Business Process Innovation as an Enabler of Proactive Value Chains

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Abstract
Proactive value chains are an emerging business practice rooted in advanced process management and underlying technologies and organizations. The paper presents a recently inaugurated research and innovation program in manufacturing, and proposes business process innovation as an enabler of proactive value chains. Finally the paper discusses the role of business process innovation in the transformation of the manufacturing value chains.

1 Introduction

In many Western countries there is a deep concern that their manufacturing industry is losing ground to the newly industrialized countries. In Denmark, 25 % of the jobs in industry have disappeared in the last decade. At the same time, however, it has been realized that access to manufacturing is vital to preserve innovation capabilities. Consequently a national strategy towards re-industrialization is needed. MADE (Manufacturing Academy of Denmark) is a national initiative with international collaborations aimed at restoring the competitiveness of Danish industry.

The role of national companies in global value chains is largely determined by extrinsic variables. Differences in national framework conditions, such as salary levels, taxes, workforce skills and infrastructure, determine the footprint of global value chains. As a small welfare nation it is difficult to compete with regard to salaries or technology alone. Therefore a national strategy for manufacturing needs to be rooted in supporting local organizations with the creation of unique

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competencies for industrial leadership. Following this thinking, we investigate how business process innovation approaches can be developed and deployed in the creation of proactive value chains, and outline this transformation.

The research and innovation program on Proactive Value Chains reflects an emerging business practice focusing on agile and resilient organizations (Hugos, 2009). These organizations are sometimes referred to as adaptive organizations, sense-and-respond organizations or real-time enterprise (Hugos, 2004). Operations and supply chain management have predominantly focused on reactive planning of inventories, whereas contemporary practices put more emphasis on the execution of business processes and real-time event management.

An example from a food supply chain is the ability to track and trace individual items across the entire supply chain. This capability can be used to respond to unforeseen events and to evade problems, such as the containment of non-conforming supplies before impacting consumers.

This requires real-time visibility in the supply chain but also advanced management of the business processes. Standard IT systems can support real-time enterprises, but organizations do usually not have the transformative capacity to absorb and leverage the technology into proactive capabilities, also referred to as sense and respond. In order to develop sense-and-response capabilities, enterprises need an integrated model-based infrastructure. Many of the required process technologies and methods such as process mining and business analytics have been researched and developed extensively, while others are emerging. One of the challenges is the integration of the new technologies and tools into the existing ERP and manufacturing systems, and in particular the adoption of the new practices by the organizations.

The aim of the program is to provide Danish industries with methodologies to transform advanced process technologies into proactive supply chain capabilities. The envisioned solutions build on breakthrough enterprise systems solutions, accompanied by radically new management and development approaches. This research will address how new process technologies and methods for proactive decision-making can enable new levels of intelligence in global supply chains by providing inter-organizational process analytics.

The aim of this paper is to present the idea and challenges of proactive value chains in the context of the MADE initiative and to identify an appropriate research approach. The planned approach is based on business process innovation in an experimental setting. The paper is organized as follows. First we present an overview of the national MADE initiative, and MADE is positioned in relation to other similar national initiatives in the manufacturing area. Second, the specific research program on proactive value chains is outlined, and the research challenges are proposed and discussed. Third, it is discussed how the advanced process technologies may contribute to address these issues. Finally, the findings are summarized and conclusions made.

2 The Danish MADE Initiative

Since the financial crunch in 2008, more than one fifth of the jobs in Danish industry disappeared. Even after the recovery, jobs have continuously 'evaporated' from Danish soil. MADE is a national initiative designed to reverse this trend.

In the Danish public debate, the future of manufacturing has predominantly been seen as an endeavor that belonged to low-wage countries like China. Industrial manufacturing is considered to be an archaic and polluting activity and we are not able to compete with Chinese salaries is the general tenor. Rather, countries like Denmark should focus on high value added activities such as innovation, product development and marketing.

