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Introduction: Foresight by Design: Dealing with uncertainty in Design Innovation

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Introduction

The role of design in business has gradually expanded beyond merely creating and communicating better products. Design is now being understood by its totality of value-creating activities, and the competencies that span across innovation, product development, marketing and strategic decision-making. Design has moved from historical product and branding functions to formative ideation and coordination of product and processes across all dimensions of organizational value-creation. Design practices rely on engaging with multidisciplinary stakeholder teams responsible for creating sustainable value propositions that ensure the organization’s future.

Ensuring an organization’s future requires another emerging practice, that of strategic foresight. The dynamic complexity of business in globally networked markets and partnerships requires product and service design teams to engage fully with foresight scenarios, continual trend scanning, and futures creation. There is a growing awareness that business organizations, regardless of industry or size, are faced with unprecedented uncertainties over social analyses, globalization, and technology revolutions, as observed by the increasing interest in future studies.

Indeed, organizations are required to transform themselves, rethink their business models, innovate, and envisage alternative futures in order to adapt their approach to business, and the way they engage with informed and often empowered internal and external stakeholders. The necessity for businesses to transform, just to survive in their business segment, has created new demands for foresight, value co-creation, envisioning, and design research for assessing value for users and markets.

As design and innovation are becoming increasingly synonymous in both meaning and reach (e.g. products, services, business models, eco-systems, etc.), the priority task of the
world’s top management, economic, and educational leaders is to effectively manage knowledge and to generate an innovative (corporate/community/learning) culture.

The themed track features 5 submissions from 12 authors, who share important insights, knowledge, and research outputs relevant to design research, strategic design and innovation management.

The papers explore varying foresight methods (Delphi, Three Horizons and futures scenarios) and futures thinking approaches through co-design, improvisation, business model prototyping and sensemaking. Design methods and approaches have been applied in a number of diverse contexts and applications to help better understand how designers can deal with uncertainty in design innovation.

The goal of this track is to draw out patterns and themes from these respective cases to begin to formulate an emerging proposal or framework applicable to Foresight by Design. The track features 5 submissions from 12 authors, who share important insights, new knowledge, and research outputs relevant to foresight research methodologies, strategic design and innovation management.

Introducing a design-inspired foresight approach, Buhring’s paper contributes to our limited understanding of how designers and interdisciplinary innovation teams realize futures that are desirable. Through applied research, the author employed a Delphi-like method to gain insights from industry experts, while eliciting their consensus of distant horizons as a foundation to develop futures scenarios in core pillars of the economy (Financial Services, Wealth Management, and Private Banking). Through lessons and first-hand experiences, we learn about design approaches that can assist interdisciplinary innovation teams apply futures thinking techniques to deal with uncertainty in Design innovation.

In a similar vein, Price, Wigley and Metthews present a design-led innovation approach and its relationship to sensemaking as a future-oriented mechanism within its framework. Through action research, the authors present their findings that support sensmaking as a value-creating activity during the design and innovation process, while highlighting critical skills needed by innovation catalysts that must develop and managing knowledge at interpersonal levels.

Still within design and innovation, Sarantou and Miettinen describe in their paper the connective role of improvisation in dealing with uncertainty during the invention and design process stages. Their work highlights the role of improvisation in design thinking, which is supported by several years of field studies in Namibia and Australia. A framework is presented, which is designed to bridge the gap between design process theory and practice through improvisation techniques. With this approach, the authors advocate improvisation as an important aspect of managing uncertainty in design thinking and inventions.

Applying design thinking competencies to business model innovation, Amano, Brassett, Green, and Hestad highlight in their paper the literature that supports the need for prototyping, and the process dimensions applied during the development stages. To this end, the authors argue that prototypes are not simply representations of objects, instead, they are tools that enable designers can employ to envisage hypotheses about the future. As such, their contribution is the analysis of existing prototyping process models, while
drawing attention to the importance of defining intangible prototyping perspectives in context of business model innovation.

Finally, this themed track offers insights as to the value of design residencies in future Design museums. Here Coulson and Valentine’s paper presents through exploratory workshops with diverse groups of designers, a conceptual model on how future museums can fully embrace designer-community collaborations by engaging patrons in active learning activities through co-creation, visualization, and the imagination of new possible futures.

With this eclectic mix of ideas and contributions, the Foresight by Design track wishes to further emphasize the value of strategic and creative foresight in design and innovation. Moreover, the underpinning goal is improving the designer’s and the organization’s learning to adopt new methods in their innovation practices.

About the Track Facilitators

**Dr Jorn Buhring** is a Research Assistant Professor at the PolyU School of Design; his research focus is on human-centred value innovation with emphasis on user engagement in experiential settings. Addressing future perspectives, Jorn explores design foresight, vision and fiction approaches through applied research. His aim is to advance emerging design processes in business through vision-provoking futures thinking.

**Dr Sam Bucolo** is a Professor of Design Innovation at UTS, who’s role is to help organisations grow through Design Led Innovation, a process which enables firms to better understand the problem they solving and develop new leadership mindsets to transform their organisation. Sam has collaborated widely with a diverse set of industry partners and sectors, he has led many government initiatives on embedding design within organisations.

**Dr Peter Jones** is Associate Professor at OCAD University where he teaches in the Strategic Foresight and Innovation, and Design for Health MDes programs. For over 20 years Peter has led large complex software design projects through human-centred research for emerging technologies on a large scale. He was involved in expert systems and knowledge engineering at AT&T Bell Labs projects, client-server and early distributed computing applications.
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