A Travel Guide

Ralf Reichwald
Kathrin M. Möslein
Anne Sigismund Huff
Marcus Kölling
Anne-Katrin Neyer
To an increasing extent, Germany’s global competitiveness depends on the innovative power of the service sector. Innovative and knowledge-based services are the key to economic growth and prosperity in our society. For this reason, the High-Tech Strategy for Germany aims to strengthen and systematically develop future-oriented services.

As part of the project “Innovative services on the way to world class”, a travel guide has been created which showcases the outstanding achievements of Germany’s service research and service sector in the form of an impressive map. These research fields include innovations in the health sector, educational innovations, and information and communication technologies. The latter not only affect all aspects of everyday and professional life, but also form the basis of innovative services ranging from remote maintenance and internet-based services to online banking.

This travel guide shows that innovative services can make everyday life easier: telemedicine can improve the treatment of emergency patients, optimized machine running times enable a reliable and failure-free production flow, and new lifestyle products use photovoltaic technology to supply power on the move. This publication presents a whole wealth of further examples of creativity in the areas of service research as well as their practical applications.

This travel guide, which was put together with the help of funding from the Federal Ministry of Education and Research, gives an insight into the wide spectrum of excellence within the German service sector. It also provides an information platform for business and science and encourages the exchange of experiences between a wide range of different stakeholders. Germany is a nation of ideas and our country is on the right track towards turning excellent concepts into innovative services, as set out in the High-Tech Strategy. This travel guide will accompany you on a stimulating and fascinating journey to innovative services made in Germany!

Dr. Annette Schavan, MdB (Member of the German Bundestag)
Federal Minister of Education and Research
Contents

Germany – On the Way to Services Champion ................................................................. 4
Journey Through the Country of Service Innovations .................................................. 5
The Jury ......................................................................................................................... 6

Service Innovation ........................................................................................................ 8
  Summary...................................................................................................................... 11
  An Overview of Service Innovation ........................................................................... 12
  Interview: Service Piloting as the Basis for Innovations with Service Concepts for Utilization ......................................................... 17
  Service Prototyping at UnternehmerTUM ................................................................. 19
  ServLab – Service Innovation in the Laboratory ....................................................... 21
  Conclusion .................................................................................................................. 22
  Hot Spots of Service Innovation ............................................................................. 23

Service Engineering .................................................................................................... 36
  Summary...................................................................................................................... 39
  An Overview of Service Engineering Models ........................................................... 41
  Interview: Munich Airport – Superior Service Receives its Reward ....................... 47
  Systematic Service Development at Munich Airport ............................................... 49
  Conclusion .................................................................................................................. 50
  Hot Spots of Service Engineering ............................................................................. 51

Service Individualization ............................................................................................. 56
  Summary...................................................................................................................... 59
  Service Individualization – Responding to the Voice of the Customer ..................... 61
  Interview on adidas – Impossible is Nothing ............................................................ 65
  “mi adidas” – Supporting an Individual Approach to Sports! ................................... 67
  Conclusion .................................................................................................................. 70
  Hot Spots of Service Individualization ..................................................................... 71

Service Standardization ............................................................................................... 78
  Summary...................................................................................................................... 81
  Service Standardization ............................................................................................. 83
  Interview: Standardization as the Basis of Innovation with Services ....................... 86
  DIN – Deutsches Institut für Normung e.V. (German Institute for Standardization) ........................................................................ 87
  Conclusion .................................................................................................................. 88
  Hot Spots of Service Standardization ..................................................................... 89
Service in the Healthcare Sector......................................................................................................................... 96
  Summary........................................................................................................................................................................... 99
  Service in the Healthcare Sector.......................................................................................................................... 101
  Interview: Telemedicine as the Innovative Motor for Medicinal Services............................................................... 107
  Reality of Telemedicine at the Charité Berlin: Other Selected Examples................................................................. 108
  Conclusion ....................................................................................................................................................................... 110
  Hot Spots of Service Innovation in the Healthcare Sector ....................................................................................... 111

