XXVII ISPIM Innovation Conference
Porto, Portugal • 19-22 June 2016

ispim
PORTO 2016

BLENDING TOMORROW'S INNOVATION VINTAGE

ispim®

ANI AGÊNCIA NACIONAL DE INOVAÇÃO

Porto.

1834 ASSOCIAÇÃO COMERCIAL DO PORTO

INESCTEC TECHNOLOGY & SCIENCE

rINNOVATION GROUP

Open your mind. LUT.
Lappeenranta University of Technology

spi Sociedade Portuguesa de Inovação

U.PORTO UNIVERSIDADE DO PORTO

SANDEMAN

the shape of things

World Scientific Connecting Great Minds

#ispim

ISBN 978-952-265-928-6

K.R.E. Huizingh
S. Conn
M. Torkkeli
I. Bitran

Name..

Bem vindo,

Welcome back to Porto – it's not often that we go to the same place twice but this is the second time we have been to this wonderful city. The last time was in 2005 when ISPIM was very different to what it is today and we remember being extremely happy with around 120 delegates.

How times have changed! This year we will welcome around 450 innovation professionals from around 45 countries to Porto. Instead of a lunchtime visit to a beer company, when we got stuck in traffic on the way back to the conference venue, we will be visiting 4 different industry clusters on Wednesday. Delegates will be able to choose between Health, Food, Energy and Sustainable Mobility and each visit will include a discussion panel where different innovation challenges will be addressed. This builds on the successful cluster visits that took place at the ISPIM Innovation Forum in Boston earlier this year where we addressed the importance of engaging with the local innovation community.

On the subject of the local innovation community, delegates will also have the opportunity during this conference to meet with local businesses on Tuesday during the industry matchmaking session that runs in parallel to the main conference sessions for the entire day. If you have some time, why not go down to the Discovery room and find out for yourself what these innovative companies have to offer?

One of the highlights for a few of us in 2005 was experiencing the Festa de São João that takes place every year on the 23rd June. To put it in simple terms, the entire city empties out onto the streets and has a firework war with Vila Nova de Gaia on the other side of the Douro River. People eat sardines, dance to samba music and hit each other over the head with plastic hammers! It is something that has to be experienced. For those of you not staying until the 23rd, don't worry as we will have our own festival on Tuesday night in a former port wine cave. The other main social evening takes place at the magnificent Palácio da Bolsa, the Stock Exchange Palace, on Monday evening where the various ISPIM awards will be presented and where we will welcome back the wonderful Sónia and her band who last played for us in Barcelona in 2012.

As in 2005, we are indebted to our good friend and former ISPIM Board Member, José Carlos Caldeira. Back then he was our host and now he is our partner in his capacity as President of ANI - Agência Nacional de Inovação (the National Innovation Agency of Portugal). We would like to thank José and his staff at ANI for their wonderful support in helping making this event a reality. We would also like to thank all our sponsors, invited speakers, hot-topic moderators, session facilitators, workshop leaders, the 130+ members of the ISPIM Scientific Panel and, of course, our Advisory Board led by Jens Leker, and the ISPIM Fellows.

Iain Bitran Steffen Conn Eelko Huizingh Marko Torkkeli Bruno Woeran

The ISPIM Board of Directors

After 11 years, the ISPIM Conference is back in Porto and we would like to welcome you all to this amazing city once again!

Successful innovation eco-systems call for an integration of diversified knowledge areas, including technological and social sciences, the development of sophisticated value chains, gathering large companies and SMEs, from both mature and emerging sectors, and the creation of clusters and networks, bringing together academia, business, consumers and the public sector, at regional, national and international level. This is precisely the ISPIM 2016 Conference Title – Blending Tomorrow's Innovation Vintage.

Mobilizing different and, in many cases, complementary actors, knowledge and experiences, the programme includes a rich set of presentations, both from academia and practitioners, to be discussed by delegates. This is also an opportunity to connect delegates with some of the main national and regional initiatives and stakeholders. A parallel matchmaking event, organized on the Tuesday 21 June and four visits to clusters on the Wednesday 22 June provide the right framework and we would like to invite you all to actively participate.

Portugal and in particular the city of Porto is a great place to anchor this debate. The region of Porto is an innovation hub for multiple areas, including Smart Cities, Electric Mobility, Sustainable Manufacturing, Health, Creative and Cultural Industries and hosts several universities and polytechnic schools, a network of intermediary organizations, a business community composed of large companies and innovative SMEs, as well as relevant Portuguese clusters and a significant number of incubators.

With a focus on value-added knowledge and technology transfer, collaboration between academia and business, and the internationalization of the Portuguese innovation system, the National Innovation Agency (ANI) supports these communities and their initiatives, namely through a set of funding instruments to support R&D projects and investments, both financial and in other terms. Other public organizations and agencies provide complementary support to address the entire innovation cycle, creating a very competitive landscape to attract investments.

In this context, the 2016 ISPIM Conference and its community is very relevant for our objectives and it is with great expectations that we support the organization of this event in Portugal. We hope that you all can benefit from inspiring presentations, participate in exciting debates, know interesting people and establish new collaborations. And we also hope that you enjoy your stay in Porto.

José Carlos Caldeira
President
ANI - Agência Nacional de Inovação

Contents

* *http://ispim.org/files/XXVII_ISPIM_Book.pdf*

DON'T FORGET

ISPIM Member Lounge

The Member Lounge (Challenger Room on the 1st Floor) is for ISPIM Members who need meeting, working or relaxing space.

ISPIM Members Meeting & Port Tasting

ISPIM Members are invited to an informal meeting and port tasting in the magnificent Arab Room at the Stock Exchange Palace (Palácio da Bolsa) on Monday at 1900 prior to the gala dinner. Come and meet the ISPIM Board & Advisory Board and find out how you can contribute to the ISPIM community.

ISPIM is recruiting

We have two part-time positions open for Innovation Management PhD students. We are looking for a Scientific Coordinator (to help us with our scientific processes) and a Junior Researcher Community Coordinator (to help us build our PhD and junior researcher community). It is your chance to get involved, so please reach out to us during the Conference.

HOUSEKEEPING

Stop Press

Although this book is correct at time of press, last-minute changes can occur. Such changes are listed at: http://conference.ispim.org/stop-press/

Venue

All sessions and breaks are at The Sheraton Porto Hotel & Spa, Rua Tenente Valadim 146, Porto, 4100-476

WiFi

All sessions are interactive and you are expected to contribute. Out of courtesy to other delegates, if you want to check email etc., please do not do so in session rooms. Network: connecting@sheraton Username and Password: ISPIM

Delegate Badges

Please wear your badge at **all** times, including evening events, where it is required to gain entry.

Industry Cluster Visits - Wednesday, 22 June

Visits will leave from the Ground Floor of the hotel – please check the departure times with the conference Registration Desk and do not be late. If you have not already selected your visit online, please sign up at the Registration Desk immediately.

- Food
- Health
- Energy
- Sustainable Mobility

ISPIM PHD STUDENT COMMUNITY

The ISPIM PhD Community provides activities and networking for students from around the world who are completing a PhD in Innovation Management. Our aim is to answer questions and solve problems faced by young scholars, and also encourage interaction and networking between our Community members and Innovation Management professionals from academia, industry, consulting and the public sector. The Community organises activities and events often referred to as "Labs", coinciding with the ISPIM Conferences. The labs focus on:

- Exchanging knowledge and experiences between junior and senior scholars
- Networking and facilitating cooperation
- Sharing ideas and resources
- Staying up-to-date on new topics and trends in Innovation Management

We also co-operate with a number of universities and organisations, which enables Community members to take part in associated activities organised by our partners between ISPIM events.

We invite PhD students to join our Community, and to take an active role in it by participating in our events, keeping discussions going, and by providing us with feedback and ideas to shape our Community as it grows. You can find us on Facebook and LinkedIn under the name ISPIM PhD Student Community. Come and join the discussions! If you have any questions or comments, please contact Abayomi Baiyere, our Community Development Co-ordinator - baiyere@ispim.org.

ISPIM SPECIAL INTEREST GROUPS (SIGS)

ISPIM Events now regularly attract submissions from more than 700 authors every year on a wide selection of topics. This has enabled ISPIM to create Special Interest Groups within the Community to promote targeted specialist interaction. Each SIG has volunteer Co-ordinators who convene the SIG sessions at Events, co-ordinating output into Journals and bringing Academic, Consulting and Industry perspectives together within the SIG. Current SIGs include:

Business Model Innovation	Patrick Spieth - University of Kassel & Dirk Schneckenberg - ESC Rennes School of Business
Early Stages of Innovation	Ceri Williams, John Egan - Medical Technologies Innovation and Knowledge Centre, University of Leeds; Paul Ellwood - University of Liverpool Management School
Living Labs	Dimitri Schuurman – iMinds MICT & ENoLL; Seppo Leminen - Laurea University of Applied Sciences & Aalto University
Open & Collaborative Innovation	Wim Vanhaverbeke – UHasselt, ESADE Business School & National University of Singapore; Letizia Mortara – Institute for Manufacturing, University of Cambridge; Nadine Roijakkers - Hasselt University; Kati Järvi - Hanken School of Economics, Irina Fiegenbaum – ISPIM
Strategic Foresight, Strategic Agility & Future Orientation	René Rohrbeck - Aarhus University
Super Wicked Problems	Anton Kriz - University of Newcastle & William Westgate of William Westgate & Associates
Teaching and Coaching Innovation	Anna Trifilova – University of Exeter

If there is an area of innovation management that you would like to shape, contact Steffen Conn at conn@ispim.org to discuss what it means to form and manage an ISPIM SIG.

AWARDS & WINNERS

The ISPIM Scientific Panel Contribution Award

This award is made to a member of the 130-person ISPIM Scientific Panel for excellence in scientific contribution.

Davide Chiaroni, Politecnico di Milano, Italy

The Knut Holt Award for Best Paper

The Knut Holt Award is named after the founder of ISPIM and is awarded to the best paper at an ISPIM event, as chosen by the Scientific Panel. The three papers that have been shortlisted by the Scientific Panel are:

- *Nizar Abdelkafi, Sergiy Makhotin, Marina Thuns, Anna Pohle & Knut Blind: To Standardize or to Patent? Development of a Decision Making Tool and Recommendations for Young Companies*
- *Pia Hurmelinna-Laukkanen, Kwadwo Atta-Owusu & Eeva-Liisa Oikarinen: Are you serious? – Types of humor affecting innovative behavior and output*
- *Sven M. Laudien & Birgit Daxböck: Uncovering Characteristics of Digitalization-based- Business Models: A Qualitative-empirical Analysis*

The Alex Gofman Award for Best Student Paper

The Award is named after Alex Gofman, a long-time member and supporter of ISPIM and is made to the student with the best paper. The three papers that have been shortlisted by the Scientific Panel are:

- *Christian Arnold, Daniel Kiel & Kai-Ingo Voigt: How Industry 4.0 changes business models in different manufacturing industries*
- *Mark A. Phillips & Jagjit Singh Srai: Convergent innovation ecosystems: navigating, negotiating and nurturing*
- *Mirjam Roessler, Dirk Schneckenberg & Vivek K. Velamuri: Corporate Entrepreneurship and Business Model Design: Interacting Contradictory*

2016 ISPIM Innovation Management Dissertation Award (sponsored by Innovation Leaders and John Wiley & Sons)

The ISPIM Scientific Panel is pleased to announce that the top three dissertations in the 2016 ISPIM Innovation Management Dissertation Award are:

- *Aneesh Banerjee: How to Choose What to do? Essays on Adoption of Organisational Routines*
- *Matthijs Jansen: Service Innovation in an Evolutionary Perspective*
- *You-Na Lee: Expanding Understanding of the Innovation Process: R&D and Non-R&D Innovation*

Best Paper on "Practical Implications for Technology" (sponsored by Nokia)

The Award is made to the best paper that emphasises a technology-related topic and provides valuable implications for corporate practice.

The winners of all awards will be announced during the Conference Dinner on Monday evening.

KEYNOTE SPEAKER PROFILES

Dominique Laousse
Head of Foresight and Innovative Group
SNCF

Dominique Laousse is Head of the Foresight and Innovation Group at SNCF. Since 2011, Dominique and his team have been responsible for providing disruptive innovation to help structure future business activities. A trained economist, Dominique holds an MBA from Laval University in Quebec. Prior to SNCF, he was project manager for 10 years with the RATP (Paris Transport Authority).

Henry Etzkowitz
Senior Research Fellow
Stanford University H-STAR Institute

Henry Etzkowitz is a scholar of international reputation in innovation studies as the originator of the 'Entrepreneurial University' and 'Triple Helix' concepts that link university with industry and government at national and regional levels. He is currently a Research Fellow at Stanford University, Visiting Professor at the University of Edinburgh Business School and General Adviser to the International Institute of Triple Helix (IITH) of LaSalle University in Spain. Prior to his appointment at Stanford, Professor Etzkowitz held the Chair in Management of Innovation, Creativity and Enterprise at Newcastle University Business School and served as Visiting Professor at Stony Brook University.

Ramon Vullings
Cross-Industry Innovation Expert & IdeaDJ
RamonVullings.com

Ramon Vullings is an inspirational speaker, a cross-industry innovation expert, author and ideaDJ. He believes that there are positive alternatives to the way we interact and how we shape our businesses for the better. He is also Chairman of the European Association for Creativity and Innovation for sharing, developing thought leadership and linking the international creative community. Ramon is the author of “Creativity in Business” and “Not Invented Here”.

Tim Jones
Founder & Programme Director, The Future Agenda
Founder & Head of Research, Innovation Leaders

Tim is Programme Director of The Future Agenda, Head of Research of the Innovation Leaders analysis and works with a number of companies in the areas of innovation and growth. He is a co-founder of a new global expert network, the Growth Agenda, which helps organisations around the world to identify and exploit emerging opportunities and is also an advisor to several small companies. Tim has worked with many of the world’s leading companies, building new innovation spaces, developing new ideas, leading development teams, defining new business models, designing new organisational structures and creating innovation-centric cultures to build new and improved innovation capability.

Wim Vanhaverbeke
Professor of Strategy and Innovation Management
Hasselt University

Prof dr Wim Vanhaverbeke is professor at the University of Hasselt. He is also visiting professor at ESADE Business School and the National University of Singapore. He published in several international journals such as Organization Science, Research Policy, California Management Review, Journal of Management Studies, Small Business Economics, Journal of Business Venturing, Technovation. He was co-editor with Henry Chesbrough and Joel West of the books “Open Innovation: Researching a New Paradigm” (OUP, 2006) and “New frontiers in open innovation” (OUP, 2014). He is a dedicated open innovation researcher collaborating with different partners in universities and companies around the globe.

José Carlos Caldeira
President
ANI - Agência Nacional de Inovação (National Innovation Agency)

José Carlos Caldeira is currently the President of ANI - Agência Nacional de Inovação (National Innovation Agency). He is also member of the MANUFUTURE High Level Group and Chairman of its National and Regional Technology Platforms Group. He is also Board member of EFFRA – European Factories of the Future Research Association (as observer). Since 2012, he his RIS3 expert of DG REGIO. In the last 20 years, he participated as responsible and/or a collaborator in the preparation, development and execution of several R&D and innovation projects, in the Industrial Management and Automation area, which received national and international funding, comprising different companies and sectors: metalworking, textile, footwear, wood and cork, injected foundry, food and beverage.

Daniel Nepelski
Scientific Officer
European Commission, Joint Research Centre - IPTS

Daniel Nepelski serves as Scientific Officer at the Joint Research Centre-IPTS, European Commission. Working at the melting pot of policy making and academia, he provides science-based support to policy-making process in the field of technology-based innovation and entrepreneurship at European level. His main interests include commercialization of technology, the working of the European innovation and entrepreneurship ecosystem and the position of Europe in the global context of technology-based value generation. Before joining the JRC-IPTS, Daniel worked at the German Institute for Economic Research in Berlin (DIW Berlin). He holds a Ph.D. in Economics from the Humboldt University Berlin.

PROGRAMME

SUNDAY, 19 JUNE

1300 – 1800 ISPIM JUNIOR RESEARCHER LAB
Venue: Apollo 1-2 – 1st Floor, Sheraton Porto Hotel & Spa

The ISPIM PhD Student Community provides activities and networking for junior researchers from around the world. All junior researchers are invited to attend this Lab and must sign-up in advance.

1830 – 2000 WELCOME RECEPTION & REGISTRATION
Venue: Câmara Municipal do Porto, Praça General Humberto Delgado

Delegates are invited to the welcome reception at Porto City Hall (Câmara Municipal do Porto), one of Porto's historical landmarks, situated in the heart of downtown Porto.

1845 – 1915 Facilitator & Moderator Q&A session for facilitators and hot topic moderators. Led by Steffen Conn, Olga Kokshagina & Bruno Woeran
1930 – 1945 Welcome to Porto by Rui Moreira, Mayor of Porto

Dress Code: Casual

MONDAY, 20 JUNE - MORNING — Venue: Sheraton Porto Hotel & Spa

0700 – 0800 ISPIM RUNNERS Start the day with fresh minds and energy on a friendly, guided run exploring beautiful Porto. Limited places, reserve your place with Sabrina Schneider - schneider@ispim.org

from 0815 DELEGATE REGISTRATION (1st Floor Foyer)

0800 – 0830 THE NEWCOMERS BREAKFAST (Room: Discovery)
Your first time at ISPIM? Start the first morning with a new set of friends to make you feel at home right away! Open to first-time ISPIM attendees only.

0830 – 1030 OPENING SESSION (Room: Apollo 1-4)
Iain Bitran – Executive Director, ISPIM & José Carlos Caldeira – President, ANI - Agência Nacional De Inovação *Conference Welcome*
Dominique Laousse – Head of Foresight and Innovative Group, SNCF *Collaborative design to face unknown risks. Organization, processes & methods at SNCF*
Henry Etzkowitz – Senior Research Fellow, Stanford University H-STAR Institute *Triple helix innovation in a crisis era*
Ramon Vullings – Cross-Industry Expert & ideaDJ *Not Invented Here: Cross-industry Innovation*

1030 – 1100 COFFEE BREAK (1st Floor Foyer)

1100 – 1230 HOT TOPIC DISCUSSIONS (Rooms: Apollo 1-2, Apollo 3, Apollo 4)
Discussions on innovation "hot topics" for groups of up to 10 per topic. Sessions last for 45 minutes and will be repeated once. Delegates are required to change topics half–way through the session. Seating is on a first–come–first–served basis.

Hot topics 1-8: Looking to the Future Room: Apollo 1-2	**Hot topics 9-16: Innovating in Today's Organisation** Room: Apollo 3	**Hot topics 17-24: Innovation People: Profiles, Projects, Papers & Partners** Room: Apollo 4
1. James Woudhuysen: Could the internet of Things become the Internet of Apprehension?	**9. Kate Hammer:** How can we use storytelling, anecdotes and narratives for innovation?	**17. Bruno Woeran:** What are your ideas for joint collaborative project developments on innovation support mechanisms?
2. Marko Torkkeli: What are the key challenges for financial services innovation?	**10. Gavin Smeilus:** How should inventors navigate the IP maze and what can Open Innovation professionals learn from this?	**18. Dianna Vitasovic:** How can we infuse innovation projects with more creativity?
3. Menes Etingue Kum: What matters more for surviving in uncertain environments: Strategic Agility or Corporate Foresight?	**11. Byoung Soo Kim:** How can we innovate knowledge management to stimulate organisational innovation in an open innovation system?	**19. Gijs van Wulfen:** ISPIM Lonely Wolves: A club for lonely innovators who know how hard innovation can be!
4. Beryl Bellman: How can pattern-based enterprise architectures help the adoption of innovation by industries and governments?	**12. Nils Duelfer:** Is design thinking in the professional service industry a sustainable model to foster clients´ innovativeness?	**20. Allen Alexander:** Capturing value from your networks with active network visualisation & navigation – a core capability or nice idea?
5. Azim Pawanchik: Digitizing innovation management - is there real value?	**13. Klaus Fichter:** How do and should universities support sustainable entrepreneurship?	**21. Christian Buchholz:** How can we improve teaching & coaching innovation?
6. Mikko Dufva: Innovation management and the future of work: how will our jobs change?	**14. Joanne Hyland:** Hype or Helpful: Is lean startup good, bad or inconsequential for corporate innovation?	**22. Olga Kokshagina:** Collaborating online to solve problems: myth or reality?
7. Eric Stevens: Smart Cities: What streams of research do we need to pursue next?	**15. Rui Patricio:** Why and How to Gamify Innovation Processes?	**23. Harvey Wade:** What is an innovation culture and how can you measure its development?
8. Ann Kedia: How can we prepare for disruptive innovation? Is being an early-adopter enough?	**16. Frank Lillehagen:** How can we capture local context and tacit knowledge enabling cyclic innovation and learning?	**24. Justyna Dabrowska:** Do companies need Open Innovation specialists? If yes, what should be their tasks?

WORKSHOP
(Room: Gemini 1)

Doing Qualitative Research in Innovation Management

This professional development workshop offers an opportunity both for aspiring qualitative researchers to learn about qualitative methodological approaches and for researchers with some experience on qualitative methods to strengthen their methodological capabilities.

WORKSHOP
(Room: Discovery)

ISPIM Seeks Solutions

All organizations have to innovate today in order to create new value in the market. But how do you select the best innovation management practices to implement in your company? How do you find the best resources to help you when you do not achieve the expected results? We all have problems related to innovation management and here is a way to find new solutions: the Seeks Solutions approach with the ISPIM crowd!

1230 – 1330 LUNCH (Ground Floor)

MONDAY, 20 JUNE - AFTERNOON & EVENING

Venue: Sheraton Porto Hotel & Spa

1330 – 1430 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)					**RESEARCH-IN-PROGRESS**	**WORKSHOP**
Room: Apollo 3	Room: Apollo 4	Room: Gemini 1	Room: Gemini 2	Room: Ariane 3	Room: Ariane 2	Room: Discovery
Facilitator: Irina Fiegenbaum	Facilitator: Patrick Spieth	Facilitator: Bill Russell	Facilitator: Jimmi Normann Kristiansen	Facilitator: Mikael Johnsson	Facilitator: Antero Kutvonen	**How to Navigate The Innovation Maze?** Led by Gijs van Wulfen In practice so many people experiencing innovation as a maze. They get lost or stuck in their journey behind obstacles such as no internal support, a lack of resources, no time or no inspiration. Meaning that statistically eighty percent of all innovation projects never reach the market. In this workshop, innovation author Gijs van Wulfen shows four clear routes from different natural innovation starting points and guides you through how to overcome the obstacles to successfully deliver new business cases for products, services and business models.
Session 1.1: Open Innovation 1: Reflections Marcin Baron: Open Innovation in Old Industrial Regions. Does old mean closed? Tor Helge Aas: Open versus closed innovation: Advancing the debate Daria Podmetina: Open Innovation: Do you really do what you think you do? Urs Daellenbach: Extending Theorisation for Open Innovation via a Social Capital Lens	**Session 1.2: BMI 1: Reflections** Dirk Schneckenberg: Linking managerial thinking with theory on business model innovation Marianne Hock: Knowledge Management, Strategic Flexibility and Business Model Innovation Irina Saur-Amaral: Business Model Innovation: Where Do We Stand? Alexander Claus Wenz: Exploring the BMI Trade-off and Proposing a Potential Resolution	**Session 1.3: Strategic Foresight, Agility & Future Orientation: 1** Astrid Weiss: Present and Future of Digitalization in South Tyrolean SMEs Cristina Guimaraes: Technology Roadmapping in Research Institutes through Technology Readiness Level Assessment Chaminda Senaratne: Barriers to Ambidexterity in UK Hi-Tech SMEs Alf Steinar Sætre: Bringing new knowledge into the organization: Scanning, framing and connecting	**Session 1.4: Innovating in Traditional Sectors 1** Andrea Urbinati: How Incumbents Manage Waves of Disruptive Innovation: an Empirical Analysis Koichiro Kodama: An adaptive process of photo shop industry to digitization Paul Trott: Innovation within the European food industry Juha Kytölä: Sustainable innovation in practice: case shipbuilding	**Session 1.5: Enabling Innovation: Methods, Training, Coaching & Competence** John Bessant: Innovating innovation management teaching Stephanie Kaudela-Baum: Learning through Paradox: Exploring Teaching Strategies for Innovation Management Educators Joris Hensen, Katja-Maria Prexl: Intrapreneurship Reactor: Enable start-up culture in large company Nina Bozic Yams: Integrated model of innovation competence	**Session 1.6: Bootcamp 1: Open Innovation & Networks** Mikko Dufva: Making sense of platform economy: perceptions and metaphors Olga Kokshagina: Linked crowds in open science Meera Sarma: Innovation Processes in Virtual Communities Marc Steen: Successful Open Innovation Involving SMEs: Network Structure and Network Coordination	
5 MINUTE TRANSIT TIME						
1435 – 1535 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)					**RESEARCH-IN-PROGRESS**	
Room: Apollo 3	Room: Apollo 4	Room: Gemini 1	Room: Gemini 2	Room: Ariane 3	Room: Ariane 2	
Facilitator: Irina Saur-Amaral	Facilitator: Dirk Schneckenberg	Facilitator: Joanne Hyland	Facilitator: Paul Trott	Facilitator: Dianna Vitasovic	Facilitator: Allen Alexander	
Session 2.1: Open Innovation 2: Users & Customers Changiz Valmohammadi: Collaborative innovation with customers in service sector Masaya Onuma: Professional User as Innovator: Organizational Problems in Collaborative Projects Hari Suman Naik: User Innovation in Open Design Tuija Rantala: Identifying New Innovations in Diverse B-to-B Sales Meetings	**Session 2.2: BMI 2: Platform & Technological Opportunity** Nina Tura: Value creation and capture in sustaining platform-based business Christian Arnold: How Industry 4.0 changes business models in different manufacturing industries Daniel Moser: Creating Strategic Scope using a Platform Perspective on Business Models Sven M. Laudien: Uncovering Characteristics of Digitalization-based Business Models: A Qualitative-empirical Analysis	**Session 2.3: Strategic Foresight, Agility & Future Orientation: 2** Jinsun Jung: Exploratory Research on the Dynamic Capabilities of Leading Firms Yoongun Min: An ex-ante framework for the emergence of a dominant displays Nathalie Sick: Hot spots of convergence research Clara Mansilha: Insights for innovation: combining patents pools and product portfolio analysis	**Session 2.4: Innovating in Traditional Sectors 2** Julius Golovatchev: The impact of the IoT on Product Development and Management Peter Nagler: Leading Innovation - the Model of "Loose Coupled" Networks Ken Dovey: The Socio-Political Antecedents of Technical Innovation Lea Hannola: Sociotechnical Challenges in Knowledge-Intensive Production Environments	**Session 2.5: Innovation for Economic, Societal & Environmental Sustainability 1** Carol Lin: Four Way Voice John Bessant: Case studies in humanitarian innovation Miko Ching-Ying Yu: Empathy Diffusion - The NGO Sustainable Development Ashish Malik: Transformative Co-creation of Value: The Case of Smart Work Hubs	**Session 2.6 Bootcamp 2: Universities & the Innovation System** Christiana Müller: 'Entrepreneurial University' applied to Universities of Technology in Austria Rogério Ferreira: The Triple Helix Model and the Brazilian Army Strategic Projects Priscilla Kan John: A Research Engagement Canvas tool to facilitate University-Industry Engagement Ana Markovic Cunko: A New Perspective on Innovation Systems Evaluation: the Croatian Case	

1535 – 1600 COFFEE BREAK (1st Floor Foyer)

1600 – 1730 THE GRAND PRIZE FINAL (Room: Apollo 1-3)

Moderated by Kevin McFarthing, Innovation Fixer Ltd (ISPIM Advisory Board)

1530 – 1615 Presentations by the three finalists – Huawei, Orange & SAP – followed by audience voting

1615 – 1645 Tim Jones - Founder and Programme Director, Future Agenda *Six Challenges for Next Decade: New Innovation Opportunities*

1645 – 1700 Presentations to the winner and runners-up

Prizes kindly provided by Swarovski

SWAROVSKI

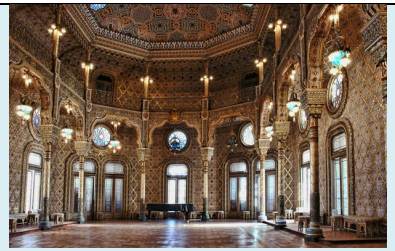
1730 END OF SESSIONS – DAY ONE

1900 – 1930 ISPIM MEMBERS MEETING & PORT TASTING

Venue: The Arab Room, 1st Floor, Palácio da Bolsa, R. de Ferreira Borges, 4050-253 Porto

ISPIM Members are invited to an informal meeting and port tasting in the magnificent Arab Room at the Stock Exchange Palace (Palácio da Bolsa). Come and meet the ISPIM Board & Advisory Board and find out how you can contribute to the ISPIM community. Non-members are not eligible to attend but can join ISPIM online at www.ispim.org or at the conference registration desk. Port kindly provided by Sandeman.

SANDEMAN



1930 – 2300 CONFERENCE DINNER

Venue: Palácio da Bolsa, R. de Ferreira Borges, 4050-253 Porto

All delegates are invited to the Stock Exchange Palace (Palácio da Bolsa). The palace was built in the 19th century by the city's Commercial Association (Associação Comercial) in Neoclassical style. It is in the historical centre of Porto, designated World Heritage Site by UNESCO. Live music will be provided by The Girl in the Other Room Jazz Quintet.

Awards: Knut Holt Award for Best Paper; Alex Gofman Award for Best Student Paper; Scientific Panel Award; The PhD Dissertation Award; The Technological Implications Award by Nokia

Dress Code: Smart Casual (i.e. ties not required). Please make your own way there and don't forget to bring your badge.

TUESDAY 21 JUNE, 0700 - 1130 — Venue: Sheraton Porto Hotel & Spa

0700 – 0800 ISPIM YOGA Start the day with some deep relaxation, breathing techniques and asanas during a traditional Hatha Yoga class. Limited places, reserve your place with Sabrina Schneider - schneider@ispim.org

0900 – 1000 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)					**RESEARCH-IN-PROGRESS**	**EXPERIENCE INNOVATION**	
Room: Apollo 1+2	Room: Apollo 3	Room: Gemini 1	Room: Gemini 2	Room: Ariane 3	Room: Ariane 2	Room: Apollo 4	**ALL DAY INDUSTRY MATCH MAKING** (Room: Discovery) A chance for delegates to meet with local Porto businesses
Facilitator: Katie Hyslop	Facilitator: Patrick Spieth	Facilitator: Kristel Miller	Facilitator: Benoit Gailly	Facilitator: Peter Nagler	Facilitator: Kate Hammer	Facilitator: Florian Rustler	
Session 3.1: Open Innovation 3: Suppliers Fang-Mei Tseng: Supplier Involvement and New Product Performance: Moderating Effects Yu-Xiang Yen: Collaboration with Suppliers in Green Management Practices-Institutional Theory Antecedents Marika Makkonen: Stimulating supplier innovation in a complex business environment Anna Aminoff: Driving supplier innovations towards digitization of infrastructure projects	**Session 3.2: BMI 3: Start-ups & entrepreneurs** Catarina Maia: Wearable medical devices startups business models: a multiple case study Mirjam Rössler: Corporate Entrepreneurship and Business Model Design: Interacting Contradictory Design Logics Tommi Rissanen: Business Model Experimentation in Incumbent and Startup Companies Wen-Ching Hsu: Why the growth of biopharmaceutical latecomer firms is more difficult?	**Session 3.3: University-Industry Innovation 1** Csaba Deák: We Have Research Infrastructure - Can We Cooperate? Eduardo B. Pinto: Managing a Successful University-Industry Collaborative Funded Innovation Program Thomas Clauß: Managing University-Business-Collaboration through Formalisation: The Moderating Role of Fairness Philippe Gorry: Serendipity and university technology transfer: a case study	**Session 3.4: Innovating in Traditional Sectors 3** Päivi Karhu: Cognitive Ambidexterity in Marketing Management: Vicious and Virtuous Tensions Oda Ellingsen: Managing exploration and exploitation: commercialization case from advanced manufacturing Bill Russell, Allen Alexander: Fighting tradition: Developing ambidextrous capabilities across the innovation portfolio Gerrita Van der Veen: From Social Media to Social Business: The Growth to Maturity	**Session 3.5: Innovation for Economic, Societal & Environmental Sustainability 2** Maria Real Perdomo: Exploring the Insect Economy Stephan von Delft: Sustainability-orientation and competitiveness: Is supply chain consideration a missing link? Klaus Fichter: Influencing Factors of University Support for Sustainable Entrepreneurship and Eco-innovation Erik Lindhult: Sustainability oriented innovation capacity in cities	**Session 3.6 Bootcamp 3: Components of Innovation (Mixed session)** Beryl Bellman, Prakash Rao, Reedy Ann: Enterprise Architecture Patterns for Innovation Christoph Haag: The Underlying Needs of Innovations - A Time Study Carola Guyot Phung: Prototyping Sustainable Systemic Innovation : Building Regime Change Pierre-Jean Barlatier: Exploiting Social Media potential to leverage innovation: a case study	**Experience 1: Gamification for Innovation** **(CPD Session)** Gamification is increasingly used as learning and training approach, as a way to make serious strategic decisions, and as a technique to develop new business models... It is time to take a serious look at this fun approach. Carina Leue, Lufthansa Systems Fabian Schlage, Nokia Henning Breuer, UXBerlin	

Event Partners & Sponsors

5 MINUTE TRANSIT TIME							
1005 – 1105 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)					**RESEARCH-IN-PROGRESS**	**EXPERIENCE INNOVATION**	**ALL DAY INDUSTRY MATCH MAKING** (Room: Discovery) A chance for delegates to meet with local Porto businesses
Room: Apollo 1+2	Room: Apollo 3	Room: Gemini 1	Room: Gemini 2	Room: Ariane 3	Room: Ariane 2	Room: Apollo 4	
Facilitator: Dimitri Schuurman	Facilitator: Stephan von Delft	Facilitator: Sven Laudien	Facilitator: John Bessant	Facilitator: Christoph Köller	Facilitator: Daria Podmetina	Facilitator: Menes Kum	
Session 4.1: Open Innovation 4: SMEs Marc Steen: An 'Open Innovation Project Canvas' to support SMEs Lawrence Dooley: Inter-organisational Innovation: Collaborative Breadth and Depth within the SME sector Elena Casprini: Making Open Innovation in Family Firms Happen: the Loccioni case Aineias Gkikas: Open Innovation, SMEs and Regional Development	**Session 4.2: BMI 4: Adoption & Implementation & Crowdsourcing (Mixed Session)** Marc G. Villinger: Crossing the Rubicon: Driving adoption of novel business models Benedikt Echterhoff: Systematic Business Model Implementation - From Concepts to Real Business Sergey Yablonsky: Innovation Crowdsourcing Intermedi -aries: Input Supplier, Multi-sided Platform or Reseller? Tsu-Tung Ku: Dynamic Boundary Spanning Process in Crowdsourcing Competition	**Session 4.3: University-Industry Innovation 2** Dominique Philippe Martin: What scopes of intervention for Argentina University Transfer Offices? Shino Iwami: Overlay map of funded research centers Ekaterina Albats: Innovation intermediaries in university-industry collaboration: analysis of the online platforms	**Session 4.4: Teaching Innovation Management Invited Speaker Session on Knowledge Sharing** As Einstein put it "The only source of knowledge is experience". And because we also know that knowledge increases with sharing, rather than saving, we have created this session to share our practical experience in teaching innovation.	**Session 4.5: Innovation for Economic, Societal & Environmental Sustainability 3** Maria Antikainen: Consumer acceptance of novel sustainable circular services Päivi Timonen, Samuli Kortelainen: Value Creation in Public Service Transformation - Case Mobility Patricia Lagun Mesquita: Analyzing Social LCA through the lens of Strategic Sustainable Development Farley Nobre: Innovation for Sustainability: Creating Mutual Values	**Session 4.6: Bootcamp 4: Aspects of Innovation Management** Christopher Simms: How line stretch contributes to product development within process industries Oussama Darouichi: R&D and Innovation Maturity Models: Review and Implications Abdissa Yilma Tiky: Determinants of Abandoning Innovation Activities: Ethiopian Manufacturing Sector Thomas Mahnke, Lukas Esser: Managing industrial service innovations - a detailed process framework	**Experience 2: Impact of Corporate Foresight on Corporate Performance** **(CPD Session)** led by Menes Kum & Tymen Jissink Deloitte Consulting GmbH Today, most of our organizations are built with a focus on operating the current business. Only 3% of a top manager's time is devoted to creating future perspectives, leading to myopia. For answering the questions how companies can build a future preparedness we have built a maturity model that we regularly use to assess and benchmark multinational companies and SMEs.	

1105 – 1130 COFFEE BREAK (1st Floor Foyer)

Event Partners & Sponsors

TUESDAY 21 JUNE, 1130 - 1335 — Venue: Sheraton Porto Hotel & Spa

1130 – 1230 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)				WORKSHOP	RESEARCH-IN-PROGRESS	EXPERIENCE INNOVATION	ALL DAY INDUSTRY MATCH MAKING
Room: Apollo 1+2	Room: Ariane 3	Room: Gemini 1	Room: Gemini 2	Room: Apollo 3	Room: Ariane 2	Room: Apollo 4	(Room: Discovery)
Facilitator: Kati Järvi	Facilitator:Mark Vandael	Facilitator: Allen Alexander	Facilitator: Paul Ellwood	**Is it Possible to Innovate without Marketing?** Led by Carlos Brito Innovation is more than invention in as much as it only occurs when value is created. In other words, innovation requires market success. Since marketing is at the heart of innovation, the workshop is designed to offer insights and develop competences for the implementation of a marketing approach in start-ups and innovative projects.	Facilitator: Anne-Laure Mention	Facilitator: John Bessant	A chance for delegates to meet with local Porto businesses
Session 5.1: Open Innovation 5: Ecosystems Monika Hengstler: Innovation Ecosystems: "With Great Power Comes Great Responsibility" Ozgur Dedehayir: The Process of Ecosystem Genesis: A Tale of two Drugs Leonardo Garnica: Innovation Ecosystems and Collaboration Strategies: the case of Natura Cosmetics Leena Aarikka-Stenroos: Innovation and business ecosystem research: the foci and future agenda	**Session 5.2: Creativity in Innovation 1: Standards & Talent** Ricardo Moreira: The approach to Creativity in European Innovation Management Standards Lydia Montandon: Unleash your Organization's Talent Fostering Disruptive Ideas Jurate Cerneviciute: Factors Influencing Productivity of Teamwork in Creative Industries Gaizka Garechana: Abengoa Solar New Technologies: innovation through UNE 166002 standard	**Session 5.3: University-Industry Innovation 3** Leona Fitzmaurice: For the Public Good: The Bayh-Dole Act and Innovation Management Nabil Amara: Climbing the ladder of the patenting process Kristel Miller: Entrepreneurial Academic Entrepreneurs: understanding micro social factors and legitimacy	**Session 5.4: Front End & NPD Themes** Samuli Kortelainen: Launching a Next Generation Analytics Product - Case Industrial Maintenance Patrick Spieth: Passive Innovation Rejection: Rejection Behavior Prior New Product Evaluation Verena Joachim: Front End Activities: Insights from German Material Science and Engineering Teresa Tiaojung Hsu: Strategic Orientation of the Firm and New Product Performance		**Session 5.5: Bootcamp 5: Innovation on a personal level** Dimitra Chasanidou: Design thinking and innovation in companies Kristiane Lindland: Developing Learning Capability through EDI for Managing Ambidexterity Volker Koch: Rewarding of purchasing professionals in Austrian technology companies Christian Haslam: Developing apprentice skills for innovation through interdisciplinary training and education	**Experience 3: Coaching Innovation Management** **(CPD Session)** As part of the conference, ISPIM offers the opportunity to experience innovation training in action. In interaction with the audience, professional coaches will demonstrate how they train innovation inside organisations. Florian Rustler – Creaffective Rob Sheffield – Bluegreen	

Event Partners & Sponsors

5 MINUTE TRANSIT TIME							ALL DAY INDUSTRY MATCH MAKING (Room: Discovery) A chance for delegates to meet with local Porto businesses
1235 – 1335 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)			**EU/FUNDED PROJECT SPARK**	**WORKSHOP**	**RESEARCH-IN-PROGRESS**	**EXPERIENCE INNOVATION**	
Room: Apollo 1+2	Room: Ariane 3	Room: Gemini 1	Room: Gemini 2	Room: Apollo 3	Room: Ariane 2	Room: Apollo 4	
Facilitator: Teemu Santonen	Facilitator: Ramon Vullings	Facilitator: Tuija Hirvikoski	Facilitator: Bruno Woeran		Facilitator: Leona Fitzmaurice	Facilitator: Carina Leue	
Session 6.1: Open Innovation 6: Ecosystems & Networks Mark Phillips: Convergent innovation ecosystems: navigating, negotiating and nurturing Paavo Ritala: Disruptive innovation in the ecosystem level: path-creation and institutional barriers Ricardo Greenfield: Sustaining Innovation Networks through Network Commitment Eelko Huizingh: Coopetition in R&D Networks: Implications for Innovation Processes	**Session 6.2: Creativity in Innovation 2: Ideas & Interactions** Mark Vandael: Idea Selection 2.0 Pia Hurmelinna-Laukkanen: Are you serious? Humor types affecting innovative behavior and output Stephan Sonnenburg: Moments to Despair in the Co-Creative Process Detlef Reis: How to move beyond conventional ideas in an innovation project?	**Session 6.3: Positioning Living Labs in the Innovation Domain (Invited Speaker Session)** This session is for researchers, policy makers, innovation managers, and anyone involved and/or interested in Living Labs. As both of the Living Labs SIG leaders have recently finished a PhD on Living Labs, and as ENoLL has created two publications based on best practices from their broad assembly of member Living Labs, this session will give novel insights from an academic as well as practical perspective.	**Session 6.4:** **Project Spark Session** Sara Medina: Science, Technology and Innovation (STI) Performance of China Frank Lillehagen: Holistic Design for Cyclic Innovation and Learning Reinhard Altenburger: Stakeholder Engagement in the Innovation Processes of Sustainable Products Eva Diedrichs: Mastering the challenges of national and regional innovation strategy implementation Marta Begonja: PACINNO - Platform for trans-Academic Cooperation in Innovation Michael Hamwi: Business model innovation for energy transition in household sector	**Early-stage Innovation** led by Paul Ellwood & Ceri Williams The earliest stages of innovation are often seen to depend on serendipity, and are noticeable for an absence of innovation management processes to connect with later, established new product introduction systems. Through a series of ISPIM workshops we seek insights for succeeding through the fuzzy front end of innovation.	**Session 6.5: Bootcamp 6 The Future & X-industry Innovation (Mixed Session)** Marta Morais-Storz, Rikke Stoud Platou: Problem setting in innovating and strategizing for a future unknown Rikke S. Platou: Managers' Future orientation and Corporate Strategy under Changing Environments Hilda Bø Lyng: Trans-disciplinary boundary spanning: Knowledge transfer from petroleum to biomedicine Tania Douglas: Cross-sector collaboration for orthopaedic device innovation in South Africa	**Experience 4: Spotlighting Innovation Tools** **(CPD Session)** Invited speakers will share their wide experience of using different creative methods of managing innovation in industry. Participants employ various idea creation methodologies to find out how different approaches suits for different challenges around training for innovation. Hans-Jürgen August – Siemens Michael Dell – Ratio Strategy & Innovation Consulting	

Affiliate & Media Partners

TUESDAY 21 JUNE, 1335 onwards — Venue: Sheraton Porto Hotel & Spa

1335 – 1430 LUNCH (Ground Floor)
Networking Session: ISPIM Lonely Wolves Club Lunchtime Meet-up (Apollo 4)

1430 – 1530 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)				**WORKSHOP**	**RESEARCH-IN-PROGRESS**	**EXPERIENCE INNOVATION**	**ALL DAY INDUSTRY MATCH MAKING** (Room: Discovery) A chance for delegates to meet with local Porto businesses
Room: Apollo 1+2	Room: Ariane 3	Room: Gemini 1	Room: Gemini 2	Room: Apollo 3	Room: Ariane 2	Room: Apollo 4	
Facilitator: Mark Phillips	Facilitator: Sally Davenport	Facilitator: Abayomi Baiyere	Facilitator: Joanne Hyland	**Strategies to engage employees to innovate** Led by Azim Pawanchik & Suraya Sulaiman – Alpha Catalyst Consulting The rationale for innovating can range from maintaining market position, entering a new market, gaining access to unique resources or materials, meeting regulatory requirements, attracting talent, or simply meeting the expectations of diverse stakeholders. This means that innovation needs to occur in every corner of the organisation. The challenge however lies in getting every single talent on board the innovation journey!!	Facilitator: Pia Hurmelinna-Laukkanen	Facilitator: Eva Diedrichs	
Session 7.1: Open Innovation 7: Technology & R&D Mathias Beck: Diversity and Innovation Performance: Firms' Research- and Development-Orientation Mark Wilson: IP Management in Technology Alliances: An Example of Capability Development Annika Dingler: Managing Technological Distance in Collaborative Innovation: AC-Routines and Social Integration José Coelho Rodrigues: Aligning Innovations and Networks in Implementation Projects: Systematic Literature Review	**Session 7.2: Sources of Opportunity: Mixed Innovation Themes** André Ribeiro de Oliveira: Sports Innovation: An Opportunity for Technological Companies based on Olympics Christoph Köller: Fostering innovation from Social Sciences and the Humanities Teemu Santonen: Social Network Analysis based Keyword Analysis of ISPIM Research Topics Peter Robbins: How to unlock innovation in professional services: an empirical study	**Session 7.3: Living Labs 1** Yun Kim: Factors influencing Living Lab activation in Korea using SEM Lotta Haukipuro: End user involvement in public procurement through living lab approach Dimitri Schuurman: Impact Assessment of Interactive Coupled Open Innovation in Living Labs Seppo Leminen: Innovation Tools in Living Labs	**Session 7.4: Transferring Knowledge 1: Themes** Katja Krämer, Christiane Rau: Exploring the Knowledge Transfer of Innovation Managers during Co-creation Projects Nuno Felício: Internal Technology Scouting: A Neglected Approach in Supporting Technology Transfer Sari Mäenpää: Knowledge Integration Method Development for Multi-Stakeholder Innovation Process		**Session 7.5: Bootcamp 7: Sustainability** Edurne Inigo: Sustainability-oriented Innovation: Identifying its Impact on Financial Performance Laura Albareda: Knowledge search strategies and sustainability-oriented innovation Linda Bergset: Exploring the financial "biographies" of early-stage green companies in Germany José Freitas Santos: Innovation from below: dynamic capabilities of the territory	**Experience 5: Innovation Stories from Industry** Harvey Wade – Cisco: Maturing Innovation at Cisco Joerg Liebe – Lufthansa Systems: Corporate Innovation Management utilizing Crowdfunding and Gamification Gema Roig – Fundación InnDEA Valencia: Valencia a Smart City Strategy for Open Government	

5 MINUTE TRANSIT TIME							
1535 – 1635 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)					**RESEARCH-IN-PROGRESS**	**EXPERIENCE INNOVATION**	**ALL DAY INDUSTRY MATCH MAKING** (Room: Discovery) A chance for delegates to meet with local Porto businesses
Room: Apollo 1+2	Room: Ariane 3	Room: Gemini 1	Room: Gemini 2	Room: Apollo 3	Room: Ariane 2	Room: Apollo 4	
Facilitator: Davide Chiaroni	Facilitator: Tor Helge Aas	Facilitator: Seppo Leminen	Facilitator: Heidi Olander	Facilitator: Paavo Ritala	Facilitator: Marko Torkkeli	Facilitator: James Woudhuysen	
Session 8.1: Open Innovation 8: Management Challenges Pia Storvang, Majbritt Rostgaard Evald, Ann Højbjerg Clarke: Industry-Mover Innovation based on External Collaboration Colin Cheng: Managing open innovation for radical innovation performance Martin Allmendinger: How do large firms realize innovation-oriented partnerships with start-ups? Justyna Dabrowska: Searching for common skills and competences of open innovation professionals	**Session 8.2: Managing Innovation 1: R&D** Ali Naef Mohammad: A Revised Model for Valuation and Selection of R&D Projects Ulla Saari: Exploring How Brand Experience Measurement Helps Integrating Marketing and R&D Virna Motta, Lorenzo Antozzi: Different R&D Management Approaches: Multinational Large Company and Industrie DeNora Bruna Silva, Mariana Almeida: Efficiency evaluation of R & D projects fostered by government	**Session 8.3: Living Labs 2** Koen Vervoort: The WORTHCASE-matrix, one overview to flow a Living Lab panel Louise Savelkoul: A Structured Science Based Needsfinding for Infrastructure Living Labs Kaisa Henttonen, Anne Horila: The co-creation of social innovations: a Living Lab case	**Session 8.4: Transferring Knowledge 2: Absorptive Capacity** Agne Paliokaite: Innovation Policies and Firm Absorptive Capacities: Minding the Gap Nekane Aramburu: Absorptive Capacity and Innovation Performance in Mexican SMEs Chien-Chiang Lin: An Individual-Level Exploration of Absorptive Capacity Djerdj Horvat: Absorptive Capacity: Opening the Black Box from a Process Perspective	**Session 8.5: Innovation System Performance & Policy** Arho Suominen: Innovation Systems and Ecosystems: a Review and Synthesis Ana Silva: Regional Innovation Systems in Follower Regions: Assessing Innovation Policy Mix Klemens Joachim: Innovation intermediaries in the innovation system materials science and engineering Tibor Dory: How effectively serve intermediary organisa-tions innovation in Hungary? Teemu Santonen: Scientometrics Analysis of ESF-Projects in Finland: Funding Period 2007-2013	**Session 8.6: Bootcamp 8: Financial Themes & BMI (Mixed Session)** Martin Gjelsvik: Developing business models in the emerging market for welfare technology Carlos DaSilva: Business Model Innovation: A Discourse Analysis Of CEOs Florian Rehm: Financing sources and performance metrics in early-stage start-ups Sujung Jee: Significant Features of Collateralized Patents on Successful Lending	**Experience 6: The 10 Rules for Forecasting Future Trends** Learn James's 10 rules of forecasting future trends and, when you return to the office, do the following: Build your own forecasting team. Each month, get a young person to introduce, at a workshop, a newish book on forecasting and innovation. After each workshop draws out insights and implications, explore those with customers. Start the process of gaining thought leadership about the future! Start it now!	

