1. Record Nr. UNINA9910504284103321 Autore Klos Zbigniew Stanislaw Titolo Towards a Sustainable Future - Life Cycle Management : Challenges and **Prospects** Pubbl/distr/stampa Cham, : Springer International Publishing AG, 2021 **ISBN** 3-030-77127-X Descrizione fisica 1 online resource (317 p.) Altri autori (Persone) KalkowskaJoanna KasprzakJdrzej Soggetti **Environmental management** Sustainability Business & the environment, 'Green' approaches to business The environment Environmental science, engineering & technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di contenuto Intro -- Preface -- Acknowledgments -- Contents -- Contributors --List of Figures -- List of Tables -- Part I: Sustainable Products --Ecodesign as a New Lever to Enhance the Global Value Proposition: From Space to Corporate -- 1 Introduction -- 1.1 Principles of Responsibility Driving Stronger Environmental Commitments -- 1.2 From a Commitment to an Effective Implementation? -- 1.3 Challenges Related to Constrained Engineering Environments -- 2 Retrospective Analysis of the GreenSat Project -- 2.1 Objective and Methodological Approach -- 2.2 Introduction to the GreenSat Project 2.3 Retrospective Analysis from a Product Strategy Perspective -- 3 A Transposable and Replicable Resulting Methodology -- 4 Conclusion --References -- The "Environmental Activation Energy" of Modularity and Conditions for an Environmental Payback -- 1 Introduction -- 2 Life Cycle Assessment of Modularity -- 2.1 Smartphone Modularity --2.2 Digital Voice Recorder Concept DPM D4R -- 2.3 Embedding

of Components for a Modular Printed Circuit Board Assembly -- 3

Design Rules for Modularity -- 4 Conclusions -- References Quantitative Environmental Impact Assessment for Agricultural

Products Caused by Exposure of Artificial Light at Night -- 1 Introduction -- 2 Methods -- 2.1 Development of a Method for Assessing Light Pollution Impact on Rice Cultivation -- 2.1.1 Procedures for Assessing the Impact of Light Pollution on Rice Cultivation -- 2.1.2 Effect Analysis -- 2.1.3 Damage Analysis -- 2.2 Case Study Using One Unit of Outdoor Lighting -- 2.2.1 Assessment Method -- 2.2.2 Inventory Analysis -- 3 Results -- 3.1 Development of Impact Assessment Methods -- 3.1.1 Correlation Between Illuminance and Heading Delay 3.1.2 Correlation Between Heading Delay and Yield -- 3.2 Damage Factor Results -- 3.2.1 Correlation Between Illuminance and Yield --3.3 Case Study Results by One Outdoor Lighting Unit -- 3.3.1 Illumination Distribution in the Paddy Field -- 3.3.2 Endpoint Calculation Results -- 4 Conclusion -- References -- City Air Management: LCA-Based Decision Support Model to Improve Air Quality -- 1 Introduction -- 2 City Air Management: Solution and Methodology -- 3 Results and Discussion -- References Is Environmental Efficiency Compatible with Economic Competitiveness in Dairy Farming? A Case Study of 80 Luxembourgish Farms -- 1 Introduction -- 2 Material and Methods -- 2.1 The Investigated Farms and the Protein Autarky -- 2.2 The LCA Methodology Applied and Economic Indicators Used -- 2.3 The Principle of Farm Segregation and Statistics Analysis -- 3 Results and Discussion -- 4 Main Conclusions -- References -- Dynamic and Localized LCA Information Supports the Transition of Complex Systems to a More Sustainable

Sommario/riassunto

This open access book includes a selection of contributions from the Life Cycle Management 2019 Conference (LCM) held in Pozna, Poland, and presents different examples of scientific and practical contributions, showing an incorporation of life cycle approach into the decision processes on strategic and operational level. Special attention is drawn to applications of LCM to target, organize, analyze and manage product-related information and activities towards continuous improvement, along the different products life cycle. The selection of case studies presents LCM as a business management approach that can be used by all types of businesses and organizations in order to improve their sustainability performance. This book provides a crosssectoral, current picture of LCM issues. The structure of the book is based on five-theme lines. The themes represent different objects that are focused on sustainability and LCM practices mainly related to: products, technologies, organizations, markets and policy issues as well as methodological solutions. The book brings together presentations from the world of science and the world of enterprises as well as institutions supporting economic development.

Manner Such as Energy and Transport Systems -- 1 Introduction

2 Four Applications