Turning Data into Dollars

Pitram & Erdenet Copper Mongolia

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MICROMINE
Intuitive Mining Solutions

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Intuitive Mining Solutions

- A global leader of mining solutions for the exploration and mining industry
- Intuitive, innovative and commercially advanced software solutions
- Award winning solutions that span the entire mining process
- Delivered by local MICROMINE specialists
- Used at more than 2,000 sites in over 90 countries
- Available in multiple languages

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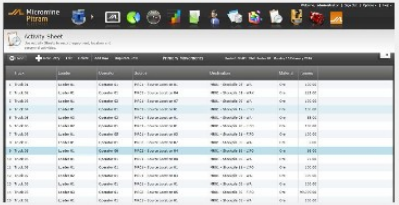
How do you capture data on site?



Manual

For manual data entry, such as paper (PLOD) sheets, sites use Pitram Activity Sheet to capture and effectively track key mining activities including development, face advancement and production.

Read More

Voice

Data transmitted through radio infrastructure is managed through Pitram Control Room Voice solution.

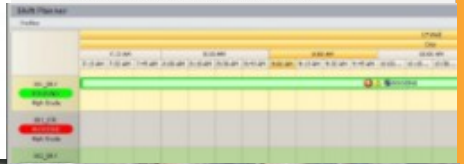
Read More

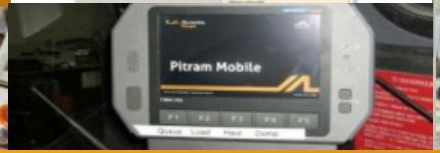
Automated

Automated data capture, enabled through WiFi, on-board systems and GPS, puts a mine in real control of its operation, enabling accurate data and live decision making.

Pitram's automated data capture solutions include Pitram Automated and Pitram Tablet.

Pitram connect





Fleet Management Solution

Scales to Operation

Open Pit and Underground

Full suite of Modules

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Erdenet Mining Company

- 4th Largest Copper Mine
- Northern Mongolia
- Mongolian Government Owned
- Operations began in 1978
- 1.5 Billion tonnes Reserves

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Erdenet Mining Company

Processes approx. 26Mt/yr.

530Kt of copper concentrate produced

Employs 8000 people

95% nationals

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Project Goals

Reduce mining costs

Improve Efficiency

Empower and strengthen workforce through technology

Project Key Success Outcomes

Understand and increase Equipment Availability and Utilizations

Minimize production delays

Track Equipment

Reduce Miss-dumps

Improve the grade from the pit

HPGPS Loading Equipment

9 High Precision GPS

3x Liebherr Hydraulic
6x EKG Electric Rope

Dig blocks and maps designed in office and passed to machine via wireless network

