

GGSC General Presentation

GGSC – German Group for Services & Consultancy
Frankfurt/Germany

Hussain Suliman (Chairman & CEO)

Prof. Dr.-Eng. Hans Georg Reinke Senior Consultant & CEO (Team-Leader – „Reconstruction of Sudan after war“)

Cem Güler (CIO – Chief Information Officer)

The Group

- Founded 30 years ago and has grown from a small local set up to an international firm
- Operating in African & European Markets
 - Head Office in Frankfurt Germany
 - Offices: Dubai/UAE, Khartoum/Sudan, Izmir/Turkey, Doha/Qatar, Sierra Leone and Chennai/India
 - Joint Ventures:
 - German HealthCare: Medical IT & Technology
 - medasol: Bio Medical & Hospital Operation Management
 - getucon: Technology Consultancy
- Thanks its end-to-end work approach and world - wide partnership ecosystem, GGSC completed diverse projects in different industries



Prof. Dr. Reinke (Senior Consultant & CEO) **Mr. Suliman** (Chairman & CEO)



Metering System for Petrodar Sudan



Bridge Construction



Intersection Road



GGSC Project Meeting

Chairman Mr. Hussain Suliman

- Mr. Hussain Suliman is Chairman of the German Group for Services and Consulting "GGSC" and has 35 years of international business experience and strong relationships in a different field and sector with manufacturing companies and corporations as well as government institutions, chamber of commerce – Frankfurt/Germany (IHK) and decision makers worldwide.
- **GGSC German Group for Services & Consultancy** is a Group comprises several limited companies. It is registered in Frankfurt/M, Germany under the German Law.

GGSC, GICT, AEM (Dubai), GGSC Competence (India), GGSC WSI International (Sudan), German Qatari Group (Qatar), getucon (Turkey) the Group has grown substantially from a small set up to international companies during thirty five (35) years old.



Mr. Suliman – Headquarter in Germany Frankfurt

Prof. Dr. Hans Georg Reinke

- **Senior Consultant & CEO – Team-Leader**
- **Prof. of Structural Engineering Frankfurt University of Applied Sciences**
- **Partner of More than 35 years of professional Werner Sobek Engineering Frankfurt**
- **International experience in Engineering**



Prof. Hans Reinke

Curriculum Vitae

1952	Born in Frankfurt/Germany
1972 – 1977	Civil engineering studies at the University of Karlsruhe/Germany and University of Stuttgart/Germany
1977 – 1979	Employee in the engineering office BGS, Frankfurt/Germany
1979 – 1984	post-graduate fellow of Prof. Dr.-Ing. Jörg Schlaich at the Institute for Concrete Construction of the University of Stuttgart/Germany
1984 – 1990	Senior Engineer in the office of Harries & Kinkel, Neu-Isenburg/Germany
1986	PhD in civil engineering at the University of Stuttgart/Germany
1991 – 2001	Partner in the office of Hock & Reinke, Haibach/Germany
since 1991	Professor at Frankfurt University of Applied Sciences, Frankfurt/Germany
1993 - 2022	Proof engineer for structures and materials
1996 - 2022	Proof engineer of the national railway authority
since 2001	Senior Consultant & CEO
since 2005	Shareholder GGSC WSI International & Team Leader Sudan: Infrastructure Projects in Khatoum State (21 Intersections)
since 2023	Team-Leader – „Reconstruction of Sudan after war“

Cem Güler

- Chief Information Officer (CIO)
- 15 years of experience in Technology Consultancy
- Extensive experience as Team-Leader in Project Management
- International experience in Requirements Engineering & Delivery Management



Cem Güler - Chief Information Officer (CIO)

Profile	
Activity	CIO / Senior Consultant for Datacenter Solutions
Range of applications	Project management, business analyst, product owner, scrum master, business process analysis, modeling and reengineering, requirements analysis, robotic process automation (RPA), innovation management, EU tenders, IT outsourcing, sourcing strategy, tenders, contract negotiation, transition, transformation, cloud, IT Infrastructure, AWS, Presentation and communication, Strategic planning, Business development, Design Thinking

Brief portrait
Extensive experience as a project manager, requirements engineer and delivery manager in classic and agile Datacenter, Digitalization and Data Archiving projects, cloud, IT & Telecommunication

Knowledge	
Industry knowledge	<ul style="list-style-type: none"> • Ministries • Banks • Chemie • Logistics and forwarding • Airports • E-Commerce • Education • IT & Telecommunication
Technical knowledge	Cloud, AWS, Azure, firewall, IT security, UCC, VoIP, WAN, VLAN, MPLS, DWDM, dark fiber, data center management, backup & disaster recovery
SAP	certified in SAP ERP TERP1 integrated business processes
SAP development	Certified in SAP Development "SAP Fundamentals, ABAP, Web DynPro"

Profile of GGSC

- General Consultant for Ministries (PR - Contacts with German Government, European Authorities, Chamber of Commerce – „IHK“, Banks & Development Institution) and Joint Venture and sole agent for European, Asian and USA Companies.
- General Contractor & Turnkey Projects (Infrastructure, Healthcare, Mining, Oil & Gas, Agriculture, Education, IT, Vocational Training, Digitalization, Datacenter)
- All kinds of Machineries & Equipments
- Digitalization (E-Government)
- Datacenter
- IT-Infrastructure
- Fiber & Network Solutions
- IT-Network Security
- Telecommunication
- Hardware
- Software & Licences
- Project Engineering (Outsourcing)

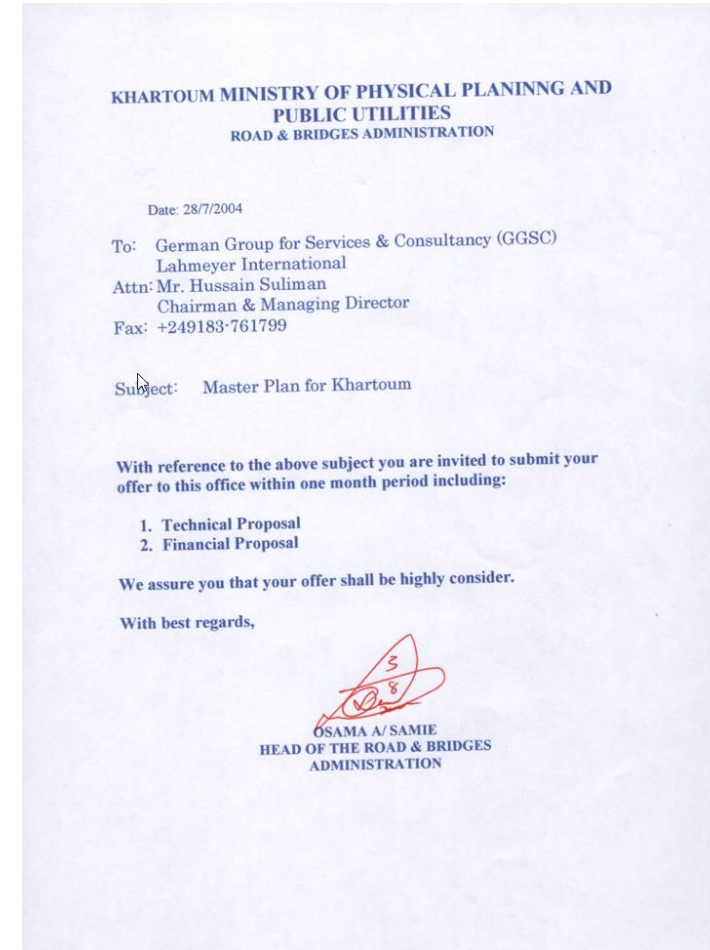
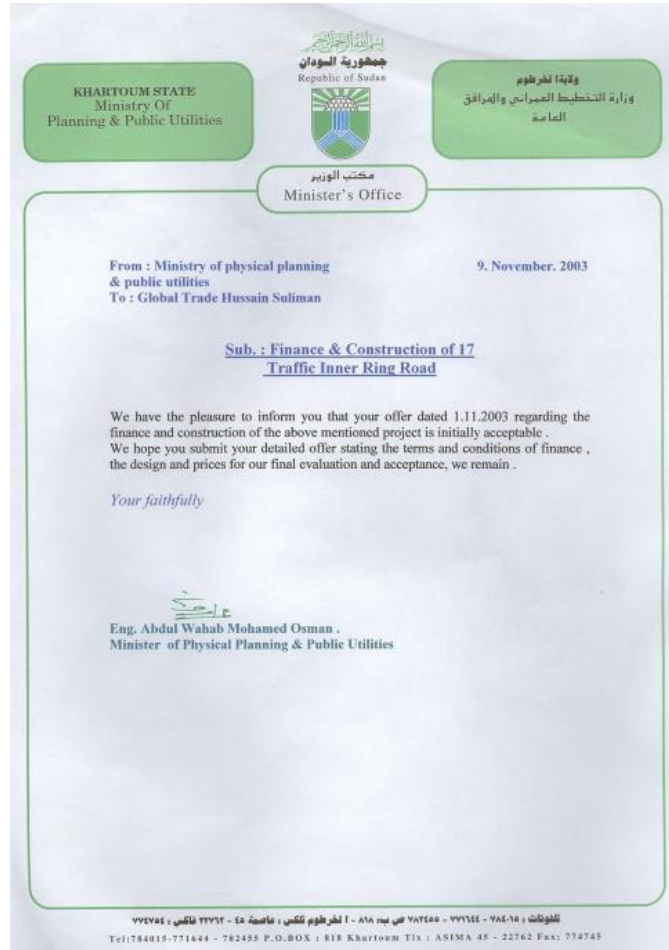
Profile of GGSC

- Infrastructure: Road, Bridges & Highrise Bulidings
- Health: Hospitals
- Education
- Information Technology: Digitalization & E-Goverment, Datacenter & Telecommunications
- Energy & Renewable Energy
- Mining
- Agriculture
- Livestock
- Oil & Gas
- Banking Systeme & Training
- Finance

City of Frankfurt – Frankfurt University of Applied Sciences



Ring Road Projekt Khartoum



Projekt Sierra Leone



Petroleum Directorate
Office of the President
Government of Sierra Leone
20 Mandalay Street, Kingtom - Freetown
Tel: 232-22-222714; Fax: 232-22-221105
E-mail: info@pd-sl.com

12th September, 2019

Mr. Hussain Suliman
Chairman
Prof. Dr. Hans Reinke
CEO
Global Group for Services & Consultancy GmbH
Riedhofweg 23 Hinterhaus
60596 Frankfurt, Germany

Dear Sirs,

Letter of Invitation- Global Group for Services & Consultancy GmbH

I am acknowledging receipt of the email introduction of your company sent to the Petroleum Directorate (PD) of the Republic of Sierra Leone by Barrister Ibrahim Kanu of IBSA Holdings SL Ltd.

The PD therefore, presents its compliments to Global Group for Services & Consultancy GmbH (GGSC), and has the honour to convey that being mindful of its generic goal of delivering socio-economic development to its people, the Government of the Republic of Sierra Leone under the new dispensation is desirous of maximising the beneficial outcomes of its extractive resources through the creation of dependable partnerships and attraction and retention of reputable oil and gas exploration entities as Global Group for Services & Consultancy GmbH.

In light of the above, I wish to extend an invitation to your organization to visit Sierra Leone and engender discussions on the country's upstream opportunities. The honouring of this invitation is anchored upon your earliest available and convenient time.

May I further use this time to reiterate that we currently have the entire basin of Sierra Leone open for licensing under the Sierra Leone fourth Petroleum Licensing round, and that the entire basin has significant quantities of quality 2-D and 3-D seismic, and/or well data as the case may be, with surface areas ranging between at least 5000 km² and 7500km². Please note that we are set to respond to your enquiries either by ourselves or through our London-based technical partner, Getech.

We also hope to release onshore acreage immediately the necessary legislative framework has been passed hopefully by the first half of next year. For these, we have extensive aeromagnetic data coverage.

Whilst waiting to hear from you at your earliest convenience, may I avail myself of this opportunity to engage Global Group for Services & Consultancy GmbH.

Please kindly accept assurances of our highest esteem and consideration.

