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HISTORY OF EXIGENT

Exigent Engineering Consultants was established 1998 providing Multidisciplinary Engineering and Environmental Services. Exigent has since grown into a profitable organisation.

The Vision of Exigent is to provide **value** to the client and through that:

- Grow financially,
- Continuously improve the Exigent capability, and
- Invest in social responsibility.

Exigent has two divisions, namely the **Engineering services** and the **Environmental Business Unit**.

SOCIAL RESPONSIBILITY

Exigent is an equal opportunity employer. We believe that the solution to success lies with people, and therefore we put great emphasis on people, be they our employees or clients. To enable us to embrace our vision of social responsibility we actively and diligently pursue the following:

SOCIAL INVOLVEMENT

Social interaction as being one of the cornerstones of affirmative actions is one of the areas that we treasure. In our quest to achieve our vision, we are actively involved in grass roots projects where we attend meetings, drive those community efforts, and assist in capacity building where we can, free of charge. Exigent believes that we should empower others so that they can in turn empower others.

HUMAN RESOURCE DEVELOPMENT

Exigent is actively involved in learnerships where we take the leading role in giving the needed training to previously disadvantaged individuals. We further assist in the placement of these PDIs after training has been completed. Most of these learnerships will actively partake in the running of our business until we feel that they are capacitated.

COMMUNITY INVOLVEMENT

Exigent always welcomes opportunities to get involved in community projects and therefore we always encourage new clients to bring to our attention the community needs within their areas, as to enable us to consider the need and assist in fulfilling that need if it is within our power.

MANAGEMENT STRUCTURE

Exigent is a 50% PDI owned company of which we are proud. In the management of the company we employed numerous HDIs and PDIs that has proven to be worthy of carrying our name and services to our clients.

ENVIRONMENTAL BUSINESS UNIT

The Exigent Environmental Business Unit provides sustainable answers within an environmental developmental framework. Our foundation is built upon ecological principles, and our services are intended for global application as well as being tailor-made for specific client requirements.

During our involvement in any project, we strive to find the best option to unite nature and its needs, with the needs of development. This is required without compromising the necessities of both sides also considering cost-effective services and solutions as well as a high ethical standard of conduct.

Exigent Environmental is committed to excellence and continuously monitors project outcomes to ensure that outcomes conform to clients' requirements and to deliver high quality environmental professional services. Our members are registered at the South African Council of Natural Scientific Professions (SACNASP), Water Institute of South Africa (WISA), Environmental Law Association (ELA) of South Africa, Botanical Society of South Africa (BOTSOC), South Africa Wetland Society (SAWS) and the International Association for Impact Assessment South Africa (IAIASA).

ENVIRONMENTAL SERVICES OFFERING

- Applicability of Environmental Legislation
- Alien and Invasive Species Control Plans
- Burrow pit & Quarry Mining Applications
- Ecological Assessments
- Environmental Audit Reports
- Environmental Impact Assessments
- Environmental Management Programmes
- Environmental Management Plans
- Geographic Information Systems (GIS) based analysis
- Integrated Environmental Risk Assessments
- Integrated Waste and Water Management Programmes
- Mine closure Plans
- Mine Closure Costings
- Rehabilitation Plans
- State of Environment Reporting
- Vegetation Assessments
- Water Quality Assessments
- Water Services Development Plans
- Water Use License Applications and audits
- Wetland delineation and Functionality Assessments

OUR RESOURCES

Jacolette Adam is the manager of the Environmental Business Unit.

Jacolette obtained a Master of Science in Zoology from the University of Pretoria in 2000. Her thesis, *Roads as Ecological Edges for Rehabilitating Coastal Dune Assemblages in Northern KwaZulu-Natal, South Africa* (published in Restoration Ecology Vol 11, Issue 1, p: 43-46) was based on field work conducted in the rehabilitating forests of Richards Bay Minerals, north of Richards Bay.

Since completion of her MSc, she has gained 17 years of professional experience in the environmental sector, and has been a certified Professional Natural Scientist since 2002. She is also a Fellow member of the Water Institute of South Africa (WISA). She has successfully conducted project management for numerous environmental assessments in terms of various legislated processes throughout South Africa for a wide range of clients, including the mining sector, the large-scale housing developments, private lodge developments, telecommunication industry, various engineering projects including pipelines, road construction, road upgrades. She has been responsible for various strategic projects such as Integrated Environmental Management Programme for municipalities as well as Provincial State of the Environment Reporting. Due to her training as an ecologist/zoologist she provides the specialist skill of wetland and ecological assessments. She qualified as a Carbon Footprint Analyst in 2015. She is currently registered for a Masters degree in Environmental Law.

