



Ideas

Innovation and Design as Leadership

Transformation in the Digital Era

Joseph Press
Abraham B. (Rami) Shani
Silvia Magnanini
Daniel Trabucchi

Roberto Verganti
Tommaso Buganza
Paola Bellis
Federico Paolo Zasa

IDEaLs

(Innovation and Design as Leadership)

ENDORSEMENTS

It will be impossible to reach global climate goals if cities don't transform to become more livable, more equal, and zero carbon. This transformation needs innovation that is co-created by a coalition of citizens, government, and businesses. More than anything, the process and outcome have to have meaning for every participant because cities will change only if we all have a stake in it.

IDEaLs is a much needed manual for a new kind of leadership, and a must-read for all changemakers who want to enable a process of cocreation that engages everyone to imagine and build better futures.

–Ani Dasgupta, President & CEO,
World Resources Institute (WRI)

Are we in an innovation glut, or a leadership rut? Is design at the core of our survival, or just on the periphery? Do we focus on one, the other, or all? While the answers may not be certain, what is clear to all of us who seek better futures is that the three words of this book – innovation, design, and leadership – are critical for humanity to thrive at every level. IDEaLs puts these terms back into perspective so that none of the three is engaged with the religious fervor recently found in so many books/articles/talks/blogs. These three are juxtaposed with clear examples which will satisfy those who nerd out in deep science, those requiring well-researched methodological frameworks, as well as those who need a bit of nudging for on-the-ground action. I especially appreciate the focus on

people, since in the end most of the challenges we face today were/are made by people, will be solved by people, and will be developed and delivered by people. *IDeaLs* helps us all to understand not just the how, but also the why. It is simply an excellent piece of work.

–Chris Luebke, Leader of the Strategic Foresight Hub in the Office of the President at ETH Zurich. Former Director of Global Foresight + Research + Innovation of Arup

IDeaLs defines a new wave of changemakers who are embracing the power of collaboration as the new way forward for innovative and sustainable leadership. Their research confirms the power of imagery as a catalyst for change – in business, society, and even from within ourselves. A motivating and powerful read for purpose-driven influence at any level.

–Lindsay Morris, Strategic Development Manager,
Adobe Stock

Innovation

IDEALS breaks new ground in powerful ways and at the exact moment when we, as innovators and designers, need new frameworks to lead deep and collective transformations for the challenges and opportunities we are now faced with. By infusing transformation with neuroplasticity, anthropology, design practices, and some of the deepest thinking on the collective imagination, this work beautifully reveals a generative sense of shared consciousness, thereby raising our ability to coconstruct new futures and nurture truly transformational change. This is an aperture expanding book for all of us.

–**John Seely Brown**, Former Chief Scientist, Xerox Corporation, and Director of Xerox Palo Alto Research Center (PARC), and Co-author with Ann Pendleton-Jullian of *Design Unbound. Designing for Emergence in a White Water World* (MIT Press, 2018)

How to transform is the existential challenge of our new decade. Integrating innovation, design, and leadership opens an important chapter on how to spark and sustain *transformative innovation*.

–**Ivanka Visnjic**, Associate Professor of Innovation, Director of Institute for Innovation and Knowledge Management, ESADE Business School

This buoyant book shows you how to connect the dots – between neuroscience, meaning, engagement, community, and transformation – so you can use innovation, design, and leadership to become a true *future maker*.

–**Bob Johansen**, PhD, author of *Full-Spectrum Thinking* and eleven other books. Distinguished Fellow, Institute for the Future

In times when countless publications promise the silver bullet for managing digital transformation, this book stands out for its welcome and refreshing combination of rich research-based insights and practical applications. *IDeaLs* does justice to the complexity of the subject while presenting an accessible reference for today's business leaders.

–Shiko Ben-Menahem, Senior Researcher and Lecturer
at the Chair of Strategic Management
and Innovation, ETH Zurich

Design

I have worked as a Professor in Academia as a Vice president in industry. Each community has its own view of reality sometimes with nothing in common. Even researchers who work in company research organizations are often clueless about how their work might translate into business opportunities. IDEaLs stands out as a unique, groundbreaking initiative to bridge this gap. It brings together leading researchers with industry executives, creating a collaborative environment that yields the best of both worlds. IDEaLs merges innovative ways of thinking with practical realism about the real, messy, chaotic world of competition and uncertainty.

–**Don Norman**, Cofounder of the Design Lab, University of California, San Diego’s Design Lab, cofounder of the Nielsen Norman group, and former VP of Apple’s Advanced technology group. Author of over 20 books, including *Design of Everyday Things*

Transformative Innovation is more than just a well-honed process, episodic investment, or set of promising new ideas – it only works for all of us when it includes all of us. IDEaLs offers a holistic, research-based approach to fostering sustainable innovation by integrating the human, social, and technical systems for lasting change. In an increasingly VUCA world, this pursuit is needed now more than ever before.”

–**Lisa Kay Solomon**, co-author of *Moments of Impact* and *Design a Better Business*, Designer in Residence, Stanford University Hasso Plattner Institute of Design

With keen insights on the uniqueness of our digital context, IDEaLs' integrated theory and rigorous research sparks a necessary reframing of innovation, design, and leadership. This book will enhance your awareness of the challenges to lead innovation for impact, and certainly encourage a critical dialog on our assumptions. Ultimately, this book is a call for all of us to move closer to the ambitious, yet critical goal of collectively transforming toward a more sustainable world.

–Dr. Falk Uebernickel, Professor for Design Thinking and Innovation Research at Hasso Plattner Institute (HPI)

An important reference for any business leader today navigating the complexity and volatility of current market conditions. A key takeaway from IDEaLs is to leverage neuroscience to inform how to integrate innovation, design, and leadership. This text also opens an important perspective for researchers and practitioners in the innovation game.

–Rhea Alexander, Director and Founder of Parsons Entrepreneurs Lab (ELab) and Professor of Strategic Design and Management, Parsons School of Design, The New School University

Historically, innovation and design begin with a service perspective: “we innovate for you.” Transformation, particularly changing systems toward shared purpose, requires a first-person perspective: “I innovate with you.” This book shares important learnings on engaging people for systemic change, making a crucial next step in the evolution of design practices with sustainable impact.

