

Preface

This book's origins lie in design methodology, especially the work of Hubka and his articulation of design science and theory. In my youth, I had the privilege of working with Hubka and was one of the first 'believers' in the fundamentals of design science that also influence this book. Over my career, I have worked to build these ideas into the teaching and research at the Chair of Engineering Design at the Technical University of Denmark. First, established in 1952 it is now flatteringly known as home to the 'Copenhagen School' of design research.

Fundamentally, this book builds on and synthesizes many years of research and crystallizes these for the reader based on my, and my co-authors, extensive teaching experience. Throughout, the Design Society and its conferences have allowed us to establish a strong network from which we have found inspiration and insight into many aspects of this book, e.g. design behaviour, reasoning, understanding of value and mindset, socio-technical design, staging of teams, and many more. Fundamentally, we think that these dimensions are the prerequisites for using methods and executing successful, professional design work.

Throughout the writing process, my guiding star has been the question: "what to tell the students?" be they candidates, researchers, professionals, or anyone wishing to understand and work in design. The writing process has been influenced by many inspirations and has been forged in constructive conflict and discussion with a close group of valued colleagues. In particular, I have drawn much insight from the Summer School of Engineering Design Research, where I have spent many years in dialogue with PhD students and design scholars.

It is my core belief that effective design comes from professional, structured understanding, and skill, in the same way that a musician must understand and have insight into music. However, in both cases, the 'player' needs the instrument, the understanding, and practice in order to hone their skills. As in music, not every piece should be played in symphony but also in playful jam sessions where we realize our own creativity. In its nature design is to play, to imagine, and act on our imagination. I hope to capture these attributes in our interpretations, mindset, and models.

Over the last decades, design has grown as a research field, as a profession, and as a science with hundreds of new papers and books each year. In this book, I aim to bring this expanding field back to its fundamentals, explaining the totality of design in conjunction with its core concepts: conceptualization, synthesis, and reasoning. Thus I (and my co-authors) offer the reader a new, more cohesive world of thinking, concepts, models, and methods that equip them to tackle all manner of design challenges. All our experience and research leads us to believe this world is productive.

Kongens Lyngby, Denmark
2015

Mogens Myrup Andreasen

Conceptual Design

Interpretations, Mindset and Models

Myrup Andreasen, M.; Thorp Hansen, C.; Cash, P.

2015, XVIII, 394 p. 267 illus., 102 illus. in color.,

Hardcover

ISBN: 978-3-319-19838-5