Jacolette has worked in all nine provinces of South Africa, as well as in Africa, Mozambique and DRC.

Jacolette has proven the capability to complete environmental assessments of challenging projects with various approvals required from different authorities, including Department of Environmental Affairs, Department of Forestry, Department of Water and Sanitation and Department of Mineral Resources. Her expertise is in managing these complex projects with the wide range of specialists, and identifying the key issues which needs to be mitigated. In line with the newer developments in the environmental field, she has obtained valuable experience in compiling biodiversity offset documents and negotiating these aspects with relevant government Departments and related authorities.

Charleen Smuts is a Candidate of Professional Natural Scientist, member of the South African Affiliate of the International Association for Impact Assessment, the Wetland Society of South Africa and the Botanical Society of South Africa. She has obtained her BSc in 2005 and has since gained a MSc from the University of Pretoria in 2012. She has 4 years of experience and has conducted numerous ecological and wetland delineation and functionality assessments. Furthermore, Charleen has been involved in a wide range of environmental authorisation projects. These include mixed-use housing developments, pipelines, road developments and upgrades, large scale developments, land use change projects, low cost housing developments and golf estate developments. She has gained valuable experience in Environmental Control Officer compliance functions as well as Public Participation Processes.

Madeleine Knoetze has 2 years of experience in the field of environmental management after completing her BSc Geology in 2014. She is a member of the International Association for Impact Assessments South Africa (IAIAsa). Madeleine has assisted in the completion of a number of environmental impact assessments, and selective ecological and wetland assessments in KwaZulu-Natal, Gauteng and in the Free State. She is skillful in the field of Geographic Information Systems (GIS) leading to involvement in large and small scale mapping projects in KwaZulu-Natal and Gauteng, ranging between mapping for the specialists and EIA process reports to Municipal Land Use Management Systems (LUMS).

OUR EXPERIENCE

We have been involved in numerous projects since 2001 throughout all 9 provinces in South Africa, as well as in Africa.

Below is some of the projects that we have been involved in during the last 15 years.

Environmental Impact Assessment

- Zamokuhle Trust Agricultural Development, Mkuze
- Mkuze Airport upgrade project
- Felixton proposed mixed-use development
- Doubling of North Central Arterial road, Richards Bay
- Residential development north of Empangeni
- Carsdale Residential development estate
- Residential development on Lot No 174B, uMhlatuze No 8457
- Doornkuil proposed residential development for
- Tamboekiesfontein proposed development park for Basil Read Developments
- Waterval proposed business and residential development for Basil Read Developments
- Proposed Lanseria Business Park development
- Sishen airstrip extension for Sishen Iron Ore Mine
- Ngorogoro proposed eco-estate development
- Cosmo City Phase 2 development
- Environmental process for the approval of the expansion of the Afriski Resort, Lesotho
- Proposed realignment of Road D3333 and the power line adjacent to the road, Northern Cape
- Proposed new residential township development on Lot no. 174B, uMhlatuze no. 8457, Empangeni.
- Dainfern Extension 23 Development
- Environmental Impact Assessment: Phase 1 for the proposed Queenstown Hotel, Casino and Convention Resort development, Eastern Cape Province
- Environmental Impact Assessment: Phase 1 for the proposed Umtata Royal Palm Hotel, Casino and Convention Resort development, Eastern Cape Province
- Environmental Impact Assessment: Phase 1 for the proposed casino development on a portion of Erf 1984 Kuruman and a portion of Erf 1 Kuruman, Northern Cape Province
- Proposed Broiler farm on Portion 176 of Portion 145 of the farm Bokfontein 448JQ
- Proposed establishment of the Carsdale Gardens Residential Development on Erf 7956, Empangeni
- Upgrade of a Resort at Sharks Point, Eastern Cape
- Construction of a weir in the Mhlatuze River
- Environmental process for the proposed resort on Portion 32 and 72 on the Farm Klipfontein 498 JR, Bronkhorstspuit
- Construction of on-and-off ramps on the National Route 2 (between Fairbreeze and Mtunzini interchanges), KwaZulu-Natal
- Proposed road upgrade of National Route 1 Section 9 between Three Sisters and Biesiespoort
- Mvamanzi Rural Housing Project, KZN
- Hluhluwe Low Cost Housing Project, KZN
- As River Hydro-Electric Station, FS
- Pecanwood Golf Estate Harbour – Hartebeespoort Dam
- North Riding Sewer Pipeline, Johannesburg

