

Intercultural User Interface Consulting Portfolio



Quality instead of Quantity

Lehderstraße 71 13086 Berlin Germany



## **Intercultural User Interface Consulting**



We show you,

how to check and optimize your processes.\*

how to make your products user-friendly with best UX.

how you develop cross-cultural user interfaces for everyone worldwide.

\* Blue underlined texts are links to further information



## Intercultural User Interface Consulting

### Research & Development (hypothesis generation, study, modeling, implementation, test)

Continuous literature review and research guarantee exclusive, scientifically validated expert knowledge for state-of-the-art development.

### <u>Training (lectures, trainings, workshops)</u>

Seminars and workshops provide all parties involved in process and product development (such as management, marketing, design, production, sales, quality) with in-depth knowledge of process and product optimization and usability.

### Consulting (support, accompaniment, consultation)

Intensive support in the development of usable and customer-oriented products and processes, also in an intercultural context, enables your company to provide tailor-made solutions worldwide.



## <u>Intercultural User Interface Consulting - Portfolio</u>

### Product and process development



The development of innovative and usable and customer-oriented products can only be realized effectively and efficiently if the underlying processes work and are optimized.

### Human centered design



Usability and UX engineering includes all activities that are necessary to make something usable. We test your processes and products in this regard.

### Intercultural User Interface Design



Intercultural user interface design means the development of user interfaces for their use in an intercultural context.



## References - Ready for cooperation - Since 2003













FRESENIUS



### bertrandt





















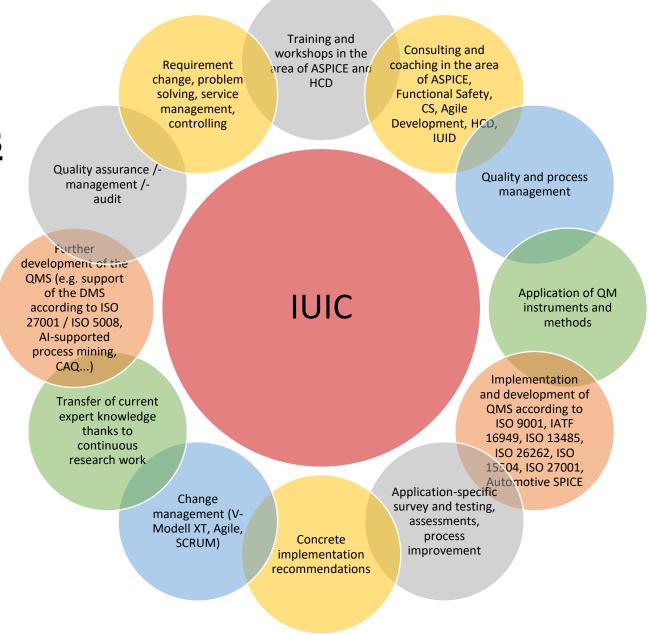








# Solutions for product and process





# Optimizing products and processes through knowledge and experience

- Whoever wants to develop products systematically by means of processes will inevitably benefit from our specialized consulting services on "Automotive SPICE".
- Let IUIC support you by accessing our distinctive expertise in the area of "<u>Automotive SPICE</u>" (ASPICE)!
- Because only those who consciously design their products in a process-oriented manner will systematically achieve the desired product quality and productivity.





## The IUIC team and the IUIC cooperation partners



























# **Research & Development**

With IUIC you have access to the current <u>state of</u> <u>research</u> in the field of development of usable products (<u>HCD</u>) and their processes (<u>ASPICE</u>) especially for the intercultural context.

IUIC transforms the <u>latest scientific findings</u> from research collaborations and <u>committee work</u> into actionable knowledge for practice in development.





# **Training**

IUIC conducts seminars according to the <u>CPUX</u> curriculum of the UXQB with accredited certification possibility of the German Usability Professional Association (GUPA). IUIC also offers training in process testing and optimization based on international standards (<u>SPICE</u>).

