

# Chapter XXXVI

## Business Process Reuse and Standardization with P2P Technologies

**José A. Rodrigues Nt**

*COPPE—Federal University of Rio de Janeiro, Brazil*

**Jano Moreira de Souza**

*COPPE—Federal University of Rio de Janeiro, Brazil*

**Geraldo Zimbrão**

*COPPE—Federal University of Rio de Janeiro, Brazil*

**Geraldo Xexéo**

*COPPE—Federal University of Rio de Janeiro, Brazil*

**Mutaleci Miranda**

*Military Institute of Engineering, Brazil*

### ABSTRACT

*Business Process Management (BPM) brings together the idea of effectively managing organizations and properly using Information Technology to fulfill organizations' needs. For this purpose, BPM systems are largely used nowadays. However, most process models are started from scratch, not having reuse promoted. Sometimes, large enterprises have the same business process implemented in a variety of ways due to differences in their departmental cultures or environments, even when using a unique integrated system. Additionally, although technology plays an important role in actually improving organizations, the human factor is still fundamental, since any improvement attempt goes through cultural changes. In this chapter, a peer-to-peer (P2P) tool is proposed as a way to cooperatively develop business processes models, minimizing the time needed to develop such models, reducing the differences among similar processes conducted in distinct organizational units, enhancing the quality of models, promoting reuse, and distributing knowledge.*

## **INTRODUCTION**

Business Process Management (BPM) brings together the idea of effectively managing organizations<sup>1</sup> and properly using Information Technology to fulfill organizational needs. Although technology plays an important role in actually improving organizations, the human factor is still the fundamental one, since any improvement attempt goes through cultural changes. Organizational culture is a very complex subject. It is usual to find organizations that have the same activity performed differently in each of their units. Although BPM can help standardize such behaviors, a brute force approach is not always effective or advisable.

We believe that a cooperative approach for creating and sharing business processes can greatly reduce differences among organizations' units and promote reuse. In addition, using a distributed implementation, we can provide the organizations with a low cost tool. These characteristics, besides being beneficial for large organizations, can make BPM accessible for small and medium businesses (SMB) where the cost of traditional BPM tools can make it impossible for them to accrue such benefits.

Additionally, the approach proposed here also allows for the creation of modeling communities inside and outside organizations. Finally, since modelers can work independently of any organization, the tool may also be used on an individual basis, as an open repository and reuse promotion mechanism.

Addressing these issues, we propose the use of a peer-to-peer (P2P) tool to exchange processes models, promoting a "natural" standardization. The proposed tool also allows for the enhancement of existing models, through an evolutionary approach that helps in organizational learning (Liebowitz, 1999).

The chapter is organized in the following sections: Background, with an overview of business process management and some general related concerns, including some social and human aspects;

Business Process Collaborative Modeling Issues, where we present an overview of technologies closely related to BP modeling and collaboration; A Tool for Collaborative Modeling, which presents a tool that can help in collaborative modeling and discusses some important aspects of virtual collaboration; and Future Trends and Conclusion.

## **BACKGROUND**

BPM has gained popularity and strength in the last few years. The factors that have most contributed to this have two different origins. On the management side, the failure or saturation of previous approaches to optimize work on organizations, and, on the Information Technology (IT) side, the inefficiency of traditional approaches for systems modeling in fully addressing the needs of most organizations, especially on aligning the development's final product with business objectives (Chan, 2002), have contributed to this picture.

On the Management side, efforts that begun with Taylor works have evolved through statistical techniques, as viewed by Deming and others, and Total Quality Management (TQM), to Business Process Reengineering (BPR). BPR, not focused only on production itself, later turned out to be the motivation for workforce reduction, labeled as process optimization. Considering that the human factor is the main force for any organization improvement or cultural change, it did not take long to show BPR weaknesses (Jeston & Nelis, 2006). Recent changes have taken some organizations to the last hype—Six Sigma—another statistical approach to reaching process perfection, or "zero defects."

BPM, independent of any specific methodology or technique, brings to the scene a more holistic approach. In a sense, it considers the essence of the above-mentioned approaches—process management—and the need for a broader view to improve organization effectiveness and efficiency. To implement BPM, we will find the need for business process modeling.

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/business-process-reuse-standardization-p2p/21919](http://www.igi-global.com/chapter/business-process-reuse-standardization-p2p/21919)

## Related Content

---

### Primary Care through a Public-Private Partnership: Health Management and Research Institute

Sofi Bergkvist and Hanna Pernefeldt (2011). *Human Resources in Healthcare, Health Informatics and Healthcare Systems* (pp. 127-153).

[www.irma-international.org/chapter/primary-care-through-public-private/43268](http://www.irma-international.org/chapter/primary-care-through-public-private/43268)

### Egypt: Sustainable HR within the CSR Policies in a Multinational Hospitality Group

Taghreed Badawoud (2015). *Cases on Sustainable Human Resources Management in the Middle East and Asia* (pp. 229-245).

[www.irma-international.org/chapter/egypt-sustainable-hr-within-the-csr-policies-in-a-multinational-hospitality-group/125148](http://www.irma-international.org/chapter/egypt-sustainable-hr-within-the-csr-policies-in-a-multinational-hospitality-group/125148)

### Building Capability: Flipping the Zone of Proximal Development For Talent Management

Kevin Paul Barrons and Thomas C. McGinnis (2017). *Effective Talent Management Strategies for Organizational Success* (pp. 160-176).

[www.irma-international.org/chapter/building-capability/176327](http://www.irma-international.org/chapter/building-capability/176327)

### Employee Life-Cycle Process Management Improvement with Web-Enabled Workflow Systems

Leon Welicki, Javier Piqueres Juan, Fernando Llorente Martin and Victor de Vega Hernandez (2009). *Handbook of Research on E-Transformation and Human Resources Management Technologies: Organizational Outcomes and Challenges* (pp. 335-350).

[www.irma-international.org/chapter/employee-life-cycle-process-management/20070](http://www.irma-international.org/chapter/employee-life-cycle-process-management/20070)

### An Employer-Employee Relationship Perspective on Rewards, Challenges, and Systems

Herwig Ostermann, Bettina Staudinger, Magdalena Thoenig and Roland Staudinger (2009). *Encyclopedia of Human Resources Information Systems: Challenges in e-HRM* (pp. 340-349).

[www.irma-international.org/chapter/employer-employee-relationship-perspective-rewards/13251](http://www.irma-international.org/chapter/employer-employee-relationship-perspective-rewards/13251)