from South America.

**10. What obstacle or challenge do you face as you try to gain widespread acceptance of business process efforts at your organization?** (Question 14. Choose all that apply.)

Lots of business professionals tell us that process work depends on support from senior management. We have asked, for some time, about the specific problems that are faced when process people try to gain acceptance for process efforts. This year, as in past years, the dominant reasons respondents cited was competition from other process change groups within the organization, and that process management is focused elsewhere.

| Table 10. What obstacles or challenges do you face as you try to gain widespread acceptance of business process efforts at your organization? | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2007 | 2011 | 2013 | 2015 | 2017 | 2019 | |
| Senior management isn't interested or is focused elsewhere | | | 37% | 48% | 58% | 37% | 48% | 60 |
| Management wants ROI estimates that we cannot produce | | | 23% | 29% | 30% | 24% | 32% | 40 |
| We have multiple process change efforts competing for attention | | | 42% | 49% | 44% | 55% | 52% | 65 |
| We have had process projects that failed and management is cautious | | | 12% | 16% | 25% | 22% | 18% | 23 |
| Management does not want to make the investment at this time | | | 22% | 24% | 24% | 22% | 22% | 28 |
| Other, please specify | | | 10% | 10% | 13% | 13% | 14% | 18 |

We have argued for years that process people within an organization should combine and work together, offering a single, combined approach to each process problem. Confusing management by arguing about process solutions just reduces the overall effectiveness of all process people. A combined approach, however, would usually mean that IT would need to work not only with business analysts, with Six Sigma or Lean groups, and with independent process groups. To date, this has proved difficult for most organizations.

As for management's focus, this supports the theme we have been developing. Between 2005-2007, process change headed most surveys of management priorities. The Internet and the Web, and social changes accompanying these new technologies had senior management focused on operational change. Today, senior management is more likely to be focused on climate change, on changes in trade relations or where organizations should have offices or have manufacturing facilities.

**11. How is your overall approach to management of process projects organized?** (Question 15.)

This question is simply designed to find out how various organizations structure their process management efforts.

| Table 11. How is your overall approach to management of process projects organized? | | | |
|---|---|---|---|
| | 2017 | 2019 | |
| Individual business managers initiate and manage efforts | 27% | 26% | 33 |
| Division or department managers initiate and manage efforts | 16% | 24% | 31 |
| Business Analysts initiate and manage efforts | | 13% | 17 |
| IT specialists initiate and manage efforts | | 5% | 7 |
| We have a BPM group that initiates and manages efforts | 24% | 15% | 19 |
| Senior executives initiate and manage efforts | 20% | 13% | 16 |
| Other (please specify) | 13% | 4% | 5 |
| Totals | 100% | 100% | 128 |

Many organizations have experimented with having process centers of excellence (often called BPM groups). When they do, and when these groups report to the CEO, they can be a major source of coordination for process efforts at an organization. We asked this year's respondents about how they managed their process projects and most indicated that project management was done by individual business managers or division and departmental managers.

Among those who chose Other, several mentioned that there was some joint efforts that departmental and IT managers coordinated by means of a joint effort.

Interestingly, among those from Financial Services, normally an early adopter and a rather sophisticated user of process technology, IT is more likely to manage projects than individual or divisional managers.

**12. Does your organization provide training in process analysis and improvement? Does the training lead to certification?** (Question 16.)

Most organizations do not provide training in process analysis or in process improvement. One assumes they are not doing process work, or, more likely have already trained staff in basic process improvement technologies. Of those that do, 28% provide training, but no certification.

Training in process work has dropped significantly since 2005. Training is more in demand when new process technologies are being introduced, and less popular when organizations think they already understand what they need to know.

| Table 12. Does you organization offer training in process analysis and improvement? Does the training lead to certification? | | |
|---|---|---|
| | 2019 | |
| Yes, we provide training that leads to certification. | 16% | 20 |
| Yes, we provide training but no certification | 28% | 36 |
| We have a BPM group that initiates and manages efforts | 14% | 18 |
| No, we don't provide training in analysis or process improvement. | 42% | 54 |
| Total | 100% | 128 |

Certification was introduced early in the Twenty-First Century by several organizations. Several colleges set up programs to train individuals for advanced degrees in business process work. As a broad generalization, these programs have flourished, and thus more and more process professionals have academic degrees that suggest they have a good knowledge of the technical and methodological basics of process work.

In around 2010, several professional groups, like ABPMP (Association of Process Management Professionals) and ASQ (American Society for Quality) introduced certification that indicated individuals had a minimal understanding of process basics. Training organizations also offered certification for individuals who completed a sequence of courses. At the time it was argued that countries outside North America were more focused on certification and required it for professional advancement. In fact, it is mostly North American companies who indicate that they do training and provide certification. Little BPM certification is being sought outside North America and Europe.

**13. How has your organization's level of interest in the use of BPM practices changed over the past two years?** (Question 17.)

Interest in BPM has grown modestly at organizations throughout the world.

Organizations that report that interest in BPM has grown rapidly are mostly located in North and South America and Europe and within the financial industry.

| Table 13. How has your organization's level of interest in BPM practices changed over the last two years? | | |
|---|---|---|
| | 2019 | |
| Grown rapidly | 16% | 20 |
| Grown modestly | 57% | 72 |
| Unchanged | 17% | 21 |
| Declined modestly | 9% | 11 |
| Declined rapidly | 2% | 2 |
| Total | 100% | 126 |

**14. How much would you estimate your organization spent on business process analysis, process management, monitoring, redesign and improvement in 2019? Include BPM management, Lean Six Sigma, process automation and overhead staff. DO NOT include outsourcing or ERP software and implementation costs.** (Question 18. Choose one.)

This year, as in past years, most organizations plan to spend under $500,000 on business process work. As in the past, a few organizations plan to spend much more than that, and 3 organizations plan to spend over $50 mill

| Table14. How much would you estimate your organization will have spent on business process analysis, process management, monitoring, redesign and improvement in 2019? Include BPM management, Lean Six Sigma, process automation, and overhead staff. DO NOT include outsourcing, or ERP software and implementation costs. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 | |
| $0-$500,000 | 57% | 51% | 54% | 63% | 54% | 52% | 54% | 62% | 78 |
| $500,000 to $999,999 | 15% | 16% | 15% | 16% | 20% | 18% | 21% | 17% | 21 |
| $1 million $5 million | 19% | 21% | 21% | 12% | 15% | 18% | 15% | 10% | 13 |
| $5 million to $10 million | 3% | 4% | 4% | 4% | 5% | 6% | 6% | 6% | 7 |
| Over $10 million | 5% | 7% | 4% | 3% | 4% | 6% | 3% | 3% | 4 |
| Over $50 million | | 2% | 3% | 1% | 2% | 2% | 1% | 2% | 3 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 126 |

We checked on which organizations planned to spend over $50 million. It turned out one was in North America, one in Europe and one in the Middle East. The organizations themselves were, in two cases, governments and in one case a healthcare organization.

**15. How do you expect your organization's investment in BPM technology will change over the course of the next two years?** (Question 19. Choose one.)

More than half of the respondents indicated that their organizations would be spending more on process work over the course of the next two years. Forty-six percent suggested they would be spending less than 100% more than they were currently spending.

**Table 15. How do you expect our organization's investment in BPM technology is going to change over the course of the next two years?**

| | 2017 | 2019 | |
|---|---|---|---|
| Increasing by more than 100% | 9% | 11% | 14 |
| Increasing by less than 100% | 46% | 46% | 58 |
| Unchanging | 40% | 35% | 45 |
| Decreasing by less than 50% | 4% | 6% | 8 |
| Decreasing by more than 50% | 2% | 2% | 2 |
| Totals | 100% | 100% | 127 |

Organizations that expect their spending to grow by more than 100% are located in the Financial Industry and in Government and located in North America and South America.

# Section II
# Business Process Software Tools
## This section analyzed by Jorge Garcia of TEC

Today, the software and tech industries are undergoing drastic changes over relatively short time periods, oftentimes making it difficult to stay abreast of the trends and advances that are poised to change the way organizations do business. At the same, businesses are becoming increasingly complex, placing demands for more effective and efficient business process management.