1635 – 1700 COFFEE BREAK (1st Floor Foyer)

1700 – 1800 OPEN INNOVATION IN SMEs - Learning Points for Managers and Academics

Room: Apollo 1-3

Moderator: Marko Torkkeli

Wim Vanhaverbeke – Professor of Strategy and Innovation Management, Hasselt University

An increasing number of SMEs are embracing OI practices to gain competitive advantage. Yet, OI in SMEs has received scant attention in the research. In this session Wim will highlight the lessons from a new book, which examines how OI in SMEs is managed and implemented, including a framework on how to use OI strategies successfully.

1700 – 1800 FRUGAL INNOVATIONS - An Innovation Opportunity Companies cannot ignore

Room: Apollo 4

Moderator: Stephan Buse

We will discuss the relevance of Frugal Innovations for Western companies. We deal with the question whether and to what extent firms can afford to ignore this concept.

Invited speakers: Rajnish Tiwari - Centre for Frugal Innovation & Monika Petraite - Kaunas University of Technology

1800 END OF SESSIONS – DAY TWO

2000 – 2300 FESTA DE SÃO JOÃO SOCIAL EVENING

Venue: Herança Magna, R. de Serpa Pinto 239, 4400-307 Vila Nova de Gaia.

Delegates are invited to a special Porto-themed evening at Herança Magna, a former port wine cave built into the side of the granite hills of Vila Nova de Gaia. As well as a traditional Portuguese buffet dinner, delegates will experience the Festival of St John (Festa de São João) and be treated to live music from The Isabel Darque Band as well as the much-heralded fifth appearance of ISPIM Rocks!

Dress Code: Casual. Don't forget to bring your badge.

WEDNESDAY 22 JUNE, 0900 to close — Venue: Sheraton Porto Hotel & Spa

0900 – 1000 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)			**RESEARCH-IN-PROGRESS**	**RESEARCH IDEAS**	**WORKSHOP**
Room: Apollo 4	Room: Gemini 1	Room: Gemini 2	Room: Ariane 2	Room: Ariane 3	Room: Discovery
Facilitator: Eric Stevens	Facilitator: William Westgate	Facilitator: Eelko Huizingh	Facilitator: Joachim Hafkesbrink	Facilitator: Marcin Baron	**storyFORMing** **A story design workshop** led by Kate Hammer storyFORMing is a visual thinking toolkit specifically designed to help people organise conversations and thoughts into cogent stories. The method galvanises you to create and tell new stories. It will help you and your team see the big picture, by exploring and re-imagining the user/consumer insights and new product concepts that are fundamental to your innovation or new product development (NPD) work. Once you've learned to use the storyFORMing process, you'll be a better storyteller with a clearer lens on change.
Session 9.1: Service Innovation Peter Harengel: Perspectives of Service-dominant Logic for Innovation Management: A Bibliometric Analysis Vessela Warren: Overcoming challenges to service innovation process implementation in an SME Manuela Dias: Managing innovation in service industry: the role of consultants	**Session 9.2: Managing Innovation 2: Teams** Mikael Johnsson: Important Innovation Enablers for Innovation Teams Steve McGuire, Ellen Drost: Predictive and Concurrent Validity of a Model of Entrepreneurial Culture Anders Wikström: Capturing the dynamics of innovation climate in organizations Rui Patricio: ideaChef: A gamified approach for engaging teams	**Session 9.3: Transferring Knowledge 3: Networks & Knowledge** Heidi Olander: Intentional or Not? The Nature and Dimensions of Knowledge Mobility Maike Strudthoff: Knowledge networks based on technological distances Kylie de Jager: Evolution of medical device innovation in South Africa: 2001-2013	**Session 9.4: Bootcamp 9: Themes in Open Innovation** Mohammad Muzamil Naqshbandi: Organizational culture and open innovation: role of absorptive capacity Matthias Guertler: Analysing the influence of planning-parameters on Open Innovation performance Katie Hyslop: Open innovation activities and network competence as drivers of performance	**Session 9.5: Ideas Sandbox 1: Platforms & Ecosystems** Jérémie Faham: A Dialogical Approach to increase "Matching" Efficiency before CBM Pekka Berg: Transparency of the Platform Ecosystems Innovation Management Jarkko Pellikka: Creating and capturing value in the business ecosystems Anne-Laure Mention: Emergent collaborative innovation intermediaries: innovation hubs vs. innovation labs	
5 MINUTE TRANSIT TIME					
1005 – 1105 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)			**RESEARCH-IN-PROGRESS**	**RESEARCH IDEAS**	
Room: Apollo 4	Room: Gemini 1	Room: Gemini 2	Room: Ariane 2	Room: Ariane 3	
Facilitator: Urs Daellenbach	Facilitator: Irina Saur-Amaral	Facilitator: Justyna Dabrowska	Facilitator: James Woudhuysen	Facilitator: Michael Dell	
Session 10.1: Design Thinking for Innovation Anna Rose Vagn, Christian Schou Jensen: Participatory Methods for Initiating Manufacturing Employees' Involvement in Product Innovation Nils Dülfer: Designing for Success Doris Schartinger: Patterns of Industrial Designs: Evidence from Austria Marianne Storgaard: Discursive Strategies for Legitimizing the Field of Strategic Design	**Session 10.2: Managing Innovation 3: Process & Components** Dirk Primus: Investigating non-traditional development practices and the effectiveness of frugal innovation Renato Pereira, Isabel Caetano: Importance of Routines for Innovation Process Success Marc Osswald: How successful are your product launches? Benedikt Müller-Stewens: Quantifying Project Efficiency in New Product Development: Benefits and Pitfalls	**Session 10.3: Start-Ups & Entrepreneurs 1** Eric Brun: Startup development processes in business incubators Arto Wallin: Concerns and Ambitions of Entrepreneurial Innovators João Paulo Marques: Development of innovation in incubating companies: The case of Portugal	**Session 10.4: Bootcamp 10: Customers, Users & Innovation** Hsuan-Chi Hwang: Customer Innovation Service Adoption Behavior: The case of 4G Chih-Hung Hsieh: A New QFD Model for Strategic Resource Based Product Innovation Konstantin Vishnevskiy: Integration of TRM and QFD for Sectoral Foresight: Russian Experience	**Session 10.5: Ideas Sandbox 2: Innovation Methods & Users** Myriam Sanchez Mejia: Innovation management for biobased local sustainable development Sophie Nyborg, Ghita Dragsdahl Lauritzen: User innovators in the smart energy transition Kuo-Nan (Nick) Hsieh: Customer collaboration mechanism in open service innovation Christian Thurnes: Contradiction-based innovation library: creating and sharing innovation impulses	

1105 – 1130 COFFEE BREAK (1st Floor Foyer)

1130 – 1230 SHARING INNOVATION RESEARCH RESULTS & PRACTICE (10 mins per presenter & 20 mins discussion)				**RESEARCH-IN-PROGRESS**	**RESEARCH IDEAS**
Room: Apollo 4	Room: Gemini 1	Room: Gemini 2	Room: Discovery	Room: Ariane 2	Room: Ariane 3
Facilitator: Jens Leker	Facilitator: Mathias Beck	Facilitator: Leona Fitzmaurice	Facilitator: Ozgur Dedehayir	Facilitator: Olga Kokshagina	Facilitator: Sabrina Schneider
Session 11.1: Financial Services & IP Considerations (Mixed Session) Anne-Laure Mention: Sources of innovation in financial services companies Maria Cristina Longo: Innovation-Hub Management For Value Co-Creation: The Centrality of Corporate Policies Gavin Smeilus: Mapping the Inventor New Product Development Process Kaisa Still: FinTechs' as service innovators: analysing components of innovation	**Session 11.2: Managing Innovation 4: Firm level** Maria Cimilluca: Creating an Innovative Culture: A Framework for Increased Absorptive Capacity Djerdj Horvat: Innovation ability as part of a forward-thinking supplier evaluation system Isabel Caetano: Innovation Measurement: practices, indicators and lessons at firm level Susanne Hügel: Firm Innovativeness Reloaded - Development of a Multidimensional and Formative Construct	**Session 11.3: Start-Ups & Entrepreneurs 2: Technology entrepreneurship** Dan Swan: Semantic mapping of cognitively diverse start-up teams: dynamic creative interoperability Sergiy Makhotin: To standardize or to patent? Decision tool for technology startups Victor dos Santos Paulino: Taking advantage of disruptive innovations in the space sector Irina Fiegenbaum: Key Performance Indicators of Startups: external view	**Session 11.4: Disruptive, Radical and Adjacent Innovation Options** Christian Duelme: Future-oriented consolidation of product portfolios - Create space for innovations Abayomi Baiyere: Exploring the role of IT Capabilities in Disruptive Innovations Desai Narasimhalu: AIM: Adjacent Innovation Matrix Jimmi Normann Kristiansen: Understanding the Typological Evolution of Radical Innovation	**Session 11.5: Bootcamp 11: Innovation Management Themes** Martin Meinel: The Application and Impact of Creativity Techniques in Innovation Management Juan Campos, Guadalupe Calderon: Idea Management Initiative as a Catalyst for an Innovation Culture Eric Stevens: Learning Processes while developing co-creation platforms Veronika Hornung-Prähauser: Innovation-Lens: Method for Reflected Thinking Patterns supporting trend-driven Innovation	**Session 11.6: Ideas Sandbox 3: Finance & Performance** Arash Rezazadeh: Business model innovation: a remedy for SMEs' survival and growth Bruno Woeran: The Black Hole for SMEs in Financing their Innovation Processes? Menes Etingue Kum: Impact of Corporate Foresight on Innovation Performance Yongseung Lee: Opportunity identification using investment data

5 MINUTE TRANSIT TIME

1235 – 1330 SUPPORTING INNOVATION IN PORTUGAL (Room: Apollo 1-3)

Moderator: Irina Saur-Amaral

Find out about how innovation is supported at national and EU levels with presentations from two experts. This will be followed by an in-depth interview of both speakers including selected questions from the audience taken from Twitter – use #ISPIM. Session speakers:

José Carlos Caldeira – President, ANI - Agência Nacional de Inovação (National Innovation Agency)

Daniel Nepelski – Scientific Officer, European Commission, Joint Research Centre - IPTS

1235 – 1330 SOLVING WICKED INNOVATION PROBLEMS(Room: Apollo 4)

led by Anton Kriz & William Westgate

In this the latest in the series of Solving Wicked Problems Workshops, William and Anton, with the support of the Porto Community, help local partners address how Porto can develop a Citizen Centric approach that can scale-up to support sustainable economic growth.

5 MINUTE TRANSIT TIME

1335 – 1345 CLOSING SESSION (Room: Apollo 1-3)

Iain Bitran – Executive Director, ISPIM

Awards for Outstanding Conference Contributions

1345 – 1445 LUNCH (Ground Floor)

1445 – 1800 VISITS TO LOCAL INDUSTRY CLUSTERS (meet the cluster hosts on Ground Floor)

Cluster 1: Food	**Cluster 2: Health**	**Cluster 3: Energy**	**Cluster 4: Sustainable Mobility**
An Interactive Innovation tour with product tasting, hosted by Frulact´s Innovation & Technology team followed by a discussion panel to debate the role and impact of innovation in the Food sector.	From knowledge to market, from bench to bedside: making innovation work in the Health sector. HCP – Health Cluster Portugal, and I3S – Institute for Research and Innovation in Health, will promote a Forum to debate the role and impact of innovation in the Health sector.	Sustainable Innovation Using Technology Transfer – The importance of strong partnerships. EFACEC Power Solutions and EnergyIN – Competitiveness and Technological Cluster for Energy will host a discussion on innovation processes in a technology company operating in the energy sector.	Decarbonising Urban Mobility – The Creation of a Cluster. CEiiA will host a forum related to the challenges and opportunities of creating a cluster around the development of Sustainable Mobility products and services.

CLOSE OF CONFERENCE

AGÊNCIA NACIONAL DE INOVAÇÃO

ANI - The Portuguese National Innovation Agency

MISSION

Strengthening the Portuguese competitiveness through the promotion and commercialization of scientific and technological knowledge and its transformation into economic growth.

ANI embodies the growing alignment of the R&D, Innovation and technology-based entrepreneurship policies and programmes. The Agency's main role is to promote knowledge valorization and transfer, particularly through an increased and better cooperation and coordination between business and academia.

ACTIVITIES

- Enhance collaborative innovation
- Leverage knowledge transfer to companies
- Increase the participation of the National S&T System, as well of national companies, in the Research & Innovation international networks
- Strengthen business investment in R&I
- Foster a social environment which favours technological entrepreneurship

GOVERNANCE MODEL

ANI is endowed with a Governance Model which enables it to take a central position in the science-economy relation, partnering with relevant stakeholders, structured in three main Directorates:

- Funding Incentives
- Projects & International Cooperation
- Innovation Policies and Promotion

PORTO CONTACTS

Rua de Sagres, 11
4150-649 Porto
Tel.: +351 226 167 820
Fax: +351 2261 85 406

LISBON CONTACTS

Campus do Lumiar, Ed. O, 1º
Estrada do Paço do Lumiar
1649-038 Lisboa
Tel.: +351 214 232 100
Fax: +351 214 232 101

www.ani.pt/en
ani@ani.pt

Lappeenranta University of Technology, LUT has throughout its history (founded 1969) combined expertise in technology and business. The university's operation is based on cooperative, multidisciplinary and solution-based activity. We respond to future challenges in cooperation with our partners in the academic world and industries.

Our international community consists of 7000 students and experts. Since 2012 over 10 000 students have graduated from LUT with Master of Science degrees in engineering and business, as well as 450 Ph.D. degrees in technology and business.

LUT strategic focus areas are

- green energy and technology
- the sustainable value creation
- international role as a hub of Russian relations.

The strategy 2015 is supported by our values: courage to succeed, passion for innovation through science, and a will to build well-being.

Open your mind. LUT.
Lappeenranta University of Technology

Special features of innovation research at LUT:

- innovation is seen as requisite for the regeneration of enterprises and society and ultimately for sustainable value creation
- a broad view of innovation, considering the entire life cycle and different types thereof
- world-leading open innovation research
- expertise in the management of global, knowledge-intensive innovation and value chains
- special focus on research on innovation and business environments in Russia and transition economies
- breaking the traditional linear model of innovation and seeking innovation by breaking borders through "intellectual cross-fertilization"
- innovations are created and implemented in value networks, open innovation is the driving force of modern "creative destruction".
- the core competence is brokering, which means the skill to create worlds of intellectual cross-fertilization.
- innovations are mainly created in practical contexts, where many different sources of information are exploited in solution-centered processes; in these environments the customer is a subject, not an object, of innovation activities.
- organizations should not be seen as passive bystanders of innovation policy – instead, innovative capabilities needed in working life must be developed with the assistance of a solid toolbox.
- enhancing the principles of practice-based innovation activities by our own networked ways of action.

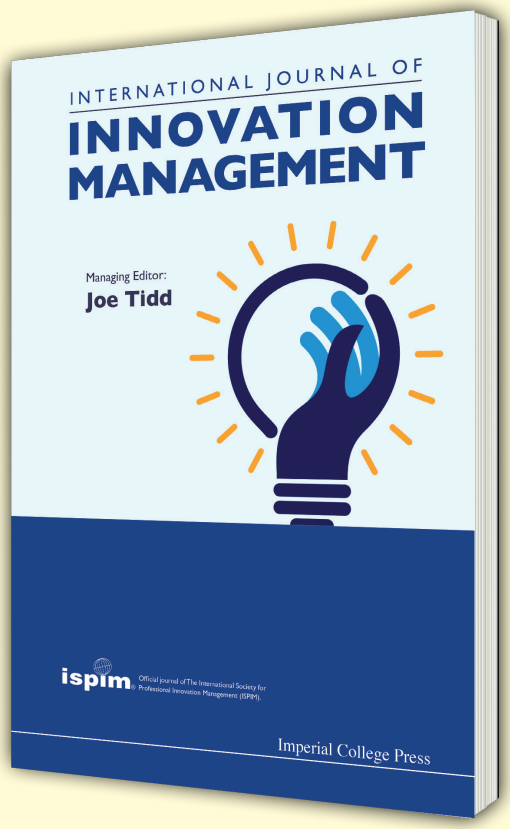
www.lut.fi

World Scientific
Connecting Great Minds

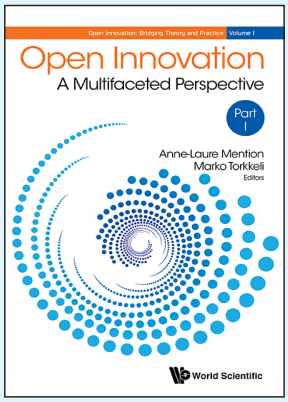
International Journal of Innovation Management (IJIM)

Official journal of the International Society of Professional Innovation Management (ISPIM)

http://www.worldscientific.com/worldscinet/ijim

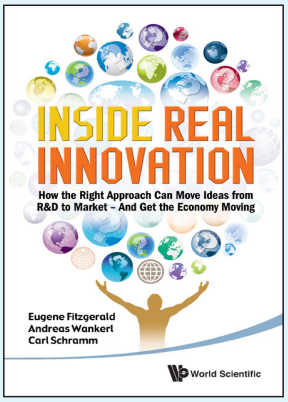


Quote WSISPIMP20 for a 20% Discount on all books! Valid till 30 July 2016.



Feb 2016 | US$226 / £163 | 978-981-4719-17-9

(In 2 Parts)
Edited by **Anne-Laure Mention** *(Luxembourg Institute of Science and Technology, Luxembourg)*, **Marko Torkkeli** *(Lappeenranta University of Technology, Finland)*

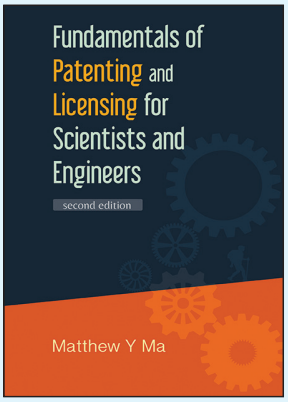


Nov 2010 | US$29.95 / £20 | 978-981-4327-98-5

By **Eugene Fitzgerald**, **Andreas Wankerl** *(Massachusetts Institute of Technology, USA & Cornell University, USA & The Innovation Interface, USA)*, **Carl Schramm** *(The Kauffman Foundation, USA)*

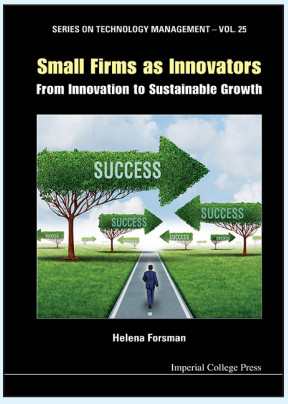
Dec 2006 | US$99 / £65 | 978-981-256-694-2

By **James Utterback** *(Massachusetts Institute of Technology, USA)*, **Bengt-Arne Vedin** *(Mälardalen University, Sweden)*, **Eduardo Alvarez** *(VIGIX, Inc.)*, **Sten Ekman** *(Mälardalen University, Sweden)*, **Susan Walsh Sanderson** *(Rensselaer Polytechnic Institute, USA)*, **BruceTether** *(University of Manchester, UK)*, **Roberto Verganti** *(Politecnico di Milano, Italy)*



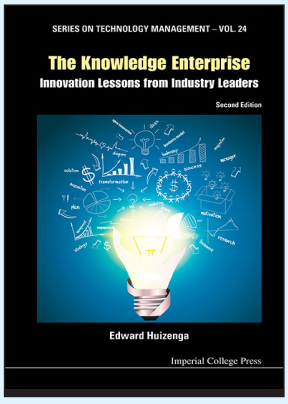
Apr 2015 | US$68 / £45 | 978-981-4452-53-3

By **Matthew Y Ma** *(Scientific Works, USA)*



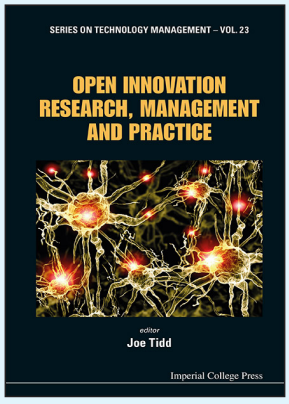
Mar 2015 | US$89 / £59 | 978-1-78326-633-3

By **Helena Forsman** *(University of Tampere, Finland)*



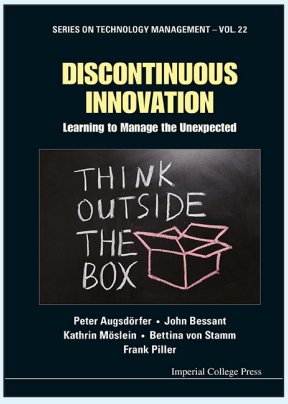
Oct 2014 | US$68 / £45 | 978-1-78326-542-8

By **Edward Huizenga** *(University of Amsterdam, The Netherlands & Benthurst & Co, The Netherlands)*



Oct 2013 | US$135 / £89 | 978-1-78326-280-9

Edited by **Joe Tidd** *(SPRU, University of Sussex, UK)*



Aug 2013 | US$78 / £51 | 978-1-84816-780-3

By **Peter Augsdörfer** *(Technische Hochschule Ingolstadt, Germany)*, **John Bessant** *(University of Exeter, UK)*, **Kathrin Möslein** *(Universität Erlangen-Nürnberg, Germany)*, **Bettina von Stamm** *(Innovation Leadership Forum, UK)*, **Frank Piller** *(RWTH Aachen University, Germany)*

AD_WN_06_16_05_BL

Order your copies @ www.worldscientific.com

SESSION OVERVIEW AND THEMATIC PLANNER

Monday

1330 – 1430	1.1: Open Innovation 1: Reflections	1.2: BMI 1: Reflections	1.3: Strategic Foresight, Agility & Future Orientation: 1	1.4: Innovating in Traditional Sectors 1	1.5: Enabling Innovation: Methods, Training, Coaching & Competence	1.6: Bootcamp 1: Open Innovation & Networks	Workshop: How to Navigate The Innovation Maze?
1435 – 1535	2.1: Open Innovation 2: Users & Customers	2.2: BMI 2: Platform & Technological Opportunity	2.3: Strategic Foresight, Agility & Future Orientation: 2	2.4: Innovating in Traditional Sectors 2	2.5: Innovation for Economic, Societal & Environmental Sustainability 1	2.6 Bootcamp 2: Universities & the Innovation System	

Tuesday

0900 – 1000	3.1: Open Innovation 3: Suppliers	3.2: BMI 3: Start-ups & entrepreneurs	3.3: University-Industry Innovation 1	3.4: Innovating in Traditional Sectors 3	3.5: Innovation for Economic, Societal & Environmental Sustainability 2	3.6 Bootcamp 3: Components of Innovation (Mixed session)	Experience 1: Gamification for Innovation (CPD Session)
1005 – 1105	4.1: Open Innovation 4: SMEs	4.2: BMI 4: Adoption & Implementation & Crowdsourcing (Mixed Session)	4.3: University-Industry Innovation 2	4.4: Teaching Innovation Management Invited Speaker on Knowledge Sharing	4.5: Innovation for Economic, Societal & Environmental Sustainability 3	4.6: Bootcamp 4: Aspects of Innovation Management	Experience 2: Impact of Corporate Foresight on Corporate Performance
1130 – 1230	5.1: Open Innovation 5: Ecosystems	5.2: Creativity in Innovation 1: Standards & Talent	5.3: University-Industry Innovation 3	5.4: Front End & NPD Themes	Workshop: Is it Possible to Innovate without Marketing?	5.5: Bootcamp 5 : Innovation on a personal level	Experience 3: Coaching Innovation Management (CPD Session)
1235 – 1335	6.1: Open Innovation 6: Ecosystems & Networks	6.2: Creativity in Innovation 2: Ideas & Interactions	6.3: Positioning Living Labs in the Innovation Domain	6.4: Project Spark Session	Workshop: Early-stage Innovation	6.5: Bootcamp 6 The Future & X-industry Innovation (Mixed Session)	Experience 4: Spotlighting Innovation Tools
1430 – 1530	7.1: Open Innovation 7: Technology & R&D	7.2: Sources of Opportunity: Mixed Innovation Themes	7.3: Living Labs 1	7.4: Transferring Knowledge 1: Themes	Workshop: Strategies to engage employees to innovate	7.5: Bootcamp 7: Sustainability	Experience 5: Innovation Stories from Industry
1535 – 1635	8.1: Open Innovation 8: Management Challenges	8.2: Managing Innovation 1: R&D	8.3: Living Labs 2	8.4: Transferring Knowledge 2: Absorptive Capacity	8.5: Innovation System Performance & Policy	8.6: Bootcamp 8: Financial Themes & BMI (Mixed Session)	Experience 6: The 10 Rules for Forecasting Future Trends

Wednesday

0900 – 1000	9.1: Service Innovation	9.2: Managing Innovation 2: Teams	9.3: Transferring Knowledge 3: Networks & Knowledge	9.4: Bootcamp 9: Themes in Open Innovation	9.5: Ideas Sandbox 1: Platforms & Ecosystems	Workshop: storyFORMing A story design workshop
1005 – 1105	10.1: Design Thinking for Innovation	10.2: Managing Innovation 3: Process & Components	10.3: Start-Ups & Entrepreneurs 1	10.4: Bootcamp 10: Customers, Users & Innovation	10.5: Ideas Sandbox 2: Innovation Methods & Users	
1130 – 1230	11.1: Financial Services & IP Considerations (Mixed Session)	11.2: Managing Innovation 4: Firm level	11.3: Start-Ups & Entrepreneurs 2: Technology entrepreneurship	11.5: Bootcamp 11: Innovation Management Themes	11.6: Ideas Sandbox 3: Finance & Performance	11.4: Disruptive, Radical and Adjacent Innovation Options

PARALLEL SESSION SUMMARIES

SESSION 1.1: OPEN INNOVATION 1: REFLECTIONS

MONDAY, JUNE 20, 1330 – 1430

FACILITATOR: IRINA FIEGENBAUM

APOLLO 3

Baron, Marcin: University of Economics in Katowice, Poland
OPEN INNOVATION IN OLD INDUSTRIAL REGIONS. DOES OLD MEAN CLOSED?

The paper is focused on innovation management patterns in companies in old industrial regions, in particular on the open innovation capacity of companies and business networks located in (or originating from) such regions. These regions, undergoing several restructuration processes, maintain their innovativeness but very often within the fairly closed ecosystems. Three models are conceptualized in the study: closed ecosystems in traditional industries; opening advanced manufacturing ecosystems and open (opening) ecosystems in new industries. The conceptualization is based upon a study in Upper Silesia (Poland) which was cross-checked with outlook on old industrial areas of the EU's old member states (Midlands, Nordrhein-Westfalen, Nord-Pas-de-Calais, Basque, crossboarder area of Belgium and the Netherlands) as well as on old industrial areas of former socialist countries.

Author(s)
Baron, Marcin: University of Economics in Katowice, Poland

Aas, Tor Helge: University of Agder, Norway
OPEN VERSUS CLOSED INNOVATION: ADVANCING THE DEBATE

This paper examines what criteria innovation managers use when they take open versus closed innovation model decisions during innovation processes. The examination is based on in-depth interviews with 34 key-employees in 13 top-performing small and medium sized firms in mature industries in Norway. The findings suggested that open and closed innovation models co-existed in all sampled firms. Managers had to find a compromise between conflicting aims when open versus closed innovation model decisions were made. Two types of criteria seemed to be particularly important in these decision processes; (1) the type of knowledge needed during the innovation process (firm specific tacit knowledge versus generic explicit knowledge), and (2) the degree of connectedness between the innovation and the firm's core product. The findings provide useful insights for managers of small and medium sized firms struggling with open versus closed innovation model decisions.

Author(s)
Aas, Tor Helge: University of Agder, Norway
Jørgensen, Geir: Agderforskning, Norway

Podmetina, Daria: Lappeenranta University of Technology, Finland
OPEN INNOVATION: DO YOU REALLY DO WHAT YOU THINK YOU DO?

Since first book on Open Innovation was published in 2003, concept caused extensive debates in academic community. While one scholars criticize Open Innovation for conceptual ambiguity and being merely repackaging existing practices, the proponents emphasize the novelty of the concept in systematic combination of inbound and outbound activities and tight linkage with company strategy. The paper address the research gap in structuring the open innovation activities and bringing more understanding on how companies associate the degree of engagement in OI with the level of open innovation adoption. In this research we perform cluster analysis use on data of the survey on open innovation conducted in 2014-2015 among 461 managers representing companies operating in Europe. The results revealed six types of open innovation strategies, based on combinations of various open innovation activities adopted by companies. We also identified and clarified the gap between the existing theoretical concepts and their business perception.

Author(s)
Podmetina, Daria: Lappeenranta University of Technology, Finland
Teplov, Roman: Lappeenranta University of Technology, Finland
Dabrowska, Justyna: Lappeenranta University of Technology, Finland
Albats, Ekaterina: Lappeenranta University of Technology, Finland

Daellenbach, Urs: Victoria University of Wellington, New Zealand
EXTENDING THEORISATION FOR OPEN INNOVATION VIA A SOCIAL CAPITAL LENS

Social capital has long been argued to have important implications for innovation. Open innovation and absorptive capacity research address similar issues related to the transfer of knowledge in collaborations between organisations and individuals. The latter two areas, however, have traditionally emphasised a 'firm' and 'commercial' focus. Here, we argue that these literatures can be fruitfully combined to generate novel understanding of the relationships needed to acquire, assimilate and exploit knowledge from both internal and external sources. By drawing on Nahapiet & Ghoshal's (1998) framework highlighting three dimensions of social capital (structural, cognitive, relational) that are argued facilitate access to parties for combining/exchanging knowledge, suggest when value through these combinations and exchanges is anticipated, affect motivation to combine/exchange, and generate combination capability, there is strong potential to augment open innovation and absorptive capacity research findings.

Author(s)
Daellenbach, Urs: Victoria University of Wellington, New Zealand
Davenport, Sally: Victoria University of Wellington, New Zealand
Leitch, Shirley: Australian National University, Australia

Schneckenberg, Dirk: ESC Rennes School of Business, France
LINKING MANAGERIAL THINKING WITH THEORY ON BUSINESS MODEL INNOVATION

The large-scale deployment of cloud computing infrastructures creates new options to reconfigure software. To seize market opportunities, software firms need to consequently develop business models which transform technological properties of software-as-a-service solutions into customer value. A central issue is the linkage between normative business model representations and managerial thinking during the development of software-as-a-service solutions. To address this issue, we inquire how and to which degree managerial thinking and enacted practices of software-as-a-service providers concur with essential theoretical positions for business model innovation. We identify normative business model components in the extant literature, and we investigate their enactment in a comparative study of eleven software-as-a-service solution providers. Findings reveal disruptive system properties, adaptive service provision, organizational redesign, developing technological capabilities, dynamic ecosystem architecture, evolving revenue flows, and cost structure optimization as factors undergirding reasoning in business model innovation. Our findings add understanding to the nascent theory on business model innovation.

Author(s)
Schneckenberg, Dirk: ESC Rennes School of Business, France
Comberg, Chris: HHL Leipzig, Germany
Velamuri, Vivek: HHL Leipzig, Germany
Spieth, Patrick: University of Kassel , Germany

Hock, Marianne: Philipps University Marburg, Germany
KNOWLEDGE MANAGEMENT, STRATEGIC FLEXIBILITY AND BUSINESS MODEL INNOVATION

When analysing capabilities that enable business model innovation, the influence of knowledge and knowledge management has been rarely included. Considering that knowledge is a key resource for innovation, we analyse business model innovation capabilities through the lens of the knowledge-based view. We empirically analyse a sample of 230 mid-sized companies and are able to find that the ability to process knowledge out of external information sources has a significant and positive effect on business model innovation. A firm´s ability to exploit existing internal knowledge seems to be less relevant for business model innovation. However, it does play a significant effect for firm´s with a low risk-taking tolerance. For firms with a high risk-taking tolerance, internal knowledge exploitation capabilities even hinder business model innovation.

Author(s)
Hock, Marianne: Philipps University Marburg, Germany
Clauß, Thomas: Philipps University Marburg, Germany

Saur-Amaral, Irina: Strategy 360 - Consulting, Lda, Portugal
BUSINESS MODEL INNOVATION: WHERE DO WE STAND?

Our submission focuses on the development of the field of business model innovation (BMI). We use the systematic literature review methodology based on a sample of papers indexed on ISI Current Contents, published between 2000 and 2015. Bibliometric results point towards a significant increase in the number of papers, journals and authors, and lack of specialized journals/authors publishing regularly in the BMI field. Thematic analysis reveals that BMI has been extensively studied, however there is rarely any cumulative knowledge effect between authors. Most researches were conceptual or qualitative, however not many constructs have been defined and tested to enable quantitative studies. We conclude that there had been little evolution in terms of integrating and theoretically developing the BMI field. We argue that there is a need to adopt the existing conceptual models, develop constructs and validate them with primary quantitative data collection and statistical analysis (regression or structural equation modelling).

Author(s)
Saur-Amaral, Irina: Strategy 360 - Consulting, Lda, Portugal
Reis Soares, Raquel: Universidade Europeia, Portugal
F. Proença, João: Universidade Europeia, Portugal

Wenz, Alexander Claus: EBS Universität, Germany
EXPLORING THE BMI TRADE-OFF AND PROPOSING A POTENTIAL RESOLUTION

In today's times, business environments are increasingly volatile and conditions change rapidly. Established companies are obliged to innovate their business model (BM) to sustain competitiveness. While being reluctant to abandon their established BM completely, enterprises raise new BM Innovation (BMI) units, to explore new sources of demands, next to the existing one. The paradoxical character of this explorative and exploitative endeavour is likely to provoke a trade-off. Debatably multiple types and degrees of conflicts are embodied in such a trade-off. Additionally, organizational ambidexterity (OA) is proposed to be advantageous to assess context of BMI and to provide favourable organizational designs to overcome emerging conflicts. Using in-depth data from 22 interviews in 12 companies, the paper adopts a grounded theory approach to develop a framework that interrelates the need to increased competitiveness through BMI, paradoxical exploring and exploiting strategies, conflicts caused by BMI trade-off, and the concept of OA solutions together.

Author(s)
Wenz, Alexander Claus: EBS Universität, Germany
Spieth, Patrick: Universität Kassel, Germany

Weiss, Astrid: Fraunhofer Italia Research scarl, Italy
PRESENT AND FUTURE OF DIGITALIZATION IN SOUTH TYROLEAN SMES

The digital transformation in the last decade increasingly changed the way we live and work as well as the way we are doing business. Highly dynamic business processes and worldwide customer relations require the use of computers and the internet in order to stay competitive. Therefore, this paper focuses on the recent trend topic of the Digital Economy, which currently is of high economic and political importance in the northern region of South Tyrol - Italy. The aim of this regional study on the one hand was to explore the actual situation of digitalization and its future development potential in South Tyrolean SMEs of the production and service sector based on five functional dimensions, on the other hand to identify significant digitalization levers for being able to leverage SME innovation capabilities.

Author(s)
Weiss, Astrid: Fraunhofer Italia Research scarl, Italy
Schade, Cornelia: Fraunhofer Italia Research scarl, Italy
Riedl, Michael : Fraunhofer Italia Research scarl, Italy
Matt, Dominik : Fraunhofer Italia Research scarl, Italy

Guimaraes, Cristina: INESC TEC, Portugal
TECHNOLOGY ROADMAPPING IN RESEARCH INSTITUTES THROUGH TECHNOLOGY READINESS LEVEL ASSESSMENT

This paper aims to explore the need for technological maturity evaluation in R&D institutions, namely throughout technological readiness levels (TRL) assessment in pursuing corporate objectives and research strategic alignment. Through a case-study analysis of an R&D institution, it seeks to provide exploratory answers to two main research questions: 1) How may research center diversity/complementarity contribute to a solid presence in the research national and international environment? and 2) How can research performance assessment (TRL) create awareness and consolidation of an evolving Knowledge Value Chain Framework? One of the most important results we present in this paper is a strategic dashboard for technology road mapping, as a first step of a continuous process of this institution strategic alignment.

Author(s)
Guimaraes, Cristina: INESC TEC, Portugal
Claro, João: INESC TEC, Portugal
Niza, Cláudia : INESC TEC, Portugal

Senaratne, Chaminda: Northumbria University, United Kingdom
BARRIERS TO AMBIDEXTERITY IN UK HI-TECH SMES

The interaction between exploration and exploitation can affect firm performance. Ambidextrous firms possess higher exploratory and exploitative capabilities. The proposed trade-off between exploration and exploitation has not been empirically supported; it has been argued that two activities can have a co-evolutionary/cyclical relationship. To identify the nature of ambidexterity and the barriers to ambidexterity, we examine the possibility of achieving ambidexterity in high-tech SMEs. Our qualitative study includes 20 UK high-tech SMEs in five industries. High-tech SMEs, that are important in the current economic climate, possess advanced knowledge and technological capabilities. SMEs face competitive pressures to pursue exploration and exploitation concurrently. Our findings show that the proposed archetypes of ambidexterity may not hold for the high-tech SMEs, and it can be of contextual nature, and can occur within or across firms/organisations; there is a cyclical/reciprocal/co-evolutionary relationship between exploration and exploitation. We also identified some internal and external barriers to ambidexterity.

Author(s)
Senaratne, Chaminda: Northumbria University, United Kingdom
L. Wang, Catherine: Royal Holloway, University of London, United Kingdom

Sætre, Alf Steinar: NTNU, Norway
BRINGING NEW KNOWLEDGE INTO THE ORGANIZATION: SCANNING, FRAMING AND CONNECTING

This conceptual paper explores how new knowledge is brought into an organization. It does this by exploring the front-end of absorptive capacity; proposing a continuum of scanning behaviors followed by either associative or bisociative framing. Organizational members engage in multiple forms of environmental scanning. What they notice depends both on the stimulus and on the scanner. When what is noticed is brought into the organization it is framed and connected to existing knowledge. This framing can either be associative or bisociative, depending on the novelty of the new information and knowledge. The creation of new frames help organizational members connect new information and knowledge from different knowledge domains to the organizations pre-existing knowledge. The ability to absorb knowledge from a broad range of knowledge domains through scanning and associative and bisociative framing has important implications for a firm's absorptive capacity and subsequently for organizational performance.

Author(s)
Sætre, Alf Steinar: NTNU, Norway

Urbinati, Andrea: Politecnico Di Milano, Italy
HOW INCUMBENTS MANAGE WAVES OF DISRUPTIVE INNOVATION: AN EMPIRICAL ANALYSIS

Innovation scholars have long looked into the managerial practices that incumbents should adopt to promptly respond to disruptive innovations (see, e.g., Christensen, 1997; Birkinshaw and Gibson, 2004). These practices include, among the others, the use of an open innovation approach or the establishment of ambidextrous organizations. However, this body of research has not analysed how these practices develop and unfold over time, although very often incumbents are confronted with waves of disruptive innovations that cyclically take place along the lifecycle of an industry (Moreau, 2013). This paper investigates this issue through a historical analysis (Gottschalk, 1969) of the global music industry. For each wave of disruptive innovation that hit this industry over the last fifteen years (digital music distribution, permanent digital download and streaming), we analyse the reaction of incumbents and develop a model suggesting how incumbents develop over time managerial practices to respond to cycles of disruptive changes.

Author(s)
Chiaroni, Davide: Politecnico di Milano, Italy
Chiesa, Vittorio: Politecnico di Milano, Italy
Franzò, Simone: Politecnico di Milano, Italy
Frattini, Federico: Politecnico di Milano, Italy
Urbinati, Andrea: Politecnico Di Milano, Italy

Kodama, Koichiro: Meisei University, Japan
AN ADAPTIVE PROCESS OF PHOTO SHOP INDUSTRY TO DIGITIZATION

The purpose of this study is to determine how photo shop industry in Japan continue to exist despite the digitization of photography. In this paper, we focus the problem why digital mini-labs were diffused faster than DSCs, despite following three obstructive factors: the enormity of investment; uncertainty regarding the digitization of photography; conservativeness of the photo shop industry. Based on historical analysis, we find following mechanism: in contrast to other photo shops, Kitamura especially recognized the digitization of photography as an urgent and crucial problem, and decided to introduce digital mini-labs into all of its photo shops; Kitamura's entrepreneurial action triggered its rivals to follow suit; digital mini-labs became the standard solution for the problem of digitization for the entire photo shop industry; the emergence of standard solution changed the perspectives of other photo shops that were unaware of the threat.

Author(s)
Kodama, Koichiro: Meisei University, Japan

Trott, Paul: University of Portsmouth, United Kingdom
INNOVATION WITHIN THE EUROPEAN FOOD INDUSTRY

Branded food producers are under pressure like never before. Firms such as Cadbury, Nestle, and Danome are facing the pressure of rising costs and consumers moving to lower priced alternatives. Our preliminary case study findings show that food retailers across Europe have a large influence on the nature of innovations. We show that food processing is the engine room of the food industry and the retailer's reach of influence penetrates deep into the relationship between food producers and brand owners. We uncover examples of poacher like behaviour by the retailer when it comes to the imitation of branded products. The dominant model of new product development within this mature industry shows how it is sometimes led and often orchestrated by the retailers. . This paper contributes to innovation theory by illustrating the governing gatekeeper role played by food retailers. This also contributes to innovation theory in mature industries.

Author(s)
Trott, Paul: University of Portsmouth, United Kingdom
Simms, Chris : University of Portsmouth, United Kingdom

Kytölä, Juha: Wärtsilä, Finland
SUSTAINABLE INNOVATION IN PRACTICE: CASE SHIPBUILDING

Innovation theories have traditionally focused on measuring innovation success via financial performance. According to sustainability viewpoint also success in environmental and social performance have to be taken into account when judging innovation and business success. This research focused on identifying theories for integrating sustainability into innovation management in practice, on how to manage the complexity in 'going sustainable' and how to identify and measure sustainability in real operations. Research of the literature show that sustainability of innovation is relatively recent research focus and has only been studied during this millennium. The drivers impacting sustainability in innovation according to other researchers were identified and visualised. A visual presentation was used to analyse the sustainability in innovations in shipbuilding. Despite being a traditional industry, a lot of innovations have been materialised in shipbuilding. Many sustainability initiatives were found to be implemented.