Scope

5 High Precision GPS

5x SBSH250 Drill rigs

Drill patterns designed in office and passed to machine via wireless network

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Scope

35 Belaz Haul trucks

Integration with on-board Belaz payload and OEM information system

Communications

No previous in pit wireless comms

New survey base station

Power was a problem

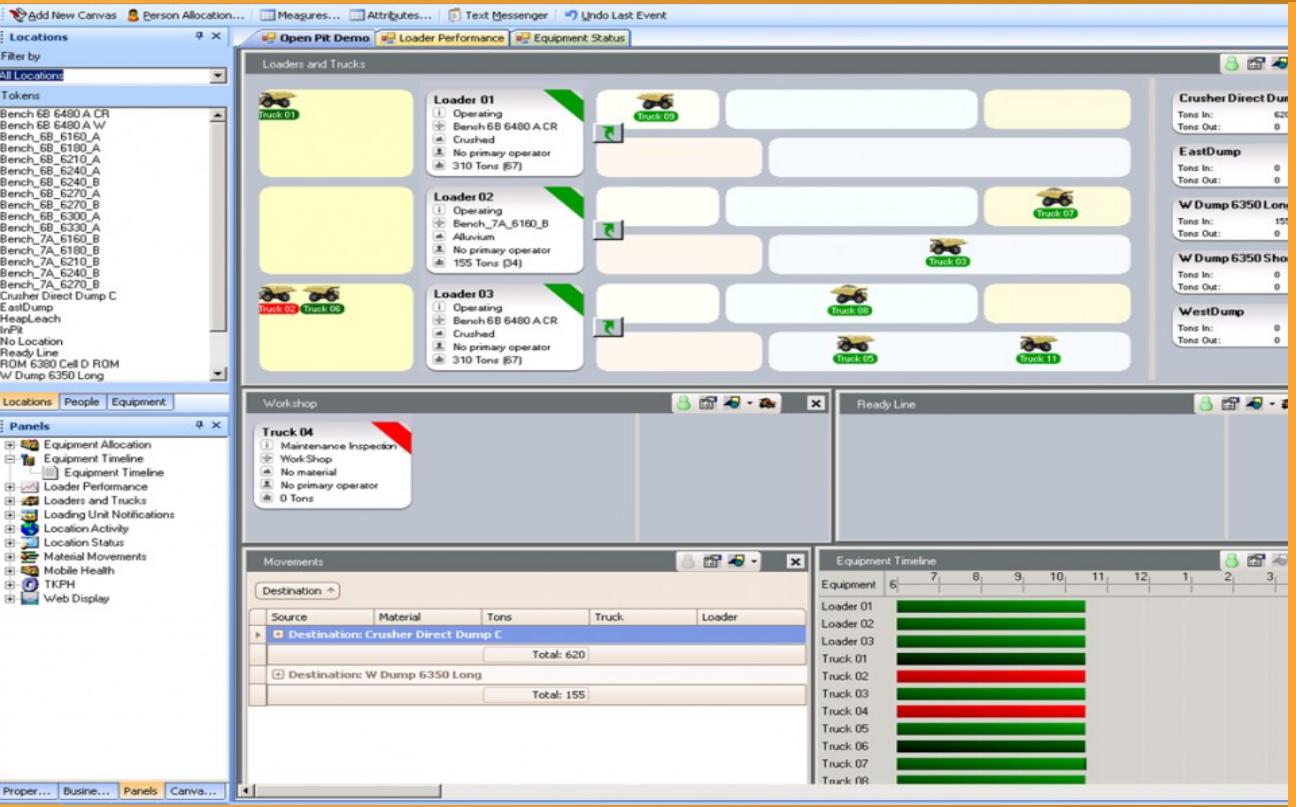
Communications

Ensuring that the preparation was correct

Communications

Dealing with less than ideal weather conditions was difficult

Pitram Scope of Works



Pitram Control Room

- Equipment Performance
- Equipment Availability & Utilisation
- Equipment Timeline
- Equipment Assignments
- Operator Timesheet
- Material Movements
- Equipment Measures

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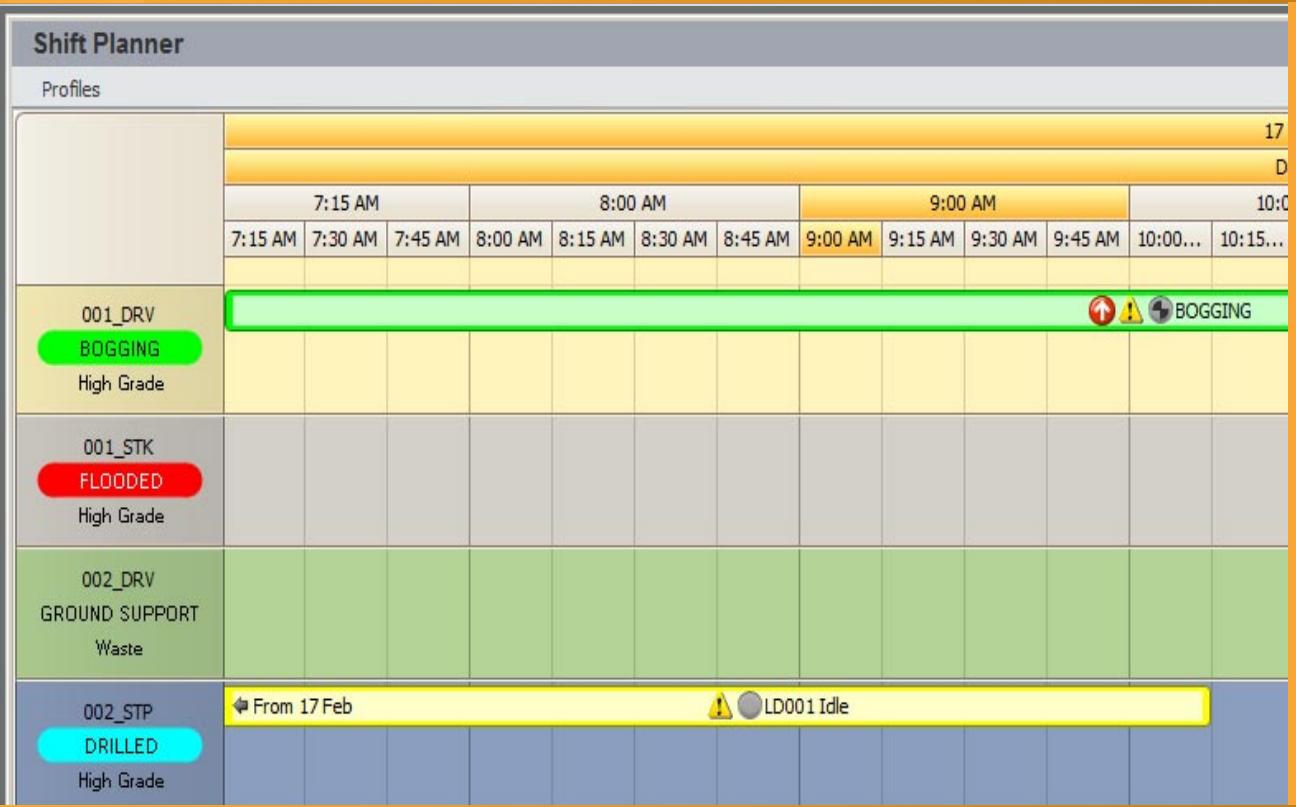
Pitram Shift Planner



