

Phantom ex machina: Digital disruption's role in business model transformation

Editors

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Objective and Background

Today's business ecosystem is bringing furious and frenetic change to existing business structures, operations and models. And just like the Greek Furies that drove their victims mad, the dislocating affects of technological change are disrupting the accepted norms of business. This book will explore the pivotal role that technology plays in creating new dynamics to business operations and forcing business model changes. In particular, the operating environment in which businesses function today has, and will, change to a greater degree and at a faster pace than any period in the past. The dynamic that enabled the television to gain critical mass over five decades has accelerated to allow Internet based companies to reach the same critical mass within months.

Market convergence is reducing business barriers to entry, destabilising long established businesses and their underlying business models. The dynamic forces of unleashed technological advancements that new technically advanced businesses are using are rapidly and significantly disrupting long-established sustainable products, companies, industries and sectors. The creative adoption of technology is creating a strategic imbalance comprised of firms who understand how to use technology effectively and firms that have not yet realized that they are playing in an unstable ecosystem. The intent of this book is to explore the factors that make digital disruption possible, the effects this has on existing

business models, the industries that are most susceptible to disruption and what executives can do to take advantage of disruption to re-invent their business model.

Audience for this book

This book is targeted at business practitioners, entrepreneurs, senior leadership, managerial and administration teams and anyone interested in understanding how to guide corporate strategy and operate competitive businesses.

Adoption of digital technology has caused process disruptions in a number of industries (e.g., automotive and services), led to new business models (e.g., Über, AirBnb) and new products (e.g., robots, 3D printing, etc.). While most of these examples are in front of us and we read and hear about them in media, this books targets not so obvious disruptions (e.g., in the education sector, in services and changing business models) along with some obvious ones (e.g., 3D printing and in addressing mobility issues).

Other publications in this area

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.

Brynjolfsson, E., & McAfee, A. (2012). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee.

Dobbs, R., Manyika, J., & Woetzel, J. (2015). *No Ordinary Disruption: The Four Global Forces Breaking All the Trends*. PublicAffairs.

McQuivey, J. (2013). *Digital disruption: Unleashing the next wave of innovation*. Forrester Research, Incorporated.

R "Ray" Wang (2015). *Disrupting Digital Business: Create an Authentic Experience in the Peer-to-Peer Economy*. Harvard Business Review Press.

Schmidt, E., & Cohen, J. (2013). *The New Digital Age: Transforming Nations, Businesses, and Our Lives*. Vintage.

Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading Digital: Turning Technology into Business Transformation*. Harvard Business Press.

Acceptance and Proposal Review Process

The Editors reviewed the proposals submitted and an initial structure of the book is presented. Selected authors will be invited to submit full papers.

Full Papers submitted would be peer-reviewed by a team of academics and practitioners from around the world. The Editors and an Editorial Board will coordinate the review process.

Publisher



The book will be published by Springer US. They are a publisher of repute who publish in both e-book and printed format and have a global distribution network.

Follow them on Twitter: [@Springernomics](https://twitter.com/Springernomics)

Book website

We have created a companion website (<http://phantomexmachina.com>) related to this edited book.



We invite you to share your thoughts on digital disruptions, suggest links to books and articles dealing with digital disruptions, write blogs and even tweet about disruptions (#DigitalDisruption). This is open to public.

Follow [@PhantomexMachin](https://twitter.com/PhantomexMachin) on Twitter

Contact

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Reviewer – Proposal

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Prof. Mildenberger's research interests revolve around digital technology and its role in business. His University focuses on issues related to digital technologies and its impact on international business.

Timeline & Deadlines

June 2015 – October 2016

- Call for proposals: June 1, 2015 (COMPLETED)
- Receipt of proposals: August 31, 2015 (COMPLETED)
- Call for papers after review of proposals: September 20, 2015 (COMPLETED)
- Search for publisher: October 1, 2015 (COMPLETED)
- Receipt of full papers: March 31, 2016
- Review and revisions to be completed by June 30, 2016
- Handover the manuscript to publisher by July 31, 2016

Target Date of Publication: The target date for publication is October 2016 if everything goes as planned.

Financial Implications for authors: There will be no financial implications and / or burden on contributing authors. The Editors will bear any cost of editing, publication and distribution that may occur. Authors will also not be receiving any royalty from sales (if provided by the publisher to the Editors).

A free hard copy and an electronic copy of the book will be negotiated with the publisher.

Submission of Full Papers

Please see the guidelines attached at the end of this document. Full papers should be received before **March 31, 2016**.

Editor Bios

Anshuman Khare is Professor in Operations Management at Athabasca University, Canada. He joined Athabasca University in January 2000. He is a MBA and PhD from Allahabad University, India. He is an Alexander von Humboldt Fellow and has completed two post-doctoral terms at Johannes Gutenberg Universität in Mainz, Germany. He is also a former Monbusho Scholar, having completed a postdoctoral assignment at Ryukoku University in Kyoto, Japan. He has published a number of books and research papers on a wide range of topics. His research focuses on environmental regulation impacts on industry, just-in-time manufacturing, supply chain management, sustainability, cities and climate change, etc. Anshuman serves on Athabasca University General Faculties Council representing Faculty of Business Faculty Council as a full-time academic faculty member. As his commitment to community Anshuman also serves on the Board of Directors of Northern Alberta Business Incubator (NABI) and is the Vice Chair of Smart Cities Masterplan Steering Committee for the City of St. Albert. He is on the Steering Committee of Alexander von Humboldt Cities and Climate Change Network of research scientists and on the executive of Humboldt Association of Canada. Anshuman has recently agreed to serve as Associate Editor of "International Journal of Sustainability in Higher Education" published by Emerald.

Rod Schatz is a Senior Executive with an Information Systems focus where he delivers business value to organizations through the use of systems in unique and creative ways. Rod holds a Master of Science degree in geospatial technologies from the University of Alberta. During his graduate studies, he focused on the application of location-allocation studies with geospatial technologies (GIS). Rod has presented over 20 conference presentations dealing with the applied use of geospatial technologies to Municipalities for infrastructure asset management, sustainable development and land management. More recently, Rod has specialized in implementing cloud technologies, dealing with large data management problems, service oriented architecture (SOA), Business Process Management (BPM) solutions to organizations to assist them with their journey into truly digital businesses.

Brian Stewart is the Executive Program Director of the Campus Alberta Unified Services initiative at the University of Alberta and has been an executive leader in the printing and higher education sectors. Throughout his career Brian has successfully applied technology to optimise organisational performance, improve strategic and marketing position, and increase operational and administrative effectiveness. He has many industry affiliations and is currently a Director and advisor to several innovative and IT related initiatives. Brian has also published and presented on cloud computing, Green ICT, the future of educational technology, and the use of ICT in printing and education. He holds an MA in Economics from the University College Cork and an MBA from Athabasca University and is currently completing a PhD at the School of Computing, University of Eastern Finland.

