**Design for Business:
Research Conference**
Program

12 - 13 May
Melbourne, Australia

Presented by

ideason**design**

Presented in partnership with Creative Victoria
and Swinburne University of Technology.

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SWINBURNE
UNIVERSITY OF
TECHNOLOGY

CREATIVE
VICTORIA

State
Government
Victoria

Contents

In its fifth year, this trans-disciplinary conference presents the latest studies on the role of design as a strategic resource in the development of new business platforms, communication strategies, products and services.

There's a groundswell of interest in the role that design and design thinking is playing in the fortunes of companies that establish a premium position in their markets and continue to grow and prosper over time.

Such business advantage is not isolated to particular sectors; the success stories are coming from across an increasing range of industries. A consistent factor seems to be that design in these companies is used as a strategic resource, championed at the highest levels of management and embraced across the organization.

'Design for Business' is a multi-platform program that presents business and design researchers and practitioners, who are leading the way in building knowledge and skills in the application of design and design thinking to improve business performance. The program explores design as it is being applied not only to product development but also to the re-imagining of existing products, enhancing the customer experience, improving work place environments, right through to re-imagining strategic direction and the future vision of companies and businesses.

The Design for Business: Research Conference is a world class platform that brings together leading scholars, academics and professionals from around the world to present research on large corporate and government organizations, small and medium-sized enterprise (SME) business development, creative thinking, corporate and business innovation from fields such as design, business, management, marketing, the public sector and entrepreneurship.

The 2015 program will include presentations on:

- Public Sector Innovation and Initiatives
- Business Model Design and Innovation
- Design Thinking for Creative Entrepreneurs
- Educating for Tomorrow
- Digital Design Innovation
- Food Design
- Strategic Design
- Consumer vs Customer vs User
- Designing New Markets, Products and Packages
- New Product Design and Innovation
- Urban and Spatial Design and Innovation

This conference is presented in partnership with Creative Victoria and Swinburne University of Technology as a platform to encourage discourse on design and its benefits to business, and help various stakeholders, such as business managers, marketers, economists, entrepreneurs and innovators, to further understand the role of design in creative value.

Over two days we will discuss the theory and practice of design and how the two can inform and interact with one another and offer strategic advantage that can lead to improved productivity and increased economic prosperity for business.

Conference Chairman and Convener

Dr Gjoko Muratovksi
Auckland University of Technology
New Zealand

Dr Gjoko Muratovski holds a PhD in Design
Research and Corporate Communication Strategies,
with specialization in Branding and Public Opinion
Management. He has over 20 years of international
design experience spanning from Europe and Asia,
to the USA and Australia. Over the years, he has
been working for, or collaborating with, a wide range
of government, non-government, and corporate
organizations, including being an Advisor on Brand
Development Strategies for the European-based
agency IDEA Plus Communications whose clients
include Porsche, Audi, Volkswagen, McDonald's,
and the Heineken Group.

Dr Muratovski is currently a Senior Manager:
School of Art & Design and Head of Department:
Communication Design at the Auckland University of
Technology (AUT). AUT's School of Art & Design is
ranked as No.1 in New Zealand and in Top 50 in the
World by the QS World University Ranking.

Welcome from the Chairman

It is my great pleasure to welcome you to the 2015
'Design for Business' conference - a landmark event at
the annual Melbourne International Design Week. What
started five years ago as a research conference aimed
at establishing a better relationship between design and
business communities, is now a major multi-platform
program with a broad appeal and a global outreach.
Today, we no longer see ourselves only as conference
facilitators, but as promoters of a new culture of cross-
disciplinary research and collaboration between design,
business, government, and the public.

As an organization, we believe in fostering a community
interested in collaboration between divergent fields
of expertise. We also believe in building relationships,
rather than working in silos. And we believe that
tackling complex issues together is important in
finding universally accepted solutions. But we are
not only about research. We see this event as a great
opportunity for establishing new networks and contacts,
and for reinvigorating old ones. It is this interaction
and exchange that allows for new collaborations to
flourish and for new opportunities to emerge. That is
why once a year we all come together at the Melbourne
International Design Week for a common purpose: to
get to know each other little bit better and to exchange
new ideas and information.

When we first started this program we had a simple
premise in mind: we wanted to highlight the value of
design as a strategic business resource. When we
launched the idea of the conference our first step

was to start a conversation, not only amongst design
academics, as most design conferences do, but
between designers and various stakeholders that deal
with design but are not necessarily designers, such
as business managers, marketers, manufactures, and
entrepreneurs. After the first year we understood that
our sphere of interest should expand. As a result we
agreed to allow for the initial premise of the conference
to evolve further and to address the issue of design a
strategic resource that adds value not only to business,
but also to society at large. In doing so we involved a
broader network of stakeholders, policy-makers and
activists with the program and as a result, many new
voices joined the discussion and started participating
in the conversation. Now we regularly feature talks
from social innovators or from experts that work with
various government departments. We also work very
closely with the State Government of Victoria who is
one of our biggest supporters through their funding
and advisory body, Creative Victoria.

And in return, over the course of two days we will
offer you an exciting and diverse event, starting with
a Research Forum. At this Forum we will present to
you the latest research in design for business and
for society, and traditionally, we will open the Forum
with a Keynote Address. This year the honour goes to
Professor Cees de Bont, the Dean of the School of
Design at the Hong Kong Polytechnic University - one
of the most prestigious design schools in the world. As
a person who prior to moving to the university sector
held global responsibility for marketing intelligence and

strategy at Philips for 10 years, Professor de Bont is ideally suited to deliver the ceremonial Keynote Address of the conference. In his talk, Professor de Bont will address a topic of current interest: the global rise of Chinese businesses and on the design culture within them. He will then be followed by an exciting line-up of academic and industry-based presenters. All of the studies at this forum have been double-blind peer reviewed by our international panel of experts and have been selected on the basis of their research contribution to the fields of design and business. And in a manner typical for our conference the topics will be highly diverse - ranging from design for airplane manufacturing to food design.

This year, we will introduce a new component to the program - the Round Table Symposium. The purpose of the Symposium is to serve as a platform where academics, researchers, professionals and executives can come together and discuss areas of common interest. We hope that this interaction will help initiate a much needed discussion that can be useful to the development of both research and practice in these fields. This program will include five tracks, broadly labelled as Social Innovation, Corporate Innovation, Creative Entrepreneurship, Business Support, and Product Development. Each of the participants will have the opportunity to present their view or findings on a similar topic of interest and then to participate in a facilitated panel discussion. The audience will be welcome to join in and direct questions to the panellists and the moderators.

The Business Advantage Breakfast Seminar - a well-established stand-alone event at the Melbourne International Design Week - is now an integral part of this conference, allowing for a more consolidated design and business program. The Seminar is an event that brings together prominent designers, business leaders, and public influencers for a series of talks and Q&A.

This year, the Seminar will feature two exciting presenters - Jay Greene and Miki Setlur. Jay Greene is the former editor at BusinessWeek and author of *Design Is How It Works*. Greene will use this opportunity to talk about his in-depth interviews with CEO's from leading businesses ranging from Virgin Atlantic and Nike, to Lego and will discuss how these companies use design in their business. Miki Setlur, as a Senior Product Designer from Twitter, will talk about how one of the world's largest and most successful social media platforms has managed to integrate design into their DNA. The talks will be preceded by a networking event where our guests, partners and delegates can meet and network in casual and informal setting over breakfast.

Finally, as in the previous years, we will close the conference with what is now seen as our traditional on-stage 'live interview' with a distinguished guest. On this occasion we have invited Lisa Strausfeld - an award-winning Information Architect and Data Visualisation entrepreneur - to join us for the closing ceremony. Strausfeld has experience working for Bloomberg LP and for the Gallup Organization, and she was a partner at the renowned design firm Pentagram. She holds

degrees from Brown University, Harvard University and from MIT's Media Lab, and she held teaching positions at Yale and at the New York University. The topic of our conversation will revolve around the importance of Big Data to businesses and governments, on what are the best ways that this data can be shared with the general public, and how the role of the Information Architect will be defined in the future.

And then, once the conference will come to an end, we will continue disseminating our ideas, our knowledge, and our expertise further. Together with our publishing partners, Intellect Books & Journals and Chicago University Press, we have published a three-part book series, *Design for Business*. The book series brings together a range of studies presented over the years. In addition to this, we also publish a bimonthly publication called *Executive Summary* where we publish summaries of selected research papers, in a format that is adapted for general audiences. The executive summaries are hand delivered to the Top 500 Australian businesses and to the Top 40 New Zealand businesses, and distributed in digital format to over 15,000 small and medium-sized enterprises across Australia and abroad. Further more, we are also pleased to say that in addition to this, we have recently launched an associated academic journal - the *Journal of Design, Business & Society*, which is now part of the Intellect family of journals. And most excitingly, we have tapped into our large peer network and started building an online database of international research experts that we could link to various organisations interested in design and business innovation.

In terms of international collaboration, so far we have engaged with organizations such as ICOGRADA, the Design Management Institute, the European Academy of Design, Designers Institute of New Zealand, the global DESIS Network, and many others. And we plan to continue to expand our networks in the future. So, if you represent a like-minded organization interested in collaborating with us, we would love to hear from you. For more information on all of our activities, please visit our website.

And finally, I have to say that none of this would have been possible without the generous support of our partners and sponsors such as the State Government of Victoria through Creative Victoria, Swinburne University of Technology, the School of Art and Design at Auckland University of Technology, the School of Business at the RMIT University, the Australian Centre for the Moving Image (ACMI), the National Gallery of Victoria International, Intellect Publishing, Desktop Magazine, and many others - including yourselves. And that is why I would like to use this opportunity to say Thank You to all of you. To all our partners, speakers, delegates, participants, guests and sponsors, on behalf of the Executive Group and the Advisory Board, thank you for your continuing support to the development of this multi-platform program.

With our best regards,

Dr Gjoko Muratovski
Conference Chairman

intellect

Publications

Material presented in these publications are subjected to rigorous peer review from a panel of over 100 internationally acclaimed research experts and published globally through Intellect Books and their partner University of Chicago Press.

Connect James Campbel from Intellect throughout the conference to discuss publishing opportunities or email james@intellectbooks.com.

Intellect are offering a discount to delegates of up to 50% on conference publications and subscriptions.

Design for Business: Executive Summaries

A free bi-monthly bulletin sharing executive summaries of international research papers about design for business. Sourced from papers published in the Design for Business: Research book series and Journal of Design, Business & Society publication.

ISSUE 1
ISSUE 2
ISSUE 3
ISSUE 4

Design for Business: Research

One of very few book series to bring together business and design, this collection features essays sourced from the Design for Business: Research conference presented by Ideas on Design, on topics ranging from branding and sustainability to business-driven design education.

VOLUME 1
VOLUME 2
VOLUME 3

Journal of Design, Business & Society

The Journal of Design, Business & Society is a scholarly peer reviewed journal that publishes high-quality academic papers, case studies, and critiques that examine the role of design in business or society, as well as book reviews of relevant literature.

ISSUE 1
YEARLY SUBSCRIPTION

intellect

publishers of original thinking

NEW JOURNAL

INTERNATIONAL JOURNAL OF FOOD DESIGN

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The *International Journal of Food Design* (IJFD) is the first academic journal entirely dedicated to Food Design research and practice. We aim at creating a platform for researchers operating in the various disciplines that contribute to the understanding of Food Design.

Although the journal is open towards different background disciplines, knowledge and expertise, it only focuses on collecting any Food Design-related research outcome: research that somehow combines food and Design. We define Food Design as simply the discipline that connects food and Design: Design applied to food and eating, or food and eating investigated from a Design perspective.

Call for Papers available from
www.intellectbooks.com

DESIGN ECOLOGIES

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Dr. Shaun Murray
Eniatype
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Design Ecologies foregrounds the inextricable connection between human communication and ecological accountability in architectural design. This burgeoning field has the potential to become a far-reaching discipline, bonding a community that crosses over into and out of architecture, environment, interaction, urbanism, and performing arts and communication.

Through original design exploration ranging in scale, the journal will proffer a critical vision towards the built environment, and promote ecological transitions within local and global contexts. It will challenge the everyday emerging practices of architectural design by offering a transdisciplinary framework for design production.

Call for Papers available from
www.intellectbooks.com

'**Research has become increasingly significant in the world of business; therefore when designing products, services, experiences and processes ...research, scholarship and experimentation must inform designers' work.'**

**University Distinguished Professor
Ken Friedman**

Day 1: Tuesday 12 May
Australian Centre for the Moving Imag (ACMI)

8.30am	Registration Doors Open
9:00am	**Research Forum: Session 1** Cinema 2
10.31am	Morning Break
10.51am	**Research Forum: Session 2** Cinema 2
12.41pm	Lunch at Riverlands Bar
1.40 pm	**Round Table Symposium: Track 1 - Social Innovation** Studio 1
	Round Table Symposium: Track 2 - Business Support The Cube
3.05pm	Session Break
3.20pm	**Round Table Symposium: Track 3 - Product Development** Studio 1
	Round Table Symposium: Track 4 - Corporate Innovation The Cube
4.37pm	Close

Please note:
Track 1 & 2 and Track 3 & 4 are parallel sessions

Day 2: Wednesday 13 May
National Gallery of Victoria International (NGVI)

7:30am	Business Advantage: Breakfast Seminar [1]
9.30am	Doors Open
10:00am	**Research Forum: Session 3** Clemenger Theatre
11.19am	Morning Break
11.39am	**Round Table Symposium: Track 5 - Creative Entrepreneurship** Clemenger Theatre
12.59pm	Lunch in the Great Hall
2.09pm	**Research Forum: Session 4**
4.00pm	Close
4.15pm	Network Drinks - Curve Bar (Arts Centre Melbourne)

[1] Available to Business Advantage ticket holders only

Day 1: Tuesday 12 May

Research Forum: Session 1

Keynote presentation
Lessons from China: A paradise or graveyard
for designers?
Cees de Bont

Making sense of flying: Designers give sense to the
aviation manufacturing industry
Julia Debacker, Jürgen Tanghe, Christine De Lille

Innovation is in the eyes of the beholder: The case of
the ageing consumers
Gabriella Spinelli

Research Forum: Session 2

Redesigning the energy sector — Co-creating new
business models using strategic visualization
Stine Degnegaard, Rex Degnegaard

A design approach to innovation in the Australian
energy industry
Tim Stevenson, Cara Wrigley, Judy Matthews

Designers thinking: 7 new ways to add value to
flexible workplaces
Agustin Chevez Bernaldo de Quiros, Steve Coster,
Cameron McIntosh, Paul Sloman

Food design for business
Francesca Zampollo

Round Table Symposium:
Track 1 - Social Innovation

Diagnostic design: A framework for activating civic
participation through urban media
Ian McArthur, Martin Tomitsch

A socially responsible design to promote cultural
self-confidence — A case study of a village revitalization
project design
Fang Xu, Fujian Mo, Yuanyuan Chen

Whole of life, whole of use: Rethinking residential design
in Australian cities
Andrew Martel, Brian Kidd

Design as knowledge work: Understanding design in a
knowledge economy
Amanda Bill

A design-led approach to improving the health of police
personnel in India
Brajendra Nandan Panda

Round Table Symposium:
Track 2 - Business Development

Diversifying product offerings for Australian
manufacturers through successful examples of
university-industry engagement
Blair Kuys, Gianni Renda

Unlocking design in business: Symbolic interactionism
is the key
Jan Jervis, Jeffery Brand

Design thinking model for business
Philip Whiting

The market for design services: Insights from
interviews with Australian firms
Michael Rowley Falk, Kwanghui Lim, Don O'Sullivan

Round Table Symposium:
Track 3 - Product Development

Embracing the tall poppy: Overcoming tradition in
customer jewellery design preference
Jason Kennedy

Supply network performance and Adinkra industrial
production challenges in Ghana
Josephine Aboagyewaa-Ntiri, Arun Vijayan,
Mac Fergusson

Future scenarios for design and craft: The Spanish case
Manuel Martínez Torán, Chele Esteve Sendra

Bridging the gap between marketing strategy and
design teams: a method to facilitate strategic styling
decision making within a company
Janneke Blijlevens, Charlie Ranscombe

Round Table Symposium:
Track 4 - Corporate Innovation

A holistic approach to corporate innovation
Frank Washko

The role of design-led innovation in de-risking uncertain
futures for the Australian insurance industry
Alexander Garrett, Cara Wrigley, Nick Russell,
Judy Matthews

Design, visualisation and storytelling at Deloitte and its
contribution to business strategy
Lauren Tan, Shane Currey, Irit Pollak, John Hayles,
Craig Hutchinson