Basic Assessment Processes

- Richards Bay Industrial Development Zone railway line upgrade
- The proposed upgrade of Thokoza Road and installation of a culvert in the Mandeni CBD
- The extension of East Central Arterial, Richards Bay
- Construction of lodge, Tembe, Maputoland
- Proposed Construction of a Vodacom mast in Dark City, Bronkhorstspuit
- Fairways estate in Empangeni
- Frank Bull road upgrade in Empangeni
- Alsef Holding 21 proposed development
- Construction of a feedlot for the National Landcare Project
- Kengies Extension 35 development

- Kenley proposed development
- Mthatha casino proposed development for Peermont Global
- Nomandela and sons proposed development in Wild Coast
- Alton, Richards Bay industrial subdivision
- Construction of an asphalt plant, Nseleni
- Proposed upgrade of the Tuzi Gazi waterfront complex
- Proposed construction of the Tuzi Gazi restaurant facilities
- Proposed Piggery on Portion 6 of the farm Straffontein 252 IR, Delmas
- The proposed nature trail for 4 wheel motorcycles on the Farm Tweefontein

Wetland Delineations and Functionality Assessments

- Wetland Delineation and Functionality Assessment for the proposed St Lucia Estuary Precinct Development
- Wetland Delineation and Functionality Assessment for the proposed commercial development, Sub 05 Lot 58 Umfolozi number 15939, Mtubatuba
- Wetland Delineation and Functionality Assessment for the Mtubatuba Waste Disposal Site, Nordale
- Wetland Delineation and Functionality Assessment for the Mpact Mill upgrade, Felixton
- Wetland Delineation and Functionality Assessment for the proposed Esikhaleni Mall: Road Safety Improvements: Upgrade of Mthombothi / Mdlebe Ntshona Intersection
- Wetland Functionality Assessment for the Greater Mthonjaneni SSA 2 Bulk water supply project
- Wetland Functionality Assessment for the widening of Medway Road and associated interchanges in Richards Bay
- Wetland and Functionality Assessment for the upgrade of the National Route 3 (N3) Hammarsdale Interchange, Ethekeini Outer West Municipality
- Wetland Assessment at the proposed Annlin Extensions 93, 94 and 97
- Wetland Assessment on Portion 3 and Portion 37 of the Farm Keerom 374 JS
- Determining presence or absence of a wetland on Portion 52 of the remainder of Portion 43 of the Farm Vlakplaats 138 IR
- Technical investigation of the Libradene wetland and impact of service station on the wetland
- Wetland Assessment for the Afri-Ski-Mahlasela Ski Resort, Lesotho
- Wetland Assessment on the Farm Rietspruit 535 IQ
- Wetland Assessment for the Riverlea Development Upgrade
- Wetland Assessment on Portion 32 of the Farm Klipfontein
- An inventory of Wetlands in the Upper Olifants River Catchment
- Vegetation assessment in the wetland at the site for the proposed Ebotse Golf Estate, Benoni
- Wetland Assessment at holding 173, Erand Agricultural Holdings, Midrand
- Assessing the presence or absence of a wetland in Noordwyk Extension 79
- Preliminary assessment of the wetland on Portion 5 of the farm Tygervallei 334 JR
- Assessing the presence or absence of a wetland at Aspen Lakes
- Preliminary assessment of a wetland on Kengies Extension 7, plot 37
- Preliminary assessment of a wetland in Eldorado Park
- Siyaya River Rehabilitation Plan
- Preliminary assessment of a wetland at the Stewards, Remainder of Portion 14 of the Farm Kleinfontein 67 IR
- Preliminary assessments of wetlands at Fairbreeze, KwaZulu-Natal