Author(s)
Kytölä, Juha: Wärtsilä, Finland
Naaranoja, Marja: Vaasa University, Finland

SESSION 1.5: ENABLING INNOVATION: METHODS, TRAINING, COACHING & COMPETENCE **MONDAY, JUNE 20, 1330 – 1430**

FACILITATOR: MIKAEL JOHNSSON **ARIANE 3**

Bessant, John: University of Exeter, United Kingdom
INNOVATING INNOVATION MANAGEMENT TEACHING

This paper explores a challenge in innovation around how you teach it and learn about it. While many organizations offer courses we know these often fail to stimulate a step change in student abilities. Learners know they should act, but training does not enable this and whilst they gain considerable 'explicit' knowledge, they fail to gain the 'TACIT' element that helps them to apply it. We suggest this is partly due to the mode of delivery and there is a need for different approaches. In this paper we report on continuing research around tacit knowledge. The objective of our project is to combine the efforts of business and university educators to create new learner-centred teaching methods, open up new learning opportunities and develop the practical application of entrepreneurial skills. This will be framed as an innovative training module.

Author(s)
Trifilova, Anna: University of Exeter, United Kingdom
Bessant, John : University of Exeter, United Kingdom
Alexander, Allen: University of Exeter, United Kingdom

Kaudela-Baum, Stephanie: Lucerne University of Applied Sciences and Arts/School of Business , Switzerland
LEARNING THROUGH PARADOX: EXPLORING TEACHING STRATEGIES FOR INNOVATION MANAGEMENT EDUCATORS

This paper argues for the adoption of paradox theory-based approaches in innovation management education. The argument rests on the supposition that if innovation management research calls for embracing paradox, particularly in response to the profound changes that have occurred during recent years in the competitive environments of organizations, there is the need to develop innovation managers with a distinct affinity for the paradox, that is, managers more skilled in dealing with innovation paradoxes and the underlying managerial tensions. There is a rich body of literature available on teaching paradoxical thinking. However, it is quite difficult to see the links between the different approaches or evaluate them for selected teaching settings. A meta-synthesis is presented to gain a broad overview about current literature relevant to management education and the navigation of the paradoxes that exist in organizations. The authors conducted an extensive review of available literature for this study.

Author(s)
Kaudela-Baum, Stephanie: Lucerne University of Applied Sciences and Arts/School of Business , Switzerland
Baumann, Sheron: Lucerne University of Applied Sciences and Arts/School of Business, Switzerland
Zemp, Markus: Lucerne University of Applied Sciences and Arts/School of Business, Switzerland

Hensen, Joris: Deutsche Bank AG, Germany Prexl, Katja-Maria: Zeppelin University, Germany
INTRAPRENEURSHIP REACTOR: ENABLE START-UP CULTURE IN LARGE COMPANY

For a couple of years we have witnessed start-ups as a probably ideal way to deliver quick and creative results. As a huge global corporation, Deutsche Bank wanted to find its own way to keep up with this development. Our approach to adapt was the "Intrapreneurship Reactor" based on Pinchot's model. To succeed with the implementation, we had to convince management to grant autonomy and freedom of choice to individuals as a stronger driving force behind the company, plus we had to identify and attract a critical mass of Intrapreneurs. While we found information about the Intrapreneurship model, we did not find guidelines or cases on how to implement the model and address our challenges. Thus, we developed the Intrapreneurship Reactor approach. To introduce the program, we hosted a competition for 60 employees from all over our multi-national company to develop their own ideas in a start-up like environment.

Author(s)
Hensen, Joris: Deutsche Bank AG, Germany
Schoenbeck, Julian: Deutsche Bank, Germany
Buescher, Matthias: Ruhr University Bochum, Germany
Prexl, Katja-Maria: Zeppelin University, Germany

Bozic Yams, Nina: Mälardalen University, Sweden
INTEGRATED MODEL OF INNOVATION COMPETENCE

This conceptual paper contributes to understanding of individual innovation competence by providing a comprehensive view of the concept, integrating different theories from innovation management into one model and linking it to the theory from studies of competence. It is filling the gap in existing innovation management theory where most researchers focus only on specific dimension of innovation competence. The integrated model of innovation competence shows how individuals need to combine different knowledge, personality traits, functional and interactive skills to demonstrate innovative behavior in practice. There is a certain ambidexterity in the elements of innovation competence that enables individual to move between exploration and generation of ideas on one hand, and promotion and implementation of ideas on the other. The model can be used both in recruiting innovative talent, developing innovation as a core competence among employees, and forming innovative teams.

Author(s)
Bozic Yams, Nina: Mälardalen University, Sweden

Dufva, Mikko: VTT Technical Research Centre of Finland Ltd, Finland
MAKING SENSE OF PLATFORM ECONOMY: PERCEPTIONS AND METAPHORS

Platform thinking is challenging the current operational environment of companies by providing a new logic of value creation and necessitating new business models. This has been claimed to lead to shift from industrial service economy to a networked platform economy. Since the discussion around platforms is fairly recent and the impacts of platform thinking are still uncertain, there are multiple views of what platforms are and what they mean for society. In this paper we aim to describe different perceptions of platforms and structure them using nine metaphors, which we hope will help to better make sense of platform thinking and platform economy, and ultimately support strategy development. The results are based on the interpretation of horizon scanning results.

Author(s)
Dufva, Mikko: VTT Technical Research Centre of Finland Ltd, Finland
Auvinen, Heidi: VTT Technical Research Centre of Finland Ltd, Finland
Koivisto, Raija: VTT Technical Research Centre of Finland Ltd, Finland

Kokshagina, Olga: Mines ParisTech, France
LINKED CROWDS IN OPEN SCIENCE

Open collaborative initiatives shift today from one-shot examples to multiple challenges organized by a single actor or hosted within an internet platform. In these cases, it is becoming crucial to deal with a series of projects simultaneously, ensure learning and participation across portfolios. Up to date, no studies are available regarding the series of open projects and on the effect of learning within them. The purpose of this research is to shed light on how these series can be organized and learning incorporated in the case of 11 polymath challenges. Polymath is an intermediary platform within different interconnected blogs that aim for collective problem solving by dealing with interdependent ill-structured subtasks. This research studies learning series within the 11 polymath projects to better reveal how problems were explored and resolved collectively. This research gives indications on how crowds are formed, learn and operate on a series of online problems.

Author(s)
Kokshagina, Olga: Mines ParisTech, France
Gillier, Thomas: Grenoble Ecole de Management, France

Sarma, Meera: Northumbria University, United Kingdom
INNOVATION PROCESSES IN VIRTUAL COMMUNITIES

Communities involved in free and open source activities possess special structural and processual characteristics that are conducive to innovative product development on-line. We suggest that this form of innovative, knowledge-generating, community may benefit from being seen within the framework of virtual process research using Virtual Ethnography (VE). In order to analyse the virtual ethnographic observations, innovative software research tools, such as the 'IRC Conversation Map', had to be devised. The investigation explored the structural and temporal dynamics of the community through the examination of interactions between members, as they unfolded in virtual space. In this way, we show how the themes that constitute the innovation process emerge from everyday routines that members of the hacker community perform. This paper contributes to the methodology of process research by exploring strategies that allow qualitative researchers to examine virtual organized activities through a process lens.

Author(s)
Sarma, Meera: Northumbria University, United Kingdom

Steen, Marc: TNO, Netherlands
SUCCESSFUL OPEN INNOVATION INVOLVING SMES: NETWORK STRUCTURE AND NETWORK COORDINATION

Open Innovation offers many opportunities, in particular for SMEs; collaboration with, e.g., potential customers, knowledge institutes and public partners can improve their innovation processes. Relatively little is known, however, on ways to successfully organize Open Innovation involving SMEs. There is a small but growing body of knowledge that we aim to contribute to. We conducted a case study of ten Open Innovation projects and focused on network structure (e.g., alignment of partners' goals, partner selection, and governance) and network coordination (e.g., leadership styles, cohesion and commitment, and experimentation and learning). Based on these cases we identified several 'success factors' and articulated a series of recommendations for managers of Open Innovation projects involving SMEs.

Author(s)
Steen, Marc: TNO, Netherlands
Vanhaverbeke, Wim: University of Hasselt, Belgium

Valmohammadi, Changiz: Islamic Azad University-South Tehran Branch, Iran
COLLABORATIVE INNOVATION WITH CUSTOMERS IN SERVICE SECTOR

This study explores the perception of Iranian experts and executive managers of sample organizations on the benefits and barriers of collaborative innovation with customers (CIC) in service sector of Iran. Based on the review of the related literature, drivers and barriers of CIC implementation were identified. Through a questionnaire which was collected from 71 Iranian service organizations the ranking and importance of drivers and barriers to CIC projects and initiatives implementation were determined based on the perception of the respondents of the survey organizations. The obtained results reveal that "Demand for customization" and "improved customer experience" are the most important drivers that motivates the surveyed organizations to implement CIC projects and initiatives, though the rate the implementation of such projects is low. Also," Lack of trust working with outside organizations "and "Lack of executive sponsorship" were ranked as the most challenging barriers to CIC projects and initiatives implementation.

Author(s)
Valmohammadi, Changiz: Islamic Azad University-South Tehran Branch, Iran

Onuma, Masaya: Yokohama National University, Japan
PROFESSIONAL USER AS INNOVATOR: ORGANIZATIONAL PROBLEMS IN COLLABORATIVE PROJECTS

The purpose of this paper is to build and enrich theory around how professional users proceed with innovative activities, with special attention to organizational collaboration between professionals and firms. Prior research on user innovation has illustrated that some professional users such as scientists and doctors are innovators who apply specialized knowledge to new artefacts, and then recently highlighted the importance of professionals' external knowledge in corporate innovation. However, these studies fail to understand the detailed processes regarding professionals collaborating with firms to push innovations or how firms mobilize professional knowledge to realize innovation, because the mechanisms of success and failure of these activities have not been clarified. Therefore, we examined these processes using exploratory case study concerning the research and development process of medical devices and explored the theoretical framework of the innovation.

Author(s)
Onuma, Masaya: Yokohama National University, Japan

Naik, Hari Suman: Friedrich-Alexander University Erlangen-Nuremberg, Germany
USER INNOVATION IN OPEN DESIGN

Digital fabrication and ICT technologies have further enabled users to innovate and design through open design of tangible products. It has led to the emergence of products created and driven by individual or small groups of users. This paper explores how users in online open design platforms develop their innovative tangible products. Through a multiple case study with six cases from the 3D design-sharing platform Thingiverse, it analyses the modularity of product design and the design process and outlines four stages of the innovation process followed by users. The results have implications on how users can be further encouraged to innovate in open design platforms through design of products and toolkits as well as community management.

Author(s)
Naik, Hari Suman: Friedrich-Alexander University Erlangen-Nuremberg, Germany
Möslein, Kathrin: Friedrich-Alexander University Erlangen-Nuremberg, Germany

Rantala, Tuija: VTT Technical Research Centre of Finland Ltd., Finland
IDENTIFYING NEW INNOVATIONS IN DIVERSE B-TO-B SALES MEETINGS

The purpose of the paper is to study the role of b-to-b sales meetings and related social media in the innovation process. The paper combines literature on innovation with customers and value co-creation in b-to-b sales. The study employed a qualitative case study approach and used qualitative data collected from four buyer and four seller interviews. The interviewed buyers sent a contact request to the seller through the Internet. The paper discusses the types of and routes for ideas that have emerged in sales meetings, as well as the use of these ideas. The results show that the interaction between the buyer and the seller provides rich knowledge and ideas for new innovations, and these ideas are triggered by both the salesperson and the customer. However, these ideas may not be used further in the organizations.

Author(s)
Rantala, Tuija: VTT Technical Research Centre of Finland Ltd., Finland
Hänti, Sirpa: Turku University of Applied Sciences, Finland

Tura, Nina: Lappeenranta University of Technology, Finland
VALUE CREATION AND CAPTURE IN SUSTAINING PLATFORM-BASED BUSINESS

Value creation and capture aspects introduce specific requirements for sustaining a multi-sided platform-based system. The case studied is DORA, a platform-based information system for multimodal traveling optimization. Utilizing focus group methodology, we explain the requisite conditions for the emergence of an ecosystem and describe the attributes that enable the ecosystem to remain sustainably together. Analyzing positive and negative value elements for each stakeholder we find that to subscribe to the transformative effect that the platform has on their business stakeholders expect benefits in scaling up their business cost-effectively while also pursuing common goals related to platform development, fair sharing of the created value and improving the sustainability of the transport system. We also find that reorganizing into an ecosystem creates benefits especially for society and end users at the expense of traditional business models of service providers.

Author(s)
Tura, Nina: Lappeenranta University of Technology, Finland
Kutvonen, Antero: Lappeenranta University of Technology, Finland

Arnold, Christian: Friedrich-Alexander University Erlangen-Nürnberg, Germany
HOW INDUSTRY 4.0 CHANGES BUSINESS MODELS IN DIFFERENT MANUFACTURING INDUSTRIES

The Industrial Internet of Things (IIoT) poses large impacts on business models (BM) of established manufacturing companies within several industries. Thus, this paper aims at analyzing the influence of the IIoT on these BMs with particular respect to differences and similarities dependent on varying industry sectors. For this purpose, we employ an exploratory multiple case study approach based on semi-structured expert interviews in 69 manufacturing companies from the five most important German industries. Owing the lack of previous research, our study contributes to the current state of management literature by revealing the following valuable insights with regard to industry-specific BM changes: The machine and plant engineering companies are mainly facing changing workforce qualifications, the electrical engineering and information and communication technology companies are particularly concerned with the importance of novel key partner networks, and automotive suppliers predominantly exploit IIoT-inherent benefits in terms of an increasing cost efficiency.

Author(s)
Arnold, Christian: Friedrich-Alexander University Erlangen-Nürnberg, Germany
Kiel, Daniel: Friedrich-Alexander University Erlangen-Nürnberg, Germany
Voigt, Kai-Ingo: Friedrich-Alexander University Erlangen-Nürnberg, Germany

Moser, Daniel: University of St. Gallen, Switzerland
CREATING STRATEGIC SCOPE USING A PLATFORM PERSPECTIVE ON BUSINESS MODELS

Digitalization, connected products and services, and shortening innovation cycles are widely discussed topics in management practice and theory and demand for new concepts. Platforms are such a concept and find successively entry into a growing number of companies. However, research did not yet address how business models for platforms can be innovated. Thus, we build on a multi-case study and analyze how three major platform companies, Amazon, Apple and Google innovated their business models. We found out, that each company still runs its original platform business model, which got innovated through the addition of new business models, when the platform's scope got expanded. Strategically, this was done out of offensive, defensive and opportunistic reasons. Furthermore, each business model of a platform is interrelated with the core business model, being in a one-sided or mutually beneficial relationship to each other.

Author(s)
Moser, Daniel: University of St. Gallen, Switzerland
Gassmann, Oliver: University of St. Gallen, Switzerland

Laudien, Sven M.: University of Erfurt , Germany
UNCOVERING CHARACTERISTICS OF DIGITALIZATION-BASED BUSINESS MODELS: A QUALITATIVE-EMPIRICAL ANALYSIS

Although digitalization has become the main challenge for firms in den 21st century, detailed insights on its effects on the business level remain sparse. This paper tackles this shortcoming of current research as it is dedicated to an in-depth analysis of digitalization-based business process changes manufacturing firms employ in order to comply with the change necessities. Against the background of a multiple-case study we identify and characterize three archetypes of manufacturing firm digitalization-based business models. Our study considerably contributes to business model research and additionally bolsters up a strategic firm level perspective on digitalization. Thereby, our findings are not only of scientific but also of managerial relevance and contribute to a better understanding of digitalization effects.

Author(s)
Laudien, Sven M.: University of Erfurt , Germany
Daxboeck, Birgit: Otto von Guericke University Magdeburg, Germany

Jung, Jinsun: Sungkyunkwan university, Korea, Republic of
EXPLORATORY RESEARCH ON THE DYNAMIC CAPABILITIES OF LEADING FIRMS

Sources of a sustainable competitive advantage of market leading firms in a dynamic environment are major concerns for firm managers and academic researchers. Although the dynamic capability view is gaining popularity as a cornerstone for a firm's success in a dynamic market, its underpinning concept remains unclear. This study investigates the sources of competitive advantages of leading firms under environmental volatility through the lens of the dynamic capability view. Our study first introduced a conceptual building block framework of the dynamic capabilities by systematic literature review. An empirical study of Samsung's digital TV business indicates that the building blocks of the dynamic capabilities have positively influenced its sustainable performance, supported by the firm's position factors such as financial, human resources and reputation.

Author(s)
Paek, Byungjoo: Sungkyunkwan university, Korea, Republic of
Jung, Jinsun: Sungkyunkwan university, Korea, Republic of
Lee, Heesang: Sungkyunkwan university, Korea, Republic of

Min, Yoongun: Sungkyunkwan University, Korea, Republic of
AN EX-ANTE FRAMEWORK FOR THE EMERGENCE OF A DOMINANT DISPLAYS

This paper uses a dominant design concept to explore the characteristics of a next - generation electronic display and proposes an ex-ante framework for identifying the determinants of its appearance. To ensure validity and reliability, we employ multiple methods, including in-depth interview and the Delphi method, with the participation of display experts. The results indicate that organic light-emitting diode (OLED) displays are more likely to become a mainstay in next - generation displays. The findings also highlight the importance of rapid technological innovation toward future displays and cost leadership to secure market share. We suggest an ex - ante framework to complement the existing literature and provide practical implications to establish a competition strategy.

Author(s)
Yoon, Inhwan: Sungkyunkwan University, Korea, Republic of
Min, Yoongun: Sungkyunkwan University, Korea, Republic of
Lee, Myeong Yong: Sungkyunkwan University, Korea, Republic of
Lee, Heesang: Sungkyunkwan University, Korea, Republic of

Sick, Nathalie: Helmholtz-Institute Muenster, Germany
HOT SPOTS OF CONVERGENCE RESEARCH

Convergence research has a high relevance and impact for innovation management research and practice. However, due to a lack of conceptual clarity, an overview of the convergence research landscape including main actors and topics is missing so far. Therefore, we strive to identify hot spots of convergence research. Based on publication and social network analysis, we found that the convergence research landscape is still scattered, with numerous single authors and small clusters of two or three authors. In contrast, we identified three hot spots of convergence research: the German hot spot around Stefanie Bröring, the Swiss hot spot around Fredrik Hacklin and Christian Marxt as well as the Finnish hot spot around Matti Karvonen and Tuomo Kässi. We also provide information on the different focal areas of the hot spots as well as on the links between them.

Author(s)
Sick, Nathalie: Helmholtz-Institute Muenster, Germany
Preschitschek, Nina: University of Bonn, Germany
Bröring, Stefanie: University of Bonn, Germany

Mansilha, Clara: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal
INSIGHTS FOR INNOVATION: COMBINING PATENTS POOLS AND PRODUCT PORTFOLIO ANALYSIS

Current technology forecasting methods rely mostly on conjoint analysis of patent pools and patent pool visualization methods, disregarding the commercial exploitation of patents through the product portfolio. To tackle this issue, we propose that the combined analysis of patents pools and product portfolios can produce insights about innovation, potentially uncovering patent vacuums associated with product features. As an illustration of the use of this new approach, we investigate the current patent landscape in the wearable medical devices, particularly for wearable electrocardiography (ECG) devices. Through this combined analysis, we shed light into the intellectual property strategy in the wearable devices industry. The innovation dynamics is also addressed, and we point out future avenues for product evolution.

Author(s)
Mansilha, Clara: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal
Maia, Catarina : INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal
Tedim, Ana: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal

Golovatchev, Julius: Detecon International GmbH / Deutsche Telekom Group, Germany
THE IMPACT OF THE IOT ON PRODUCT DEVELOPMENT AND MANAGEMENT

A rising complexity of products, an on-going digitization and an accelerated shift of market demands lead to a rapidly rising number of uncertainties in business and technology environments. The Internet of Things (IoT) offers many potential opportunities and benefits to both manufacturers and customers. The paper aims at integrating knowledge from the diverse fields into a comprehensive, practical approach for the development and implementation of the products and services using IoT technologies.The research focused especially on the needs and challenges of innovation and product managers who have to find ways to cope with rising uncertainties and the problem of increasingly complex business environments and digitalization. Therefore, this paper presents first learnings that guides practitioners through implementation of industrial IoT and its impact on new product development and management. It gives them guidance on how the company's IoT project could be linked with its new product development initiatives.

Author(s)
Golovatchev, Julius: Detecon International GmbH / Deutsche Telekom Group, Germany
Chatterjee, Prodip : Detecon International GmbH / Deutsche Telekom Group, Germany
Kraus, Florian: Detecon International GmbH / Deutsche Telekom Group, Germany
Schüssl, Roger: Detecon International GmbH / Deutsche Telekom Group, Germany

Nagler, Peter: Evonik Industries AG, Germany
LEADING INNOVATION - THE MODEL OF "LOOSE COUPLED" NETWORKS

In a fast changing world with increasing complexity and speed, higher volatility and uncertainties, global innovation organizations need to be agile and flexible. Well-known hierarchical systems, i. e. closely linked systems, with their direct influence on people or departments, are not the right approach.Evonik started its "Leading Innovation Initiative" to further increase the value contribution of innovation, focusing on leadership based on the model of "loose coupled systems" to enhance flexibility and adaptability while keeping sufficient stability and continuity. Loose coupled systems are variable networks that adapt to necessities - considerably changing the roles of innovation leaders. Such systems require a more transformational leadership style by setting directions, and a more lateral, inclusive and systemic leadership. They allow to better balance contradictory positions in innovation management. One important success factor are "shared values" - like the vision: "Evonik is one of the most innovative companies in the world".

Author(s)
Nagler, Peter: Evonik Industries AG, Germany

Dovey, Ken: University of Technology, Sydney, Australia
THE SOCIO-POLITICAL ANTECEDENTS OF TECHNICAL INNOVATION

The paper reports on a management initiative within an iconic global high-tech company to facilitate technical innovation within two teams (situated in different global locations of the company) that had been unable to produce any form of technical innovation over a period of several years. Experimenting with an action research strategy, this initiative had the practical goal of generating technical innovation and the research goal of gaining insight into the social dynamics that may facilitate such innovation. The two-year process delivered novel insights into the circumstances that enabled these teams to deliver four company-lauded technical innovations. The principal finding of the research - that social innovation is an antecedent of technical innovation - highlights the importance of alternative research methodologies (to that of the dominant research approach involved in R&D facilities) in addressing the politics of innovation within large organisations.

Author(s)
Burdon, Steve: University of Technology Sydney, Australia
Dovey, Ken: University of Technology, Sydney, Australia
Allen, Grant: University of Technology, Australia

Hannola, Lea: Lappeenranta University of Technology, Finland
SOCIOTECHNICAL CHALLENGES IN KNOWLEDGE-INTENSIVE PRODUCTION ENVIRONMENTS

Increasing demands for innovative products and rising competition lead manufacturing companies to design more flexible and efficient production environments. Thus, factory work becomes increasingly knowledge intensive. Recent developments of digital technologies including social software, mobile technologies and augmented reality offer promising opportunities to empower knowledge workers, but lead also to sociotechnical challenges, i.e. digitally augmented human work, worker-centric knowledge sharing, self-learning manufacturing workplaces and in-situ mobile learning for factory workers. We explore opportunities and challenges and show that they are applicable for a wide range of production strategies and manufacturing companies. Our study suggests genres of technologies to support knowledge work for tomorrow's flexible production. It also extends the knowledge related to current trends and emerging technologies in advanced manufacturing environments to empower workers and to improve job satisfaction, efficiency and productivity.

Author(s)
Hannola, Lea: Lappeenranta University of Technology, Finland
Heinrich, Peter: University of Zurich, Switzerland
Richter, Alexander: IT University of Copenhagen, Denmark
Stocker, Alexander: Virtual Vehicle Research Center, Austria

Lin, Carol: National Chengchi University, Taiwan
FOUR WAY VOICE

This case reports how a social innovation satisfies the social needs of about half million migrants in Taiwan and created a Vietnamese language newspaper in 2006. Up to 2011, four more languages were added, Thai, Cambodian, Indonesian and Tagalog (local Philippine language). The newspaper invites the migrants to contribute articles and paintings. By sharing their secrets in mind and showing their skills, immigrants and foreign labors calm their uneasy feeling, knowing they are not alone thus regaining their confidence in a foreign land. With the publications of the Four Way Voice, local Taiwanese become more receptive to the migrants. This case provides a reference for how to handle the recent large scale refugee migration to Europe. In addition, a LERP-PEARL transition model is proposed.

Author(s)
Lin, Carol: National Chengchi University, Taiwan

Bessant, John: University of Exeter, United Kingdom
CASE STUDIES IN HUMANITARIAN INNOVATION

Innovation is often presented as a survival issue and this provides a powerful metaphor to focus attention on the need to manage it effectively. But in the humanitarian context it takes on a very literal meaning. Crises, whether natural or man-made, require rapid problem solving if agencies and aid workers are to avoid the huge negative impacts of such disasters. That makes consideration of how innovation takes place in this sector an urgent challenge. How can the humanitarian sector best organize to enable innovation and what are the roles for key actors - donors, agencies, and most importantly 'users'? Our paper summarizes the nature of the challenge and reviews experience so far in humanitarian innovation (HI) through a series of case studies across the innovation spectrum.

Author(s)
Bessant, John: University of Exeter, United Kingdom
Trifilova, Anna: University of St Petersburg, Russia
Rush, Howard : University of Brighton, United Kingdom

Yu, Miko Ching-Ying: Kyoto University, Japan
EMPATHY DIFFUSION - THE NGO SUSTAINABLE DEVELOPMENT

The growth of NPO/NGO often restricted by the capability of sustainable operation. In this study, and was based on the charity and disaster relief in 2011 earthquake off the Pacific coast of T?hoku by the Taiwan based charity group, Buddhist Compassion Relief Tzu-Chi Foundation. During the disaster relief, the focused action should not only be the emergency services (disaster relief) itself, but the psychological, panicking and depression to victims should also be in the priority when providing reliefs. Therefor, to discuss empathy diffusion in this study will be based on the disaster relief should first help victims "psychologically", and follow up the discussion for grow NPO/NGO sustainable operation in long term as in whole for this study. Here, this study will demonstrate social distance in consumer psychological study as a guild, also collaborate the dictator game theory to see how tester consider the social distance in distributing donation.

Author(s)
Yu, Miko Ching-Ying: Kyoto University, Japan
Ida, Takanori : Kyoto University, Japan

Malik, Ashish: UNIVERSITY OF NEWCASTLE, Australia
TRANSFORMATIVE CO-CREATION OF VALUE: THE CASE OF SMART WORK HUBS

This paper focuses on a service innovation by exploring a novel work-design initiative driven by the New South Wales (NSW) State Government in Australia that seeks to address the commuter-congestion issue. The NSW Government's pilot program of innovative work design of smart-work-hub (SWH) services in regional areas provides an opportunity for value co-creation in the SWH context. Transformative value co-creation that has received little attention to date in the context of SWHs. This paper identifies the constellation of actors in the SWH ecosystem and the forms of co-creation in the SWH context, with a focus on SWH users. An online sample featured 231 NSW commuters interested in using a SWH. Using SmartPLS, a hierarchical model of anticipated transformative value to come from SWH use-which comprised business-work and family-life dimensions-was found to have a strong, positive influence on attitudes towards SWHs, which then positively influenced SWH usage intentions.

Author(s)
Malik, Ashish: UNIVERSITY OF NEWCASTLE, Australia
Rosenberger III, Philip: University of Newcastle, Australia
Fitzgerald, Martin : University of Newcastle, Australia

Müller, Christiana: TU Graz-Institut für Unternehmensführung und Organisation, Austria
'ENTREPRENEURIAL UNIVERSITY' APPLIED TO UNIVERSITIES OF TECHNOLOGY IN AUSTRIA

The concept of the Entrepreneurial University is now recognised as a major driver for self-development, innovation and as an appropriate response to succeeding in highly turbulent and unpredictable markets. This paper outlines and evaluates the current situation of the implementation of this concept at the Technical Universities (TU) in Austria. For the evaluation of the status quo, first, a review of existing programmes and initiatives at the TU Austria (consisting of TU Graz, TU Vienna and MU Leoben) was undertaken. Second, a questionnaire was designed on the basis of the HEInnovate Framework and sent to representatives of the universities. The results underscore that the model of the Entrepreneurial University represents the next step of development in higher education. Moreover, it demonstrates that there is still room for improvement at the TU Austria, especially in terms of fostering an entrepreneurial spirit among students.

Author(s)
Sperrer, Martin: TU Graz-Institut für BWL, Austria
Soos, Julia: TU Graz-Institut für BWL, Austria
Müller, Christiana: TU Graz-Institut für Unternehmensführung und Organisation, Austria

Ferreira, Rogério: Brazilian Army, Brazil
THE TRIPLE HELIX MODEL AND THE BRAZILIAN ARMY STRATEGIC PROJECTS

This study aims at designing and validating a model of criteria for the selection of the beneficiary university of technology transfer, based on the Triple Helix theory and on experts' assessment, in a context of netting agreements in strategic projects of the Brazilian Army. The model proposes four mainstays (entrepreneurial nature; institutional interaction; capacity for technology absorption and transfer; capacity in terms of human resources) that group the criteria, wherein each criterion lists three evidence. To attain this goal, a research is performed in relevant literature to design the model of criteria of the beneficiary university. The proposal of the model is built on the identification of best practices, aligned with the Helix Triple theoretical model, and of the indicators regarding technology transfer. In a subsequent step, the Delphi technique was used, so as to achieve a consensus on the model. For this, the sample includes 20 experts.

Author(s)
Ferreira, Rogério: Brazilian Army, Brazil
Crispim, José: University of Minho, Portugal

Kan John, Priscilla: Australian National University, Australia
A RESEARCH ENGAGEMENT CANVAS TOOL TO FACILIATE UNIVERSITY-INDUSTRY ENGAGEMENT

This paper presents preliminary work on the design and development of a visual tool, the Research Engagement Canvas (REC) to assist academics in collaborating with industry. A Design Science Research approach is used whereby contribution is made to the existing knowledge base through the design of an artifact (the REC) with a clear goal and utility. While it is generally recognised that University-Industry Collaboration is important for innovation, researchers lack clear guidance in how to go about developing collaborations. Our work aims to start addressing this gap through the REC. We present a rough sketch of a first version of the REC, which we intend to refine over time as we carry out further evaluation and collect feedback.

Author(s)
Kan John, Priscilla: Australian National University, Australia
Gregor, Shirley: Australian National University, Australia
Sun, Ruonan: Australian National University, Australia

Markovic Cunko, Ana: Faculty of Medicine University of Rijeka, Croatia
A NEW PERSPECTIVE ON INNOVATION SYSTEMS EVALUATION: THE CROATIAN CASE

This paper aims to identify, classify and analyze the innovation chain of enablers and inhibitors in Croatia in the context of the Adriatic Region. To this end, we present a series of indicators across ten innovation dimensions that constitute an important and integral part of a national innovation system, and which were previously compiled by the PACINNO project consortium. Another important objective of the study is the analysis of the Croatian national innovation system and innovation policies. Here we rely on the qualitative data obtained through interviews with key informants, identifying the role of the system components as innovation enabling or inhibiting. This research contributes to the literature on national and regional innovation systems by providing the first comprehensive set of data focusing on the Adriatic Region and novel analytical framework for the study of national and regional innovation systems.

Author(s)
Markovic Cunko, Ana: Faculty of Medicine University of Rijeka, Croatia
Cicek, Filip: Faculty of Medicine University of Rijeka, Croatia
Begonja, Marta: Faculty of Medicine University of Rijeka, Croatia
Gerbin, Ani: Faculty of Medicine University of Rijeka, Croatia

Tseng, Fang-Mei: Yuan-Ze University,Taiwan, Taiwan
SUPPLIER INVOLVEMENT AND NEW PRODUCT PERFORMANCE: MODERATING EFFECTS

In a rapidly changing global business environment with vigorous competition, it is becoming increasingly important for companies to continuously develop successful new products (NPs). Recent studies have indicated that when suppliers are involved in the development of NPs (hereafter, NP development, NPD), it enhances the competitive advantage of enterprises and the performance of NPs. However, some studies have produced contradictory results. Therefore, we focus on whether moderating effects exist between suppler involvement in NPD and NP performance. We target high-tech business-to-business manufacturers and use hierarchical regression to test our hypotheses. A survey of 151 high-tech business-to-business R&D managers in Taiwan showed that the relationship between supplier involvement and new product development performance is contingent upon the moderating effects of organizational market position.

Author(s)
Tseng, Fang-Mei: Yuan-Ze University,Taiwan, Taiwan
Weng, Ju-Yin: Yuan-Ze University, Taiwan
Wang, Cheng-Ming : Yuan-Ze University, Taiwan

Yen, Yu-Xiang: College of Management, Yuan Ze University, Taiwan
COLLABORATION WITH SUPPLIERS IN GREEN MANAGEMENT PRACTICES- INSTITUTIONAL THEORY ANTECEDENTS

Green management practices are increasingly considered critical for enhancing firm innovation and business performance. Though some external and internal drivers to green supply chain management practices are proposed by previous research, the influence mechanism of buyer-supplier collaboration in green management practices is not fully discussed. The research purpose and contribution of this study are to disclose the drivers of and their influence mechanism to buyer-supplier collaboration in green management practices. The research data was collected by questionnaires from purchasing managers in Taiwanese listed electronic firms and analyzed by structural equation modeling to examine the proposed model. The findings show that customer pressure and top management commitment have direct and positive influences on green collaboration with suppliers. Competitor pressure, regulatory pressure, and customer pressure have also indirect influences through the mediation of top management commitment.

Author(s)
Yen, Yu-Xiang: College of Management, Yuan Ze University, Taiwan

Makkonen, Marika: VTT Technical Research Centre of Finland, Finland
STIMULATING SUPPLIER INNOVATION IN A COMPLEX BUSINESS ENVIRONMENT

This paper contributes to the research on open innovation, and especially on stimulating suppliers to innovate. The purpose of this paper is to empirically investigate ways to stimulate suppliers towards outside-in open innovation in a business environment in which the buyer is reliant on external resources in R&D. Specifically, the main objective is to identify ways of increasing the supplier's willingness to contribute to the buyer's development process. A qualitative, embedded case study methodology is applied based on dyadic data collection. The material was collected in 18 semi-structured interviews in Finland, at the case company Posiva and three of its key suppliers in mechanical engineering and manufacturing. The results indicate that Posiva's current practices may even prevent innovativeness.

Author(s)
Makkonen, Marika: VTT Technical Research Centre of Finland, Finland
Aminoff, Anna : VTT Technical Research Centre of Finland, Finland
Valkokari, Katri: VTT Technical Research Centre of Finland, Finland

Aminoff, Anna: VTT Technical Research Centre of Finland, Finland
DRIVING SUPPLIER INNOVATIONS TOWARDS DIGITIZATION OF INFRASTRUCTURE PROJECTS

Digitalization offers huge possibilities in the infrastructure industry, and there is an increasing need for rapid development of digitalization. Innovation collaboration with suppliers and other external organisations is an important means to complement an organisation's knowledge base. The aim of this study is to explore how a public client can drive supplier innovations towards digitalization of infrastructure projects. To research the phenomenon empirically, an in-depth single-case study was conducted. Based on the data, a three level framework to drive supplier innovations was developed. The client should be active in influencing the supplier market by early interaction with potential suppliers. Innovation can also be procured. As the whole industry is built up in a project-based mode of delivery, it is important to understand how to enhance innovations developed as part of infrastructure projects. Here, the results directly support the investment project's goals.

Author(s)
Aminoff, Anna: VTT Technical Research Centre of Finland, Finland
Kiviniemi, Markku: VTT Technical Research Centre of Finland, Finland

Maia, Catarina: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal
WEARABLE MEDICAL DEVICES STARTUPS BUSINESS MODELS: A MULTIPLE CASE STUDY

Innovation can reside not only in the product itself, but also in the business model. Wearable medical devices companies are a new paradigm: a technology-based, electronics company, which merges characteristics from software startups (e.g., speed and iterative process of software development) with characteristics from classical medical devices companies (a highly regulated market, subject to the approval of Government agencies, and for which the users - the patients - may not make the purchasing decision). These companies are different from traditional software companies, as their products must comply with a highly regulated environment. In this study, we access whether there is business model innovation, by understanding the characteristics from these two different types of companies these startups are incorporating in their business models.

Author(s)
Almeida, Maria: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal
Maia, Catarina: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal

Rössler, Mirjam: HHL Leipzig Graduate School of Management, Germany
CORPORATE ENTREPRENEURSHIP AND BUSINESS MODEL DESIGN: INTERACTING CONTRADICTORY DESIGN LOGICS

Literature increasingly emphasizes the role of managerial cognition in developing new business models. Building on behavioural theory that suggests organisational routines and beliefs to originate in past experiences; we infer that incumbent and entrepreneurial firms substantially differ in the way they enact new business models. Business models can be understood as reflections of managerial mental models. We relate to this conceptualisation by investigating how the interplay of the dominant logic of incumbents and the emergent logic of entrepreneurial firms influences the design of new business models in the context of corporate entrepreneurship initiatives. By indicating a mutual linkage of both incumbent and entrepreneurial logics in joint business model design, we contribute to the understanding of cognition research in business model innovation. In particular, we provide evidence highlighting distinct cognitive processes that guide managerial reasoning in the design of new business models in the context under study.

Author(s)
Rössler, Mirjam: HHL Leipzig Graduate School of Management, Germany
Schneckenberg, Dirk: ESC Rennes School of Business, France
Velamuri, Vivek K.: HHL Leipzig Graduate School of Management, Germany

Rissanen, Tommi: Lappeenranta University of Technology, Finland
BUSINESS MODEL EXPERIMENTATION IN INCUMBENT AND STARTUP COMPANIES

All companies are facing toughening global competition in rapidly digitalizing business environment. In order to stay competitive they must be ready to challenge, adjust and even change their business models constantly. This applies to both incumbent and startup companies. Traditionally incumbent companies have been perceived as unable to stay innovative. Currently, they do not have other choice. This paper present research on the differences between incumbent and startup companies on how they change their business model through a process of experimentation. Incumbent companies have imitated the startup business model experimentation methods but they still lack the agility and courage of startup companies in business model change. However, the incumbents excel in business model validation processes. This study confirms previous research on the importance of managerial skills and managerial choices.

Author(s)
Rissanen, Tommi: Lappeenranta University of Technology, Finland
Sainio, Liisa-Maija: Lappeenranta University of Technology, Finland

Hsu, Wen-Ching: National Tsing Hua University, Taiwan
WHY THE GROWTH OF BIOPHARMACEUTICAL LATECOMER FIRMS IS MORE DIFFICULT?

Distinguished from the prior studies focused on the industry-level driving forces, this study offered the firm-level perspective to examine why the growth of biopharmaceutical firms in the latecomer country such as Taiwan is more difficult . We identify the unique drivers based on the latecomer's resource-based theory and institutional theory. Using DEMATEL method, our empirical results demonstrate that the growth driving forces of Taiwan's biopharmaceutical firms are overwhelmingly relied on the internal institutional factors, namely the 'leadership and governance' (internal informal institution), followed by the 'organizational support mechanism' (internal formal institution) while the adaption to the external institutions and utilization of resource are relatively weaker, demonstrating the disconnection with external industrial dynamics and misalignment of strategic resources. We also compare and contrast our empirical findings with that of the ICT latecomer firms in Taiwan in order to capture the theoretical and practical insight

Author(s)
Hu, Mei-Chih: National Tsing Hua University, Taiwan
Hsu, Wen-Ching: National Tsing Hua University, Taiwan

Deák, Csaba: University of Miskolc, Hungary
WE HAVE RESEARCH INFRASTRUCTURE - CAN WE COOPERATE?

We examine one of the tools which can help in business-academia cooperation but that is usually overlooked: the role of research infrastructure. It has great scientific impact, though its socio-economic importance is not yet studied in depth; the need to measure this importance is becoming more and more necessary from both the policy and societal side. There are certain characteristics that have to be taken into account when studying research infrastructures. While most of them are designed for scientific use, economic impact is expected through their usage - this problem should be solved with their involvement in the already existing technology transfer activities, which research infrastructures can improve through their presence. Based on current data we propose to use the Pareto-principle for determining the industrial usage of a research infrastructure in general; however, the characteristics of different scientific branches have to be taken into consideration as well.

Author(s)
Szabó, István : National Research, Development and Innovation Office, Hungary
Deák, Csaba: University of Miskolc, Hungary

Pinto, Eduardo B.: CCG/ZGDV Institute - University of Minho, Portugal
MANAGING A SUCCESSFUL UNIVERSITY-INDUSTRY COLLABORATIVE FUNDED INNOVATION PROGRAM

This paper describes the results of a qualitative study to identify the key programme and project management practices in a successful university-industry collaborative funded innovation programme between the University of Minho (UMinho) and Bosch Car Multimedia Portugal (BOSCH), named - HMIExcel. While the literature provides some advice on managing programs and projects, the specific context of university-industry R&D collaboration is being scarcely reported, demanding a strong research effort to produce effective guidelines. HMIExcel programme embraced an investment of 19.2 MEUR and involved around 300 people during two years (2013-2015). HMIExcel is considered a successful programme for several reasons, namely the decision of the UMinho and BOSCH partnership for developing a second programme named - IC-HMI - which foresees an investment of 54.7 MEUR. The success of the HMIExcel programme was partially due to the programme and project management practices adopted.

Author(s)
Pinto, Eduardo B.: CCG/ZGDV Institute - University of Minho, Portugal
Fernandes, Gabriela: Universidade do Minho, Portugal
Oliveira, José Rodrigues: BOSCH Car Multimedia, S.A., Portugal
Araújo, Madalena: Universidade do Minho, Portugal
Pontes, António J.: Universidade do Minho, Portugal
Machado, Ricardo J.: Universidade do Minho, Portugal

Clauß, Thomas: Philipps-University of Marburg, Germany
MANAGING UNIVERSITY-BUSINESS-COLLABORATION THROUGH FORMALISATION: THE MODERATING ROLE OF FAIRNESS

Innovation-based university-business collaboration (UBC) is becoming more and more relevant for both universities and businesses. Due to the particularities of this specific kind of inter-organisational relationship featuring actors with partially differing foci and objectives, the organisation of such collaboration requires several specific measures to be taken. Two core issues with respect to fruitful long-term collaboration are the degree of formalisation and the perception of fairness. Our large-scale survey among German professors collaborating with businesses finds a positive impact of UBC formalisation on joint innovation outcomes. The results furthermore reveal that procedural fairness and distributive fairness each increase the positive effect of formalisation on joint innovation outcomes. The joint innovation outcomes eventually positively influence the specific UBC outcomes for both businesses (e.g. increased market share) and universities (e.g. scientific publications).

Author(s)
Clauß, Thomas: Philipps-University of Marburg, Germany
Kesting, Tobias : Münster University of Applied Sciences, Germany

Gorry, Philippe: University of Bordeaux, France
SERENDIPITY AND UNIVERSITY TECHNOLOGY TRANSFER: A CASE STUDY

Technology transfer office (TTO) core activities are the management of public-private partnerships through: sponsored research contracts, patents licensing, and spin-off companies. In their typology of transactions, it has been suggested to include an informal mechanism: serendipitous discovery. Serendipity is defined as the art of discovering, an unsought finding. It is one of the most important aspects of science, generating radical and disruptive innovations. Serendipity has been discussed in several academic fields but the topic has been under-research in management science. We seek to fill the gap through one case-study: a serendipitous drug discovery made by academics from Bordeaux's university and its successful launch on the market. We will share with academics, TTO managers and policymakers the issues that a university TTO could face in front of such unpredictable opportunity, figure out "anti-serendipity" factors, identify the main success factors and draw some conclusions on university technology transfer management.

Author(s)
Gorry, Philippe: University of Bordeaux, France

Karhu, Päivi: Lappeenranta University of Technology, LUT School of Business, Finland
COGNITIVE AMBIDEXTERITY IN MARKETING MANAGEMENT: VICIOUS AND VIRTUOUS TENSIONS

Marketing managers under constant pressure to pursue exploitative and explorative goals, or in other words, to embrace the present while creating new and innovative solutions. In this task, they are faced with cognitive challenges which may be perceived as vicious and virtuous, and to cope with these negative and positive dynamics cognitive ambidexterity is required. By conducting 18 semi-structured interviews with marketing managers in the traditional beverage industry, we aimed to discover the cognitive tensions companies contend with by empirically testing the framework of tensions by Smith and Lewis (2011). Additionally we label their experience of the tensions negative or positive. The findings show that managers cognitively encounter both types of tensions but yet often lack systematic procedures - or cognitive ambidexterity - of addressing them optimally, i.e. manage and leverage the tension when needed for the aimed outcome.

Author(s)
Karhu, Päivi: Lappeenranta University of Technology, LUT School of Business, Finland
Ritala, Paavo: Lappeenranta University of Technology, LUT School of Business, Finland

Ellingsen, Oda: Rolls-Royce Marine/ Norwegian University of Science and Technology, Norway
MANAGING EXPLORATION AND EXPLOITATION: COMMERCIALIZATION CASE FROM ADVANCED MANUFACTURING

In order to sustain in today's hostile business environment, it is essential to reduce both cost of non-quality and time to market on new product introduction. In this study, we perform an exploratory case study of a multinational organization ongoing industrialization of two new technology development projects. The overall objectives of this study is to provide insight into the operational side of how companies can manage the industrialization of new technology and complex-products within the context of advanced manufacturing. Organizations need to manage both exploration and exploitation, but it is problematic to engage in both. Studying two different types of innovation projects in-depth within the same organization through a value stream mapping, has facilitated a review of the challenges of transition from exploration to exploitation.

