

Africa-One Consulting

Company Profile



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1 Africa-One Consulting Factsheet



Africa-One Consulting Factsheet - Compliance

Nature of business and Location

- Africa -One Consulting and Research Pty Ltd formed in May 2012 with main focus on electrical consulting with a vision to later incorporate later expanded to include civil engineering, mechanical and metallurgical engineering.
- Company also specializes in communication and information technology as well as business research, and project management
- Multi -disciplinary design, engineering and implementation across engineering faculties
- Company has Johannesburg and Pretoria offices in Gauteng and offices in Mpumalanga, North West, Western Cape, Free State and Northern Cape

Financials and Commercial information

- Company registration # 2012/086575/07
- Tax # - 9512927162
- VAT # - 4510278819
- R10 million Professional indemnity insurance
- Level 2 BEE organization
- Bankers – FNB
- Registered in Treasury Central Supplier Database



2 Our Markets and the Industries We Serve



Extractive and Chemical Industries



Extractive and Processing



Water and sewer



Electrical Power



Infrastructure and Building



Petrochemical & Chemical



Telecommunications



Railways

Extractive and Processing

- ❖ We are present in every phase of the mining and metallurgical cycle and value chain.
- ❖ Africa-One Consulting designs, build, maintain and operate mineral processing plants, material handling systems, associated water and slurry conveying systems as well as the related services structures and building infrastructure among other facilities that meet top industry schedules of quality, safety and cost requirements.
- ❖ We develop greenfield and brownfield facilities for copper, gold, silver, platinum, potassium, lithium, uranium, platinum and iron ore mining projects.

Petrochemical and Chemical

Africa-One Consulting staff design, purchase, build and assist start-up process plants, both new cutting-edge facilities and modernization of existing plants for the chemical and petrochemical industry. Some of the sub-industries in which we play are:

- Bulk material handling and storage (urea, coke, sulfur)
- PVC
- Polyethylene
- Sulfuric acid
- Biofuels (ethanol)
- Cement

Water and Civil Engineering Infrastructure

Water and Sewer

- ❖ Africa-One Consulting strives to be a leading service provider in all facets of water, waste water and sewer engineering, construction, operations and maintenance services..
- ❖ We offer innovative water and sewer plant solutions, comprehensive design, rigorous construction services including operations and long term maintenance support.



Infrastructure

- ❖ Our infrastructure business is focused on building large civil infrastructure projects such as roads, bridges, airports, dams, residential and commercial buildings, pipelines e.t.c
- ❖ The Africa-One Consulting team offers the full suite of skills and expertise working closely with our customers in order manage typical complex project risks associated with infrastructure projects.
- ❖ We understand typical government requirements, business and infrastructure operators.
- ❖ We assist our customers in making financial decisions to solve social challenges with minimal risk through the application of leading edge engineering and technological expertise.

Telecommunications and Electrical Infrastructure

Electrical Power

- ❖ We are a leading provider of construction, commissioning, maintenance together with an extensive array of engineering and design expertise in power generation, transmission and distribution.
- ❖ Our portfolio covers both renewable and non-renewable energy value chains with technology capabilities that include advanced power stations, smart grid technology, electrical substations, transmission line and energy demand management for both commercial and residential facilities.



Telecommunications

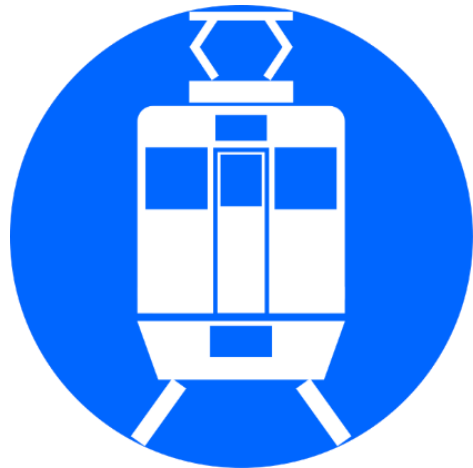
At Africa-One Consulting we have extensive expertise in communication technologies ranging from 2G-5G, bases station and equipment room engineering, optical and radio network infrastructure planning engineering and construction, green field and brownfield mobile communication and fixed network technologies, architecture, construction and operational maintenance and support.

