ATEC PMC Company Profile

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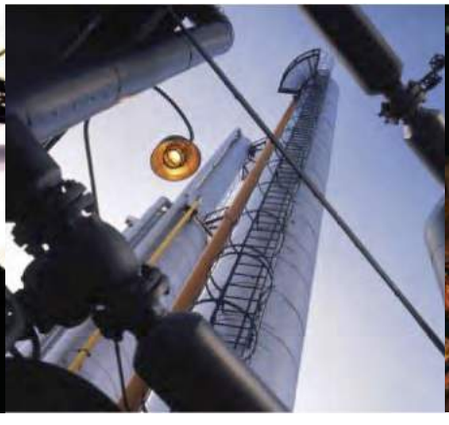

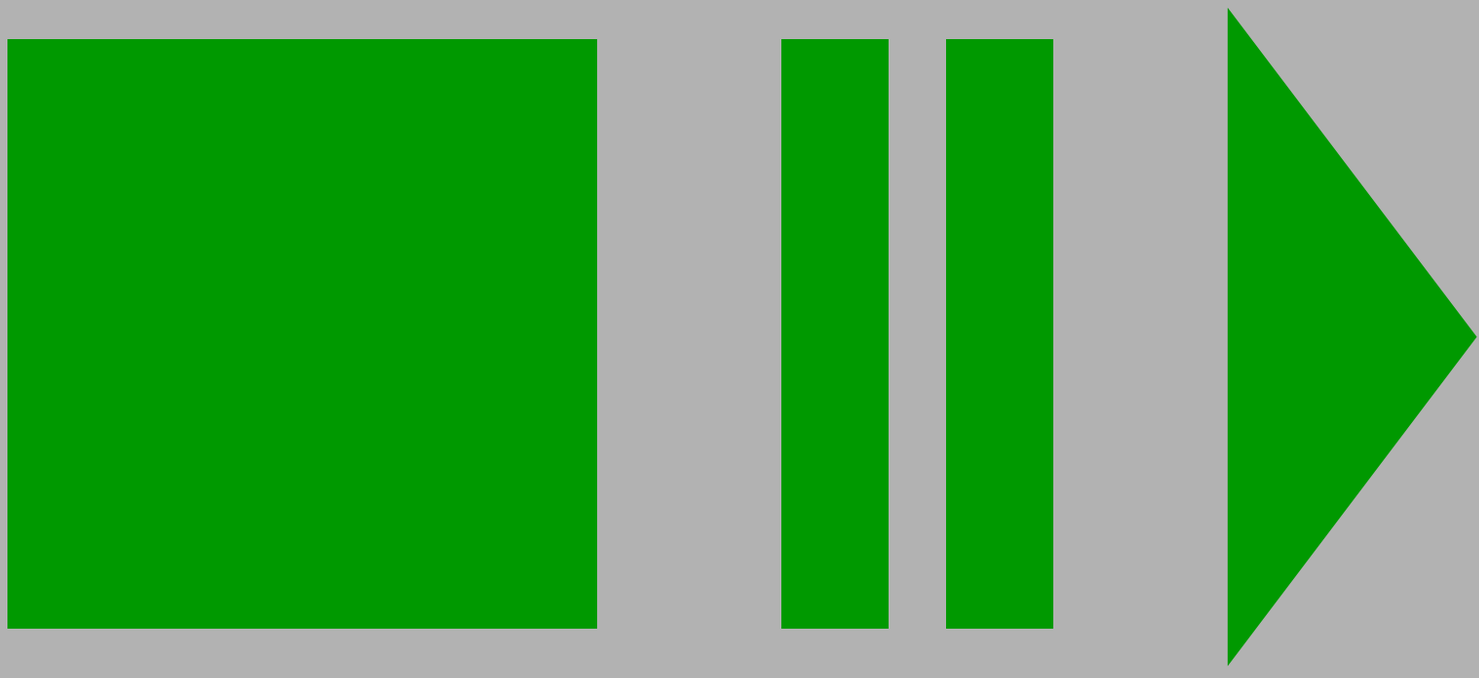

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Unlocking Potential Through Innovation

ATEC PMC's approach to engineering and project consultation is anything but typical, because client problems are seldom predictable. We are engineers, project managers and problem solvers who see unusual project challenges as opportunities to innovate.