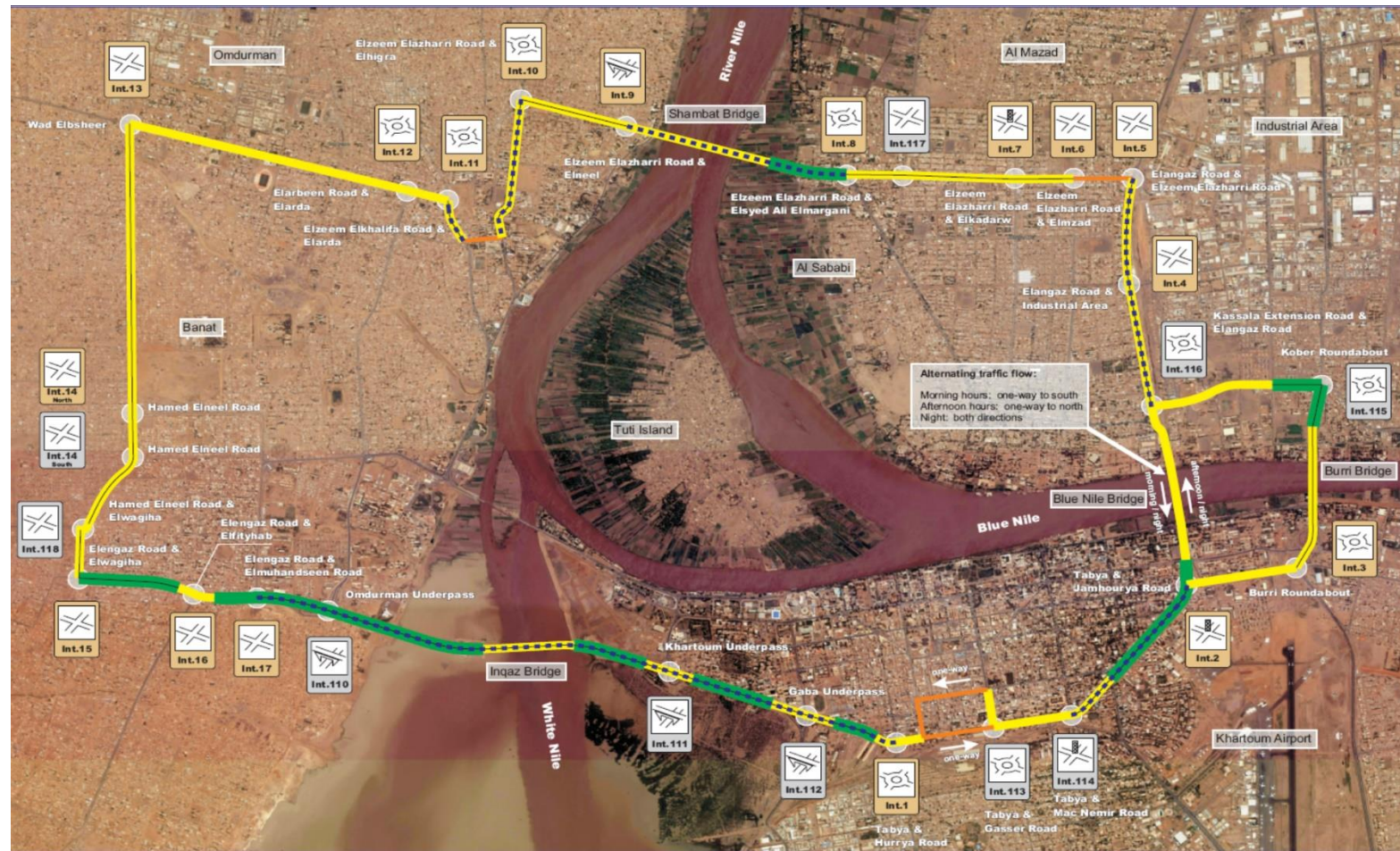
Sincerely

Timothy M. Kabba
Director General

Copy: Barrister Ibrahim Kanu

IBSA Holdings SL Limited

Infrastructure: Ring Road Khartoum



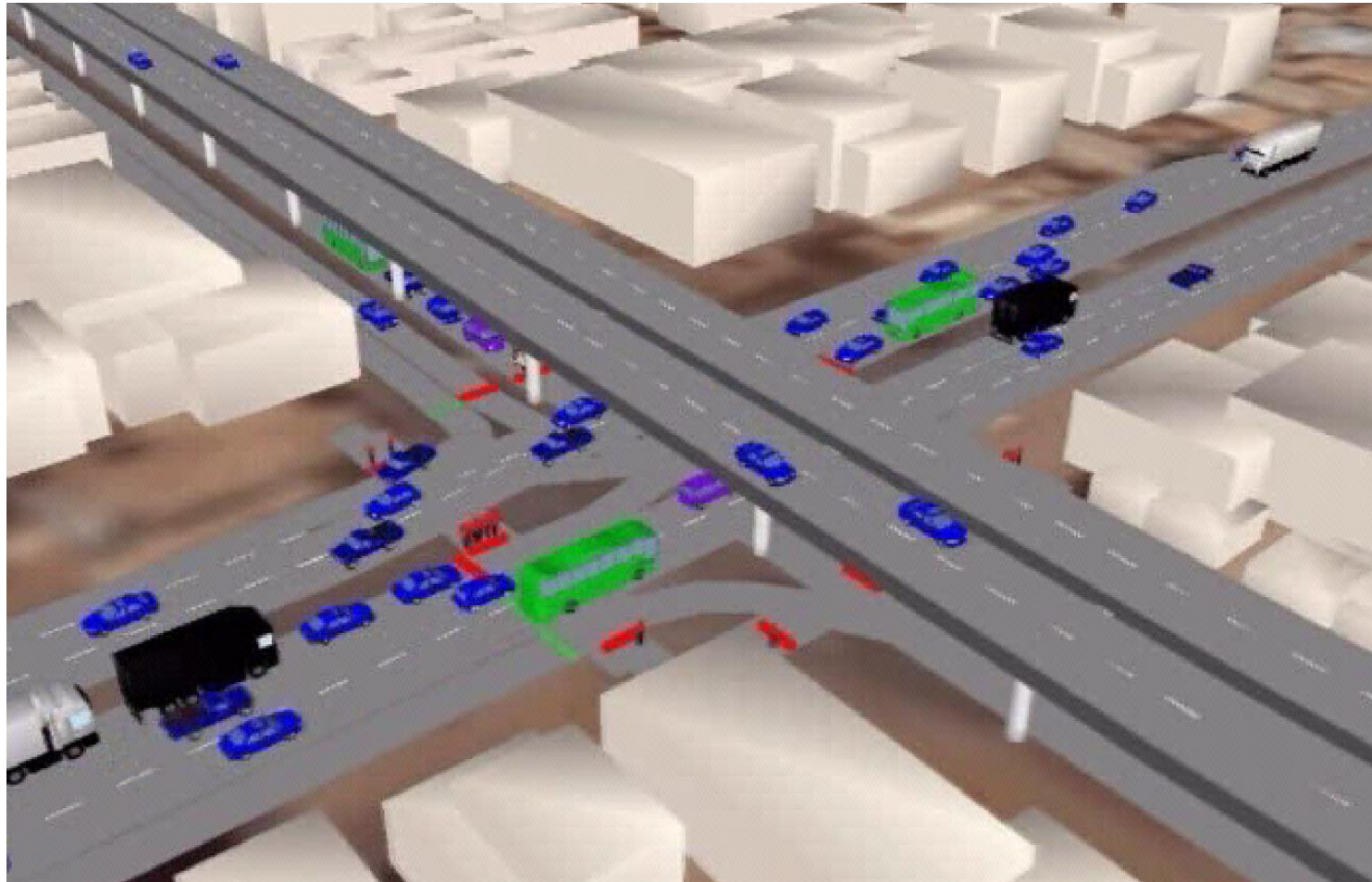
Fly over



Intersections



Traffic Studies with Computer Models



Cement factory in Qatar



Cement factory in Qatar



**Mr. Dozen (GGSC), Mr. Saikumar (GGSC PMO),
Dr. Omer Yagi (GM GCC)**



Kick-Off Meeting in Doha



Mr. Suliman (GGSC), Dr. Omer Yagi (GM GCC)



Cement factory in Qatar



Gulf Cement Factory Construction Site in Doha



Gulf Cement Factory Mainframe in Doha



Gulf Cement Factory Mainframe in Doha



Bangkok Airport Thailand

Lufthansa Aviation Center Frankfurt/Deutschland



High-rise Buildings FOUR Frankfurt/Deutschland



Services

Architecture
Urban planning
Mobility
Landscape Architecture
Mega events
Regional planning
Airport planning
Legal site planning
Process management

Projects

Highlights;
Architecture
Urban planning
Mobility
Landscape Architecture
Mega events
Regional planning
Airport planning
Legal site planning
Process management

Projects



Mohammed Bin Salman Nonprofit City General Master Plan

Riyadh, 2018 - 2020

Elaboration of AS+P's winning competition entry for a 344-ha site in Riyadh. The design takes its cue from a human scale while combining key aspects of sustainable urban planning. The features include keeping key facilities and utilities within walking district, mixed usages, and an integrated and resilient infrastructure

Projects

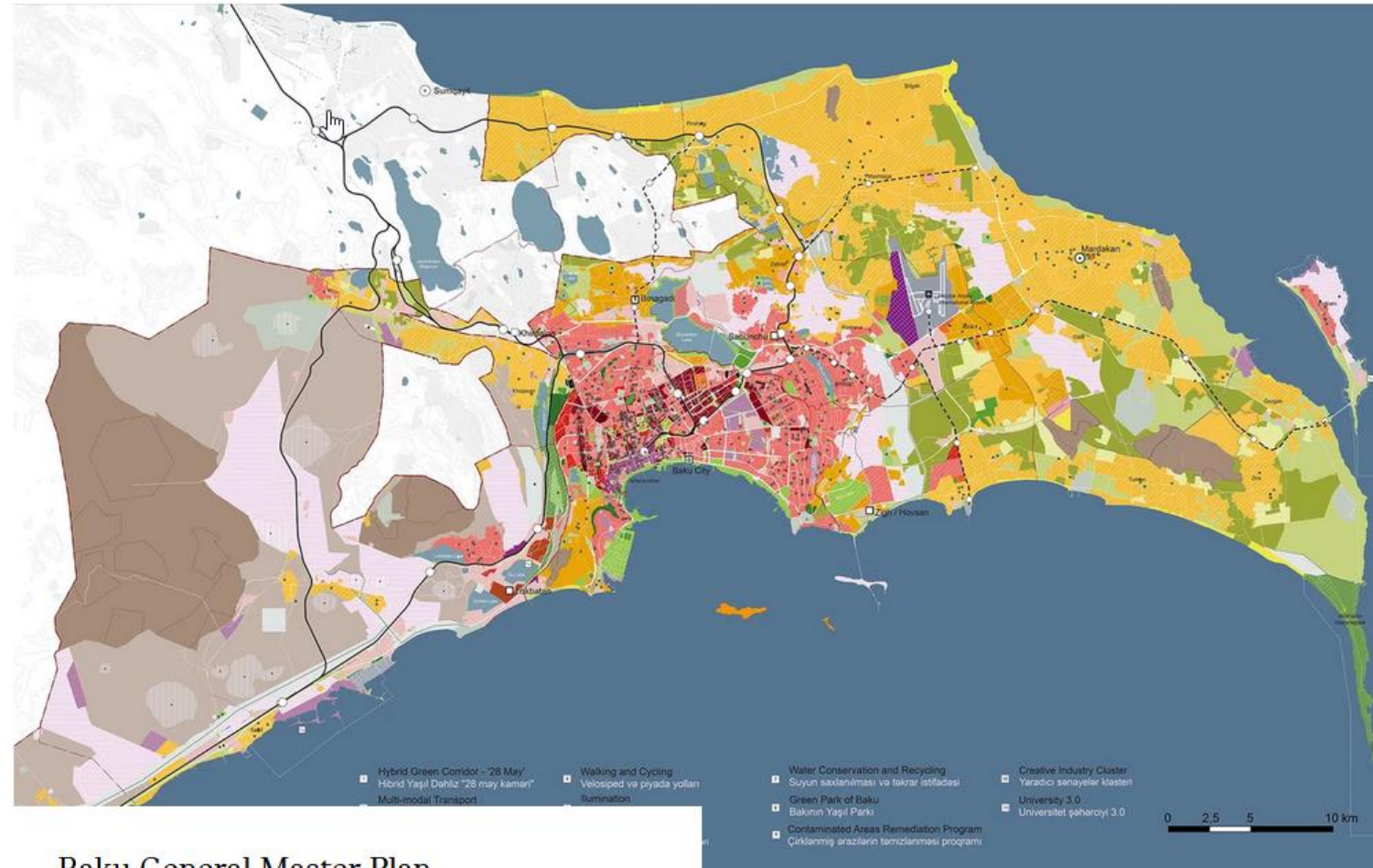


Urban Master Planning Frankfurt Westside

Frankfurt/Main, since 2020

Concept and development strategy for the grounds of the former Griesheim industrial estate as the basis for the urban planning and functional implementation of Frankfurt's largest commercial development zone

Projects



Baku General Master Plan

Baku, 2019 - 2021

The strategic document, integrating all major aspects such as land use, urban zoning and form, transportation, utility infrastructure, ecology and urban economy in form of one plan, is an important step to guide the future regional and urban development for the City of Baku

Projects



Integrated Planning Badya City

Cairo, 2016 - 2019

Integrated planning of a complete mixed-use development: AS+P developed the master plan for 150,000 inhabitants and the architectural design of more than 3,000 units to launch the project. Winner of the Iconic Award 2019 and German Design Award 2020



German Group for Services & Consultancy

**YOUR SOLUTION PARTNER
FOR TURN-KEY PROJECTS**



Area of Expertise

Engineering Services

Turn-key Engineering Solutions from construction to performance management



Construction

We offers services for design, construction and reconstruction of buildings. These include roads, highways, bridges, railways, airports, powerplant construction, hospital engineering, office buildings, healthcare properties, sports and cultural facilities.