However, in the recent years it has been realized that this strategy is not viable due to the close links between manufacturing and product development. Also the close relationship between manufacturing jobs and related jobs in the service industry causes worries. It is estimated that for every 100 jobs created in industry, an additional 35 jobs are created in related businesses. This emphasized the importance of the retaining jobs in industry. In summary, it is now accepted that manufacturing is a sector that should proactively be kept in Denmark, and it should actively be developed and strengthen in order to create growth and wealth for the future.

The creation of manufacturing jobs in a national context is a not an easy task. It is politically possible to redesign the framework conditions for doing business in Denmark in such a way that the investments in Denmark (FDI) increase, thus, improving the job situation. An analysis of the framework conditions, such as the salary rate, reveals that competing on cost alone is not feasible for a Western welfare society and therefore likely to fail. So the challenge is to find an approach where the value created in Denmark and by Danish companies exceeds the high cost of manufacturing in Denmark.

The road towards more Danish manufacturing jobs requires that industry become smarter, faster and more innovative in order to regain competitiveness. In "Manufacturing 2025", a collaborative study published in 2010 by the Danish branch of Manufuture, Manufuture.dk, five future scenarios where industry can compete were identified (Johansen, Madsen, Jensen, & Vestergaard, 2010):

- The highly competent manufacturing company
  - Danish manufacturing companies must strive to be among the best at exploiting new technologies developed by other countries and at developing new products
- The industrial power center
  - The industrial power center consolidates and coordinates competences and resources across businesses, industries, universities and knowledge centers to take up the challenge presented by the technological leadership of large international manufacturers

- The innovation factory
  - The innovation factory cultivates and optimizes the interplay between design and manufacturing competences in order to develop 'intelligent products' for customers and accelerate the time-to-market. Advanced manufacturing methods such as prototyping and ramp-up are applied to support and accelerate the innovation process
- The flexible value chain integrator
  - The central idea of the model is to build a network of suppliers supported by global, flexible value-chain integrators that understand how to integrate with international original equipment manufacturers (OEMs) with regard to business and delivery
- The virtual business
  - Virtual business connects the best global competences in virtual networks in order to quickly and effectively exploit more business opportunities and pool its resources of business creation, innovation, distribution, and production

These five scenarios were the key input of a process leading to the formulation of a joint Danish national society for manufacturing: "Manufacturing Academy of Denmark" or MADE, presently consisting of 26 manufacturing companies, 5 universities and 2 technological services, and the confederation of Danish industries.

MADE has the ambition to drive a re-industrialization of Denmark by co-developing manufacturing insight and new knowledge. Initially, MADE is provided with seed funding provided by the Danish government, industry and universities in an action program called "MADE platform for future manufacturing".

In many western countries, a similar debate has been around and in the US a major program on advanced manufacturing was launched last year (Holdren, Lander, Press, & Savitz, 2011) and the German government established the "Industrie 4.0" program (Kagermann, Wahlster, & Helbig, 2013). Manufacturing is also an issue in the European context where, e.g., the "Factory of the Future" program within the "Horizon 2020" framework program addresses these issues (Factories of the Future, 2014).

The concept of "Industrie 4.0" refers to a potential fourth generation of industrialization, where the first three industrial revolutions came about as a result of mechanization, electricity and IT. The fourth industrial revolution is enabled by the introduction of the Internet of Things and Services into the manufacturing environment. In the future, businesses will establish global networks that incorporate their machinery, warehousing systems and production facilities in the shape of Cyber-Physical Systems (Lee, 2008).

A shared view in these programs is a consistent emphasis on technology and on digital manufacturing and smart factories in particular. Topics like new materials, sensors and advanced robotics predominantly define these programs.

The MADE approach takes a more holistic approach to manufacturing and nine interrelated programs have been defined in the initial research framework: platform

	Rapid Product & Production Development	Model Based Production	Complexity Management
Value Chain & Business Systems	WP1: High speed product development	WP4: Model based knowledge sharing in global supply chains	WP7: The "new" Manufacturing Paradigm
Integrated Production Systems	WP2: Modular production platforms for high speed ramp-up	WP5:Proactive supply chains	WP8: Hyper flexible automation
Enabling Technologies	WP3: 3D print and new production processes	WP6: Lifelong product customization via ICT service model	WP9: Sensors and quality control

Fig. 1 MADE platform for future manufacturing

for future manufacturing. These work packages (WPs) and their coordination are illustrated in the following Fig. 1 (Manufacturing Academy of Denmark, 2014):

The platform focuses on three business functionalities: Rapid Product and Production Development, Model Based Production, and Complexity Management. These are key enablers for realizing the potential for innovation, agility and sustainability and consequently are of significant competitive importance to Danish industry. These business functionalities will be investigated from three different viewpoints: Value Chains and Business Systems, Integrated production systems, and Enabling Technologies.