–Paul Gardien, Vice President of Philips Design

Leadership

IDeaLs is an important book because in reality an innovative and effective organization is a group product. It is the result of co-design and coimplementation by designers, producers, and users. By linking the traditionally separate processes of engineering, design, and group work, IDeaLs aims to link real work to the artistic in all of us. In the end, this is the only way to truly engage employees in the hard work of organizational change.

–Edgar H. Schein, Professor Emeritus, MIT Sloan School of Management, and author with Peter Schein of *Humble Leadership* (2018) and *Humble Inquiry, 2nd Ed* (2021)

The IDeaLs research represents a powerful combination of theory and practice in tackling real-world challenges. The authors present a fresh approach to developing systemic thinking *and* action by exploring the connections between innovation, design, and leadership. Case studies from some of the world's largest companies illustrate the real-world challenges of aligning individuals and groups to solving complex challenges and designing a desired future. These tangible examples reinforce the framework of design thinking to achieve transformational innovation – and the paradigm shift – required to drive real change. A must-read for those wanting to disrupt the status quo and breathe new life into critical strategic initiatives.

–Cheryl Flink, PhD, VP of Leadership Research and Innovation, Center for Creative Leadership

Rather than espouse capabilities or a model for transformational leadership, the IDEaLs research opens a space for researchers and practitioners to explore the nuances of engaging people for transformation in the digital era.

–**Shlomo Ben-Hur**, PhD, Professor of Leadership, Organization, and Corporate Learning and Director of IMD Business School Transformative Leadership Program

IDEaLs (Innovation and Design as Leadership) is a must-read for those who want to enhance a design thinking approach with sustainable transformation. It provides a compelling framework for transformation by democratizing innovation through shared leadership and cocreation with meaning.

–**Eun Y. Kim**, Founder and President of CEO International, and Executive Coach at The Center for Creative Leadership

This page intentionally left blank

IDeaLs

(Innovation and Design as Leadership)

Transformation in the Digital Era

BY

JOSEPH PRESS

Parsons School of Design, USA

PAOLA BELLIS

Politecnico di Milano, Italy

TOMMASO BUGANZA

Politecnico di Milano, Italy

SILVIA MAGNANINI

Politecnico di Milano, Italy

ABRAHAM B. (RAMI) SHANI

California Polytechnic State University, USA

DANIEL TRABUCCHI

Politecnico di Milano, Italy

ROBERTO VERGANTI

Stockholm School of Economics, Sweden

and

FEDERICO P. ZASA

Politecnico di Milano, Italy



emerald
PUBLISHING

United Kingdom – North America – Japan
India – Malaysia – China

Emerald Publishing Limited
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2021

Copyright © 2021 Joseph Press, Paola Bellis, Tommaso Buganza, Silvia Magnanini, Abraham B. (Rami) Shani, Daniel Trabucchi, Roberto Verganti, and Federico P. Zasa
Published under an exclusive license by Emerald Publishing Limited

Reprints and permissions service

Contact: permissions@emeraldinsight.com.

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-80071-834-0 (Print)

ISBN: 978-1-80071-833-3 (Online)

ISBN: 978-1-80071-835-7 (Epub)



ISOQAR certified
Management System,
awarded to Emerald
for adherence to
Environmental
standard
ISO 14001:2004.

Certificate Number 1985
ISO 14001



INVESTOR IN PEOPLE

*To our mentors, who engaged us to transform ourselves,
and the communities we serve.*

This page intentionally left blank

If powerful men and women
could center themselves in it,
the whole world would be transformed
by itself, in its natural rhythms.

Lao Tzu, Tao Te Ching.
Translated by Stephen Mitchell, 1999

This page intentionally left blank

CONTENTS

<i>List of Figures and Tables</i>	<i>xix</i>
<i>List of Abbreviations</i>	<i>xxiii</i>
<i>About the Authors</i>	<i>xxvii</i>
<i>List of Authors</i>	<i>xxxix</i>
<i>Foreword</i>	<i>xxxiii</i>
<i>Abstract</i>	<i>xxxix</i>
<i>Acknowledgments</i>	<i>xli</i>
Preamble: Researching Innovation, Design, and Leadership in the Digital Era	1

Part 1 Introducing IDEaLs

1. Innovation in the Digital Era	13
2. IDEaLs: Transforming in the Digital Era	35
3. The Neuroscience of Engagement: Insights on IDEaLs	49
4. Exploring IDEaLs: A Research Ecotone	79

Part 2 Exploring IDEaLs

5. Developing the Individual: Philips and Nestlé	107
6. Cultivating the Collective: Sintetica and Sorgenia	133
7. Triggering Transformation: Stolt Tankers and Adidas	159

Part 3 Envisioning IDEaLs

8. Research Reflections	187
9. Design-Driven Experiences	207
10. Futures of IDEaLs	235
<i>References</i>	<i>267</i>
<i>Index</i>	<i>295</i>

LIST OF FIGURES AND TABLES

Figure 1.1.	The Person-Centric Scenarios of Innovation in a Digital Era.	30
Figure 1.2.	Three Horizons Framework: The Transition Towards a Regenerative Culture.	33
Figure 2.1.	Person-Centric Strategies in the Digital Era.	45
Figure 3.1.	Multiscale, Multilayer, Multiplex Networks in Neuroscience.	53
Figure 3.2.	From Nodes to Networks.	55
Figure 3.3.	Functional Connectivity Associated with Divergent Thinking.	56
Figure 3.4.	Design Squiggle Mashup: Evolution of a Design Object with Shared Meaning.	73
Figure 3.5.	Expanded Framework for Engagement.	77
Figure 4.1.	Buchanan's Four Orders of Design.	83
Figure 4.2.	Laugier's Primitive Hut.	86
Figure 4.3.	Adaptation of the Toolmaker's Paradigm.	89
Figure 4.4.	IDeaLs Sketch of the Innovator's World.	97
Figure 4.5.	IDeaLs' Research Model.	100
Figure 4.6.	The IDeaLs' Research Cycle.	102
Figure 5.1.	Researching the Individual at Philips and Nestlé.	108
Figure 5.2.	Philips' Research Design.	112
Figure 5.3.	Philips' Experiment Highlights.	113
Figure 5.4.	The Five Dimensions of Healthy Maternity.	115
Figure 5.5.	Nestlé's Research Design.	123
Figure 5.6.	Nestlé's Experiment Highlights.	124
Figure 5.7.	IDeaLs' Cosplays.	126
Figure 5.8.	Sampled Participant Passport.	129

