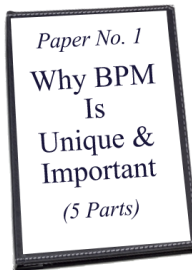


Paper I in a Series: BPM Technology As Revolutionary Enabler

A multi-part series presented by BPM.com for the purpose of exploring the reasons why BPM software technology is the most important technology for business transformation.

Presented as four papers in multiple parts.



Why BPM Is Unique & Important

Introducing the Minimum Viable Definition Of BPM Software Technology

BPM Is Unique

Definition of BPM as The Technology of Work

Business process management software technology ("BPM") is the technology for automating the work of business. By definition, in BPM automation technology, and only in that technology, concepts of work and process are first-class citizens of that technology.

Road Map For Four Papers

Paper Series: *Explore BPM Technology As Revolutionary Enabler*, published in four parts:

1. This first Paper, "**Why BPM Is Unique & Important**", introduces the exciting topic of BPM software technology and why BPM so relevant to business today. Work, process and modeling are revealed as built-in to BPM software, enabling rapid construction of new business capabilities. **Published in five parts.**
2. The second Paper, "**Minimum Viable Definition Of BPM**", introduces the whole BPM ecosystem but then zeros in on the Minimum Viable Definition. Promotion and adoption of BPM software technology is facilitated when the unique value of core BPM is clear. **Published in one part.**
3. The third Paper, "**Challenges Of Being A BPM Pioneer**", highlights technical keys to success for a BPM programme. BPM software technology is not mature, and "results may vary". However, there are ways of narrowing the "cone of outcomes" for your BPM programme.
4. The fourth Paper, "**Adoption Process & BPM Institutionalization**", covers how BPM software technology adoption can accelerate beyond the current technology grid-lock, a process which is less about technology and more about community.



Author: John Morris

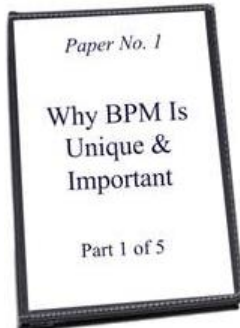


John Morris is a business development and sales specialist with experience in business services, financial services, manufacturing, field service, supply chain, and CRM & B2B marketing, gained representing companies including IDC, DEC, Oracle, Intalio and Bosch. John is on point to help organizations successfully navigate disruption, especially leveraging the power of business semantics and BPM process technology. And he says "There's a bright future for channels. Because that's where the trusted domain knowledge is."

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Part 1: One Technology of Work

One Technology Helps You Put Your Ideas Of Work To Work

So many technologies! So much business pressure to digitize! So much complexity! Where should we spend our limited time?

Business Process Management software technology is clearly a technology that might help us as business people achieve business objectives.

But what if BPM software technology (“BPM”) is more than just another technology?

What if BPM is in fact the technology that should be the core of our efforts? Knowing with confidence that we had a sensible place to start our digitization efforts would be very helpful.

BPM is in fact that place to start! This Paper will show you why.

This Paper itself is the first of a series on the revolutionary potential of BPM technology. Here is the plan for the series:

BPM Technology As Revolutionary Enabler Paper Series

- 1) **Why BPM Is Unique & Important: Work & Process As First-Class**
- 2) **Minimum Viable Definition Of BPM: Power To The People**
- 3) **Challenges Of Being A BPM Pioneer: Using Technology Effectively**
- 4) **Adoption Futures & BPM Institutionalization: Technology As Social Process**

Our series starts with a look at why BPM is important, at the real meaning of BPM technology, and how that meaning sometimes gets lost. The “Minimum Viable Definition” of BPM software technology helps us recover the core value of the technology. BPM technology includes both software technology and as well the social technologies and business practices which can be grouped under the label of “BPM methodologies” which are covered in Papers III and IV.

Minimum Viable Definition of Business Process Management (“BPM”) Software Technology

Let’s begin with a definition of BPM software technology. This is the “Minimum Viable Definition”; in the subsequent Paper II we’ll explore the background of the Definition.