Railways and Buildings

Railways

Africa-One Consulting 's capabilities include a range of services in railway infrastructure projects. Such services include:

- ❖ Civil infrastructures including earthworks, bridges, tunnels, station buildings and facilities
- ❖ New track laying and rehabilitation of existing tracks.
- ❖ Railway electrification and power systems;
- ❖ Metro railway systems;
- ❖ Private railway sidings.
- ❖ Railway signaling and telecommunication systems



Commercial and Residential Buildings

- ❖ In the construction or residential and commercial building infrastructure Africa-One Consulting specializes in green building engineering, energy management, access control and mechanical engineering.
- ❖ Our mechanical proficiency includes HVAC Systems, hot water generation, industrial and commercial solar water heating systems, cold-room and freezer designs for supermarkets and superstores.

3 Our Engineering Consulting Spectrum



Engineering Consulting Overview

Multi-Disciplinary Engineering Consulting

Civil & Structural Engineering	Electrical & Information Communication Technology	Mechanical Engineering	Metallurgical and Mining Engineering
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- Design and drawings
- Environmental engineering
- Water resource engineering
- Highway & transportation engineering
- Structural engineering
- Geotechnical engineering
- Geomatics engineering
- Building Infrastructure

- Electrical and communication systems design and drawings
- Non/renewable energy systems
- Emergency power systems & batteries
- Communications infrastructure
- Industrial automation and control systems
- Electronic security and building management systems
- ICT technology architecture and design
- Virtualization and cloud services
- Digital strategy and advisory
- Enterprise cyber security

- Design and drawings
- Power plants
- Pressure vessels
- Boiler life evaluations
- Turbines and generators
- Conveyor, chute and feeder design
- Boiler plant layout
- Heating, ventilation and air conditioning

- Operation and optimization of process plants
- Design, development and implementation of process projects
- Cost modeling
- Equipment selection and optimization
- Mine designs

Project management and contract administration, turnkey execution



Civil and Structural Engineering (1)

Environmental Engineering

- Water and wastewater treatment
- Industrial wastewater treatment
- Solid waste management
- Landfill technology
- Environmental Impact Assessment (EIA)
- Air Quality and Water Quality Studies
- Sludge Management
- Noise Pollution control and Biological Treatment
- Sludge



Highway Engineering and Transportation Engineering

- Pavement Engineering
- Bituminous Material for Roads
- Traffic Engineering
- Road Safety
- Intelligent Transport Systems
- Public Transport Studies
- Highway Capacity Studies
- Travel Behaviour Studies
- GIS Application in Transportation

Water Resources Engineering

- Water Supply
- Urban Storm Management
- Hydrological Modeling
- Urban Hydrology
- River Engineering
- Sediment Transport
- GIS Application in Water Resources
- Land Use Hydrology
- Modeling of Pump Station and Ecohydrology



Civil and Structural Engineering (2)



Structural Engineering

- Concrete Technology
- Concrete Repair Materials and Techniques
- Wind Engineering
- Earthquake Engineering
- Masonry Engineering
- Timber Engineering
- Tensioned Structures, Shell & Spatial Structures
- Computational Mechanics and Advanced Structural Analysis



Geotechnical Engineering

- Slope Stabilization (Soil/Rock)
- Soil Improvement
- Rock Mechanics
- Blasting Vibrations
- Foundation Engineering Studies
- Land Reclamation and Rehabilitation
- Geotechnical Assessment
- Landslide risk Management
- Site Investigation



Geomatics Engineering and Management

- Geo-Information Sciences (GIS)
- Monitoring System
- Global Positioning System (GPS)
- Spatial Decision Support Systems
- Digital Imaging
- Engineering Survey

Communication Infrastructure

Site infrastructure

- Racks, cabinets and equipment shelters
- Solar power systems
- Cable and cable management systems
- Mast & poles infrastructure including antenna systems
- Mast and system earthing , lightning protection and civil works



