PROCEPT
TECHNOLOGY SOLUTIONS

Whitepaper

Improving future safety for the Mining & Resources workforce is powered by Data, IoT+, AI and Automation

Lead your companies safety solutions into the future

Contents

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Data, IoT+, AI and Automation 101

What is IoT?

IoT, or the "Internet of Things" is a wide range of essential technology solutions to modern day real-world problems, that involves connecting businesses, devices, people, and data together seamlessly, using the internet.

This Whitepaper will show you how businesses in almost every sector are embracing the advanced OHS measures and systems, significant bottom-line cost savings, operational advantages, reduced critical risks, increased agility and market edge this emergent technology provides.

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Data, IoT+, AI and Automation 101

The Benefits To You & Your Business

1 **OHS & Safety**

Track and monitor environmental conditions and employee movements in dangerous workplaces. Employees can connect, respond and react much more efficiently in emergency situations.

2 **Real-Time Insights**

Obtain real-time insights into the status of operational equipment efficiency, identification of minerals and resources, environmental factors on staff and equipment, tracking of logistics, processing operations, the possibilities are endless...

3 **Reduced Critical Business Risk**

Predict, report, alert and respond instantly on interruptions to mechanical operations, upcoming required maintenance, damage to equipment in transit, critical changes to environmental conditions and more.

4 **Save Significant Time & Money**

Reduce operational costs with smart use of data, sensors, and smart devices.

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Data, IoT+, AI and Automation 101

The Benefits To You & Your Business

5 **Smart Data, Smarter Faster Business**

Instant access to a diverse range of critical and predictive data allows you and your business to make informed and timely decisions, giving you the edge over your competitors.

6 **User Friendly "Rich" Data**

Give your business and your team instant and user-friendly access to complicated "rich data", to improve operational efficiency, and allow your expert team to work with instant insights, as opposed to gathering the data manually.

7 **Automate the Basics**

Automate resource heavy processes. These solutions do not replace human resources, they liberate employee time to focus on more valuable, fulfilling and revenue driving tasks.

8 **Workforce Satisfaction is Key**

Greatly reduce time consuming and monotonous tasks for your workforce with state-of-the-art and seamless IoT+ based solutions.

The Benefits To You & Your Business

9 **Monitor, Track, Analyse & Trend**

Don't wait for monthly reports, instantly connect to critical data and track all that is fundamental to your business.

10 **Increase Security Solutions**

Increase the strength of your security by enhancing security measures with connected surveillance, track status of critical IT systems and the integrity of real-world locations.

Introduction

As an award winning technology solutions provider to key clients globally for 16+ years, we have seen first-hand how adoption of new but proven technology has driven significant improvement in workforce safety in the Mining & Resources sector.

There is one key emerging global technology trend that all successful Mining & Resources companies need to be aware of.

The emerging OHS solutions provided by Data, IoT+, AI and Automation technologies can monitor workers and equipment in real-time, helping to identify potential safety risks and alert workers to take appropriate action. This can greatly reduce the risk of accidents and improve overall safety in the workplace.

Companies that do not investigate the significant OHS benefits these technologies provide are leaving their workforce at risk and increasing costly reputational and financial risks associated with safety audits and avoidable large scale incidents

We offer our key insights into how the strategic use of smart technologies is transforming the future OHS solutions and success of the Mining & Resources industry.

Top 3 Key Questions around Data, IoT+, AI and Automation

Question 1: How will a custom technology solution, whether it uses Data, IoT+, AI, or Automation increase company OHS systems and ROI for years to come?

- **Enhancing safety:** IoT+-enabled devices can monitor workers and equipment in real-time, helping to identify potential safety risks and alert workers to take appropriate action. This can greatly reduce the risk of accidents and improve overall safety in the workplace.

- **Avoid life threatening incidents:** Advanced technologies such as AI and IoT+ can provide real-time data and insights into equipment performance and safety, workforce location and movements, hazardous environmental conditions etc, enabling your business to take instant safety precautions during dangerous incidents, make more informed decisions, communicate effectively during crisis and avoid potential large scale life threatening incidents.

- **Reducing costs:** Automation and AI will reduce operational costs by minimising costly errors, increasing accuracy, and minimising the need for manual intervention.

Avoid potential life threatening incidents and greatly improve OHS for overall workforce safety with custom Data, IoT+, AI and Automation solutions.

Top 3 Key Questions around Data, IoT+, AI and Automation

Question 1: How will a custom technology solution, whether it uses Data, IoT+, AI, or Automation increase company OHS systems and ROI for years to come?

- Improving operational efficiency: AI can provide real-time data from vast amounts of data sources to allow people to focus on strategic processes. This dramatically reduces the time invested in extracting and processing data manually.

- Improving decision-making: Advanced data analytics capabilities provided by AI and IoT+ can provide companies with valuable insights into their operations, enabling them to make more informed decisions, improve performance, and increase ROI.