ATEC PMC engineers solutions for the mining, minerals processing and industrial environments, turning client ideas into successful projects through:

- Conceptual and feasibility studies;
- Plant design and implementation / engineering;
- Project management and project control systems and
- Construction and execution management.

We do this by unleashing our key differentiators, these are: innovative thinking, passion for quality and service and our knowledge base - manifest in our experienced engineers, project managers, skilled designers and technical experts. Clients receive a full range of capability in a single dedicated team that is committed to utilizing available opportunities and expertise to unlock potential and add value.

With **ATEC PMC** your ideas become a successful reality.

Together, we make it happen.



Our Mission

To assist selected clients in the mining, minerals processing and industrial environments with idea evolution from concept to operation, delivering quality and measurable value through innovative project solutions.

Our Vision

To be known and respected by clients, peers and colleagues as a company of integrity and superior expertise - ensuring the highest quality as we deliver innovative solutions to project challenges.

The Values That Drive Us

Our drive to offer innovative problem solving, quality and service that exceeds expectations is embodied by our core values:

- Open communication – on all levels of interaction
- Dedication – to quality and delivery
- Exceeding expectations – through a professional delivery model
- Innovation – to continually add value to each client and project
- Building relationships – based on trust and integrity
- Valuing people – and assisting them to achieve their potential
- Ethics – in our standards and practices
- Safety – built into all our designs and working methods
- Respect – for people and the environment
- Commitment – to sustainable development

A Dynamic Innovative Approach

ATEC PMC brings experience and fresh thinking to each project challenge. These are the qualities that set us apart:

Engineering first
We engineer the technical solution first, ensure it is executable, then deploy project management to guide it.

Close client engagement
Our senior staff consult at the strategic and operational level and remain personally engaged from conceptual stage to handover.

Comprehensive resourcing
Skilled resources may be scarce, but we access our network of professionals to deliver the specialist skills the project requires.

Inherent industry understanding
Our knowledge and experience enhances the quality and accuracy of each study phase: the key to getting it right first-time.

Customised solutions
One size does not fit all - each client deserves a unique solution structured to specific needs.

'Big picture' view
Throughout our involvement, we focus on the desired outcome regardless of where in the process our service is required.

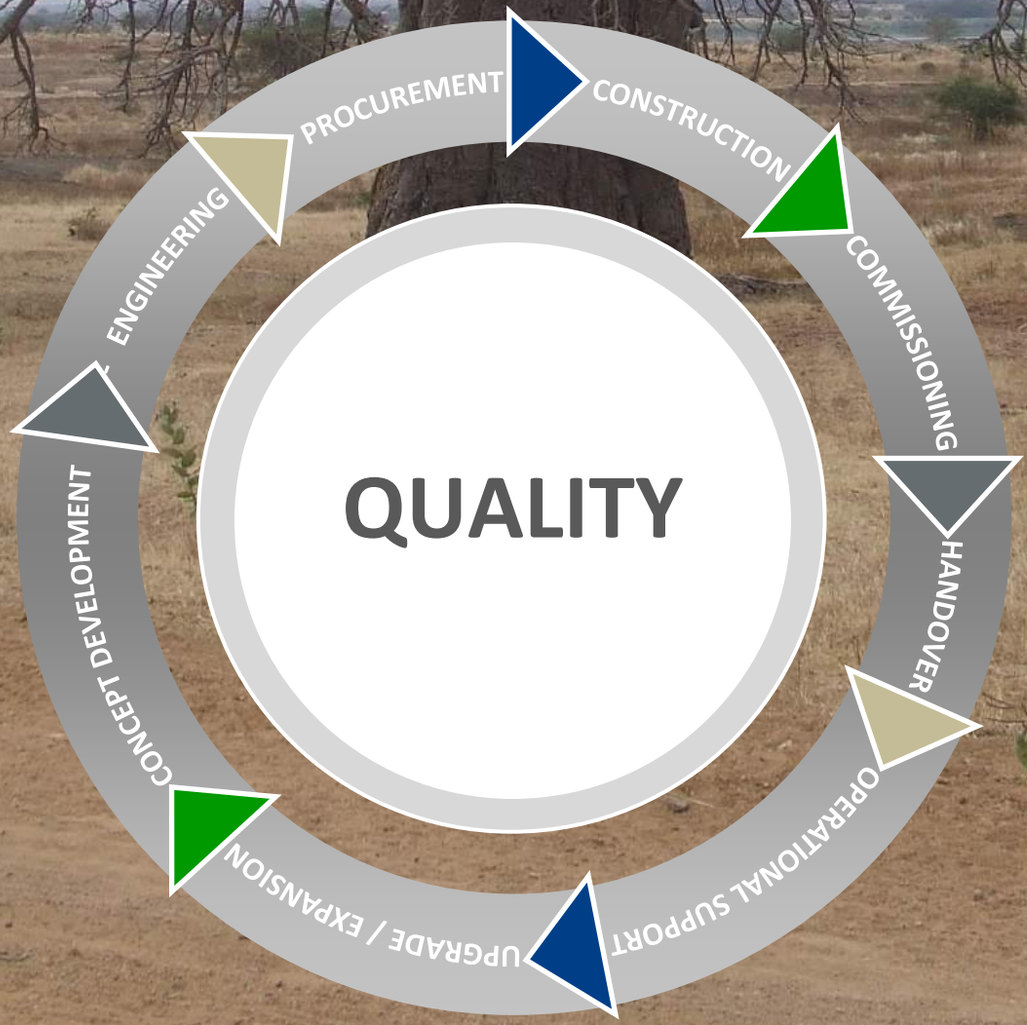
Quality over quantity
Appointing quality people and deploying effective systems allows us to do more with less. Quality is intrinsic in our end-product, our solutions and in all that we do.