Consequently, organizations need to rely on the appropriate tools for establishing the practice of business process management, or if they are considering the adoption of BPM tools, for making the best possible choice for BPM software selection and adoption.

The successful selection and subsequent adoption of BPM software throughout a user organization requires first and foremost a good grasp of the business process management landscape. This section of 16 questions (questions 20 to 36) aims to provide you with useful information regarding the state of the market and the nature of the current BPM software market. The information contained in this section reflects the views of our user community and provides you with a solid foundation for assessing how you're faring with your existing BPM tool set, for preparing for a BPM software selection and adoption endeavor, or for simply keeping yourself informed about the BPM software market and the important trends that are reshaping the development of these tools and the capabilities they offer businesses.

**16. Are you using software tools to model the processes you are trying to transform or improve?** (Question 20.)

In 2017, to better understand the relationship between the practice of BPM and the use of tools, we asked the user community: *Is your organization using any software tools to model processes?* We found that most respondents, 79%, stated they are using some type of software modeling tool. A significant 21% of respondents stated they do not use any type of tool for modeling processes.

In 2019, we basically asked the same question: *Are you using software tools to model the processes you are trying to transform or improve?* Respondents could choose from among four options, enabling us to better understand their intentions toward the adoption of BPM tools for modeling processes.

| Table 16. Are you using software tools to model the processes you are trying to transform or improve? | | |
|---|---|---|
| | 2019 | |
| Yes | 70% | 80 |
| No, but we will implement one within the next 3 months | 5% | 6 |
| No, but we will implement one within the next 6 months | 7% | 8 |
| No, but we will implement one within the next 12 months | 18% | 20 |
| Totals | 100% | 114 |

In 2019, 70% of respondents said they already have a tool in place for process modeling, approximately 8% less than in 2017. While this is not a significant difference, it does indicate that a substantial segment of the market is still not using business process management technologies and tools. It's possible that organizations are focusing on adopting much-hyped technologies such as artificial intelligence and the cloud instead.

Of those with no such tools in place, 5% expect to adopt BPM tools within the next 3 months, 7% within the next 6 months, and 18% within the next 12 months. These findings indicate the progressive adoption of BPM tools in about 30% of the survey population over the next year.

**17. If yes, please identify the software product(s).** (Question 21.)

There are two types of BPM solutions: those that are used for defining diagrams (e.g., Visio); and those that are used for defining processes—that is, for storing models in a database and letting users monitor processes and maintain data about the processes.

The use of tools for process modeling has basically remained the same over the past 2 years. In 2017, 58% of the respondents who use BPM tools identified the specific BPM software solution used for process modeling.

In 2019, a slightly higher percentage (70%) of respondents said they are using BPM solutions. This represents a 12% increase in the adoption rate of BPM solutions since 2017. This increase is rather small considering that BPM software solutions have been in the market for more than 20 years and have seen significant evolution with the addition of myriad new technologies in recent years.

The available data does not allow us to identify a clear BPM solution by level of popularity, consistent with the rampant market entry, exit, and merger of BPM software offerings. However, some respondents showed keen interest in the adoption of specific BPM applications within their current enterprise software stack.

While there is an increase in the use of formal BPM tools for process modeling (such as AuraPortal,

Bizagi, IBM Blueworks Live, Signavio, Pega BPM, and Software AG's ARIS), a large proportion of the user population still relies on tools that simply perform the function of defining process diagrams (such as Microsoft Visio, Lucidchart, and even Microsoft PowerPoint). These latter tools have nothing to do with formal BPM practices: process design and modeling, deployment, and execution.

Despite the enormous potential benefits of having a BPM software solution for gaining full business process management, monitoring, and control, organizations still experience difficulties in understanding, evaluating, and selecting a proper BPM solution for their business—precluding the widespread adopting of an enterprise or niche BPM solution.

One reason for the challenges and eventual inability of organizations to beef up their software stack is the increasing fragmentation of the BPM market landscape with more and more flavors of BPM solutions. There are now intelligent business process management software (iBPMS), business process automation (BPA) software, and robotic process automation (RPA) solutions, among other types of business process offerings. This makes it increasingly difficult for organizations and their users, and even for vendors, to rationalize the best adoption strategy.

**18. How many tools (overall) do you use for business process management in your organization?** (Question 22.)

When asked how many tools (overall) they use for performing their business process management tasks, most respondents (62%) said they use one or two, a fair proportion (21%) said they use from three to five tools, and *in-extremis*, 7% said they use 6 or more software tools. A small percentage (10%) said they do not use a specific software tool at all.

**Table 18. How many tools (overall) do you use for business process management in your organization?**

| | 2019 | |
|---|---|---|
| 0 | 10% | 11 |
| 1 or 2 | 62% | 70 |
| 3-5 | 21% | 24 |
| 6+ | 7% | 8 |
| Totals | 100% | 113 |

Based on my own experience, users dislike having to access multiple tools for ensuring that all business processes are efficiently executed and monitored. Relying on as few software applications as possible for BPM, as for other business tasks, is a good business practice in general. Using multiple tools may increase information dispersion, which may impede users' ability to perform task management efficiently, especially if these systems are not neatly integrated. But the vast majority of the survey population are using at most two software solutions for business process management, suggesting that many BPM tasks are probably still not being done as efficiently as possible.

**19. Assuming you create models of your processes, who uses the models you create?** (Question 23.)

In 2017 and 2019, we asked the survey population about who uses the process models that their software tools generate. Consistent with the 2017 results, two years earlier, the 2019 results showed that 41% of respondents said that team and business managers who own their own processes use the models, followed by 29% who said that only those involved in the process change effort actually use the modeled processes.

**Table 19. Assuming you create models of your processes, who uses the models you create?**

| | 2017 | 2019 | |
|---|---|---|---|
| Only the team involved in the process change effort | 26% | 29% | 33 |
| Team and business managers who own processes | 36% | 41% | 46 |
| Team, business managers and other senior executives | 12% | 12% | 13 |
| All employees | 22% | 15% | 17 |
| Other (please specify) | 4% | 3% | 3 |
| Totals | 100% | 100% | 112 |

So, over the past two years, more than half of those who use and benefit from the models produced by BPM tools are the model users or those involved in model design.

**20. If you're using software tools to model your process change efforts, in which of the following areas are they most helpful?** (Question 24. Choose all that apply.)

When asked in which areas of the business do you see the benefits of the BPM software, nearly 49% of our respondents identified enhancement of collaboration, followed by 40% who noted improvement of internal and external process interactions.

Other benefits included easing business complexity (36%), process optimization (34%), and process execution (24%).

Today, it has become increasingly difficult and complex to conduct business operations, stepping up demands for more efficient collaboration and interaction between all business stakeholders and players, both inside and outside of an organization.

These findings emphasize the paramount role that collaboration and proper communication play during business process design, implementation, and execution in the pursuit of organizations' goals for increased efficiency, robustness, and agility toward business process execution.

| Table 20. If you're using software tools to model your process change efforts, in which of the following areas are they most helpful? | | |
|---|---|---|
| | 2019 | |
| Easing business complexity | 36% | 39 |
| Enhancing collaboration | 49% | 52 |
| Improving internal and external process interactions | 40% | 43 |
| Process execution | 24% | 26 |
| Process optimization | 34% | 36 |
| Total | | 107 |

***Note to readers:*** Questions 21 through 24 explore the level of satisfaction of users regarding the use of their BPM tool(s) of choice. These questions reflect four main capabilities of the BPM tool(s): workflow definition and modeling; process execution and monitoring; process collaboration and document management; and administration, user management, and security. Question 25 addresses users' overall levels of satisfaction regarding their BPM tool(s) of choice.

**21. If you're using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for workflow definition and modeling?** (Question 25.)

