

Curriculum Vitae

Diplom-Ökonom

Klaus Brüggemann

Senior Consultant for

**Quality Management and
System & Software Process Improvement**



Personal Dates and Education

Birthday	16-Mar-1960 in Münster / Westfalen, Germany
Home Address	Augasse 1c, 61194 Niddatal (near Frankfurt am Main), Germany
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Education

09/1969 – 06/1979	Schlaun-Gymnasium Münster, Abitur / university-entrance diploma
10/1980 – 02/1983	Hochschule der Bundeswehr (Military Forces University), Study of Informatics, 7 Trimester, without degree
10/1983 – 01/1992	Fernuniversität Hagen, degree in Economics
07/1996	EOQ Quality System Manager
10/2000	EOQ Quality Auditor (ISO 9001:2000)
05/2009	Provisional Automotive SPICE Assessor
09/2009	Certified Professional for Requirements Engineering
11/2010	Design for Six Sigma – Green Belt
Foreign Languages	English, written and spoken fluently

Short Profile

I'm working as Consultant for Quality Management and Software/System Process Improvement (SPI). My major activities are the consulting of system and software developing enterprises to reach a higher maturity level according to the maturity models CMMI, and ISO 15504 (SPICE), as well as according to the RUP and V-Model. I have specialized experiences in the areas of Requirements Management & Engineering (RM&E), Quality Management, and Project Management with metrics. I use moderated self-assessments, seminars, workshops, and appropriate coaching support to help my customers. And I don't hesitate to take over the key activities in a project by myself.

Based on the experiences as Quality Manager in several development projects and enterprises I'm used to take one thing as first priority when implementing any model recommendations: the practical usability of new concepts, so that the developers can gain the expected advantages for their daily work.

I'm showing and sharing my knowledge and experiences in different presentations and workshops at international conferences.

Business Career (details starting at page 6)	
since 09/2009	Freelancer as Consultant for Quality Management and Process Improvement
08/2005 – 05/2009	Senior Consultant at HOOD GmbH, Germany
12/2001 – 07/2005	Senior Consultant at Q-Labs GmbH Germany (now DNV IT Global Services)
07/1999 – 11/2001	Director Corporate Quality Management EMEA at LHS AG (in 2000 merged into Sema Group, in 2001 merged into SchlumbergerSema, currently again in business as LHS an Ericsson company)
05/1998 – 06/1999	Manager SW Quality Management at GEHE AG, now Celesio AG
07/1991 – 04/1998	Department Leader Software Quality Management at VDO Lufffahrtgeräte Werk GmbH, now Diehl Aerospace GmbH
07/1979 – 06/1991	EDP Officer at the German Air Force, last rank: Captain

Education during the last years	
Design for Six Sigma	Green Belt Training (ESSC), Karlheinz Lerch, 6σBT, 11/2010, 10 Tage
Requirements Management & Engineering (RM&E)	Training & Exam as Certified Professional for Requirements Engineering, HOOD / iSQI, Sep 2009, 3 days
Automotive SPICE	Training & Exam as Automotive SPICE Assessor, KMC, 05/2009, 5 days
CMMI for Services	Services Supplement for CMMI V1.2, Anywhere24, 04/2009, 1 day
CMMI Intermediate	Intermediate Concepts of CMMI-DEV V1.2, SEI, 02/2007, 5 days
CMMI Upgrade	CMMI-DEV Version 1.2 Upgrade Training, 01/2007, Internet Training
CMMI Introduction	Introduction to CMMI-DEV V1.1, Lamri Ltd., 06/2006, 3 days
Requirements Management & Engineering (RM&E)	Internal accreditation training, HOOD GmbH, 2005/2006, 9 days “RM&E – Methods” and “RM&E – Writing good Requirements”
CMMI Advanced Training	Internal CMMI Intermediate Training, Q-Labs GmbH, 2003, 8 days
Quality Auditor & Manager	EOQ Quality Auditor (2000) & Manager (1996)
CMM Training	Introduction to the CMM, European Software Institute, 1998, 3 days

