

# Activity Report 2012/2013



# WHU – Otto Beisheim School of Management Chair of Technology and Innovation Management





# **Welcome Greetings**



Professor Dr. Holger Ernst

Dear Reader,

It is a great pleasure to present the activity report for the Chair of Technology and Innovation Management (TIM-Chair) at the WHU - Otto Beisheim School of Management for the academic year 2012/2013. The activity report is full of exciting activities and we invite you to have a detailed look at them. At this point, I would like to highlight two aspects from the academic year 2012/2013:

It has always been our mission to provide our students across multiple programs at the WHU an outstanding experience in the classroom. We have therefore invested a lot into making our class offerings innovative, insightful, thought provoking and managerially relevant. It is therefore always a great honor and an important sign of recognition when we receive positive feedback from our students. In this academic year, we are very proud that we were able to win two

best teacher awards. James G. Conley, Professor at the Kellogg School of Management, Northwestern University, USA, and affiliated with the TIM-Chair for many years, won the Best Teacher Award for his class "Heinz-Nixdorf-Lecture: Strategic Intellectual Capital Management" in the WHU - Otto Beisheim School of Management Master of Science Program. Holger Ernst, holder of the TIM-Chair at the WHU - Otto Beisheim School of Management was elected as Best Teacher for his class "Innovation Management" by the students of the Part-Time MBA Program of the WHU - Otto Beisheim School of Management. We are very thankful for these awards and consider them as a motivator to keep improving our class offerings even further.

We also believe that insightful and unique teaching content requires own research in our respective fields. We therefore conduct research with the objective to integrate our scientific findings into our teaching curriculum. A good example for this approach is a recent publication by James Conley, Peter Bican and Holger Ernst about the strategic management of intellectual property (IP) in the California Management Review. The authors develop a new framework on the integrative use of multiple IP regimes, especially patents and trademarks, and they show in multiple case studies from various industries how firms can achieve a competitive advantage and business success by an integrative management of multiple IP regimes. These case studies have been used in multiple of our classes, e.g. in the above mentioned class for which Prof. Conley received the best teacher award. In this context, it is worth mentioning a recent study by Holger Ernst and Martin Fischer which shows that the integration of the IP department into the new product development process and its alignment with Research and Development increases the financial performance of new products. This paper was accepted for publication by the Journal of Product Innovation Management.

This activity report provides you with more detailed information about these and other research projects at the TIM-Chair during the last academic year. We encourage you to contact us, to give us feedback and to engage in joint projects. We are looking forward to collaborating with you. Please find more information about the TIM-Chair on our homepage at http://www.whu.edu/tim.

Yours Sincerely,

Prof. Dr. Holger Ernst

About the Chair of Technology and Innovation Management	3	Team Members	5	Teaching	11	Röchling Assistant Professorship for International Innovation Management	30	WHU-Activities/ Community Outreach	34
About WHU – Otto Beisheim School of Management	4	Team Activities	10	Research	20	Business Engagement	31	Sustainability Report & Thank you	35



# **About the Chair of Technology and Innovation Management**

- TIM-Chair at WHU Otto Beisheim School of Management since 2001
- Member of the Innovation and Entrepreneurship Group at WHU – Otto Beisheim School of Management
- Research Focus: Strategy, Innovation, R&D Management, New Product Development, Intellectual Property, Technology Marketing
- 13 Team Members (1 Professor, 1 Assistant Professor, 10 Doctoral Students)
- · 4 Visiting Professors
- Strong Research Performance in (e.g. Journal of Marketing, Journal of Product Innovation Management, Research Policy)
- Multiple Research Collaborations (Winner of multiple Research Awards)
  - Boston College (USA)
  - Centre for European Economic Research (ZEW) (Germany)
  - Hosei University (Japan)
  - Northwestern University (USA)
  - University of Cambridge (United Kingdom)
  - . University of Texas at Austin (USA)
  - Westfälische-Wilhelms-Universität Münster (Germany)
- Excellent Teaching Performance in all WHU Programs (Winner of multiple Teaching)
- Active Knowledge Transfer (Conferences, Presentations, Case Studies, Publications, Executive Education, etc.)
- Large Industry Network and Ties (e.g. Innovation Success Panel (ISP®) or Patent Asset Index™ at PatentSight GmbH)
- Multiple Sponsored Research Projects (from Companies and Research Institutions)
- Interdisciplinary Initiatives (e.g. Prepare! The Entrepreneurs' Academy with the RWTH Aachen)
- Location: WHU Otto Beisheim School of Management's Z-Building, Hellenstraße 9, 56179 Vallendar, Germany





WHU's Z-Building: Location of the TIM-Chair at Vallendar's pedestrian area



# **About WHU - Otto Beisheim School of Management**

WHU is an internationally oriented and privately financed business school based in Vallendar and Düsseldorf. Founded in 1984, WHU is now one of the most renowned German Business Schools with an exceptional national and international reputation. WHU stands for Excellence in Management Education and pursues this goal in three core areas: Academic Programs, Research, and Executive Education & Business Engagement.

Quality, internationality, and practical relevance are our principal guidelines in all areas. The results are expressed in our excellent national and international rankings. Furthermore, our business school has more than 190 partner schools worldwide and an outstanding corporate network.

WHU offers top-level academic programs in business administration (BSc, MSc), a Full-time, a Part-time and an Executive MBA, the Bucerius/WHU Master of Law and Business - Joachim Herz program, customized company programs and the possibility to pursue a doctoral degree and the German "Habilitation".

# Faculty/Staff: Full Professors: 33 Assistant/Associated Professors: 21 Post-Docs: 1 Honorary Professors: 13 External Lecturers: 60 Staff: 141 Founders and Benefactors of WHU: 120

Students/Participants:					
BSc Program:	557	MSc Program:	211		
Full-Time MBA Program:	77	Part-Time MBA Program:	86		
MLB Program:	52	EMBA Program:	98		
Doctoral Students:	257	Participants Executive Education:	304		
Exchange Students:	275	Participants European Summer Institute and European Programs:	219		
In Praxi e.V. (WHU Alumni Association): ~ 2.800 Members in ~ 65 Countries					

### Milestones

1984	first Diploma class is admitted
1988	WHU moves to the Marienburg in Vallendar, Germany
1993	WHU receives a generous Donation to its endowment by Otto Beisheim
1997	WHU and the Kellogg School of Management (Evanston, Illinois, USA) establish a joint EMBA Program
1998	WHU is the first German Business School achieving EQUIS Accreditation
2001	WHU becomes the only Private School to join the German Research Foundation (Deutsche Forschungsgemeinschaft (DFG))
2005	WHU launches the Bachelor and Master of Science Program; Start of the MBA Program
2006	WHU and the Bucerius Law School (Hamburg, Germany) initiate the joint Bucerius/WHU Master of Law and Business - Joachim Herz Program
2007	The first Assistant Professors are appointed
2010	Start of the Part-Time MBA Program in Düsseldorf, Germany
	WHU is accredited by AACSB International
2012	WHU achieves the FIBAA System Accreditation
	WHU opens its second Campus in Düsseldorf



# **Team Members**



### Left to Right:

Anke Siedenkamp (Personal Assistant), Assistant Professor Dr. Anna Dubiel (Röchling Professor of International Innovation Management), Carsten Guderian (Research Assistant and Doctoral Student), Professor Dr. Holger Ernst (Professor of Technology and Innovation Management), Sebastian Glöckner (Research Assistant and Doctoral Student), Markus Kremmel (Research Assistant and Doctoral Student), Peter M. Bican (Research Assistant and Doctoral Student)



### **Faculty**



Professor Dr. Holger Ernst

Holger Ernst is Professor of Technology and Innovation Management at WHU – Otto Beisheim School of Management in Vallendar, Germany, since 2001. He is a regular Visiting Professor at the Kellogg School of Management, Northwestern University, USA. Professor Dr. Ernst studied Business Administration at the Christian-Albrechts-University of Kiel, Germany, and at the University of Illinois at Urbana-Champaign, USA. He received a degree in Business Administration (1992), his PhD (1996) and his Habilitation (2001) from the Christian-Albrechts-University of Kiel, Germany.