Regarding the level of satisfaction with their BPM tools' workflow definition and modeling capabilities, more than 53% of respondents stated they are satisfied or very satisfied, a strong 36% stated they feel plainly satisfied, while nearly 20% noted they feel somehow dissatisfied.

| Table 21. If you are using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for workflow definition and modeling? | | |
|---|---|---|
| | 2019 | |
| Very satisfied | 18% | 19 |
| Satisfied | 36% | 38 |
| Neutral | 26% | 28 |
| Unsatisfied | 17% | 18 |
| Very unsatisfied | 3% | 3 |
| Totals | 100% | 106 |

**22. If you're using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for process execution and monitoring?** (Question 26.)

Similarly, regarding the level of satisfaction with their BPM tools' process execution and monitoring capabilities, nearly 36% showed a good or high level of satisfaction while approximately 25% showed a level of dissatisfaction. Interestingly, 40% had a neutral view.

| Table 22. If you're using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for process execution and monitoring? | | |
|---|---|---|
| | 2019 | |
| Very satisfied | 13% | 13 |
| Satisfied | 23% | 24 |
| Neutral | 40% | 42 |
| Unsatisfied | 18% | 19 |
| Very unsatisfied | 6% | 6 |
| Totals | 100% | 104 |

**23. If you're using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for process collaboration and document management?** (Question 27.)

On the question of users' level of satisfaction with the collaboration and document management capabilities of their BPM tools, nearly 50% of respondents appeared to be satisfied or very satisfied, 29% were neutral, and a bit more than 21% felt dissatisfied with their BPM tools.

| Table 23. If you're using software tools to model your process change efforts, how satisfied are you with your tools' capabilities for process collaboration and document management? | | |
|---|---|---|
| | 2019 | |
| Very satisfied | 11% | 12 |
| Satisfied | 38% | 40 |
| Neutral | 29% | 30 |
| Unsatisfied | 18% | 19 |
| Very unsatisfied | 4% | 4 |
| Totals | 100% | 105 |

**24. If you're using software tools to model your process change efforts, how satisfied are you with your tools' administration, user management and security capabilities?** (Question 28.)

When queried about their level of satisfaction with the administration, user management, and security capabilities of their BPM tools, 47% of respondents stated they are satisfied or very satisfied, a strong 36% noted that they are plainly satisfied, while 16% stated that they feel somehow dissatisfied.

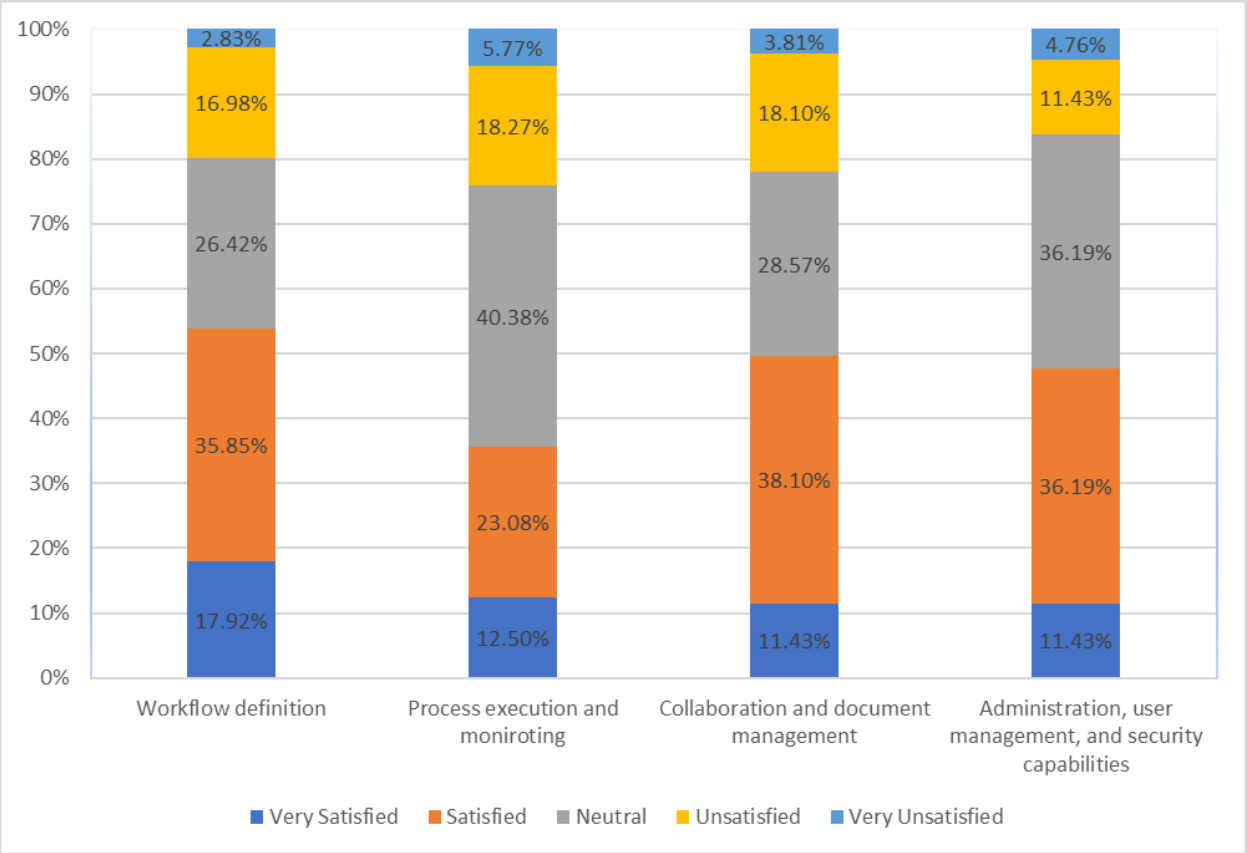
**Table 24. If you're using software tools to model your process change efforts, how satisfied are you with your tools' administration, user management, and security capabilities?**

| | 2019 | |
|---|---|---|
| Very satisfied | 11% | 12 |
| Satisfied | 36% | 38 |
| Neutral | 36% | 38 |
| Unsatisfied | 11% | 12 |
| Very unsatisfied | 5% | 5 |
| Totals | 100% | 105 |

A summary of the analysis of data available for questions 21 to 24 in the graph below shows that more than 50% of respondents showed a higher level of user satisfaction when it comes to their BPM software's capabilities for workflow definition, while slightly more than 35% were confident about process execution and monitoring and 23% were not satisfied.

Moreover, 40% of users come with neutral feelings in the area of process execution and monitoring, perhaps indicating doubts about the ability of their BPM software tools' for efficiently executing and monitoring processes.

Regarding both process collaboration and document management, as well as administration, user management, and security capabilities, users hit just below the 50% mark for good satisfaction levels.




**25. In general, if you're using software tools to model your process change efforts, are you satisfied with the tools you are using?** (Question 29.)

When asked about how satisfied our community is regarding the general usage of BPM tools, in 2019, like two years earlier, approximately 50% of respondents said they are satisfied or very satisfied with their existing BPM tools. In 2019, 17% stated they were unsatisfied or very unsatisfied, compared with 15% in 2017; 31% appeared to be neutral, compared with 35% in 2017.

**Table 25. In general, if you're using software tools to model your process change efforts, are you satisfied with the tools you are using?**

| | 2017 | 2019 | |
|---|---|---|---|
| Very satisfied | 15% | 14% | 15 |
| Satisfied | 35% | 38% | 40 |
| Neutral | 35% | 31% | 33 |
| Unsatisfied | 11% | 11% | 12 |
| Very unsatisfied | 4% | 6% | 6 |
| Totals | 100% | 100% | 106 |

Overall, it appears that the BPM software market has maintained consistent user levels of satisfaction over the past couple of years. In other words, user organizations express the same overall level of satisfaction with their BPM tools despite the evolution of BPM software tools and their underlying technologies.

It's possible that most user organizations are still using the same BPM tools over the past couple of years and are getting the job done—so they continue to be pleased with the tools they have in place though they may not be exploiting the BPM software market to its fullest and garnering the most benefits for organizational process success.

**26. How likely is it that your organization will change its process tools in the next two years? (2020-2021)** (Question 30.)