Figure 6.1.	Cultivating the Collective at Sintetica and Sorgenia.	134
Figure 6.2.	Sinetica Research Design.	138
Figure 6.3.	Sinetica Experiment Highlights.	139
Figure 6.4.	Sorgenia's Human Centric Organization.	143
Figure 6.5.	Sorgenia's Research Design.	147
Figure 6.6.	Shortlisted Meaning Stories.	148
Figure 6.7.	Personal Meaning Collage.	151
Figure 6.8.	Sorgenia's Experiment Highlights.	153
Figure 6.9.	Sorgenia's New Strategic Direction: Image Sentiment Analysis.	156
Figure 7.1.	Engaging for Transformation at Stolt Tankers and Adidas.	160
Figure 7.2.	Stolt Tankers' Research Design.	163
Figure 7.3.	Stolt Tankers' Experiment Highlights.	164
Figure 7.4.	Final Word Cloud and Image Collage.	169
Figure 7.5.	Project Springboard Images Sentiment Analysis.	171
Figure 7.6.	Project Springboard Object Analysis.	172
Figure 7.7.	Adidas' Research Design.	176
Figure 7.8.	Adidas' Experiment Highlights.	177
Figure 7.9.	How Does Digital Transformation Make You Feel?	181
Figure 7.10.	What Can Make the Design Process Not So Cool in the Future?	182
Figure 7.11.	Meaning Stories of Teams 1, 2, and 3.	183
Figure 8.1.	Possible Options to Synchronize.	196
Figure 8.2.	Enhancements in a Storyboard at Sintetica.	197
Figure 8.3.	Sentiment Analysis and the Social Synapse.	199
Figure 9.1.	Evolution of the IDeaLs' Research Model.	212
Figure 9.2.	The Design-Driven Dialogue.	214
Figure 9.3.	The Design-Driven Transformation Scaffold.	226
Figure 9.4.	Design Council's Framework for Innovation.	233

Figure 10.1.	Spanning Spectrums – the IDEaLs' Mindset and Practices.	238
Figure 10.2.	A Steward's Search for Meaning in the Digital Age.	242
Figure 10.3.	The World System Mandela.	248
Figure 10.4.	Present Problem Map of COVID-19 in the United States through the Lens of Transition Design.	249
Table 1.	The IDEaLs Manifesto: Transforming Our Existing State to an IDEaLs' State.	xxxv
Table 3.1.	Neuroscientific Insights on Engagement.	63
Table 3.2.	Shifting Our Perspectives of How to Engage People for Transformation.	64

This page intentionally left blank

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
ADR	Action Design Research
ANN	Artificial Neural Network
AR/VR	Augmented/Virtual Reality
BVP	Business Value Proposition
CCL	Center for Creative Leadership
CDO	Chief Design Officer
CEN	Central Executive Network
CEO	Chief Executive Officer
CIO	Chief Information Officer, Responsible for the Information Technology Organization
CLO	Chief Learning Officer
CNS	Central Nervous System
Cognitive UXD	Cognitive User Experience Design
COVID-19	“CO” stands for Corona, “VI” for Virus, and “D” for Disease, which was initially referred to as 2019
CTM	Computational Theory of Mind
D ² T	Design-Driven Transformation
DAC	Direction, Alignment, Commitment
DAO	Distributed (or decentralised) Autonomous Organizations
DAT	Digital Acceleration Team
Diagnostic OD	Diagnostic Organizational Development
Dialogic OD	Dialogic Organizational Development
DMN	Default Mode Network
DTP	Digital Transformation Platform
EEG	Electroencephalogram

fMRI	Functional Magnetic Resonance Imaging
fNIRS	Functional Near Infrared Spectroscopy
HCD	Human-centric Design
IDeAls	Innovation and Design as Leadership
IFTF	Institute for the Future
IM	Nestlé's Innovation Methodologies Team
IT	Information Technology, Common Description for the Department Responsible for All Technological Systems
LTP	Long-term Potentiation
MET	Material Engagement Theory
MInD	Meaningful Innovation Direction
MIT	Massachusetts Institute of Technology
MLP	Multi-Level Perspective
MMO	Massively Multiplayer Online Game
OB-GYN	Obstetrician-Gynecologist
OCB	Organizational Citizenship Behavior
OECD	Organisation for Economic Co-operation and Development
PCP	Personal Care Product
PNS	Parasympathetic Nervous System
PSI	Para-Social Interaction
RBV	Resource-Based View
R&D	Research and Development
ROI	Return on Investment
RTD	Research Through Design
SDGs	Sustainable Development Goals (from the United Nations General Assembly)
SNS	Sympathetic Nervous System
SSE	Social and Solidarity Economy
STEEP	Social, Technological, Economical, Environmental, Political
SVIO	Nestlé's Silicon Valley Innovation Outpost

TOM	Target Operating Model
VP	Vice President
VUCA	Volatile, Uncertain, Complex, and Ambiguous

This page intentionally left blank

ABOUT THE AUTHORS

Joseph Press is a Co-Creator of the Master's in Strategic Design and Management at the Parsons School of Design and a Visiting Professor at Politecnico di Milano Schools of Management. He is also a Futures Advisor at the Institute For The Future where he advises organizations in the design of meaningful futures. After a 10-year career as an architect, including completing his PhD in Design Technology at MIT, he pivoted into management consulting. He capped his 15-year career at Deloitte by founding Deloitte Digital Switzerland, an interdisciplinary team focusing on the design and implementation of transformative digital experiences for global cross-industry organizations. He then became the Global Innovator at the Center for Creative Leadership, where he led leadership programs to co-create solutions to challenges requiring systemic transformation. To explore the intersections of his experiences in innovation, design, and leadership, he cofounded IDEaLs with the Leadin'Lab at the Politecnico di Milano.

Paola Bellis is a Postdoctoral Researcher at the School of Management of Politecnico di Milano and serves as senior researcher of IDEaLs, and as researcher at Leadin'Lab. Her research interests are focused on the interplay between Innovation Management and Leadership. In particular, she has been working on the role of team of dyads for the development of innovation looking at the sense-making process pairs perform when engaging in innovation initiatives. Besides, she focuses on engagement strategies for innovation development.

