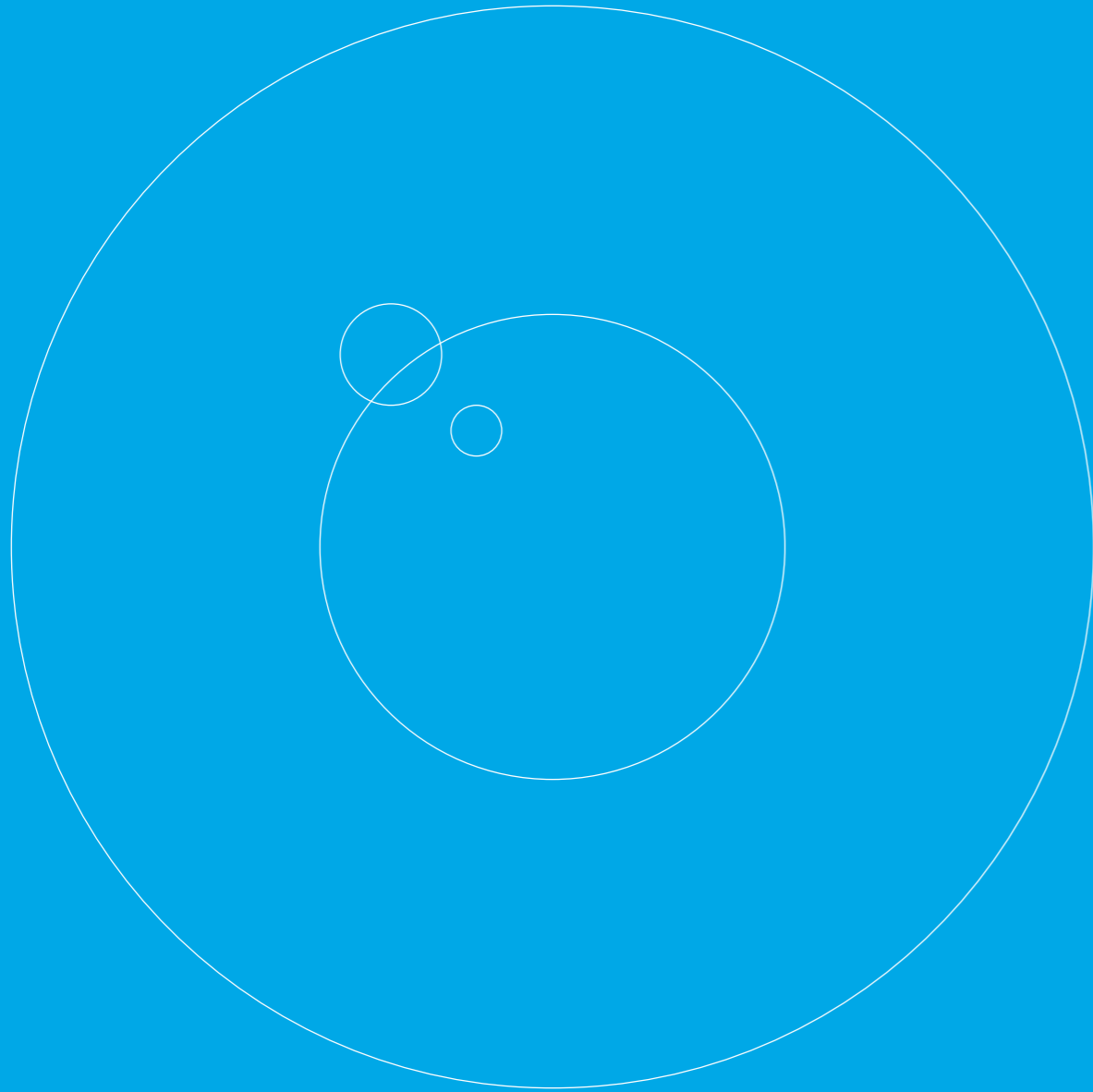


Leadership for Innovation: VISUALIZING THE INVISIBLE



Leadership for Innovation: VISUALIZING THE INVISIBLE



PROJECT COORDINATORS:
 Prof. Dr. Kathrin M. Möslein | Prof. Dr. Frank T. Piller | Prof. Dr. Dr. h.c. Ralf Reichwald

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.MISSION

The Peter Pribilla Foundation

The Peter Pribilla Foundation was founded in 2005 as part of the property of the corporate body of the Technical University of Munich. The foundation supports science, research, and academic teaching in the field of innovation and leadership in accordance with the spirit of its eponym.

Since the official inception of the Peter Pribilla Foundation, a network of excellence has been developed, whose members meet several times a year. The activities of the foundation enhance the development of personal contacts between practitioners and academics with the aim of creating mutual understanding as well as effective influence on a changing world.

In a world, holding too much varying information, our ambition is to highlight promising new ideas in the context of innovation and leadership.

MAIN OBJECTIVES

- Supporting research, teaching and knowledge transfer in the fields of leadership and innovation
- Enhancing the creation of personal contacts between business partners and academics to develop a deeper understanding
- Publication of a selection of reports that show new ideas in the field of innovation and leadership



.EPONYM

Peter Pribilla

Peter Pribilla was member of the executive board of the Siemens Corporation, in the end holding the position of Head of Corporate Human Resources.

Furthermore, he was one of the most influential partners of the Technical University of Munich. Peter Pribilla's connection to the chair for information, organisation and management goes back to the year 1993 and found its expression in various forms of cooperation, ranging from a multinational research project on the impact of

"We collaborate in a worldwide network of knowledge and learning. Our corporate culture is shaped by the diversity of its people, cultures, open dialogue, mutual respect, defined goals, and decisive leadership."

(PETER PRIBILLA 2003)

electronic innovations on leadership practice to his long-time function as university lecturer at the TUM.

In appreciation of his great contributions, Peter Pribilla became a honorary professor of TUM in 1997. Peter Pribilla's intellectual interests, based on academic studies and his practical experiences of many years, are reflected in the central orientation of the foundation, which was founded in 2005 in his honour: Therefore, the Peter Pribilla Foundation focuses on the fields of innovation and leadership.

.GUIDANCE

Advisory Board



Prof. Dr. Dr. h.c. Ralf Reichwald
(Chairman)
Technical University of Munich
Emeritus of Excellence &
HHL Leipzig Graduate School
of Management



Prof. Dr. Arnulf Melzer
Representative of the President
for Fundraising
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Prof. Dr. Kathrin M. Möslin
(Co-Chair)
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Erlangen-Nürnberg &
HHL Leipzig Graduate School
of Management



Dr. Hartwig Rüll
Senior Research Fellow
Technical University of Munich



Dr. Helmut Schönenberger
CEO
UnternehmerTUM



ACTIVITIES

Funding / Networking



Support for young talents and outstanding researchers

The Peter Pribilla Foundation devotes special attention to the upcoming generation of scholars and to networks between academics and practitioners. It sponsors activities that will advance the understanding of the interplay of innovation and leadership in organizations and markets.

Funding is provided for individual talents at different career stages:

- 1 Early stage: Deutschlandstipendium
- 2 Intermediate stage: Peter Pribilla Award
- 3 Advanced stage: TUM Research Excellence Award

1 The Deutschlandstipendium

The “Germany Scholarship” (Deutschlandstipendium) provides financial and non-material support to high-achieving and committed students from all over the world. Modelled after the principle of public-private partnership, businesses, foundations or private individuals sponsor young talent and the Federal Government matches the scholarship amount.

Every year, the Peter Pribilla Foundation selects two students of the Technical University of Munich who deliver promising results in their studies of business economics and show extraordinary responsibility in society.



Further information can be found here:

Link: <http://bit.ly/2jT135a>



Further information and a complete list of award holders can be found here:

Link: <http://bit.ly/2kf19F4>



2 Peter Pribilla Award

The Peter Pribilla Award is awarded annually to students of the program “TUM Betriebswirtschaftslehre” for the best academic overall performance (Master Thesis) in the field of innovation and leadership.

3 TUM Research Excellence Award

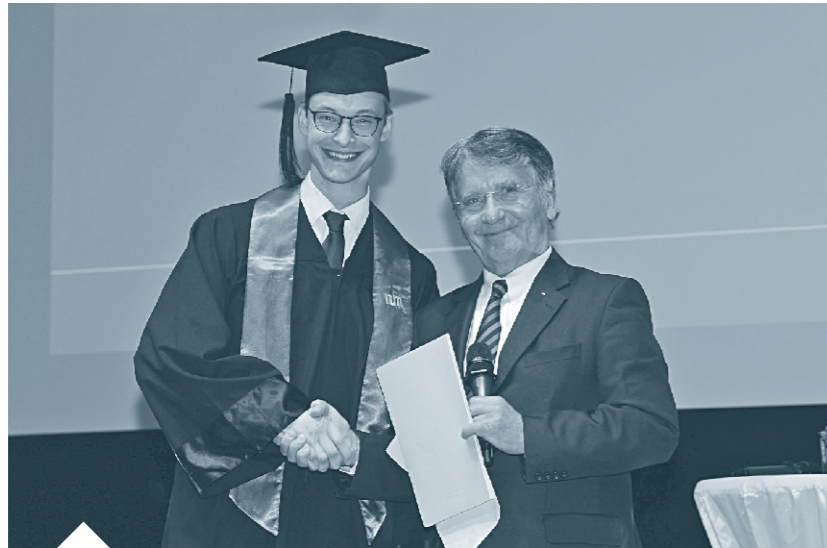
This bi-annual award is granted with 10,000 € for outstanding research of emerging scholars on the level of post-doctoral researchers as well as early career academics and professors. Contributions may take the form of conceptual, theoretical, methodological or empirical developments. In addition to receiving the prize money, the recipient is recognized at the EURAM Conference and has the opportunity to present his/her research in the prominent setting of the TUM Institute for Advanced Study (IAS).



Further information and a complete list of award holders can be found here:

Link: <http://bit.ly/1Orx3Vd>





Award ceremony of the 2016 Peter Pribilla Award at the Technical University of Munich.



The 2016 winner of the TUM Research Excellence Award, Associate Professor Linus Dahlander, is honored during the 16th EURAM Conference in Paris, France.

Networking Activities



In its mission to foster the establishment of personal contacts between business partners and academics to develop a deeper mutual understanding, the Peter Pribilla Foundation has gathered a network of excellence whose members are meeting annually to discuss the latest trends and challenges in the field of innovation and leadership. The participants take this opportunity to exchange ideas and develop joint research proposals, responding to current topics such as the Digital Transformation.

Network members include practitioners and researchers from renowned international institutions, for example Friedrich-Alexander-Universität Erlangen-Nürnberg, Technical University of Munich, London Business School, Harvard Business School, RWTH Aachen University, Université de Tunis El Manar and UnternehmerTUM GmbH.



Participants of the 10th Network Meeting of the Peter Pribilla Foundation in the historical Villa del Cardinale near Rome, Italy.

OVERVIEW

Research Initiative

The research initiative **Leadership for Innovation: VISUALIZING THE INVISIBLE**, established by the Peter Pribilla Foundation in 2009, aims at connecting, integrating, fostering and visualizing national and international research findings in the field of leadership and innovation. Main focus of the initiative is the visualization of the invisible, intangible and often subconscious that characterizes innovations and their successful leadership, particularly in services, processes and systems.

The Peter Pribilla Foundation called for projects that

- develop specific methods, tools, concepts and designs to enhance the visibility and understanding of leadership for innovation.
- integrate current research and provide additional insight by transferring current findings into practical application and teaching.
- will support young academics in the development of research findings and research transfer by special formats (e. g. summer schools, innovation labs, research seminars).

Providing funding for 50 research fellows within altogether 17 projects, the following types of activities were supported:

- exploration and networking among existing research projects,
- piloting, experimenting and laboratory concepts,

- development of methods and instruments,
- participation in research workshops, conferences and seminars,
- knowledge transfer within the research network as well as into teaching and training concepts,
- support of early career academics in an international context.