Ecological Assessments

- Vegetation Assessment and Wetland Delineation for the Agricultural development by Senekal Boerdery, near Mkuze
- Vegetation Assessment and Wetland Delineation for the extension of Alton south railway line to the Richards Bay IDZ: Phase 1F, Alton north, Richards Bay
- Vegetation Assessment and Wetland Delineation and Functionality Assessment for the Vutshini-Nkandla water scheme (north): phase 1 within the Nkandla Local Municipality
- Addendum to the Ecological and Wetland Assessment Report for the Eskom Power Line and Marallaneng Substation Alternatives for the Clocolan-Ficksburg Power Line Corridor
- Ecological Screening Report for the Beverley Extension 65 Township Development, City of Johannesburg, Gauteng
- Draft Vegetation Assessment and Wetland Delineation for the proposed Richards Bay Outfall Sewer upgrade

- Jozini-Ingwavuma water supply scheme within the Jozini local municipality, northern KwaZulu-Natal
- Vegetation assessment and wetland delineation for the proposed Go-cart racetrack, ZCBF Grounds, Richards Bay
- Ecological assessment for the proposed low-cost housing development, Hluhluwe
- Ecological assessment for the proposed Kwambonambi Primary School
- Ecological assessment for the proposed mixed-use housing development, Felixton
- Ecological assessment for the proposed Rutledge Ridge Park mixed-use housing development, Eshowe
- Ecological assessment for proposed North Central Arterial road construction
- Ecological Assessment for a proposed development on Portion 185 of Portion 86 of the Farm Doornkloof 391 JR
- Ecological Assessment on Portion 3 and 37 of the farm Keerom 374 JS
- Indigenous Tree Removal: Vaalboschbult 66 JR
- Steelpoort Pump Storage Scheme: Ecological Screening
- Red Data species Study on Holdings 11 and 12 of Willowbrae Agricultural Holdings
- Ecological Assessment for the proposed resort development on Portion 32 of the Farm Klipfontein
- Ecological Assessment for the proposed residential development on Portion 10 and 17 of the Farm Witpoort 551 JR
- Ecological Assessment for a proposed development on the Farm Rietspruit 535 IQ
- Egoli Granite Grassland Assessment at holding 173, Erand Agricultural Holdings, Midrand
- Ecological Assessment for the proposed development in Southview, Witbank
- Proposed Golf and Recreation Estate, Somerset East, Eastern Cape Province
- Ecological Assessment for the proposed Sewerage Pipeline of Rosslyn Extension 13
- Red Data Study for the proposed Ninians Quarry
- Housing Development on Portion 158 of the Farm Willows
- Pomona Holding 89 Habitat Assessment – a Habitat Assessment to determine the availability habitat for *Phoenicopterus ruber*
- Faunal Study for the Dainfern North Golf Estate

Water Use License Applications

- Water Use License Application for the proposed Fairbreeze mine, Tronox
- Water Use License Application for the proposed upgrade of Thokoza road in the Mandeni CBD
- Water Use License Application for the installation of a culvert in the Mandeni CBD
- Water Use License Application for the Richards Bay Industrial Development Zone railway line

Rehabilitation Projects

- Rehabilitation Plan for water, stormwater, and sewer service crossings for the proposed Cosmo City Township on property Zandspruit 191 IQ
- Rehabilitation of Borrow Pit 2.4 and 9.8, Mabaalstad
- Compilation of a wetland rehabilitation plan for Bailey Spruit
- Compilation of a wetland rehabilitation plan for the Soutpanspruit at Tswaing Nature Reserve
- Compilation of a wetland rehabilitation plan for the tributary of the Natalspruit at Siluma View
- Rehabilitation plan for the Klip River Catchment
- Assessing the success of rehabilitation in Richards Bay, KwaZulu-Natal
- Consequences of Habitat Edges for the Rehabilitation of Coastal Dune Communities of Richards Bay, KwaZulu-Natal

Mining related Assessments

- Financial provision calculation as per NEMA GN509 for Richards Bay Minerals, KZN
- Financial Provision calculation for Begane Quarries, Empangeni
- Closure of Borrow Pit 2.4 and 9.8, Mabaalstad
- Closure Assessment of the Smelter and Slag Dump at Ruighoek Chrome Mine
- The Three Sisters borrow pit and quarry mining application
- Pre-feasibility study for closure of Brakpan Processing Plant
- TICOR SA water use licence – CPC and Hillendale mine
- Closure costing for Hillendale mine, CPC, Fairbreeze
- Fatal flaw assessment for Block P, TICOR SA
- Hillendale Environmental Management Programme amendments
- Fairbreeze Environmental Management Programme specialist studies

- Contract work for Sishen Iron Ore Mine for Environmental Services
- Arid Environments Literature Review for TICOR SA, Empangeni
- Rehabilitation Strategy for TICOR SA, Empangeni