Editorial Board

(Listed in alphabetical order; Editorial Board members who also authored a chapter are identified with a *)

Dwight R. Thomas* is Professor Emeritus with the Athabasca University Faculty of Business and has been engaged in design of innovative technology and its applications to online and distance education since the late 1970's. Professor Thomas was one of the "innovators" who launched the Athabasca University online executive MBA program in 1993 and has most recently served as a course developer and facilitator for a new MBA advanced elective course in the management of technology and innovation. He has also been commissioned to serve as an external reviewer for a variety of academic texts and scholarly articles in marketing and management.

Iain Reid* is a Senior lecturer at the University of Huddersfield Business School. Iain has numerous publications in the areas of Engineer-to-order, Supply Chain Integration, Agility, and Mass Customisation. Iain's PhD from Sheffield Hallam University, UK and was centred around knowledge transfer engineer-to-order. Iain has over 15 years experience working in the manufacturing sector, specialising in make to order and engineer-to-order (MTO/ETO) manufacture. Prior to embarking upon an academic career, Iain worked as a projects manager on an European Regional Development Fund (ERDF) project supporting over 80 manufacturing Small Medium Enterprises (SMEs) on manufacturing operations and other process improvement initiatives, a number of which became knowledge transfer partnerships (KTPs).

After joining IBM's Strategy Consulting practice in 1996, **Jean-François Barsoum** began developing technology business plans and strategies for businesses and diverse organizations, such as financial institutions, higher education institutions, professional associations, pharmaceutical companies and telecommunications companies. His specific focus has been on developing business plans of new and disruptive technologies, for which he developed IBM's method. He subsequently trained several hundred IBM consultants in the use of that method. He has been a keynote speaker on the topics of smart cities, innovation, corporate responsibility and climate change in Canada, the United States, South America, Europe and Asia. In 2008, selected by the Al Gore's Climate Project, he was one of the few Canadians to receive training from the Nobel peace laureate. Since then, he has presented the science of climate change dozens of times to diverse audiences, from high schools, universities, and public sector organizations to banks and telecommunications firms. In 2011, he joined the board of directors of Al Gore's foundation, since renamed "the Climate Reality Project Canada"; and acts as a mentor to the other presenters in the business community and in the province of Quebec. He is a member of the steering committee of the David Suzuki Foundation (Québec), a director at the Canadian Water Network (a federally funded research granting organisation), and the leader of IBM's Green Community, founded in 1999 and has over 1000 members worldwide.

Kam Jugdev is a Professor in Project Management and Strategy at Athabasca University, Canada. She joined the University in April 2003. Kam holds undergraduate degrees from the

University of Calgary, a Masters in Health Services Administration from the University of Alberta, a Masters in Engineering from the University of Calgary, and a PhD in Engineering (Project Management) from the University of Calgary. Kam's research program spans project management lessons learned and communities of practice; project management tools and techniques; project success/failure; project management as a source of competitive advantage using the Resource Based View of the Firm; burnout in project managers; and the free rider problem on project teams. Kam enjoys being able to relate theory to practice with students and through her research.

Oliver Mack* is researcher, entrepreneur, coach and consultant located in Salzburg and Vienna, Austria. He studied Business Administration and Law at the University of Mannheim and got his PhD in Political Science at Johannes-Gutenberg-University of Mainz, Germany. He is author of several publications and speaker at international conferences and meetings and he is academic teacher in international organizations. Mack is founder of mack:consulting, a consulting company helping companies and organizations in the "3rd mode of consulting", combination of traditional top management consulting and systemic change consulting in the main areas of Project Orientation, New Organizational Design, Change and Complexity. Oliver Mack is Network partner of osb international Vienna, a leading Systemic Consulting companies in Europe. He is also founder of the xm:insitue, an organization doing applied research and application of "Ideas for Management & Leadership in the Next Society". He is also active in various associations.

Peter Carr* is a lecturer in the Department of Management Sciences at the University of Waterloo and an adjunct faculty member in the Conrad Centre for Business, Entrepreneurship and Technology, also at the University of Waterloo. He is the director of Waterloo's online Certificate in Social Media for Business Performance and the online Certificate in Project Leadership. Over the past eight years Peter has worked with NetHope on the application of information technology in third world development, undertaking over 20 research projects. The most recent project was on the use of information technology to improve the lives of refugees and involved 45 student participants. His Social media for Business Performance online archive contains over 600 case studies. He is currently creating an online certificate programme in Technology Entrepreneurship, which will be offered in January 2016. Peter lives in Toronto with his wife Lynn.

R. Andreas Kraemer* is Founder & Director Emeritus of Ecologic Institute in Berlin, Germany and Founding Chairman (pro bono) of Ecologic Institute US in Washington DC. He is currently Senior Fellow at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany, Visiting Scholar at the Massachusetts Institute of Technology (MIT), Center for Energy and Environmental Policy Research (CEEPR), and Visiting Assistant Professor of Political Science and Adjunct Professor of German Studies at Duke University). His research focuses on the role and functions of science-based policy institutes or "think tanks" in theory and the practice in different political systems, the interactions among policy domains and international relations, and global governance on environment, resources, climate and energy.

Stephen Murgatroyd*, PhD FBPsS FRSA is a former Dean School of Administrative Studies and Executive Director, Centre for Innovative Management at Athabasca University, Canada. He is now CEO of the Collaborative Media Group and has consulted for forty of the Fortune 100 companies. Author of over forty books and six hundred papers, chapters and articles, he is a frequent contributor to news, journals and other media on future focused issues. His most recent book *How to Rethink the Future – Making Use of Strategic Foresight* (New York: Lulu Press / Kindle) builds on his previous work in strategic foresight.

Terry Beckman* received his Ph.D. in Marketing from Queen's University and his M.B.A in International Business from the University of Victoria. He teaches Marketing Management, Global Marketing and International Business Management. Prior to Athabasca University, he taught at Queen's University, The Royal Military College of Canada and the University of Victoria. His background includes over 12 years of industry experience, including work with IBM Canada Ltd, the Canadian High Commission in Malaysia and business consulting. His research interests are primarily in marketing strategy, corporate branding, international business and corporate social responsibility. He has published one edited book and a variety of articles in his areas of research interest. Terry has a keen interest in the changing of management practices and processes due to the emergence of digital technologies that have forced transformation of businesses in every walk of life.

