
# Short-Case Series

## The Green Shift: Can Sustainability Be Inclusive?

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Case theme: Inclusive SME Transformation for Sustainable Competitiveness. Managing Organisational Conflict

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# Case: The Green Shift: Can Sustainability Be Inclusive?

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## Abstract

This teaching case examines sustainability, digital transformation, and workforce inclusion in the German automotive industry. It focuses on the managerial challenge of achieving a *Just Transition* - ensuring that the shift towards greener and more digital production is environmentally sustainable, economically competitive, and socially inclusive, particularly for older employees. The case follows Thomas Kellermensen, Managing Director of Kellermensen GmbH, a family-owned automotive components manufacturer facing pressure to reduce carbon emissions and modernise production. The company plans an ambitious modernisation programme utilising automation and digital technologies.

However, an internal assessment reveals that over one-third of employees are over 55 years old and that some have limited digital skills, raising concerns about reskilling, workforce inclusion, potential layoffs, and emerging organisational conflict. Management must balance environmental sustainability, competitiveness, and equitable workforce transition.

The case invites students to analyse how small and medium-sized enterprises (SMEs) can achieve a Just Transition by balancing environmental sustainability, competitiveness, and workforce inclusion. The Just Transition concept provides the primary analytical framework for evaluating the managerial dilemma. The Sustainable Development Goals offer a company-level structure for examining the tensions and complementarities between environmental, economic, and social objectives. At the same time, Doughnut Economics may be used as an optional interpretive lens to broaden the discussion of the relationship between ecological limits and social foundations.

**The case relates to the United Nations' Sustainable Development Goals**: SDG 8, Decent Work and Economic Growth; SDG 9, Industry, Innovation and Infrastructure; and SDG 10, Reduced Inequalities; SDG 12, Responsible Consumption and Production; SDG 13, Climate Action.

**Keywords:** *Just Transition; Age Diversity; Workforce Inclusion; Sustainability; Sustainable Development; Digital Transformation; Industry 4.0; Automotive Industry; SMEs; Reskilling; Social Sustainability; Green Transition; Tensions; Doughnut Economics; Germany.*

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We sincerely appreciate the reviewers' insightful and constructive feedback. Their comments helped improve the clarity, realism, and academic rigour of both the teaching case and the accompanying teaching notes, ensuring that the case reflects the practical challenges experienced by many German and Lithuanian companies.

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## 1. The Green Shift: Can Sustainability Be Inclusive?

In March 2025, Thomas Kellermensen, Managing Director of Kellermensen GmbH, stared at two reports lying side by side on his desk.

The first brought good news. The company had secured a long-term contract extension with one of Germany's leading automotive manufacturers. However, the contract came with new expectations. To remain a preferred supplier, Kellermensen GmbH would need to demonstrate measurable progress in reducing carbon emissions, improving energy efficiency, and modernising its production processes. Adding to the pressure, industrial electricity prices in Germany remained among the highest (Picture 1) of major manufacturing economies, forcing automotive suppliers such as Kellermensen GmbH to seek greater energy efficiency while maintaining competitiveness in global supply chains. The sustainability team had already outlined the investments required to meet these demands.

The second report was far more troubling. An internal workforce assessment revealed that more than one-third of the company's employees were over the age of 55. Many possessed decades of experience and deep knowledge of production processes. The assessment also identified digital skills gaps among some long-serving employees, raising concerns that they might be unprepared for future roles. The assessment warned that the planned modernisation of the factory could leave a significant number of long-serving employees unprepared for future jobs.

Thomas immediately saw the connection between the two reports. The company's future depended on becoming greener, more digital, and more competitive. However, achieving that future might come at the expense of the very people who had helped build its success.

He wondered whether Kellermensen GmbH could become a more sustainable company without leaving part of its workforce behind.

## 2. A Company at the Crossroads of Transition

Founded in 1974 and located in Baden-Württemberg, Kellermensen GmbH was a family-owned Tier-1 [1]automotive components manufacturer employing approximately 240 people. The company designed and manufactured precision drivetrain and transmission assemblies that were delivered directly to major German automotive manufacturers. For decades, its reputation rested on engineering excellence, reliability, and the expertise of a highly experienced production workforce.