Alien and Invasive Species Control Plans

- Alien and Invasive Species Control Plan for Portion 32 of the Farm Klipfontein
- Alien and Invasive Species Control Plan for Portion 3 and Portion 37 of the Farm Keerom 374 JS

Environmental Management Plans

- Environmental Management Plan for Summersaults Water Park, Small Craft Harbor, Richards Bay
- Environmental management plan for a mining permit on the Remainder of Portion 9 of the farm Hondsrivier 509 JR, Bronkhorstspuit
- Residential Development, Kyalami Hills extension 8 on portion 74 of the farm Bothasfontein 408 JR
- Residential Development, Kyalami Hills extension 10 on portion 75 of the farm Bothasfontein 408 JR
- Prospecting on Portions 4, 24, 26, 45, 46, 47 and 48 of the farm Kameelfontein 297 JR
- Letaba Ranch Game Reserve – Road upgrades
- Pecanwood Golf Estate Sewerage Treatment Works

Environmental Management Programmes

- The Three Sisters borrow pit and quarry application
- Proposed upgrade and extension of the Electric substation on the Farm Bruce 544
- Proposed Extension of the Vliegveldt Waste Dump: EMPR Amendment
- Environmental Management Programme for the borrow pit on Portion 27 of the farm Brandvlei 261 IQ
- Diamond Mining EMProgramme – Magna Diamonds
- Environmental Management Programme for the borrow pit on Portion 22 of the farm Vogelstruisfontein 263 IQ
- Upgrade of Sections of Roads D52, P124, D1144 and D93 – borrow pits
- Limpopo Province Road Upgrade - borrow pit
- Road upgrading projects in NW province – borrow pits
- Cala – Lady Frere road upgrade – borrow pits
- Letaba Ranch Game Reserve – road upgrades

Environmental Management System

- Pecanwood Estate
- Hillside Environmental Management System

Environmental Audits

- Environmental Control Officer for the Zamokuhle Trust Agricultural development, Mkuze
- Environmental Control Officer for the Arboretum water pipeline installation, uMhlathuze Municipality
- Environmental Control Officer for the Nseleni water pipeline installation, uMhlathuze Municipality
- Environmental Control Officer for the Noordwyk Residential Development, Midrand
- Environmental Control Officer for the Summerset Residential Development, Midrand
- Environmental Control Officer for the Medway Road upgrade by RBIDZ, Richards Bay
- Environmental Control Officer for the Tuzi Gazi Waterfront Protea Hotel in Richards Bay
- Environmental Monitoring Report for the Bethlehem Casino Development, Free State.
- Environmental Audit of the Waste Water Treatment Plant at the Betta Sanitaryware Factory, Chamdor
- Pecanwood Estate, ISO 14001 Preparation

National Department of Agriculture Authorisations

- Assessment of two dams on Portion 10 of the Farm Boschkop 543 JR
- Authorisations of illegal dam walls and other Conservation of Agricultural Resources Act (CARA) activities

Geographical Information Systems Projects

- Mthonjaneni Land Use Management System (LUMS) 2017
- Wingate Golf Course: Compilation of a Management Information System for Wingate
- KMC Integrated Transport Plan
- Assessing the distribution status and future conservation planning for Madagascar's Raptors

Public Private Partnership Projects

- Gautrain Phase 2 feasibility study
- Proposed new Head Office for the Government Printing Works
- Construction of a new Head Office for the Department of Land Affairs
- Construction of a New Head Office Accommodation and Related Services for the Department of Foreign Affairs
- Commercialization of Nature Reserves Limpopo Tourism and Parks Board
- Environmental specialist on Gautrain Bidding team - Gauliwe
- Cape Nature Conservation Transaction Advisory Team