His main research interests lie in the fields of technology, strategy, innovation, new product development and intellectual property. Professor Dr. Ernst has published in leading international journals such as Journal of Marketing, Journal of the Academy of Marketing Science, Journal of Product Innovation Management, MIT Sloan Management Review, Research Policy, and others. He has received multiple best dissertation and best paper awards.

Professor Dr. Ernst teaches regularly in executive programs, e.g. like the Kellogg-WHU Executive MBA Program, the Melbourne Business School Executive MBA Program and in various WHU and Kellogg Executive Customized Programs (e.g. for 3M, Esai Pharmaceuticals, Merck, L'Oreal, Süd-Chemie, Sony, Nissan, DuPont, Sony-Ericsson). He received Best Teacher Awards for his Innovation Management course in the WHU Full-Time MBA Program in 2006, for the Strategic Intellectual Property Management course in the Bucerius/WHU Master of Law and Business Program in 2008, and for his Innovation Management course in the WHU Part-Time MBA Program in 2012. Furthermore, Professor Dr. Ernst consults and holds presentations at corporations worldwide in the areas of technology, strategy, innovation, new product development and intellectual property.

Tel. +49 (0)261 6509 240

Fax +49 (0)261 6509 249

Holger.Ernst@whu.edu



Assistant Professor Dr.
Anna Dubiel

Anna Dubiel is Assistant Professor of International Innovation Management since January 2012. Her professorship is funded by the Röchling Foundation. She received her MSc degree in Business Administration from the Friedrich-Alexander-University in Erlangen-Nürnberg, Germany, and her PhD degree from WHU – Otto Beisheim School of Management in Vallendar, Germany. During her doctoral studies, she was a visiting researcher at the Carroll School of Management at Boston College, USA. Furthermore, she worked on consulting projects for the Corporate Technology Office of Siemens AG.

Assistant Professor Dr. Dubiel's main research interests lie in the field of international innovation and R&D management. She has co-edited a book on the success factors of German and US-American industrial R&D centers in emerging markets. She also contributed to two edited volumes, with one of them being the "PDMA Handbook of New Product Development" (3<sup>rd</sup> edition, Eds. K. Kahn et al.). She has regularly presented her research at leading international academic conferences. Additionally, she has published two award-winning teaching cases on best practice examples of innovations and R&D facilities in emerging markets.

Tel. +49 (0)261 6509 244

Fax +49 (0)261 6509 249

Anna.Dubiel@whu.edu



### Personal and Research Assistants

Anke Siedenkamp is the Personal Assistant of Professor Dr. Holger Ernst. Anke joined the Chair of Technology and Innovation Management and WHU – Otto Beisheim School of Management in November 2005.

Tel. +49 (0)261 6509 241 Fax +49 (0)261 6509 249 Anke.Siedenkamp@whu.edu



Anke Siedenkamp

Sebastian Glöckner studied Business Administration at the University of Cologne, Germany, and specialized in marketing. After his studies, he co-founded the GateSecure AG, a company that builds software and services to protect children online, in 2008. Sebastian joined the TIM-Chair in January 2012 and supports the Innovation Management courses in the BSc- and MBA-programs. His dissertation topic relates to the role of the sales force in new product development projects.

Tel. +49 (0)261 6509 245 Fax +49 (0)261 6509 249 Sebastian. Gloeckner@whu.edu



Sebastian Glöckner

Carsten Guderian studied Economics and Business Administration at the Christian-Albrechts-University of Kiel, Germany. He specialized in entrepreneurship and innovation management, organization, and economic policy. Carsten joined the TIM-Chair in April 2012 and supports lectures and seminars in various WHU programs. Furthermore, he is involved in Prepare! - The Entrepreneurs' Academy in the MSc-program. His dissertation focuses on the development of qualitative patent indicators for forecasting applications.

Tel. +49 (0)261 6509 242 Fax +49 (0)261 6509 249 Carsten.Guderian@whu.edu



Carsten Guderian

Markus Kremmel studied International Business Administration at the Friedrich-Alexander-University in Erlangen-Nürnberg, Germany, and the University of Technology in Sydney, Australia. He specialized in strategic management, logistics and (corporate) entrepreneurship. Markus joined the TIM-Chair in May 2011 and supports the Strategic Research and Development courses in the MSc- and MBA-programs. His dissertation refers to co-creation, the involvement of customers in the new product development-process.

Tel. +49 (0)261 6509 247 Fax +49 (0)261 6509 249 Markus.Kremmel@whu.edu



**Markus Kremmel** 





Peter M. Bican

Peter M. Bican studied Law and Business Administration at the Friedrich-Alexander-University of Erlangen-Nürnberg, Germany, Julius-Maximilians-University of Würzburg, Germany, and Boston University, USA. After completion of his studies in 2004, he worked in the Audit Department of Deloitte Luxembourg and the Capital Markets Group of PwC Frankfurt, Germany. Peter joined the TIM-Chair in July 2010 and supports the Heinz-Nixdorf-Lecture: Strategic Intellectual Capital Management course in the MSc- and the Strategic Intellectual Property Management course in the MLB-program. His dissertation concentrates on the integration of intellectual property as competitive advantage.

Tel. +49 (0)261 6509 248

Fax +49 (0)261 6509 249

Peter.Bican@whu.edu



Michael Baur

Michael Baur

External Doctoral Student

Tel. +49 (0)261 6509 241

Michael.Baur@whu.edu

Alexander Götz

External Doctoral Student

Tel. +49 (0)261 6509 241

Alexander.Goetz@whu.edu



Alexander Götz



Hanna Nari Kahle

Hanna Nari Kahle
External Doctoral Student
Tel. +49 (0)261 6509 241
Nari.Kahle@whu.edu

Nils Omland

External Doctoral Student

Tel. +49 (0)261 6509 241

Nils.Omland@whu.edu



Nils Omland



Michael Schramm

Michael Schramm

External Doctoral Student

Tel. +49 (0)261 6509 241

Michael.Schramm@whu.edu

David Somhegyi

External Doctoral Student

Tel. +49 (0)261 6509 241

David.Somhegyi@whu.edu



David Somhegyi



### **Visiting Faculty**



Professor

James G. Conley

Professor
James G. Conley
Northwestern University
Kellogg School of Management
Visiting Professor

Tel. +49 (0)261 6509 241 j-conleya@kellogg.northwestern.edu Professor Anthony Di Benedetto

Temple University
Fox School of Business and
Management

**Visiting Professor** 

Tel. +49 (0)261 6509 241 anthony.dibenedetto@temple.edu



Professor Anthony Di Benedetto



Professor Wayne D. Hoyer

Professor
Wayne D. Hoyer
University of Texas at Austin
McCombs School of Business
Visiting Professor
Tel. +49 (0)261 6509 241

wayne.hoyer@mccombs.utexas.edu

Professor Mohan Subramaniam Boston College Carroll School of Management Visiting Professor

