Impact of Global Hyperconnectivity and Increased Smartphone Usage on the Delivery and Structure of IT Organization in Transport Logistics

Michael Linke, T-Systems International, Frankfurt, Germany

ABSTRACT

Improved technical IT possibilities in terms of performance, availability, usability, as well as cheaper prices through mass production on a worldwide basis, led to a global, multiconnected, so called ‘hyperconnected’ market, of people, goods, ideas and techniques. This situation results in higher demands and a higher customer expectation on a B2B and B2C level and therefore for enhanced logistics challenges especially for Courier, Express & Parcel (CEP) providers worldwide and their respect IT organisations. Within the IT realm of this momentum Smartphones, ‘Apps’ and Cloud Computing seem to increase the complexity within logistics IT departments in the first place. From a business point of view the extension of variabilized outsourcing and outtasking of defined parts of the overall value chain could be seen as new influence factors, especially in mature CEP markets. Enterprise Architecture Management (EAM) seems to be one auxiliary to manage this new complexity, by combining the view on the business processes, as well as the technical dimension of the logistics provide

Keywords: Courier Express & Parcel (CEP), Enterprise Architecture Management (EAM), Hyperconnectivity, Radio Frequency Identification (RFID), Smartphones, Stop Factor

1. INTRODUCTION

According to the opinions of leading analysts, xaaS markets will increase nearly exponentially in the following years (Coyl, 2011). Although a stronger use of network-based services requires a stable infrastructure, it currently does not necessarily correspond to the dramatically increased traffic demand in the mobile environment. On the other hand, high process-related requirements towards a 24/7 follow-the-sun operation seem to also be evident. Recently, it became obvious that if not properly managed under any circumstance, desired serviced

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levels may not be reached as shown by the inter-regional push-e-mail breakdowns in 2011 (Ulanoff, 2011). Irrespective of these facts and of the growing “congestion” of the core-interconnection points caused for example by popular video streaming (Kurz, 2012), these events do not seem to disturb the IT megatrend of “mobility” at all.

Due to simplified user interfaces for mobile terminals, wider availability of broadband internet connections, and over 500,000 applications in central ‘App’ stores (“The App Store”, 2012) available via a simple “touch”, a fusion of B2C and B2B leading towards the functionalities and characteristics of modern IT technology can be observed in developed countries in particular. Simplicity, agility and instant mobile delivery thus seem to be expected on devices such as private smartphones, also for B2B software components, and potentially still within the context changed to B2B, on the same device. BYOD (Bring-your-own-device) (Bradley, 2011) is an acronym that is quite often used to describe this development.

Thus, new technologies also seem to create new possibilities by means of operationally creating business processes as well as new opportunities for interaction between physical goods, products and services, as well as their related information flows - this could also be called hyperconnection (Aducci et al., 2008). So it could be the task of several IT organizations, in particular in the CEP (Courier Express Parcel), to penetrate this topic towards an active creation.

2. HYPERCONNECTION OF IT, GOODS AND SERVICES AS A DRIVING FORCE

The artificial term hyperconnection alludes to the term hypertext and was developed during the 1990s, while the associated concept of the internet and more recently Web 2.0 (Quan-Haase & Wellman, 2006; Anabel et al, 2008; Chu & Xu, 2009; Cavoukian et al., 2010) represents a connection, which is supposed to express a wide, exponentiated, deep inner connectivity of entities (see Figure 1).

2.1. Human Dimension: Blending of Social and Business Life

For the description of the human or even individual dimension, or characteristic of the term hyperconnection, it is advisable to take a glance into the historic development, with emphasis on the individual working habits from a civilization perspective. Whether in Europe, the Middle East or Asia, there seems to be an increase in blending of working life and private life partly because of the well known international time zones and their relevant problems with working hours. For instance, promptly and efficiently replying late at night to private or job-related emails, work tasks and associates / friends from other time zone seems to be a common problem.

This, in fact, is more true for Knowledge Workers of the information society than for factory workers in an industrialized society or farmers in a rural environment.

However, the last two aforementioned groups do seem to feel the impact of an increasing number of social and economic relations relevant to them. One such example includes the new dependencies from seed producers (Monsanto) (Minderhoud-Jones, 2001) and their efficient supply chains. Additionally, the qualitative aspect of the usage of Social Networks Services (SNS) (Chou et al., 2011) is of paramount importance, as is proven by the existence of latterly set up reputation management agencies. These agencies actively offer to manage the “digital” reputation, and therefore the quality of individual information relations for particular individuals.

2.2. Spatial Dimension: Increasing Mobility and Traffic Networks

With a close reference to the personal dimension of connectivity already mentioned, there accrues a mobility-oriented perspective. Recent research in traffic and transport shows that the personally driven kilometers are increasing sig-
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