Methods for optimizing the usability of products and processes are taught in seminars, especially with regard to other cultures (IUID). Project-accompanying coaching serves to ensure the correct application of what has been learned in practice.





# **Consulting**

IUIC accompanies you in the development of <u>usable</u> and customer-oriented <u>products</u> and processes from the idea to the market launch, also in an intercultural context.

We review for you the relevant <u>processes</u> for product development in your company based on international standards (such as ISO 15504 or ISO 9241-220).

We show you which aspects are important in user interface design for other <u>cultures</u> and how development guidelines or customized solutions can be generated for your company.





## **Product and process assessment**

The development of innovative, customer-oriented and usable products can only be realized effectively and efficiently if the underlying processes are optimized. We therefore offer an introductory seminar to review your product development processes based on ISO 15504 (SPICE):

#### **Introduction to Process Review (SPICE-E)**

Introduction to process "assessments" based on ISO 15504 / Automotive SPICE / ISO 26262 / ISO 21434 / ISO 27000 / ISO 9241-220

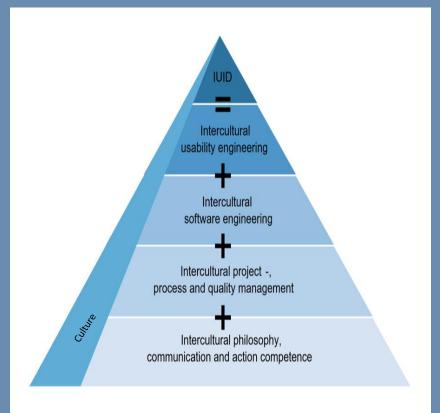
We also provide you with concrete support in process auditing or carry it out completely for you, derive measures and implement them with you:

### **Execution of the process review (SPICE-D)**

Execution of the process review based on ISO 15504 / Automotive SPICE / ISO 26262 / ISO 21434 / ISO 27000 / ISO 9241-220 (in-house / project-accompanying)







**Automotive SPICE** 

**Functional Safety** 

IT & Cybersecurity

Agile SPICE

Agile Development

Quality, Process &

**Project Management** 

Artificial intelligence
Human-centered design
Assistance systems/ADAS
Usability & User
experience engineering
Intercultural user
interface design



# **Experience & Competence**



# **Work experience - functions**

- > Process Management
  - Process Management according to Automotive SPICE® / ISO 15504-5
  - Process modeling and process mining
  - Establishment and optimization of VDA scope processes
- Change management (V-model, Agile)
  - Lean processes
- > Project management
  - Feasibility analyses
  - Production relocations
  - Personnel management in an intercultural environment
  - Planning, effort estimation
  - Controlling (budget, time, quality monitoring)
  - Customer care
- Logistics
  - Production planning and control

- > Requirements management
  - Requirements analysis
  - Change and problem-solving management
- > Engineering & Development
  - Development according to V-Model
  - Agile Development
  - Embedded system/SW/HW/ME development
  - Microprocessors (uP), Digital Signal Processors (DSP)
- > Test Management
  - Test strategy, test tools, test equipment management, test planning, test and test specifications
- Configuration Management (CM)
  - Document management, CM strategy, CM plan creation and review



# **Work experience - functions**

- > Quality Management
  - Quality management / assurance for systems (SW/HW/ME)
  - Quality management in project and series production
  - Application of the QM standards ISO 9001, ISO 13485, IATF 16949 and the VDA series of publications
  - Planning as well as moderation of milestone and object reviews according to the product life cycle
  - Planning as well as moderation of FMEA's and risk analyses, FMEDA
  - Interdisciplinary determination and coordination during the introduction of corrective and improvement measures
  - Problem solving with application of quality methods such as 8D, Ishikawa, 5Why, DOE