Expected results:

- 1 Publications in academic journals as well as business-related journals
- 1 Conferences and academic workshops
- 1 Innovative formats (videocasts, podcasts, blogs, exhibitions, vernissages, movies, simulation or performances)
- 1 Transfer into a network of innovation labs
- 1 Teaching material, especially case studies
- 1 Material for summer schools and start-up seminars
- 1 Research projects, experiments and piloting

17 projects

50 research fellows

12 countries



1. Turning Co-Creators into Brand Ambassadors

Catharina van Delden, innosabi GmbH
Dr. Bernhard Doll, Orange Hills GmbH



2. Encounter for Innovations

Prof. Dr. Nancy Wunderlich, Universität Paderborn
Prof. Dr. Vera Blazevic, RWTH Aachen University



3. Visualizing the Intangible

Dr. Bernhard Doll, Orange Hills GmbH
Dr. René Frieß, BMW Group
Prof. Dr. Michael Koch, Universität der Bundeswehr München
Dr. Bettina von Stamm, Innovation Leadership Forum



4. From Real to Virtual

Prof. Dr. Alexander Richter, IT University of Copenhagen, Universität Zürich
Prof. Dr. Jan Hendrik Schumann, Universität Passau
Dr. Anna Trifilova, University of Exeter



5. Open Innovation Readiness

Prof. Dr. Christoph Ihl, Technische Universität Hamburg
Prof. Dr. Vera Blazevic, RWTH Aachen University



6. Innotracing – Capturing the Messiness of Innovation

Dr. Ian Sutherland, Memorial University
Dr. Paul Blažek, cyLEDGE Media GmbH
Dr. Hans Lundberg, Linnaeus School of Business and Economics
Prof. Dr. Birgit Penzenstadler, California State University Long Beach



7. Massive Ideation

Prof. Dr. Johann Füller, HYVE AG
Dr. Hagen Habicht, Versicherungsforen Leipzig GmbH
Dr. Florian Forster, ATOSS Software AG
Dr. René Frieß, BMW Group



8. Real Open Innovation

Dr. Holger Hoffmann, innosabi GmbH
Prof. Dr. Angelika C. Bullinger-Hoffmann, Technische Universität Chemnitz
Prof. Dr. Andrei Villarreal, FCEE-Católica, MIT Sloan School of Management
Prof. Dr. Dominik Walcher, Salzburg University of Applied Sciences



9. Open School

Dr. Nizar Abdelkafi, Fraunhofer IMW
Dr. Michael Bartl, HYVE AG
Prof. Dr. Johann Füller, HYVE AG
Prof. Dr. Christoph Ihl, Technische Universität Hamburg



10. Open Government 200

Prof. Dr. Dennis Hilgers, Johannes Kepler Universität Linz
Dr. Michael Steinbusch, Technische Universität Dresden



11. Open Architecture

Dr. Michael Steinbusch, Technische Universität Dresden
Prof. Dr. Dominik Walcher, Salzburg University of Applied Sciences



12. Visualizing User Innovation in Healthcare

Prof. Pedro Oliveira, Ph.D., CATÓLICA-LISBON School of Business and Economics
Dr. Danita Cepiku, University of Rome "Tor Vergata"
Prof. Dr. Katja Hutter, University of Innsbruck
Dr. Sara Poggesi, University of Rome "Tor Vergata"



13. Epidemic Communicator

Prof. Dr. Gordon Müller-Seitz, Technische Universität Kaiserslautern
Prof. Dr. Carsten Reuter, Hochschule Aschaffenburg – University of Applied Sciences
Dr. Christoph Stöckmann, Universität Duisburg-Essen
Dr. Wotan Wilden, Technical University of Munich



14. Critics vs. Creator Leading Innovation

Jun.-Prof. Dr. Julia Müller, Martin-Luther-Universität Halle-Wittenberg
Dr. Celine Abecassis-Moedas, CATÓLICA-LISBON School of Business and Economics



15. Failure-Driven Innovation

Dr. Olivier Berthod, Freie Universität Berlin
Dr. Allen Alexander, University of Exeter
Dr. Sebastian Kunert, artop GmbH
Prof. Torsten Oliver Salge, Ph.D., RWTH Aachen University
Anne L. Washington, Ph.D., George Mason University



16. Solve Different

Sven Richter, Technische Universität Dresden
Dr. Mario Arlt, ABB
Prof. Oliver Fritz, Hochschule Konstanz
Dr. Bernhard Rothbucher, Synowaytion GmbH



17. Resolving Dilemmas in Collective Innovation

Prof. Dr. Pascal Le Masson, Mines ParisTech
Prof. Dr. Tobias Fredberg, Chalmers University of Technology
Prof. Dr. Blanche Segrestin, Mines ParisTech
Prof. Dr. Martin Wiener, Friedrich-Alexander-Universität Erlangen-Nürnberg

PROJECT #1 Turning Co-Creators into Brand Ambassadors

PROJECT MANAGER: Catharina van Delden, innosabi GmbH

PROJECT PARTNER: Dr. Bernhard Doll, Orange Hills GmbH

LINK: <http://bit.ly/2jpLmD0>

ABSTRACT:

The project developed a new, internet-based method for co-creating products with consumers that not only helps to create more successful products but also to involve the co-creators as brand ambassadors when launching the new product to the market. This provides benefit for all parties involved: The participating consumers as well as the companies, who open their innovation processes. The co-creators have their voice and wishes heard, feel appreciated for their contribution and enjoy developing products – the keyword “gamification” must be named in this context. For the companies, the results provide value to their organization. To evaluate this approach, a prototype internet platform was created and targeted at the consumer goods industry as a starting point.

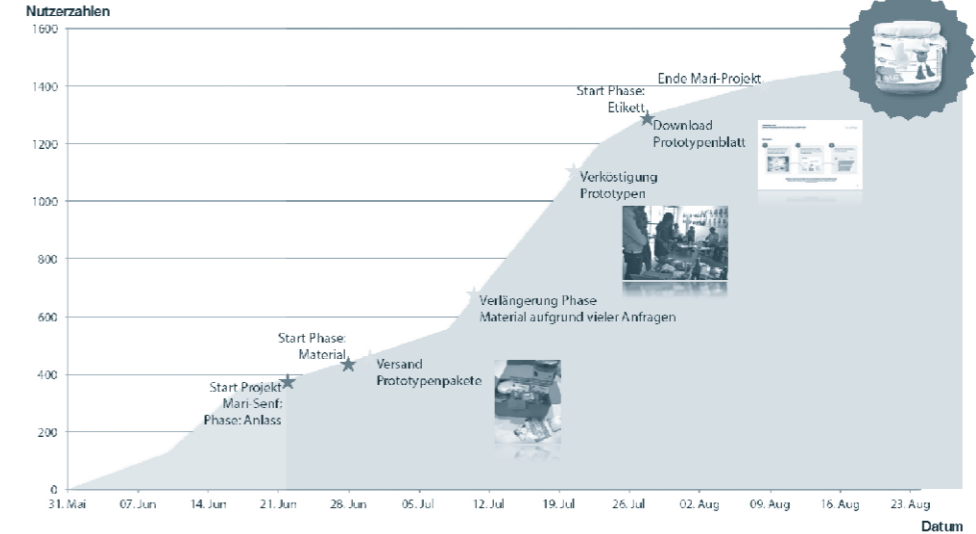
APPROACH:

The question answered with this project is: How can we tap into this potential and help companies identify and work with brand ambassadors amongst co-creators? The approach included:

- ✓ Creation of an explanation video for the co-creators, together with a guiding icon-set, to communicate the complex methods and its benefits.
- ✓ Sending first set of user innovation toolkits containing spices and more ingredients in order to support the co-creation of new mustard flavors.



The co-creators have their voice and wishes heard.



Community building and viral distribution with the platform userAller.

OUTCOMES:

- » The platform named “userAller” is an established co-creation and crowdsourcing site with 20,000 registered members and several products brought to the market.
- » Large consumer good brands like Görtz, dm Drogeriemarkt, Ford or Manhattan have co-created products on userAller as well as hundreds of very small organizations like crime novel authors, cover song bands or anti-ageing product producers have kept the platform alive with their dialogue about new offerings.
- » Publications like the Handelsblatt, Frankfurter Allgemeine Zeitung, Deutschlandradio, t3n or Glamour have written very positive reviews about the platform and the products created on it.
- » innosabi (with the product userAller) has been recognized by the federal German minister of Economic Affairs as the most innovative startup of 2011.

Selected publications and presentations:

van Delden, C. & Wunderlich, N. (2010). Open Innovation Marketing – A Case Study. Jahrestagung der Gesellschaft für Informatik (GI). Leipzig.

van Delden, C. (2011). User Generated Products: Konsumenten entwickeln Produkte. Webinare, the holistic web conference. Berlin.

van Delden, C. (2011). Erfolgsfaktoren bei der Entwicklung von Produkten mit Konsumenten. Social commerce summit. Wiesbaden.

Video:



vimeo.com/
59552239

PROJECT #2 Encounter for Innovations

PROJECT MANAGER: Prof. Dr. Nancy Wunderlich, Universität Paderborn

PROJECT PARTNER: Prof. Dr. Vera Blazevic, RWTH Aachen University

LINK: <http://bit.ly/2kfNSKW>

ABSTRACT:

This pilot project about service encounter generated a new knowledge concerning critical interactions of both service providers and service consumers. Both contribute knowledge and experience, as well as expectations and needs associated with the service delivery. These factors strongly influence the joint knowledge generation of supplier and customer in the service encounter. Still several gaps and challenges concerning the generation of knowledge during service encounter remain unsolved. Especially dyadic data is missing that takes both perspectives, i. e. customers and provider's perspective, into account. Therefore, the focus of this project was to answer the question how knowledge generated during service interaction can be used to create innovations, and to improve employee management.

APPROACH:

In order to get insights into both the customer's and the provider's perspectives, the project team conducted two sets of interviews:

Step 1

Interviews with IT service provider: with customers of the service provider as well as with employees

Step 2

Interviews with a study advice service: with customers of the service as well as with employees

To create innovations, we have to take both the provider's and the customer's perspective.

OUTCOMES:

The researchers found that

- » *The service quality of the service encounter is highly important for generating knowledge together.*
- » *Quality is determined by functional and emotional aspects of the service encounter.*
- » *For knowledge generation, feedback processes need to be integrated into the corporate development.*
- » *Customers can play three roles: passive user, active informer, bidirectional creator. Within these roles, diverse knowledge stocks are created during service encounter.*

Selected publications and presentations:

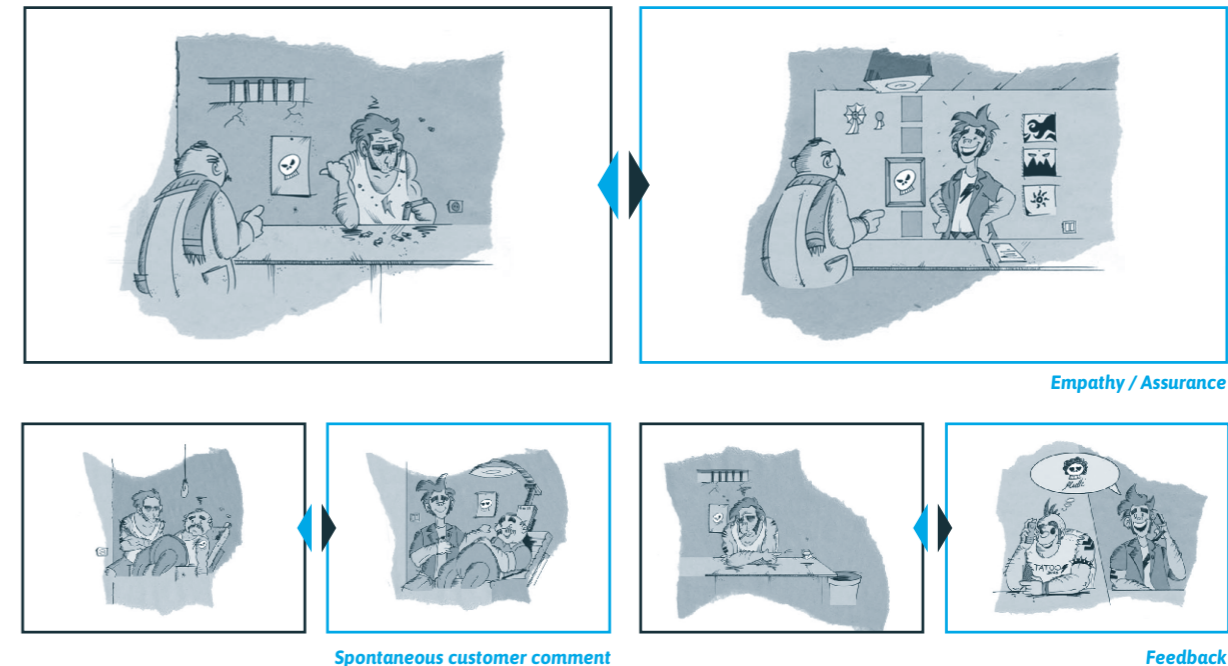
Wunderlich, N.V. & Blazevic, V. (2011). When Customer Engagement Leads to Unchosen Ideas: Attribution Bias in Open Innovation Processes. The 12th International Research Symposium on Service Excellence in Management (QUIS), Ithaca, USA.

Video:



vimeo.com/59389082

The results show how the service encounter should be ideally designed for generating knowledge. Furthermore, the study shows how generation of knowledge impacts perceived service quality, and also to what extent the knowledge can be used as a pool of ideas for leadership and innovation management.



Empathy / Assurance

Spontaneous customer comment

Feedback

Typical service encounter – Dos and Don'ts.