Design innovation: A tool for value-adding to the Papua
New Guinea balsa wood industry
Nathan Kotlarewski, Blair Kuys, Christine Thong

Day 2: Wednesday 13 May

Research Forum: Session 3

The design thinking mindset: An assessment of what we
know and what we see in practice
Jochen Schweitzer, Lars Groeger, Leanne Sobel

Exploring the role of mindset in design thinking:
Implications for capability development and practice
Zaana Howard, Melis Senova, Gavin Melles

Round Table Symposium:
Track 5 - Creative Entrepreneurship

A design research strategy for advancing the
technological and competitive strength of Australian
manufacturing Small to Medium Enterprises (SMEs)
Roderick Walden, Stefan Lie, Berto Pandolfo,
Cathy Lockhart

Shaping futures through new meanings: Design projects
that transform business
Marta Morillo Rodriguez, Claudio Dell'Era,
Roberto Verganti

Why should business value creativity?
Ron Corso, Stuart Gluth

Research Forum: Session 4

Design as a competitive advantage in startup fundraising
Nico Florian Klenner, Lasse Hartz-Olsson, Brett Capron

Service design integration with business development:
Six Finnish case studies of digital service development
Piia Rytilahti, Simo Rontti, Satu Miettinen,
Hanna-Riina Vuontisjärvi

The value and importance of design when branding for
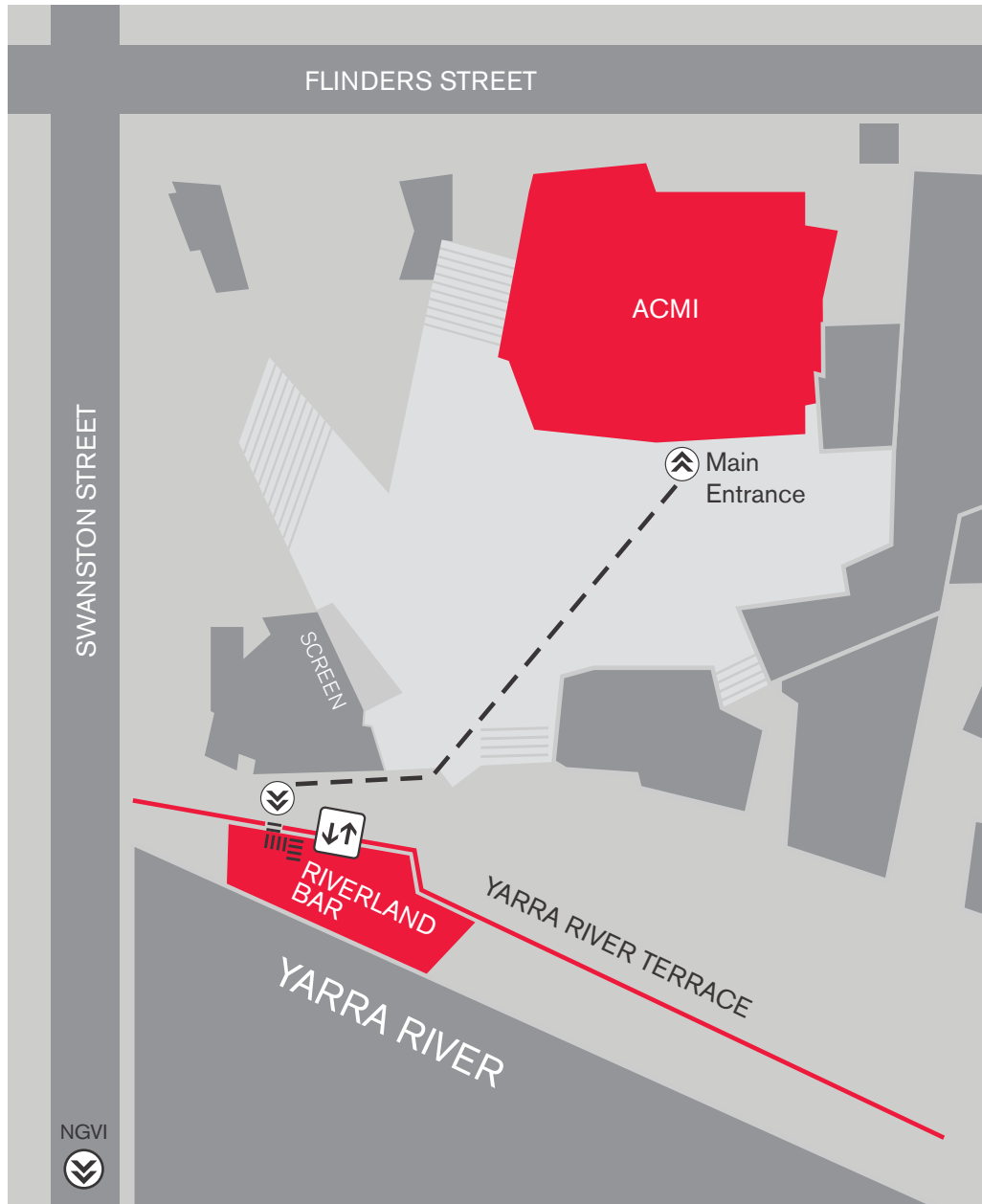social media. Models for a framework analysis
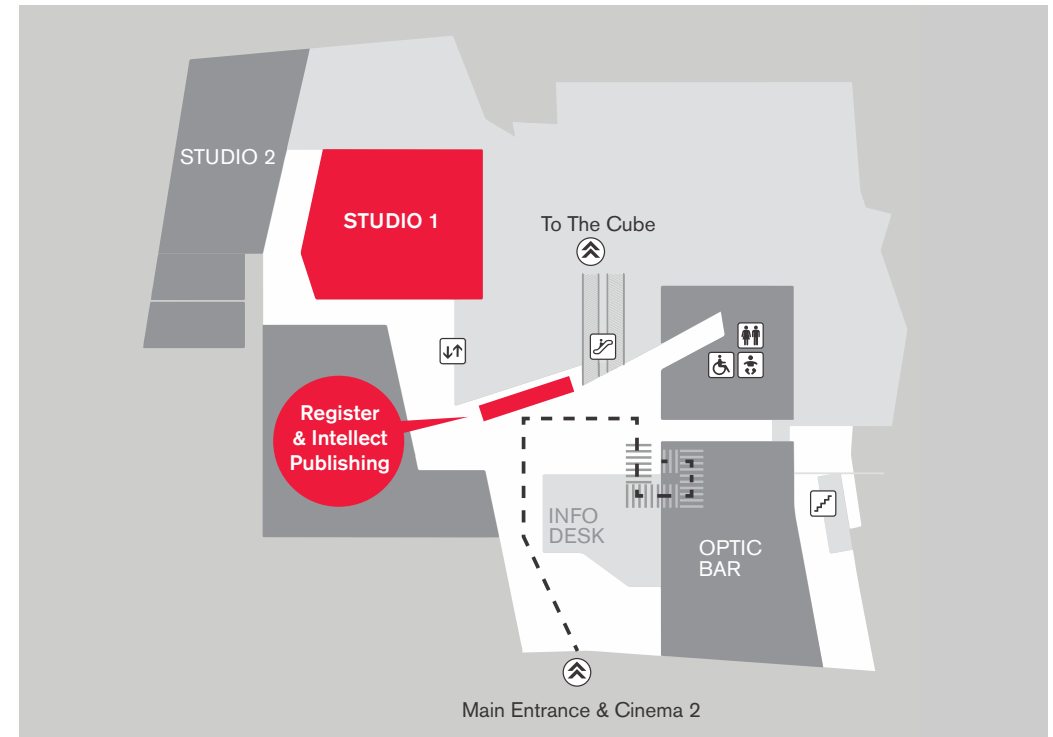Sara Gancho, Rachel Cooper, Martyn Evans

A conversation with Lisa Strausfeld
Lisa Strausfeld, Gjoko Muratovski

Australian Centre for the Moving Image (ACMI) & Lunch Venue

ACMI: Registration

FLINDERS STREET

SWANSTON STREET

ACMI

Main
Entrance

SCREEN

RIVERLAND
BAR

YARRA RIVER TERRACE

YARRA RIVER

NGVI

STUDIO 2

STUDIO 1

To The Cube

Register
& Intellect
Publishing

INFO
DESK

OPTIC
BAR

Main Entrance & Cinema 2

ACMI: The Cinema 2 - First Session

CINEMA 2

CINEMA 1

SBS OFFICES

ACMI: The Cube

GALLERY 1

Registration
Desk

THE
CUBE

GALLERY 2

School
Entry

SCREEN WORLDS

To Main
Entry
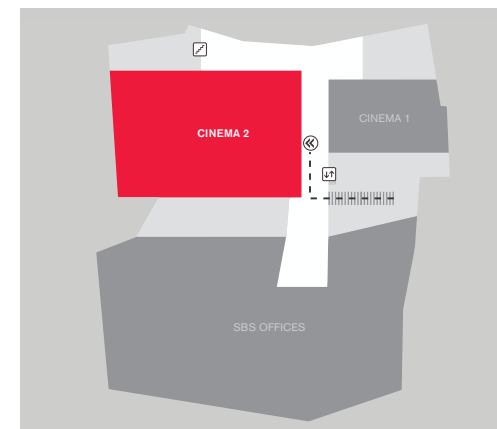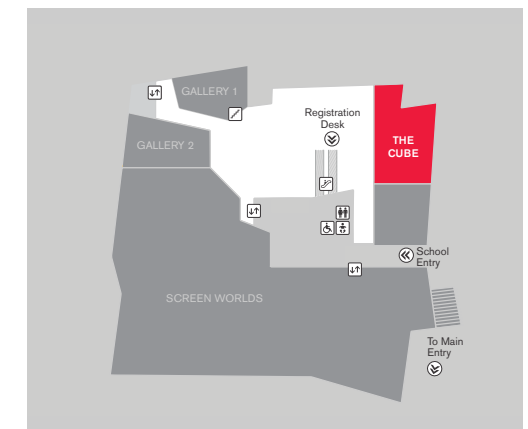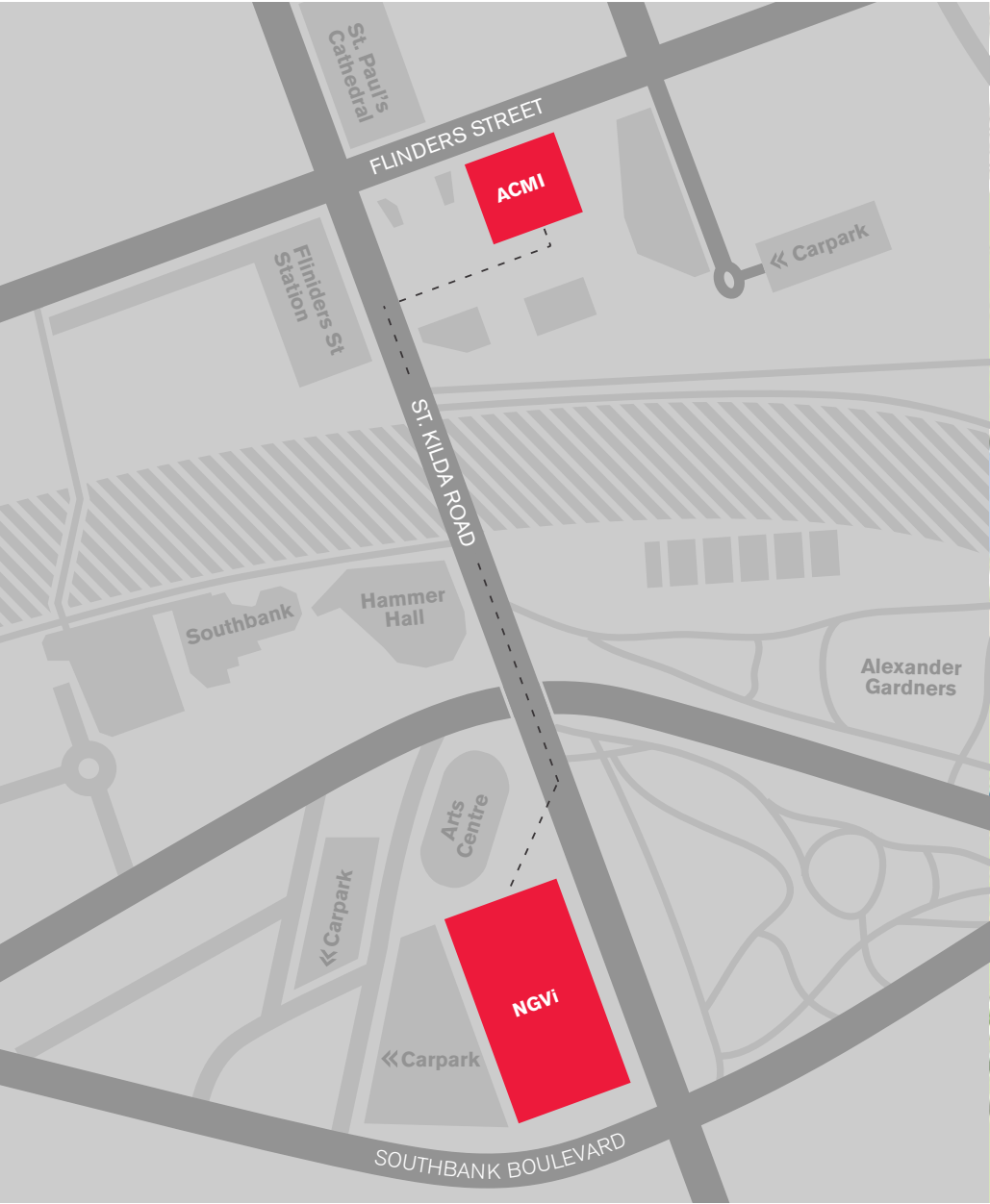
NGVi: Clemenger Theatre, Lunch, Network Drinks

St Paul's Cathedral

FLINDERS STREET

ACMI

Flinders St Station

« Carpark

ST. KILDA ROAD

Southbank

Hammer Hall

Alexander Gardners

Arts Centre

« Carpark

NGVi

« Carpark

SOUTHBANK BOULEVARD

Arts Centre Melbourne

Cafe

ACMI

Curve Bar

ST KILDA ROAD

Entrance before 10 am

NGV International

Clemenger Theatre

Entrance after 10am

The Great Hall

SOUTHBANK BOULEVARD
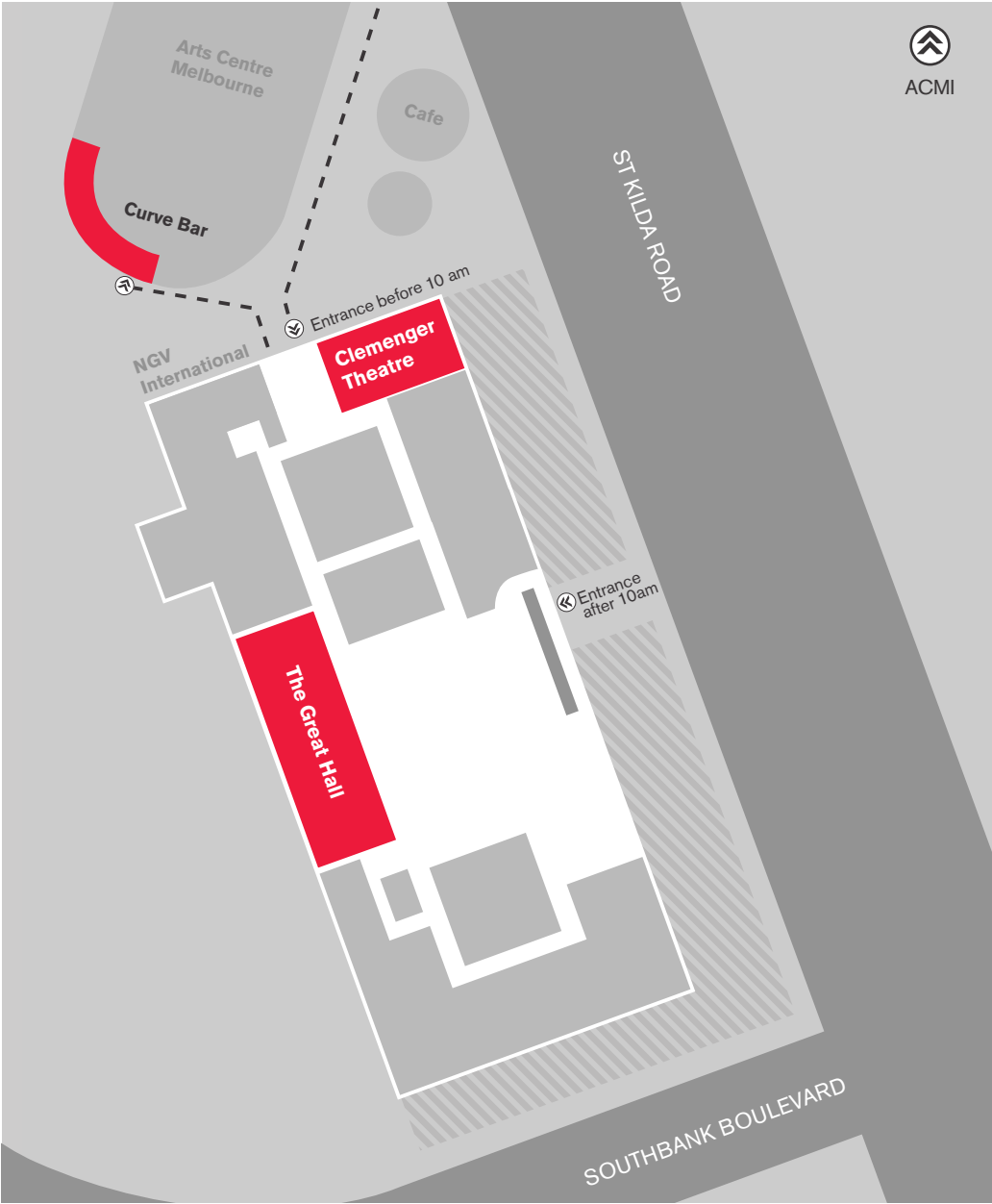
Research Forum:
Session 1

Lessons from China:
A paradise or graveyard for designers

Keynote Presentation

The vast amount of design students that are being taught in design are either very artistic or can be seen as engineers. The middle ground of those who can integrate between people and technology are scarce. China masters manufacturing rather well, often thanks to the support of Taiwanese or German expertise. Companies like Haier, Huawei and Lenovo have reached number one market positions on a global scale. These companies have gone through the evolution from original equipment manufacturer (OEM) via original design manufacturer (ODM) to original brand manufacturer (OBM) in very different ways. Much more recently the Chinese internet companies (Tencent, Alibaba and Baidu) have become highly profitable giants in less than 15 years. These internet companies developed services that were inspired by their American counterparts, but now go beyond western companies in terms of user-centered innovation.

