1. BPMN Who?

1-1. So They Say That BPMN Is A Business Process "Notation"

What do you think of when you hear "Notation"? (thinking, thinking…)
One minute of thinking isn't getting us any closer, so let's ask our friend Google.

Aha, Wiki Notation!
…Well, maybe. (Please, no stealing.)

A way of stubbornly avoiding HTML tags, by using asterisks (*) and colons (:). (Wiki Notation)

Or, Polish Notation!
…Um, probably not. (Please, no making things up.)

The Polish Notation (and Reverse Polish Notation) was a Polish invention in which 1+2+3 is written as + 1 2 3.
It's a style that some programmers from the previous century fancied. (Polish Notation)

Anyways, BPMN is also a Notation.
It's short for Business Process Modeling Notation, and is a way of portraying business processes. Most notably, it defines a "Way to Draw" business processes. Perhaps it would be best if we say, BPMN is a method of drawing business processes.


<Figure 1>
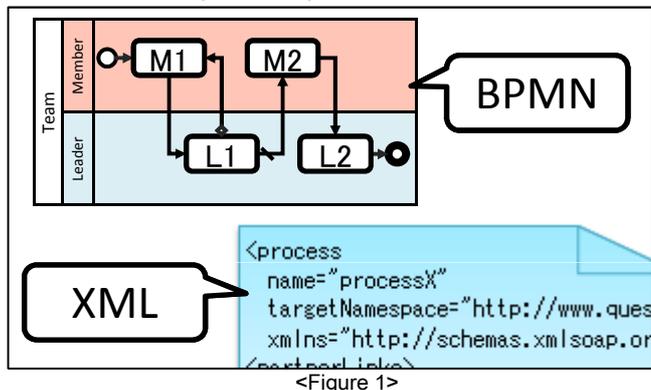
In other words—unlike HTML, XML, Wiki Notation, Polish Notation, etc., etc.—it isn't about words and texts.

1-2. Tasks Are Rectangles With Rounded Corners

BPMN is a "method of drawing." Even those of you who can't suppress a shudder at the mention of XML and Wiki can muster up some curiosity if we say "How to draw."
So, before we lose you again with words, here is a sample of a business process drawn in BPMN.


<Figure 2>
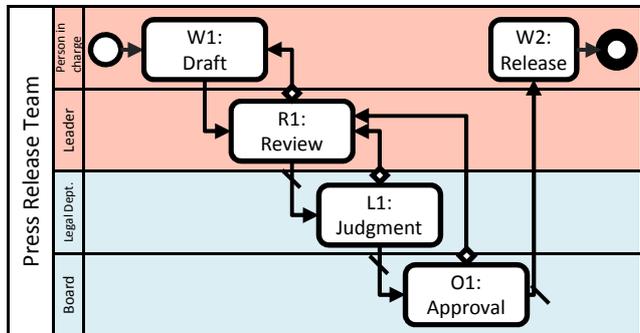
Hey, I could draw that!
Yes, it's that easy. What would take a lot more effort in words, gets across easily this way. No prior knowledge is necessary. And the most important point is… you can understand it intuitively.
By the way, as you can see, individual tasks are round-cornered rectangles, and the business flow goes from left to right. These are part of the BPMN rules.

1-3. Apparently There Are Other Notations

You don't have to use BPMN to draw business flows or processes. Some other famous ones are EPC (Event-driven Process Chain), shown in Figure-3, and Activity Diagrams.

Well, to be honest, "famous" in this case means, the number of business people who know these methods, would approximately equal the number of people who dreamed of getting squished by a dinosaur this morning. (How many is that?)