- Collaboration with customers, suppliers and 3rd party auditors
- Quality preplanning according to APQP
- Planning, execution and evaluation of audits, process inspection
- Assurance of development quality according to ASPICE
- Document review, document optimization
- Initial sampling according to PPAP or VDA 2
- Creation of quality control documents such as control and process flow charts
- Statistical process monitoring and optimization using Six Sigma and measurement system analysis (MSA)
- Document review and feasibility analysis



## **Work experience - methods and roles**

- Automotive SPICE
  - ASPICE Process Support, ASPICE SWQE Coach
  - "ASPICE-Speed-Coaching"
  - Assessments according to ISO 330xx
  - SW potential analyses/revisions
  - ASPICE Process Manager
  - ASPICE Competent Assessor
- > Functional Safety
  - Management of Functional Safety according to ISO 26262
  - Evaluation of findings from Functional Safety Assessments
  - ASIL D / ASPICE L3 process QE coach and process manager
- Cybersecurity
  - Assessments according to "intacs Cybersecurity-Addon" to ASPICE PAM 3.1 (SEC.1-4)
- > Agile development
  - SCRUM, NEXUS, KANBAN, SAFe

- > Quality Management
  - FMEA, FMEDA, 8D, 5Why, APQP, PPAP
  - Review, Moderation, LL-Workshops
  - CIP, PAP, SWOT, QFD, Six Sigma, DMAIC, EFQM, RADAR
     & BSC benchmarking
  - Audit methods (process, product, system audit)
- > Research & Teaching
  - Organization and execution of training courses
  - Implementation of research projects (e.g. IUID)
- > Roles
  - Process auditor, process assessor
  - Quality and SW quality coach
  - Quality and process manager in project and series
  - "Local Quality Responsible", SW Quality Engineer
  - Scrum Master, Agile ASPICE Coach
  - SW developer, HW developer, lab electronics engineer
  - Supplier Quality Manager
  - Product Manager, Project Manager
  - Lecturer for HCD/IUID



### **Tools**

- Project management tools / process tools / engineering tools ("tool chains")
  - MS-Project, HP-QC/ALM, PKit/Stages, Polarion, MKS, IMS (MKS with Jira/Git connection), Doors, DoorNG, PTC,
     Integrity, ClearQuest, Enterprise Architect/Rhapsody, Subversion
  - Macros/VB, MS-Project, MS-Sharepoint, CAS Genesis World, Survey Monkey, Moodle
  - SAP, MS Office (Word, Excel, Power Point, Project, Teams, Outlook), MS Visio, "Open Source" SW tools
  - DMS and LMS systems, track & trace tools, IT, communication & knowledge management tools
  - Digital transformation tools, work 4.0, AI
- > Integrated Development Environments (IDEs):
  - MS VisualStudio, Eclipse, RAD Studio, Cross Studio, CodeBeamer
- Programming languages:
  - Assembler, C/C++/C#, Java, Pascal, Delphi, Python, VBA, Pascal, Fortran protocols
- > Quality management tools:
  - QA-C/MISRA, APIS IQ, IMDS, IMS, Reqman, Safexpert, QA-C Programming languages
- > Model-based development (MDB) / simulation / artificial intelligence:
  - Matlab/Simulink, Vector, Jupyter, NumPy, Keras, Tensorflow, Hadoop, DSP/TI
- > Bus systems:
  - TCP/IP, SPI, UART, CAN





### **Standards**

- > SPICE
  - Agile SPICE®
  - Automotive SPICE® / ISO 15504-5
- > Quality Management
  - ISO 9001 / ISO 9004 / ITAF 16949
- > Audits and assessments
  - ISO 19011 / ISO 330xx / ISO 45001
- > Human-centered design
  - ISO 9241-xxx
- > Environmental management
  - ISO 14001
- > IT and Cybersecurity
  - ISO-SAE 21434 / ISO 21448 / ISO 27001
- Functional Safety
  - ISO 25119 / ISO 26262 / IEC 61508
- Medical technology
  - ISO 13485





### **Standards as Tools**

- > Standards provide recognized information and procedures for design and evaluation. When you follow standards, you reduce the uncertainty of the outcome.
- > Standards are not the only methods, but they are widely accepted, verified, and validated. They are often best practices.
- > Standards are useful tools. The proper application of standards is a prerequisite for realizing the potential benefits that such standards promise.
- ➤ A standard by itself does nothing. But like screwdrivers, wrenches and hammers, they are of no use if they remain in the toolbox or are used improperly. "A fool with one tool is still a fool."
- ➤ Organizations that move at a fast pace often don't have time to think about best practices. Standards can provide such practices. This is more likely to affect new organizations than established ones.