Flexible project execution
We review each project phase to improve the understanding of the specific solution required. If a change is necessary, we adapt accordingly to ensure a successful outcome.

Building long-term relationships
Our close client relationships extend beyond project handover; we remain mindful of their future needs and the role we can play in meeting them.

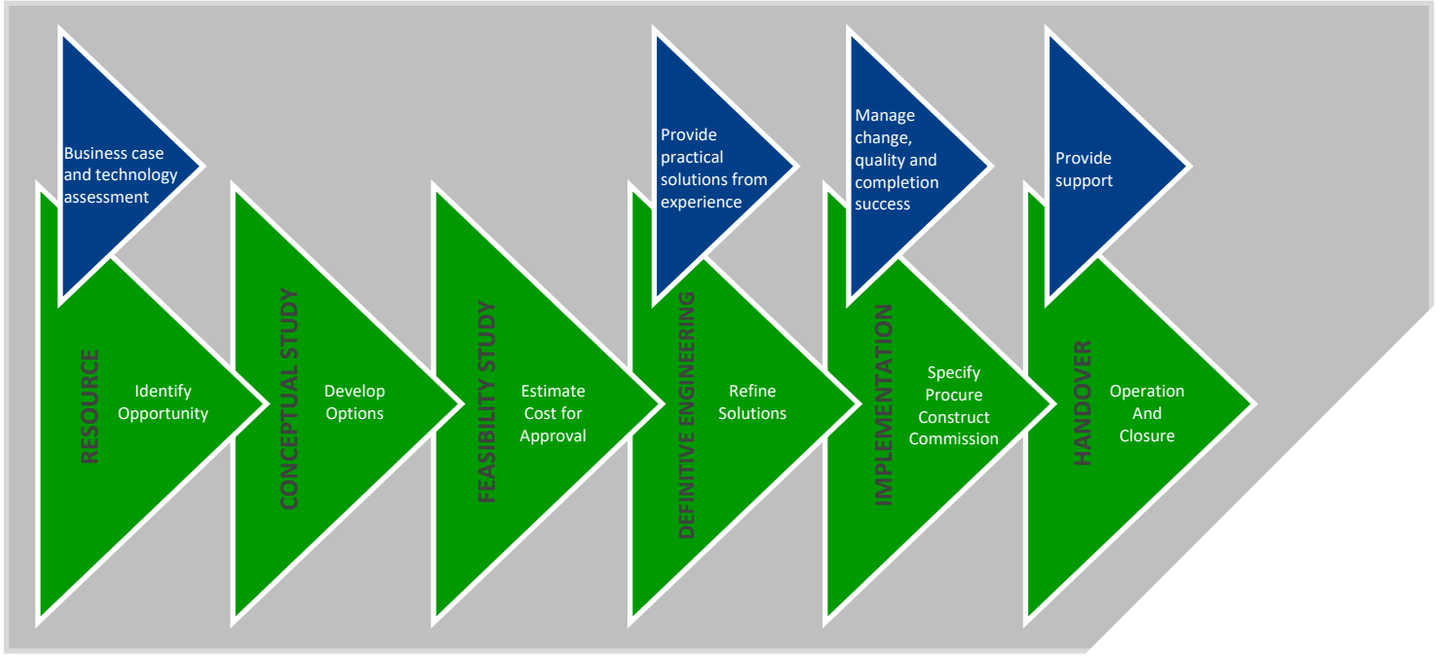
Sustainable project development
A continuous commitment to protection of the environment and sustainable project development.

