

Rethink Logistics & Supply Chain Management

Logistik Weiter-Denken, Logistik Neu-Denken

Scientific Series on Logistics and Supply Chain Management

Green - Lean - Supply Chain Management

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Preface

This first issue of the scientific series "Rethink Logistics & Supply Chain Management" is dedicated to Green – Lean – Supply Chain Management. Both topics, Green SCM and Lean SCM, are becoming more and more important, both in science and research as well as in industry. This is indicated by an increasing number of student enquiries regarding the supervision of theses, heightened attention in scientific publications as well as an increasing number of project enquiries from industry on these topics. Since I myself have been dealing intensively with these topics for some time now, I am particularly pleased with this increased interest. The aim of this book is to provide an insight into current research fields and to discuss current challenges as well as concepts, tools, and methods that deal with Green - Lean - Supply Chain Management.

But what exactly is Green – Lean – Supply Chain Management about?

Lean Supply Chain Management or Lean Logistics comprises the design of logistics systems with the primary goal of avoiding waste of resources. To achieve this goal the philosophy and aims of lean production are transferred to logistic processes. Lean Production originates with Japanese car manufacturer Toyota and aims to improve the manufacturing process of goods and services through eliminating waste along the whole value stream. All processes are focused on the customer, who defines what the terms “value” and “waste” mean in this context. Therefore, any activity and investment of resources that doesn’t promote the value of the product from the perspective of the customer is generating waste. Transferring this philosophy to logistics processes can be described as a way to recognize and eliminate wasteful activities from the supply chain in order to increase product flow and speed – always with the main focus on achieving the overall optimum in logistics systems.

Green Supply Chain Management consists of integrating environmental aspects into all phases of supply chain management: material sourcing, product design and construction, material sourcing strategies, manufacturing processes, delivery, reverse logistics and end-of-life management. In this book, we take a wider meaning of the term. Aside from the aspects already mentioned, all of which are associated with the ecological dimension of sustainability, we include and consider the other two dimensions of sustainability – the economic and social dimensions. In research works on green supply chains, the focus is very often set on profit as the first priority. This results in ecological measures being evaluated by whether they create economic value. Only in a second step does their sustainability play a role in research. In contrast to

those works, this book focuses not on profit, but on the sustainable supply chain, built on all three dimensions: social, economic, and environmental.

Both concepts, Lean and Green Supply Chain Management, have the potential to support and enhance each other. Avoidance of waste in the supply chain can lead to more sustainability, while a more sustainable supply chain is focused on reducing certain waste. It is important to note that the aims of both concepts differ and a Lean Supply Chain does not automatically lead to a Green Supply Chain, and vice versa.

This book includes nine different articles in which the authors illustrate different topics concerned with Green – Lean - Supply Chain Management that are currently relevant to scientific research and industry. These topics range from sustainable warehouse management, Lean Six Sigma as a contribution to sustainable production systems, sustainability of wind power plant supply chains, a comprehensive classification of urban transshipment facilities to the challenges of humanitarian aid logistics.

As the editor and publisher of Rethink Logistics & Supply Chain Management and this first edition on Green – Lean –Supply Chain Management, I would like to thank all authors, contributors, and supporters who helped in the creation of this edition and hope that the series will be successful and continue as planned in the future.

Henning Strubelt

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