Like in 2017, two years later, we asked users about the likelihood that their organizations would change their business process tools.

**Table 26. How likely is it that your organization will change its process tools in the next two years? (2020-2021)**

| | 2017 | 2019 | |
|---|---|---|---|
| Very likely | 9% | 16% | 18 |
| Likely | 13% | 24% | 26 |
| Don't know | 26% | 20% | 22 |
| Unlikely | 37% | 26% | 29 |
| Very unlikely | 15% | 14% | 15 |
| Totals | 100% | 100% | 110 |

Back in 2017, a total of 22% of respondents considered it likely (very likely or likely) to undergo a change in the organization's BPM tools over the next couple of years. In 2019, this same figure rose to 40%, a nearly doubling of the previous figure.

As organizations grow and their processes become more intricate and complex, it makes sense that they will want to take advantage of other, better tools, perhaps new entrants to the market promising enhanced capabilities.

**27. What specific technologies do you hope to add to your process improvement toolkit in the coming year?** (Question 31. Choose all that apply.)

On the question of which specific technologies are the object of desire for organizations to improve their capabilities for BPM, we expanded the list of options available to the question posed for the 2017 report with new trends and capabilities.

BPM automation stood out as the most preferred technology, with more than 57% of users looking for capabilities in this area. This was followed closely by the 39% of the users interested in process

mining and the 38% of the users interested in decision management and robot process automation (RPA).

**Table 27. What specific technologies do you hope to add to your process improvement toolkit in the coming year?**

| | 2017 | 2019 | |
|---|---|---|---|
| Process mining | 31% | 39% | 41 |
| Capability modeling | 33% | 31% | 32 |
| Decision management | 48% | 38% | 40 |
| BPM automation | | 57% | 59 |
| iBPM, case management or artificial intelligence | 28% | | |
| Case management | | 22% | 23 |
| iBPM and/or artificial intelligence | | 36% | 37 |
| Internet of Things (IoT) features | | 15% | 16 |
| Low-code development | | 18% | 19 |
| Robotic process automation (RPA) | 37% | 38% | 40 |
| Other (please specify) | 16% | | |

As a result, we expect that many organizations will, in their search for garnering capabilities for process automation and effective process analytics, make significant efforts in incorporating such capabilities into their software functionality arsenal.

**28. What obstacles do you see in your company when it comes to Process Mining?** (Question 32. Choose all that apply.)

Given the growing importance of process mining across BPM practices, we asked the question of what obstacles users see when it comes to implementing process mining practices within their companies. Process mining refers to the use of a series of techniques to analyze business process event logs in order to better understand business processes and make them more efficient.

As expected, the most common challenge to overcome with respect to process mining was the financial aspect, with budgeting seen as an obstacle by 46% of users. This was followed by lack of know-how cited by 55% of users and lack of support from management noted by 44%.

| Table 28. What obstacles do you see in your company when it comes to Process Mining? | | |
|---|---|---|
| | 2019 | |
| Budget | 46% | 48 |
| Lack of know how | 55% | 58 |
| Employees are blocking | 12% | 13 |
| Lack of management support | 45% | 47 |
| Poor data quality | 49% | 51 |

These findings reveal important gaps that need to be filled for organizations to enhance their process efficiency with process mining capabilities.

**29. What general trends in technology have had the most impact on the way you do business process work?** (Question 33. Choose all that apply.)

As many new technology paradigms emerge, companies and users try to identify those technologies that will allow them to thrive and excel in new and constantly changing markets and business process models.

When asked about those technologies that in their perspective will have the most impact on the way they do their business process work, users were emphatically clear that digital transformation technologies would be the ones that will have the most impact, cited by about three-quarters of users (71%).

| Table 29. What general trends in technology have had the most impact on the way you do business process work? | | |
|---|---|---|
| | 2019 | |
| Cloud computing | 47% | 50 |
| Mobile technologies | 34% | 36 |
| Digital transformation | 71% | 76 |
| Artificial intelligence or cognitive transformation | 20% | 21 |
| Embedded collaboration capabilities | 11% | 12 |
| Embedded process analytic capabilities | 19% | 20 |
| Industry 4.0/Internet of Things | 12% | 13 |

Other technologies seen to have a clear impact on improving business process management

practices include cloud computing, cited by 47% of users, and mobile capabilities, cited by 33%.

We expect that the majority of organizations will consider taking measures for achieving digital transformation, and this will have the most impact on BPM in the following years.

**30. How would you describe your organization's current interest in using low-code/no-code platforms to enhance its business process management?** (Question 34.)

Software providers can allow users and organizations to develop full-fledged process-based applications with minimal or no code requirement. So, software vendors are currently in the process of developing and incorporating low-code platforms, which will allow companies to build full-fledged independent applications with an orientation toward business processes.

When asked about their organization's current interest in the incorporation of low-code or no-code platforms, 44% of respondents cited that they are still in the process of exploring the opportunities that low-code development applications can bring to the table. Yet, a significant 26% of respondents work for organizations that have done their homework and are now committed to the deployment of low-code application development initiatives.

**Table 30. How would you describe your organizations current interest in using low-code/no-code platforms to enhance its business process management?**

| | 2019 | |
|---|---|---|
| Significant strategic commitment by executive team | 15% | 16 |
| Commitment to multiple/major projects | 11% | 12 |
| Exploring opportunities | 44% | 48 |
| No interest | 31% | 34 |
| Totals | 100% | 110 |

Such BPM software can be used by organizations as development platforms for building functionality features that extend way beyond workflow-related components to include forms, analytics, process and data integration interfaces, among other elements—with increased flexibility and speed.

**31. Digitalization usually means using IT techniques to automate and better integrate your organization's processes. Is your organization following a digitalization strategy?** (Question 35.)

Question 33 revealed that digital performance–related technologies are the most impactful technologies in the business process realm. We followed up with a question on whether users are currently pursuing a digitalization strategy.

Consistent with the findings from question 33, we found that 49% of respondents answered in the

affirmative, whereas more than 37% mentioned that they are not pursuing such a strategy.

**Table 31. Digitalization usually means using IT techniques to automate and better integrate your organization's processes. Is your organization following a digitalization strategy?**

| | 2019 | |
|---|---|---|
| Yes, to a great extent. | 49% | 55 |
| No, I don't think so. | 23% | 26 |
| No, not at all. | 14% | 16 |
| Don't know | 13% | 15 |
| Totals | 100% | 112 |

The data suggests that digital transformation and digitalization strategies are currently—and will be at least for the foreseeable future—a priority for companies in the pursuit of transforming their current business processes into full-fledged digitally enhanced processes.

# Section III.
# Analysis of Respondents

This section provides an overview of the respondents that participated in this survey.

### 32. Number of respondents in the survey

BPTrends conducted this survey during late September and October of 2019. We then spent the next two months organizing the data and preparing this report which we now publish in early 2020.

Table 32 shows number of participants over the course of our surveys. As you can see, we had 129 participants this year. As a broad generalization, we've had fewer respondents as the overall interest in business process has declined.

**Table 32. Respondents taking part in the survey**

| Survey | Respondents |
|---|---|
| 2005 | 348 |
| 2007 | 274 |
| 2009 | 264 |
| 2011 | 399 |
| 2013 | 309 |
| 2015 | 116 |
| 2017 | 184 |
| 2019 | 129 |

### 33. Where is your organization located? (Question 4. Choose one only.)

Most respondents, this year, were from Europe. This was the same in the last survey. Interest in process work, and especially in the use of BPM Software seems to remain somewhat stronger in Europe than in Canada and the US.

