MIBEECK CONSULTING GMBH

Strategy Consulting Data Center, Data Management & Cloud

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Short biography and consultant profile Michael M. Beeck

Michael Max Beeck

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Education:	Studied electrical engineering Process & Project Management
Certifications:	ISO/IEC27001, Prince2

Professional experience

since 07/2019	mibcon.de, mibeeck Consulting GmbH Ebersberg Managing Director, Consultant, Speaker
05/2013 – 08/2017	best Systeme GmbH, tCam4Life research consortium Head of Research, tCam4Life joint project (Implementation of mathematical algorithms in FPGA and ANN)
07/1994 – 06/2019	best Systeme GmbH, Unterföhring near Munich Managing Director, CTO, Consultant

Skills and interests

Foreign languages	English (fluent, ICAO Level 6) French, Portuguese (basic knowledge)
IT-Knowledge	Disaster recovery, strategy consulting, interim management Processes and strategies in enterprise data centers Processes and strategies in cloud/hybrid cloud environments Service levels and availability in enterprise data centers Strategies and procedures for data management and data analytics Data security, data protection, and compliance
Additional knowledge	Support for EU-wide IT tendering procedures Performance acceptance within the framework of IT tendering procedures Proof of concepts within the framework of IT procurement ITIL, TISAX
Certifications	ISO/IEC 27001 (APMG) Prince 2 6th Edition (Axelos)

Hobbies

Motorized flight	PPL(A), SEP, NFVR
Hiking	Hiking, mountain hiking, cycling
Music	Guitar, bass
New technologies	Embedded systems, smart things, AI/KI, analog computers

Michael M. Beeck

Expert in EU-wide IT tenders, expert in disaster recovery consulting

Short biography

Michael M. Beeck (born October 8, 1960, in Heidelberg) is an entrepreneur, visionary, strategy consultant, and speaker. After 25 years as technical managing director and head of development at the Munich-based system houses "best Systeme GmbH" and "best Technologie GmbH," he is now an independent consultant and managing director of "mibeeck Consulting GmbH."
With over 30 years of experience in technologies and processes in enterprise data centers, combined with cutting-edge technological research, Michael Beeck has been a sought-after consultant and expert in forward-looking data center technologies for many years. In this capacity, he supports customers from public authorities and industry in projects and tenders for the modernization of data centers.
Over 30 years of experience with data management and backup/restore technology processes underpin his expertise as a consultant in the field of disaster recovery and emergency processes. As part of such projects, clients are supported and accompanied in the development and implementation of emergency processes as well as recovery and restart strategies following critical failures (e.g., cyber attacks, environmental events, power outages). Support as interim disaster recovery management is also possible.

Expertise

- Disaster recovery strategy consulting
- Disaster recovery interim management
- Cyber attack incident response
- Emergency processes in the data center
- Shutdown and startup processes in the data center (e.g., in the event of a power outage)
- Market analysis, expert opinions, e.g., in the run-up to tenders
- Support for EU-wide IT tenders in accordance with VgV, UVgO
- Industry knowledge of healthcare, VDA, public sector clients,
  clients in internal and external security
- Process understanding in data center operations
- Application of regulatory requirements in data centers
  e.g., ISO 27001, BSI basic protection, GDPR, NIS2, etc.

Project example for the area of
EU-wide tender, direct award, etc.
Public healthcare

Public client, Public Healthcare, Hamburg

Hamburg since 10/2023

Technical support for procurement and tendering procedures for hospital IT operations