Applied throughout the entire project lifecycle



Expertly Evolving Project Phases

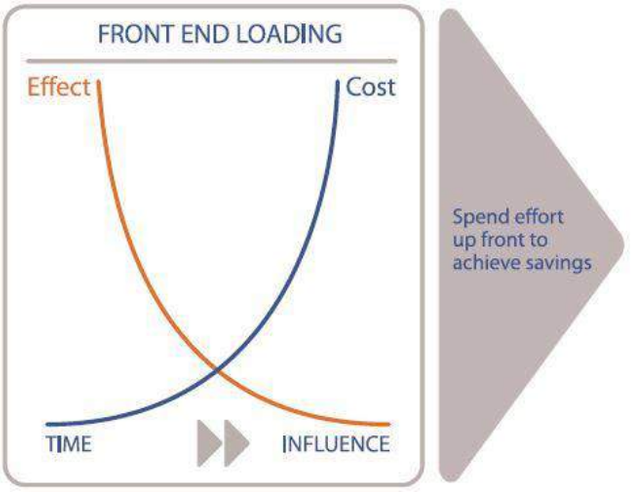
Multi-disciplinary services for successful projects



ATEC PMC follows globally-accepted engineering and project management standards. But that alone is not innovative.

There are four main reasons why we do it better.

Firstly, we always view the project in its entirety; Having a holistic view is essential to innovation and effective problem solving. Equally important is focussing on the end product. This ensures a product that meets expectation and fits its purpose. Then, a skill that can only be mastered with experience is knowing when to focus on which project element or activity. We save our clients time and frustration by helping them to prioritise. Finally, experience has given us an accurate gauge of how much detail is essential to each project phase. This comes through in the accuracy of our studies, engineering and design.



The value that these four strengths add during the front-end study phases becomes visible in the benefits realised after execution, namely project success and return on investment.

1) *Conceptual study*

Exploring an idea

An investment concept is proposed. Basic testing and investigation develops the concept into a potential opportunity. Preliminary engineering tells us if there is a case for further development.

2) *Pre-Feasibility Study*

Developing the investment opportunity

The proposed investment opportunity takes shape as we define and analyse its potential. A full comparative evaluation is made of the available options, giving rise to one preferred option. This phase requires basic engineering and defining of deliverables.

3) *Feasibility Study*

Demonstrating viability

We build a business case around the preferred option, proving its technical and economical viability. A risk profile determines if there is sufficient confidence to proceed to execution. A go / no-go decision is made. Our expertise in detailed engineering and defining of deliverables is applied here to guide decision making.

4) *Project Execution*

Managing, directing, delivering

Set-up and mobilisation

- Following approval for the project to proceed, we facilitate project execution planning, scheduling and resourcing in preparation for implementation. We invest the appropriate amount of time in establishing the processes, procedures and project controls that will be critical to effective management at implementation.

Implementation

- The focus moves from planning, to action, through detailed engineering, procurement, construction and commissioning, culminating in handover of the facility.

