Platform-based business models and platform ecosystems experience a massive hype in the past years with their potential to revolutionize industries respectively disrupt business models. The logistics, as a critical function and industry interlinking companies around the globe, impersonate per se an analog ecosystem of players exchanging and transporting goods. In the context of digital transformation and the push toward a more digitalized world, logistics companies are forced to transform their operating models into digital ones by exchanging data with the affected parties. Thus, this change in the logistics industry delivers a perfect breeding ground for creating digital-induced platform-based business models since logistics companies act as intermediaries. However, logistics incumbents and newly appearing startups fail yet to establish successful platform ecosystems. Also, in academia, the detailed composition of logistics platforms has not been tackled yet and, therefore, represents a scientific gap.

This dissertation contributes to this practice-inspired issue by analyzing different ecosystem types and deriving criteria for shaping platform ecosystems in the logistics industry. Embedded into a design science research approach, this dissertation defines two artifacts: the first artifact embodies a logistics platform morphology, which considers five design elements with detailed design criteria for logistics platforms. It deals as a tool to create, maintain, and review logistics platforms and should solve the problem of building platform ecosystems in the logistics industry. The second artifact is provided through logistics platform design principles that help researchers and practitioners to design logistics platforms. Both artifacts have been designed based on a systematic literature review and five case studies, whereof two represent action design research projects.

The results are addressed to practitioners and academics interested in information systems, supply chain management, and platform ecosystem research. Accordingly, this dissertation proposes drivers for the digital transformation of the logistics industry, new digital business model creation, and closes a gap that lies between multiple research disciplines.