Product-Service System Design for Sustainability

Identity Designed: Reintroducing Materials for Sustainable Design

Sustainable Product Design and Development

Designing for Zero Waste

Sustainable Solutions

Sustainable Thinking

Sustainable Architectural Design

Product-Service System Design for Sustainability

This book, based on a huge European and Asian research project, is a state-of-the-art examination of the theory and practice of system innovation through Product-Service System (PSS) design for sustainability. From a trans-cultural viewpoint, PSS design incorporates innovative strategies that shift businesses away from simply designing and selling physical products to developing integrated systems of products and services that satisfy human needs. The book provides background, advice and tools for designers interested in sustainable PSSs and has a wealth of case studies for practitioners to digest.

Identity Designed

This is a practical book on creating packaging prototypes that reflect sustainable and ecologically sound principles. It challenges the next generation of graphic designers to re-envision packaging design as a less environmentally destructive practice than it presently is, and examines an array of techniques and methodologies for creating innovative and sustainable packaging designs, from first concept to final production. The book is organized into two distinct sections embracing first the theory, including many case studies, and then the practice of eco-friendly packaging design. In the first part of the book, after introducing the student to the background of packaging design and its purpose, the author focuses on issues of sustainability. Through a series of case studies and interviews he looks at some of the companies that are leading the way in sustainable packaging. The second part of the book provides practical information on creating eco-friendly packaging and follows various projects through, step by step.

Reintroducing Materials for Sustainable Design

Reintroducing Materials for Sustainable Design provides instrumental theory and practical guidance to bring materials back into a central role in the design process and education. To create designs that are sustainable and respond to current environmental, economic and cultural concerns, practitioners and educators require a clear framework for materials use in design and product manufacturing. While much has been written about sustainable design over the last two decades, outlining systems of sustainability and product criteria, to design for material circularity requires a detailed understanding of the physical matter that constitutes products. Designers must not just know of materials but know how to manipulate them and work with them creatively. This book responds to the gap by offering a way to acquire the material knowledge necessary to design physical objects for sustainability. It reinforces the key role and responsibility of designers and encourages designers to take back control over the ideation and manufacturing process. Finally, it addresses the educational practice involved and the potential implications for design education following implementation, addressing didactics, facilities and expertise. This guide is a must-read for designers, educators and researchers engaged in sustainable product design and materials.

Sustainable Product Design and Development

Designing for Zero Waste is a timely, topical and necessary publication. Materials and resources are being depleted at an accelerating speed and rising consumption trends across the globe have placed material efficiency, waste reduction and recycling at the centre of many government policy agendas, giving them an unprecedented urgency. While there has been a considerable literature addressing consumption and waste reduction from different disciplinary perspectives, the complex nature of the problem requires an increasing degree of interdisciplinarity. Resource recovery and the optimisation of material flow can only be achieved alongside and through behaviour change to reduce the creation of material waste and wasteful consumption. This book aims to develop a more robust understanding of the links between lifestyle, consumption, technologies and urban development.

Sustainable Solutions

How to take the lead with sustainable packaging design/solutions With initiatives like the Wal-Mart Scorecard in the U.S. and the EU’s Packaging Directive, delivering sustainable packaging is now an integral part of today's global competitive market. Written by experts from a wide variety of fields, here is a comprehensive, single-source of actionable information that enables everyone involved in the design and development process to make smarter, informed decisions, opening new possibilities for creating truly innovative solutions. Wendy Jedlicka, CPP (Roseville, MN) is President of Jedlicka Design Ltd. and a member of the faculty at Minneapolis College of Art and Design's groundbreaking Sustainable Design Certificate Program. A Certified Packaging Professional, she serves as Upper Midwest Chapter Chair (02swm.org), as well as U.S. co-coordinator for the Global Green Design Network (02.org), and contributes frequently to Packaging Design magazine's "Sustainability Update" feature column.