Tel. +49 (0)261 6509 241 mohan.subramaniam.1@bc.edu



Professor Mohan Subramaniam







# **Team Activities**





# **Teaching**

### **Lectures - Overview**

Program	Term	Course
Bachelor of Science (BSc)	Fall Term 2012	Innovation Management (Group A & Group B)
	Fall Term 2012	Literature Seminar
	Spring Term 2013	Management Abroad Course India
Master of Science (MSc)	Fall Term 2012	Strategic R&D Management
	Fall Term 2012	Heinz-Nixdorf-Lecture: Strategic Intellectual Capital Management
	Fall Term 2012	New Product Development
	Spring Term 2013	Prepare! – The Entrepreneurs' Academy (together with Prof. Dr. Malte Brettel, RWTH Aachen)
WHU Full-Time Master of Business Administration (FTMBA)	Fall Term 2012	Kellogg Module: Business Opportunities in US
	Fall Term 2012	Strategic Innovation and Corporate Renewal
	Spring Term 2013	Innovation Management
WHU Part-Time MBA (PTMBA)	Fall Term 2012	Innovation Management
Kellogg/WHU Executive MBA (EMBA)	Spring Term 2013	Innovation Management
Bucerius/WHU Master of Law and Business (MLB)	Spring Term 2013	Strategic Intellectual Property Management
PhD/Doctoral Program	Fall Term 2012	Product Management Seminar
	Fall Term 2012	Literature Seminar
	Spring Term 2013	Linking Theory with Empirical Data Analyses
Deutsche Börse Group Management Education Program	Spring Term 2013	Innovation Management
Melbourne Business School Senior Executive MBA	Spring Term 2013	Innovation Strategies of European Companies



### Lectures





### **Guest Lectures**





### Prepare! - The Entrepreneurs' Academy 2013

Professor Dr. Malte Brettel (WHU – Otto Beisheim School of Management/RWTH Aachen), Professor Dr. Holger Ernst (WHU – Otto Beisheim School of Management), Marcel Meuer (RWTH Aachen) and Carsten Guderian (WHU – Otto Beisheim School of Management), together with the Gründerkolleg of the RWTH Aachen, have jointly organized the workshop "Prepare! – The Entrepreneurs' Academy 2013". Natural scientists and engineers from the RWTH Aachen teamed with WHU students to further develop their existing new product concepts and entrepreneurial spirit. 35 students and university members participated in the workshops held in Vallendar and Aachen on several occasions in early 2013. The teams addressed product concepts from a variety of disciplines like sports equipment, online platforms and machine tools. The program was enhanced by lectures held by experienced entrepreneurs and team coaching sessions. On February 15, 2013, the product concepts were presented before a jury consisting of academicians and practitioners and in the end the three best concepts were awarded. Congratulations, thank you and good luck to all participants!





### **Awards**

During the current academic year, affiliates of the Chair of Technology and Innovation Management at WHU – Otto Beisheim School of Management were honored with three awards:

The participants of the lecture on "Innovation Management" in the WHU Part-Time Master of Business Administration (PTMBA) program awarded Professor Dr. Holger Ernst the Best Teacher Award in the PTMBA program 2012. In this lecture, Professor Dr. Ernst provides an overview of fundamental aspects of innovation management from the strategic, organizational and procedural domains of managing product, process and business model innovation in different industrial and competitive environments. Herein, the participants learn e.g. about the importance of innovation for the creation of sustainable competitive advantages, disruptive technologies, resistance to innovation and how to overcome it, customer integration, open innovation, portfolio management, innovation assessment, reverse innovation and innovation in emerging markets.





Similarly, participants of the WHU Master of Science (MSc) "Heinz-Nixdorf-Lecture on Strategic Intellectual Capital Management" awarded Professor James G. Conley, Clinical Professor of Technology at Kellogg School of Management, Northwestern University, USA, and Visiting Scholar at the Chair of Technology and Innovation Management, WHU – Otto Beisheim School of Management, the Best Teacher Award in the MSc program 2012. In this lecture, Professor Conley provides an overview of strategic aspects of and depicts best practices in intellectual property management (patents, trade marks and copyrights) in various industrial settings. "It is an honor for me to have the opportunity to teach and learn with WHU students. They are a bright and engaging group. I am grateful to the WHU community for selecting me for this recognition," said Prof. James G. Conley. Congratulations!

Furthermore, the WHU alumni association In Praxi awarded Niclas Marcus Baldus the In Praxi Outstanding Thesis Award 2013 for his Bachelor of Science Thesis on "Innovation in Family Businesses – An Analysis of Idiosyncratic Factors of Family Businesses and Their Fulfillment of Critical Success Factors of Innovation". The award rewards academic excellence at WHU through incentivizing students to focus on topics of real relevance to business and society by demonstrating them the support and acknowledgment of the alumni community. In addition to the public recognition at the Graduation Ceremony on September 28, 2013, the award includes a  $\in$  1000 donation. Mr. Baldus wrote his thesis at the Chair of Technology and Innovation Management and was supervised by Professor Dr. Holger Ernst and Carsten Guderian. His key findings suggest that family businesses perform better in terms of their corporate culture, leadership style and strategic planning that encourage innovation compared to non-family businesses. However, family firms face innovation challenges concerning their risk attitude and financial resource availability. Congratulations, Niclas!





### Theses at the Chair of Technology and Innovation Management

Topic	Program	Candidate
Impact of Capacity Building on Success of Cross-Sector Partnerships in the Energy Sector at the Bottom-of-the-Pyramid Markets – An Overview (Business Partner: Electricité de France)	BSc	Anna Symann
Co-Creation in New Product Development (NPD): Differences between the Various Stages of the NPD-Process – A Literature Review	BSc	Christopher Hohns
Customer-Driven New Product Development in Business-to-Business – A Literature Review	BSc	Daniel Steinfeld
Co-Creation: Why do Users Innovate – A Literature Review	BSc	Daniel Wolfgarten
Market Orientation and Innovation Success in Online Start-Ups – An Empirical Analysis	BSc	Maximilian Haug & Philipp Petrescu
Quarkmanufaktur: How to Innovate in the German Convenience Food Market	BSc	Florian Hoppen
Business Model Innovation – A Literature Review	BSc	Jan Wohlleben
Innovation Management in Times of Crisis	BSc	Johanna Drechsel
Tackling the Soul of Branding: Significance and Strategic Management of Trademarks	BSc	Jost Gerrit Dieckhaus
R&D Activities of Firms from BRIC Economies in the Triad – A Descriptive Analysis	BSc	Leonard Goetze
Bayer's Nexavar™: Intellectual Expropriation and Strategic Options to Compulsory Licensing in Emerging Markets	BSc	Linda Quynh Nhu Truong
Process Innovation – A Literature Review	BSc	Marc Simon Günter Heiden
Open Innovation – Adaptive Methods to Integrate Users Effectively in Intermediate Innovation Toolkits	BSc	Max Willaschek
Innovation in Family Businesses – An Analysis of Idiosyncratic Factors of Family Businesses and Their Fulfillment of Critical Success Factors of Innovation	BSc	Niclas Marcus Baldus
Leveraging the Sales Force in New Product Development Projects – A Literature Review	BSc	Philipp Schleuning



