

CURRICULUM VITAE HELMUT F GIESA

Position Title and No.:	Procurement, Supervision, Contract/Claim Management incl. Delay + Disruption Analyst, Alternative Dispute Resolution Individual Independent Consultant
Name of Expert:	Helmut Giesa
Date of Birth:	24.04.1957 Search/Find Fact Sheet: www.aid21.de/TOC123.pdf
Country of Citizenship/Residence:	German only

Education:	1988 – 1993	University in Hagen, Germany Post-graduate studies of ECONOMICS / Accounting / Financial Management as a part-time student
	1975-1981	Univ. of Technical University of Munich, Germany, Graduation in CIVIL Engineering / Town Planning / Transportation , Dipl.-Ing. Univ. (=MSc equivalent),
	1970- 1973	University of Applied Science in Munich, Germany, Degree in Surveying / QS - Engineering Dipl.-Ing. (FH) (=BSc equivalent)

Language Skills:	speaking	Reading	writing
German (Mother tongue)	excellent	excellent	excellent
English	excellent	excellent	excellent

Membership in Professional Associations and Publications:

- (i) VSVI (Society for Road Construction and **Transportation** Engineers)
- (ii) GPM (Association for **Project Management**)
- (iii) DVP (German Association of **Project Controllers**)
- (iv) VDI (Association of German Engineers)
- (v) Member of the German **Institution of Arbitration** / DIS (Schiedsgerichtsbarkeit):
ADR: Conflict Management Strategies, expedited proceedings, Adjudications, amicable settlements,
Conciliation, Mediations, and Arbitrations.

Other Skills (e.g. computer literacy, additional knowhow, experiences, skills)

- (i) **EDP-Knowledge** and application of MS Office 2007/2010, outlook, MS Office 2007/2010 (Time / Activity scheduling, **Resource** planning and **Cost / Budget** planning, project tracking and trending time, cost and quantities), Mind Manager / Mind jet Coordination tool, Financial Software Lexware
- (ii) **Legal Knowledge** and application : German Price Law (HOAI), award of contract and execution of works (VOB), EG-Sektorenrichtlinie, Civil Law, “rainbow” **FiDiC** [Red Book: construction only; Silver: **EPC/Turnkey**; Yellow: **Plant + Design + Build**; Gold: **Design+ Build+ Operate (Maintain)**; Green: Subcontractors for small scale project; White: consultant / client relationship], Finance of PPP and **EU-General / Special Conditions of Contract (GCC / EU-SCC)** services, works and grants.
- (iii) **Economic / Financial Management** of supply market, procurement, selling market, labour market, capital market
- (iv) **Donor structures and processes**: Financing Agreements, Procurement (EU PRAG2012/16, AfDB, ADB, JICA, WB, KfW) of supply, service, works and grants, Evaluation, Project Cycle Management (PCM), ROMs, EU-Evaluations, Mid-Term Reviews, Audits.
- (v) Working experienced in **Europe, Asia, and Africa** with intercultural skills in fragile states, too.
- (vi) **Communication skill**, social competences and multicultural / tribal experiences in African countries (Liberia, Sierra Leone, South Africa, Libya, Malawi, Ghana, India, Pakistan, Japan)
- (vii) **Quality Assurance**: EFQM / Monitoring ROM / Review / Technical Audits with DAC-Criteria **relevance/ project design, efficiency, effectiveness, impacts, sustainability**, coherence and added value to EU.
- (viii) **Courses** in Coaching / Training / Workshops / Mentoring (refer to item training, workshops, lectures, coaching) attended: Management Techniques, Creativity, Conference Techniques, Rhetoric, Argumentation, Management Psychology, Project Cycle Management (EU-PCM), **Road Asset Management**, TC of capacity development (CD), PCM with Technical Audits and ROM.
However a lot of workshops have been facilitated: approx.. 40.
- (ix) Coordination + cooperation + **Leadership capabilities** in more as 18 projects
- (x) Application of **EU-Communication and Visibility Manual** with the communication matrix: Press Releases, Newspaper coverage, TV + Radio Broadcastings (workshops/site visits).

0_ Three formal educations in W-Germany (www.AiD21.de/index.pdf)

in Surveying / Quantity Survey, Construction Engineering, and post-graduate in Economics.
Autodidact – long life learning – esp. Procurement Guidelines + Construction Law (FIDIC / common Law, HOAI, VOB, EDF / civil law, Alternative Dispute Resolutions)

1 – Sectors for horizontal and vertical Infrastructures

1A Horizontal Infrastructures

Transportation, Highway / **Roads + Bridges** with different materials + **Tunnels** (7 projects of 100 Million Euro), **Railways** (up to 750 m), **Bus Rapid Transit (BRT) Corridor Project** with **elaborated** bus lanes (250 Million) + Mumbai **Bridge up to 180 m spans** (2.150 Million, 2,150 Billion USD), **open mining** rehabilitation with dismantling and melioration (750 Million p.a.) **Water procurement**, purification, main supply pipelines, booster and pumping station, reservoirs, distribution / spaghetti pipes, **surface drainage**, drainage, **sewer/sewerages**, water treatment plants (280 Million), **solid waste deposits** with adjacent infrastructure to gain electricity.

1 B Vertical Infrastructures (EPC / Turnkey)

Town planning with EPC-construction of Residential and Business **Buildings** (shell construction, roof, facade, interior wet works, Interior dry works, MEP, HVAC, sanitation, furniture and fixtures, central building + control system, pre-opening phase) i.e. Berliner Platz five sky scrapers (150.000 m² Cross floor area, ~250 Mill Euro) ... refer to professional record 1995 – 1998, Drees & Sommer.

Energy + Building Facilities up to 500 Mill Euro: **EPC-Power Generation**, Converter Station, Transmission, Distribution of Electricity and all attached facilities / **common Buildings for operation** like **Administration Buildings, Social Bldgs., Gate Houses, Gas + Fuel stations, Unit Electrical / Low Voltage Bldg., Workshops and Store Bldg., Fire brigade Bldg., Oil Treatment Bldg., Pump Houses, Water Treatment Building with all lightning protections**, 20 million litre **steel structures** for fuel / gas storage, 125 m high **RI-cooling tower**, Operational buildings; Converter Stations (bi-polar HVDC 2500, 500 KV DC), **Tram depots, Bus depots** with all adjacent operational and administrative Buildings.

2 Project Cycles for Infrastructures

2A EU – Phases PCM_2004 / EDF

P1_Programming (EC / EDF) Development Policy, PRSP, Country Strategy Paper, Nat. Indicative Program with **Conceptual design to incorporate the Employer's Requirements**, P2_Identification (preliminary architectural and engineering design with Cost Estimates), P3_Formulation (final / detailed architectural and engineering design with preparation of **Tender Dossiers** with consistent and unambiguous parts and **Procurement procedure** in compliance with Donors (EU-PRAG, AfDB, ADB, JICA, WB, KfW) with Submission and Evaluation of the administrative, technical, financial and composite scores for award, P4_Implementation (with adequate supervision and proper superintendence), taking-over / provisional acceptance certificate, P5_Defect Notification / Liability Period, final acceptance certificate, P6_Operation / Maintenance phase with performance certificate, discharge and cessation, P7_Transfer to Owner with the application of the Logical Log frame Approach (Analysis) / LF Matrix (planning) resulting in a work plan (activities, resources, Budget, recurrent costs) in all project cycle phases.

2B German Project Control stages:

S1_Feasibility study / preliminary design, S2_Preparation of Tender Dossier / detailed design, S3_Procurement / Award of Contract, S4_Execution of Works, S5_Phase out, Defect Liability Period, S6_Operation / Commission, Maintenance Phase, S7_Transfer to Owner

2C German HOAI Service Phases for Architects and Engineers:

P1_Data Collection, Ascertainment of basic data, definition of function / client's requirements, conceptual design, planning of the coordination, P2_Pre-Arrangement / outline design, P3_Design engineering, P4_License / approval design, P5_Detailed Design, P6_Preparation of Tender Dossier, P7_Participation of Procurement, Evaluation of Bids, Award of Contract, P8_Supervision / Superintendence P9_Object Documentation, Taking over / technical and contractual acceptance, operation and maintenance manuals / licenses.

3 Tasks, Duties and Functions in all project cycles of different sectors within Authorities (~11 years), Project Management Institutes (~4 yrs), Consulting Firms (~8 yrs), and Construction Industry (~11 yrs)

3A Technical issues within all project life cycles from inception, implementation, and commissioning:

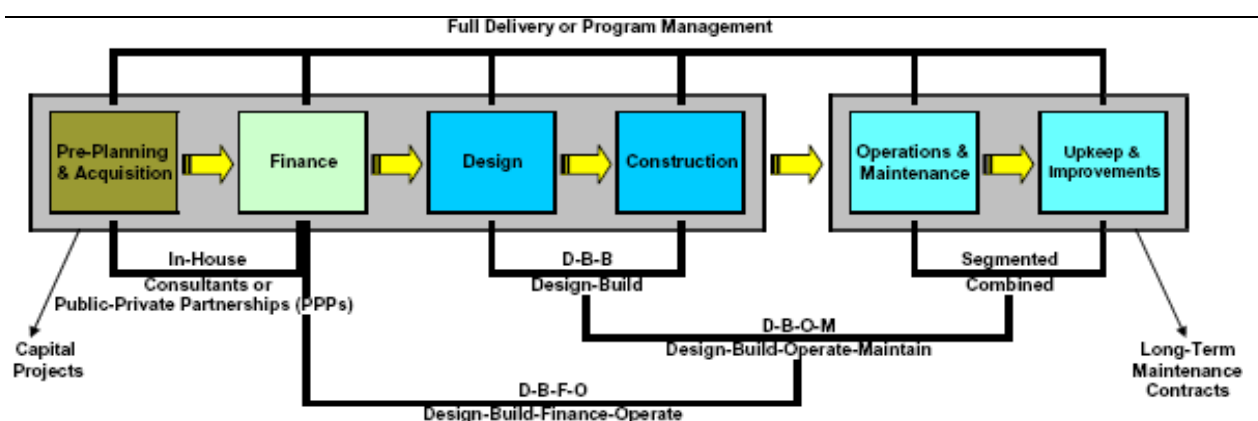
business development, general methodology / principles to design, construct, operate and maintain infrastructures in a technical and economical manner (Value for Money): studies, road condition survey (network) / inventories (project level), alignment / pavement design and **design review, survey reports** (geotechnical, soil examinations, classified traffic counts, ESA, fatigue / damage factors, geodetic measurements, shipping, requirements for equipment and tools, Quantity Survey for all resources), preparation of consistent **Tender Dossiers with technical requirements, financial aspects and legal conditions** (BoQ, Drawings, Technical Specifications (VOB/C, BS, TRL ORN 1-40, SATCC, AASHTO, PIARC), FIDIC / EDF - Conditions of Contract), procurement, evaluation of administrative, technical, financial capabilities, eligibility, responsive criteria of the bids, composite scores, **Evaluation Report** with recommendation for Award, resolution of **all technical impediments** during the course of execution of works,