Professional Services

- Economic modeling and business case development
- High level and low-level network architecture and design services
- Equipment and networks installation and commissioning
- Projects and program management
- Bill of Material and Bill of Quantities development
- Proof of concept and interoperability testing



FTTH, FTTB, FTTx and OSP

- Residential and commercial (including multi-storey dwelling) design and deployment
- CAD/GIS Services for fibre routes and as built documentation
- In-Home Wiring and ONT replacements
- Detailed cost benefit analysis between design alternatives
- Right of way acquisition and administration
- OSP planning, contract administration and management
- Optic fibre splicing and characterisation
- Final and preliminary acceptance testing for both copper and optic fibre cable systems



Enterprise Backbone, Backhaul & Core

- Network architecture, technology strategy
- C/WDM and OTN optical networks
- SDH/MSPP technologies and migrations
- IP/MPLS, metro and carrier Ethernet
- PDH and PCM multiplex systems

Wireless Communications

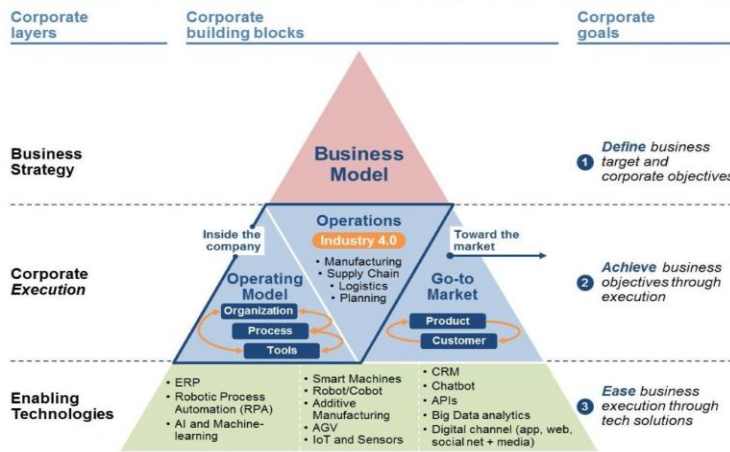
- Satellite , earth station and VSAT technologies
- Microwave radio systems
- WiMAX, Wi-Fi and Access point systems
- GSM, GPRS, UMTS, LTE and 5G technologies

Information and Computer Systems Technology

Virtualization and Cloud Services

- Private cloud
- Application and storage hosting
- Infrastructure outsourcing
- X-AAS – platform, database, recovery, network
- Data center infrastructure solutions – security, power, cooling etc.

The Digital Transformation pyramid



Security Solutions

- Risk management services
- E-mail and network security solutions
- Continual virus and spyware protection for devices
- Disaster recovery and business continuity
- IT policies and governance
- Virtual Private Networks (VPN)
- Managed security services

Digital Services

- Business policy, process and operations management
- Connected devices – IoT, smart home, smart metering
- Emerging technologies – drone technology, driverless cars, big data, virtual reality, virtual intelligence
- Digital strategy and advisory – competition analysis, benchmarking
- Technology architecture and design services
- Big data analytics
- Digital channel strategies

Quality Assurance

- Software system and integration testing
- Test automation
- Configuration management
- User acceptance testing and implementation of acceptance testing procedures



Enterprise Network Solutions

- L 2& L3 routing and switching solutions
- Network security
- Cloudification solutions
- Unified communications and collaboration

Managed Services

- Infrastructure planning, design installation and rollout
- Network management encompassing internet access, hosting, IP solutions
- 24/7 helpdesk services and remote support

Electrical Engineering

Utility Services

- Revenue protection
- Revenue maximization
- Investigations and studies



Instrumentation Control and SCADA

- Technical audits and engineering studies
- Engineering and control system upgrades and modernization
- Design and engineering
- SCADA and PLC systems integration