- Inventory (actual analysis) of IT infrastructure, IT client operations, IT processes, and IT service operations
- Preparation of decision papers for management on the selection of the best possible procurement procedure (e.g., tender, direct award)
- Preparation of procurement and award notes for time-critical ad hoc procurements, including:
    - Endpoint security (e.g., antivirus, XDR)
    - Upgrade or replacement of EOSL-[1] Hardware (servers, switches)
    - Service quota to support IT staff
- Preparation of recommendations for the optimal tendering procedure.
- Preparation of technical service descriptions, technical support for procedures, including:
    - Framework agreement for Microsoft Enterprise Agreement
    - Framework agreement for workplace hardware, 18,000 employees, €25 million scope (48 months), notebooks, PCs, accessories, mobile devices, etc.
    - Operational support for IT infrastructure operation (service quota, managed monitoring)
    - Operational support for IT end device operation
    - Managed Security Operation Center
    - Clinical software (quality assurance)
    - Clinical software (support for medical staff)
- Development and creation of technical service catalogs ("criteria catalog")
- Technical support for the tendering process with bidder questions, bidder presentations, and selection procedures
- Preparation and support for service acceptance ("acceptance")

Technologies used: Data center processes, IT services, managed services, IT security
Knowledge used: Technical service description (specifications), tendering process, data center processes, high availability, IEC27001, GDPR

[1] End of Service Life – End of manufacturer support, usually no more security updates available

Project example for the area

Managed Services
Primary Storage
Tender support
EU-wide tender

Government agency (finance)

Public contracting authority, Finance & Tax Authority, Nuremberg

Nuremberg, 2023

Technical support and assistance with a Europe-wide tender process for enterprise primary storage

- Development of the service description with a technical service catalog for enterprise primary storage to be procured. Framework agreement over 6 years.
- Development of the service description with a technical service catalog for additionally tendered operational support (managed services).
- Development and description of evaluation criteria.
- Technical support in processing bidder questions.
- Support in the technical evaluation of the bids received.
- The customer provides internal departments with storage services from a highly available multi-site storage environment as storage as a service. The volume amounts to several petabytes.
- Evaluation not only in terms of available solutions and technology. The costs for onboarding and migration were also evaluated from an economic and technical perspective.

Technologies used:

Data center technology, data center processes, enterprise primary storage, block storage technology

Knowledge used:

Storage technology, enterprise data center processes, GDPR, cloud and cloud edge technology, high availability.
Award procedure, VgV

Project example for the area of

Disaster recovery strategy

Industry (HR)

Industry, human resources Service provider > 8,000 employees worldwide, cloud services user, data centers worldwide

Munich, 2021 to 2024

Development of a disaster recovery strategy in the context of business continuity, backup restore, and ransomware protection

- Incident response and analysis after cyber attacks.
- In addition to traditional data center operations, the client is increasingly relying on cloud services (SaaS)
- Evaluating the existing company-wide single sign-on (IAM)
- Evaluating possible strategies and systems for modernizing and expanding the existing single sign-on solution
- Supporting the implementation process (Sailpoint IAM) as part of the DR strategy
- Developing and implementing the DR strategy for company-wide IAM.
- Developing and implementing DR strategies for Salesforce, SAP, and Google Workspace
- Developing, coaching, and onboarding the role of a disaster recovery manager for the company.
- Recording current processes and requirements from the perspective of application operators.
- Recording requirements and specifications in the client's corporate context. In particular, TISAX, ISO/IEC 27001, ITIL V3, SOX/SOA
- Recording and revising concepts for business continuity and disaster recovery
- Reviewing the backup/restore strategies of the respective systems and processes (on premises and cloud).
- Developing a company-wide strategy for disaster recovery.
- Developing the comprehensive DR plan and product-related disaster recovery plans
- Developing the annual testing strategy for the DR plans
- Developing the strategy and processes for emergency operations
- Developing a strategy for damage limitation in the event of cyber attacks, e.g., ransomware protection
- Presentation and discussion of results and proposals in a workshop with decision-makers and senior management

Technologies used: Enterprise backup & recovery, enterprise virtualization, Salesforce, SAP, SAP IAM, Sailpoint, public cloud services (Salesforce, Google, AWS)

Knowledge used: Data center processes, high availability, enterprise identity management, data center outsourcing, cloud technologies, TISAX, GDPR, ISO/IEC27001

Project example for the area of
primary storage
Market report
EU-wide tender

Government agency (finance)