Other Projects

- Mondi Peat Fires Survey, Mitigation and Rehabilitation, Mondi Richards bay
- Water Management Plan for QMM, Madagascar
- Environmental Liability Risk Assessment and Closure Framework Alumicor site, Pietermaritzburg
- Integrated Environmental Risk Assessment for the proposed Meerensee 5 development, Richards Bay
- Approval of a retention dam at Alveda Housing Development Steelpoort Pumped Storage Scheme – Ecological Screening Report
- Steelpoort Pumped Storage Scheme – Agricultural value Screening Report
- Compilation of a plan for the planting of street trees in Tokoza, Johannesburg
- Limpopo EIMS
- International Mire Conservation Group – part of the organisation committee for the IMCG excursion and symposium held in Paarl, South Africa
- State of Environment Report, Free State
- N2 Toll Road – Msikaba and Mtentu Bridges Environmental Survey
- Project Developer’s Forum on Clean Development Mechanisms
- Cala – Lady Frere Road upgrade: Water Quality Assessment
- Compilation of Water Services Development Plan, JHB Water.
- Interim Report on Sustainable Development, Northern Province
- Johannesburg Water and Sanitation Utility, Midrand Integration – Initial Strategic Business Plan
- A multiple scale analysis of Southern African bird body size distributions

MULTIDISCIPLINARY ENGINEERING SERVICES PROFILE

The Exigent Engineering Business Unit provides services aimed at the safety, optimization and continuous improvement of complex processes or systems. We are concerned with the development, improvement, implementation and evaluation of integrated systems of people, money, knowledge, information, equipment, energy, materials, analysis and synthesis, as well as the mathematical, physical and social sciences together with the principles and methods of engineering design to specify, predict, and evaluate the results to be obtained from such systems or processes.

The principles within the disciplines of Industrial Engineering, System Engineering and Safety Engineering form the basis of the Exigent approach to projects. Exigent utilizes a **Systems** approach to deliver **Quality** products in a **Safe** and **Cost Effective** manner to its clients.

OUR RESOURCES

Johan Adam matriculated in 1981 at Grey College in Bloemfontein and then did his compulsory military service in the Parachute Battalion 1982/83, finished his military service as corporal before he started his tertiary education. Johan has the following theoretical qualifications: B Eng & B Eng (Hons) Industrial (University of Pretoria, SA), MS System Engineering (Virginia Polytechnic Institute and State University, Blacksburg, VA, USA), Certified SAP MM and ASAP consultant, COBIT and TOGAF basis certified. Johan started his career in the design and manufacturing environment and gained experience in Systems Engineering, Simulation, Reliability, Maintainability, & Availability (RAM), Safety Analysis from a design perspective and Statistical Process Control, Quality Assurance and Process Improvement from a manufacturing perspective. Johan furthered his career in the Information, Communication & Technology (ICT) environment as Business Analyst, Enterprise Architect and ICT strategist. Johan founded Exigent in 1998 and since then performed as an ICT & Eng Consultant delivering services in Project Management, Business Reengineering & Excellence, Enterprise Architecture, Safety & Risk analysis, HAZOP, FMECA, RAM analysis, Optimization and Improvement. Johan has 28 years of experience and his passion is to participate / manage the process of bringing quality complex systems efficiently and safely into being on schedule and within budget that satisfies the intended need within an overall enterprise architecture context and to further be involved with the evaluation and improvement of integrated systems of people, assets, knowledge, finance and energy.

ENGINEERING SERVICES OFFERING

Reliability, Availability and Maintainability (RAM) Studies
 Hazard and Operability Studies (HAZOP)
 Failure Mode and Effect Analysis (FMECA)
 Throughput and System Behavioural Simulation Services
 Economic Feasibility Studies
 Optimization and Improvement Studies
 Logistic Support Consulting Services
 Business Analysis, Enterprise Architecture & ICT Services
 Project Management - Assembling and Management of multidisciplinary teams.

OUR EXPERIENCE

Reliability, Availability and Maintainability (RAM) Studies

- Bateman RAM and throughput study for coal transfer system at Eskom Medupi Power Plant
- Pebble Bed Modular Reactor (PBMR) Development of an analytical software model for quantifying plant availability.
- Lesedi RAM study for low pressure system at Eskom Medupi Power Plant
- Industrial Water Cooling (IWC) RAM study for Axillary Cooling System at Eskom Medupi Power Plant
- ALSTOM RAM study for Instrumentation and Control System at Medupi and Kusile Plants
- ALSTOM RAM study for Flue Gas Desulphurisation Plant at Eskom Medupi Power Plant

Hazardous Operations Studies (HAZOP), Failure Mode Effect and Criticality Analysis (FMECA) and Safety Studies

- Bateman FMECA study for the Coal transfer system at Eskom Medupi Power Plant.
- ALSTOM FMECA study for a Flue Gas Desulphurisation Plant at the Eskom Kusile Power Plant.
- Bateman HAZOP study for the Coal transfer system at Eskom Medupi Power Plant.
- ALSTOM HAZOP study for the Flue Gas Desulphurisation Plant at the Eskom Kusile Power Plant.
- SAMANCOR CR HAZOP study for waste heat power generation plant.
- Pebble Bed Modular Reactor (PBMR) analytical software model for quantifying safety for the reactor.
- HAZOP studies on several PBMR reactor subsystems.

