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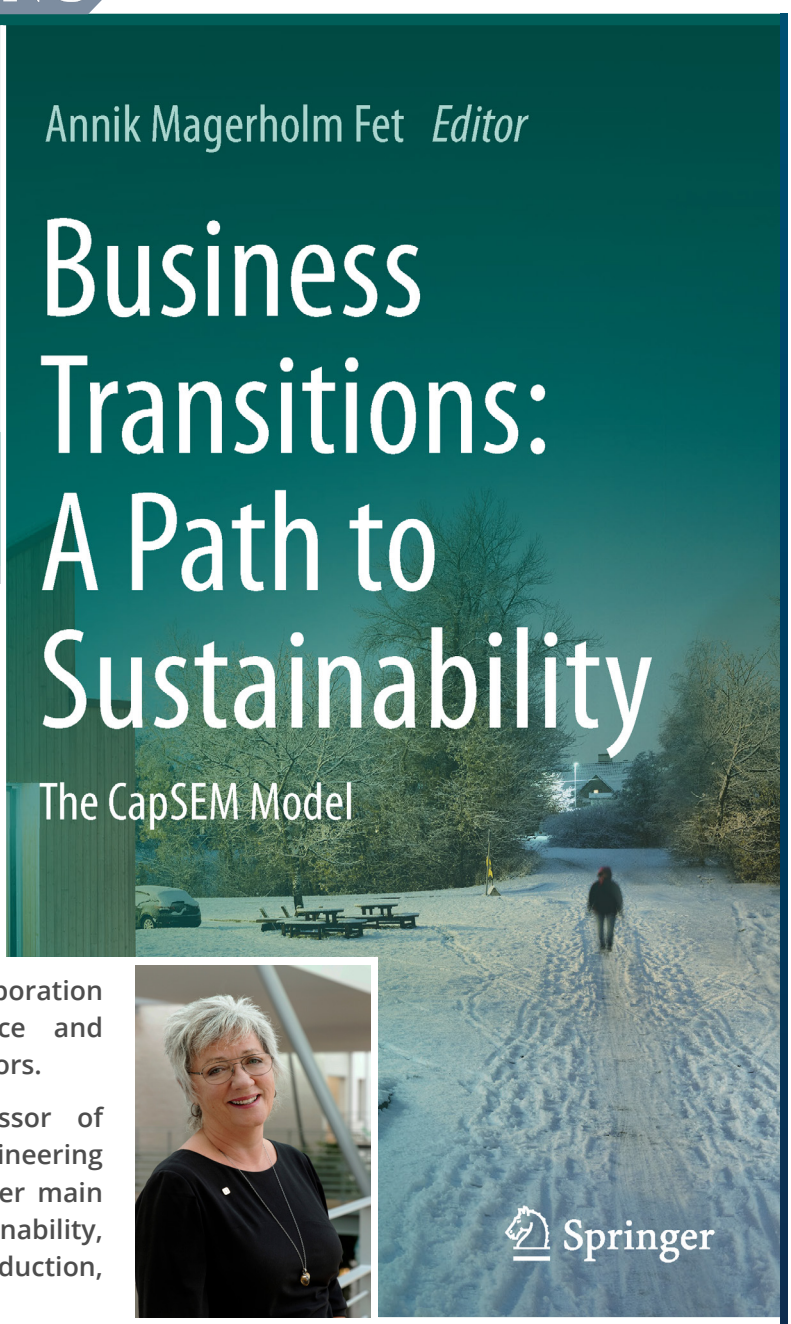
Who is this for? Practitioners, businesses, and organizations can use this book as a reference when moving towards Sustainable Development. Applications of the toolbox model can also help developing countries, transferring lessons learnt elsewhere, adopting SDGs to diverse settings.

Annik Magerholm Fet *Editor*

Business Transitions: A Path to Sustainability

The CapSEM Model



Springer

Central to this book is **CapSEM Model** which presents an analytical toolbox across four distinct levels:

Process, Product, Organizational & Systems.

Critical discussions of tools and their implementation is a cross cutting theme.

Authors include a multi-disciplined collaboration from the Norwegian University of Science and Technology (NTNU) together with business sectors.

Annik Magerholm Fet, editor, is a professor of environmental management, systems engineering and life cycle analysis at NTNU in Ålesund. Her main disciplines and research areas are within sustainability, including environmental challenges, global production, and corporate social responsibility.