.PROJECT #3 Visualizing the Intangible

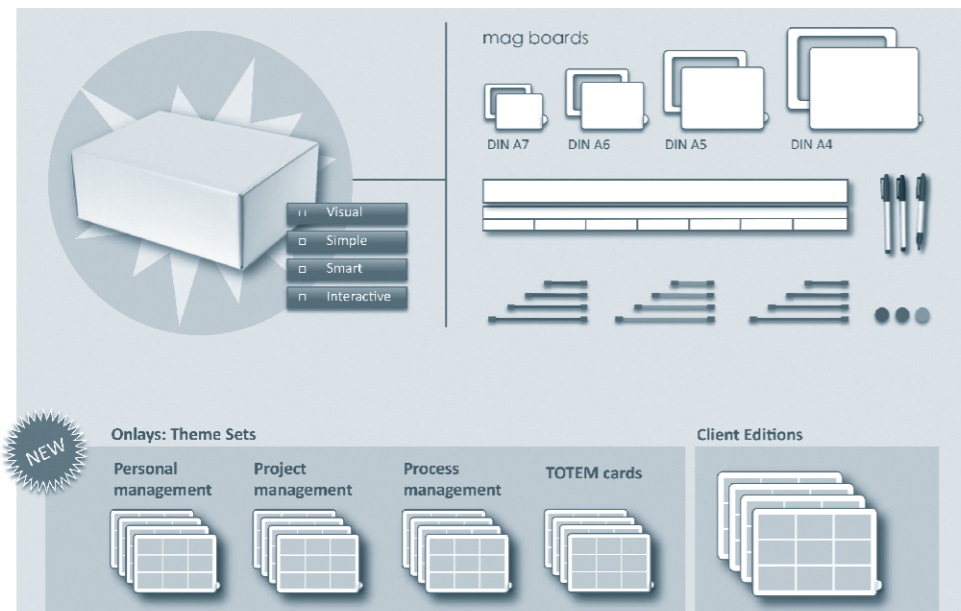
PROJECT MANAGER: Dr. Bernhard Doll, Orange Hills GmbH

PROJECT PARTNERS: Dr. René Frieß, BMW Group
Prof. Dr. Michael Koch, Universität der Bundeswehr München
Dr. Bettina von Stamm, Innovation Leadership Forum

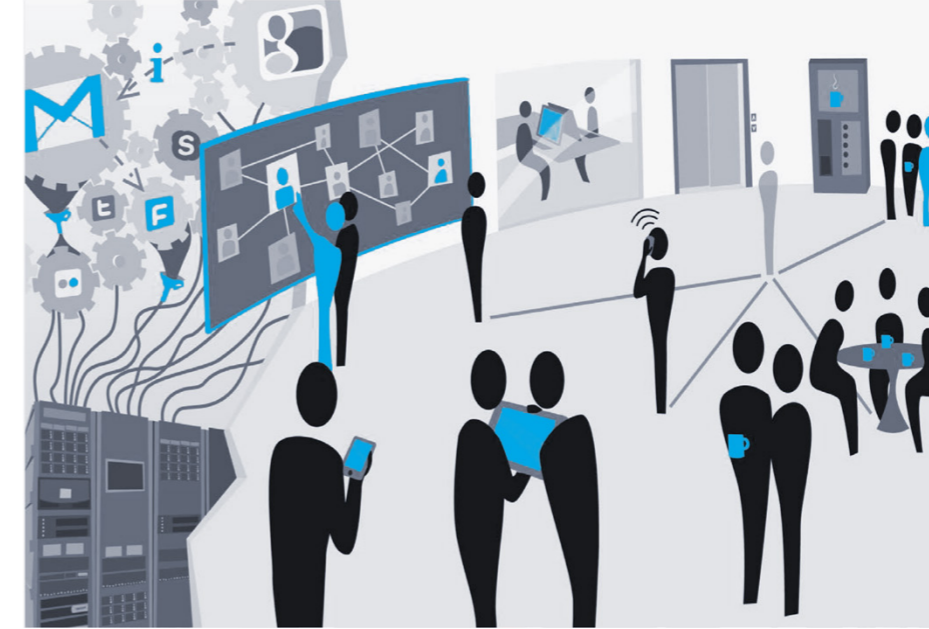
LINK: <http://bit.ly/2juuWul>

ABSTRACT:

The project "Visualizing the intangible" developed methods and tools for employees and teams within organizations to facilitate conversion of 'the abstract' in daily work. 'The abstract' stands for new strategies, processes, services, business models, forms of organizations, etc., which are difficult to put into words. Therefore it is not easy to communicate them by traditional means. The team identified new and interesting fields of research for innovation research, and developed tools that can be used in diverse workshops forms. Those tools and methods help to tangible and clear statements and concepts. Furthermore, empirical data was generated during the development and usage of tools.



Toolbox examples for visualizing the intangible.



Integral design of cooperative systems.

Selected publications and presentations:

Bessant, J., von Stamm, B., Möslein, K.M. & Neyer, A. (2010). Backing outsiders: selection strategies for discontinuous innovation. *R&D Management* 40, 4, 345-356.

von Stamm, B. (2010). Leading for innovation. In: Jolly, A. (Ed.) *The Innovation Handbook*, 2nd ed. 137-141. Kogan Page.

von Stamm, B., Neyer, A. & Doll, B. (upcoming). How to build social prototypes. *Harvard Business Review*.

Video:



vimeo.com/59552240

We need methods and tools to facilitate putting "the abstract" into words.

APPROACH AND OUTCOMES:

For accomplishing the objectives of the project, three main activities were conducted:

✔ **Development of a construction kit**

that helps to build physical images of innovative strategies, business models, and services. The construction kit can be used by employees of different branches without any excessive training. The price is similar to professional moderation kits.

✔ **Use of the construction kit in several workshops and events**

to demonstrate benefits of physical images in innovation processes. The focus was put on workshops within the network of the Peter Pribilla Foundation to ensure distribution of results. Throughout this process, empirical data was generated.

✔ **Development and maintenance of a blog**

that lists derived solutions for the development of physical images, and best practices that help to connect interfaces between electronic and physical images. Approaches existent in the Peter Pribilla network, like Cue Cards, Table top, Community-Mirror, Surface-Table, Social Prototyping, LEGO Serious Play, have been integrated.

PROJECT #4 From Real to Virtual (FR2V)

PROJECT MANAGER: Prof. Dr. Alexander Richter, IT University of Copenhagen, Universität Zürich

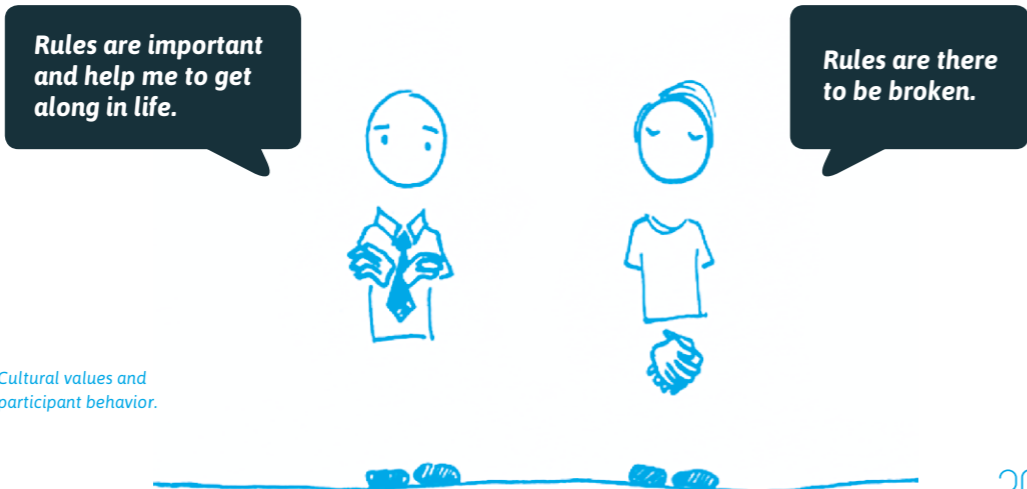
PROJECT PARTNERS: Prof. Dr. Jan Hendrik Schumann, Universität Passau
Dr. Anna Trifilova, University of Exeter

LINK: <http://bit.ly/2k6Fdgo>

ABSTRACT:

The project explored the continuation of face-to-face encounters by transferring essential insights into virtual realms where it can be picked up by (a) a larger number of participants, and (b) across a wider spatial/geographical dispersion. The solution developed by the project team supports this so far untackled issue. By doing so, this project enables the shift from rather synchronous idea generation processes – mostly taking place in the face-to-face contexts – to rather asynchronous innovation processes – mostly taking place in virtual settings. A crucial factor to be taken into consideration in the transfer from ‘real’ to ‘virtual’ is the influence of different cultures, be it at the organizational, industry or national level.

By translating from real to virtual, insights can be shared, developed, and acted upon by a wider community.

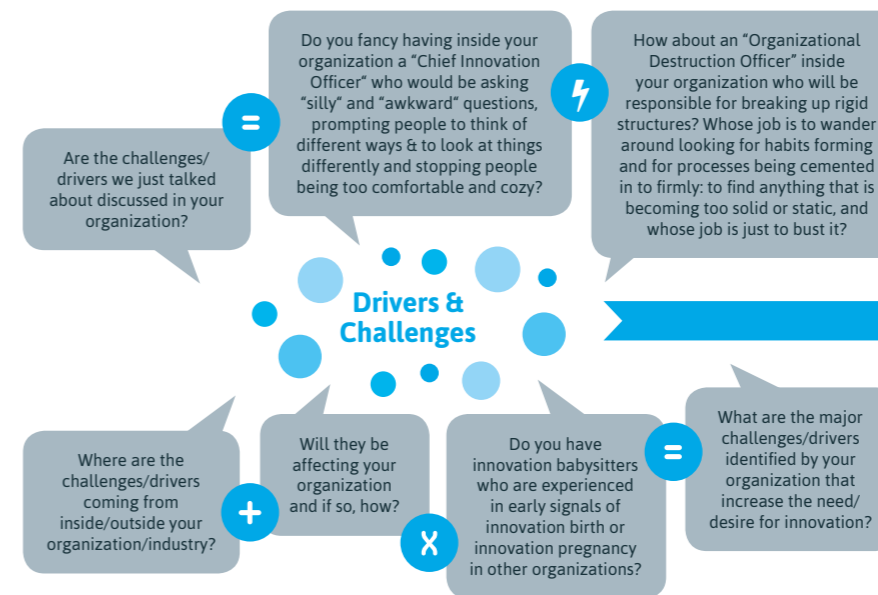


APPROACH:

As a concrete scenario to explore and pilot the transfer from real to virtual, the “Future of Innovation (Fol) Toolkit” was used, a toolkit that allows organizations to explore a variety of aspects they need to understand, address and be ready for in order to create a successful future of innovation.

OUTCOMES:

- » A prototype of the Fol suitcase.
- » A prototype that helps to understand how the transfer of insights and content of Fol workshops from the real into the virtual world can be supported.
- » A framework that provides insights into cultural implications.



Selected publications and presentations:

Ott, F., Koch, M. & Richter, A. (2010). CommunityMirrors™ - Using Public Shared Displays to Move Information “out of the box”. In: Hafkesbrink, J.; Hoppe, H.U.; Schlichter, J. (Eds.): *Competence Management for Open Innovation - Tools and IT-support to unlock the innovation potential beyond company boundaries*. 139-168. Köln: EUL Verlag.

Richter, A., Riemer, K. & Koch, M. (2010). *Social Software und Unternehmenskultur*. In: *Wirtschaftsinformatik und Management*, 6/2010, 78-81.

Riemer, K., Richter, A. & Böhringer, M. (2010). *Enterprise Microblogging*. In: *Wirtschaftsinformatik*, 6 (52), 387-390.

Video:



vimeo.com/55098479

PROJECT #5 Open Innovation Readiness

PROJECT MANAGER: Prof. Dr. Christoph Ihl, Technische Universität Hamburg

PROJECT PARTNER: Prof. Dr. Vera Blazevic, RWTH Aachen University

LINK: <http://bit.ly/2jZj3Mx>

ABSTRACT:

In daily business context, it is important for responsible managers to understand that Open Innovation is not a "One-Size-Fits-All" concept. Therefore, this project developed a benchmarking tool to help innovation managers to evaluate open innovation strategies on suitability and design for their own businesses. This tool was based on a comprehensive screening of relevant data sources.

Another central challenge was to translate academic findings into a comprehensible and attractive benchmarking tool for management purposes. Managers are able to outline the profile of their business with the help of identified criteria (degree of openness, structure of organization and competences).

APPROACH:

1. Based on a thorough theoretical analysis, four areas in which companies should possess critical capabilities and execute important management practices have been derived.
2. The relevance of these capabilities and management practices was evaluated further by a large-scale empirical study with 380 companies from the German manufacturing industry.

Open Innovation is not a "One-Size-Fits-All" concept.

OUTCOMES:

» **Organization of innovation activities inside the company:**

Companies gained the most from OI by combining a decentralized structure of decision authority with formalized routines.

