Chapter 80

Business Agility and Process Agility:
How Do They Relate to Each Other?

Giorgio Bruno
Politecnico di Torino, Italy

ABSTRACT

Agility is an essential feature for SMEs and this chapter intends to examine if and how business processes, as currently understood, are able to promote it. Over the last years a number of viewpoints have emerged which exerted great influence on the design of notations and languages for business processes: the majority of them can be referred to as the centralized viewpoint, the role viewpoint, the conversational viewpoint, the case viewpoint and the cooperative one. These viewpoints provide different levels of agility and then beneficial results can be expected from their integration, which is the purpose of the proof-of-concept notation, AgileBPN, presented in this chapter. In AgileBPN, business processes are organized around conversations and role processes (encompassing the tasks pertaining to a given role); shared artifacts are represented as cooperative objects. The notation is illustrated with the help of an example referring to a business process meant to handle applications in a certain organization.

INTRODUCTION

Agility is an essential feature for SMEs, since "these do not apply standardised processes to such a degree as large companies" (Riss, Rickayzen, Maus & van der Aalst, 2005).

In general, agility is the ability to react to external stimuli, quickly and effectively. In a business context, agility is associated with the business practices at different levels (corporate, individual and group).

At the corporate level, agility means the adaptation of the current business practices or the introduction of new ones, in response to new market needs, to initiatives of competitors or to changes in regulations.

Since business practices are carried out through business processes (Davenport, 1993), an important driver of corporate agility is an expressive notation able to capture the essential features of

the business problem being considered. As notations are made up of building blocks addressing specific classes of sub-problems, the issue is to identify the building blocks as well as the most appropriate composition mechanisms. Agility is achieved because the building blocks provide partial solutions already available, which can be arranged in the order needed, by means of the composition mechanisms.

Over the last years, a number of viewpoints have emerged which exerted great influence on the design of notations and languages for business processes.

These viewpoints propose different ways of organizing the basic constituents of cooperative environments, which are the operational activities, the coordination activities and the common field of work (Schmidt & Simone, 1996). Operational activities are units of work meant to produce some changes in the underlying common field of work, which is a repository of artifacts (business data and documents). Coordination activities are responsible for organizing the operational activities in the proper sequence.

When an activity is to be carried out by a person, it is referred to as manual activity or task; the term "task" will be used in this chapter to denote a manual activity. On the contrary, automated activities are performed by external services. The people taking part in a process are referred to as the participants in the process.

At the beginning of CSCW (Computer Supported Cooperative Work), coordination was left to the users who tried to achieve it by means of various means, including shared databases and e-mails (Holt, 1985). Then, explicit coordination techniques were introduced in order to come up with repeatable processes.

However, there are marked differences among the above mentioned viewpoints in the extent to which the participants in the business processes are involved in the coordination activities.

In the centralized viewpoint, where efficiency is the major goal, coordination is carried out by the business processes through control-flow elements, which are responsible for organizing the operational activities in sequential, alternative, repetitive and concurrent paths, as needed.

A business process is then like a master who distributes the work among the participants.

This is a rigid approach in that, when an activity has been completed, the selection of the next one to be carried out is automatically made through the control-flow elements.

Well-known notations and languages, such as BPMN (OMG, 2008) and BPEL (OASIS, 2007), support the centralized viewpoint.

While it is generally accepted that rigid processes made a significant contribution to repetitive, standardized work (i.e. routines), they do not seem to be adequate to situations requiring knowledge intensive work (Riss, Rickayzen, Maus & van der Aalst, 2005).

Knowledge intensive work is usually associated with individual agility, which is the ability for the participants to take part in the coordination of the work to be done; they do so, by autonomously selecting the tasks to carry out, when needed, on the basis of their judgment and experience.

The conversational viewpoint and the case viewpoint promote individual agility through conversations and through the handling of individual artifacts, respectively.

The conversational viewpoint emphasizes conversations, which are patterns of interaction between pairs of participants. A well-known such pattern is the conversation for action (Winograd, 1987-1988), in which two parties, i.e. a requester and a provider, reach mutual agreement through a number of negotiations. A business process can then be described in terms of roles and conversations between roles, roles and conversations being building blocks (Dietz, 2006). In particular, a role building block is a compound entity encompassing the "space of action" of the participants playing that role in the business process being considered. This space of action shows the conversations the participants may be involved in as well as the tasks

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