The following sections will focus on a specific work package within the MADE platform: proactive supply chains or rather proactive value chains in the larger context.

3 Proactive Value Chains

Compared to "Industrie 4.0" MADE extend the smart factory into value chains and business systems. The aim of work package 5 is to provide Danish industries with methodologies and approaches to transform advanced business process technologies into proactive value and supply chain capabilities. The envisioned solutions build on breakthrough enterprise systems solutions, accompanied by radically new management and development approaches. The research will address how new process technologies and methods for proactive decision-making can enable new levels of intelligence in global supply chains by providing inter-organizational process analytics.

Proactive supply chains reflect an emerging business practice. Operations and supply chain management has predominantly focused on reactive planning of inventories, whereas contemporary practices put more emphasis on the execution of business processes and real-time events. An example from a food supply chain is the ability to track and trace individual items across the entire supply chain. This capability can be used to respond to unforeseen events and evade problems by, for example, early containment of non-conformant supplies.

In order for an enterprise to leverage the advanced business process technologies, the organization needs to develop strategies for managing proactively. This has been conceptualized as a sense-and-respond organization or an adaptive enterprise model (Haeckel, 2013). For a large and complex organization to be able to react proactively and possibly adapt in a systematic way to the unpredictable demands of rapid change, the organization needs to be designed and managed as an adaptive system and managed by wire (Haeckel & Nolan, 1993). In aviation, flying by wire is referring to a pilot interacting with a digital representation of the airplane's sensors and controls. Managing by wire is similar.

Existing big-data technology can make information available on a real-time basis and at the same time enable prediction of future events, and thus enable real-time sense-and-respond capabilities.

An example of this kind of problem is a discrete manufacturing supply chain where demand disturbances are known to cause the bullwhip effect, affecting the required capacity throughout the supply chain. A proactive strategy could be to monitor the demand patterns for exceptional variation and to create strategies for containing the disturbances within the existing supply chain capacity (see Fig. 2).

Many of the required process technologies and methods such as process mining and analytics have been researched and developed extensively (Grigori et al., 2004). Even business activity monitoring or complex event processing are available as off the shelves solutions (Luckham, 2011). Modern standard IT systems support many of the real-time enterprise concepts, but organizations usually do not have the transformative capacity to leverage the new technologies. A major challenge is the integration of the new technologies and tools into the existing ERP and manufacturing systems landscape, and the adoption of new practices in the companies (Butner, 2010). This includes the challenge of transforming supply chain visibility into management capabilities and providing business cases for adopting new advanced process technologies into the production and supply chain (Siurdyban & Møller, 2012). This extends from the supply chain to the entire value chain, including the development of new products and processes (Møller, Chaudhry, & Jørgensen, 2008).

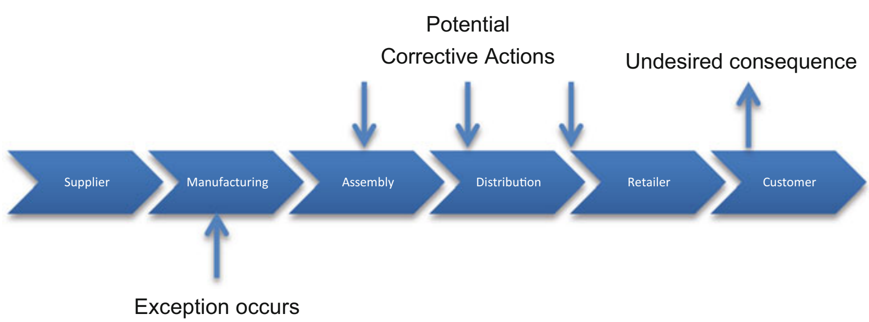

Fig. 2 Value chains are global processes with time/place lag between cause and effect