- correct calculation of **overhaul** based on Mass Haul Diagrams, preservation / conservation of evidences (FiDiC Cl 4 + Cl 8), verification report / punch list / and Defect Notification / Liability period (operation + maintenance).
- 3B _ **Financial issues in all project cycles / service + realization phases:**
 Finance, financial arrangements, Financing agreements / decisions, Program Estimates, Survey of Cost Estimates based on ROCKS (WB), **Bid Price Calculation** (Top Sheet) with split up of Prime Costs, Preliminary & General Costs, indirect cost, direct cost, final charges, overheads according to the Work Break Structure, Tender Dossiers, Member of the Evaluation Committee, **Adjustment for Changes in Costs** (EDF Art. 37+48 + FIDIC Clause 13.8 formulas), Material on Site (!), Interim Payment Certificates, sureties / bonds / guarantees for performance, advanced payment, retention, Final statement of account, Discharge, Cessation of any obligation.
- 3C _ **Logistics of mobilization, temporary, permanent and dismantling works:**
 organization of All inputs like financial means, human resources, equipment +tools, material flow, deliveries of pre-cast components to site, clearance +customs regulations, duty waivers, transport.
- 3D _ **Contractual issue for competitive procurement with in due diligence evaluations and award procedures.**
 More details can be retrieved from my “fact sheet” www.AiD21.de/index.pdf
 “Rainbow” FIDIC 1999 / 2017 (Plant Design Build Operate / Maintain, Transfer), EU-EDF, PRAG, VOB, HOAI, Donor Guidelines for Procurement, Bid Evaluation / Member of the Evaluation Committee, Contract Administration, Claim and Dispute Management in an endeavor to reach agreements to avoid / prevent Disputes to achieve swift Determinations for Merits / Principle + Quantum (Time + Cost), forensic investigations for delay + disruption analysis with MS-Project (Time + Cost-Effects to identify the Cause Relation), Dispute Resolution (DAAB, DRB, DB, DAB, Amicable Settlement, Conciliation, MEDIATION, Arbitration (member “Giesa” of the DIS Arbitration Institution disarb.org), Support in Law Cases i.e. witness box with cross examination, proper reporting systems and correspondences in context with the Dispute Hearings: (referrals, statements of cases, responses, rebuttals, rejoinders, forensic investigation results / time + cost cause-effect relations attributable to Employer or Works Contractor, ...), formal notices of dissatisfaction, Lessons learned. No agreements to any supplier.
 Unidroit Principle (UP) of International Commercial Contract, for hardship Claims similar the Principle of European Contract Law (PECL)
 Unbiased / “Neutral” Services will be offered / delivered to Employers, Engineers and/or Contractor.
- 3E _ **Administrative Issues**
 All administrative actions within an Authority with all interventions to their supervisors (Ministries), Beneficiaries and stakeholder, Policies i.e. Country Strategy Paper, PRSP poverty reduction, Agenda for xxx, National Indicative Program NIP, for Parliamentary Acts, Road Fund Administration, Devolution / Decentralization, ECOWAS Regulations, i.e. Axle load control and fines, sensitization (public participation) for development projects with communities and societies, compensation for land acquisition, resettlement plans, crop loss + damages of the project affected people (PAP), right of way encroachments.
- 3F _ **General Management and Advisor / Consultant (that it works) / Construction Industry (how it works)**
 Logic Frame interventions, smart developing / performance indicators, application of software tools (i.e. MS_Project 2010) to establish a proper WORK Program comprising result-based activity schedules with sequences and dependencies, critical / sub-critical path analysis / simulations for forensic investigations, resource inputs, Costs / budgets planning with recurrent expenditures in all project cycles (studies, design, procurement, logistic / deliveries, implementation / execution of works, DNP, maintenance, performance certificate), monitoring / project tracking, evaluation, trending / forecasting of Time, Cost, Quality / workmanship, cross cutting issues like Security, Health, Environment, Social and Gender equality in context with interlocked / nested log frame of policies, programs and projects to modify the approach, resources, and re-planning, if required – to meet the milestones.
Special experiences with Construction firms:
 (i) **Mobilization** program, (ii) **material production** (quarries, sand exploitation, concrete and asphalt plants) with quality control, (iii) **transport logistics** / lorry fleet, (iv) **technical and financial superintendence** of works (time planning, cost planning, coordination of workmanship like execution, (v) efficient and effective **operations / methods for construction**, (vi) accurate **measurement**, Interim Payment Applications and payment follow up (vii) **contract administration** dealing with instructions, variations, force majeure, and claims / disputes, conservation / preservation of evidences, (viii) all type of **sureties / guarantees / bonds** (i.e performance, advances, retention, payment guarantee by Employer), Taking-over, upon completion, statement of completion, Maintenance – if contracted - , Performance Certificate, Draft Final statement (of Account), Discharge, Cessation of all Employer’s and Contractor’s Liabilities / Obligations, Post-Calculation to cost/turnover relation and “actual” unit rate analysis.
- 3G _ **Capacity Building** / Institutional Assessment of Development in compliance with , the Donor Guidelines
 Knowledge Transfer of **TRL ORN** No 1-40, **PIARC** Handbook, Project Cycle Management with Log Frame approach and LF matrix, road conditions survey, pavement maintenance program to derive the unconstrained and constraint budget, revamp organizational structures of **Road Asset Management** Units (RAMU), preparation of out-and performance based Infrastructure Projects (OPRC) with initial rehabilitation, routine / periodic maintenance with the defined service levels (i.e. accessibility, traffic speed, comfort, durability, rapid response to ensure operation, safety, and emergency maintenance), and at the end of the i.e. 10 years lasting entire contract period to improve / strengthen the pavement or surface by re-gravelling or overlay.
- 3H _ **EU Communication and Visibility** Guidelines
 Besides the application of Communication / Visibility Matrix, Helmut possesses communication skills, social competencies with multicultural / tribal experiences in all hierarchy levels with strong proven leadership abilities, which have been proven as a sine qua non condition – beside technical prerequisites - achieving objectives.

- 3I _ Robust **Risk Management** for proper decisions to achieve the business objectives to apply the SWOT-Analysis with the external or internal causes: identify, assess and prioritize the causes (defined in ISO 31000) as the effect of uncertainty on objectives followed by “application of resources” to (i) minimize the probability and/or impact of unfortunate events to ascertain the composite strength factor and to (ii) maximize the realization of opportunities. Risk management’s objective is to assure **uncertainty** does not deflect the endeavor from the business goals. And last not at least, address the means of remedies / mitigations through actions to avoid, reduce, share or retain the threats.
- 3J _ **Monitoring, Evaluation (M&E) and Re-planning** / Project tracking and trending (forecasting) in compliance with the donor guidelines (M&E, Mid-Term Reviews, Audits) and time / cost / quality assurance with SHEs-Q / gender aspects in compliance with time- and cost schedules.
- 3K _ **Coaching / lecturing / facilitation** of workshops to transfer the knowledge to the Engineers and Business Administrators - in all technical, financial, contractual, logistics, administrative and organizational aspects -.
- 3L _ **Autodidact** to update the required knowledge especially in legal doctrines (**Unidroit principles** of international commercial contracts UP2016, CISG, PECL), Interpretation contra proferentem rule, terms given effect, **pacta sunt servanda** ./ **clausula rebus sic stantibus** / fundamental change in circumstances, impossibility, doctrine of frustration, Claim / Disputes, Negotiation, Delay + disruption analysis with Cost- and Time Scheduling with SHEs-Q and gender aspects, Amicable alternative Dispute Resolutions (Mediations) and Arbitration support.
- 3M _ **Ethical Conduct / Policy** in line with IBRD / IDA guidelines to prevent corrupt, fraudulent, collusive, coercive and obstructive practices.

Particular professional Skills (PS) / Adequacy for a result-oriented “procurement / purchase” + “Contract / Claim Management” + “Delay+Disruption Analysis” Assignment :

- PS 1 _Project Management Experiences in general and **PROCESS** competencies: time and network planning (sequences + dependencies) with critical path analysis / simulations, cost / budget planning, monitoring + evaluation + re-planning.
- PS 2 _Design Experiences and **PRODUCT Know how** of components and assemblies of RI-concrete, steel, piles, masonry structures and asphaltic / Ri-concrete / gravel roads.
- PS 3 _Theoretical knowledge and practical skills with **all contractual issues in all project cycles** from inception up to commissioning / operation – for a holistic approach towards claim resolution.



- PS 4 _Knowledge and Experiences in all **ADMINISTRATIVE procedures** for the execution of a project in all cycles with Authorities, Consulting Firm, Project Management Institutes, and Construction companies.
- PS 5 _Project Management in **Time, Cost, Quality, SHEs-Q** Aspects
- PS 6 _Prepare actively EDF - **Tender Dossiers** with all the required EU-PRAG / EDF-GCC / SCC, ADB, AfDB, JICA, WB **standardized Bidding Documents and Guidelines for Procurement and Bid Evaluation** are used, FiDiC-forms and DAB-agreements, PPP contracts: application of Procurement rules for award of service and work contracts and **contract management in all project cycles** to **prevent Claim submission** and to **avert / repudiate claims** - based on RED (Construction), Yellow (P+DB), Silver (EPC/Turnkey) and GOLD (DBO) FiDiC Books. **Note: PPIAF / APMG - PPP Guides for Procurement Procedures 2016, Chapter 1 – Chapter 8 has to be applied for the Procurement procedures and Tendering of Public Private Partnership projects.**
- PS 7 _Done Tender **Bid Price Calculations** (Top Sheet) for construction company with Prime Costs, Preliminary & General Cost, indirect cost, direct cost, final charges / overheads according to the Work Break Structure.
- PS 8 _**Taking over procedures** with the suitable **Test on completion** / after completion: Technical and legal take over / **acceptance** with release of the final statement of account, **sureties and warranties** (without lack of organization) during the Utilization phase.
- PS 9 _Operation Phase / **Defect Liability – Notification Period (DLP / DNP)**: Serviceability Certificate / operating ability Certificate / Commissioning Certificate
- PS 10 _Extensive **THEORETICAL knowledge** about the “rainbow” FiDiC publications to **minimize risk due to impairment of the performance** of an obligation / fault – failure either by employer or contractor toward

preliminary / precedent liability, planning / design faults, lack of coordination, faults and imperfection in the procurement / award procedure, defective / faulty / insufficient / inadequate supervision, facility management, preservation/conservation of evidences in large quantities (obey report requirements of FIDIC Clauses 4+8) enabling me to do a proper forensic effect-cause examination (delay + disruption analysis), proper Variation management not exceeded / overrun of budgeted Contract Price with foreseen contingencies.

- PS 11_ Use of a logic **METHODOLOGY** / contractual appreciation of a claim to check the **requirements, reasons, attributable entitlements of instructions / variations / claims**, legal consequences and his effects for the settlement of the dispute: amicable negotiations, dispute (adjudications) with DB/DAB, protracted Arbitration Procedures, Litigation, Terminations.
- PS 12_ Practical Contract- / **Claim Management RESOLUTIONS** carried out with plenty of **achievements** with Authorities, Consultants, and General Contractors (**up- and downstream**) in the international context. Extensive Experiences in **Claim Management** + extensive **Consultations / Negotiations** in an endeavor to reach agreements to avoid / prevent Disputes + swift **Determinations** for Contractor’s and Employer’s Claims within the time bar for Merits / Principles + Quantum (Time + Cost), EDF-Amicable Settlement and Conciliations, + FIDIC - **Dispute Resolutions** (Adjudication DAB / Review Boards DRB / DB), support for preparation of **Arbitration** (member “Giesa” of the DIS Arbitration Institution disarb.org), witness box with cross examination, proper reporting system / **MEDIATIONS** / Conciliations / substantial breach of Contract (i.e. late payment, failure to perform), **Suspension + Termination** of Contract, Lesson Learned.
- PS 13_ **Delay + Disruption Analysis - Forensic Investigation** to identify the Cause from the known impact (Effect) due to an retrospective analysis. Networking MS-Project Tool and SCL-orientations were used for the Time and Cost implications. All activities have to show their sequences and dependencies enabling the analyst to carry out a forensic investigation to prove backward the effect-cause relation.
- PS 14_ Contract / Claim Trainings facilitated for Authorities / Ministries about Delay and Disruption Analysis **Choosing a Delay Methodology** with the principle to establish the effect (incidence and extend of delay) at first and then move to the cause of that delay.
- What does the Contract requires?
 - Which approach is appropriate, correct and sustainable?
 - Does a lack of information preclude the use on any of the approaches?
 - Do time/cost constraints eliminate certain options?
- Which **approach** should be selected?
- **Prospective** critical path positions (no progress that will happen)
 - **Contemporaneous critical path** (work progress, changes in strategy)
 - **Retrospective** critical path (view from the end with the known delays)
- Productivity- and cost-based Methods of analysis**
- Impacted As-planned, time impact, snapshot / time slice window, As-planned v As-build window, longest path, collapsed As-build, and earned value analysis.
- PS 15_ Remark: **Time impact analysis** is still a first choice of **contemporary analysis**, but not in retro perspective analysis where the effects of the delay are known. It appears this is a more pragmatic approach to identify the causes and the Extension of Time that a Contractor should have been granted **at the time an Employer’s Risk event occurred**. Hence the time- and value-related Costs can be ascertained as well.
- PS 16_ Robust **Risk Management** for proper decisions to achieve the business objectives to apply the Strength-Weakness-Opportunities-Threats (SWOT)-Analysis with the external or internal causes: identify, assess and prioritize the causes (defined in ISO 31000) as the effect of uncertainty on objectives followed by “application of resources” to (i) minimize the probability and/or impact of unfortunate events to ascertain the composite strength factor and to (ii) maximize the realization of opportunities. Risk management’s objective is to assure **uncertainty** does not deflect the endeavor from the business goals. And last not at least, address the means of remedies / mitigations through actions to avoid, reduce, share or retain the threats.