Civil Engineering

Our Services includes:
Planning
Design

- Geotechnical engineering
- Structural engineering
- Hydraulic engineering
- Traffic engineering
- Electrical engineering
- Highway engineering

Construction
Completion/Project Close-out and Handover



Drywall

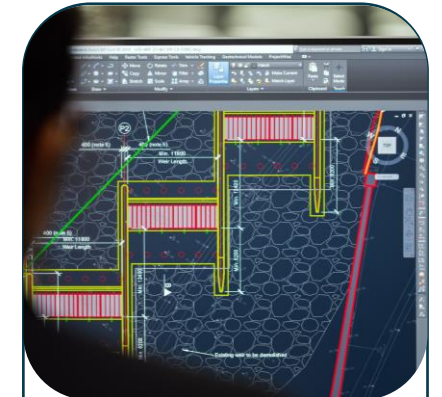
Range of our services

- Light partitions
- False ceilings,
- Wooden ceiling
- Plasterboard cladding
- Fire protection panels
- Individual attic conversion
- Insulation
- Old building renovation
- Floor covering
- Intermediate floors
- Dry screeds



Mechanical & Electrical

Our contracting division provides turn-key project implementation for residential spaces as well as office buildings, production plants, hospitals, commercial and public facilities. We provide one-stop solution to our clients by managing all building systems including SCADA, fire protection & detection, security and access systems and CCTV as well.



Industrial Engineering

We help our clients in the planning, design and implementation of improvements in manufacturing, distribution and engineering. We see integration as the key to success in operations improvement. We help our clients to integrate improvements in strategy, process, organization, information, physical facilities and performance measurements

Area of Expertise

Information & Technology Services

State of art technology capabilities from IT infrastructure to automation



IT & Cloud Infrastructure

Our IT Infrastructure solutions cover all components required to operate and manage IT environments. Our solutions includes Data Center, Cloud, Back-Up and Data Recovery, Cyber Security, Hardware, Mail Server, Logging, Routers, Switches, Networking, Connectivity, API Management and Cloud Infrastructure .



Software Development

We offer tailor made software development for your organization's need. As GGSC software development is not just about coding, we combine coding, design and functionality in a compact form. Our software development line is grouped in 3 main categories Web App, Mobile App and Enterprise Applications.



Digitization & Automation

Our services ranges from implementation of PLC, SCADA for industrial plants. We help our client at design and implement digital solutions as well as choose right technology solution providers. GGSC has hand on experience digitization of public sector such as e-government and distance learning

Area of Expertise

Health Care

End-to-end project delivery including operation and maintenance



Hospital Engineering

GGSC & Partners Biomedical and Health Care services has expanded over the years thanks to scientific and technological advances. At present, we are turn-key solution partner of health care industry.



Medical Supply

GGSC & Partners are turn-key solution partner of health care industry. We are provider of medical equipments such as: Vital Signs Monitoring Systems, Diagnostic Devices X-Rays, Health Support Devices, Ultrasounds and Magnetic Resonance Medical Furniture, Hospital Waste Treatment Solutions, Fire Detection System



Medical Treatment, Trousim, Patient Transfer & Doctor Exchange

GGSC & Partners are in collaboration with leading private and university hospitals and offers effective medical programs in every field of medicine. Our services include also:

- Medical Tourism and Patient Transfer
- Relocation Services for Health Care Professionals

Area of Expertise

Oil & Gas, Energy & Mining

Next Generation Solutions



Oil & Gas

Engineering

Providing all of the engineering and design services required for the implementation of projects

Production

Offering in engineering and supplying custom-designed and modularized oil/gas treatment equipment.

Plant Solution

Our manufacturing capabilities with our own modern fabrication facility, we offer full integrated solutions.



Renewable Energy

Our well established capabilities and partnership ecosystem allows us provide range of services. Our managed services coverage range from IT as a service such as network, application, infrastructure and security management to technical operational maintenance and ground services for airports administration.



Mining

Engineering

Providing all of the engineering and design services required for the implementation of projects

Geotechnic

Providing tailor-made, innovative geotechnical solutions

Exploration

Searching for energy resources and valuable minerals, with solid expertise and state-of-the-art technology

Area of Expertise

Professional Services

End-to-end project delivery including operation and maintenance



Facility Services

Our integrated facility management solutions comprise of cleaning, security, prevention systems, fire detection systems, access systems, CCTV, maintenance, catering and workplace solutions as well as occupational health and safety. Our services include risk assessment, monitoring, training as well as accreditation



Managed Services

Our well established capabilities and partnership ecosystem allows us provide range of services. Our managed services coverage range from IT as a service such as network, application, infrastructure and security management to technical operational maintenance and ground services for airports administration.



Investo Immigration Services

We provide immigration and settlement services to Germany both individuals and investors. We handle all process starting from the initial evaluation of your profile, to preparing and submitting your file and finally to assist you in meeting all the mandatory requirements to qualify immigration and settlement by working with expert lawyers in field of immigration.



General Trading

As GGSC, our turn-key delivery approach necessitates to complete your value chain. To this end we either directly or through our partners provide all necessary goods; including raw materials, semi-products and final goods and installation, commissioning and training of these equipment and materials as well

Line of Expertise

Industry Specific Solutions & Services

Tailored Solutions and Personalised Attention



GGSC & Partners provide turn-key construction services from design to construction. GGSC have long standing experience in:

- **Roads, Bridges, Intersections, Hospital, Cultural Facilities**
- **Rail Systems, Airport, Sea Transition, Natural Gas and Petroleum Pipe Line, Mine Construction as well.**
- **Power Plants, Commercial Areas, Office Buildings**
- Fabrication and installation of **Drywalls**



GGSC & Partners offer turn-key project delivery for aviation, airport and transportation industry for construction:

- **Runways, Terminals and Parking Structure**
- Supply of aviation equipment: **X-Ray Machines, Lightning Systems**
- **Ground Services** as managed service



GGSC & Partners provides end-to-end turn-key IT solutions:

- **Data Center, Custom Software, Cyber Security, Internet Systems, Switches, Routers**

GGSC has also in depth experience in construction and maintenance of telecommunication infrastructure:

- **Copper, Metro and Backbone Fiber Optic Networks (FTTx, MPLS, all IP networks)**

Line of Expertise

Industry Specific Solutions & Services

Tailored Solutions and Personalised Attention



GGSC & Partners provide full spectrum of turn-key energy solutions. Our core competencies:

- **Energy Power Plant, Generators and UPS**
- **Solar Energy, Solar-Powered Irrigation**
- **Off and On-Grid Solutions**



GGSC & Partner offers turn-key solution for oil and gas fields. Our services include fabrication of components, design and supply of:

- **Flare Systems, Process Units and NGL Units, Low Temperature and Cryogenic Tanks**

We also provide interdisciplinary services for Oil & Gas industry:

- **Geophysical Data, Seismic Surveys, 3D Geological Modelling and VSP**



GGSC & Partners offer turn-key mining industry services including:

- **Gold and Mineral Exploration, Mine Design and Planning, Feasibility Acquisition, Compilation, Processing, Analysis and the Interpretation of Geophysical Data**
- Advanced Operational Services: **Surface Geophysical and Borehole Logging**

Line of Expertise

Industry Specific Solutions & Services

Tailored Solutions and Personalised Attention



GGSC & Partners provide turn-key project delivery for agri industry including:

- Setting up Irrigation, Drainage and Dripping Systems
- Providing **Organic, n-p-k Liquid Fertilizer, Liquid Subsoil Fertilizer, Foliar Fertilizers, Plant Nutrition and Maintenance Fertilizers, Urea**
- Fabrication and Installation of **Silos**
- Providing **Natural and Synthetic Turf Pitches** for sport areas.



GGSC & Partners provide turn-key services for education institutions:

- **Construction of Educational Facilities, Hardware and Software Interactive Boards, Tablet and Computer Sets and LMS and CMS** for distance learning.

GGSC education solution covers technical teaching and research equipment

- **Physics to Mechanical and Thermodynamics to Biomedical Engineering**



GGSC & Partners are turn-key solution partner of health care industry. We are provider of medical equipments such as:

- **Vital Signs Monitoring Systems, Diagnostic Devices X-Rays, Health Support Devices, Ultrasounds and Magnetic Resonance Medical Furniture, Hospital Waste Treatment Solutions, Fire Detection System**

Line of Expertise

Industry Specific Solutions & Services

Tailored Solutions and Personalised Attention



GGSC & Partners are in collaboration with leading private and university hospitals and offers effective medical programs in every field of medicine. Our services include also:

- **Medical Tourism and Patient Transfer**
- **Relocation Services for Health Care Professionals**



GGSC & Partners are in collaboration with financial institutions world-wide including **commercial & corporate banks, investment companies, private equities** and **development banks** for **trade and project financing** to facilitate funding of mega project like infrastructure, industrial and public projects as well as international trade

Products & Solutions

Construction



Bridge



Cement Factory



Bridge



Cement Factory

Products & Solutions

Construction



Drywall Construction



Intersection



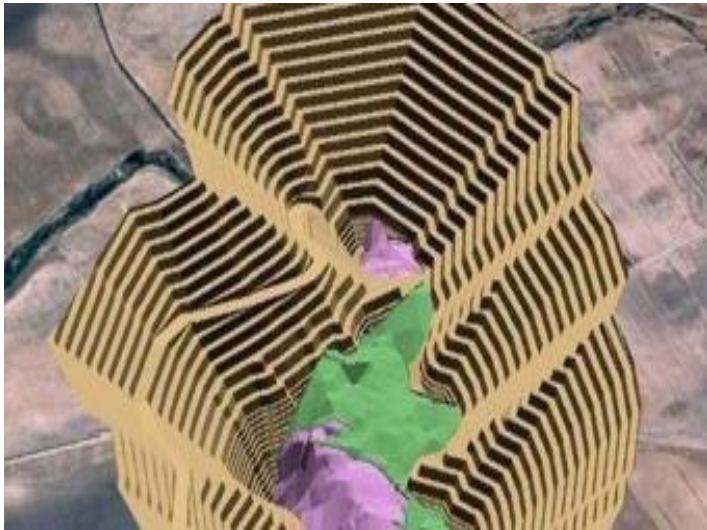
Drywall Construction



Intersection

Products & Solutions

Engineering



Mine Design Software



Mine Design in Application



Biomedical Engineering

Products & Solutions

Renewable Energy



Easy-to-Install Solar Panels



Solar Powered Fountain System



Solar Energy Application



Solar Powered Fountain System

Products & Solutions

Medical Technology



Operation Room Design



Life Support Unit



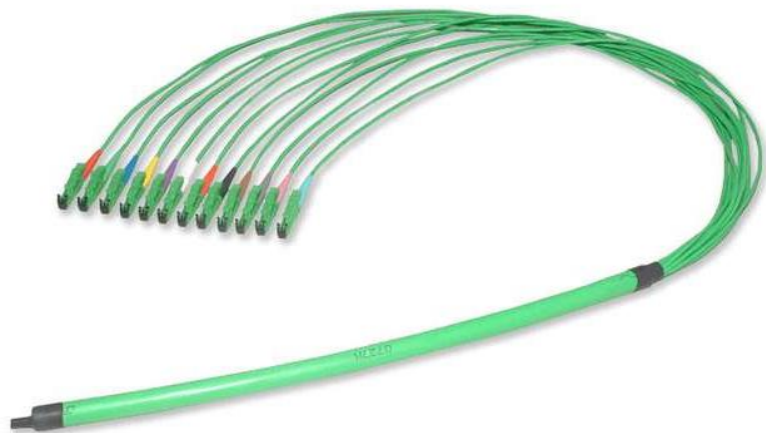
MRT Installation



Ventilation device

Products & Solutions

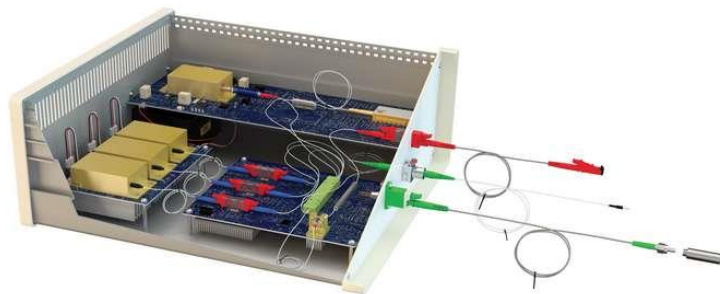
IT & Telecom



Break-Out Assemblies



Video Inspection



Connector



X-Beam Connector

Products & Solutions

Oil & Gas



Metering System – Bashair / Port Sudan



Plant Control System Infrastructure



Sampling Fats Loop



SCADA used for Process Control

Products & Solutions

Oil & Gas



Metering System – Bashair / Port Sudan
Certificate of Provisional Acceptance

PETRODAR OPERATING COMPANY
Almugan District – Petrodar Tower
P.O. Box 11778, Khartoum, Sudan,
Tel: +249 183 790501 Fax: +249 183 790550
Email: petrodar@petrodar.com
Website: <http://www.petrodar.com>



COMPLETION & COMMISSIONING OF MARINE TERMINAL METERING STATION

Contract No.: PDOC/31/14-1304

Between

Petrodar Operating Company (PDOC)

AND

German Group for Services & Consultancy (GGSC)

Certificate of Provisional Acceptance

In accordance with article 12.3 General Condition of CONTRACT, the OWNER hereby Issues this Certificate for the following work to CONTRACTOR.

COMPLETION & COMMISSIONING OF MARINE TERMINAL METERING STATION

This Certificate shall be effective from August 31st, 2017

Nothing contained in this Certificate shall be construed as relieving the CONTRACTOR of its obligations under the CONTRACT.