Public client, Finance & Tax Authority, Nuremberg

Nuremberg, 2022/2024

Tender preparation Enterprise primary storage
Market analysis and strategy development in preparation for a tender
Support for a Europe-wide tender process for enterprise primary storage

- Comprehensive market research with strategic assessment and trend analysis in the customer context to prepare for a Europe-wide tender. The report produced forms the basis for the selection of the upcoming award procedure.
- Assessment of market developments and trends in the field of enterprise primary storage systems. In particular, evaluation of all-flash storage and private cloud or cloud-aware offerings.
- The customer provides internal departments with storage services from a highly available multi-site storage environment as storage as a service. The volume amounted to several petabytes.
- Evaluation not only in terms of available solutions and technology. The costs for onboarding and migration were also evaluated from an economic and technical perspective.
- Presentation and discussion of the results and proposals in a workshop with data center managers, decision-makers, and senior management.

Technologies used: Data center technology, enterprise primary storage, block storage technology

Knowledge used: Storage technology, enterprise data center processes, GDPR, cloud and cloud edge technology, high availability.
Procurement procedure, VgV

Project example for the area of

backup/restore technology Market report

Government agency (finance)

Public contracting authority, Finance & Tax Authority, Nuremberg

Nuremberg, 2022

Tender preparation Data management/analytics
Market analysis and strategy development in preparation for a tender

- Comprehensive market research with strategic assessment and trend analysis in the customer context to prepare for a Europe-wide tender. The report produced forms the basis for the selection of the upcoming award procedure.
- Assessment of market developments and trends in the field of enterprise backup/recovery, backup target appliances, and archiving. In particular, evaluation of private cloud and cloud-aware offerings.
- The customer currently operates a multi-site backup environment including WAN replication based on VTL. Front-end backup volume exceeds the peta-byte limit.
- Evaluation not only in terms of available solutions and technology. The costs of onboarding and migration were also evaluated from an economic and technical perspective.
- Presentation and discussion of the results and proposals in a workshop with data center managers, decision-makers, and senior management.

Technologies used: Commvault Simpana, NetApp Storage Grid S3, VMware Virtualization, Data Center Technology, HCI, VTL,

Knowledge used: Backup/recovery, storage technology, GDPR, cloud and cloud edge technology, data center processes, high availability

Project example for the area of

Disaster recovery strategy
Data center strategy

Industry (automotive)

Industry, automotive supplier, >3,000 employees nationwide, >30 data centers nationwide, +10 data centers worldwide, metro cluster

Berlin, since 2021

Assessment and revision of the corporate strategy for disaster recovery and backup/recovery

- Revision of business continuity and disaster recovery plans with the responsible management, operations team, and application managers.
- Revision of processes and requirements based on the adapted specifications from business continuity and disaster recovery.
- Recording of requirements and specifications in the client's corporate context. In particular, TISAX, ISO/IEC 27001, ITIL V3, SOX/SOA
- Exploring optimal solutions for the relevant backup/recovery environment (physical and private cloud).
- Analyzing possible combinations with services from cloud providers for services such as cloud archiving and emergency operation from cloud data centers.
- Planning recommendations for subsequent projects to modernize concepts and procurement.
- Presentation and discussion of the results and proposals in a workshop with decision-makers and senior management.

Technologies used:

Enterprise storage, enterprise backup & recovery, enterprise virtualization, clustered GPFS, private cloud, campus and metro clusters, Symantec Netbackup, Veeam

Knowledge used:

Data center processes, high availability, data center outsourcing, cloud and cloud edge technology, TISAX, GDPR, ISO/IEC27001

Project example for the area of

Overall project management
Data center strategy consulting

Healthcare insurance

Public sector client, healthcare insurance, Hamburg

Hamburg, 2021-2022

Overall project management and strategy consulting Revision and renewal of the central database infrastructure

- Technical consulting on strategy development
- Overall project management on the part of the service provider
- Coordination of sub-projects, manufacturers, suppliers, and stake owners
- Planning and review of performance criteria for the respective milestones
- Project planning and project documentation.
- Project communication

Technologies used :

