

Approach to Establish Logistics as a Central Scientific Discipline of Tomorrow's Industry

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Abstract : Most of the today's companies face increasing need to operate efficiently. Driven by global trends like shorter product cycles, mass customization and the rising speed of delivery, manufacturing value chains are becoming more and more distributed. Manufacturing processes are becoming highly integrated, e.g. 3D printing. All these changes are affecting companies' organization. They are leading towards individual, small scale, and ad-hoc logistics processes and structures, and finally, towards a significant increase in the importance of logistics itself since traditional value chains transform into agile value networks. In the past logistics has been following manufacturing but in the future industry, this role allocation might change. With this increase in the logistics practice of companies and businesses, the relevance of logistics research as the methodological foundation of logistics networks and processes is gaining importance. Logistics research is evolving into a central and highly interdisciplinary science for the future industry. Using the example of Germany, this paper discusses ways to establish logistics as a central scientific discipline of the future industry. About three million people work in the logistics sector in Germany. Only automotive and retail industry have more employees. Even though there is a bunch of logistics degree programs at more than 100 institutions of higher education, a common understanding of logistics as a research discipline is missing. In this paper an innovative approach will be presented, including; identified perspectives on logistics, such as process orientation, IT orientation or employees orientation, relevant scientific disciplines for logistics science, a concept for interdisciplinary research approaches to unify the perspectives of the different scientific disciplines on logistics and the methodological base of logistics science.

Keywords : logistics, logistics science, logistics management, future challenges

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