Issued By:

Agreed and accepted By:

Petrodar Operating Company

German Group for Services & Consultancy

Signature : 

Signature : 

Name : Khalid Sobhi

Name : Suliman

Designation : Project Manager

Designation : CEO

Date : 31-8-2017

Date : 31-8-2017

Completed Projects

Infrastructure: Intersections Ring Raod Khartoum



Project Description

- The existing Inner Ring Road of Khartoum with a length of 35km will be reorganised to cover future traffic development.
- 21 main intersections shall be demerged with bridges & tunnels.
- The project comprises field investigations, survey works, a traffic survey, geotechnical investigations, conceptual and structural design.

Client Khartoum State

Location Khartoum / Sudan

Year 2008-2010

Budget 170,000,000 US\$

Completed Projects (GGSC-WSI Consulting Partnership)

Structural Engineering: Pedestrian and Bicycle Bridge over River Rhine



Project Description

- The bridge is a very slender steel construction suspended by two pylons.
- There are two lanes, a flat one for the cyclists spans 390 m and a vertically curved one for pedestrians with a span of 275 m. Both lanes are connected to each other in mid-span and form a platform with 100 m². The bridge is suspended with 72 cables from the both 40 m high pylons

Client City of Kehl/Germany

Location Kehl/Germany

Year 2001 – 2003

Budget 10,000,000 €



Completed Projects (GGSC-WSI Consulting Partnership)

Lufthansa headquarters in Frankfurt/Germany



Project Description

- The comb-shaped structure consists of ten 'fingers' and provides accommodation for 1650 staff. The fingers of the building are roofed by double-curved reinforced concrete shells
- To achieve maximum transparency, the external façade of each atrium is designed as a cable façade whose only load-bearing elements are vertically tensioned cables.
- Point-mounted glass panels are fixed between these cables. The façade sections which may be up to 25 meters high, can be deflected by up to 400 mm under wind load

Client Deutsche Lufthansa AG, Frankfurt/Germany

Location Frankfurt/Germany

Year 2001-2005

Budget 169,000,000 €

Completed Projects (GGSC-WSI Consulting Partnership)

Gas Turbine Plant Jamshoro/Pakistan



Project Description	<ul style="list-style-type: none">• For the gas turbine plant Jamshoro in Pakistan, technical support was given for the dynamic analyses
Client	Lahmeyer International, Bad Vilbel/Germany
Location	Jamshoro/Pakistan
Year	1988

Completed Projects

Acid facility Capro Leuna, Leuna/Germany



Project Description

- On-site construction management and expert tasks for the evaluation of surface damages of an acid facility within the industrial facility Capro Leuna.

Client Lurgi AG, Frankfurt/Germany

Location Leuna/Germany

Year 1996 - 1998

Completed Projects (GGSC-WSI Consulting Partnership)

Structural Engineering & Facades: New Mercedes-Benz Museum



Project Description

- Wide spanning structure in reinforced concrete with three-dimensional elements (Twist, Myth Ramp).
- Steel compound floor slabs and columns on 8 levels which form a double helix from level 2 upwards.
- The floor slabs span up to 30 m without columns.

Client Daimler Chrysler Immobilien GmbH, Berlin/Germany

Location Berlin/Germany

Year 2004-2006

Budget 72,000,000 €



Completed Projects

Structural & Civil Engineering: Cement Plant



Project Description	<ul style="list-style-type: none">• Structural & Civil review services for drawings and calculations, Quality assurance plan, Site supervision services
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Client	Gulf Cement Company, Qatar
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Location	Qatar
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Year	
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Budget	250,000,000 US\$
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Completed Projects (GGSC-WSI Consulting Partnership)

Full Engineering: Cologne-Bonn Airport/Germany



Project Description	<ul style="list-style-type: none">• Full engineering service except site observation for structural engineering of facades and special structures, steel structures for multistory car park
Client	Cologne-Bonn Airport/Germany
Location	Germany
Year	1998-2000
Budget	256,000,000 €

Completed Projects (GGSC-WSI Consulting Partnership)

Full Engineering: Bangkok International Airport



Project Description	<ul style="list-style-type: none">• Full engineering service for structural engineering of loadbearing structure, facades, special structures and interior
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Client	New Bangkok International Airport Co. Ltd./Thailand
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Location	Thailand
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Year	2001-2006
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Budget	2,045,000,000 €
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ONE STOP IT & TELECOMMUNICATION SOLUTIONS



German Group for Services & Consultancy

What We Do

In-Nutshell

We provide end-to-end Telecom solution from software development to network infrastructure



Custom Applications

- We offer tailor made software applications for Telecom industry ranging from CRM to Modern Work Place Solutions
- Our software development line is grouped in 3 main categories Web App, Mobile App and Enterprise Applications.



IT Infrastructure

- Our IT Infrastructure solutions cover all components required to operate and manage IT environments.
- Our solutions includes Data Center, Cloud, Back-Up and Data Recovery, Cyber Security, Networking, Connectivity, API Management and Cloud Infrastructure .

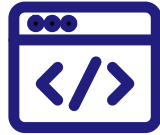


Fiber Solutions

- We are partnering leading fiber optic solution provider to offer services across industries ranging form telecom to medical industry

Line of Expertise

Custom Software Solution



Custom Software Solutions

We develop custom software for based on your requirements: digital channels to reach customer, faster and resilient processes or to meet regulatory requirements



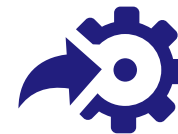
ERP & CRM Solutions

We develop ERP and CRM solution either by module or as full fledged solution based on requirement of our client across different platform as mobile, web and desktop application



Mobile Application

We develop mobile application solutions for IOS and Android clients. Our mobile app capabilities allow us deploy any kind of desktop and web application as mobile solution



System Integration

We help our clients at integrating different application for convenient automated and seamless process flow and eventually optimized business results

Line of Expertise

IT & Cloud Infrastructure



Data Center

Data Center solutions rely on a network of computing and a storage that enables distribution of shared application and data



Data Back-up & Recovery

The data stored reliably is protected by such systems in case of computer or server malfunctions on the disk, application errors, virus infection, loss of data files or completely user faulty malfunctions.



Cyber Security

Cyber Security is the necessary measures and measures taken to protect vital information, to ensure its integrity and to ensure that it is accessible and accessible.



Logging Solutions

It allows you to easily analyze and report in case of any problem by monitoring the traffic on your network regardless of the number and characteristics of the platforms used.

Line of Expertise

IT & Cloud Infrastructure



Software & Hardware

We undertake all the procedures for the detection, preparation, purchase or production of the electronic devices and software that your company needs, and the installation and delivery.



Data Archiving

Data Archiving is a solution for long-term data retention. The Archive is a set of historical records kept for long-term storage and used for future reference. Typically, archives contain data that is not actively used.



Mail Server Solutions

Many people use Internet-based mail clients such as Microsoft, Yandex or Gmail. However, those who need a large area, especially businesses, should invest in their own mail servers.



VPN Solutions

Virtual private network, Internet technology that enables to connect to different networks through remote access.

Line of Expertise

Industry Solutions



Network Solutions

Taking necessary precautions for safe operation of long distance networks, etc. services. We perform Server Installation and Configuration services



Telephony Switchboard

Thanks to IVR-CRM Integration, it allows you to apply special scenarios to the number in your new generation virtual telephone exchanges



Server Systems

A client-server structure is often used in an internal company network. A central server provides services for many clients. File Server, Terminal Server and Cloud Servers are the most common ones



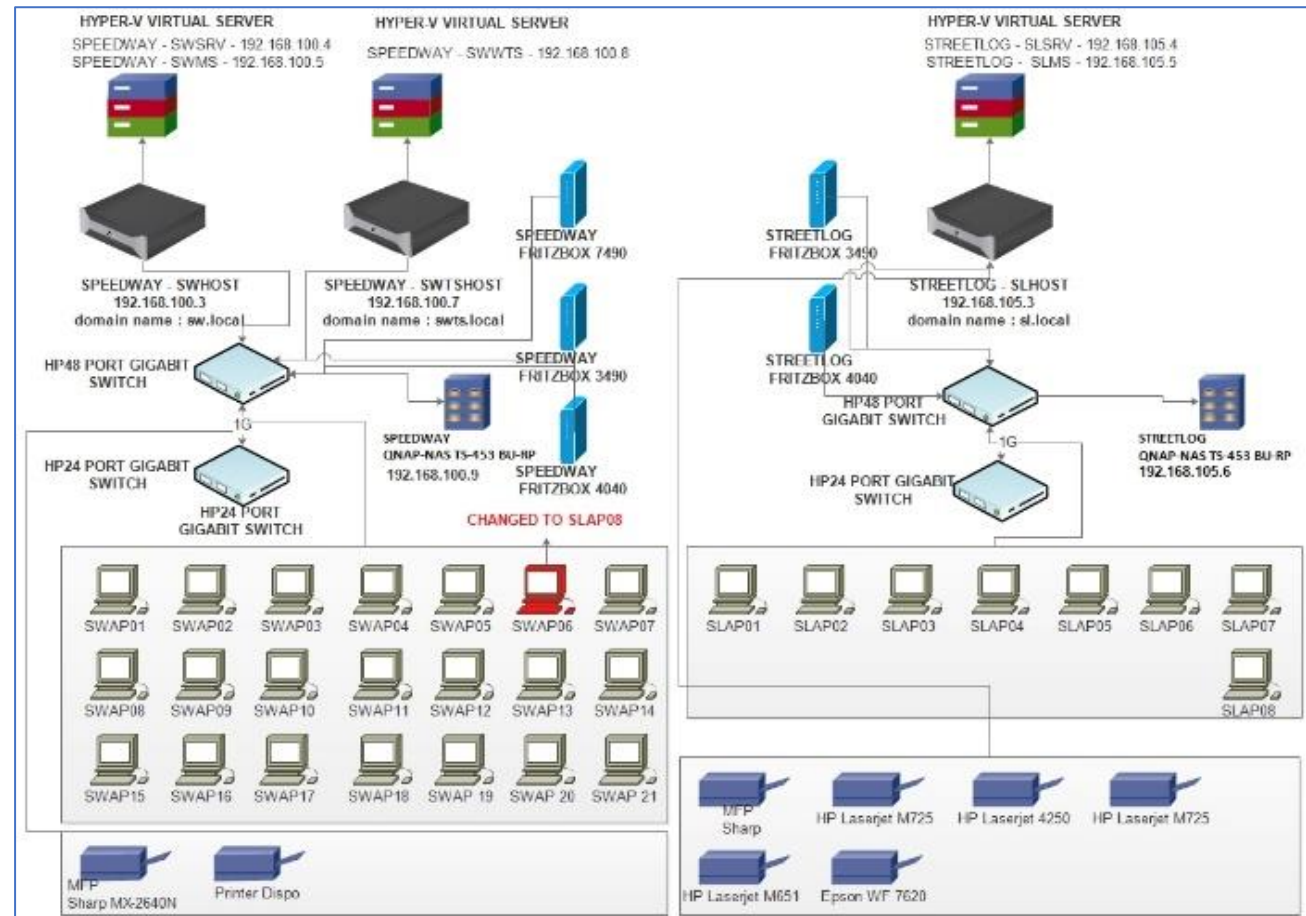
IT as a Service

We are providing all kind of IT services as managed service to our client

Line of Expertise

Industry Solutions – Client Server Infrastructure

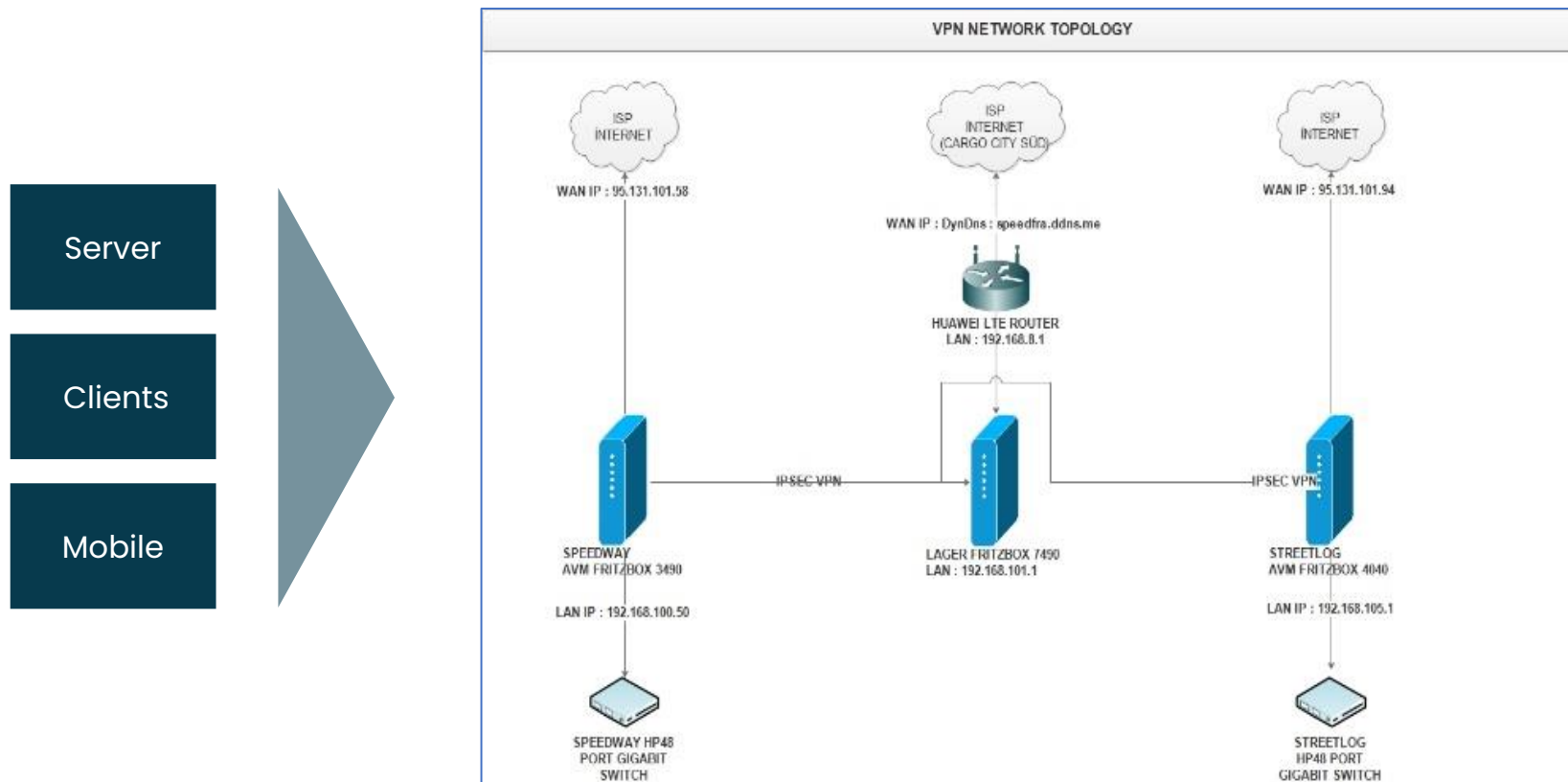
Server	<ul style="list-style-type: none"> Hosts Virtual Machine etc.
Clients	<ul style="list-style-type: none"> PC Ext. Clients etc.
Security	<ul style="list-style-type: none"> Firewall VPN etc.