Building Management & Security Systems

- Fire detection and security alarms
- Residential and commercial access control systems
- Intelligent building management systems – lighting control, PABX, PA Systems, CCTV, sprinkler and pump automation



Electrical Network Reticulation and Power Systems

- Commercial, industrial and residential electrification networks
- Standby generator and UPS power supply systems
- Specialized lighting (street lighting, high mast lighting, building lighting systems, lighting control and automation systems)



Power Generation Systems

- Power flow analysis
- Fault analysis in power systems
- Connection of “ green-energy systems” to power systems
- Power system protection and system installations
- Energy storage systems – hydrogen storage, pumped storage, battery storage, thermal energy storage
- Steam generators and turbines
- Power plant control and instrumentation

Mechanical Engineering

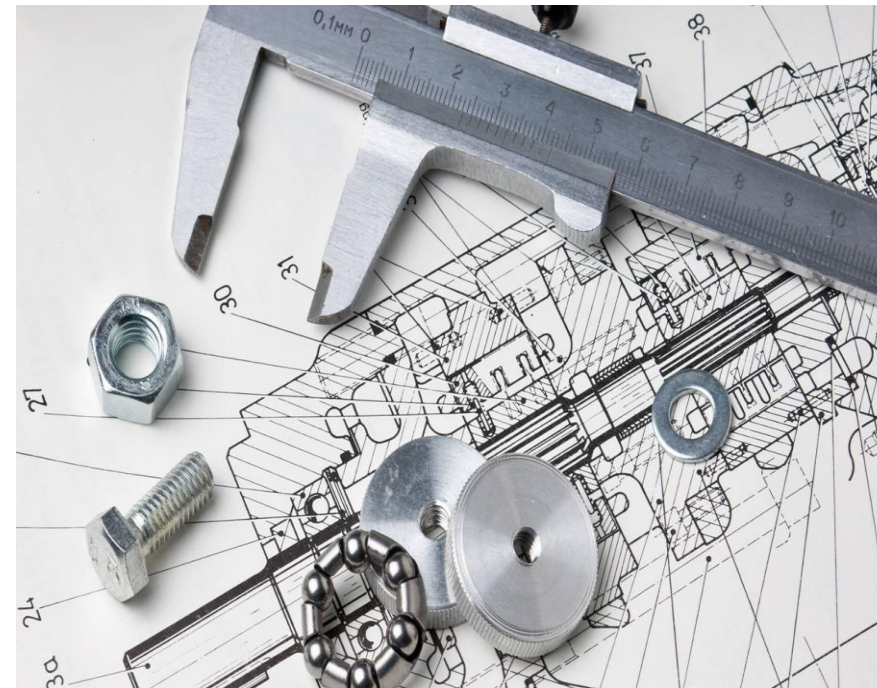


Steam and Power Systems

- Hot water generation (boilers, calorifiers etc) and steam reticulation
- Geothermal heat exchange, ground source systems
- Design and draughting
- Pressure vessels
- Turbines and generators

HVAC and Fire

- Mechanical design and modelling
- Mechanical drives and machines including vibration analysis
- Heating, Ventilation, air -Conditioning and refrigeration
- Fire prevention and fire fighting
- Medical and LPG gas systems
- Compliance inspection and equipment certification



Mechanical Engineering Design Services

- Pipeline class specification
- PDMS/PDS 3D modeling
- Valves specification and schedules
- Equipment drawings, piping plans, section and isometrics



