

Interview with Phil Gilbert on “Business Process Management and Data Integration”

Phil Gilbert leads the Business Process Management segment for the IBM Software Group, which includes Business Process Management, business rules, events and business monitoring. He joined IBM in January 2010 as a result of its acquisition of Lombardi Software, where he served as President and CTO. Phil is a recognized leader in the software industry, having held managerial & executive positions in consulting and industry. He has led three successful start-ups, and is a frequent speaker around the world on topics of Business Process Management, technology, governance, strategy and culture. Phil is a past Chair of the Object Management Group’s BPM Steering Committee and is a founding member of the Process Knowledge Initiative, a collaborative industry and academic endeavor creating an open source body of knowledge on process management. He has been awarded four patents in the areas of business process and distributed transaction management, most recently on the topic of business process diagram visualization using heat maps. Phil served on numerous industry committees and panels, and was a founding Board member of RosettaNet, serving until 2001. Phil graduated as a Pe-et (top ten) senior from the University of Oklahoma in 1978 with a Bachelor of Accountancy degree, with special emphasis in the Computer Sciences.

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In your experience, what is the focus of Business Process Management today?

Gilbert: Purely on an anecdotal basis, my observation is that mainstream BPM maturity has advanced more in the past 12 months than in the previous 120. People are really “getting it.” But it’s not new things – it’s just that BPM is becoming mainstream. It has been several years, now, that companies have focused on process as a way to improve their customer relationships, improve their operational efficiency, and make their business operations more transparent (and therefore less risky).

BISE: How has the discipline of Business Process Management changed over the years?

Gilbert: The discipline and the technologies of BPM have evolved, of course. Many years ago, we used to talk about “straight-through” processes as being distinct from “human-centric” processes. These were different than “content-centric” processes, or ad hoc or case processes. More and more, the practice of BPM – the discipline of BPM – has embraced the enterprise perspective of end-to-end process understanding and improvement. While there may be many

BISE: Business Process Management has drawn from a variety of technology and management streams since the early 1980s. From office automation through

workflow management, business process reengineering to adaptive case management, each generation has given new impulse and subtle spin to this domain.

technologies underpinning a BPM effort, we have seen the market embrace the BPM “center of excellence” as the place where all these end-to-end processes are considered, regardless of the “sub-process pattern” required to solve a specific problem.

BISE: Are there any new topics that enter the conversation around BPM?

Gilbert: I’d say if there’s anything that’s a new area of focus for BPM teams it’s the increasing awareness of data as it relates to process and to a company’s business performance as a whole. We’ve always known that data quality is probably the single biggest contributor to process performance. But lately, I’ve been seeing more customers trying to understand the confluence of process, integration and data in a multi-channel world, where the maturity of each can impact the requirements of the other for any given project or program. Developing a scalable BPM-based framework for understanding, capturing and communicating data through a process lens is just beginning to take hold, and holds a lot of promise as a more effective place for architecture than just focusing on activity and sub-process re-use.

At these customers, more and more BPM teams have explicit ownership of the business data models, and are working with the architects on rationalizing these with the underlying systems of record (which will have different data models, and often duplicative ones at that). We’re also seeing an increasing linkage between companies’ Master Data Management and Enterprise Content Management efforts and their process efforts. These specific sources of data are being considered at the process layer in much the same way as structured data being delivered via the enterprise service buses and other sources.

BISE: If process teams obtain ownership of business data, how does that change our traditional practices regarding the management of data?

Gilbert: As we enter this BPM-driven data domain, we need to begin thinking of data as being a “morphable” as processes. A big part of the success of BPM has been its embrace of iterative change. We actively try to mature and alter processes; and sometimes the same process is both structured and ad hoc based on the product set or customer segmentation. The point is: the discipline accepts this as OK! There is no “right” answer

for a given process without taking into account its intention in a given context.

We need to apply this thinking to our data. We should be actively managing data toward its highest and best “type”, as opposed to thinking of, say, “documents” as distinct from “structured” data. Over time, the goal is to move a given piece of data to being the type it needs to be so that it’s most effective. This is analogous to how we think of processes: we have a goal of changing them over time to be better – whatever “better” means. Just as we expect a process to change its character over time, we should start thinking about data in the same way.

BISE: That sounds like a challenge for data managers – what makes it a BPM issue?

Gilbert: Why is this a BPM thing? Because it’s the use of data in context that determines its highest and best state, and since process is the instantiation of context, this is the best proxy for understanding how the business consumes data. So the BPM team is a logical place to drive this “data improvement” from. (Note: data integrity isn’t exactly what I’m talking about here although that’s important. I’m really referring to using the desired process outcomes as a way to determine the desired end-state for data type, and then working with the data owners to drive to that outcome using process improvement as the change vehicle.)