<Figure-3>
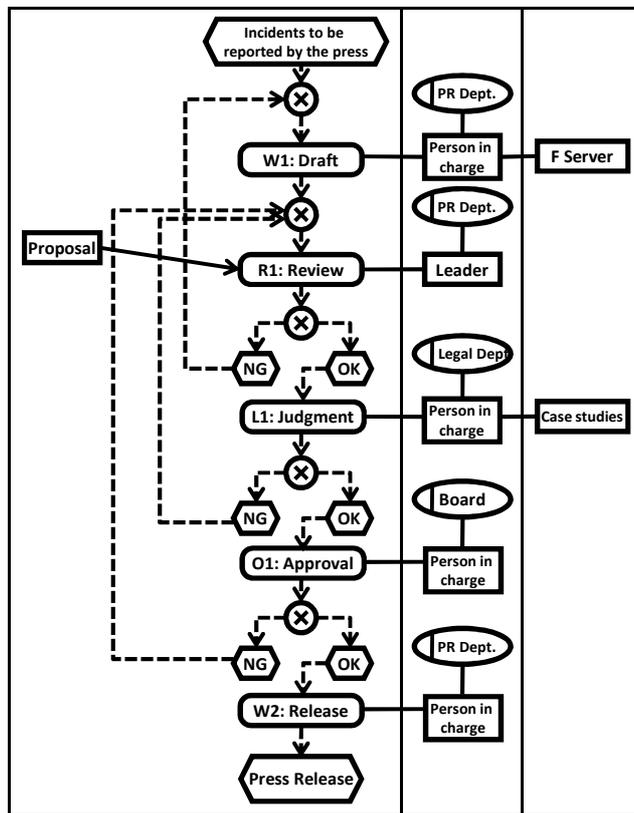
As you can see from the sample, there is a difference in the style and amount of information, but no great difference in the content and essence; in fact, we could say the only difference is in taste.
However, the fact that BPMN is *intuitively* understandable is, however small, the reason why it is… an appropriate notation for the discussion of business processes.

1-4. It's Still Young

The history of BPMN is still very short. But it is… a global resource that is managed by one of the largest standardization organizations in the world.
As of 2009, we have BPMN 1.2. In the near future, though, we should be seeing a promotion from "Business Process Modeling Notation 1.2" to "Business Process Model and Notation 2.0." But you can forget about that for now. (Curious…?)


<Figure-4>
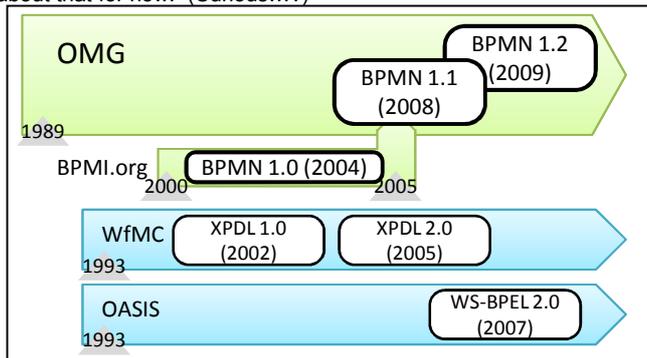
2. BPMN Within One Minute?

2-1. Drawing a BPMN diagram Within One Minute!

The Four Fundamentals of BPMN are: (Fundamentals?)
1) Draw Oblong Rectangles and label them with company departments (swimlanes)
2) Line up Round-Cornered Rectangles (tasks)
3) Connect them with Arrows (sequence flow)
4) Connect the start to a Single Narrow Circle, and the end to a Single Bold Circle (start/end events)
These are the basics. No need to memorize any terminology. There are other marks (markers) and troublesome Diamond Shapes, but let's forget them for now.

<Figure 1>
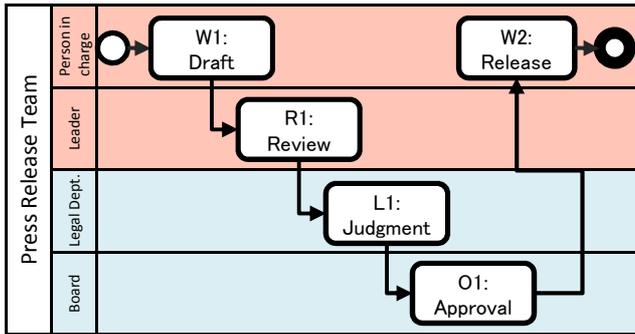
Maybe we don't even have to explain the above figure, but just in case:
•A press release staff creates a draft,
•The leader of the press release team reviews it,
•The Legal Department judges it,
•A Board executive approves it, and
•The initial press release staff releases it.
It ends perfectly, with a completed cycle. It's a simple one-way path of no options and no return, but it *was* drawn within a minute! (Really…?)

2-2. Learn to draw a point with two or more options, and you're one step closer to mastering it.