Material Handling Systems

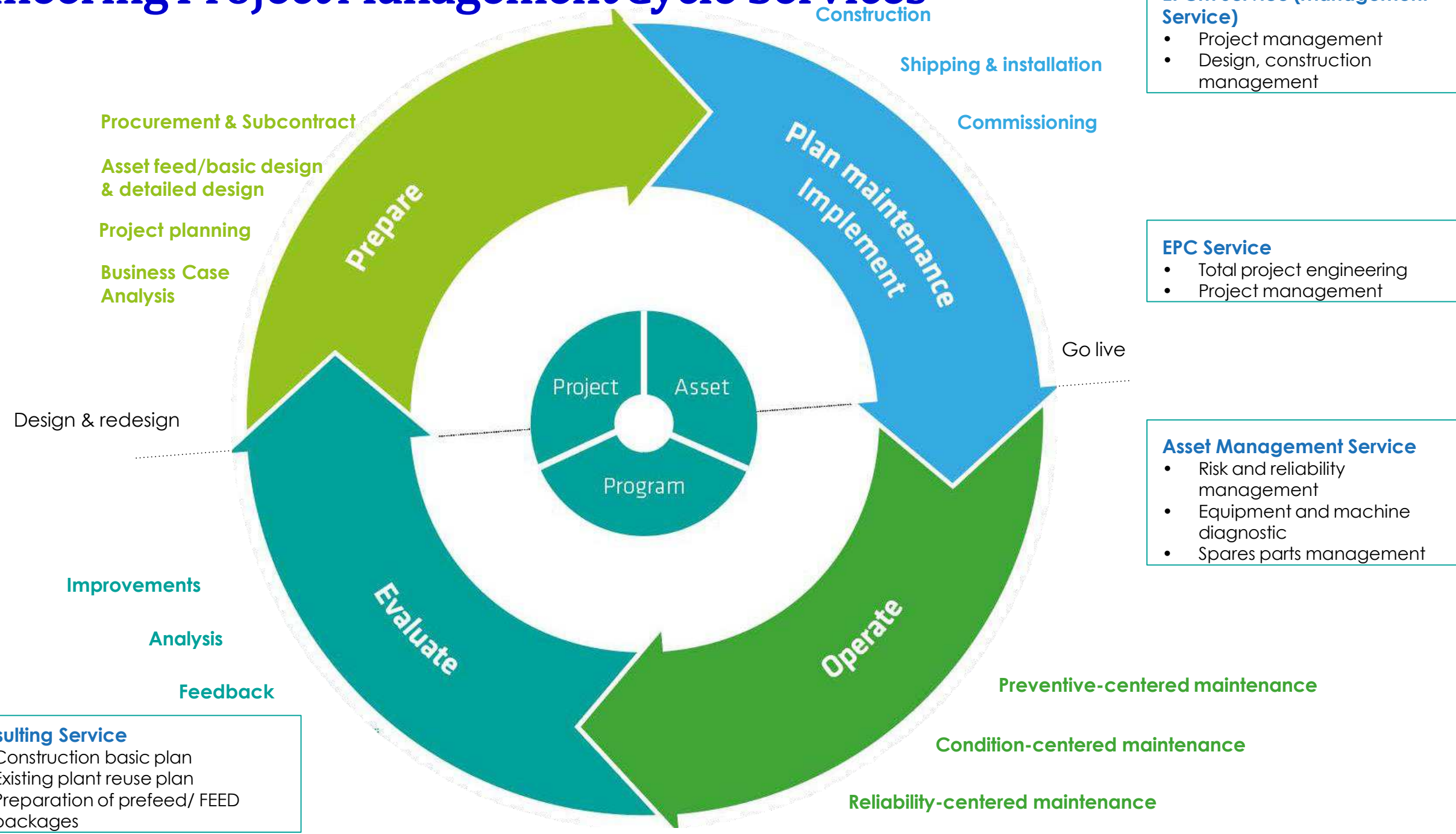
- Design and maintenance of material handling and storage systems
- Fuel handling systems
- Compressed air systems
- Pipes, pipe fittings and valves
- Metal forming, shaping and casting

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Project Management and Resource Outsourcing Services