Topic	Program	Candidate
R&D Facilities of German MNCs in China – A Descriptive Analysis	MSc	Caroline Päffgen
Innovation Strategies – A Literature Review	MSc	Mengting Gao
Enhancing Innovation Capabilities of Emerging Market MNEs via M&A: The Case of Sany and Putzmeister	MSc	Philipp Scheibe
The Monetary Valuation of Patents	MSc	Tim Sütter
Managing the Innovation Portfolio – An Example from the Power Products Industry	PTMBA	Hans Helmut Bockshammer
Success Factors of Innovations in the Launch Phase	PTMBA	Yelena Grigoreva
Business Plan	FTMBA	Benjamin Weide
Innovation Management – Analysis of the Status Quo and Recommendations for Improvement	ЕМВА	Carsten Oliver Knoll
Business Plan Concept for the Creation of a Bid-Based Collaborative Project Portal	ЕМВА	Dan Ravick Fiala
Innovation Management Leadership	ЕМВА	Daniel Joisten
Supply Chain Integration: A Proposal for a Pharmaceutical Clinical Supply Chain	ЕМВА	Ketan Amin
Connected Home: Analysis of Market Environment and Business Models as represented in Pilot Project "Zukunft Wohnen"	ЕМВА	Klaus Dechet
Business plan for a Home Energy Management System	ЕМВА	Mohideen Azeez Jan
The Importance of Intellectual Property and Brand Management in the Creation of a Strong Brand	MLB	Ana Regina Martínez Flores
Patent Evaluation in the International Airline Industry – A Technological, Legal and Strategic Analysis	MLB	Kolin Schunck
FIFA Intellectual Property Rights Management: When Corporate Needs and Legal Principles collide	MLB	Martín Peñaherrera Oleas
Protecting the Design and Presentation of Products: Dealing With Distinctiveness and Non-Functionality to Protect the Trade Dress	MLB	Mauricio Vallecilla de la Espriella



### Management Abroad Course - India

The Management Abroad Course India took place from May 05 to May 17, 2013. It is a two week field trip to India as part of the BSc curriculum at WHU – Otto Beisheim School of Management and it was organized by Assistant Professor Dr. Anna Dubiel. The "Management Abroad Course India" combines a traditional university course on international management and on-site firm, non-governmental organizations, and cultural sight visits. It offers students the possibility to discover and to experience India and, in particular, the cities of Bangalore as the "Silicon Valley" of India and Mumbai as the "Financial Capital" of India. This year we had the opportunity to visit the following companies and institutions:

- Bangalore: Bosch, Continental, a project of the German Federal Ministry of Economic Cooperation and Development, SAP, Titan Industries
- Mumbai: Alok Industries, BASF, HDFC Ergo, Indo-German Chamber of Commerce, Mahindra & Mahindra, Taj Mahal Hotel, Volkswagen

Furthermore, we met the German Deputy Consul General in Bangalore, the Executive Director of the State of Bavaria India Office, the Secretary General of the Organization of Plastics Processors of India and a few WHU alumni living in India. The program was complemented by a trip to the palace in Mysore and work on an India-specific case study.





# Entrepreneurship Seminar at Universitas Ciputra (Indonesia): Strategic Intellectual Property Management for Small Business

In February 2013, Peter M. Bican was invited by the Head of Corporate Entrepreneurship, Dr. Ir. Denny Bernardus K.W., MM, to hold a guest lecture at Universitas Ciputra in Surabaya, Indonesia. With more than 3.000 students and over 1.000 alumni, Universitas Ciputra is the only University in Indonesia emphasizing on entrepreneurship for all their students. Founded by the Indonesian entrepreneur Dr. Ir. Ciputra, Chairman of the Ciputra Group, the university is located on Ciputra's own sub-urban satellite city Citra Raya campus. Universitas Ciputra's vision is to impact the nation by being a university that creates entrepreneurs with excellent character and skills.

Peter M. Bican presented his lecture on "Strategic Intellectual Property Management for Small Businesses" during Universitas Ciputra's Entrepreneurship Seminar Day and to the Universitas Ciputra Family Business Chair. At Universitas Ciputra, the entrepreneurial spirit is prevailing all over campus. During his stay, Peter M. Bican also visited Campus-Start-Ups like Happy Toast and discussed its potentials with students.







### Research

### **Research Objectives and Areas of Interest**

With our research, we focus on topics that are highly relevant for scientific scholars as well as managerial decision makers. We conduct empirical research with state-of-the-art methods and cover the following areas of interest: strategy, innovation, research and development, new product development, Intellectual Property, and technology marketing. Therein, we do not limit our research to certain specific industries.

We aim to publish in the internationally leading academic journals of our areas of interest. Besides scientific actuality and accuracy, our work shall provide decision makers with precise and solid recommendations to facilitate the potential and influence of their innovations in reaching their strategic and financial objectives. For example, Professor Dr. Ernst's paper on "Patent Information for Strategic Technology Management" was the most downloaded World Patent Information article in the first six months of 2013. To foster the transfer of knowledge, we furthermore publish our results in leading practitioner journals and the business press. In addition, we focus on current management trends in case studies.

### **Emerging Markets Case Study accepted for Publication**

The case study "Compulsory License For Bayer's Nexavar™ in India: Cancer for Big Pharma?", written at the Chair of Technology and Innovation Management, was among the first WHU case studies to be accepted for publication by IVEY Publishing. The Ivey Business School at Western University in Ontario, Canada, is one of the world's leading business and one of the two most important producers of business cases in the world alongside Harvard Business School at Harvard University, Cambridge, USA.

In their case study, Peter M. Bican (Doctoral Student at TIM-Chair) and Linda Quynh Nhu Truong (WHU BSc Class of 2013) illustrate the significance and pitfalls of intellectual property strategies in emerging markets. In 2012, the Intellectual Property Appellate Board in India ruled against Bayer AG by permitting its competitor Natco Pharma Limited to sell a generic version of Nexavar™ for as low as three percent of Bayer's original price. Can pharmaceutical innovator companies react to this threat?

# "COMPULSORY LICENSE FOR BAYER'S NEXAVAR™ IN INDIA: A CANCER FOR BIG PHARMA?"

Peter M. Bican and Linda Quynh Nhu Truong





### **Research Collaborations**

The Chair of Technology and Innovation Management at WHU – Otto Beisheim School of Management engages in several research collaborations with national and international partners. Our current international research projects are:



Professor Dr. Holger Ernst (WHU), Professor James G. Conley (Center for Research in Technology and Innovation, Kellogg School of Management, Northwestern University, USA) and Dr. Martin Fischer (Vodafone, former Doctoral Student at WHU) jointly research the inclusion of patent departments in the new product development and additionally potential success implications on individual research projects. The research project is funded by the Transcoopprogram of the Alexander von Humboldt-Foundation and the Kellogg Center for Research in Technology and Innovation. We would like to thank both institutions for their support.

Professor Dr. Holger Ernst, Professor James G. Conley and Peter M. Bican (WHU) empirically research how long-term strategic competitive advantages my be achieved through the integrative management of different IP regimes. The research project is funded by the WHU and the Kellogg Center for Research in Technology and Innovation. We would like to thank both institutions for their support.

Professor Dr. Holger Ernst, Professor Dr. Christoph Hienerth (WHU), Professor James G. Conley and Carsten Guderian (WHU) empirically research how patent data can be used for technology forecasting and other strategic applications. The research project is funded by the WHU and the Kellogg Center for Research in Technology and Innovation. We would like to thank both institutions for their support.