### **Certifications**

- > Certified Professional in Usability and User Experience Essentials in UX and HCD Management (CPUX-M)
- > Munich Safety Certified Competent Manager for Functional Safety (ISO 26262)
- > intacs<sup>™</sup> certified Automotive SPICE<sup>®</sup> for Cybersecurity (ISO 21434)
- > intacs™ certified ISO/IEC 15504 Competent Assessor (Automotive SPICE®)
- MunichSafety® certified security manager (ISO 26262)
- Certification as ISO/TS16949:2002 Auditor
- Certified Professional for usability and user experience Foundation Level (CPUX-F)
- intacs™ certified ISO/IEC 15504 Provisional Assessor (Automotive SPICE®)
- > ISTQB certified tester Foundation Level
- > Internal TQC auditor
- > Quality Representative, Manager and Auditor (TÜV SÜD)
- > ISTQB® Certified Automotive Software Tester FL TPI
- > Next® Certified Test Process Improvement
- > IREB® Certified Requirements Engineer
- > EOQ Certified Quality Manager





## Training and further education

- > Training and further education
  - Professional Scrum MasterTM I (PSM I) Training
  - PMI Agile Certified Practitioner (PMI-ACP Agile Certified Exam Prep) Training
  - Data Science, Deep and Machine Learning, Artificial Intelligence Bootcamp
  - Test equipment management according to ISO/TS 16949
  - Measurement System Analysis (MSA)
  - Problem-solving procedures
  - Audits according to ISO9001 and TS16949
  - intacs ASPICE Competent Assessor
- > Trained professions
  - Industrial mechanic
  - Information scientist
  - Office and information electronics technician
  - Industrial Engineer
  - Industrial clerk
  - Musician





### **Social Skills**

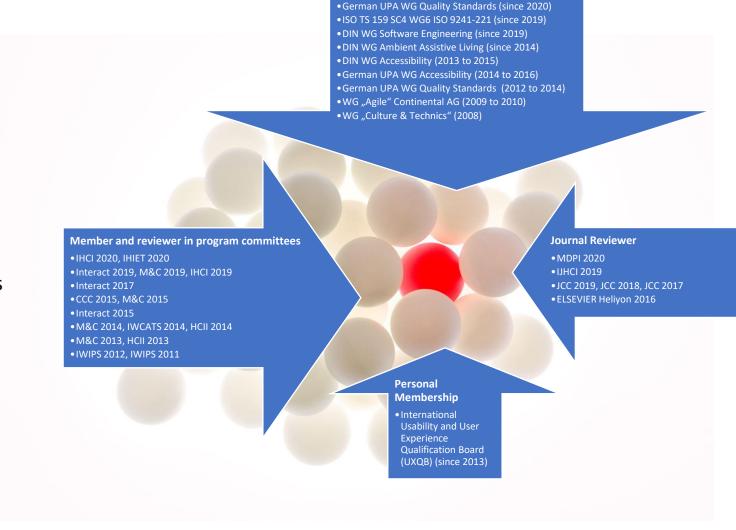
- Experience abroad (Czech Republic, China, England, Spain)
- Ability to work in a team and social competence (GFK)
- > Flexibility, stress resistance, resilience
- > Self-management, "hands-on" mentality
- > Empathy, knowledge of human nature
- > Passion for the profession
- Languages
  - Mother tongues: German, Czech, Indondesian
  - Business fluent: English, Slovakian
  - Passive: Spanish, French, Italian
  - Basic knowledge: Dutch, Chinese





