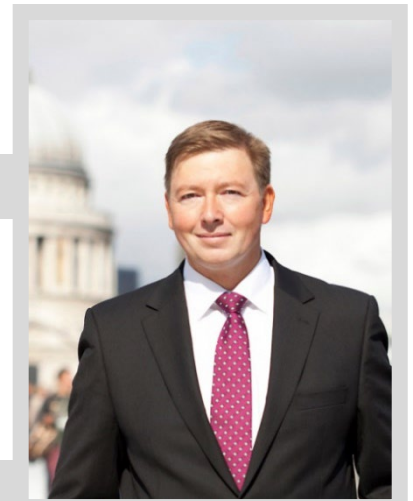


Curriculum Vitae



Personal Details

Ralf G.J. Knoll, Dipl.-Phys. Ing., M.Sc., Psych. Counsellor, FRSA
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<https://knoll-engineering.de>
DOB and marital status: -- -- 1963, single.

Objectives / Aims in life

General macroeconomic level – including social and behavioural change:

I love to create **valuable solutions** for **today's problems** to **create a better society** via novel disruptive goods & services & educational initiatives [[SDG](#), [longtermism](#), [social impact-driven](#)].

Micro-economic level – including product design and corporate development:

I support and lead companies towards more resilience/stability, economic sustainability, and maximum efficiency, primarily via **developing** innovative high-tech products, **improvement** of production processes, systemic strategies, and organisational/legal structures [[neoliberalism](#)].

Short Profile

Management Consultant and Change Manager for innovation management and strategy formation since the year 2000. / Product developer / Problem solver / Interim Manager.
[Consultant](#), [Physicist](#), [Philosopher](#), [Entrepreneur](#), [Futurist](#), [Freethinker](#), [Investment Analyst](#).
Example tags: #INOPTEC | #InnovatorOfTheYear | #RalfGJknoll | Twitter: @Ralf_Knoll

Methodology & Tools:

GE/McKinsey Matrix, Critical Success Factor Analysis, QFD, TRIZ, ARIZ, Conjoint-, Kano-, Value-Benefit-Analysis (VBA), creativity techniques (Delphi, 635, Syntectics, Morphological Analysis), futurology, strategy tools, scenario planning with Szeno-Plan software by Prof. Heinecke.

Method Development:

1990: Method for contact-free pressure measurement. Patent: DE3935532 A1
2014: Methods to improve vision enhancement systems. Patent: WO2015181340 A1
2005: Method for seamless & efficient implementation of IM and change tools to SMEs.

Subject-specific: (Basis below method level)

Eng. physics, optics, photonics, telco, electronics, ICT, web3/DAO, complex systems, AI, ASI.

Branch-specific: automotive/aviation, telecom, electronics, ICT, AI, production & supply etc.

Individual strengths and ability:

- Interdisciplinary technical/methodological know-how – combined with leadership skills.
- Creativity, development of products, methods, strategies beyond state-of-the-art concepts
- Syntectics – creative interdisciplinary analogy formation
- General philosophical analysis – formal and classical logic, semiotics
- Holistic, cybernetic view – systemic view
- Heuristic competence – entrepreneurial spirit, self-motivated

Myers-Briggs Type Indicator (MTBI):

2013 + 2017: INTJ = Architect, with I=32%, N=40%, T=30%, J=14%
Similar outcomes: 2014: INTP = Logician | 2016: ENTP = Debater

Publications:

2 book chapters on innovation management for the connector industry: ISBN 3816934846
Various lectures with VDE; leading article in the E-Journal on systems: ISSN 0013-5674