BPM Is Unique

Definition of BPM as The Technology of Work

Business process management software technology (“BPM”) is the technology for automating the work of business. By definition, in BPM automation technology, and only in that technology, concepts of work and process are first-class citizens of that technology.¹

BPM software technology is unique because no other technology can be described as “directly about automating the work of business”.

And “directly about” is possible because of the first-class citizenship in BPM software technology of the ideas of “work and process”. BPM software technology has native support for the language of work and process that business people can directly use to express their plans for automation.

BPM Is Important

Meaning of BPM Technology for Organizations

Only BPM technology directly enables business-side staff to directly imagine, model, make and use automation artefacts for any desired business process, minimizing IT-side mediation.

New generation BPM software technology thus enables organizations to evolve business capabilities more rapidly and affordably than is possible with any alternative.

BPM software technology provides opportunity; for that opportunity to be realized, it needs to be combined with leadership and investment. That combination of powerful technology and business leadership will open the door to real, measurable, positive and affordable business change. For these reasons, BPM software technology is the ideal starting place for your digitalization journey.

See Paper II for an exclusive focus on just the Minimum Viable Definition of BPM software automation technology. Paper III concerns technical challenges of BPM technology. Paper IV covers social aspects of BPM software technology promotion and adoption.

A Little Background On The History of BPM Technology Adoption

For decades, and formerly known as workflow, one of the most seductively promising business technologies has been business process management software technology. Especially today, with the wide perception of business disruption and digitization, the intuitive allure that BPM is the way to build new business offerings is stronger than ever.

So, given that business intuition, plus the real experience of BPM success stories and even a decade of hype, BPM software technology should almost “sell itself”. And indeed, BPM software is now explicitly part of many company technology portfolios, and implicitly part of major software applications.

But as for “selling itself”, and as any sales person knows (and as a sales person I know this too), nothing “sells itself”.

Especially BPM software doesn’t sell itself. Despite it’s natural attraction, for multiple reasons the pace of BPM technology adoption has been fairly “slow”.¹

What is the challenge in selling BPM?

Beyond the feel-good BPM sales slide deck, BPM technology often reveals itself as requiring a major IT commitment. There are lots of success stories, certainly, but fewer than we had hoped for. Even for those who have taken the plunge, current BPM software too often turns out to be exactly that – the big IT commitment and technology grid-lock that everyone fears.

Yet despite these reservations, the expectation of both business people and technologists remain, an expectation that BPM technology does indeed have huge potential. This is one of the reasons for this Paper series, to make a case for adopting BPM software technology that is beyond intuition.

¹ BPTrends Surveys (www.bptrends.com/bptrends-surveys); Gartner; IDC

And as for the challenges in BPM adoption, improved BPM technology combined with good BPM software technology management can make all the difference for a successful BPM programme.



Next up in the Series -- Paper I, Why BPM Is Unique & Important: **Part 2, Introduce The Work Of Business:** *What is business all about and what do we need technology to do?*

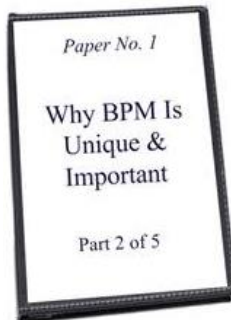
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Part 2: Introduce The Work Of Business

Definition Of The Work Of Business

Most or even all technologists are to some degree technology enthusiasts. And that includes BPM software technology professionals. And certainly in our pursuit of the Minimum Viable Definition of BPM software technology, we'll have to dive into that technology.

However, before we do that, it's important to understand the "why" of this technology. Let's step back for a moment from technology and ask about the reasons why BPM software technology – or indeed any technology at all -- exists? The result may be that we have even more reason to be enthusiastic about BPM!

In a nutshell, technology exists a force multiplier for human brawn or human brains. Technology thus helps us do more work with the same resources. As such, BPM software technology, like all technology, helps us with our work. With technology our "productivity" is higher.

As technology, BPM specifically concerns the automation of certain types of work. In fact our definition of BPM stated that "BPM is the technology for automating the work of business". So let's explore the ideas of "work" and the "automation of work"; they are the "why" of BPM software technology.

