Preface

This book contributes a novel action-oriented, collaborative, and participatory perspective on design and innovation. Based on an exploration of the notion of staging inspired by a theatrical metaphor, it offers a number of in-depth case studies on how professionals practice staging processes for design and innovation.

The idea behind the book takes its main departure from attempts over more than 30 years to inform engineering curricula with sociotechnical dimensions in a Danish context at the Technical University of Denmark and Aalborg University. A number of the contributors to the book have been engaged in the development of the new engineering education programmes in design and innovation/sustainable design that have emerged since the start of the century. These programmes aimed at the creation of a new professional role for engineers enabling them to analyse and handle complex and wicked problems in close collaboration with relevant stakeholders in practice and to take on more social responsibility. The means to do this was to combine and integrate three competence areas: engineering and technical competences, creative design skills, and sociotechnical competences. Collaborative innovative practices, the focus on engineering and materiality and the integration of design skills in organisational practice were considered key challenges for innovation within industry as well as in the public domain.

A strong sense of a new professional identity grew from these activities emphasising university–industry collaboration and the staging and navigation of design and innovation processes. Here, the staging approach eventually became a way to enable these new engineering and similar professions to integrate sociotechnical understandings and collaborative concerns in their work with design and innovation. Many of the authors in this book have either served as teachers in these programmes and/or they have graduated from them and undertaken their postgraduate work in associated research programmes.

Staging as a research theme was developed with strong inspiration from and collaboration with the Scandinavian tradition of participatory design, and attempts to develop Science and Technology Studies (STS) including the shaping of technology into something actionable. Interestingly, staging design and innovation as a theme and the use of a theatrical metaphor seems to be able to attract attention at STS events as well as more engineering design and innovation management focused events.

With this background the book brings together theoretically informed reflection and practical experience from solving real life problems in design

and innovation. The close connection between theory and practice is reflected in the authorships in several ways, either by university researchers collaborating closely with industry and public authorities or by professionals undertaking academic research while working in the industry.

The foundation for the book was laid by a number of events hosted by the research group Sustainable Design and Transition at the Department of Planning at Aalborg University in Copenhagen where potential contributors were invited to share and discuss their approaches to staging design and innovation and submit their abstracts for potential contributions. As a next step the international network of collaboration was mobilized in order to create and make visible both theoretical inspirations and practices in staging design and innovation. Consequently, the collection of chapters assembled is based on a coming together of research contributions from a Scandinavian action-oriented tradition with an international outreach to research environments in STS, Design Anthropology and Co-design from Europe, Australia, China and the United States. Also worth mentioning is the European Union (EU) COST research network dating back to the 1990s, gathering technology studies and technology management around a common interest in the role of design in the shaping of technology, shared by Christian Clausen and Dominique Vinck. This book has in particular benefitted from such international synergies in the application of actor–network theory, and in understanding the role of intermediary objects and the theatrical metaphor in the development of an actionable staging approach to design and innovation.

In order to develop a collective whole from the individual contributions the authors were asked to comment on and relate to a preliminary paper presenting a foundational understanding of what could be meant by staging. Based on the comments received the piece was revised and appears as the present Chapter 2 in this volume.

The team of editors was set up to combine experience with the younger generation's fresh ideas and to combine internal and external perspectives. The editors have reviewed all of the chapters in the format of three-page abstracts for selection, and through two rounds of review of the full version of the chapters. This process has enabled a sound cross-breeding and mutual inspiration across the chapters and led to a well-integrated volume grounded in a variety of cases and approaches, but all contributing to the same project.

We hope this book will be of inspiration to the emerging groups of professionals facing sociotechnical challenges in the work with design and innovation and their educators.

Copenhagen and Lausanne, June 2020

Christian Clausen, Dominique Vinck, Signe Pedersen and Jens Dorland