Key Activities:	
<ul style="list-style-type: none"> • Establishing / improving of various process areas (e.g., Requirements Management & Engineering, Project & Quality Management, Verification & Validation) incl. roll-out • Defining and establishing new development methodologies with corresponding tool support • Modelling of system architectures in various techniques, like Use Cases, UML, SA, SD • Establishing of system development approaches (incl. modelling) with all development disciplines • Introducing and establishing of practical project and organizational metrics • Establishing Quality Management Systems 	<ul style="list-style-type: none"> • Leading / supporting of Process Improvement (PI) projects in several enterprises • Supporting assessments in several SW developing enterprises according to the established maturity models (CMMI & SPICE) • Defining and establishing processes to develop and qualify safety critical products • Performing qualification tests for safety critical embedded products • Performing seminars / workshops in the area of Requirements Management & Engineering, Quality Management, Metrics, Modelling, and Process Improvement, incl. tool support • Performing Quality Assurance activities

Special Know-How Areas	
RM&E	I'm very keen on the different aspects of RM&E: scoping, stakeholder analysis, req. engineering, traceability, risk & change mgmt., tool support with DOORS & MKS
Safety / Criticality	During my long business in the avionics industry I've gained intimate Know-How in the safety standards RTCA DO/178-A/B and IEC ISO 61508.
Metrics	I was working in several projects on the definition and establishment of metrics for project progress tracking; special focus was laid on practical handling, usability, and achieving benefits for the metrics owners.

Selection of projects conducted as consultant and trainer:	
Customer	Project Description
Postfinanz AG Bern, Schweiz 05/2011 – ongoing	Performance of several preparation trainings for the IREB certificate „Certified Professional for Requirements Engineering – Foundation Level“; Performance of workshops on writing good requirements
Siemens AG Erlangen 02/2011 – ongoing	Support in the area of High Speed Trains for documented evidence of conformity of the customer requirements with the tool DOORS®; coaching of key-people in process and tool usage
WABCO GmbH, Hannover 09/2010 – 03/2011	Support in establishing a System Specification for two new braking systems with support of MKS-RM® and definition of a concept for structural reuse of functional requirements
Cortal Consors S.A., Nürnberg 01/2010 – 12/2010	Support in Quality Assurance and Process Improvement <ul style="list-style-type: none"> • Performing Workshops in Writing Requirements • Definition of a roadmap to introduce new requirements engineering methods based on an employee poll • Migration of templates into Office 2010 format
NovaTec GmbH, Leinfelden- Echterdingen 02-03/2010	Participation in a SCAMPI A Appraisal on CMMI-DEV V1.2 for Maturity Level 2 as member of the Appraisal Team
MBtech GmbH, Sindelfingen 11/2009	Participation in a SCAMPI A Appraisal on CMMI-DEV V1.2 for Maturity Level 2 as member of the Appraisal Team
Cortal Consors S.A., Nürnberg 10/2009 – 12/2009	Support in Quality Assurance and Process Improvement <ul style="list-style-type: none"> • Performance of Quality Reviews in active projects • Establishing of new templates for process monitoring in Excel
TRW Lucas Varity, Koblenz 05/2008 – 12/2008	Definition and Performance of different workshops to strengthen the awareness for Requirements Management and Engineering (RM&E) in the development area (1 per quarter) <ul style="list-style-type: none"> • RM&E Awareness Workshop • DOORS Basic Workshop
VW Coaching GmbH, Wolfsburg & Audi Akademie, Ingolstadt 06/2007 – ongoing	Definition and Performance of Trainings and Workshops (1 per month/quarter) <ul style="list-style-type: none"> • RM&E: Basics and DOORS (2 days) • DOORS Basics (1 day) • DOORS Best Practices Workshop (1 day)
Volkswagen AG, Wolfsburg 06/2006 – 02/2009	Definition and establishment of requirements management processes and methods to support a structured reuse of electrical/electronic functional specifications and generation of ECU specifications <ul style="list-style-type: none"> • Definition of an information model and a corresponding method • Definition of a specific handling of versions and variants • Performing workshops, trainings and coaching for the method
SiemensVDO I CM, Babenhausen 04/2006 – 10/2006	Establishment of Requirements Management & Engineering (RM&E) with DOORS in system development according to CMMI Level 3 <ul style="list-style-type: none"> • Improvement of the Requirements Engineering and Architecture processes • Coaching of Requirements Engineers in using DOORS and in writing good requirements • Coaching of additional key people in using improved processes and methods
TRW Lucas Varity, Koblenz 10/2005 – 06/2006	Establishment of RM&E with DOORS in software development <ul style="list-style-type: none"> • Common definition of an information model • Performing Workshops to define a RM&E process • Describing a SPICE compliant process for RM&E, including procedures and templates • Implementation of the information model with generic templates in DOORS, including attributes and views