Oracle Database, Oracle Exadata, Data Center Technology, Oracle Data Guard, Oracle RAC, IBM Tivoli, IBM DB2

Knowledge used :

Data center processes, high availability, Oracle databases, migration**,** Oracle Engineered Systems, IEC27001, GDPR, Prince 2

Project example for the area of
EU-wide tender

Public Healthcare

Public client, public/government healthcare, Berlin

Berlin, 2020

Technical support for tendering process (negotiation procedure) Data management & data analytics

- Development and creation of a service catalog based on a previous market analysis and strategy development
- Technical support for the tendering process with bidder questions, bidder presentations, and selection process
- Preparation of service acceptance

Technologies used:
Oracle Database, Oracle Exadata, data analytics, data center technology

Knowledge used:
Technical service description (specifications), award procedure, data center processes, high availability, Oracle databases, Oracle Engineered Systems, IEC27001, GDPR

Project example for the area of

Data center strategy consulting
Cloud/private cloud strategy

Industry (automotive)

Industry, automotive supplier, >3,000 employees nationwide, >30 data centers nationwide, +10 data centers worldwide, metro cluster

Berlin/Braunschweig, 2020

Assessment of the corporate strategy for central storage services (data center housing, backup/recovery services) and development of recommendations for modernization

- Needs assessment in collaboration with operations teams and application managers.
- Recording of current processes and requirements from the perspective of application operators.
- Recording of requirements and specifications in the client's corporate context. In particular, TISAX, ISO/IEC 27001, ITIL V3, SOX/SOA
- Recording and revising concepts for business continuity and disaster recovery
- Exploration of optimal solutions for the relevant operating and application environments (physical and private cloud).
- Analysis of possible combinations with services from cloud providers for services such as cloud archiving, testing and development, and data analytics.
- Planning recommendations for subsequent projects to modernize concepts and procurement.
- Presentation and discussion of the results and proposals in a workshop with decision-makers and senior management

Technologies used: Enterprise storage, enterprise backup & recovery, enterprise virtualization, clustered GPFS, private cloud, campus and metro clusters, Symantec Netbackup, Veeam

Knowledge used: Data center processes, high availability, data center outsourcing, cloud and cloud edge technologies, TISAX, GDPR, ISO/IEC27001

Project example for the area of
Backup/restore strategy EU-wide tender

Industry (automotive)

Industry, Automotive supplier, > 80,000 employees worldwide, > 80 data centers worldwide, Geo-Cluster

Nuremberg, 2019

Development and implementation of a corporate strategy for backup/recovery in times of agility and cloud

- Needs assessment in collaboration with operations teams and application managers.
- Recording of current processes and requirements from the perspective of application operators.
- Recording requirements from the perspective of the umbrella organization (in this case, VDA) and the Company Information Security and Compliance teams.
- Exploration and evaluation of optimal solutions for the relevant operating and application environments (virtual, physical, and cloud).
- Analysis of possible combinations with services from cloud providers for services such as cloud archiving, testing and development, and data analytics.
- Development of an operating concept for a future backup recovery environment with optimal solutions for different infrastructures.
- Development of a compatible onboarding process for the respective operating and administration teams.
- Preparation of technical documents for an EU-wide procurement procedure.
- Support for the tendering and procurement process.
- Development of test and measurement procedures for PoC and subsequent acceptance of overall performance.
- Presentation and discussion of the results and proposals in a workshop with decision-makers and stakeholders.

Technologies used: Enterprise backup & recovery, enterprise virtualization, enterprise data management, SAP, SAP Hana, HP / MicroFocus Data Protector, Veeam

Knowledge used: Data center processes, high availability, cloud and cloud edge technologies, GDPR, IEC27001, Prince 2

Project example for the area of

Data Management & Analytics Strategy consulting Market reports

Public Healthcare

Public client, Public/Government Healthcare, Berlin,

Berlin, 2019

Tender preparation Data Management/Analytics
Market analysis and strategy development in preparation for a tender