Contributors

(Listed in alphabetical order)

Abubaker Haddud is a Visiting Scholar at Eastern Michigan University. He is also an Honorary Lecturer, Lead Faculty, and a Dissertation Advisor for the Operations and Supply Chain Management Online Master's Programme at the University of Liverpool in England. He has a PhD in Engineering Management from Eastern Michigan University (USA) where he was a Fulbright Scholar and an MBA with Distinction from Coventry University (UK). Abubaker has several years of university teaching experience within business and management domain at undergraduate and postgraduate. He has more than 10 years of industrial work experience working for private, public and governmental organizations. His teaching and research interests focus on Lean Thinking, Strategic Operations Management and Supply Chain Operations Management.

Andreas Krämer is Marketing and Strategy Consultant, living in Bonn, Germany, and Professor of Customer Value Management and Pricing at BiTS Business and Information Technology School, Iserlohn. He studied Agricultural Economics and earned his Ph.D. at the University of Bonn. After working for two strategy consultancies he founded his own consulting firm in 2000: exeo Strategic Consulting AG is focused on data-driven decision support in marketing - especially pricing and customer value management. He is author of several books and numerous publications and speaker at international conferences and meetings.

Arto Ojala is working as a senior researcher in the Department of Computer Science and Information Systems at the University of Jyväskylä, Finland. He is also Adjunct Professor in Software Business at the Tampere University of Technology. His research interests include software business, software entrepreneurship, cloud computing, and the internationalization of software firms. Ojala has a PhD in economics from the University of Jyväskylä.

David Bamford joined the University of Huddersfield in 2012. He is an experienced industrialist/academic with multiple publications to his name, including a co-authored book (Essential Guide to Operations Management: Concepts and Case Notes, 2010). David's academic activities are under-pinned by a strong industrial and commercial background which, following initial qualifications in mechanical engineering and management led to roles as Quality Manager, Shift Manager and Operations Manager. The final position was created to manage pharmaceutical manufacturing and assembly operations for exponential sales growth and involved establishing complex logistical relationships with worldwide suppliers, contractors and customers.

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Professor at International Business School Suzhou (IBSS) at XJTLU, **Hossam Ismail** has numerous publications in the areas of Manufacturing Systems Design, Simulation and Modelling, Agility, Mass customisation, Decision Support Tools, Intelligent Design and Feature recognition. Hossam is Director of the Agility Centre, a business help centre funded from Objective One for Merseyside to develop agility tools and methodologies to assist manufacturing-based Merseyside-based SME's. Hossam has supervised 20 knowledge transfer programmes and he has seven major Research and Development projects in design and manufacturing. Hossam is also responsible for a successful MSc programme in e-business strategy and systems at The Management School; a programme that is specifically aimed at manufacturing industry.

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Neil Slater works at the EUMETSAT, a global operational satellite agency at the heart of Europe European Space Agency's site in Germany and has been an Engineering Manager for the past 26 years. Neil studied an MSc with Liverpool University via this programme some years ago, attained a BEng (Hons) from Cranfield University (UK) in 1994, and is a Chartered Engineer (UK Registered) along with being a Member of the Institution of Engineering and Technology. His job and aspirations for future career require a balanced mixture of both business/managerial skills and an underlying broad grasp of engineering expertise.

Peter Veil has more than 15 years of experience in Telco, Automotive and Internet Industry. He draws on broad financial and business competencies from his role as Vice President for Subsidiaries Controlling of a 12bn EUR Telco company and formerly as CFO of a Telematics Start Up. Peter has proven very strong strategic and business development skills in the Internet and the Automotive Industry. He has a track record in end-2-end complexity management and efficiency improvement as well as in successfully leading international teams especially in SEE Region. Additionally to his role in business he frequently gives lectures on business management. He studied Business Engineering at the University of Karlsruhe, holds an MBA from Portland State University, and got his PhD in Political Science at University of Stuttgart.

Regine Kalka is a Professor for Marketing and Communication at the University of Applied Science Düsseldorf and Freelance Consultant with the focus on strategy, brand management and coaching of small and medium-sized companies. Before that she worked for a strategy consultancy and as vice president for a trade fair company. She studied Business Economics at the University of Trier and earned her Ph.D. at the Vienna University of Economics and Business Administration.

Rob Llewellyn is the founder of CXO Transform and before 26 he had bought one

company, built another from scratch, and sold them both. He became European Director of a Singapore based trading company at 27 and entered independent consulting 3 years later. Providing independent consultancy across Europe, the Middle East and Australia, Rob has spent almost two decades helping executives at some of the world's largest corporations. As one of the world's few certified Global Business Transformation Masters who operates as an independent consultant, Rob provides world-class consultancy to a small portfolio of clients and helps other independent consultants leverage innovative digital solutions and grow their business.

Richard A. W. Tortorella is a Doctoral Candidate in the School of Computing at the University of Eastern Finland. His specialisation involves adaptive context aware learning systems and expert system integration. He is also an assistant editor for the Journal of Educational Technology & Society. In what spare time he has he enjoys the motorcycling and the outdoors. He lives with his wife and two daughters in Langley, BC Canada.

Robert Bongaerts is CRM and Strategy Consultant, living in Frankfurt, Germany, and Lecturer of Customer Value Management and Pricing at BiTS Business and Information Technology School, Iserlohn. He studied Agricultural Economics and earned his Ph.D. at the University of Bonn. He is partner at exeo Strategic Consulting AG, a consultancy focused on data-driven decision support in marketing - especially pricing and customer value management.

Senana L. Brugger is Consultant, Researcher and Trainer located in Hamburg, Germany. She studied Cultural Anthropology and Computer Science at the University of Hamburg. She has specialized on human-technology-interaction, especially in computer supported cooperative work, and intercultural communication; and developed a mapping method for complex context analysis using visual methods of ethnography. Her project experience includes software design and technical aid. She is also founder of "Drei Wellen", designing "brain-friendly" learning landscapes for various topics.

Shonelle Ramserran is a Digital Marketing Specialist at ToysRUs Canada Ltd., and has been working in the online marketing communication field since 2007. She has recently completed her Masters of Science in Project Management at the University of Liverpool, UK. Previously employed at Pearson Education Canada as a Digital Project Manager she has been involved with managing virtual teams and online communication for the majority of her career. Shonelle is looking forward to completing a PhD. in Marketing in order to teach these acute online team communication skills at a university level.

Tatjana König is a Professor of Marketing at HTW Saarland Business School, Saarbrücken, Germany and teaches also at the University of Luxemburg. She earned a diploma degree at the Johannes Gutenberg-University in Mainz and a Ph.D. from the University of Mannheim. After working for a strategy consultancy and for Deutsche Lufthansa she was appointed Marketing Professor at HTW. She focuses on Consumer Behavior, Pricing and Multivariate Analysis. She is author of numerous publications and speaker at international conferences.