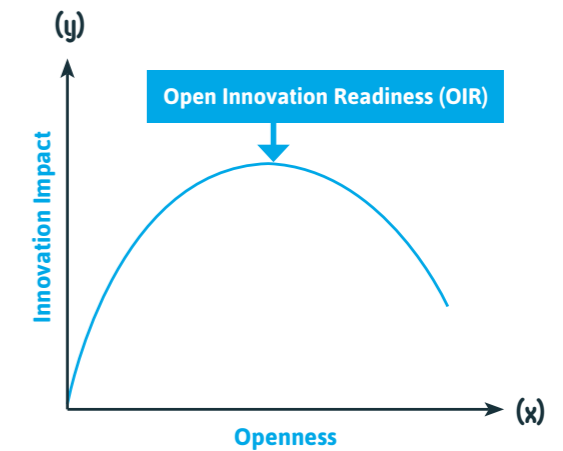
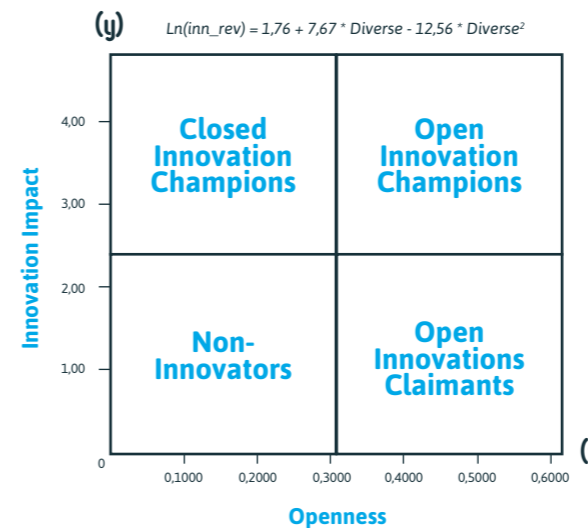
» **Innovation and RD Management practices:**

Companies gained the most from OI by supplementing experiential learning with cognitive learning.

» **Knowledge management:**

Companies gained the most from OI if they are able to predict the relevant core of their knowledge base, but at the same time able to reveal some of their knowledge in order to better interact with the outside world.

With the help of the tool, deficits in the implementation of Open Innovation strategies can be pointed out effortlessly and immediately. It was shown that managers who used the tool gained advantages from the public accessibility.



Results from a large-scale empirical study with 380 companies.

Selected publications and presentations:

Ihl, C., Piller, F. T. & Wagner, P. (2012). Organizing for Open Innovation: Aligning Internal Structure with External Knowledge Search. Available at SSRN: <https://ssrn.com/abstract=2164766>.

Ihl, C. & Piller, F.T. (2013). Co-creation with Customers. In: Huff, A., Möslin, K.M. & Reichwald, R. (Eds.) *Leading Open Innovation*. 139-153. Cambridge: MIT Press.

Video:



vimeo.com/59389745

PROJECT #6

Innotracing – Capturing the Messiness of Innovation

PROJECT MANAGER: Dr. Ian Sutherland, Memorial University

PROJECT PARTNERS: Dr. Paul Blažek, cyLEDGE Media GmbH
Dr. Hans Lundberg, Linnaeus School of Business and Economics
Prof. Dr. Birgit Penzenstadler, California State University Long Beach

LINK: <http://bit.ly/2juq88H>

ABSTRACT:

The phenomena of leadership, creativity and innovation are complex, non-linear, recursive, unpredictable and largely tacit. Yet successful efforts converge to form meaningful and valuable new ideas, products, services, and business models. Despite extensive study, the micro-heart of leadership and innovation remains an unexplored black box. The “moments of significance” (MOS) – those turning points crucial to outcomes where innovation blooms or fades – remain invisible to us, despite our sensing of their presence. The Innotracing project developed a software tool and social science methodology to open this black box and to make the invisible MOS visible by tracing & analyzing the moment-to-moment messy, tacit intangible and intangible elements of leadership, creativity and innovation.

APPROACH:

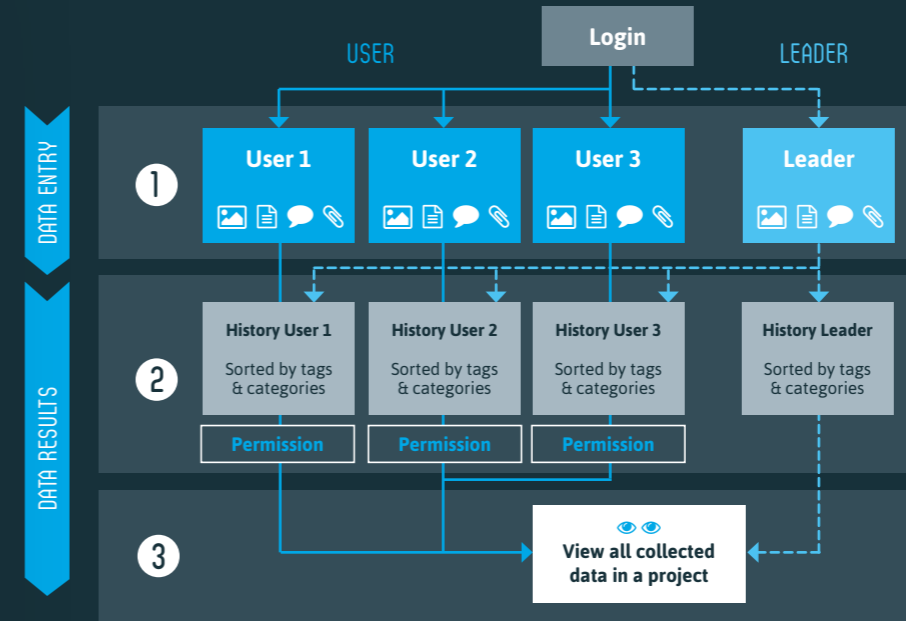
Increasing attention is placed on the situated interactions of participating agents and how – in real time from moment-to-moment – leadership and innovation emerge.

Yet, gathering rich data at micro-levels of interactions (the moments when things seem to happen) has been methodologically constrained and we lack the means of gathering, aggregating and working with such data.

The Innotracing project therefore created:

- a) *a methodological software tool in the form of a mobile application (InnoTrace) and*
- b) *a robust qualitative methodological approach to mobilize the data generated (Innotracing).*

These means make interactions and processes visible through empowering participants to generate data themselves based on their perspectives and experiences of what is going on.



Functional principle of the InnoTrace software tool.

The micro-heart of leadership, creativity and innovation remains an unexplored black box.

OUTCOMES:

- » **Web-based software application InnoTrace** engaging participants in documenting the micro-level of group processes by using mobile devices to capture the 'moments of significance' (MOS) they experience in daily organizational life. Each photo, video or text becomes a data point in a growing visualization of individual and group processes. InnoTrace aggregates this data by individual and group, creating cognitive process maps that serve as rich tapestries of the micro-level interactions which underlie the phenomena of leadership and innovation.
- » **InnoTracing methodology:** The InnoTracing project developed a robust qualitative methodological approach to mobilize the data generated through the tool.
- » **Pilot study** conducted with participants at the Peter Pribilla Foundation's Leadership & Innovation conference
- » **International field project** in collaboration with the company Great Place to Work (Mexico City, Mexico)

The developed methodology and software tool opened the black box of micro-interactions, directly targeting and creating impact on the understanding of the interaction between leadership and innovation.

Selected publications and presentations:

Lundberg, H., Sutherland, I., Blažek, P., Penzenstadler, B. & Habicht, H. (2015). The emergence of creativity, innovation and leadership in micro level social interactions and how to research it. *International Journal of Industrial Engineering and Management*, 5(4), 221-232.

Sutherland, I., Blazek, P., Penzenstadler, B., Lundberg, H. & Habicht, H. (2014). InnoTracing: A framework to investigate the moment-to-moment unfolding of leadership, creativity and innovation. In: Brunoe, T.D., Nielsen, K., Joergensen, K.A. & Taps, S.B. (Eds). *Proceedings of the 7th World Conference on Mass Customization, Personalization and Co-Creation*. 275-285. Heidelberg: Springer.

Link:



PROJECT #7 Massive Ideation

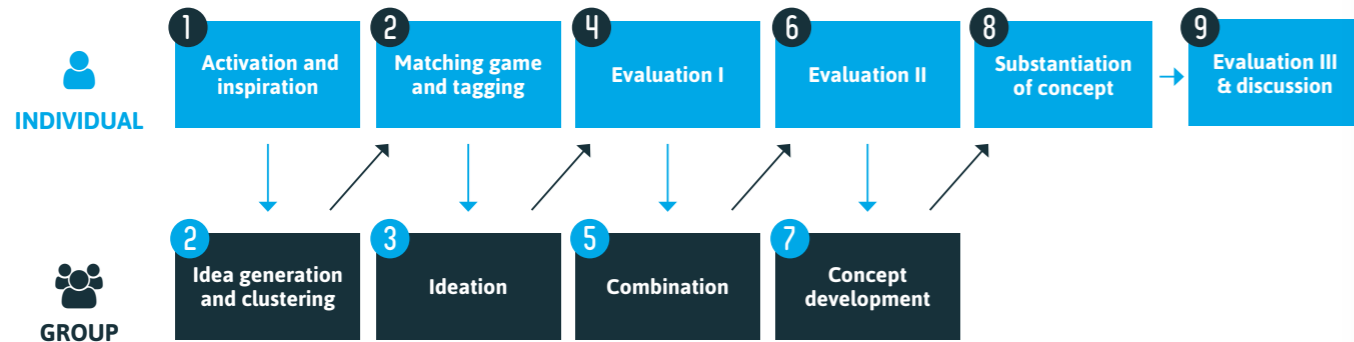
PROJECT MANAGER: Prof. Dr. Johann Füller, HYVE AG

PROJECT PARTNERS: Dr. Hagen Habicht, Versicherungsforen Leipzig GmbH
Dr. Florian Forster, ATOSS Software AG
Dr. René Frieß, BMW Group

LINK: <http://bit.ly/2k4qj6F>

ABSTRACT:

Both creativity workshops and online innovation platforms, such as community platforms, have certain advantages and disadvantages. While the number of participants for workshops is limited, online platforms often require increased efforts to facilitate and steer activities. The aim of the project "Massive Ideation" is to combine advantages of both forms of collaboration. Therefore, a new software-based concept is developed which allows realizing creative online workshops with "massive" participation. This software, called "Massive Ideation", aims to solve the organizational and communicative challenges cursed by massive attendance (> 100 participants). Hence, new knowledge for specific users and experts in massive online contexts is generated.



The course of "Massive Ideation".

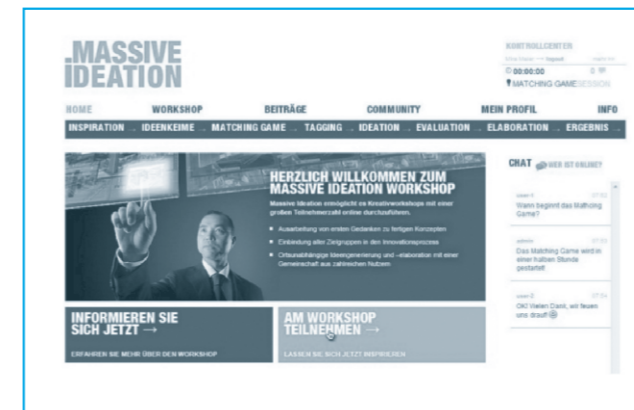
Combining "wisdom-of-the-crowd" and workshop principles guarantees the boost of creativity without losing focus.

APPROACH:

So far, accurate knowledge about the use of creativity techniques, and guided creative processes for massive participation is still lacking. The implementation of online workshops with a sizeable group of participants for the first time aims to fill this gap.

To bring valuable ideas and concepts to light, a structured presentation and moderation is developed. Through an online platform with a simple and intuitive design, the activities, communication, and interaction processes between participants are directed and supported.

The platform steers massive participation by breaking down innovation tasks into easily manageable steps assigned to individual participants. In a further step, partial results are integrated in the design of the platform in iterative cycles and finally transferred into final concepts.



OUTCOMES:

» As the main outcome of the project, the Massive Ideation online platform was implemented.

The platform was tested in a pilot project with the "Junge Akademie" at Technical University of Munich, bringing together 60 students who developed 321 "sprouts" which were consolidated into 117 clusters. This pilot demonstrated how the developed structure can help creating substantial concepts from a large amount of initial ideas following various process steps.

Selected publications and presentations:

Füller, J., Hutter, K. & Hautz, J. (2013) The Future of Crowdsourcing: From Idea Contests to MASSIVE Ideation. In: Huff, A., Moslein, K.M. & Reichwald, R. (Eds.) Leading Open Innovation. 241-261. Cambridge: MIT Press.