Several research collaborations are currently conducted together with Professor Wayne D. Hoyer (McCombs School of Business, University of Austin at Texas, USA). The researched includes the following topics: innovation and co-creation (with Professor Dr. Manfred Krafft, Westfälische-Wilhelms-University of Münster, Germany) and the role of sales and marketing in new product development projects (together with Michael Baur, Doctoral Student at WHU).



Professor Dr. Holger Ernst, Professor Mohan Subramaniam (Carroll School of Management, Boston College, USA) and Assistant Professor Dr. Anna Dubiel (WHU) jointly research the influence of international market information in different phases of the innovation process on the success of new products in foreign markets. Furthermore, they are guest editors of a Special Issue of the Journal of Product Innovation Management on "Innovations For and From Emerging Markets".



Professor Dr. Holger Ernst, Professor Mohan Subramaniam, Prof. Jaideep Prabhu (Judge School of Business, Cambridge, UK), Assistant Professor Dr. Anna Dubiel and Hanna Nari Kahle (Doctoral Student at WHU) work together on social innovations and antecedents and performance implications of affordable value products in emerging markets.



Professor Dr. Holger Ernst, Dr. Christian Rammer (Centre for European Economic Research (ZEW)) and Martin Hud (Centre for European Economic Research GmbH (ZEW)) work together to examine innovation strategies and their impact on performance during times of a crisis.



### **New Case Study:**

### "Gateway to Successful Global New Product Development - The Case of SAP Labs India"

The case study titled "Gateway to Successful Global New Product Development – The Case of SAP Labs India" written by Assistant Professor Dr. Anna Dubiel and Professor Dr. Holger Ernst was recently published by The Case Centre, UK, the distributor of the world's largest collection of business education materials.

The case study focuses on the global new product development (NPD) practices introduced by the software powerhouse SAP at the end of the 1990s. India, with its emerging IT industry and well-educated people, was a perfect match. Thus, a research and development (R&D) facility – called the SAP Labs – was established in the city of Bangalore. In the next years, further in-house R&D locations flourished worldwide, reaching 14 sites in 10 countries and making distributed NPD teams a rule rather than an exception. Within this global R&D network, India became the firm's biggest foreign R&D location and one of its most dynamic sales markets.

Set in 2008 amidst the preparations for the 10th anniversary of SAP Labs India, the case analyses the three "layers" of international R&D networks. First, it looks at the firm's "bricks-and-mortar" R&D site in Bangalore and the key success factors of its management. Second, it goes on to zoom into a particular international NPD team responsible for software solutions in the apparel and footwear industry. The team illustrates the many opportunities and challenges dispersed and cross-cultural NPD teams encounter in their daily work. Finally, the personal networks of a few SAP employees are outlined helping them to manage international NPD activities.



"Gateway to successful global new product development – The case of SAP Labs India"

The case study was written by Assistant Professor Dr. Anna Dubiel, under the supervision of Prof. Dr. Holger Ernst, WHU – Otto Beisheim School of Management. It was developed solely as a base for class discussion. It is not intended to serve as endorsement, source of primary data, or illustration of effective or ineffective management.

We would like to thank Clas Neumann, Senior Vice-President and Global Head, Core SAP Labs Network, for making this case study possible as well as all interviewees and employees at SAP Labs India who supported us during our visits to Bangalore, India. We would also like to thank Carsten Guderian for proofreading the case study.

© 2012, Chair of Technology and Innovation Management, WHU – Otto Beisheim School of Management, Vallendar, Germany. All rights reserved. Photo Source: www.sap.com.

Education



# TIM-Chair Exchange with Japanese Researchers: Research Trip to Germany in February 2013

Between February 22 and 27, 2013, Prof. Masa Yasumoto (Yokohama National University), Prof. Seiki Yukimoto (Kanagawa University) and PhD Candidate Masato Itohisa (The University of Tokyo) visited Germany and the Chair of Technology and Innovation Management. The program encompassed visits to a number of automotive supplier companies such as Continental, Röchling Automotive, and TE Connectivity in the region of Frankfurt. Furthermore, the research workshop "German-Japanese Junior Faculty Workshop on R&D and Innovation Management", organized by Assistant Professor Dr. Anna Dubiel, was held at the WHU Campus in Vallendar. We are looking forward to future meetings with Prof. Yasumoto, Prof. Yukimoto and Mr. Itohisa.





# Current Dissertation Projects Research Assistants

### Integration of Intellectual Property as Competitive Advantage

### Peter M. Bican

Organizations use, protect and exploit their intellectual property (IP) more efficiently and broadly than ever before. But as wide-ranging as IP is, as broad do regimes of IP protection exist. There is neither the single IP nor a single IP protection scheme, since IP varies, among others, in their origin of rights, criteria for protection, scope of protection and, most importantly, its useable life span. In academia, the interaction, integration and correlation (appropriation) of the differing IP regimes within an organization is seen as a vital success factor for a firm's performance and competitiveness. This research project will extend the existing knowledge about value transference from definite life assets (e.g. patents) to indefinite life assets (e.g. trademarks) through qualitative and quantitative methods and introduce the value articulation framework to empirically prove the correlation and causation between integration of IP, a firm's (long-term) financial performance and competitive advantage in the market.

### Leveraging the Sales Force in New Product Development Projects

### Sebastian Glöckner

The sales force is the closest link to the customer a firm can have. Every day, pertaining to the voice of the customer, sales people learn about customer needs, market developments and competitor actions. For years, only the role of the sales force in new product launches was of interest to scholars, neglecting the knowledge and the valuable relationships the sales force has for new product development projects. While earlier research at our TIM-Chair has shown that collaboration with the sales force in NPD projects has a positive and significant influence on the NPD success, the current work analyses the drivers behind that influence. In addition, antecedents of these drivers with regard to organizational and personal aspects are identified. As managerial implications are concerned, the research project shall help companies to create an environment so that the sales people can contribute to NPD projects in the best way possible. Furthermore, it shall help project managements to select and hire the best-suited sales persons.

### Patents in Technology Forecasting and Strategy Formation

### **Carsten Guderian**

Patent statistics are a traditional information source used to forecast the emergence of new technologies. However, current patent-count-based forecasting is subject to decisive limitations, including unconsidered differences in legislation or relative patent importance. Employing an international data set which contains longitudinal patent data, these detriments will be overcome through the integration of qualitative information from patent data in quantitative patent assessment applications. Therein, the thesis contributes to improving the state of the art in technological forecasting and identifies links to strategy formation. The results shall support firm managements' strategy formations via the implementation of more fine-grained – and thus more reliable – patent-based forecasting techniques.

### Co-Creation in the New Product Development Process

### **Markus Kremmel**

Technological innovations in the ICT/telecommunication sector such as smart phones or the high-speed internet depicted a change in the new product development (NPD) process over the past years. Whilst customers have traditionally been passive consumers, they are now becoming active co-producers. The current research project focusses on selected aspects of this new role of the customer during the NPD processes. By means of case studies, the impact of consumers and modes of interaction will be analyzed and evaluated with respect to the different steps of the NPD process. The core topics will be an assessment of the consumer-firm interaction as well as the question whether the customer is really part of the NPD process.