Tommaso Buganza is Associate Professor of Leadership and Innovation at the School of Management of Politecnico di Milano where he also is cofounder of LEADIN'Lab, the Laboratory for Leadership, Design, and Innovation. He is a lecturer in Innovation Management and Project Management, responsible for the Project Management Academy and coordinator of the innovation and training area at MIP (Politecnico di Milano Graduate School of Business). He is a member of the scientific committee of the International Product

Development Management Conference EIASM-IPDMC. His research activity explores the intersection between technological innovation and leadership and has been published in peer-reviewed journals such as *Journal of Product Innovation Management*, *International Journal of Project Management*, *International Journal of Innovation Management*, *European Journal of Innovation Management*, and *Creativity and Innovation Management*.

Silvia Magnanini is a Researcher at IDEaLs, dealing with the development of engagement experiences through design practices and tools. She carries out her research at the School of Management of Politecnico di Milano, focusing on how collaborative decision-making methods foster convergence when people articulate a new strategic vision.

Abraham B. (Rami) Shani is a Professor of Management at the Orfalea College of Business, California Polytechnic University. He has been a Visiting Professor at the Stockholm School of Economics, Politecnico di Milano and Tel Aviv University. His research interest includes collaborative research methodologies, work and organization design, organizational change and development, learning in and by organizations, sustainability and sustainable effectiveness. His work was published in *Academy of Management Journal*, *British Journal of Management*, *California Management Review*, *Human Relations*, *Journal of Applied Behavioral Science*, *Journal of Change Management*, *Organizational Dynamics*, *Sloan Management Review*, and others. His most recent books (co-authored with David Coghlan) include *Collaborative Inquiry for Organization Development and Change* (Elgar, 2021) and *Conducting Action Research* (SAGE, 2018). Since 2008 he is the coeditor of the annual research series, *Research in Organization Change and Development* (Emerald Publications). He served as the Management Department Head and Associate Dean at CalPoly and as the president of the Organization Development and Change Division at the Academy of Management. He is on the editorial board of five journals.

Daniel Trabucchi is Assistant Professor at the School of Management of Politecnico di Milano, where he serves as a researcher of LEADIN'Lab, the Laboratory for Leadership, Design, and Innovation. His research interests are focused on Innovation Management. In particular, he has been working on digital two-sided platforms and their peculiarities (focusing on how they can create and capture value and the related data-driven business models);

moreover, he focuses on the engagement of people in innovation processes. His research has been published in peer-reviewed journals such as *Technological Forecasting and Social Change*, *Internet Research*, *Journal of Knowledge Management*, *Research-Technology Management*, *Creativity and Innovation Management*, *Technology Analysis and Strategic Management*, and *European Journal of Innovation Management*; he is also a reviewer for many of these journals.

Roberto Verganti is Professor of Leadership and Innovation at the Stockholm School of Economics. He is also the founder of Leadin'Lab (the LEAdership, Design, and INnovation of Politecnico di Milano). He has been a visiting scholar at the Harvard Business School twice, at the Copenhagen Business School and at the California Polytechnic University. Roberto serves in the Advisory Board of the European Innovation Council of the European Commission. Roberto is the author of *Overcrowded*, published by MIT Press in 2017 and of *Design-Driven Innovation*, published by Harvard Business Press in 2009, which has been nominated by the Academy of Management for the George R. Terry Book Award as one of the best six management books published in 2008 and 2009. Roberto has issued more than 150 articles. He is in the Hall of Fame of the *Journal of Product Innovation Management* and has been featured on *The Wall Street Journal*, *The New York Times*, *Financial Times*, *Forbes*, and *BusinessWeek*. Roberto is a regular contributor to the *Harvard Business Review*.

Federico P. Zasa is a Researcher at IDEaLs, dealing with the development of analytical tools for visual and text data. He pursues his research at the School of Management of Politecnico di Milano, where he focuses on the cognitive aspects of the innovation process. In particular, he analyzes the interplay between cognitive diverse individuals and the establishment of a shared vision drive innovation.

For more information about IDEaLs please visit our website at <http://www.ideals.polimi.it>.

This page intentionally left blank

LIST OF AUTHORS

<i>Joseph Press</i>	Parsons School of Design, USA
<i>Paola Bellis</i>	Politecnico di Milano, Italy
<i>Tommaso Buganza</i>	Politecnico di Milano, Italy
<i>Silvia Magnanini</i>	Politecnico di Milano, Italy
<i>Abraham B. (Rami) Shani</i>	California Polytechnic State University, USA
<i>Daniel Trabucchi</i>	Politecnico di Milano, Italy
<i>Roberto Verganti</i>	Stockholm School of Economics, Sweden
<i>Federico P. Zasa</i>	Politecnico di Milano, Italy

This page intentionally left blank

FOREWORD

Cooper's *Stage-Gate*, Google's *Sprints*, Amazon's *Working Backwards*, IBM's *Jams*, *Scrum*, *Kanban*, *Lean*, *Extended Programming*, and *Double Diamonds*. This is what academics and practitioners of *innovation* have been focusing their attention on over the last 20 years. And if there were a single question arising out of all these efforts, it would be this: *what is the one magical process to make all innovation happen?*

David Kelley, the celebrated founder of IDEO, stated it clearly on the 1999 ABC late-night show when he was talking redesigning the traditional shopping cart: “[...] we’re experts on the *process* of design. We don’t care if you give us a toothbrush or a space shuttle...it’s *always* the same task...”.

Lately though, some managers and researchers dealing with innovation are starting to feel uneasy about the quest for the perfect process. We, the founders of IDEaLs, are among their ranks. The world of innovation has profoundly changed over the last 15 years. Today, the majority of companies place a high priority on innovation and encourage creativity for generating new ideas. But now that we have plenty of ideas, the critical question is: *how can we make sense of all these ideas and converge on those that really deserve our heads, hearts, and hands?*

Moreover, the reassuring dichotomy between those within an organization who deal with innovation and those who run the company is long gone. Today, it’s no longer just our organizations but society as a whole that expects and needs each one of us to be innovative – not just how we do things but also our methodologies and tools, as well as the very reason why we do things.

