Business Process Re-design to Support Supply Chain Integration in an Airline MRO Supply Chain

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Resumen:
At the core of gaining competitive advantage through Supply Chain Management (SCM) is Supply Chain Integration (SCI); when integration is achieved, the supply chain operates as a single entity driven directly by customer demand (Farhoomad, 2005). However evidence found in the supply chain literature shows a number of challenges faced by organizations regarding the construction of SCI (Sweeney, 2011; Awad & Nassar, 2010; Bagchi & Skjoett-Larsen, 2005). One of the challenges is the necessity to change business processes to support SCI. However redesigning business processes is difficult; the increase of complexity in business processes in supply chains results in the need for new methodologies, on how to integrate process information in enterprise networks (Roder & Tibken, 2006).

A literature search and review was conducted to find a methodology to conduct business process redesign (BPR) to support SCI (Palma-Mendoza, Neailey & Roy , 2014). The review found that none of the methodologies provides a comprehensive solution. However, a number of methodologies tend to be more useful in relation to some phases than others, so it becomes attractive to combine different methodologies for a better result. When linking different methodologies it is necessary to decompose them into detachable elements (Mingers & Brocklesby, 1997). Thus the methodologies identified were decomposed at their stage level, then through an inductive approach of pattern recognition similar to the one used by Kettinger, Teng and Guha (1997), commonalities and differences between the reviewed methodologies were
analyzed. This analysis resulted in the identification of generic stages for the construction of a BPR methodology structure. The methodologies reviewed were decomposed a second time in terms of their techniques and methods employed in order to select the most suitable for each stage. Additional methods and techniques were adopted from the wider SCM and e-business literature.

Once the methodology was constructed (Palma et al, 2014), it was applied and validated through a BPR project undertaken at an Airline MRO (Maintenance, Repair and Overhaul) provider based in the United Kingdom (UK). In recent years the UK Airline MRO sector has been experiencing considerable growth. The main drivers affecting the positive growth are the appearance of low cost carriers and new aircraft technology which brings an increase in the number of aircraft systems to be maintained/repaired. This growth has been affected by the current world economic situation causing a drop in demand, making it difficult to achieve high margins (Adams, 2009; Jackman, 2009). Thus, in order to remain competitive, MRO providers are aiming to improve and integrate their supply chain processes (Adams, 2009). Within this context contact was established with an Airline MRO provider in order to conduct a BPR project within their component repair services operations in the UK. Results from this application show that the proposed BPR methodology can clearly guide business process re-design to support the construction of supply chain integration.

References