Professional Experiences abroad / overseas (serval fragile, post-war states) > 15 years

Europe: German (citizen), Austria, Georgia / Caucasus, Romania
 Africa-East: Ethiopia, Kenya, South-Sudan, Uganda
 Africa – South: Rep of South Africa (RSA), Malawi & Tanzania,
 Africa – West: Liberia, Gambia, Ghana, Sierra Leone;
 Africa – North: Libya
 Near/Middle East: Saudi-Arabia (KSA), Yemen, Iraq / Kurdistan, Jordan
 Asia: Bangladesh, Afghanistan, China, India, Myanmar, Nepal, Pakistan, Philippines.
 or “this type of format”

Country (Sector)	Date from - Date to
Iraq (Highways, Procurement / Tender dossier + Contract Management)	June 2023 – August 2023
Liberia (Capacity Building Ministry / IIU – Contract Management)	Dec 2022 – May 2023

Georgia / Caucasus (Bridges, Tunnels, Underpasses, Highway in mountainous and swampy area – Black Sea)	June 2019 – Nov 2022
Sierra Leone (Infrastructure, OPRC-Lecturing)	May 2019
Bangladesh (Multipurpose Bridge Rail + Road)	Jan 2019 – April 2019
Liberia (Procurement Water Sector)	May 2018 – Dec 2020
Gambia (Business Development, Trade)	April 2018
Sierra Leone (Business Development, Building)	November 2017 – on-going
India (Sea-Bridge, Cost Estimator/Procurement)	August 2017 – Oct 2017, 1+ mission
Pakistan (R+B, Procurement / Contract)	April 2017 – July 2017, 1 mission
Sierra Leone (Roads + Bridges, OPRC)	March 2017, 1 mission
Palestine (Mediation / Vertical + horizontal Infra structures)	January 2017, 1 mission
Sierra Leone (CD, Roads + Bridges, DB)	05/2016-12/2016, 4 missions
South-Sudan (Roads OPRC)	12/2015-04/2016, 2 missions
Uganda (Roads / Business development)	03/2016, 1 mission
Georgia / Caucasus (Concrete Highway, Claims)	08/2015 - 12/2016, 6 missions
Kenya (Highway + Bridges, Evaluation)	04-07/2015 – 09/2016, 4 missions
Germany + Myanmar/Thailand (Infrastructure)	2015 – ongoing
Ghana, Liberia & Germany (Building + Civil)	2013 – 2014
China (Air Traffic / Aviation, Evaluation)	Nov 2013
Ethiopia (Energy)	2010-2012
Sierra Leone (Highways + Bridges)	2009-2012
Libya (Energy + Buildings)	2008/2009
Philippines (Ship-Steel)	2008
India (Energy + Buildings)	2008
P.R. China (Air Traffic / Airbus + Buildings)	2007
Germany (Energy + Buildings)	2007
Iraq / Kurdistan & Jordan (Energy + Buildings)	2006 / 2007
Liberia (Water)	2006
Afghanistan (Highway + Bridges)	2004 / 2005
Germany (Railway)	2002 – 2003
Romania (Highway)	2001
Germany (Highways, Railways, Utilities, Sanitary, Buildings / Sky scrapers)	1992 – 2000
Nepal (Roads)	1990 / 1991
Germany (Sanitary/Waste Deposit / Buildings)	1989
Yemen Arab Republic / (Highway + Bridges)	1987 / 1988
Malawi & Tanzania / NCP (Modal split)	1987
Rep. Of South-Africa (Highway + Bridges)	1984 / 1986
Germany (Civil + Industrial Plants)	1983
Kingdom of Saudi-Arabia (Highways)	1981 / 1982

Employment record of ALL professional experiences (overall view about development):

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
06/2023 08(2023 [47]	Organization: SweRoad Position: Procurement + Contract Reference: please inquire	Iraq	[47] Technical Assistance in raising awareness on routine maintenance and preparation of Performance Based Maintenance Bid Documents for Expressway R7, R8, R9 (World Bank WB) HFG's parts to prepare (i) Operational Guidelines, (ii) Procurement strategy and models for bidding and contract documents for rehabilitation and routine / emergency maintenance referring to World Bank Standard Procurement Documents, (iii) Draft Tender Documents for R7, R8, and R9 Performance Based Rehabilitation and Maintenance

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			Works inclusive TOR for supervision of Service contracts for the Client MoCH /RBD
12/2023 to 05/2023 [46]	Organization A : French Main Consultant B : Sub/Consult GuB GmbH Position: Contract / Claim Mgmt Reference: Katharina@GuB21.de	Liberia	[46] Technical Assistance for Infrastructure Implementation Unit @ Ministry of Public Works in Monrovia/Liberia. A _ Contractual issues addressed and explained: content of Progress Reports (FIDIC SC04.21), proper application of Price Fluctuation (SC13.8), PCC considerations, e.g. sole member of DAAB (SC20.2/20.3 Rad / Pink Book) B _ Workshops facilitated B1. Log frame approach (analysis) and LF B2. Obligations of the Parties (EMP, ENG / MC, CON) B3. PM Philosophy and Software application of MS-Project tool with practical exercises to WBS, sequences, dependencies, monitoring & evaluation. C _ Food for thoughts given about Organizational Design and Implementation to transform the IIU-entity to a semi/autonomous Road Agency under the supervision of the MPW. Note: Refer to Helmut F Giesa's other experiences to build up capacity and to enhance capabilities for engineers and MBAs. www.aid21.de/42FIDIC+EDF.pdf
06/2019-11/2022 [45]	Organization A : Kocks Consult, Branch Georgia, HO Germany and GuB GmbH Germany Organization B: GuB GmbH and UBM Position: Contract / Claim Mgmt Reference: on request Katharina@gub21.de	Georgia / Caucasus	[45] A _ East-West-Highway (E60 Lot iii Samtredia-Grigoletti) 12 km dual carriage way with 3 bridges and several underpasses with soft soil improvement at Black Sea area 6 months Design Review, 24 months supervision + 24 months DNP) B _ East-West Highway (Khevi-Ubisa Section) Improvement Project , 11 Tunnels, 18 Bridges and highways sections: Construction Supervision E60 – F2; Tasks: identify responsibilities of the parties, ensure insurance policies, assist in contract administration in general, contract / claim / variation management with advise Employer in adjudication & arbitration procedures (36 months supervision + 24 DNP + EoT)
06/2019 – 10/2019 [44]	Organization: MDF Position: Contract / Claim Mgmt. Reference: on request	Georgia	[44] Modernization of Tbilisi-Rustavi Road Section II – financed by Municipality Development Fund (MDF) and Asian Development Bank (ADB); Tasks: Review / analysis of Engineer's Determination ; potential claims/costs related to reduction of scope [omissions] and defend Client's position at the Dispute Board (DB) .
05/2019 [43]	Organization: Roughton + IBS Position: Contract / Claim Mgmt. Advisor / Mentor Reference: Katharina@GuB21.de	Sierra Leone	[43] Facilitation of several workshops about OPRC / Output and Performance based Roads/Bridge Contracts – FiDiC DBO/M-T Design+Build+Operate / Maintain + Transfer
01/2019 – 04/2019 [42]	Organization: ECCL Singapore Position: Contract / Claim Mgmt. Advisor / Mentor Reference: on request www.aid21.de/TOC123.pdf	Bangladesh	[42] Supervision of the 6.15 km long multi-purpose Padma Bridge (Highway + Railway) with ca. 800 m approach viaducts and River Training Works (Dredging) Contract Price 2.8 bn USD: Claim Management Advisor /Mentor for Construction Supervision Consultant with the main task: contract administration in general and to cope with all legal provisions / evaluations of claims and variations for extension of time, costs plus profit in particular.
05/2018 – 12/2020 [41]	Organization: MCA-L / GoL Position: Technical and Financial Evaluator (Consultancy Services) Reference: on request	Liberia	[41] Member of the Tech and Fin Evaluation Panel (TEP) to procure CONSULTANCY Services + Works Contracts: Millennium Challenge Corporation (256 Mill MCC/US-AID financed), several short missions up to 12/2020, mostly Design + Build (YB) Contracts
04/2018 [40]	Organization: GuB GmbH Position: Business development Advisor (T+F+C+Adm).	Gambia	[40] Business Development: Technical, financial, and administrative capacity upgrading of the Client's structural and process organization (UK, Gambia, other ECOWAS)
11/2017 – 12/2019	Organization: GuB GmbH Position: Business development,	Sierra Leone	[39] Business Development / Private Finance Initiative (PFI) for construction of a turn-key, commercial Building and Trad-

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
[39]	Advisor, Acquisition		ing, on-off missions.
08/2017-10/2017 [38]	Organization: Padeco Co. Ltd / GuB GmbH Position: Cost-Estimator / Procurement / Claim Management Expert. Contact info for Reference: See Fact Sheet / written Reference www.AiD21.de/TOC123.pdf	India	[38] Procurement for Design, Construction, Installation, Operation and Maintenance Facilities of the Mumbai Trans Harbor Link (DBO) with EMP, EMoP, RAP, Intelligent Transport System ITS, toll plazas, operation control center, project length 21 km, crossing the Arabian Sea with mainly ramp and bridge sections, 50m, 150 and 180 m concrete and steel spans, 6 lanes wide, 25 m deep piles (maritime); Assistance in final Cost Estimate for buildings / MEP, roads and bridges, bidding / procurement procedure to clarify and evaluate the technical capacities and financial capabilities (i.e. Unit rate / prime cost analysis) of the Contractor's Bids and to facilitate Technology Transfer. The Plant, Design + Build project (based on Yellow FIDIC Book) is co-financed by JICA, based on Japanese ODA Loan and Bid Evaluation Guidelines 2015. Total Investment ~ INR 20.000 Crore; Construction Cost ~ INR 14.000 Crore / 2.150 Million (2,15 Billion) USD.
04/2017 - 07/2017 [37]	Organization: BMB Mott MacDonald Netherlands / GuB GmbH Position: Procurement / Contract Contact info for Reference: See Fact Sheet / written reference www.AiD21.de/TOC123.pdf	Pakistan	[37] Fast Track Peshawar Sustainable Bus Rapid Transit (BRT) Corridor Project: Finalize and Review two Tender Dossiers (Design + Build) for dissemination (IfB), Pre-site visit clarification, Openings of Tec+Fin Bids, Sub-Committee Member to produce EVAL Reports in compliance with Asian Development Bank (ADB) procurement guideline / guide on bid Evaluation. Investment: 250 Million USD.
03/2017 [36]	Organization: HIFAB / GuB Position: Advisor Contact info for Reference: Cooperation @GuB21.de	Sierra Leone	[36] Expression of Interest (i) Service Contract OPRC – 500 km Feeder Roads: local consultant in Freetown organized, meeting with MAFFS and inputs, (ii) EOI for Individual Consultant Road Asset Mgmt, financed by WB.
Jan 2017 [35]	Organization: GuB GmbH Position: Mediator for vertical and horizontal Infrastructures Contact info for Reference See Fact Sheet www.AiD21.de/TOC123.pdf	Palestine	[35] Mediation Discrepancies of needs, rights, and interests have been settled by a guided process within one month only. The Mediator is not allowed to divulged any data (duty to keep confidential) about the disputing Parties, the Project, the Investment and the content of the satisfactorily achieved results – without prejudice privilege- , except (i) Pre-conditions of the Mediation have been met: both parties were ready and willing to participate, each party brought along legal representatives and competent / authorized decision makers, (ii) a guided interactive process resolved the conflicts, and (iii) a review and ratification / endorsement safeguarded the decision to became final and conclusive.
05/2016-12/2016 [34]	Organization: FTL Company Position: Technical and Financial Project Management, Procurement + Contract/Claim Management Contact info for Reference Managing Director of FTL Abiodun Oyebola aoyebola@firsttricon.com	Sierra Leone	[34] Construction of GOSL - financed Design + Build Roads and Townships in the Eastern Provinces Tasks: Technical, Financial and Contractual Project and Contract Management Advisor with discretionary power for Business development / Capacity Building to (i) the process of Procurement, Material flow / spare parts / filling station, pre-cast fabrication, Logistic / Transport, Construction Management (ii) Finance with financial monitoring system (iii) Claim Management complying with the “D+B-Contract” , UP2016 Hardship / doctrine of frustration, (iv) Administration Management / General Management for Roads, Bridges and Housing / Building facilities with a portfolio of 200 Mill USD. 5th missions.
12/2015-04/2016 [33].	Organization: Sheladia, USA Position: Procurement & Contract Mgmt. Contact info for Reference PM of Ministry, Transport, Roads and Bridges James Alam	South-Sudan	[33] WB-Procurement / Contract Management Ministry for Transport, Roads & Bridges Tasks: (i) Upgrade of Tender Documents for output and performance based road contracts OPRC (similar D+B+O) esp. Routine and Periodic Maintenance, Emergency Works and Improvement upon Transfer for all Service Levels / Performance Criteria of paved and unpaved Roads inclusive Bridges: Bidding Procedure, Specifications, and Condition of Con-