Conformance to plan

Automatically reallocate

Insight into shift

Control mill feed

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Pitram Surface Optimiser

Simple

Multi functional

Designed to improve the utilization

Reduce radio traffic

Pitram Materials Management

Provide better control

Understand material movements

Provide the insight for reconciliation

Summary or drill down

Reporting

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Training Engagement

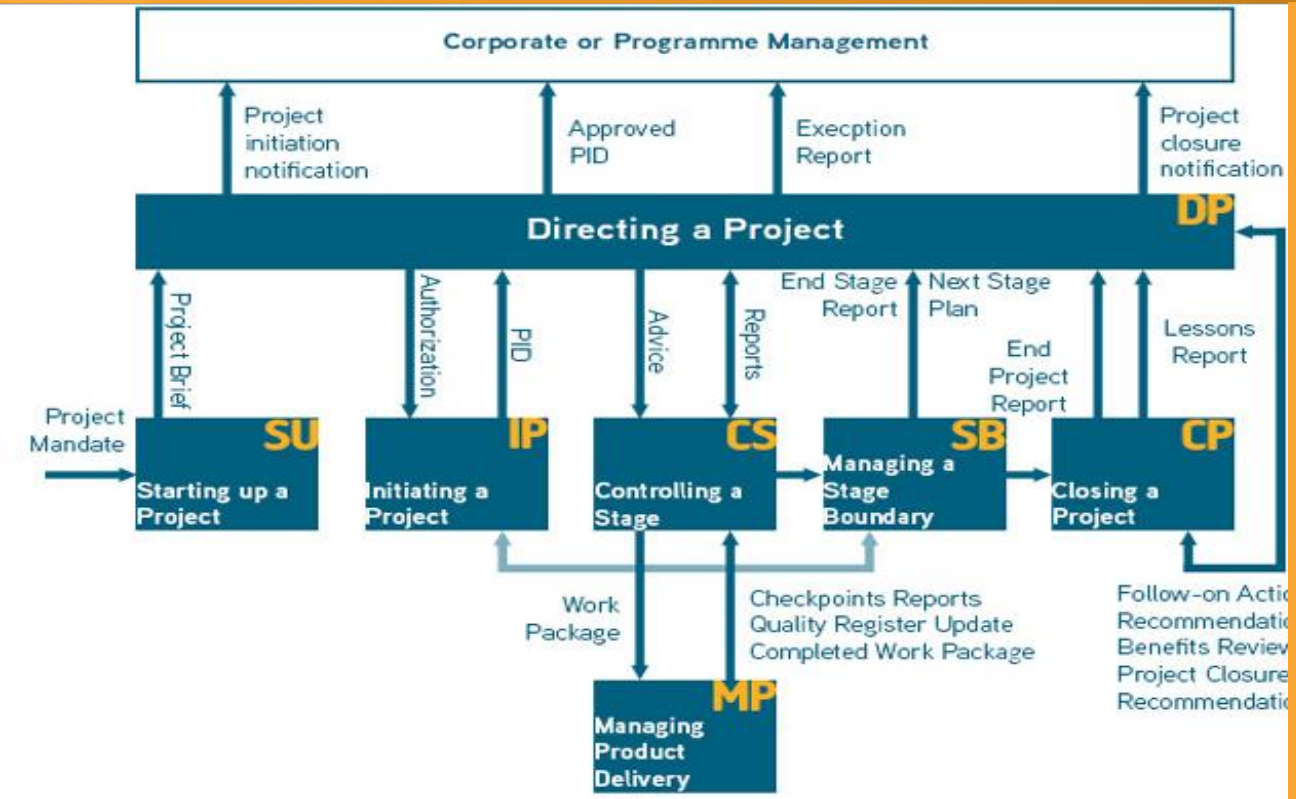
Empower local staff

Ensuring all shifts were covered both day and night

Handover approved and signed off

Ensuring local language support

Project Management



Prince2

Well documented

Transparent

Presence on site

Work with local teams

Additional feedback

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Key Successes

Engaged early

Key Partnerships

Local support