Special Know-How Areas	
Bosch Rexroth, Lohr am Main 01/2005 – 02/2006	Supporting the SEPG to achieve CMM Level 2 <ul style="list-style-type: none"> • Evaluation of current situation and re-planning of the improvement project • Common definition, piloting and review of process descriptions • Performing management briefings and reports • Performing self assessments • Coaching of the project leader and supporting the roll-out • Establishing a metric program for project progress tracking
SiemensVDO I IP HVAC, Karben 04/2005 – 01/2006	Establishment of an RM&E approach with DOORS in system development according to CMMI Level 3 <ul style="list-style-type: none"> • Common definition and review of process descriptions • Establishing proceedings and procedures in a pilot project • Establishing process support with DOORS • Coaching of System Architects, Requirements Manager and Test Manager • Supporting the EPG in general topics • Supporting the introduction of a metric program for project progress tracking
Robert Bosch GmbH ST, Ottobrunn 10/2004 – 01/2005	Supporting the metrics area to achieve CMMI Level 3 requirements <ul style="list-style-type: none"> • Common definition and review of the review process • Implementing different information needs in cockpit charts
Bosch Engineering AS, Tamm 12/2003 – 12/2004	Supporting the SEPG to achieve CMMI Level 2 <ul style="list-style-type: none"> • Supporting the SEPG in general topics • Performing Workshops to define processes • Establishing a metric program for project progress tracking • Performing self assessments • Writing PIIDs (Process Implementation Indication Documents) as appraisal preparation
Harmann Becker, Karlsbad 2004	Supporting the build-up of a Requirements Service Center <ul style="list-style-type: none"> • Establishing metrics for tracking requirements • Adaptation of project cockpit charts regarding metric owner requirements
Bosch Engineering SF, Möglingen 2003	Supporting the SEPG to achieve CMMI Level 2 <ul style="list-style-type: none"> • Supporting the SEPG in general topics • Supporting process definition and roll-out of Project Management • Coaching of pilot Project Leaders • Supporting the introduction of estimates and size measurements • Tracking of size measurements
Bosch ETAS, Stuttgart 2003	Supporting the SEPG <ul style="list-style-type: none"> • Performing a workshop to align the SPI initiative with the goals of the organization • Technical support of performing a ROI analysis of the development cost after achieving Level 2
Robert Bosch GmbH FV, Schwieberdingen 2002 – 2005	Establishing of Measurements in several development areas <ul style="list-style-type: none"> • Defining and performing trainings for measurements • Building a measurements building kit with 9 cockpit charts for CMM Level 2 • Definition of a generic measurement process • Definition of a generic ROI building kit • Coaching of several areas within Bosch in using the measurements building kit • Enhancement of the measurement kit (45 charts, 11 cockpits) to support the different areas of CMMI Level 3 • Supporting working groups within Bosch for measurement and Project Management