If you want to make it possible to go back a step, you have to create a crossroad (split), where you either go forward or go back.
When you draw a lot of internal business processes, at some point you come to realize that most crossroads are simple, usually a single choice out of two options. Complicated crossroads are rare. The most common one is "OK or NG."
The Two Fundamentals of splits are: (More fundamentals?)
1) Give the regular flow a slash, and (default flow)
2) Give the optional flow a small diamond (conditional flow)

<Figure 2>
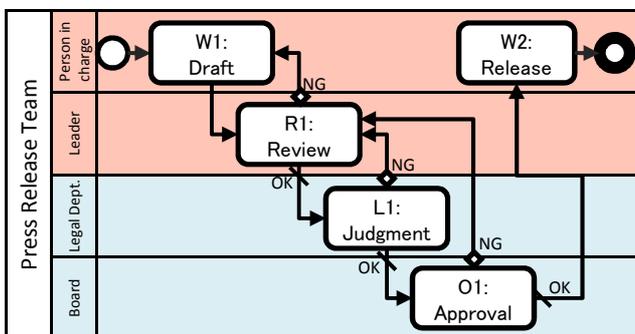
A small diamond indicates the existence of a condition. You don't have to clarify these conditions in the diagram. The slash indicates the way a process should proceed in case none of the conditions are met. If you feel like it, you can add comments on the different flows, which makes it easier for others to understand.
With these Fundamentals (Four + Two)… You can draw more than 90% of your company's business processes.
Please, try it out.
By the way, if there are only two choices, you can exchange the slash and small diamond without changing the definition of the business process.

2-3. Branching is Complicated!

When you are ready to go into complicated business processes, the first step is branching; in other words, choosing both (or all) flows simultaneously instead of only one.
Choosing all means you want all applicable tasks performed simultaneously under clearly defined roles. In BPMN this is simply illustrated with multiple arrows. For example, in the figure below, A: Hotel Reservation and B: Purchase Travel Ticket are simultaneously executed. (an AND-split)

<Figure 3>
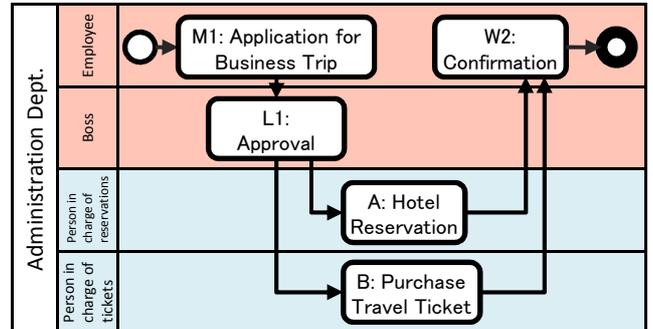
By the way, business processes are often called workflows, but it's actually very difficult to *define a flow* by imagining *actually flowing objects*. This is especially true when drawing complicated business processes. We suggest imagining a train and tracks, instead of the typical water and river, or car and roads. Trains can detach cars and proceed on different tracks, and they can come back together and proceed again as one long train.

<Figure 4>
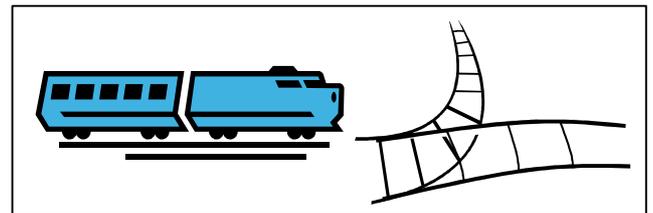
In reality, though, branching the flow into two ways increases possible errors, such as if there is trouble on one of the tracks (Figure 3: There are no available hotel rooms), or if there is a problem with the trains reconnecting (Figure 3: Sum of hotel fee and ticket fee exceed budget). Whenever possible, you should avoid enabling all (AND-split) or multiple (OR-split) choices, and stick to simple single (XOR split) choices.

2-4. Now, Would You Like Some Homework?

Naturally, managing business processes (BPM) is only meaningful if you improve them. For example, let's take the press release of Figure 2: if the initial drafts are of good quality, and also frequent enough, there's no problem. But, in other words, this means it is entirely dependant on the staff in charge.
Let's rewrite it so that the leader leads the process. (Do I have to?)