When it comes to each one of us as individuals, we are so easily overwhelmed by innovations – whether it be the new ways of communicating, social networks, photo editing apps, data analytics, or the latest way of building self-confidence in our kids.

We know very well that this challenge goes far beyond mere apps to make innovation happen. In fact, the world of innovation has been so focused on

finding the perfect process and method that it nearly forgot the *people* who make innovation happen. Ultimately, it is people who will need to change our existing situations into preferred ones. Given the realities of 2020, with its pandemics and protests, we absolutely need to focus on how to empower people to make innovation happen.

This is the starting point for IDEaLs – exploring how innovation and design creates the leadership required for collective action. We know that innovation leaders not only have to find and adapt the right processes but also engage people during innovation. They need to make people want to be part of it, to make them love it, and to make it meaningful for them. Extrapolating from this observation, we crafted a central research question with other like-minded innovation leaders:

In the Digital Age, How Can I Engage People to Make
Transformative Innovation Happen?

This fundamental starting point for our research triggered our collaboration with at least two unique aspects: how we began our journey and the type of involvement expected from our partner companies.

The original name of the research was called “Leadership for Innovation.” It actually took us some time to fully comprehend what we really had in mind. When the team of Politecnico di Milano initially met with the leadership team from the Center for Creative Leadership, it was difficult to understand what the true purpose of our research should be. It then occurred to us that we shared a similar discomfort about the current focus of innovation and change management.

This did not start out as a standard research project but more as a kind of cultural proposal. Our manifesto (Table 1) sought to shape more precisely what we were struggling with, and then propose a radical alternative. While working collectively on the manifesto, we came to view innovation as a *de facto act of leadership*. From this tenet, we intuitively understood that *collective design* is key to making people want to lead both innovation and the transformation required for impact. This was the genesis of the IDEaLs acronym: *Innovation and Design as Leadership*.

Table 1. The IDEaLS Manifesto: Transforming Our Existing State to an IDEaLS' State.

People is driven by the creation of shareholder value	Shareholder Value	Meaning	People is driven by the creation of meaning, for users, society, their organization, themselves.
Leadership is for leaders	Leader	Leadership	Everyone is called to the art and practice of leadership
Innovation is a process. A system. Whichever the output, what matters is the process	Process (How)	Gift (Why)	Innovation is what you deliver to others. Innovation is first about loving the product you create and why you do it
The world needs more ideas. Innovation is about empowering individuals to generate ideas	Ideation	Depth	The world needs meaning. Innovation is about empowering individual to find and create meaningful things in a world awash with opportunities
Leadership is through expressing yourself, and innovation is divergence	Human	HumanS	Together is better. Leadership is about journeying together and innovation is about change
There is one best way to do innovation	Positivistic	Constructivist	Together we search, learn, imagine, and change the world for the better

The second unique aspect of this research lies in the relationship with our partner organizations. In the design of research, there are two dominant models: In the first, researchers study companies without getting involved directly in their processes. They develop a research protocol, collect primary data through interviews and surveys, and then triangulate them with secondary data coming either from the company (internal documents) or the public domain (websites, professional associations, press, customers' reactions, etc.). In the second, known as action research, researchers become an active part of the company's initiative. They share objectives with management and go through a four-stage process: study and plan, action, data collection, and reflection.

IDeaLs is certainly more aligned with this second type research method, but with one notable exception: we did not restrict our research to collecting data by exploring the challenges of our partner organizations. In an attempt to create new insights with real value, we invited the organizations to be active participants in our research. Organizations do not join IDeaLs simply for tackling a business-critical problem in an innovative way and then supporting the research. They also actively contribute to the ongoing process of learning and shaping the theories, methodologies, analyses, as well as the ultimate framework that arises out of all this.

In this manner, together we also employ an additional research methodology, design science (Sanders and Stappers 2008). In this way, the *entity* joining the research is no longer the organization, but the *people* (managers, innovators) who make up that organization, specifically those who want to contribute and develop their thought leadership. They do it because they want to drive, design, and live the research process itself alongside the formal researchers and other curious practitioners.

In other words, the innovation leaders in IDeaLs collaborate in defining both the objectives and the research questions, and then propose tools, ways of designing experiments, and methods for testing results, from both an organizational and an academic perspective. As a benefit, they not only witness the actual transformation of a community in their organization, but they also retain access to the prototypes we co-created and the knowledge required for applying and redesigning them in the future.

This level of engagement was an exciting experiment in itself, as we asked managers to not only provide resource support and a transformational project as an experimental field but also to be engaged from an academic perspective, to contribute ideas and suggestions, and to actively participate in

the crafting of research. This led to our roles occasionally shifting, with researchers being more concerned with the practical applications and managers with theory. Once, during a meeting to frame a research intervention, we scholars shared a concern that the workshop may not achieve an impact for the transformational project of the organization. The company manager was instead initially more concerned about how to design the workshop in order to support the overall research project. As we pointed to this unexpected dynamic, the manager observed: “I can already see that this method will be useful for us. Now I want to be sure it is useful for the whole research project. If the overall research moves forward, we will also gain more value in the future.”

To add more external validity to our research process, we also decided to involve a “brain trust” in the IDEaLs platform. Inspired by Pixar’s group of advisors on every film project, we created a *Brain Trust* of internationally recognized influencers in the field of leadership for innovation whom we asked to inspire, validate, and challenge our research (Catmull 2008).

Finally, after having defined a manifesto, crafted a new way for involving the companies, and strengthened the research methodology through the brain trust, we had one final important step to take: finding our research partners for the first year.

We admit that it was not an easy task to present an international research program without really proposing a clearly-defined list of expected outputs and requesting a high level of commitment to collectively define what we will do. Nonetheless, some of the managers introduced to the IDEaLs vision reacted positively. The way we framed the problem resonated and they recognized what they were struggling with.

IDEaLs emerged as an ecotone for exploring the new transformation practices in the digital age. Technically, while we started out with seven founding partners and three brain trusts members, it would probably be more appropriate to say that it really started with seven teams of managers who clearly saw the challenge and accepted the challenge, and three passionate experts who very committed to helping and reviewing our progress.

We are grateful to all the leaders and managers of our partners, and our Brain Trust, who made that remarkable leadership decision to be engaged into IDEaLs.