Video:



.PROJECT #8 Real Open Innovation

PROJECT MANAGER: Dr. Holger Hoffmann, innosabi GmbH

PROJECT PARTNERS: Prof. Dr. Angelika C. Bullinger-Hoffmann, Technische Universität Chemnitz
 Prof. Dr. Andrei Villarroel, FCEE-Católica, MIT Sloan School of Management
 Prof. Dr. Dominik Walcher, Salzburg University of Applied Sciences

LINK: <http://bit.ly/2jpP8MV>

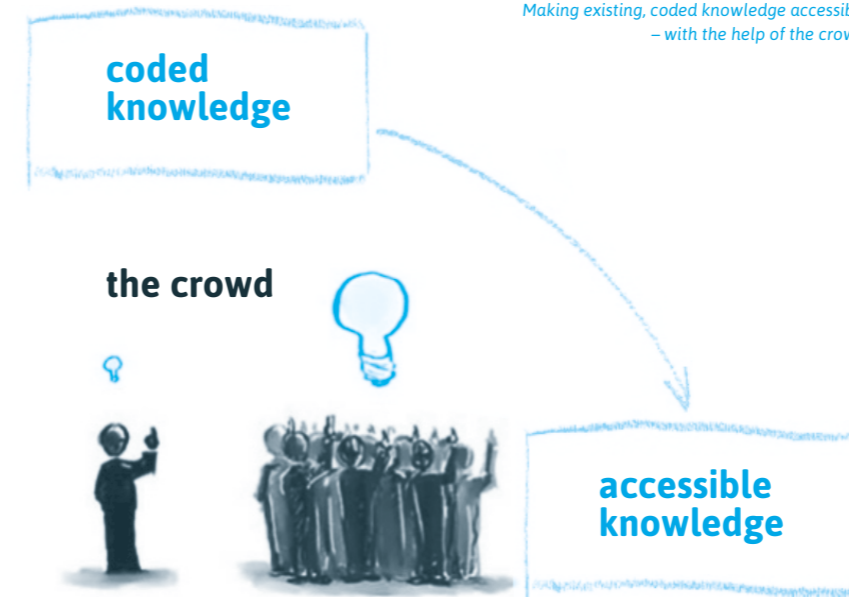
ABSTRACT:

Research on innovation has begun to explore new open models of innovation where commercially valuable knowledge is more easily exchanged among different actors in the innovation process. While traditional “Open Innovation” focuses on gathering new ideas from innovators, sources of already existing knowledge – in the form of patents – are often neglected in the innovation process. Additionally, companies are facing difficulties managing the dilemma of protected intellectual property, and in finding the Open Innovation processes that are a better fit for them. There is a growing need to manage disclosure, access, and process, to best leverage the intellectual property held by the firm and to create the greatest value from open innovation. Our research thus aims at making patents more transparent and to enable organizations to better choose a suitable innovation process.

APPROACH:

In order to achieve this visualization goal, we used a three-step-approach:

1. **Crowdsourcing**
Members of Amazon Mechanical Turk have been asked to transcribe one of 55 selected patent abstracts into plain English and rate the difficulty of this task.
2. **Visualization**
Artists transferred the “hidden” intellectual property from the texts into “visible” information in short videos.
3. **Creation of an app**
To combine the first two steps and make the text and the videos accessible.



OUTCOMES:

- » 550 transcripts of original patent abstracts
- » Unique and individual videos for 31 of our 55 patent abstracts
- » Web-based app “PatentBrowser” for iOS and Android devices, making accessible and visualizing information about the patents.

The project was able to show how to make something inherently invisible – like intellectual property – visible, even for the layman’s eyes. A process was created that can be followed by other researchers as well as business practice to use the power of the crowd to support this effort. It was demonstrated how designers can help visualize key concepts by transferring them from one format, i. e. text to video.

Our research wants to enable organizations to better choose a suitable innovation process.

Selected publications and presentations:

Bullinger-Hoffmann, A., Hoffmann, H. & Walcher, D. (2011). Visualizing Crowd Intelligence. The 2011 World Conference on Mass Customization, Personalization, and Co-Creation (MCPC). San Francisco.

Hoffmann, H., Bullinger, A. & Fellbaum, C. (2013). Towards the automated evaluation of crowd work: Machine-learning based classification of complex texts simplified by laymen. 46th Hawaii International Conference on System Sciences (HICSS). (2013)393, 1287-1298. Grand Wailea.

Video:



.PROJECT #9 **Open School**

PROJECT MANAGER: Dr. Nizar Abdelkafi, Fraunhofer IMW

PROJECT PARTNERS: Dr. Michael Bartl, HYVE AG
 Prof. Dr. Johann Füller, HYVE AG
 Prof. Dr. Christoph Ihl, Technische Universität Hamburg

LINK: <http://bit.ly/2juxJ7g>

ABSTRACT:

This project strengthened the openness of universities to its students. In an open school, students do not take a passive role as service consumers; they are active, and empowered members of their university. Hence, the open school reflects a new mindset in higher education enabled by the use of latest crowdsourcing technologies.

In this project, an online solution was adapted using already available technologies. Web-based platforms for crowdsourcing, such as HYVE's IDEANET, are adequate systems to support universities in launching an open school project.

In an Open School, students are active, and empowered members of their university.

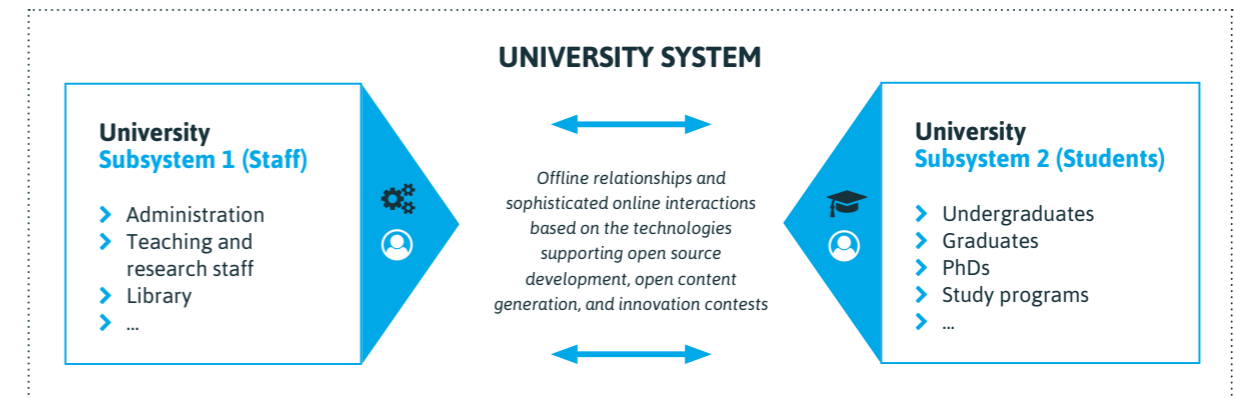
APPROACH:

To implement an open school, the project focused on the following activities:

1. Creation of an online platform to combine and connect all stakeholders.
2. Identification of universities as partners.
3. 14 case studies with partner universities, including HHL Leipzig Graduate School of Management, RWTH Aachen University and University of Leipzig.

OUTCOMES:

- » An online open school platform was created: Students are willing to use the platform; they are able to generate original ideas.
- » Open school projects, using voluntary participation and competition among students can work in the practice. The use of grades, as a means to push motivation among students, can sometimes lead to conflicts. Students can contribute to the creation of high quality research and teaching materials.
- » The IDEANET platform generates big volumes of data that can be analyzed to answer diverse research questions related to online communities.



Open School regards staff and students as two "University Subsystems".

Selected publications and presentations:

Abdelkafi, N., Bartl, M., Füller, J., Ihl, C. & Rieger, M. (2010). The Open School Vision - For More Openness at Universities. In: Fährnich, K. & Franczyk, B. (Eds.). Proceedings of Informatik 2010: Service Science - Neue Perspektiven für die Informatik. Band 1. 949-955. Bonn: Gesellschaft für Informatik 2010.

Abdelkafi, N. (2011). Open School: How to Organize Innovation Contests with Students. Informatik 2011 – Informatik schafft Communities. 41. Jahrestagung der Gesellschaft für Informatik, Berlin.

Neyer, A. & Abdelkafi, N. (2011). Educating Open Innovation Ambassadors. In: Huff, A., Möslin, K.M. & Reichwald, R. (Eds.). Leading Open Innovation. 203-219. Cambridge: MIT Press.

Video:



vimeo.com/55048681

PROJECT #10 **Open Government 200**

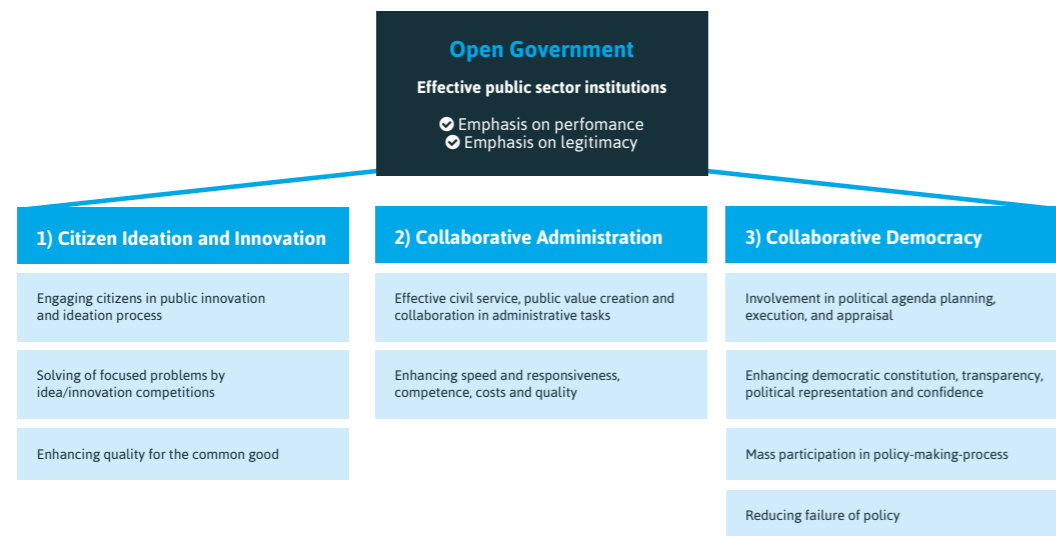
PROJECT MANAGER: Prof. Dr. Dennis Hilgers, Johannes Kepler Universität Linz

PROJECT PARTNER: Dr. Michael Steinbusch, Technische Universität Dresden

LINK: <http://bit.ly/2jR4A2Y>

ABSTRACT:

Theories of innovation suggest the process of product and service development is becoming more open, placing more emphasis on external knowledge and involving a wide range of external factors to achieve and sustain innovation. The growing success of Open Innovation practices in many firms raises the question of whether these principles can be transferred for the reinventing of public sector organizations. Going beyond a technocratic e-government paradigm, but with the support of internet technology, this project presents a structural overview of how external collaboration and innovation between citizens and public administrations can offer new ways of citizen integration and participation, enhanced performance and benefits for the political decision-making process.



Open Government, Citizen Co-Creation and Gov 2.0: Hype or Revolution?

APPROACH:

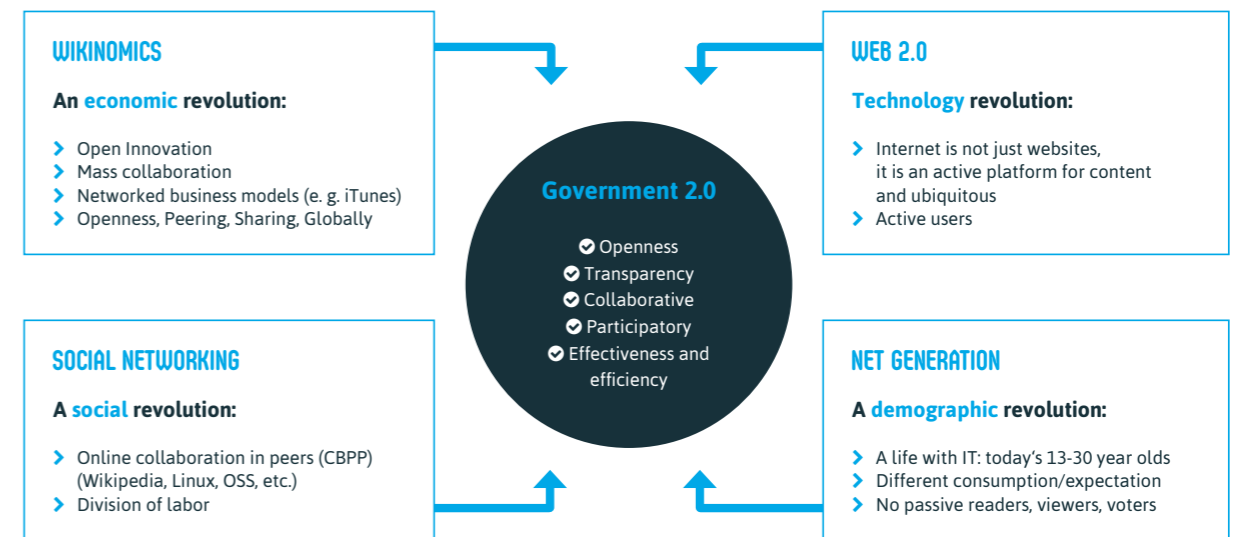
Central for the project is the use of internet-based platforms, and existing research in the area of urban planning and architecture.