# **Current Dissertation Projects External Doctoral Students**

Topic	Candidate
Driving Market Orientation in New Product Development – What really matters	Michael Baur
Chief Technology Officer: Antecedents and Performance Implications	Alexander Götz
Innovations in Base of the Pyramid Markets - A Paper Series	Hanna Nari Kahle
The Value of Patented Technologies	Nils Omland
The Service Component in New Product Development and its Influence on Performance	Michael Schramm
Customer Integration in New Product Development	David Somhegyi



### **Completed Dissertation Projects 2012**

Topic	Scholar
Portfolio Orientation in New Product Development – A Paper Series	Marcel Coulon



# Dissertation Projects Professor Dr. Holger Ernst as Second Dissertation Supervisor

Topic Candidate

Uncertainty and Stress in Innovation
First Dissertation Supervisor: Professor Dr. Martin Högl

**Stefan Razinskas** 

### **Professional Development and Training**

### Conference/Event/Seminar/Workshop

Bican, P. M., Research Trip to Kellogg School of Management, Northwestern University, Evanston, USA, January, 2013.

Bican, P. M., Research Trip to Kellogg School of Management, Northwestern University, Evanston, USA, August 2013.

Bican, P. M., Participation in and Presentation at AoM Annual Meeting, Lake Buena Vista, USA, August 09-13, 2013.

Dubiel, A., Participation in and Presentation at TIE Division Annual Conference of the German Academic Association for Business Research, Hamburg, Germany, September 26-28, 2012.



Dubiel, A., Meeting of GaLaBau e.V., Berlin, Germany, November 13, 2012.

Dubiel, A., Organization of, Participation in and Presentation at German-Japanese Junior Faculty Workshop on R&D and Innovation Management, Vallendar, Germany, February 27, 2013.

Dubiel, A., Research Trip to D'Amore-McKim School of Business, Northeastern University, Boston, USA, March 2013.

Dubiel, A., Participation in and Presentation at Conference on Family Firms/Businesses, Vallendar, Germany, April 26, 2013.

Dubiel, A., Research Trip to Judge School of Business, Cambridge, UK, June 2013.

Dubiel, A., Meeting of DIFI – Forum für Innovationsmanagement, Darmstadt, Germany, September 24, 2013.

Ernst, H., Participation in and Presentation at 22nd European Doctoral Summer School on Technology Management, Twente, Netherlands, August 28, 2012.

Glöckner, S., EMO Hannover 2013, Trade Fair Exhibition, Hanover, Germany, September 20, 2013.

Guderian, C., Participation in German-Japanese Junior Faculty Workshop on R&D and Innovation Management, Vallendar, Germany, February 27, 2013.

Guderian, C., EMO Hannover 2013, Trade Fair Exhibition, Hanover, Germany, September 20, 2013.

Kremmel, M., EMO Hannover 2013, Trade Fair Exhibition, Hanover, Germany, September 20, 2013.

TIM-Chair Team Members, Participation in and Presentation at TIM Doctoral Seminar 01/2013, Vallendar, Germany, March 06, 2013.

TIM-Chair Team Members, Participation in and Presentation at TIM Doctoral Seminar 02/2013, Vallendar, Germany, July 03, 2013.

TIM-Chair Team Members, Participation in and Presentation at TIM Doctoral Seminar 03/2013, Vallendar, Germany, September 13, 2013.



### **Publications**

### **Peer-Reviewed Journals**



Conley, J. G., Bican, P. M. & Ernst, H. (2013), Value Articulation: A Framework For The Strategic Management of Intellectual Property, California Management Review, 55(4): 102-120.

Ernst, H. & Fischer, M., Integrating the R&D and Patent Functions: Implications for New Product Performance, Journal of Product Innovation Management, (forthcoming).

Kahle, H., Dubiel, A., Ernst, H. & Prabhu, J., The democratizing effects of frugal innovation: Implications for inclusive growth and state building, Journal of Indian Business Research, (forthcoming).

Siebdrat, F., Högl, M. & Ernst, H., Subjective distance and team collaboration in distributed teams, Journal of Product Innovation Management, (forthcoming).

### **Books and Book Chapters**



Dubiel, A. (2013), F&E-Standorte Multinationaler Unternehmen aus Emerging Markets in Deutschland – Partner oder Herausforderer?, Tagungsband der Hans Martin Schleyer-Stiftung, Band 82, 117-119.

Dubiel, A. & Ernst, H. (2013), Industrial R&D Centers in Emerging Markets: Motivations, Barriers and Success Factors. In: T. Pedersen, L. Bals & P. Ø. Jensen (Eds.), The Offshoring Challenge: Strategic Design and Innovation for Tomorrow's Organization. Springer: Heidelberg, 191-210.

Dubiel, A. & Ernst, H. (2013), Success Factors of New Product Development for Emerging Markets. In: K. Kahn, S. E. Kay, G. Gibson & S. Urban (Eds.), PDMA Handbook on New Product Development, 3<sup>rd</sup> Edition, Hoboken, New Jersey: John Wiley & Sons, 100-114.

### **Other Papers and Case Studies**



Bican, P. M. & Truong, L. Q. N., Compulsory License For Bayer's Nexavar™ in India: A Cancer for Big Pharma?, ISB-IVEY Publication, (forthcoming).

Conley, J. G., Bican, P. M. & Wilkof, N., Study on Patents and the Public Doman (II), World Intellectual Property Organization (WIPO) White Paper, (forthcoming).

Dubiel, A. & Ernst, H. (2013), Gateway to successful global new product development – The case of SAP Labs India, The Case Centre, Case Number 313-220-1.

Ernst, H. (2012), Innovationen entwickeln, umsetzen und schützen – worauf es ankommt. Impuls – Das Magazin der Zukunftsinitiative Rheinland-Pfalz (ZIRP), Oktober 2012/01, 08-13.



### **Presentations**

Conley, J. G., Bican, P. M. & Ernst, H., "Professional Development Workshop (PDW) on Intellectual Property Management and Innovation Appropriability: Towards a New Research Agenda", TIM Division, AoM Annual Meeting, Lake Buena Vista, USA, August 10, 2013.

Dubiel, A., "Silkroad revisited – How Siemens is reversing the innovation Flow between China and Germany", TIE Division Annual Conference of the German Academic Association for Business Research, Hamburg, Germany, September 26, 2012.

Dubiel, A., "Innovationsstrategien für den Mittelstand", Meeting of GaLaBau e.V. "Zukunftsstrategien für den Garten-, Landschafts- und Sportplatzbau", Berlin, Germany, November 13, 2012.



Dubiel, A., "The use of international market information across NPD stages: An exploratory study", German-Japanese Junior Faculty Workshop on R&D and Innovation Management, Vallendar, Germany, February 27, 2013.

Dubiel, A., Ernst, H. & Subramaniam, M., "Leaving the home turf: International market orientation, its antecedents and impact on new product performance", LeBow College of Business, Drexel University, Philadelphia, USA, March 03, 2013.

Dubiel, A., "Industrial R&D of German MNCs in EMs: Motivations, Barriers and Success Factors", D'Amore-McKim School of Business, Northeastern University, Boston, USA, March 21, 2013.

Dubiel, A., "Innovationsmanagement in Emerging Markets: Konzept, Best Practices", Meeting of DIFI – Forum für Innovationsmanagement on "Innovationsmanagement im globalen Kontext", Darmstadt, Germany, September 24, 2013.

Ernst, H., "Integration of R&D and Patent Management and its Impact on New Product Performance", 22nd European Doctoral Summer School on Technology Management, Twente, Netherlands, August 28, 2012.

Ernst, H., "Erfolgsfaktor Innovation – Das Rezept nachhaltig dominanter Unternehmen", BAMAKA AG, Königswinter, Germany, August 30, 2012.



Ernst, H., "Innovation and Competitive Advantage", Try Out Lecture at WHU Information Day, Vallendar, Germany, January 26, 2013.