Thomas Tachilzik is Digital Marketing Consultant, living in Bonn, Germany, and speaker for Social CRM. He studied economics, mechanical engineering and earned his degree at the University of Bochum. After working for a strategy and process consultancy Icarus and Lufthansa in Product Development he founded his own consulting firm in 2004: Tachilzik Consulting GmbH is focused on customer data-driven sales & marketing - especially Social CRM and customer value management. He is author of numerous publications and speaker at digital transformation conferences and meetings.

Torsten Eymann is Full Professor for Information Systems Management at University of Bayreuth, Germany, since 2004. His research topics include ubiquitous computing in healthcare, trust and reputation in e-commerce, and secure cloud computing. He is author of 3 books and more than 100 journal and conference papers, some of which received best paper awards. He has coordinated research projects funded by the European Commission and several national agencies with a total budget of 4 Mio. EUR. For longer research stays he has visited Hitachi's System Development Labs in Japan, British Telecom Labs in the UK and the Universitat Politecnica de Catalunya in Barcelona. He co-organizes workshops and conferences on Information Systems Management, Cloud Computing and Mobile Computing. He serves as the chairman of the German Informatics Society's chapter on Business Informatics, since 2013.

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7.0 CONCLUSION

Embracing Disruptions and the Unknown Future

- Brian Stewart, Anshuman Khare & Rod Schatz

1.0 INTRODUCTION

Digital Disruption: Why It Matters?

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Perhaps the most succinct description of a firm is that of the economist Ronald Coase (1937), who characterized the construct as the result of the cost of market transactions. By internalizing transaction costs firms could improve their performance through reducing their overall cost and time of operations. If we place this theory in the digital age that exhibits instantaneous transactions with associated costs approaching zero, it becomes readily apparent that the *raison d'être* of a firm or business is subject to massively disruptive forces. Indeed it is not too far to state that an existential crisis is on the horizon for many businesses and their underlying business models and a Schumpeterian era of digitized creative destruction dawns. Business and organizational managers and leaders need new frameworks to enable them to initially ask the right questions and then to develop the correct responses to the forces of change that are about to sweep over them. All in an environment where decisional milieu consists of unknown time frames and the paradox of information availability serve to obfuscate rather than to enlighten.

In this chapter we will review current strategic and operational frameworks to determine their appropriateness to effectively deal with the future and seek to assess the gaps in business thinking where new models may be needed.

References

Coase, R. H. (1937). The nature of the firm. *economica*, 4(16), 386-405.

2.0 BUSINESS STRATEGY

Enterprise Impact of Social Media: Some Case Studies

Peter Carr (pdccarr@uwaterloo.ca)

Social media is having a significant impact on the lives of many people around the globe today. It is transforming the means of communication and changing the nature of human relationships. In the business world, social media has been widely accepted as changing the nature of marketing. It alters the power relationship between buyers and sellers on both a retail and business-to-business level.

Social media is also impacting business in areas beyond the marketing function, although this is not yet widespread. Early activity is evident in operations and supply chain, product development and design and human resources and employee engagement. There is substantial potential for social media to transform modern companies.

This chapter will consider the whole enterprise impact of social media. It will be based on case study examples that have been developed as part of the Certificate in Social Media for Business Performance that has been offered online by the University of Waterloo since 2012.

Cultural Communication Patterns – A way how management and engineering can improve their mutual understanding significantly

Oliver Mack (oliver.mack@mack-consulting.at)

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In the age of digital disruption, technology is no longer only a tool to improve organizational efficiency. Technology becomes a key success factor and enabler for radically new and innovative products and services, new organizational processes as well as totally new business models. To be able to develop innovations on a global scale on all those levels, good communication across disciplines, like IT, Engineering and Management and across countries and cultures becomes more and more a key success factor.

The paper will focus on a new perspective on cultural communication, seen as a kind of social disruption being a prerequisite for technological disruptions. We are developing a theoretical framework on how cross-cultural communication is driven using the PSI theory and other elements of Personality Psychology and Ethnology. We believe that different professions, disciplines and cultures in general have preferred communication patterns that make it easy to communicate within the cultural set, but difficult to communicate with other cultures, professions or disciplines across borders. Those communication patterns form “professional cultures”, which then form larger, integrated regional cultures that can also be shaped by meta-patterns. While regional cultures are varied, the number of underlying professional cultures is limited. The framework will describe the different communication types based on specific values, motivational preferences and practices that are closely linked to certain communication patterns. The theory of pattern language helps to collect and structure those communication patterns in a systematic way and makes them available for all disciplines and professions.

The benefit of understanding these patterns is to be able to apply those patterns in practice when communicating across borders with other disciplines. This could reduce the misunderstanding and conflicts within organizations as well as within projects across the globe. We will give some examples on how and where to apply this idea e.g. in Innovation, R&D, Project Management or Intercultural Management.

Technology and Disruption: How the New Customer Relationship Influences the Corporate Strategy

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The major changes in technological environment and customer digital behavior have a significant impact on the way companies manage their customer relationship. Here, both perspectives of value managements are concerned: (a) The design of products and services including the way of interaction with the customer that generate a high customer benefit and (b) The focus of companies on customers with high profit margin and sales potential. The flow of information is also in two directions.

Firstly, one information flow refers to data that originate from the customer. Yet, companies receive more, detailed and real time data about products and services as was the case earlier through digital customer relationship processes. More and more products are generating even usage data with the permission of customers, but with no customer initiated company interaction. While certain companies had strong brands but had only limited contact with the end customer (industries with several levels of added value, such as beverages and automotive industries), in the era of Internet, social media and Google this situation is completely changed. Customers actively identifying themselves with strong brands and communicate their experiences along the total product life cycle – from the first awareness up to the end of using it. This can be positive or negative. Although data security might be a concern, consumers willingly provide, preferences as well as full profile descriptions and accept to store those data, to get access to tailored offers and services. Customers are paying with personal data for free product or service usage. Google, Facebook or the customer loyalty system PAYBACK is one example.

Secondly, there is an information flow triggered by the company as is now easier for enterprises to actively communicate towards customers. Information and additional offers to customers is provided more and more real-time and individually but with none classical customer data. The “relevant moment” in marketing communication opens new opportunities. Amazon is one example here, which is sending products to customers while there is no existing offer. Products are finding customers and the other way round, with none customer relation in advance. But also the direct marketing has been revolutionized in a digital and networked world, making a long discussed 1:1 marketing approach feasible. By combining different data sources a more accurate way to improve performance in marketing and product development becomes possible. On the one hand tailored products and services can be offered to the customer, on the other hand the controlling and steering of customer value management in real time is possible. By using transaction-oriented customer satisfaction measurements managers can quickly identify and eliminate performance defects, when the degree of customer satisfaction or the intention to recommend (NPS) of a single transaction is linked to sales, production and logistics as well as social media data.