"This book offers a clear view on transition to a safe sustainable future by providing a holistic approach to transition alongside a toolbox of practical methods and tools. "

Bjørn K. Haugland CEO Skift, Business Climate Leaders

Book structure consists of **24 chapters**, divided into **4 parts**

Part I	Part II	Part III	Part IV
Sustainability: Challenges & Opportunities	The Toolbox: Methodologies & Theories	From Theory to Practice: Case Studies	The Road Ahead

What is the CapSEM Model? The CapSEM Model comprises a systematized methodology of assessment and management tools for sustainability and environmental management. It offers to streamline applications for the business sector and industry. Each axis describes a change in scope.

The horizontal axis shows the scope of systems and begins at the simple production process at Level 1. It extends to the set of processes within the value chain and the life cycle of a product at Level 2. Then, to the organizational level (Level 3), to ingrain sustainability consciousness and commitment into the organizational routines of the company through the implementation of management systems. The scope of the systems on Level 4 are defined as the sector that the organization is a part of, or as wide as a societal system.

The vertical axis shows the scope of performance and potential for reaching the greatest sustainability achievements across environmental and social dimensions. Level 1 focuses on the environmental impacts of material flows, while Level 2 widens focus to the performance of the entire value chain and all the processes within it. Level 3 adds aspects to be considered from a strategic level, such as management systems which guide organizations through a shift to a higher level of sustainability performance over time to Level 4. The model does not mandate that a company place itself within one level. Rather, it shows the way the tools and perspectives are linked and build upon each other.

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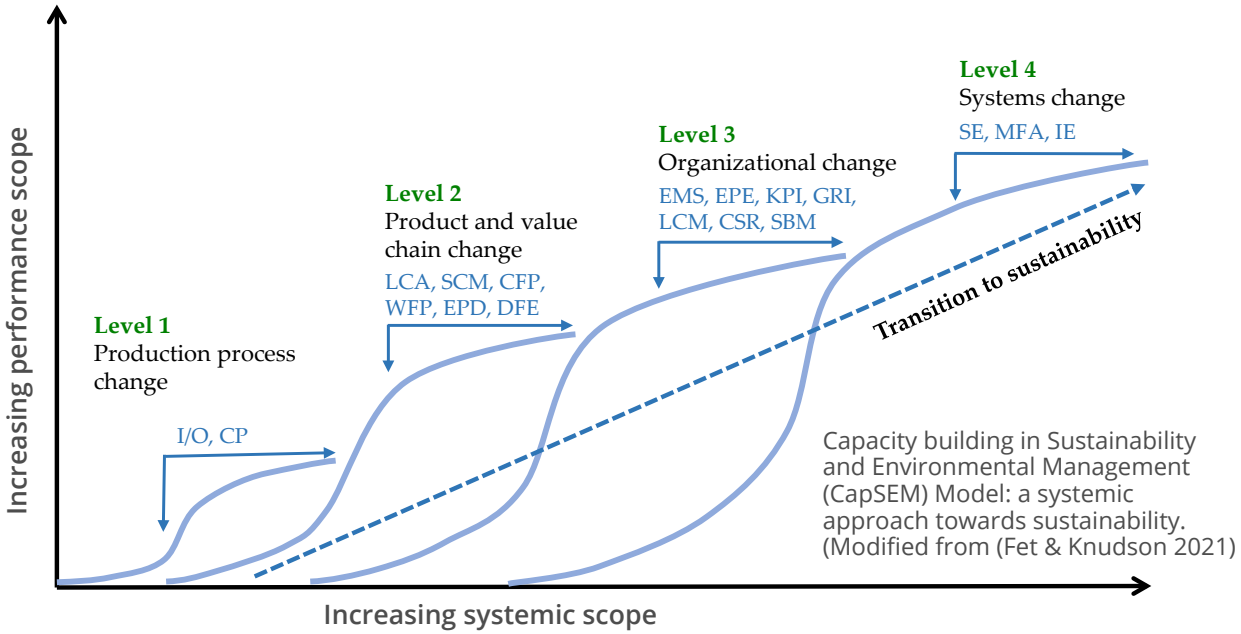

Capacity building in Sustainability and Environmental Management (CapSEM) Model: a systemic approach towards sustainability. (Modified from (Fet & Knudson 2021)

1 Production process change

I/O – Input-Output Analysis

CP – Cleaner Production

2 Product & value chain change

LCA – Life Cycle Assessment

SCM – Supply Chain Management

CFP – Carbon Footprint of Products

WFP – Water Footprint of Products

EPD – Environmental Product Declaration

DFE – Design for Environment

3 Organizational change

EMS – Environmental Management System

EPE – Environmental Performance Evaluation

KPI – Key Performance Indicator

GRI – Global Reporting Initiative

LCM – Life Cycle Management

CSR – Corporate Social Responsibility

SBM – Sustainable Business Models

4 Systems change

SE – Systems Engineering

MFA – Material Flow Analysis

IE – Industrial Ecology