Ernst, H., "Wert schaffen durch Patente – Auf das richtige Management kommt es an!", Arbeitskreis Patente und Lizenzen, Hamburg, Germany, June 17, 2013.

Ernst, H., "Erfolgsfaktor Innovation – Was man von Innovationsführern lernen kann!", Success – Vorsprung durch Innovation, Mainz, Germany, September 12, 2013.

Ernst, H., Dubiel, A. & Subramaniam, M., "Silkroad revisited – How Siemens is reversing the innovation flow between China and Germany", PDMA Research Forum, Orlando, USA, October 20, 2012.

Fischer, T., Merkert, P., Dubiel, A. "Vom konservativen Familienunternehmen zum weltweiten Innovationsführer", Konferenz Familienunternehmen, WHU, Vallendar, Germany, April 26, 2013.

Glöckner, S., "Leveraging the Sales Force in New Product Development – The Link between Sales Force Activities and New Product Performance", Dissertation Project Proposal Defense, Vallendar, Germany, June 12, 2013.

Guderian, C., "The Integration of Qualitative Components of Patent Data in Quantitative Technological Forecasting and Strategy Formation", TE Connectivity, Bensheim, Germany, February 26, 2013.

Guderian, C., "Intellectual Property Management: The Integration of Qualitative Components of Patent Data in Quantitative Technological Forecasting and Strategy Formation", Dissertation Project Proposal Defense, Vallendar, Germany, September 10, 2013.



### Other Scientific Activities

### **Advisor (Professor Dr. Holger Ernst)**

Member of the Scientific Advisory Council for the Innovation Survey by the Centre for European Economic Research (Mannheim, Germany), funded by the German Federal Ministry of Education and Research

**Member of Advisory Council of Technology Center Koblenz** 

### **Editorships (Professor Dr. Holger Ernst)**

Journal of Product Innovation Management:

Member of the Editorial Board

Schriftenreihe Betriebswirtschaftslehre für Technologie und Innovation, Deutscher Universitäts-Verlag: Editor

**Creativity and Innovation Management:** 

Associate Editor

Journal of Product Innovation Management, Special Issue "Innovation For and From Emerging Markets": Guest Editor (with Assistant Professor Dr. Anna Dubiel and Professor Mohan Subramaniam)

### Reviewer (Professor Dr. Holger Ernst and Assistant Professor Dr. Anna Dubiel)

**Academy of International Business Conference** 

Academy of Management Conference (TIM Division and BPS Division)

**Creativity and Innovation Management** 

Journal of Business Venturing

Journal of International Business Studies

Journal of Marketing

**Journal of Product Innovation Management** 

Journal of World Business

**Management International Review** 

Product Development and Management Association Conference and Research Forum

**R&D Management** 

**Research Policy** 

**Technovation** 

TIE Division Conference of the German Academic Association for Business Research (Verband der Hochschullehrer für Betriebswirtschaftslehre e.V.)

Zeitschrift für Betriebswirtschaft



# Röchling Assistant Professorship for International Innovation Management

The Assistant Professorship for International Innovation Management was established at the Chair of Technology and Innovation Management in January 2012. The Professorship is funded by the Röchling Foundation, which is located in Mannheim, Germany. The current professorship holder, Assistant Professor Dr. Anna Dubiel is interested in the interface of innovation and international management. She is devoting her activities mainly to the following three areas:



### 1) Research

- Papers in progress and research collaborations:
  - Two papers resulting from her dissertation thesis together
    with Professor Dr. Holger Ernst and Professor Mohan Subramanian
    (Boston College, USA), of which one is currently under review in the Journal of Product Innovation Management
  - A paper resulting from a collaboration between Professor Dr. Holger Ernst, Nari Kahle, Assistant Professor Dr. Anna Dubiel, Professor Jaideep Prabhu (University of Cambridge, United Kingdom), and Professor Mohan Subramanian (Boston College, USA) currently under review for a special issue of the Journal of Product Innovation Management
  - A paper together with Professor Dr. Christoph Grimpe (Copenhagen Business School, Denmark)
- Chapter accepted for the upcoming "PDMA Toolbook on Open Innovation" titled "Keeping up with the virtual voice of the customer – Social media applications in NPD" together with Assistant Professor Dr. Tim Brexendorf (WHU – Otto Beisheim School of Management) and Sebastian Glöckner (WHU – Otto Beisheim School of Management)
- Management of the final review round as co-guest editor of a special issue of the Journal of Product Innovation Management
- Regular reviews for journals and conferences and active participation in (international) research conferences

### 2) Teaching

- Lecture "New Product Development" in the WHU Otto Beisheim School of Management's MSc Program
- Course "Management Abroad Course India" in the WHU Otto Beisheim School of Management's BSc Program
- Completion of two teaching case studies on global new product development (NPD) teams and NPD for emerging
  markets together with Bosch GmbH and SAP AG.
- Supervision of several theses in the programs at WHU Otto Beisheim School of Management

### 3) Community Outreach

- Speeches at practice-oriented conferences
- Managers invited for guest lectures on NPD practices in their companies
- Depiction of current management trends with the help of case studies written jointly with companies
- Ad-hoc member of the jury for the assessment of potential new students for the WHU – Otto Beisheim School of Management's BSc program



# **Business Engagement**



The InnovationsuccessPanel®, developed and supervised by the Chair of Technology and Innovation Management at WHU – Otto Beisheim School of Management, provides the opportunity for firms to validate their Innovation Management and find areas for improvement using a solid, data-based approach. For further information, please refer to the slides below or the IsP® website http://www.innovationserfolgspanel.de.

### Key Elements of the IsP®

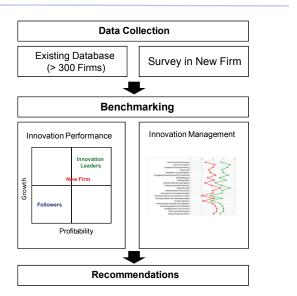


IsP® allows for Comparison to Leading Firms regarding Key Drivers of Innovation Performance:

### **Characteristics**

- The IsP® offers an easy and actionable way to check your innovation management against best practices.
- The IsP® is based on scientifically proven success factors of innovations.
- Through benchmarking, we directly compare your firm's innovation management with innovation leaders.
- The IsP® follows a holistic approach and considers a broad spectrum of factors that influence innovation success (e.g. process, culture, portfolio management, strategy, project management, cross-functional collaboration, organization, incentives, etc.).

### **Procedure**



© Prof. Dr. Holger Ernst – All rights reserved 2000 - 2012

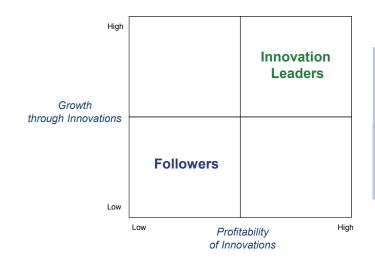


### The Innovation Success Matrix



The Success of Innovation Management is measured by various Variables, representing a Mixture of Objective Data and Subjective Judgments.

The success is measured in two dimensions; growth and profitability through innovations.