The IDEaLs Team
Milan, San Luis Obispo, Stockholm and Zürich
January 2021

This page intentionally left blank

ABSTRACT

Our world is replete with unresolved problems, despite being inundated in the digital age with ideas and technologies to solve them. Many acknowledge that people are the critical element in making change happen. However, even as professional innovators are augmented by anyone who can suggest solutions, our existing situations remain far from being preferred ones. Clearly, in the digital era we have an urgent need to explore new ways of engaging people to make transformative innovation happen.

IDeaLs – Innovation and Design as Leadership – was established to research our collective conundrum. A global research platform, IDeaLs explores the intersections between innovation, design, and leadership to reveal new insights and practices on how to make transformative innovation happen. Learning from actual transformation journeys, we collaboratively embark on researching real change challenges with six global companies (Philips, Nestlé, Sintetica, Sorgenia, Stolt Tankers, and Adidas).

To ensure we examine our biases in innovation, design, and leadership, we reflect on and then infuse our current theories with neuroscience. The resulting reframing opens opportunities to integrate these new perspectives, specifically:

- *From the Innovation of Ideas to Innovation as Meaning*: rather than encouraging more ideas, people are more engaged by seeking personal meaning within socio-technical systems.
- *From Human-Centered Design to Design as Making Objects*: rather than designing for other people, people are much more engaged in a revitalized design practice that encourages the cocreation of objects that either metaphorically or literally represent meaningful new directions.
- *From Leaders to Leadership as Community*: rather than managing others, people are committed for collective action when making collective sense of new situations with others.

These positions inform a model to research how co-creating images of strategic objectives can engage people to transform existing situations into preferred ones. Each action research experiment explores an aspect of our initial model – the individual, the collective, and the intended transformation. Each had a common goal: explore the synergies of innovation, design, and leadership to engage people to converge on a shared meaning of a new strategic direction. We share in detail each research experiment, describe the design of each experience and their assessment, and conclude with our findings.

In reflecting upon our research experiences, and recent research on dialogue in organizations, we propose an iteration of the model: Design-Driven Dialogue. This engine underlies a prototype for engaging people to make transformative innovation happen: Design-Driven Transformation. Although based on a relatively small sample, we contend such an integrated approach can provide a powerful new perspective on our collective challenges. We intend to conduct further research, specifically on story making, and codify our tools for others to experiment with, in the coming years. We see IDEaLs as a journey and view this book as an invitation to join us in this mission-critical search for changing our existing situations into preferred futures.

ACKNOWLEDGMENTS

We also wish to thank everyone who has been involved in this research project, in particular:

- David Altman, Kris Downing, Annie Faulkner, Cheryl Flink, Liora Gross, Hamish Madan, Jennifer Martineau, Bill Pasmore, Elisabeth Rodriguez, and John Ryan from the Center for Creative Leadership for their belief and support throughout the IDeALs journey.
- Moira Buzzolani, Simone Cesano, Katharina Ebermann, Alja Ter Burg, Robbert Zegers, and all the participants from Adidas.
- Thomas Maeder, Lindsay Morris, Sebastian Shaw from Adobe.
- Joern Brucker, Karma Morcos, Bertrand Rajon, and all the participants from Nestlé.
- Geert Christiaansen, Paul Gardien, Simona Rocchi, and all the participants from Philips.
- Augusto Mitidieri and all the participants from Sintetica.
- Alberto Bigi, Thomas Greco, and all the participants from Sorgenia.
- Jordi Bogaard, Johan Isaksen, Steven Kretsch, Igor Segeda, and all the participants from Stolt Tankers.
- Don Norman, Gerhard Vorster, and Eun Young Kim, members of our Brain Trust.
- Martina Barri, Silvia Castellazzi, Diletta Di Marco, Federica Guazzoni, and Valeria Verardi for their support throughout the entire research project.
- Our sparring partners Drew Tick and Shiko Ben-Menahem.

- Our editors Trevor O'Hara and the team at www.scrifted.co who made the editing of the manuscript a collaborative exercise of creating shared meaning.
- The experts in neuroscience who reviewed and edited Chapter 3:
 - Melis Yilmaz Balban, PhD, Postdoctoral Researcher – Founder of Huberman Virtual Reality Lab at Stanford University School of Medicine
 - Jasmine Ho, PhD, Postdoctoral Research Fellow – MedTech at University of Zurich
 - Jeanine Stewart PhD, Organizational Systems Neuroscientist
 - Jake Dunagan, Director, Governance Futures Lab, IFTF
- The team at Emerald Publishing Limited.

PREAMBLE: RESEARCHING INNOVATION, DESIGN, AND LEADERSHIP IN THE DIGITAL ERA

In the digital age, where pandemics and protests spread like wildfire, innovation and its requisite transformation is in need of a new, more integrated approach. The resurgence of innovation processes, people, and places has led to a plethora of ideas, a spreading of creative spaces, and a multitude of leaders prepared for collective action with impact.

Despite achieving all the necessary ingredients for innovation, we still struggle to make innovation happen. Digital Transformation – the design and implementation of technologies to enable innovation – according to the IDC will reach \$2.3 trillion in 2023 (Simpson and Smith 2019). This massive investment is commonly justified by the allure of new products, new customer experiences, new processes, and increased efficiency. However, what is transformed in reality often falls short of expectations. Forrester Research claims that many business leaders focused on digital transformation learn that despite the effort “... more than 50% of digital transformation efforts stalled” (Forrester Research 2018).

We believe that investigating the challenges innovators face in the digital age is essential for realizing the potential benefits of innovation. We observed that as innovation moves further away from classic “R&D” and permeates organizations, our attention should shift from creating just one more idea toward finding a common direction. This move implies that innovation has become ‘voluntary’ (Hill et al. 2014) and happens only if people are engaged in dialogue, action, and discovery. If innovation is about people (Ovans 2015), then humans not only need to search for solutions but also to converge

on new directions with shared meaning (Verganti 2009). This underlies the challenge for leaders who need to transform – simultaneously innovating and changing. Therefore, in a digital world overcrowded with ideas, leaders should ask: “how can I *engage people* to make innovation happen?”.