Line of Expertise

Industry Solutions – VPN Network Topology

Creating safe, encrypted connection from a device to a network



Line of Expertise

Fiber Optic Solutions

Fiber Optic System is a communication System that uses light as the carrier of the information from a source to a destination through a guided fiber cable (glass or plastic).

Because of high **information carrying capacity** and low attenuation, now-a-days- fiber are finding wide application in telecommunications, local area networks, sensors, computer networks

Main features



Line of Expertise

Fiber Optic Solutions – Areas of Use



Energy & Plant
Technology



Aviation



Aerospace



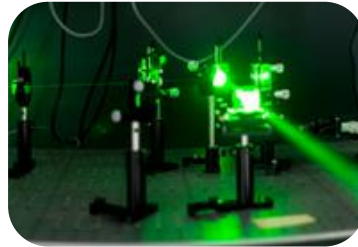
Military



Research Institutes
and Universities



Telecommunication



Photonics &
Biophotonics



Harsh-Environment



Industry 4.0

Line of Expertise

Fiber Optic Solutions – Medical Applications

Fiber Optic Solutions applicable for several medical sectors, such as:



SECURING BUSINESS CONTINUITY WITH RESILIENT DATA CENTER



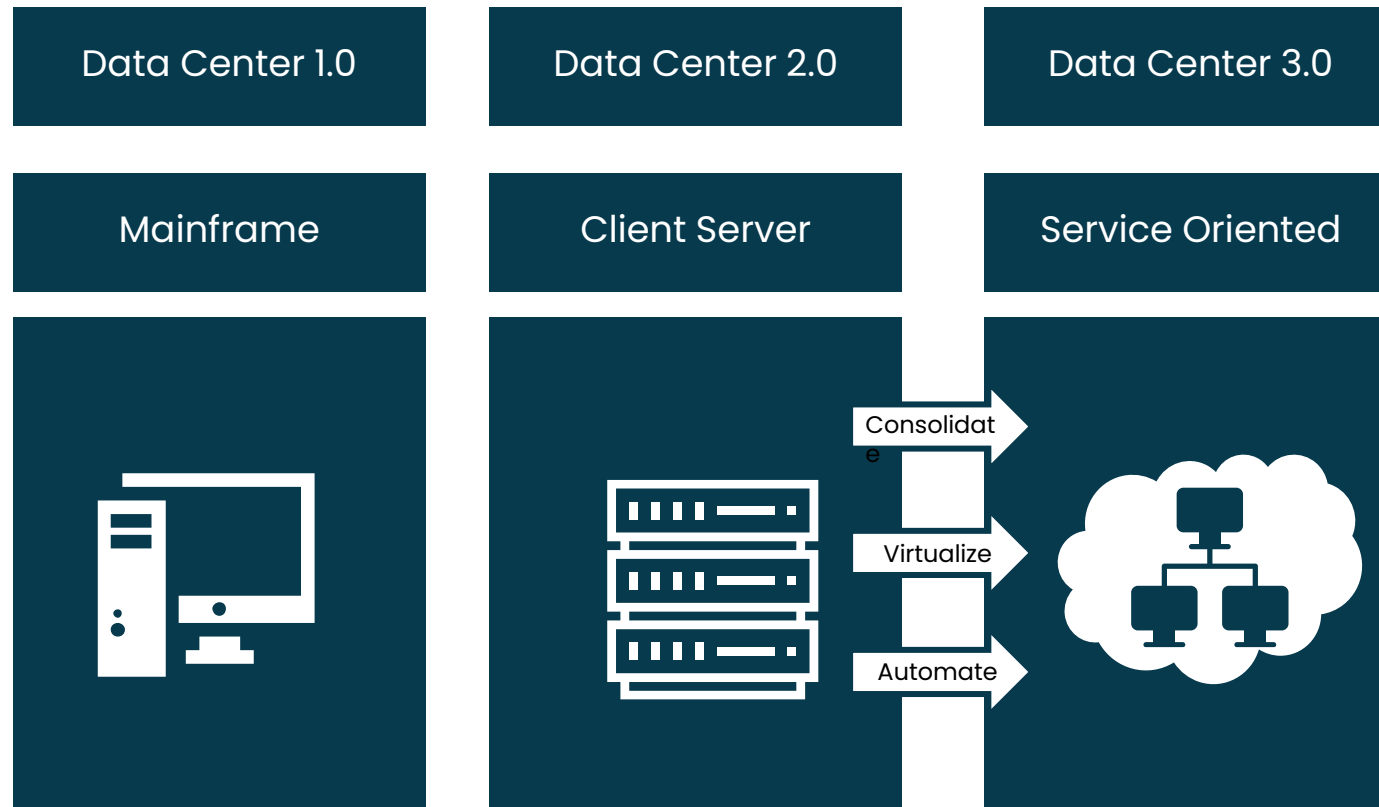
German Group for Services & Consultancy

What We Do

Evolution of Data Center

State of art technologies

Data centers has evolved from central data storage (mainframe computer) to key enabler of any business for automating processes, consolidating Technologies and virtualize physical IT infrastructure



What We Do

Data Center Basics

Data Center solutions rely on a network of computing and a storage that enables distribution of shared application and data

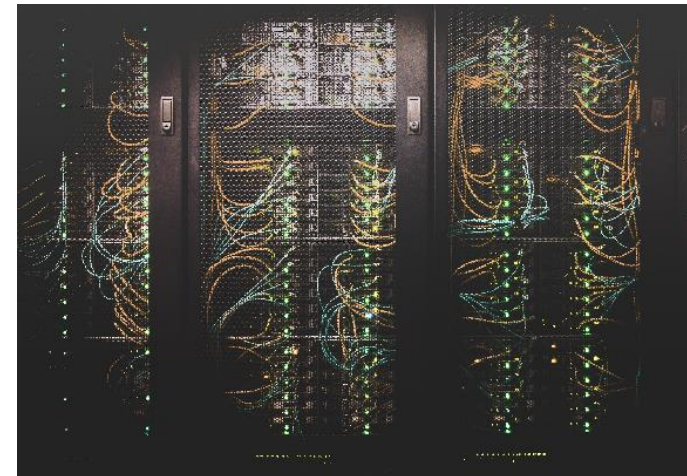
Definition

- A centralized location where computer related resources (and data) are stored.
- The users do not require physical access in order to use the resources.
- Is the physical space (or spaces) in which a company houses and operates its IT hardware infrastructure



Key Elements

- The Site
- Command Center
- Cable Management
- Network Infrastructure
- Environmental Controls
- Power
- Cooling
- Security/Redundancy



Data Center Architecture

Data center architecture is **the physical and logical layout of the resources and equipment within a data center facility**. It serves as a blueprint for designing and deploying a data center facility. It is a layered process which provides architectural guidelines in data center development



Virtual Layer

Data center virtualization is the process of designing, developing and deploying a data center on virtualization and cloud computing technologies.



Server

Server is a computer program or a hardware device that provides services to the connected devices in the network. The other devices are called hosts or clients



Converged Network

A converged network **allows you to utilize the same equipment and space for multiple systems**. This type of network helps you eliminate redundancy while still optimizing the delivery of all services



Unified Storage

Unified storage is **a storage system that makes it possible to run and manage files and applications from a single device**

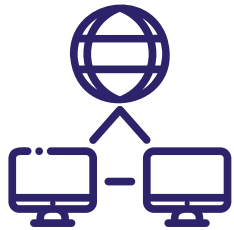


Back-Up

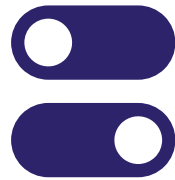
The data stored reliably is protected by such systems in case of malfunctions, application errors, virus infection, loss or completely user faulty malfunctions.

Data Center Architecture

Other Equipments & Parts



LAN & Fiber



Switches



Patch Panels



Firewall



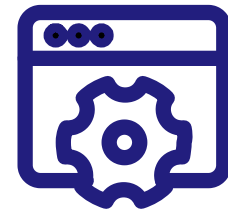
VPN



Router



Monitoring



Remote Control

Data Center Elements

Site Location & Environment

Energy Cost and **Connectivity** are main consideration for Data Center site selection

Key Elements

Layout

- Room
- Interior Room
- Interior Building Space
- Building Infrastructure

Access

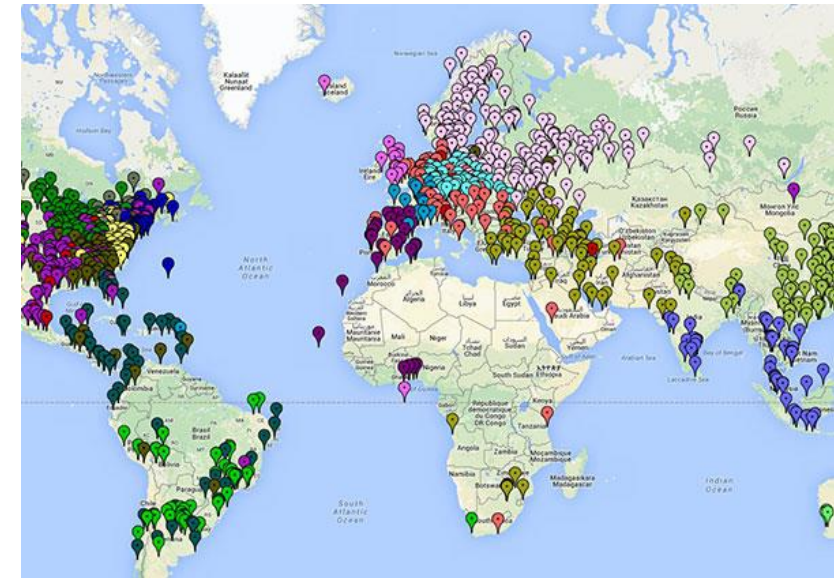
- Ease of access to interiors
- Large oversized doors
- Loading Dock
- Ramps
- Service Elevator

Environmental

- Earthquakes
- Floods
- Lightning
- Fires
- Hurricanes
- Tornados



Data Center Interior



Data center Distribution across Geographic Areas

Data Center Elements

Security & Surveillance

Security and Surveillance is not only for business continuity but also preventing intruders

Key Elements

Security

- Authorized / Limited Access
- Keycards
- Biometric Pass
- Escorted Entry

Surveillance

- CCTV
- Motion Detector
- Track record of entry and exit
- Log reports



Data Center Elements

Operational Elements

Power Supply, Energy Cost and UPS for continuity is main focus for flawless and sustainable operations