### Profitability of innovations:

- Profitability (ROI) of the innovation
- portfolio

  Contribution of innovations to firm
- profitability
   Relative profitability of the innovation portfolio compared to competitors

### Growth through innovations:

- · Commercial success rate of innovations
- Percentage of sales generated by innovations
- · Contribution of innovations to the firm's sales growth

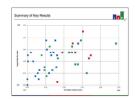
### Results of the Benchmarking Analysis



Various Benchmarking Analyses provide a Detailed View on the Quality of your Innovation Management:



Prioritization of Areas of Improvement and Derivation of Actionable Recommendations



© Prof. Dr. Holger Ernst - All rights reserved 2000 - 2012

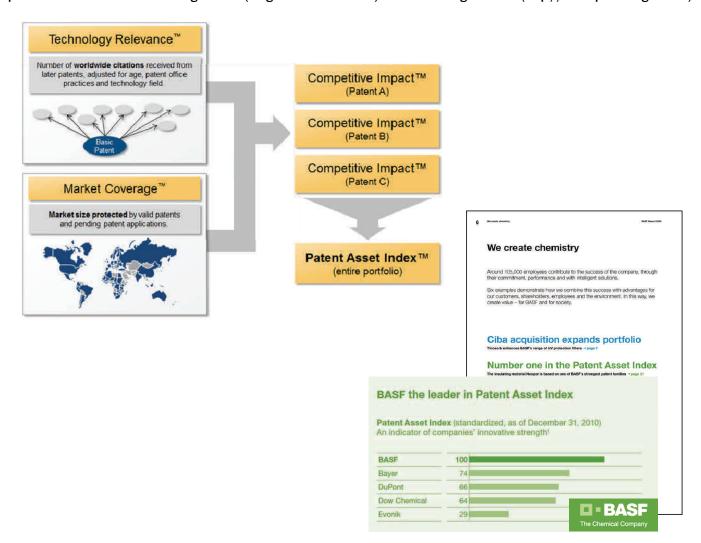




The PatentSight GmbH, co-founded as an academic spin-off by Professor Dr. Holger Ernst and Diplom-Kaufmann Nils Omland, provides new insights into innovations, technologies and patents. Its Patent Asset Index™ reveals the technological strength of firms in terms of quantity and quality in all technical areas of interest by means of objective comparisons. Therein, the Patent Asset Index™ is a new method to benchmark patent portfolios that overcomes the limitations of prior approaches. It globally compares the entire current patent portfolio of firms and stands for a transparent calculation of the indicators as well as a reliable measurement of the competitive impact of the patents.

The Patent Asset Index<sup>™</sup> depicts sum of the Competitive Impact<sup>™</sup> of a patent portfolio, where the Competitive Impact<sup>™</sup> is a relative measure comparing the contribution of a patent to the competitive advantage with an average patent. The measure of comprises of the Technology Relevance<sup>™</sup> and the Market Coverage<sup>™</sup>. Herein, the former reflects the importance of the covered invention, whilst the latter represents the extent of patent protection in global markets.

Solutions developed by PatentSight GmbH may be used for investor relations, public relations, internal patent portfolio management, M&A related topics, in strategy development or patent portfolio evaluations. For further information, please refer to Professor Dr. Holger Ernst (holger.ernst@whu.edu) or to PatentSight GmbH (http://www.patentsight.com).





# **WHU-Activities/Community Outreach**

Activities	Team Member
Speaker of the Innovation & Entrepreneurship Group at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Head of the Biopharma Management Center at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Head of Third-Party-Funded Projects at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Academic Director of Melbourne Business School Program at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Vice Chairman of the PhD Council at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Member of various Councils, Committees and Workgroups at WHU – Otto Beisheim School of Management (Appointment Committees, Professorium)	Professor Dr. Holger Ernst
Organization of WHU Research Colloquium of Innovation & Entrepreneurship Group at WHU – Otto Beisheim School of Management	Professor Dr. Holger Ernst
Contact Person for Firms and Press	Professor Dr. Holger Ernst
Workshops, Presentations and Advisory for Firms	Professor Dr. Holger Ernst
Presentations at Scientific Conferences	Professor Dr. Holger Ernst
Interviews and Jury Member for the Assessment of Potential BSc Students in Admission Process to WHU – Otto Beisheim School of Management	JunProf. Dr. Anna Dubiel
Presentations at Scientific Conferences	JunProf. Dr. Anna Dubiel
First Aid – Responsible for Z-Building of WHU – Otto Beisheim School of Management	Anke Siedenkamp
Interviews and Jury Member for the Assessment of Potential BSc Students in Admission Process to WHU – Otto Beisheim School of Management	Peter M. Bican
Presentations at Scientific Conferences	Peter M. Bican
Guest Lectures (Entrepreneurship Seminar on Strategic Intellectual Property Management for Small Business, Universitas Ciputra, Indonesia)	Peter M. Bican
Voluntary Application Training for Local School Community in Vallendar, Germany	Sebastian Glöckner
Conference/Trade Fair Attendance and Company Visits	Sebastian Glöckner
Voluntary Application Training for Local School Community in Vallendar, Germany	Carsten Guderian
Conference/Trade Fair Attendance and Company Visits	Carsten Guderian
First Aid – Responsible for Z-Building of WHU – Otto Beisheim School of Management	Markus Kremmel
Member of the Examination Board of WHU – Otto Beisheim School of Management	Markus Kremmel
Conference/Trade Fair Attendance and Company Visits	Markus Kremmel



# **Sustainability Report**

With our research, teaching and business engagement, we strive to work towards stable and sustainable solutions concerning all aspects of technology and innovation management. Therein, we interpret sustainability in a twofold way; firstly, in a developmental sense, covering social as well as ethical aspects and, secondly, as a long-term orientation guiding or thoughts, actions and recommendations. The following depicts a selected overview of the incorporation of sustainability at the TIM-Chair:

### **Teaching**

- A) Theses topics dealing with developmental, sustainable, social and BRIC issues, e.g. theses of Ms. Syman (Bottom-of-the-Pyramid Markets), Mr. Goetze (BRIC Economies), Mr. Scheibe (Emerging Markets)
- B) Long-term orientation of course content concerning student development in accordance with WHU Mission Statement and WHU Objectives in all WHU programs, e.g. concerning personal development, leadership skills and strategic thinking, to highlight the role of innovation and change for achieving sustainable competitive advantage and to create long-term value.

### **Research & Business Engagement**

- A) Research topics dealing with developmental issues, international markets or BRIC countries e.g. dissertation of Ms. Kahle (Social Innovation) and research areas of Assistant Professor Dr. Anna Dubiel (International/Emerging Markets)
- B) Recommendations for precise actions or methods to increase R&D, New Product Development and Innovation (Management) Impact as well as the identification of New Business Opportunities are long-term- and stakeholder-oriented, aiming at increasing firm's potentials and revenues and augmenting the impact of (technological) innovations, even under unfavorable conditions for innovation and change

### **Donations**

In the context of Ms. Hanna Nari Kahle's dissertation thesis survey, the TIM-Chair donated a total of 1550 Euro to three development projects: (1) Andheri-Hilfe (Fighting Poverty in Asia (India, Bangladesh)), (2) ESSVA (Education in Madagascar) and (3) Plan Deutschland (Soccer Training for Girls in Brazil).

### Thank you...

We would like to thank the donors and sponsors of the Chair of Technology and Innovation Management at WHU – Otto Beisheim School of Management:

Alexander von Humboldt-Stiftung

Heinz-Nixdorf-Stiftung

Prof. Otto Beisheim Stiftung

Röchling Stiftung

Siemens AG





WHU – Otto Beisheim School of Management Chair of Technology and Innovation Management Professor Dr. Holger Ernst

Postal Address: Visitor Address:
Burgplatz 2 Hellenstraße 9
56179 Vallendar
Germany Germany

Tel. +49 (0)261 6509 241 Fax +49 (0)261 6509 249

tim@whu.edu

http://www.whu.edu/tim