IDeALs was created as a platform to research this question, and explore new innovation and transformation practices for the digital era. Our hypothesis is that the creation of *shared meaning* can be accelerated by seeking innovation within a socially orchestrated, design-like process. Innovation leaders who engage in this dialogical act of forging a new shared direction can simultaneously create the communities required for transformation. Leaders who set a clear direction and enable the making of meaning in a shared space and around a shared subject are more likely to engage people in the interests of giving birth to innovation.

Exploring this space, and its underlying potential to cultivate meaning, requires expanding our existing paradigms and enlarging the traditional tenets of innovation. Most innovation theories and methods are process-driven, composed of a linear sequence of serial activities. However, in our experiences we have seen that *engagement* has a significant influence on making innovation happen. People are actually more engaged by a sense of purpose rather than by mere teleological tasks. In light of the need to find a *raison d'être*, we contend that a shift from process to people is essential for making innovation happen.

Due to the overwhelming focus over the past few years on creativity and ideation, augmented considerably by the rise of digital platforms, we have a plethora of ideas. In parallel, however, we have witnessed that making things creates shared meaning. This observation reveals an important gap in the academic literature and the management tools available. Innovation is not just about amenable conversations; it's about more intellectually and emotionally challenging conversations. This includes critique between the people that have an interest in making something actually happen. In fact, it is our ability to represent intentions, share, and learn from others that underlies our collective opportunity to co-create meaning.

The rise of user relevance is promoted by human-centered design approaches like design thinking. However, this has come at the expense of denaturing the organizational innovators themselves. Design is not just a way to understand users, as proposed by proponents of Human-Centered Design. Its real power is to

call people into action by anchoring them into the making of things, without wallowing in the relativism of hyper-prototyping.

For innovation leaders to engage in a collective act of forging a new shared direction, they will need to make meaning in a community of practice (Drath and Palus 1994). Fortunately, in today's digital environments our exchanges in the form of words, images, and networks are transparent. We can now shift our innovation efforts from seeking an amorphous culture of creativity to places where communities can thrive. In this context, leadership that makes meaning in a community of practice, as demonstrated by that makes an impact, can be encouraged and celebrated. If leading for a new direction can be achieved by engaging others, we believe innovation leaders can even encourage the growth of themselves (Press et al. 2020).

However, formidable hurdles exist in organizations today. The levels of purpose, meaning, and trust required to engage in a meaningful experience are in short supply. Sadly, this is only reinforced by many of today's leaders on the world stage, despite the mass movements taking to the streets demanding equality and searching for hope. Clearly a reframing of the incumbent process-centric perspectives is the only hope to rid ourselves of the unavoidable power struggles implicit in the tragedy of the commons (Ostrom 1990).

We still believe in the potential of the individual leader to innovate for a changing world. Leaders who set a direction and enable the making of meaning, within a shared space and on a shared focal point, should be better able to engage people in order to make innovation transformation happen. This is a step beyond sustaining and disruptive innovation. "Transformative innovation is not an innovation within the system. It is an innovation of the system" (International Futures Forum 2019). This longer-term innovation process fundamentally changes culture and identity toward what Daniel Christian Wahl refers to as a *restorative culture*. He continues by stating that

...transformative innovation has the potential to drive the cultural evolution from our current industrial growth society of resource exploitation and social competition to a life-sustaining society of humanity....

(Wahl 2016)

This book explores how these epistemic and ontological shifts may reframe the innovation experience and can reveal the catalysts of individual,

organizational, and societal transformation. IDeALs draws inspiration from the parallel processing of the brain to explore new perspectives on engagement for transformation. As revealed by recent findings from neuroscience, integrating theories of innovation, design, and leadership, and testing them in action research empowers us to better understand transformative innovation in the digital age.

We begin our IDeALs exploration in Chapter 1 by examining innovation in the digital age. In our research and advisory work, we are witnessing how traditional *innovation theories and methods* are being disrupted in the digital age. This in turn is creating new scenarios the innovator must confront. Similarly, we are witnessing significant disruptions in traditional *change theories and methods*. Despite the plethora of evidence of the failures of both innovation and change, we share two anecdotal stories to emphasize the point that a new theory and approach is warranted in the digital era. We contend there is an opportunity in learning from these failures because these disruptions create a new space where the innovator must innovate and change simultaneously. At this intersection, we propose that the innovator's dilemma in the digital era is *transformation* – converging people in a new direction for collective action. Therefore, we set out our search for answers to the question: *how can we engage people to simultaneously innovate and change for transformation?*

From our own collective experiences in the fields of innovation and transformation, we observed the interdependency of innovation, design, and leadership. In Chapter 2, we share the journeys two of our partners have been on over the past decade. Although not empirically researched, the trajectory of these anecdotes opened our eyes to the necessity of organizations seeking sustainable transformation in the concurrent pursuit of innovation, design, and leadership. We propose that transformation in the digital age can be driven by design. We posit that the pillars of IDeALs – innovation, design, and leadership – establish a grounded framework to guide our pursuit of a new paradigm for transformative innovation in the digital era.

Chapter 3 deepens these intuitive insights with the insights we contend can reveal a rebalancing of the dominant cognitive processes models to develop an integrated framework for transformation. We found many insights, and deep inspiration from the flourishing field of neuroscience. Our focus on the neurological networks in the brain of the individual innovator, rather than the consumer of innovation, opens opportunities for us to reframe our

perspectives on innovation, design, and leadership to *engage* leaders in three fundamental ways:

1. *From the Innovation of Ideas to Innovation as Meaning*: rather than encouraging more ideas, people are more engaged by stimulating neuroplasticity to create personal meaning within socio-technical systems.
2. *From Human-Centered Design to Humans Designing Objects*: rather than designing for other people, people are much more engaged in a revitalized design practice that stimulates neuroplasticity through the intense work of co-creating objects that synchronizes meaning of new directions among stakeholders.
3. *From Leading Change to Leadership as Community*: rather than managing others to change, people are engaged for collective action by synchronizing meaning of their social neurological networks with others.

Underlying the potential of our reframing is neuroplasticity – the ability to change the brain and achieve synchronization with others. Through the lens of neuroscience, we contend that the intersections of innovation, design, and leadership create a rich ecotone to research how we can develop leaders that engage people to make transformative innovation happen in the digital age.