Key Elements

Power

- UPS
- Surge Protection
- ATS
- Batteries
- Generator

Power Capacity

- Server Equipment
- HVAC
- Lighting
- Security
- Fire Protection



Digitalization E-Government



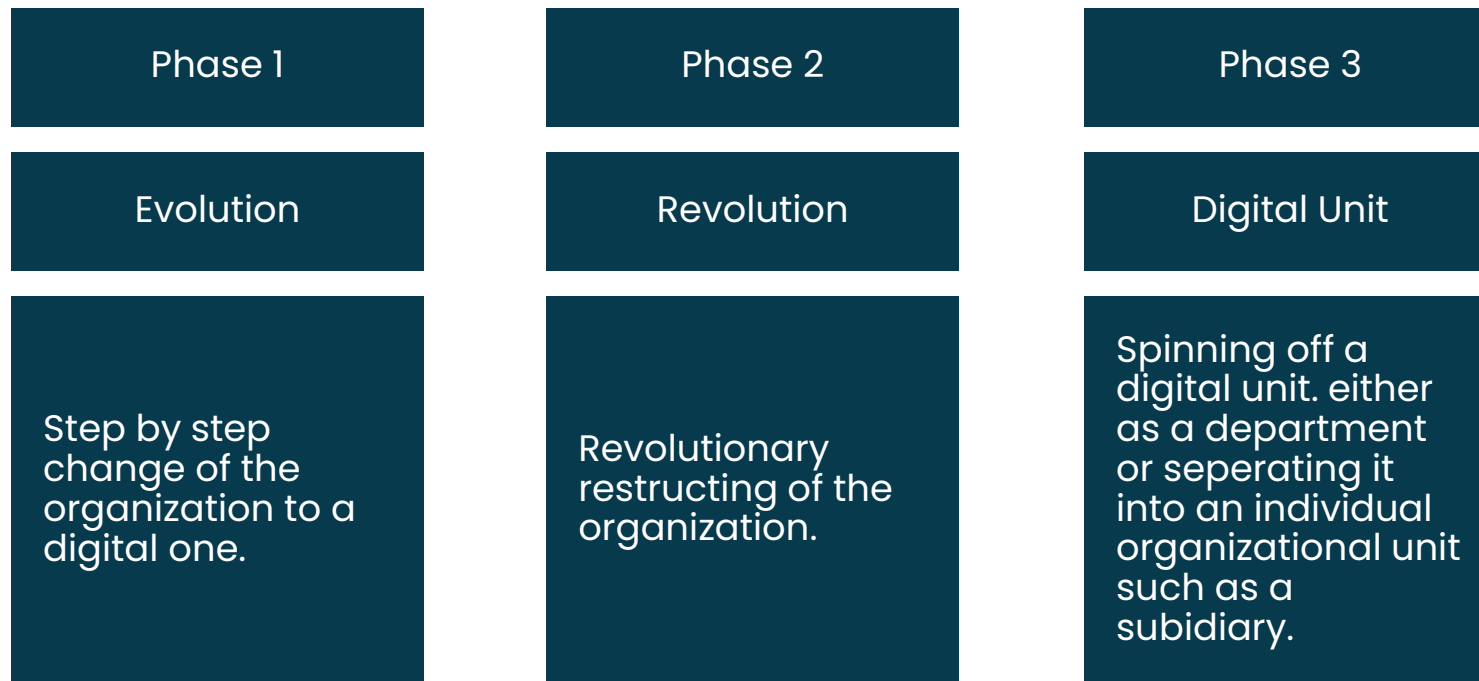
German Group for Services & Consultancy

What We Do

Building Digital Organizations

Digital Transformation

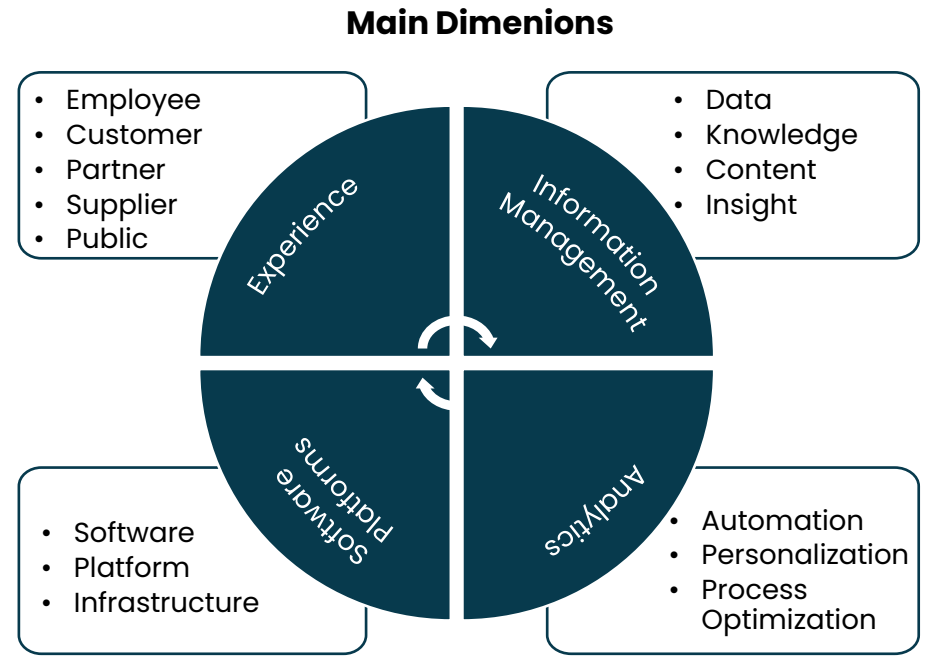
Digital transformation drives change in three areas: customer (citizen) experience, operational processes and business models. The process of digital transformation requires coordination across the entire organization, and involves business culture changes.



What We Do

Digitization Key Elements

- 1 The starting point for digitalization is the development of a digital strategy.
- 2 Transformation of the core business and the development of new digital business segments.
- 3 Digitalization drivers are often the IT departments, but specialist departments and management must also support the digital strategy as well as



Advantages of Digitalization (E-Government)

Digitization provides number of benefit offered all stakeholder of any type of organizations



Management

- Fast reaction for operative and strategic handlings
- Competitiv edge



Enterprise

- High performance
- High quality of software, long term
- Flexibility, Scalability, automation



IT

- Scalable infrastructure
- Shorter release cycles
- Less effort for development



Sales

- Automated sales support
- Partner Portal
- Simpler on boarding



Finance

- Reduced investment costs
- Lower personal costs
- Efficient use of resources



HR

- Target candidate marketing
- Talent Tracebility
- CRM with all data



Marketing

- Personalized adress
- Better targeting
- Shorter time-to-market
- Analysis of results



Citizens

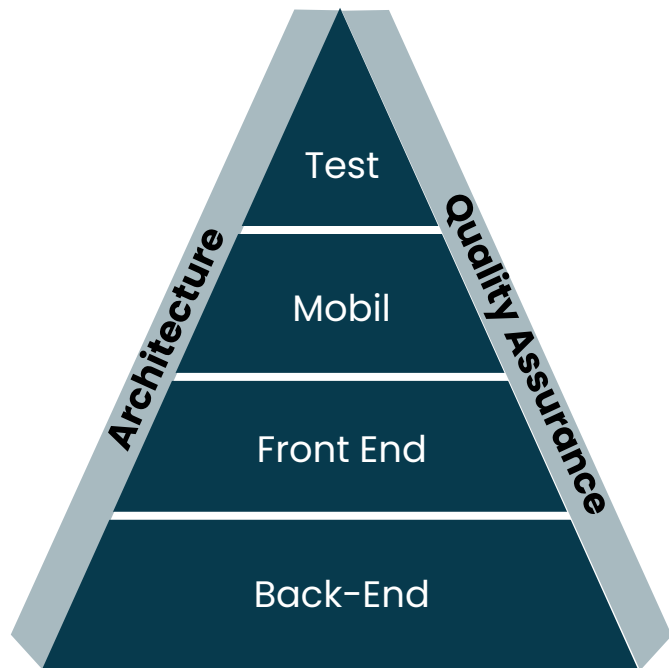
- Faster support times
- Improved support quality
- Central customer data
- Knowledge managemnet

Digitization Methodologies

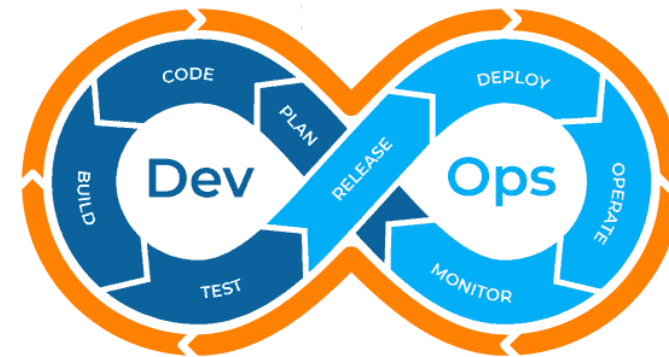
Team Structure & Methodologies

Agile team structure together with continuous development-deployment is norm for digital organizations

Delivery Structure



Delivery Methodologies



An agile approach to delivery

- People: teammates, customers, and interactions between these people – instead of processes and tools
- Immediacy: Working software – instead of comprehensive documentation
- Flexibility: Responding to, and even embracing, change – instead of following a predetermined plan

Digitalization (E-Government)

Smart Government

The process of digital innovation using open data is embedded deeply across the entire government, with buy in and leadership from the top tier of policymakers. The innovation process is predictable and repeatable, even in the face of disruptions or sudden events that require rapid responses

	eGovernment	Open Government	Data-Centric Government	Fully Transformed Government	Smart Government
Drivers	Compliance, efficiency	Transparency and openness	Citizen value	Insight-driven transformation	Self-defining
Service model	Reactive	Intermediated	Proactive	Embedded	Predictive
Digital System	IT-centric	Citizen-centric	Data-centric	Thing-Centric	Ecosystem centric
Ecosystem and users	Governmentcentric	Service cocreation	Aware	Engaged	Evolving
Technology focus	Service Oriented Architecture	API enabled architecture	Open any data	Things as data	Intelligence
Leadership	Technology	Data	Business	Information	Innovation
Key metrics	% Services online	Number of open datasets	Number of data-driven services	% of new and retired services	Number of new delivery models

Partner

Mühlbauer (Roding/Germany)



- **Mühlbauer** – Comprehensive Solutions for Industrie and Governments (E-Government)
- Compared to traditional counter-based services, E-Government solutions represent a very efficient alternative.
- Flexibly customizable E-Government solution based on web services, which can also be used to upgrade existing enrollment systems or E-Government solutions.



Mühlbauer Headquarter Roding/Germany

KEY REFERENCES

 **PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA**
National ID Card, Driver's License & Vehicle Registration

 **REPUBLIC OF ANGOLA**
Civil Registry

 **COMMONWEALTH OF AUSTRALIA**
ePassport Personalization

 **BOSNIA & HERZEGOVINA**
Driver's License, National ID Card & ePassport

 **REPUBLIC OF CHAD**
National ID Card, Residence Card & ePassport

 **REPUBLIC OF THE CONGO**
National ID Card, ePassport & Tax ID Card

 **REPUBLIC OF EL SALVADOR**
National ID Card

 **REPUBLIC OF FIJI**
ePassport

 **GEORGIA**
National ID Card & eGate

 **REPUBLIC OF GHANA**
Enrollment & ePassport Personalization

 **GIBRALTAR**
National ID Card & Driver's License

 **REPUBLIC OF GUATEMALA**
National ID Card

 **REPUBLIC OF INDONESIA**
National ID Card

 **REPUBLIC OF IRAQ**
Driver's License & Vehicle Registration

 **ITALIAN REPUBLIC**
Driver's License

 **STATE OF KUWAIT**
ePassport Personalization

 **REPUBLIC OF MOLDOVA**
eGate


 **MONTENEGRO**
National eID Card, ePassport, Driver's License, Multi-Purpose cards


 **REPUBLIC OF MOZAMBIQUE**
National ID Card & ePassport

 **SULTANATE OF OMAN**
eGate

 **REPUBLIC OF SERBIA**
eGate

 **REPUBLIC OF SOUTH AFRICA**
Enrollment for Driver's License

 **REPUBLIC OF SOUTH SUDAN**
National ID Card, ePassport & Vehicle Registration

 **SWISS CONFEDERATION**
Military ID Card

 **REPUBLIC OF UGANDA**
National ID Card – NSIS

Partner
Mühlbauer (Roding/Germany)



GGSC Team & Mühlbauer Sales Manager



GGSC Team & Mühlbauer Sales Manager

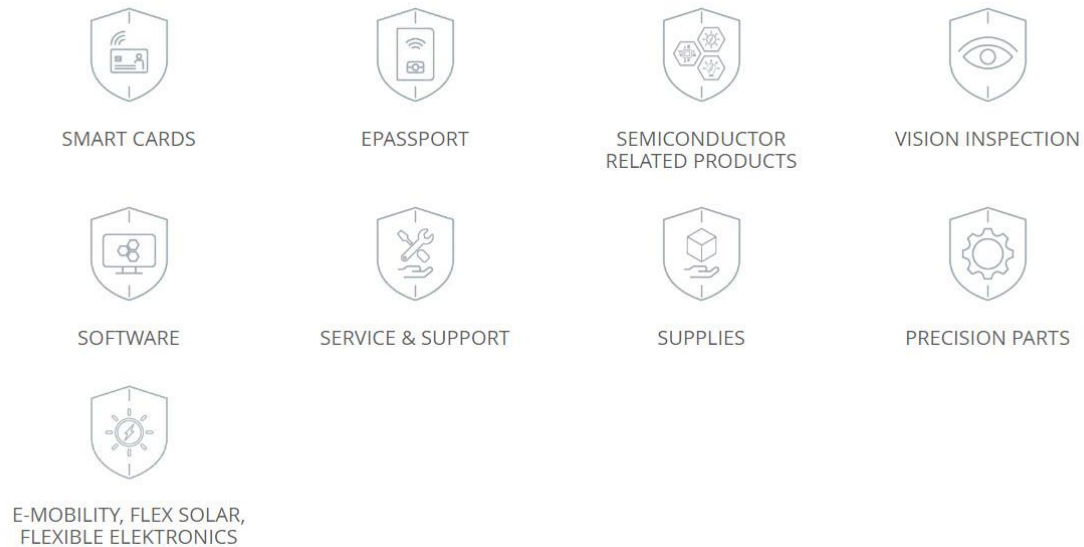
Partner
Mühlbauer (Roding/Germany)