Service Innovation in Education and Research.....................................................................................................118
  Summary ......................................................................................................................................................................... 121
  Service Innovation in Education and Research ...................................................................................................... 122
  Innovative Educational Concepts .............................................................................................................................. 129
  The High-Tech Strategy for Germany ........................................................................................................................ 130
  Hot Spots of Service Innovation in Education and Research .................................................................................. 133

Service Markets .........................................................................................................................................................146
  Summary ......................................................................................................................................................................... 149
  Service Markets .......................................................................................................................................................... 151
  Interview: The Internet of Services and Electronic Markets as the Basis of Service Innovation ............................................ 157
  Index for Family-Owned Businesses: On a High .......................................................................................................... 159
  Conclusion ....................................................................................................................................................................... 160
  Hot Spots of Service Markets .................................................................................................................................. 161

Service Export .............................................................................................................................................................168
  Summary ......................................................................................................................................................................... 171
  Service Export ............................................................................................................................................................ 173
  Interview: Global Export Champion Germany – Due to the Internationalization of Services ............................ 178
  Service Export at the Charité - University Medicine Berlin ............................................................................................... 181
  Conclusion ....................................................................................................................................................................... 182
  Hot Spots of Service Export ...................................................................................................................................... 183

List of Innovative Service Providers .......................................................................................................................... 188
CLIC .............................................................................................................................................................................. 190
List of Authors .............................................................................................................................................................. 191
Bibliography .................................................................................................................................................................. 192
Notes ............................................................................................................................................................................... 195
Imprint ............................................................................................................................................................................ 200
Germany – On the Way to Services Champion

Not that long ago Germany was described as a “services desert.” Nowadays, “Services Made in Germany” are beginning to achieve world-class recognition and bring competitive advantages to our nation.

What has provoked this fundamental change? A key role has been played by services research, which for the last 12 years systematically examined and further developed services in close cooperation with the economic sector. This was made possible with the aid of the initiative, “Services for the 21st Century”, on the part of the Federal Ministry of Education and Research, which commenced in 1995. In this initiative, over 90 projects were developed, involving around 300 academic and economic institutions. The success of this initiative has radically transformed awareness of services as the motor of innovation, and is therefore an important factor for the future of Germany. Service research is today a permanent element of federal support programs. The Federal Government’s current “High-Tech Strategy for Germany” defines service research as one of the fields that will create new jobs and prosperity in Germany.

The aim of this travel guide is to illustrate the impressive transformation of Germany into a services champion. The content is based on innovation fora that were held between September 2007 and February 2008 in services champion locations nationwide. The guide presents services excellence on the part of businesses and research institutions to a wider specialist public, who we hope will visit the locations described and personally observe the quality of “Services Made in Germany”.

At this point, we would like to offer our thanks to our partners in the German Federal Ministry of Education and Research, in particular to Ms. Kornelia Haugg, who approved the concept of the service travel guide, and additionally provided constant encouragement and support. Our appreciation and gratitude is extended to include, Ms. Ursula Zahn-Elliott and Mr. Christian Stertz. We thank Dr. Gerd Ernst, from the DLR Project Management Agency (German Aerospace Center), for numerous helpful ideas to aid project development and supervision, and thank as well Mr. Bertholt Schuckles and Mr. Klaus Zühike-Robinet. Our special thanks go to our colleague Dr. Tobias Fredberg, Chalmers University of Technology in Gothenburg, for his inspiration and input from outside the project. Finally, we thank all of our colleagues at CLIC, in particular Ms. Nicole Horbas, Ms. Christine Gille, Ms. Antje Sauerland, and Ms. Jessica Scheler.

We invite you to accompany us on our journey, and allow yourselves to be inspired by the outstanding examples of excellence in service research and service innovation in Germany.