Author(s)
Ellingsen, Oda: Rolls-Royce Marine/ Norwegian University of Science and Technology, Norway
Welo, Torgeir: Norwegian University of Science and Technology, Norway

Russell, Bill: Exeter University Business School, United Kingdom
Alexander, Allen: Exeter University Business School, United Kingdom
FIGHTING TRADITION: DEVELOPING AMBIDEXTROUS CAPABILITIES ACROSS THE INNOVATION PORTFOLIO

The study assesses the presence of four NPD capabilities in 10 firms with an average age of 178 years, publishing 9,000 journals. Through interviews with 63 individuals the project assesses whether the case companies are guided by a high level strategic plan considering core, adjacent and breakthrough opportunities. The degree of ambidexterity within the sample is explored through evaluating the operationalization of structured search and select processes across the NPD portfolio. The recruitment and learning from individuals outside the core industry is considered. The majority of the incumbent case companies did not operationalize structured search and select processes across the portfolio. The three companies with the most structured search and select processes confirm the literature that firms need both structures and routines to support ambidextrous search and select activities in both core, and beyond the core environments. The study found the leading companies focusing on jobs-to-be-done to identify opportunities.

Author(s)
Russell, Bill: Exeter University Business School, United Kingdom
Alexander, Allen : Exeter University Business School, United Kingdom

Van der Veen, Gerrita: HU Business School Utrecht, Netherlands
FROM SOCIAL MEDIA TO SOCIAL BUSINESS: THE GROWTH TO MATURITY

While most businesses concur that social media has the potential to innovate their operations, the question remains when and how they will fulfil that promise. Therefore, in the learning curve to social maturity, the role of social media should shift from a phenomenon in itself to a means of achieving organizational goals. This is a question of organization. Insight into the organisational innovation adoption process and the accompanying success and failure factors help organizations to make a success out of social media. We have used triangulation in this regard, combining case studies with (expert-)interviews and desk research. Our study was firstly intended for organizations that wish to take the initiative or next step with social media in their business operations. Conversely, we are able to use our practical findings to add substance to and expand our knowledge on innovation adoption in relation to social business.

Author(s)
Van der Veen, Gerrita: HU Business School Utrecht, Netherlands
Maas, Arne: University of Applied Sciences Rotterdam, Netherlands
Delfgaauw, AnneMarie : AMD1510 online marketing, Netherlands
Gerrits, Han: VU University Amsterdam, Netherlands

Real Perdomo, Maria: Heilbronn University, Germany
EXPLORING THE INSECT ECONOMY

Insects as bioresources open up potential for radical and incremental innovation of products and processes, and for the creation of new value networks - a potential that can further be leveraged by employing biotechnology as a converging technology. We identified 5 industry sectors that hold this innovation potential. Using insects does at the same time pose staggering opportunities for sustainable development because they potentially are a sustainable bioresource which can be a solution to address multiple global challenges such food scarcity, malnutrition and waste production. To address the latter, we introduce insects as bioresources into the context of industrial symbiosis where insects can be used as enablers to create novel industry networks that harness new value-added activities.

Author(s)
Real Perdomo, Maria: Heilbronn University, Germany
Fichter, Klaus: Carl von Ossietzky University Oldenburg, Germany

von Delft, Stephan: University of Glasgow, United Kingdom
SUSTAINABILITY-ORIENTATION AND COMPETITIVENESS: IS SUPPLY CHAIN CONSIDERATION A MISSING LINK?

Corporate sustainability-orientation has increasingly been considered a key element of firm competitiveness. However, in prior research, sustainable firm behaviour has been related to dependent measures of competitiveness one at a time; studies including sustainability-orientation and multiple performance measures are rare. Moreover, although a close interaction with supply chain partners is believed to be a potential mediator in the sustainability-orientation-competitiveness relationship, much of the evidence to date remains anecdotal or speculative. This suggests that a broader nomological inquiry is needed to fully understand the effect of sustainability-orientation on competitiveness. Using survey data from chemical companies, structural equation modelling shows that sustainability-orientation has a direct positive effect on product price and it is an important driver of product quality and innovativeness, though this effect is only indirect and fully mediated by a firm's ability to integrate and align processes with upstream and downstream partners in the supply chain.

Author(s)
von Delft, Stephan: University of Glasgow, United Kingdom
Gelhard, Carsten: University of Twente, Netherlands
Leker, Jens: University of Muenster, Germany

Fichter, Klaus: Borderstep Institute for Innovation and Sustainability, Germany
INFLUENCING FACTORS OF UNIVERSITY SUPPORT FOR SUSTAINABLE ENTREPRENEURSHIP AND ECO-INNOVATION

In recent years policies have increasingly recognised the importance of entrepreneurship for sustainable economic growth and for finding solutions to fundamental challenges such as climate change. It is emphasised that universities should play an important role in supporting sustainable entrepreneurship, e.g. by sensitizing and educating future sustainable entrepreneurs. To date there has been hardly any research on university support for sustainable entrepreneurship. We address this research gap with a qualitative multi-case study approach. Based on 42 good-practice examples we carried out in-depth case studies investigating four universities from the US and Germany. We show which factors influence the emergence and implementation of university support for sustainable entrepreneurship. Two driving forces are dominant in our cases: (1) the institutional framework with a clearly defined strategy, structure and supporting culture and (2) key persons. Analysing the constraining factors of the support activities we found that the most common obstacles arise internally.

Author(s)
Fichter, Klaus: Borderstep Institute for Innovation and Sustainability, Germany
Tiemann, Irina: University of Oldenburg, Germany

Lindhult, Erik: Mälardalen University, Sweden
SUSTAINABILITY ORIENTED INNOVATION CAPACITY IN CITIES

How can sustainability oriented innovation capacity in cities be assessed? There is a lack of research which develops innovation capacity analyses and assessment for cities. Based on experiences with assessments of sustainability oriented innovation capacity in six cities this paper develops perspectives and models for such innovation capacity assessment. Best practice approaches to innovation is problematized as well the importance to work systemically in innovation management in city context. The city innovation capacity assessment has pinpointed a number of innovation challenges for enhancing innovation in cities related to different innovation dimensions. The finding shows that city planning need to deal with a number of concrete challenges experienced to be considered in innovation and transition work in the energy innovation area.

Author(s)
Lindhult, Erik: Mälardalen University, Sweden

Guyot Phung, Carola: i3- CRG - ECOLE POLYTECHNIQUE - PARIS SACLAY, France
PROTOTYPING SUSTAINABLE SYSTEMIC INNOVATION : BUILDING REGIME CHANGE

Environmental concerns are an expression to attempt to reverse entropy. Acting on technological regime structuring processes and more sustainability-oriented trajectories has become a major issue. Technological transition is the interplay between three analytical levels (the sociopolitical landscape, the sociotechnical regime, the technological niche). The niche is a protected space where innovations are nurtured before connecting to existing regimes and making them evolve. We bring into light innovation dynamics within niches. We compare three innovation cases supported by an industrial innovator, a social innovator, and a territorial innovator. We demonstrate that niches nurture radical, incremental and architectural innovations. We analyze the resources and asset orchestration process, the degree of dependency on these resources and modes of hybridization or accumulation processes. Doing this, we deepen multilevel perspective analysis from the agency's point of view.

Author(s)
Guyot Phung, Carola: i3- CRG - ECOLE POLYTECHNIQUE - PARIS SACLAY, France

Bellman, Beryl: California State University Los Angeles, USA Rao, Prakash: Enterprise Sherpas LLC, USA Ann, Reedy: MITRE - Retired, USA
ENTERPRISE ARCHITECTURE PATTERNS FOR INNOVATION

Innovation management requires a holistic strategy for effective incorporation of change, We use enterprise architecture patterns reflecting the business, socio-cultural, and architecture aspects of the enterprise. This is based on architecture principles including loose coupling, separation of concerns, decomposition, and relaxation of constraints. Architecture elements across these aspects are normalized using scaffolding comprised of six dimensions. Previous approaches to EA are based on IT governance relying on IT models for representation. The lifecycle of this detailed enterprise architecture cannot keep the pace needed for innovation, transformation, and emergence. EA techniques have mostly been focused on engineering concerns. Our approach uses a pattern library for enterprise classes to provide rapid instantiation for specific individual enterprise architectures. This holistic approach with a systematic planning strategy is consistent with the development of a methodology that allows innovation managers effectively insert innovations into the enterprise

Author(s)
Bellman, Beryl: California State University Los Angeles, USA
Rao, Prakash: Enterprise Sherpas LLC, USA
Ann, Reedy: MITRE - Retired, USA

Haag, Christoph: Rhine-Waal University of Applied Sciences, Germany
THE UNDERLYING NEEDS OF INNOVATIONS - A TIME STUDY

There are three archetypes of innovating companies: Need Seekers who are first-to-market and ascertain the needs of consumers; Market Readers which are the second mover, watching market trends and innovating opportunistically; and Technology Drivers who leverage their technological capabilities. What differentiates them mostly is their nucleus for innovation. For the need seekers one might call this impulse a "market pull", whereas for the technology drivers a "technology push", and for the market readers just a deliberate financial calculus. In any case, there must be an underlying need to satisfy, in order to bring a new product or service innovation successfully to market. This paper investigates, based on a set of historical innovations, the types of needs that innovations address, and how they change over time. It furthermore tries to identify differences between technology push and market pull innovations, with regard to their addressed needs types.

Author(s)
Haag, Christoph: Rhine-Waal University of Applied Sciences, Germany
Kuetscher, Marie-Christine: Rhine-Waal University of Applied Sciences, Germany

Barlatier, Pierre-Jean: Luxembourg Institute of Science and Technology, Luxembourg
EXPLOITING SOCIAL MEDIA POTENTIAL TO LEVERAGE INNOVATION: A CASE STUDY

Social media (SM) has revolutionized the way organizations interact with actors both inside and outside their boundaries. SM makes intensive use of web-based and mobile applications to create interactive platforms where individuals and communities can co-create and modify user-generated content. The new channels and modalities of communication enabled by the emergence of SM promise a tremendous potential for innovation. However, few companies manage to successfully leverage and exploit benefits of SM usage for innovative endeavours. We propose through an illustrative case study of a multinational company in the energy and environment industry to shed light on the relevant use of these new media on innovation and explore a number of related issues. Contributions of this research are twofold, i.e. conceptual and managerial. The conceptual contribution lies mainly in the analysis of the impact of SM use on innovation processes. The managerial contribution involves identifying organizational best practices regarding SM use.

Author(s)
Barlatier, Pierre-Jean: Luxembourg Institute of Science and Technology, Luxembourg
Josserand, Emmanuel: University of Technology Sydney, Australia

Steen, Marc: TNO, Netherlands
AN 'OPEN INNOVATION PROJECT CANVAS' TO SUPPORT SMES

There are tools available to support innovation processes, e.g., for Business Model Generation and for Value Proposition Design. These tools typically focus on a single company and on creating a viable business model for deployment. As a consequence, these tools are less appropriate for Open Innovation projects that involve a heterogeneous network of SMEs, public partners and knowledge institutes, and for R&D projects, which are concerned with the first phases of innovation. In order to better support SMEs to manage such projects, we developed the 'Open Innovation Project Canvas', as a complement to other tools. It is distinctive in several ways: it focuses on organizing collaboration (rather than on one company), on the first phases of innovation, from idea to a prototype (rather than on deployment), on practical, short-term project results (a 'minimum viable product'), and on identifying parties that will value these results (and further business development).

Author(s)
Steen, Marc: TNO, Netherlands
Vanhaverbeke, Wim: Hasselt University, Belgium

Dooley, Lawrence: University College Cork, Ireland, Republic of
INTER-ORGANISATIONAL INNOVATION: COLLABORATIVE BREADTH AND DEPTH WITHIN THE SME SECTOR

Low and medium-low tech (LMT) industries still remain an important part of modern economies and account for significant economic wealth creation through their innovation efforts. However the legacy of innovation research has largely concentrated on industries and firms engaged in 'more traditional' R&D intensive activity, resulting in claims that the LMT is a forgotten sector and calls for better understanding of innovation management within the sector. Modern innovation management not only harnesses internal capabilities but also complementary capabilities of other organizations to nurture innovation activity and given that LMT industries are dominated by SME's, then such practice is of particular relevance. Thus, this research explores the nature of innovation within four LMT cases and the extent to which open innovation modes are leveraged to support their innovation activity.

Author(s)
Dooley, Lawrence: University College Cork, Ireland, Republic of
O'Sullivan, David: National University of Ireland, Galway, Ireland, Republic of

Casprini, Elena: Scuola Superiore Sant'Anna, Italy
MAKING OPEN INNOVATION IN FAMILY FIRMS HAPPEN: THE LOCCIONI CASE

Bridging family firms and open innovation literatures, this paper explores the activities and capabilities that allow a family firm to achieve a fit between the distinctive characteristics of this governance archetype and the open innovation processes. From the literature reviewed, a theoretical framework that links family firms' idiosyncratic characteristics and three types of open innovation barriers (namely cognitive, intra- and inter-organizational barriers) is introduced. Through an in-depth, illustrative and exploratory case study on Loccioni Group (an Italian high tech family firm), the paper describes how a family firm has been able to reach a fit between its family firm characteristics and its open innovation process. From the data analyses, three main capabilities, namely imprinting capability, orchestrating capability and relational capability, emerged as important to successfully implement open innovation in the context of family firms.

Author(s)
Casprini, Elena: Scuola Superiore Sant'Anna, Italy
De Massis, Alfredo: Lancaster University, United Kingdom
Di Minin, Alberto : Scuola Superiore Sant'Anna, Italy
Frattini, Federico: Politecnico di Milano, Italy
Piccaluga, Andrea: Scuola Superiore Sant'Anna, Italy

Gkikas, Aineias: Birmingham City University, United Kingdom
OPEN INNOVATION, SMES AND REGIONAL DEVELOPMENT: EVIDENCE FROM THE UK

This paper seeks to contribute to the literature on open innovation via the development of an index of open innovation. The analysis is conducted using Community Innovation Survey (CIS) data for UK regions. The UK regions fall into four performance groups. The first group of open innovation leaders includes firms located in the regions of South East England, East England, and Wales, with innovation performance well above that of the UK average. The second group of open innovation followers includes firms located in the regions of East Midlands, West Midlands, South West England, and North East England, with an open innovation performance close to that of the UK average. The third group of moderate open innovators includes firms located in the regions of Northern Ireland and Yorkshire and The Humber. The final group of modest open innovators includes firms located in the regions of London and Scotland.

Author(s)
Jones-Evans, Dylan: University of the West of England, United Kingdom
Gkikas, Aineias: Birmingham City University, United Kingdom
Rhisiart, Martin: University of South Wales, United Kingdom
MacKenzie, Niall: University of Strathclyde, United Kingdom

SESSION 4.2: BMI 4: ADOPTION & IMPLEMENTATION & CROWDSOURCING (MIXED SESSION) TUESDAY, JUNE 21, 1005 – 1105

FACILITATOR: STEPHAN VON DELFT APOLLO 3

Villinger, Marc G.: University of St. Gallen, Switzerland
CROSSING THE RUBICON: DRIVING ADOPTION OF NOVEL BUSINESS MODELS

Business model innovation is crucial for established firms, as they need to be able to adapt to increasingly dynamic market environments and foster innovation proactively. However, many incumbent managers struggle with inertia and cognitive barriers hindering adoption of forward-looking business models. Extant business model literature offers methods, which promote break-through thinking when designing business models. However, there are little insights yet on how to avoid falling back into the trap when converting novel designs into an operative business. By building on a recently emerging cognitive view on business models as well as on theory from cognition in strategy and psychology, we design a process model. The approach aims at mitigating cognitive barriers while assessing required actions for the commercialization of novel business models, which typically needs to be supported by middle management. We evaluate the artifact based on an in-depth case study with a large firm from the software industry.

Author(s)
Villinger, Marc G.: University of St. Gallen, Switzerland
Jung, Reinhard: University of St. Gallen, Switzerland

Echterhoff, Benedikt: Heinz Nixdorf Institut, University of Paderborn, Germany
SYSTEMATIC BUSINESS MODEL IMPLEMENTATION - FROM CONCEPTS TO REAL BUSINESS

Nowadays business model innovation has become a task, every company has to face in order to stay competitive. Even though, good business concepts are created every day, only few of them make their way from paper to real business. This is mostly due to barriers during implementation: How do we validate our business model? How do we derive requirements and measures? In which way can we keep internal resistance to a minimum? Even though the literature on business model innovation is extensive, business model implementation is covered seldomly. The paper at hand presents a methodology for systematic business model implementation. Key components are a maturity model for business concept validation, an impact analysis for the identification of requirements as well as master plan of action which serves as a communication strategy.

Author(s)
Echterhoff, Benedikt: Heinz Nixdorf Institut, University of Paderborn, Germany
Hirschter, Tobias: Heinz Nixdorf Institut, University of Paderborn, Germany
Gausemeier, Jürgen: Heinz Nixdorf Institut, University of Paderborn, Germany

Yablonsky, Sergey: Graduate School of Management, St. Petersburg University, Russia
INNOVATION CROWDSOURCING INTERMEDIARIES: INPUT SUPPLIER, MULTI-SIDED PLATFORM OR RESELLER?

In this work, we investigate existing crowdsourcing innovation platform business models by analysing innovation intermediaries providing innovative collaboration for value creation. We argue that the general set of possible business models could be increased by including internal innovators. At the same time the set of crowdsourcing business models could be generalised and reduced to a variety of well-known 4 types of business models: multi-sided platform, reseller, input supplier, and vertical integrator. We propose new definition of the innovation crowdsourcing multi-sided platform and crowdfunding multi-sided platform. Based on theoretical conceptualization, combined with empirical evidence, we propose a strategic framework for innovation crowdsourcing intermediaries' management. The evaluation logic presents a tool that managers, company owners and investors can use for identifying innovation crowdsourcing business models to interact with different groups of contributors in order to receive new ideas, feedback and solutions.

Author(s)
Yablonsky, Sergey: Graduate School of Management, St. Petersburg University, Russia

Ku, Tsu-Tung: Yuan Ze University, Taiwan
DYNAMIC BOUNDARY SPANNING PROCESS IN CROWDSOURCING COMPETITION

After Web 2.0 technologies came out, more and more companies started to develop new products through design competition by their own websites or a third-party platform. Participants are not familiar enough with the company that may let the feasibility decrease. At the same time, cultural and knowledge boundary would lead to conflict of ideas. In previous research, boundary theory is used to explain how to span the boundary between departments within the company. However, the emergence of crowdsourcing increased the interaction between people and companies and there are more boundaries exist. Therefore, this research figures out how the company spans the boundary and increase the value of the results as the purpose of this study.

Author(s)
Ku, Tsu-Tung: Yuan Ze University, Taiwan
Tseng, Fang-Mei : College of Management, Yuan Ze University, Taiwan

Martin, Dominique Philippe: CREM UMR CNRS 6211 - Rennes 1 University, France

WHAT SCOPES OF INTERVENTION FOR ARGENTINA UNIVERSITY TRANSFER OFFICES?

The purpose of this paper is to study how the universities of Argentina reply to the same institutional demand on transfer of knowledge and technology. In this sense, we suggests a framework based on an integrated view of 16 channels of transfer organized around 4 core competences and in relation to their relational and contractual form of governance. The empirical analysis is based on data gathered through a questionnaire administered to a sample of 29 Argentina Universities. The findings emphasized 4 types of strategy - integrated, networking, ad hoc strategy and embryonic or undetermined - and 2 main types of trajectories of evolution. The results have also implications for universities as well as for policy makers.

Author(s)
Becerra, Paulina: National University of Quilmes, Argentina
Codner, Dario: National University of Quilmes, Argentina
Martin, Dominique Philippe: CREM UMR CNRS 6211 - Rennes 1 University, France

Albats, Ekaterina: Lappeenranta University of Technology, Finland

INNOVATION INTERMEDIARIES IN UNIVERSITY-INDUSTRY COLLABORATION: ANALYSIS OF THE ONLINE PLATFORMS

The importance of intermediation in university-industry collaboration (UIC) has been widely acknowledged, however, the phenomenon of UIC online tools is not yet studied in detail. In this paper, we examine fifteen UIC online platforms, identify their functions and role that they play in UIC. By combining secondary data with interviews with platform developers and users, we identify five main archetypes of collaborative online platforms: education-focused, knowledge transfer platforms, crowdsourcing platforms, networking tools and platforms for innovation marketing. We also present a number of the benefits the platforms bring. These tools reduce the time and resources spent establishing and managing collaborations; they help to make networking more targeted; they help to reveal the value that university research has for business and increase the adoption of university education. Our findings suggest that whilst facing some challenges, the platforms analysed represent a scalable, rapidly growing and more importantly demand-led business opportunity.

Author(s)
Albats, Ekaterina: Lappeenranta University of Technology, Finland
Fiegenbaum, Irina: Independent Innovation Consultant, Germany
Alexander, Allen: University of Exeter, United Kingdom

Iwami, Shino: Eötvös Loránd University, Hungary

OVERLAY MAP OF FUNDED RESEARCH CENTERS

The purpose of this research is to identify deficient and inactive academic fields, where the Japanese government has not built research centers, and to discover Japanese unique academic fields against the world. The methodology is to match between world academic field's keyword and Japanese research center's report, using natural language processing. Consequently, we found that adacemic fields concentrating the specific fields and blank fields for the funding of Innovation Centers for Advanced Interdisciplinary Research Areas. The Japanese research centers concentrate on stem cells, nano chemical, nano physics and quantum physics. By contrast, particle physics, cosmology, environment, botany, immunology, neuroscience, and mathematics are less interesting by this funding. This research and the methodology will contribute as objective evidence to funding research fields.

Author(s)
Iwami, Shino: Eötvös Loránd University, Hungary
Futagawa, Tsukasa: Japan Science and Technology Agency, Japan
Yoneda, Masahide: Japan Science and Technology Agency, Japan
Sato, Yasushi: Japan Science and Technology Agency, Japan
Matsuo, Keiko: Japan Science and Technology Agency, Japan

Antikainen, Maria: VTT, Finland
CONSUMER ACCEPTANCE OF NOVEL SUSTAINABLE CIRCULAR SERVICES

We know that we have to move towards a circular economy (CE) in order to tackle the challenges derived from diminishing non-renewable resources, global warming, growing consumption, unemployment and urbanisation. The change towards CE needs to be at a systemic level, affecting consumers, companies, universities and legislators. Active consumers are at the centre of the closed loop in CE. In order to make consumers change their practices and support CE business models in their choices, these models need to be attractive. In this paper, we concentrate on consumer exploration of the factors influencing consumer acceptance of novel sustainable circular services. The data was collected during a group interview session of 42 consumers held in February 2016. As a result we found several factors that accelerate or inhibit consumer acceptance towards CE services.

Author(s)
Antikainen, Maria: VTT, Finland
Lammi, Minna: University of Helsinki, Finland

Lagun Mesquita, Patricia: Blekinge Institute of Technology, Sweden
ANALYZING SOCIAL LCA THROUGH THE LENS OF STRATEGIC SUSTAINABLE DEVELOPMENT

In recent years several approaches to Social LCA have been proposed. Despite recognized shortcomings of those, recent development has focused more on testing existing approaches and less on finding a unifying framework that can support Social LCA to deliver on its promise: to aid decision making regarding social issues related to product life cycles. This paper offers an analysis and evaluation of the potential contribution of the body of work on Social LCA to sustainable development using the Framework for Strategic Sustainable Development. A number of strengths and weaknesses from a strategic sustainability perspective are identified and recommendations to improve the support for how to deal with social issues in the product innovation process are provided.

Author(s)
Lagun Mesquita, Patricia: Blekinge Institute of Technology, Sweden
Broman, Göran: Blekinge Institute of Technology, Sweden
Hallstedt, Sophie: Blekinge Institute of Technology, Sweden

Nobre, Farley: Federal University of Parana / School of Management, Brazil
INNOVATION FOR SUSTAINABILITY: CREATING MUTUAL VALUES

This article analyzes whether and how partnerships between Sustainable Ventures (SV) and Base of the Pyramid (BoP) communities can enhance and develop innovations that support the creation of mutual values that involve economic, social and environmental dimensions of sustainability. For this purpose, we investigate two cases in Brazil which include operations between SV and BoP communities. Findings in both cases indicate the partnerships between the SV and the BoP communities can produce mutual values and innovations associated to economic, social and environmental benefits. Therefore, SV can be perceived as leading and disseminating agents of sustainable and mutual values in BoP ecosystems. In such a perspective, Sustainable Entrepreneurship (SE) can play an important role to complement or expand the first traditional model of BoP initiatives as much as the relationship between them create not only profits but also socioeconomic and environmental values for both parts.

Author(s)
Morais-da-Silva, Rodrigo: Federal University of Parana / School of Management, Brazil
Orsiolli, Thalita: Federal University of Parana / School of Management, Brazil
Nobre, Farley: Federal University of Parana / School of Management, Brazil
Walker, David: University of Birmingham / Birmingham Business School, United Kingdom

Timonen, Päivi: University of Helsinki, Finland Kortelainen, Samuli: University of Lappeenranta, Finland
VALUE CREATION IN PUBLIC SERVICE TRANSFORMATION - CASE MOBILITY

A disruptive approach at public service could assist a transformation of public service offerings and raise productivity. In this paper, we adopt a concept of mass customization of public transport as a complex system. The Kutsuplus service pilot for public transport in the Helsinki Metropolitan Area in Finland is used as a case to study the disruptive features of mass customization in public services. In order to analyze a complex system, the focus was turned to individual member of a system as their collective behavior creates the holistic behavior of the system. As such, the Kutsuplus service was developing as expected from the system dynamic analysis. It is expected that the operational efficiency would have continued to increase during following years, but it is not self-evident that the service would have been able to be profitable.

Author(s)
Timonen, Päivi: University of Helsinki, Finland
Repo, Petteri: University of Helsinki, Finland
Kortelainen, Samuli: University of Lappeenranta, Finland

Simms, Christopher: University of portsmouth, United Kingdom
HOW LINE STRETCH CONTRIBUTES TO PRODUCT DEVELOPMENT WITHIN PROCESS INDUSTRIES

Within process industries innovation is commonly constrained by a firm's preceding capital investments in the production line. As a result firms commonly become constrained by their current technical trajectory. The line stretch mechanism is proposed by Aylen (2014) as a potential solution to the constraint. Firms are able to modify their existing line and 'bolt on' new equipment to provide them with new production capabilities. In particular, this can enable them to produce new products. Through two detailed case studies of food packaging innovations this paper explores the concept of line stretch and examines the mechanisms through which firms are able to develop new products. We uncover a number of factors that are required in order for firms to benefit from line stretch. A number of recommendations are made for firms in order to ensure they do not overlook new product opportunities due to a failure to exploit line stretch.

Author(s)
Simms, Christopher: University of Portsmouth, United Kingdom
Trott, Paul: University of Portsmouth, United Kingdom
Ford, Nicholas : University of Portsmouth, United Kingdom
Hullova, Dusana: University of Portsmouth, United Kingdom

Darouichi, Oussama: Université de Neuchâtel, Switzerland
R&D AND INNOVATION MATURITY MODELS: REVIEW AND IMPLICATIONS

The study presented in this research in progress articles tries to analyse the existing literature on R&D and Innovation maturity models. Over the years various models were developed each measuring the sophistication degree of specific R&D capabilities and/or an innovation process. Reviewed models are characterized by a heterogeneity of theoretical backgrounds, a gap between recent R&D and innovation literature advances and model's reference literature, a variety of level of analysis as well as a lack of integrative multi-level approaches. Author differ in terms of measured object (capabilities vs best practices) as well as a lack of empirical evidence. We conclude by exposing important research and practical questions that emerged from the study to be discussed during the presentation.

Author(s)
Darouichi, Oussama: Université de Neuchâtel, Switzerland
Blili, Sam: Université de Neuchâtel, Switzerland
Nisar, Arsalan: Université de Neuchâtel, Switzerland

Tiky, Abdissa Yilma: Seoul National University, Korea, Republic of
DETERMINANTS OF ABANDONING INNOVATION ACTIVITIES: ETHIOPIAN MANUFACTURING SECTOR

Innovation positively affects different aspects of firm performance. More specifically, innovative firms are likely to enjoy production, market and revenue growth, irrespective of the industry in which they operate. However; firms face with obstacles while carrying out innovation and also encounter constraints that deter innovation activities. This paper investigates the effect of innovation hampering factors on the decision to abandon or not start innovation activities in Ethiopian manufacturing sector. The Ethiopian innovation survey data collected for the year 2012 to 2014 is analyzed using recursive bivariate probit model. The model determined simultaneously the probability of facing financial constraint and decision to abandon or not to start innovation projects. The research revealed that obstacles to innovation have different influence at different stages of abandoning innovation. The result of the study will contribute to make informed policy decision.

Author(s)
Tiky, Abdissa Yilma: Seoul National University, Korea, Republic of
Hwang, Junseok: Seoul National University, Korea, Republic of
Yoon, Hyunyoung: Seoul National University, Korea, Republic of
Kim, Hana: Seoul National University, Korea, Republic of

Mahnke, Thomas; Esser, Lukas: Institute of Technology and Process Management, Ulm University, Germany
MANAGING INDUSTRIAL SERVICE INNOVATIONS - A DETAILED PROCESS FRAMEWORK

Many business-to-business companies are shifting their offering from products to product-related services or solutions. The underlying rationale is to achieve a sustainable differentiation in their market segments and to increase profitability. Managing industrial services is a key challenge for these companies. Our research focusses on developing a detailed process framework for service product management. The approach is based on the findings of current literature that were integrated by conducting a meta-analysis on process-related success factors for industrial services. Seventeen (service) product managers from leading German B2B companies evaluated the framework. We distinguish between strategic and operational processes. For the latter we provide detailed process descriptions (objectives, responsibilities, inputs, outputs, methods and templates). Therefore, our approach enables companies to successfully manage their industrial services over their whole lifecycle from ideation to phase out.

Author(s)
Mahnke, Thomas: Institute of Technology and Process Management, Ulm University, Germany
Esser, Lukas: Institute of Technology and Process Management, Ulm University, Germany
Brecht, Leo: Institute of Technology and Process Management, Ulm University, Germany

SESSION 5.1: OPEN INNOVATION 5: ECOSYSTEMS

TUESDAY, JUNE 21, 1130 – 1230

FACILITATOR: KATI JÄRVI

APOLLO 1+2

Hengstler, Monika: Zeppelin University, Germany
INNOVATION ECOSYSTEMS: "WITH GREAT POWER COMES GREAT RESPONSIBILITY"

An innovation ecosystem is a type of inter-organizational network where multiple partners such as product or service suppliers, providers, and distributors are committed to jointly creating and delivering innovations. Because both cooperative and competitive structures exist among ecosystem members, mechanisms are necessary to enable successful cooperation and decrease opportunistic behavior of partners. Drawing on the literature on the nexus of trust and control, this research examines how orchestrating firms build trust and control in innovation ecosystems. Based on empirical research using nine case studies, this study illustrates that in innovation ecosystems, both trust and control constitute mechanisms of governance. Furthermore, the results reveal that orchestrating firms build trust and control at two distinct levels: first, at the firm level between the orchestrating organization and a partner and second, at the level of the innovation ecosystem.

Author(s)
Hengstler, Monika: Zeppelin University, Germany

Dedehayir, Ozgur: Queensland University of Technology, Australia
THE PROCESS OF ECOSYSTEM GENESIS: A TALE OF TWO DRUGS

This paper aims to identify the roles that come to prominence during innovation ecosystem genesis, and the activities that these roles enact over time as the process of genesis unfolds. We employ an inductive research design to examine the cases of Taxol and Herceptin, two ground-breaking drugs used in the treatment of ovarian and breast cancer, using a wide spectrum of archival data sources, including books, corporate announcements, news articles, scientific publications, videos, and company websites. In addition to the roles identified in prior literature, our results suggest four new roles that deserve recognition during ecosystem birth, namely, the 'communicator', 'entrepreneur', 'regulator', and 'lobbyist'. Furthermore, our analyses indicate that the 'expert', 'regulator', 'ecosystem leader', and 'champion' roles come to prominence more often than others in driving the genesis process.

Author(s)
Dedehayir, Ozgur: Queensland University of Technology, Australia
Ortt, Roland J.: Delft University of Technology, Netherlands
Makinen, Saku J.: Tampere University of Technology, Finland
Chakrabarti, Alok: New Jersey Institute of Technology, USA

Garnica, Leonardo: Natura Cosmetics, Brazil
INNOVATION ECOSYSTEMS AND COLLABORATION STRATEGIES: THE CASE OF NATURA COSMETICS

There is a growing interest in the interaction process involving external cooperation, sharing of knowledge, sharing risks and policies in the context of leveraging innovation capacity of enterprises. This paper brings a brief review of the literature on innovation ecosystems and network theory, with the application of a case study of the Natura cosmetics company, a Brazilian multinational personal care and cosmetics industry. We propose that both approaches are part of an incipient open system, yet while the ecosystem seeks to formalize this system, network theory brings a contribution on predicting the next change. The ecosystem helps in the limits setting of network borders from a certain criteria. To apply these concepts we conducted a mapping and developed a methodology to scale Natura Company's innovation ecosystem focusing on the development of collaborative strategies and institutional relationship with research institutions, innovation funding agencies and businesses.

Author(s)
Ikenami, Rodrigo : Escola Politécnica - Universidade de São Paulo (USP), Brazil
Garnica, Leonardo: Natura Cosmetics, Brazil
Ringer, Naya: Natura Cosmetics, Brazil
Horta, Luciana: Natura Cosmetics, Brazil

Aarikka-Stenroos, Leena: Tampere University of Technology, Finland
INNOVATION AND BUSINESS ECOSYSTEM RESEARCH: THE FOCI AND FUTURE AGENDA

An ecosystem approach to innovation and business has become increasingly relevant in contemporary research but research knowledge is scattered across divergent disciplines. The aim of this study is thus, through an extensive, multidisciplinary literature review to integrate the extant knowledge on innovation and business ecosystems and analyze how they are conceptualized, analyzed, captured and depicted. By conducting a systematic multi-phase content analysis of over 230 articles selected from the Web of Science, we will build a comprehensive picture on the research streams of innovation/business ecosystem research, the used methods, foci, illustrations/visualizations of business/innovation ecosystems and build a future research agenda. This article contributes by providing a structured analysis on this multi-disciplinary research area, aggregating the current knowledge and generating a research agenda on innovation/business ecosystems - a theme that is emergent, multifaceted, and crucial to innovative companies as well as researchers in the fields of innovation, management, technology and marketing.

Author(s)
Aarikka-Stenroos, Leena: Tampere University of Technology, Finland
Peltola, Tero: Tampere University of Technology, Finland
Rikkiev, Andrei: Tampere University of Technology, Finland
Saari, Ulla: Tampere University of Technology, Finland

Moreira, Ricardo: INESC TEC, Portugal
THE APPROACH TO CREATIVITY IN EUROPEAN INNOVATION MANAGEMENT STANDARDS

Innovation leads to the creation of economic and social value, having been used as a banner to meet the growing constraints such as job creation or sustainability, on European and world level. In this sense, the standardization of Innovation Management systems has been strengthened at European level to foster innovation, competitiveness and sharing of best practices. This research project aims to understand how creativity is addressed in normative documents of Innovation Management Systems that exist in Europe. All normative documents nationwide existing in Europe address creativity from the perspective of generating ideas and promoting a Culture of Creativity, however, only some report or explain their methods and techniques. This research contributes to the identification of the terms, definitions, methods and technics related to creativity, which are used in innovation management standards, as well as, the understanding of the links between creativity and innovation practices.

Author(s)
Moreira, Ricardo: INESC TEC, Portugal
Xavier, Alexandra: INESC TEC and Faculdade de Engenharia, Universidade do Porto , Portugal
Tschimmel, Katja: ESAD Matosinhos, Portugal

Montandon, Lydia: Atos Spain, Spain
UNLEASH YOUR ORGANIZATION'S TALENT FOSTERING DISRUPTIVE IDEAS

We believe that organizations with a culture of innovation tend to be more successful in facing challenges such as competition, sustainable growth and customer transformation. Moreover, organizations' talented people are an excellent source of disruptive ideas and innovative solutions that can lead to positive steps forward. Thus, a suitable combination of challenges, innovation and talent is the fundament of the methodology we have developed and successfully applied in our company. The methodology is designed to foster the generation of innovative ideas to address acknowledged challenges by a diversity of participants that have great potential. It considers several consecutive phases, which cover not only the generation of ideas, but also their evaluation and the support for the follow-up of selected projects. In this paper, we present a practical case of applying this methodology and describe concrete examples of successful projects that have been developed as a result of using it.

Author(s)
Montandon, Lydia: Atos Spain, Spain
Muguiro, Juan: Atos Spain, Spain
Pezuela, Clara: Atos Spain, Spain
Rossi, Andrea: Atos Spain, Spain

Cerneviciute, Jurate: International Business School at Vilnius University, Lithuania
FACTORS INFLUENCING PRODUCTIVITY OF TEAMWORK IN CREATIVE INDUSTRIES

The companies of creative industries usually use a new paradigm in innovation development. They more willingly invest into solutions based on the existing knowledge, rather than in the development of R&D-based innovation. The important question of how to manage creative teams to achieve a high productivity with limited resources and time arises in innovation management both from the theoretical and practical points of view. There is still no clarity which factors affecting productivity of teamwork are more important than others. The study was aimed at the identification most important factors for the productivity of teamwork. The survey of 113 student creative teams in 8 counties (Lithuania, Poland, Canada, China, France, Italy, Russia, and Denmark) was performed. Based of the findings the hierarchy of the significance of the factors influencing the productivity of teamwork is established and described in the article.

Author(s)
Strazdas, Rolandas: International Business School at Vilnius University, Lithuania
Cerneviciute, Jurate: International Business School at Vilnius University, Lithuania
Jancoras, Zilvinas : International Business School at Vilnius University, Lithuania

Garechana, Gaizka: University of the Basque Country EHU, Spain
ABENGOA SOLAR NEW TECHNOLOGIES: INNOVATION THROUGH UNE 166002 STANDARD

Management standards are benefitial for in-depth analysis of business processes, the reduction of errors and improved traceability, the counterpart comes from bureaucratic workload and favoring a mindset prone to systemization and structured problem solving, thus inhibiting innovation. The pioneer R&D&I management standard UNE 166002 joins together two apparently divergent issues such as standardization and innovation, and we conducted an interview-based qualitative research at Abengoa Solar NT, certified under UNE 166002 in year 2008, in order to determine the effects of certification in the innovative performance of the firm and study the unprecedented boost in patent production of the firm from 2008. Results show that the standard plays a key role objectivizing decision making in R&D project management and innovation strategic planning, and remarkably improves information sharing and knowledge management in the company. The increased bureaucratic workload derived from keeping the standard's information requirements is partially leveraged when applying for grants.

Author(s)
Garechana, Gaizka: University of the Basque Country EHU, Spain
Río-Belver, Rosa: University of the Basque Country UPV/EHU, Spain
Cilleruelo-Carrasco, Ernesto: University of the Basque Country UPV/EHU, Spain
Bildosola-Agirregomezkorta, Iñaki: University of the Basque Country UPV/EHU, Spain

SESSION 5.3: UNIVERSITY-INDUSTRY INNOVATION 3

TUESDAY, JUNE 21, 1130 – 1230

FACILITATOR: ALLEN ALEXANDER

GEMINI 1

Amara, Nabil: Laval university, Canada
CLIMBING THE LADDER OF THE PATENTING PROCESS

Most studies on academic patenting either focus on patent applications or granted patents by adopting the university as their unit of analysis. This study adopts the individual academic as its unit of analysis and focuses on three stages of the patenting process: patent applications, patents granted at the national level and patents granted by the US Patent Office. Three econometric models were estimated. We find a positive relationship between academics who forge strong ties with industry at the patent application level, but no such relationship for the later stages of the patenting process. Furthermore, we find that knowledge assets and organizational factors [university research intensity, laboratory size and use of services provided by the TTO] are positively associated with all three stages of the patenting process. Our results also highlight the importance of controlling for research field and seniority when explaining the involvement of academics in the patenting process.

Author(s)
Amara, Nabil: Laval university, Canada
Landry, Réjean: Laval University, Canada
Idrissi, Moulay Othman: Cadi Ayyad University, Morocco
Halilem, Norrin: Laval University, Canada

Fitzmaurice, Leona: Consultant and writer, USA
FOR THE PUBLIC GOOD: THE BAYH-DOLE ACT AND INNOVATION MANAGEMENT

The U.S. government awarded more than nine percent of its entire 1968 budget to universities and nonprofit entities for research and development. Although such awards are now less than three percent of the federal budget, they continue to be the primary source of support for basic research in the United States. Effective management of resulting innovations is essential for economic development. Public Law 96-517 (the Bayh-Dole Act), enacted December 2, 1980, granted institutions the right to assert ownership in inventions created with federal funding. The planned study will examine development and implementation of policies and procedures by U.S. universities to comply with the Bayh-Dole Act and manage federally funded inventions. This paper focuses on the University of Wisconsin at Madison, Stanford University, and the University of Michigan System identified recently by Reuters as among the top ten most innovative universities worldwide.

Author(s)
Fitzmaurice, Leona: Consultant and writer, USA

Miller, Kristel: Queens University , United Kingdom
ENTREPRENEURIAL ACADEMIC ENTREPRENEURS: UNDERSTANDING MICRO SOCIAL FACTORS AND LEGITIMACY

As universities transition toward being increasingly entrepreneurial there is, according to their emerging strategies, a call for a new breed of Entrepreneurial Academic. Academic Entrepreneurs, who spin-out or start-up new ventures, have been studied since the inception of academic capitalism in the late 1980s; however, recently, policy and now research recognises less formal modes of business engagement attracts academics with an Entrepreneurial modus-operandi. In reality, we know little about the distinctions between these two types of academics; the challenges they face and how microsocial factors impact upon their motivations and legitimacy. This exploratory research reports on 5 interviews comparing traditional and second career academics in a leading UK Business School. We find that career stage and pathway affects the motivation to become an entrepreneurial academic and that the prevalence of organisational reward and recognition processes, support, norms and role models all impacted upon the perceived legitimacy of Entrepreneurial Academics.

Author(s)
Miller, Kristel: Queens University , United Kingdom
Alexander, Allen: Exeter University, United Kingdom
Albats, Ekaterina: Lappeenranta University of Technology, Finland

Kortelainen, Samuli: SimAnalytics Oy, Finland
LAUNCHING A NEXT GENERATION ANALYTICS PRODUCT - CASE INDUSTRIAL MAINTENANCE

We present our experiences from development and commercialization of a revolutionary cloud based analytics service for management of industrial maintenance. The tool is meant for optimizing preventive maintenance schedules by utilizing massive amounts of operation data with modern computational capabilities. Development of scalable analytics tool is challenging with significant challenge in productizing and simplifying a complex product suitable for large volume sales. As the product is currently being sold and tool has first significant reference customer, it is safe to say that so far these problems have been overcome. The development journey has not been easy as there is limited amount of previous advanced analytics services to benchmark during presentation. We will present our solutions and experiences from this case in our presentation.

Author(s)
Kortelainen, Samuli: SimAnalytics Oy, Finland

Spieth, Patrick: University of Kassel, Germany
PASSIVE INNOVATION REJECTION: REJECTION BEHAVIOR PRIOR NEW PRODUCT EVALUATION

Since decades, new product adoption research has confirmed high new product failure rates around 50%. Recent empirical studies highlight that adoption may begin only after initial resistance offered by the consumer has been overcome. Yet, there is always some resistance before adoption, and many new products get even rejected without deliberated evaluation. Previous conceptual research, suggest that nonpurchase behavior without deliberate new product evaluation (i.e. passive innovation rejections) account for a major share of new product failures. However, empirical evidence on the existence and determinants of passive innovation rejection behavior is still lacking. Consequently, this study strives to systematically explore whether passive innovation rejections really exist and to shed light on the nature and determinants of this phenomenon. Our findings from an experimental study (n=153) indicate high relevance of passive innovation rejections in the new product adoption context, such that many products are indeed rejected prior new product evaluation.

Author(s)
Spieth, Patrick: University of Kassel, Germany
Heidenreich, Sven: Saarland University, Germany
Joachim, Verena: University of Kassel, Germany

Joachim, Verena: University of Kassel , Germany
FRONT END ACTIVITIES: INSIGHTS FROM GERMAN MATERIAL SCIENCE AND ENGINEERING

The front end of innovation is crucial for a firm's success. Within this research stream, the concept of FE activities has become central. They describe how to implement the process, comprising finding and assessing new product opportunities. We build on results that FE processes should be flexible and context specific. We address the current need to understand how organizations can influence FE activities to be more efficient. Therefore, we qualitatively explored the navigating effect of organizational FE characteristics. By conducting semi-structured interviews with 24 FE experts from German Material Science and Engineering companies, we outline that organizational FE characteristics can be derived in organizational capabilities, strategic orientation, and organizational culture. Furthermore, we explore that organizational capabilities and strategic orientation have an effect on the intensity of FE analysis, whereas organizational culture as well as soft skills have a moderating and the degree of initial uncertainty a mediating effect.

Author(s)
Joachim, Verena: University of Kassel , Germany
Spieth, Patrick: University of Kassel, Germany

Hsu, Teresa Tiaojung: Cheng Shiu University, Taiwan
STRATEGIC ORIENTATION OF THE FIRM AND NEW PRODUCT PERFORMANCE

The success in new product development of a firm can bring about competitive advantage. According to Knowledge-based View (KBV), the ability to integrate resource and knowledge is the potential source of competitive. Many studies indicate that the ability of the firm is its strategic orientation, which guide the firm to create proper behaviors through a deeply rooted set of values and beliefs to achieve superior performance. There are an increasing number of studies suggesting that the dimensions of strategic orientation (market orientation, technology orientation, entrepreneurial orientation, and learning orientation) are related to and complementary to each others, and that the organizations which strongly focus on a single orientation tend to perform poorly than those who combined several dimensions of orientations simultaneously. This study adopts Hakala's (2011) complementary view and proposes a framework that simultaneously incorporates all four dimensions of strategic orientation and then examines the effects of these orientations on new product performance.