Occupation & Research

- 2000 – present** **Management Consultant:** At the age of 37, proactive decision to become an independent Innovation & Change Manager, and Entrepreneur – to work as a self-employed freelance technology & management consultant, interim manager, and CEO of various companies.
- **Strategy formation/development:** Scenario planning, dynamic strategies, biz-plans
 - **Innovation management:** Contract work for SMEs within the high-tech sector
 - **Business economics and micro/macroeconomics:** marketing strategy & methods. Application of **MBA-level** knowledge during the execution of contract work in the field of consumer/investment goods marketing, services, and marketing of technical products.
 - **Leadership / Interim Management:** I worked for **investors, VCs, Start-ups** (CTO), created legal entities, and scouted companies for potential collaboration and M&A.
 - **Private applied AI research:** Economy & Society | Since 1986, the future impact of AI, AGI, ASI – **technologically, philosophically, and ethically** (risk assessments and chances).
- 1998 – 2000** **Scientific research associate:** Development of novel ICT systems (xDSL, PLC, radio) with Fraunhofer Institute for Embedded Systems and Communication (ESK), Munich.
- 1996 – 1998** **Project manager:** Announcement-bid-selection cycle of ICT technology and technical due diligence analyst for investments in city carriers in Bavaria; Bayernwerk AG jointly with VIAG Interkom O2 Mobile, Munich. / “Start-up-like” activities, e.g., biz-plan for last mile, rollout, etc.
- 1995 – 1996** **Vice President, operations manager, and head of the electronics section:** Project management and team management, product engineering at Pero-System Messgeraete GmbH (measuring instruments) in Wuppertal.
- 1991 – 1993** **Development engineer (EE):** Fibre communication systems with QUANTE AG (later CISCO Photonics) in Wuppertal, Germany. | Development of high bit-rate optical transmitter modules (SDH/SONET 622. Mbit/s STM-4) and introduction to series production. | Smallest and best transmitter design amongst the competing suppliers (SIEMENS, ERICSSON, etc.) for the German Telekom tender bid competition. | Wandel & Golterman (JDSU) decided to use this PCB for their measuring instruments, which constitute their core business/sales.
- 1981 + 1983** **Telephone systems technician:** Deutsche Bundespost (later Telekom AG), Wuppertal. Hands-on work in a construction district right after a successful apprenticeship (1978 - 81)

University Education

- 1995** **Business economics:** Intensive courses in Macro-Economics & Marketing, using HBS case studies, Corporate Ethics in the Department of Philosophy / Harvard University, Boston, USA
- 1993 – 1994** **Master of Science (M.Sc.) in Optoelectronic and Laser Devices:** Heriot-Watt University, Edinburgh, UK, jointly with University of St. Andrews, UK. Research project on MIM FE-LC Displays, CRL Thorn EMI, London (today 4D-ForthDimDisplays).
- 1993** **English and American studies:** Including Phonetics and Phonology. 1 Semester at the University of Wuppertal to prepare for forthcoming studies in UK and US.
- 1984 – 1990** **Diploma (M.Sc. equivalent) in Engineering Physics / Technical & Applied Physics:** Elective subject: **Electronics and Telecommunications** University of Wuppertal, Germany
Final Examination grade: very good. | Thesis grade: very good, best student. (≈ Hons/M.Sc.)

School, Apprenticeship, Compulsory Military Service

- 1990 – 1991** **Military:** Recruitment as a radio operator and C3I office admin, FmAKp 811, Wuppertal
- 1983 – 1984** **College:** Fachoberschule d. Elektrotechnik (12th grade) / Haspel, Wuppertal
- 1981 – 1983** **Grammar School:** 3 Semesters at Berufsaufbauschule, Haspel, Wuppertal
- 1978 – 1981** **Apprenticeship:** Telephone systems technician with German Telecom AG (DTAG) | My first developments of digital circuits based on TTL 74xx series, such as electronic clocks, telephone systems/multiplexers (mixed analogue-digital circuits). | Installing and repairing electro-mechanical dialling systems (SxS, EMD, etc.), including 230V electrical installations.

Further/Continuing Education: Entrepreneurship, Consulting and Coaching

- 2008 – 2010** **Psychological counsellor / personal coach:** Professional training via accredited/state-approved ILS Hamburg distance learning course. Publications/Papers: WLB inclusion. Peer group and practical training: Quality Circle Coaching (QRC), Munich
- 2003 – ...** **Innovation and project management:** Own lectures at VDI/VDE, publications; Project management according to GPM, IPMA > Level D
- 2002 – 2003** **Quality assurance for business consultancies:** Methodological skills and procedure models according to established guidelines and standards of the Federal Association of German Management Consultants (BDU) e.V. et al.
- 1998 – 2000** **Intellectual property rights:** Patents, trademarks, and copyright law. Experience with research, application, filing, and exploitation.
- 1998 – 2000** **Entrepreneurship / business formation classes:** legal forms of companies in DE /UK, ownership rights, IPO, venture capital conditions, due diligence and ratings, turnaround management. | Lectures from: FNT e.V. (Munich Network) in cooperation with the Ludwig Maximilian University (LMU); the Munich Business Plan Competition Initiative (MBPW); and various law firms focussing on start-ups (Osborne Clarke, RA Weitnauer, etc.).

