Achieving high performance in mining

Winning today,
succeeding tomorrow

High performance. Delivered.
Volatility comes with the territory in commodity businesses, as mining companies have found over the past few years. The heady days of record prices resembled an old-fashioned “land grab” and a “supercycle” belief in near unconstrained growth.

The inevitable crash caught some businesses short, struggling to service debt after seeing revenues dramatically decline. The resulting across-the-board reductions in capital and operational expenditures certainly will sow the seeds for future problems.

In Accenture’s view, the key challenge for mining executives is to deliver consistent returns to shareholders despite the volatility of commodity markets. This is one of the key characteristics of a high-performance mining company—that it outperforms its peers across a range of metrics over the long term. Other characteristics of high-performance mining companies include a focus on long-term growth and a dedication to excellence in execution. They have a clear vision on how they want to operate globally and strive to eliminate confusion over accountability for performance across commodity businesses and their geographies. They understand where it is important to differentiate processes and technologies. Many of these companies also seek to simplify their processes, rather than making complex, suboptimal processes the global standard. The role of their corporate functions is clear, and they work to achieve scale in back-office administrative processes. These companies focus on measurement and benchmarking and invest in global information systems to streamline operations and enable performance comparisons.
Accenture works with mining companies to help them become high-performance businesses that can deliver sustained, long-term results. We draw on our High Performance Business research and deep industry experience, gained through collaborating with mining companies in every major mining region around the world. We work with all of the large diversified miners, as well as with many of the leading commodity niche players. Our experience includes helping merged mining companies realise the planned deal value, implementing global strategies to standardise processes and systems, working with mining companies to implement global operating models and helping management achieve operational excellence.
Creating the right foundation

Accenture helps mining executives address a range of challenges to build a foundation for rapid benefits and future success. We help our clients achieve high performance with the following capabilities and offerings.

**Mine value solutions**
Our work with mining companies starts with developing insights into what drives success in their specific contexts. We have, for example, helped clients in the gold and platinum mining sectors understand the relative sensitivity of value drivers such as grade, tonnage, energy costs, direct labour costs and recoveries. We apply the Accenture Mine Value Solution to assess whether and how our clients’ business plans will improve return on invested capital, and to help clients prioritise their capital spending across a portfolio of mining assets. We also use value analysis to help clients determine where to focus their efforts on deriving value from investments in enterprise systems, such as SAP.

**Supply chain optimisation**
Supply chain challenges in the mining industry are unique and diverse. For precious-metals miners, the focus might be on low-cost sourcing and supply risk in the inbound chain. For base and ferrous metals companies, the focus might be on the opportunity to improve internal and external logistics. A few leading mining companies are striving for demand-driven chains, which integrate market requirements with logistics processing and even mining plans to create more-responsive chains, whilst reducing operating costs and working-capital requirements. Accenture has helped optimise the supply chains of mining companies in different commodity sectors and at different levels of maturity. We helped deliver substantial procurement savings in the gold, diamond, base metals, platinum, coal and iron ore mining industries, whilst helping these clients transform their own global supply chain capabilities.

**Merger and acquisition integration**
We work with clients to integrate merged organisations and cut support costs quickly and effectively. We provide a comprehensive approach to finding synergies in supply chain operations, finance and accounting functions, and HR and IT organisations. We help mining companies manage the complexities of combining IT solutions, establishing consistent financial processes and consolidating centres. We also work with them to blend global, regional and local organisations to provide efficient, responsive support for worldwide operations.
Shareholder value analysis – The SVA tree
Gold mining company example

- **Invested capital**
  - Operating working capital
  - Net plant, property & equipment
  - Rehabilitation provision
  - Net goodwill

- **Current assets**
  - Net receivables
  - Inventories
  - Cash
  - Other current assets

- **Non-interest bearing current liabilities**
  - Accounts payable
  - Income taxes payable
  - Other current liabilities

- **Operating costs**
  - Mining costs 57.59%
    - Production costs 67.82%
      - Operating labour 46.34%
        - Drilling 6.34%
          - Blasting 7.67%
        - Drilling consumables
        - Explosives
      - Load & haul
      - Management & technical services 8.58%
        - Other costs 30.47%
          - Crushing 8.87%
          - Grinding 46.38%
          - Recovery 22.83%
        - Laboratory 4.95%
    - Overhead costs 14.62%
      - Other costs 17.56%
        - Human resources 21.66%
          - Finance 19.36%
          - Health, safety & environment 4.20%
          - Security 6.19%
          - Regional office 1.08%
          - Training cost 10.42%
          - Management fees 32.52%
          - Government royalties 4.57%
          - Environment provision 6.28%
          - Depreciation & amortisation 67.63%
          - Deferred loan fees 5.94%
          - Political risk insurance 7.59%
          - Amortisation - DTP mobilisation 12.56%
        - Overhead costs 16.96%
          - Power
          - Consumables
          - Repair & maintenance
        - Other costs
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Energy management
Rising energy costs are a key challenge for mining companies. We work with mining companies to understand their real energy costs—typically one of their largest operating expenses—and to develop strategies for reducing their energy bills. Our energy-management solution helps mining companies take a comprehensive approach to energy management across the business, as opposed to a mine-by-mine approach. This solution provides processes and tools designed to improve energy-related procurement, consumption management, risk management, back-office operations and decision support to help companies realise significant energy cost savings.

