ABSTRACT

Knowledge-intensive administration and service activity has features favouring a particular architectural approach to business process integration. The approach is based on a process metamodel that extends the familiar input-process-output schema, and embodies the principle that the essential WHAT of a process is prior to any empirical and/or physical HOW. A structure of interrelated concepts can be derived from the metamodel. These can be used at logical level to define and analyze processes. They can also be implemented at a physical level—as an achievable and ideal integrated process architecture, or as a continuum of incremental control and integration improvements. Overall, the approach is to process what double entry is to accounting and the relational model is to data.

INTRODUCTION

The subject of this chapter is not business process integration in general, across all industries, but only in the context of a particular but increasingly important sector. The category of knowledge-intensive service industry covers most kinds of administration: all financial services, and many areas and levels of government and civil administration, education, law, tourism, and so forth. Although it excludes manufacturing and distribution, even these have significant administrative components (order processing and accounting, for example), sharing important features of the intended focus area.

The category is not arbitrary. There are things fundamental to knowledge-intensive service industries that make a particular architectural approach to business process integration likely to succeed where others might fail.

A common obstacle to business process integration in service industries is that application systems are often incompletely process designed, or not process designed at all. Related to this, the systems often encourage the view of “business process” as primarily a string of activities...
performed on or by those systems and therefore defined in terms of those systems. A more “logical” alternative view of business process as an ordered satisfaction of a customer’s need is often dismissed as unnecessarily pedantic, analytical, or purist—not “real world”. In very “real-world” terms, radical critique of the business design implemented in an organization’s IT portfolio can be unpopular if it looks an expensive direction.

But, sometimes you have to swim upstream. Today’s process-centric enterprise cries out for a logical metamodel to do for process what double entry did for financial management and the relational model did for data.

This chapter outlines a metamodel that can revolutionize knowledge-intensive service industries in particular because so much of their production-line content is translatable into electronic form. The key is to define the process model at a logical level (“WHAT”) free from any technical implementation (“HOW”). For a process-centric enterprise, that logical process model is the core of its business architecture. Business process integration is then a matter of achieving the best possible overall physical engine to implement that process model from available legacy applications, applied investment opportunity, and expert development resources.

**BACKGROUND**

The process metamodel outlined here is essentially the same as that articulated in Lawrence (2005) and reproduced in part in Fischer (2005). In 2004, Old Mutual South Africa adopted it as the Old Mutual Business Process Methodology (OMBPM).

An important source of the metamodel is experience in designing and implementing the sort of process-designed systems described in Jackson and Twaddle (1997). It is in implementation in particular where the full business-transforma-
tional potential of integrated process architecture starts to show.

Where appropriate, the diagrams shown use the emerging BPMN (Business Process Modeling Notation) standard (Business Process Management Initiative [BPMI], 2004), as does Lawrence (2005). Although BPMN is more customarily used for depicting physical processes, no constraint has yet been expressed against extending its application to processes at a logical level. Indeed, part of the orthodoxy that this chapter challenges is that process analysis and design begin and end at the physical, empirical level.

**PROBLEM SPACE**

**Administration**

We start by inquiring into the nature of administration work: processing applications, granting approval, carrying out instructions, and so forth in sales, financial services, central and local government, education, tourism, and so on.

Administration work typically involves carrying out an implicit or explicit “request” from, or on behalf of, a “customer.” It is usually governed by rules. There are right ways and wrong ways of doing things: rules about standard cases and exceptions, about sequence and completeness criteria.

Administration work is also increasingly supported by computer systems. The people involved increasingly deal with exceptions and special cases, and make rules rather than (just) follow them.

More analytically, we see that administration work can be treated abstractly without losing its essence. It can be translated into different formats (e.g., digitized), and so can its rules.

Take, for example, a life insurance policy. We could define this as a legal contract between a financial organization and another person or or-
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