Table 1 Smart process manufacturing business transformations (Smart Process Manufacturing Engineering Virtual Organization Steering Committee, 2009)

From	To	Results
Investment in facilities	Investment in knowledge-embedded facilities	Investment and management of facilities and knowledge are equally important
Reactive	Proactive	Economic optimization is achieved by anticipation and decision, understanding probability, risk and impact
Response	Prevention	Sensing, modeling and analysis are used to predict events and operations are controlled to mitigate the impact
Compliance	Performance	Zero-incident EH&S is part of the performance culture
Tactical	Strategic	Requirements become opportunities, optimizing total enterprise operation
Local	Global	Every decision must be made in the context of a globally competitive environment

Another example is within a food chain where quality variation in raw material measured up front is used to calibrate the entire supply chain to accommodate for variations in final goods production.

In these cases the information is already available, the technology for collecting and processing the data in real-time is known. However the existing organization and business processes becomes a barrier for improvements. Thus a more profound process innovation approach is needed for designing a responsive supply chain.

Finally, the transformation of new requirements and capabilities into global supply chains and the exchange of knowledge need to be revisited in the digital manufacturing context. The transformation has been defined in the "Smart Process Manufacturing: an Operations and Technology Roadmap" as in Table 1.

An example of such a process is virtual commissioning in a mechatronic production system, where the operating characteristics of new production technology can be simulated at the design time and ramp-up problems avoided (Reinhart & Wünsch, 2007).

In the ideal world there would be digital models and a complete tool chain from the point of conceptualizing new value chain concepts to implemented solutions. The speed and agility with which an organization is able to mobilize an eco-system of vendors and partners, and integrate their technology and knowledge in the development of new products and processes is of paramount importance. However, in the real world this is hampered by organizational boundaries and a lack of systems integration.

The outcome of the proactive value chain program is a number of documented pilot cases that are intended to serve as demonstrator models, with the aim of illustrating potentials such as substantial reduction in non-conformance costs.

Furthermore, for wider use, the methodologies should be translated into applicable roadmaps and software tools.

3.1 Proactive Value Chains in a Process Innovation Perspective

Digital and flexible manufacturing has been around for many years. In the past, the concept was referred to as Computer Integrated Manufacturing (CIM) and even though the original idea was innovative, the implementations were less successful—partly due to immature technology. However, the research resulting from exploring the CIM concept was very important. Models and frameworks, like the CIMOSA or GERAM architecture, emerged out of very large-scale research. This provide a systematic and consistent architecture on which we can build the proactive value chains (Bernus, Nemes, & Schmidt, 2003).

The real-time enterprise concept has also been around for several years (Fingar & Bellini, 2004). In general the availability of data is never an issue. The usability of data on the other hand hinders the concepts from flourishing in the factories. Interoperability is consistently an issue.

Visibility in the value chain is a prerequisite for a proactive reaction. However the integration of information in the value chain is a barrier for proactive management. Consider a typical systems landscape with Manufacturing Execution Systems (MES), Enterprise Resource Planning (ERP) systems and Data Warehouses (DW) as illustrated in Fig. 3 below. The data processing, from the time an event occurs in manufacturing (for example a measurement of quality data) until management is able to make sense of the event and its consequences, requires the aggregation on information through several systems layers as illustrated below. Even though the information is available, the time delay from the events that are generated until these are aggregated into actionable management information is considerable. In extreme cases it takes months until management is able to make sense of the situation, and by that time the product is delivered and the window for corrective actions is closed. This time lag forces decision making to be reactive. We want to be able to make decisions based on real time data, which can be done using, e.g., in-memory database technologies.