Sustainable Thinking

A forward looking book on sustainable design that describes problems and then, by providing a different way to conceptualise design and development, leads on to examples of regenerative solutions. Its aim is to move the discussion away from doing less, but still detracting from our ecological capital, to positively contributing and adding to this capital. This book offers a hopeful response to the often frightening changes and challenges we face; arguing that we can actively create a positive and abundant future through mindful, contributive engagement that is rooted in a living systems based worldview. Concepts and practices such as Regenerative Development, Biophilic Design, Biomimicry, Permaculture and Positive Development are explored through interviews and case studies from the built environment to try and answer questions such as: “How can projects focus on creating a positive ecological footprint and contribute to community?”; “How can we as practitioners restore and enrich the relationships in our projects?”; and “How does design focus hope and create a positive legacy?”

Sustainable Architectural Design

Comprehensively covers the definition, methodology, and current applications of the principles of sustainability and resiliency in every engineering discipline
Designing for Hope

Innovation is everywhere: when you stop to not just smell but watch the roses. Mother Nature's interwoven relationships between all life can serve as a powerful model for graphic designers to create sustainable print and digital work. Design to Renourish is a book for the graphic design professional that helps to integrate sustainability into their workflow through a design process called systems thinking. This process asks the graphic designer to approach a design problem by being more informed and aware of and influenced by the impacts that material and vendor choices have on one another, the planet, and consequently on us. The book not only walks the reader through a guide to design with Mother Nature as a model, but also offers solutions to the real life challenges of working with the client to create sustainable work. Through ten case studies that feature interviews with international design teams who embrace a sustainable systems methodology, the reader will gain valuable insights on how to design to renewish and improve life on Earth.

Sustainable Customer Experience Design

An actionable guide to mindfulness and practical ethics for any creative professional who wants to make a living without selling their soul. It can be difficult to live according to our values in a complicated world. At a time when capitalism seems most unforgiving but the need for paying work remains high, it is important to learn how to be more mindful and intentional about our impact — personal, social, economic, and environmental. As a designer and creative director Kelly Small had to do to navigate a crisis of ethics and burnout in their career in advertising, we can admit our complicity in problematic systems and take on the responsibility of letting our own conscience guide our decisions. Start with one or many of these 100+ rigorously researched, action-oriented steps: Create for empowerment, not exploitation; Work with clients to foster transparency and corporate social responsibility (CSR) Fully illustrated and packed with case studies of green design implementation, this reference guide more than inspires; a “sustainability scorecard” and a complete glossary of key terms and resources ensure that anyone in the design field can implement practical green solutions. Green Graphic Design is an indispensable resource for graphic designers ready to look to the future of their business and the environment.

Green Culture

Facility performance evaluations inform the long-term life of a building and do not end with design or construction. To this aim, Patricia A. Ndraski created L.E.E.D. Lab: A Model for Sustainable Design Education uses the L.E.E.D. O+M building rating system to measure and achieve performance-driven campus facilities in which the readers work and operate. The book explains in simple terms the theory, tasks, tools and techniques necessary for credit implementation and achievement, and includes case studies and exercises for practical application in each chapter. Readers will learn the conceptual scientific framework used to understand existing operational performance and how to quantify sustainability gains, create green campus policies with administrators, and understand systems such as energy and water in a research-based application. The entire manual is accompanied by a vast online “Teaching Toolkit” to provide helpful educational resources such as syllabi, lectures, examinations, assignments, Individual Student Progress Presentation (ISPP) templates, web resources, and much more. This is an excellent guide for undergraduate or graduate students enrolled in L.E.E.D. Lab or a similar campus building assessment course, as well as construction or architectural professionals and facility managers, this manual navigates the complexities of using a green building diagnostic tool such as L.E.E.D. O+M towards greater environmental literacy.

Integral Sustainable Design

Ecosketchbook has been created both as an educational tool and a sketchbook, with half of the pages containing sustainable design advice, strategies and resources, and the other half providing thought-provoking questions and ample space on which to draw and explore these concepts. The purpose of Ecosketchbook is to increase awareness about the environmental issues connected with a product and to provide insights and strategies for designing a more sustainable consumer product. This book provides a way for designers to challenge the impacts that lifestyle choices have on the environment. As a designer, this book will connect these impacts to the design process and show how thoughtful design practices and eco-design strategies can reduce impacts, save money, and even increase product desirability. Topics include Ecological Footprint, Zero Waste, Cradle to Cradle, Biomimicry, Life Cycle Assessment, Sustainable Design Strategies, and Communicating Sustainability.