Enterprise systems
Accenture helps mining companies plan, design and implement enterprise resource planning solutions, including SAP, Ellipse and Oracle solutions. The Accenture Advanced Enterprise Solution for Mining draws on our extensive experience with such systems and our proven implementation processes, tools and templates for the mining industry to accelerate implementation whilst reducing risk. In many cases, we are helping clients beyond the go-live date, using local and global delivery centres to provide ongoing application-management services.

Accenture has worked with more than 50 mining companies over the past 25 years.
Unleashing value through automation

Accenture teamed with one of the world’s largest metals and mining companies to revitalise the automation, instrumentation and controls of the unitary operations of one of its plants, which traditionally had been a bottleneck. Working with the client, Accenture conducted a production analysis and was able to identify potential production gains and cost reductions for this plant. Compared to the previous year, potential gains included a decrease in process variability of 1.3 percent, an increase in equipment production availability of between 1.8 and 3.3 percent and a decrease in water use of 2.1 percent.

Mining technical systems
Most mining companies grapple with a vast array of niche-mining technical systems to support core functions including inter alia, exploration, mineral resource management, mine planning and design, production planning and control, dispatch, sample analysis and reporting, metal accounting and plant information systems. Accenture can bring an architecturally sound, principle-based approach to developing strategy, selecting software products, integrating systems and delivering meaningful management information to geologists, mine managers, planning departments, plant managers and senior executives. Our application integration experience can help solve the problems of integrating data from mining technical systems with enterprise systems such as SAP and Ellipse. Our experience includes working with mining companies to implement plant information systems and mineral-processing execution systems.

Plant and asset solutions
Accenture works with mining companies to help them build and operate plants in a reliable, safe, low-cost and sustainable manner, as well as prioritise investments to focus on efforts that will deliver the highest return in the long run. Additionally, we help integrate production systems with corporate applications such as enterprise resource planning systems—helping to connect and synchronise the shop floor and the C-suite. Our solutions address areas such as the integration of instrumentation and robotics systems, manufacturing execution systems, production optimization, maintenance management and the management of large capital projects. In helping mining companies drive improvements, we draw on our deep experience in operational consulting, systems integration, process design, organization design, program management and outsourcing, along with extensive skills in automation, industrial IT and engineering.
Impact on delivery

What prevents the mine from creating value?

- Not enough ore mined
- Not enough ore processed
- Not enough au

Is the plan incorrect?

No
- Feasibility
- Forced

Yes
- Operational issues
- Strategic issues

- Production issues
- Recovery issues
- Support issues

- Corporate
- Mine

Shared support services
Mining companies have traditionally operated on a self-sufficiency principle, particularly given remote sites that typically have a poor communications infrastructure. As technology improves and bandwidth costs decrease, more mining companies are looking for operating efficiencies by standardising back-office administrative processes. Shared services models have been made more feasible through the implementation of enterprise systems. Accenture is able to help mining companies through the phases of planning, designing and deploying shared services for a variety of support areas including finance and accounting, HR, payroll, IT, procurement, logistics, health care, housing and other administrative functions.

Outsourcing support services
Mining companies are also starting to question why all services need to be provided in house. In fact, many mining companies already rely on business partners for core services such as shaft sinking, plant construction and even mining. Accenture provides outsourced support services in a variety of commercial and IT areas. For example, our application outsourcing services can support SAP and Ellipse applications and help mining companies create IT organisations that can control costs whilst delivering improved services. Through our business process outsourcing offerings, we provide clients with leading HR, finance and procurement services. We can provide these services on a shared, multicient basis, to provide cost-effective support for organisations of virtually any size.

Mining operational excellence
Accenture offers a solution to help mining companies achieve operational excellence in core mineral extraction and recovery processes. The Accenture Mine Value Solution starts with an assessment of current operations, resources and capital, including the impact on delivery, to uncover opportunities to improve throughput and yield. We put the resulting information through an optimisation model to build what we call the mine value agenda—a road map to achieving high performance in core operations. This road map can be used to drive improvement in a variety of activities, from extraction and processing to logistics and maintenance. We have, for example, worked with a mining and processing minerals company to help it identify and quantify cost-cutting opportunities to improve its bottom line.
Optimising logistics for high performance

A natural resources company with global mining operations was planning a start-up mine in sub-Saharan Africa. Mining operations were scheduled to begin in 12 months, and the client was affected by escalating transportation costs, inconsistent transit times, poor visibility of cargo and customs delays that were impacting construction timelines and the overall budget. Additionally, the client’s knowledge of the third-party logistics providers and logistics infrastructure (ports, rail, roads) was limited. The company requested Accenture’s help to determine the short-, medium- and long-term logistics operating model for the mine. Accenture worked with the company to conduct an assessment that determined a model that optimised logistics operations. Project benefits delivered to the client included a reduction in logistics expenditures by 15 percent through a re-bid of road- and rail-provider contracts, reduced transit times of 30 percent by identifying and applying for customs process exemptions in the host and transit nations, identification of backhaul opportunities that reduced transportation spend by an additional 10 percent and establishment of guidelines to help ensure real-time visibility into shipments and timely key performance indicator (KPI) reporting.
To learn more about how Accenture can help your company achieve high performance and take advantage of today’s opportunities to drive tomorrow’s success, visit www.accenture.com/mining.
About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With approximately 177,000 people serving clients in more than 120 countries, the company generated net revenues of US$23.39 billion for the fiscal year ended Aug. 31, 2008. Its home page is www.accenture.com.