To sum up and to frame the research challenges of proactive value chains: we state the premise that required process technologies and methods are already available. We can conceptualize proactive value chains from a business process perspective as the management of integrated processes on three levels:

- Managing the process of end-to-end system engineering from conceptualizing the product or service to the decommissioning
- Managing the end-to-end supply chain from supplier to customer
- Managing the end-to-end process information from sensors on the shop floor to the board room and back

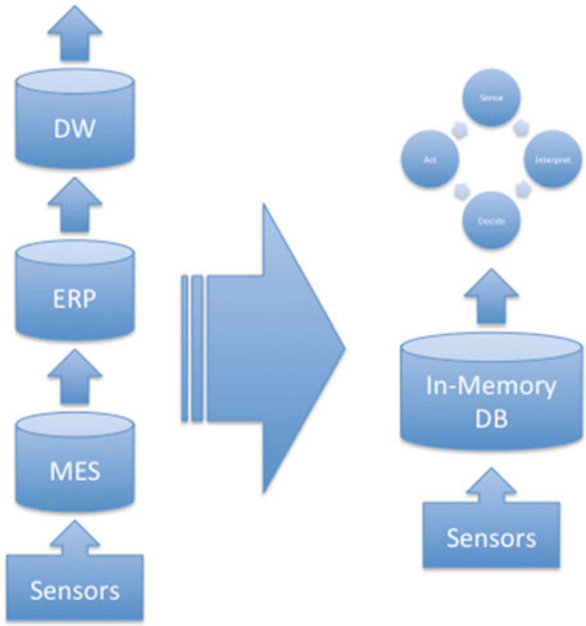

Fig. 3 Towards real-time capabilities

This research agenda is aligned with "Industrie 4.0" that further emphasizes "New social infrastructures in the workplace" and "Cyber-Physical Systems technology" as research areas. These are dealt with elsewhere in the MADE program. However the technological transformation can be summarized as in Table 2.

Achieving the benefits from a new process-innovation-based approach to digital manufacturing is a long-term endeavor and will involve a gradual experimental learning process involving technology, systems and management processes. For a

Table 2 Smart process manufacturing technical transformations (Smart Process Manufacturing Engineering Virtual Organization Steering Committee, 2009)

From	To	Results
One-off models in operations	Models integrated into operations	There must be pervasive, coordinated, consistent and managed applications of models
Dispersed intelligence	Distributed intelligence	Data, information, knowledge, models and expertise are available and used to make decisions at the right time and place
Unintelligent systems	Self-aware systems	There must be autonomous systems that understand their role and performance in the enterprise and systems that take action to optimize performance
Proprietary systems	Interoperable systems	Systems must communicate through standard protocols for information sharing, capability and best-in-class components
Unpredictable industry	Predictable Industry	Operations within defined operating envelopes must be performed with predictable impacts

company it will be key to ensure that the value of existing manufacturing systems is preserved. At the same time, it will be necessary to come up with migration strategies that deliver benefits and productivity from an early stage.

3.2 The Open Factory Concept

As argued above, we define proactive value chains from a process management perspective and thus we need to stage and orchestrate an innovation platform for researching and developing these processes. A central mechanism for business process innovation is a model-based laboratory of the digital factory. The open factory, as outlined below, is designed as a low risk prototype environment for experimenting with the new concepts and solutions for the proactive value chain (Fig. 4).

The MADE Open Factory is also a meeting place between companies, vendors, researchers and students where they can explore ideas in an unconventional settings. The core function of the MADE Open Factory is the ability to experiment with new business processes enabled by advanced process technology. The outputs are validated concepts that can be advanced further as pilots in the participating companies. Central ideas in the MADE Open Factory have previously been described as the process innovation laboratory (Møller, 2007).

Initially, three cases are planned: (1) A discrete manufacturing case, aimed at containing the effects of demand variation in the supply chain; (2) a case in the windmill industry, aimed at containing the effects of production variability; and (3) a case in the food supply chain, aimed at configuring the quality variation in raw