GGSC Team & Mühlbauer Technical Manager

Partner

Mühlbauer (Roding/Germany)



Mühlbauer Products



Mühlbauer Sales Team

References / Projects

Datacenter of University of Zurich (UZH)



University of
Zurich ^{UZH}

- **GGSC/Diamond SA (Switzerland)**
- **Diamond** did all the Installations of the high-performance, reliable fiber optic components in **UZH**.
- **Mrs. Andrea Sigel – Team Leader of GGSC/Diamond**



GGSC/Diamond in UZH Datacenter with Team Leader Mrs. Andrea Sigel

References / Projects

Datacenter of University of Zurich (UZH)



University of
Zurich ^{UZH}



GGSC Partner Diamond in UZH Datacenter



GGSC Partner Diamond in UZH Datacenter

References / Projects (Draft)

Project / Reference / Location



University of
Zurich ^{UZH}



GGSC Partner Diamond in UZH Datacenter



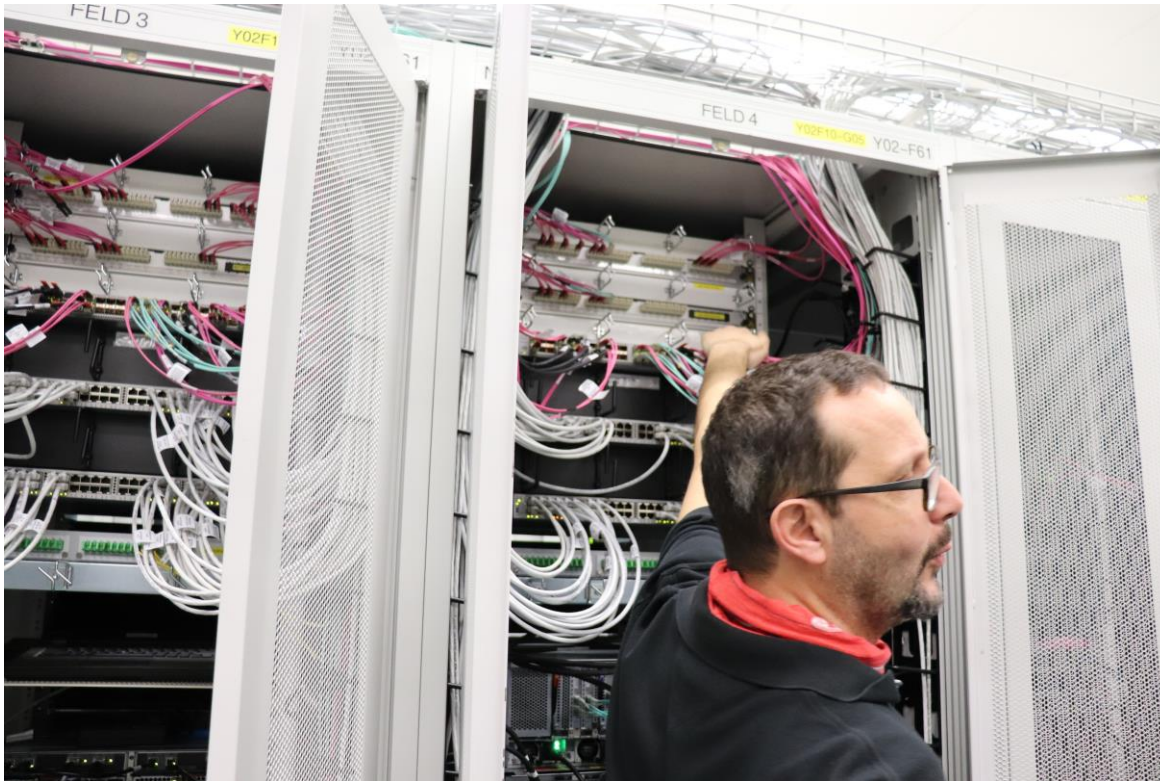
GGSC Partner Diamond in UZH Datacenter

References / Projects (Draft)

Project / Reference / Location



University of
Zurich ^{UZH}



GGSC Partner Diamond in UZH Datacenter



GGSC Partner Diamond in UZH Datacenter

References / Projects (Draft)

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University of
Zurich ^{UZH}



GGSC Partner Diamond in UZH Datacenter



GGSC Partner Diamond in UZH Datacenter



GGSC Partner Diamond in UZH Datacenter

References / Projects

Ministry of Sudanese Council of Ministries



- **GGSC/Diamond SA (Switzerland)** with Sudanese Partner **sudatel Telecom Group**
- Turn key Project. Consulting, Planning, Infrastructure, high-performance, reliable fiber optic components.
- **Ministry of Sudanese Council of Ministries.**
- Fiber optic assemblies on a wide variety of fiber and cable. Different fiber and ferrule technologies. Used standard and custom connectors.



Ministry of Sudanese Council of Ministries

Mrs. Andrea Sigel – Team Leader of GGSC/Diamond

References / Projects

Ministry of Sudanese Council of Ministries



Main features



Mrs. Andrea Sigel
(Team Leader of GGSC/Diamond)

Mr. Suliman
(Chairman & CEO)

Diamond Sales
(Diamond Sales Manager)

References / Projects

Ministry of Sudanese Council of Ministries



Main features



Headquarter Diamond SA (Switzerland)

References / Projects

Ministry of Sudanese Council of Ministries



Fiber Optic System is a communication System that uses light as the carrier of the information from a source to a destination through a guided fiber cable (glass or plastic).

Because of high **information carrying capacity** and low attenuation, now-a-days- fiber are finding wide application in telecommunications, local area networks, sensors, computer networks



References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



TRUSTED
COLO

- Datacenter Upgrade with **GGSC/getucon** & **Kurth Electronic**, focused on telecommunications, data technology and electrical installations.
- **Trusted Colo** is a local datacenter provider in Frankfurt/Germany and a
- High Performance Datacenter made in Germany



Cem Guler
(CIO)

Heinz-Dieter Elbracht
(Chairman & CEO of Trusted Colo)



Contract: GGSC/getucon – Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Entry of Datacenter Trusted Colo



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo



Datacenter Upgrade with high Performance Servers

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



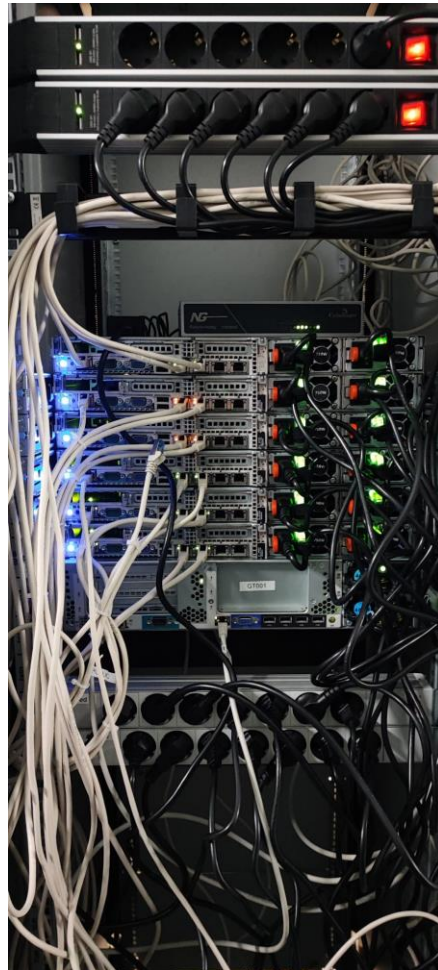
Datacenter Trusted Colo



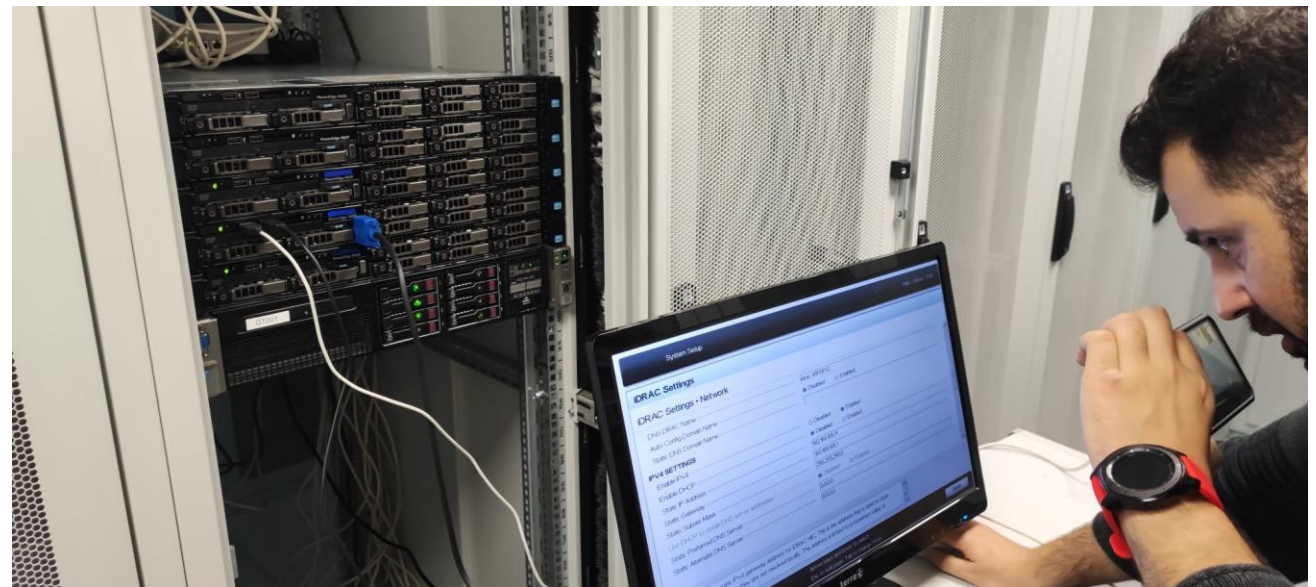
Preparation of Datacenter Components

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Trusted Colo in Frankfurt/Germany



Datacenter Trusted Colo



Datacenter Trusted Colo

References / Projects

Datacenter Upgrade Kurth Electronics in Nürnberg/Germany



- **Kurth Electronic** stands for quality, user-friendliness and innovation in measuring and testing technology.
- **GGSC & Kurth Electronics** did several projects (Hardware, technical components, Trainings, Installations) in Sudan with Sudatel and in Germany for international firms.
- Focus on telecommunications, data technology and electrical installation, the company addresses various market segments: telecommunications companies, service technicians and installers are among its long-standing customers.
- The company is one of the leading international companies in these business areas.



Kurth Electronic Headquarter Nürnberg/Germany

References / Projects

*Datacenter Upgrade Kurth Electronics in
Nürnberg/Germany*



Multi Testing with high-performance components

References / Projects

*Datacenter transformation UBS Europe
(Germany/Frankfurt)*



- Contract Signing with GGSC Partner **getucon (Germany)**, as a Technology Consultancy firm, specialized for Datacenter Solutions.
- **UBS Group AG** is a multinational investment bank & financial services company founded and based in Switzerland.