<Figure 5>
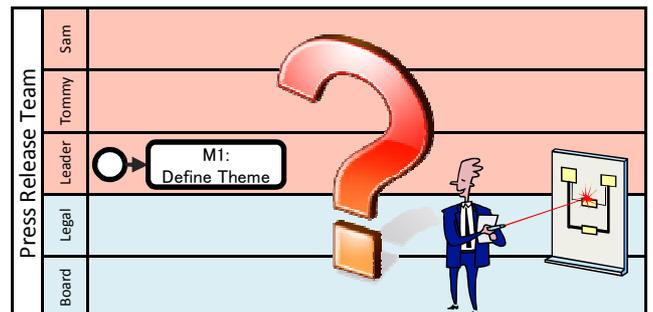
By the way, swimlanes are usually labeled with departments, and someone in the appointed department executes the task, but it's also okay to label them with a specific person or position.

3. Business Processes Appropriate for Practicing BPMN

3-1. Initiation… Document Creation Process

Now that you have learned to draw BPMN, (Who… me?!) you will no doubt start looking for chances to use your new skill. First, take our word and try our BPMN Initiation Program: the Document Creation Process. It can be anything: daily reports, proposals, meeting documents, etc. Just make sure to imagine a process that will elicit the boss's smile.

There can be many different examples, but a good sample might look like this:

<Figure 1>
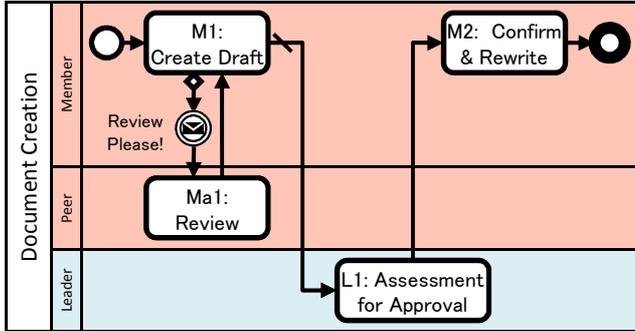
"Ah, a peer review!"
In TV dramas the character would say, "I've finished the document you wanted," and the boss would answer, "Good. By the way Mr. Tanaka…" But real life is never so easy.
When you hand in a finished draft, you more often than not are told about additional important points (for the first time), and when you fix that you will be told to enhance the layout design a little more, and then comes comments on typos, etc. There are too many organizations where this type of repetition is the norm.
When we aren't so sure about ourselves we can ask a peer to review our work and utilize common expertise. At least it will increase the chance of getting the boss to smile.
Just to let you know, we didn't consider the chance of no one accepting the reviewing task. Imagining such a merciless work environment would make the process way too complicated, in which case it would be better to design a process without a peer review in the first place!

"Wait a second… a new icon!"
Yes, a new character. But I think you get the basic idea of it. In short, an email is sent. This icon is pretty convenient. In this example it means an email is sent to peers for recruiting reviewers, although the icon itself does not explain who sends an email to whom. But, hey, that's modeling. By the way, this is officially called a Message Throwing Intermediate Event, but you really don't have to memorize the names.

As with natural languages and programming languages, it is important to begin by trying BPMN out. Forget about the exact grammar and official names. (If you have a lot of time on your hands, just remember that intermediate events have tramline borders, while start events have single narrow borders and end events have single bold borders.) BPMN-savvy people collectively call icons Flow Objects (events and tasks). Please beware. (Of the people or of the words?)

3-2. First, Start with Telecommuters and Part-time Workers

As with general rules and manuals, veteran employees usually don't want to look at business processes drawn in BPMN. To be frank, they will not comply. After all, model diagrams are merely miniatures of real-life processes, and are hardly adequate to excite anyone who already does them everyday. And in some cases, employees will have their own way of doing things, and they don't *want* to comply.
But BPMN diagrams don't want to be filed away and forgotten. (You still there?) Especially if you worked hard at drawing them out. (Helloooo…?)

 BPMN works best when implemented on work processes *which are executed by many people in the same way*, and *in which roles are clear*. To be specific, translation processes, quality check processes, and technical support processes are some good ones.

3-3. We Suggest Using BPMN in Clearly Problematic Processes

To put it clearly, if the effort improves something, it should be undertaken, but if it doesn't, it shouldn't.
When drawing business processes with BPMN, if the targeted process has few problems, there is less reason to draw it in BPMN. When you get used to it, drawing in BPMN becomes fun, but the act of drawing should never become the purpose.
So let's look at an inquiry-reaction process in which replies are too slow.