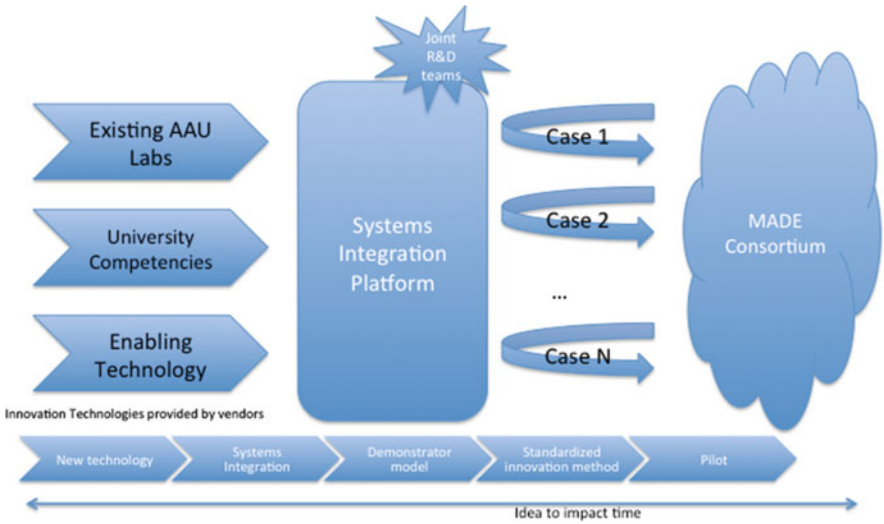

Fig. 4 MADE open factory concepts

material measured up front, are used to calibrate the entire supply chain to accommodate for the variations in final goods production.

Further, an inquiry into the valuation of the benefits from integration is already in progress and a study and an experiment with design thinking as a methodology for process innovation are also being investigated, including an approach where students are engaged as a resource into the ecosystem of an enterprise.

The MADE program will run from 2014 to 2018 and besides the Danish consortium of manufacturing companies and vendors, SAP Service Innovation and the University of Liechtenstein, as an international partner, will also contribute to the research.

4 Discussion and Conclusion

This paper has now presented and discussed a research agenda for developing manufacturing industry in Western developed countries. It is argued that business process innovation has the potential to contribute to manufacturing competitiveness in several ways and, potentially, with more effect than simple automation technology.

Applying the business process perspective on manufacturing has several implications (see also chapter by Welke (2015)). First of all, it puts the end customer in focus. Traditionally, manufacturing is centered on balancing inventories. Business process management deals with managing end-to-end business processes. Second, business process management provides the components needed to build the integrated processes using existing and verified methods. Third, the new technologies, like Internet of Things, require that manufacturing broaden its perspective: from the factory floor towards the entire life cycle of a product or service. This is where business process innovation becomes a central enabler of the business transformation outlined in Table 1 shown previously. Although the roadmaps are being explored in various programs around the globe, there are transformational challenges where nations and companies without huge budgets may succeed. The journey towards the future will be an evolutionary process (Kagermann et al., 2013):

- Current basic technologies and experience will have to be adapted to the specific requirements of manufacturing engineering, and innovative solutions for new locations and new markets will have to be explored
- Achieving the benefits from digital manufacturing is a long-term endeavor and will involve a gradual experimental learning process involving technology, systems and management processes
- For a company it will be key to ensure that the value of existing manufacturing systems is preserved
- At the same time, it will be necessary to come up with migration strategies that deliver benefits and productivity from an early stage.

The concept of a proactive value chain and the MADE research is in its very early stage. The close engagement between researchers and companies will likely result in new and different perspective that will impact the research focus—but that is part of the fun, and a source of innovation.

References

Bernus, P., Nemes, L., & Schmidt, G. (2003). *Handbook on enterprise architecture*. Berlin: Springer. Retrieved from http://www.google.dk/books?id=LTR93xiadtEC&pgis=1

Butner, K. (2010). The smarter supply chain of the future. *Strategy & Leadership, 38*(1), 22–31. doi:10.1108/10878571011009859.

Factories of the Future. (2014). Retrieved February 1, 2014, from http://www.effra.eu/

Fingar, P., & Bellini, J. (2004). *The real-time enterprise: Competing on time with the revolutionary business S-Ex machine* (p. 222). Meghan Kiffer Press. Retrieved from http://www.amazon.com/The-Real-Time-Enterprise-Competing-Revolutionary/dp/0929652304

Grigori, D., Casati, F., Castellanos, M., Dayal, U., Sayal, M., & Shan, M.-C. (2004). Business process intelligence. *Computers in Industry, 53*(3), 321–343. doi:10.1016/j.compind.2003.10.007.