Based on the new perspectives exposed in our epistemological ecotone, in Chapter 4 we examine the objects that may assist us in cultivating new ways of engaging and leading for transformative innovation in the digital age. We begin with the design object as a boundary object – a visible manifestation of people’s intentions and actions. The significance of the design object as neuroplastic catalyst is augmented by learning from type in architecture, as this concept reveals the potency of the shared meaning of objects within communities. Transposing these theories to today, we examine the objects that are commonly found across today’s digital landscape – images. Images are essential objects of the digital world because they trigger people to share and seek meaning. With visual representation as our mechanism for creating neurological meaning, images become the object of shared meaning, as best exemplified in the visual trends from an IDEaLs supporter, Adobe. From all these active elements, we propose a model to research how design as the intersection of individual and collective action on images can cultivate the leadership required for transformation.

With this initial model in hand, we began our action research informed by design science to explore the power of designing innovation directions toward transformation at six companies. In Chapter 5 we share our case studies, focusing on *engaging and transforming the individual* at Philips and Nestlé. Here we discovered how identity is a critical element in embracing collective cognition. In Chapter 6 we share our case studies focusing on *engaging and transforming the collective* at Sintetica and Sorgenia. Here we discovered the complexities of cultivating community, a critical element for collective action. In Chapter 7 we share our case studies focusing on *engaging people for transformation* at Stolt Tankers and Adidas. Here we discovered how co-creating meaning is a critical element for innovation and change. In each case study, we share the company's context, challenge, and innovation intention. We position the research within our model to contextualize the experiments designed and conducted. At the end of each case, we convey our insights, which inform our broader and deeper reflections on the research in the next chapter.

Chapter 8 starts with a reflection on the research experience itself. This is an important perspective since action research is growing in popularity at the curious intersection between academics and practice. We then share our insights on the innovator's new scenario, and the conundrums inherent in the polarity of the individual and the collective search for meaning. To assist researchers pursuing a similar agenda, we share our anticipated iterations in the research methodology to guide us in our ongoing journey to create an integrated approach to transformative innovation in the digital era.

Our experiences, insights, and reflections pave the way for a new appreciation of the conundrum of transformative innovation in the digital era. Since we are researching under a design science paradigm, in Chapter 9 we leverage our insights to revise our model. We propose a revision and infuse it with the pervasive phenomena of dialogue. Informed by recent developments in dialogical organizations and Schön's design pragmatism, we propose that evolving into a Design-driven Dialogue can engage people for innovation, and spark transformation. As a superconductor to catalyze collective action across innovation, design, and leadership, we propose that a "Design-driven Transformation" can integrate the elements. As an experience, Design-driven Transformation is spurred on by Design-driven Dialogue in the incessant activity around a shared object. Bringing insights from design and dialogical theorists, this approach integrates personal shaping and learning

and collective shaping and learning. Each successive turn of sharing, shaping, and learning facilitates the evolving convergence on the object itself. As its personal meaning increases, so does its shared meaning across the collective of influencers and actors, which can act as a powerful catalyst for transformative innovation. Although these design-driven experiences are nascent prototypes, we propose an approach to engage people to make transformative innovation happen by starting with imagination to create visions of meaningful futures, then to design the actual experiences in a way that will bring people together to collectively change the existing situation into a preferred one.

Since the intent of IDEaLs is to research how to integrate the theories of innovation, design, and leadership into a holistic and systemic approach for engaging people to make transformative innovation happen, in Chapter 10 we conclude by proposing a pathway that allows us to learn more about transformation in the digital age. There is so much more to explore in the systems of the neuronal, regional, and social neurological networks. We propose continuing the research by exploring in more depth how the search for meaning plays out neurologically. We anticipate that seeking a preferred future can be instrumental in overcoming the limitations of cognition, and encourage people to think and act across spectrums (Johansen 2020). Understanding the nature of complex systems is important starting point to overcome the boundaries inherent to our networks, and design-driven experiences can accelerate this awareness. We will need to iterate our models and sharpen our tools – action research has taken us far, but given the complexities of the digital era, we will need much more collaborative inquiry to collectively understand how to engage people for transformation.

Fundamental for leaders who seek this objective is a mindset that keeps the IDEaLs dimensions and associated questions always in mind, namely:

- *Innovation as Meaning*: How can I infuse new meaning into the experiences we offer?
- *Design as Making*: How can I co-create across our ecosystem to converge on a new shared direction?
- *Leadership as Community*: How can I synchronize my organization around a shared purpose?

A final word of caution to the reader of this research: This is not the business book you are looking for. We aim to go beyond the buzzwords of innovation, design, and leadership by delving into the depths of these over-used terms. We intentionally attempt to avoid the typical structure of most business books: start with a preconceived concept of the way things are, share some cases that conveniently prove the concept, provide ready-to-use tools so you can replicate what we did (with the assumption you will have the same results), then wrap up with some platitudes indicating the potential potency of what you just read.

Similarly, this is not the academic book you are looking for. While we build upon our mentors and fellow researchers in conducting rigorous research, we also speculate on possible futures that may be construed as being on the fringes of proper academic pursuits. We fully acknowledge the preliminary nature of our cases, and therefore state clearly our intention to perform deeper action research. We believe with an enlarged sample we can provide further empirical and quantitative evidence of the power of a person-centered perspective on innovation, design, and leadership for empowering personal, organizational, and societal transformation. Based on our experiences to date, we believe that making stories may accelerate the coalescing of leaders around meaningful visions of the future that would engage them to take concrete actions toward transforming the status quo into new visions. Ideally, our ongoing research will provide even more insights into how to achieve the true transformation of the individual, the organization, and the community because ultimately this is what humankind both seeks and needs for pushing through the turbulence of our digital era.

We conclude with a friendly reminder: IDeALs is a research group, conducting action research with companies in a collaborative inquiry approach. Translated into plain English – we research, we propose, we test, we iterate, we learn, and we start again. Therefore, the perspectives and stories are more reminiscent of shifting sands, revealing fragments of a forgotten civilization. They may be disorienting, and will be because the digital era and particularly the challenges we confront in the new decade, are volatile, uncertain, complex and ambiguous (VUCA). As a leader, we believe if you come into this new decade with a desire for *certainty*, you will ultimately be disappointed. We agree with futurist Bob Johansen that *clarity* is much more important. We believe that by looking at our world through the lens of innovation, design,