

## Chapter XI

# Comparing the Standards Lens with Other Perspectives on IS Innovations: The Case of CPFR

**M. Lynne Markus**

*Bentley College, USA*

**Ulric J. Gelinas, Jr.**

*Bentley College, USA*

### **ABSTRACT**

*Conceptual labels influence researchers' observations and analytic insights. This article aims to clarify the contributions of standards label by contrasting it with other ways of viewing the same entity and applying it to the IT-enabled supply chain innovation of collaborative planning, forecasting, and replenishment (CPFR). Proponents have labeled CPFR not only as a standard but also, at different decreasing levels of abstraction, as a business philosophy, methodology, and set of technologies. By comparing the analytic leverage offered by the different labels, we conclude that there is value in combining the standards perspective with other conceptual lenses. The specific case of CPFR also raises an interesting question for future research: Can information systems innovations justifiably be considered standardized in practice, if they are not standardized at all relevant levels of abstraction?*

## INTRODUCTION

This article was motivated by our investigation of a particular information system (IS) innovation known as CPFR (collaborative planning, forecasting, and replenishment) used by interdependent organizations to improve supply chain performance. Proponents repeatedly referred to CPFR as a standard or as standards-based, but we could not see exactly how the standards label applied or how it added value relative to other ways of looking at the innovation. (As explained later, CPFR also can be analyzed as a business philosophy, methodology, and set of technologies.) Knowing that conceptual labels can affect researchers' observations and analytic insights, we decided to compare several partially overlapping conceptual perspectives and apply them to this innovation.

The four conceptual lenses applied in this article are (1) philosophy (frame, organizing vision); (2) methodology (procedure, process); (3) technology (tool, technical infrastructure); and (4) standard (standardization). The first three concepts represent an innovation's logical and temporal progression from abstract idea to concrete implementation (Iivari, Hirschheim, & Klein, 2001). The fourth concept can be thought of as the end point of a process about which actors implicitly or explicitly reach agreement and widely adopt solutions to matching problems (Brunsson, Jacobsson & Associates, 2000; Cargill, 1989; de

Vries, 1999). Thus, the four labels overlap, as shown in Figure 1.

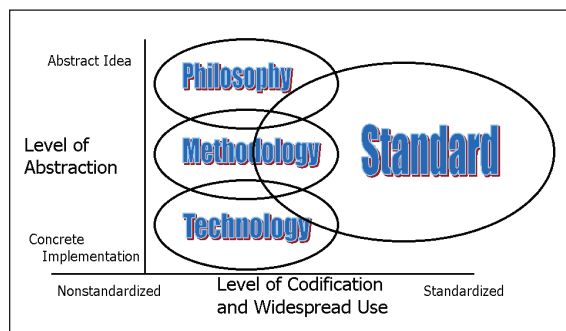
Through our analysis of CPFR, we found that, despite their overlaps, each perspective provides unique insights. We also found that the CPFR innovation cannot be considered standardized yet at any level of abstraction. This observation raises an intriguing question for future standards and standardization research: Unless it has achieved standardization at all levels of abstraction, can an IS innovation truly be considered to be standardized?

## THEORETICAL BACKGROUND

The label standard can be applied to such entities as products, processes, services, materials, equipment, systems, interfaces, protocols, functions, methods, and activities (de Vries, 1999). Regarding IS and information technology (IT), the term standard can be applied to technology specifications or products such as GSM (Iversen, 2000) or the Windows operating system, to methodologies such as ISO 9000 (Brunsson et al., 2000) or the capability maturity model of software development, to business processes such as those addressed by the RosettaNet Consortium, and so forth. Calling these entities standards implies that they differ in essential ways from nonstandardized specifications, products, methodologies, processes, and so forth. This observation raises questions about the overlaps and unique contributions of different conceptual labels applied to the same phenomenon.

There is as much debate about the definitions of core concepts in the IS field (Alter, 2005; Orlikowski & Iacono, 2001) as about the definitions of standards and standardization (Brunsson et al., 2000; de Vries, 1999; Soderstrom, 2002). Nevertheless, IS innovations can be analyzed at multiple levels of abstraction with concepts such as philosophy, paradigm, and organizing vision, at the most abstract; concepts such as tools,

Figure 1. Overlapping concepts



15 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/comparing-standards-lens-other-perspectives/29688](http://www.igi-global.com/chapter/comparing-standards-lens-other-perspectives/29688)

## Related Content

---

### Consensus Versus Speed

Roy Rada (2000). *Information Technology Standards and Standardization: A Global Perspective* (pp. 19-34).

[www.irma-international.org/chapter/consensus-versus-speed/23725](http://www.irma-international.org/chapter/consensus-versus-speed/23725)

### Theoretical and Methodological Approaches

Timothy Schoechle (2009). *Standardization and Digital Enclosure: The Privatization of Standards, Knowledge, and Policy in the Age of Global Information Technology* (pp. 78-104).

[www.irma-international.org/chapter/theoretical-methodological-approaches/29673](http://www.irma-international.org/chapter/theoretical-methodological-approaches/29673)

### The Impacts of the Cascading Style Sheet Standard on Mobile Computing

Matt Germonprez and Michel Avital (2006). *International Journal of IT Standards and Standardization Research* (pp. 55-69).

[www.irma-international.org/article/impacts-cascading-style-sheet-standard/2578](http://www.irma-international.org/article/impacts-cascading-style-sheet-standard/2578)

### A Model for Building Trust in E-Government

Stephen M. Mutula (2011). *Frameworks for ICT Policy: Government, Social and Legal Issues* (pp. 15-33).

[www.irma-international.org/chapter/model-building-trust-government/43770](http://www.irma-international.org/chapter/model-building-trust-government/43770)

### Brain-Like System for Audiovisual Person Authentication Based on Time-to-First Spike Coding

Simej Gomes Wysocki, Lubica Benuskova and Nikola K. Kasabov (2013). *IT Policy and Ethics: Concepts, Methodologies, Tools, and Applications* (pp. 662-689).

[www.irma-international.org/chapter/brain-like-system-audiovisual-person/75051](http://www.irma-international.org/chapter/brain-like-system-audiovisual-person/75051)