<Figure 2>
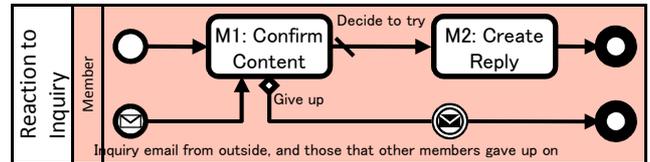
There is no upstream or downstream, no clear flow from one person to the next— this almost doesn't deserve to be called a business process. It has a lot of problems that don't even need BPMN to fix, but sadly, this is often reality. This is when mailboxes become "Graveyards for tasks."

<Figure 3>
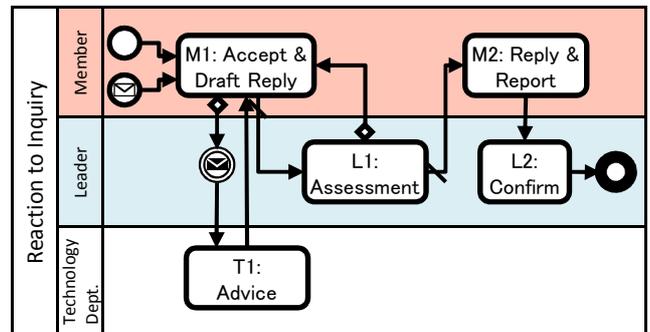
What do you think? We made a business process in which the employee creates a reply with the help of the Technical department's advice and the leader's assessment. Defining business processes that do not allow tasks to be neglected is one of the duties of upper management.

"There's a letter inside the start icon (start event)!"
Oh, yes. In addition to voluntarily initiated processes, there are also processes that automatically start with an incoming message.

"So it's okay to have two start icons!"
Think back to the train and tracks. It's okay if there are multiple starting stations or terminal stations.

"A white letter and a black letter?"
You miss nothing. The details of this is explained in "BPMN for Beginners." Basically, the white letter was written by Victor Hugo and the black letter by his publisher. (Are you mocking me?)

3-4. Information That You Can't See in Business Process Definitions By BPMN

As we've explained so far, BPMN is a notation method for clearly illustrating real-life business processes. But perhaps you've noticed, some very important points are missing. For example, BPMN cannot recognize the format of the data to be handed down through tasks. Also, it is often efficient for members executing upstream tasks to control the range of members for downstream tasks, but BPMN itself cannot clarify this.
BPMN illustrates the overall framework, and doesn't sweat over the small stuff.

# 4. Can We Define Business Systems Only With BPMN Diagrams?

4-1. The Definition of Each Task Directly Generates Data Input Screens!

The evolution of software is a frightening thing, and we have come to an age where we can actually *construct a system* just by drawing business processes in BPMN. In particular, software products called "BPM suites" automatically generate input/output screens from tasks with rounded corners. In short, when a process flows to a certain task, the person in charge of that task is automatically required to input data.

〈Figure 1〉
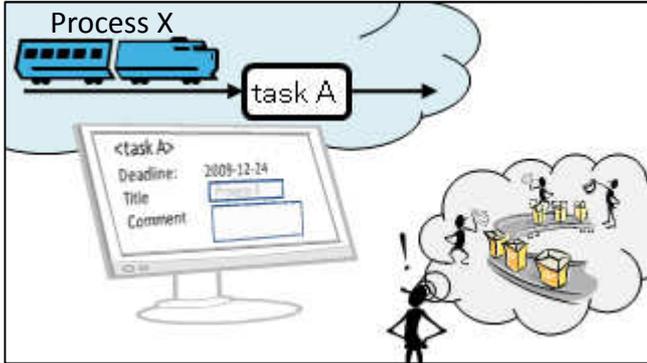
By the way, BPM suites don't have a great difference in terms of objectives when compared to "workflow software." The concept of workflow software is contained within BPM suites, so the difference might be like *tuna* and *fish*. (Hm??)
However, because a business process can be defined with pictures and shapes, it is easy to define complicated rules such as loops and splits, and even to change the definition of a process.