Those designers who primarily have good drawing skills or good engineering skills will compete against many skilled, low-paid, Chinese designers. Those who can integrate between technology and people will be in high demand, but will face that companies with a manufacturing background are not always open to adopting design-driven innovation. The most promising future, or paradise, is for those designers who can connect the advanced design capabilities of the service-oriented internet companies with manufacturing companies to generate breakthroughs in wearable electronics and in health-care services for the aging population.

Professor Cees de Bont
Hong Kong Polytechnic University (PolyU)
Hong Kong

Professor Cees de Bont is Dean of the School of Design at Hong Kong Polytechnic University (PolyU) and Swire Chair Professor of Industrial and Product Design. Prior to his appointment at PolyU, he held global responsibility for marketing intelligence and strategy in Philips for 10 years and Dean of Delft University of Technology's Faculty of Industrial Design Engineering for 7 years. Both the design schools in Delft and Hong Kong contribute strongly to the academic development of the discipline and they are consistently ranked among the best design schools in the world (Business Week, Business Insider). Professor de Bont founded the Creative Industry Scientific Program (CRISP) on product-service systems in the Netherlands, which is the largest ever research program in the sector, connecting top design schools, design firms, multi-national corporations, etc. He chaired the Dutch Innovation Centre for Electric Road Transport for many years. Currently, he is Chairman of the Jockey Club Design Institute for Social Innovation, the first of its kind in an Asian design school. He is also in the board of directors of the Hong Kong Design Centre and of Police Married Quarters, which is a new hub for the creative industries in Hong Kong.

Making sense of flying: Designers give sense to the aviation manufacturing industry

Julia Debacker
Delft University of Technology
The Netherlands

Keywords

design, sense making, sense giving, aviation, manufacturing, supplier, airlines, strategic change

This paper aims to extend the body of knowledge on Sensemaking as a capability for organizational and strategic change by investigating how design could support Sensemaking activities. In order to investigate how design methods can consciously influence Sensemaking activities and how this supports an organization, the case of a large aviation industry manufacturer is taken. The company under investigation is dealing with implementing their newly established strategy to its everyday work and product innovation practices moving towards service enabling systems. This strategy has been chosen as industry is forced to find new drivers such as passenger experience to gain competitive advantage. As a consequence, manufacturers must also change strategy to support airlines in achieving their goals. Sensemaking is an essential mechanism manufacturers use to understand the service goals of airlines.

Sensemaking is defined as the process of cognitively organizing the unknown in order to give it meaning and being able to act on it. In three separate moments of the innovation process, design methods were used to explore their ability to support the manufacturer in Sensemaking activities.

The results show that Sensemaking allows the new product development team to place their work in a broader context: that of service, service providers and users. This moves the entire organization into a more service-oriented mind-set and in line with company strategic goals. Our findings come back to three types of decisions a designer can make: the people participating, the goal of the workshop and the designed tools used to support Sensemaking.

Julia Debacker is a designer with an eye for innovation and service excellence. She holds a BA in Industrial Design from Milan Polytechnic University, an MA in Design Management from University of Arts London and is currently a PhD researcher in Service Design for Aviation at the Faculty of Industrial Design Engineering at Delft University of Technology, The Netherlands, where she is also a Lecturer in Service Design. She has a personal interest in inflight service delivery processes, service differentiation and user experience, having worked for multiple airlines. During her career spanning several countries in Asia, Europe and the Middle East, she worked in brand differentiation and business development. Currently, she works at Zodiac Aerospace where she develops strategies for user experience & service innovation.

Making sense of flying: Designers give sense to the aviation manufacturing industry
(continued)

Jürgen Tanghe
Delft University of Technology
The Netherlands

Jürgen Tanghe is Lecturer and Doctoral Researcher at the Delft University of Technology. Jürgen's main research area is the role of design in business Strategy and organizational change and the Design of Services. He holds a Master's degree in Psychology and Business Administration. Outside academia, Jürgen is a practitioner as Service Design and Customer Experience Leader at Crossroad consulting, located in Mechelen, Belgium. He advises and coaches service companies on change and innovation.

Dr Christine de Lille
Delft University of Technology
The Netherlands

Christine De Lille is an Assistant Professor at the Faculty of Industrial Design Engineering at Delft University of Technology. She investigates "Designing User-Centered Organizations" with a focus on the practice of small to medium-sized enterprises (such as Difrax, Bammens and Alrec Displays), supporting organizations such as the Dutch Chamber of Commerce and Flanders InShape as well as the aviation industry (for companies such as KLM, Schiphol Airport, Zodiac Aerospace). Main areas of her work include service design and user-centered design, and how this impact organizations. Christine is involved in the Creative Industry Scientific Program funded by the Dutch government on creating a body of knowledge on Product Service Systems (PSS). Christine is editor of the CRISP magazine, member of the Design Research Society, co-founder of its Design Management SIG and organizer of various conferences. Christine De Lille lectures primarily in the Master program 'Strategic Product Design' at her faculty in Delft, and is also a frequent guest speaker to other universities and schools as well as various networks in practice such as the Dutch Design Management Network. One of her classes was awarded the Crystal Cabin Award in 2014, a prestigious award within the aviation industry.

Innovation is in the eyes of the beholder: The case of the ageing consumers

Keywords

innovation, inovation overload, product design, ageing consumers, inferential analogy

This research considers innovation from the user point of view in order to enhance the design and commercialisation of technology-based products. Previous studies predominantly analyze innovation as a function of technology advantage; that is how new competitors who have advanced R&D can challenge the incumbents' position. However little is understood about the potentially ambiguous position that technology-based products may have on the market due to the diverse perception that different market segments may hold of such products. Consequently innovations studies are limited in overlooking innovation as function of users'/consumers' perception. The findings of this research reveal that innovation may be disruptive and evolutionary at the same time for different consumers groups. Consumers' perception of technology products can influence their decision-making pre-purchase as well as their level of adoption. Analogical learning, or the inability to apply it, is in part responsible for the choices that consumers make when considering whether to purchase, use and discard technological products. Exposure and familiarity with the product category are also factors that influence consumers' perception, especially among the ageing segment of the population. The ambiguity of products' perception represents an unusual puzzle for businesses that are now required to alter design features and marketing communication strategies to appeal to different consumers despite the product is inherently the same from a business point of view.

Dr Gabriella Spinelli
Brunel University
United Kingdom

Gabriella's research interests have attracted external funds from the Engineering and Physical Sciences Research Council, the National Police Improvements Agency, the technology Strategy Board and The DAIWA foundation. She has 15 years experience in designing interaction, technologies and communication, starting from the users. Her recent research interests locate Gabriella's expertise is at the interface between design and consumer studies where most of her work now resides.

Prior to her doctoral studies Gabriella worked at the research centre of Domus Academy (Italy), the Human Factors and Ergonomic Lab at Eastman Kodak (NY) and the Appliance studio (UK). Throughout her academic career Gabriella has applied user-centred approaches to product/service/system design and commercialisation. She is interested in inclusive design as a pathway to innovate design strategies and researched the effects of ageing on identity and on decision-making. She continues her work as consultant to make her research socially and commercially relevant. She has been a consultant for Age UK, The Royal National Institute for the Blind, Panasonic, Homebase, NDS systems. She has spent her graduate placement during her PhD at IDEO.

Gabriella is a visiting scholar at the Helen Hamlyn Centre, RCA, London and has also collaborated with the Innovation Lab at Todai.

Research Forum:
Session 2

Redesigning the energy sector – Co-creating new business models using strategic visualization

Keywords

co-creation, sustainable energy, new power, business models, design, strategic visualization

This study examines the role of design in creating multi-stakeholder business models.

An essential goal for energy sector is a complete conversion to sustainable energy. However, the sector is characterized by fragmented clusters competing for subsidies and sub-optimizing their individual business models.

The case for the study is based on a concern for the energy sector with the following research questions: How can we design a business model that will enable actors across industries to exploit synergies among them for a greater good?

The paper discusses findings from an action research initiative in the energy sector aimed at designing and developing co-created cross-sector business models, using strategic visualization design vehicle.

The findings highlight how designing shared business models through strategic visualization can play an active role in building the foundation for transforming traditional business models into co-created multi-stakeholder business models. The case shows how strategic visualization can be a design vehicle by creating clarity for those involved, communication across the actor landscape, and building shared engagement platforms.

Stine Degnegaard
INITIATIVES
Denmark

Stine Degnegaard is Co-Founder and Strategic Planner at INITIATIVES. Stine helps organizations and leaders develop and execute strategic initiatives in primarily financial, pharmaceutical and shipping industries and with larger multi-stakeholder initiatives in safety, health, and sustainability. Stine uses strategic visualization as a method for creating overview, clarity and commitment.

Stine engages in the development of co-creation as a field by contributing to initiatives that target society wide challenges. Previously she has contributed to Rebuild21, COP15, the Co-Creation Conference with CBS, Standford d.School, and LAICS Annual Summit with CBS and IDEO.

Stine is also External Associate Professor at Copenhagen University at Anthropology and People-Centred Business. She holds an MA in Aesthetics and Culture from Aarhus University.

Dr Rex Degnegaard
INITIATIVES
Denmark

Rex Degnegaard, Ph.D. is Co-Founder and CEO of the research based advisory firm INITIATIVES. He is responsible for co-designing and driving strategic co-creation processes with his clients.

Rex is deeply involved in developing co-creation apps for both private sector and private-public sector initiatives with a specific focus on security, health care, and sustainability. He teaches co-creation at the MBA programme and executive programmes. Furthermore, he is an active researcher in applied research and holds advisory role as an innovation expert for the Danish Agency for Science, Technology and Innovation. Furthermore, he serves on councils for the Danish Design Association and on an expert panel for electronics and design.

A design approach to innovation in the Australian energy industry

Keywords
design-led innovation, stakeholder insights, action research

Electricity distribution businesses across Australia face many market disruptions such as the increasing demand from the rapid uptake of domestic air conditioners and the contrasting problematic generation from solar power connection to the grid. In this context the opportunity to proactively leverage forthcoming technological advances in battery storage and electric vehicles to address the steeply rising cost of electricity supply has emerged. This research explores a design approach to support a business to navigate such disruptions in the current market.

This study examines a design-led approach to innovation conducted over a ten-month action research study within a large, risk averse firm in the Australian energy sector. This paper presents results describing a current foresight gap within the business, the response of the business to using Design-Led Innovation to address this issue, and the tools, approaches and processes used. The business responses indicate their perception of the value of qualitative customer engagement as a path to addressing and possibly benefiting from disruptive innovation. It is anticipated these results will further business model development within the company and assist in leveraging disruptive innovations for this industry participant, thus limiting future increases in the cost of electricity supply for customers in Australia.

Tim Stevenson
Queensland University of Technology
Australia

Tim Stevenson is a business design consultant with 3rdView Consulting in Brisbane. Tim supports large and small businesses and government organisations to uncover deep customer insights to drive business innovation. An experienced Industrial Designer with expertise in developing new products for the mining, agricultural, sanitation, disability access and renewable energy sectors, Tim is passionate about the power of design and its potential for positive impact for business at the strategic as well as operational level. Tim enrolled in a Research Masters in Design Led Innovation as an opportunity to generate a design mindset in employees, explore new ways of working at multiple levels of an organisation, and act as a catalyst for business innovation as an embedded researcher. Tim enjoys the challenge of developing client capability and capacity, whilst delivering customer focused business innovation and applying the learnings from his research in practice.

A design approach to innovation in the Australian energy industry
(continued)

Dr Cara Wrigley
Queensland University of Technology
Australia

Dr Cara Wrigley is an emerging leader in the discipline of design-led innovation. Building on her solid practical industry experience, and combining this with her scholarly understanding of emotional design, she is developing a unique understanding in the value of design to business. Specifically, this focuses on strategies to design business models which have an emotive customer engagement. Cara has presented and published widely in the field of design-led innovation, and is currently leading several initiatives to contribute to both industry and academia on the value of design to business.

Dr Judy Matthews
Queensland University of Technology
Australia

Dr Judy Matthews is a researcher, facilitator and educator in innovation management in the School of Management in the QUT Business School at the Queensland University of Technology, actively engaged in research on design-led innovation. Until January 2007 she was a senior lecturer in the School of Management, Marketing and International Business in the College of Business and Economics at the Australian National University; and from 2002–05 was the Director of Master of Management Programs at the National Graduate School of Management at the Australian National University.

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SWINBURNE UNIVERSITY OF TECHNOLOGY

Image: Advanced Manufacturing and Design Centre, Hawthorn campus

Designers thinking: 7 new ways to add value to flexible workplaces

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HASSELL
Australia

Steve Coster
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Australia

Keywords
building capacity, design thinking, workplace design

Mobile technologies, eroded hierarchical structures and a persistent pursuit of space efficiency are changing the patterns of office space use, which in turn are challenging traditional ways of calculating and nominating the number of people occupying an office building. Getting the building population right is important for the comfort, safety and cost (construction and operational) of an office building and it affects a variety of stakeholders.

Studies indicate that new working practices have the tendency to increase the number of people per square meter in a building. However, current frameworks governing workplace design are falling behind in recognising this change and limiting the potential of contemporary work environments.

Design Thinking was adopted as the instrument to innovate building capacity frameworks. This approach offers the opportunity to move workplace design from a traditionally downstream step in the development process, to creating ideas at earlier steps capable of developing unprecedented forms of value.

A process was developed to identify codes related to building population in workplace related frameworks. A total of seven areas were identified, which if innovated could create an equal number of new value opportunities in workplace design. A particularly relevant result was that the statutory code establishing the maximum density per square meter has not changed in 24 years. Opportunities to update this code to contemporary ways of working are discussed.

A prototype capable of modelling different population scenarios and test them against selected codes was developed and discussed. Results suggest that perhaps the focus should not be on finding a higher density, but on a better way of nominating the capacity of a building.

Future research efforts include an empathy Inspiration-Ideation cycle.

Dr. Agustin Chevez experience combines industry practice with academic research in the field of workplace design. Agustin's interest in the relationship between people, space and technology saw him pursue a PhD on the evolution of workplace architecture as a consequence of technology development at RMIT University. As an Architect Agustin has participated in the development of workplace strategies in Australia, New Zealand and Singapore. His research has also been presented at various international conferences and publications.

Agustin is a Senior Researcher at international design firm HASSELL and Adjunct Research Fellow at the Centre For Design Innovation, Swinburne University.