This is an opportunity and a challenge at the same time. The ways to extract information from Big Data and evolve smart data, which help in decision-making in marketing, become a competitive factor.

The future dominance of platform business models as a concept for digital disruption

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Currently almost all industries are undergoing a fundamental transformation; based on the approach that everything that can be calculated will be calculated. This more and more leads to a digitalization of the world where software becomes more and more the key success factor also in many brick-and-mortar businesses and change appears more as disruption as evolution. A core concept and business model for the new age is the platform concept. In practice, companies like AirBnB, Facebook, LinkedIn and Über are examples of this platform business model. In management theory the platform model is still in a very early stage of discussion.

The chapter will have a deeper look into the concept of platform business models, describing their characteristics and major functional mechanisms. We will also discuss the major differences in comparison to traditional business models and analyze why it is so difficult to implement this concept in existing companies. Understanding this gives a good explanation, why new players in a market using the platform model have such disruptive effects on the whole industry. The paper will further discuss how the platform concept not only has disruptive impact on the market but also internally on the DNA of companies as such. We will analyze what impact the platform model has on the overall organizational design of companies with traditional business models.

How Digital Disruption Changes Pricing Strategies and Price Models

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The digitization of the economy leads to significant changes in the way in which companies determine their prices. The technological changes (availability of the Internet, digitization of production, product innovations etc.) basically lead to a better environment, since the basis for pricing can be improved. Companies can collect and analyse more relevant information and hence optimize their prices. However, these changes also lead to an acceleration of market reactions. On one hand, consumer behaviour changes (more information is available online, search engines and price robots help to find best offers etc.), on the other hand market structures become fragile (market entry barriers for new competitors are lowered, traditional products are cannibalized by digital products). Due to these factors the product and pricing strategy must be completely rethought.

Microsoft, one of the world's most profitable companies, in future will focus more on its own ecosystem and imitate competitors Google and Apple. As announced in 2015, the upgrade to Windows 10 will be for free (the first time). Apple and Google seem to be the benchmarks for the new way of Microsoft. Both companies integrate their products and build their own ecosystem. In the case of Apple this is done by iPhone, iPad and Mac, who are in league with Safari, FaceTime, iTunes, iCloud and iMessage among themselves. Google can build customer loyalty due to its product portfolio (Android devices, Google Search, Gmail, YouTube and Chrome).

If companies check their market positioning and competitive position, this has consequences for the range of pricing models available in the market. In this context, the paper focuses on 4 types. Firstly, the digitization allows to offer products for free for the consumer (Facebook and Google are particularly profitable examples) when at the same time other sources of revenue streams (here: advertising revenue) are generated. Secondly, especially popular with startups are freemium models, which are also free of charge for a basic service, but for upgraded services (full range of features, no ads). LinkedIn, Dropbox or Spotify are prominent examples of this pricing model. Thirdly, subscription models have a strong boost. Since production costs drop when new business models are based on digitization, subscription models (like Netflix) – which have a long tradition – nowadays become more attractive. Fourth, pricing models with flexible prices, which are dependent on demand will be discussed. For some industries, dynamic prices are an integral part of the business model and widely accepted by customers. For example, in the airline industry, Revenue Management Systems are successfully implemented since the mid-80s. However, the acceptance of the customer as a key factor is not always given, as the example of Coca-Cola shows. In 1999, Coca-Cola Company had quietly begun testing a vending machine that could automatically raise prices for its drinks in hot weather. After customers refused the new pricing model, the company moved back the pricing model. Dynamic pricing has a growing importance in online trading, but will also come for use in retail stores (a few grocers have tried out electronic shelf labels, yet).

The paper examines the implications of digitization on strategic and operational pricing decisions and shows examples from various industries (retail, media, music etc.) and enterprises. In addition, the limits of technological changes are discussed, while both aspects are regarded, the perspective of the company and the perspective (and perception) of the customer.

E-Entrepreneurship and Agriculture: The Case of Agriculture in Great Montreal Metropolitan

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In Canada, like elsewhere in the world, the demand is growing for healthy food, fresh and environmentally friendly products. This has a positive impact on small producers that offer their products directly to farmers markets. Hence such market has increased its popularity. It is good news as this market loses five farms per week in Quebec. However, players of this consolidated industry also increase their offers to meet the new digital trend. According to Agriculture Canada report (2009), less than 1% of consumers procure their needs from such market, whereas, with massive implementation and use of internet-based-technologies (IBTs) and information communication a technology (ICTs), there is an outstanding increase of such platforms in recent years.

In this chapter, we look at digital entrepreneurship created to fulfill the needs of farmers, ordinary people and restaurant-owners for fresh food and products. It is studied along with a closer consideration of use of social media as means of awareness and advertisement of such e-platforms. Through an in-depth, longitudinal study of a highly popular and expanding platforms such as LufaFarm and Provendora, the pattern of information and communication process and of technology deployment in this industry is documented to allow for a dialectic verification of propositions and examination of the theories. This chapter's contribution is in covering the gap and also contributing to our understating of the role of ICTs, IBTs and mobile technologies in e-agriculture and their internationalization process. Selected aspects of internet-agriculture interactions, and business models, are discussed in some depth. Public policy implications will also be presented.

3.0 MOBILITY

How digitization affects mobility and the business models of automotive OEMs

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The automotive industry is of great importance for various economies and the German economy in specific. The German car manufacturer Daimler notes that “digital technologies are changing our products, our brand and corporate communication activities and our work environment”. However, Hanelt, Piccinini, Gregory, Hildebrandt, and Kolbe (2015) recently stated “what is missing to date is an understanding of how digital transformation manifests itself in industries in which the core products are primarily physical [...].” Changes resulting from the digitalization are relevant for all car manufacturers and have to be analyzed systematically. The proposed contribution captures the following questions:

- What are the major challenges caused by digitization and changing consumer needs?
- What kind of new business models and mobility concepts are out there?
- How can automotive OEMs integrate themselves into digital business models and mobility concepts of the future?

Based on case studies regarding BMW vs. Tesla vs. Porsche the suggested research topics will be introduced, analyzed, and courses of action will be provided. For OEMs, it is crucial to understand how the companies have to react in order to remain successful in the digital era.

The proposed contribution covers the exposed question of ‘who is affected’ and the theme of technology and disruption of the current call for contributions of ‘phantom ex machina’. By providing case study based research the contribution highlights the disruption of the traditional business models of automotive OEM and answers the question of ‘how to turn these disruptive forces into business advantage’.

Disruption Technology in Mobility: Some Case Studies

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Important things get part of our language. "Do not reinvent the wheel" is an old German proverb, which refers to one of the most important "breakthrough" developments in the area of mobility - a still increasingly essential need of mankind. The history of mobility knows many more examples of disruptive technologies e.g. the invention of cars, trains, planes. All of them changed our world up to today.