Author(s)
Hsu, Teresa Tiaojung: Cheng Shiu University, Taiwan

Chasanidou, Dimitra: SINTEF ICT, Norway
DESIGN THINKING AND INNOVATION IN COMPANIES

This paper presents the results of an ongoing qualitative study with employees working with innovation in a Scandinavian company. Using Design Thinking as an approach, the paper analyses how different tools are used to initiate innovation processes. Issues like innovation drivers, team structure, creativity, information flow among teams, usefulness and challenges of using the methods and tools are discussed. The role of different design tools in innovation processes opens the discussion for possible future directions. The results suggest that many methods and tools could generate value in regards with the innovation processes, while there are many challenges that need to be considered. The findings could be beneficial primarily for companies that facilitate DT methods, designers, developers, managers and other involved members in innovation activities could gain insights on how to implement DT methods and tools.

Author(s)
Chasanidou, Dimitra: SINTEF ICT, Norway
Gasparini, Andrea: University of Oslo, Norway

Lindland, Kristiane: International research Institute of Stavanger, Norway
DEVELOPING LEARNING CAPABILITY THROUGH EDI FOR MANAGING AMBIDEXTERITY

Innovation ambidexterity is crucial for companies to survive long-term. Traditional companies often excel in incremental innovations, based on their core competence, but are less able in using this core competence for more radical innovations bringing new products to new markets. Through a case study of a traditional, yet ambidexterous company, we raise the question of whether companies characterized by Employee Driven Innovation (EDI) are likely to develop stronger learning capabilities and consequently, stronger innovation ambidexterity. As this by far is research-in-progress, we here merely raise the question as a working hypothesis and welcome views, questions and suggestions for how to take these ideas further. EDI has often been connected to the Nordic Model, characterized by a three-part collaboration between leaders/owners, employee representatives and employees. However, leaning capabilities are also found in other cultures. Hence, research on learning capabilities and EDI needs further exploration.

Author(s)
Lindland, Kristiane: International research Institute of Stavanger, Norway
Billington, Mary : International Research Institute of Stavanger, Norway

Koch, Volker: Institute of Business Economics and Industrial Sociology, Austria
REWARDING OF PURCHASING PROFESSIONALS IN AUSTRIAN TECHNOLOGY COMPANIES

Reward systems are a tried and trusted tool in propelling the motivation by incentive of employees - especially in finance, accounting and sales. Reward systems could support trigger changes and growth through innovation, however rewarding for purchasing departments is rarely witnessed. This paper aims to identify the field of practice of rewarding systems in seven Austrian technology companies and evaluate the use of rewarding systems as it is to current understanding unclear why industry implementation has been limited. The great impact purchasing processes have on companies and how it could be heighten in technology companies are the leaders of this research. Purchasing departments have a high potential to generate profit for technology companies and thus to pursue important business objectives. The paper further aims to point out how to fulfil rewarding systems in purchasing departments and to what gains.

Author(s)
Koch, Volker: Institute of Business Economics and Industrial Sociology, Austria

Haslam, Christian: Aalborg University, Denmark
DEVELOPING APPRENTICE SKILLS FOR INNOVATION THROUGH INTERDISCIPLINARY TRAINING AND EDUCATION

This paper is concerned with training students of vocational education programs; specifically, tradesmen and skilled workers to better utilise value networks and knowledge hubs, set up through government initiatives, as an innovation platform. The study indicates that massively interdisciplinary innovation workshops originally designed for university students can be adapted to vocational programs demonstrating similar effects on this demographic. Collaboration around solving real-world problems across various trades and, in some cases also coupled with academic disciplines, seems to influence participants' attitude towards not only interdisciplinary collaboration but also entrepreneurship in general. Combining trades directly with academic disciplines also appears to, mostly, dispel any preconceived notions about one another. The study is based on two years of experimentation running six independent workshops across ten different disciplines and trades and four educational institutions.

Author(s)
Haslam, Christian: Aalborg University, Denmark

SESSION 6.1: OPEN INNOVATION 6: ECOSYSTEMS & NETWORKS

TUESDAY, JUNE 21, 1235 – 1335

FACILITATOR: TEEMU SANTONEN

APOLLO 1+2

Phillips, Mark: University of Cambridge, United Kingdom
CONVERGENT INNOVATION ECOSYSTEMS: NAVIGATING, NEGOTIATING AND NURTURING

New developments such as 'Precision Medicine', 'Regenerative Medicine' and 'Digital Health' are emerging as important areas, underpinned by the concept of 'convergent' or 'cross-industry' innovation, resulting in greater uncertainty and influence from new knowledge and actors, including previously disparate technologies and capabilities. There has been limited empirical research to understand the capabilities required in such nascent and convergent ecosystems. Focussed on early stage medical technology innovation, this research explores the ecosystem and five longitudinal cases, using a combination of semi-structured interviews, field observations and, company and public documents. A conceptual model for early stage convergent innovation is developed, built upon the need for co-evolution of the innovation, business model, and value network within an evolving ecosystem. Micro-processes, forming an 'activity system', underpinning this are suggested. The research makes a contribution to convergent innovation and nascent ecosystems, and provides practical proposals for innovators in this field.

Author(s)
Phillips, Mark: University of Cambridge, United Kingdom
Srai, Jagjit Singh: University of Cambridge, United Kingdom

Ritala, Paavo: Lappeenranta University of Technology, Finland
DISRUPTIVE INNOVATION IN THE ECOSYSTEM LEVEL: PATH-CREATION AND INSTITUTIONAL BARRIERS

Disruptive innovations create fundamental, transformative shifts in markets and technologies. Existing research has provided understanding over the nature of disruptive innovation, and suggested implications for emerging and established actors. However, we know less about how disruptive innovations relate to the emergence of business ecosystems within which they are embedded in, as well as of the institutional barriers and drivers involved. To this end, we develop a framework of ecosystem emergence through institutional disruption. We utilize the insights from institutional theory and particularly organizational field approach to explain how emerging ecosystems confront barriers and possibilities in the organizational field, and how they disrupt and connect to existing actors and institutions in the field. We conduct an illustrative multiple case study focusing on disruptive innovation in the context of co-evolution of ecosystems and institutions. Our empirical analysis provides evidence of the path-creation and path-breaking mechanisms and institutional barriers of disruption.

Author(s)
Ritala, Paavo: Lappeenranta University of Technology, Finland
Aarikka-Stenroos, Leena: Tampere University of Technology, Finland

Greenfield, Ricardo: INESC-TEC, Portugal
SUSTAINING INNOVATION NETWORKS THROUGH NETWORK COMMITMENT

SMEs in German industry are known for being naturally innovative and active in networking activities for innovation. Due to the benefits of networks for innovation, measures have been taken by German policy to implement additional top-down innovation networks. It has been however acknowledged that networks implanted by policy from a top-down approach have a higher failure rate when compared to networks solely supported by the network partners. The purpose of this work is to analyze seven top-down networks that were funded by policy-incentives over a period of three years. After this period the network either collapsed or evolved to a sustained form, supported by committed network partners. The focus of the study is on how these networks, which resulted in either committed or uncommitted partners, were created and managed over time.

Author(s)
Greenfield, Ricardo: INESC-TEC, Portugal
Barros, Ana Cristina: INESC-TEC, Portugal
Soares, Antonio Lucas: INESC-TEC, Portugal

Huizingh, Eelko: University of Groningen, Netherlands
COOPETITION IN R&D NETWORKS: IMPLICATIONS FOR INNOVATION PROCESSES

R&D Networks comprise of different actors with different goals and motivations. Thus, such networks are filled with tensions that emerge from simultaneously existing competing or contradictory organizing elements. In this study we examine Dutch aerospace sector and the knowledge search and integration behaviour of firms in participating R&D networks. We find evidence of several tensions that have implications to knowledge processes of firms in the network. In particular, we find evidence of both paradoxical and dialectical tensions that create specific managerial challenges and opportunities. Paradoxical tensions require often simultaneous attention to the different organizing elements, while dialectical tensions create either/or situations that need to be carefully managed. The results provide interesting insights to the design of R&D networks and knowledge search and integration outcomes.

Author(s)
Ritala, Paavo: Lappeenranta University of Technology, Finland
Huizingh, Eelko: University of Groningen, Netherlands
Almpanopoulou, Argyro: Lappeenranta University of Technology, Finland
Wijbenga, Paul: University of Groningen, Netherlands

Vandael, Mark: CeeTee, Belgium
IDEA SELECTION 2.0

We use a lot of techniques in order to generate ideas. However, after generating creative ideas, we must also select some ideas for implementation. Often the idea selection is run through very quickly, or even ignored. I firmly believe idea selection is equally important to idea generation and that the whole creative process is as strong as it weakest link. Several years ago the Centre for Development of Creative Thinking (COCD) developed a technique to select ideas, the COCD-box, which is widely used nowadays. But they wanted to go a step further. Little research had been done on idea selection, and the few studies that were done, showed that people are very poor in selecting creative ideas. COCD cooperated with the organizational psychology department of Ghent University. This research resulted in new insights in idea selection! I am happy to share some of the findings with you.

Author(s)
Vandael, Mark: CeeTee, Belgium

Hurmelinna-Laukkanen, Pia: University of Oulu, Oulu Business School, Finland
ARE YOU SERIOUS? HUMOR TYPES AFFECTING INNOVATIVE BEHAVIOR AND OUTPUT

While humor is present in everyday business in practice, its strategic meaning and effectiveness is rarely investigated in relation to innovation processes or their management. In this study, we suggest that different types of humor can have both positive and negative effects on innovative work behavior and innovation output of individuals, and that the nature of the effects depends to an extent on whether these humor types are present in interaction within or across organizational boundaries. Theoretical discussion and empirical evidence derived from a quantitative analysis illustrate the diversity of relationships. The results indicate that while humor is, in general, more relevant for innovation within organizations, it also bears importance with regard to external relationships. Likewise, generally speaking, aggressive humor has negative connotation while, affiliative, coping, and reframing types of humor are associated with positive undertone. However, these connections are not self-evident.

Author(s)
Hurmelinna-Laukkanen, Pia: University of Oulu, Oulu Business School, Finland
Atta-Owusu, Kwadwo: University of Oulu, Oulu Business School, Finland
Oikarinen, Eeva-Liisa: University of Oulu, Oulu Business School, Finland

Sonnenburg, Stephan: Karlshochschule International University, Germany
MOMENTS TO DESPAIR IN THE CO-CREATIVE PROCESS

Collaborative creativity is highly dynamic, turning the creative process into a multidimensional phenomenon, where it is impossible to exclude negative emotions. However, the effect of negative emotions on co-creativity is ambiguous and mostly seen as harmful for the team performance. This paper examines despair in project teams to be able to (re-)enter into the group flow. Based on empirical data in the form of diaries, a typology of moments leading to despair is elaborated. It is highlighted that inter-personal problems should not be underestimated. The paper contributes not only to a more profound understanding of the relationship between constraints, affective reactions and co-creativity but it also enables managers and team leaders to understand their teams' behavior in order to stimulate creativity. Negative emotions might not be as bad as they seem when experienced in collaboration and could lead to the 'rebirth of the phoenix' during the co-creative process.

Author(s)
Sonnenburg, Stephan: Karlshochschule International University, Germany
Manz, Lena: Karlshochschule International University, Germany

Reis, Detlef: Thinkergy Limited, Hong Kong
HOW TO MOVE BEYOND CONVENTIONAL IDEAS IN AN INNOVATION PROJECT?

X-IDEA is an awards-winning innovation process method enabling organisations to reliably produce meaningful deliverables in innovation projects. One key distinguishing feature of X-IDEA is its separation of the creative phase into two distinct stages, Ideation and Development. I structure my paper into five parts. Part 1 establishes the desire of organisations moving beyond conventional ideas. The second part reviews the literature on how selected innovation process methods approach the creative process phase. After briefly discussing the chosen research approach for this paper in part 3, I explain the creative stages of X-IDEA in detail in the fourth part, thereby describing how the two creative stages Ideation and Development distinctly differ and build upon each other to enable more novel, original, and meaningful idea outputs. The final part discusses how X-IDEA's approach of two separate creative process stages may inspire business practitioners and researchers alike.

Author(s)
Reis, Detlef: Thinkergy Limited, Hong Kong

Medina, Sara: Sociedade Portuguesa de Inovacao, Portugal
SCIENCE, TECHNOLOGY AND INNOVATION (STI) PERFORMANCE OF CHINA
This paper is based on the study funded by the European Commission "Science, Technology and Innovation (STI) Performance of China". This study was carried out by Sociedade Portuguesa de Inovação (SPI), The United Nations University - Maastricht Economic and Social Research and Training Centre on Innovation and Technology (UNU-MERIT) and the Austrian Institute of Technology (AIT), with the support of Tsinghua University and Renmin University of China. The objective of the STI China study was to assess the evolution of the country's STI Performance and analyse its economic impact on Chinese productivity and competitiveness and on the global markets, taking into account the differences between various Science and Technology fields, economic sectors and types of actors involved.
Author(s)
Medina, Sara: Sociedade Portuguesa de Inovacao, Portugal

Lillehagen, Frank: Commitment AS, Norway
HOLISTIC DESIGN FOR CYCLIC INNOVATION AND LEARNING
Industry and public sectors are facing novel challenges, and need to move from horizontal and vertical activity-sliced information flows to instant data- and situation-driven collaboration and work and knowledge management. The major European trends are set by the circular economy and the single digital market strategies and policies. To stay competitive, meet emergent customer needs, and support life-cycle services all actors involved must deliver sustainable results and adaptive services. Novel knowledge assets, design methods, and ICT capabilities must be designed and implemented while work is progressing. Companies must be able to simultaneously participate in many diverse networks, performing R&D in parallel with innovation and learning, business operations, and customer services delivery. Pragmatic applications, design and configuration rules, parameter dependencies, and working contexts cannot be prescribed and coded, so emergent visual networking platforms are dependent on novel symbolic languages and visual knowledge modelling.
Author(s)
Lillehagen, Frank: Commitment AS, Norway
Krogstie, John: NTNU IDI, Norway

Altenburger, Reinhard: IMC University of Applied Sciences Krems, Austria
STAKEHOLDER ENGAGEMENT IN THE INNOVATION PROCESSES OF SUSTAINABLE PRODUCTS
The goal of sustainable innovations is to minimize the negative impacts of production while simultaneously creating business benefits and value for customers and other stakeholders. Stakeholder engagement can be identified as a valuable source of innovation, due to the resources stakeholders offer, and integrating stakeholder groups into innovation processes prove highly valuable. The main contribution of this presentation is to emphasize the significance of stakeholders for sustainable innovations. Stakeholders can be involved in different phased of the innovation process, starting with environmental scanning, generating and evaluating ideas right through to jointly creating and reworking prototypes and launching a new product, service or process. Benefits of interacting with stakeholders in the innovation process are manifold, including external knowledge exploration and exploitation, cost savings as well as gaining stronger credibility and partnership opportunities along with a better approach to emerging consumer concerns.
Author(s)
Altenburger, Reinhard: IMC University of Applied Sciences Krems, Austria
Bachner, Christine: IMC University of Applied Sciences Krems, Austria

Diedrichs, Eva: IMP³rove - European Innovation Management Academy, Germany
MASTERING THE CHALLENGES OF NATIONAL AND REGIONAL INNOVATION STRATEGY IMPLEMENTATION
In many countries especially in Europe, innovation strategies exist to create economic and social wealth. However, they usually only focus on the "what": the objectives and key areas that are considered to be the "wealth engines". Most of the innovation strategies lack the implementation part, the "how". This creates the risk that they will not deliver the expected results. This presentation will highlight the key success factors for innovation strategy implementation: continuity of an effective support infrastructure and support services, alignment of supply and demand of innovation management support, and the qualification of the support providers. As innovation often requires longer-term investment, companies need security that the innovation support will continue beyond the current election period. Innovation policies address the need of SMEs, however, in many cases not their demand as a recent survey shows. Best practice examples will provide a roadmap to effective innovation strategy implementation.
Author(s)
Diedrichs, Eva: IMP³rove - European Innovation Management Academy, Germany

Begonja, Marta: University of Rijeka Faculty of Medicine , Croatia
PACINNO - PLATFORM FOR TRANS-ACADEMIC COOPERATION IN INNOVATION
The IPA Adriatic CBC programme-funded project PACINNO (Platform for trans-Academic Cooperation in Innovation) was initiated with the aim to create and enable a regional innovation eco-system, tackling the issue of poor economic development of the Adriatic Region of Europe as well as weak industry-academia cooperation. Through the project three core activities were implemented: research on innovation and national innovation systems enablers and inhibitors as well as individual-level creativity factors (micro enablers) and the organizational setting enablers and inhibitors; education of scientists and researchers in entrepreneurial/business skills and the development of technology transfer activities. The project provided inputs for policy makers and realized concrete activities that support the innovation system and its stakeholders (policymakers, scientists and entrepreneurs). One of the successful activities was the implementation of startup trainings in order to enable young startups and high growth teams to present their products in front of a network of investors.
Author(s)
Begonja, Marta; Markovic Cunko, Ana; Gerbin, Ani: University of Rijeka Faculty of Medicine, Croatia

Hamwi, Michael: ESTIA, France
BUSINESS MODEL INNOVATION FOR ENERGY TRANSITION IN HOUSEHOLD SECTOR
This paper focuses on Business Model (BM) innovation practices within a specific field: the household sector energy transition. In recent years, the value chain between the stakeholders involved in this field has been modified due to recent technological changes, which poses a threat for current companies and an opportunity for insiders. This research work is carried out within the Greenplay project, which is an EU funded Horizon H2020 project. This project aims to develop new business models that reduces energy consumption in the household sector and can be successfully implemented. In this study, a systematic literature review is conducted related to energy business models. Furthermore, the proposed framework is a crossing classification based on criteria concerning innovation targets and various energy production, distribution and consumption BMs. In the second phase of the Greenplay project the authors will apply the proposed framework to the use cases identified in the project.
Author(s)
Hamwi, Michael: ESTIA, France
Lizarralde, Iban: ESTIA, France

Morais-Storz, Marta: Norwegian University of Science and Technology, Norway ; Stoud Platou, Rikke: Norwegian University of Science and Technology, Norway
PROBLEM SETTING IN INNOVATING AND STRATEGIZING FOR A FUTURE UNKNOWN

Organizations that are resilient and stay competitive over the long-haul are those that continually put forth into the world innovations that are a good-fit to the novel conditions that they help to create. These innovations are an outcome of a purposeful and deliberate front-end process that interactively creates new meaning and constructs problems to be solved. We call this purposeful and deliberate front-end process "problem setting". It is defined by Donal Schön as "a process in which, interactively, we name the things we will attend and frame the context in which we will attend to them" (Schön, 1983, p. 40). In this paper we identify two primary antecedent factors (top management team future orientation and organizational legacy burden) that on the one hand may drive this process or hinder it. From this, we derive theoretical propositions and research questions for a forthcoming empirical study.

Author(s)
Morais-Storz, Marta: Norwegian University of Science and Technology, Norway
Stoud Platou, Rikke : Norwegian University of Science and Technology, Norway

Platou, Rikke S.: Norwegian University of Science and Technology (NTNU), Norway
MANAGERS' FUTURE ORIENTATION AND CORPORATE STRATEGY UNDER CHANGING ENVIRONMENTS

A key to long-term organizational success is the ability to adapt. During times of rapid technological change, future uncertainty, as well as the need for adaptation, increases. Treating the individual component of corporate foresight, we explore the relationship between top managers' future orientation and their companies' strategies, looking specifically at strategic diversification in times of uncertainty. Through a multiple-case study, we explore this relationship in incumbent Norwegian electric power companies. They represent a traditional industry that is currently facing a complex and uncertain future. We observe heterogeneity in which and how many strategic dimensions top managers' consider when they assess the future and develop corporate strategies. We find that top managers' future orientation influences the boundaries of organizational identity. Managers that are highly future oriented expand the perception of the company's self-image: what are we and what can we become?

Author(s)
Platou, Rikke S.: Norwegian University of Science and Technology (NTNU), Norway
Aspelund, Arild: Norwegian University of Science and Technology (NTNU), Norway
Johansen, Nina B.: Norwegian University of Science and Technology (NTNU), Norway
Malmedal, Maren F.: Norwegian University of Science and Technology (NTNU), Norway

Bø Lyng, Hilda: University of Stavanger, Norway
TRANS-DISCIPLINARY BOUNDARY SPANNING: KNOWLEDGE TRANSFER FROM PETROLEUM TO BIOMEDICINE

In the current situation with a significant decline in the petroleum industry, there is a need for an industrial transformation process in Norway. Several initiatives have been taken to facilitate this transformation by transferring and applying knowledge gained in the petroleum sector to new industry areas. This study will focus on the development of biomedical technology. A problem to be solved is how to transfer knowledge between disciplines as different as petroleum and biomedicine. Existing literature has focused on knowledge transfer mainly across boundaries within a firm or an industry. There is therefore a need for more research on how one can efficiently transfer knowledge between highly different disciplines. This research will develop a classification framework for the relevant theoretical approaches and apply this framework on empirical data to clarify how knowledge transfer between the petroleum and biomedical disciplines can be understood through a variety of theoretical lenses.

Author(s)
Bø Lyng, Hilda: University of Stavanger, Norway
Brun, Eric Christian: University of Stavanger, Norway

Douglas, Tania: University of Cape Town, South Africa
CROSS-SECTOR COLLABORATION FOR ORTHOPAEDIC DEVICE INNOVATION IN SOUTH AFRICA

We investigate the orthopaedic device development network in South Africa by performing a bibliometric study. The objective is to identify the actors participating in orthopaedic device development, the sectors to which they belong and to characterise the intra- and inter-sectoral collaboration. Journal and conference articles on orthopaedic device development in South Africa, extracted from the Scopus database for the period 2000-2015, were used to draw the network. Social network analysis metrics (density, degree and betweenness centrality) were applied. The network was largely disconnected, having a density of 0.057. Actors from the university and healthcare sectors accounted for over 80% of the network, with local universities contributing most to the network. The actors with highest influence on the propagation of information in the network were local healthcare facilities. The strongest ties were between local universities and local healthcare facilities.

Author(s)
Salie, Faatiema: University of Cape Town, South Africa
de Jager, Kylie: University of Cape Town, South Africa
Douglas, Tania: University of Cape Town, South Africa

Beck, Mathias: University of Zurich, Switzerland
DIVERSITY AND INNOVATION PERFORMANCE: FIRMS' RESEARCH- AND DEVELOPMENT-ORIENTATION

This study examines how diversity in R&D collaboration partners affects the innovation performance, as measured by each firm's sales share of innovative products taking into account the research versus development orientation of firms. To address this question, a large-scale sample of firm-level data from six waves (1999, 2002, 2005, 2008, 2011 and 2013) of the Swiss innovation survey is examined using a heteroscedastic-robust Tobit regression method. Results suggest that diversity positively affects the innovation performance of both firm types, but that the effects are strongest for research-oriented firms. In line with theoretical reasoning, a clear inverted U-shaped relationship between partner diversity and innovation performance is detected only for development-oriented firms and differences in effects are most pronounced for new-to-the-market innovations. In light of our findings, the study stresses the importance of partner diversity for research-oriented firms and (vertical) partner selectivity for development-oriented firms.

Author(s)
Beck, Mathias: University of Zurich, Switzerland
Dieng, Mattias: University of Zurich, Switzerland

Wilson, Mark: GlaxoSmithKline Pharmaceuticals, United Kingdom
IP MANAGEMENT IN TECHNOLOGY ALLIANCES: AN EXAMPLE OF CAPABILITY DEVELOPMENT

On initiating collaborative open innovation activities, firms often encounter challenges in agreeing complex intellectual property provisions in alliance negotiation situations. In technological domains of activity, IP rights are of considerable significance, affecting how technologies can serve the firm's business strategy, and the viability and cost of different options. Many companies develop competences in the management of IP terms as an experiential learning process, over a period of years. This presentation will address GlaxoSmithKline's development of competence in this area, with reference to technology management, over a 15-year period, and will summarise the best practices that were developed, and the underpinning rationales. The establishment of IP skills within a group charged with developing and commercialising formulation and pharmaceutical manufacturing approaches, which was initiated in the late 1990s, may provide useful lessons for practitioners in firms that are initiating open innovation activities, and for academics who are interested in IP management.

Author(s)
Wilson, Mark: GlaxoSmithKline Pharmaceuticals, United Kingdom

Dingler, Annika: Zeppelin Universität, Germany
MANAGING TECHNOLOGICAL DISTANCE IN COLLABORATIVE INNOVATION: AC-ROUTINES AND SOCIAL INTEGRATION

While high technological distance to project partners outside of the established value chain can positively influence innovation performance, project goals can only be achieved if the social integration of project members is improved in terms of coordination and communication. This paper draws on absorptive capacity literature to explore how social integration mechanisms translate into different learning outcomes in distant collaborations within and across organizational boundaries. Drawing upon expert interviews as our primary source of data, we conducted an in-depth multiple case study analysis of inter-organizational projects. Our findings indicate that the effect of different types of social integration mechanisms on learning outcome also affects distance in process and product technology. Moreover, they suggest that it is not just the extent, but also the interplay of social integration mechanisms surrounding internal and external absorptive capacity routines that enable project members to engage in the absorption of distant knowledge.

Author(s)
Enkel, Ellen: Zeppelin Universität, Germany
Dingler, Annika: Zeppelin Universität, Germany
Heil, Sebastian: Deloitte Consulting GmbH l The Deloitte Garage, Germany

Coelho Rodrigues, José: INESC TEC and FEUP, Portugal
ALIGNING INNOVATIONS AND NETWORKS IN IMPLEMENTATION PROJECTS: SYSTEMATIC LITERATURE REVIEW

This paper systematizes current understanding about efforts to align technology and adopters in implementations taking place in interorganizational networks. For several decades, researchers have been conceptualizing implementations as processes of mutual adaptation, or alignment, but only recently has an interest on interorganizational networks as locus of adoption started to develop. Nevertheless, the volume of existing relevant literature already justifies a review, especially considering that research on this topic is significantly scattered across journals and disciplines. Findings from a systematic literature review contribute to conceptualize alignment efforts in network implementations and understand their impact on the implementation outcome. The review shows that knowledge about alignment management is still scarce and weakly supported, and provides directions for future research, supported by a conceptual framework, which also offers useful guidance for practitioners.

Author(s)
Coelho Rodrigues, José: INESC TEC and FEUP, Portugal
Claro, João: INESC TEC and FEUP, Portugal
Barros, Ana Cristina: INESC TEC, Portugal

Ribeiro de Oliveira, André: Rio de Janeiro State University, Brazil
SPORTS INNOVATION: AN OPPORTUNITY FOR TECHNOLOGICAL COMPANIES BASED ON OLYMPICS

The aim of this project is to evaluate the innovation degree and the innovation environment of the Brazilian technological based companies, which produce sports devices, with support of business incubators and government encouragement. Specifically aimed to: 1) expand the mapping of devices; 2) analyse the trajectory of the introduction of these devices on the market; 3) measure the innovation degree of these devices and to observing the innovation environment of such enterprises. The research analyses 384 incubators and showed 22 Brazilian technological based companies, operating in sport industry segment, motivated by the Olympic Games, that will take place at Rio de Janeiro State in 2016. The innovation degree was obtained by the Innovation Radar methodology, which uses 12 dimensions to assess multi criterions. In addition, there was analysed the innovation environment through university-industry-government interaction. The results indicate low level of innovation in spite of an adequate environment to stimulate innovation.

Author(s)
Regina Cantisano dos Santos e Silva R TERRA, Branca: Rio de Janeiro State University, Brazil
Almeida, Mariza: Rio de Janeiro State Federal University, Brazil
Batista, Luiz Alberto: Rio de Janeiro State University, Brazil
Ribeiro de Oliveira, André: Rio de Janeiro State University, Brazil
Alberto Neves dos Santos, João: Fluminense Federal University, Brazil
Almeida Nobrega, Jana: Rio de Janeiro State Federal University, Brazil
Lehnemann Agostinho Martins, Leonardo: Rio de Janeiro State Federal University, Brazil

Köller, Christoph: Görgen & Köller GmbH, Germany
FOSTERING INNOVATION FROM SOCIAL SCIENCES AND THE HUMANITIES

There is a vast amount of findings in social sciences and humanities (SSH) with potential to add value to current developments and to address societal challenges. But SSH research is often not getting beyond the academic sphere. This may be due to the kind of research created in SSH, as it is often more diffuse and cannot be attributed to one researcher alone. But SSH research is also often not patentable and thus classic instruments of K/TTOs are not applicable. The talk will present challenges and opportunities with valorizing research from SSH. It will furthermore aim at making more people aware of the innovation potentials that can be found in SSH research and how to exploit them in order to create opportunities arising with this widely unexplored field for innovation.

Author(s)
Köller, Christoph: Görgen & Köller GmbH, Germany

Santonen, Teemu: Laurea University of Applied Sciences, Finland
SOCIAL NETWORK ANALYSIS BASED KEYWORD ANALYSIS OF ISPIM RESEARCH TOPICS

The usefulness of keywords and keyword networks as a fundamental carrier of knowledge has been recognized but the prior studies identifying and analyzing innovation management research topics and their evolution at ISPIM have not addressed the Social Network Analysis (SNA) viewpoint. Therefore this study evaluates the network structure of ISPIM research topics from the SNA point of view. By applying SNA to the ISPIM keyword and research topic data from 2009 to 2014 full academic paper publications (N=1084), this study is explicitly modelling how the different keywords and keyword derived research topics are inter-linked with each other. By analyzing various centrality measures, the importance of a particular keyword and research topics within the whole ISPIM network are determined. As a result the contemporary body of knowledge of innovation management research is described and visualized as a keyword and research topic network. Implications for future innovation management research are discussed.

Author(s)
Santonen, Teemu: Laurea University of Applied Sciences, Finland
Conn, Steffen: ISPIM, United Kingdom

Robbins, Peter: Maynooth University, Ireland, Republic of
HOW TO UNLOCK INNOVATION IN PROFESSIONAL SERVICES: AN EMPIRICAL STUDY

Despite a substantial body of work in the areas of both organizational culture, and innovation, limited research on these topics exist within the context of professional service firms.. Human actors alone create the service delivery processes that characterize professional services (Løwendahl et al., 2001). This highlights the importance of managing individuals and professionals in ways that support innovative enterprise.Joas and Beckert (2002) also stress the importance of creativity to continued innovation and highlight it as being 'central to economic growth'. It is for this reason, that the ability to enhance and exploit its creative and innovative abilities is a crucial competitive weapon in the arsenal of a modern organisation. Our survey investigates how a Top 6 law firm encourages creativity across different levels of the organization. This survey will contribute to the knowledge about enhancing innovation in professional services.

Author(s)
Robbins, Peter: Maynooth University, Ireland, Republic of
Fu, Na: Maynooth University, Ireland, Republic of
Devitt, Frank : Maynooth University, Ireland, Republic of

Kim, Yun: Sungkyunkwan University , Korea, Republic of
FACTORS INFLUENCING LIVING LAB ACTIVATION IN KOREA USING SEM

Living Lab is a user-driven open innovation ecosystem where users themselves partake in the R&D and innovation process. With its mature ICT environment, South Korea has great advantages in effective deployment of Living Lab. Despite having this key prerequisite for Living Lab, however, its deployment remains slow and few in Korea. Existing studies are insufficient to explain this phenomenon, as they cover only the general motivation of participants in pre-existing Living Lab that are already well developed. This study seeks to identify in finer detail the key influential factors that drive the activation of Living Lab. Socio-technical, internal and external factors from various existing theoretical frameworks are assessed and integrated into our model, which is then validated via structural equation modelling with data collected 100 professional respondents. This study provides a deeper insight into Living Lab's development process, as well as managerial strategies for effective new deployment of Living Labs.

Author(s)
Kang, Jungseok: Sungkyunkwan University , Korea, Republic of
Kim, Yun: Sungkyunkwan University , Korea, Republic of
Kim, Yohan: Sungkyunkwan University , Korea, Republic of
Kang, Jiseok: Sungkyunkwan University , Korea, Republic of
Sohn, Byungkuk: Sungkyunkwan University , Korea, Republic of
Choe , Jaehun: Sungkyunkwan University , Korea, Republic of
Yoon, Jaehee: Sungkyunkwan University , Korea, Republic of

Haukipuro, Lotta: University of Oulu, Center for Ubiquitous Computing, Finland
END USER INVOLVEMENT IN PUBLIC PROCUREMENT THROUGH LIVING LAB APPROACH

This paper examines public procuring, aiming to increase understanding on how living lab approach and end-user involvement create innovativeness and enhance public procurement results, providing effectiveness and better solutions. Empirical findings are based on a real-life unique public procurement in the healthcare field where living lab approach was used through product testing phase. Perceived quality of the product formed on the basis of product testing was in significant role for the first time in public healthcare related procurement of City X; the winning solution was not the most affordable but the one obtaining highest quality scores by users. Findings of the study suggest that product testing as part of public procurement should be more widely taken into use, however, carefully considering the right balance of price-quality ratio to ensure innovativeness. Based on the study, we propose a framework for product testing as a part of public procurement through open procedure.

Author(s)
Haukipuro, Lotta: University of Oulu, Center for Ubiquitous Computing, Finland
Väinämö, Satu: University of Oulu, Center for Ubiquitous Computing, Finland
Torvinen, Hannu: University of Oulu, Oulu Business School, Finland

Schuurman, Dimitri: iMinds - MICT - Ghent University, Belgium
IMPACT ASSESSMENT OF INTERACTIVE COUPLED OPEN INNOVATION IN LIVING LABS

Within Open Innovation in general, and for Living Labs, an organizational form for implementing and facilitating Interactive Coupled Open Innovation, there is a lack of clear measurement and impact assessment studies (Enkel et al., 2009). Therefore, this paper gathers evidence and proposes an impact assessment model for Interactive Coupled Open Innovation. The basis of the model consists of assessing the value the Living Lab generates on three different levels of analysis (Schuurman, 2015). The macro level uses Open Innovation indicators, the micro level from the User Innovation literature, whereas the meso level uses indicators from both literature streams. Different than most papers that approach Living Labs from a theoretical or democratic perspective, we propose an economic perspective instead (Greenbaum, 1993). This way, the paper contributes to the understanding in terms of impact assessment and measurement models for Open Innovation practices in general, and Living Labs in particular.

Author(s)
Schuurman, Dimitri: iMinds - MICT - Ghent University, Belgium
Baccarne, Bastiaan: iMinds - MICT - Ghent University, Belgium
De Marez, Lieven: iMinds - MICT - Ghent University, Belgium
Ballon, Pieter: iMinds - SMIT - VUB, Belgium

Leminen, Seppo: Laurea University of Applied Sciences, Finland
INNOVATION TOOLS IN LIVING LABS

This paper examines innovation tools and subsequent tooling in living labs. Besides offering a new mode of open innovation for practitioners, living labs is an under researched and emerging scholarly research area. In particular, there is a substantial need to examine innovation tools in living labs. This study focuses on the link between different innovation processes and the usage of tools in living labs. So doing, it develops a framework based on the living lab literature and analyzes 40 living labs in different countries. The study contributes to the literatures of living labs and open innovation by introducing four new types of living labs: linearizer, iterizer, mass customizer, and tailor. Moreover, the study proposes three ways to organize innovation activities in living labs. The paper concludes with theoretical and managerial implications and suggests directions for future research.

Author(s)
Leminen, Seppo: Laurea University of Applied Sciences, Finland
Westerlund, Mika: Carleton University, Canada

Krämer, Katja: University of Lübeck, Germany Rau, Christiane: University of Applied Sciences Upper-Austria, Austria
EXPLORING THE KNOWLEDGE TRANSFER OF INNOVATION MANAGERS DURING CO-CREATION PROJECTS

We contribute to the on-going discussion in innovation literature to enhance the organizational perspective of co-creation research. Based on organizational learning, we argue that the co-creation expertise of innovation managers who frequently conduct co-creation projects are a valuable source for organizations to foster and strengthen their co-creation activities generally - if the innovation managers share their gained co-creation expertise within their organization. A qualitative explorative research design was chosen to gain in- depth and rich insights to the research gap identified. We conducted semi- structured interviews with both European innovation intermediaries and European innovation managers. With the exploration and comparison of sharing measures that are used by the innovation managers and factors that influence their sharing behaviour during co-creation projects, we identify adjusting levers with which organizations can support the co-creation knowledge transfer internally.

Author(s)
Krämer, Katja: University of Lübeck, Germany
Rau, Christiane: University of Applied Sciences Upper-Austria, Austria
Scheiner, Christian: University of Lübeck, Germany

Felício, Nuno: INESC TEC/CITE and Faculdade de Engenharia, Universidade do Porto, Portugal
INTERNAL TECHNOLOGY SCOUTING: A NEGLECTED APPROACH IN SUPPORTING TECHNOLOGY TRANSFER

Eliciting invention disclosure through proactive scouting of inventions within organizations remains relatively unexplored by technology transfer offices in academia and other R&D organizations. Given the critical role of the disclosure in kickstarting the technology transfer process, this paper proposes that such an anticipatory initiative holds an untapped potential to extract value from knowledge produced inside the organization. Considering the scarcity in the current literature on this topic, this paper introduces a methodology to elicit invention disclosures in technology R&D organizations, and assesses its performance towards promoting an increase in the quantity and quality of disclosures, using as a case study an R&D organization in Portugal. The application of this methodology, simply called Internal Technology Scouting, resulted in the disclosure of one high quality invention and three pending submissions by the end of the study. Suggestions for improvement are discussed.

Author(s)
Felício, Nuno: INESC TEC/CITE and Faculdade de Engenharia, Universidade do Porto, Portugal
Maia, Catarina: INESC TEC/CITE and Faculdade de Engenharia, Universidade do Porto, Portugal
Niza, Cláudia: INESC TEC/CITE and Universidade do Porto, Portugal
Claro, João: INESC TEC/CITE and Faculdade de Engenharia, Universidade do Porto, Portugal

Mäenpää, Sari: Tampere University of Technology, Finland
KNOWLEDGE INTEGRATION METHOD DEVELOPMENT FOR MULTI-STAKEHOLDER INNOVATION PROCESS

This paper addresses the development of a knowledge integration method for multi-stakeholder innovation. Specifically, it focuses on the piloting in the early stage of the knowledge integration method development process according to design science approach. This study is based on knowledge integration as the ability to put knowledge into action in organizations, and therefore reports the development of a method for knowledge integration. The empirical study includes one case with multi-stakeholder innovation sessions in R&D -project context. This paper presents both the process of the method development along with the outcomes and describes the boundary objects used within the method. Additionally, it reveals the feedback received from the pilot. Presenting conclusions for both academics and industry, the paper fills a gap in the literature of putting expert knowledge, an essential feature of individual creativity and organizational innovation, into action with the help of a knowledge integration method.

Author(s)
Mäenpää, Sari: Tampere University of Technology, Finland
Suominen, Anu: Tampere University of Technology, Finland
Breite, Rainer: Tampere University of Technology, Finland

Inigo, Edurne: Deusto Business School, Spain
SUSTAINABILITY-ORIENTED INNOVATION: IDENTIFYING ITS IMPACT ON FINANCIAL PERFORMANCE

The linkage between sustainable business and financial performance is a debated topic that has offered mixed results in the past. Some argue that they are not easy to combine, while others say that it is possible in some contexts. Our study examines whether sustainability-oriented innovation is associated with low or high financial performance, looking at the development of process, product or service sustainability-oriented innovation in groups of financially high and low performing companies. Based on a sample of 170 Spanish firms, our survey-based study finds that financially high performing firms engage into more sustainable product and process innovation than low performing ones. Our results suggest that sustainability-oriented innovation in services is guided by different rules.

Author(s)
Inigo, Edurne: Deusto Business School, Spain
Ritala, Paavo: Lappeenranta University of Technology, Finland
Albareda, Laura: Deusto Business School, Spain

Albareda, Laura: Deusto Business School, Spain
KNOWLEDGE SEARCH STRATEGIES AND SUSTAINABILITY-ORIENTED INNOVATION

Knowledge search is a fundamental issue for firms pursuing to improve their innovation outcomes. Existing research has provided a lot of evidence of strategies utilizing internal and external knowledge sources. For sustainability-oriented innovation (SOI), knowledge search is especially important since sustainable solutions require broad stakeholder and system-level understanding. This study empirically examines the knowledge search strategies of 170 firms in Spanish Basque region, and provides novel evidence of how knowledge search strategies contribute to three different types of SOI outcomes. Our study shows that firms that lean on market and R&D related strategies yield more product SOI, suggesting that these two search strategies are particularly useful in maximizing the product SOI outcomes. Market-related strategies help to avoid risk in commercialization, while R&D related strategies provide firms with the necessary knowledge to advance the technicalities of developing sustainable products.

Author(s)
Iñigo, Edurne: Deusto Business School, Spain
Ritala, Paavo: School of Business and Management, Lappeenranta University of Technology, Finland
Albareda, Laura: Deusto Business School, Spain

Bergset, Linda: Borderstep Institut gGmbH, Germany
EXPLORING THE FINANCIAL "BIOGRAPHIES" OF EARLY-STAGE GREEN COMPANIES IN GERMANY

Sustainable entrepreneurship and entrepreneurial finance are areas that have experienced increasing research interest in the last decades. Few studies have, however, yet looked at green start-up finance and the related challenges and opportunities. This empirical study uses a case study design to look at success factors and barriers of financial access in green start-ups in the energy sector in Germany. Although similar success factors and barriers can be found as in other start-ups, some specificity exists for green start-ups in the energy sector. These include, amongst others, the need for a high level of sector knowledge on the part of the investor as well as an ability to stomach the relatively long R&D periods and rather instable regulatory framework surrounding such start-ups.

Author(s)
Bergset, Linda: Borderstep Institut gGmbH, Germany
Fichter, Klaus: Carl von Ossietzky University Oldenburg, Germany
Beucker, Severin: Borderstep Institut gGmbH, Germany

Freitas Santos, José: NIPE/UM and ISCAP/IPP, Portugal
INNOVATION FROM BELOW: DYNAMIC CAPABILITIES OF THE TERRITORY

Societies are currently facing very pressing and complex social problems. Social innovation is a crucial instrument for the conception of new strategies for social and economic development. Many of these initiatives are pursued at the local level and are based on the specific features, endowments and capabilities of a given territory. Through the analysis of the Cooperative Terra Chã, we assess whether dynamic capabilities of the territory can generate opportunities for social innovation and analyse how they can be exploited by local communities. We observe that by using a holistic response that explore in an integrated the resources and capabilities of the territory, this new social ventures are able to cope with severe social issues that are not being adequately addressed by the remaining social responses.

Author(s)
Freitas Santos, José: NIPE/UM and ISCAP/IPP, Portugal
Bernardino, Susana: Instituto Politécnico do Porto/ ISCAP, Portugal

Storvang, Pia: University of Southern Denmark, Denmark Rostgaard Evald, Majbritt: University of Southern Denmark, Denmark Højbjerg Clarke, Ann: University of Southern Denmark, Denmark
INDUSTRY-MOVER INNOVATION BASED ON EXTERNAL COLLABORATION

Often, when researching innovation focus is on focal companies or, value chain partners in a single industry. Recently OI-researchers have shown that innovation also happens through cross-industry innovation. But even a more extreme form of OI occurs: Industry-mover innovation - stepping into a new unknown industry to create a new market or product. How companies actually handle the process of moving into a new industry is under researched. To understand the process two streams of literatures are combined: OI focusing on how firms open up their innovation process and design thinking literature concerned with intense forms of collaboration. The findings, based on a qualitative in-depth case study of four firms, show that continuous learning of external collaborators is central for the firms to make successful industry-mover innovation. More, for the firms to get tacit knowledge of the external collaborators it requires of them to use different types of design methods.

Author(s)
Storvang, Pia: University of Southern Denmark, Denmark
Rostgaard Evald, Majbritt: University of Southern Denmark, Denmark
Højbjerg Clarke, Ann: University of Southern Denmark, Denmark

Cheng, Colin: National Yunlin U. of Science and Technology, Taiwan
MANAGING OPEN INNOVATION FOR RADICAL INNOVATION PERFORMANCE

While early OI studies tended to focus on its effects on new product/service innovativeness and new product/service success, recent research endeavours have begun to identify OI as a unique resource to enhance radical innovation. However, the OI literature is somewhat inconclusive regarding the effects of OI inbound and outbound activities on radical innovation. These inconsistent findings suggest the need for considering additional factors in the OI-radical innovation relationship. To address this issue, this study focuses on the research question: how do knowledge sharing and acquisition capabilities influence the effects of OI inbound and outbound activities on radical innovation performance? Based on survey data, the statistical results indicate that the effectiveness of OI inbound and outbound activities is contingent on the presence of knowledge acquisition and sharing capabilities.

Author(s)
Cheng, Colin: National Yunlin U. of Science and Technology, Taiwan
Sheu, Chwen: Kansas State University, USA

Allmendinger, Martin: University of Hohenheim / Department of Entrepreneurship, Germany
HOW DO LARGE FIRMS REALIZE INNOVATION-ORIENTED PARTNERSHIPS WITH START-UPS?

Existing studies in literature of open innovation conclude that the speed and complexity of innovation require large and established firms to rethink their organisational structures and processes to be able to partner with various external actors. Consequently, firms try to find new cooperation partners such as high-skilled and technology-driven start-ups to avoid being left behind on innovation. Realizing that they cannot compete alone on highly innovation-driven and competitive global markets, firms enter asymmetric partnerships. This, they hope to find and create breakthrough innovations outside their core business. Using an exploratory approach, I contribute to the widely unexplored field of non-equity-related innovation-oriented partnerships between corporations and start-ups. I explore ten mechanisms that foster management of start-up-cooperation from an exclusive large and established firm perspective of 17 firms. I find that corporate-start-up-partnerships go far beyond mere idea collection but promise mutual benefit through intense partnerships at a level playing field.

Author(s)
Allmendinger, Martin: University of Hohenheim / Department of Entrepreneurship, Germany

Dabrowska, Justyna: Lappeenranta University of Technology, Finland
SEARCHING FOR COMMON SKILLS AND COMPETENCES OF OPEN INNOVATION PROFESSIONALS

This paper focuses on understudied human side of open innovation. It explores the roles and responsibilities and related to them skills and competencies of open innovation specialists. Moreover, it analyses the differences in competences profiles across organizations and differences of organizational functions, where open innovation professionals are needed based on analysis of 100 job offers collected worldwide from the beginning of 2014 and 2016. Findings indicate that open innovation functions do not refer to R&D departments only but companies seek open innovation specialists to other functions like Strategic Management; Marketing and Sales; Corporate Communications, IT or Purchasing. Also, ability to influence others and prior start-up experience become a basic requirement to apply for position of open innovating specialist.