〈Figure 2〉
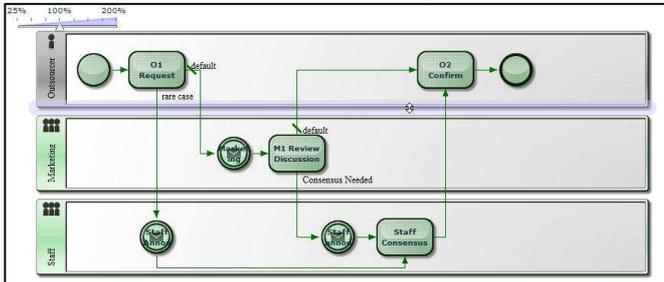
4-2. How Many Icons Must We Memorize?

There are surprisingly numerous and detailed notation rules in BPMN. However, even BPM suites that proclaim "BPMN Support" often cannot interpret and process 90% of BPMN in practice. Furthermore, what is supported differs among the products.
If you want to pin up business process diagrams on the wall and make them common knowledge, or if you want to define specifications to order a custom-made information system, you might want to learn many of the rules. But if your goal is just to input data into BPM suites, you only have to learn *the rules supported by the product you use*.
Below you will find general summaries of what you can expect in BPM suites, leaving the detailed specification of each product to the vendors.

〈Activities (5 types of markers)〉
Many software products only support regular tasks, and none of the icons are supported.
〈Start/Intermediate/End Events (10 types of markers)〉
Many software products can start processes upon receipt of incoming emails (Message Start Event). Some can send emails in the middle of (Message Throwing Intermediate Event) and at the end of (Message Throwing End Event) a process . Also, in some products, a pre-defined time can automatically start an event (Timer Intermediate Event) or process (Timer Start Event).
〈Gateways (5 types of markers)〉
Many software products support Exclusive-Data splits [XOR-Split], and Parallel splits [AND-Splits]. Some also support Inclusive splits [OR-Splits]. Most do not support Exclusive-Event splits [Event-based XOR-Splits].

4-3. Reasons for Learning BPMN

As we stated earlier, BPMN cannot define how to handle data. Neither can it define the position or authority of members who execute the business processes. BPMN also tolerates ambiguous representations of process flows. To go even further, we would have to say that it is quite possible to draw one business process in multiple ways. Also, in order to define the detailed specification of a business process, you might need to use separate documents. In some cases, you might even want to separately summarize the consideration about risks that a business process could suffer from.
However, BPMN business process diagrams *can* intuitively communicate business processes to many viewers.

〈Discussions for improvements〉
Discussions for improvements (illustration of current situation), discussions for improvements (illustration of the situation after improvement), analysis of possible risks
〈For explanation〉
New-employee training (business manual), reports to stockholders (business flow related to SOX Act)

Furthermore, by using software such as BPM suites, an organization can grasp the actual process status, including the current situation or the results of a particular time period.

〈For control〉
Standardization (elimination of individual and arbitrary methods), prevention of dishonesty (task logs)
〈For productivity improvement〉
Retention monitoring (faster recovery from errors), improvement of reusability of deliverables
〈For personnel evaluation〉
Measurement of productivity by individual or group, measurement of productivity per time unit

The reasons for learning BPMN differ greatly on the person, but you might want to first consider which of the above goals fits your purpose. Of course, there is no better way than learning together as a team sharing the same goals.
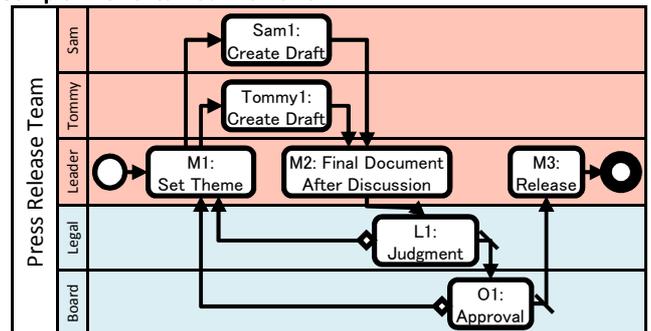
4-4. In Conclusion

Finally, our last chapter together. We find it hard to hold back our tears at the thought of you reading thus far; we can hardly see your face. (Not that you could see it in the first place.)
The source of a company's competence is in its business processes.
A company must continuously modify its business processes.
And a company must keep on understanding and sharing its ever-changing business processes.

We highly recommend promoting Business Process Management using BPMN, instead of relying too much on the knowledge of long-time employees.

THE END of [BPMN Introduction]. TO BE CONTINUED to [BPMN for Beginners.]

<Sample Answer to Your Homework>

〈Sample Answer to 2-4〉