Recent disruptive innovation within the mobility refer to

- Simple and cost-effective access to mobility: The example of Uber shows how motorized private transport can be accessed for public transport – coordinated via mobile Internet devices (digital transformation). The idea of the sharing economy “to replace ownership by renting or sharing for part-time usage or access” transferred to the mobility sector led to a lot of new business models like car sharing, bike sharing and nowadays even plane and drone sharing.
- Technological development: Tesla demonstrates impressively that eco-friendly electric cars can beat traditional car technology. Due to the combination of laser technology, GPS, and vehicle-to-vehicle communication self-driving cars are on their way. Even telekinesis (steering by thinking) seems possible.
- Commercial Space Travel e.g. planetary tourism and super-high-speed-travelling around the world.

For every innovation there are two challenges: It must be made, and it must be accepted. The first challenge is all about engineering and technology, the second one is all about mind and design. And both of them do not just consist of make-or-break leaps, but are continuous processes – on the way to the breakthrough, and beyond. The “Map of Disruption” combines these two dimensions and gives us a useful framework about what is technically feasible and what is acceptable by society.

Within this framework technological developments in the area of mobility will be analyzed: Do they satisfy the requirements of both the customer perspective and the company perspective? For the latter, the reactions of traditional providers play an essential role. These three perspectives - customer, company, competitor (traditional supplier) - will be discussed addressing the following questions: What are the key disruptive attributes in the mobility industry (consumer/supplier perspective)? How can traditional suppliers/competitors react? What opportunities despite the risks arise for traditional suppliers through disruptive technologies?

Rising customer and societal value with 'diglectrical' innovations: New perspectives for the automotive industry?

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Climate change, growing urbanization as well as technological developments like digitalization and electrification ('diglectrification') seem to change customer and societal expectations and preferences towards mobility in the future, especially automotive mobility. The international automotive industry is under pressure because of these tectonic shifts.

'Connected car', 'autonomous car', 'low-emission and zero-emission vehicles' have been on the agenda of the automotive industry since several years. The drivers of 'diglectrical' trends are partly newcomers in the automotive industry, like Tesla and Google. The growing role of disruptive innovations is in the focus of politics, business and academia. Governmental initiatives like the National Platform for Electro mobility in Germany focussing on the mass introduction of electric vehicles try to create suitable frameworks for effective entrepreneurial activities.

The leading idea of this paper is to design a conceptual framework, whereby 'diglectrical' disruptive technologies are the initial point to develop and to evaluate customer-focused strategies and measures rising customer and societal value and transforming (traditional) business opportunities in the automotive industry.

4.0 TECHNOLOGY

Key Technologies That Are Creating Disruption Today and Technologies That May Add Further Disruption: Big Data and Internet of Things

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There are many varying definitions of “digital disruption”, each describing one or more aspects of the concept. How about natural selection in digital life? I prefer this because it theorizes the “evolution of species”, rather than replacement of a few weakly adapted individuals by others. Hence, the difference from the term “disruptive technology”¹.

Quoting Darwin: “We shall best understand the probable course of natural selection by taking the case of a country undergoing some physical change, for instance, of climate. The proportional numbers of its inhabitants would almost immediately undergo a change, and some species might become extinct. We may conclude, from what we have seen of the intimate and complex manner in which the inhabitants of each country are bound together, that any change in the numerical proportions of some of the inhabitants, independently of the change of climate itself, would most seriously affect many of the others. If the country were open on its borders, new forms would certainly immigrate, and this also would seriously disturb the relations of some of the former inhabitants. Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be.”

Creating parallels might help better understand. Let’s start with “change”. Stemming from one of the most fundamental laws of our universe; entropy, change could arise as an external factor such as climate or population growth. Especially the latter is known to be correlated and the driving force behind Internet penetration growth and data growth. Over the next five years the number of people on the Internet will roughly double in the world, which will likely boost the already exponential increase in the volume of data generated. Big Data is becoming even bigger and bigger.

The second element is the speed of the change. It might be sudden, in which case the impact could be catastrophic on one or more industries. This might create a void, or a niche area depending on the perspective, which might remain for some time before other market players can fill it. Or change might be gradual. Then its continuous and irresistible pace reaches critical mass at certain intervals, which again enforces disruptions. Theories on business cycles, such as Schumpeter’s², arguably utilize patterns from these intervals. The pace of change also affects the velocity of data.

Another one is the tightly knitted fabric of the business environment, which can create a domino effect on other sectors, when one is disrupted. A good example to this could be

¹ The term “disruptive technology” was coined by Harvard Business School professor Clayton M. Christensen to describe a new technology that displaces an established technology.

² For more information on Schumpeter’s Business Cycles, please refer to “Schumpeter, J.A. The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle translated from the German by Redvers Opie (1961) New York: OUP”.

Microsoft founder Bill Gates' "a computer on every desk and in every home" vision. Before that, computers required huge investments and were only affordable by government entities or a number of large corporations. Within a decade or two, this vision had an impact on almost every area of our lives and significantly changed how business is done on the planet. The variety of data generated and shared by all kinds of organizations and individuals increased proportionally.

Barriers need to be taken into account as well. Internet has been the quintessential medium for bringing suppliers closer to customers and boosting their bargaining power (for Porter's theory of business models, see Business Models chapter in this book). By making information exchange so much easier, internet also makes entry to market much more affordable and faster for disruptors. Cloud brings the power of computing at a scale and shortens cycles of experimentation and validation replacing elaborate market tests³. In fact, by combining big data in the cloud such as Azure HDInsight, and a powerful business intelligence tool like Excel which is already being used by more than 1 billion users, anyone can store, process and analyze colossal amounts of information. This is something we couldn't imagine until recently. Add to this the real-time information generation and collection capacity of Internet of Things⁴, and the business opportunity possibilities for the same disruptors become virtually infinite.

³ Statistically, larger sample sets yield better predictions. Before Big Data with cloud computing and IoT, collecting, storing, sorting, aggregating, visualizing and extrapolating large data sets were most challenging. With the advent of these two capabilities, data became democratized and time to market decreased significantly.

⁴ According to Cisco, there were 13 billion internet connected devices in 2013 and there will be 50 billion in 2020 including 'chips, sensors, implants and devices of which we have not yet conceived.'

3D Printing - Challenging Existing Business Models

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Technologies labelled as “disruptive”, such as the Internet, have revolutionized the way people communicate, buy and consume products and services as well as how people work. A great consensus exists that 3D printing is the next major technological revolution, taking product and process innovations totally into a new level. 3D printing is a process enabling to produce three-dimensional objects basically of any shape from a digital model. Today, 3D printing is widely used in prototype production allowing realistic and close to manufacture quality prototypes.