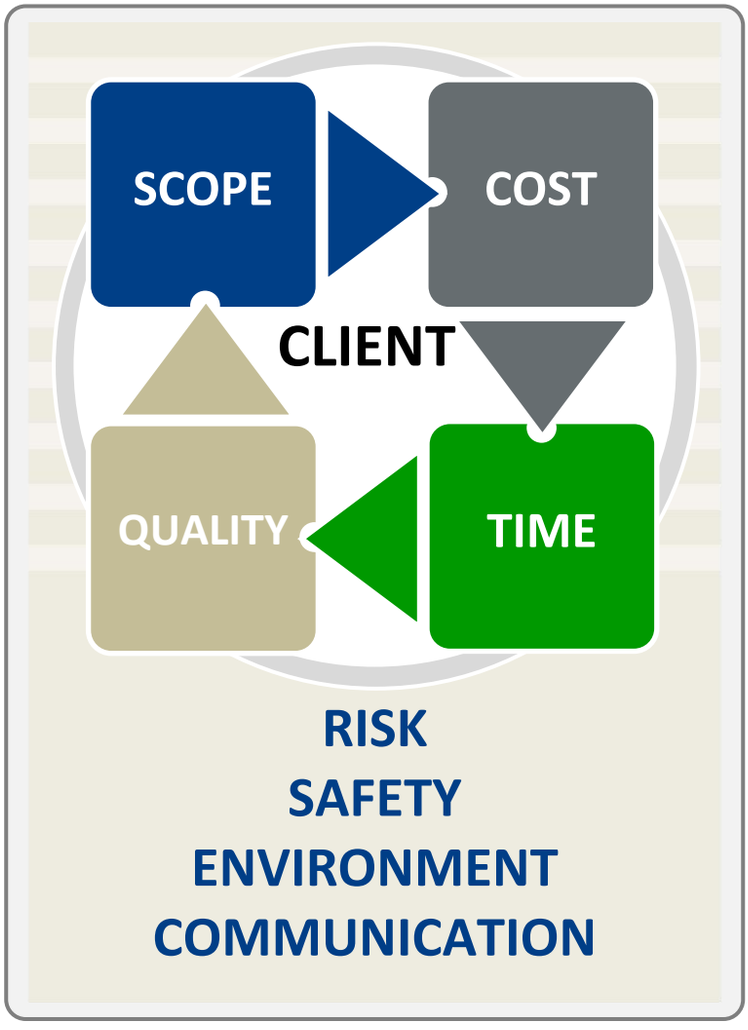
Start-up of operations

- The appropriate resource capacity is put in place for production ramp-up and effective operation of the facility.

Post-investment review

- After handover, the project key performance indicators are reviewed from the perspective of return on investment and strategic objectives achieved.

The full range of **ATEC PMC** services and expertise are contextualised according to eight integrated service areas that extend across all phases of the project lifecycle.



CLIENT FOCUSED
PROJECT INTEGRATION MODEL

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Channeling Our Expertise

Advanced Engineering Design and Consulting

ATEC PMC's engineers provide full multi-disciplinary conceptual, basic and detailed engineering design and consulting services.

Where appropriate, we use widely accepted industry practices and processes as a foundation, but always differentiate our service by the level of detail and our fresh way of approaching challenges. The result: accurate, quality work and innovatively engineered solutions that are fi t for purpose.

We develop ideas from concept to final detail using advanced analysis software and 3D modelling tools. Our combined knowledge and experience guides us to focus on what is relevant and required.