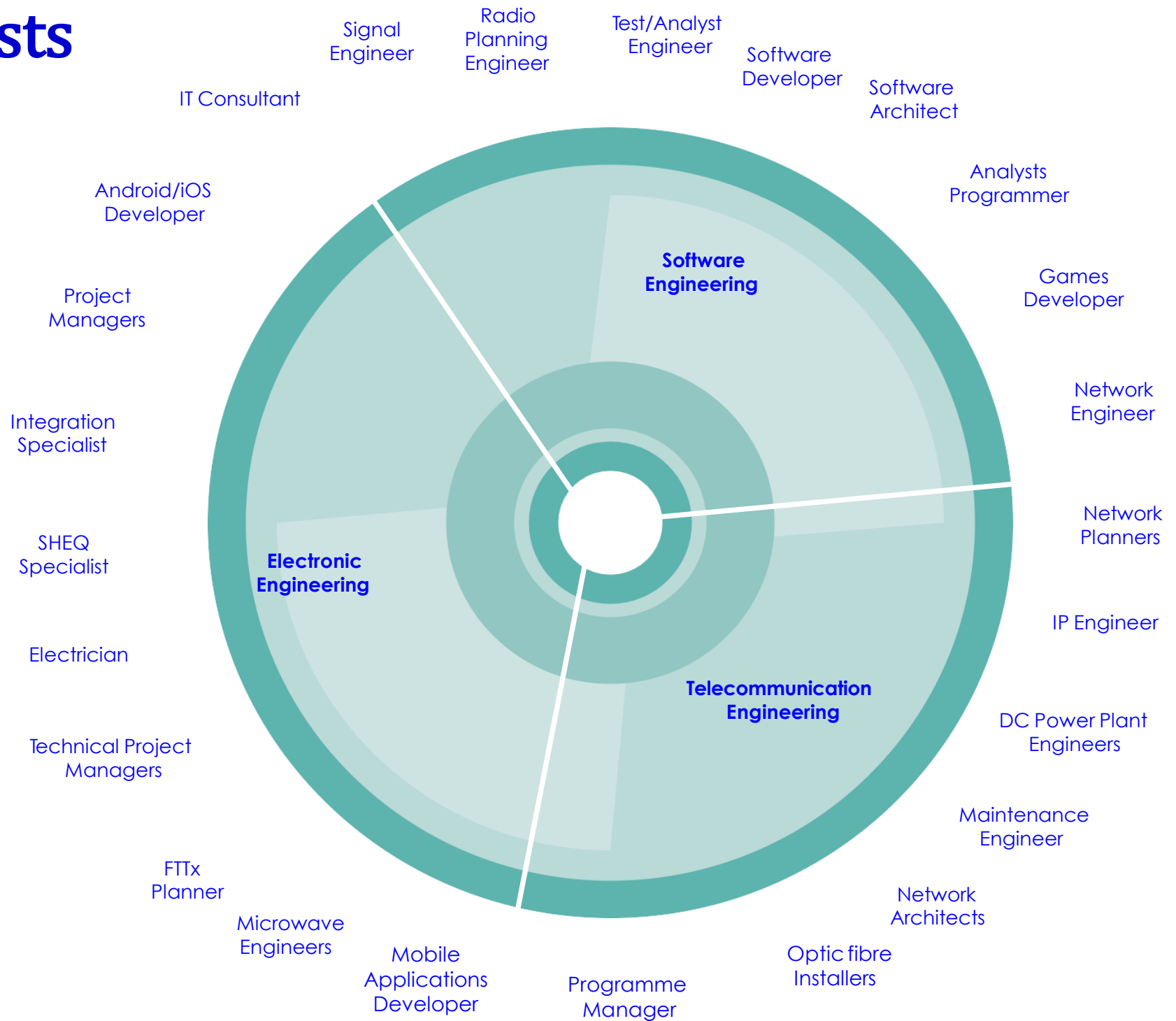


Engineering Project Management Cycle Services



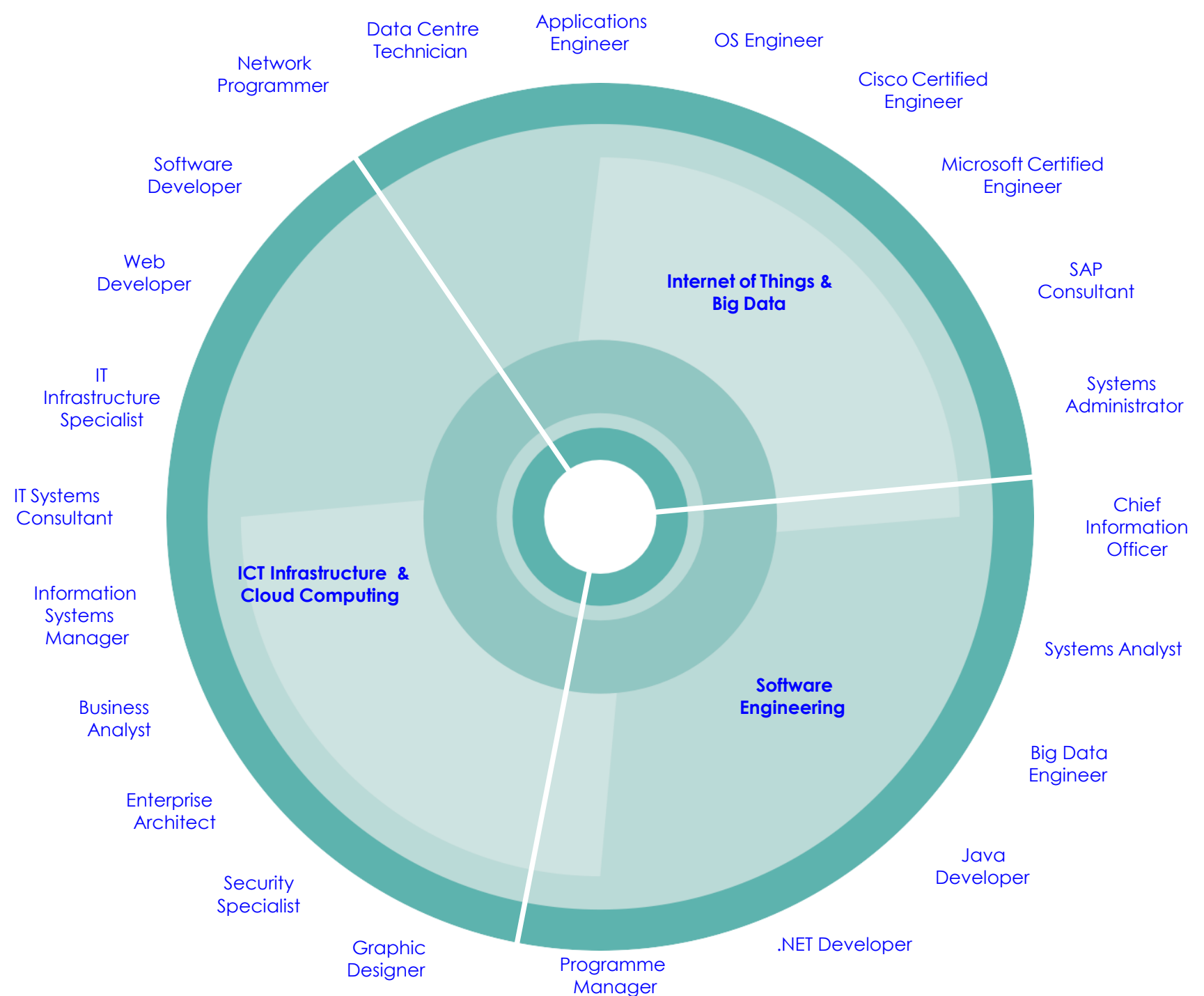
Engineering Specialists

- Project staffing
- Flexible staffing
- Contingency and contract staffing
- Temporary staffing
- Specialist assignment staffing
- Engineering and technical staffing
- ICT staffing
- Executive staffing



ICT Specialists

- Project staffing
- Flexible staffing
- Contingency and contract staffing
- Temporary staffing
- Specialist assignment staffing
- Engineering and technical staffing
- ICT staffing
- Executive staffing

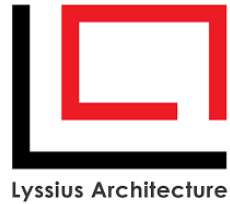


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Our Ecosystem



Our Clients



Thank you

www.africaone-consulting.com