Special Know-How Areas	
Q-Labs GmbH internal, 2002 – 2005	Establishing a Quality Management System for a consulting organization and Certification according to DIN EN ISO 9001:2000 <ul style="list-style-type: none"> • Definition and Establishing of the business processes • Documenting the processes in a Lotus Notes database • Performing of internal audits • Supporting the external audits • Leading the QM-Team in Germany and Coordination with the teams in other countries • Maintaining the Lotus Notes databases for handling of quotations and supporting the financial processes (time reporting and invoicing)
Volkswagen AG, Wolfsburg 2002 – 2003	Supporting the build-up of a Project Control Office (PCO) <ul style="list-style-type: none"> • Documenting the processes of the PCO • Supporting the definition of cockpit charts • Supporting various supplier projects
ZF-Lenksysteme, Schwäbisch-Gmünd, 2/2002 – 5/2002	Supporting the definition of improvement activities after a SPICE Assessment and the definition of an integration concept
BMW AG, München 10/2001 – 01/2002	Supporting the start of a BMW internal improvement initiative according to CMMI, focusing on Quality Management and System Integration

Presentations & Workshops given at International Conferences	
18-Jan-2011, Software Quality Days, Wien	Tutorial: “Erkennen Sie die Risiken in Anforderungen – bevor Sie sie umsetzen“
16-Sep-2009, CONQUEST, Nuremberg	Tutorial: “Writing Software Requirements – Excellence is not difficult”
28-May-2009, Software & System Quality Conference, Düsseldorf	Workshop: “Gute Anforderungen schreiben – Ein praktikabler Weg zu Excellence”
20-Jan-2009, Software Quality Days, Vienna	Tutorial: “Spezifizieren von Anforderungen – mit einfachen Mitteln zu Excellence“
15-Apr-2008, Software & System Quality Conference, Düsseldorf	Tutorial: “Spezifizieren von Anforderungen – Ein praktikabler Weg zu Excellence”
25-Apr-2007, Software & System Quality Conference, Düsseldorf	Workshop: “ Spezifizieren von Anforderungen, aber wie?“
28-Sep-2005, 3rd World Congress on Software Quality, Munich	Paper & Presentation: “A Practical Successful Implementation of the CMMI Process Area ‘Measurement & Analysis’”
15-Jun-2005, ESEPG, London	Paper & Presentation (not presented by myself): “A Practical Successful Implementation of the CMMI Process Area ‘Measurement & Analysis’”
21-Sep-2001, CONQUEST, Nuremberg	Paper & Presentation (not presented due to illness): “The Dashboard – a long and winding road for implementing a metrication program”
26-Sep-1997, CONQUEST, Nuremberg	Paper & Presentation: “Software Quality Management in the Avionics Industry – Between Paradise and Pillory? – What is the state of the art?”