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
	alamjj2@yahoo.co.uk		tract. (ii) Calculation Scheme, Price Break Down / Unit Rate Analysis (iii) OPRC-Training / Workshop for MTRB / Roads Authority in Juba [04/2016]. 2 Missions + home based works = 4 months with sensitization for x-cutting issues (SHEs + Gender).
02/2016 - 03/2016 [32]	Organization: TIEG / Position: Individual Consultant, Advisor Helmut F Giesa, FWC Contact info for Reference Delegation of European Union Kampala / Uganda. Enock.NYOUREKWA-TWINOBURYO@eeas.europa.eu (and Fiona Nagasika)	Uganda	[32] EU-financed TA in Design, Business Development and Environmental Policy and Management to the UNRA [Uganda National Roads Authority] Tasks : Review of the new organisational structure and processes with the recruitment of human resources and their capabilities and income possibilities (bill boards). Needs assessment, Proposals to overcome the bottlenecks and quick win solutions like management program presented in a precedence network, monthly tracker / monitoring system and Quick-win action plan; 1 Mission ~ 1,5 monhs .
08/2015 - 12/2016 [31].	Organization: PADECO Japan Position: Contract / Claim Manager Contact info for Reference First Chairman of the Road Department / Ministry of Regional Development and Infrastructure RD / MRDI Nugzar Gasviani nugzar.gasviani@georoad.ge Mrs. Yayoi Nishihama, Authorized Representative of Padeco ynishihama@padeco.co.jp	Georgia	[31] Contract / Claim Management for Ministry of Regional Development and Infrastructure for Georgia / Road Department. Three Lots of new constructions of Highways, 65 km, CONCRETE roads with 7 Bridges / intersections with ramps and bridges with building / maintenance and parking facilities financed by JICA (150 Mio. EUR). Contract Basis: MDB harmonized edition for Construction (FIDIC - red book, designed by Employer). Tasks: (i) Engineer's Determination of time- and value-related (15 Mio. EUR), and all other Claims (+5 Mio. EUR) referring to the Contract. (ii) Advices for DB-Member / Amicable Settlement / Arbitral awards (iii) Supporting the Employer in the DB Hearings for Dispute resolution. 6 Missions ~ 8,0 months cumulative
04/2015 - 09/2016 [30].	Organization: WYG Turkey Position: Contract / Claim Management Contact info for Reference Kenyan National Highway Authority, PM Daniel Cherono d.cherono@kenha.co.ke Delegation of European Union Nairobi: Kizito.OJAAMONG@eeas.europa.eu and Juliet Chelimo.	Kenya	[30] EU-Technical Assistance for Evaluation of contractual claims / Contract + Claim Management Training: Rehabilitation of Bridges a highway with asphalt concrete surfacing and building facilities, 120 km length. Financed by EU. And Facilitator for FIDIC / MDB harmonized edition for Construction, AND EDF General/Special Conditions of Contract in context with EDF-Procurement PRAG_2014 – Two Trainings in Contract/Claim Management facilitated. 4 Missions, ~ 2,5 months cumulative
02/2013 on-going [29].	Organization: GuB GmbH Germany Position C: Project Developer Position B: Adjustor Position C: Procurement Contract and Project Mgmt Contact info for Reference Walter Faidt Cooperation@GuB21.de	Thailand / Myanmar Sierra Leone Germany Liberia	[29C] (i) On-going Project Development of a technical, social (e.g. Temples) and economical (markets, clinics, pharmacy, community centers) infrastructure including “ commercial production plant ” (estimate 400 Mio. USD). The key element of the concept / pre-assessments are based on an ultramodern combustion process plant with carbonization at low temperature (German state-of-art) to produce Gas, Fuel, Fertilizer, activate coke, and Electricity for using of operation of transport fleet and distribution center (cooling systems for food security) to generate 5.000 employments in the agricultural sector. Project Finance of the humanitarian Development Projects via International Foundation / Trading in the second market. [29B] Qualified appraisals / assessments of the fair market value of real estate of Industrial Plants and Residential Estates for private or Bank customers basic principles (WertVO, MaBV, BauNVO, BGB, HOAI §33/34); selection of methods (plot value, tangible assets, capitalized and realizable value); object types (property estate, industrial complexes, ownership / cadaster / mortgages). [29 A] Preparation of (i) Technical Proposals (Approach, Organization + Methodology, Work programs) and (ii) Fi-

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			<p>nancial Proposals (calculation/cost determination of the tender prices) for different co-operation partners and donors: EU–Swaziland; WB–Liberia; UNOPS/SIDA– Afghanistan, AfDB–Gambia USAiD–Iraq, JICA– Bangladesh, USAiD Afghanistan, EU St Lucia (PRAG/PCM), GIZ – Liberia, and others.</p>
Nov. 2013 [28]	<p>Organization: Particip / Ecorys Position: Monitor / Evaluator / Assessor (Framework Contract) Contact info for Reference Delegation of European Union (DEU) Beijing P.R.C. Yi Xiaolin, Task Manager xiaolin.yi@ecas.europa.eu</p>	China	<p>[28] EU- ROM-Mission / result-oriented monitoring-mission: Institutional Capacity Building for the Civil Aviation Sector in China (EU-co-financed Program: Airworthiness, Air Traffic Mgmt, Pilot Training, CA + Safety Regulations ...) with MOFCOM, CAAC / Cast, CAUC, EUCCAP; Assessment of 1 Financing Agreement / Decision, 2 Grants, and 1 Service Contract Performance. 1 mission, 0,5 month</p>
03/2010-06/2012	<p>Organization: Vergnet / GuB Position: administrative Mgmt.</p>	Ethiopia	<p>[28] Construction Ashegoda Wind farm (Mekele) for EEPCo Investment: 0,45 EUR/KWh at a 55 m hub height.</p>
01/2011 – 01/2013 [27]	<p>Organization: R R I & GiZ (previous invent / gtz) Position: Project Management and Procurement Specialist; Evaluation Committee, Team Leader Contact info for Reference Sierra Leone Roads Authority (SLRA), Mr. Munda E Rogers, Director General e-mail: SLRA_DG@sierratel.sl www.AiD21.de/11-RRi.pdf</p> <p>Mr. Sahr D Dugba, Director of Development, SLRA e-mail SahrD1110@gmail.com</p> <p>Written References published under www.AiD21.de/TOC123.pdf Certificates 1+2+3 1 _ JV RRI & GiZ [01/2011-01/2013] www.aid21.de/11-RRi.pdf 2 _ SLRA / GoSL [04/2009 – 01/2013] www.aid21.de/12-SLRA.pdf 3_ Louis Berger [03/2009 – 03/2010] www.aid21.de/13-LB.pdf</p>	Sierra Leone	<p>[27] EU -TA to SLRA : Construction / Reconstruction / Rehabilitation of the Road network in Sierra Leone Main project features: Technical Assistance – Technical Advisor / Team Leader / Project Management Specialist A_ Operational Project Cycle Management in all Phases (PCM) with Log Frame work approach / matrix and performance indicators: Studies, Design, Supervision B_ Procurement guidelines with Bid Evaluations (EU-PRAG 2012, AfDB, WB). Member of Evaluation Committee (FIDIC, red Book, Construction, designed by EMP).. C_ Review of Design of Extension of SLRA-Office Building, Construction start: Spring 2012. D_ Supervision execution of works: roads, bridges and office building E_ Policy formulation of Decentralization/Devolution of Feeder Roads to LC/DC F_ Multi Donor Sector Policy Support Programme (SPSP), Donor Coordination, Road Pavement Management System for Budgeting, Financial Management G_ Following up of several Technical Audits H_ EU Communication and Visibility Guidelines, Communication Matrix I_ Knowledge transfer in technical, financial, logistic and contractual PM in plenty workshops J_ Administrative Procedures (contractual supervision obligations) in line with EU-GCC/SCC and FIDIC for construction and road maintenance/ performance based management + maintenance contracts K_ Study tour to Ghana J_ Capacity Development to plan, develop, manage and maintain classified road network with all the adjacent facilities / market buildings; with the application of EU-Project Cycle management (PCM) guidelines in all phases of a program / project like Logical Framework approach (Process: Analyses Stage) and LF-Matrix (Product – Planning stage with the result-oriented ACTIVITY, RESOURCE and COST schedules including annual recurrent costs (Work Program); split up in Cost Codes (Funding Sources Gov. / Donors)). K_ Rejection of a 15 Million USD Claim (Report) J_ Review of Design and Cost Estimate, reduce the Cost from 95 Million to 65 Million USD for 120 km road; Bids have matched the revised Cost Estimate. L_ Road Asset Management: Data collection and input of Road Register, Road Condition Survey and Road Register, GiS-Mapping for Road Asset Management Database, Classified Traffic Counts with axle load measurement (mobile weighbridges),</p>

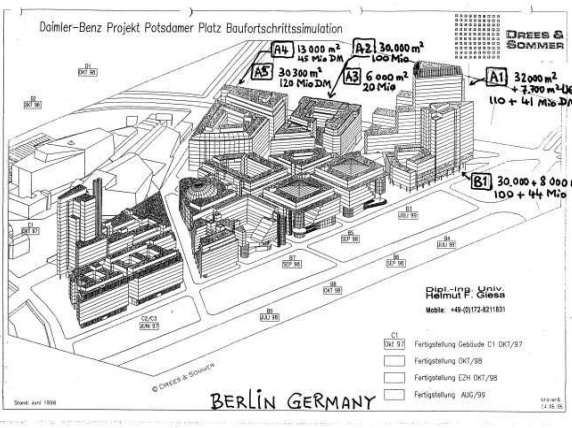
Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			<p>M _ Detailed advices for the supervisor (Management) in technical, financial and contractual issues, rejection of a huge Claim of 15 Mio. USD,</p> <p>N _ Review of Design with the technical and economical achievement: quantities reduced and hence the cost estimate saved 30 Mio USD (120 km road length).</p> <p>O _ Technical Assistance Team (similar TSG) delivered a ROAD and BRIDGE design manual (RBDM) / Technical Specifications.</p> <p>P _ Leadership / Coordination / PM</p> <p>Q _ Training, Coaching and Motivation</p> <p><i>Financing: European Union / WB / AfDB / Islamic Dev Bank / Badea / Kuwait Fund / OPEC a.s.o.</i></p> <p>Activities performed: Technical, logistic, financial, contractual and organizational Advices given in project administration, review of road design / build / operate and maintenance implementation: traffic count, axle load measurement with mobile weighbridges, geotechnical explorations and soil/material testing (DCP, CRB, PI,..), support in the entire procurement chain, review pavement structure (TRL Road note 29 + 31), surveying topics, optimization of horizontal and vertical alignment with Mass Haul Diagram, hydraulics calculation of drainage structures, review of structural design and calculation of Bridges, methods of measurement and payment / contractual recommendation in from inception up to commission to revert claims, Change Management / administrative Orders AO / Addendums / Revision of prices (VOP) / contract price escalation (CPA) in all project cycles with Training, Coaching and Motivation techniques of SLRA Engineers.</p>
04/2010 – 01/2011 [26]	<p>Organization: GoSL / SLRA Position: Technical and contractual Advisor, Procurement / Contract + Claim Management Specialist, Procurement Support / Evaluation Sierra Leone Roads Authority (SLRA) Mr. Munda E Rogers, Director General mundarogers8@gmail.com</p> <p>Mr. Sahr D Dugba, Director of Development SahrD1110@gmail.com</p>	Sierra Leone	<p>[26] Construction / Reconstruction / Rehabilitation of the Road network in Sierra Leone</p> <p>Main project features: Technical Assistance – Contract Management Specialist / FiDiC and EU-GCC/SCC (in connection with TA 2011-2013)</p> <p><u>Financing:</u> Government of Sierra Leone (NAO) / European Union EU</p> <p><u>Project Cost:</u> Road Construction 150M Euro for supply services and works contracts (Roads and Bridges) and Performance based Management and Maintenance Contracts (compare FiDiC Gold Book : Design, Build, Operate and Maintain)</p> <p>Activities performed: Advises / contractual recommendation in all project cycles with Training and Coaching. Preparation of Tender Documents and Design Review with VoP-formulae. All aspects of Procurement Procedures in line with WB, AfDB, EU, and other donor regulations/guidelines: Evaluation-Team Member to assess Consultant's / service Proposals and Contractors works bid. Technical Advise in financial, technical, logistical and organizational project management, Design review, Procurement, Evaluations and esp. Supervision during site visits of roads and pre-stressed concrete bridge construction. IPC / Revision of Prices checked. Delay + Disruption Analysis with network tools.</p> <p>Achievement: 15 Mio. USD claim averted.</p>
03/2009 - 03/2010 [25]	<p>Organization: Louis Berger Position: Contract + Claim, Technical Advisor Procurement, Evaluation Written Reference: www.aid21.de/13-LB.pdf Implementing Agency: Sierra Leo-</p>	Sierra Leone Freetown	<p>[25] Technical Assistance (TA) to SLRA : Construction / Reconstruction / Rehabilitation of the Road network in Sierra Leone</p> <p>Main project features: Technical Cooperation – Contract Management Specialist / FiDiC / EU-GCC/SCC for all type of highways and bridges.</p> <p><u>Financing:</u> Government of Sierra Leone (NAO) / European</p>