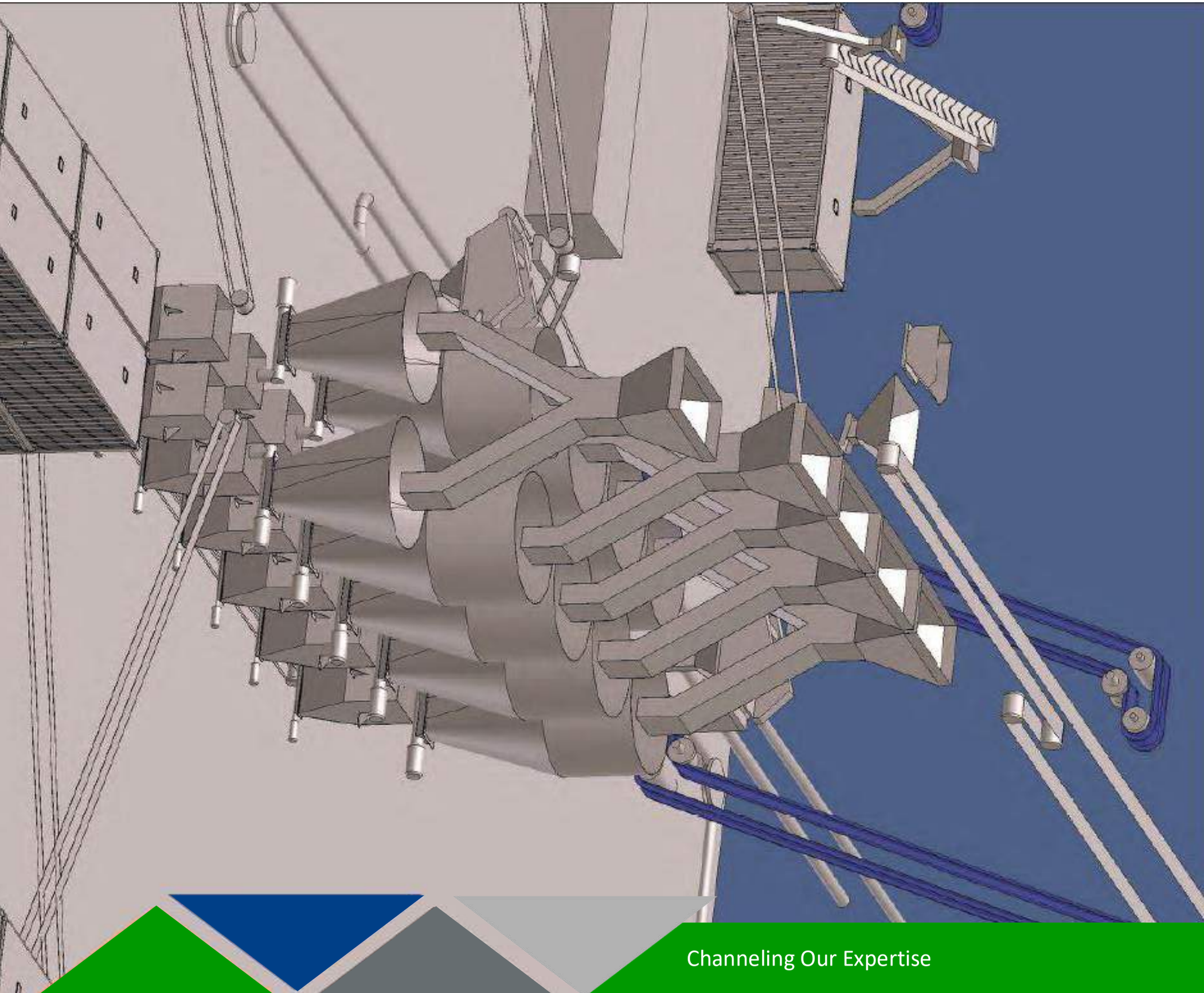
Added value:

We quickly build an understanding of the essence of client specifications and standards. This ensures that project specific design criteria are based on client learnings applied to the particular challenge, backed up by current industry knowledge.

Our engineers assist with troubleshooting, simulation analysis, de-bottlenecking and system optimisation, providing operational support to clients at existing installations.

We obtain client approval on firm scope of work documentation that specifies battery limits and tie-in points, continuing to guide engineering development through client design reviews. This allows us to measure progress accurately and manage scope changes effectively.

In each area of competency, from developing design criteria, specifications, 3D models, plant layouts and drawings, to schedules, bills, technical enquiries or compiling estimates, we continually review our work and challenge how we measure ourselves to ensure quality.



Channeling Our Expertise

Detailed Planning / Scheduling / Time Management

The project scope of work and deliverables are allocated to appropriate work packages based on the Work Breakdown Structure. The activities required to complete the scope and deliverables are identified at the relevant level for planning the particular phase of the project. We develop a project schedule aimed at meeting predetermined milestones through allocation of adequate resources to finalise activities in time. We complete the project execution plan during the set-up and mobilisation phase, ready to guide the project at implementation kick-off.

We spend a lot of effort on front end loading activities, planning in particular, to increase the probability of project success.

