



## Fundamentals of Business Process Management

Marlon Dumas, Marcello La Rosa, Jan Mendling, & Hajo A. Reijers

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### Reviewed by Paul Harmon

There are a number of different types of business process books. There are general overviews that survey the theory and practices of the field and there are specialized books that focus on one specific area of concern, as, for examples books on BPMN or on Process Mining. Then there are academic books, like the two volume Handbook on BPM, which consists of a collection of technical papers. And, as universities have increasingly established courses in BPM, there are now textbooks designed to introduce students to the subject.

This is a textbook and it was written by four professors: Marlon Dumas from the Institute of Computer Science at the University of Tartu, in Estonia, Marcello La Rosa, from the BPM program at the Queensland University of Technology, in Australia, Jan Mendling from the Institute for Information Business, Vienna University of Economics and Business, in Austria, and Hajo A. Reijers, from the Department of Mathematics and Computer Science, at Eindhoven University of Technology, in The Netherlands.

As I sat down to read this book, I was interested in two different things. First, I was interested in how university programs were introducing students to BPM. And, second, I was interested in what broader insights into BPM an introductory book might offer for business managers and practitioners working in industry.

Given the fact that many of the BPM programs in colleges today are in the computer science departments, I was especially interested to see how this book would position BPM. The authors were also concerned with that, and address it directly. They state in the Preface, that treatments of BPM range from books like my own *Business Process Change* book, addressed to business managers and process practitioners to books like Van der Aalst and Van Hee's *Workflow Management*, that are addressed to computer scientists. The author's went on to explain that they wanted to produce a book that "embraces BPM as a cross-disciplinary field, striking a balance between business management and IT aspects..." In addition, of course, they wanted a book designed to support college instruction and that relied heavily on the latest academic research in BPM.

Let's begin with an overview of the contents of the book, as provided by the basic titles in the table of contents:

1. Introduction to Business Process Management
2. Process Identification
3. Essential Process Modeling
4. Advanced Process Modeling
5. Process Discovery
6. Qualitative Process Analysis
7. Quantitative Process Analysis

- 8. Process Redesign
- 9. Process Automation
- 10. Process Intelligence

So what does this tell us about the scope of this book? What, apparently, do the authors believe BPM to consist of, or, perhaps, more accurately, what do they hope to teach about BPM in the course that this book would facilitate.

When I try to think about the subject matter that ought to be covered in a BPM book or course, I tend to rely on a matrix that shows six cells (seven actually, but I'll come back to that.) On the top axis I discriminate between (1) projects that are designed to generate a specific result and (2) activities that are undertaken on an on-going basis. A business process that is being executed at a company is in the latter category and a project to redesign that process is in the former category. On the vertical axis I discriminate between (i) organization-wide concerns, (ii) process specific concerns, and (iii) concerns with support resources used by processes. Thus, developing a business architecture is an organization-wide concern, redesigning a specific process is a process specific concern, and creating a new software application to support a new process redesign is a support concern. I would suggest that the top four cells are definitely BPM concerns, and that the bottom two boxes were primarily the concerns of support groups like IT, HR, or facilities, although process people often have reason to interact with their support groups. I have also thrown in a 7<sup>th</sup> cell which I placed at the top left of Figure 1. Separate from all the types of work that are involved, there are general principles and concepts that anyone working in the process area needs to understand.

Given this model of the BPM space, I would then suggest that the book being reviewed focuses almost entirely on Principles and Concepts and on Business Process Redesign. There are small forays into architecture and into BPM software development, but the focus is clearly on redesign projects. Moreover it is primarily focused on flow issues, and we don't get much information about how to establish a process measurement system.

Principles & Concepts of Process Work	Projects to Achieve Specific Goals	On-Going Execution of Processes
Concern is organization-wide	Business Process Architecture Development Projects	On-Going, Organization-wide Management of Process Work
Concern is with a specific business process	Business Process Design or Redesign Projects	Day-to-Day Execution of a Specific Business Process
Concern is with a resource that supports a process	Projects to Develop Support Resources (e.g. Software Applications or Training)	Day-to-Day Support of a Specific Business Process

**Figure 1. A model of the BPM space**

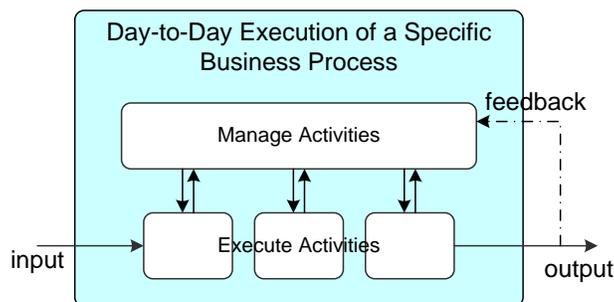
Let's see if I can say this a bit differently. Process work has had different focuses at different points in history. In the Eighties, there was a lot of attention on Six Sigma, which in turn focused

on small scale improvements in output quality and consistency. In the Nineties, the focus shifted to Business Process Reengineering which focused on large-scale projects that aimed at reconceptualizing how IT was used to facilitate operational work throughout organizations. In the past decade we have focused on BPM. So what is the concern of BPM? My answer is that the focus on BPM is on **managing** process work throughout the organization. In other words, it's about coordinating and prioritizing process work done by Lean, Six Sigma, IT, and many other groups. This is not, of course, the only view. Some would have us believe that BPM is about using a new type of software application (call it BPMS) to manage specific processes. In other words, BPM is, in this view, about building and using the latest generation of workflow tools.