As a Tier-1 supplier, Kellermensen operated at the heart of Germany's automotive value chain. However, by 2025, the industry was undergoing profound change. Digitalisation and increasingly demanding sustainability requirements were reshaping expectations throughout the supply

[1] A Tier 1 automotive supplier is a company that manufactures major parts, modules, or complete systems (like engines, seating systems, or braking systems) and sells them directly to an automaker. https://spi-al.com/

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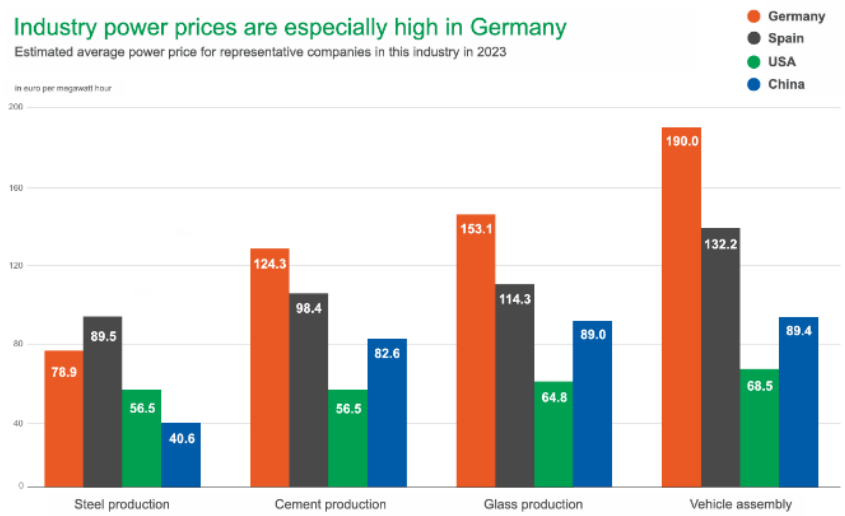
chain. Automotive manufacturers were no longer evaluating suppliers solely on quality, cost, and delivery performance. They increasingly expected suppliers to reduce emissions, improve resource efficiency, assure employee well-being, and provide sustainability-related data as part of broader environmental and social responsibility commitments.

At the same time, German automotive suppliers faced growing competitive pressures. The industry was investing heavily in electric vehicles, autonomous driving technologies, and Industry 4.0 manufacturing systems. Meanwhile, industrial electricity prices in Germany remained significantly higher than in many competing countries, placing additional pressure on manufacturers to improve efficiency and productivity (see Picture 1).




Picture 1. Industry power prices in 2023. Source: German Association of the Automotive Industry, 2023, p.17.

For Kellermensen, maintaining the status quo was no longer an option. To remain competitive and secure future contracts, the management team developed an ambitious €15 million modernisation programme. The investment would introduce automated production lines, AI-assisted quality control systems, energy-efficient machinery, and digital monitoring tools.

The modernisation programme is expected to reduce energy consumption by 35 per cent, production waste by 40 per cent, and carbon emissions by 30 per cent over the following five years. These projections do not constitute a full life-cycle assessment of the company's products or of the environmental impacts associated with manufacturing, installing and eventually replacing the new production equipment.

According to the sustainability team, the programme was essential for securing future contracts and maintaining Kellermensen's position within increasingly sustainability-focused automotive supply chains. These estimates refer to projected improvements in Kellermensen GmbH's own production operations resulting from the introduction of energy-efficient manufacturing equipment, digital process monitoring, and automated production systems.

## 3. When Sustainability Meets Inclusion

However, as pilot projects began, concerns quickly emerged. Employees adapted to the pilot technologies at different rates. Some younger employees were already familiar with digital

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interfaces and data-driven production systems, while some long-serving employees found the new software platforms and monitoring tools more challenging. Some senior employees who had spent thirty years mastering traditional production techniques found themselves overwhelmed by new software platforms and digital monitoring tools.