Added value:

Definition of the schedule inputs -

- Work package definition
- Procurement package dictionary
- Project milestone target dates
- Engineering deliverables
- Incorporation of fabrication and delivery schedules
- Logistics and transport strategy
- Construction strategy development and packaging
- Commissioning systems identification

Sequencing of interactions

- Milestone driven activities
- Identification of mandatory and discretionary dependencies through experience-based input
- Sequencing the engineering input per discipline work package, procurement per commodity, construction
- per area and commissioning per system to establish the most appropriate and practical execution scenario
- Predecessor and successor planning to illustrate the relationships of various activities

Resource Estimation

- Establishing resource requirements and availability
- Conduct resource levelling with histograms

Duration Estimation

- Determining production levels by evaluating market indicators to arrive at realistic time frames
- Evaluating various scenarios through simulation to determine schedule contingency

Schedule Development

- Identifying the critical path
- Reviewing the cost impact of fast tracking critical items
- Developing the most realistic schedule to match the scope and execution model

Schedule Control

- Incorporating the change management procedure on an ongoing basis to accurately forecast the impact of
- any changes before they are implemented
- Progress reporting and forecasting of ongoing activities to ensure timely corrective action
- Earned Value Analyses reporting to link capital expenditure and schedule progress
- Forecasting expected final completion dates and likely scenarios through simulation of remaining activities

Accurate Project Estimates / Budgets / Cost Management

Budgeting is a specialised process that provides a quantitative estimate of the likely costs of the project elements. Throughout the study phases we use our past experience and the evolving information provided by our engineering processes to develop the budget and estimates for resources and activities. After project approval, estimates are based on final project plans and scope of work. These are further refined when actual tender information is available and construction commences.

Added value:

Cost Estimating

- Incorporation of the Work Breakdown Structure into each activity to enable scope definition, reporting and reviews
- Accuracy of quantities through engineering eff ort and rates obtained from market input captured inappropriately defined procurement packages allocated to a Cost Breakdown Structure
- Flexibility of reporting and analyses by capturing all items in a database
- Review information is extracted from the central repository using pivot tables
- Simple and effective presentation of relevant data enables informed decision making

Cash Flow

- Accurate cash flow, and ultimately financial models, are derived by linking the estimate data to the execution schedule through the use of the WBS-based data capturing process

Contingencies and Allowances

- By identifying and capturing the foreign exchange component of each activity, it is possible to analyse sensitivity to exchange rate fluctuations
- Allowances to address the uncertainty in base data are derived using statistical analyses software to model expected variations of each cost item
- Contingency values are based on the risk profile and likelihood of occurrence predicted for the execution period to arrive at a realistic contingency apportionment

Change Control

- Change control is implemented from the base case budget to accurately identify the effect of any change and manage the outcome on the final project cost

Cost Control

- Accurate cost control is achieved through diligent capturing of data at prescribed recurrence periods

Cost Reporting

- Commitments, cash flow and forecasting are captured per item on a monthly basis to understand trends and likely outcomes that allows timely intervention and corrective action

Effective Procurement Management

Our procurement and contracts management competencies are first applied at the study phase to produce procurement / contracting strategies.

Our expertise covers all aspects of the contracting of services and procurement of equipment / materials. We produce pertinent documentation for tenders and proposals, as well as procedures for adjudication processes, contract placement, management and closure.

The contribution we make extends beyond procurement process, strategy and documentation. We tap into our network of professionals in a variety of technical disciplines, so that clients are not exposed to the effects of the industry skills shortage.

Added value:

Planning

- Establishing the most effective procurement philosophy according to specific client requirements
- Developing a procurement management plan that accurately describes how the process will be managed

Enquiry process

- Inviting appropriate bidders through a pre-qualification and selection process
- Reviewing the various conditions of contract to optimise potential value for each application
- Ascertaining the most suitable measurement criteria, be it fixed price, re-measurable or perhaps time and
- material (cost plus) based contracts
- Utilising a Procurement Management Plan to control the outcome of the procurement process

Adjudication

- Using evaluation criteria in a weighted matrix to determine the best suited candidate for each contract,
- taking into account capacity, capability, experience and technical approach
- Evaluation of lifecycle costing, integration of systems and operability
- Direct and indirect cost evaluation and modelling
- Manage clarification meetings and contract negotiations to the benefit of the client and supplier

Award and Administration

- Contract management
- Continual involvement during contract administration to ensure accurate delivery of the scope of work
- Coordination of quantity surveys and progress reports
- Risk mitigation through expediting / delivery monitoring and control
- Claims resolution
- Contract closure

Consistent Quality Control, Risk Mitigation and Safety Management

Safety, Risk and Quality Management planning and development of procedures are initiated during the study phases of the project, but plans and strategies are only effective when consistently applied through all phases of projects.

Added value:

We do not compromise on safety. In all aspects of our work we consider it a priority and apply tools such as HAZOP / maintainability review during design, or toolbox talks / task observation during construction, to ensure a safe environment for all.