There is a growing interest in process work in the Middle East. BPTrends has always had members from India, Japan and China, but for some reason, hardly any of them take part is surveys.

| Table 33. Where is your organization located? | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2007 | 2011 | 2013 | 2015 | 2017 | 2019 | |
| North America | 45% | 42% | 27% | 40% | 41% | 24% | 29% | 37 |
| Europe | 29% | 30% | 38% | 35% | 29% | 37% | 36% | 46 |
| Central & South America | 6% | 5% | 16% | 7% | 14% | 12% | 15% | 19 |
| India or SE Asia | | 3% | 2% | 1% | 1% | 1% | 5% | 7 |
| NE Asia (China, Japan, Korea) | | 1% | 4% | 1% | 0% | 0% | 3% | 4 |
| Australia/New Zealand | | 12% | 11% | 11% | 11% | 18% | 1% | 1 |
| Subtotal Asia/Australia | 13% | 16% | 14% | 13% | 12% | | | |
| Africa/Middle East | 7% | 7% | 4% | 5% | 4% | 8% | 12% | 15 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 129 |

**34. Which of the following best describes your job function?** (Question 1.)

Most of our respondents are either business process practitioners, BPM consultants or business process architects. This undoubtedly reflects the readership and appeal of the BPTrends website, which is where most respondents learned about the survey.

| Table 34. Which of the following best describes your job function? | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2007 | 2011 | 2013 | 2015 | 2017 | 2019 | |
| Executive (CEO,COO,CFO) | 17% | 12% | 14% | 9% | 8% | 8% | 9% | 11 |
| Business or Line of Business Manager | 18% | 17% | 11% | 15% | 9% | 9% | 12% | 15 |
| Process practitioner/ Lean/Six Sigma Business Analyst | 50% | 55% | | | | | 25% | 32 |
| Process Practitioner | | | 9% | 12% | 11% | 10% | 23% | |
| Lean/Six Sigma Practitioner | | | 11% | 3% | 3% | 4% | 4% | |
| Business Analyst | | | 2% | 14% | 16% | 11% | 1% | |
| Business/Process Architect | | | 14% | 18% | 26% | 26% | 23% | 30 |
| IT Manager/IT Developer | 14% | 15% | 8% | | | | 4% | 5 |
| IT Manager | | | | 6% | 5% | 6% | | |
| IT Developer | | | | 0% | 0% | 1% | | |
| HR Manager or Human Performance Practitioner | 1% | 1% | 1% | | | | | |
| HR Manager | | | | 0% | 0% | 0% | 1% | 1 |
| Human Performance Practitioner | | | 1% | 0% | 0% | 0% | 1% | 1 |
| BPM Instructor | | | | 0% | 3% | 2% | 5% | 7 |
| BPM Student | | | | 0% | 1% | 1% | | |
| BPM Consultant | | | 20% | 13% | 10% | 16% | 19% | 24 |
| Vendor Representative | | | 1% | 0% | 0% | 1% | 2% | 2 |
| Other, please specify | | | 7% | 10% | 10% | 7% | | |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 129 |

**35. Which of the following best describes your organization's size?** (Question 2.)

The respondents came from organizations of all sizes. Earlier, more came from larger organizations but that has changed and respondents are equally likely to come from smaller organizations.

**Table 35. Which of the following best describes your organization's size?**

| | 2005 | 2007 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|
| Large (2000 or more employees) | 41% | 46% | 35% | 53% | 56% | 27% | 29% | 37 |
| Medium (500 to 1999 employees) | 33% | 34% | 38% | 15% | 21% | 45% | 36% | 46 |
| Small (under 500 employees) | 26% | 20% | 27% | 32% | 22% | 28% | 35% | 45 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 128 |

**36. Which of the following best describes your industry?** (Question 3. Choose one.)

Respondents came from all industries. Most came from the Financial Services industry.

**Table 36. Which of the following best describes your industry?**

| | 2005 | 2007 | 2011 | 2013 | 2015 | 2017 | 2019 | |
|---|---|---|---|---|---|---|---|---|
| Aerospace/Defense | 2% | 3% | 1% | 4% | 0% | 0% | 4% | 5 |
| Heavy manufacturing | 2% | 2% | 1% | 4% | 1% | 2% | 4% | 5 |
| Light manufacturing | 2% | 2% | 2% | 2% | 5% | 2% | 4% | 5 |
| Chemicals/Energy/Refineries | 5% | 3% | 5% | 5% | 4% | 2% | 5% | 7 |
| Computers/Consumer Electronics/Software | 17% | 14% | 3% | 5% | 4% | 5% | 6% | 8 |
| Building/Construction | | | | 2% | 0% | 2% | 0% | 0 |
| Education | 4% | 4% | 4% | 3% | 6% | 5% | 9% | 12 |
| Financial Services/Insurance | 19% | 20% | 13% | 22% | 29% | 17% | 11% | 14 |
| Food/Beverage | 2% | 1% | 4% | 2% | 1% | 2% | 3% | 4 |
| Government/Military | 9% | 10% | 9% | 7% | 6% | 18% | 9% | 12 |
| Healthcare/Medical Equipment | 2% | 2% | 3% | 4% | 3% | 5% | 4% | 5 |
| Leisure/Entertainment/Travel | 1% | 1% | 1% | 0% | 0% | 1% | 2% | 3 |
| Professional/Business Services/Consulting | 16% | 14% | 19% | 18% | 11% | 11% | 17% | 22 |
| Retail and Wholesale | 4% | 3% | 4% | 4% | 4% | 3% | 4% | 5 |
| Telecommunications | 8% | 3% | 5% | 6% | 6% | 7% | 5% | 6 |
| Utilities | 4% | 5% | 3% | 4% | 10% | 6% | 2% | 3 |
| Agriculture Business | | | | | | 1% | 2% | 2 |
| Other, Please Specify | 9% | 13% | 10% | 11% | 12% | 12% | 9% | 11 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 129 |

## Section IV
# Thoughts From Thought Leaders

Sections I to III presented data gathered from respondents at organizations throughout the world. Those data were interpreted by Jorge Garcia and Paul Harmon. At this point, we felt it might be interesting to provide some alternative views. We asked a number of well-known thought leaders, drawn from business, consulting, and academia to provide their own insights into the nature and trends of the process market. Each of these individuals is someone that Paul Harmon would consult if he wanted more in-depth insight into their various areas of expertise. We asked each of them to consider their own recent experience and to tell us where they thought business process development would go in the next year or two. Respecting their time limitations, we asked for anything from a sentence to a couple of paragraphs. Read their comments and compare and contrast them with each other and with our respondents. We think you will be impressed with the variety of opinions as to where process technology is trending.

### Dr. Roger Addison & Carol Haig

Authors, Analysts and Consultants, in Evidence-Based Performance Improvement, CPTs

In the next few years we expect to see the continued integration of workers (people), work (process), and workplace (enterprise) within organizations. and a corresponding awareness of the impact each company makes on the world (mega). Business leaders will be increasingly focused on sustainability and how their organizations impact the world, with climate change being a major concern. Prominent companies such as Walmart and Apple are using recycled materials that are less harmful to the earth, and other organizations are taking similar steps to lighten their footprints. For more about evidence-based human performance improvement, please visit: https://hpttreasures.wordpress.com.

### Abdulrahman AlForaih

Consultant and Trainer from Saudi Arabia

From our experience in implementing BPM projects in Saudi Arabia, we expect the following trends in our BPM market especially in the public sector:

1- Business Processes will be the cornerstone of any organization structuring exercise. Many government entities we worked with realize that they need to revisit their organizational structure after they learned about the benefits of having a process architecture (cross-functional view). So instead of having two views of organization, vertical (org structure) and horizontal (process architecture), they prefer to have one organization structure that is based on value accumulation and delivery.
2- Business Process change will be the main driver for major decisions.
3- CIOs will invest more in low-code BPM platforms to ensure they respond faster to rapid business

changes.

**Bassam AlKharashi**

Author, Consultant and Trainer in Saudi Arabia

Regarding your inquiry, based on our experience with BPM projects in the Arab region, we expect business process change projects to become the main vehicle for any transformation project. Strategic plans and major decisions will be based on operational performance. BPM projects will be a "must-do" rather than "good to do."

**Dr. Oscar Barros**

Author, Consultant and Professor, University of Chile

By the beginning of this century, I became convinced that BPM has no future in the way it was used in practice, so I started developing new ideas to complement this discipline.