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
	<p>ne Roads Authority Financed by EU</p> <p>Contact info for Reference Pascal HOUDEAU Managing Director for W-Africa phoudeau@louisberger.com</p>		<p>Union / of the EPC/Turnkey Project (similar Gold FIDIC book) with DBOM (Design+Build+Operate/Maintain) (design, build, operate, maintain and own). <u>Project Cost:</u> Road and minor structural Construction 150M Euro for Supply, Services and Works Contracts. Activities performed: Advises / contractual solutions in all project cycles inclusive Procurement, Evaluation, Award with Training and Coaching (see above mentioned assignments with SLRA between 2010 and 2013) and Contract Administration with Delay + Disruption analysis based on productivity and costs (earned value analysis)</p>
10/2008 – 03/2009 [24]	<p>Organization: SiEMENS AG General Contractor Position: Coordinator , Project Manager, Superintendent</p> <p>General Electric of Libya (Utility) Financed by World Bank Construction Contact info for Reference Bertrand Laine, Site Manager E&M – Libya bertrand.laine.ext@siemens.com</p>	North Africa Libya	<p>[24] Construction of a Substation / Switchgear Building of 400 KV and 66 KV in Ghadames / Libya Main project features: Silver Book FiDiC / EPC-Turnkey Contract - Construction of the 400 KV and 66 KV SS with operational, social and administrative Buildings, pipelines, sewer systems, water supply in rocky surroundings, concrete access roads <u>Financing:</u> Government of Libya in conjunction with the World Bank <u>Project Cost:</u> 120 Mio. Euro / civil works around 6 Mio Euro. EPC/Turnkey Project (similar silver or gold FIDIC book) with DBOMO (design, build, operate, maintain and own). Activities performed: Overall-Coordination / superintendence / supervision of extensive reinforced concrete works / material / tools / equipment deliveries on site, Quality Control (e.g. sequence and procedure of construction, LAB-Tests) of civil works, QS / measurement and payment, reporting to the HO.</p>
02/2008 – 09/2008 [23]	<p>Organization: SIEMENS AG General Contractor Position: Construction Liaison Officer, Superintendent, Project Management</p> <p>PGCIL Powergrid Corporation (Energy Utility) Financed by World Bank Contact info for Reference Gustav Jantsch, EPC – Coordinator, Head Office Erlangen, Germany + India E-mail: gustav.jantsch@siemens.com</p>	Asia India Balla Bhiwadi	<p>[23] Construction of two HVDC bi-pole Converter Stations, +/-500 KV / 2.500 MW incl. ground electrode stations with AC-switchyard extension 132 kV with concrete access roads Main project features: Construction of the two converter station with AC-Switchyard / FiDiC with reinforced concrete foundations of the electrical towers, intensive dewatering – vacuum systems with jetting / well points due to high water table for the construction of several high buildings up to 23 m with reinforced concrete and brick buildings, operational and administrative buildings, water supply, sewerage, road construction with concrete (access of 375 tons generators). The entire stations have been built with labor intensive works methods in compliance with the Indian law. <u>Financing:</u> Government of India in conjunction with World Bank <u>Project Cost:</u> 13,6 Billion. INR / 220 Mio. Euro of the EPC / Turnkey Project (similar silver FIDIC book) with DBOMO (design, build, operate, maintain and own). Activities performed: Overall-Coordination of the design and supervision with Claim Management of the execution of “concrete” and “steel” works.</p>
07/2007 – 09/2007 [22]	<p>Organization: Drees & Sommer Project Management Institute Position: Consultant Advisor and Project Controller with CAPDI China / AIRBUS Contact info for Reference Heinz Fraunhoffer, Stuttgart General Manager Prof. Hans Sommer, CEO, Owner</p>	China Tianjin Beijing	<p>[22] Final Assembly Line FAL-C Airbus A319/A320 in Tianjin, P.R.C./China Main project features: Construction of civil and building works for the huge aero-industrial Project with extensive overlapping bored pile walls and in some areas with 20m deep steel pilings in the black cotton ground (clay). The Hangars and assembly halls have a length of 800m. And construction of extended concrete tax ways for the heavy duty plane operations (testing areas). All Hangars, operational buildings and Power “House”, social buildings (i.e.Canteen). <u>Financing:</u> Airbus / Chinese Government (Chin. Aeronautical</p>

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
	Financed by Gov. P.R.C		Design and Project Institute CAPDI) <u>Project Cost:</u> 300 Mio. Euro of a Private and Public Financing Initiative (PPFi) – similar a Silver FiDiC Book contract (EPC/Turnkey) -. Activities performed: Advisor and Emergency Project controller / Time Scheduling for the Final Assembly Line esp. the power house to supply the entire project with electricity and Claim Management to prove with a forensic examination the entitlement for Time and Cost.
06/2007 - 12/2007 [21]	Organization: ALSTOM, General Contractor Position: Project Management Site Supervision Contact info for Reference Alain Cailler General Construction Manager ; Lingen – Germany. E-Mail : aain.cailler@power.alstom.com Financed by RWE Public Utility	Germany	[21] Construction of a GuD / Gas and Steam power plant in Germany Main project features: VoB – Contract - Construction of 875 MW Gas and Steam / Combined Cycle power station with several technical, social, administrative buildings with necessary dewatering vacuum-systems with well points/jetting in sand formation , huge amount of RI-Concrete, a 124 m high cooling tower , a lot of different ground pipelines for the operation of a GuD-power plant, sewerage systems, and approx. 5 km asphaltic roads and concrete parking / delivery areas. <u>Financing:</u> RWE .Energy public utility, <u>Project Cost:</u> 550 Mio. Euro, EPC / Turnkey Contract (similar Silver FIDIC Book) Activities performed: Coordination of the design and supervision of all “ steel and re-enforced concrete ” works, pipe laying, road construction like ABB-Project in Iraq and preparation of Claims for the EPC-Contractor. Claim Management to prove with a forensic examination / networking the entitlement for Time and Cost.
08/2006 – 05/2007 [20]	Organization: ABB General Contractor Position: Construction Supervision, Coordinator, Project Management Contact info for Reference Jürgen von der Au EPC, Project Leader Head Office, ABB Mannheim e-mail: juergen.von_der_au@de.abb.com Financed by Mass Jordan Investment (private Investor)	Kurdistan / North-Iraq Arbil (Erbil) + Jordan Amman	[20] Construction of a 450 MW Gas Power Station with the extension of combined cycle to 900 MW Main project features: FiDiC – EPC / Turnkey-Contract - Construction of a 450 MW gas power station with all technical, social and administrative buildings / infrastructures esp. reinforced concrete elements / extensive concrete delivery areas, 4 huge steel tanks for 20.000 m3 fuel, several hundred meter man-size “open cast” tunnel systems for the utilities, and 4 km asphaltic / concrete roads. <u>Financing:</u> private Investor with Kurdish Regional Government / EPC/Turnkey similar Silver FiDiC Book and DBOO Service (design + build + operate +own) <u>Project Cost:</u> 200 Mio. Euro; EPC / Turnkey Contract (Silver Book FIDIC) Activities performed: Design coordinated and Execution of re-enforced concrete and steel Works supervised. Daily Coordination of ten site agents of the subcontractors / 700 workers on site with Time – and Cost Schedules. Claim Requests to prove with a forensic examination (prospective / contemporaneous approaches) to prove the entitlement for time prolongation and cost compensation.
03/2006 - 07/2006 [19]	Organization: Hydroplan / GuB Position: Consultant, TA Team Leader, NAO, Advisor for Managing Directors, Public procurement for LWSC Liberia Water and Sewer Corporation Contact info for Reference Nathan Hun-Bu Tulay, Managing Director, LWSC e-mail: NHunbu@yahoo.com Financed by EU	West-Africa Liberia Monrovia	[19] Technical Assistance for the Rehabilitation of the Water Infrastructures of Monrovia and Support to the administrative, financial and technical management of the LWSC. Rehabilitation of the water treatment plant, transmission lines, booster / pumping stations and reservoirs. <u>Financing:</u> European Commission (ACP-9th EDF 003) <u>Project Cost:</u> 3.0 Mio. Euro EU-General and Special Conditions for Service and construction Contracts (similar red book FiDiC) with Variation Orders / Revisions of Prices (VoP). Activities performed: Tender Documents / Revision of

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
	Request for Reference:		Price-Formulae. Procurement and administrative, financial and technical support for LWSC.
01/2005 - 02/2006 [18]	Afghan-German Asman Abi Tulu, JV GuB GmbH Contractor Position: Technical advisor Project Manager, General Management Contact info for Reference Fatlind Malaj, Kosovo-Albania e-mail : fatlindmalaj@hotmail.de Private Entity	Afghanistan Germany	[18] Afghan-German Cooperation between GuB, GmbH / Asman Abi Tulu (AAT) Main project features: Infrastructures in civil (roads, minor bridges with reinforced concrete), sewer and building trade / FiDiC. Technical and financial advice and support for AAT. Financing: Private Enterprise Activities performed: Coordination and Support for Acquisition, Bid preparation and Calculation, Design, Procurement and Supervision , Quantity Survey and Method of Measurement and Payment and Claim Management with prove of critical / subcritical path for Extension of Time and extra / additional payment (delay+disruption cause-effects)
01/2004- 12/2004 [17]	Organization: IBG Gauff /GuB Consultants Position: Consultant, Coordinator Resident Engineer for D+B+B/C Contact info for Reference K. Birkenmeyer, MD, owner Financed by BMZ / KfW	Afghanistan	[17] Road Reconstruction Programme for Kunduz / Emergency rehabilitation of roads, two reinforced bridges with constant cross-sections / Length approx. 7 meters and 15 culverts of 14 km town roads with asphaltic concrete wearing course as a Design / Engineering, Procurement and Build / Construction Contract (EPC-Contract). Financing: German Ministry of economic cooperation and development (BMZ) with KfW Project Cost: 3.5 Mio. EURO Activities performed: Initiation, technical, logistic and financial administration / of Design, Procurement and Supervision of the execution of the asphalt and concrete / bridge works [Design + Build + Operate + Transfer concept : DBOT / EPC – FiDiC]; Coordination of all key stakeholders and Supervision; Variation and Revision of Prices , Incidental Budget control of 3,5 Mio. EURO with Lexware Prof. Financial Database.
01/2003 - 12/2003 [16]	Organization: Socotec Position: Consultant, institutionnel support, Procurement, Contract Manager Management Marketing Contact info for Reference H. Hesse, MD Financed by Ministry of Transport Consultant / Project	Germany	[16] Setup of the Acquisition procedure of infrastructure projects (railway projects) by PM Tools Responsible for the management of the marketing / Procurement department . Establishment of a sales and marketing organization by using project management methods and processes. Request and preparation of Tender documents related to railway and road engineering services.
01/2001 - 12/2002 [15]	Organization: DB Deutsche Bahn = German Railway Authority Position: Procurement Contract + Claim Management Contact info for Reference Hans-Joachim Dunsch Head of Contract Department Mrs. Renate Eichhorn Head of Claim Management Department Financed by Ministry of Transport	Germany	[15] Procurement / Supply Department Railway Authority Main project features: HOAI-Service, VOL-supply and VOB-work contracts of civil and railway construction works including bridges and tunnels ... Construction [VOB, similar Red FiDiC Book and Service (HOAI) contracts] Financing: Ministry of Transport Activities performed: Re-engineering and improvement of the purchase procedure of engineering and construction services. Review and evaluation of the Contractor's submitted claims related to additional railway and bridge works. Negotiations with the Contractor's representatives to defend portions of the claims for the Client. Delay analysis / simulations for loss of productivity and loss of time (network tool). Achievements : minus 40% claim negotiation
06/2001 - 08/2001 [14]	Organization: Seib Consultant Position: Consultant Highway Engineer MoT / N.A.R. Contact info for Reference Hans Seib, MD / CEO, Owner	Romania	[14] Upgrade of the Infra Trans-European Transport Network, Corridor IV Upgrading measures of the existing roads by field investigations. Financing: Financing: European Commission Activities performed: Co-ordination and preparation of feasibility studies with survey, geotechnical explorations,

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
	Financed by EU / Phare Studies		soil/material testing, pavement design, optimization of alignment with mass haul diagrams and production of tender documents and database for cost estimates / "Construction" (Red-FiDiC Book)
01/1999 - 12/2000 [13]	<p>Organization: IPM / DB PM-Institute for Deutsche Bahn (DB = German Railway authority)</p> <p>Position: Consultant – Institutional support, Procurement & Contract Manager</p> <p>Contact info for Reference Franz Mergenthaler Department Manager, DB Netz AG</p> <p>Financed by Ministry of Transport</p>	Germany	<p>[13] Contractual Procurement / Supply Department of the railway authority</p> <p>Procurement of all HOAI-service, VOL-supply and VOB-work contracts for all "railway" structures like Steel / composite Bridges, Cast in Box Girders, incremental launching methods / timed shifting and Tunnels in Munich and negotiations with the contractors to defend their claims. Delay + Disruption analysis / simulations for causes – effect relationship to identify the entitlement for time + monies claims (merits + quantum – Qty + Cost).</p> <p>Achievements: approx. 40% claim amounts reduced by tough negotiations and well organized Data Management. Assistance in the purchase department to procure engineering and construction services: Acknowledgement of orders.</p> <p>Claim Management / Settlement of Disputes. Review of the submitted claims to the Client. Negotiations to find an amicable settlement to defend portions of the claim (VoB Part A + B + C)</p>
07/1995 - 06/1997 [12a] AND 07/1997 - 12/1998 [12b]	<p>Organization: DRESS & SOMMER Daimler Quarter Development</p> <p>Position: Project Management Procurement</p> <p>Contract Management Project Controller</p> <p>Contact info for Reference Heinz Fraunhoffer, Stuttgart General Manager Prof. Hans Sommer, CEO, Owner</p> <p>Financed by Public Utility Municipality</p>	Germany	<p>[12] Project management contract to implement</p> <p>[12a] Public utilities (Tram and Omnibus operation depot, total 90 Mio Euro) in Mannheim with construction of arch halls for parking and repair, road and railway network on the depot and halls, bored piles for foundations, buildings with shell construction, dry and wet works, central building control system, outside facilities with electrification poles, pavement of concrete, cobbles and asphalt.</p> <p>[12b] Huge Turn-key building projects (250 Mio. Euro) of the Potsdamer Platz / Berlin Germany comprise of five turn-key buildings up to 25 floors with 5 Underground floors for parking / storage areas: Huge Sheet pilings / overlapping bored piling walls with anchoring have been executed to incorporate the metro in the UG. Buildings / Turnkey Hotels, Boarding House: SHELL: Construction (RC, brickworks), Staircase, lightning system, ROOF: safety barriers, plumber, structural Facing (twin) FACADE, sun screeds, windows to protect against inclement weather: Central Heating / cooling / ventilation system (HVAC) in cellar or roof; INTERIOR works: door case / frames, rough installation of cable / pipes for heating, fire protection / sprinkler, electric, sanitary, plumbing, wet works: plastering, floor screed, (DB false, HB raised screed), floor and wall covering (tiles, flags) painting, dry construction with partition walls, lifts / elevators, door leaves, locking system, final electric / SANITATION installation and building services / CONTROL system, suspension ceilings, lighting, floor cover (parquet, linoleum), carpenter / built-in furniture, outdoor facilities, basic cleaning, take-over, move in furniture, pre-opening phase / Test phase.</p> <p><u>Financing:</u> Daimler Chrysler, private Financing Initiate (PFI) <u>Project Cost:</u> (12a) 45 Mio. Euro Operational Depots in Mannheim (12b) 250 Mio. Euro Turnkey Sky scrapers in Berlin</p> <p>12a) Activities for the Operation depots: Review of Tender Docs of the General Designer for building, civil and railway works, Cost Estimate, Evaluation of bids, Evaluations reports, Recommendations for award of contract, time Schedule, re-planning measures, contractual appreciations of contractor's claims and overall coordination of the con-</p>