Professional Career:	
Period	Company, Position, Description of Tasks
09/2009 – today	Freelancer as Consultant for Quality Management and Process Improvement
08/2005 – 08/2009	<p>HOOD GmbH, Oberhaching (with Home-Office in Niddatal); a consulting company for establishing and improving processes for Requirements Management and Engineering (RM&E)</p> <p>Senior Consultant, reporting to the General Manager. List of tasks included:</p> <ul style="list-style-type: none"> • Methodical leadership of a project (12 people from 5 companies) at Volkswagen AG to establish a new approach for functional RM&E • Support of system development at Bosch Rexroth with achieving SW-CMM Level 2 • Support of system development at Siemens VDO I/IP HVAC with achieving CMMI Level 3 for RM&E area • Development and Performance of trainings for RM&E and tools
12/2001 – 07/2005	<p>Q-LABS GmbH (now DNV IT Global Services) , Stuttgart (with Home-Office in Niddatal); a world wide consulting company for implementing and improving of development processes of products containing software (focus: automotive)</p> <p>Senior Consultant, reporting to the Operating Manager. List of tasks included:</p> <ul style="list-style-type: none"> • Consulting of companies according to CMM, CMMI und SPICE, with special attendances to Quality Assurance, Project-Management, Metrics and Test • Process improvement projects performed at BMW, Volkswagen, SiemensVDO Automotive, ZF Lenksysteme, Harman/Becker, various parts of Bosch • Development of generic processes / tools in the metrics area to observe and control project status; this measurement construction kit has been successfully introduced several times in different companies • Technical implementation and responsibility of the internal quality management system at Q-LABS • Coordination of the consultancy in the area of Software Safety (e.g., IEC 61508, SW-FMEA)
07/1999 – 11/2001	<p>LHS Verwaltungs GmbH & Co. Projekt KG, Dreieich; world leading supplier for billing and customer care products in the telecoms industry</p> <p>Director Corporate Quality Management EMEA, reporting to the Vice President Quality Management, full responsibility of 3-5 inferiors. List of tasks included:</p> <ul style="list-style-type: none"> • Worldwide coordination of all Y2K activities • Enhancing the software quality management system to support the local, operational management • Harmonizing different business processes for several departments • Coordination of a CMM based assessment and definition of improvement projects based on the assessment results • Performing internal and external audits according to ISO 9001 • Coaching and training on methods in software engineering • Establishing a metric program for product and process quality
05/1998 – 06/1999	<p>GEHE Informatik Services GmbH & Co. KG (GEHIS), Stuttgart, affiliate of GEHE AG, now CELESIO AG, (pharmacy wholesale) with development sites in France, England and Germany</p> <p>Software Quality Assurance Manager for international application development, reporting to the development director, no inferiors. List of tasks included:</p> <ul style="list-style-type: none"> • Establishing and maintaining a software quality management system • Performing reviews and inspections in development projects • Coaching and training on new methods in software engineering • Coordination on CMM trainings, participation in a CMM assessment • Defining an improvement program to achieve CMM maturity level 2

Professional Carreer:	
Period	Company, Position, Description of Tasks
07/1991 – 04/1998	<p>VDO LUFTFAHRTGERÄTEWERK GmbH (now Diehl Aerospace), Frankfurt, supplier of the avionics industry.</p> <p>Head of Software Quality Management; reporting to the head of Quality Management; full responsibility of 4 inferiors. List of tasks included:</p> <ul style="list-style-type: none"> • Establishing a software quality management system for civil and military embedded product development • Definition of development processes, coaching and training on new methods and tools • Certification according to AQAP-13, ISO 9001 and ISO 9000 part 3 • Performing internal and external audits • Definition and coordination of quality assurance plans with customers • Performing reviews and inspections in development projects • Release of software applications and embedded products according to DO-178 A/B • Performing test coverage measurements for safety critical embedded real-time software with Logiscope • Certification of a code generator with international avionic authorities
07/1979 – 06/1991	<p>Military: Air Force Officer (last rank: Captain)</p>
1979 – 1983	<p>Basic Education, Officers School, Study at the University of the Armed Forces (Informatics, without degree)</p>
1983 – 1987	<p>EDP Officer in the government agency for EDP und telecommunications without inferiors. List of tasks included:</p> <ul style="list-style-type: none"> • Development of a system design for the Command Control and Information System of the German Air Force, • Comparison and design of databases • Review of software designs and software prototypes • Participation at the selection of the CASE tool for documentation of the software for the TORNADO aircraft
1987 – 1991	<p>EDP Officer in an international programming center with full responsibility for 4 inferiors. List of tasks included:</p> <ul style="list-style-type: none"> • Establishing and Leading a department for UNIX systems • Definition of a concept for the use of UNIX systems in the Air Force network • Support of the ADP Security Officer of the German Air Force regarding the security of UNIX systems • Development of security software and office applications • Review and verification of software developed by industry partners for various military purposes (tactical combat training of pilots, computer aided interpretation of reconnaissance pictures, military message transfer) • As interims head of a military unit in full responsibility of 240 inferiors and 40 civil employees