First, I developed the ideas of Business Engineering (BE), which provide a framework for designing well-founded processes. This means that we need a Strategy, a Business Model, a Business Architecture derived from these, and, from here, a designed Process Architecture that guides good individual process design. I am talking here about the alignment of process design with the true needs of the business to assure the value generation required. I wrote three books in English about BE, published in 2013 and 2017, which detail these ideas and are available at Amazon. There is a solid empirical foundation for the ideas proposed, with hundreds of cases developed at the Master in BE, I created in 2003, all of which were required to generate some proof that the approach worked. The books give summaries and results of many of these cases. I think I shared a PDF of the first book with you.

Then, I found that something more was needed to support BE, which are architecture patterns that would facilitate the business and process architecture design. I wrote three papers in English about architecture, published in the BPMJ, and one recent paper (2019) about how architecture works at complex services. All these papers are available at Research Gate. My ideas of architecture have nothing to do with TOGAF, which I consider of very little value to do architecture design. I have developed several projects of architecture design using my patterns in emergency services design in hospitals, the innovation architecture for the Chilean Health System, new services architecture for an electrical distribution company in Peru, the architecture of services to children at risk in Chile and many others in banking services, education and retail. All these cases are published in my books and papers.

Based on these ideas I propose the summary you request, as follows:

BPM has very little impact on business results nowadays because it is mostly concerned with isolated process design that adds little value. To generate more impact, BPM has to necessarily look a the whole business picture. This only can be done by starting with the Strategy and Business Model definitions for an enterprise. Thus, an Enterprise Architecture and process architecture should be derived to implement these definitions. Therefore, there would be objective foundations to define the processes, which, when created or redesigned, will generate significant value for the business. The innovative design of these processes and their successful implementation will position BPM as an active participant in the adaptation of a business to the current challenging situation it faces in the information economy.

**Tom Bellinson**
IT, Team, and Lean Consultant

I hear a lot of people talking about *The Lean Startup* by Tim Ries. As you know, I write a column about agile practices, so maybe I'm biased, but agile practices come right out of the Lean movement, so they share a lot of ideas that seem to be taking hold throughout many organizations. The idea of being nimble and flexible flies in the face of traditional BPM practices in which processes are enshrined in expensive software that often requires significant effort to change. Agile practices expect that processes will be much more fluid. In my experience to date, I believe that we're not doing a great job of managing these new dynamic processes that change incrementally or sometimes in wholesale fashion with little warning. We need better tools to support this working environment and we don't have them yet. I have no doubt that great minds are out there working to create these tools. When we have them, we will not only have better support for dynamic processes, but better ways to measure their effectiveness, which is critical when every process change is just another experiment.

**Tony Benedict**
President, ABPMP International

ABPMP is seeing a return to BPM Fundamentals, especially in the last 5 years given the high failure rates of companies attempting to go digital. Organizations are again realizing that process is at the center and fundamental to digitizing any company or customer journey. In the last two years, there have been two additional observations, that after 20 years, seem remarkable given how much training and education is available in the marketplace. The first is that the most common training request is still process modeling/analysis and design as evidenced by a younger workforce engaging in an organization's digitization efforts. Secondly, many of these newcomers to BPM are asking what the potential career paths are if one chooses BPM? ABPMP has addressed the BPM Career Path with a BPM Competency model in the latest version of the BPM CBOK (Common Body of Knowledge) that outlines

the knowledge, skills, competencies and experience for entry, managerial and executive leadership levels for BPM Certifications that gives younger employees a career growth trajectory beyond the traditional Business Analyst.

**Roger Burlton**
Author, Conference Chair and Consultant

First, I believe that the process perspective and the management of business processes have gone through the initial hype and have survived the trough of disillusionment. Now it is gradually making it back as a more mature and professionally managed way of dealing with the business beyond a traditional usage for defining IT requirements. It may be glacially paced but I can observe the clear trend to see processes as real things to be measured, managed and optimized as a business issue beyond the initial more simple view of the profession from 25 years ago.

The second thing I see happening is the role of business processes as an essential aspect in holistic Business and Enterprise architecture. Having spent the best part of three years working with members of the Business Architecture Guild on a paper to have Business Architects embrace Business Processes as essential and not simply attributes of Capabilities, I can attest to the difficulties one has to deal with to convince died in the wool EAs that processes are an architectural issues. After this time a paper has now been produced and authorized that combines the stack of value streams and value stream stages with the stack of business processes to assure one hierarchical view that can be adopted and shared by the two professional communities. The interaction of capabilities as an association with this stack rather than a decomposition to workflow is powerful and hopefully is now breaking the deadlock between communities. In teaching Business Architecture training around the world in this three year period and introducing the integrative concept to many experienced business architects, I have witnessed a remarkably high degree of acceptance for these model structures. I expect we will see more collaboration between these groups trying to lay out the basis for agile business designs going forward.

## Peter Fingar

Author and Consultant

As Paul Harmon said in letter asking for our thoughts, "There is perhaps a little growth in the interest in architecture and AI, and less interest in BPM tools, but no major breakthroughs that I can see." Whoa! There is something awesome heading toward us: **AI with empathy!** Empathy is the ability to "walk a mile in someone else's shoes"– to understand the other's situation, perceptions and feelings from their point of view – and to be able to communicate that understanding back to the other person. Since the 1950s there have been several AI Springs and Winters. The year 2012 was awesome: IBM's Watson AI won Jeopardy and we had the Mayan apocalypse. The apocalypse didn't mean the beginning of the end, it meant the lifting of the veil to a whole new era. The new era in AI (a term used since the 1950s) included Deep Learning, developed by Geoffrey Hinton and his team at the University of Toronto. Deep learning means that the systems can learn on their own. With Deep Learning, the AI hype cycle took off! But now, as Paul stated above there is little growth in interest in AI. So, let's give AI a little empathy here… EAI or Empathy AI is already among us with startups such as the one spun out of the MIT Media Lab and a BPM company that has a customer empathy advisor. With Empathy AI, all is changed, changed utterly. So, choose between Empathy AI embedded in your BPM, or entropy!

## Denis Gagne

CEO and CTO of Trisotech, and a driving force behind many international BPM standards in use today including BPMN, CMMN and DMN.

The term BPM will have less importance over the next couple of years but not the need for organizations to be process centric. The holy grail of efficient and effective operations aligned with strategies will become even more important in this unfolding era of digital transformation. New Digital Agile Enterprises will become masters at harnessing and orchestrating disruptive technologies (such as AI), allowing incumbents to ward off or become themselves disruptors. The Business-IT divide will be diminished by having IT encapsulate programmatic logic via microservices and containers and business people themselves assembling the business logic. A process by any other name. Indeed the pendulum will swing toward digital [process] automation only to unearth yet again the need for [process] analysis and improvements. What's in a name?

## Keith Harrison-Broninski

Author and Consultant on human problems of process improvement

Live long enough and you see everything come round again. 16 years after "The Third Wave", and 26 years after "Reengineering the Corporation", most organizations have reverted to something close to 1980s-style workflow. Many of their key processes come pre-cooked in packaged applications that they have learnt never to customize, while other processes are automated as simple Web workflows using infrastructure tools such as Microsoft SharePoint. This leaves the collaborative processes I described in "Human Interactions" and write about in my BP Trends column "Human Processes", which as automation takes over more and more jobs, will be all that is left to do. Poorly thought through efforts by the OMG to produce a case management notation that leaves out the interesting stuff and competes confusingly with BPMN (CMMN) alongside an addition to BPMN that isn't useful for anything (have you ever tried to use BPMN Conversations?) scuppered any chance of addressing interactive human work in a structured way, so the one real chance the process management industry had of producing lasting change is likely to go nowhere. Shame!

## Holly Lyke-Ho-Gland

Principal Research Lead, Process and Performance Management Research - APQC

In 2018 we saw a paradigm shift for BPM, moving towards a strategic role supporting organizational and digital transformation efforts. This required BPM professionals re-evaluate their skillsets and methodologies to be more agile and customer-centric. As we move into 2020 and beyond, I see this trend continue to impact BPM professionals in two ways:

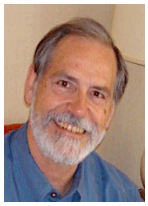
1. Emphasis on supporting end-to-end processes and value streams.
2. Focus on people. Either through using well-honed change management skills to take staff along on the journey or using human-centric design to ensure solutions provide value to the end-users.