Sustainable Graphic Design

The graphic artist's guide to sustainable design Graphic design is frequently thought of as a purely decorative effort. Yet these effects can be responsible for shocking impacts on natural resources just to produce a barely-glanced-at catalog or mail piece. Sustainable Graphic Design: Tools, Systems, and Strategies for Innovative Print Design helps designers view graphic design as a holistic process. By exploring eco-conscious materials and production techniques, it shows designers how to create more effective and more sustainable designs. Sustainable Graphic Design opens your eyes to the bigger picture of design seen from the
Imagine what a large-scale web project would look like if front end development were not treated as an add-on, but as an equal partner with backend development and content strategy. This practical book takes experienced web developers through the new discipline of front end architecture, including the latest tools, standards, and best practices that have elevated front end development to an entirely new level. Using real-world examples, case studies, and practical tips and tricks throughout, author Micah Godbolt introduces you to the four pillars of front end architecture. He also provides compelling arguments for developers who want to embrace the mantle of front end architect and fight to make it a first-class citizen in their next project. The four pillars include: Code: how to approach the HTML, CSS, and JavaScript of a design system Process: tools and processes for creating an efficient and error-proof workflow Testing: creating a stable foundation on which to build your site Documentation: tools for writing documentation while the work is in progress

Knowledge Brokerage for Sustainable Development

There is little appreciation for what happens to graphic design artifacts after their useful life has ended. Sustainable Graphic Design outlines graphic design's relationship to production and consumption, demonstrating how designers can contribute solution-oriented responses to consumption, through tools and methodologies applicable to both education and practice. The book provides an overview of sustainable graphic design, based on global engagement with design's relationship to consumption, and features highly creative work inspired by complex issues and including studies of a variety of visual artifacts, the larger built environment and the very ordinary products of consumption. Presenting cutting-edge work in graphic design from practitioners, educators and students from North America, Northern Europe, Australia and the Far East, the book helps students visualize their future roles engaging with the field in response to ecological concerns, social justice and present systems of design by using extensive case studies of student work with step-by-step instructions adapted for use by instructors.

Designing Sustainable Energy for All

The menace of a post-truth era challenges conventional policy-making and science. Instead of fighting an uphill battle against populist solutions, those involved in both policy-making and science have to find innovative ways to collaborate, and make use of the vast amounts of knowledge that are already available. Knowledge brokerage, in this context, is more than a simple question-and-answer game: it is a process of co-creating and re-framing knowledge. In addition, Knowledge Brokerage for Sustainable Development has to deal with trade-offs and ambiguities, as well as world-views, cultures and the preferences of stakeholder groups. This book is the first in-depth exploration of how knowledge brokerage has the potential to help manage the challenges of sustainable development across political and scientific systems. It presents a selection of innovative and practical tools to enhance the connectivity of research and policy-making processes. In doing so, this book will be an essential publication in research and practice, and will make their experience better known to the different communities involved. The book presents interviews with leading policymakers and researchers such as former EU Commissioner Franz Fischler, Robert-Jan Smits (Director-General of Research and Innovation at the EC), Uwe Schneiderwied (President of the Uппertal Institute), and Leida Rijnhout (European Environmental Bureau). It also provides insights into eleven EU-funded projects dealing with different approaches of Knowledge Brokerage for Sustainable Development.

SustainAble

Meet the challenge of integrating Building Information Modeling and sustainability with this in-depth guide, which pairs these two revolutionary movements to create environmentally friendly design through a streamlined process. Written by an award-winning team that has gone beyond theory to lead the implementation of Green BIM projects, this comprehensive reference features practical strategies, techniques, and real-world expertise so that you can create sustainable BIM projects, no matter what their scale.

Packaging Sustainability

Sustainable Food System Assessment provides both practical and theoretical insights about the growing interest in and response to measuring food system sustainability. Bringing together research from the Global North and South, this book shares lessons learned, explores intended and actual project outcomes, and highlights points of conceptual and methodological convergence. Interest in assessing food system sustainability is growing, as evidenced by the Milan Urban Food Policy Pact and the importance food systems initiatives have in taking in service as a lever for attaining the UN Sustainable Development Goals. This book opens by looking at the conceptual considerations of food systems indicators, including the place-based dimensions of food systems indicators and how measurements are implicated in sense-making and visioning processes. Chapters in the second part cover operationalizing metrics, including the development of food systems indicator frameworks, degrees of indicator complexities, and practical constraints to assessment. The final part focuses on the outcomes of assessment projects, including impacts on food policy and communities involved, highlighting the importance of building connections between sustainable food systems initiatives. The global coverage and multi-scalar perspectives, including both conceptual and practical aspects, make this a key resource for academics and practitioners across planning, geography, urban studies, food studies, and research methods. It will also be of interest to government officials and those working within NGOs.