OUTCOMES:

The project provided:

- » a better understanding of Open Government in the practice,
- » a large collection of "best" and "promising" practices,
- » an overview of technologies used for citizen participation.

In addition to presenting the results at several national and international conferences, we organized the Public Management Colloquium on New Public Management and Open Government, held in Hamburg in 2012.

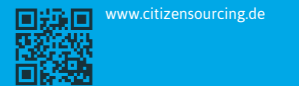


Selected publications and presentations:

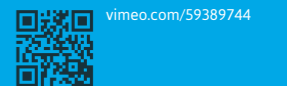
Hilgers, D. (2011). How Open is Government? Investigating Open Innovation in the Public Sector. 7th Transatlantic Dialogue on Strategic Management of Public Organisations, Working Group 4: Strategic management and public service innovation and reforms. Rutgers University, New York.

Hilgers, D. (2011). Mit Communities zum Open Government: Wege zur Öffnung von Staat und Verwaltung. Informatik 2011, Berlin.

Link:



Video:



.PROJECT #11

Open Architecture

PROJECT MANAGER: Dr. Michael Steinbusch, Technische Universität Dresden

PROJECT PARTNER: Prof. Dr. Dominik Walcher, Salzburg University of Applied Sciences

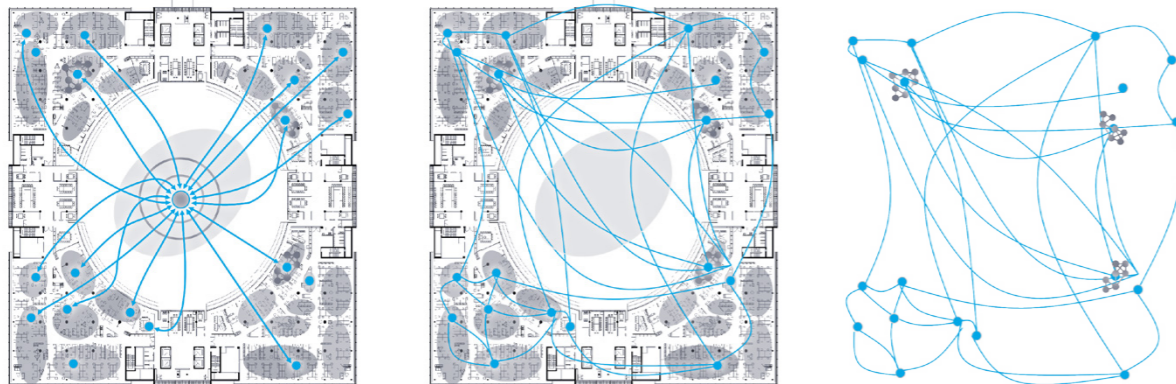
LINK: <http://bit.ly/2kfXO7j>

ABSTRACT:

Since the beginning of the cultural evolution of mankind, architecture has been forming social interactions and builds an institutional framework for human life. Nowadays, architecture is a globalized profession in which cultural aspects only play a minor role. We have become a society of innovations, and transform innovation strategies into network structures that extend beyond a company's systemic borders.

Architecture itself has grown into an open strategy:

Open innovation is not only a transgression of company borders but also of (organizational, professional) borders within a company. They cannot be overcome by organizational means itself, but have to be transcended in a realm of perception and embodiment without giving up strategy. Open architecture strategies are a special way of self-organization helping communities to develop their own visible structures of social perception.



Architecture has grown into an open strategy.

OUTCOMES:

- » **Symposium held in Dresden in 2011**
- » **Seminar at TU Dresden**
- » **Book publication**

APPROACH:

The project answered the following questions:

Are the methods of Open Innovation applicable to the emergence of architecture?

Architecture is a social phenomenon when it is used, but a solitary one when it is created:

- ❓ What is the reason behind this?
- ❓ What could be gained with an open architecture?
- ❓ Which problem could be solved?
- ❓ What social relevance would an "opening" of architecture have?
- ❓ What technologies and ways of thinking would support the approach?

The project findings were published in the book "Open Architecture", which features contributions from various experts in the field of open innovation and architecture. Methods are combined to find a new approach on how architecture can be opened, for instance by using tools for transparent and clear collaboration of several participants via an intuitive interface.



Selected publications and presentations:

Steinbusch, M. & Walcher, D. (2013). *Open Architecture*. Lulu Press, Inc.

Link:



www.open-arch.com

Video:



vimeo.com/59389742

PROJECT #12 Visualizing User Innovation in Healthcare

PROJECT MANAGER: Prof. Pedro Oliveira, Ph.D., CATÓLICA-LISBON School of Business and Economics

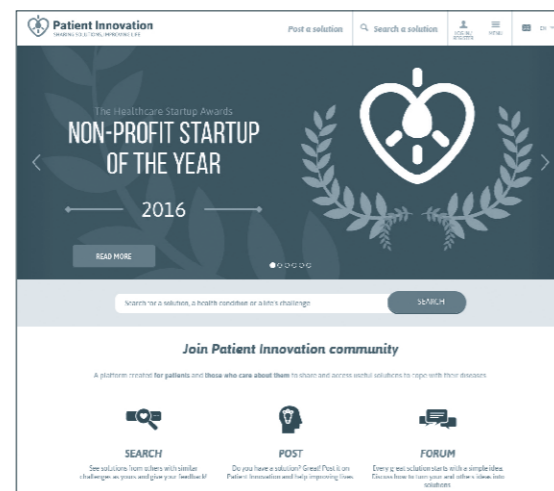
PROJECT PARTNERS: Dr. Danita Cepiku, University of Rome "Tor Vergata"
Prof. Dr. Katja Hutter, University of Innsbruck
Dr. Sara Poggesi, University of Rome "Tor Vergata"

LINK: <http://bit.ly/1oDVp2m>

ABSTRACT:

The literature on user innovation in healthcare services has identified examples of service development (including medical treatments) by users. For example, Richard Bernstein, a type 1 diabetes patient, is believed to be the first individual to self-monitor his blood sugar and was an early advocate for such monitoring by diabetics. This is just one of the many examples in which a treatment or medical device was developed by patients. We call these examples the "celebrity user innovators". The project aimed to identify actual user innovators with the idea to share those innovations with patients that can benefit from them.

Sharing Solutions,
Improving Life.



The "Patient Innovation" social web platform for P2P solution sharing.

The following questions have been tackled by the project:

- ❓ How can we identify the user innovators in healthcare and the innovations they developed?
- ❓ How can we make them "visible" to society?
- ❓ How does society benefit from users innovations in healthcare services?

APPROACH:

A two-step approach was followed:

In phase 1, cases have been identified where new treatments/devices were developed by the patients. The project team worked in close collaboration with the "Gemeinsam für die Seltenen" (the German society for Rare Diseases, www.gemeinsamselten.de). The possibility of collaborating with communities of patients in Austria, Italy and Portugal was also used.

In phase 2, the variety of visualization of the identified user innovations have been promoted. The project focused on chronic diseases, as it is more likely that patients try to find a solution for a long-lasting or recurrent problem.

OUTCOMES:

Several patients who developed treatment for chronic diseases and share the treatments/devices they developed have been identified and have been included in case studies. Furthermore, the project outcomes include:

- A) International survey to identify patient innovators
- B) Website for promoting the project (namely among patients associations) patient-innovation.com
- C) The "Patient Innovation" social platform for P2P solution sharing & Facebook page

Selected publications and presentations:

Habicht, H., Oliveira, P. & Shcherbatiuk, V. (2012). *User Innovators: When Patients Set Out to Help Themselves and End Up Helping Many*. *Die Unternehmung*, 66:3, 277-295.

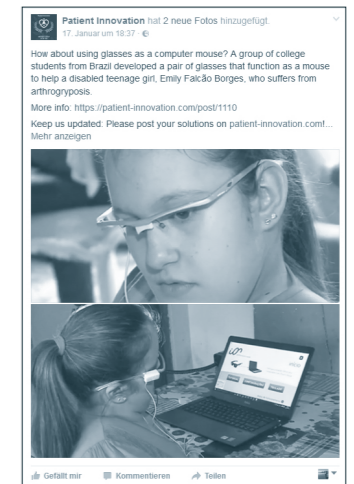
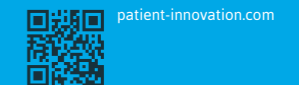
Oliveira, P., Zejnilovi, L., Canhão, H. & von Hippel, E. (2015). *Innovation by patients with rare diseases and chronic needs*. In: *Orphanet Journal of Rare Diseases*, 10:41, DOI 10.1186/s13023-015-0257-2.

Zejnilovi, L., Oliveira, P. & Canhão, H. (2016). *Innovations by and for Patients and Their Place in the Future Health Care System*. In: *Albach, H., Meffert, H., Pinkwart, A., Reichwald, R. & von Eiff, W. (Eds.). Boundaryless Hospital*. 341-357. Berlin: Springer.

Video:



Link:



The project outcomes have achieved great sustainability, for example with the "Patient Innovation" Facebook page.

PROJECT #13 Epidemic Communicator: Uncertainty as a Trigger for Service

PROJECT MANAGER: Prof. Dr. Gordon Müller-Seitz, Technische Universität Kaiserslautern

PROJECT PARTNERS: Prof. Dr. Carsten Reuter, Hochschule Aschaffenburg – University of Applied Sciences
Dr. Christoph Stöckmann, Universität Duisburg-Essen
Dr. Wotan Wilden, Technical University of Munich

LINK: <http://bit.ly/2jCmZTe>

ABSTRACT:

This project shed light on uncertainty – understood here as the unexpected and non-calculable –, by contrast to calculable risks. Despite its societal relevance and omnipresence (e. g. 9/11, tsunamis or the volcanic ash clouds of the Icelandic volcano), this topic has been only rarely researched. The way that actors actually deal with uncertainty before, during and after such phenomena has been researched within disciplinary silos, in an isolated manner, sticking to risk conceptions most of the time. This project tackles this overarching theme against the background of service innovations in the face of uncertainty with regard to foodborne disease outbreaks. This context is deemed adequate due to its high societal and managerial relevance. Moreover, it relates to the initiative's theme as – in this case – fighting the invisible (e. g. EHEC bacteria) demands leadership in innovative ways.

APPROACH:

The project aimed for a thorough understanding of how actors, in particular organizations, face uncertainty. Therefore, service innovations and managerial practice efforts have been made visible ensuing from dealing with uncertainty resulting from large-scale disease outbreaks.

Using synergies across the project participants, a qualitative-explorative approach was used in creating case studies for teaching purposes and an explorative oriented conference paper. In contrast, a quantitative-theory-testing approach was employed when testing the usability of an app developed within the project (epicomm – epidemic and emergency communication system).

Fighting the invisible demands leadership in innovative ways.

OUTCOMES:

The project contributed to teaching, research and practice as follows:

- » **Teaching impact: three case studies (EHEC, SARS, BSE) for teaching purposes.**
- » **Research impact: Exchange with leading experts from the field, and presentations and papers, e. g. at the Public Management Colloquium and EURAM.**
- » **Running prototype of the epicomm app.**

Selected publications and presentations:

Müller-Seitz, G. (2014). Practising Uncertainty in the Face of Large-Scale Disease Outbreaks. In: *Journal of Management Inquiry*, 23:3, 276-293.

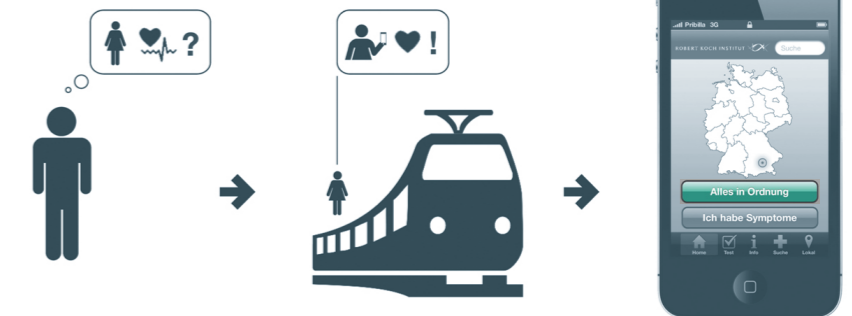
Müller-Seitz, G. & Macpherson, A. (2014). Learning during crisis as a 'war for meaning': The case of the German Escherichia coli outbreak in 2011. In: *Management Learning*, 45:5, 593-608.