## **Board activities**

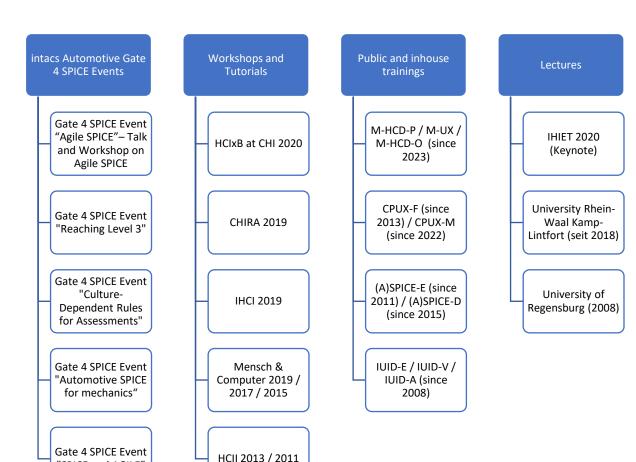
- > Topics
  - Agile
  - ASPICE
  - HCD
- > Institutions
  - DIN
  - ISO
  - Conferences
  - Program Committees



Working group (WG) collaboration
• intacs WG "Agile SPICE" (since 2020)



# **Events (Conferences, Presentations, Workshops, Lectures, Public Trainings)**



"SPICE and AGILE"





# **Publications** (Extract)

- Heimgärtner, R. (2022). Gate4 SPICE Event "Agile SPICE" (11/2022) Talk and Workshop on "Agile SPICE in a nutshell". [Kontakt: Achim Gerber]
- Knüvener, C., Hübscher, C., Gerber, A., De Jong, A., George, A., Schweizer, C., Yazer, C., Salazar-Dorn, C., Feurer, D., Kneisl, F., Meyl, H., Graeff, L., Knapp, N., Rojas, R., Bayer, R., Heimgärtner, R., Weber, S., Weber, S., Müller, S., Maier, T. (2020). PRM/PAM Agile SPICE™, V1.2, 22.07.2022, intacsTM Working Group Agile SPICE. [Kontakt: Christian Knüvener & Christian Hübscher]
- Heimgärtner, R. (2019). Intercultural User Interface Design. Springer Verlag. [Kontakt: Nancy Wade-Jones].
- Heimgärtner, R. (2019). Toolkit for Designing Intercultural Automotive HMI. <u>Presentation</u> at 2nd Automotive HMI Display Forum Berlin. [Kontakt: Peter Rößger, Iva Placková]
- Invited talk at Automotive HMI USA in Detroit about IUID: <a href="https://automotive-hmi-usa.iqpc.de/speakers/rudiger-heimgartner">https://automotive-hmi-usa.iqpc.de/speakers/rudiger-heimgartner</a>
- Invited talk at 5th International VDI Conference Automotive HMI & Connectivity about IUID: <a href="https://www.vdi-wissensforum.de/en/eyent/automotive-hmi-and-connectivity/">https://www.vdi-wissensforum.de/en/eyent/automotive-hmi-and-connectivity/</a>
- Heimgärtner, R., Solanki, A., Windl, H. (2017). Cultural User Experience in the Car Towards a Standardized Systematic Intercultural Automotive UI/UX Design Process. In: Meixner, G., Mülller, C. Automotive User Interfaces - Creating Interactive Experiences in the Car. [Kontakt: Hr. Prof. Meixner]
- Heimgärtner, R. (2012). <u>Cultural Differences in Human Computer Interaction</u>. Dissertation. Lehrstuhl für Informationswissenschaft. Universität Regensburg. Oldenbourg Verlag. [Kontakt: Hr. Prof. Dr. Rainer Hammwöhner, Hr. Prof. Dr. Christian Wolff ]
- Heimgärtner, R. (2008). Towards A Generic Adaptability Framework for Automotive HMI. In: Lucke, U., Kindsmüller, M.C., Fischer, S., Herczeg, M., & Seehusen, S. (Hrsg.) Workshop Proceedings der Tagungen Mensch & Computer 2008, DeLFI 2008 und Cognitive Design 2008. "Viel Mehr Ideen", 7-10. September, Lübeck. Proceedings of AUIIA 08 Workshop "Automotive User Interfaces and Interactive Applications". pp. 248-255. [Mitglied im Programmkomitee] [Kontakt: Hr. Prof. Dr. Albrecht Schmidt, Hr. Prof. Dr. Jürgen Ziegler.]
- Heimgärtner, R. (2007) [Mitautor von] HMI: Schnittstelle zwischen Mensch und Maschine. In: Inside Fokus Das Mitarbeitermagazin von Siemens VDO Automotive, 1/2007. pp. 4-9. [Kontakt: Ines Muermann]
- Heimgärtner, R. (2005). Research in Progress: Towards Cross-Cultural Adaptive Human-Machine-Interaction in Automotive Navigation Systems. In: Day, D.L., Evers, V., del Galdo, E. (Eds.): Designing for Global Markets 7: bridging cultural differences. Proceedings of the Seventh International Workshop on Internationalization of Products and Systems, IWIPS 2005, 7-9 July, Amsterdam, The Netherlands. Amsterdam, The Netherlands: Grafisch Centrum. pp. 97-111. [Kontakt: Fr. Prof. Dr. Vanessa Evers, Hr. Prof. Dr. Geert Hofstede, Hr. Prof. Dr. Ben Shneiderman.]