- Comprehensive market research with strategic assessment and trend analysis in the customer context to prepare for a Europe-wide tender. The report produced forms the basis for the selection of the upcoming award procedure.
- Assessment of market developments and trends in the field of Data Management Systems for Analytics (DMSA). In particular, evaluation of cloud and cloud-aware offerings.
- The customer currently uses high-end database systems in its data center. Data volume exceeds the TB limit.
- Evaluation not only in terms of available solutions and technology. The costs of onboarding and migration were also evaluated from an economic and technical perspective.
- Knowledge/products: DMSA (Data Management Systems for Analytics), Oracle Exadata, Redhat Opernshift, Kubernetes
- Presentation and discussion of the results and proposals in a workshop with data center managers, decision-makers, and senior management

Technologies used:

Oracle Database, Oracle Exadata, Data Analytics, Data Center Technology, AWS, Google Cloud, Microsoft Azure, Oracle Cloud, Redhat Openshift, Kubernetes, Pivotal, Greenplum, Amazon Redshift, Google Big Query

Knowledge used:

Databases, big data analytics, GDPR, cloud and cloud edge technologies, high availability, data center processes

Project example for the area of
data management
Strategy Consulting

Healthcare

Industry, healthcare, 2 data centers, cloud services

Düsseldorf, 2019

Next Generation Medical Carts: Development of a strategy for the next generations of ward round and nursing trolleys

- The company already manufactures and sells medical carts with integrated solutions for electronic patient records and documentation
- The addition of IT equipment to such carts is also becoming increasingly common in the medical device market
- Development of strategies to enhance the overall solution in order to obtain or expand unique selling points
- Development of concepts for autonomous small-scale navigation in buildings (e.g., for automated loading in the KKH pharmacy before nursing rounds)
- Testing and evaluating different sensor equipment for advanced data analysis
- Testing and evaluating access and authorization procedures
- Developing suitable approaches for the application infrastructure in the backend (PaaS, SaaS, Function as a Service)
- Research and evaluation of service data centers for the operation of a corresponding application infrastructure

Technologies used: Google Coral, NVIDIA Jetson, Google Big Query

Knowledge used: IOT, big data analytics, GDPR, cloud and cloud edge technologies, data center processes

Project example for the area of

Data center strategy
Cloud/private cloud strategy

Industry (automotive)

Industry, automotive supplier, >80,000 employees worldwide, >80 data centers worldwide, geo-cluster

Nuremberg, 2017–2019

"Virtual Private Cloud": Development of a multi-stage corporate strategy for agile data center operations

- Needs analysis
- Recording of the existing virtualization and storage environment
- Recording existing processes and workarounds
- Recording requirements from the perspective of the parent organization and the customer's company information security and compliance teams.
- Team interviews to record the wishes and concerns of the teams and employees affected.
- Developing possible strategies and defining requirements
  - Reviewing possible solutions on the market and conducting market analysis
    - Compiling a shortlist for a proof of concept (PoC) of the preferred solutions
  - Creating and supporting the tender for the PoC.
  - Performing performance benchmarks in the PoC. The solution determined in the PoC forms the basis of the client's data center strategy for the next 5-7 years
- Challenge:
  - 24-hour operation of a heterogeneous operating environment on a classic virtualization and storage environment (SAN) Connection of global data centers through replication mechanisms
  - Compliance with SLA and compliance requirements
- Development of an overall strategy for data center operations for the next 5-7 years based on the requirements and results of the PoC.
- Identification of standard building blocks for a global data center strategy
- Cross-departmental presentation and discussion of the results and proposals in a workshop with decision-makers and department heads.
- Development of a 3-step plan for implementing the final strategy (SaaS from a virtual private cloud).
- Support and follow-up during the implementation of the 3 stages

Technologies used: Converged infrastructure, hyper-converged infrastructure, enterprise virtualization, cloud orchestration, Linux, Windows, SAP, SAP Hana

Knowledge used: Data center processes, high availability, data center outsourcing, cloud and cloud edge technologies, coaching (onboarding), GDPR, IEC27001, Prince

Project example for the area of

Disaster recovery strategy
Emergency concepts

Industry (automotive)