## Mark McGregor

Author, Market Analyst and Strategy Consultant

Process is hotter than it has been for a long time, in the past two years over $2.5bn has been invested in process companies. Investment is not just in automation either,; process modeling and process mining picked up over $700m of that investment. But why?

Digitalization, Customer Excellence, and Regulatory change are disrupting every organization, in every industry around the globe, and we still don't fully know how big that disruption will be. The more we understand about how we operate (process) and how people interact with us (journeys) then the better able we are to make the changes we will need before it is too late. Once we know what we need to change and how, through process modeling, then applying new types of process automation and leveraging automated process discovery, where appropriate, can ensure we make the right decisions and apply them cost effectively. Of course, that also presupposes that while we make these changes, we involve everyone in the organization, not just a team of so named experts, communicate with them and have them share in the goals and aspirations. Customer Excellence requires that everyone is engaged through all channels and in every customer interaction, and acts consistently.



## James Odell

Author and Consultant, expert in AI and Agent technologies

Modeling our business processes in a linear and hierarchical manner is quickly becoming unsustainable. In the next few years, BPM will need to address business applications that result in something that is *greater* than the sum of their processes: that is, as complex adaptive systems (CAS). Here, processes will have many-to-many interactional relations with no central control -- including situations such as event-driven processing, resource management, financial management systems, Internet-of-Things (IoT) and agent-based approaches.

## Dr. Michael Rosemann

Author and Professor, Queensland University, Australia

The emergence of advanced decision making capabilities, autonomous things, augmented workplaces and an overall networked, empowered society will further accelerate the demand for business processes as orchestrators of this hybrid set of capabilities and actors. Future processes will probably be more decentralized, less static and have a new set of requirements related to their scalability, embedded trust mechanisms and related data analytics (e.g., process mining).

## Bruce Silver

Author, Consultant, Conference Chair

I think the BPM market will continue the path back to where it was 25 years ago by emphasizing process automation. There will be more emphasis on low-code, "citizen developer" tools to create process and decision models deployable as cloud-based microservices.

## Howard Smith

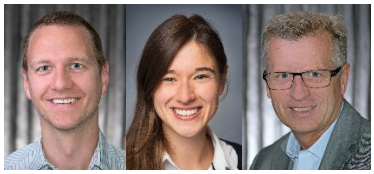
Author and Consultant

From the IT perspective, all significant enterprise apps are now BPM-powered, one way or another using some combination of rules, workflow and transactions. Some employ a unified BPM language for designing and deploying new or improved IT-powered business processes. From the Business perspective, the discipline of Process Management remains as important as ever (a.k.a. The Process Lifecycle). The target of BPM has not changed: operational improvements, supply chain optimizations and customer relationships. The scale of BPM has changed. All applications are web applications (in the main). Those companies able to deploy new business processes in an agile way (measure, sense, respond), using a BPM System (tools and methodology appropriate to their business) will have an advantage in the marketplace in regard to their process efficiency and alignment with customer needs. Since all products are now supported by services and many businesses have 'flipped' to be primarily service-businesses (manu-services), service processes are often the most important business processes for improvement. The emphasis on customer experience has never been higher. Organizations that design processes for an optimized, convenient, transparent and flexible customer relationship will win in the marketplace (all other factors being equal). Going forward, Design Thinking will be increasingly integrated with business process design. There will be increased emphasis on corporate responsibility and sustainability in the design of new business processes. Automation remains a primary driver to drive down costs and increase reliability across the business. In the same way that rules management systems (BRMS) became an integral part of many enterprise applications, machine learning (ML) systems are now being embedded where they are justified. All of these technological options can help the business to be more agile and responsive to customers and their markets. This potential depends, in large part, on having an effective BPM methodology that can measure what is important to the business and close the loop to business process and IT design. The vision of a BPMS that closes this loop using a unified approach remains a goal for many BPM practitioners.

## Dr. Richard Mark Soley

Chairman and Chief Executive Officer of the OMG

BPM has become a normal and accepted practice in most companies, and is being put into practice in specialized ways in specific vertical markets. Our BPM+Health community (https://www.bpm-plus.org/) is a strong example of this, going from strength to strength!



## Terje Haugland, Iselin S. Nordal, and Tore Rasmussen

CPO & Principal Enterprise Architect, Regional Manager, and CEO of Qualisoft AS Norway

As BPM continues to mature as a discipline amongst Norwegian firms, we see the market evolving towards more strategically oriented and holistic integrated Business Management Solutions. Areas of exploration amongst our customer-base are those of management by objectives and risk, capability mapping and process automation.

Larger firms are usually undertaking multiple process initiatives to solve different problems and realize potential business opportunities. These initiatives are usually parallel and un-coordinated. There are lean, process oriented management quality systems, post-merger business process alignments, digitalization, automation, RPA and other initiatives going on in parallel and very often with little coordination between them. Smaller companies usually focus on a few chosen initiatives and methods, also un-coordinated.

Companies who have realized that this way of working is inefficient and confusing for business people, who must define their way of working multiple times, have matured and try to ensure collaboration between the different initiatives often from a centralized business architecture. Either based on business processes or business capabilities. All initiatives must state what part of the business architecture they are trying to improve.

There is a growing understanding and belief that business process management is necessary in order to ensure the proper connection between strategy, compliance, how work gets done, automation, IT applications and usage of information.

Some companies have realized that they cannot take out the value of digitalization and be data driven unless they have control over the business architecture and ensure multi-discipline teams work together on improvement initiatives.

Currently, the highest focus on BPM comes from the digitalization/RPA initiatives that often have CXO attention. In the years to come we believe BPM in Norway will be increasingly focused on creating and displaying business value through organization-wide alignment initiatives/efforts. This may be achieved by applying more dimensions of the Business Management Solution or through integrations with other software, or both. Thus, creating a sound basis for making strategic and managerial decisions.

Needless to say, we are excited for the future of Norwegian BPM!

## Roger Tregear

Author and Consultant

I am seeing the start of a trend, especially amongst those tasked with high-level management decision making, to take much more seriously the need to consciously manage everyone's end-to-end experience, to go beyond the platitudes to active process management. The message that seems to be resonating is a 'simple' one – processes are how value gets created and delivered to everyone, including the organization, and in the traditional management model it is nobody's job to manage them. Shining a light on the centrality of analyzing, managing, and improving processes will become increasingly important at all levels of management. We are all in this process together!

## Dr. Wil van der Aalst

Author and Professor, RWTH Aachen University, Germany

The importance of process mining will continue to grow as is reflected by the valuation of companies like Celonis. At the same time, "old-school BPM" involving hand-made process models will gradually disappear. There will be a convergence of traditional BPM tools and process mining tools. For example, the border between process modeling and process mining will blur. Moreover, Robotic Process Automation (RPA) and the so-called "action engines" will help organizations to turn event data into actionable results. Repetitive work will be further automated using RPA. However, not only the work itself, but also the management of work (e.g., reacting to conformance and performance problems) will be better supported.

## Dr. Michael zurMuehlen

Author and Professor, Stephens University. USA

Three things to keep an eye on:

The open source offerings that came out of the Alfresco Activiti project, Camunda, and Flowable, have reached a level of maturity that surpasses some aspects of the commercial BPM market from a few years ago. That means organizations with in-house development capacity have a fairly inexpensive pathway to create process automation prototypes and deployments, and I would expect to see vertical solution providers leverage these platforms to develop industry-specific offerings.

The decision modeling community around DMN has some distance to cover in order to develop consistent standards around decision model design – something that happened in the BPM space years ago. In certain industries (particularly Finance and Insurance) there is considerable excitement about the ability to capture decision requirements in a graphical form as well as with the underlying decision tables, but a lot of uncertainty remains around the portability of models in this space, as well as execution capabilities for decision automation.