# **Customer interfaces (B2B)**

- > VW/Audi (Formel Q, KGAS, SQIL)
- > Mercedes
- > BMW





# Use IUIC's know-how to your advantage!

IUIC conducts <u>seminars</u> according to the <u>ASPICE requirements</u> of intacs with accredited certification possibility. The development of innovative as well as customer-oriented and usable processes can only be realised effectively and efficiently if the necessary requirements for the process are met. We therefore review the relevant processes for product development in your company (based on the <u>ISO 15504 / Automotive SPICE / ISO 26262 / ISO 21434 / ISO 27000 standard</u>).

IUIC also conducts <u>seminars</u> according to the <u>CPUX curriculum</u> of the UXQB with accredited certification possibility of the German Usability Professional Association (GUPA). Efficient, effective and satisfactory processes and products, also and especially in an intercultural context, lead to greater sales success.

We will show you which aspects are important in processes for product development and how development guidelines or customised solutions for your company can be generated from them. For this purpose, IUIC transforms the latest scientific findings into actionable and applicable know-how, which is constantly updated and expanded on the basis of literature studies and research cooperation.





# Advantages for your company

- > Increasing company value through more know-how
- Employee satisfaction through process optimization
- User-friendly product development
- Customer-oriented product development
- > International competitiveness
- > Shorter development times
- Cost savings
- > Increased sales
- Market advantage



Wir leben Usability.

Wir prüfen Prozesse.

Wir begreifen Kulturen.



# Thank you for your interest!



"The IUID introductory seminar from IUIC is a must for every internationally operating company and its stakeholders to stay up to date and hold the market lead or to obtain the market lead."

Dr. Rüdiger Heimgärtner, IUIC Founder, CEO, Author, Docent, Speaker

Headquarter: Lehderstraße 71, 13086 Berlin, Germany Backoffice: Lindenstraße 9, 93152 Undorf, Germany

E-Mail: ruediger.heimgaertner@iuic.de

Phone: +49 (0) 1755650322 URL: https://www.iuic.de





# **Questions and Feedback?**

IUIC Dr. Rüdiger Heimgärtner, CEO Lehderstraße 71 13086 Berlin, Germany Phone: +491755650322 https://www.iuic.de



Intercultural User Interface Consulting Dr. Rüdiger Heimgärtner