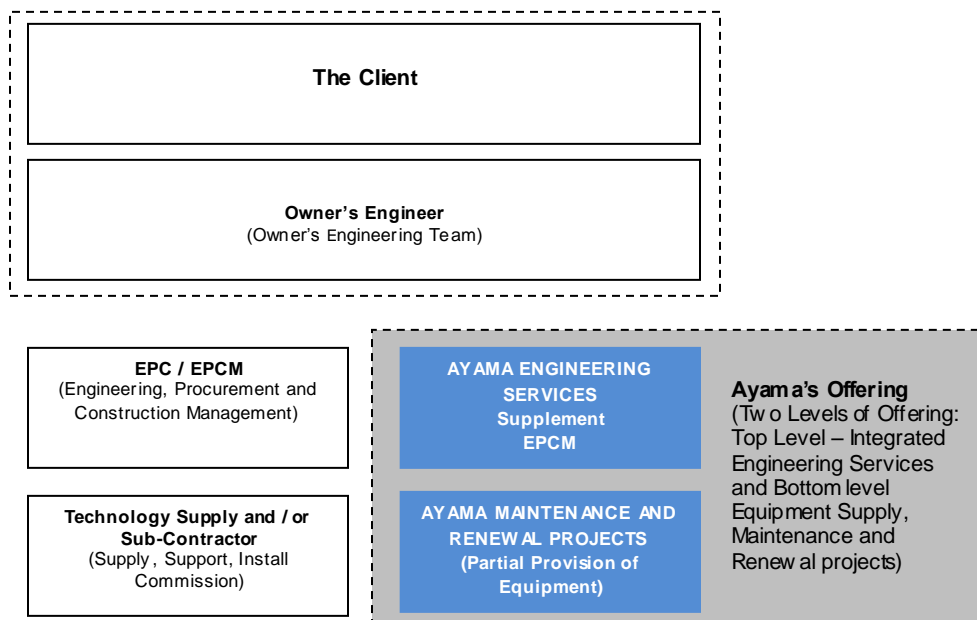


INTEGRATED ENGINEERING SERVICES

Dear Sir / Madam

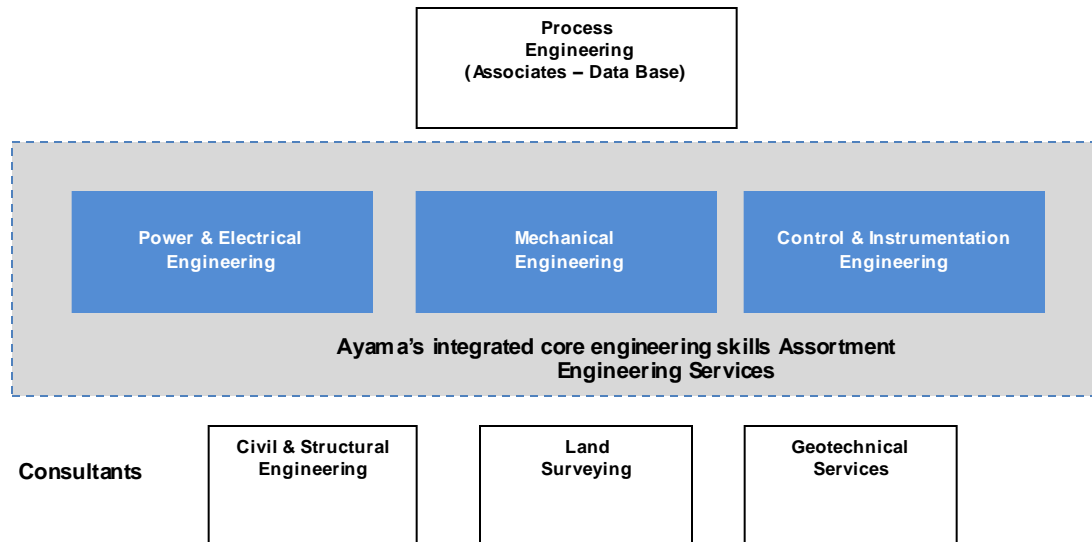
Enclosed is our company profile for your perusal. In the interest of outlining our services offering, I would like to draw your attention to the following diagram:



As Ayama Projects, we provide services at two levels of the on the hierarchy of the engineering development structure. At the base level of the structure, Ayama Projects provides electrical equipment such as motors and related equipment in the context of maintenance and renewal projects.