While DMN is growing in significance, there is a counter-trend: Machine Learning and the development of automated decision-making algorithms based on training data sets, no modeling required. Both of these trends are addressing the same space, and it remains to be seen whether we will see a co-existence of both in their respective niches, or whether the AI/ML wave will swallow DMN before it has a chance to stand on its own.

## Section V
# A Final Word

Process work, as a business discipline, has been around since the early years of the Twentieth Century. It arguably began when Fredrick Winslow Taylor wrote *Principles of Scientific Management* in 1911. Taylor claimed that there was a best way to perform tasks and that managers should study work, identify best practices, and then teach them to workers. For several years after Taylor's popular book was published, he attended and spoke at conferences on Work Simplification that were organized in the US and Europe to teach his ideas to people who ultimately became known as industrial engineers. In the decades since, there have been a number of business process movements. Focusing on only some recent movements, one thinks of Business Process Reengineering (BPR), Value Chain Strategies, Six Sigma, Lean, Total Quality Control (TQC), Balanced Scorecard, Enterprise Resource Planning (ERP), Human Performance Improvement (ISPI), and Business Process Management (BPM).

As we has argued elsewhere[1], the various process movements break down into three broad traditions: A human performance/Six Sigma improvement tradition, an information technology/automation tradition, and a business management tradition. There has been a major push to combine many of these perspectives, but major disagreements on emphasis still remain, and this year, as in past years, respondents indicated that one of the major problems they face is management confusion resulting from too many different groups urging different approaches to process change.

At their most extreme, you could describe the three positions this way:

- Have consultants design new processes to support new strategies and organize the company around them. (Management Tradition)

- Focus on people, train them, and expect them to evolve the best processes. (Human Performance/Six Sigma Tradition)

- Ignore people, use technology to automate everything and push ahead. (IT/Automation Tradition)

Everyone actually involved in process work knows that each of these positions, in isolation, is impossible and that, to succeed, an organization needs an approach that combines the best elements of each of these positions. In spite of this, it's easy to find practitioners who, while paying lip service to the idea of a mixed strategy, still put most of their emphasis on one or another of these approaches.

BPTrends has always advocated a mixed approach that combines the various approaches. As a practical matter, however, BPTrends started just as Business Process Management Software Tools became popular. BPMS was an IT initiative, driven by the hope that a new class of software technologies and tools would allow managers to better model, integrate, monitor and control their

business activities. Some even hoped that the new tools would allow business managers to generate their own software applications, or at least to modify their processes without the need for IT support. Like several previous IT initiatives of this kind, it proved popular for a while, but has begun to fade as it has been realized, or proven very hard to realize. This is not to say that some improvements haven't been delivered and that new opportunities have not opened up. Each process movement seems to deliver something – just not everything that is promised. Thus, there is a predictable period of excitement, followed by more complex experimentation, some disappointment, and then a lull while the next great idea gathers momentum.

In our opinion, we are currently in the lull, following the failure of BPMS tools to deliver all that was promised. We are waiting for the next great idea, be it robotic process automation, process mining, AI, or some new human improvement movement generated by some world-conquering Chinese company. This is not to say that some companies aren't enthusiastic about process work or that process tool vendors aren't enjoying growing sales. It's simply to say that the market isn't as vibrant as it was in 2005-2007 and as it undoubtedly will be, in the future, when some new development excites managers to once again focus on expanding their process capabilities.

Meanwhile, we are still well ahead of where we were in 2005. Companies are more focused on processes, on average, than they were then. Tools and technologies are much more comprehensive and adaptable. Companies have adapted to manufacturing throughout the world for increasingly diverse audiences of consumers, and the Internet and Web revolutions have generated companies that interact, almost constantly, with customers online.

In the past few years, two terms have become increasingly popular in the IT/management literature: Data Driven, and Digital Transformation. Often the second is broken up and one speaks of a company being Digitally focused or engaged in a business Transformation.

Companies have spoken of the importance of capturing business data for decades, of course, but it's become particularly urgent, in recent years, as the availability of data on customers has exploded with the advent of the Web and various electronic media. Today, if an organization is willing to spend the money, it can mine emails, clicks on its website, searches and postings by its customers, and so forth. Using mining and other AI tools, this data can be organized to provide companies with trends and other indicators to support management decision-making. Thus, gathering, analyzing and acting on customer data has become a key element in many business processes.

Transformation, in its earliest use, referred to major changes in the way a company did business – as when an organization abandoned stores and decided to make all its sales online. As the term grew more popular, the term *Digital* was often added to emphasize that companies were transforming themselves by employing software (*digital*) technologies. Today both terms are so widely used that one needs to read the specific article to see how the authors are using the terms. Speaking broadly, businesses and government agencies have been involved in digital transformations since the 1960s, when computers, and then the Internet, the Web, and social media began to transform how we communicate and interact with each other. This process has expanded rapidly as computers evolved from mainframes to personal computers, to digital assistants, and recently, to intelligent phones.

In a similar way there is a lot of talk, today, about how Artificial Intelligence (AI) is going to revolutionize business, but, in reality, AI is just another set of computer technologies that are going

to continue to drive the automation of tasks previously undertaken by human beings. The world of business has become an interactive web of relationships created and maintained by computer networks and applications. Adding intelligence to that web is going to make it a lot more flexible and useful.

In the late Eighteenth Century, 80% of the world's population worked on farms, growing food. Today, in the advanced world, 2-3% of the human population work on farms. Farming has been largely automated. The same thing is now taking place in manufacturing, and will, sooner or later, also take place in most of the service industries. Adjusting to this massive digital transformation is a major social challenge. For managers and process practitioners, the challenge involves redesigning business processes, and then redesigning them again, and then again, as each new wave of automation technology washes over our organizations. Increasingly we will use process tools to help make constant process improvement easier and faster. No matter how we manage it, however, the one thing that is certain is that we will need to keep working at renewing our business processes.

---

**Notes**

1. *Handbook on Business Process Management 1*, 2nd Ed. By Jan vomBrocke and Michael Rosemann (Eds.) Springer, 2015. See article by Paul Harmon, "The Scope and Evolution of Business Process Management." P. 37.

# Authors

## Paul Harmon

Executive Editor and Business Analyst, BPTrends

Paul Harmon is a well-known management consultant and the author of the popular book, ***Business Process Change***. (4th Ed.)

He is also the founder and the executive editor of **Business Process Trends**, an internationally popular website (www.bptrends.com) that provides a variety of free articles, columns, surveys, and book reviews each month on trends, directions and best practices in business process management. His articles and research reports – like his bi-annual survey of the state of the international business process market – have become essential reading for anyone who wants to understand the evolution of the process field. Mr. Harmon has developed several training programs that are taught, worldwide, by certified BPTrends instructors.

Mr. Harmon is also a Senior Consultant at Cutter Consortium, where he provides advice to Consortium clients on cognitive or AI technologies. He was the lead author of ***Expert Systems: AI for Business*** (Wiley, 1983), a best selling book that was translated into seven different languages.

Mr. Harmon has given keynotes and seminars around the world. He has given invited keynotes at almost every major international BPM conference – Conferences like BPM2008-Milan, IRM-UK BPM London, BPM Brazil, BPM Portugal, Gartner BPM and the Sydney BPM Conference. He has provided executive briefings on process change at leading corporations (e.g. Chevron, IBM, HP, Oracle, SoftwareAG, Pemex, Telefonica-Chili, and Nokia.)

## Jorge Garcia

Principal Analyst, Business Intelligence and Data Management, TEC

Jorge Garcia has more than 30 years of experience in all phases of application development and database and data warehouse (DWH) design, as well as more than 10 years in project management, covering best practices and new technologies in the business intelligence, analytics, and data management spaces.

Garcia also steers TEC's coverage of Business Process Management and Enterprise Performance

Management.

Prior to joining TEC, Garcia was a senior project manager and senior analyst developing BI, DWH, and data integration solutions with a number of applications (Oracle, SAP, IBM, Microsoft and others). He has also worked on projects related to the implementation of BI and data management solutions for the private and public sectors, including the banking, insurance, manufacturing and retail industries among others.