Instead of mass production, 3D printing allows mass customization with unique and tailored products. Medical applications like dental implants and hearing aid devices are good examples of 3D printed customer specific products. Digital business improves adaptation of the 3D printing and delivery process. Globally operating crowdsourcing platforms advance unique product design and 3D printing enables agile product testing and innovation in “lean” way.

As 3D printing presents an important disruptive technology, it will shape business models and ecosystems in various industries. This study aims to discover how 3D printing might change and advance a company’s existing business models – involving value network, value delivery and revenue models. With this knowledge, business practitioners and scholars can better understand opportunities and challenges of 3D printing. To increase our knowledge on the topic and acquire in-depth knowledge, this study applies qualitative case study method, including firms operating in medical and automotive industries.

5.0 HIGHER EDUCATION & TRAINING

Education, Technology and Simple Innovation

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This chapter will provide a description of three innovations in education which have leveraged technology:

- The Commonwealth of Learning's use of voicemail, self-help groups, social networks and research translation to transform farming in India.
- The use of social media to aid innovation in health care through learning and sharing networks in Alberta.
- The development of badges to support the recognition of learning and the transfer of skills.

The paper will then provide a model of innovation based on the work of Denning and Dunham (2010), adapted for education (Murgatroyd, 2014).

The key messages of this chapter are:

1. People are the engines of innovation in education, not technology.
2. We need to adopt the simplicity principle – the simpler, more reliable and accessible the technology the more sustainable and scalable will be its use.
3. The big challenges with technology related innovation in education are: (a) reach – being able to reach underrepresented groups who normally are denied access to education; (b) scale – securing scale which represents success and provides the basis for impact; and (c) sustainability – keeping the innovation going after the start-up and initial breakthrough phase.
4. People will surprise you when you stop getting in the way – teach less to learn more! This links to the pioneering work of Sugata Mitra (see <http://www.wired.com/2013/10/free-thinkers/all/>).
5. Wicked problems demand innovative responses which are based around notions of engagement, learning, challenge and “grandmother” support.

This chapter builds on past work by Stephen Murgatroyd.

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Learning Assessment Must Change in a World of “Digital Cheats”

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Digital disruption has touched almost every industry and sector imaginable including the education sector. One disruption in the education sector comes from the rise and acceptance of distance and online education. Not only is this evident through traditional courses being offered online, but the increase in massively open online courses (MOOCs) which create even more disruption. In addition to the changes in the general process of delivery of education, the course content and how students interact with each other and with instructors is also changing. Buckley (2015) argues that “the education sector is ripe for digital disruption”. Additionally, there have been efforts to utilize the power of social media and social networking to improve the learning of students. Several studies have shown how the use of social media technology can enhance learning (e.g., Brownson, 2014; Friedman & Friedman, 2014; O’Boyle, 2014; Thoms & Eryilmaz, 2014). However, the rapid changes in digital technology have also led to the new breed of “cheats” who use the same digital technology causing disruption to cheat the system for better results. This paper looks at the evolution of cheating and suggests that the solutions may require a fundamental shift in how *learning assessment* is carried out in business education. The paper looks at how digital technology has impacted the traditional assessment tools and how assessment can be modified in a digital world to ensure that students are achieving program-learning goals.

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Digital Disruption: A Transformation in Graduate Management Education

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Digital disruption in the online education environment requires fundamental changes from the traditional models. Digital disruptions reflect innovations in both programme and course development and delivery. Examples include the use of embedded or hot-linked video and audio presentations, group and team interactive assignments (conducted through either synchronous and asynchronous means), problem solving and critical thinking exercises, and activities conducted through designated social media or through via Skype, Adobe Connect or similar real time mediums. The use of expanding web related (Web 2 etc.) options would also be explored.

This chapter will outline the learning and delivery models that two well-established and successful online MBA programmes have developed which include evidence of digital disruption which has served to enhance the quality of online course offerings. The presentation will also include suggestions as to the future benefits that the inclusion of digital elements in their programmes can provide to graduates as they pursue their future career endeavors.

The programmes and institutions highlighted include the executive MBA that was launched in 1994 by Athabasca University in Canada and the online MBA offered by the University of Liverpool in the UK (in conjunction with Laureate Education).

The chapter will conclude with an overview of the potential future personal and career linked benefits that may follow from the exposure that online MBA programme graduates have gained from their familiarization with social media and other digital disruption-related enhancements in their respective degree programmes.

Training in the 21st century: Technology Evolution or Revolution?

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The business environment is in a constant ebb and flow due to omnipresent technological changes. This affects every facet of the business world; including the very way employees are trained. Today, online learning does not need to stop at the post-secondary level; in fact it continues on in the form of workplace training. In the last twenty years, workplace training has seen a paradigm shift. For the longest time it was centered around in-house training, then moving to offsite third party training, to what we are experiencing today: online training.

In many ways the dynamics of on the job training has come full circle. Employees are still learning in the workplace, but are being taught by professionals potentially half a world away. What does this mean to one's business model? How is training now handled by the business world? What budgetary and infrastructure concerns are now needed to properly ensure one's workforce stays up-to-date with the current trends and techniques?

This proposal wishes to address these issues within the following sections:

- Paradigm shifts of training over the last 20 years: How has training changed
- Costs effectiveness: No longer are businesses in need of in-home training or expensive out-of-area seminars. What does this mean to budgets and business models?
- Possible pitfalls and downfalls: Can the market truly sustain a global online training scenario.
- What does the future hold? What are some possible scenarios in the next 5-10 year in terms of training?

6.0 MANAGING VIRTUAL NETWORKS & SERVICES

Innovative Digital Disruption of the Consulting Industry

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There are no greater evangelists of the need for firms to transform, than management consulting firms. Vast profit potential sits on the boardroom tables of firms that are eager for expert advice about how to remain relevant, either through Radical, Architectural, Modular, or Incremental transformation.

The irony is that the business models used by many of these management consulting firms have not been changed in decades, leaving them exposed to becoming victims of disruption themselves.

As Clayton M. Christensen, Dina Wang and Derek van Bever wrote in the October 2013 issue of the Harvard Business Review, "Though the full effects of disruption have yet to hit consulting, our observations suggest that it's just a matter of time". While the consultants that Christensen and his colleagues spoke with, warn clients about the risks of disruption, they rejected the notion of disruption in their own management consulting industry.

Digitally enabled platforms based on a variety of innovative models now provide companies with the expertise that has traditionally been found within consulting firms. Mobile, social and content marketing solutions have enabled peer-to-peer consulting, where independent consultants engage directly with prospective clients. This provides executives with the opportunity to choose between spending high on brand-name consultancies, or cost-effectively on equivalent independent expertise.

