



Consulting Profile

Alexander Zock, PhD

Born in 1967 and raised in Cologne, Germany, Alexander Zock has a graduate degree in physics and worked in research for a total of seven years after his studies in Cologne and Bonn. He completed his dissertation in geophysics and planetary science at Tel Aviv University in 2000.

In August 1999, Alexander Zock accepted a position at Deutsche Lufthansa AG, where he worked for the next seven years, gaining valuable experience in a variety of positions as a project manager and line manager. His main focus during this time was on the management of IT projects, products and processes, strategic analysis and the associated challenges of organisational change. In addition to professional and methodological insights, his responsibilities provided him with in-depth experience in the areas of change management and stakeholder management, as well as leadership and communication.

In 2006, Alexander Zock moved to an aviation industry institute offering applied research and industry-specific consulting services in the form of public-private partnerships. Initially joining the institute as Director of Aviation Management, he was appointed to the board of directors in early 2009. The main focus of his work during his time at the institute, in a wide variety of consulting and research projects, was on matters of business and production strategy, analysis, controlling, simulation and optimisation of processes, as well as furnishing expert opinions (see references expert consulting). In addition to his function as a board member, Alexander Zock taught classes in Aviation Management and System Dynamics at Mannheim University from 2005 to 2010, among other things.

Since January 2011, Alexander Zock has been applying his wide range of practical and methodological experience for his clients in the core areas of modern production chains. His main focus in this is on the core issues of modern management: leadership, strategy, processes and structures, communication and ethics. In addition to his consulting work, Alexander Zock also works as an executive coach (for more details see the separate coaching profile).

Typical area of activity – organisational consulting and training (a selection)

- support and coaching of top-level management teams during strategic reorientations and the associated analysis and reorganisation measures (different industries)
- analysis and optimisation of governance models after major reorganisations (including process and interface analysis)
- design and implementation of architectures of change (platforms for dialogue, advanced training measures, team-WS , etc.)
- design and implementation of communication plans in change projects
- facilitation of management workshops (small and large groups of up to 40 participants) in a variety of settings (strategy days, team development, etc.)
- process and interface analysis and optimisation
- project management coaching and training
- values-based cultural analysis of leadership teams and organisations (in particular as an element of change projects)
- introduction of business-partnering models (including implementation of training programs for "business partners")
- implementation of communication training (including conflict communication)
- conducting management training seminars on the topic of "leadership"
- team diagnosis and process support as well as team-development workshops and training
- conflict mediation and diplomatic missions (e.g. facilitation and guidance for work groups (management and labour representatives (unions/works councils) on collective bargaining matters, member of the arbitration commission of Prof. Dr. Bert Rürup during the 2012 arbitration between Lufthansa and the flight attendants' union UFO)
- work on ethics and values

Typical areas of activity – expert consulting for the aviation industry (a selection)

- analysis and simulation of long-term personnel capacity planning issues in the areas of cockpit and air traffic control
- simulation of the dynamics of change and advancement system for the pilots of Deutsche Lufthansa AG
- simulation of the dynamic development of cockpit personnel costs (base salary and overtime) for a regional carrier
- analysis and optimisation of crew planning and scheduling processes
- post-OPS analysis of the quality of capacity-planning and staff-scheduling processes for air traffic controllers in civilian air traffic control
- analysis and optimisation of trilateral punctuality management at Frankfurt Airport
- analysis in the area of fuel efficiency at Deutsche Lufthansa AG
- analysis in the area of mission control and support at Deutsche Lufthansa AG
- simulation of mid-term market development of the global airline market for Star Alliance
- comparative research in the area of airport performance (US, EU)

Partial list of publications

Zock, A. Von Organisationsberatern und Hofnarren – Die Beobachtung der Beratung der Gesellschaft durch Peter Fuchs, Festschrift zum 66. Geburtstag von Prof. Dr. Peter Fuchs, in: Umschrift – Grenzgänge der Systemtheorie, Hrg. Maren Lehmann, Markus Heidingsfelder und Olaf Maaß, pp. 251 – 272, 2015.

Azzam, M., Klingauf, U. and Zock, A., The accelerated growth of the worldwide air transportation network, The European Physical Journal Special Topics, Vol. 215, Issue 1, pp. 35-48, 2013.