During one management meeting, a production supervisor raised a difficult question.

"How much training are we prepared to invest in employees who may retire in a few years?"

The entire room fell silent.

Human Resources Director Anna Weiss strongly disagreed with this perspective. She argued that many older employees possessed invaluable tacit knowledge about production processes, quality control, and problem-solving. Excluding them from the transformation would not only harm employee morale but also risk losing critical organisational knowledge.

Meanwhile, rumours of potential layoffs began circulating throughout the factory. Anxiety increased among employees. The works council demanded assurances that the company's sustainability strategy would not come at the expense of its workforce.

As tensions grew, the executive team identified three possible approaches.

The first option was to proceed rapidly with modernisation while offering only basic training. Employees unable to adapt would be encouraged to take early retirement or leave the company. This option offered the fastest progress toward the company’s projected operational environmental and efficiency targets while requiring the lowest additional investment in workforce development.

The second option was to invest heavily in reskilling and inclusion programmes. Employees would receive extensive digital training, mentoring support, and individualised learning pathways. While this approach could preserve critical organisational knowledge and support workforce inclusion, it would require substantial investment and might delay some anticipated efficiency gains.

The third option involved a gradual transition. Traditional production systems would be maintained alongside new technologies for several years, allowing employees more time to adapt. However, environmental and efficiency gains would be delayed.

As Thomas prepared for an upcoming board meeting, he faced a decision that extended far beyond technology or cost calculations.

Could Kellermensen achieve its environmental and competitiveness goals if doing so meant that many long-serving employees were left behind? Or was true sustainability only possible when environmental progress and social inclusion advanced together?

Thomas realised that the decision before him was not simply about technology, costs, or emissions. It was about defining what sustainability meant for Kellermensen GmbH. Could the company pursue environmental and economic progress while maintaining an inclusive workplace, or would leaving part of its workforce behind mean that the transition could no longer be considered just?

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## 4. Assignment and Discussion Questions

Part 1: Company Diagnosis

Take the role of a consultant ready to help the company resolve the dilemma. Before evaluating the three strategic options and answering the questions, identify what additional information you would need to collect during a visit to Kellermensen GmbH. Explain why this information is essential and how it would influence your recommendation. Consider the following statements and set the context for the company:

- Company profile (products, markets, customers and competitive position)
- Business performance and investment capacity
- Production processes and workflow
- Work organisation and task allocation
- Workforce profile (age structure, qualifications and experience)
- Existing competence development and training practices
- Technology currently in use and planned investments
- Quality, productivity and safety indicators
- Organisational culture and leadership
- Customer requirements and external pressures
- Operational constraints and available resources
- Perspectives of managers, supervisors, employees and the works council

Part 2: Answer the Questions

1. What responsibilities does Kellermensen GmbH have toward older employees whose skills may become obsolete during the company's green and digital transformation?
2. How should Thomas Kellermensen balance the environmental, economic, and social objectives associated with the modernisation programme? In your answer, consider how the proposed strategies contribute to or create tensions between the relevant Sustainable Development Goals.
3. Which of the three strategic options should Thomas choose? Evaluate the short-term and long-term consequences of each option.
4. How can SMEs pursue a just transition that simultaneously supports competitiveness, environmental sustainability, and workforce inclusion?
5. Optional extension. Using the Doughnut Economics framework (Raworth, 2017), which option is most likely to keep the company within the "safe and just space" between the ecological ceiling and the social foundation?

## 5. References:

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**Case Disclaimer:**

This teaching case was developed for educational purposes and was inspired by a real business challenge presented and discussed during the DEI4SME Hackathon in Lithuania (https://dei4sme.eu/dei4sme-hackathon-lithuania/). The published case has been substantially adapted and fictionalised for teaching purposes. The company name, characters, numerical data, strategic options and specific circumstances have been modified or created to protect confidentiality and strengthen the learning experience. The case does not provide a factual account of the original company or situation and is not intended to demonstrate either effective or ineffective management practice.

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