Steve Coster is a specialist in workplace strategy and design. He uses architecture and design to help unlock value for organisations. Steve has developed workplace strategies, project briefs, design frameworks and workplace change management plans for a diverse range of organisations. He is particularly focused on how physical places (and the design process itself) can support organisational culture, change, talent attraction, wellbeing and business performance.

Steve has been involved in some of Australia's most progressive workplaces. His experience also spans co-working communities, office buildings, laboratories, University campuses and city precincts.

Steve is a Principal, Board Director and leader of the Workplace Design and Commercial Architecture sector at international design firm HASSELL. He was previously Australian Managing Director of workplace strategy consultancy DEGW. He holds a Masters degree in Architecture from the University of Melbourne.

Designers thinking: 7 new ways to add value to flexible workplaces
(continued)

Cameron McIntosh
Arup
Australia

Cameron McIntosh leads Arup's electrical team in Melbourne. Cameron has extensive experience on various projects, having been a member of multidisciplinary consultancy teams on a number of new build and upgrade projects in sectors from aviation to workplace.

Cameron has a keen interest in design to drive collaboration, efficiency, and practical improvements for people and the organisations they work for.

Cameron led the introduction of Activity Based Working into Arup's Melbourne office, including concept development, pilot implementation, and on-going monitoring and improvement.

Paul Sloman
Arup
Australia

Paul Sloman is an Arup Fellow, Australasian Regional Board Member with responsibility for Foresight & Innovation and Corporate Sustainability, and holds the positions of Buildings Sector leader and Commercial Property leader in the region.

As an active and innovative designer Paul seeks solutions beyond the norm for his Clients across the many sectors of the built environment, and facilitating the best of what Arup, as a global design firm, have to offer.

Food design for business

Keywords
food design, eating design, Five Aspects Meal Model

What is Food Design? And how can it help businesses? This paper first proposes a brief overview of possible definitions of Food Design, and then proposes a categorization of its sub-disciplines that highlight the different background disciplines that can be used to approach Food Design. After identifying what is Eating Design in particular, this paper gives a proposition for how Eating Design can help businesses. I argue here that Eating Design can help businesses by generating solutions that trigger people's emotions, through the consideration of all aspects of the eating situation. I present the literature that sustain the importance of designing for emotions, and then give an overview of different categorizations of the aspects that influence the eating experience concluding with the one I suggest food designers should use, the Five Aspects Meal Model. Finally I try and sustain my argument presenting three examples of eating situations designed considering all aspects influencing the eating experience, and therefore generating positive emotions in the customers.

Francesca Zampollo
Auckland University of Technology
New Zealand

Francesca is Senior Lecturer in the Industrial Design + Innovation department at Auckland University of Technology. Francesca has a PhD in Design Theory applied to Food Design. She is the Principal Editor of the International Journal of Food Design published by Intellect. In 2009 Francesca founded the International Food Design Society, and since then organized the First International Symposium on Food Experience Design (London, November 2010), the first academic conference on Food Design, the International Conference on Designing Food and Designing for Food (London, June 2012), and she is now organising the Second International Conference on Food Design (NYC, November 2015, www.fooddesign2015.com).

Round Table Symposium:
Track 1 - Social Innovation

Session Moderator:

Professor Mads Gaardboe
University of South Australia
Australia

Professor Mads Gaardboe joined UniSA in 2004 as Head of the Louis Laybourne Smith School of Architecture and Design. Prior to this position he was Professor and Head of Department of Architecture, and Associate Director of Liverpool School of Art at John Moore's University in the U.K. Professor Gaardboe was also a Subject Specialist with the British Quality Assessment Agency and External Examiner at the University of Central England, Birmingham, and Leeds Metropolitan University. As a practicing architect he has worked in Europe, Africa, the Middle East and Australia, with practices in Canberra and London. His research has focussed on urban design related to the history of new towns and campus design. The design and architecture of tourist developments and hotels is a second area of focus.

Diagnostic design: A framework for activating civic participation through urban media

Dr Ian McArthur
University of New South Wales
Australia

Dr Martin Tomitsch
The University of Sydney
Australia

Keywords

participatory design, urban media, civic engagement, smart cities, urban planning

This research proposes the notion of diagnostic design as a method for supporting local economy in new urban developments. New developments often take years to turn from building sites into vibrant neighbourhoods where new businesses can thrive. Increasingly, developers are looking at urban media, such as large digital screens, as a new opportunity for placemaking and accelerating the growth of local economies. However, there is a lack of knowledge regarding strategies for the effective utilisation of urban media. Consequently, urban media in many cases defaults to being used for advertising, which creates immediate revenue but fails to connect with the local neighbourhood and its community.

We suggest that there is an opportunity to connect urban media with participatory design and data visualisation to add long-term social, cultural and economic value to urban planning in cities and their precincts. To that end urban media becomes the diagnostic tool, which engages citizens into a dialogue on civic issues, as well as an urban intervention that contributes to placemaking through strengthening the connection between people and the places they share.

Using the urban screen at a recent development in Sydney, Australia, we deployed a number of civic engagement strategies and evaluated their effect on local participation. We argue that increased participation in a local neighbourhood can lead to increased opportunities for local businesses and inward investment through transnational or multinational corporations.

Based on the findings of this study we propose a framework that enables participatory citizen engagement to foster thriving urban communities and 'smart' development. This diagnostic approach builds sustainable value for all stakeholders allowing for a closer alignment between the objectives of new developments and the preferences, needs and expectations of the citizens who will live and work in them.

Dr Ian McArthur is a hybrid practitioner working in the domains of experimental and speculative multidisciplinary practice, transcultural design collaboration, metadesign and education change. In 2001-2003 Ian was Program Director of Graphic Design at La Salle DHU (Donghua University, Shanghai) where he initiated The Collabor8 Project (C8) to foster creative collaboration between China and Australia. This initiative has lead to a decade of developing culturally adaptive pedagogies and design processes using online, social and responsive technologies to create collaborative experimental spaces. A senior design academic at the UNSW Art & Design, Ian has presented lectures and papers about this research in Asia, Europe, South America and Australia. His most recent work focuses on collaborative architectural-scale data visualisations and experimental sonifications for responsive interactive media environments, urban informatics and public art installations.

Dr Martin Tomitsch is a Senior Lecturer at the University of Sydney, where he teaches interaction design and human-computer interaction. He is the Director of the Design Computing program and a member of the Design Lab, an interdisciplinary research group within the Faculty of Architecture, Design and Planning. He received a PhD in informatics from the Vienna University of Technology, Austria, where he holds a visiting lecturer appointment at the Research Group for Industrial Software (INSO). He is co-author of 'New Media Facades' published by av edition and over sixty articles published in journals and academic conferences. He is a founding member of the Media Architecture Institute (MAI), NSW state co-chair for the Computer-Human Interaction Special Interest Group (CHISIG) of the Human Factors & Ergonomics Society of Australia (HFESA), and committee member of several international workshops and conferences. Prior to commencing his position at the University of Sydney, he has worked as interface designer in large software projects.

A socially responsible design to promote cultural self-confidence – A case study of a village revitalization project design

Keywords
social effect, social reliable design, village revitalization

This paper discusses an alternative learning process for project design and management through the use of a remote mountain Village Revitalization project in Tongguan, Guizhou. It challenges conventional village revitalization by addressing at the core-level the constraints that have stemmed from China's modernization and urbanization. Specifically, through adopting a socially responsible design method, this research challenges the end-product oriented method, questions the top-to-bottom approach, and highlights the significance of the end-users' direct involvement to rebuild cultural self-confidence. It addresses issues including the role of a project, the criteria of the product, the relationship between the product and its end-users, and contextualizes these issues subject to local conditions. Following two years of efforts by volunteers and villagers, the remote village's revitalization project was realized in the form of a Villagers' Center. This product not only satisfied the interests of its current end-users in both the short and long term, but also sets an innovative, functional example of how both project design and management can be effectively utilized across all remote villages facing similar challenges in their communities.

Associate Professor Fang Xu
University of New South Wales
Australia

Fang Xu is currently an Associate Professor in Art & Design, UNSW where he is the Coordinator of Environments / Spatial Design.

Fang Xu's expertise is drawn from his cross-cultural background, wide range of professional design experience and interdisciplinary research interests. With thirty years experience as a practicing designer and tertiary educator both in Australia and overseas, Fang has a deep understanding of the nature of design, and its social influences and cultural values that shape contemporary design education and practice.

As a researcher, Fang is interested in issues central to design practice in the changing context of values, objectives and methods. His recent research concentrates on the role of public participation, community engagement, social innovation and design intervention in design practice. This approach is reflected in his research outcomes of studying public open space, urban renewal, aged care and other topics relating to the theme of social sustainability.

A socially responsible design to promote cultural self-confidence – A case study of a village revitalization project design
(continued)

Associate Professor Fujian Mo
Guangxi Arts Institute
China

Fujian Mo is an Associate Professor at the Environmental Arts Design Department, Guangxi Arts Institute, Nanning, China. As a designer, he has been working closely with the villagers to develop research for this project.

Yuanyuan Chen
Charitable Foundation Brand Project
China

Yuanyuan Chen is a director of Charitable Foundation Brand Project at Tencent, Shenzhen, China. She has engaged and facilitated Tencent Building New Rural Project to promote rural areas development since 2009.

Whole of life, whole of use: Rethinking residential design in Australian cities

Dr Andrew Martel
University of Melbourne
Australia

Brian Kidd
University of Melbourne
Australia

Keywords
NDIS, disability design, housing, customer-based choice

How does Australia's current housing stock perform in relation to people living with a disability, and how will Australia's housing industry cope with the challenge presented by the National Disability Insurance Scheme (NDIS)?

This paper reports on an investigative design studio where the students worked with disability support services, the not-for-profit housing sector, and developers to; 1) establish design requirements for residents with a broad spectrum of physical and cognitive housing needs; 2) evaluate the performance of typical existing housing stock in meeting those needs; and 3) propose a range of medium density dwelling solutions that are economically feasible and popular with the broader housing market, while being suitable, flexible, and adaptable to the needs of occupants with a disability. The studio found a number of simple, low cost design solutions that mainstream housing producers could incorporate into their standard housing layouts, which suggests that industry-wide change in thinking about housing design is possible. However, the shift in mindset required of the design and development industries to accommodate a demand driven, truly universal design platform is both subtle and profound, and the paper concludes with discussion of the possibilities of a partnership based, investigative approach to contribute to this change.

Andrew Martel is an Early Career Academic in Construction Management and Housing at the University of Melbourne. His research is based on a multi-disciplinary approach that incorporates design, construction management, building performance and technology, housing economics, social practice, and planning policy. A particular research focus is on how differing concepts of what constitutes value for the separate sectors of the housing industry compete to influence the outcome of built housing stock, and the importance of understanding, and being able to measure, cross-disciplinary dynamics when framing housing policy to ensure the long-term sustainability housing development.

Brian Kidd is an architect who has specialised in designing for people with disabilities, and people who are ageing, for over 53 years. He was a key member of the ACROD Committees on Access and Mobility from 1962 until 1994, during which time awareness campaigns were conducted, new Australian Standards drafted and regulations introduced into the building Regulations.

In the 1980s he was involved in campaigns to change the image of nursing homes from a medical to a social or residential model. He is particularly concerned with the quality of life and the dignity of the individual.

He has been involved as a practitioner, an academic and an activist, and is currently an Honorary Senior Fellow at the University of Melbourne.

Design as knowledge work: Understanding design in a knowledge economy

Keywords

innovation ecosystem, design, business, collaboration, knowledge economy

This paper positions design in relation to the innovation practices of a Knowledge-based economy. The broad aim of the paper is to 'translate' between cultures of design, business and public policy, in order to understand design as 'knowledge work' and improve design teaching and learning. Since the term national innovation system was coined by economists in the 1980s, empirical research has shown that innovating enterprises are invariably collaborating enterprises and that enterprises rarely innovate without both technological cooperation and collaboration. One of the roles of a designer in an innovation system is to act as a creative broker who can recombine previous experience from various domains into new hybrid forms. Using the terminology of the knowledge economy, design can be described as an interaction between tacit and explicit knowledge, an example of Mode 2 knowledge production and a Knowledge Intensive Business Service.

Dr Amanda Bill
Auckland University of Technology
New Zealand

Dr. Amanda Bill is a Senior Lecturer in Industrial Design and Innovation at AUT University, where she is Programme Leader for Design and Business. Her research investigates the role of design in cultural economic processes, sometimes using strategies that are initiated in practice. For example, the 7 Lamps of Creativity project uses digital textile design to research creativity as a type of performative knowledge. Amanda also has a PhD in Sociology and Women's Studies and applies these social science perspectives to emergent discourses in design. Currently she is leading a research project on Knowledge Work in Innovation Ecosystems for the New Zealand Work Research Institute. This project studies how Design Thinking facilitates collaborative innovation within hybrid organizations.

A design-led approach to improving the health of police personnel in India

Brajendra Nandan Panda
Cognizant Technology Solutions
India

Keywords

police, organizational reforms, personnel welfare, systems design, India

The population of police personnel and their families in India is about 10.8 million. Keeping them in good health is a major concern and challenge. This project establishes a relationship between health of police personnel, their work culture and the many police agencies across India. Through a sensitive and empathetic, design-led research it was observed that the impact the policing job had on the health of the 8.7 million people in the immediate family of the personnel was seldom a concern for the police leadership, or the government. Personnel in the constabulary (85% of personnel) came from lower socio-economic classes, had little education, lacked understanding of health habits, and lacked social accessibility. Their duty was long, harsh, strenuous, and unpredictable, thus weakening the primary support system (i.e. the family) that an individual has in the Indian society.

Though there was no proper public accessible records of the health of personnel, interaction with the broad range of stakeholders, outlined by the design-led approach, established that a vast majority of personnel suffered from major ailments or conditions like diabetes, hypertension, insomnia, obesity, etc.,

especially after the age of 40. Most of these conditions arise out of an irregular lifestyle that the job thrusts upon the personnel. It was also established that such a lifestyle adversely impacts the family, both physically and mentally.

This population generally did not seek health support till the manifestation of their illness became unbearable to them and their families. One such solution – Hello Health – now in the queue for further research and possible implementation – adapts the business off-shoring processes to empower the police families to take care of their own health. The project proposed a host of inexpensive yet scale-able solutions to create a parallel structure that supported the existing system.

Brajendra is a graduate of the National Institute of Design at Ahmedabad, India. He is one of the first few designers in India to have worked on the domain of personnel welfare in the police. This paper is based on his graduation project: Police Health. Mentored by the first woman Indian Police Service officer and Magsaysay awardee, Dr. Kiran Bedi, Brajendra's project has been showcased at various national forums including the National Police Mission, the All India Police Science Congress etc.

Brajendra believes in contributing in his own small way to making the big change in areas where thoughts, ideologies, organizations, people & products interact. His role in Cognizant Technology Solutions India enables him to do just that. His projects in Cognizant aim at improving the two-way connection that employees share with the organization.

Brajendra underwent the undergraduate program in Architecture from the National Institute of Technology, Hamirpur, India before joining the Product Design program in the National Institute of Design, Ahmedabad, India.

Round Table Symposium:
Track 2 - Business Development

Session Moderator: **Professor Gerda Gemser**
RMIT University
Australia

Gerda received her PhD in Management at the Rotterdam School of Management (Erasmus University Rotterdam) in 1999. Gerda does research on design and innovation management in the creative industries. She has been a visiting scholar at leading research universities, including The Wharton School, University of Pennsylvania (US) and Saunder School of Business, The University of British Columbia (Canada). In the last 15 years, she has held (assistant and associate) professorships at different Dutch universities including Erasmus University and Delft University of Design. Currently she is one five international Professors of Design appointed by RMIT University to further strengthen the University's leadership and expansion of design research. Gerda has published in leading management and design journals such as Organization Science, Organization Studies, Journal of Management, Long Range Planning, Journal of Product Innovation Management, Design Studies and International Journal of Design.

Diversifying product offerings for Australian manufacturers through successful examples of university–industry engagement

Dr Blair Kuys
Swinburne University of Technology
Australia

Dr Gianni Renda
Swinburne University of Technology
Australia

Keywords

industrial design, research-led, industrial design practice, manufacturing, industry engagement

With the news of major automotive companies making the decision to end manufacturing in Australia, as well as manufacturing for the mining industry moving to India (particularly metals), product diversification is of utmost importance to ensure manufacturing in Australia remains strong. In order to keep manufacturing in Australia, design-led innovations are required to ensure there are continued products to be produced – products that can be produced in Australia and compete on a global scale. This paper explains how this was done through methods of engagement between Australian manufacturers and universities and a case study is used as an exemplar for future works in this area.

