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Introduction

percent of the employees in the logistics sector work in this area (cf. figure 2). Outsourcing logistics service providers are supplying approximately 40 percent of the services (cf. [KHK10]).

Production is using lean management for decades to sustainably optimize processes. It is therefore not surprising that many logistics companies, both

Figure 1: Development of logistics (based on [Bau08])

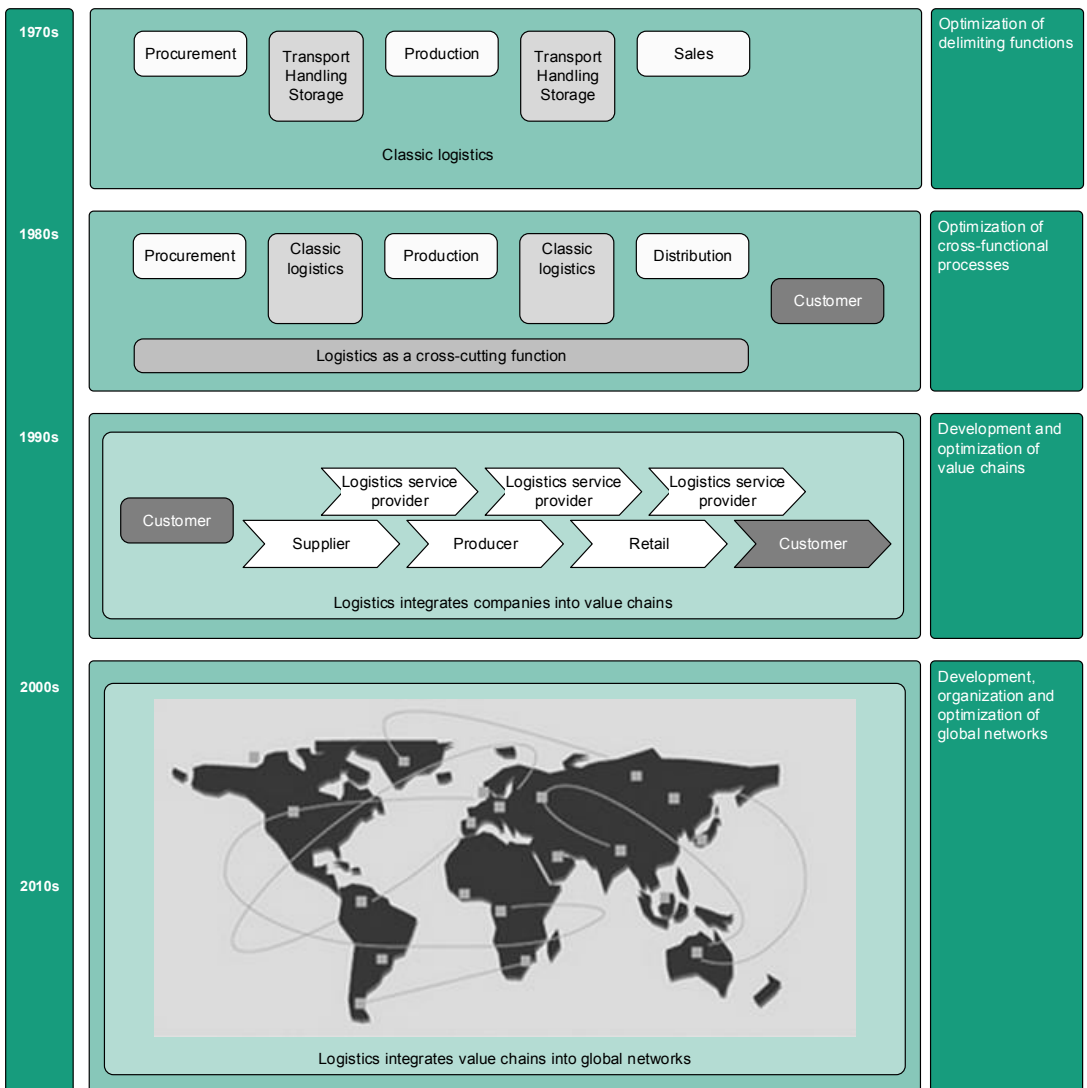
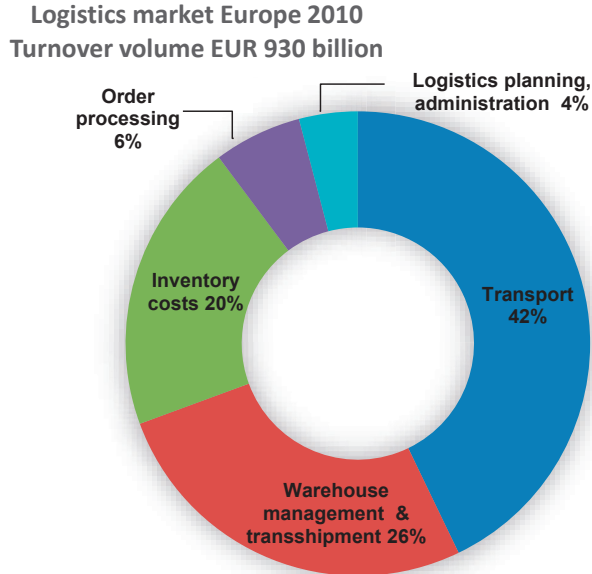


Figure 2: Distribution of the logistics market volume in Europe in 2010 (based on [Sch12])



service providers and manufacturing companies, rely on lean management to make their warehouse processes more efficient. Despite the spatial and procedural proximity of many warehouses to production, it took some time until the lean management philosophy, originating from the production, was transferred to warehouses.

In recent years, the use of lean management in warehouses, so-called lean warehousing, has increasingly come to the fore. In 2010, for example, the Bundesvereinigung Logistik (BVL), under the leadership of Prof. Dr.-Ing. Kai Furmans, set up the "lean management in warehouses" working group. Within this group, leading retail, industrial and logistics companies develop a common understanding of lean warehousing and possibilities for transferring the methodology into warehouse environment. This procedure is tested and further developed using pilot warehouses (cf. [BVL12]). The results of the working group will probably be published in a book in autumn 2012.

Irrespective of this, optimization with lean methods in warehouses is still a very young field, which is still in the development phase. It is not an easy task to transfer the lean management theories from production to warehousing, as the methods for warehouse environment have to be adapted due to