Visualizing all of this is an exciting new area for BPM technologies to grow into. The BPMN 2 specification gives some primitive guidance on visualization but the methods shown in the specification don’t really work in the real world. They don’t scale for any process diagrams of even minor complexity. So we have to tackle this as an industry and I think it’s a fruitful area for advancement. Data visualization – both at design-time and at run-time – will be increasingly important to the BPM specialist.

BISE: 25 years ago Max Vetter called it the computer science challenge of the century: Getting a grip on the data chaos that was created by unfettered data growth. You are suggesting that process thinking can play a pivotal role in solving this problem?

Gilbert: Max was a century ahead of his time! At this point, just a decade into the 21st century it’s almost trite to talk about the “information explosion”. Although I think we always overestimate our prowess. Was there ever more of an

explosion than, say, in the years immediately following Gutenberg? There are so many aspects to the data issue. There’s a tendency toward structured, from the unstructured; an increase in meta-data, around the data; and an explosion of transactions, giving rise to both data and its meta-data.

I think what Max was referring to was, in a way, what I’ll call the unified theory of data. And, yes, I think one of the problems in getting a grip on data is that in the abstract, data is meaningless. It’s hard to put a consistent mental model on something until you understand its context. Content matters because context inherently begins to communicate the constraints. Turning data into information requires context. So in a world where data is almost unlimited, the situational constraints around the data become the magic ingredients that perform the alchemy that gives us information and insight, which in turn are the key ingredients for effective decisions in a process.

BISE: So context becomes the key to effective process design?

Gilbert: Up until recently, it was the scarcity of data that was a constraint. It was in different formats (digital and otherwise). Now, it’s no longer a scarcity of data and, to me, it isn’t that there’s too much. It’s that now that we have all this data in accessible form (it’s virtually all digitized now), the problem that’s become apparent is that we don’t understand the context we need for a given situation. We have evolved to a higher order problem. Now we have the data, so we have to turn to the problem of context.

And what better way to describe situational constraints than using the language of process. Process is the means by which we communicate how our businesses run, how they operate. Processes describe the situations we are faced with, and the decisions that need to be made. They understand time, value and cost. And properly formed they provide a mechanism for communicating constraints, often in the form of KPIs and Service Level Agreements.

BISE: Do customers understand this philosophy?

Gilbert: Most customers may not be thinking philosophically. In many cases, we’ve found a more tactical linkage between process and data: as BPM programs mature, people in the line of business really do become more involved in the design and developed of process

applications. But what we've found is that business people, even SMEs, really don't wake up in the morning thinking about BPMN or Six Sigma. They wake up thinking about their work; the tasks at hand. And this work is primarily about their customers and suppliers and employees. Their work is about the processing of data and meta-data, adding value to it as it flows along a path (maybe pre-defined, maybe ad hoc). Process, for them, is about the flow and measurement of data as it moves through the organization. These people – real business people – are primarily concerned about the data of their work as opposed to the process of their work. Process is a means to scale the flow of data.

And so, as companies become more process-driven they find that they also need to become more data-driven, as well. And, interestingly, this is a conversation that's even more interesting to the business than the processes. But dealing with data without process is, in my experience, a non-starter. You simply cannot have great data without great process understanding. So while there's a maturity curve for becoming process-driven; even that capability is just the first step

on an even bigger "maturity curve" of an organization.

When we view process as a shared language for what we desire, what we have to do to achieve that desire, and whether we've accomplished it, then it follows that the key ingredient to process – it's data – has to be a meaningful part of that conversation. Many companies are reaching this level of maturity in their BPM programs, and I think it may well be the most important addition to the BPM discipline for the next several years.

BISE: Which role can academic research play in the development of these capabilities?

Gilbert: Academics tend to work more with end user organizations in their research, as opposed to vendors, so I'm hoping we will see the massive opportunities in areas that are not even being discussed by vendors today. I hope the research community will hold us accountable and point out where we are staring at our own navels, continuously drilling down into arcana at the expense of focusing on areas where we can make some great strides. Vendors all have self-interest at heart, and that's a good thing. So we need academia to pull us out of our self-promotion and talk about the

real topics inhibiting companies from succeeding at BPM.

An example of an anti-pattern is what we are doing with BPMN 2.0, which is not "bad" per se. What is bad is that the notation is dominating the conversation at the expense of other topics that offer more opportunity. In the same way that BPMN 1.0 filled a huge void, let's go fill another huge void, for example runtime data, process governance and maturity, BPM methodologies, before we drill down into the arcana of notation. We are progressing the BPM stack very unevenly.

My hope is that the academics in their research will help us find out what is really ailing in our customers at this point of the BPM journey. There are a lot of companies still not doing BPM at scale. Why not? I don't hold out hope the vendors will soon address the research, so that's a place where academia can help. Ask the question: Are you wildly successful in your BPM efforts across the entire organization? If not, dig in, be open-minded. Deal with the data. Then report objectively on the data and hold us vendors to task to provide solutions to those problems.

BISE: Thank you very much for your thoughts.