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			<p>sultant and contractors.</p> <p>12b) Activities for “building construction” performed: Review of Tender Docs of the General Designer for building, civil and railway works, Cost Estimate, Evaluation of bids, preparing the decision-making memos to the Client based on German Procurement and Execution of Works Regulations (VOB Part A+B+C) for quality, time and cost controls and monitored the entire construction process. MS-Project and special Cost Software has been used for Claim Management with prove of critical / subcritical path for Extension of Time and extra / additional payment (delay + disruption cause-effect relationship)</p>
			<p>My perceived achievements: “tact cycles” concept with “optimization of team configurations” caught up a 6 month delay in shell-construction, interior works (wet + dry construction) with contents, furniture and fixtures for pre-opening / Test Phase</p> <p>Six TURNKEY-BUILDINGS B2 : Gross Floor Area 30.000 m2 + 8.000 m2 Under Ground, Cost=100+44 Mio. DM A1 : CF Area 32.000 m2 + 7.000 m2 UG, Cost =110 + 41 Mio. DM A2 : CF Area 30.000 m2, Cost = 100 Mio. DM A3 : CF Area 6.000 m2, Cost = 20 Mio. DM A4 : CF Area 13.000 m2, Cost = 45 Mio DM A5 : CF Area 30.300 m2, Cost = 120 Mio DM Website : http://www.AiD21.de/CV2015HFG/90-SP.pdf</p>
01/1995 - 06/1995 [11]	<p>Organization: Progeo Consultant Position: Authority Advisor Procurement & Contract Manager Contact info for Reference Andreas Roedel, Owner – MD (Progeo) and Prof. Bielknoth, Com. MD (LBV)</p> <p>Financed by Mining Authority LBV (Brown Coal) / Ministry</p>	Germany	<p>[11] Re-cultivation of the open cast mines and dismantling of the industrial power plants / buildings. Consultancy to the administrative, financial and technical top management about the EU-wide procurement process, technical advice to prepare the technical and contractual tender documents, evaluation of contractors’ bids, award of contract, follow up activities. <u>Project Cost:</u> 350 Mio. per anno budget Activities performed: In charge of consultancy of the strategic and operational procurement process, award of contract and implementation coordination (VOB/A,B,C).</p>
01/1994 - 12/1994 [10]	<p>Organization: ARGE Hochtief-Wayss & Freitag Position: Construction Supervision Project Controller Tracking and Trending Trouble Shouting Contact info for Reference H. Schwerdtfeger, General Project Manager</p> <p>Financed by Berliner Wasserbetriebe Water Authority</p>	Germany	<p>[10] Sewage Purification Plant Berlin Scheduling and time control for the proper execution of sewage treatment plant in Berlin / “Klärwerk Wassmannsdorf”, to expedite the process of construction: operational buildings, aeration basins, sludge tanks, pipelines, sewers, drainage, two precast bridges with a length of 15 m (scaffolding support) / tunnels and circa 100.000 m2 asphaltic access roads / parking areas. <u>Project Cost:</u> 140 Mio. Euro Activities performed: Project tracking and trending / forecasting with MS-Project Software (Time and Cost) Claim Management with prove of critical / subcritical path for Extension of Time and extra / additional payment (delay + disruption cause-effect relationship)</p>
01/1993 - 12/1993 [9]	<p>Organization: Straßenbauamt German Roads Authority Position: Authority Project Leader – Public Procurement of infrastructures Contact info for Reference Ltd. Baudirektor Wrede DG Roads authority.</p> <p>Financed by Ministry of Transport</p>	Germany	<p>[9] Administration and Public Approval Procedure (Raumordnungsverfahren) Design, construction and preventive and corrective maintenance of state roads / highways and concrete pre-stressed bridges between a span of 25 to 275 m (BAB-Highway; incremental launching method) in the entire district Central Franconia (1,200 km) based on VOB Part A + B + C. Responsible for the punctual implementation of design tasks, staff coordination and design check. Preparation of tender documents, Evaluation of bids, Award of Contract, Supervi-</p>

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			tion of construction works (roads and bridges).
01/1992 - 12/1992 [8]	Organization: FiEGL Construction Position: Construction Superintendent, Calculator, Project / General Manager Contact info for Reference Hanns Steinbacher, Owner Financed by Ministry of Transport	Germany	[8] Construction of the Bundesstraße B13 By-pass Gunzenhausen – Aha Main project features: Construction of carriageways, 1 major bridge in reinforced concrete, Length approx. 55 m with three spans, sewer and purification plants based on VOB Part A + B + C Management of road construction, sewerage and storm water drainage. Co-ordination of subcontractors. In charge of quantity survey and all contractual procedures and matters including the relevant negotiations.
01/1991 - 12/1991 [7]	Organization: LAHMEYER Position: Consultant Highway Engineer Design Supervision International Consult Contact info for Reference Joachim Neumann, General Manager Financed by Ministry of Transport	Germany	[7] Technical studies for Public Private Partnership (PPP) of the Highway Dresden – Leipzig Technical Study and examination of the financial implications of the upgrading of the existing “65 km long Autobahn” with 13 highway bridges in reinforcement / pre-stressed concrete modules / incremental launching method to introduce toll gates for a public private partnership cooperation. Cost investigations about reconstruction and realignment of portions of the highway and 13 bridges / Autobahn Dresden-Chemnitz for different options (typical classified cross-sections)
01/1990 - 12/1990 [6a] [6b]	Organization: LAHMEYER International Consult Position: Consultant, Road Design and Cost Engineer Contact info for Reference Lue Luetkestratkoetter, MD / CEO Financed by NEA/Nepal Electricity Authority and World Bank	Nepal	[6a] Feasibility study of Hegdanga - Chepuwa access road – Arun III HEP (40 km) and [6b] Review of the Tumlingtar – Arun access road – Arun II HEP (200 km) access road <u>Financing:</u> The World Bank <u>Project Cost:</u> (1) 35 Mio. USD (2) 120 Mio USD Activities performed: (6a) Feasibility Study / Construction Planning Report of the access gravel road to the ARUN III Hydroelectric Power Station (HEP) in the Himalaya with 9 reinforced / partially pre-stressed bridges (up to 40 m) over gorges and 1 pre-stressed bridge (70 m) of the Arun River. (6b) Review of Tender Documents for gravel access road from Tumlingtar to the ARUN II HEP (70 km long) in the mountainous area of Himalaya with 5 bridges (up to 35 m) over deep gorges and 1 bridge (75 m) over the Arun.
01/1989 - 12/1989 [5]	Organization: MICHEL Contractor Position: Construction Site Supervisor Contact info for Reference Carl Pioch, Owner – MD Financed by District Council	Germany	[5] Construction of a Waste Disposal Site Construction of a 35 ha waste dump site with loam, clay and montmorillonite (betonit) mixture to construct a water-impermeable 30 cm thick bottom layer with 50 cm thick drainage layer with HD-perforated seepage water drain pipes; cover of existing waste dump with geo-textile and water/air-impermeable layer, de-aeration domes and gas pipelines to the combined heat and power station; sewer systems with adjacent asphalt concrete road. Responsible for the site management / superintendence / VoB Part A+B+C (German contracting rules for award and execution of construction performance contracts).
05/1987 - 06/1987 [4]	Organization: GITEC Consult Position: Consultant, Highway Engineer, Survey Engineer Contact info for Reference M.P. Giesler, owner – MD Financed by Ministry of Works and Transport	Malawi / Tanzania	[4] Northern Corridor Project (NCP) from Dar-es-Salam – Mybea – Chipoka – Chilumba – Monkey Bay Preliminary and detailed design (architectural, mechanical, electrical and loading devices) and coordination of the interdisciplinary tender documents Field reconnaissance of the existing situation. Detailed engineering design. Preparation of tender documents (technical specifications, conditions and provisions of contract) including the Co-ordination of the sub-contractor's architectural,

Period No. A.	Employing organization, title/position, Client / Donor, reference information	Country	Summary of activities performed relevant to the Assignment
			mechanical, electrical and loading services of the port facilities (storage buildings, administration, gantry cranes, docks/quays) railways, and road transport.
07/1987 - 12/1988 [3]	Organization: GiTEC Consult Position: Consultant, Highway Engineer, Site supervisor, Quantity Surveyor Contact info for Reference M.P. Giesler, owner – MD Financed by KfW German Bank of Reconstruction	Y.A.R. Arab Republic Yemen Sana'a & Taif	[3] Rehabilitation and construction of the Sanaa - Taiz road The rehabilitation works entailed the repair of potholes, strengthening of portions of the base course, levelling asphalt course to cover the undulations and an asphalt concrete overlay of the 280 km long dual single carriageway. The storm water drainage with 15 huge box-culverts (several cells) and three reinforced concrete bridges with spans to 25 m (scaffolding structure / support) in t <i>Seller duties, conveyance of property / transfer of ownership, buyer duties / obligations, Liability for material defect / liability to defect as to quality</i> he mountainous area have been upgraded and three by-passes have been constructed. <u>Project Cost:</u> 140 Mio. Euro
01/1984 - 12/1986 [2]	Organization: LTA Pty (Ltd) Contractor Position: Construction Planning and Costing Engineer Contact info for Reference Dr. Volker F Claus, LTA – MD – Director Financed by MoWT	Rep. of South-Africa	[2] Re-Construction of a 51 km portion of national route 3 section 7 and 8 from Harrismith to Warden Construction of a four lane, single carriageway – under a half-width sequence of construction / under traffic - with a huge intersection (Bridge Construction with four ramps at Warden) and facilities. <u>Project Cost:</u> 110 Mio. Euro Activities performed: Site supervision and project management / Time Scheduling applied with the assistance of mass haul diagram, PM-Techniques and Project tracking and trending methods.
04/1981 - 12/1983 [1]	Organization: Held & Francke Construction AG Position: Supervisor / Chief Surveying Engineer and Estimator Contact info for Reference Mr. Dr. Reutlinger, General Manager Financed by MoT Government of South Africa	Asia K.S.A. Kingdom of Saudi Arabia	[1a] Taif – Zalim Highway Construction Detailed Engineering Design and Estimate of tender documents / Bids / Quotations for the Construction of a 90 km and [1b] supervision of the highway contract (asphalt concrete) / FiDiC – Contracts. <u>Project Cost:</u> 75 Mio. Euro Activities performed: review of tender documents, estimation assisted to prepare the tender quotation, mainly topographical reconnaissance and design of vertical and horizontal road alignments and site supervision of road construction / major structure works in Saudi-Arabia.

Other relevant information (e.g., Publications, training, workshops, lectures, coaching ...)

A Thesis: Town planning and Transportation in Rural Areas.

Research of rural traffic movement including a draft of a census-paper. A poll was performed (field works of several weeks) to get basic data to develop suggestions for improvements of infrastructure measures in public transportation systems / public means.

B Training / Coaching / Mentoring / Lecturer

Facilitated more as 40 courses: project cycle management (EDF PCM_2004), Procurement procedures (EDF - PRAG2012...), Cost Estimate for large scale infrastructure projects, Preparation of Tender Dossiers with all administrative, technical and contractual Parts, Construction Management in Roads, Bridges, Buildings with , Quality Management, Risk Management, Quantity Survey (QS), Sureties, EDF – and FIDIC Contract / Claim Management and Dispute Resolution (i.e. Mediation, Conciliation – PRAG), OPRC with Bidding Procedures, Employer's Requirements / Specifications and provisions, Conditions of Contract / Contract Forms.

Autodidact / self-education / “life time learning” in all type of knowledge, i.e. Contract Law, Tort Law, law of conservation of evidences, Procurement and Bid Evaluation Guidelines of different Donors and esp. for Public Private Partnership: PPIAF / APMG - PPP Guides for Procurement Procedures 2016, Chapter 1 – Chapter 8 has to be applied for the Procurement procedures and Tendering of Public Private Partnership (PPP) projects.