Haeckel, S. H. (2013). *Adaptive enterprise: Creating and leading sense-and-respond organizations (Google eBook)* (p. 295). Harvard Business Press. Retrieved from http://books.google.com/books?id=pkrFugJBAn4C&pgis=1

Haeckel, S. H., & Nolan, R. L. (1993). Managing by wire. *Harvard Business Review, 71*, 122–132.

Holdren, J. P., Lander, E., Press, W., & Savitz, M. (2011). *Report to the president on ensuring American leadership in advanced manufacturing* (p. 56). Retrieved from http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-advanced-manufacturing-june2011.pdf

Hugos, M. H. (2004). *Building the real-time enterprise: An executive briefing* (p. 224). Wiley. Retrieved from http://www.amazon.com/Building-Real-Time-Enterprise-Executive-Briefing/dp/0471678295

Hugos, M. H. (2009). *Business agility: Sustainable prosperity in a relentlessly competitive world* (1st ed.). Wiley. Retrieved from http://www.amazon.com/Business-Agility-Sustainable-Relentlessly-Competitive-ebook/dp/B001VLXNII/ref=sr_sp-btf_title_1_7?s=digital-text&ie=UTF8&qid=1394847288&sr=1-7

Johansen, J., Madsen, O., Jensen, H. V., & Vestergaard, A. (2010). *Manufacturing 2025: Future scenarios for Danish manufacturing companies* (p. 36). Aalborg: Center for Industrial Production and Department of Mechanical and Manufacturing Engineering. Retrieved from http://www.en.manufuture.dk/activities/production-2025/

Kagermann, H., Wahlster, W., & Helbig, J. (2013). *Securing the future of German manufacturing industry: Recommendations for implementing the strategic initiative INDUSTRIE 4.0: Final report of the Industrie 4.0 working group* (p. 84). Retrieved from http://www.plattform-i40.de/sites/default/files/Report_Industrie4.0_engl_1.pdf

Lee, E. A. (2008). Cyber physical systems: Design challenges. *2008 11th IEEE International Symposium on Object and Component-Oriented Real-Time Distributed Computing (ISORC)* (pp. 363–369). doi:10.1109/ISORC.2008.25

Luckham, D. C. (2011). *Event processing for business: Organizing the real-time enterprise*. Wiley. Retrieved from http://www.amazon.co.uk/Event-Processing-Business-Organizing-Enterprise-ebook/dp/B005YO4XUU

Manufacturing Academy of Denmark. (2014). Retrieved February 1, 2014, from http://made.dk

Møller, C. (2007). Process innovation laboratory: A new approach to business process innovation based on enterprise information systems. *Enterprise Information Systems, 1*(1), 113–128. doi:10.1080/17517570601092143.

Møller, C., Chaudhry, S. S., & Jørgensen, B. (2008). Complex service design: A virtual enterprise architecture for logistics service. *Information Systems Frontiers, 10*(5), 503–518. doi:10.1007/s10796-008-9106-3.

Reinhart, G., & Wünsch, G. (2007). Economic application of virtual commissioning to mechatronic production systems. *Production Engineering, 1*(4), 371–379. doi:10.1007/s11740-007-0066-0.

Siurdyban, A., & Møller, C. (2012). Towards intelligent supply chains. *International Journal of Information Systems and Supply Chain Management, 5*(1), 1–19. doi:10.4018/jisscm.2012010101.

Smart Process Manufacturing Engineering Virtual Organization Steering Committee. (2009). *Smart process manufacturing an operations and technology roadmap* (p. 61). https://smartmanufacturingcoalition.org/sites/default/files/spm_-_an_operations_and_technology_roadmap.pdf

Welke, R. J. (2015). Thinking tri-laterally about business processes, services and business models: An innovation perspective. In J. vom Brocke & T. Schmiedel (Eds.), *Business process management: Driving innovation in a digital world*. Berlin: Springer.

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