The authors of *Fundamentals of Business Process Management* make it clear that they believe that BPM is quite a bit more than BPMS. On the other hand, their book suggests that they believe students should be introduced to BPM as if it were a process redesign discipline. They have left out the process **management!** There is little consideration of what would be involved in creating an organization-wide business process architecture, let alone anything about the tasks involved in managing processes for an entire organization (e.g. How to you prioritize process projects throughout an organization with a business process architecture?). This is the kind of work that hundreds of organizations have joined the Supply Chain Council (SCC) and the TeleManagement Forum to learn about, and it's largely omitted from this text.

Let me extend this argument, by asking how one might use a BPMS application. Obviously the tool can be used to model a process, and thus might be used as an over-priced modeling tool during a redesign project. Similarly, most BPMS tools are easier to use than older workflow tools, and more flexible than most ERP applications, and can be used by software developers. The real claim for BPMS applications, however, is that they let day-to-day managers monitor and control the on-going execution of their processes. In other words, a BPMS application is design as a combination workflow tool and decision support tool. The very use of a BPMS tool ought to point strongly to the fact that a process has a manager and that manager plays a key roll in the day-to-day effectiveness of the process.

Let me get even more specific, however. In Figure 2 I've pictured a process – let's say it is an on-going process to Produce Widgets. Employees (or software applications and machines) execute a number of activities that result in the production of widgets. Someone, however, manages that process. They set a budget, arrange for tools, set schedules and assign tasks, monitor the work, report on progress, provide feedback to employees and otherwise manage the process. This isn't an abstraction! In a real work setting, you can see people doing these things. And you can detect the results. If employees aren't doing their work quite right, and no one informs them that they are off-target, they go right on as they are. If tools aren't available then they aren't used. If it's clear that managers don't care if step 2 is done or not, step 2 tends not to be done.



**Figure 2. Two different types of activities that occur within a process.**

Any process analysis needs to consider two sources of problems: (1) Is the working being executed efficiently, and (2) is the working being structured and supported, hour-by-hour, by the person responsible for managing or supervising the process. An analysis of a business process that shows us the activities that are executed, but doesn't consider what the supervisor is doing to support the ongoing execution of the activity is only half of a comprehensive process analysis. It would be nice to have some research as to which contributes most to problems. In my informal experience, I would say it was about 50/50. It's just as likely that a manager is discouraging correct behavior as it's likely that employees don't know what to do. Anyone whose redesigned a new process and rolled it out, only to come back in six months and find employees doing things the old way, knows the power of managers to determine what gets done and what doesn't.

I mention this to suggest that, even within the scope that the authors set for themselves, they avoid consideration of management issues. If you study the diagrams and the discussions in this book you realize that there is a lot about how to diagram what the employees (or software systems) do, but nothing on the feedback provided by managers to employees. Thinking about this in a different way, the authors focus too much, in my opinion, on using BPMN – a notation designed to allow code generation. Unfortunately, BPMN isn't sophisticated enough to model manager-employee interactions. It lets you show the process itself, but it doesn't make it easy to show what a manager does, on a day-by-day basis to maintain the human behavior that executes the process activities. Once one accepts the assumption that the process is what the employees' do, one ties one hand behind one's back, and doesn't even look for all of the process problems that arise from poor management. In this sense, despite the author's explicit denials, this book reflects an IT slant, and does not reflect the true complexity and richness of the business process perspective that I believe underlies BPM.

At the same time, once one defines BPM as process redesign, one gives up a seat at the management table and settles for a technical role. One doesn't get to help managers understand the organization from the process perspective, but settles for fixing specific process problems.

In a nutshell: I wish the authors had taken a more expansive view of BPM. I wish they were focused on getting new BPM students to think of themselves as business managers with a special perspective on how to organize an organization, and not as technicians who undertake specific types of projects.

That said, how does the book do within the constraints that the authors have set for themselves? As we have already noted, the book walks a student through the phases in a business process redesign effort. And the authors rely extensively on BPMN to explain how the flows and activities work together. The cases were well chosen, and the diagrams provide a nice introduction to the use of BPMN. Each chapter presents a topic and then there are exercises that provide the student with a good chance to think about the information and apply it to other cases. I found the discussion of process redesign detailed and interesting.

Teachers will have to decide if this book introduces students to BPM as they would want to do it. I suspect in most cases it will, and assuming it does, I'm confident that teachers will find the support exercises very valuable. A harder question is whether a process practitioner would benefit from this book. It's well written and provides a completely up-to-date introduction to the use of BPMN. Moreover, it provides a nice review of some of the latest software techniques available in BPMS tools, with a special emphasis on process mining. I would certainly recommend it to any process practitioners that wanted an up-to-date refresher.

Paul Harmon is the executive editor of [www.bptrends.com](http://www.bptrends.com)

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