All Organized Activity Is Work

Business or any organized endeavour starts with a purpose. And then that business executes on that purpose by the expenditure of effort. This is our starting point then: purposeful effort. And that's called work. All organized human endeavour is about performing "work", the expenditure of effort in support of some purpose. And in a macro organizational context, organizational work then adds up to a value chain.

The job of management is to organize work in support of that value chain. Specifically, the job of the executive is to decide what work should be done, i.e. what effort should be expended in support of defined purposes. All business or government or non-profit managers and executives want to organize work. That's what managers do.

Following from this, if work is what organization is for, then the use of technology to be more productive in our work would be very important.

Automation Of Work Is The Goal

The application of technology to work to improve productivity changes how work is done. This change is called automation.

What is a helpful and specific meaning of automation for this discussion?

This Paper uses the term "automation" in its most general sense, which is the use of technology artefacts as force-multipliers of human effort in the performance of work.² This meaning of the

² [Business process automation vs. business process management: A primer](#) by Kristen Caretta, Associate Editor 10 Nov 2009

term automation is already in use, as in the following sentence said by a business manager: “We need to automate that department.”

One could argue that the word “augmentation” may be in some circumstances more appropriate, but augmentation implies an human actor that may not always be present.

Another term, the new “digitalize”, is often used to describe a big-picture automation program; the term however is not focused on “work”, which is our point of interest.

Note that BPM software technology itself is not a synonym for automation. There are lots of instances of automation achieved without BPM; the idea of automation is distinct.

Some readers will recall the original meaning of the term automation as narrowly defined in terms of industrial control systems. But interestingly, the [International Society for Automation](#) now concurs with a broader use of the term automation, defining automation as “*the creation and application of technology to monitor and control the production and delivery of products and services.*”³

Business leaders then will choose to automate work if there is a good business case. This is the “why” of BPM software automation technology.



Next up in the Series -- Paper I, Why BPM Is Unique & Important: **Part 3, Link Work of Business And BPM Software Technology**: *What is truly unique about BPM? And what are the big three first-class BPM functions?*

Paper I in 5 Parts

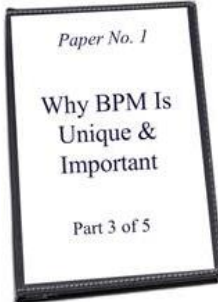
1. [The Technology of Work](#)
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³ “What Is Automation” www.isa.org/about-isa/what-is-automation/

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Part 3: Link Work Of Business And BPM Software Technology

Definition of BPM Technology: Technology For The Work Of Business

In previous sections we defined the concepts of “work”, “the work of business” and “automation”. Now we can ask “what is the best technology for automating the work of business”?

Our answer is BPM software technology. In explaining this answer we’ll start by defining the idea of “first-class functionality” in a given software product. Then we’ll look at the big three first-class functions in BPM software technology: work, process and, in the next section, automation artefact manufacturing.

What Is A First-Class Function Of Software Technology? Why Does This Matter?

When given functionality is a first-class citizen of a software system, that “first-classness” implies that users of a technology can use that functionality directly. And some reference to the functionality will likely show up as a feature listed on the product’s website.

The idea of “first-class” arose first in the world of software programming to describe an attribute of coded software functions. But the term is now used more generally in IT discourse to describe higher level functions as well. A good example is the first statement in the [Business Rules Manifesto](#), by the Business Rules Group, to wit “*Rules are a first-class citizen of the requirements world*”.

If functionality is not first-class, then that implies that extra work is required to achieve that functionality, if it is even possible.

With this definition of first-class functionality, let’s examine BPM software technology.

Work As First-Class Function Of BPM Software Technology

Why is BPM software the technology for automating work?

Uniquely in BPM “concepts of work are first-class citizens” of BPM technology.

What does this idea mean, that “concepts of work are first-class citizens”?