Author(s)
Dabrowska, Justyna: Lappeenranta University of Technology, Finland
Podmetina, Daria: Lappeenranta University of Technology Finland, Finland

Mohammad, Ali Naef: Aalborg university, Denmark

A REVISED MODEL FOR VALUATION AND SELECTION OF R&D PROJECTS

Our research proposes an R&D project selection model which has been developed through a comprehensive literature review on financial valuation and selection of R&D projects. The findings contribute directly to the understanding of optimal choices for project compositions in firms' innovation project portfolio. We describe an R&D selection model which integrates valuation and selection through a multi-stage approach. We develop an integrated model of R&D selection and discuss the four subsequent stages of R&D project valuation and selection. Our consolidated effort on R&D project valuation brings about a comprehensive understanding of the consequences for optimal project selection for portfolios, and our propositions add numerous insights on what areas should be considered for R&D portfolio optimization.

Author(s)
Mohammad, Ali Naef: Aalborg university, Denmark
Kristiansen, Jimmi Normann: Aalborg university , Denmark

Saari, Ulla: Tampere University of Technology, Finland

EXPLORING HOW BRAND EXPERIENCE MEASUREMENT HELPS INTEGRATING MARKETING AND R&D

Based on a brand experience survey done on global mobile phone brands, we have analysed how brand experiences impact brand loyalty and are associated to prior product selections. We have created two conceptual models after doing exploratory factor analysis (EFA) on data collected from Finland (N=468). Our findings indicate that brand experiences of mobile phone brands consist of intellectual, sensory, behavioural, and eco-friendliness related aspects, and that the affective dimension that has earlier been linked to brand experiences is in fact associated more with brand loyalty. Also the perception of eco-friendliness in the brand experience can have an impact on brand loyalty and it is reflected in the product selection. Thus we suggest that integrated marketing and innovation management concentrate on improving the emotions consumers have towards a brand and measure this dimension to track how the brand has succeeded to deliver intellectual, sensory, behavioural and eco-friendliness related brand experiences.

Author(s)
Saari, Ulla: Tampere University of Technology, Finland
Mäkinen, Saku J.: Tampere University of Technology, Finland

Motta, Virna: strategie&innovazione, Italy Antozzi, Lorenzo: Industrie De Nora, Italy

DIFFERENT R&D MANAGEMENT APPROACHES: MULTINATIONAL LARGE COMPANY AND INDUSTRIE DENORA

Manage R&D resources and measuring R&D performance over time can be quite complex due to inherent uncertainty. The main aim of an efficient Portfolio Management is to align projects with the company's objectives to obtain a balance among the opportunities that the market may offer. Many companies develop their own methods rather than use one taken from the literature. The work shows how Industrie De Nora (medium-large Italian chemical company), and Pirelli Tyre (big manufacturing Multinational tyre company) have approached this topic setting an integrated portfolio management system using a balanced scorecard method to measure the efficiency of R&D function. This work aims showing their path, underlining the common issues met and suggesting a plan of actions to link R&D resources and activities with firm's strategic objectives. This report describes tools and processes that might be used as part of the project portfolio management and evaluation process.

Author(s)
Motta, Virna: strategie&innovazione, Italy
Antozzi, Lorenzo: Industrie De Nora, Italy

Silva, Bruna: Universidade Federal Rural do Semi-Árido, Brazil Almeida, Mariana: Universidade Federal do Rio Grande do Norte, Brazil

EFFICIENCY EVALUATION OF R & D PROJECTS FOSTERED BY GOVERNMENT

The present study aimed to measure the innovation performance of companies subsidized with public funds arising from government programs in developing R&D projects. They were measured through a quantitative and qualitative analysis represented by analyses of efficiency and exogenous factors in order to examine whether there is any relationship between these factors and the different levels of efficiency achieved by the investigated companies. The results showed that 31.25% of the analyzed companies stood out in conducting research in technological innovation, thereby making better use of financial resources made available by the supplying organ in the form of economic subsidy. This indicates that most of the companies supported by the program failed to transform their R&D projects into successful products/technologies. The presence of barriers in the process of innovation development can be considered as exogenous factors to the proposed model, influencing companies' performance.

Author(s)
Silva, Bruna: Universidade Federal Rural do Semi-Árido, Brazil
Almeida, Mariana: Universidade Federal do Rio Grande do Norte, Brazil

Vervoort, Koen: iMinds Living Labs, Belgium
THE WORTHCASE-MATRIX, ONE OVERVIEW TO FLOW A LIVING LAB PANEL

Communication between actors in a Living labs is never easy and managing the expectations of all different stakeholders is the main challenge of panel management. Therefore creating a clear view on the panel activities and expectations, the research methods used and resources needed/available can be a good way to tackle these issues. Facing these issues iMinds Living Labs developed the WORTHCASE-matrix. It's an overview - available for all different stakeholders - of all panel related activities throughout a project. By making this overview available to all stakeholders (research, business development, istigators, panel management,...), everyone get better insights on the impact of the undertaken steps to achieve the goals and everyone can find a tool to facilitate their efforts.

Author(s)
Vervoort, Koen: iMinds Living Labs, Belgium
Georges, Annabel: iMinds Living Labs - MICT, Belgium
Schuurman, Dimitri: iMinds Living Labs - MICT, Belgium
Oelbrandt, Kathy: iMinds Living Labs, Belgium
Krawczyk, Piotr: JAMK University of Applied Sciences, Finland

Savelkoul, Louise: Tilburg University, Netherlands
A STRUCTURED SCIENCE BASED NEEDSFINDING FOR INFRASTRUCTURE LIVING LABS

Living Labs increasingly enable innovations to be facilitated and implemented in a fast and efficient way. Key element is the active involvement of users. This case presents the needsfinding phase of an infrastructure Lab within the context of cycling. Since effectuation costs are high (roads and buildings are capital intensive), the need for focus (tackling the right user needs) is essential for funding of the lab. The needsfinding phase aims to generate user needs and requirements, which is researched by investigating bicycle commuting intention. This is tested using the Theory of Planned Behavior (TPB). The results show convincingly that bicycle commuting intention can be explained by the variables of the TPB model (R2=.808). Within the context of a Living Lab, this model can be used as a very effective tool to instigate behavioral change. The insights can be generalized and are readily applicable in other areas.

Author(s)
Peutz, Murk: EQUATOR RESEARCH BV, Netherlands
Savelkoul, Louise: Tilburg University, Netherlands

Henttonen, Kaisa: Lappeenranta University of Technology, Finland Horila, Anne: Regional Council of Häme, Finland
THE CO-CREATION OF SOCIAL INNOVATIONS: A LIVING LAB CASE

Participative processes and empowerment of citizens are seen as central aspects of social innovation that involves collaborative activities between the private, public, and third sectors. Therefore, it is important to identify the factors influencing social participation. Thus, we investigate how can we encourage people to contribute to improving societal well-being and enhance partnerships between citizens, region, as well as the profit and non-profit sectors. Our study results reveal factors influenting organisational and citizen co-creation in different roles. We also discuss participant motivation and perceived value from co-creation. Furthermore, we also describe specific shareholder-related outcomes of co-creation process missing from most of the previous studies (Voorberg et al., 2015). Finally, we also identify actions that can be taken to enhance co-creation and overcome the potential barriers of co-creation of social innovations.

Author(s)
Henttonen, Kaisa: Lappeenranta University of Technology, Finland
Nisula, Anna-Maija: Lappeenranta Univeristy of Technology, Finland
Blomqvist, Kirsimarja : Lappeenranta University of Technology, Finland
Horila, Anne: Regional Council of Häme, Finland
Takala, Minna : Regional Council of Häme, Finland

Paliokaite, Agne: Visionary Analytics, Lithuania
INNOVATION POLICIES AND FIRM ABSORPTIVE CAPACITIES: MINDING THE GAP

The paper addresses 'regional innovation paradox' referring to the lower capacity to absorb public funds earmarked for the promotion of innovation in the lagging regions. The focal interest of this paper is - what policy instruments and policy mixes are most effective in building absorptive capacities of firms to facilitate innovation and growth. Literature analysis helps to distill determinants of absorptive capacity at firm and system levels. Analysis of policies applied by the new EU Member States in 2007-2013 is used to determine the gap between mainstream innovation policies and business capacity building needs. The paper presents an integrative conceptual 'stairway of competence' mapping technology consumers, emerging, potential and mature innovators types with alternative policy routes.

Author(s)
Paliokaite, Agne: Visionary Analytics, Lithuania

Aramburu, Nekane: University of Deusto, Spain
ABSORPTIVE CAPACITY AND INNOVATION PERFORMANCE IN MEXICAN SMES

In their seminal article on absorptive capacity (AC), Cohen & Levinthal (1990) argued that the ability of a firm to recognize the value of new, external information, assimilate it, and apply it for commercial ends (i.e. absorptive capacity) is critical to its innovative capability. As outside sources of knowledge are often highly relevant in the innovation process, the ability to exploit external knowledge is thus a critical condition for innovation to succeed. According to this, this research focuses on the interplay between AC and innovation performance. In particular, such interplay has been examined in a set of 115 Mexican manufacturing SMEs. Structural Equation Modelling based on Partial Least Squares (PLS) has been applied for statistical analysis. The results obtained show that AC significantly influences innovation performance and that managerial context has a relevant impact on AC.

Author(s)
Aramburu, Nekane: University of Deusto, Spain
Silva, Roberto: Tecnológico de Monterrey, Mexico

Lin, Chien-Chiang: Department of Business Administration, Shih Hsin University, Taiwan
AN INDIVIDUAL-LEVEL EXPLORATION OF ABSORBPTIVE CAPACITY

In order to increase the knowledge stock of a specific company, sharing knowledge among employees tocultivate absorptive capacity is advocated as promising deed for securing market position. Absorptive capacity was traditionally considered as an organizational level concept; however, the current study argues that, through a proper manipulation of the knowledge management mechanism, knowledge sharing intention, and knowledge sharing behaviour, companies could successfully improve the absorptive capacity of employees and upgrade its competitive edge. Based on the quantitative investigation, it is concluded that, knowledge management mechanism has a positive effect on knowledge sharing intention, knowledge sharing behaviour, and absorptive capacity; knowledge sharing intention has a positive effect on knowledge sharing behaviour; knowledge sharing behaviour has a positive effect on absorptive capacity; knowledge sharing intention plays a mediating role on the relationship between knowledge management mechanism and knowledge sharing behaviour. Discussion, implication, and direction for further inquires are provided.

Author(s)
Lin, Chien-Chiang: Department of Business Administration, Shih Hsin University, Taiwan
Huang, Lee-Jay: Department of Business Administration, Shih Hsin University, Taiwan

Horvat, Djerdj: Fraunhofer ISI, Germany

ABSORPTIVE CAPACITY: OPENING THE BLACK BOX FROM A PROCESS PERSPECTIVE

In a dynamic and turbulent environment, the capacity of firms to absorb new knowledge from a variety of external sources becomes an increasingly important factor of their innovation capability. This article makes an additional contribution to the literature and management practice by opening the "black box" of absorptive capacity process. Based on an in-depth, single-case study of a highly innovative company from the drive technology industry in Germany, we present a process model with three main turning points and describe how these can result in different linear and non-linear process flows. Furthermore, we describe the links between various organizational mechanisms and the effectiveness of identified process flows. This contributes to the literature by elucidating why firms may have different absorptive capacities.

Author(s)
Horvat, Djerdj: Fraunhofer ISI, Germany
Dreher, Carsten: Freie Universität Berlin, Germany
Som, Oliver: Management Center Innsbruck MCI, Austria

Suominen, Arho: VTT Technical Research Centre of Finland Ltd, Finland
INNOVATION SYSTEMS AND ECOSYSTEMS: A REVIEW AND SYNTHESIS

The ecosystem approach to innovation and business ecosystem has emerged as prominent research avenue departing from the extant literature on innovation and management. The broad adoption of ecosystem terminology has increased the conceptual ambiguity of the terminology to where ecosystems are used fairly loosely, even as buzz or decoration to the core message. This study tackles the use of ecosystem terminology and structures the conceptual frame for the field, identifying definitions of an innovation ecosystem and how the concept has been founded in previous literature. Our results highlight how the ecosystem theory, while showing value adding elements, rests heavily on a few seminal works, but both empirical and conceptual advancements are needed before a coherent theory.

Author(s)
Suominen, Arho: VTT Technical Research Centre of Finland Ltd, Finland
Seppänen, Marko: Tampere University of Technology, Finland
Dedehayir, Ozgur: Queensland University of Technology, Australia

Silva, Ana: SIGMA, Portugal
REGIONAL INNOVATION SYSTEMS IN FOLLOWER REGIONS: ASSESSING INNOVATION POLICY MIX

Public funding of R&D is widely implemented in national innovation policies. R&D policy instruments include public performed research, government funding of business R&D. Each instrument has its own merits and they can be seen as complementary. There is an ongoing debate about the driving forces of innovation, opposing the "science and technology push" and the "demand pull" models. This debate can be translated to innovation and R&D policies but the assessment about the effectiveness of policy choices is sensitive to context. We consider the specificities of follower countries and we discuss the effectiveness of two main instruments of R&D policy in Portugal during recent years: SAESCTN, oriented to support research in S&T public or non-profit organizations; and SI I&DT, oriented to support firms' R&D projects. From this analysis we draw conclusions with particular relevance for follower countries.

Author(s)
Silva, Ana: SIGMA, Portugal
Silva, Mário: FEP University of Porto, Portugal

Joachim, Klemens: University of Kassel, Germany
INNOVATION INTERMEDIARIES IN THE INNOVATION SYSTEM MATERIALS SCIENCE AND ENGINEERING

This article attempts to fill in the gaps in the literature about intermediaries' contribution in innovation systems. We look at intermediaries' which activities and services they provide, what of this can be interpreted as intermediary function in a narrower sense and how this contribute to the innovation systems performance. Furthermore, we analyze how efficient this activity is and in how far potentials for improving collective benefit can be identified. The article investigates the necessary capabilities that the intermediaries develop, and activities that the intermediaries conduct and institutionalize such capabilities. In particular, this article aims at investigating the contribution of intermediaries in Germany. In particular, the role of scientific technical non-profit associations as key intermediaries in the system, were examined. The multiple-cases study was conducted through 20 semi-structured and in-depth interviews with management of intermediaries, university researchers and industrial companies.

Author(s)
Joachim, Klemens: University of Kassel, Germany
Spieth, Patrick: University of Kassel, Germany

Dőry, Tibor: Széchenyi István University, Hungary
HOW EFFECTIVELY SERVE INTERMEDIARY ORGANISATIONS INNOVATION IN HUNGARY?

Innovation intermediary organizations play a significant role in national systems of innovation and they attract a particular attention of national and EU policy makers. Usually, innovation intermediaries provide a wide range of services for the actors of the innovation chain in which cooperation and trust based connections are emphasised. So far, no assessment of the efficiency and effectiveness of these organisations was carried out in Hungary, in a country with low evaluation traditions. Having this idea in mind, the paper presents the main results of our empirical investigation that focused on the analysis of the effectiveness of services offered by Hungarian innovation intermediary organisations. Our results demonstrate that there is room for improvement both at management level of individual organizations and at the level of research and innovation policy making to leverage the expected impact of innovation intermediaries.

Author(s)
Dőry, Tibor: Széchenyi István University, Hungary
Gajzágó, Éva: Edutus College, Hungary

Santonen, Teemu: Laurea University of Applied Sciences, Finland
SCIENTOMETRICS ANALYSIS OF ESF-PROJECTS IN FINLAND: FUNDING PERIOD 2007-2013

European Social Fund (ESF) is among the largest funding instruments in the EU. However, less is known how collaboration networks in ESF-programs are formed at the regional level. Therefore, this Finnish case study evaluates what kind of collaboration relationships are existing among ESF-project actors in Finland during the funding period 2007-2013. In all the dataset included 2.773 ESF-projects and 1.092 different business IDs in four regional and one nationwide programs in five thematic topics areas. In all only 2 percent of organisations have had funding to 40 or more projects, whereas about half of the organisations had participated only in one project and less than firth in two projects. As a result only handful of organisations are actively collaborating and taking part in Finnish ESF-programs. Nationwide funding program has most widespread collaboration, which outperform clearly all four regional programs, in which collaboration is characteristics by fewer but more intensive collaboration.

Author(s)
Santonen, Teemu: Laurea University of Applied Sciences, Finland

Gjelsvik, Martin: IRIS (International Research institute of Stavanger), Norway
DEVELOPING BUSINESS MODELS IN THE EMERGING MARKET FOR WELFARE TECHNOLOGY

The ageing of the population, the growing burden of chronic diseases, and the limited access to healthcare personnel are all threats to the sustainability and equity of health and care systems throughout Europe. A growing number of firms have seen these opportunities. We hypothesize, however, that a narrow technological focus hinders diffusion and implementation of new solutions. Part of the reason is that firms are reluctant to invest sufficiently due to high perceived risks and lack of standards. Abernathy and Utterbach (1978) use the term "fluid" to characterise this initial phase of a new market. In this context of an emergent market without standards, managers have difficulties in developing viable business models or are unwilling to invest in more advanced models. The study is based on deep interviews with top managers in eleven Norwegian firms that develop products and services related to welfare technology

Author(s)
Gjelsvik, Martin: IRIS (International Research institute of Stavanger), Norway

DaSilva, Carlos: School of Management Fribourg/ University of Applied Sciences Western Switzerland, Switzerland
BUSINESS MODEL INNOVATION: A DISCOURSE ANALYSIS OF CEOS

While business model innovations are critical to a company's long-term survival, they are still poorly understood compared with other kinds of innovations such a process or product innovation. In this paper, we investigate prior research and reframe business model innovation through a practitioner lens. We report on a content analysis of interviews with 63 CEOs of small and medium size enterprises in the technology industry, with the aim of recording their definition of business model innovation. This research intends to contribute to a better understanding of the meaning of business model innovation from a practitioners' perspective. These findings open new directions for theory development and empirical studies in the business model and innovation management literature.

Author(s)
DaSilva, Carlos: School of Management Fribourg/ University of Applied Sciences Western Switzerland, Switzerland

Rehm, Florian: INESC TEC, Portugal

FINANCING SOURCES AND PERFORMANCE METRICS IN EARLY-STAGE START-UPS

On the one hand, a crucial component of every entrepreneurial firm and its performance is the access and availability to sufficient capital. On the other hand, various scientists from different disciplines have devoted themselves to answer the question of how the performance of a business can be measured. However, little work exists on the relationship between the access to external financing sources and the performance of an early-stage start-up. The most important determinants of performance in the literature are financial performance measures such as sales growth or employee growth. Nevertheless, these metrics are not suitable if applied to an early-stage start-up. This paper aims to present a start-up performance metric framework, that allows to assess start-up performance in the different investment stages. The results show that not only the amount of raised capital is important, but also that particular sources of finance have an advantageous impact in boosting start-up performance.

Author(s)
Rehm, Florian: INESC TEC, Portugal
Xavier, Alexandra: INESC TEC, Portugal

Jee, Sujung: Yonsei University, Korea, Republic of
SIGNIFICANT FEATURES OF COLLATERALIZED PATENTS ON SUCCESSFUL LENDING

Although the early stage new technology based firms (NTBFs) have difficulty in borrowing money from traditional banks due to their uncertainty, there exists quite large and robust US industry of specialized venture lenders providing debt to the early stage NTBFs. Because these NTBFs have few tangible assets, they increasingly tend to use patents as collateral for debt financing. The patents used as collateral are major asset and knowledge that can significantly affect young venture's future innovation performance. Based on the early stage ventures' collateralized patent portfolio, we investigate the relationship between radicalness of young ventures' collateralized patents and their future innovation performance measured in terms of amount, quality, and innovativeness of patenting activity. Understanding such relationship can enhance the efficiency of patent backed venture financing, which greatly contributes to the economic development when it is successful.

Author(s)
Jee, Sujung: Yonsei University, Korea, Republic of
Sohn, Soyoung: Yonsei University, Korea, Republic of

SESSION 9.1: SERVICE INNOVATION

WEDNESDAY, JUNE 22, 0900 – 1000

FACILITATOR: ERIC STEVENS

APOLLO 4

Harengel, Peter: Philipps-University Marburg, Germany
PERSPECTIVES OF SERVICE-DOMINANT LOGIC FOR INNOVATION MANAGEMENT: A BIBLIOMETRIC ANALYSIS

Originally stemming from the field of marketing, the service-dominant logic concept has gained broad interest in many areas of in management research during the last ten years. However, the concept is still in its infancy and lacks a sold anchoring in extant theory as well as a traceable integration in well-stablished research fields. In this paper, we analyze the current state of service-dominant logic influenced research and identify future research directions against the background of a bibliometric analysis. This allows for identifying the core fields of impact of the service-dominant logic and helps to uncover overlaps between the different research areas. Our findings provide a first holistic picture of service-dominant logic research and help to pave the way for a future development of this concept as we highlight research potential that is inherent in this concept.

Author(s)
Harengel, Peter: Philipps-University Marburg, Germany
Clauß, Thomas: Philipps-University Marburg, Germany
Laudien, Sven: University of Erfurt, Germany

Warren, Vessela: University of Worcester, United Kingdom
OVERCOMING CHALLENGES TO SERVICE INNOVATION PROCESS IMPLEMENTATION IN AN SME

This case study research reports on a small and medium-sized (SME) business-to-business (B2B) services firm implementing a novel new service development (NSD) process. It provides accounts of what occurred in practice in terms of the challenges to NSD process implementation and how the firm overcame these challenges. It also considers the implications for NSD in this and other firms' innovation practices. This longitudinal case study (18 months) was conducted "inside" the case organization. It covered the entire innovation process from the initiation to the launch of a new service. The primary method may be viewed as participant observation. The research involved all those participating in the innovation system in the firm, including decision-makers, middle managers and employees at lower hierarchical levels and the firm's external networks. Implications for researchers and managers focusing on structured innovation models for the services sector are also presented.

Author(s)
Warren, Vessela: University of Worcester, United Kingdom
Davies, Barry : University of Gloucestershire, United Kingdom

Dias, Manuela: FEP - UP, Portugal
MANAGING INNOVATION IN SERVICE INDUSTRY: THE ROLE OF CONSULTANTS

Innovation intermediaries are organizations or groups within organizations that work to enable innovation, bridging the gap between internal and external know-how, and reducing the time to market and to know-how. Much of the existing literature regarding this topic is focused on manufacturing, and little is known about the role of innovation intermediaries in service industry. The growing importance of the service industry, as well as its specificities, stress the importance of contributions to the current understanding of service innovation. There is a great diversity of intermediaries, and consultants are included in this group, due to their extensive services, and their flexibility in modes of operation and interaction. Services are more likely to involve consultancies than other specialist knowledge providers. This paper aims to understand the role of consultants as innovation intermediaries in service industry. Our research will benefit the development of existing theory on service innovation and innovation intermediaries.

Author(s)
Dias, Manuela: FEP - UP, Portugal
Saur-Amaral, Irina: Universidade Europeia, Portugal
Brito, Carlos: FEP-UP, Portugal

Johnsson, Mikael: Blekinge Institute of Technology, Sweden
IMPORTANT INNOVATION ENABLERS FOR INNOVATION TEAMS

This research aims to study if innovation enablers (Enablers), i.e. factors that enable innovation work, are important for innovation teams in on-going innovation work and if lack of Enablers affects innovation projects negatively. The background to this study is that prior research states that numerous factors are important for innovation work, but there's still knowledge to gain whatever these Enablers are perceived to be important by innovation teams. Data from three innovation teams on-going innovation projects, supported by an external facilitator, were used within this study. The long-term qualitative study shows that all Enablers are important, but also that a facilitator is important. Lack of Enablers may cause negative effects on innovation projects, where nine enablers within this study were identified to be critical for avoiding project delays. Further research is suggested.

Author(s)
Johnsson, Mikael: Blekinge Institute of Technology, Sweden

McGuire, Steve: California State University, Los Angeles, USA
Drost, Ellen: California State University, Los Angeles, USA
PREDICTIVE AND CONCURRENT VALIDITY OF A MODEL OF ENTREPRENEURIAL CULTURE

The purpose of the study was to examine the validity of a measure of entrepreneurial organizational culture (EOC). Data were collected from 1,941 organizations. First, we examined the EOC model using confirmatory factor analysis both at the individual-level, and for: for-profit companies, non-profit organizations, and governmental agencies, and at the multiple-group level of analysis. We then examined convergent and discriminant validity. Results indicate that a revised, more parsimonious model with 6 factors and 25 items was a good fit with the data (GFI =0.939, RMSEA =0.053). Evidence of convergent validity was found by a positive, significant relationship between EOC and "intrapreneurship" (R2 = 0.383).

Author(s)
McGuire, Steve: California State University, Los Angeles, USA
Drost, Ellen: California State University, Los Angeles, USA
Zhang, Yang: California State University, Los Angeles, USA

Wikström, Anders: SICS Swedish ICT Västerås, Sweden
CAPTURING THE DYNAMICS OF INNOVATION CLIMATE IN ORGANIZATIONS

The research on innovation climate has provided valuable information on organization in the last 30 years. Building on the CCQ questionnaire this study reports result from a leaner version that enable longitudinal measurements of the innovation climate. The results indicate that there are several types of dynamics on how the innovation climate varies over time that has not been accounted for in previous research, e.g. the differences in levels over time, due to departmental differences, seasonal events and organizational decisions. The longitudinal approach can be used by managers to proactively and systematically develop their innovation climate, by using feedback loops each week in order to make sure that the climate in the organisation enables innovation.

Author(s)
Wikström, Anders: SICS Swedish ICT Västerås, Sweden
Edoff, Petra: SICS Swedish ICT Västerås, Sweden
Cedergren, Stefan: SICS Swedish ICT Västerås, Sweden

Patricio, Rui: Digitalflow, Portugal
IDEACHEF®: A GAMIFIED APPROACH FOR ENGAGING TEAMS

This paper describes a gamified method and tool - ideaChef®, which helps teams get committed and engaged in corporate innovation and entrepreneurship processes. It starts by introducing the concept of gamification, explaining what it is, how it works and serves ideaChef®. The paper provides valuable insights from corporate innovation users and describes a case study of an entrepreneurship class from the University of Porto. Finally, it discusses the minus and plus and the key impacts of this gamified method and tool. Researchers will gain insights into the effects and the value of gamification approaches in order to define their own well-shaped road map. Practitioners will understand how this new method and tool can be implemented in order to truly shape innovation cultures.

Author(s)
Patricio, Rui: Digitalflow, Portugal

Olander, Heidi: LUT School of Business and Management, Finland
INTENTIONAL OR NOT? THE NATURE AND DIMENSIONS OF KNOWLEDGE MOBILITY

Even if knowledge exchange in general generates benefits, it may have opposite effects if it happens unintentionally from the knowledge holder's point of view. Knowledge leaving may cause knowledge loss if it involves key employees, and in the hands of outsiders, some knowledge assets may hurt competitiveness of the firm. As the overall knowledge mobility related dynamics are rather abstract and difficult to grasp, this study tries to dissolve some of the debates that exist especially in open innovation literature, around the relevance of knowledge protection for innovation management. The study aims at showing that sharing and protection are two sides of the same coin. We approach the identification of dimensions by the questions: how and why knowledge moves, what kind of knowledge moves, and where and how knowledge flows happen. Through theoretical and qualitative empirical investigation we develop a categorization of dimensions of knowledge mobility.

Author(s)
Olander, Heidi: LUT School of Business and Management, Finland
Hurmelinna-Laukkanen, Pia: Oulu Business School, University of Oulu, Finland
von Zedtwitz, Max: GLORAD Center for Global R&D and Innovation , Switzerland

Strudthoff, Maike: Helmholtz-Institut Münster, Germany
KNOWLEDGE NETWORKS BASED ON TECHNOLOGICAL DISTANCES

Interdisciplinary and cross-industry R&D-activities are a promising path to get new solutions for emerging technologies like energy storage and battery systems. As battery research collaborations are formed across the entire value chain, partners with different knowledge bases are to be expected. In this context, technological distance (TD) has proven to be an applicable measure for the description of the variety of knowledge within collaborations. As a suboptimal transfer of knowledge can decrease the likelihood of collaboration success, we show our approach of visualizing and examining a knowledge network based on TD by investigating a recently founded battery research institute. Furthermore, we share the finding that the perception of TD deviates from calculated TD and provide an explanation approach.

Author(s)
Strudthoff, Maike: Helmholtz-Institut Münster, Germany
Sick, Nathalie: Helmholtz-Institut Münster, Germany
Leker, Jens: Universität Münster, Germany

de Jager, Kylie: University of Cape Town, South Africa
EVOLUTION OF MEDICAL DEVICE INNOVATION IN SOUTH AFRICA: 2001-2013

Medical device innovation in South Africa was investigated using collaboration networks derived from a bibliometric study. Collaborating institutions originated from four sectors: academia (A); healthcare (H); industry (I); and science & support (S). A longitudinal study (5-year moving window) of the networks was carried out to investigate their evolution over time. Centrality measures identified dominant institutions. New actors entering the networks either exhibited preferential attachment to these institutions, or joined the network as part of an isolated cluster. Of the new institutions, foreign collaborators seldom stayed beyond 5 years, while local institutions seldom left after entering the field. Over the 13-year period considered, local collaboration activity persisted while local foreign collaborations were seen to decline.

Author(s)
de Jager, Kylie: University of Cape Town, South Africa
Chimhundu, Chipo: University of Cape Town, South Africa
Saidi, Trust: University of Cape Town, South Africa
Tania, Douglas: University of Cape Town, South Africa

Naqshbandi, Mohammad Muzamil: University of Dubai, United Arab Emirates
ORGANIZATIONAL CULTURE AND OPEN INNOVATION: ROLE OF ABSORPTIVE CAPACITY

Using data collected from 259 middle and top managers across different industries in the United Arab Emirates, this paper tests an integrated model to examine the relationship between two contrasting organizational culture types with two types of open innovation. It also takes into account the mediating role of realized absorptive capacity between these associations. Results obtained through multiple linear regression show that highly integrative culture relates positively while hierarchy culture relates negatively to the two types of open innovation. Results also establish the mediating role of realized absorptive capacity in these relationships. These findings contribute theoretically to open innovation and organizational culture literature while providing insights for practitioners on how to succeed or avoid failure in their open innovation initiatives. A discussion of the findings along with limitations of the study and future research directions are given.

Author(s)
Naqshbandi, Mohammad Muzamil: University of Dubai, United Arab Emirates
Kamel, Yehia: University of Dubai, United Arab Emirates

Guertler, Matthias: Technical University of Munich, Institute of Product Development, Germany
ANALYSING THE INFLUENCE OF PLANNING-PARAMETERS ON OPEN INNOVATION PERFORMANCE

Outside-in Open Innovation (OI) allows to use the experience and expertise of external partners to develop new or improved products. In contrast to traditional cooperation approaches, it particularly focuses on the involvement of large number of different partners, so called crowds. An established crowdsourcing method is an ideation contest. However, when applied for the first time, companies tend to commission external service providers or to use a trial-and-error approach that often does not lead to insufficient results, for instance, in terms of ideas quality, cost-benefit ratio or success of incentives. Methodical support is limited so far. Thus, this paper analyses two series of community-based ideation contests concerning the effect of different planning activities and parameters. This lays the basis for further analyses and the development of a methodical planning approach enabling effective and efficient ideation contests.

Author(s)
Guertler, Matthias: Technical University of Munich, Institute of Product Development, Germany
Stahl, Stefanus: Technical University of Munich, Faculty of Mecchanical Engineering, Germany
Muenzberg, Christopher: Technical University of Munich, Institute of Product Development, Germany
Lindemann, Udo: Technical University of Munich, Institute of Product Development, Germany

Hyslop, Katie: WU University of Economics and Business Vienna, Austria
OPEN INNOVATION ACTIVITIES AND NETWORK COMPETENCE AS DRIVERS OF PERFORMANCE

The paradigm of open innovation has sparked increasing scholarly interest. However, the concept has largely been studied from the perspective of large, technology-based MNCs. Therefore, there is a need to build a more fine grained understanding of the potential of open innovation practices for SMEs as they look to overcome their liability of smallness. In particular, there is need for more empirical investigations of SME innovation performance as a function of open innovation implementation; as well as the competencies required for its successful execution. From this background, this proposed, quantitative study aims to answer the following research question: What is the role of network competence and open innovation practices in explaining the innovation performance of European SMEs?

Author(s)
Hyslop, Katie: WU University of Economics and Business Vienna, Austria

Faham, Jérémie: ESTIA - Institute of Technology , France
A DIALOGICAL APPROACH TO INCREASE "MATCHING" EFFICIENCY BEFORE CBM

The 2014-2020 European Union cohesion policy settled the obligation to establish "Research and Innovation Strategies for the Smart Specialization" (RIS3) to build competitive advantages for each region. The originality of RIS3 is the "bottom-up" identification of regional priorities through the "Entrepreneurial Discovery" (ED) process which stresses the need to involve all the regional "entrepreneurs" (RE) - companies, research, consulting, public authorities etc. - into the design of territorial orientations. However there is a lack of recommendations to implement it into heterogeneous regions. The Collaborative Business Models (CBM) approach has probably a role to play within this process as a suitable strategic tool to set up regional "value networks". However, the preparatory stage of CBM and especially the identification and the matching processes among potential RE partners is often not addressed. This work is a proposition to answer this issue of matching in order to improve the CBM efficacy within RIS3.

Author(s)
Faham, Jérémie: ESTIA - Institute of Technology , France
Daniel, Maxime: ESTIA - Institute of Technology, France
Tyl, Benjamin : APESA Innovation, France
Lizarralde, Iban : ESTIA - Institute of Technology, France
Garagorri, Iñaki : Universidad de Deusto, Spain
Legardeur, Jérémy: ESTIA - Institute of Technology, France

Berg, Pekka: Aalto University, Finland
TRANSPARENCY OF THE PLATFORM ECOSYSTEMS INNOVATION MANAGEMENT

At the moment many traditional industries are facing lots of open questions and uncertainties related to the utilization of digitalization and the ways to manage innovation environment in order to create growth through platform economy. In this our project proposal we introduce four research questions dealing with the mentioned topic. First, how digitalization will transform the traditional sectors innovation ecosystems and what are the relevant objectives to assess? Second, what kind of criteria and attributes we should use in order to understand and make more transparent the status of our innovation ecosystem risks and maturity level? Third, how the current innovation strategy will be developed and how to ensure its competitiveness during the business life-cycle of the ecosystem? And fourth, what kind of new competences, processes and practices needs to be developed in order to create new value in a changing environment?

Author(s)
Berg, Pekka: Aalto University, Finland
Pihlajamaa, Jussi: Aalto University, Finland
Hansen, Poul : Aalborg University, Denmark

Pellikka, Jarkko: Nokia Technologies , Finland
CREATING AND CAPTURING VALUE IN THE BUSINESS ECOSYSTEMS

In a new economic landscape, firms need to access external knowledge sources due to their incapability of generating all necessary knowledge on their own. This network of linkages can be considered as an ecosystem. Previous studies have shown that a firm's ability to successfully commercialize a new product depends not only on its own technology strategy, but also its capabilities to manage an innovation ecosystem strategy. Dynamic markets, digitalization and open innovation models drives intense competition and shorter product life cycles. Well-defined and executed innovation ecosystem strategies can help companies to develop new markets and business opportunities for the different types of innovations and enable business to grow. Therefore this study provide new insight on how an ecosystem strategy can be formed based on the traditional strategy literature and provide a conceptual framework for senior leaders to form an ecosystem strategy.

Author(s)
Pellikka, Jarkko: Nokia Technologies , Finland
Ali-Vehmas, Timo : Nokia Technologies, Finland

Mention, Anne-Laure: Luxembourg Institute of Science and Technology, Luxembourg
EMERGENT COLLABORATIVE INNOVATION INTERMEDIARIES: INNOVATION HUBS VS. INNOVATION LABS

Alongside traditional innovation intermediaries such as science parks, incubators, and technology transfer offices, novel forms of innovation hubs and labs have been causing a stir in practitioner communities. Despite their unquestioned popularity, thus far both the hubs and the labs have gone largely unnoticed in mainstream innovation management research. Ostensibly, both aspire to facilitate collaborative, participatory, open, social-impact-oriented innovation, but how do they compare to each other and to traditional innovation intermediaries? We propose a qualitative, exploratory research drawing on our database on 10 hubs and 11 labs from 8 countries, including 102 semi-structured interviews and observation notes from 18 hub and lab events. As a result, we hope to provide sharper definitions of innovation hubs and labs, their in-depth comparison along 5-10 relevant dimensions, a list of illustrative innovation practices applied by hubs and labs and a set of conclusions for innovation management theory and practice.

Author(s)
Gryszkiewicz, Lidia: Luxembourg Institute of Science and Technology, Luxembourg
Edwards-Schachter, Mónica : Researcher & Consultant, Spain
Friederici, Nicolas : Oxford Internet Institute, Green Templeton College, University of Oxford, United Kingdom
Jimenez, Andrea : School Of Management, Royal Holloway University of London, United Kingdom
Mention, Anne-Laure: Luxembourg Institute of Science and Technology, Luxembourg

Vagn, Anna Rose: DTU Engineering Management, Denmark Jensen, Christian Schou: DTU Management Engineering, Denmark
PARTICIPATORY METHODS FOR INITIATING MANUFACTURING EMPLOYEES' INVOLVEMENT IN PRODUCT INNOVATION

Employee-driven innovation has the potential to improve product innovation by involving employees as innovative resources. However, it can be a challenge to turn the potential into a reality of collaboration practices across organizational structures and culture. Through an interactive research approach that we apply to two case companies, this paper presents an empirical study of how to initiate involvement of manufacturing employees in R&D activities. We have used participatory methods from design thinking that has the ability to create relations between employees from different backgrounds and through a series of facilitated workshops we have investigated how these methods can initiate employee involvement. We see that participatory methods can improve understanding and relation between R&D and manufacturing departments, and thereby support a creative collaboration and emergence of employee-driven innovation practices.

Author(s)
Vagn, Anna Rose: DTU Engineering Management, Denmark
Jensen, Christian Schou: DTU Management Engineering, Denmark
Brobjerg, Ole: DTU Engineering Management, Denmark

Dülfer, Nils: IMP³rove - European Innovation Management Academy, Germany
DESIGNING FOR SUCCESS

The paper examines the impact of design thinking on teamwork during the early stage of the innovation process and on the quality of the resulting ideas. Empirical data stems from an experimental investigation among six innovation teams. The design thinking process appears to enhance teams' internal communication and their exploitation of external sources. In turn, internal communication drives group cohesion and ultimately group cohesion drives shared understanding among team members. The findings also demonstrate that novelty, relevance and specificity of the developed ideas are positively influenced by the design thinking process. The present study provides managers with a better understanding of how design thinking drives teamwork and idea quality and with key factors for successfully implementing the design thinking process among novice teams. This paper provides theoretical considerations on and initial empirical support for the impact of the design thinking process on teamwork and idea quality.

Author(s)
Dülfer, Nils: IMP³rove - European Innovation Management Academy, Germany
Mahr, Dominik: Maastricht University, Netherlands
Gericke, Maike: Océ Technologies B.V., Netherlands
Wetzels, Martin: Maastricht University, Netherlands

Schartinger, Doris: AIT Austrian Institute of Technology GmbH , Austria
PATTERNS OF INDUSTRIAL DESIGNS: EVIDENCE FROM AUSTRIA

Design is increasingly seen as an important ingredient to the competitiveness of firms. Although innovation processesare increasingly open, we also know that appropriability of knowledge is key to maintaining a competitive advantage. In the light of the above we ask the following research questions. What is the the significance of industrial designs as a protection mechanism over the Austrian firm population? What characterizes firms that chose designs to protect their innovation processes and results? We use data on industrial designs registered at the Austrian patent office for national protection in the period from 2004-2014 and match them with Aurelia firm data. We estimate a Poisson model, showing that firm size and export ratios positively influence the propensity to apply for designs, while firm age has a negative effect.

Author(s)
Barber, Michael: AIT Austrian Institute of Technology GmbH, Austria
Schartinger, Doris: AIT Austrian Institute of Technology GmbH , Austria

Storgaard, Marianne: University of Southern Denmark, Denmark
DISCURSIVE STRATEGIES FOR LEGITIMIZING THE FIELD OF STRATEGIC DESIGN

Recently we have seen the upsurge of a new academic and professional field, Strategic Design, which offers itself as a new way of working within business at a strategic level by utilizing designers' approach to problem solving. Inherent in the rise and growth of an academic and professional field is the pursuit of differentiation from other fields and later re-establishment of contact with other fields. In this explorative study we show that participants in the field of 'Strategic Design', in their effort of legitimization, make use of in-group/out-group distinctions, stereotypes and de-legitimization of outgroups. However, we find that this serves as source of not only frustration for novice design consultants but also as an obstacle for the whole process of legitimization of the field.

Author(s)
Storgaard, Marianne: University of Southern Denmark, Denmark
Brandi Sørensen, Elin: University of Southern Denmark, Denmark

Primus, Dirk: Bryant University, USA
INVESTIGATING NON-TRADITIONAL DEVELOPMENT PRACTICES AND THE EFFECTIVENESS OF FRUGAL INNOVATION

This investigation is concerned with the relationship between development practices and the effectiveness of frugal innovations. The term frugal refers to innovations that target emerging markets with resource constrained customers. Emerging markets are attractive growth targets, because they are largely untapped. However, it is unlikely that existing product development practice will succeed in emerging markets, because they fundamentally differ from developed regions. For example, frugal innovations require a deep understanding of how a new product will interact with the local conditions, as well as development of localized business infrastructure. Thus, they can likely benefit from non-traditional, multidisciplinary development approaches, such as design thinking practices. For the empirical part, I will collect and analyze multi-region data from separate sources for development practices and performance. Overall, this study aims to inform research and practice concerned with innovation in emerging markets about the effect of non-traditional, multidisciplinary development practices on frugal innovation performance.

Author(s)
Primus, Dirk: Bryant University, USA

Pereira, Renato: ISCTE-IUL, Portugal Caetano, Isabel: ISCTE-IUL, Portugal
IMPORTANCE OF ROUTINES FOR INNOVATION PROCESS SUCCESS

The main purpose of this research is to investigate the most important routines in innovation process. In addition, it is intended to understand the factors that affect the company's innovation process. The study was based on a survey applied in Portuguese companies. The experience of these companies was a critical factor for the understanding of the phenomenon. The main conclusions are the existence of a pattern of specific routines and organizational factors associated with successful innovative firms, which differ from unsuccessful innovative companies. As such, innovation should be analyzed as a phenomenon that can be managed. There are routines and organizational factors that must be continually developed to make innovation a key element for the business.

Author(s)
Vala, Luís: ISCTE-IUL, Portugal
Pereira, Renato: ISCTE-IUL, Portugal
Caetano, Isabel: ISCTE-IUL, Portugal

Osswald, Marc: University of Ulm, Institute of Technology and Process Management, Germany
HOW SUCCESSFUL ARE YOUR PRODUCT LAUNCHES?

To finish the new product development process, a product has to be launched in a market. A lot of published articles show, that the product launch is not only one of the most expensive processes within the product's lifecycle but also one of the most critical ones for the success of a new product. Unfortunately, most of the published articles focused on analysing the factors influencing the success or failure of a market launch. Only a few articles developed tools and models to evaluate the quality of a market launch. To further close this gap, we developed an easily applicable quantitative model, based on the Data Envelopment Analysis (DEA). To apply the DEA, we identified four input factors and four output factors which are important to evaluate the quality of a market launch together with eight big German and Swiss B2B-companies and tested the model in a Case Study.

Author(s)
Osswald, Marc: University of Ulm, Institute of Technology and Process Management, Germany
Brecht, Leo: University of Ulm, Institute of Technology and Process Management, Germany
Gentner, Daniel: University of Ulm, Institute of Technology and Process Management, Germany
Mahnke, Thomas: University of Ulm, Institute of Technology and Process Management, Germany

Müller-Stewens, Benedikt: University of St.Gallen, Switzerland
QUANTIFYING PROJECT EFFICIENCY IN NEW PRODUCT DEVELOPMENT: BENEFITS AND PITFALLS

New product development is a major determinant of a company's competitive advantage. However, the complex project environment aggravates objective performance assessments. Relying on decision heuristics, managers give space to subjectivity. Prior research finds that these decisions are subject to optimistic bias that leads to escalation of managerial commitment. We aim at reducing the subjective leeway in decision making by developing an efficiency-based tool that systematically guides managerial attention based on objectified information. In an in-depth case study we demonstrate that the data envelopment analysis (DEA) represents a method that can be reasonably implemented in a product development context complementing existing metrics. A promising implementation is required to address potential pitfalls: homogeneity of the project base; reliability of the estimated output metrics; consistent data availability on project-level; thoughtful interpretation of the results by experts; promotion of organizational acceptance of metric.

Author(s)
Müller-Stewens, Benedikt: University of St.Gallen, Switzerland
Möller, Klaus: University of St.Gallen, Switzerland

Brun, Eric: University of Stavanger, Norway
STARTUP DEVELOPMENT PROCESSES IN BUSINESS INCUBATORS

Business incubators have important roles in helping small companies develop through their initial startup phases. However, there is little research literature available to help incubator managers' better understand the process of developing the startups as incubatees. In this study, qualitative content analysis from case studies of 15 startups in a Norwegian incubator identified a blend of 3 incubatee development approaches: causation, effectuation and learning. Two frameworks were developed; Firstly, a general framework to identify the appropriate approach for an incubatee. Secondly, a process framework for incubatee development incorporating a blend of the 3 approaches. The reported research enhances our theoretical understanding of startup development processes within an incubator. Also, the frameworks represent tools that will be useful for incubator management to guide incubatees through their venture creation process.

Author(s)
Brun, Eric: University of Stavanger, Norway

Wallin, Arto: VTT, Finland
CONCERNS AND AMBITIONS OF ENTREPRENEURIAL INNOVATORS

This paper aims to increase understanding on the start-up innovation process from the perspective of entrepreneurial growth ambitions. Based on the findings we suggest that growth-ambitions should be seen as a more complex socially constructed concept that just an easily observable value defining the level of ambition. Growth-ambitions are influenced at least by the type of the market where start-up is focusing on, the scalability of the business model, personal characteristics of entrepreneurs, entrepreneurial and international experience of the founders and their perceptions of the barriers and constraints of the field, and finally the social context to which they are embedded in. We claim that different types of start-up companies have different needs and therefore the support provided to those start-ups should be different.