Over the past three years, the authors of this paper have worked closely with Australian manufacturers who were looking at diversifying their product offerings by using the existing capital within their organisation. In this period, four SMEs have signed agreements with the university, which have generated over $300,000 in Category 3 research income.

Australian manufacturing is very smart – we have exceptional quality production and very clever engineers, however the thing that is severely lacking is design innovation, or perhaps the ability to convert design into commercially successful products.

The clear benefit of the work done by the authors is the development of new products for Australian manufacturers – new products that are innovations upon what exists with identified markets. By creating new 'Australian made' products, jobs will stay in Australian manufacturing. It is anticipated that those who share similar interests can learn from this study through 'real-world' product development between manufacturing and universities, which helps disperse the myths with industry engagement with the university sector. If more design researchers can involve themselves in such activities we will start promoting a knowledge economy and not be so reliant on Australia's dwindling resources to keep our dollar strong.

Dr Blair Kuys is currently Department Chair (Head) of Interior Architecture and Industrial Design within the Faculty of Health, Arts and Design at Swinburne University of Technology, Melbourne, Australia. Dr Blair Kuys completed a PhD with the CSIRO and Swinburne University of Technology in 2010. He is an active researcher and has been instrumental in working alongside scientists, manufacturers and engineers to promote the benefits of industrial design for new product developments. Dr Blair Kuys has successfully been awarded six Vice-Chancellor's Awards for Community Engagement (2008), Teaching – Higher Education (2009), Sustainability (2010), Internationalisation (2011), Research – Early Career (2012) and Industry Engagement (2014). These awards highlight his strong commitment to important values for Swinburne University of Technology showing commitment and leadership across all portfolios.

Dr Gianni Renda is the Course Coordinator and lecturer in the Bachelor of Industrial Design and is Deputy Director of the Swinburne BioReactor, an ARC Training centre focused on developing new products and technologies for the health sector. His PhD investigated the effect of styling and aesthetics of assistive cutlery on the perception of a user, and the subsequent uptake of these ergonomic aids. Gianni has worked as a graphic designer, retoucher, printer, exhibition and set designer. His current research focus is investigating ways that design can empower the user in the field of health, disability and ageing. Other interests include food design, advanced manufacturing, Italian design history and automotive design.

Unlocking design in business:
Symbolic interactionism is the key

Keywords

communication, design, design attitude, business manager, symbolic interactionism, vocabulary

Communication is at the intersection of design and business. However, designers and business managers do not always speak the same design language or share similar frames of reference. Both have attitudes towards design that are based on their assumptions. When assumptions diverge, communication breaks down and competitive advantage can be lost.

Symbolic interactionism can explain and overcome barriers caused by diverse assumptions and incoherent frames of reference. Symbolic interactionism examines how people create meanings of words through three premises. Firstly, people respond to the word design based on the meaning it has for them. Secondly, this meaning of design is derived through their social interactions with others such as business conversations. Thirdly, a person's thoughts will interpret meaning from their interactions with design such as with product design. Thus, a shared understanding of design is impacted by communicators' backgrounds, their interactions with others and within social settings and their interpretations or thoughts about their design interactions.

To understand the diversity of assumptions made about design in professional communications the authors conducted a systematic content analysis of journal articles (n=71) from Design Management Journal. The analysis began with issue 1 in 2000 through to issue 8 in 2013. Key variables measured were based on the three premises of SI including 1) authors' background, demographic, organization 2) their interactions with design demonstrated in the research article and 3) articulations of design meanings evinced in their writing.

The findings presented in this paper demonstrate that functional, robust application of the word design is constrained by the forces predicted by symbolic interactionism. This research is ongoing and will contribute to the unresolved defining design debate and the growing body of literature regarding design's importance to competitive advantage in business. The research will also contribute to the limited literature on symbolic interactionism's relevance to design. A practical outcome of commonly held design attitudes through a design vocabulary tool from a symbolic interactionist perspective will be useful for business managers understanding of design attitudes in commercial organisations on a global stage.

Jan Jervis
Bond University
Australia

Jan Jervis is a PhD researcher and Teaching Fellow in Creative Media at Bond University. Her qualifications and industry experience in fashion and graphic design led her to complete a Master of Multimedia degree. Her current focus is on design communication. Jan's first-hand knowledge of cross-disciplinary communication issues surrounding design has led her to pursue a PhD thesis concerning the assumptions made about design in developed economies. Her publications include research on teaching project production to diverse learners and on the polysemy and primacy of design in society. Jan is the recipient of three University Excellence in Teaching Awards and she was part of the founding group launching the Bachelor of Interactive Media and Design in May 2013 at Bond University. Jan has received industry award recognition for women's clothing design, produced textiles, worked with overseas production, graphic and website design. Her strengths are design management in cross-disciplinary contexts.

Dr Jeffery Brand
Bond University
Australia

Dr Jeff Brand is Professor of Communication and Creative Media at Bond University where his research and teaching focus on emerging media, interactive media industries, computer game audiences, and content policy. He is author of the Interactive Australia and Interactive New Zealand series of national computer games audience studies. He also publishes research on news and current affairs, gender effects of media, media content stereotypes, and using mobile media as engagement tools in higher education. Jeff is the recipient of an Australian Office of Learning and Teaching Excellence Citation. He has served as consultant to the Australian Communications and Media Authority, the Australian Classification Board, the Special Broadcasting Services, and the Interactive Games and Entertainment Association. He recently served on the policy advisory board for The Australian Law Reform Commission's review of the National Classification Scheme.

Design thinking model for business

Dr Philip Whiting
ZEROPLUS
Australia

Keywords
design thinking, design research, branding, consumer desire, sustainable

In his publication Tool-being: Heidegger and the Metaphysics of Objects, Graham Harman recalls the words of Theodor Nelson, who suggested that the Pentagon is often accused of "planning for the last war" (Harman, 2002, p. 154). Harman refers to how the glory of old victories and their successful strategies continually form the basis for further battles, whilst new and pressing threats are either misunderstood or often totally ignored.

Practicing as a designer within the retail sector in both Europe and Australia for over thirty years, I would argue that a similar affliction is clearly apparent in business and especially the majority major retail enterprises throughout the world. When developing a strategy or making commercial decisions on the future of a retail operation, a retail brand, product or service; any evaluation and assessment is generally limited to the overall trajectory of past and present business performance.

Today I work with Business Management and Financial groups applying design thinking methodology to assist their retail clients in redirection strategies. This paper is primarily about risk assessment but also about brand evaluation which for those working within financial circles is seen as an extremely specialised art form. It is my

hypothesis that using a design research process and methodology, what is called design thinking, it is possible to quantify desire, want and need as the intangible functional and emotional design assets contained within design and branding, at the same time identify future potential commercial risk. In this way it can be further demonstrated that design thinking methodology can provide even greater leverage over the gap between anticipated retail performance and any real future potential.

My research in this area combines business pragmatism with perceptive & innovative design thinking to make sense of why a business exists, where it is failing and where it is succeeding. Design research explores then maps and recodes a sustainable commercial landscape to determine how a diverse and productive future is possible. My research working with business management and financial groups uses design thinking methodology to try to anticipate future consumer needs, as well as determining how to meet those needs to elevate a business and allow it to flourish.

Through my ongoing research design thinking is used to provide the basis for a strategy to navigate volatile commercial environments or take advantage of permanent chaos as a disruptive market leader.

Dr Philip Whiting specialises in Design Thinking, Research and Strategy for the retail sector where he works across the design disciplines of interior, product and visual communication design. He first established a successful UK design consultancy working with major pharmaceutical retailer The Boots Company. Philip worked with manufacturers 3M/Riker and Volvo to improve existing products and developed early FMCG retailing concept for the Shell Company as a design consultant with the Institute for Consumer Ergonomics.

In Australia he originally joined Minale Tattersfield Bryce, working with major retail developers Lend Lease. He has since worked on retail developments for Westfield, Stockland and others. He is a past president of the Design Institute of Australia, Queensland Chapter 1994/96. Philip was Convenor of the Design Department, Queensland College of Art, Griffith University for three years until late 2011 and continues to lecture on Design Thinking, Methodology and Practice. In 2013 he established ZEROPLUS a design research consultancy to progress Design Thinking within a radically changing retail climate.

The market for design services: Insights from interviews with Australian firms

Michael Falk
The University of Melbourne
Australia

Keywords

design services, interfirm collaboration, signaling, capabilities-based view

We examine how firms form relationships in the market for design services. Our study focuses on dyads of Australian design service providers and their client firms. We find that the formal protection of intellectual property plays a minor role in the decision making of firms. Market participants emphasize informational problems that arise when firms access external design capabilities through the exchange of services. To adapt to market imperfections linked to moral hazard, expropriation risk and adverse selection, both clients and providers have developed reputational signals. Providers engage in strategies to manage signals that we refer to as the 5 Rs: rigour, rhetoric, roster, rating and referral. Signals of a client's reputation also assume great importance and we refer to these as the 4 Cs: contests, co-creation, curation and casting.

Michael R. Falk is a doctoral student based at Melbourne Business School. His research is on the formation of collaborations in expert service markets and the translation of research into industry. He has an M.A. in Publishing and Communications and a B.A. (Honours) in Historical and Philosophical Studies from the University of Melbourne. Michael previously worked as an independent research analyst for design and technology companies including The Conversation Media Group, Inframe Media, Telsoft Pty Ltd, Workshop 3000, and Enhanced Editions in the UK. His commission work has included studies on research impact and partnerships by Monash University and by the Enterprise Connect Creative Industries Innovation Centre, based at the University of Technology, Sydney. He is an affiliate of the eScholarship Research Centre, Melbourne School of Government and the Victorian Eco-Innovation Lab at the University of Melbourne.

The market for design services: Insights from interviews with Australian firms

(continued)

Associate Professor Kwanghui Lim
The University of Melbourne
Australia

Kwanghui Lim is Associate Professor (Strategy) at the Melbourne Business School and Associate Director at the Intellectual Property Research Institute of Australia. He has a B.Eng. degree from the National University of Singapore (NUS) and a Ph.D. in Management from MIT. Between 2000 and 2006, he worked as an Assistant Professor at NUS where he was part of a team that developed and taught new programs linking innovation and entrepreneurship.

Associate Professor Lim's research is on how firms manage knowledge, intellectual property and scientific human capital. He has published research on post-acquisition inventor productivity (Kapoor and Lim, Academy of Management Journal, 2007), the effect of star and bridging scientists (Subramaniam, Lim and Soh, Research Policy, 2013), types of absorptive capacity (Lim, Industrial and Corporate Change, 2010; Lim, Research Policy, 2004) and `knowledge brokering' across technical domains (Hsu and Lim, Organization Science, in press).

Associate Professor Don O'Sullivan
The University of Melbourne
Australia

Don O'Sullivan is Associate Professor of Marketing at Melbourne Business School. He joined the MBS faculty in 2008 from University College Cork, Ireland. His research is on the impact of marketing activities and assets on company performance. A/P O'Sullivan's research has been published in leading journals including the Journal of Marketing, the Strategic Management Journal, the Journal of the Academy of Marketing Science, the International Journal of Research in Marketing and Marketing Letters. He is a member of the advisory board of the Chief Marketing Officers (CMO) Council of the USA. Since 2003, he has led the Council's Marketing Performance Measurement (MPM) research program. Previously, Don was Client Services Director at a marketing services agency targeting the European technology sector. He was responsible for a range of clients including Microsoft, Siemens, Hewlett-Packard and Computer Associates. His team developed numerous international award-winning campaigns including a global ECHO award and two BusinessWeek Icon Awards.

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Round Table Symposium:
Track 3 - Product Developement

Session Moderator: **Lyle Reilly**
Auckland University of Technology
New Zealand

Lyle has been involved in the fashion industry for over 20 years before taking up the post of Senior Lecturer at AUT in 2000. He is a strong supporter of design thinking for social and commercial engagement, believing that development of a creative entrepreneurial mind-set is essential for preparing art & design students for future success within the creative sector. Lyle's specialist research interest is E-Textiles, his Masters theses focussed on the human centred design development and implementation of wearable electronics for sports clothing. Further work includes 3-D body scanning, 3-D printing and E-Textile integration for the health purposes. This research has resulted in international publications and presentations, most recently at the inaugural Digital Textiles Technologies in Manchester, UK, September 2013 and Shapeshifting, Auckland, 2014.

Embracing the tall poppy: Overcoming tradition in customer jewellery design preference

Jason Kennedy
Auckland University of Technology
New Zealand

Keywords

jewellery, New Zealand, design, 3D printing, CAD

This case study examines the role that Tall Poppy Syndrome (TPS) plays within the New Zealand jewellery industry. One company's attempt to subvert tradition and encourage personalization of milestone jewellery such as engagement rings and wedding rings has led to insights about Kiwi jewellery purchasing behaviours. The mass-market jewellery industry in New Zealand is heavily invested in producing jewellery designs that have existed for upwards of 50 years. Kiwi customers are on average less adventuresome in their preference for jewellery styles, and often purchase traditional jewellery designs because they believe such designs to be stylistically safer. This paper provides a detailed case study that examines how the Auckland-based boutique jeweller K. Amani Fine Jeweller designs against convention and consistently encourages tradition-minded customers to embrace personalized jewellery styles. This is accomplished through communicating to customers the personal design aesthetic of K. Amani's jeweller, as well as through non-standard solutions to traditional jewellery manufacturing such as Computer Aided Design (CAD), 3D rendering, and 3D printing. Likewise, dedicated face-to-face consultations and a keen understanding of customer personality types help to raise awareness of jewellery design possibilities, and provide customers with a greater sense of security in order to opt for custom or non-traditional designs. This approach consistently results in customers electing personalized touches to their jewellery designs, and encourages lifetime loyalty to K. Amani who can create custom designs, versus jewellers that only provide stock items.
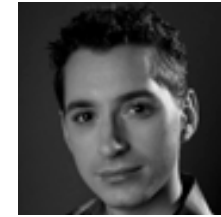
Jason Kennedy is a lecturer and programme leader in the Digital Design department at Auckland University of Technology, and a practicing artist with work in 3D animation, fine art, and jewellery.

Jason entered the fine art world circuitously through his initial ambition to become a palaeontologist. He enrolled in Albion College's geology programme (in Albion, Michigan, USA), only to discover that while he still loved dinosaurs, he liked the idea of animating them more than digging them up. Jason graduated from Albion in 2004 with a major in studio art (drawing) and minors in geology and mathematics. He completed a MFA in electronic art from the University of Cincinnati in 2007.

Jason taught at The Art Institute of Ohio – Cincinnati from 2007-2008, and joined the Digital Design department at AUT in 2008. Since then he has taken on the role of Animation Pathway Leader. He is completing a PhD that investigates the changing nature of acting in the context of animation and motion capture.

He is also a managing director of K. Amani Fine Jeweller along with his wife, where he specializes in 3D modelling, 3D printing, and 3D rendering jewellery, along with maintaining the company's website and graphic identity.
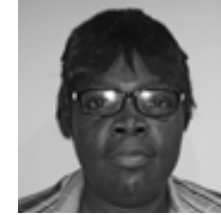
Supply network performance and Adinkra industrial production challenges in Ghana

Josephine Aboagyewaa-Ntiri
Royal Melbourne Institute of Technology University
Australia

Keywords
adinkra cloth, artisans, supply network, interactions, diffusion

The research reports on factors that could facilitate diffusion of Adinkra textile printing in the Ghanaian textiles printing industry in order to promote productivity. The production of traditional Adinkra textile printing has been a dying art among the Artisans of the Ashanti region of Ghana. The Adinkra textile print has not gained appreciable acceptance among modern Ghanaian users, however, the meanings of the Adinkra symbols are still significant in the daily life activities of the Akan people of modern Ghana. To examine factors facilitating acceptance, an empirical study using mixed-methods was adopted. Data for the study was obtained from interviews with a convenient sample of 35 organisations representing the main stakeholders in the textile supply network. The data collected was transcribed and analysed with NVivo 10 software. There have been expressions of need for innovative affordable practices which can be used by the Artisans for the maintainability and promotion of traditional Adinkra textile industry.

Miss Josephine Aboagyewaa-Ntiri is currently a PhD candidate in the school of Fashion and Textile of Royal Melbourne Institute of Technology University, Australia. She holds MA Arts in Fashion and Textiles from Nottingham Trent University and B.Ed. Home Economics (Clothing option) from University of Cape Coast. She studied Fashion and Textiles at Higher National Diploma level in Kumasi Polytechnic. She has thirteen years teaching experience of Fashion and Textiles in tertiary institutions. Her research interest is on inculcating traditional ideas especially symbols into modern garment as a way to promote clothing and textile business.