UBS Bank in Germany/Frankfurt

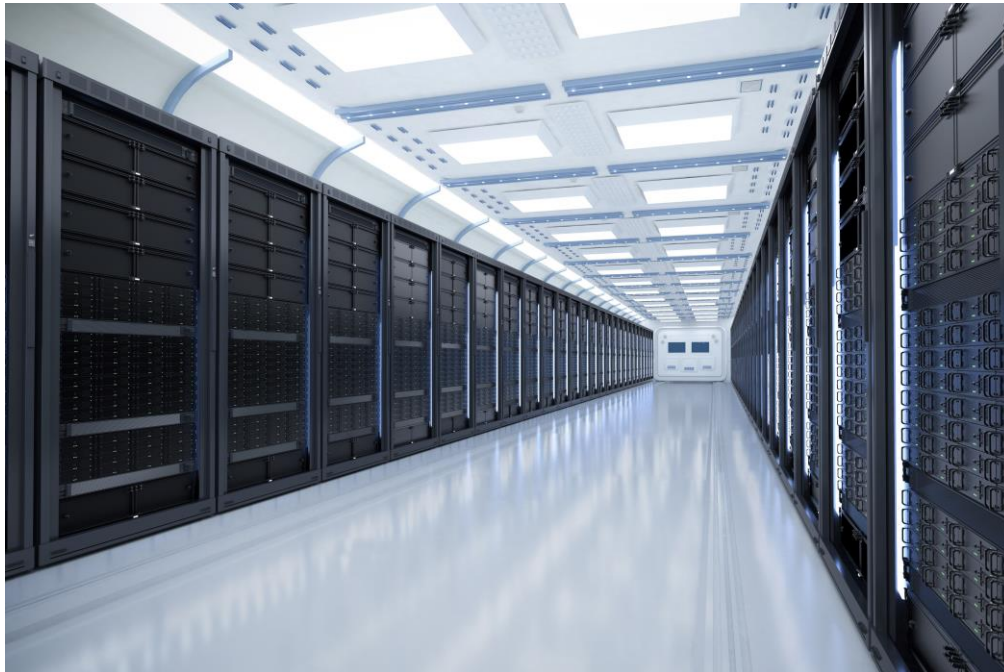
References / Projects

*Datacenter transformation UBS Europe
(Germany/Frankfurt)*



UBS

getucon
management & technology



Datacenter side UBS Bank in Germany/Frankfurt



Datacenter side UBS Bank in Germany/Frankfurt

References / Projects

*Datacenter transformation UBS Europe
(Germany/Frankfurt)*

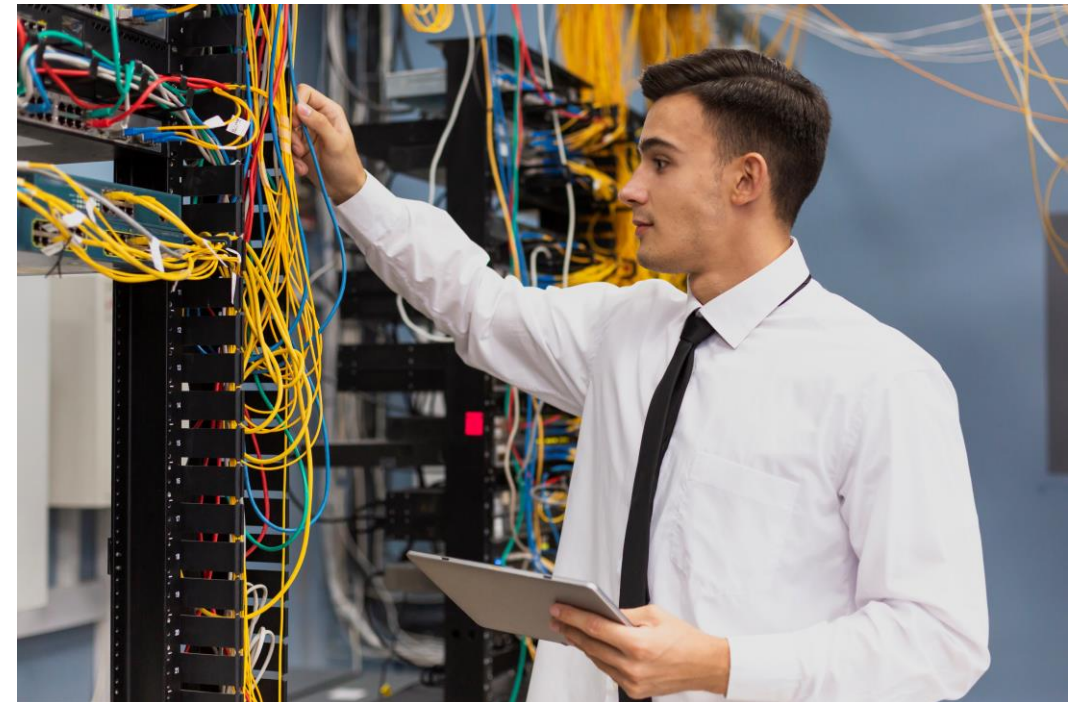


UBS

getucon
management & technology



Datacenter local side UBS Bank in Germany/Frankfurt



Datacenter local side UBS Bank in Germany/Frankfurt

References / Projects

*Datacenter transformation UBS Europe
(Germany/Frankfurt)*



UBS



getucon
management & technology



UBS Bank Broker Office in Germany/Frankfurt

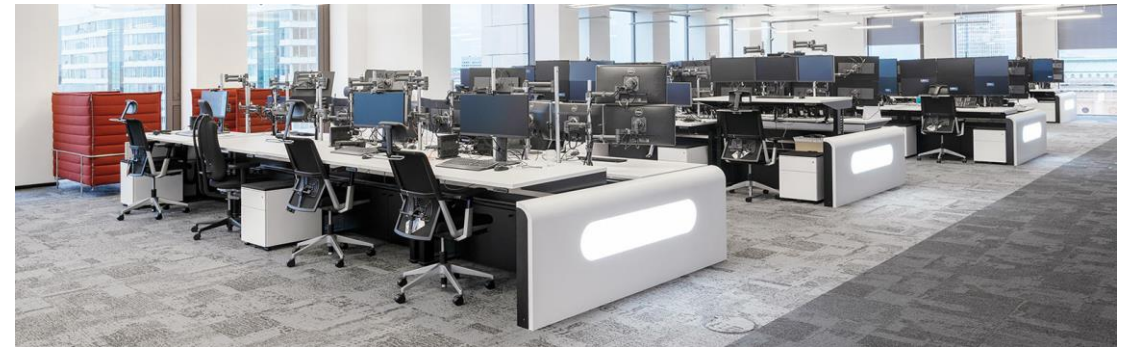
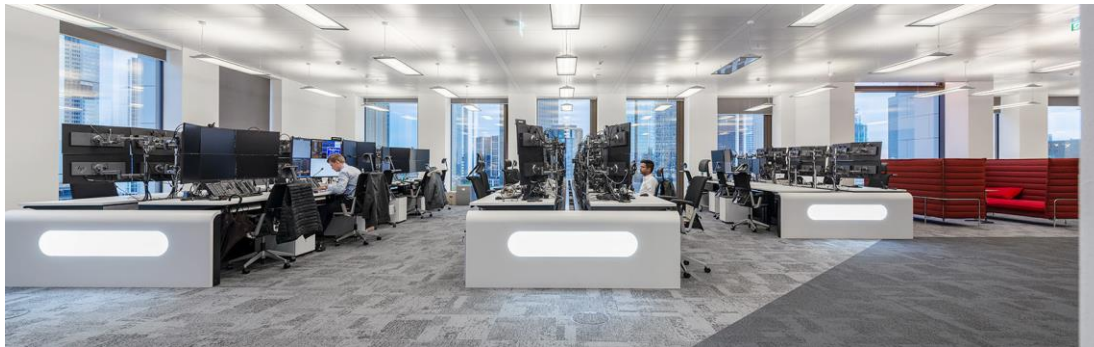
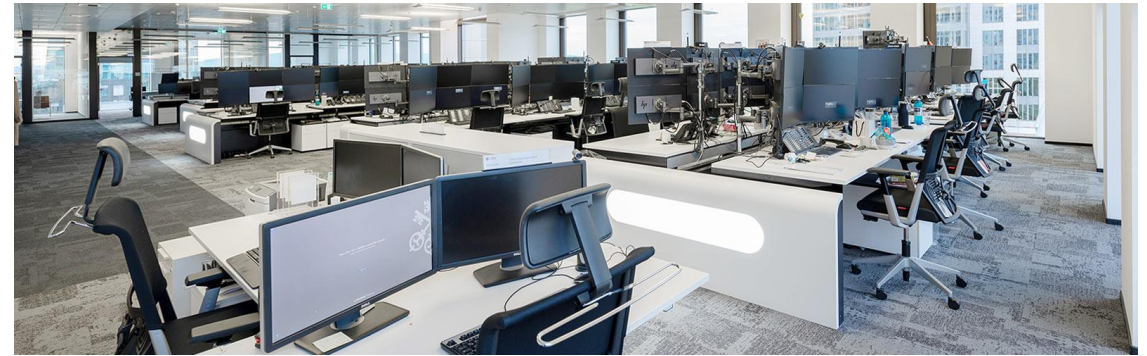
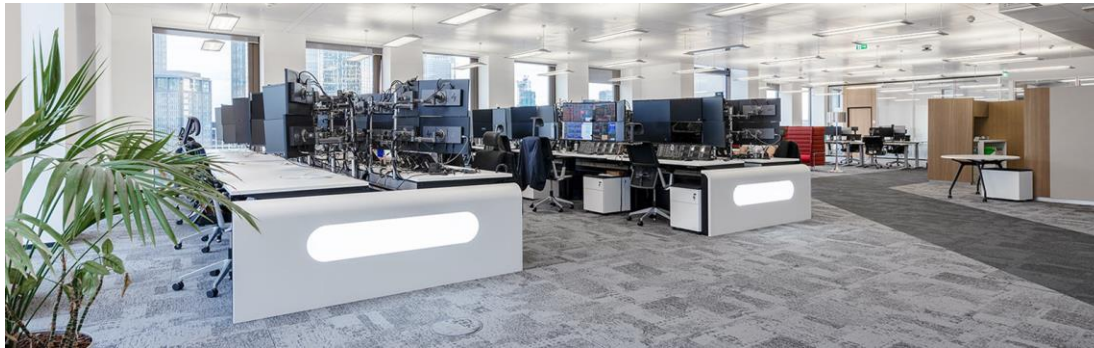
References / Projects

*Datacenter transformation UBS Europe
(Germany/Frankfurt)*



UBS

getucon
management & technology



UBS Bank Broker Office in Germany/Frankfurt

References / Projects

Datacenter Transformation and Data Migration Nord-Micro (Germany/Frankfurt)



- Planning of building construction for Datacenter, datacenter transformation and data migration with **GGSC/getucon & Bechtle**, IT system houses with a full range of IT services from strategic consulting to running entire IT infrastructures.
- Contract Signing with GGSC Partner **getucon (Germany)**, as a Technology Consultancy firm, specialized for Datacenter Solutions.
- **Collins Aerospace/Nord-Micro**, headquartered in Frankfurt am Main, Germany, is an established global player in the aerospace business and a world leader in cabin pressure control systems for large commercial aircraft.



Nord-Micro Datacenter local side Germany/Frankfurt

References / Projects

Datacenter Transformation and Data Migration Nord-Micro (Germany/Frankfurt)



Collins Aerospace



Nord-Micro Datacenter local side Germany/Frankfurt

References / Projects

Datacenter Transformation and Data Migration Nord-Micro (Germany/Frankfurt)



Nord-Micro Datacenter local side Germany/Frankfurt



Nord-Micro Team Leads Germany/Frankfurt

References / Projects

Datacenter Transformation and Data Migration Nord-Micro (Germany/Frankfurt)



Nord-Micro Team Leads Germany/Frankfurt



**Dr. Ulrich Raab
(CEO)**

References / Projects

Datacenter Transformation and Data Migration Nord-Micro (Germany/Frankfurt)



Nord-Micro Datacenter local side Germany/Frankfurt



Nord-Micro Datacenter local side Germany/Frankfurt

References / Projects

Datacenter Transformation Clariant (Germany/Frankfurt)

CLARIANT^E

- Datacenter transformation with **GGSC/getucon (Germany)**, as a Technology Consultancy firm, specialized for Datacenter Solutions.
- **Clariant** is one of the worlds leading specialty chemical companies, contributes to value creation with innovative and sustainable solutions for customers from many industries.



Clariant Innovation Center local side Germany/Frankfurt

References / Projects

*Datacenter Transformation Clariant
(Germany/Frankfurt)*

CLARIANT

getucon
management & technology







Clariant Innovation Center Datacenter local side Germany/Frankfurt



Clariant Innovation Center Datacenter local side Germany/Frankfurt

Partners

Partner Companies

Partner Company	Specialization	Locations
 <p>InterCem</p>	<p>The InterCem Group is a leading supplier of complete solutions for cement plant operators. InterCem is the ideal partner for planning, detail engineering and handling greenfield projects</p>	<p>Germany Switzerland</p>
 <p>Werner Sobek</p>	<p>Werner Sobek stands for engineering, design, sustainability and architecture. Main focus lies on structures and facades for complex geometrie.</p>	<p>Germany Turkey USA Denmark Serbia Russia Austria UAE Argentina</p>
 <p>Ciconia Aviation Services</p>	<p>Ciconia Aviation Services is a recognized leader in the field of aviation safety regulations, contributing to aviation safety in a global world and enhancing the performance of its clients</p>	<p>Netherlands</p>
 <p>Edibon</p>	<p>EDIBON offers different services such as installation, training and technology transfer as well as it provides advice on the designing of complete laboratories</p>	<p>Spain</p>

Partners

Partner Companies

Partner Company



Specialization

Diamond SA is one of the few manufacturers that has full control over its manufacturing process. High-quality ceramic, metal and plastic components, from the raw material to the end product, are all processed in-house.

Kurth Electronic is a leading manufacturer and provider of Test and Measurement products for IT, Telecommunications and Electrical Installations.

Getusys is full scale data center solution provider

Vakar hat seinen Sitz in der Türkei und bietet eine Produktionsanlage mit Quadratmetern und 350 verschiedene Arten von Produkten wie Baumwollputz, Seidenputz, Steinteppich und Naturstei

Locations

Switzerland





Germany

**Germany
Turkey**

Turkey

Partners

Partner Companies

Partner Company	Specialization	Locations
 <p>DMT</p>	<p>DMT Group specialising in the markets of plant and process engineering, infrastructure and civil engineering, natural resources, and energy</p>	<p>Germany Turkey Australia UAE Canada UK India South Africa Indonesia</p>
 <p>Geophysical Services</p> <p>Terratec</p>	<p>terrateg Geophysical Services offers surface geophysical and borehole logging services worldwide. The main objectives are the acquisition, compilation, processing, analysis and the interpretation of geophysical data</p>	<p>Germany Mali Namibia Bulgaria</p>
 <p>Competence Engineering</p>	<p>Competence Engineering is the prominent manufacturers and suppliers of a wide range of Compressor Valves, Rings and Packings, Metering Skid, PD Meters, Flow Meters and Instrumentation and Mechanical Field Services</p>	<p>India</p>
 <p>LONGi</p>	<p>LONGi is a world leader in the clean energy transition. It provides a comprehensive suite of solar PV solutions that can optimize a wide range of project</p>	<p>China</p>

Partners

Partner Companies



Head Office



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Fax: +49 (0) 69 366 01 559
Mail: info@ggsc-consultancy.com
Web: www.ggsc-consultancy.com