The influence of socially orientated growth of virtual teams: A Delphi study

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Modern communications tools and the Internet services have allowed for and fostered a less localised business environment to a situation where virtual teams (VT) can be formed without concern for geographical locations and time zones (Hastings, 2008). This paper presents the development of a new approach for communications support systems (incl. social networks) in complex product and supply chain environments in where third parties play a critical part to the supply chain. The paper also examines whether the social network medium can foster a similar integrated and tightly bonded team ethos (Khungar, 2012) for geographically dispersed VT and how to optimise such social network implementation. The research will test the hypothesis suggestion: that tight integration at an interpersonal level between individuals within a team is able to deliver an increased level of performance (Cogliser et al, 2013) and whether the (VT) can deliver such integration through Absorptive Capacity.

A structured conceptual framework is derived which addresses both the strategic and operational level of social media and social communication. The framework presents the practical implications of disruptive technologies, virtual teams, social media, and social communications and subsequent key factors derived from a Delphi study approach, (see, Laick, 2012) investigating the use of modern communications support systems to facilitate the use of VT and the technologies that they require, but also develop a deeper understanding of the positive and negative impact of moving to an environment where the traditional team is no longer the norm.

The idea proposed is that a balanced approach to the two aspects of "Disruptive Technologies" and "Social Communications" provides the required ground for managing disbursed VT in order to develop Absorptive Capacity. Designing a VT around the disruptive technologies and social communications results in both product improvements, as well as enhancing supply chain integration more effectively.

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Digital Disruption: Lessons Learned from Virtual Team Management

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Communications in the business world has dramatically changed over the past 20 years, merging modes with mediums, and moving from a socially intimate to a more socially distant environment. Nonetheless, effective communication remains essential in business with variables such as time constraints, scope changes, budget fluctuations, and other pressures which test a company's ability to thrive. The Internet has advanced the ways in which stakeholders interact, as they utilize items such as email, cell phones, social media, video conferencing, FaceTime and virtual webinars to communicate. The biggest challenge met by most managers is learning to embody the specific characteristics, skills or traits needed to engage their team members to thrive in any work environment (Laureate, 2010). "With barriers such as location, distance, and travel removed, online work environments have come across new issues in terms of team dynamics" (Berry, 2011, p.187). Although there is access to an incredible amount of information when team members are dispersed, there can be difficulties with creating a unified team culture if one team member resides in India, another in Canada and yet another in Australia. Culture, time zones, language, experience, personality and other factors affect the fluidity in communication between stakeholders on a team. "Making sense of another's beliefs or actions is a constant struggle in any team environment and this difficulty can be exacerbated in the virtual environment because of the potential for greater diversity within the team" (Boughzala, de Vreede, and Limayem, 2012, p. 720). Managers are tasked with creating cohesion and becoming the glue that holds all the pieces in place for each and every participant.

The prominent objective of this search was to clearly identify what specific management skills would greatly optimize the talents of different stakeholders participating in an online environment (Lepsinger and DeRosa, 2010, p.54). This will include how leadership and communication skills, team dynamics and as well as cultural influences create issues in how information is processed on an individual level, team level and organizational level. In order to find satisfactory research for attaining this objective some research questions have been established. The questions fall into three major sections mentioned, which are: leadership and communication, team dynamics and culture.

A survey was conducted of 120 managers working in varying degrees of online and offline teams. As virtual teams are affected differently by leadership and communication skills together with team dynamics and culture, were examined at length to understand how best to manage online teams. In line with researcher expectations, this study gave light the new phenomenon of online teams, and their benefits, but also the extra attention needed when communicating, as the element of human interaction (body language, intonation and language) is missing. Implicating standards of communication, where managers are proactively looking for differences amongst their team members and assisting in creating a team culture where trust can be built, will guide the team towards the interconnectivity needed for the completion of tasks, projects and ultimately organizational goals. Bringing awareness to the lack of attention paid when communicating in online settings can greatly

benefit organizations that are engaging in globalization. This study expands on all of these points revealing a thorough examination of why management skills should be adjusted when working with online teams.

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Digital Disruptions and the Emergence of Virtual Think Tanks

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The art of "speaking truth to power" has come a long way since Diogenes dispensed his wine-imbued wisdom to passers-by in ancient Greece. In modern times, think tanks are – or try to be – venerable institutions with a reputation for competence, relevance, influence and independence. The "business model" or rather "logic model" of many think tanks is to engage simultaneously with communities of experts and policy communities, media and the general public, and act as brokers of ideas among them. As is true for intermediaries in many areas, new information and communication technologies are reducing the space and the margins for brokerage to the point that think tanks may need to reinvent themselves.

Drawing on insights from James McGann and Enrique Mendizabal (among others) the chapter sketches the core functions and typical interventions of think tanks in influencing public discussion, policy debate, and legislative decision-making and presents the disruptions caused or threatened by the internet, the web, social media and other manifestations of the digital age.

It then presents and discusses two possible responses:

1. One is to harness new technologies and their possibilities in a process of incremental innovation within the existing modus operandi, essentially defending the existing institutional arrangements, work-flows, mechanisms for influencing the public policy process, and maintaining accepting narratives for fund-raising. There is a growing empirical basis of case studies of this kind of response.
2. The other is to re-think the think tank and develop completely new forms of mobilizing expertise and bringing it to bear on societal and political processes, in radically new ways that can be very effective and may be disruptive to the existing structures and habits at the interface of expertise and power. There are only cases of such disruptive innovation; the evidence is more anecdotal.

The chapter will offer both, an analytical and a problem-focused constructive perspective from an author with a think tank practitioners' background.

7.0 CONCLUSION

Embracing Disruptions and the Unknown Future (Tentative)

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A quotation is usually introduced with a signal phrase that contains the author's last name. When this type of signal phrase is used, the publication date and the page number for the quotation are also included. For example,

As Katzenbach (1992) suggests, "Real teams do not have to get along. They have to get things accomplished" (p. 25).

Sometimes, however, a quotation will be introduced without a signal phrase. In this case, the citation is placed at the end of the quotation, as in the following example:

"Real teams do not have to get along. They have to get things accomplished" (Katzenbach, 1992, p. 25).

In-Text Citation for a Paraphrase or Summary

A signal phrase introducing a paraphrase or a summary includes the author's last name followed by the publication date. A page number is not required. For example,
According to Smith (1994), teamwork is not essential to productivity.

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Teamwork is not essential to productivity (Smith, 1994).

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Author's last name, First initial. (year, Month). Title of article. Name of Magazine, pp. X–XX.

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Author's last name, First initial. (year). Title of article. Name of Journal, volume number(issue number), X–XX.

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Author's last name, First initial. (year, Month XX). Title of article. Title of newspaper, section and page number.

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One Network member suggested that, "blah blah blah blah" (J. Blough, personal communication, July 1, 20XX).

Entire Website:

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