Delivery and project closure

Integration to Hardware

Full suite of Micromine products

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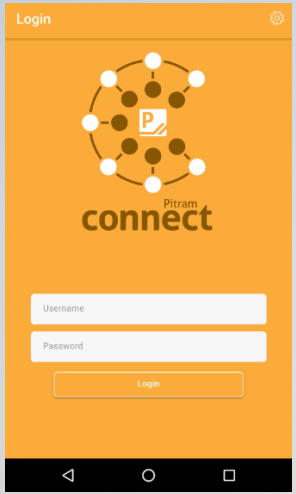
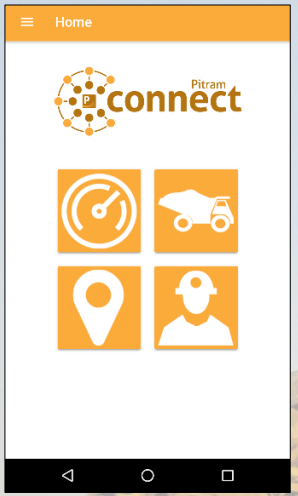
Next steps





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- Performance
- Equipment
- Locations
- Personnel

- Continue to Improve on key indicators
- Assist local staff to grow and learn
- Assist on improving
- Further installations
- Expand on current module usage

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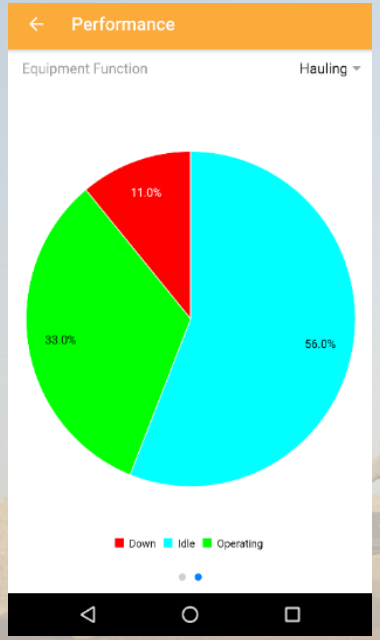
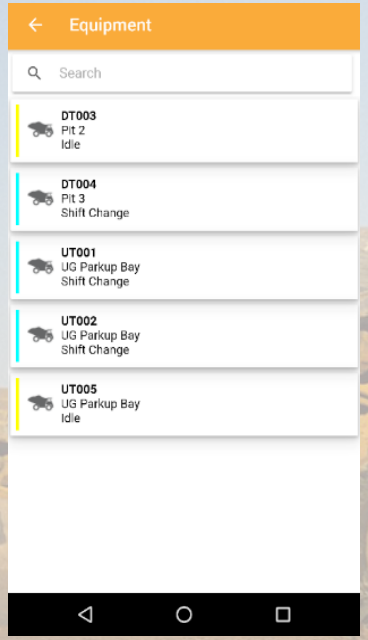
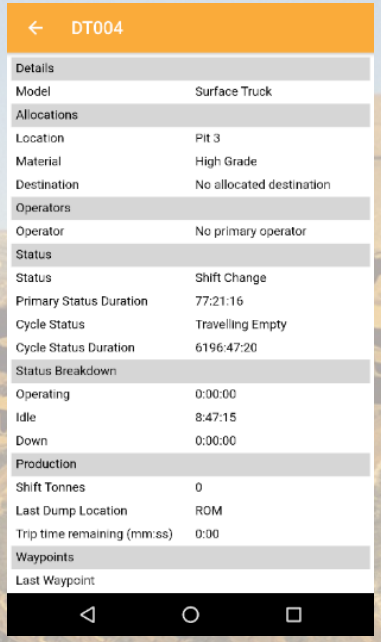
Next steps







Further insight into better control of assets

Decisions made quickly

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Please do not hesitate to contact us to find out more.

Email: marketing@micromine.com

Questions?