The growth division is the integrated engineering services which are resourced by three core disciplines, which are, electrical, mechanical and control and instrumentation. Se diagram below:





Our Sectors are as follows:

- Mining & Mineral Processing
- Power Generation
- Aviation

Other Target Sectors:

- Water, Wastewater and Effluent Treatment
- Oil & Gas (Including Natural Gas, LNG, etc)

Please note a summary of our engineering services below:

ENGINEERING SERVICES

Ayama Projects (Pty) Limited is an engineering services company, we providing services to our clients throughout the project life cycle. Our scope includes expansion projects (CAPEX) and new projects – small to medium size (CAPEX – Spend) – EPCM/ EPC Spin off projects; i.e. – sharing scope with an EPC / EPCM service provider. Our internal team is made up of resources in the three strategic disciplines; i.e. mechanical, electrical and control & instrumentation (C&I). Furthermore, we provide support such as asset management / maintenance services which include renewal projects (OPEX – Spend).

Development Life Cycle Services (Expansion & New Project)

We provide project engineering services from concept generation and concept selection, pre-and feasibility studies, design phase and project execution i.e. detail design, procurement, installation, commissioning and handover.



Maintenance + Renewal Services

We provide maintenance support (maintenance planning and technical support) and assets renewal services (OPEX), equipment supply and after sales support and 24 hour emergency service. This includes troubleshooting, field engineering liaison and inspection, commissioning and checkout, customer representation at acceptance testing of equipment, preventive maintenance programs as per manufacture schedule.

Drawing Office Services

In Ayama Projects growth cycle, we have established a drawing office business centre that allows us to provide comprehensive design services. These services include mechanical design and drawings, electrical and instrumentation drawings. These include redraws and as built drawings for an existing facility and generation of new design drawings in the development phases.

SCOPE OF WORK

Our team members have experience that extends to full EPCM and lump sum turnkey project life cycle including leading design teams, compiling detail design packages, managing budgets over R20million, adjudicating tenders, procurement, managing installation contractor, quality checks and hands-on installation/commissioning. This includes Gold, Silver, Copper and ferroalloy process mining industry, coal fired power station and Aluminium semi-fabricator (cold rolling) industry.

Our scope includes:

- Area design and drawings,
- Equipment selection,
- Scope definition,
- Technical Specifications,
- Process – Equipment data sheets;
- Bill of Quantities;
- Technical Adjudications;
- Contract Management.

Mechanical Engineering

Additional to our electrical, control and instrumentation; we also offer mechanical engineering capability which has boosted our capacity in technologies such as, but not limited to:

- Storage tanks & pressure vessels general arrangement design and process area design (systems engineering);
- Pumps and pipe reticulation (water, slurry, etc)
- Structural steel work (equipment support structures and other steel structures);
- Conveyors and bulk dry material handling



- Management of Specialist Equipment (Contract Assurance), e.g cyclones, heat exchangers, boilers, etc.

Electrical Engineering

- Scope development
- Package management (Scope and specification development, compile datasheets, Compile RFQ/RFI, Installation management, FAT, Commissioning and Handover)
- Adjudication
- Support project manager with project scheduling
- MV designs, LV designs, Load list, cable sizing
- Compile Electrical Installation Package
- Single Line Diagrams and Schematics
- Earthing and bonding design
- Drawings: MCC layouts, DB layouts, Racking and routing, lighting, Single lines and schematic.

Control & Instrumentation Engineering

- Scopes development
- Package management (Scope and specification development, compile datasheets, Compile RFQ/RFI, Installation management, FAT, Commissioning and Handover)
- Adjudication
- Support project manager with project scheduling
- Automation equipment selection (PLC, Instruments, cable, valve sizing and selection)
- Compile Control and Instrumentation Installation Package
- Fire detection design
- Drawings: Input to P&IDs, loop drawings, IO Panel layouts/wiring, DB layouts, Racking and routing, network design (Ethernet, Profibus and AS-i)

Project Engineering

Project engineering support services:

- Schedule Planning and Control
- Budgeting and Earned Value Management
- Resource Planning
- Project Co-ordination
- Feasibility Study Reports