Video:

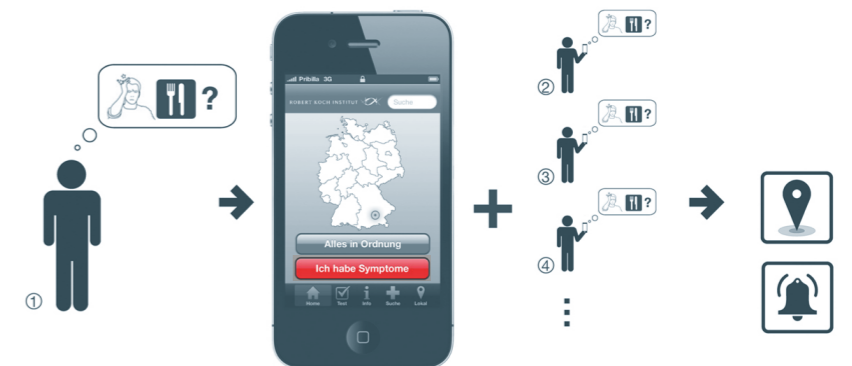


vimeo.com/59389083

Example 1
Information on health status of family members and friends



Example 2
Location-based concentration of site-specific symptoms triggers alarm



PROJECT #14 Critics vs. Creators Leading Innovation

PROJECT MANAGER: Jun.-Prof. Dr. Julia Müller, Martin-Luther-Universität Halle-Wittenberg

PROJECT PARTNER: Dr. Celine Abecassis-Moedas, CATÓLICA-LISBON School of Business and Economics

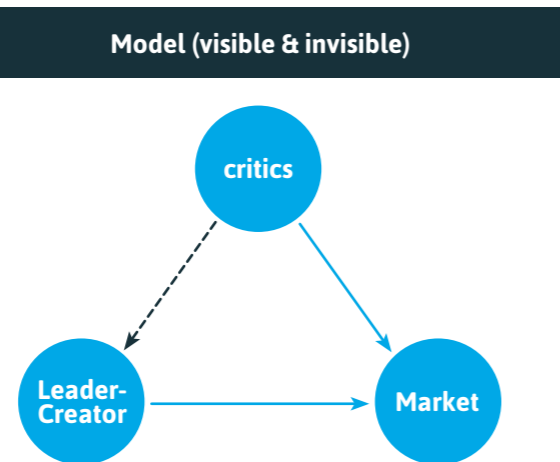
LINK: <http://bit.ly/2kqCT3t>

ABSTRACT:

Do rotten tomatoes (or stars) matter to chefs? This project made the role of critics visible in both the innovation process of companies where leader-creators drive innovation, and the process of leading innovation in the industry. So far, only the role that critics play on the market by influencing customers, and consequently sales, has been researched. In order to identify the role that critics play in the innovation process, the project dealt with critics in detail. Starting from the distinction of expert critics and non-expert critics, the impact on the creator innovation process has been investigated, using the examples of haute cuisine and arts.

Do rotten tomatoes (or stars) matter to chefs?

Illustrating the aim of the project: previous research has not taken the role of critics in the innovation process into consideration.



APPROACH:

The project distinguished two groups of critics:

1. Expert critics are professional reviewers who have a certain level of expertise. They normally adopted a standardized reviewing process in order to evaluate the quality of a service or a product.
2. Non-expert critics include everybody else who evaluates the same service or product and publishes it (e. g. in online communities).

The project focused on answering the following questions:

- Do leaders-creators take critics into account within the innovation process?
- How do leaders-creators integrate critics in the innovation process?
- Do expert and non-expert critics have different impact on the creator innovation process?

Thereby the research approach included two studies:

- a) One study in the field of haute cuisine: Looking into the role of innovation in entering the "star-system", as well as the quality needed for staying in the "star-system"
- b) One study in the field of arts: Investigating the process of interaction of creators and critics in innovation, depending on business success

OUTCOMES:

- » 2 short films summarizing the influence of critiques on innovation in the arts.

The project outcomes have been presented to conferences:

- » European Academy of Management (EURAM)
- » British Academy of Management (BAM)
- » Academy of Management (AOM)

The results of the exploratory qualitative study carried out with creators show interesting starting points for opening discussions in the fields of Open Innovation, ambidexterity, and the effect of external evaluations in creative industries. The project outcomes can be connected to the broader role of external evaluators in the innovation process of firms, including schools and universities in the case of international accreditations. The results are disseminated by the researchers in their teaching activities and further research.

Selected publications and presentations:

Abecassis-Moedas, C. & Müller, J. (2014). The influence of critics in the creative industries: Innovation, consistency or ambidexterity? The 74th Annual Meeting of the Academy of Management, Philadelphia.

Müller, J. & Abecassis-Moedas, C. (2014). The influence of critics in innovation in creative industries: exploitation or exploration? The 14th European Academy of Management Annual Conference, Valencia, Spain.

Müller, J. (2014). Critics vs. creators leading innovation, IWH Forschungstag, Halle/Saale.

PROJECT #15 Failure-Driven Innovation

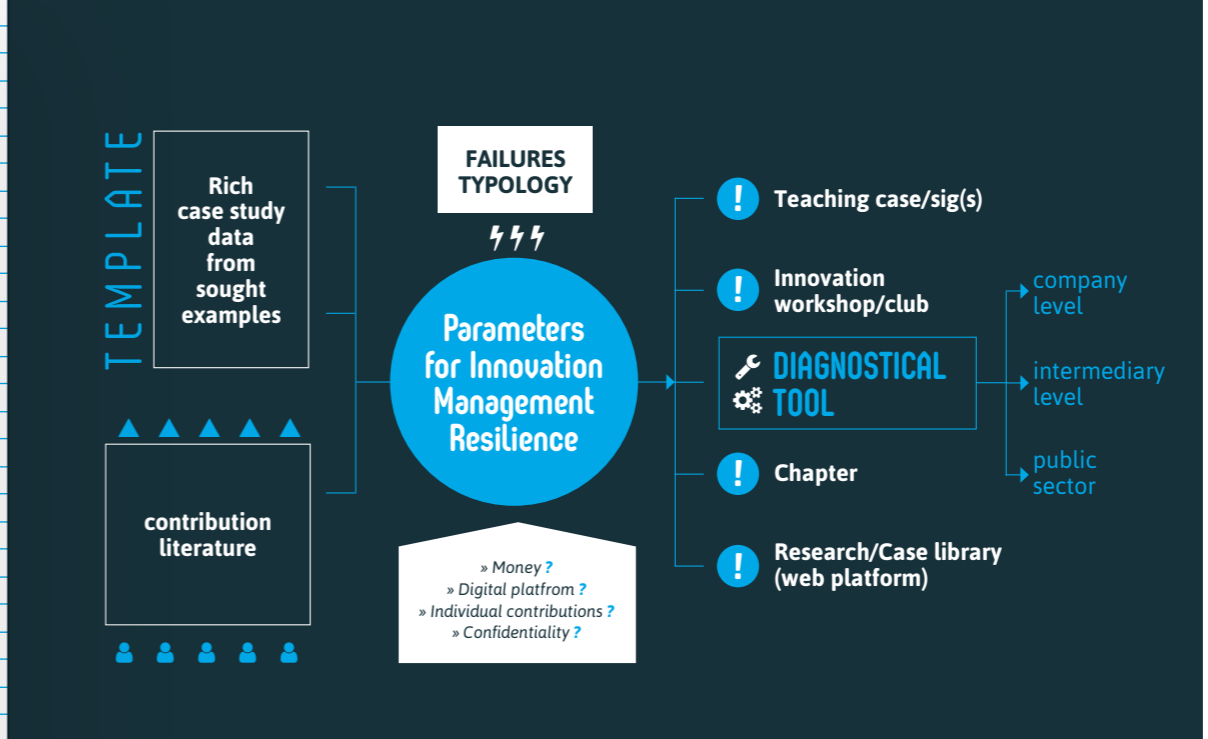
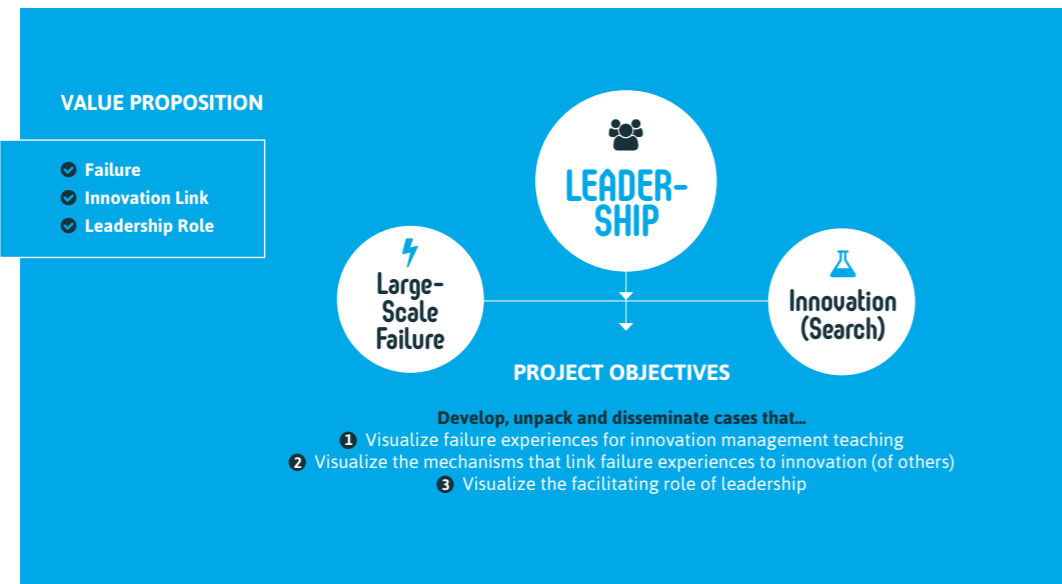
PROJECT MANAGER: Dr. Olivier Berthod, Freie Universität Berlin

PROJECT PARTNERS: Dr. Allen Alexander, University of Exeter
Dr. Sebastian Kunert, artop GmbH
Prof. Torsten Oliver Salge, Ph.D., RWTH Aachen University
Anne L. Washington, Ph.D., George Mason University

LINK: <http://bit.ly/2kfRo8c>

ABSTRACT:

When it comes to research and teaching on innovation, case selection suffers from a success bias. Academia loves to tell stories of breakthrough innovations to practitioners and focuses, in the classroom, on successful organizations and best-performers. This project thus focused on unpacking the zone of obscurity that has emerged around the notions of failure and innovation by addressing the following questions: Why do we rely so much on success-stories? Do we foster misconceptions about the nature of innovation? Can we augment our knowledge from success stories through failure stories? And how can we make this knowledge visible and accessible for all?



Selected publications and presentations:

Alexander, A.T. & Martin, D.P. (2013). Intermediaries for Open Innovation: A competence-based comparison of Knowledge Transfer Offices in the UK & France. *Technological Forecasting & Social Change*, 80(1), 38-49.

Berthod, O., Müller-Seitz, G. & Sydow, J. (2014). Out of nowhere? Interorganizational assemblage as the answer to a foodborne disease outbreak. *Schmalenbach Business Review*, 66(4), 385-414.

Kunert, S. (Ed.) (2016). *Failure Management: Ursachen und Folgen des Scheiterns*. Springer Gabler.

Book:



APPROACH:

Two main questions were raised:

1. *How can we enable students to harness the potential of learning from failure?*
2. *How can we visualize the process of learning from failure?*

To answer these questions, a three step approach was used:

- ✓ Make insights visible through **failure case studies**
- ✓ Compile a comprehensive **literature review about failure in innovation** context
- ✓ Build a **database of failure case studies** to be used for teaching on innovation

OUTCOMES:

Failures are less visible but no less important to understanding the process of innovation. Innovation is an intentional process of change while failure is an unexpected critique of existing practices. Both failure and innovation challenge the status quo in ways that require strong leadership to guide a re-examination of core beliefs. This project opened up the conversation as well as contributed to the scholarship on failure, resilience, and reliability. It provided a novel approach to researching, teaching, and thinking about innovation.

The project results include the following publications:

- » **RESEARCH REVIEWS**
- » **CASE STUDIES**
- » **BOOK**

.PROJECT #16 **Solve Different**

PROJECT MANAGER: Sven Richter, Technische Universität Dresden

PROJECT PARTNERS: Dr. Mario Arlt, ABB
Prof. Oliver Fritz, Hochschule Konstanz
Dr. Bernhard Rothbucher, Synowaytion GmbH

LINK: <http://bit.ly/2kqQ7gK>

ABSTRACT:

Today, one of the main demands of executive leadership is flexibility in thinking. Leaders have to be able to find ways to “think outside the box”. But as it might be easy to revise a decision, it is less easy to give up an approved mind-set. Companies and their leaders get stuck in patterns of thinking that grow less and less applicable in changing circumstances.

Therefore, the project leaders need to find a way to consciously unleash themselves from the fixation with certain patterns of thinking. For a series of tools for visualizing data and decision-making, the project team investigated the aspects that occur when making aware of the assumptions and frameworks that rule the application. By means of the results, the aim is to enable leaders to think outside the box to solve their decision problems differently.

