Mining ERP Software

What to consider when selecting a process management tool for your enterprise

White Paper

SCOPE SYSTEMS

THE Mining ERP Specialists

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Introduction

Efficient process management is integral to the success of any mining operation. As market competition increases, mining organisations are increasingly turning to Enterprise Resource Planning (ERP) software to manage their processes. A suitable ERP system will not only provide the functionality you require, but will also establish the security and data integrity you need around these processes.

Scope Systems, an established supplier of mining ERP software, has provided this paper to highlight several important issues to consider when evaluating ERP software for exploration and mining operations.

What is ERP software?

Utilised extensively by exploration and mining companies who are moving into, or are already in production, ERP systems establish, manage and control sound business structures. This enables managers and frontline staff to control tasks like purchase order processing, inventory management, human resources, asset maintenance financial management and much more.

ERP (Enterprise Resource Planning) software is an integrated tool that functions across multiple departments of an organisation.

Why do you need an ERP system?

To fully optimise the efficiency and productivity of any mining operation and have complete access to all operational data, ERP software is generally considered to be critical. From initial exploration, to full mine operation, an ERP system allows you to integrate, manage, control and report on every process in your business.

In the transition from being an explorer to operating a developed mine, the number and complexity of business processes significantly increases. During this growth, new requirements such as inventory management, asset utilisation, greater financial management and preventative and predicative operations need to be accounted for.

A fully integrated ERP system will help you manage all of these processes, whilst applying best practices to comply with organisational, industry and regulatory requirements. ERP software can track expenditure, manage resources, flag anything out of the ordinary and provide reports on the status of any aspect of your operations.

Implement a mining specific ERP system

As developing a mine involves several industry-unique business processes,

> Ensure industry specific Business Processes are reflected in the software as standard.

it is logical to choose an ERP system that has been specially designed for exploration and mining companies. Not only will this ensure that you have the functionality you require, but also that a number of other considerations (such as accessibility, affordability and deployment methodology) are accounted for.

Important things to look for in an ERP system for mining include:

- Functionality: Does the software handle the specific business processes you have in place or will need to establish? Will the software be able to handle expansion throughout the mining operation once it is up and running?

- Reporting: Is the software capable of producing reports suitable for the mining industry? Does the reporting need to be customised or built from scratch? Are the reports easy to understand for all employees in your organisation?

- Flexibility: Is the software compatible with the technology available in the mining industry? Will the ERP system work in remote locations with limited communications infrastructure and be accessible by your employees?

- Deployment: Is special hardware and software required to run the system, or can the software be accessed online via Cloud Computing or SaaS?

- Implementation: What experience does the provider have in implementing ERP systems for the mining industry? What will be the cost and expected timeframe?

- Support: What technical support is available?   Does the support team understand the various mining processes handled by the ERP system?
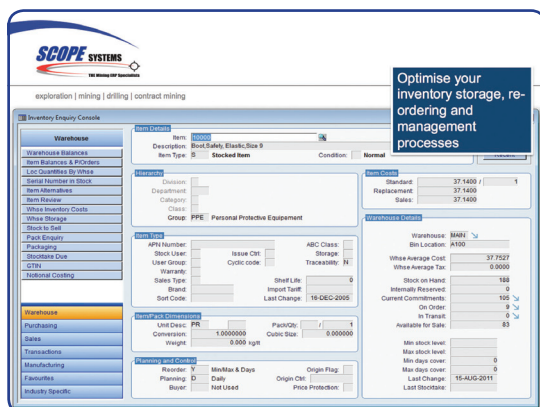
Functionality

Mining ERP software should offer the functionality you require to manage all of your exploration and mining operations.

To find the right solution, you will need to determine what your business processes are, both now and into the foreseeable future and choose an ERP system that already meets these requirements. For example, if you are currently in exploration, look for an ERP system that provides integrated tenement management functionality, as well as advanced project costing tools should you wish to convert an exploration licence into a mining licence in the future. Any efficiencies and cost savings you implement now will continue into the long term.

Many ERP systems may work well across multiple industries or for a particular product class (such as asset maintenance), but can't offer the functionality needed to manage every process of a mining company. Whilst a lot of ERP systems are customisable, the cost and complexities involved in adapting such packages to make them perform unique mining related tasks can be quite significant. As a general rule of thumb, you shouldn't have to customise more than 30% of an ERP system to meet your needs.

As a general rule, most exploration and mining companies require the following functionality, which you should assess your ERP software alternatives against:

* Financial management - to manage and report on your general ledger (GL), accounts payable (AP), accounts receivable (AR), fixed assets and remote request and approval of purchase orders

* Project Costing - to track budget vs. actual expenditure, cost activities such as mine construction or asset maintenance by projects, etc.

* Inventory Management - to set min / max levels, automate reordering processes, etc.

* Asset Maintenance - to reliably conduct predictive and preventative maintenance across your assets, increase asset utilisation, etc.