In the case of BPM, business managers or business analysts or even business users can directly manipulate the concepts of work in the software. (The most important ideas of work which are first-class citizens of BPM are the concepts of “task” or “activity”, and “workflow” etc.) ***BPM software product users will use concepts of work through the BPM automation artefact life-cycle, especially during modeling and during actual business usage.***

First-class status for work in BPM software technology is realized by support for a business process notation or language. BPMN (“Business Process Model And Notation”) is the most common process specification language, taking over from the more limiting “BPEL”. There are many other business process specification languages.

See Paper 1, Section 4 for a discussion concerning how the idea of work as first-class citizen of BPM software technology is realized.

Repetition As First-Class Function Of BPM Technology

Work is not the only first-class citizen of BPM software technology; in addition to the idea of work, the concept of “repeated work pattern” is also a first-class citizen of BPM software. And the name we give to repeated work patterns is “business process”.

What does it mean for BPM software product functionality to say that “process” or “repetition” is a first-class citizen of that software?

Process first-classness means that BPM software is built with the expectation that individual artefacts will be used over and over again. And that implies modeling and tooling support for process patterns. For example, at the level of process pattern, BPM software will natively support task loops. Or at the management and monitoring level, there will be support for managing multiple concurrent process instances and for higher-level management work such as comparing instances to baselines.

BPM software product users will use concepts of work through the automation artefact life-cycle, especially during modeling and during actual business usage.

BPM And The Economics Of Repetition

But how important is support for repeated work patterns?

If we want to understand the application of BPM software to the work of organization, it's important to understand what kind of work needs to be done, in other words, what kind of work our BPM software technology needs to support.

So what kinds of work are there to automate?

Work can be project- or process-oriented. Work can be highly standardized or structured -- or not. In each case, we might consider that different categories of software are applicable. For example, project management software may be appropriate for a large one-time, non-repeating project, but overkill for small projects.

On this basis we might conclude that BPM software may be applicable sometimes, but only for those special business cases where work is repetitive.

This conclusion would be incorrect though. Repetitive work is not a special case.

The idea that repetitive work is a special case, ignores economic pressure on organizational structure. In fact, repetitive work is and has to be the dominant pattern in any business.

Nobel Prize-winning economist Ronald Coase⁴ is noted for his 1937 insight that defined the tendency for organizations to evolve to a certain size. The tendency to a given size was based on the costs of organizing the business of the organization (specifically transaction costs of contracting out versus direct management). The result, which is also nicely intuitive, is that organizations tend to specialization. Specialization has always been characteristic of organization, but with global trade we can see specialization increasing more and more.

Almost by definition then, organizations are built around the idea of people working together doing the same thing over and over again. Except in the short term, repetition is necessarily part of all business models. (And even mass customization and case management still fall under the umbrella of specialized, repetitive work – it just depends on the level of analysis one is using.)

⁴ [Ronald Coase, The Nature Of The Firm](#)

So not only are concepts of work first-class citizens of BPM software technology, but BPM software technology also includes first-class support for the most important pattern of organizational work, which is repetitive work, or process work.



Next up in the Series -- Paper I, Why BPM Is Unique & Important: **Part 4, BPM Software Technology Ready For Use: *The promise of BPM is realized in useful automation artefacts. How do you use BPM to build these automation tools?***