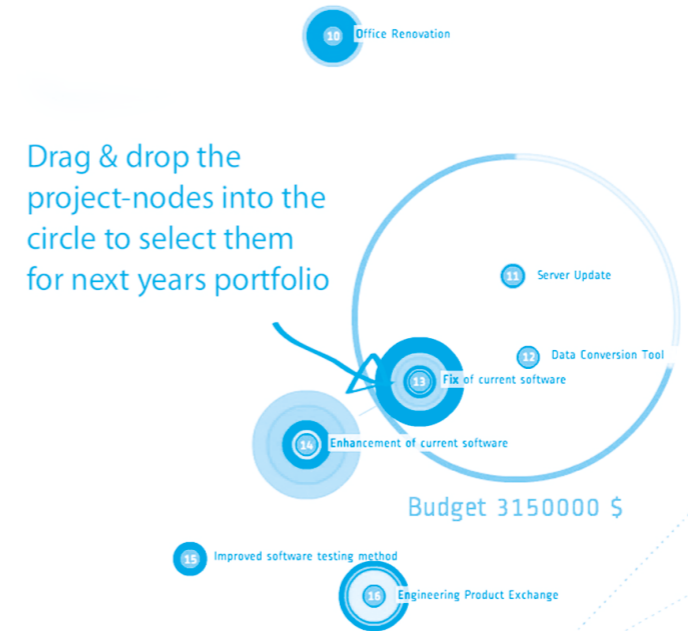
APPROACH:

In order to improve decision making by visual tools, the initial approach featured cross-over sessions by:

1. *Architecture X Product Management*
2. *Design X Portfolio Management*

Following the initial experimental sessions, new visualization tools were developed with the help of expert evaluation and the experimental protocols.

We want to enable leaders to think outside the box.



Drag & drop the project-nodes into the circle to select them for next years portfolio

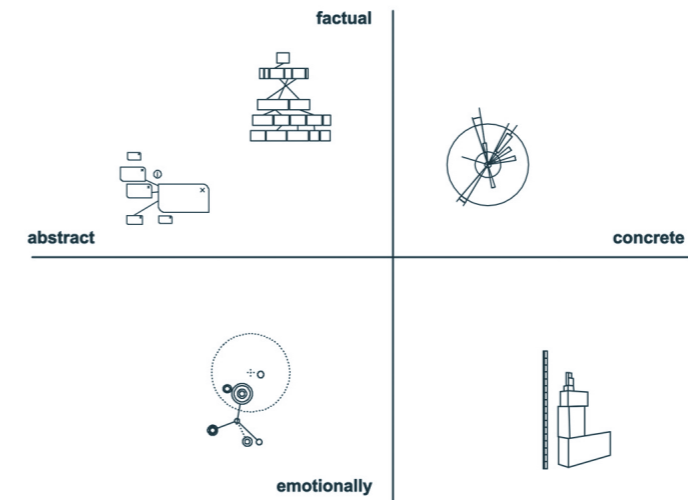
Prototype of a visualization tool.

Selected publications and presentations:

Video:



vimeo.com/59552238



Support matrix for project evaluation.

OUTCOMES:

» The application of visual representations, which are inspired by architectural or design approaches, can improve cognition of a managerial problem and may result in improved decision quality and confidence of the decision makers.

» With the help of the provided visual representations, decision makers, who may be experts in other areas, but not in portfolio management, achieve satisfactory and even optimal outcomes in the portfolio selection.

» Visual representations influence approaches to cognition; the provided visual representations enable a more intuitive solution without expert knowledge.

PROJECT #17

Resolving Dilemmas in Collective Innovation

PROJECT MANAGER: Prof. Dr. Pascal Le Masson, Mines ParisTech

PROJECT PARTNERS: Prof. Dr. Tobias Fredberg, Chalmers University of Technology
Prof. Dr. Blanche Segrestin, Mines ParisTech
Prof. Dr. Martin Wiener, Friedrich-Alexander-Universität Erlangen-Nürnberg

LINK: <http://bit.ly/2joSO1v>

ABSTRACT:

Collective innovation leads organizations to deal with contradicting approaches (centralization vs. decentralization, protect vs. reveal, subordination vs. autonomy etc.). From recent collective innovation research, we know that dilemmas are present in the management of collective innovation, as could be expected due to the liminal character of associated innovation activities. Research indicates that organizations successfully working with Open Innovation are able to solve the abovementioned dilemmas. Following recent works showing that Open Innovation requires important managerial effort, this project aimed for the visualization of the hidden variables which help to solve the dilemmas.

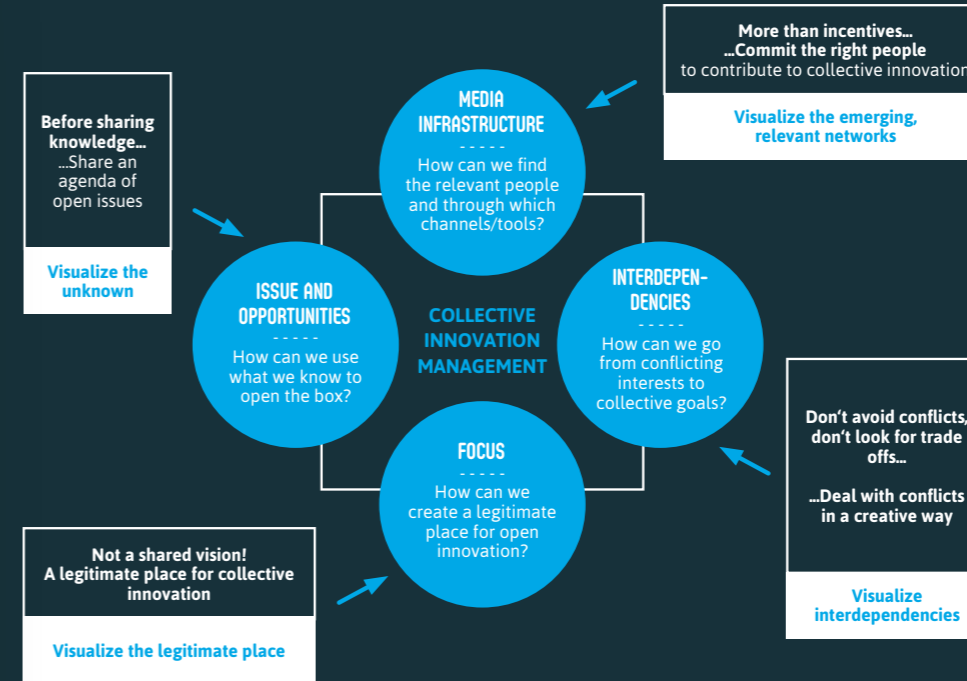
APPROACH:

Four different cases has been studied within this project:

- ✔ Personal care,
- ✔ Biodiversity protection,
- ✔ Automotive safety and
- ✔ A corporate OI organization.

Each case revealed the critical role of an (individual or collective) actor, the Open Innovation (OI) exploration manager. Based on these cases, the profile of the OI exploration manager was to be characterized. The aim was to visualize the creation of a collective innovation effort by creating a workable format for finding problems that need a collective solution, the critical design variables for such a solution, and the upcoming managerial dilemmas that need to be solved in the specific situation.

Organizations that successfully work with Open Innovation are able to solve management dilemmas.



Collective innovation management uncovered with relevant visualization techniques.

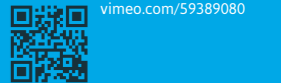
Selected publications and presentations:

Agogué, M., Le Masson, P. & Robinson, D.K.R. (2012). Orphan Innovation, or when path-creation goes stale: missing entrepreneurs or missing innovation? *Technology Analysis & Strategic Management*, 24:6, 603-616.

Berthet, E., Bretagnolle, V. & Segrestin, B. (2012). Introduction of semi-perennial forage crops in an intensive cereal plain to restore biodiversity: a need for collective management. *Journal for Sustainable Agriculture*.

Giannopoulou, E., Yström, A., Ollila, S., Fredberg, T. & Elmquist, M. (2010). Implications of Openness: A Study into (All) the Growing Literature on Open Innovation. *Journal of Technology Management & Innovation*, 5:3, 162-180.

Video:



vimeo.com/59389080

OUTCOMES:

The project found that

- » the OI exploration manager supports the collective effort for innovation through (at least) four specific activities: making open issues visible, visualizing the identity of the OI collective, visualizing the interdependencies between participating parties and creating a collaboration infrastructure for OI,
- » successful collective innovators really combine these contradictory approaches and
- » there are different important management areas that enable them to combine these approaches: Open Innovation infrastructure, opportunity space, interdependencies, legitimacy.

In order to help companies visualize these management areas, a workshop concept was developed by the project team, which was applied in cooperation with several companies.



Technical University of Munich – The Entrepreneurial University

Ever since its founding in 1868, TUM has been at the forefront of innovation. TUM scientists today have the same goal as their 19th century counterparts: finding solutions to the major challenges facing society as we move forward. TUM was founded to provide the state of Bavaria with a center of learning dedicated to the natural sciences. It has played a vital role in Europe's technological advancement and has the prestige of producing a number of Nobel Prize winners.

Today, around 40,000 young people study here – 24 percent of them from abroad – in the 14 faculties of TUM. It is this entrepreneurial spirit that in its liberal and competitive form promotes our three key objectives: academic excellence, entrepreneurship and international performance.

The Technical University of Munich sees itself as serving a society that, in the course of progressive globalization, is increasingly facing new and

ever greater challenges. To accomplish this, it needs talented young researchers, with an interdisciplinary approach attuned to the issues of this century:

health and nutrition · energy, climate and environment · mobility · communication and information · natural resources · infrastructure

These are issues we have embraced and they determine our research program.

TUM is one of the first Excellence Universities in Germany. In the national competition in 2006, it made a major impact with its "TUM. The Entrepreneurial University" concept of an entrepreneurially thinking and engaging university. Founded in 2005, the Peter Pribilla Foundation is part of the corporate body of TUM, building on Peter Pribilla's very fruitful interactions with the university.

Center for Leading Innovation & Cooperation (CLIC) at HHL Leipzig Graduate School of Management

The future belongs to value creation models based on innovation and cooperation. Their management is one of the primary challenges of the 21st century. The Center for Leading Innovation & Cooperation (CLIC) helps companies meet these challenges – through the joint design and improvement of specially tailored innovation strategies. In a world in which radical innovation and cross-national cooperation is gradually becoming the norm, cooperation between academia and business practice is of vital importance and can help strengthen the innovative abilities in firms and markets.

Founded in 2006, CLIC is a joint initiative of Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), HHL Leipzig Graduate School of Management and Technical University of Munich (TUM). CLIC is a competence center of HHL Leipzig Graduate School of Management – the oldest business school in Germany and one of the leading business schools in Europe.

CLIC bundles the know-how and experience of a strong international network of institutions and experts in innovation research, focusing especially on service innovation as well as Open Innovation

and interactive value creation. As an auxiliary institution to the Peter Pribilla Foundation, CLIC is actively involved in realizing the foundation's objectives by:

- » Managing the research initiative "Leadership for Innovation: VISUALIZING THE INVISIBLE", including the allocation of funding, scientific advisory for the projects as well as the organization of annual conferences,
- » Planning and organizing the foundation's regular network meetings, bringing together members and research fellows as well as new stakeholders from research and industry to interact within the dynamic field of innovation and leadership,
- » Co-organizing the ceremonies to award the TUM Research Excellence Award to outstanding researchers as well as
- » Promoting the activities of the foundation to wider scientific audiences and the general public.



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.RESULT

Conclusion

The research initiative of the Peter Pribilla Foundation followed the ambitious goal of visualizing the invisible, intangible and often subconscious that characterizes innovations and their successful leadership, particularly in services, processes and systems.

The following types of activities were supported:

- ✓ *Exploration and networking among existing research projects,*
- ✓ *Piloting, experimenting and laboratory concepts,*
- ✓ *Development of methods and instruments,*
- ✓ *Participation in research workshops, conferences and seminars,*
- ✓ *Knowledge transfer within the research network as well as into teaching and training concepts,*
- ✓ *Support of early career academics in an international context.*

The initiative brought together 50 research fellows from 12 countries, working in 17 projects from a large variety of research fields, thereby cooperating with diverse business sectors. The research fellows managed to produce an extensive portfolio of solutions in response to the idea of visualizing the invisible, in particular providing decision support for companies as well as making knowledge accessible and transparent for a greater (public) audience. Outcomes range from the presentation of findings in scientific publications to the free and open provision of methods and tools as online content, up to the development of prototypes of IT solutions, such as smartphone apps.

To the foundation, the “crown jewel” which evolved from this research initiative is indeed the network of excellence created from the research fellows who worked together in these projects. New alliances were forged, exploring aspects of leadership and innovation and advancing ideas from the projects to create proposals for further joint research undertakings. Through the intensive networking activities, it was possible to connect these excellent young researchers to the foundation on a long-term basis, fostering contacts between researchers and practitioners with an aspiration for sustainability. Thus, the initiative truly fulfilled its mission in the spirit of its eponym and leaves room for more ideas and projects in the future.

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