Größler, A. and Zock, A., Simulations-basierte Planung des Personalbestands, Wirtschaftswissenschaftliches Studium : WiSt ; Zeitschrift für Studium und Forschung. - München : Beck, ISSN 0340-1650, ZDB-ID 1202856. - Vol. 41.2012, 2, p. 71-76, 2012.

Drotleff, W., Morisset, T., Zock, A. and Odoni, A., Benchmarking Airport Airside Performance: FRA vs. EWR, Ninth USA/Europe Air Traffic Management Research and Development Seminar (ATM2011), 2011.

Berger A., Müller-Hannemann M., Rechner, S. and Zock, A., Efficient Computation of Time-Dependent Centralities in Air Transportation Networks, WALCOM: Algorithms and Computation, Lecture Notes in Computer Science, Vol 6552, pp. 77-88, 2011.

Drotleff, W., Morisset, T, Oesterle, F., Zock, A. and Odoni, A., Newark Airport (EWR) vs. Frankfurt am Main Airport (FRA) - A detailed operations benchmarking, G.A.R.S. (German Aviation Research Society), Benchmarking of Airports, 25th-26th of November, Berlin, Germany, 2010.

Größler, A. and Zock, A., Supporting Long-term Workforce Planning with a Dynamic Aging Chain Model – a case study from the service industry, Human Resource Management, September–October 2010, Vol. 49, No. 5, Pp. 829 – 848

Größler, A. and Zock, A., Personnel, Services, and Goods Supply Lines – a model-based approach to managing “talent on demand”, Proceedings of the 17th International Annual EurOMA Conference, Porto, 2010

Größler, A. and Zock, A., Supporting Long-term Personnel Planning of a Service Provider, Proceedings of the 27th International Conference of the System Dynamics Society, Albuquerque, 2009.

Kleer, B., Cronrath, E. M. and Zock, A., Market Development of Airline Companies – A System Dynamics View on Strategic Movements. 26th International Conference of the System Dynamics Society, Athens, Greece, 2008.

Behrens, F., Cronrath, E. M. and Zock, A., How to Approach New Industries and Gain Insights Into Their Development Dynamics - Examples of the German Aviation Industry, Proceedings of the 26th International Conference of the System Dynamics Society, Athens, Greece, 2008.

Cronrath, E.-M., Arndt, A. and Zock, A., Does Size Matter? – The Importance of Airports in the European and German Air Transport Network. 12th Air Transport Research Society World Conference (ATRS), Athens, Greece, 2008.

Klingauf, U., Zock, A. and Cronrath, E.-M., Luftverkehrswachstum und resultierende Herausforderungen [Growth in Air Traffic and Resulting Challenges], in: Internationales Verkehrswesen – 100 Jahre DVWG, Vol. 60 (No. 3 Suppl.), pp. 68-73., 2008

Cronrath, E.-M. and Zock, A., Die Entwicklung von Luftverkehrsstandorten in Europa – Aktuelle Beobachtungen [The Development of Airports in Europe – Recent Observations], in: DVWG Jahresband 2008 – Mobilität, Energie Umwelt: Perspektiven and Visionen [Germany Transport Science Society Annual Miscellany 2008 – Mobility, Energy, Environment: Perspectives and Visions], pp. 190-198, 2008.

Zock, A. and Größler, A., Tell me ‘how’ or ‘why’ – A Heuristic to Choose between Qualitative and Quantitative Systems Analysis, Proceedings of the 25th International Conference of the System Dynamics Society, Boston, USA, 2007.

Cronrath, E. M. and Zock, A., Forecasting the Diffusion of New Products using System Dynamics by Analogies, Proceedings of the 25th International Conference of the System Dynamics Society, Boston, USA, 2007.

Zock, A., A critical review of the use of System Dynamics for Organizational Consultation Projects, Proceedings of the 22nd International Conference of the System Dynamics Society, Oxford, Great Britain, 2004.

Schillinger, K., Zock, A., and Größler, A., Understanding the dynamic complexity of the editorial process for an employee portal: Lessons learned at Lufthansa German Airlines, Proceedings of the 21st International Conference of the System Dynamics Society, New York, USA, 2003.