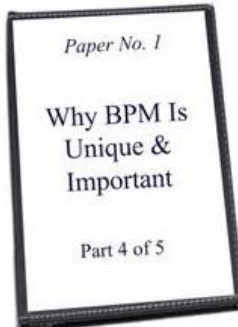
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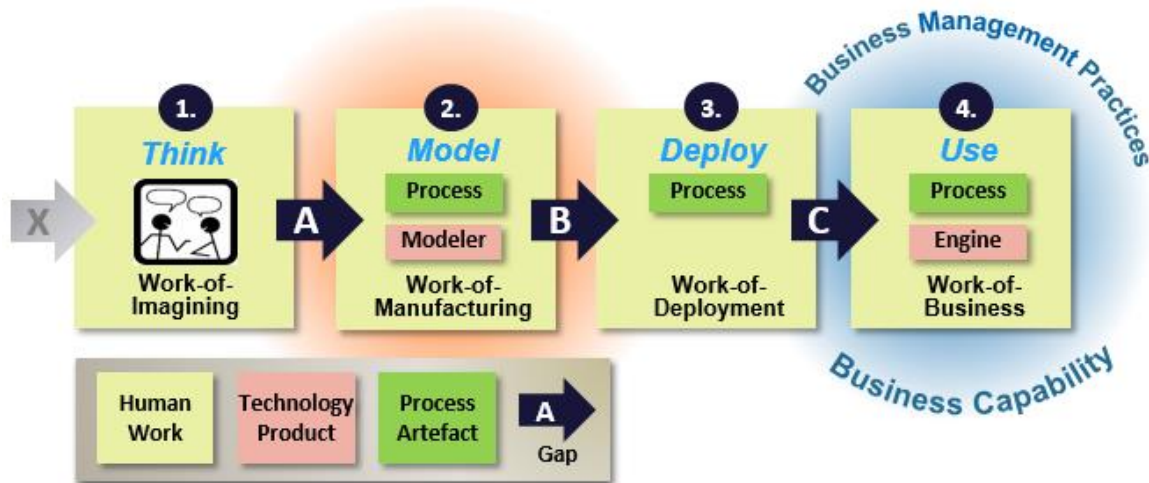
Part 4: BPM Software Technology Ready For Business Use

Automation Artefact Manufacturing As First-Class Function Of BPM

In addition to the concepts of work and process that are first-class citizens of BPM software technology, automation artefact manufacturing is also first-class in BPM.

Specifically this means the BPM software technology natively supports the modeling, deployment and usage of new business process artefacts.

BPM Automation Artefact Life-Cycle



The *BPM Automation Artefact Life-Cycle* diagram shows the work of manufacturing new process automation artefacts. It seems fairly straightforward. We model the process. Then we make a usable process artefact. That process automation artefact is the result, ready for our use in day-to-day business. And it's likely that we will keep improving process over time.

Behind the scenes things aren't quite so straight-forward though. A full discussion of important technical issues related to the automation artefact life-cycle is the subject of Paper III: **Challenges of Being A Pioneer: Using BPM Software Technology Effectively**.

So let's explore automation artefact manufacturing as a first-class citizen of BPM software technology, and especially Step No. 2, "Model".

Modeling As Work Of Value Creation

The main focus of automation artefact manufacturing is on modeling, Life-Cycle Step No. 2. The process modeling that occurs in Step Two is where technology-supported BPM value creation occurs.

And given that you are working with BPM software technology, where the concepts of work and process are first-class citizens of the system, your modeling of new automation artefacts can proceed faster than with any other technology.

A BPM technology-based automation programme concerns specifying and deploying automation artefacts that contribute to the goals of the sponsoring organization. Thus a BPM programme is itself an exercise in value creation, the creation of valuable automation artefacts.

Those automation artefacts are created by the work of modeling, conducted by staff using BPM modeling software as part of the BPM software technology package.

Model-Driven Artefact Manufacturing As First-Class Function Of BPM Technology

Model-based automation artefact manufacturing is also a first-class citizen of BPM technology. This means that the necessary software functionality for building automation artefacts from models is present in BPM software.

And for users this functionality shows up as the entire BPM automation artefact life-cycle.

BPM software technology, and indeed any software technology that supports model-based manufacturing of automation artefacts, will always have two functionalities: (1) support for first-class domain semantic models and (2) support for the automation artefact life-cycle.

In the case of BPM software technology, this means that artefact models can be built on the basis of the first-class work and process models which are part of the software. And then those artefact models can be easily or even automatically deployed as automation artefact instances.

With any other software, those same business managers and business analysts would not be able to directly build a new business process in software, for two reasons.

1. **CONCEPTS OF WORK** -- In all other software, the concepts of work are not first-class citizens. Task or activity and workflow are not first-class citizens in all other software products – because if they were first-class citizens, then those products would be products which include BPM functionality, by definition.

Without BPM software technology, if you want to build a new business process, your ideas will be mediated by a process of building software artefacts which “doesn’t speak work”.