Supply network performance and Adinkra industrial production challenges in Ghana
(continued)

Dr Arun Vijayan
Royal Melbourne Institute of Technology University
Australia

Dr Arun Vijayan is currently a research fellow at the Centre for Advanced Materials and Performance Textiles at RMIT University. Dr. Vijayan has a textile technology background, with a Master of Science in colour chemistry and PhD in textiles from the University of Leeds. He has over 15 years industrial experience working as a Product Engineer in denim manufacturing; a Formulation Chemist at Unilever, before joining CSIRO as a Research Scientist. His research interests are in manufacturing of high performance materials for human protection, modern weaving technology, advanced textiles colouration, digital printing of textiles, conductive polymers, flexible functional textiles, natural fibre composites. Dr Vijayan has been successful in acquiring research grants from DMTC (Defence Materials Technology Centre), CRC-ACS, and the Department of Education, Science and Training (DEST).

Mac Fergusson
Royal Melbourne Institute of Technology University
Australia

Mr Stanley Mac Fergusson studied textiles at Leeds University then worked as a dyer in both the Yorkshire Woollen Industry and Commission dyeing on synthetic fibres. Joined a British Dyestuff manufacture and was responsible for product marketing in Asia the Pacific. He is a Chartered Textile Technologist, Chartered Colourist and holds a Master of Technology degree from RMIT University. Main research interests are in the performance of colourants under harsh condition.

Future scenarios for design and craft: The Spanish case

Dr Manuel Martínez Torán
Universidad Politécnica de Valencia
Spain

Professor Chele Esteve Sendra
Universidad Politécnica de Valencia
Spain

Keywords
craft design, design thinking, maker culture, digital & fab design

The objective of this research was to study typical handicraft businesses and workshops in order to design and construct suitable and realistic future scenarios, which the industry can use to develop a profitable business model.

The study seeks to make a contribution to the Spanish handicraft industry by improving its strategic management and the design of specific innovation-based activities, which can help to guide well-informed and thought-out decision-making.

We have made use of all the necessary tools in order to be able to establish the guidelines and standards which structure the different models and types of activities, providing a framework with which to improve innovation processes, whether these are structural, functional, communicative or commercial in nature. In this way, all efforts can be systematised and co-ordinated for greater efficiency within the industry and, more especially, within companies. It is also our view that design, as a discipline, can play a fundamental role in the planning and development of this vision of the future for products and services and it is with this in mind that this prospective study was carried out, seeking to bring together creativity and commerce, the basis of the handicraft industry.

Manuel has his PhD in Design and is a professor at Universitat Politècnica de València Spain, a Fab Research Institute member and the Director of FabLab Valencia. He has participated in two European and 25 R&D projects of design as a principal researcher and published five books, conferences and has published a patent recognized. He has been a visiting lecturer in Argentina (2002), Mexico (2006 and 2007), Chile (2011 and 2012) and Colombia (2013). Manuel is also a member of the Designers Association of Valencia (ADCV), the Design Research Society (DRS), and the International Association of Societies of Design Research (IADR). Manuel is a member of the FabLab Iberian Network and its international network, FabLab Foundation. He is an Editorial Board Member in content design at Deforma Culture Magazine Online and curator in local and national exhibitions of design and craft. Manuel was awarded aid for research on Handicraft of Fundesarte-EOI Foundation (2011) and has been a finalist for the Spanish National Craft Awards (2013).

Chele Esteve Sendra is a professor at ETSID-Escuela Técnica Superior de Ingeniería del Diseño (School of Design and Engineering). She is interested in how everything is connected: people, objects, ideas and cultures. The quality of the connections is the key to success in a society which advocates multiculturalism.

Chele's work focuses on the research and development of new products and market trends. She currently teaches management and development projects in Graduate and Master Studies. In one of her research groups, she is working with the Museum of Crafts of Valencia (Spain), showing the blurred boundadies and emerging alliances between designers and craftsmen.

She shares her work as a professor in Universitat Politècnica de València (Spain), designer, as well as a Design&Art critic and exhibition curator. She is a methodological and creative person, with this combination giving her the energy she possesses and transmits to others.

Bridging the gap between marketing strategy and design teams: A method to facilitate strategic styling decision making within a company

Keywords
strategic styling, design, marketing, quantifying styling

In order for styling (creation of a distinct visual identity for a new product) to be successful in the market, design decisions need to be aligned with marketing strategy decisions. Previous research has suggested a styling strategy model that focuses on the goals of styling (attention drawing, recognition, symbolic meanings) through considering the degree and direction of differentiation from the products in a current portfolio, the succession of product generations and the product competitors. Using these strategies may guide product designers in their styling decisions so that they are aligned with marketing strategy goals. However, research has shown that while product designers and marketers work towards the same goals, the difference in the way they justify styling decisions can cause difficulties in communication, rationalisation and subsequent dismissal of ideas by the other party. Marketers believe that knowledge upon which styling decisions are based should be measurable and generated from competitive analysis and consumer insights, while product designers rely on intuition, experience and observations. In this research we aim to bridge this gap between marketers and product designers to improve the strategic styling decision making process. Through a case study with Crown Lager beer bottles we developed a method that measures changes in styling compared to previous product designs within the succession of product generations, as well as the differences in styling compared to current competitors. This numerical information is then mapped to market data (e.g., revenue and changes in market share). We show how the combination of these datasets aid in identifying previous styling strategy in terms of degree and direction of styling changes, and how this can be fed into future styling decisions. We contend that this method will facilitate improved shared understanding between design and marketing teams, thereby aiding successful styling decision making in a company.

Dr Janneke Blijlevens
RMIT University
Australia

Dr Janneke Blijlevens is a researcher and senior lecturer in experimental methods, design and consumer psychology at the school of Economics, Finance and Marketing at RMIT University (Melbourne, Australia). She completed her PhD research at Delft University of Technology in 2011. Her research mainly focuses on product appearance, consumer perception and appreciation of design, and innovation strategy. She has published in journals such as International Journal of Design, British Journal of Psychology and Acta Psychologica.
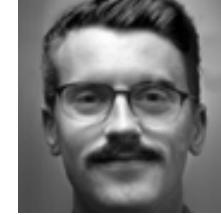
Dr Charlie Ranscombe
Swinburne University of Technology
Australia

Dr Charlie Ranscombe is a researcher and lecturer in Industrial design and Product design engineering at Swinburne University of Technology (Melbourne, Australia). His experience is both as a practicing Industrial designer in the UK and China as well as in academic design research at the University of Bath, UK. Following the completion of his PhD (2012) researching design, product styling and branding, Charlie's primary research focus is in product appearance and user perception of products.

Round Table Symposium:
Track 4 - Corporate Innovation

Session Moderator: **Associate Professor Kwanghui Lim**
University of Melbourne
Australia

Kwanghui Lim is an experienced teacher, researcher and consultant in the areas of technology management and the commercialisation of innovation. Kwanghui's research explores the strategies used by firms to manage intellectual property and the commercialisation process. His doctoral thesis at MIT won the Academy of Management and INFORMS Best Dissertation Award (2001) in the Technology Management area, as well as the 2001 Richard R. Nelson Best Dissertation Award.

Prior to joining Melbourne Business School, Kwanghui was an Assistant Professor at the National University of Singapore (NUS). At NUS he received a university-level prize for teaching excellence in 2003/04 and a faculty-level outstanding educator award in 2004. Kwanghui was a Visiting Assistant Professor at the MIT Sloan School in 2001.

Kwanghui's industry experience includes consulting experience at Booz Allen & Hamilton. During his time there he worked on corporate strategy and information technology projects and developed a computer-based staffing model used at several financial institutions. He has conducted workshops and seminars for the NUS-Port of Singapore Graduate Management Program, World Intellectual Property Organization, Intellectual Property Office of Singapore and 3M-NUS innovation Program for School Teachers.

A holistic approach to corporate innovation

Dr Frank Washko
Saint Martin's University
USA

Dr Washko has worked as an automotive engineer specializing in engine design for airflow and combustion components. In addition, he has worked in the areas of biomechanics, microfluidics, and MEMS. Most recently, he has completed research projects for DARPA and the Office of Naval Research involving efficient powertrain design, flex fuels, and artificial biomaterials. Dr. Washko has also worked as an intellectual property attorney. He currently teaches at Saint Martin's University, and has previously taught at Lawrence Technological University and Wayne State University.

Keywords

innovation, collaboration, marketing, intellectual property, R&D

Innovation in a corporate environment requires collaboration between relevant functional groups across the organization. For one, product planning groups with marketing and finance functions need to be influenced towards innovative products. Second, there needs to be intellectual property function focused on the goal of identifying and protecting innovative designs. Finally, the R&D component of a company needs to be directed towards the development of innovative designs. Evidence shows that if any one of these three functions is lacking, a company will not be effective in developing innovative products in the long-term. This paper studies the rationales and best practices for these functions within innovative companies.

The role of design-led innovation in de-risking uncertain futures for the Australian insurance industry

Alexander Garrett
Queensland University of Technology
Australia

Dr Cara Wrigley
Queensland University of Technology
Australia

Keywords

insurance industry, design-led innovation, deep customer insights

This paper reports on the use of a design-led innovation research approach applied in conjunction with an Australian multinational insurance firm. The research engagement was a response to the oncoming threat of reduced car ownership brought on by decreased car ownership in first world countries. Within this design-led innovation approach, this paper focuses on a specific part of the research, a two-step participatory / co-design research methodology which uses qualitative interviews to inform the creation of a design workshop. These interview and workshops aimed to discover deep customer insights about how participants viewed mobility holistically and new car and ride-sharing technologies. Both workshop participants and the industry partner reported positive feedback to the process and the use of design. The contributions of this paper are threefold. Firstly, this paper examines stakeholders traditionally marginalised by transportation and mobility research, the customer. Secondly, this paper adapts current research methods to generate a new, custom-built design workshop specifically for the study of mobility. Finally, the paper shows early industry buy-in for a design-led innovation process in the context of the Australian Insurance industry. It is anticipated that this research will assist mobility research and design industry alike by providing a new design approach to uncover deep customer insights for future mobility customers.

Alex is an emerging industrial designer and PhD student from QUT. He earned his bachelor degree in design in 2013 and has since been working in a variety of design roles. Mid 2014 saw Alex commence his PhD in Design-led Innovation, a journey due for completion in 2017.

Alex is constantly driven by a pursuit for interesting outcomes and a desire to instigate positive change in his work. Alex believes design and design-led innovation can help bring this change. In his view, design is best used when trying to achieve real outcomes for real people in real situations.

Dr Cara Wrigley – Senior lecturer in the field of Design-led Innovation (DLI). Building on her solid practical industry experience and combined with her scholarly expertise in emotional design, she is actively researching the value that design holds in business – specifically through the creation of strategies to design business models which lead to emotive customer engagement. She currently directs the Queensland University of Technology's DLI Research Lab, placing postgraduate researchers within Australian businesses

The role of design-led innovation in de-risking uncertain futures for the Australian insurance industry (continued)

Dr Nick Russell
Queensland University of Technology
Australia

Nick Russell has over 25 years ICT experience in a career that spans a range of technical, research and executive management roles. During this time, he has led a number of high-profile systems consulting, commercial research and product development initiatives for organisations in the government, transport, financial services and retail sectors. From 2007 to 2009, he conducted research into business process management and process-aware information systems at the Technische Universiteit Eindhoven in the Netherlands. From 2009 to 2014 he was CIO for a major Australian tools supplier with national responsibility for ICT and BPM. He is currently Principal Research Fellow in the Information Systems School at QUT, and a foundation member of the Connected Communities Initiative, investigating the conceptual underpinnings and affordances offered by virtual communities. His research interests include service science, business process management and micro-productivity in virtual contexts.

Dr Judy Matthews
Queensland University of Technology
Australia

Dr Judy Matthews is a researcher, facilitator and educator in innovation management in the School of Management in the QUT Business School at the Queensland University of Technology, actively engaged in research on design-led innovation. Until January 2007 she was a senior lecturer in the School of Management, Marketing and International Business in the College of Business and Economics at the Australian National University; and from 2002–05 was the Director of Master of Management Programs at the National Graduate School of Management at the Australian National University.

Design, visualisation and storytelling at Deloitte and its contribution to business strategy

Keywords

design, visualisation, storytelling, strategy, business, consulting, experience

As the value of design as strategy becomes ever more apparent across the business landscape, organisations are beginning to invite designers to sit at the leadership table. In 2008, Deloitte Australia embarked on the journey to transform itself from a traditional professional services firm to a bold innovator. In 2011, Deloitte made the commitment to use design thinking to help them get there (Howard, 2012; FutureNow Australia, 2014). Deloitte would be 'Different by Design', a program led by Maureen Thurston, the firm's Principal of Design, which has seen Deloitte embrace all that can happen at the intersection of design and business. In doing so, Deloitte has undertaken number of internal projects and initiatives, and offers differentiated client experiences supported by design thinking . In March 2014, Deloitte established a small and agile Design, Visualisation, and Storytelling (DVS) Team within Deloitte Consulting. The DVS Team assists Deloitte Consulting to solve real world problems using design, visualisation and storytelling to create meaningful impact for clients and their customers. To do this, our team uses three key practices:

- Design Thinking: To facilitate design-led problem solving guided by the Deloitte Design Process

- Visualisation: A tool to powerfully communicate, collaborate and engage our senses

- Storytelling: To create and tell stories, bringing meaning to work we do and engaging our imagination.

In this paper we discuss and explore the value of design, visualisation and storytelling in the context of Deloitte. We unpack the DVS practices through two case studies and reflect on how we work in the business to make design the DNA of the firm, and for the business to bring design, visualisation and storytelling to the Deloitte client experience. As an emerging and growing team, we don't seek to provide answers, but demonstrate the things we have been doing which create meaningful impact for the teams and clients we work with. Among our team, we have seen our roles as designers rapidly change and expand. We believe that the combination of design visualisation and storytelling is both unique and powerful in creating a positive impact on the work we do. We believe that the opportunities at the intersection of design and business are only limited to the imagination of designers, business people, and the clients we serve.

Dr Lauren Tan
Deloitte
Australia

Lauren has over 10 years experience in Design Thinking in Australia and the UK. Her area of expertise is in using Design Thinking to guide innovation, customer experience, service design and social innovation projects. She joined Deloitte in 2013 as a Design Strategist. Prior to this she worked with the Design Council (UK), thinkpublic (UK), DesignGov (Australia) and 2nd Road (Australia).

She has a PhD in Design from Northumbria University (UK). This research was co-sponsored by the Design Council in London (UK) and investigated design for social innovation. She also holds a Master of Business degree (University of Sydney) and a Bachelor of Design (Hons) in Visual Communication (UTS). She is a published author of several papers and a book called 'Design Transitions: Inspiring Stories. Global Viewpoints. How Design is Changing' (2013) which captures where design practice is today and where it is going in the future.

Lauren is passionate about leading and using design for innovation in business, government and society.

Shane Currey
Deloitte
Australia

Shane has a natural sense of curiosity - a craving to understand the meaning behind what brands stand for. Shane's creative thinking and customer-focused approach helps brands determine what matters most to its constituents. Taking full advantage of his expertise in design thinking, customer experience and storytelling, his focus is to help clients gain a deeper understanding of what customers truly value in a service experience.

Shane's career spans 15 years and joined Deloitte in 2007 as Creative Director in Marketing and through various creative reincarnations now he finds himself happily living in the world of Consulting working across Human Capital, Technology, Customer, Digital and Strategy competencies. Shane's passion is to help shape, create and realise new opportunities and then convert this brand intention into reality through customer experiences. In essence, he navigates the two worlds of logic and magic and helps throw away the traditional scripts and harnesses the imagination to do the impossible.

Design, visualisation and storytelling at Deloitte and its contribution to business strategy
(continued)

Irit Pollak
Deloitte
Australia

Irit is a designer and creative strategist at Deloitte in the Design, Visualisation and Storytelling team. Her focus is on applying the principles of traditional design to big picture challenges.

Irit has completed a Bachelor of Visual Communication (First Class Honours) at UTS and studied Fine Art abroad at Central Saint Martins College in London. She cut her teeth working at boutique studios Boccalatte and Zé Studio before joining Deloitte in early 2014. Her current role encompasses design thinking, workshop facilitation, print and interactive design.

Outside of Deloitte Irit is a children's book illustrator, podcaster and film maker. She has collaborated on projects with the Justice and Police Museum as well as 21_21 Design Site in Tokyo.

John Hayles
Deloitte
Australia

Over the last 8 years John has built a foundation in design and conceptual thinking through working in advertising and creative agencies. As a creative collaborator John takes a co-design approach in building solutions by helping clients search for core brand drivers, understanding differentiation and helping them communicate in one single voice through a unifying idea.