Author(s)
Wallin, Arto: VTT, Finland
Henttonen, Katja: VTT, Finland
Still, Kaisa: VTT, Finland

Marques, João Paulo: Polytechnic Institute of Coimbra, Portugal
DEVELOPMENT OF INNOVATION IN INCUBATING COMPANIES: THE CASE OF PORTUGAL

This article focuses on the study of innovative activity and its impact on the creation and sustainability of Portuguese micro-businesses in incubation. As Schumpeter has indicated innovation to be the main economic driver of economic development and a critical factor in the development and performance of companies, a number of authors have discussed this phenomenon but there is still no consensus on how it behaves. We used statistical analysis to study a sample of 243 Portuguese companies based in incubators linked to or promoted by universities. It was concluded that product innovation is most significant in an incubation environment, and also that the origin of businesses and the development of R&D activities determine the type of innovation generated. However, most of the companies surveyed are not engaged in R&D activities. They propose some policy measures and lessons for management.

Author(s)
Marques, João Paulo: Polytechnic Institute of Coimbra, Portugal
Cravo, José Pedro: Polytechnic Institute of Coimbra , Portugal

Hwang, Hsuan-Chi: College of Management, Yuan Ze University, Taiwan
CUSTOMER INNOVATION SERVICE ADOPTION BEHAVIOR: THE CASE OF 4G

The innovation adoption research has indicated that several factors may influence customers' 'adoption' or 'non-adoption' decision. However, most studies only consider the adoption of single innovation and based on the questionnaire to survey customers' intention in a state, which seems missing research of innovation in a bundle and lack real data to verify the customer's actual behavior. This study tries to fill this gap by examining the adoption behavior of innovation in a bundle, which customers upgrade to the new telecommunication service also need adopt a new smartphone in a period through customers' actual adoption behavior from the database of Taiwan's telecommunication company. Consumers' intention to adopt innovation and understanding customers' consideration are important issues to technology providers.

Author(s)
Hwang, Hsuan-Chi: College of Management, Yuan Ze University, Taiwan
Tseng, Fang-Mei : College of Management, Yuan Ze University, Taiwan

Hsieh, Chih-Hung: Yuan Ze University, Taiwan
A NEW QFD MODEL FOR STRATEGIC RESOURCE BASED PRODUCT INNOVATION

The development of new products requires key technologies, including software and hardware, to satisfy customer expectations while still being advanced enough to meet customer demands. However, product innovation should not merely imitate other products; the strategic resource elements of innovation should be lasting (in terms of time), relevant (in terms of value), irreplaceable, and provide a competitive advantage. Therefore, the authors, with the above theory in mind, propose a three dimensional Quality Function Deployment (QFD) model, which can be used to measure strategic resource importance. Measuring the degree of the compliance of core technology that meets customer demands for product innovation with the QFD model, this study uses the example of Tire Pressure Monitoring System (TPMS), where the empirical results show that this method can more accurately measure weighted values between technology and market demand.

Author(s)
Hsieh, Chih-Hung: Yuan Ze University, Taiwan

Vishnevskiy, Konstantin: National Research University Higher School of Economics, Russia
INTEGRATION OF TRM AND QFD FOR SECTORAL FORESIGHT: RUSSIAN EXPERIENCE

One of the grand and ongoing challenges in the STI sphere is the searching for balance between market needs and production possibilities. This task can be solved by applying different methods, including technology roadmapping (TRM) and quality function deployment (QFD), which are one of the most essential approaches. Even though these two methods have been widely investigated in the literature both separately and under integration, there is the lack of comprehensive QFD-TRM studies that consider market-product perspective as well as global and national agenda and provide the basis for decision-making. To fill in the gaps we developed a methodological approach transforming "customer voice", global challenges and trends into strategic actions system at the sectoral level. In this paper integrated QFD-TRM approach for particular sector is presented.

Author(s)
Vishnevskiy, Konstantin: National Research University Higher School of Economics, Russia
Linton, Jonathan: University of Ottawa, Canada
Egorova, Olga: National Research University Higher School of Economics, Russia

Sanchez Mejia, Myriam: Corporacion biotec, Colombia
INNOVATION MANAGEMENT FOR BIOBASED LOCAL SUSTAINABLE DEVELOPMENT

Colombia is recognized as one of the potential global breadbasket countries, based on its agricultural diversity. Nevertheless, agrodiversity is not integrated, nor remunerated within the development dynamics in the territories. And rural areas present significant gaps of quality of life in their communities, which have become a strategic issue for the country. Literature shows three main trends related to the use of agrodiversity: 1) a subject for the poor: subsistence strategies, 2) related to added value industries, food and other agro industries(a) and bioenergy (b), 3) conservation. With the focus on the second trend: sustainable food and income generation for the population, the main question of research is ¿how to integrate (and remunerate) agrodiversity from a territory, to dynamics of local sustainable development? Bench marking from successful cases worldwide, as reference, and case studies implemented in Colombia, will generate tools, skills and governance, from a perspective of innovation management.

Author(s)
Sanchez Mejia, Myriam: Corporacion biotec, Colombia

Nyborg, Sophie: Technical University of Denmark, Denmark
Dragsdahl Lauritzen, Ghita: Cambridge University, UK
USER INNOVATORS IN THE SMART ENERGY TRANSITION

Notions of "smart energy systems" are pervasive in discussions of a low carbon transition and much work is devoted to developing "smart energy technologies" and analyzing their economic potential. However, users, i.e. civil society receive only little attention and are mainly described as "energy consumers". The aim of this research project is to explore how civil society can get a more active role in the transition towards a low carbon energy system. Through qualitative case-study methods and scenario work, we explore the role of "energy users" for the innovative design and development of large technological systems. We ask whether the envisioned smart energy systems have potential to support more active innovation roles for the individuals using energy systems than what have been described by previous studies. Moreover, we discuss whether and how such roles allow for a democratic as well as socially, economically, and environmentally sustainable development of energy provision.

Author(s)
Nyborg, Sophie: Technical University of Denmark (DTU), Department of Management Engineering, Denmark
Borch, Kristian : Technical University of Denmark (DTU), Department of Management Engineering, Denmark
Mose Bentzen, Martin : Technical University of Denmark (DTU), Department of Management Engineering, Denmark
Dragsdahl Lauritzen, Ghita : Cambridge University, Institute for Manufacturing, United Kingdom

Hsieh, Kuo-Nan (Nick): Yuan Ze University, College of Management, Taiwan
CUSTOMER COLLABORATION MECHANISM IN OPEN SERVICE INNOVATION

Customers can be identified as important knowledge source to contribute to the possibilities of innovation success, such as generating innovation ideas and sharing information. The research design consists of case studies and draws on empirical evidence from Taiwanese service sectors to explore the issue of how firms design appropriate mechanisms to interact with customers associate with interaction process/ incentive mechanism to motivate them to be involved for knowledge sharing across different development stages. The research would offer better insights into the connection between the mode of customer interaction and open innovation approach in the specific context (i.e. the development stage). Moreover, the proposed research would further provide a better understanding of the connection between the design of customer interaction and motivation in the research of user involvement.

Author(s)
Hsieh, Kuo-Nan (Nick): Yuan Ze University, College of Management, Taiwan

Thurnes, Christian: OPINNOMETH - University of Applied Sciences Kaiserslautern, Germany
CONTRADICTION-BASED INNOVATION LIBRARY: CREATING AND SHARING INNOVATION IMPULSES

Challenges in innovation management often can be formulated as contradictions - and to resolve this contradiction will lead to an innovative idea or solution. Some tools and methods like TRIZ (Theory of inventive problem solving) are specialized on using contradictions to generate innovative ideas. But these tools are not very easy to grasp - so the concept of a contradiction-based innovation library allows using contradictions as a source for innovation stimuli to a broader innovation management community (instead of just TRIZ-experts). The library discussed in the article will have a growing base of innovation cases, that encompassed the resolution of serious contradictions. The cases will also show the specific innovative solution and the usage of TRIZ-tools to resolve the contradiction. For data retrieval and research, data structures for the description of the cases and user services have to be developed. The article describes the research idea based and first steps.

Author(s)
Thurnes, Christian: OPINNOMETH - University of Applied Sciences Kaiserslautern, Germany
Schönberger, Marius; Sohns, Christoph; Gratz, Maxim & Votteler, Waldemar: HS Kaierslautern, Germany

Mention, Anne-Laure: Luxembourg Institute of Science and Technology (LIST), Luxembourg
SOURCES OF INNOVATION IN FINANCIAL SERVICES COMPANIES

The financial services sector is significant for the overall economy and specifically for small and open economies where it can be a major contributor. This provides an interesting and fruitful research setting for innovation research dealing with financial services. A dedicated survey was created and launched to gather insights about the perceived importance of external sources of information for innovation. Preliminary statistical analyses have shown that consultants are regarded as an important external source of information, while the CEO and supporting front line employees are important internal sources for innovation. Regarding the use of customers, High Net-Worth Individuals (HNWI), SMEs and large customers were found to be important for new or improved service development initiatives.

Author(s)
De Smet, Dieter: Luxembourg Institute of Science and Technology (LIST), Luxembourg
Mention, Anne-Laure: Luxembourg Institute of Science and Technology (LIST), Luxembourg
Torkkeli, Marko: Lappeenranta University of Technology (LUT), Finland

Longo, Maria Cristina: Dept. of Economics and Business, University of Catania, Italy
INNOVATION-HUB MANAGEMENT FOR VALUE CO-CREATION: THE CENTRALITY OF CORPORATE POLICIES

The paper affords the topic of value co-creation within firms based on open collaboration models, which adopt the innovation-hub to develop new products. The paper examines appropriate corporate policies for hub's management, aimed at regulating collaborative actions and at mitigating opportunistic behaviours, based on information asymmetry and moral hazard risk. We believe the agency theory can be useful to explain the conflict between principal and agents on the appropriability of innovation and on the allocation of intellectual property rights, even within a flat, open and informal context. Starting from an exploratory case study, first we recognize the monitoring and control mechanisms to discourage opportunistic behaviours not aligned to the firm's innovative goals. Second, we examine the motivational factors, especially the psycho-social compensations, driving the spontaneous participation. Then, we analyze rules for access and orchestration mechanisms to mobilize knowledge and oversee interactions.

Author(s)
Giaccone, Sonia Caterina: Dept. of Economics and Business, University of Catania, Italy
Longo, Maria Cristina: Dept. of Economics and Business, University of Catania, Italy

Smeilus, Gavin: University of Wolverhampton, United Kingdom
MAPPING THE INVENTOR NEW PRODUCT DEVELOPMENT PROCESS

This paper seeks to build an understanding of how independent inventors navigate through their development programme and license their intellectual property (IP) rights to a business. While inventors are identified within open innovation literature as potential suppliers of externally generated IP their integration within the Open Innovation Model (OIM) is not adequately considered. This paper seeks to address this gap by presenting a validated model that describes the inventor IP in-licensing process. The results of this inquiry suggest that successful inventors steer through a new product development (NPD) process that has structural similarities with the StageGate process deployed at an organisational level. Independent inventors are seen to be resource dependent and draw upon their personal resources and capabilities, supplemented by external resources, to navigate this process.

Author(s)
Smeilus, Gavin: University of Wolverhampton, United Kingdom
Pollard, Andrew: University of Wolverhampton, United Kingdom

Still, Kaisa: VTT Technical Research Centre of Finland, Finland
FINTECHS' AS SERVICE INNOVATORS: ANALYSING COMPONENTS OF INNOVATION

What is at the core of FinTech companies? What is the innovation behind their business logic? In the context of FinTechs, we will analyse the locus of innovation through the lens of service model by Edvardsson and Olsson (1996). We chose this model as it enables to approach the service innovation both in theoretical and in practical terms. Based on 10 interviews, we used the model to analyse the presence of three components of service innovation. We showed how renewal in the service concept, process and system of service was present in the analysed innovations-with concept innovation dominating. Furthermore, we synthesized the results to a framework to support understanding of FinTechs as service innovators, emphasizing the fact that technology is not seen to be at the core of it.

Author(s)
Riikkinen, Mikko: University of Tampere, Finland
Still, Kaisa: VTT Technical Research Centre of Finland, Finland
Saraniemi, Saila: University of Oulu, Finland
Kallio, Katri: VTT, Finland

Cimilluca, Maria: Johns Hopkins Applied Physics Laboratory, USA
CREATING AN INNOVATIVE CULTURE: A FRAMEWORK FOR INCREASED ABSORPTIVE CAPACITY

For maturing, successful organizations there is both a struggle to maintain the status quo and to be more innovative. Following earlier works on Absorptive Capacity of Organizations, the authors use a framework concept in order to increase the ability of the work unit to be more innovative. For close to four decades the concept of the absorptive capacity of an organization and innovation has been studied. In 1990, Cohen and Levinthal argued that: "... the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends is critical to innovation capabilities." They labeled this the organization's 'absorptive capacity'. Using the four key elements of Absorptive Capacity: Acquisition, Assimilation, Exploitation, and Transformation, the authors show the ability to increase this capacity with an innovation framework approach.

Author(s)
Darrin, Ann: Johns Hopkins Applied Physics Laboratory, USA
Cimilluca, Maria: Johns Hopkins Applied Physics Laboratory, USA
Kedia, Ann: Johns Hopkins Applied Physics Laboratory, USA
Krill, Jerry: Johns Hopkins Applied Physics Laboratory, USA

Horvat, Djerdj: Fraunhofer Institute for Systems and Innovation Research, Germany

INNOVATION ABILITY AS PART OF A FORWARD-THINKING SUPPLIER EVALUATION SYSTEM

To provide innovative solutions for firms' future challenges and to strengthen its innovativeness, the innovation ability of its strategic supplying partners will become increasingly important to succeed in future competition. Based on the example of one of the world's largest mobility provider, the contribution shows how the innovation ability of supplying firms can be assessed. The tool entails a set of 60 indicators covering seven areas of innovation management. Different functional roles of suppliers were developed and specific target values for each of them were defined. Individual scores for each of these different supplier types are calculated and build a basis for measures of subsequent supplier development. Based on an example of good practice, participants from industry and innovation management will learn how the innovation ability of supplying firms can be systematically assessed by an online tool that can easily be integrated into existing supplier evaluation systems.

Author(s)
Som, Oliver: Management Center Innsbruck, Austria
Horvat, Djerdj: Fraunhofer Institute for Systems and Innovation Research, Germany

Caetano, Isabel: COTEC Portugal, Portugal
INNOVATION MEASUREMENT: PRACTICES, INDICATORS AND LESSONS AT FIRM LEVEL

Innovation is recognised as a difficult domain to assess and to measure. Companies are eager to develop and apply methodologies contributing to capture innovation results. A problem in innovation management is how to do it. A cluster analysis was developed to identify management practices and indicators, based on SPSS as well as a MCA analysis. It was demonstrated the questionnaire validity and its adequacy to the research, complemented with focus groups and interviews with business senior managers. A framework model was proposed and applied, considering three levels of evaluation of innovation activities and projects, following a ROI approach. This research aims to analyse how companies are managing innovation, which practices have been implemented and what framework could be designed to promote their capabilities to evaluate and measure innovation. It will contribute to the understanding of innovation measurement at firm level and to a more systematic approach for innovation management.

Author(s)
Caetano, Isabel: COTEC Portugal, Portugal

Hügel, Susanne: EBS Universität für Wirtschaft und Recht, Germany
FIRM INNOVATIVENESS RELOADED - DEVELOPMENT OF A MULTIDIMENSIONAL AND FORMATIVE CONSTRUCT

Firm innovativeness is a rich and complex intangible phenomenon that captures an organization's overall potential to innovate and is acknowledged as a key success factor for the organizational performance. In the light of both the large fragmented and inconsistent body of research as well as the under-researched non-manufacturing and increasingly mutating manufacturing industries, a more comprehensive and generalizable concept is needed. Based on a review of prior literature, the present work synthesizes research insights by taking them onto a higher level of abstraction and develops an enhanced conceptual framework of theoretical nature. It pursues a holistic concept that integrates a comprehensive dimensioning of the overarching aspects of firm innovativeness and an advanced construct specification. To serve a coherent and compelling conceptualization of firm innovativeness, a reflective first-order and formative second-order construct is suggested.

Author(s)
Hügel, Susanne: EBS Universität für Wirtschaft und Recht, Germany

Swan, Dan: www.Start-Inno.com, Australia
SEMANTIC MAPPING OF COGNITIVELY DIVERSE START-UP TEAMS: DYNAMIC CREATIVE INTEROPERABILITY

How do small firms in different sectors collaborate to innovate? A possible explanation is that of network structural holes and their bridging (Burt, 1992). Conversely, Stark (2009) argues that solely bridging or brokering does not necessarily lead to the generation of new knowledge, and that successful innovations occur rather via folded diversity, that is, where two firms have some shared membership as well as distinct cognitive diversity. But what happens when cognitively diverse firms without the advantage of overlapping membership nevertheless seek to co-create an innovation to mutual commercial advantage? Using Leximancer we built semantic network maps for three interventions in which small digital creative firms each formed new knowledge with a group from one of three other sectors: education, mining and manufacturing. We argue the semantic enabling of the interventions acted as both broker and "structural fold", enabling social legitimation and a shared language that made innovation possible.

Author(s)
Swan, Dan: www.Start-Inno.com, Australia
Hearn, Greg: QUT, Australia

Makhotin, Sergiy: Fraunhofer MOEZ, Germany
TO STANDARDIZE OR TO PATENT? DECISION TOOL FOR TECHNOLOGY STARTUPS

Young companies need support concerning decisions related to intellectual properties. Entrepreneurs can resort to a menu of strategies, not only patenting. First, we explore the literature on standardization and patenting and relate it to entrepreneurship to identify the internal and external influencing factors as well as the motives and risks related to decision making. Then, we conduct five case studies to explore these influencing factors, while trying to reconstruct the decision making process. We find five main factors: technology, resources, knowledge protection versus knowledge diffusion, need for partnerships, and innovation dynamics. Companies should use patents when their technology is patentable and knowledge protection is essential for survival. Standardization is suitable when knowledge diffusion is more important than protection, and companies look for establishing new partnerships. These insights are integrated into a decision tree that provides guidance to young entrepreneurs to make an informed decision regarding intellectual properties.

Author(s)
Abdelkafi, Nizar: Fraunhofer MOEZ, Germany
Makhotin, Sergiy: Fraunhofer MOEZ, Germany
Thuns, Marina: Fraunhofer MOEZ, Germany
Pohle, Anna: Fraunhofer MOEZ, Germany
Blind, Knut: Fraunhofer FOKUS, Germany

Dos Santos Paulino, Victor: Toulouse Business School
TAKING ADVANTAGE OF DISRUPTIVE INNOVATIONS IN THE SPACE SECTOR

The aim of the paper is to better capture the challenges that arise from being simultaneously an entrant and incumbent and help these firms to respond to disruptive threats. Using case studies, the paper analyses two innovations: individual small satellites and small satellite constellations in the space sector. It focuses on the key dimensions of performance/costs, time to market and appeal to new customers. Disruptive innovations do not succeed in isolation, and the idea behind the phrase "disrupt-or-be-disrupted" does not fully capture the dynamics we observed. We found that under conditions of disruptive change, the ability of firms to develop a good understanding of different scenarios in terms of the overall supply chain is key in influencing and taking advantage of future opportunities. This ability enables firms to decide on the roles they want to play; the collaborations they need to establish and may point to necessary internal changes.

Author(s)
Dos Santos Paulino, Victor: Toulouse Business School, France
Cambra, Jesus : Universidad Pablo de Olavide, Spain
Perez, Lourdes: Toulouse Business School, France

Fiegenbaum, Irina: ISPIM, Germany
KEY PERFORMANCE INDICATORS OF STARTUPS: EXTERNAL VIEW

SMEs are often considered the drivers of modern economy, and the recent technological and business trends has led to the startup boom around the globe. Many startup support programs are focused on selecting the most promising out of created startups and supporting their quick and successful market entry and growth. But how is this evaluated? The issue of what criteria are to be used for assessing a startup becoming of utmost relevance for both Accelerators/Incubators and the startups themselves and is also an important topic in academia as it has hardly been touched upon. This paper's goal is to shed the light on the issues of evaluating the startup performance and find which key performance indicators have a substantial weight. We analyse both KPI applied to enter the acceleration programs and to graduate from it through a series of interviews with managers of Accelerators/Incubators.

Author(s)
Fiegenbaum, Irina: ISPIM, Germany
Albats, Ekaterina: Lappeenranta University of Technology, Finland

SESSION 11.4: DISRUPTIVE, RADICAL AND ADJACENT INNOVATION OPTIONS

WEDNESDAY, JUNE 22, 1130 – 1230

FACILITATOR: OZGUR DEDEHAYIR

DISCOVERY

Baiyere, Abayomi: University of Turku, Finland
EXPLORING THE ROLE OF IT CAPABILITIES IN DISRUPTIVE INNOVATIONS

Dynamic capabilities, agility and resource based views are key voices in the discussion about handling Disruptive Innovations- DI. Typically organisations are composed of different resources and capabilities. Due to the pervasive and ubiquitous nature of IT, IT capability is arguably one of the capabilities needed in disruptive situations. This paper aims to fill the divide between existing knowledge about IT capability and what value it could bring to the DI discussion. Information Systems research have shown that IT is a platform that enables the creation of different types of innovations; at the same time IT is also considered an important leverage when responding to threats of innovations. Hence, based on this dual premise of IT Capability, we advance a duality framework of "Disrupt-Ability" (ability to disrupt) and "Disruptability" (ability to be disrupted) to contribute a conceptual synthesis of the role of IT Capabilities in disruptive innovation.

Author(s)
Baiyere, Abayomi: University of Turku, Finland

Duelme, Christian: University of Paderborn, Germany
FUTURE-ORIENTED CONSOLIDATION OF PRODUCT PORTFOLIOS - CREATE SPACE FOR INNOVATIONS

Nowadays, companies face drastically increasing numbers of product variants. Often old products require intensive support. Resources are therefore tied and not available for innovation. Especially companies with historically grown product portfolios face the question: How can we reconfigure our portfolio in the light of future developments under the condition minimal turnover losses and maximal cost savings? However, the majority of approaches in the field of variant and complexity management address primarily "Greenfield Solutions", i.e. optimizing variants for the development of new products by modular approaches - old products are usually neglected. The paper at hand presents a methodology for the future-oriented consolidation of product portfolios. Key components are an automated cross-linking-analysis from a market and a technical perspective as well as a systematic anticipation of the future relevance of products. The result is a future-oriented consolidation-roadmap, which allows for the elimination of unprofitable products in favor of promising innovations.

Author(s)
Duelme, Christian: University of Paderborn, Germany
Eckelt, Daniel: University of Paderborn, Germany
Friebe, Milena: University of Paderborn, Germany
Gausemeier, Juergen: University of Paderborn, Germany

Kristiansen, Jimmi Normann: Aalborg University, Denmark
UNDERSTANDING THE TYPOLOGICAL EVOLUTION OF RADICAL INNOVATION

This paper addresses a key issue of typological confusion in relation to radical innovation management research. Previous research has emphasized the need for a more parsimonious understanding of innovation typology, where a myriad of types are still present. We use a dataset of the radical innovation typology created through a systematic literature review to map and understand the typological evolution in the field. By following a scientometric research methodology and utilizing "popularity-based" and Social Network Analysis (SNA) research approaches, this study is empirically evaluating the evolutionary process of "radical innovation" as an innovation type. We comment and discuss critical points in time where the typology evolves. This allows us to precisely determine if an added innovation type or attribute indeed was a novel contribution. We discuss the novel contributions made over time, and also which innovation types did very little to contribute to our current understanding of the typology.

Author(s)
Santonen, Teemu: Laurea University of Applied Sciences, Finland
Kristiansen, Jimmi Normann: Aalborg University, Denmark
Gertsen, Frank: Aalborg University, Denmark

Narasimhalu, Desai: Singapore Management University, Singapore
AIM: ADJACENT INNOVATION MATRIX

Management of successful companies often struggle to find an answer to the question "What our next innovation ought to be?". Quite often they end up being content with their current product / service offerings. At best some of them try to create new products and services for the current customer base. Adjacent innovations are defined to be new products and services to current customers and adapted current product and services to new customers. Currently there is no systematic approach to identifying adjacent innovations that companies could evaluate to select their next innovation offerings. We define Adjacent Innovation Matrix as a framework to help companies generate adjacent innovation opportunities in a systematic manner. We expect this framework to be used by companies to expand their revenues and profits.

Author(s)
Narasimhalu, Desai: Singapore Management University, Singapore

Meinel, Martin: Friedrich-Alexander University Erlangen-Nürnberg, Germany

THE APPLICATION AND IMPACT OF CREATIVITY TECHNIQUES IN INNOVATION MANAGEMENT

Creativity techniques are procedures and heuristics for enhancing creativity in the idea generation process. So far, empirical studies on creativity techniques in business practice are scarce. The present study is one of the first to interview innovation experts, 68 in number, concerning their creativity technique application behavior. We reveal that creativity techniques are far away from being systematically applied and integrated in innovation management. Brainstorming is, against all empirical findings on its disadvantages, still the most commonly used technique. The application of electronic techniques is rare. However, in almost all projects investigated, creativity techniques positively affect idea generation. Furthermore, we show that the selection of a creativity technique is mainly influenced by a technique's prominence, practicability and time exposure. Prospectively, the interviewees predict an increasing use of creativity techniques.

Author(s)
Meinel, Martin: Friedrich-Alexander University Erlangen-Nürnberg, Germany
Voigt, Kai-Ingo: Friedrich-Alexander University Erlangen-Nürnberg, Germany

Campos, Juan: ESIC Business & Marketing School, Spain Calderon, Guadalupe: Universidad Autónoma Metropolitana Cuajimalpa, Mexico

IDEA MANAGEMENT INITIATIVE AS A CATALYST FOR AN INNOVATION CULTURE

As part of the current economic crisis, the public sector is subject to major budget constraints. At the same time, the demand for public services in many advanced countries is growing faster than the rest of the economy. Innovation can help to improve public sector efficiency (costs per service, reduced administration costs) and to deliver new and better quality services, but it continues to face a number of internal obstacles. This paper proposes the development of an innovation culture based on a process which encourages the participation of public employees and which promotes intrapreneurship as a mechanism to enhance the innovation capability. Through a single case study, we analyze a clear case of intrapreneurship achieved in a local government institution through the development of an innovation culture -Madrid City Hall (Spain) case- for which we have used the innovation culture model of Rao and Weintraub (2013) as a theoretical framework.

Author(s)
Campos, Juan: ESIC Business & Marketing School, Spain
Calderon, Guadalupe: Universidad Autónoma Metropolitana Cuajimalpa, Mexico

Stevens, Eric: ESSCA School of Management, France

LEARNING PROCESSES WHILE DEVELOPING CO-CREATION PLATFORMS

With the emergence of new digital tools, and in a value co-creation perspective, companies are using internet tools and platforms to support interaction and design attributes. However many authors underlined that the way co-creation is implemented and operationalised remain unexplored. The paper aims at exploring the reasons why co-creation leads to reframing the development processes with the implications for learning processes. After having detailed the research methodology adopted, results will detail the way development and learning loops occurred. Four main observations are proposed: a- Co-creation requires including new actors in the systems, resulting in organizational change b- Development processes are separated in two parts. c- The issue of product coherence and image is central to the elaboration of the interactive dispositions with the clients. d- The Design of co-creation encounter is not based on co-creation principles. Discussion follows on the way co-creation transforms existing « learning while innovating » frames.

Author(s)
Stevens, Eric: ESSCA School of Management, France
Boucher, Ronald: ISTEC, France

Hornung-Prähauser, Veronika: Salzburg Research Forschungsgesellschaft, Austria

INNOVATION-LENS: METHOD FOR REFLECTED THINKING PATTERNS SUPPORTING TREND-DRIVEN INNOVATION

This contribution deals with findings of the two-year research project "Innovation Lens", run by an interdisciplinary Austrian consortium (www.innovationlens.eu). Firstly, this project explores the role of reflected thinking patterns and sense-making for innovation foresight activities, such as trend-analysis. Secondly, it examines specific knowledge-management methods which claim to extract and visualise implicit knowledge. Thirdly, together with experienced innovation managers and consultants, the consortia develops, tests and evaluates a new ICT-enhanced method of eliciting, analysing and visualising mental models and core beliefs. The question is: How can we design a new method and software-tool, which make innovation-teams aware of those mental models driving their innovation decisions and actions? How does this awareness influence the early stage innovation process? Our work will contribute to the often neglected discussion of "innovating" innovation management approaches and enrich the well-known model of "absorptive capacity", characterising the firm´s innovation performance, with a new concept of "reflective capacity".

Author(s)
Hornung-Prähauser, Veronika: Salzburg Research Forschungsgesellschaft, Austria
Bottaro, Gloria: University of Vienna, Cognitive Science Platform , Austria
Prof. Dr. Peschl, Markus: University of Vienna, Cognitive Science Platform, Austria

Rezazadeh, Arash: University of Minho, Portugal
BUSINESS MODEL INNOVATION: A REMEDY FOR SMES' SURVIVAL AND GROWTH

Shedding light on small and medium-sized enterprises (SMEs)'s survival issues, this study attempts to propose business model innovation (BMI) as a practical, reasonably efficient solution to SME's scarcity of resources, funds, expertise, etc. Accordingly, a literature review led us to develop several propositions highlighting the potential linkages between innovating a firm's business model elements including value creation, value proposition, value delivery, and value appropriation and its survival capabilities in terms of investment absorption, adaptive, networking, and absorptive capabilities. Drawing on proposed interconnections, an integrative framework is presented suggesting the potential relationships between value proposition and investment absorption capabilities, value creation and adaptive/networking capabilities, value delivery and absorptive/networking capabilities, and finally, value appropriation and investment absorption capabilities. The proposed framework opens up new avenues for further research extending the innovation management literature into the domain of survival capabilities.

Author(s)
Talebi, Kambeiz: University of Tehran, Iran
Rezazadeh, Arash: University of Minho, Portugal
Nobari, Niloofar: University of Tehran, Iran

Woeran, Bruno: Merinova Oy AB, Finland
THE BLACK HOLE FOR SMES IN FINANCING THEIR INNOVATION PROCESSES?

There exists a lack of suitable funding opportunities for SMEs' innovation process. The majority of certain development stages within national, international and other IPP - Innovation Policy Programmes' subsequent funding schemes is laid out to generate growth, support entrepreneurial spirit and new dimensions at societal level, however lack input to create interest from SME side. The topic of "Attention Capacity of SMEs" is at hand: how long/much attempt do SMEs take before they give up due to other more prevalent issues at hand, hence self-financing the innovation action instead of searching for funding opportunities. The study intends to tackle the (none-) performance of innovation policy funding schemes for SMEs proof of concept levels and innovation processes. This presentation highlights how a better alignment between funding policies and programmes for such innovative and potentially high-growth SMEs might be the indicator for a successful support scheme.

Author(s)
Woeran, Bruno: Merinova Oy AB, Finland
Catarino, Marta: TecMinho, Portugal

Etingue Kum, Menes: Aarhus Business School, Germany
IMPACT OF CORPORATE FORESIGHT ON INNOVATION PERFORMANCE

This project contributes to our understanding of practices enabling firms to adapt to future environments. While the practices for adapting to current environments have been well understood, our understanding about prospective adaptation to uncertain future environments is still limited. Corporate Foresight represents a forward-looking search practice enabling firms to identify factors driving future change, determine implications and trigger responses. It has been proposed, that Corporate Foresight practices are potent in laying the foundation for future superior performance. However, empirical evidence on Corporate Foresight value creation is still scarce. In our study, we demonstrate the value of Corporate Foresight for superior performance, using longitudinal data of 85 European companies. Our results show that firms with an appropriate level of Corporate Foresight maturity adapted towards their environment exhibit higher profitability and market capitalization growth compared to their industry peers. Corporate Foresight preparedness seems to be a predictor for future performance

Author(s)
Etingue Kum, Menes: Aarhus Business School, Germany
Rohrbeck, René: Aarhus Business School, Germany

Lee, Yongseung: Sungkyunkwan University, Korea, Republic of
OPPORTUNITY IDENTIFICATION USING INVESTMENT DATA

Most methodologies exploring new business/product opportunities depend on experts, and opportunities based on emerging technologies have experienced greater than expected time. Our model provides a new way measuring and identifying opportunities. In order to make the monitoring as well as identifying opportunities more effective and efficient, we propose S-V-A (Size-Velocity-Acceleration) model using venture investment data. Increases in total investment over time can be measured by using the concept of velocity. Acceleration measures differences in velocity over time. Using our model, we calculate average and variance of investment velocity and acceleration of some promising opportunities to measure expected return and risks by investors. Investors already evaluate these opportunities, and made investment. Thus, our model is less dependent on expert evaluation. Companies can use our approach to identify opportunities out of their sensing and foresight scope. Also, companies can compare their identified opportunities with those identified by our model.

Author(s)
Lee, Yongseung: Sungkyunkwan University, Korea, Republic of
Shin, Juneseuk: Sungkyunkwan University, Korea, Republic of

Presenter & Co-presenter Index

Fiegenbaum, Irina: ISPIM, Germany: Session 11.3: Start-Ups & Entrepreneurs 2: Technology entrepreneurship
Fitzmaurice, Leona: Consultant and writer, USA: Session 5.3: University-Industry Innovation 3
Freitas Santos, José: NIPE/UM and ISCAP/IPP, Portugal: Session 7.5: Bootcamp 7: Sustainabilty
Garechana, Gaizka: University of the Basque Country EHU, Spain: Session 5.2: Creativity in Innovation 1: Standards & Talent
Garnica, Leonardo: Natura Cosmetics, Brazil: Session 5.1: Open Innovation 5: Ecosystems
Gjelsvik, Martin: IRIS (International Research institute of Stavanger), Norway: Session 8.6: Bootcamp 8: Financial Themes & BMI (Mixed Session)
Gkikas, Aineias: Birmingham City University, United Kingdom: Session 4.1: Open Innovation 4: SMEs
Golovatchev, Julius: Detecon International GmbH / Deutsche Telekom Group, Germany: Session 2.4: Innovating in Traditional Sectors 2
Gorry, Philippe: University of Bordeaux, France:
Greenfield, Ricardo: INESC-TEC, Portugal: Session 6.1: Open Innovation 6: Ecosystems & Networks
Guertler, Matthias: Technical University of Munich, Institute of Product Development, Germany: Session 9.4: Bootcamp 9: Themes in Open Innovation
Guimaraes, Cristina: INESC TEC, Portugal: Session 1.3: Strategic Foresight, Agility & Future Orientation: 1
Guyot Phung, Carola: i3- CRG - ECOLE POLYTECHNIQUE - PARIS SACLAY, France: Session 3.6 Bootcamp 3: Components of Innovation (Mixed session)
Haag, Christoph: Rhine-Waal University of Applied Sciences, Germany: Session 3.6 Bootcamp 3: Components of Innovation (Mixed session)
Hamwi, Michael: ESTIA, France: Session 6.4: Project Spark Session
Hannola, Lea: Lappeenranta University of Technology, Finland: Session 2.4: Innovating in Traditional Sectors 2
Harengel, Peter: Philipps-University Marburg, Germany: Session 9.1: Service Innovation
Haslam, Christian: Aalborg University, Denmark: Session 5.5: Bootcamp 5 : Innovation on a personal level
Haukipuro, Lotta: University of Oulu, Center for Ubiquitous Computing, Finland: Session 7.3: Living Labs 1
Hengstler, Monika: Zeppelin University, Germany: Session 5.1: Open Innovation 5: Ecosystems
Hensen, Joris: Deutsche Bank AG, Germany: Session 1.5: Enabling Innovation: Methods, Training, Coaching & Competence
Henttonen, Kaisa: Lappeenranta University of Technology, Finland: Session 8.3: Living Labs 3
Hock, Marianne: Philipps University Marburg, Germany: Session 1.2: BMI 1: Reflections
Højbjerg Clarke, Ann: University of Southern Denmark, Denmark: Session 8.1: Open Innovation 8: Management Challenges
Horila, Anne: Regional Council of Häme, Finland: Session 8.3: Living Labs 4
Hornung-Prähauser, Veronika: Salzburg Research Forschungsgesellschaft, Austria: Session 11.5: Bootcamp 11: Innovation Management Themes
Horvat, Djerdj: Fraunhofer Institute for Systems and Innovation Research, Germany: Session 11.2: Managing Innovation 4: Firm level
Horvat, Djerdj: Fraunhofer ISI, Germany: Session 8.4: Transferring Knowledge 2: Absorptive Capacity
Hsieh, Chih-Hung: Yuan Ze University, Taiwan: Session 10.4: Bootcamp 10: Customers, Users & Innovation
Hsieh, Kuo-Nan (Nick): Yuan Ze University, College of Management, Taiwan: Session 10.5: Ideas Sandbox 2: Innovation Methods & Users
Hsu, Teresa Tiaojung: Cheng Shiu University, Taiwan: Session 5.4: Front End & NPD Themes
Hsu, Wen-Ching: National Tsing Hua University, Taiwan: Session 3.2: BMI 3: Start-ups & entrepreneurs
Hügel, Susanne: EBS Universität für Wirtschaft und Recht, Germany: Session 11.2: Managing Innovation 4: Firm level
Huizingh, Eelko: University of Groningen, Netherlands: Session 6.1: Open Innovation 6: Ecosystems & Networks
Hurmelinna-Laukkanen, Pia: University of Oulu, Oulu Business School, Finland: Session 6.2: Creativity in Innovation 2: Ideas & Interactions
Hwang, Hsuan-Chi: College of Management, Yuan Ze University, Taiwan: Session 10.4: Bootcamp 10: Customers, Users & Innovation
Hyslop, Katie: WU University of Economics and Business Vienna, Austria: Session 9.4: Bootcamp 9: Themes in Open Innovation
Inigo, Edurne: Deusto Business School, Spain: Session 7.5: Bootcamp 7: Sustainabilty
Iwami, Shino: Eötvös Loránd University, Hungary: Session 4.3: University-Industry Innovation 2
Jee, Sujung: Yonsei University, Korea, Republic of: Session 8.6: Bootcamp 8: Financial Themes & BMI (Mixed Session)
Jensen, Christian Schou: DTU Management Engineering, Denmark: Session 10.1: Design Thinking for Innovation
Joachim, Klemens: University of Kassel, Germany: Session 8.5: Innovation System Performance & Policy
Joachim, Verena: University of Kassel , Germany: Session 5.4: Front End & NPD Themes
Johnsson, Mikael: Blekinge Institute of Technology, Sweden: Session 9.2: Managing Innovation 2: Teams
Jung, Jinsun: Sungkyunkwan university, Korea, Republic of: Session 2.3: Strategic Foresight, Agility & Future Orientation: 2
Kan John, Priscilla: Australian National University, Australia: Session 2.6 Bootcamp 2: Universities & the Innovation System
Karhu, Päivi: Lappeenranta University of Technology, LUT School of Business, Finland: Session 3.4: Innovating in Traditional Sectors 3
Kaudela-Baum, Stephanie: Lucerne University of Applied Sciences and Arts/School of Business , Switzerland: Session 1.5: Enabling Innovation: Methods, Training, Coaching & Competence
Kim, Yun: Sungkyunkwan University , Korea, Republic of: Session 7.3: Living Labs 1
Koch, Volker: Institute of Business Economics and Industrial Sociology, Austria: Session 5.5: Bootcamp 5 : Innovation on a personal level
Kodama, Koichiro: Meisei University, Japan: Session 1.4: Innovating in Traditional Sectors 1
Kokshagina, Olga: Mines ParisTech, France: Session 1.6: Bootcamp 1: Open Innovation & Networks
Köller, Christoph: Görgen & Köller GmbH, Germany: Session 7.2: Sources of Opportunity: Mixed Innovation Themes
Kortelainen, Samuli: SimAnalytics Oy, Finland: Session 5.4: Front End & NPD Themes
Kortelainen, Samuli: University of Lappeenranta, Finland: Session 4.5: Innovation for Economic, Societal & Environmental Sustainability 3
Krämer, Katja: University of Lübeck, Germany: Session 7.4: Transferring Knowledge 1: Themes
Kristiansen, Jimmi Normann: Aalborg University, Denmark: Session 11.4: Disruptive, Radical and Adjacent Innovation Options
Ku, Tsu-Tung: Yuan Ze University, Taiwan: Session 4.2: BMI 4: Adoption & Implementation & Crowdsourcing (Mixed Session)
Kytölä, Juha: Wärtsilä, Finland: Session 1.4: Innovating in Traditional Sectors 1
Lagun Mesquita, Patricia: Blekinge Institute of Technology, Sweden: Session 4.5: Innovation for Economic, Societal & Environmental Sustainability 3
Laudien, Sven M.: University of Erfurt , Germany: Session 2.2: BMI 2: Platform & Technological Opportunity
Lee, Yongseung: Sungkyunkwan University, Korea, Republic of: Session 11.6: Ideas Sandbox 3: Finance & Performance
Leminen, Seppo: Laurea University of Applied Sciences, Finland: Session 7.3: Living Labs 1
Lillehagen, Frank: Commitment AS, Norway: Session 6.4: Project Spark Session
Lin, Carol: National Chengchi University, Taiwan: Session 2.5: Innovation for Economic, Societal & Environmental Sustainability 1
Lin, Chien-Chiang: Department of Business Administration, Shih Hsin University, Taiwan: Session 8.4: Transferring Knowledge 2: Absorptive Capacity
Lindhult, Erik: Mälardalen University, Sweden: Session 3.5: Innovation for Economic, Societal & Environmental Sustainability 2
Lindland, Kristiane: International research Institute of Stavanger, Norway: Session 5.5: Bootcamp 5 : Innovation on a personal level
Longo, Maria Cristina: Dept. of Economics and Business, University of Catania, Italy: Session 11.1: Financial Services & IP Considerations (Mixed Session)

Mäenpää, Sari: Tampere University of Technology, Finland: Session 7.4: Transferring Knowledge 1: Themes
Mahnke, Thomas: Institute of Technology and Process Management, Ulm University, Germany: Session 4.6: Bootcamp 4: Aspects of Innovation Management
Maia, Catarina: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal: Session 3.2: BMI 3: Start-ups & entrepreneurs
Makhotin, Sergiy: Fraunhofer MOEZ, Germany: Session 11.3: Start-Ups & Entrepreneurs 2: Technology entrepreneurship
Makkonen, Marika: VTT Technical Research Centre of Finland, Finland: Session 3.1: Open Innovation 3: Suppliers
Malik, Ashish: UNIVERSITY OF NEWCASTLE, Australia: Session 2.5: Innovation for Economic, Societal & Environmental Sustainability 1
Mansilha, Clara: INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal: Session 2.3: Strategic Foresight, Agility & Future Orientation: 2
Markovic Cunko, Ana: Faculty of Medicine University of Rijeka, Croatia: Session 2.6 Bootcamp 2: Universities & the Innovation System
Marques, João Paulo: Polytechnic Institute of Coimbra, Portugal: Session 10.3: Start-Ups & Entrepreneurs 1
Martin, Dominique Philippe: CREM UMR CNRS 6211 - Rennes 1 University, France: Session 4.3: University-Industry Innovation 2
McGuire, Steve: California State University, Los Angeles, USA: Session 9.2: Managing Innovation 2: Teams
Medina, Sara: Sociedade Portuguesa de Inovacao, Portugal: Session 6.4: Project Spark Session
Meinel, Martin: Friedrich-Alexander University Erlangen-Nürnberg, Germany: Session 11.5: Bootcamp 11: Innovation Management Themes
Mention, Anne-Laure: Luxembourg Institute of Science and Technology (LIST), Luxembourg: Session 11.1: Financial Services & IP Considerations (Mixed Session)
Mention, Anne-Laure: Luxembourg Institute of Science and Technology, Luxembourg: Session 9.5: Ideas Sandbox 1: Platforms & Ecosystems
Miller, Kristel: Queens University , United Kingdom: Session 5.3: University-Industry Innovation 3
Min, Yoongun: Sungkyunkwan University, Korea, Republic of: Session 2.3: Strategic Foresight, Agility & Future Orientation: 2
Mohammad, Ali Naef: Aalborg university, Denmark: Session 8.2: Managing Innovation 1: R&D
Montandon, Lydia: Atos Spain, Spain: Session 5.2: Creativity in Innovation 1: Standards & Talent
Morais-Storz, Marta: Norwegian University of Science and Technology, Norway ;: Session 6.5: Bootcamp 6 The Future & X-industry Innovation (Mixed Session)
Moreira, Ricardo: INESC TEC, Portugal: Session 5.2: Creativity in Innovation 1: Standards & Talent
Moser, Daniel: University of St. Gallen, Switzerland: Session 2.2: BMI 2: Platform & Technological Opportunity
Motta, Virna: strategie&innovazione, Italy: Session 8.2: Managing Innovation 1: R&D
Müller, Christiana: TU Graz-Institut für Unternehmensführung und Organisation, Austria: Session 2.6 Bootcamp 2: Universities & the Innovation System
Müller-Stewens, Benedikt: University of St.Gallen, Switzerland: Session 10.2: Managing Innovation 3: Process & Components
Nagler, Peter: Evonik Industries AG, Germany: Session 2.4: Innovating in Traditional Sectors 2
Naik, Hari Suman: Friedrich-Alexander University Erlangen-Nuremberg, Germany: Session 2.1: Open Innovation 2: Users & Customers
Naqshbandi, Mohammad Muzamil: University of Dubai, United Arab Emirates: Session 9.4: Bootcamp 9: Themes in Open Innovation
Narasimhalu, Desai: Singapore Management University, Singapore: Session 11.4: Disruptive, Radical and Adjacent Innovation Options
Nobre, Farley: Federal University of Parana / School of Management, Brazil: Session 4.5: Innovation for Economic, Societal & Environmental Sustainability 3
Nyborg, Sophie: Technical University of Denmark, Denmark: Session 10.5: Ideas Sandbox 2: Innovation Methods & Users
Olander, Heidi: LUT School of Business and Management, Finland: Session 9.3: Transferring Knowledge 3: Networks & Knowledge
Onuma, Masaya: Yokohama National University, Japan: Session 2.1: Open Innovation 2: Users & Customers
Osswald, Marc: University of Ulm, Institute of Technology and Process Management, Germany: Session 10.2: Managing Innovation 3: Process & Components
Paliokaite, Agne: Visionary Analytics, Lithuania: Session 8.4: Transferring Knowledge 2: Absorptive Capacity
Patricio, Rui: Digitalflow, Portugal: Session 9.2: Managing Innovation 2: Teams
Pellikka, Jarkko: Nokia Technologies , Finland: Session 9.5: Ideas Sandbox 1: Platforms & Ecosystems
Pereira, Renato: ISCTE-IUL, Portugal: Session 10.2: Managing Innovation 3: Process & Components
Phillips, Mark: University of Cambridge, United Kingdom: Session 6.1: Open Innovation 6: Ecosystems & Networks
Pinto, Eduardo B.: CCG/ZGDV Institute - University of Minho, Portugal: Session 3.3: University-Industry Innovation 1
Podmetina, Daria: Lappeenranta University of Technology, Finland: Session 1.1: Open Innovation 1: Reflections
Prexl, Katja-Maria: Zeppelin University, Germany: Session 1.5: Enabling Innovation: Methods, Training, Coaching & Competence
Primus, Dirk: Bryant University, USA: Session 10.2: Managing Innovation 3: Process & Components
Rantala, Tuija: VTT Technical Research Centre of Finland Ltd., Finland: Session 2.1: Open Innovation 2: Users & Customers
Rao, Prakash: Enterprise Sherpas LLC, USA: Session 3.6 Bootcamp 3: Components of Innovation (Mixed session)
Rau, Christiane: University of Applied Sciences Upper-Austria, Austria: Session 7.4: Transferring Knowledge 1: Themes
Real Perdomo, Maria: Heilbronn University, Germany: Session 3.5: Innovation for Economic, Societal & Environmental Sustainability 2
Rehm, Florian: INESC TEC, Portugal: Session 8.6: Bootcamp 8: Financial Themes & BMI (Mixed Session)
Reis, Detlef: Thinkergy Limited, Hong Kong: Session 6.2: Creativity in Innovation 2: Ideas & Interactions
Rezazadeh, Arash: University of Minho, Portugal: Session 11.6: Ideas Sandbox 3: Finance & Performance
Ribeiro de Oliveira, André: Rio de Janeiro State University, Brazil: Session 7.2: Sources of Opportunity: Mixed Innovation Themes
Rissanen, Tommi: Lappeenranta University of Technology, Finland: Session 3.2: BMI 3: Start-ups & entrepreneurs
Ritala, Paavo: Lappeenranta University of Technology, Finland: Session 6.1: Open Innovation 6: Ecosystems & Networks
Robbins, Peter: Maynooth University, Ireland, Republic of: Session 7.2: Sources of Opportunity: Mixed Innovation Themes
Rössler, Mirjam: HHL Leipzig Graduate School of Management, Germany: Session 3.2: BMI 3: Start-ups & entrepreneurs
Rostgaard Evald, Majbritt: University of Southern Denmark, Denmark: Session 8.1: Open Innovation 8: Management Challenges
Russell, Bill: Exeter University Business School, United Kingdom: Session 3.4: Innovating in Traditional Sectors 3
Saari, Ulla: Tampere University of Technology, Finland: Session 8.2: Managing Innovation 1: R&D
Sætre, Alf Steinar: NTNU, Norway: Session 1.3: Strategic Foresight, Agility & Future Orientation: 1
Sanchez Mejia, Myriam: Corporacion biotec, Colombia: Session 10.5: Ideas Sandbox 2: Innovation Methods & Users
Santonen, Teemu: Laurea University of Applied Sciences, Finland: Session 7.2: Sources of Opportunity: Mixed Innovation Themes
Santonen, Teemu: Laurea University of Applied Sciences, Finland: Session 8.5: Innovation System Performance & Policy
Sarma, Meera: Northumbria University, United Kingdom: Session 1.6: Bootcamp 1: Open Innovation & Networks
Saur-Amaral, Irina: Strategy 360 - Consulting, Lda, Portugal: Session 1.2: BMI 1: Reflections
Savelkoul, Louise: Tilburg University, Netherlands: Session 8.3: Living Labs 2
Schartinger, Doris: AIT Austrian Institute of Technology GmbH , Austria: Session 10.1: Design Thinking for Innovation
Schneckenberg, Dirk: ESC Rennes School of Business, France: Session 1.2: BMI 1: Reflections
Schuurman, Dimitri: iMinds - MICT - Ghent University, Belgium: Session 7.3: Living Labs 1

DELEGATE LIST

The list is ordered by surname and is correct at time of printing: 13 June 2016.