Sustainable Transportation Planning

Buddhist and Taoist Systems Thinking explores a radical new conception of business and management. It is grounded on the reconnection of humans with nature as the new competitive advantage for living organizations and entrepreneurs that aspire to regenerate the economy and drive a positive impact on the planet, in the context of the Anthropocene. Organizations today struggle in finding a balance between maximizing profits and generating value for their stakeholders, the environment and the society at large. This happens in a paradigm shift characterized by unprecedented levels of exponential change and the emergence of disruptive technologies. Adeptability, thus, is becoming the new business imperative. How can, then, entrepreneurs and organizations constantly adapt and, at the same time, design the sustainable futures they’d like? This book uniquely explores the benefits of applying Buddhist and Taoist Systems Thinking to sustainable management. Grounded in Taoist and Zen Buddhist philosophies, it offers a modern scientific perspective fundamentally based on the concepts of bi-logical adaptability and lifeless amidst complexity and constant change. The book introduces the new concept of the Gaia organization as a living organism that consciously helps perpetuate the conditions for life on the planet. It is subject to the natural laws of transformation and the principles of oneness, emptiness, impermanence, balance, self-regulation and harmonization. Readers will find applied Easten systems theories such as the Yin-Yang and the Five Elements operationalized through practical methodologies and tools such as T-Qualia and the Zen Business model. They are aimed at guiding Gaa organizations and entrepreneurs in leading sustainable transformations and qualifying economic growth. The book offers a vital toolkit for purpose-driven practitioners, management researchers, students, social entrepreneurs, evaluators and change-makers to reinvent, create and mindfully manage sustainable and agile organizations that drive systemic transformation.

Routledge Handbook of Sustainable Design

Design academics and practitioners are facing a multiplicity of challenges in a dynamic, complex, world moving faster than the current design paradigm which is largely tied to the values and imperatives of commercial enterprise. Current education and practice need to evolve to ensure that the discipline of design meets sustainability drivers and equips students, teachers and professionals for the near-future. New approaches, methods and tools are urgently required as
Design Systems And Strategies For Innovative Print Design

Download Free Sustainable Graphic Design Tools

Design for Sustainable Change explores how design thinking and design-led entrepreneurship can address the issue of sustainability. It discusses the ways in which design thinking is evolving and being applied to a much wider spectrum of social and environmental issues, beyond its traditional professional territory. The result is designers themselves evolving, and developing greater design mindfulness in relation to what they do and how they do it. This book looks at design thinking as a methodology which, by its nature, considers issues of sustainability, but which does not necessarily seek to define itself in those terms. It explores the gradual extension of this methodology into the larger marketplace and the commercial and social implications of such an extension.

Complex Systems, Sustainability and Innovation

“The Great American Dream of cruising down the parkway, zipping from here to there at any time has given way to a true nightmare that is destroying the environment, costing billions and deeply impacting our personal well-being. Getting from A to B has never been more difficult, expensive or miserable. It doesn't have to be this way. Jeffrey Tumlin's book Sustainable Transportation Planning offers easy-to-understand, clearly explained tips and techniques that will allow us to quite literally take back our roads. Essential reading for anyone who wants to drive our transportation system out of the gridlock.” - Marianne Cusato, home designer and author of Get Your House Right: Architectural Elements to Use and Avoid

Sustainable Engineering
Sustainable Food System Assessment (Open Access)