Ralf Reichwald
Kathrin M. Möslein
Anne Sigismund Huff
Marcus Kölling
Anne-Katrin Neyer

The organization and supervision of the travel guide project was undertaken by the Center for Leading Innovation & Cooperation (CLIC) at the HHL - Leipzig Graduate School of Management. In addition to the fora, CLIC organized a call for nominations of services excellence in Germany. We received over 200 proposals of innovative services. A selected group of economic and practical experts, described on page 6, selected the service champions presented in this publication.
Journey Through the Country of Service Innovations

Innovative services have a particular relevance for economic and corporate growth:

- First, the services sector is the major employment sector in Germany.
- Second, new service processes and products are generated through the utilization of technology, and this is a traditional strength of the German economy.
- Third, additions to the range of services available, not only help classical service companies, but also offer organizations in all sectors new opportunities to stand out amongst their global competitors.
- Fourth, interaction between customers and companies is broadening the range of services available, and allowing companies to develop both radical and incremental innovations in service delivery.

Nowadays, the competitive ability of organizations is determined by their flexibility and professionalism in developing and implementing service innovations. Not only classical service companies, but also industrial enterprises are faced with the challenge improving and extending the range of services they offer. For this reason, the primary aim of our tour through the “Country of Service Innovations”, is to show the development and implementation of successful service innovations. Special success-relevant dimensions of innovation through services have already been displayed in the national events we organized to showcase the services selected by our jury. Service fulfills human aspirations. The world of services is multifaceted. For this reason, our tour covers: Service Innovation, Service Engineering, Service Individualization, Service Standardization, Service in the Healthcare Sector, Service Innovation in Education and Research, Service Markets, and Service Export.

You are welcome to accompany us on this journey!
The jury, which accompanied the selection process of the organizations presented in this travel guide, was made up of academics and representatives of trade unions. The individual members of the jury are introduced below.

**Dr. Tobias Fredberg**
Chalmers University of Technology Gothenburg,
Technology Management and Economics,
FENIX Centre for Innovations in Management

**Hans Gabriel**
ver.di – United Services Union

**Prof. Dr. Kathrin M. Möslein**
University Erlangen-Nuremberg,
Chair for Information Systems I – Innovation and Value Creation, and Center for Leading Innovation & Cooperation (CLIC) at HHL – Leipzig Graduate School of Management

**Prof. Dr. Frank Piller**
RWTH Aachen,
Chair for Technology and Innovation Management and founding faculty member of the MIT Smart Customization Group at the Massachusetts Institute of Technology, USA
Prof. Dr. Prof. h.c. Dr. h.c. Ralf Reichwald (Chairman)
Technische Universität München,
Chair for Information, Organization and Management, and
Center for Leading Innovation & Cooperation (CLIC) at
HHL – Leipzig Graduate School of Management

Prof. Dr.-Ing. Günther Schuh
RWTH Aachen,
Research Institute for Operations Management (FIR)

Dr. Hans-Joachim Schulz
ver.di - United Services Union,
Divisional Head “Innovation and Excellent Work”

Prof. Dr.-Ing. Dr.-Ing. E.h. Dieter Spath
Fraunhofer Institute for Industrial Engineering IAO,
Head of Institute

Prof. Dr. Dominik Walcher
Salzburg University (UAS),
Faculty of Design and Product Management,
Head of Marketing and Innovation Management
IMI – Institute for Market and Innovation Research

Prof. Dr. Prof. h.c. Dr. h.c. Ralf Reichwald (Chairman)
Technische Universität München,
Chair for Information, Organization and Management, and
Center for Leading Innovation & Cooperation (CLIC) at
HHL – Leipzig Graduate School of Management

Prof. Dr.-Ing. Günther Schuh
RWTH Aachen,
Research Institute for Operations Management (FIR)

Dr. Hans-Joachim Schulz
ver.di - United Services Union,
Divisional Head “Innovation and Excellent Work”

Prof. Dr.-Ing. Dr.-Ing. E.h. Dieter Spath
Fraunhofer Institute for Industrial Engineering IAO,
Head of Institute

Prof. Dr. Dominik Walcher
Salzburg University (UAS),
Faculty of Design and Product Management,
Head of Marketing and Innovation Management
IMI – Institute for Market and Innovation Research