

LOGMAN – Logistics and Manufacturing Trends and Sustainable Transport

Institute for Production Management – Research Team of Prof. Werner Jammerneegg
Gerhard Bauer, Werner Jammerneegg, Patricia Rogetzer, Heidrun Rosic, Stefan Treitl



Introduction

In the past best practices like outsourcing and offshoring improved the economic performance of **supply chains**.

These best practices have led to **reductions** in supply chain costs, but they have also **increased** transport activities and the emission of greenhouse gases.

The **Objectives** of the LOGMAN project are:

- to give an insight into **new logistics and manufacturing trends** and their impacts on **economic and environmental sustainability** and
- to provide **recommendations** for **European freight transport policy** considering both economic and environmental sustainability.

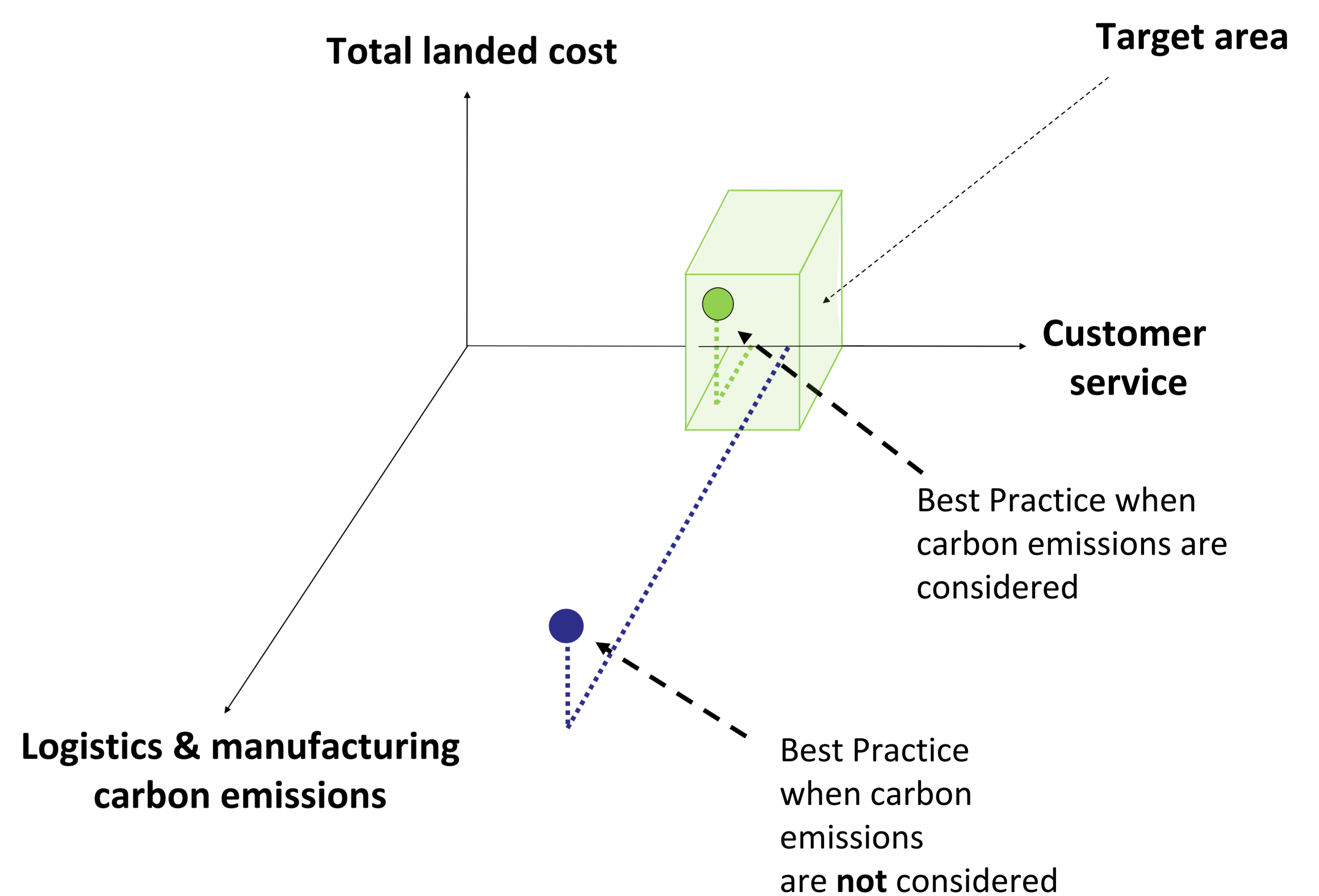
Project Framework

1. **Analysis of External Factors**
2. **Analysis of current and future Best Practices in Supply Chains (3-Dimensional Evaluation)**
3. **Derivation of Scenarios for the Future Development of Europe's Carbon Emissions**
4. **Development of Policy Recommendations**

Focus of WU

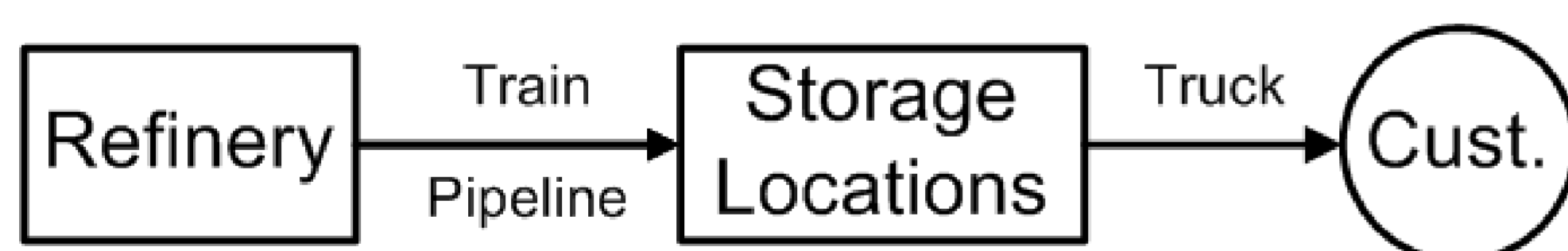
- Carry out **Case Studies** with **Industry Partners**
- Evaluate existing Supply Chains, considering **Economic and Environmental Aspects**
- Show the **Relevance and Impacts** of certain Best Practices in different Industries

Three-Dimensional Evaluation Framework



Case Study: Petrochemical Industry

- Distribution network of a petrochemical company in Southeastern Europe



- Primary Transport from Refinery to Storage Location is carried out by Rail and Pipeline
- Secondary Transport to the Customer is carried out by Truck
- Objective:** Reducing the Number of Storage Locations (currently 21) and analyze the impact of **Centralization** on Costs and Carbon Emissions from Transport

- Results:** Trade-Off between Total Distribution Costs and Emissions
- Centralization **reduces** Distribution Costs but **increases** Truck Transportation in the network and, thus, Carbon Emissions