Expert's contact information:

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Find/Search Fact sheet www.AiD21.de/TOC.pdf Germany / Whatsapp **+49 172 821 1831**

These “Additional Information (AI) / more details” serve the purpose as a “vade mecum” to tailor a résumé in compliance with the TOR-Requirements.

AI 1 _ Contract / Claim Management

AI 2 _ Monitoring & Evaluation and Re-planning

*AI 3._ Special Information Road Asset Management,
Institutional Support, Capacity Development*

AI 4 _ Details to Other relevant information Workshops

AI 1. Additional Information about Contract / Claim Management

Detailed Tasks Assigned on Consultant’s Team of Experts Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks:
I _ THEORETICAL legal / contractual Knowledge and PRACTICAL / Real Life Experiences in Contract / Claim Management in all project cycles : Project Development, Procurement/Tendering, Evaluation, Award of contract, Implementation, Operation / Maintenance in compliance with the Contract (HOAI, VOB, EU-, other Donors and “rainbow” FiDiC-Regulations).
I. 1_ SERVICES : HOAI Tariff / Pricing Law for Architects and Engineers HOAI-Regulations / Fee Structure for Architects and Engineers General and Special Provisions and Conditions of Contracts for procurement + award + execution of SERVICE contracts. Expected achievements like services in all divisions of construction / trades: basic deliveries, extraordinary benefits, fee zone dependent from difficulties of design works, chargeable costs to determine the fee of architects and engineers pursuant to DIN 276 (German Industrial Code / Standard). Literature Löffelmann / Fleischmann : Legal Comments towards the Fee structure for Architects and Engineers (HOAI) : Obligations of the principal and agent / client and contractor , Liability, exceed the contract price and other regulations for the SERVICE contract.
I.2_ Works : VOB Construction rules / official contracting terms for award of public works: pre-announcements / notices, procurement by tender /award of contract and execution / performance of works.
I.2_ Division A : Procurement and Award of Works (PRAG, VOB) General and Special Provisions and Conditions of Contracts / Strategic and anticipatory / provident procurement management / purchase decisions Selection of Procurement procedure : open, restricted, competitive negotiated procedure, competitive dialogue. Type of contract : unit rate, day work, own costs plus profit , Selection of Lot / Batches for partitions or trades, Offer mode : unit rates or global percentage bid / Up and down corrections; Type of description of works / deadlines, Tender Dossiers with “tech” provisions (specifications / requirements) and “legal” conditions of contract, Unambiguous and comprehensive description of the nature and scope of works, deadline of the submission of the quotation / tender floating period, validity period, dead line for submission of quotations and acceptance of a bid, validity period, clarifications, submission of the bid, opening session. Award: . evaluation [Responsiveness to administrative grid, Unit rate analysis with price comparison lists, technically accepted (75% / 80% scores), composite evaluation = 80%(70%) * technical + 20% (30%) *financial scores], selection of the winner, notice of award, award record, Works contract , order / dispatch.
I.2_ Division B : Implementation of works (VOB, red FiDiC Book) Works contracts with different types of contracts like Unit rate contracts , Detailed Lumpsum contract and global Lumpsum (simple + complex) Nature and Scale / Scope of works; compensation / reward, final planning documents (architectural drawings), method of execution, time scheduling, deadlines, impediments / obstacles, disruption / suspension of works, liabilities of liquidated damages, provisional / final acceptance / take over, defect liability / final statement of account, payments (IPC, Final); sureties, disputes, arbitrations.
I-2_ Division C : General Technical Specifications/Provisions of Work Contracts with detailed description of the scope, control of works and material, responsibilities to the public, prosecution of defects and defaults, forfeiture, and progress, measurement and payment, equipment, facilities for the engineer; construction details of the roads / bridges / buildings and other structures. Special Provisions have to be determined to adapt to the project requirements (Contract Data / Appendix to

Tender)
Literature : Heiermann, Riedel, Rusam – Comments to procurement, award (VOB Part A) and execution of works (VOB Part B+C)
Literature : Kapellmann / Schiffers Comments Detailed und Global Lump Sum and Unit Rate Contracts about compensation / remuneration, Claims, impediments / obstacles / obstructions to restrict smooth operations of work contracts and Objections against the foreseen execution of works; [legal and operational obligations of the requested benefits and compensation; entitlements for compensations of the contractor caused by ambiguous specification / requirements described in the Tender dossier, change in scope of works, extension of time & additional quantities.]
I.3_ Contract for sales / Civil Law BGB with investors, owners and users of properties
Seller duties, conveyance of property / transfer of ownership, buyer duties / obligations, Liability for material defect / liability to defect as to quality
I.4_ FIDIC – General / Special Provisions and Conditions / terms of Finance, Plant, Design, Bid, Build, Operate/Maintenance (F-P-D-B-0 / M)
I.4.A_ „Rainbow Forms“ for Engineering, Procurement, Construction and Operation / Maintenance: Red Book : D * Bid *Construct / Build; Silver Book : EPC/Turnkey; Yellow Book: Plant + Design + Build; Gold Book: D + B+ Operate / Maintenance; Green: Subcontractor, and White: Client / consultant relationship
I.4.B_ General and Special Conditions, Guidance for the preparation of particular conditions with forms of letter of tender, contract agreement and dispute adjudication agreement (please see “rainbow” FiDiC versions) and Donor-Regulations like European Union, World Bank, African Development Bank, Kuwait Fund, ...
I.4.C_ FORMS : General Conditions, Guidance for the preparation of particular conditions with forms of letter of tender, contract agreement and dispute adjudication agreement. Business activities conducted on construction, defect liability/notice period/warranty of fitness for a particular purpose.
I.4.D_ FiDiC Literature - A Guide for Practitioners Describing different legal systems, conflict of laws, standard forms of contract, civil law business terms, development stages, understanding of FiDiC, “rainbow FiDiC-Books”, e.g. employers / contractors duties, design responsibility, ... Variations, ... Tests, Certificates, DLP / DNP, Termination, Discharge / Frustration, Insurance, Bonds, Claim Management, Disputes, Delay Schedule.
5.1 Pre-Conditions for Claim Resolution
5.1 A_ Project Management Experiences in general and process competencies
B_ Design Experiences and Product Know how of components and assemblies
C_ Theoretical knowledge and practical skills in all project cycles in legal / contractual aspects in all project cycles from inception up to commissioning / operation – to be able to have an holistic approach for claim resolution.
D_ Knowledge and Experiences in all administrative procedures for the execution of a project in all cycles with Authorities, Consultings and Construction Industry.
E_ Project Management in Time, Cost, Quality, SHEs-Q Aspects (EU-PCM_2004)
F_ Prepare Tender Documents with all the required forms (FiDiC, EU_PRAG): Application of Procurement rules for award of service and work contracts and contract management in all project cycles to prevent Claim submission and to avert / repudiate claims - based on RED, Yellow and GOLD Books in compliance with Donor Regulations like EU, World Bank WB, AfDB, BADEA, Kuwait Fund, JiCA, UNOPS, KfW.
G_ Tender Bid Price Calculations (Top Sheet) for a construction company to determine the Unit rate out of the prime cost, unproductive parts, direct cost, overhead, indirect costs, final charges, risks&gain, sub contractors overheads, total tender price / contract price later on.
H_ Taking over procedure with suitable Tests on completion / after completion: Technical and legal take over / acceptance with release of final statement of account, sureties and warranties (without lack of organization) during the utilization phase.
5.1.I_ Operation Phase / Defect Liability – Notification Period (DLP / DNP): Serviceability Certificate / operating ability certificate / Commissioning Certificate
5.2 General Aspects of Contract Management to be considered in the Tender Documents / Design, Bread Down Structure (BDS) of works, in the Makeup of Tender Price, and execution of services, supplies and works.
Service Contracts (HOAI), Work Contracts (VOB / FIDIC / EU-GCC+SCC) and Supply Contracts (VOL, purchase and selling – BGB) with technical, legal and economical/financial avoidance / prevention of disputes and substantial contract analysis: legal and operational obligations of the requested benefits / achievements and

<p>entitlements of compensations of the contractors caused by ambiguous specification / requirements described in the Tender Dossier due to change in scope of works, extension of time and additional quantities, and obstacles causing disruptions or slow down operations.</p>
<p>Secure or avert financial, time and factual claims in compliance with the German VOB (contracting terms for the award of construction performance contracts) or FIDIC (conditions and provisions of contract for works in construction).</p>
<p>Minimize risk due to impairment of the performance of an obligation either by employer's or contractor's defaults:</p> <ul style="list-style-type: none"> (i) preliminary / precedent liability, (ii) defects / errors in design and work, (iii) lack of coordination, e.g. failures to notify / early warning, in compliance to contract requirements during the entire performance period, (iv) defaults / imperfection in the procurement / award procedure (v) faulty / insufficient / inadequate supervision to avoid and (vi) remedy defects in work in due time and speedy manner, (vii) documentation of contemporary records (work register / site diary), (viii) preservation / conservation of evidences, (ix) exceed / overrun of the budgeted contract price (ix) terminations, (x) lack of sound and ethical character. (xi) disruptions in facility management, operation/maintenance.
<p>Time Schedule and Cost Analysis with sequences and dependencies and Calculation / Cost Estimate with unit rate analysis with made up of P&G, prime cost, direct and indirect cost, overheads, subcontractor's surcharges, tender / contract price.</p>
<p>Adjustor, Arbitrators for disputes, DAB / Dispute Adjudication Board, amicable settlements, failure to comply with the DAB decisions and Alternative Dispute Resolutions MEDIATIONS / conciliations. Helmut F Giesa knows the different views and way of thinking of the representatives of public clients, the assessors / evaluators of expertises, the project manager of project management institutes, consulting firms, and superintendents of construction industrial firms.</p>
<p>5.3 METHODOLOGY for all HOAI (Services) + VOB A+B +C (Works) + FIDIC „rainbow Books“ and specific company's applications for Unit Rate + Global Lump Sum + Detailed Lump Sum Contract</p>
<p>I _ Contractual agreed scope of works [as planned] / Requirements / Entitlements II_ Actual state of construction [as built] (Time, Budget, Quality, SHEsQ) with the complications / problematic situations III_ Identified [Variations and Reasons of the change of contract] and Analyzing entitlements [Deviations / Delta : planned minus built] with his partial / fully attributable Cause-Effect Responsibilities / Liabilities for delay / extensions of Time and Extra Costs / damage and loss Using the Criteria in procedure of claim resolution [as planned], [as built], [Variations & Reasons / Entitlements] a_ Qualitative features: Nature / Type of works with content AND circumstances partial / fully delivered in conformity. b_ Quantitative aspects: Scale and extend / range of benefits c_ Time Frame : work program (CPA) with entitled/disputable extension of time d_ Cost / Budget schedule: Disbursements, receivable payments, entitled / disputable payables, Credit- / Debit Notes. IV_ Subsumption / Appreciation of the legal consequences and his effects with its Conclusions. V_ Recommendations with a viable operational action plan for the decision maker for settlement of disputes: amicable negotiation, or via dispute adjudications (DAB), protracted Arbitration Procedures, and/or Terminations.</p>
<p>6. ETHICAL CONDUCT</p>
<p>Policy of ethical conduct in line with IBRD / IDA guidelines to prevent corrupt, fraudulent, collusive, coercive and obstructive practices</p>

AI 2 Additional information about M&R, Re-Planning

12.2 THEORETICAL Knowledge of AfDB, ADB, JICA, WB + EU publications like PRAG, PCM + Bid Evaluation and Audit Guidelines about Monitoring, (Mid-term) Review, Evaluation, and Audits

- **Project cycles:** programming, identification, formulation, implementation with Monitoring, Evaluation and Re-Planning for **labor- and capital intensive** projects.
- **Logical Framework Approach** (LFA Analysis / Process) and **LF Matrix** (LFM Planning / Product) with **work program** (activity, resource and budget and recurrent costs).
- **Evaluation Purpose** to assess the **Criteria** of Relevance / Compliance – Efficiency – Effectiveness - **IMPACT - SUSTAINABILITY (R-E-E-I-S)** to improve the decision making process towards aid policies and action and **Principles** (integrity, impartially, prof. competence and behavior, due care, confidentiality, technical standards and independence) and useful/relevant for the impact & sustainability..
- **Institutional CAPACITY Assessment** with **Analysis** of the **external aspects** (organization links, views of clients/users) and **internal aspects** (management style, organization, policy making and planning, financial management / accountability, personnel management, training, motivation), **Assessment** of these elements and **Transformation** into project formulation (roles & responsibilities, scope, objectives, sustainability strategy to achieve **good governance** issues and to deliver a stream of **sustainable BENEFITS** towards the ministry vision and mission objectives.
- **Planning and Conduction TOOLS** to collect, analyze / interpret and USE / apply data for different management levels. Established **Key Documents** (work plans, progress reports incl. risk management matrix, manuals, semi-structured interviews/ checklists) are helpful for tracking procedures for field surveys
- **Requirements** and **R-E-E-I-S-Criteria** with the link to the log frame objective hierarchy with the **S-M-A-R-T / specific- measurable- access able with low cost- relevant - time bound objective-ly verifiable indicators (OVI)** for all intervention hierarchy objectives to meet the AfDB guidelines.
- **Decision options** for project continuation/re-structure, stop execution, modification in design, cooperation-strategies, or policy for future projects
- Promoting pro-active **participation** and ownership, facilitation skills and workshop preparations.
- **Know-how Transfer** / Coaching on a daily basis, meetings, and workshops to enhance the potential of the authority, and local consulting and construction firms
- **Administration:** SHEs-Q-Issues / (safety, health, environment, social / gender, Supervision, **periodical on-going / mid-term/ ex-post valuation surveys**, IBRD / IDA Ethical Conduct Guidelines
- **Reports** with proper outlines of executive summary, data collection, analysis / interpretation of facts, conclusion, Synthesis, recommendations for a viable operational action plan, dissemination, follow up.