2. **MODEL-DRIVEN ARTEFACT MANUFACTURING** -- In software that is not model-driven, artefact manufacturing itself is not a first-class citizen. This means that there’s no easy path to adapting an application to changing needs. There may be some limited table- or parameter-driven customization available. But “manufacturing” means efficiency and freedom to build new artefacts, within the limitations of the semantics of the system.

Model Scope & Management

It’s a common observation that any model is a simplification of reality. This is the power of modeling, to provide abstraction tools that humans (and machines) can use to understand and work with reality. From this perspective, models are a weapon against complexity.

But of course, insofar` as models are also simplifications, there will always be edge cases where the model is insufficient. As they cliché goes, all models are wrong, some models are useful. Reality is always richer than your models. As you get better at process modeling, part of your mastery will be knowing what to model and what to leave out.

The questions of “modeling cost” and “model governance” are important business concerns in any BPM programme. Any model takes time to build, and thus has a cost. When you buy an ERP module, one of the things you are paying for are the embedded process models which someone else took

time to build. And even as models reduce complexity, models also have their own complexity, which could again add to costs.

An ecosystem of domain-specific process models is also developing, including open source models and standard models defined for given industries and especially ecommerce. You may be able to lever such process models to start your modeling process, and then extend these models as required.

Penalties For Not Using BPM Technology

When business ideas of work have to be mediated by technology before those ideas are realized, the cost is very high – and those costs are typically much higher than we generally acknowledge.

These costs of building artefacts of work from scratch appear in multiple dimensions:

Costs of Building Automation Artefacts Without BPM

- (1) **DIRECT COST** -- It's much more expensive to build anything when you have to build from scratch;
- (2) **OVERHEAD** -- You are maintaining overhead labor which is unrelated to your business;
- (3) **AGILITY OR TIME** – Acquisition of new business capabilities is much slower.
- (4) **CUSTOMIZATION** – Business capabilities are much more difficult to fine-tune for market needs.
- (5) **INFLEXIBILITY** -- Change is hard and technical debt is high;
- (6) **RISK** – You have greater responsibility for the whole “stack” and thus your risk is higher.

In contrast, constructing new business process artefacts using purpose-specific BPM software technology means you can construct new business capabilities much faster, and at much less expense, and with greater flexibility to evolve.



Next up in the Series -- Paper I, Why BPM Is Unique & Important: **Part 5, Business Benefits Of BPM Software Technology: *What are the four main business benefits of using BPM software technology for automation?***

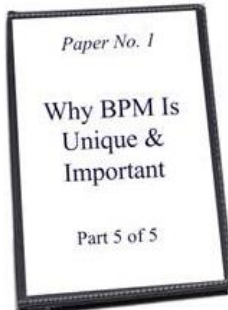
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Part 5: Business Benefits Of Using BPM Software Technology

All business, and indeed every organization, has a value chain. A value chain is the sum of work processes. We buy or build software technology artefacts to help us with our work because in this modern day, to work without software technology is impossible.

As we have shown in this Paper, BPM software technology is uniquely suited to the needs of business and organization. Here are the main technical and business benefits that accrue from using BPM software technology:

- (1) **DIRECT TRANSLATION OF BUSINESS IDEAS** – Concepts of direct concern to management are first-class, or built-in, to BPM software technology, enabling direct translation of ideas into tools.
- (2) **DEFEAT COMPLEXITY WITH MODELING** – Agility is impossible with complexity. Business-friendly model-based technology is the antidote to escalating technical and business complexity.
- (3) **DIRECT MANUFACTURE OF USEFUL TOOLS** – The direct output from using BPM software technology is usable business tools.
- (4) **GO BEYOND THE COMMODITY HORIZON** – Commonly used market or open source software defines commodity market positioning; BPM software technology makes a unique market presence affordable.

BPM software technology doesn't do anything that could not be bought or constructed otherwise. But because of the nature of the first-class concepts built into BPM, constructing automation technology artefacts with BPM software technology is much less expensive, must faster, and affords much more flexibility than would be otherwise.



Next up in the Series -- Paper II, Minimum Viable Definition Of BPM: **Part 1, The Kitchen Sink, All BPM-Related Automation Technology.** *Let's map all the powerful components of the BPM software technology ecosystem.*

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