- FMECA studies on several reactor subsystems.
- DeBeers Marine FMECA.

Simulation Projects and Economic Feasibility Studies

- Middleburg Steel and Alloys throughput simulation model for assisting engineering decisions with regards to the steel manufacturing capacity expansion project.
- Compiling recommendations with regards to spare part allocation and maintenance plans.
- USA Consulting Firm (Tippens) contracted Exigent for compiling a throughput simulation model for Danish Steel in Denmark to conduct engineering and economic feasibility analysis regarding their expansion project. ARENA (SIMAN).
- Conducted an economic feasibility study in Cairo Egypt for the export of used/redundant Vacuum Chamber Plants to Cairo from RSA for Degesh SA.
- Life Cycle Cost Analysis for quantifying the economic feasibility for a SAP implementation within the Department of Defence (DOD).

Optimization / Improvement

- Investigate and implement improvements with regards to scrap control at BHP Billiton / Bayside Aluminum
- Analysis of De Beers laboratory throughput and logistic support processes. Investigated, modeled & analyzed business processes and made recommendations regarding the overall performance enhancement of the facility.
- Optimization of pasta plant operations for Fixtrade.
- Optimization and improvement studies for Middelburg Steel and Alloys

Logistic Support Consulting

- Compiling a logistic support concept for Metro Rail.
- Designing the DOD Materiel/Logistics Governance Framework and Business Processes.
- Consulting to the DOD logistics environment with regards to Logistic Support activities, reliability and support concept.
- Managed and participated in the development of Weapon System Management Manuals (Life Cycle Asset Management) for the South African Army that contained management and logistic support principle/activity requirements for weapon system managers including managing RAM aspects of Weapon Systems.

Business Analysis, Enterprise Architecture, and ICT Projects

- Develop a Business Process Baseline as well as a Functional Specification for a computer application in support of their Projects Environment of BHP Billiton / Bayside Aluminum / Hillside / Mozal
- Develop a Business Process Baseline for the Marketing and Outbound Logistics Business and document the procedures in preparation for a further SAP implementation at BHP Billiton.
- Compiling the Department of Defence (DOD) Information Strategy.
- Consultation to assist in the establishment of the Department Of Defence's Enterprise Information System Architecture.
- Establishment of Architecture Standards for State Information Technology Agency (SITA) and State Departments.
- Business Process Re-Engineering in several state departments.
- SAP functional and feasibility exercise for possible SAP implementation within the DOD environment.
- Design of Information Systems at strategic and detail design level for SITA.
- Compilation of a SITA Information System Master Plan.
- Compiling an Information System Master Plan for Department of State Expenditure.
- Compiling an Information System Master Plan for the South African Medical Health Services.
- Compiling the DOD Geospatial Strategy, Policy, Business Architecture, and Goal Information System Architecture.
- Participating in Strategic Planning for moving towards one integrated Logistics Information System for the DOD.
- Enterprise Architecture consulting services provided to PBMR inclusive of solution requirement definition and implementation services.
- Consulted and assisted in maintaining the PBMR Policy, Procedure and Process System. This included facilitating, designing, implementing processes and infrastructure for plant delivery.
- The design of a payroll system for a labor hire business contracted by Business Engineering.
- The design, implementation and support of a Collaboration & Workflow Software Offering.
- Design and specification for the SANLAM housing IT application.

Project Management in Engineering and Information Communication Technology (ICT)

- Established and managed a project team to disassemble vacuum chamber plants in Heidelberg, packed and preserved the plant for shipment to Egypt with design and operating documentation for assembly, commissioning and operation of vacuum chambers for Degesh SA.
- Established and managed a project team to disassemble a pasta plant in Kinshasa DRC and to assemble and commission the plant in Johannesburg for Fixtrade.
- Project Management for ATIO Corporation year 2000 compliance project.

- Project Management to develop and implement the Integrated Development Planning Nerve Centre (IDPNC) for SITA client Directorate Provincial & Local Government.
- Project Management on several ICT projects for Business Engineering.