12.3 PRACTICAL / Real Life Experiences in Project Tracking/Trending, M&E

- PCM in all technical, administrative, contractual, **project tracking and trending** / prediction activities **done in all maturity levels** of a project / program / policy - from inception to commissioning / operation period -.
- Log frame structures in the **intervention hierarchy** with input, activities, output, outcome, impact development / performance indicators and contribution to sustainability with the **determination of SMART defined BASELINE indicators** for monitoring/evaluation/re-planning either as an top-down or bottom-up approach. Note: The selection of “hold-true”- **ASSUMPTIONS** (e.g. almost certainly, possible, very unlikely) as external key factors are important either to involve into the log frame or to reject, because they are crucial to the success / **achievement of the policy / programs / projects to the success**
- **Evaluation Purpose** and **Principles** for road construction projects: rehabilitation of gravel roads and asphalt concrete surfacing with new construction.
- **Institutional Capacity** Assessment for the organizational structure, transformation process to reduce operation / running costs (WB requirements)
- **Tools:** Establish vade mecums / **User Guides** to collect, analyze, interpret, use / apply the data with definition of proper **SMART OVi** and **ASSUMPTIONS** as external key factors which are able to jeopardize achievements.
- **Requirements & Evaluation Criteria** to the link of **Log frame:** Relevance (problematic situation, means), Efficiency (Means / Results), Effectiveness (Results / Project Purpose), **IMPACT** (project purpose / Overall objective) and **SUSTAINABILITY** as a connection elements between all LF objectives from the problematic situation to the overall objectives / sectorial objectives.
- **Decision options** for **policies, programs, and projects ... in future** like devolution policy for feeder roads, country strategy paper or PRSP / poverty reduction strategy papers.
- **Participation and Facilitation** of the engineers enabling them to execute field missions / semi-structured interviews, e.g. ROM-Mission, Audits, and Evaluations.
- **Know how transfer** in PCM, intervention hierarchy, **SMART OVi -Indicators**, means / source of verification, and **influence** of **ASSUMPTIONS** to examine the cause-effect relationship of the project on its wider environment, and its **contribution to the wider POLICY or SECTOR objectives** (overall objectives) towards impact and sustainability, that the flow of benefits will continue after external funding has ended and policy support, ECO-FIN factors, **institutional and managerial capacity** are functioning well.
- **Administration:** SHEs-Q issues like Awareness /**Sensitization** / public participation, **compensation of PAP** (land acquisition, resettlement, crop loss, Right of Way – (ROW) for EU- + AfDB Projects.
- **Reports** for Monitoring / ROM-Missions, **Evaluation**, Reviews, and Audits.
- **Analytical – logical comprehensive understanding** through reading of sophisticated publication and through the wide variety of knowledge, experience, and skills.

AI 3. Special Information Road Asset Management, Institutional Support, Capacity Development

12B SPECIFIC / Particular Knowledge, skills and experiences for this assignment

12B.1 Policies (i) – (v):

I worked almost four years for the Sierra Leonean Roads Authority and was involved in the SLRA Directorate. Hence I got an in-depth insight of the mission and functions of the Authority:

- (i) **update of the Roads Authority Act** (SLRA), the development and enforcement of
- (ii) **Road Maintenance Fund Administration Act** (RMFA) and the World Bank Approach
- (iii) to change the **Institutional set-up** of SLRA to reduce running / operational costs from 30% minus.
- (iv) In addition a giz-expert and myself (JV RRI&giz) worked out the **Feeder Roads Act** – by visiting several district officials – to enforce the act via parliament and president. Purpose: decentralize / devolve the Road Maintenance Activities of the feeder roads (Class F / third class) towards the District councils.
- (v) **Axle Load control and fines** in compliance to the **ECOWAS Regulation No. 14**

12B.2 Holistic Methodology to construct and maintain a road in a technical and economical manner prior to save construction investment, done with “SLRA” and “Straßenbaubehörde Nbg”.

- (i) **Structural Design Principle** with the surroundings and design speed, (ii) Classification of the **Soil / Material** characteristics, Subgrade, Pavement strength, flexible surfacing, (iii) **Water** ... drainage
- (iv) **Traffic Issues** : axle load distribution, equivalent factors, equivalent standard axle, **damage factor**
- (v) **CLASSIFIED Traffic Count** with determination of random vehicle loads by using mobile weighbridges to determine the **equivalent standard axles** an indicator of “**fatigue / damage**” factor.
- (vi) visual **Road Condition Survey** (network) + more detailed **Inventory** for the project level) in compliance with TRL Note
- (vii) decision making about the “**range of scores for intervention** of different type of maintenance levels, overlay / re-gravelling, rehabilitation, re-construction.
- (viii) **Cost estimate** done by Weltbank-ROCKS or by actual construction cost BoQ-items.
- (viii) **Application** of the **Pavement Maintenance Mgmt Program / Road Maintenance Mgmt System**.
- (ix) **Unconstraint budget** > change in range of interventions to adapt the works with available funds.

12B.3 Roads Economic Decision Model RED for the economic evaluation of low volume roads (investment + maintenance – without project + Alternatives) with Traffic Value, Vehicle Operation Cost /VOC, Speed, International Roughness Index (IRI), Time and Accidents, Benefit Distribution, Net present Value, Risk Analysis, Rate of Return, Sensitivity Analyse of impacts of the coefficients.

12B.5 Know ledge Transfer PM & Road + Bridge Maintenance : TRL ORN No 1- 40, PIARC Handbook by plenty of workshops / training / coaching especially in the field (i) Project Cycle management with **Log Frame Approach** and LF Matrix with the indicators

- (ii) **Road Condition survey** (theory and practice), visual and GPS / GiS-Application
- (iii) **Pavement Maintenance Management Program** (Hardware and Software)
- (iv) Data - Input and Output of the PMMP with the different levels of intervention (maintenance, overlay, rehabilitation, reconstruction) in dependencies of the scores, the cost approach, the **unconstraint / constraint budget**. Please see item 15, too.

12B.4 Procurement Procedure / Tender Dossier, Evaluation, Member of Evaluation Committee

Familiar with preliminary and post qualification examination of bids **Please see 12A.3 c)**

12B.6 Study Tour to Ghana with SLRA-Engineers to visit the Ministry, Ghana Highway Authority (GHA), Dep for Urban (DUR) & Dep. Feeder Roads (DFR), **Ghana Road Fund Secretary (GRFS)**.

12B.7 Monitoring & Evaluation in line with LOG-Frame Matrix with the different Development / Performance Indicators for in the different **intervention hierarchy** (input, activities, output, outcome, impact and sustainability). More theoretical and real life experiences about Monitoring & Evaluation can be retrieved from my Fact Sheet, functional CV.

AI 4. Additional “Workshops, Lecturing, Seminars, ...”

A_ Thesis: Town planning and Transportation in Rural Areas

B_ Training / Coaching / Mentoring facilitator: Mining Authority (LBMV / LBM) in Bitterfeld / Germany:

a_ Courses for the **Technical Departments** : Preparation of the **Tender Documents (BoQ, Cost Estimate)**

for the Demolition of Industrial Building Plants and Rehabilitation of the open cast mines to add value to the estates.

Annual Budget: 750 Mio.DM Investment; b_ Lessons about the EU-wide **Tendering and Procurement Procedures**

for the **Purchase Department** / technical and financial Exec Management

C_ Lecturer: Project Management Methodologies, Construction Management, inclusive SHEs-Q [Time Scheduling, Budget Control, and Quality Assurance], Contract + Claim, Management (VOB), Organization, **Calculation of large scale infrastructure projects** [prime costs, P&G, final charges, S/C, total amount of Tender. Make up of Unit rates with production rates], **SHEs-Q** [safety, health, environment, social Quality] issues, and **financial management** in implementation phase [sureties / guarantees, IPC, PAC, FSA, FAC, discharge and **ethical professional conduct**.

D_ Seminar: Air Traffic Management Development of EGNOS (AOC) European Geographical Navigation Overlay System (with advance operational capabilities) in comparison to US_GPS and GUS_GLONAS ... Thales Group and DLR.

E_ Dr. h.c. of Mediation, CCU-Institute (USA).

F_ Workshops facilitated: Bridge Construction methods for the sub and super structure (external, internal formwork, floating controls, and spacers) either with steel composition girders or prefabricated components.

a_ **Bracing scaffolding**/false work, light and heavy supporting frame (push-pull props, shoring tower brace, timber boards on sub grade formation with spot or spread foundations with longitudinal beams / buffer beams, traverses, head spindles, piers / props, load bearing towers, lowering device, bracing strutting) b_ **Formwork carriage** / advance feed transverse drive system (gantry) with casting segments / concrete cycles to jack forward with the rig to the next pier / lattice tower; c_ Incremental **launching methods** with launching nose, hydraulic / jacking system, auxiliary pylons, ... with the stationary field factory in the vicinity of abutments and ,d_ balanced cantilever construction with the booster phase / commencement pier and auxiliary struts to cowl in both directions simultaneously.

G_ Additional **WORKSHOPS** relevant for Technical Assistance Assignments in Road / Highway Institutions

(i) **Project Cycle Management** [Log frame Approach (Process-Analysis), Log frame Matrix (Planning / result-oriented Product: Activity, Resource and Budget Schedules],

(ii) Decentralization / **Devolution** of Feeder Roads towards the District Councils,

(iii) **Road Condition Survey / GPS/GiS** with Maintenance / Overlay Interventions and Cost Estimate (e.g. WB-Rocks)

(iv) **Road Asset Management / Road Maintenance (ORN)** in compliance with OPRC Contract, esp. the Monitoring of the defined Service Levels during the Operation + Maintenance phase.

(v) Axle Load Control Measures / mobile Weigh bridges

(vi) **Pavement Design ORN 31** (TRL) / PIARC,

(vii) Time and Cost planning tool (Software **Microsoft project 2007/2010**) with PM Methodology and Application,

(viii) **Risk management:** Definition, Methods & Principles. Process / techniques / tools, Risk Options

(combined assessment factors = probability of cause * impact of effect), Limitations, Application for Projectmanagement, Treatments of risks: avoid, reduce, share, or retain risk impacts.

(ix) **Cost Estimate** (unit rate analysis). Direct, indirect cost, overheads (site, head office), profit.

(x) **Contract Management** “Tender Document preparation with all technical (provision) and legal aspects (conditions)” - Service and Work Contracts (FIDIC; EU-GCC/SCC), Unidroit Principle for Hardship, EPC/CEL

(xi) **Claim Management** / Adjustments to scrutinize alterations in scope of works, technical aspects, and time related impacts for Variation / Adjustments of Prices (VoP), Extra Cost plus profit, and Extension of time.

(xii) Workshop **DBO-contract, Aggregate “Operation Service Period”**: Commissioning Certificate, Operation and Maintenance requirements, Operation and Maintenance Plan, Operation License, Asset Replacement Schedule / Fund, advanced payment, interim payments, final statement of account, Completion Certificate.

H_ Study Tour : Ghana with SLRA Engineers: Organizational structure, processes and development in **Administration, Supervision** and their socio-economic development of the Ministry of Roads and Highways (MoRH), Department of **Feeder Road (DFR)**, Ghana Highway Authority (GHA), Department for Urban Roads (DUR) and **Ghana Road Fund Secretary (GRFS)**.

I_ OPRC-Workshop in Juba / South-Sudan: Preparation (4 months) and introduction (3 day workshop) of the OPRC-**Procurement Document** with its three contractual parts : Day 1 Bidding Procedures,

Day 2 Specifications with Performance /Requirements / Service Levels Criteria, and Day 3 Conditions of Contracts with Contract Forms based on World Bank with Structure of the Unit Rate Analysis.

J_ **Risk management** (SWOT, internal and external cause, impacts, likelihoods / probability, composite strength factor, consequences, remedies / mitigations to avoid, to reduce, to share or to retain, resulting strength.

K_ Autodidact / self-education / “life time learning” in all type of knowledge, i.e. Contract Law, Tort Law, **law of preservation of evidences**.

Procurement and Bid Evaluation Guidelines for different Donors and esp. for **Public Private Partnership:**

PPIAF / APMG - PPP Guides for Procurement Procedures 2016, Chapter 1 – Chapter 8 has to applied for the Procurement procedures and Tendering of Public Private Partnership projects.