This book is a guide to a sustainable-food design process that moves from theory, to site and energy use, to building systems, and finally to evaluation and case studies, so you can integrate design and technology for effective sustainable building. Kappanessy Iyangar shows you how to get it right the first time, use free energy systems, and utilize technologies that minimize fossil fuel use. Each chapter has a sustainable design overview, technical details and strategies marked by clear sections, a summary, and further resources. Heavily illustrated with charts, tables, drawings, photographs, and case studies, the book shows technologies and concepts integrated into cohesive project types, from small and large office spaces to single and multiuse residences, hospitals, schools, restaurants, and warehouses to demonstrate implementing your designs to meet clients' needs now and for the future. Includes an overview of alternate assessment and evaluation systems such as BREEAM, CASBEE, GBE Tool, Green Globes alongside LEED, ECOTECT, energy 10, HII, and eQuest simulation programs. The guide reveals the importance of the building envelope—walls, superstructure, insulation, windows, floors, roofs, and building materials—on the environmental impact of a building, and has a section on site systems examining site selection, landscape design, thermal impact, and building placement.

Performance Metrics for Sustainable Cities

Computing the Environment presents practical workflows and guidance for designers to get feedback on their design using digital design tools on environmental performance. Starting with an extensive state-of-the-art survey of what top international offices are currently using in their design projects, this book presents detailed descriptions of the tools, algorithms, and workflows used and discusses the theories that underlie these methods. Project examples from Transsolar Klimaengineering, Buro Happold's SMART Group, Behnisch Behnisch Architects, Thomas Herzog, Aateauk are contextualized with quotes and references to key thinkers in this field such as Eric Winsberg, Andrew Marsh, Michelle A. Addington and Ali M. Alkawi.

Frontend Architecture for Design Systems

Performance Metrics for Sustainable Cities provides an overview of measurement systems and tools to enable communities to self-assess and benchmark their progress along a continuum of smart, intelligent, and sustainable development. It begins by explaining the importance of measurement and evaluation for cities and smaller communities, as well as future factors that will need to be considered and embedded into planning processes. Across 14 chapters, the book describes existing evaluation mechanisms that are being used for government funding decisions, awards of recognition, and new measurement systems to assess what makes a city smarter and more sustainable, such as broader sustainable goal targets (UN SDGs), green cities, fabrication cities, and compassionate cities. It presents examples of metrics used for important sustainability and livability concepts for cities such as how to measure trust, engagement, compassion, and circular economy, and so forth. The book ends with reflections on the feasibility of a holistic system of measurement and the implications of its implementation. This volume will be of great interest to students, researchers, and professionals of urban sustainability, smart cities, and sustainable communities.

LEED Lab

Ideal for students, independent designers, and entrepreneurs who want to expand their understanding of effective design in business, Identity Designed is the definitive guide to visual branding. Written by best-selling writer and renowned designer David Airey, Identity Designed formalizes the process and the benefits of brand identity design and includes a substantial collection of high-caliber projects from a variety of the world's most talented design studios. You'll see the history and importance of branding, a contemporary assessment of best practices, and how there's always more than one way to exceed client expectations. You'll also learn a range of methods for conducting research, defining strategy, generating ideas, developing touchpoints, implementing style guides, and futureproofing your designs. Each identity case study is followed by a recap of key points. The book includes projects by Lantern, Base, Pharus, OCD, Rice Creative, Foreign Policy, Underline Studio, Fedoriv, Freytag Anderson, Bedow, Robot Food, Together Design, Believe in, Jack Renwick Studio, ico Design, and Lundgren+I Lindqvist. Identity Designed is a must-have, not only for designers, but also for entrepreneurs who want to improve their work with a greater understanding of how good design is good business.

The Conscious Creative

Transdisciplinary Case Studies on Design for Food and Sustainability, a volume in the Consumer Science and Strategic Marketing series, analyzes the interconnectivity of sustainability, food, and design, demonstrating the presence of food design in various food-related fields of study. Broken into six parts, the book begins with the theory behind food and design. The following five sections include several case studies highlighting the different forms and applications of food design, including the use of food design in production and distribution, in food and restaurant businesses, in territory-identity, in social food design, and with regard to post-consumption. Using a case study approach to meet the needs of both academics and practitioners, Transdisciplinary Case Studies on Design for Food and Sustainability includes practical examples to illustrate food system challenges, to explain phenomena, and to build theory. Includes practical examples to illustrate food system challenges, to explain phenomena, and to build theory. Considers impacts, uses assessments, and scalability assets when presenting projects and case studies.Adressas practical problems in food design.
sustainable development.

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