Industry, automotive supplier, >80,000 employees worldwide, >80 data centers worldwide, geo-cluster

Nuremberg, 2019

Contingency plan and manuals for data center locations

- Project scope: (Customer has approx. 80 data center locations worldwide)
  High-level review of the respective emergency plans and manuals.
  - The customer's team worked with an external service provider to draft plans and manuals for the respective locations
  - Review of the submitted plans and manuals, taking into account company guidelines and specifications
  - Review of the developed processes and procedures for plausibility and compliance
- Challenge
  - Technical procedures are sometimes location-specific and require on-site testing
  - Extensive compliance and SLA requirements
  - Extensive requirements from the umbrella organization (guidelines, escalation management, and reporting obligations)
  - Compliance with corporate guidelines for IT security (CIS) and the requirements of GDPR/DSGVO

Technologies used: Enterprise virtualization, enterprise data management, SAP, SAP Hana
Knowledge used: Data center processes, high availability, GDPR, IEC27001, ITIL 3

Selected lectures and workshops

Munich 2022 **"Ransomware – Script of a cyber attack by the Egregor group"**

- Using increasingly sophisticated methods, attackers often gain "golden keys" in their victims' companies, even though they thought they were safe from such attacks. Ransomware as a Service (RaaS) platforms make it easy even for inexperienced attackers to carry out successful attacks. The damage to victims of "double extortion" attacks exceeded €4 million per attack in 2021.

Leipzig, 2019 **"Killing Storage – Intelligent Edge"**

- Contrary to the predictions of many storage manufacturers, IOT/IIOT is not necessarily developing into the new storage driver in data centers or the cloud, but rather into an independent ecosystem of intelligent sensors and efficient preprocessing. Embedded AI, such as Google's Coral TPUs, is already shifting a large part of the processing and evaluation to the sensors at the point of capture. This makes the transmission or even storage of mass data obsolete.

Munich, 2019 **"IoT, analytics in the cloud, IBM Watson Cognitive"**

- What do big data analytics and the distribution of an electron charge cloud ("tauCam4Life") have in common? Both require a deep understanding of data relationships and algorithms, but also of technical feasibility and economic implementation. The cloud can provide the computing power required for analyzing large amounts of data in an economical way, but often the infrastructure and processes in data centers are not able to use these resources efficiently. What options are available for incorporating the legal framework (e.g., GDPR, compliance) into this?

Munich, 2019 **"Cloud Workshop for IT Decision Makers"**

- A look beyond any product or manufacturer worlds. What does agility mean in the data center and what are the advantages of agile operation? Internal processes, workarounds, and compliance do not necessarily have to argue against a cloud strategy. Which strategies allow for a smooth onboarding of an existing operating team?

Frankfurt, 2019 **"Instant Recovery – Backup as an Infrastructure Service"**

- While backup problems and backup solutions are still being discussed in many places, modern approaches declare backup to be a relic of the past. In times of service-oriented approaches and cloud edge technologies, efficient management of all data copies in the company equally meets the requirements for delay-free recovery and long-term archiving. And this as another service provided by storage infrastructure services.

Munich 2018

"Big Data and the Internet of Things" – Spontaneously networking light bulbs and mega flops the size of a cigarette packet

- Technological approaches and their implementation are already "far out" in the true sense of the word, and not only in the field of autonomous driving. The possible applications of sensors and everyday products that spontaneously network with IPV6 on the Internet are also far out, in the sense of impressive. The sheer volume of data and analysis approaches that result from this are far out, in the sense of difficult to imagine.

Munich, 2018

"Oracle Database Forensics – Preserving Evidence in the Fragments of a Database"

- Databases are the most important lifelines of a company. This makes them a worthwhile target for attacks from within and outside the company. While many attacks can be detected and traced through auditing and logging, attacks by skilled personnel, e.g., from within the company, are problematic. A system could be compromised, but the traces could be manipulated or even eliminated. Here, the analysis very quickly finds itself at the level of blocks, in files or file systems.

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