Craig Hutchinson
Deloitte
Australia

Craig has spent the last 10 years crafting his skills in the Sydney design industry. His core focus is solving complex problems by designing visualisations that provoke conversation, as well as enhancing understanding and engagement.

He graduated from Billy Blue College of Design with a Bachelor of Visual Communication in 2005. He followed a fairly typical design career journey, working at several design and advertising agencies, before deciding to start his own branding studio.

He joined Deloitte in 2014 and brings a rare blend of rigour and passion to creative problem solving as Senior Designer in Deloitte's, Design, Visualisation & Storytelling team.

Craig is passionate about injecting design and creativity into business and creating new ways to solve and communicate complex problems.

Design innovation: A tool for value-adding to the Papua New Guinea balsa wood industry

Keywords

balsa, design innovation, research-led industrial design practice, smallholders, Papua New Guinea (PNG), value-adding

Nathan Kotlarewski
Swinburne University of Technology
Australia

In recent times the Papua New Guinea (PNG) balsa wood industry has increased in global volume and value, offering employment to a significant number of individuals in East New Britain (ENB) province. The PNG balsa industry previously relied on China's renewable wind energy industry for rotor blade manufacturing, which was claimed to be the largest consumer of processed balsa from PNG. Since the Global Financial Crisis (GFC) the Chinese demand for PNG balsa has significantly reduced resulting in a mass over-supply and under-demand for the PNG resource. A lack of design innovation has added to the current market conundrum and left many smallholders unable to sell their balsa, leading to widespread financial hardship.

It has come to the attention of the Australian Centre for International Agricultural Research (ACIAR) and many stakeholders, if there are no new applications for balsa there is no point continuing to grow the resource for a market that is not consuming it. Design innovation generated through research-led industrial design practice is argued as a key element to value-adding to the PNG balsa industry and smallholder businesses, which rely on balsa production for financial gain to support their family and community. A case study of the Swinburne University of Technology, Innovation Cup competition is used as a method to demonstrate how research informs design innovation to add value to the PNG balsa industry.

Nathan Kotlarewski is a PhD student at Swinburne University of Technology, Faculty of Health, Arts and Design, (Melbourne, Australia). Nathan's PhD focuses on new product development for commercial applications utilising balsa wood as a sustainable, lightweight alternative to current commercial materials. Through research-led Industrial Design practice, Nathan is developing innovative product solutions that target the Australian building and construction industry to promote Papua New Guinea balsa wood for future global developments. His research considers the social, environment and economic impact balsa wood presents to new and existing markets and industries.

Design innovation: A tool for value-adding to the Papua New Guinea balsa wood industry (continued)

Dr Blair Kuys
Swinburne University of Technology
Australia

Dr Blair Kuys is currently Department Chair (Head) of Interior Architecture and Industrial Design within the Faculty of Health, Arts and Design at Swinburne University of Technology, Melbourne, Australia. Dr Blair Kuys completed a PhD with the CSIRO and Swinburne University of Technology in 2010. He is an active researcher and has been instrumental in working alongside scientists, manufacturers and engineers to promote the benefits of industrial design for new product developments. Dr Blair Kuys has successfully been awarded six Vice-Chancellor's Awards for Community Engagement (2008), Teaching – Higher Education (2009), Sustainability (2010), Internationalisation (2011), Research – Early Career (2012) and Industry Engagement (2014). These awards highlight his strong commitment to important values for Swinburne University of Technology showing commitment and leadership across all portfolios.

Dr Christine Thong
Swinburne University of Technology
Australia

Dr Christine Thong is Swinburne Design Factory Manager, at the Faculty of Health, Arts and Design, Swinburne University of Technology, Australia. She leads international programs for interdisciplinary teams of design, business and engineering students to work on industry-engaged projects. These include platforms such as Stanford Universities ME310 Design Innovation and CERN Laboratories Challenge Based Innovation.

Christine's research explores how industrial design can play an active role in materials science and technology development to create commercial products that have value to society. Here, interdisciplinary collaboration between design, science, engineering and business is influential to create relevant research frameworks for facilitating successful partnerships between all stakeholders. Project partners include the University of Melbourne and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

In recent years Christine has received grants for researcher development schemes, and curriculum innovation (2011, 2012, 2014) as well as Vice Chancellor teaching awards for Sustainability and Internationalisation (2011, 2013).

Research Forum: Session 3

The design thinking mindset: An assessment of what we know and what we see in practice

Dr Jochen Schweitzer
University of Technology, Sydney
Australia

Keywords
design thinking, leadership, mindset, innovation

In this paper, we provide a comprehensive assessment of the design thinking mindset. First, we review the design and management literature to identify and define key cognitive and behavioural components of a design thinking mindset, before we report our initial findings from 15 in-depth interviews with innovation managers in Australia and Germany who reflect on their practices while implementing design thinking within their organizations. Our study confirms a set of commonly understood and applied mindsets, but also reveals the impact of organisational constraints on translating cognition into behaviour. We suggest to further map the different mindsets used in design thinking projects and link them to extant leadership theory, which - as we argue - provides a suitable point of departure for further study of the design thinking mindset and its role for innovation.

Jochen Schweitzer teaches Strategy and Innovation at the Business School of the University of Technology, Sydney. He is Research Stream Leader at the Center for Management and Organisation Studies and Co-Founder and Director of U.lab, a multidisciplinary innovation hub. Jochen has taught Design Thinking at the Hasso Plattner Institute – School of Design Thinking and worked as Management Consultant, Production-Planning Engineer and Cultural Program Coordinator. His professional experience is in business planning, organizational transformation, change management and innovation. His research focuses on issues of strategic management, collaboration, entrepreneurship and innovation with a special interest in design thinking, urban planning and open innovation. This work has been published in academic journals and books and has also been presented and recognised internationally.

The design thinking mindset: An assessment of what we know and what we see in practice (continued)

Dr Lars Groeger
Macquarie University
Australia

Lars Groeger teaches Marketing Management, Consumer Behaviour and Design Thinking to MBA students and executives in Sydney and Hong Kong. MGSM's MBA is ranked among the world's top 100 MBA programs. He is a frequent speaker at international conferences, business forums and workshops in Australia, Europe, the US and China. Lars also advises leading global corporations as well as start-ups on creative problem solving and marketing strategy. His research explores design thinking capabilities and leadership as well as online and offline Word of Mouth and has been published in leading academic and professional journals. He is currently visiting the HPI School of Design Thinking in Potsdam, Germany.

Leanne Sobel
University of Technology, Sydney
Australia

Leanne is a design strategist with a unique blend of design and business expertise. Over the past decade she has worked in a variety of roles within the creative industries and corporate spaces including: design, brand and research strategy; design education, graphic design, public relations, marketing communications, and project management. In 2012, Leanne conducted a research study that explored the status of design thinking in Australia. Subsequently, articles she wrote on the subject were published in the London Financial Times, Design Management Institute Review, and Business Review Australia. Leanne holds a holds a Masters of Management from Macquarie Graduate School of Management and a Bachelor of Communication Design from Swinburne University of Technology. Leanne is currently a design strategist for Deloitte and a casual lecturer at Billy Blue College of Design. She recently held positions as a casual researcher for the University of Technology, Sydney and Macquarie Graduate School of Management.

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Exploring the role of mindset in design thinking: Implications for capability development and practice

Dr Zaana Howard
Huddle
Australia

Keywords

mindset, design thinking, human centred design, design capability, design maturity

Design thinking continues to be an emergent field as it pertains to business. In building design thinking capability in organizations the current focus is on design skills and tools, rather than mindset. This imbalance toward design process, methods and tools is also present within design thinking and design research literature. Mindset is little acknowledged.

The purpose of this paper is to investigate and articulate the role of mindset within design thinking capability and practice. Mindset is the perspective that informs how a person approaches and interacts in the world (Nelson & Stolterman 2013). Where mindset is acknowledged as a critical underpinning for design thinking in the literature, it is usually presented as guiding principles for design doing. There is little insight into what the different mindsets are, how to develop or enact them, or how mindset impacts on practice. Mindset remains underexplored in discussions of design competency and maturity.

By analysing qualitative data collected across three studies of a doctoral research project exploring the composition of design thinking in practice, two mindsets emerged. These were: design thinking as a way of work and design thinking as a way of life. Design thinking as a way of work is focused on the process of design thinking with the primary purpose of designing for outputs and innovation. Design thinking as a way of life is a holistic view of design thinking where the focus is on designing for transformation and creating positive change. These mindsets are scalable, applicable to an individual or organization.

The two mindsets, when mapped against competencies in design knowledge, skills and tools, contribute a framework to explore maturity in design thinking. Understanding the maturity framework, and the role of mindset within it, has implications for how an individual and organization can build capability in design thinking and maximise outcomes in the environment in which they are designing.

Zaana is curious about how people learn and create knowledge. She is Huddle Academy Lead where she designs transformative experiences for people to develop human centred mindsets and enable new ways of thinking and working with meaningful outcomes. She is passionate about working with organisations to be more human centred and nimble within increasingly complex environments.

Zaana recently completed PhD in design at Swinburne University of Technology, researching design thinking in practice in large organisations and how people develop design thinking capability and grow to mastery. Zaana also has a Masters in Knowledge and Information Management and a Bachelor of Fine Art.

Beyond design, in her diverse professional background Zaana has worked as a university lecturer in information ecology, online community manager, intrapreneur, and information and knowledge manager across business, education and not for profit contexts.

Exploring the role of mindset in design thinking: Implications for capability development and practice (continued)

Dr Melis Senova
Huddle
Australia

As Founder and Director at Huddle, Melis is the main provocateur when it comes to encouraging creative and pragmatic solutions. She is passionate about driving change within organisations with a natural focus on human centricity, design and what it takes to thrive in the 21st century.

Melis has deep academic qualifications and vast business experience, underpinned by a PhD in Human Factors (user-centred design). Her areas of expertise covers service strategy, strategic service design, experience design, concept prototyping, systems engineering, program management and human factors research.

Melis is a contributing author to 'This is Service Design Thinking' the very first textbook on Service Design published in 2011. She sits on the advisory board for the Department of Architecture and Industrial Design at RMIT and is a Senior Research Fellow at the School of Medicine at Monash University.

Melis is also co-founder of London-based Enterprise Design consultancy FromHereOn.

Dr Gavin Melles
Swinburne University of Technology
Australia

Dr Gavin Melles is Senior Lecturer in the School of Design, Swinburne University. He teaches research methods & design thinking and supervises PhDs in Engineering, Design, Architecture and other fields. He has PhD (Education), MSc Linguistics, and is completing an MSc in Sustainable Development (SOAS, University of London). His interests and grants to date have been in design education, design thinking and sustainability. He is on the editorial board of several design, humanities and education journals.

Round Table Symposium:

Track 5 - Creative Entrepreneurship

Session Moderator:

Professor Scott Thompson-Whiteside
Swinburne University of Technology
Australia

Professor Scott Thompson-Whiteside is the Dean for the School of Design at Swinburne University of Technology in Melbourne, Australia. Since 2005 Scott has been an Associate Dean, Deputy Dean and been responsible for the leadership and management of international partnerships, courses and staff. Scott has extensive experience in teaching and managing courses, departments and schools in the UK, Malaysia, and Australia. In 2006 he won the Vice-Chancellor's award for teaching excellence in the area of design management. Scott's Research intersects the disciplines of education, higher education policy, design and innovation. His PhD is from The University of Melbourne at the Centre for the Study of Higher Education.

A design research strategy for advancing the technological and competitive strength of Australian manufacturing small to medium enterprises (SMEs)

Roderick Walden
University of Technology, Sydney
Australia

Stefan Lie
University of Technology, Sydney
Australia

Keywords

research and development, Australian SMEs, design strategy, industrial design, advanced manufacturing, practice oriented research

This paper will propose a design research strategy to support collaboration of SMEs and University Research Units on projects intended to advance the competitive strength of SMEs in Australia through the utilisation of Advanced Manufacturing Technologies (AMT). Review of literature identifies that a predominant driver for enterprises to remain competitive, is investment in Research and Development (R&D) strategies; and that while manufacturing SMEs have the potential to be innovation leaders, they are often not able to fund the high cost associated with in-house R&D. This presents SMEs with a challenge that needs to be addressed. The Australian Government, Industry Innovation and Competitive Agenda (2014) outlines a funding program that supports collaboration between university research units with Australian manufacturing SMEs under its Advanced Manufacturing category, with a view to implementing AMT into the manufacturing sector. A form of Advanced Manufacturing Technology - Additive Manufacturing (AM) has been the subject of significant and ongoing inquiry by the research sector and manufacturing sector alike.

Background research and further literature research indicates that there maybe significant advantages to the implementation of AM into more mainstream production. While SMEs have the flexibility to innovate with the technology on one hand, they are also bound by financial constraints that limits their ability to conduct the necessary experimentation required to identify ways of utilising the technology. Review of similar programs in Korea and the UK, finds that government funded university-industry projects to improve the competitiveness of SMEs, requires that knowledge transfer yield short-term implementable outcomes for the company in terms of new products and processes. However, to strategically coordinate the implementation of AM into a SMEs production system requires experimentation, innovation and long-term vision. Resolving the combination of these two competing factors so that universities can provide future focused research that has industrial application, are the main drivers behind the development of a strategic hypothesis, framed by design thinking to integrate the needs of each partner and generate collective benefit.

Roderick Walden, University of Technology, Sydney, undertakes research into the contemporary methods and practice of industrial design. His principal areas of research interest lie in professional practice, self-initiated product innovation and design thinking. He has worked as a product designer and engineer for a range of manufacturers in the commercial office furniture industry, including international companies based in the US and Germany. Before entering academia, he formed the design consultancy, Walden Design Pty Ltd, in 2003 that developed a range of products for the Australian manufacturing industry. He has published research on innovation and prioritisation in design and international networks in design formulation. His recent research on self-initiated product design proposes a model for the application and development of design knowledge to successfully commercialise product innovations. He is passionate about the technical work of design and the meaning behind the connections designers make with other areas of knowledge to solve problems, innovate and learn.

Stefan Lie began in the field of industrial design and over the past 16 years has evolved, through project experience as a consultant, postgraduate study and academic research to focus on interaction design. Lie's specific research interests are the ways in which new manufacturing methods, such as 3D printing, enable interactive products to be manufactured in very low volumes for highly specific applications, and the development of new design methods that will lead to such outcomes.

A design research strategy for advancing the technological and competitive strength of Australian manufacturing small to medium enterprises (SMEs) (continued)

Berto Pandolfo
University of Technology, Sydney
Australia

Berto Pandolfo, University of Technology, Sydney, is an industrial design practice orientated researcher whose design research interests are focused around the application of emerging and/or traditional methods to develop new approaches to complex form making, within the context of small batch production in Australia. This type of design research is characterised by non-traditional or practise-based investigations. Berto's designs have been cited in both local and international design journals and his work has been exhibited in design events both locally and internationally. Berto is senior lecturer and director of Integrated Product Design at the University of Technology, Sydney.

Cathy Lockhart
University of Technology, Sydney
Australia

Cathy Lockhart, University of Technology, Sydney, her research explores the implications of the shift in the gender mix of the student population in industrial design education where there has been a notable increase in the number of women graduating. In particular she is interested in the educational experience and transition into the profession. Cathy has worked for many years as a professional designer being Design Director of a consultancy that was a leading designer and manufacturer of retail merchandising systems.

Shaping futures through new meanings: Design projects that transform business

Keywords

meanings, business, design project, design-driven innovation

The present research investigates the impact of individual meaning-driven projects on business and overall corporate strategy.

Design and the creation of new meanings play a key role in innovation and business performance. The strategic use of design often assumes structured methodologies in which design-driven innovations are the consequence of a well-established (even when informal) design process. However, empirical evidence shows that successful design-driven innovations also result from rather isolated design initiatives that, when properly identified and promoted, have the potential to boost performance and transform the future of businesses.

This research aims to identify how these latent design-driven innovations are captured and promoted by organizations, thus becoming strategic projects with the potential to redefine their business. Based on qualitative research methodologies, the study builds on a longitudinal case study at Vibram, an Italian company that expanded their business model, boosted revenue and contributed to a disruption in the industry through a design project grounded in a change in meaning: FiveFingers®. The study unveils how design-driven ideas moved through the organization, highlighting the managerial practices that allowed the identification of a promising external design concept. This research tracks its escalation from an isolated project to a strategic level, which demonstrates the essential role of internal and external environmental factors in this transformation. The study provides useful insights for practitioners in terms of key aspects to consider when exploring the potential of individual design projects for a firm's innovation and business performance. The study also provides empirical evidence on users' potential in the creation of new meanings, an area still underexplored in design-driven literature.