Aarikka-Stenroos, Leena	Tampere University of Technology	Finland
Aas, Tor Helge	University of Agder	Norway
Abreu, Marta	Unicer Bebidas, SA	Portugal
Albareda, Laura	University of Deusto	Spain
Albats, Ekaterina	Lappeenranta University of Technology	Finland
Alexander, Allen	University of Exeter, Business School	United Kingdom
Allmendinger, Martin	University of Hohenheim	Germany
Almeida, Mariana	Federal University of Rio Grande do Norte	Brazil
Altenburger, Reinhard	IMC University of Applied Sciences Krems	Austria
Amara, Nabil	Laval university	Canada
Aminoff, Anna	VTT Technical Research Centre of Finland	Finland
Antikainen, Maria	VTT Technical Research Centre of Finland	Finland
Antozzi, Antonio Lorenzo	industrie de nora spa	Italy
Aramburu, Nekane	University of Deusto	Spain
Arnold, Christian	Friedrich-Alexander University Erlangen-Nürnberg	Germany
August, Hans-Juergen	Siemens Convergence Creators	Austria
Baiyere, Abayomi	University of Turku	Finland
Banerjee, Aneesh	Cass Business School, City University London	United Kingdom
Barlatier, Pierre-Jean	Luxembourg Institute of Science and Technology	Luxembourg
Baron, Marcin	University of Economics in Katowice	Poland
Bauer, Julia	Fraunhofer Venture	Germany
Beck, Mathias	University of Zurich	Switzerland
Begonja, Marta	University of Rijeka Faculty of Medicine	Croatia
Bellman, Beryl	California State University Los Angeles	USA
Berg, Pekka	Aalto University	Finland
Bergset, Linda	Borderstep Institut gGmbH	Germany
Bessant, John	University of Exeter	United Kingdom
Billard, Sandra	Federation University	Australia
Bitran, Daniel	EthixPeople LLC	USA
Bitran, Iain	ISPIM	United Kingdom
Bø Lyng, Hilda	University of Stavanger	Norway
Bos, Sjoerd	Avans University of Applied Sciences	Netherlands
Bozic Yams, Nina	Mälardalen University	Sweden
Braga da Cruz, Isabel	PortugalFoods	Portugal
Bravo, Sofia	ANI	Portugal
Brecht, Leo	Ulm University	Germany
Breuer, Henning	HMKW University Berlin	Germany
Brito, Carlos	Universidade do Porto	Portugal
Brun, Eric	University of Stavanger	Norway
Buchholz, Christian	Verrocchio Institute for Innovation Competence	Germany
Burdon, Steve	University of Technology, Sydney	Australia
Buse, Stephan	Hamburg University of Technology	Germany
Butler, Jeff	Technovation	United Kingdom
Caetano, Isabel	COTEC Portugal	Portugal
Caldeira, José Carlos	ANI	Portugal
Calderon, Guadalupe	Universidad Autonoma Metropolitana	Mexico
Campos, Juan	ESIC Business & Marketing School	Spain
Canas, Tomé	The Navigator Company	Portugal
Carneiro, Luís	INESC TEC	Portugal
Casprini, Elena	Scuola Superiore Sant'Anna	Italy
Cerneviciute, Jurate	International Business School at Vilnius University	Lithuania
Champinot, Christel	Air Liquide	France
Chasanidou, Dimitra	SINTEF ICT	Norway
Chen, Rui	Huawei Technologies Co Ltd	China
Cheng, Colin	National Yunlin U. of Science and Technology	Taiwan
Chiaroni, Davide	Politecnico di Milano	Italy
Choe, Jayden Jae-Hun	Sungkyunkwan University	Korea, Republic of
Cimilluca, Maria	Johns Hopkins Applied Physics Laboratory	USA
Clarke, Ann	University of Southern Denmark	Denmark
Clauß, Thomas	Philipps-University of Marburg	Germany
Coelho Rodrigues, José	Faculdade de Engenharia da Universidade do Porto	Portugal

Comberg, Christian	HHL Leipzig Graduate School of Management	Germany
Conn, Steffen	ISPIM	United Kingdom
Dabrowska, Justyna	Lappeenranta University of Technology	Finland
Daellenbach, Urs	Victoria University of Wellington	New Zealand
Damas, Diogo	ISPIM / Strategy 360 Consultancy	Portugal
Darouichi, Oussama	Université de Neuchâtel	Switzerland
Darrin, Margaret	Johns Hopkins Applied Physics Laboratory	USA
DaSilva, Carlos	Spark Triggers Unipessoal	Portugal
Davenport, Sally	Victoria Business School	New Zealand
de Jager, Kylie	University of Cape Town	South Africa
Deák, Csaba	University of Miskolc	Hungary
Dedehayir, Ozgur	Queensland University of Technology	Australia
Dell, Michael	ratio| warp-innovation	Austria
Deutsch, Christophe	En Mode Solutions	Canada
Devitt, Frank	Maynooth University	Ireland, Republic of
Dew, Rob	Coriolis Innovation Pty Ltd	Australia
Dias, Manuela	FEP - UP	Portugal
Diedrichs, Eva	IMP³rove - European Innovation Management Academy	Germany
Dingler, Annika	Zeppelin University	Germany
Dobayova, Katerina	Investment and Business Development Agency - CzechInvest	Czech Republic
Dooley, Lawrence	University College Cork	Ireland, Republic of
Dory, Tibor	Széchenyi István University	Hungary
Dos Santos Paulino, Victor	Toulouse Business School	France
Douglas, Tania	University of Cape Town	South Africa
Doval, Hismael	Deutsche Bank AG	Switzerland
Dovey, Ken	University of Technology, Sydney	Australia
Drost, Ellen	California State University Los Angeles	USA
Duelme, Christian	University of Paderborn	Germany
Dufour, François	Orange	France
Dufva, Mikko	VTT Technical Research Centre of Finland	Finland
Dülfer, Nils	IMP³rove - European Innovation Management Academy	Germany
Echardour, Pascal	ADINVEST International	France
Echterhoff, Benedikt	Heinz Nixdorf Institut, University of Paderborn	Germany
Ellingsen, Oda	Rolls-Royce Marine / NTNU	Norway
Ellwood, Paul	University of Liverpool Management School	United Kingdom
Enkel, Ellen	Zeppelin Universität gemeinnützige GmbH	Germany
Esser, Lukas	Ulm University	Germany
Etingue Kum, Menes	Aarhus Business School	Germany
Etzkowitz, Henry	Stanford University	USA
Evald, Majbritt	University of Southern Denmark	Denmark
Faham, Jérémie	ESTIA	France
Faivre, Denis	Worldline	France
Farken, Anne	BMW Group Designworks	Germany
Farrell, David	ISPIM	United Kingdom
Felício, Nuno	INESC TEC/CITE	Portugal
Fernandes, Jorge	DSM Nutitional Products Ltd	Switzerland
Ferreira, Rogério	Brazilian Army	Brazil
Ferrís Gallego, Manuel	Valencia Convention Bureau	Spain
Fichter, Klaus	Borderstep Institute for Innovation and Sustainability	Germany
Fiegenbaum, Irina	ISPIM	United Kingdom
Fisher-Robins, Elizabeth	ITN Productions	United Kingdom
Fitzmaurice, Leona	Consultant and Writer	USA
Freitas Santos, José	Universidade do Minho - NIPE	Portugal
Furner, Adrian	Kommercialize Ltd	United Kingdom
Gailly, Benoit	Louvain School of Management	Belgium
Garcia Robles, Ana	ENoLL	Belgium
Garechana, Gaizka	University of the Basque Country EHU	Spain
Garnica, Leonardo	Natura Cosmetics	Brazil
Gelhard, Carsten	University of Twente	Netherlands
Gerbin, Ani	University of Rijeka Faculty of Medicine	Croatia
Gerlach, Uwe	Sanofi-Aventis Deutschland GmbH	Germany
Gjelsvik, Martin	IRIS (International Research institute of Stavanger)	Norway
Gkikas, Aineias	Birmingham City University	United Kingdom
Golovatchev, Julius	Detecon International GmbH / Deutsche Telekom Group	Germany
Gorry, Philippe	University of Bordeaux	France
Greenfield, Ricardo	Faculdade de Engenharia da Universidade do Porto	Portugal

Guertler, Matthias	Technical University of Munich	Germany
Guimaraes, Cristina	INESC TEC	Portugal
Guyot Phung, Carola	i3- CRG - (Ecole Polytechnique - Paris Saclay)	France
Haag, Christoph	Rhine-Waal University of Applied Sciences	Germany
Hafkesbrink, Joachim	innowise GmbH	Germany
Hagedoorn, Elies	Avans Hogeschool	Netherlands
Hammer, Kate	KILN	United Kingdom
Hamwi, Michael	ESTIA	France
Hannola, Lea	Lappeenranta University of Technology	Finland
Harengel, Peter	Philipps-University of Marburg	Germany
Haslam, Christian	Aalborg University	Denmark
Haukipuro, Lotta	University of Oulu	Finland
Hengstler, Monika	Zeppelin University	Germany
Hensen, Joris	Deutsche Bank AG	Germany
Henttonen, Kaisa	Lappeenranta University of Technology	Finland
Hill-King, Michael	Huawei Technologies Co Ltd	United Kingdom
Hinkkanen, Juha	Hilti	Finland
Hock, Marianne	Philipps-University of Marburg	Germany
Hohl, Eberhard	University of Applied Sciences Ravensburg-Weingarten	Germany
Horila, Anne	Regional Council of Häme	Finland
Hornung-Prähauser, Veronika	Salzburg Research Forschungsgesellschaft	Austria
Horvat, Djerdj	Fraunhofer ISI	Germany
Hsieh, Chih-Hung	Yuan Ze University	Taiwan
Hsieh, Kuo-Nan (Nick)	College of Management, Yuan Ze University	Taiwan
Hsu, Teresa Tiaojung	Cheng Shiu University	Taiwan
Hsu, Wen-Ching	National Tsing Hua University	Taiwan
Hügel, Susanne	EBS Universität für Wirtschaft und Recht	Germany
Huizingh, Eelko	University of Groningen	Netherlands
Hurmelinna-Laukkanen, Pia	University of Oulu	Finland
Hurtado, Antonio	Government of Alberta	Canada
Hwang, Hsuan-Chi	Yuan Ze University	Taiwan
Hyland, Joanne	rInnovation Group	USA
Hyslop, Katie	WU University of Economics and Business Vienna	Austria
Ingvarsdóttir, Sigríður	Innovation Center Iceland	Iceland
Inigo, Edurne	Deusto Business School	Spain
Iwami, Shino	Eötvös Loránd University	Hungary
Janssen, Matthijs	Dialogic / Harvard University	Netherlands
Järvi, Kati	Hanken School of Economics	Finland
Jee, Sujung	Yonsei University	Korea, Republic of
Jensen, Christian Schou	Technical University of Denmark	Denmark
Jissink, Tymen	Aarhus University	Denmark
Joachim, Klemens	University of Kassel	Germany
Joachim, Verena	University of Kassel	Germany
Johnsson, Mikael	Blekinge Institute of Technology	Sweden
Jones, Tim	Future Agenda	United Kingdom
Juneseuk, Shin	Sungkyunkwan University	Korea, Republic of
Jung, Jinsun	Sungkyunkwan university	Korea, Republic of
Kan John, Priscilla	Australian National University	Australia
Karhu, Päivi	Lappeenranta University of Technology	Finland
Kaudela-Baum, Stephanie	Lucerne University of Applied Sciences and Arts	Switzerland
Kedia, Ann	Johns Hopkins Applied Physics Laboratory	USA
Keränen, Joona	Lappeenranta University of Technology	Finland
Kim, Byoung Soo	Korea Institute of S&T Evaluation and Planning	Korea, Republic of
Kim, Yun	Sungkyunkwan University	Korea, Republic of
Koch, Volker	Institute of Business Economics and Industrial Sociology	Austria
Kodama, Koichiro	Meisei University	Japan
Kokshagina, Olga	ISPIM	United Kingdom
Köller, Christoph	Görgen & Köller GmbH	Germany
Kortelainen, Samuli	SimAnalytics Oy	Finland
Krämer, Katja	University of Lübeck	Germany
Kristiansen, Jimmi Normann	Aalborg University	Denmark
Ku, Tsu-Tung	College of Management, Yuan Ze University	Taiwan
Kutvonen, Antero	Lappeenranta University of Technology	Finland
Kytölä, Juha	Wärtsilä	Finland
Lagun Mesquita, Patricia	Blekinge Institute of Technology	Sweden
Laousse, Dominique	SNCF	France

Laudien, Sven M.	University of Erfurt	Germany
Lauritzen, Ghita	Cambridge University	United Kingdom
Lee, Heesang	Sungkyunkwan University	Korea, Republic of
Lee, Myeong Yong	Sungkyunkwan University	Korea, Republic of
Lee, Yongseung	Sungkyunkwan University	Korea, Republic of
Lee, You-Na	Georgia Institute of Technology	USA
Legardeur, Jérémy	ESTIA	France
Leker, Jens	University of Münster	Germany
Leminen, Seppo	Laurea University of Applied Sciences	Finland
Leue-Bensch, Carina	Lufthansa Systems GmbH & Co.KG	Germany
Li, Xiao	Huawei Technologies Co Ltd	China
Liebe, Joerg	Lufthansa Systems GmbH & Co.KG	Germany
Lillehagen, Frank	Commitment AS	Norway
Lin, Carol	National Chengchi University	Taiwan
Lin, Chien-Chiang	Shih Hsin University	Taiwan
Lindhult, Erik	Mälardalen University	Sweden
Lindland, Kristiane	International Research Institute of Stavanger	Norway
Longo, Maria Cristina	University of Catania	Italy
Mäenpää, Sari	Tampere University of Technology	Finland
Mahnke, Thomas	Ulm University	Germany
Maia, Catarina	INESC TEC	Portugal
Makhotin, Sergiy	Fraunhofer MOEZ	Germany
Makkonen, Marika	VTT Technical Research Centre of Finland	Finland
Malik, Ashish	University of Newcastle	Australia
Mansilha, Clara	INESC TEC	Portugal
Markovic Cunko, Ana	University of Rijeka Faculty of Medicine	Croatia
Marques, João Paulo	University of Aveiro	Portugal
Martin, Dominique Philippe	CREM UMR CNRS 6211 - Rennes 1 University	France
Matos, Elisabete	Sorgal SA	Portugal
McFarthing, Kevin	Innovation Fixer	United Kingdom
McGuire, Steve	California State University Los Angeles	USA
Medina, Sara	Sociedade Portuguesa de Inovacao	Portugal
Meinel, Martin	Friedrich-Alexander University Erlangen-Nürnberg	Germany
Meireles, Sónia	ANI	Portugal
Mention, Anne-Laure	Luxembourg Institute of Science and Technology	Luxembourg
Mesquita, Ana Paula	Magellan Association	Portugal
Miller, Kristel	Queens University	United Kingdom
Min, Yoongun	Sungkyunkwan University	Korea, Republic of
Mohammad, Ali Naef	Aalborg university	Denmark
Monsen, Gry Elisabeth	Innovation Norway	Norway
Montandon, Lydia	Atos Spain	Spain
Monteiro, Sergio	ISCAP/IPP	Portugal
Morais, Pilar	Frulact, S. A.	Portugal
Morais-Storz, Marta	Norwegian University of Science and Technology	Norway
Moreira, Ricardo	INESC TEC	Portugal
Möseneder, Hannes	Greiner Technology & Innovation GmbH	Austria
Moser, Daniel	University of St. Gallen	Switzerland
Motta, Virna	Strategie&Innovazione	Italy
Müller, Christiana	Graz University of Technology	Austria
Müller-Stewens, Benedikt	University of St.Gallen	Switzerland
Nagler, Peter	Evonik Industries AG	Germany
Naik, Hari Suman	Friedrich-Alexander University Erlangen-Nürnberg	Germany
Naqshbandi, Mohammad Muzamil	University of Dubai	United Arab Emirates
Narasimhalu, Desai	Singapore Management University	Singapore
Naruseviciene, Dovile	Ministry of Economy of the Republic of Lithuania	Lithuania
Nepelski, Daniel	European Commission, Joint Research Centre - IPTS	Spain
Nobre, Farley	Federal University of Parana / School of Management	Brazil
Nyborg, Sophie	Technical University of Denmark (DTU)	Denmark
Olander, Heidi	Lappeenranta University of Technology	Finland
Onuma, Masaya	Yokohama National University	Japan
Osswald, Marc	University of Ulm, ITOP	Germany
Osumi, Tamaki	University of the Ryukyus	Japan
Paliokaite, Agne	Visionary Analytics	Lithuania
Papageorgiou, Kyriaki	Fundación ESADE	Spain
Park, Youngil	Ewha Womans University	Korea, Republic of
Patricio, Rui	Digitalflow	Portugal

Paužaitė-Kimsienė, Akvilė	Ministry of Economy of the Republic of Lithuania	Lithuania
Pawanchik, Azim	Alpha Catalyst Consulting Sdn. Bhd.	Malaysia
Pawełczak, Rafał	KGHM Polska Miedź S.A.	Poland
Pellikka, Jarkko	Nokia Technologies	Finland
Pereira, Renato	ISCTE-IUL	Portugal
Petraite, Monika	Kaunas Univeristy of Technology	Lithuania
Peutz, Murk	Equator Research	Netherlands
Phillips, Mark	University of Cambridge	United Kingdom
Pinto, Eduardo	Universidade do Minho / CCG	Portugal
Platou, Rikke S.	Norwegian University of Science and Technology	Norway
Podmetina, Daria	Lappeenranta University of Technology	Finland
Prexl, Katja-Maria	Zeppelin University	Germany
Primus, Dirk	Bryant University	USA
Quintella, Cristina	UFBA & FORTEC	Brazil
Rantala, Tuija	VTT Technical Research Centre of Finland	Finland
Rao, Prakash	Enterprise Sherpas LLC	USA
Rau, Christiane	University of Applied Sciences Upper Austria	Austria
Raubiene, Vida	Ministry of Economy of the Republic of Lithuania	Lithuania
Real Perdomo, Maria	Heilbronn University	Germany
Reedy, Ann	Self	USA
Rehm, Florian	INESC TEC	Portugal
Reil, Michael	SAP SE	Germany
Reis, Detlef	Thinkergy Limited	Hong Kong
Rezazadeh, Arash	University of Minho	Portugal
Rhisiart, Martin	University of South Wales	United Kingdom
Ribeiro de Oliveira, André	Rio de Janeiro State University	Brazil
Rissanen, Tommi	Lappeenranta University of Technology	Finland
Ritala, Paavo	Lappeenranta University of Technology	Finland
Robbins, Peter	Maynooth University	Ireland, Republic of
Roig, Gema	InnDEA Valencia (Valencia Municipality)	Spain
Rossi, Margarida	i3S	Portugal
Rössler, Mirjam	HHL Leipzig Graduate School of Management	Germany
Russell, Bill	Exeter University Business School	United Kingdom
Rustler, Florian	creaffective GmbH	Germany
Saari, Ulla	Tampere University of Technology	Finland
Sætre, Alf Steinar	Norwegian University of Science and Technology	Norway
Salavejiene, Renata	Ministry of Economy of the Republic of Lithuania	Lithuania
Sanchez Mejia, Myriam	Corporacion biotec	Colombia
Santonen, Teemu	Laurea University of Applied Sciences	Finland
Sarma, Meera	Northumbria University	United Kingdom
Saur-Amaral, Irina	Universidade Europeia	Portugal
Savelkoul, Louise	Equator Research	Netherlands
Schartinger, Doris	AIT Austrian Institute of Technology GmbH	Austria
Schlage, Fabian	Nokia	Germany
Schmalfuss, Björn	Fraunhofer Venture	Germany
Schneckenberg, Dirk	ESC Rennes School of Business	France
Schneider, Sabrina	Independent	Germany
Schulz, Stefan	Carmeq GmbH	Germany
Schuurman, Dimitri	iMinds Living Labs	Belgium
Sedounik, Val	KAIROS	United Kingdom
Senaratne, Chaminda	Northumbria University	United Kingdom
Shahbazpour, Mehdi	Auckland UniServices Ltd c/ University of Auckland	New Zealand
Sheffield, Rob	Bluegreen Learning	United Kingdom
Sick, Nathalie	Forschungszentrum Juelich GmbH Helmholtz-Institute Muenster	Germany
Silva, Ana	Sigma Team Consulting, S.A.	Portugal
Silva, Bruna	Universidade Federal Rural do Semi-Árido	Brazil
Silva, Mario	Faculdade de Economia do Porto	Portugal
Silva, Nuno	EFACEC	Portugal
Silva, Ricardo	Quociente Razao	Portugal
Silva, Ricardo	Unicer Bebidas, SA	Portugal
Silva, Roberto	ITESM	Mexico
Silva, Suzana	Lactogal, Produtos Aimentares S.A	Portugal
Simms, Christopher	University of Portsmouth	United Kingdom
Smeilus, Gavin	University of Wolverhampton	United Kingdom
Smolan, Arild	Norwegian University of Science and Technology	Norway
Soares Fernandes, André Filipe	University of Porto	Portugal

Sohn, Byungkuk	Sungkyunkwan University	Korea, Republic of
Sonnenburg, Stephan	Karlshochschule International University	Germany
Spieth, Patrick	University of Kassel	Germany
Steen, Marc	TNO	Netherlands
Stel, Frans	Avans University of Applied Sciences	Netherlands
Stevens, Eric	ESSCA School of Management	France
Still, Kaisa	VTT Technical Research Centre of Finland	Finland
Storgaard, Marianne	University of Southern Denmark	Denmark
Storvang, Pia	University of Southern Denmark	Denmark
Strudthoff, Maike	Forschungszentrum Juelich GmbH Helmholtz-Institute Muenster	Germany
Sulaiman, Suraya	Alpha Catalyst Consulting Sdn. Bhd.	Malaysia
Suominen, Arho	VTT Technical Research Centre of Finland	Finland
Swan, Dan	startinno	Australia
Teixeira, Sandrina	ISCAP/IPP	Portugal
Thurnes, Christian	University of Applied Sciences Kaiserslautern - OPINNOMETH	Germany
Tiky, Abdissa Yilma	Seoul National University	Korea, Republic of
Timonen, Päivi	University of Helsinki	Finland
Tiwari, Rajnish	Hamburg University of Technology	Germany
Toister, Amir	Independent	Israel
Torkkeli, Marko	Lappeenranta University of Technology	Finland
Toth, Eszter	Universitas-Gyor Nonprofit Kft	Hungary
Trauzettel, Susanne	Lufthansa Systems GmbH & Co.KG	Germany
Trifilova, Anna	University of Exeter	United Kingdom
Trott, Paul	University of Portsmouth	United Kingdom
Tseng, Fang-Mei	Yuan-Ze University	Taiwan
Tura, Nina	Lappeenranta University of Technology	Finland
Urbinati, Andrea	Politecnico di Milano	Italy
Vagn, Anna Rose	DTU Engineering Management	Denmark
Valmohammadi, Changiz	Islamic Azad University-South Tehran Branch	Iran
Van der Veen, Gerrita	HU Business School Utrecht	Netherlands
van Wulfen, Gijs	Big Tree Marketing Innovators BV	Netherlands
Vanatkova, Daniela	Investment and Business Development Agency - CzechInvest	Czech Republic
Vandael, Mark	markvandael.com	Belgium
Vanhaverbeke, Wim	Fundación ESADE	Spain
Velamuri, Vivek K	HHL Leipzig Graduate School of Management	Germany
Vervoort, Koen	iMinds vzw	Belgium
Villinger, Marc G.	University of St. Gallen	Switzerland
Vishnevskiy, Konstantin	National Research University Higher School of Economics	Russia
Vitasovic, Dianna	Innovation Culture	Australia
von Delft, Stephan	University of Glasgow	United Kingdom
von Riegen, Claus	SAP SE	Germany
Vullings, Ramon	RamonVullings.com - Twinkeling BV	Netherlands
Wade, Harvey	Cisco	United Kingdom
Wallin, Arto	VTT Technical Research Centre of Finland	Finland
Warren, Vessela	University of Worcester	United Kingdom
Weiss, Astrid	Fraunhofer Italia Research scarl	Italy
Wenz, Alexander Claus	EBS Universität für Wirtschaft und Recht	Germany
Westgate, William	William Westgate & Associates Inc.	Canada
Wikström, Anders	SICS Swedish ICT Västerås	Sweden
Williams, Ceri	University of Leeds	United Kingdom
Wilson, Mark	GlaxoSmithKline Pharmaceuticals	United Kingdom
Woeran, Bruno	Merinova Oy AB	Finland
Woudhuysen, James	London South Bank University	United Kingdom
Wynne, Danielle	University of Exeter Business School	United Kingdom
Yablonsky, Sergey	Graduate School of Management, St. Petersburg University	Russia
Yen, Yu-Xiang	College of Management, Yuan Ze University	Taiwan
Yoon, Jaehee	Sungkyunkwan University	Korea, Republic of
Yu, Miko Ching-Ying	Kyoto University	Japan
Zittel, Karina	ISPIM / TU Berlin	Germany

NOTES


INESCTEC
TECHNOLOGY & SCIENCE
ASSOCIATE LABORATORY
PORTUGAL
RESEARCH AND TECHNOLOGICAL DEVELOPMENT
TECHNOLOGY TRANSFER AND VALORISATION
ADVANCED TRAINING
CONSULTING
PREINCUBATION OF TECHNOLOGY-BASED COMPANIES
CONTACTS
INESC TEC
INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES
TECNOLOGIA E CIÊNCIA
CAMPUS DA FEUP
R. DR. ROBERTO FRIAS
4200 - 465 PORTO
PORTUGAL
T +351 222 094 000
INFO@INESCTEC.PT
WWW.INESCTEC.PT
FUNDED BY
COMPETE 2020
PORTUGAL 2020
FCT
from knowledge generation to science-based innovation
COMPUTER SCIENCE
INDUSTRY AND INNOVATION
NETWORKED INTELLIGENT SYSTEMS
POWER AND ENERGY
INESC TEC has a multidisciplinary environment organised into 4 Clusters to maximise synergies and generate more competitive results
+ 190 PROJECTS / YEAR
NATIONAL AND EUROPEAN PROGRAMMES
R&D AND CONSULTING SERVICES
+ 300 PAPERS / YEAR
INTERNATIONAL SCIENTIFIC JOURNALS
+ 300 GRANT HOLDERS / YEAR
PERSONAL DEVELOPMENT IN S&T
+ 650 RESEARCHERS (INCLUDING + 270 PhDs)

NOTES

NOTES


U.PORTO
WE CREATE
THE FUTURE
U.PORTO
inovação
Turning knowledge into value with talented people

NOTES

NOTES


1986 | 30 | 2016
inegi driving science & innovation
PARTNERSHIP FOR RESEARCH & INNOVATION AND ADVANCED ENGINEERING
> ENERGY AND ENVIRONMENT
> NEW MATERIALS AND STRUCTURAL SOLUTIONS
> ADVANCED MANUFACTURING TECHNOLOGIES
> PRODUCT AND SYSTEM DEVELOPMENT
AERONAUTICS, SPACE AND DEFENCE
AUTOMOTIVE AND TRANSPORTS
ENERGY AND ENVIRONMENT
INDUSTRY
HEALTH
SEA ECONOMY
www.inegi.up.pt


spi
Sociedade Portuguesa de Inovação
YOUR PARTNER FOR INNOVATION
WWW.SPIEUROPE.EU
REGIONAL DEVELOPMENT
LAND USE PLANNING
URBAN REGENERATION
SUSTAINABLE DEVELOPMENT
SCIENCE AND TECHNOLOGY
INNOVATION MANAGEMENT
SKILLS DEVELOPMENT
CONSULTING
CLUSTER IMPLEMENTATION
INNOVATION
KNOWLEDGE MANAGEMENT
INTERNATIONAL COLLABORATIONS
INTERNATIONALIZATION
R&D
TECHNOLOGICAL DEVELOPMENT
TRAINING
ENTREPRENEURSHIP
SOCIEDADE PORTUGUESA DE INOVAÇÃO • AVENIDA MARECHAL GOMES DA COSTA, 1376 • 4150-356 PORTO
PORTO • LISBON • COIMBRA • AZORES • SANTIAGO DE COMPOSTELA • BRUSSELS • WASHINGTON D. C. • CALIFORNIA • BEIJING • MACAU • SINGAPORE

NOTES

NOTES

ISPIM Special Interest Group: Teaching and Coaching Innovation

News about an EU-funded Project

on training for innovation inside organisations

ispim® TACIT Knowledge Alliance

Funded by the Erasmus+ Programme of the European Union

Project Number:
562459-EPP-1-2015-1-UK-EPPKA2-KA
Project Duration January 2016 - December 2018

Project idea

At the 2014 ISPIM conference in Dublin delegates from industry shared their challenges and expressed their interest to learn more about training employees around the themes represented by the Teaching & Coaching SIG.

Project question

With this idea, a consortium was built consisting of industrial partners and academics to research the question of: "How do we improve on current innovation management and entrepreneurship teaching, coaching and training?"

Project funding & design

A proposal titled "Teaching and Coaching Innovation & Entrepreneurship InnovaTively" (TACIT)" was selected out 200 Knowledge Alliance submissions to the EU's Erasmus Plus Programme. It is a three year, €1 million project designed as a 'Knowledge Alliance' involving research groups led jointly by academic and industrial partners.

Project research areas

The partners focus on eight innovative methods of innovation training:

- Storytelling
- Peripatetic learning
- Futures-based learning
- Entrepreneur laboratory
- Innovation theatre
- Design making
- Innovation games
- Project-based learning

To join & find out more

The Erasmus Knowledge Alliance programme allows organizations to join TACIT as an associated partner. For inquiries, please contact Anna Trifilova, Leader of ISPIM Teaching SIG & TACIT project coordinator via anna@thefutureofinnovation.org

Project partners

University of Exeter
HHL Leipzig Graduate School of Management
SDU
International Academy | RWTH Aachen University
ispim®
ASIIN Consult
LEGO
NOKIA
Aachen Münchener
Lufthansa Systems
Torbay and South Devon NHS Foundation Trust
BMW | MINI | Rolls-Royce Motor Cars Limited

SIG Supporters

Innovation Portal

TACIT Knowledge Alliance

CENTER FOR LEADING INNOVATION AND COOPERATION

INNOVATION LAB

INNOVATION LEADERSHIP FORUM

PETER PRIBILLA FOUNDATION

the future of Innovation

ISPIM SCIENTIFIC PANEL

Our thanks are due to those people who contributed from the ISPIM Scientific Panel.

Head of Panel: Eelko Huizingh, University of Groningen, Netherlands
Associate Heads: Urs Daellenbach, Victoria University of Wellington, New Zealand & Jens Leker, University of Münster, Germany
Scientific Co-ordinator: Olga Kokshagina, MINES Paristech

- Tor Helge Aas, University of Agder, Norway
- Ekaterina Albats, Lappeenranta University of Technology, Finland
- Maria Antikainen, VTT Technical Research Centre of Finland, Finland
- Marcelo Amaral, Universidade Federal Fluminense, Brazil
- Allen Alexander, University of Exeter, UK
- Anna-Leena Asikainen, Luxembourg Institute of Science & Technology, Luxembourg
- Rashmi Assudani, Xavier University, USA
- Mohan Avvari, Nottingham University Business School, Malaysia
- Tony Bailetti, Carleton University, Canada
- Ron Beckett, Swinburne University of Technology, Australia
- Iain Bitran, ISPIM, UK
- Thomas Bohné, University of Auckland Business School, New Zealand
- Alexander Brem, University of Southern Denmark, Denmark
- Glenn Brophey, Nipissing University, Canada
- Stephan Buse, TUHH, Germany
- Jeff Butler, Technovation, UK
- Dave Caissy, École Polytechnique de Montréal/Innovation Leaders Club, Canada
- Tamara Carleton, Innovation Leadership Board LLC, USA
- Annick Castiaux, University of Namur, Belgium
- Angelo Cavallo, Politecnico di Milano, Italy
- Colin Cheng, Yuan Ze University, Taiwan
- Davide Chiaroni, Politecnico di Milano, Italy
- Steffen Conn, ISPIM, UK
- Tom Coughlan, Mercy College, USA
- Claudio Cruz Cázares, Universidad Autónoma de Barcelona, Spain
- Alexander Cowan, www.alexandercowan.com, USA
- Clive-Steven Curran, Fresenius Medical Care AG & Co. KGaA, Germany
- Minna Damani, CanBiotech Innovations, Canada
- Christophe Deutsch, Telops/En Mode Solutions, Canada
- Pedro de Faria, University of Groningen, Netherlands
- Gerrit Anton de Waal, RMIT University, Australia
- Maria Cristina De Stefano, Universidad Carlos III de Madrid, Spain
- Robert Dew, Coriolis Innovation Pty Ltd, Australia
- Ron Dvir, Innovation Ecology, Israel
- Paul Ellwood, University of Liverpool, UK
- Scott Erickson, School of Business, Ithaca College, USA
- Irina Fiegenbaum, ISPIM, Germany
- Matthias Fink, Johannes Kepler University, Austria
- Leona Fitzmaurice, The UAB Research Foundation, USA
- Sean P. Flanigan, University of Ottawa, Canada
- Jeannie Fletcher, Massey University, New Zealand
- Serghei Floricel, UQAM, Canada
- Helena Forsman, University of Tampere School of Management, Finland
- Federico Frattini, Politecnico di Milano, Italy
- Benoit Gailly, Université Catholique de Louvain, Belgium
- Charlie Garland, The Innovation Outlet, USA
- Birte Golembiewski, University of Münster, Germany
- David Grandadam, HEC Montreal, Canada
- Christina Grundström, Linköping University, Sweden
- Praveen Gupta, Illinois Institute of Technology, USA
- Karim Hagar, Kepri, Canada
- Norrin Halilem, Université Laval, Canada
- Jean-Francois Harvey, Harvard Business School, USA
- Sven Heidenreich, Universität des Saarlandes, Germany
- Romy Hilbig, Fraunhofer MOEZ, Germany
- Hendrik Hielkema, Aalto University, Finland
- Antonio Hurtado, Government of Alberta, Canada
- Pia Hurmelinna-Laukkanen, University of Oulu, Finland
- Kristina Jespersen, Aarhus University, Denmark
- Kati Järvi, Hanken School of Economics, Finland
- Liz Jones, Strategy Regeneration, USA
- Linda Kamp, TU Delft, Netherlands
- Hannu Karkkainen, Tampere University of Technology, Finland
- Byoung Soo Kim, KISTEP, South Korea
- Mirjam Knockaert, Ghent University, Belgium
- Samuli Kortelainen, Lappeenranta University of Technology, Finland
- Antero Kutvonen, Lappeenranta University of Technology, Finland
- Thomas Lager, Université Mohammed VI Polytechnique, Morocco
- Johannes Landsperger, EBS Universität für Wirtschaft und Recht, Germany
- Sven Laudien, Universität Erfurt, Germany
- Pentti Launonen, Aalto University, Finland
- Christofer Laurell, Stockholm University, Sweden
- Pascale Lehoux, Université de Montréal, Canada
- Seppo Leminen, Laurea University of Applied Sciences & Aalto University, Finland
- Frank Lillehagen, Commitment AS, Norway
- Dirk Lüttgens, RWTH Aachen University, Germany
- Lygia Magacho, Anpei, Brazil
- Tucker Marion, Northeastern University, USA
- Andrey Martovoy, Luxembourg Institute of Science & Technology, Luxembourg
- Graham Massey, University of Technology Sydney, Australia
- Killian McCarthy, University of Groningen, Netherlands
- Kevin McFarthing, Innovation Fixer Ltd, UK
- Anne-Laure Mention, Luxembourg Institute of Science & Technology, Luxembourg
- Jens Uwe Meyer, Innolytics GmbH, Germany
- Simon Minderhoud, Philips Innovation Services, Netherlands
- Steven Muegge, Carleton University, Canada
- Maurice Mulvenna, University of Ulster, UK
- Tobias Müller-Prothmann, IAV GmbH, Germany
- Benjamin Niedergassel, University of Münster, Germany
- Christina Öberg, Lund University, Sweden
- Yat Ming Ooi, University of Auckland, New Zealand
- Ville Ojanen, Lappeenranta University of Technology, Finland
- Heidi Olander, Lappeenranta University of Technology, Finland
- Jaakko Paasi, VTT Technical Research Centre, Finland
- Julia Paranhos, Instituto de Economia, Brazil
- Giovanni Perrone, University of Palermo, Italy
- Irene Petrick, Penn State University, USA
- Nicole Pfeffermann, ISEIC Pfeffermann Consulting, Germany
- Abeer Pharaon, Innovation Culture Consulting, UK
- Kalle Piirainen, Technical University of Denmark, Denmark
- Daria Podmentina, Lappeenranta University of Technology, Finland
- Ger Post, Fontys University of Applied Science, Netherlands
- Erich Prem, eutema GmbH, Austria
- Nina Preschitschek, Rheinische Friedrich-Wilhelms-Universität Bonn, Germany
- Risto Rajala, Aalto University, Finland
- Andres Ramirez, KTH Royal Institute of Technology, Sweden
- Geir Ringen, Sintef Raufoss Manufacturing, Norway
- Tomislav Rimac, LUISS Guido Carli, Italy
- Paavo Ritala, Lappeenranta University of Technology, Finland
- René Rohrbeck, Aarhus University, Denmark
- Nadine Roijakkers, Hasselt University, Belgium
- Luiz Ojima Sakuda, FEI, Brazil
- Tatjana Samsonowa, i.PERF, Germany
- Teemu Santonen, Laurea University of Applied Science, Finland
- Irina Saur-Amaral, IPAM, Portugal
- Michelle Savoie, University of Montreal, Canada
- Daniel Schallmo, University of Ulm, Germany
- Francesco Schiavone, University Parthenope - Naples, Italy
- Fabian Schlage, Nokia, Germany
- Dirk Schneckenberg, ESC Rennes, France
- Sabrina Schneider, Universität Kassel, Germany
- Dimitri Schuurman, Ghent University, Belgium
- Fiona Schweitzer, Upper Austria University of Applied Sciences, Austria
- Marko Seppänen, Tampere University of Technology, Finland
- Natalya Sergeeva, University Collgege London, UK
- Nathalie Sick, University of Münster, Germany
- Uros Sikimic, 3Lateral Studio, Serbia
- Maria Gabriela Silva, ISCTE-IUL, Portugal
- Oscar Smulders, MINASE, Netherlands
- Patrick Spieth, Universität Kassel, Germany
- Andre Spithoven, Vrije Universiteit Brussel, Belgium
- Jayakanth Srinivasan, Massachusetts Institute of Technology, USA
- Eric Stevens, ESSCA, France
- Stoyan Tanev, University of Southern Denmark, Denmark
- Stefania Testa, University of Genoa, Italy
- Marko Torkkeli, Lappeenranta University of Technology, Finland
- Ann Torugsa, University of Tasmania, Australia
- Anna Trifilova, University of Exeter, UK
- Petra Turkama, Aalto University, Finland
- Didier Van Caillie, University of Liege, Belgium
- Allard van Riel, Radboud University Nijmegen, Netherlands
- Gijs van Wulfen, FORTH Innovation Group, Netherlands
- Sophie Veilleux, Université Laval, Canada
- Vivek Velamuri, HHL, Germany
- Eric Viardot, EADA, Spain
- Dianna Vitasovic, Innovation Culture, Australia
- Stephan von Delft, University of Glasgow, UK
- Petar Vrgovic, University of Novi Sad, Serbia
- Jack Wang, National Sun Yet-sen University, Taiwan
- Michael Weiss, Carleton University, Canada
- Mika Westerlund, Carleton University, Canada

Dating back to 1983, **The International Society for Professional Innovation Management (ISPIM)** is a worldwide network of innovation management professionals from research, industry, and intermediary organisations. ISPIM participates in research projects and produces scientific and educational material and events to help people understand and share thinking and experiences on how individuals, organisations and society can be better organised to create and distribute new products, services and processes to make the world a better place.

Forthcoming Events

Forthcoming Publications

ISPIM Special Issue on "Charting the Future of Innovation Management (Boston and Porto)" in International Journal of Innovation Management. Editors: Joe Tidd of SPRU University of Sussex, Eelko Huizingh of University of Groningen and Steffen Conn of ISPIM.

Special Issue in International Journal of Technology Management. Editors: Pia Hurmelinna-Laukkanen of University of Oulu and Heidi Olander of Lappeenranta University of Technology.

ISPIM Special Issue on "Marketing Innovation" in International Journal of Technology Marketing. Editors: Eric Viardot of EADA, Alexander Brem of University of Erlangen-Nuremberg and Eelko Huizingh of University of Groningen.

ISPIM Special Issue in TIM Technology Innovation Management Review. Editors: Chris McPhee of Technology Innovation Management Review and Anystone, and Eelko Huizingh of University of Groningen.

ISPIM Special Issue on “Innovation Processes in Business Ecosystems” in International Journal of Business and Systems Research. Editors: edited by Marko Seppänen of Tampere University of Technology, Peter Harland of Technische Universität Dresden and Eelko Huizingh of University of Groningen.

ISPIM Special Issue on "Changing the Innovation Landscape" in International Journal of Innovation Management. Editors: Joe Tidd of SPRU University of Sussex, Eelko Huizingh of University of Groningen and Steffen Conn of ISPIM.

XXVII ISPIM Conference – Blending Tomorrow’s Innovation Vintage (June 2016) ISBN 978-952-265-928-6
LUT Scientific and Expertise Publications Reports - Raportit ja selvitykset