* Payroll - to manage employee entitlements including leave and salary as well as employment details for all of your permanent, temporary and contract employees

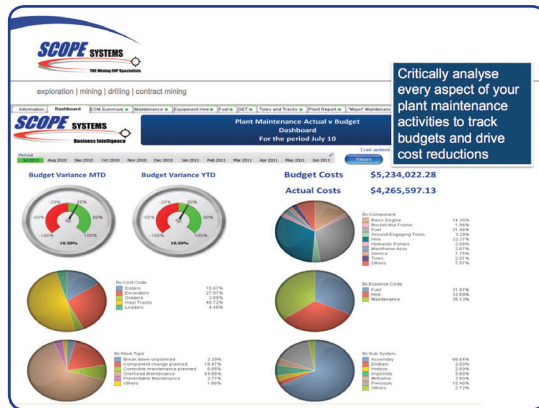* Tenement Management - to manage expenditure, anniversary dates and tenement reporting requirements

Track spending on your tenements, anniversary dates and automatically produce internal and regulatory reports

* Reporting - your ERP system should produce graphical reports that can be easily interpreted and allow users to drill down into the data

* Budgeting / Forecasting management - Budgeting and forecasting should be easy to complete within your ERP system, based on the drivers of your operations (e.g. staffing, production, inventory requirements or sales requirements)

Functionality such as manufacturing and customer relationship management (CRM) generally aren't required by mining organisations, unless you are planning to operate an extensive supply chain.

Reporting

It is essential that your ERP system is equipped to handle the organisational, industrial and regulatory reporting requirements of mining organisations. A quality ERP system should provide graphical, business intelligence style reports that can be easily integrated and are readily available, without the need for extensive customisation.

Generally, a mining ERP system should be able to report on:

• Income, expenditure and costs (predicted, committed and actual)

• Partnership (e.g. JV accounting)

• Regulatory requirements
(e.g. tenement expenditure, human resource management)

• Inventory levels (e.g. minimums and maximums, status of orders placed)

• Supplier arrangements (including HP lease contracts)

• Physical processes (e.g. tonnes mined, metres drilled)

Flexibility

A mining ERP system will need to expand with the lifecycle of an operation and should utilise the most reliable technology available, whilst providing greatest ease of use.

Having an ERP system that can run across geographical divides and operate in remote locations is essential. In areas with limited communications infrastructure, often where only satellite communication is possible, thin client technology has proven to be the most successful.

Thin client technology offers minimal latency which provides for a good user experience. In a mining environment, you should ideally look for ERP software that requires few graphics and GUIs (Graphical User Interfaces) to operate, as this will increase the speed of data transfer between site and head office.

Deployment

Ideally, a mining ERP system vendor should offer two deployment options; standalone, where you acquire both the software and the hardware for an upfront

Your deployment methodology needs to meet your operating conditions.

fee or Cloud Computing / SaaS (Software as a Service), where the software and hardware is supplied by the ERP supplier and accessed online, usually for a monthly fee.

Both options have their advantages. Standalone systems involve higher set up costs, but are often preferred by larger organisations with in-house IT departments who wish to fully own and manage their own IT systems. Many early stage explorers and midsized companies however may prefer to implement a Cloud Computing or SaaS system, as there is no upfront cost or internal IT management required.

Implementation

Choosing the right provider is critical when implementing ERP software within an exploration and mining company. A reputable mining ERP supplier should be able to clearly outline the qualifications and skills of their team conducting the implementation and have completed a large number of ERP solutions prior to commencing with your implementation. In any mining operation it is vital that

Select an implementation partner with mining experience.

the team working on the ERP implementation not only know the software, but also have extensive knowledge of the mining processes (such as financial, asset maintenance and inventory

management processes), so they can suggest methods to improve efficiency and reduce costs (how to structure your Chart of Accounts to cater for your continued expansion and mine development).

A mining ERP system vendor should be able to provide a detailed breakdown on what functionality will be implemented, what tasks the implementation team will carry out and what tasks your staff will need to complete (e.g. data migration) and an expected timeframe and overall cost.

ERP vendors usually charge an annual maintenance fee. Within the mining industry this is usually around 20% of the software cost and includes bug fixes and software updates when they become available.

Support

An experienced provider of mining ERP software should also be able to offer ongoing support that reflects their understanding of mining processes. From the outset you will need to clarify with your vendor what type of support is available (phone, email, web and / or on site support), how accessible these support services are (e.g. is support offered in a time zone that is convenient to your head office staff as well as the team on site) and the associated costs of each.

Find out if your vendor is able to provide individual experienced consultants who understand your specific system and operations. Over time a consultant who works with you to implement, support and optimise your ERP system will be as familiar with it as you are and will be able to quickly solve problems, providing your business with tangible cost and efficiency benefits.

Conclusion

Exploration companies often begin looking at ERP systems during their feasibility study, however many are starting to evaluate ERP systems prior to this stage. Carefully planning a business process management system at the earliest stage possible is highly beneficial. Selecting the right system and vendor is critical.

About Scope Systems

Scope Systems is a leading supplier of ERP software to the global mining industry. Our systems are based on the widely recognised PRONTO-Xi ERP software package, which we have complemented with advanced business intelligence and budgeting software to meet the needs of exploration and mining companies. For further information about our mining ERP solutions, please contact Scope Systems today.

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