Marta Morillo Rodriguez
Politecnico di Milano
Italy

Design-driven professional with a 'can do mentality', passionate about design and hi-tech products. Marta has over twelve years of international professional experience in design, product and project management roles with leading multinationals (Philips) and SME's, driving and delivering innovations across several markets and industries. She has a sound knowledge of innovation, design management, product management, LED lighting, customization, and solid project management competencies, particularly in projects with a strong creative driver and highly innovative and technological requirements.

Always eager to learn, Marta is currently Executive PhD candidate [Innovation Management] at Politecnico di Milano (Department of Management, Economics and Industrial Engineering), and a EU Marie Curie research fellow at DESMA. She holds a degree in Engineering in Industrial Design (Valladolid University) and a postgraduate MA Design Management (Staffordshire University).

Her professional and research interests lie at the intersection between innovation, design, technology and business: innovation management, design management, strategy, design-driven innovation, technology management, portfolio strategy, and open innovation.

Shaping futures through new meanings: Design projects that transform business
(continued)

Claudio Dell'Era
Politecnico di Milano
Italy

Claudio Dell'Era is Assistant Professor in the Department of Management, Economics and Industrial Engineering of Politecnico di Milano, where he serves also as Co-Director of MaDe In Lab, the Laboratory of Management of Design and Innovation of MIP Politecnico di Milano (www.madeinlab.it). Research activities developed by Claudio Dell'Era are concentrated in the area of Management of Innovation. Specifically research interests are about two main streams: the former concentrates on innovation strategies developed by leading companies that operate in design-intensive industries where symbolic and emotional values represents critical success factors to generate competitive advantage (Management of Design-Driven Innovation); while the latter analyzes approaches and practices adopted during innovation processes by high-tech companies that face turbulent environments (Management of Technological Innovations in Turbulent Environments). He has published in relevant international journals, such as Journal of Product Innovation Management, Long Range Planning, R&D Management, International Journal of Operations & Production Management, Industry & Innovation, International Journal of Innovation Management.

Roberto Verganti
Politecnico di Milano
Italy

Roberto Verganti is Professor of Leadership and Innovation at Politecnico di Milano, where he teaches in the School of Management and the School of Design, and where he directs MaDe In Lab. He has been a visiting scholar at the Harvard Business School twice, and at the Copenhagen Business School. At Politecnico di Milano he has been the founder and first director of the School of Doctoral Programs and of the Alta Scuola Politecnica. Roberto serves on the European Design Leadership Board of the European Commission. His research on management of design and design clusters has been awarded the Compasso d'Oro (the most prestigious design award in Italy).

Roberto's research focuses on how leaders and organizations create innovations that people love. He explores how to generate radically new visions, and make those visions come real. His studies lie at the intersection between strategy, design and technology management. In his research Roberto combines methodologies of in-depth analysis of cases with experimentations with pioneering firms, in a variety of industries and contexts.

Why should business value creativity?

Keywords
creativity, business, strategies and approaches, implementation

Creativity is a word which can be interpreted in many ways. Traditionally considered to be personal, inborn, individual, specialized and about inventing something, Erica McWilliam's 'old creativity', it's now acknowledged to be collaborative, learnable, community based, cross or multi-disciplinary and about ideas and making connections. Unsurprisingly, this reflects the way most of us work best.

In business, creativity has come to mean a process that leads to novel exploitable outcomes – Tim Brown's 'design thinking', 'matching people's needs with what is technologically feasible and viable as a business strategy'. But much will be lost if we only think of it like this. Many great ideas arose from directionless idle curiosity, and, as Rick Poyner has pointed out, this ignores the importance of culturally connecting with the audience.

Giovanni Schiuma argues that the innovation, thinking patterns and emotional intelligence offered by the arts can allow speculation, insight and foresight, flexible response, openness to possibilities and change, and challenge ingrained ways of thinking. Industry knows that it takes fresh thinking and innovation to stay ahead in a global market. Governments are looking to the creative industries to drive their economies out of recession. Many business institutions understand the need for this creative dimension but don't know how to achieve it!

This paper outlines strategies for the assimilation of creative practice in business gained by the authors' experience introducing a creative dimension across a variety of business related disciplines aimed at providing the attributes required to a change attitudes to creativity, and gain the benefits it offers. It demonstrates strategies to overcome inhibitors such as aversion to risk or the unexpected, the inertia of familiarity and proven outcomes, and management and workplace expectations that often frustrate the very creative possibilities that a business may need to survive and thrive during increasingly complex changing times.

Stuart Gluth
Charles Darwin University
Australia

Stuart Gluth, who is now Lecturer in Graphic Design at Charles Darwin University, was previously Studio Head of Graphic Design at the University of South Australia, and is a practising designer, Illustrator, prizewinning pop-up designer, typographer/typographic researcher into the legibility of type and creativity. With Ron Corso, he has conducted workshops in creativity across disciplines, leading to a Teaching and Learning Citation for Teaching Excellence, a University Teaching and Learning Grant and participation in a successful OLT grant to develop an on- line creativity framework. He has exhibited his personal paper work, has acted as a consultant internationally in integrating creativity across disciplines, been an exchange lecturer and taught design education, drawing and creativity in China and conducted design workshops in remote aboriginal communities.

Ron Corso
University of South Australia
Australia

Ron Corso, immediate past program director of Graphic Design and Product Innovation at the University of South Australia, has had an involvement in Design Education for over thirty years. He has conducted research into the teaching of creativity, convened conferences as well as publishing and presenting at numerous conferences. He has conducted workshops on creativity across disciplines locally, nationally and internationally facilitating significant curriculum change to reflect creative capacity in students which has led to a Teaching and Learning Citation for Teaching Excellence and Research, a University Teaching and Learning Grant and participation in a successful OLT grant to develop an on-line creativity teaching framework. He has acted as an international consultant in integrating creativity across disciplines, working on projects promoting, Design, Design Education, Drawing and Creativity.

Research Forum: Session 4

Design as a competitive advantage in startup fundraising

Nico Florian Klenner
Copenhagen Business School
Denmark

Keywords
design, start-ups, fundraising, grounded theory, case study

This study examines how design can be employed to create a competitive advantage for start-ups in seeking external funding.

Access to funding is a crucial factor for start-ups when it comes to building, developing, and growing their business. A better understanding of the criteria sought by investors or financiers can aid entrepreneurs in obtaining funding. The current literature on fundraising overlooks the role that design plays in start-ups' fundraising activities.

A multiple case study analysis shows a number of ways that start-ups might benefit from a design-led approach to fundraising. The study is based on interviews with Danish institutional and private investors, designers, design institutions, governmental organisations, and key decision makers in design-led start-ups.

The researchers identify the main opportunities and challenges for design-led start-ups in the fundraising process and demonstrate how taking a design-led approach towards fundraising might confer a competitive advantage for start-ups that are looking to obtain external funding.

The study shows how this competitive advantage might be realised and proposes a model that explains how the fundraising process leading to the investment decision might be influenced by design. This newly proposed model was then tested in a small study of Australian based entrepreneurs and intrapreneurs, looking for validation and similarities or anomalies between the Danish and Australian start-up cultures.

Nico is currently employed with Danish audio design company AIAIAI, where he works in marketing and business development. AIAIAI is dedicated to developing high quality audio products with modern, minimalist aesthetics.

Nico is enrolled in the Master of Science in Economics and Business Administration - Strategic Market Creation, a program focusing on strategy, innovation and design. As part of his studies Nico spent an exchange term at Melbourne Business School. As part of his Master thesis he is currently researching at the intersection of business and design

Prior to joining AIAIAI Nico was working in Digital Marketing both in Denmark and Germany. He holds a Bachelor of Science in International Marketing from University of Pforzheim (Germany) and a Bachelor of Arts in International Business from ESCEM Paris-Tour-Poitiers (France).

Design as a competitive advantage in startup fundraising
(continued)

Lasse Hartz-Olsson
Copenhagen Business School
Denmark

Lasse is currently employed with the official Green brand of Denmark State of Green, where he works in finance, strategy and corporate governance. State of Green is a public-private partnership founded by some of the most prominent private companies as well as ministries in the fields of energy, climate, environment and water.

Lasse is currently completing a Master of Science in Economics and Business Administration at Copenhagen Business School - a program focusing on strategy, innovation and design. In his Master's Thesis Lasse is researching at the intersection of business and design.

Lasse has previous experience as an entrepreneur and co-founder of a startup within the creative industries. Lasse holds a Bachelor of Science in Economics and Mathematics from Copenhagen Business School.

Brett Capron
CobaltNiche Design
Australia

Brett is an experienced product designer from Melbourne Australia. Brett believes in the deployment of creativity and design at the highest strategic level in business; injecting empathy, creative thinking and iterative prototyping into corporate culture.

Brett is Associate Principal at CobaltNiche, one of Australia's largest and most creative industrial design consultancies, balancing equal measures of creative passion and technical accountability in designing profitable products for clients.

Brett is a Member of the Design Institute of Australia (MDIA), an Accredited Designer, a Member of Engineers Australia (MIEAust), and a Chartered Professional Engineer (CPEng). Brett holds a Bachelor of Industrial Design (Monash University, 2006), a Bachelor of Mechanical Engineering with Honours (Monash University, 2006) and an MBA (Melbourne Business School, 2014).

Service design integration with business development: Six Finnish case studies of digital service development

Piia Rytilahti
University of Lapland
Finland

Piia Rytilahti works as a researcher at the University of Lapland, Faculty of Art and Design. She is experienced in design research focused both in regional research and development projects, technology and design led development projects, and academic research. She is finalizing her dissertation thesis on service design. Her research interests are in social interaction, co-creation and affective design methodologies.

Keywords

service design, digital business ecosystem, activity theory, action research, case study

As a complex ecosystem, the global digital environment includes actors and stakeholders with diverse values and distinct mind-sets. In this research, we examine the digital ecosystem in the Finnish context of a business-led research and development (R&D) consortia (Need for Speed, N4S), focusing on the early phases of research. The aim is to propose an iterative action research framework for developing the Finnish digital business ecosystem with the use of service design thinking and tools.

Service design is the methodology and process of enabling co-creation activities during all steps of the design process, concept generation and prototyping before the launch of a service. The theoretical framework utilised in this research is Cultural-Historical Activity Theory (CHAT), which suggests the starting point for a more practical strategic tool—a community-originated perspective of value proposition which integrates continuous product, service and business development practices.

Theory-based data analysis is applied to data on design methods used in service design cases with six companies, including co-creation workshops, reflective interviews, observation, visual documentation and rough service prototyping. In this empirical study, the six company cases serve as iterations in the action research approach. The company cases were conducted by the Service Innovation Corner (SINCO) laboratory at the University of Lapland in 2013 and 2014. Two case companies operate in the customer service field in tourism (Santa Park, Lapland Safaris), two in manufacturing (Norrhydro, Kone) and two in the software industry (Elektrobit, Ericsson).

This research proposes a preliminary structure of the prerequisites for service design integration in the Finnish digital ecosystem mapped through the case domains (tourism, manufacturing and software). Additionally, this paper proposes further research topics relevant to integrating service design processes with continuous product, service and business development practices and agile process models.

Service design integration with business development: Six Finnish case studies of digital service development (continued)

Simo Rontti
University of Lapland
Finland

Simo Rontti works as a project manager and university lecturer at The University of Lapland, Faculty of Art and Design. His research interests focus on service design methodologies and environments such as developing The SINCO (Service Innovation Corner), project that started at the University of Lapland in 2009, to develop an environment for holistic service prototyping where building a prototype in a "rough and ready" manner, but utilizing quick and agile methods, would be easy and collaborative.

Satu Miettinen
University of Lapland
Finland

At the moment, Satu Miettinen works as a professor at the University of Lapland. For several years she has been working with service design research and authored number of books and research publications in this area.

Her research interests are in the areas of social and public service development as well as in the area of digital service development. She has both national and international expert positions in these areas. She is a research director in several national and international service design research projects coordinated by the University of Lapland. Further, she is running a research group in service design and supervising doctoral thesis in the areas of service and social design. Satu Miettinen works actively in the area of social design in Namibia, South Africa and China. She is active artist and designer in the area socially engaged art. In the past she has worked as a project manager and specialist in the areas of crafts development, cultural and creative tourism in several international and European Union funded projects during the period 1997 - 2006.

The value and importance of design when branding for social media. Models for a framework analysis

Sara Gancho
LICA - Imagination Lancaster
United Kingdom

Keywords
branding, social media, design, design strategy, design management

This paper presents an investigation into understanding the role of design and designers, when managing creative brand strategies for social media. We identify the design skills necessary to work in branding for social media, and discuss how design and marketing strategy are related to social media strategy. We also look into what roles designers may play in the future of social media.

We consider three different domains and areas of expertise: Marketing, Design and Social Media. With regard to Marketing we opted to focus on the branding literature that is concerned with strategic brand management, and also on the social marketing management literature. We attempt to connect aspects of brand design that are crucial to the social media field. Concerning design, we focused on its importance to both branding and social media, while addressing the importance of design management in branding today, and how it is connected to new research in social media. We analysed how social media has developed into a growing and important platform for brands to connect with consumers and vice versa, and also how it generates business and return of investment. Our goal is to clarify the importance and impact of these areas for social media strategy, branding and business.

We also present a series of empirical studies, using surveys and expert interviews, tailored to capture quantitative and qualitative data, which enabled the proposal of models representing the design practices for branding in social media, which were also validated and revised through a survey.

Sara Gancho has a degree in Graphic Design and a Masters in Design and Visual Communication from IADE, the most renowned Design University in Portugal. Since graduating she has lectured several courses in Marketing, Management Branding and Introduction to Design in three different Universities (IADE – Creative University, ESTAL – Escola Superior de Artes e Tecnologias de Lisboa and Lancaster University – LICA) and has been awarded a highly commended paper by the Design Management Institute and Cambridge University in September of last year. She was a Researcher in a funded Relationship Marketing Project "Determinants and Consequences of the Relationship Marketing aproaches between B2B" and is a collaborating member of UNIDCOM in the ID:Co.Lab funded project. After finishing her degree she has also worked in several design agencies and as a freelance designer for many Portuguese and English companies. She is currently represented by AAREPS and has published illustration work on the Black Book of Illustration.

The value and importance of design when branding for social media. Models for a framework analysis (continued)

Dr Rachel Cooper
LICA - Imagination Lancaster
United Kingdom

Rachel Cooper is Professor of Design Management at the University of Lancaster, where she is Chair of the Lancaster Institute for the Contemporary Arts, co-Director of ImaginationLancaster, and co-Director of HighWire (Digital Economies Innovation Doctoral Training Centre). She is also President of the European Academy of Design, Editor of The Design Journal, and a trustee of the Research and Development Management Association (RADMA). She has recently become a member of the EU Design and Innovation Leadership Board, and has undertaken several advisory roles to national and international universities, government and non-governmental organisations.

Dr Martyn Evans
LICA - Imagination Lancaster
United Kingdom

Martyn is Head of Department of Lancaster Institute for the Contemporary Arts at Lancaster University. His research interests explore the strategic approaches designers use to consider the future, in particular the ability of designers to envision potential social, cultural, technological and economic futures. As a trained product designer, his research activities centre on design futures, trends and forecasting on which he has presented widely.

Lisa Strausfeld
InformationArt
USA

Lisa Strausfeld is a New York-based information architect, data visualisation entrepreneur and, currently, Principal of her own studio, InformationArt.

Most recently, Lisa spent 3 years at Bloomberg LP, first as Global Head of Data Visualisation and then as Creative Director of Bloomberg View. She built and led Bloomberg's first data visualisation team, Bloomberg Visual Data, dedicated to creating a new genre of editorially driven interactive data products for Bloomberg's consumer audience.

Prior to Bloomberg, Lisa was a partner at Pentagram from 2002 to 2011 where she built a practice around digital information projects including the design of large-scale media installations, software prototypes and user interfaces, signage and websites.

Her clients included One Laptop per Child, GE, the Museum of Arts and Design, Bloomberg LP, MIT and the New York Times. Lisa left Pentagram to launch Major League Politics, a startup that measures and visualises government activity with the goal of civic entertainment.

Lisa received the 2010 National Design Award for Interaction Design. She holds four patents related to user interfaces, has been a Senior Scientist at the Gallup Organization since 2006 and has taught interactive design at the Yale School of Art and at NYU's ITP program. Lisa has a BA from Brown in art history and computer science, an M Arch in architecture from Harvard and an MS from the MIT Media Lab.

Acknowledgements

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The Design for Business: Research Conference is a landmark event at the annual Melbourne International Design Week. The program is presented by Ideas on Design in partnership with Creative Victoria and Swinburne University of Technology, with support from Auckland University of Technology and RMIT University - College of Business.

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