Risk management is an essential part of pro-active project management. We focus on early project risk analysis, development of appropriate actions / mitigation strategies / contingency allocation and progressive updates of the risk register. This empowers the project manager and client to take early corrective action to risks identified for meeting project objectives.

Our passion for quality shines through in the extent to which we apply quality control throughout the project lifecycle. Quality planning, assurance, monitoring and control are performed to agreed standards, targeted to meet or exceed requirements. This relates to all aspects of the project, including project management, engineering, procurement, construction, commissioning and handover.

Expert Construction / Execution

Like most of our service areas, application of our construction management competency begins in the study phases, with constructability reviews and identification of project elements that will affect construction.

During the execution phase, the entire construction process is managed, from mobilisation to site to the final handover of the completed facility.

Early alignment of construction planning with project goals and client objectives is essential to the success of the implementation.

Added value:

- Construction work packages are identified and scheduled, including logistics aspects
- The appropriate contracting strategy is selected
- Ongoing material management, control and coordination
- Effective commissioning and handover
- Workforce planning, resourcing and management
- Off -site quality assurance and inspections
- Safety Management
- Quality control according to project specifications

Strength in Knowledge

ATEC PMC is a young, growing company of engineers, project managers and problem solvers. Our senior management team represents the mechanical, civil, structural, mining, electrical, control and metallurgical engineering disciplines. They have experience as project / construction managers and lead engineers on small, medium and mega projects, covering a wide range of mining, minerals processing, metals and industrial work.

ATEC PMC is equipped to add value through combination of our service areas, from independent studies and audits, to delivering entire facilities from concept to handover.

Our expertise is applied to a wide range of projects and commodities.

We pride ourselves in our ability to apply our knowledge, high standards and commitment to quality and know that what we do, we do exceptionally well.

Growth Through Satisfied Clients

We ensure accessibility and personal attention at all levels of the client operation.

This attitude and our delivery model have appealed to some of the industry's most prominent role-players.

- Frontier Rare Earths
- Kumba Iron Ore
- Eland Platinum
- Black Mountain Zinc
- Aquarius Platinum
- Keaton Energy
- Exxaro
- Marubeni Coal
- BHP Billiton
- Assmang
- Alufer Mining
- Lodestone Namibia
- Sesa Goa India
- Goliath Gold
- Graphit Kropfmuhl
- Noble Gold
- Aquila Resources
- Petra Diamonds
- Vedanta Resources
- PPC

Expertly Evolving Project Phases

Our people are engineers with entrepreneurial hearts. We hire fellow innovators, problem-solvers who ask themselves and us,

'What is the best solution we can offer our client?'.

Exploring the challenge, delivering the solution

Albert Jacobs holds mechanical engineering and commercial degrees and is registered as a professional engineer with the Engineering Council of South Africa. He is experienced in engineering design and project management with client and consulting companies in the mining, metals and related industries.

He has managed feasibility study work and performed technical and management roles in execution of small, large and mega projects. He developed engineering groups at a senior level in global mining and engineering firms in South Africa and Australia.

His current focus is on engineering setup and engineering / project management of studies and implementation projects as director of ATEC PMC.

Understanding the detail, developing the design

A group of multi-disciplinary engineers and designers work closely with our clients to ensure a proper understanding of the detail of each particular project, before utilising a range of tools and systems to develop the design to a point where a decision can be made regarding the feasibility of the ideas and possibly obtain approval for implementation. We rely heavily on integrated 3D CAD and other design tools to develop a visual representation that lends itself to live or online mark-up and review. Engineering and costing is backed up with data from recent projects or industry that is updated continuously to represent the latest in technical thinking and market factors. As part of design we look at execution and mitigation of risk.

Visualising the need, creating the reality

Following project approval for implementation, the design and execution plan is finalised in sufficient detail to allow proper control over the execution phase. Baseline schedules and control budgets form the basis for planning and control. Engineers, project managers, project control personnel and site construction teams work in tandem to execute contracts on LSTK, EPCM, BOOT, BOOM or client specific terms and conditions Our monthly reporting can be done at steering committee or executive level and captures the essence of project status on both technical and commercial levels, with specific actions identified for the following period to manage completion according to plan.

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Contact us for an innovative solution to your project challenge.

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