Languages / Software

English: Business fluent – written and spoken.
Pronunciation: South-East England (advanced RP), North-East USA (rhotic AE)

German: Journalistic/author level (old and new German orthography)
Pronunciation: Accent-free High/Central German – suited for speaker roles

Software and formal languages:

MS Office Professional
HTML and CSS-Code (scripting language)
ICT Tools (e.g. Cloud Encryption, Citrix Share-File)
Adobe Photoshop & LR CC Creative Cloud
Adobe AI, ID and others CC Creative Cloud
Design Software (e.g. SolidWorks, Eagle, LightTools)
Simulation Soft for Markets & Tech (Scenarios, PSpice)
1984 - 1990: Assemb, C+, Fortran, Pascal, Basic UNIX
1986: Programmed my first neuronal network

Skill grade:

very good
good code structuring abilities
good sensibility for cyber security
very good (graphic designer level)
sufficient to handle/convert formats
sufficient to plan R&D processes
very good – sufficient
was good; now, basic knowledge left
very good: text & pattern recognition

Voluntary: Private & Public Leadership Activities -and- Personal Interests

- 1981 – 1993 Competitive sports & Leadership:** Player-coach and Certified Trainer (DSB) with expert Volleyball certifications (DVV) successfully led a team from its foundation to the 6th division.
- 2007 – 2009 Philosophy - Institute for Dialogical and Practical Philosophy e.V.:** Studying and proactive contributions in basically all fields of philosophy, including economy & society and social psychology (see overlap with 2008–2010 course to become a Psychological Counsellor).
- 2010 – 2015 Philosophical Practice:** Founder of the “Philosophy Round-Table Symposium” in Munich, a monthly meeting for scientists focusing on teleological models (AI singularity, transhuman, posthuman AI, ASI, impact on society) and topics around social psychology & social philosophy.
- 2008 – 2009 Tutor for MBA revision courses:** For graduates of micro and macroeconomics, esp. in marketing [Philip Kotler/Bliemel] and dynamic competitive strategy [George S. Day; Wharton].
- 2018 – 2019 RSA → Future Foundations / United Nations SDG / GOV.UK Department for Education:** Voluntary coach & judge for UN Sustainable Development Goals projects (#SDGs) submitted by young students/environmentalists within the Global Social Leader Competition (#GSLGoals).
- 1984 – now Various ongoing projects in the fields of Nature, Posthumanism, AI, AGI, ASI and ALife:** Just a few examples and highlights:
In 1984, I programmed John Horton Conway’s Game of Life and, in 1986, my first neuronal network. Since then, I have been intrigued by the **analysis and creation of complex systems**, including self-organisation and self-replication, also in the context of philosophical viewpoints like Schopenhauer’s will to power. Since 2003, I have met and/or interviewed thought leaders, i.e., Richard Dawkins, Daniel Dennett, Nancy Cartwright, Richard Healey, Frank Wilczek and Lawrence Krauss, at various LSE Events at the London School of Economics and Political Science. In 2022 / 2023 / 2024, I participated in summer courses at the Faraday Institute for Science and Religion in Cambridge, UK, to explore interdisciplinary perceptions of creation, evolution, etc.

Active contributions to clubs, societies, institutions, think tanks, etc.:

- SPIE – Society of Photographic Instrumentation Engineers, WA, USA.**
International Society for Optics and Photonics. / Active at DSS and Photonics West.
- EPIC – European Photonics Industry Consortium, Brussels, Paris, Eindhoven, EUROPE.**
Member via INOPTEC Ltd. – fostering an expert network within the photonics community.
- RSA – Royal Society of Arts, London, UK.**
An award-winning British think tank in London. / Fellow of the Royal Society (FRSA).
- IoD – Institute of Directors, London, UK**
Organisation for company directors, senior business leaders and entrepreneurs.
- WBU – Wirtschaftsbeirat der Union, Munich, Germany.**
Economic Advisory Council for the Bavarian Union. / Active as a green-liberal influencer.
- TT – Tech Tour, Brussels, Geneva, EUROPE.**
Investor-orientated community. / Active as an expert juror to judge start-ups (pitches).

Older/former memberships or affiliations or contributions:

VDE/VDI ECOC Optical Communication; PTF Powerline TK Forum; IOP Institute of Physics; OSA Optical Society of America; AIP American Institute of Physics; FNT - Munich Network e.V.; QRC Qualitätsring Coaching; BDU e.V.; GPM/IPMA Project Management Association, and more.