By implementing a custom technology solution that leverages Data, IoT+, AI and Automation, companies within the Mining & Resources industry can realise significant improvements in safety, efficiency and profitability.

Custom technology solutions deliver significant improvements in efficiency, safety and profitability.

Top 3 Key Questions around Data, IoT+, AI and Automation

Question 2: How will our business ensure employee job security in the new revolution of Automation and AI?

- **Free your expert workforce from mundane and time consuming tasks:** Integrating smart technology into the workplace removes mundane, repetitive and time consuming tasks. Your expert teams can then focus on utilising their full skill sets and expertise. This greatly increases job satisfaction, as their time is free to engage in higher-level problem-solving, critical thinking, and decision-making.

- **Upskilling and reskilling workers:** With the tool set of new technology solutions, employees can acquire valuable new skills that align with global technological advancements, making them more valuable and relevant in their current roles, and able to embrace new opportunities that arise within your business.

- **The true value of human skills:** Data, IoT+, AI and Automation do not replace human skills and abilities. They improve time costly processes to allow the true value of your team's expertise to be utilised. Emphasising the absolute value of employee skills will help to ensure your staff's job security.

Free your workforce from time-consuming tasks so they can utilise their expertise and potential, bringing great value and job satisfaction.

Top 3 Key Questions around Data, IoT+, AI and Automation

Question 2: How will our business ensure employee job security in the new revolution of Automation and AI?

- **Workforce planning and development:** Create a workforce plan that takes into consideration the potential impact of Data, IoT+, AI and Automation on job roles, and proactively manage any workforce role changes. Involve employees in decision-making processes and ensure that they understand the benefits of new technologies.

- **Transparent communication and consultation with employees:** Regularly communicate and consult with employees about the implementation of new technologies. Involve them in the planning process, as their expertise is critical in developing the best solution. Through this process, the inherent positive impacts on job satisfaction and emergence of new career paths will become clear.

By adopting these strategies, the Mining & Resources industry can create a supportive environment for workers to adapt to new technologies and maintain job security.

Involve employees in your planning process. Their expertise is critical to achieving the greatest positive impact.

Top 3 Key Questions around Data, IoT+, AI and Automation

Question 3: How will custom technology solutions improve company efficiency?

KORE GEOSYSTEMS - SPECTOR Solution

- We partnered and advised KORE GEOSYSTEMS, developing their SPECTOR solution, and within 3 years, 6 of the top 12 mining firms have partnered with them to save millions of dollars each year.
- Geology teams can re-log entire projects in just 10 minutes.
- >90% accuracy rate, automatically markup core and classify lithology.
- Consistent and accurate logging of core.
- Geology teams can work remotely, therefore reducing significant costs incurred via unnecessary time onsite.

KORE GEOSYSTEMS partnered with Procept. Their custom technology SPECTOR solution now saves 6 of the top 12 mining firms thousand of man hours and millions of dollars each year.

Top 3 key questions around Data, IoT+, AI and Automation

Question 3: How will custom technology solutions improve company efficiency?

EHAT

- The eHat system was developed as a brand new way of immediately and efficiently transferring critical safety information to anyone working in an external industrial site
- We advised their business plan and conducted feasibility studies to identify and remove risk.
- Field staff managers use eHat to connect their people to trained experts, providing remote help exactly when they need it.
- The system revolves around a video/audio streaming hardhat, which is connected via a smartphone back to a central location.
- eHat have helped greatly increase workforce safety for their clients with their innovative and industry leading OHS solution.

eHat is an industry leading OHS solution that allows managers to immediately and efficiently communicate critical safety information to field staff and safety rep's in remote locations, greatly increasing workforce safety.

Implementing digital technologies, such as Data, IoT+, AI and Automation can have a range of impacts for Mining & Resources companies.

Top 6 benefits include:

1. **Improved safety:** IoT+ sensors can be integrated into equipment to monitor for potential hazards and prevent serious incidents. Automation reduces the need for human intervention in dangerous areas, improving safety for employees.

2. **Increased efficiency:** IoT+ based technologies automate repetitive or manual tasks, streamline processes, and improve communication and collaboration among employees. This leads to increased productivity and reduced operational costs.

IoT+ sensors improve communication among employees in dangerous situations, and monitor for potential hazards to prevent serious incidents.

Implementing digital technologies, such as Data, IoT+, AI and Automation can have a range of impacts for Mining & Resources companies.

Top 6 benefits include:

3   Instant and informed decision-making: Data analytics and visualisation tools are used to collect and analyse vast amounts of data, providing insights into the performance of operations and enabling informed real-time decision-making.

4   Reduced downtime: Predictive maintenance, enabled by IoT+ and AI, will predict when equipment is likely to fail and schedule maintenance before failure occurs, significantly reducing downtime and increasing equipment availability.
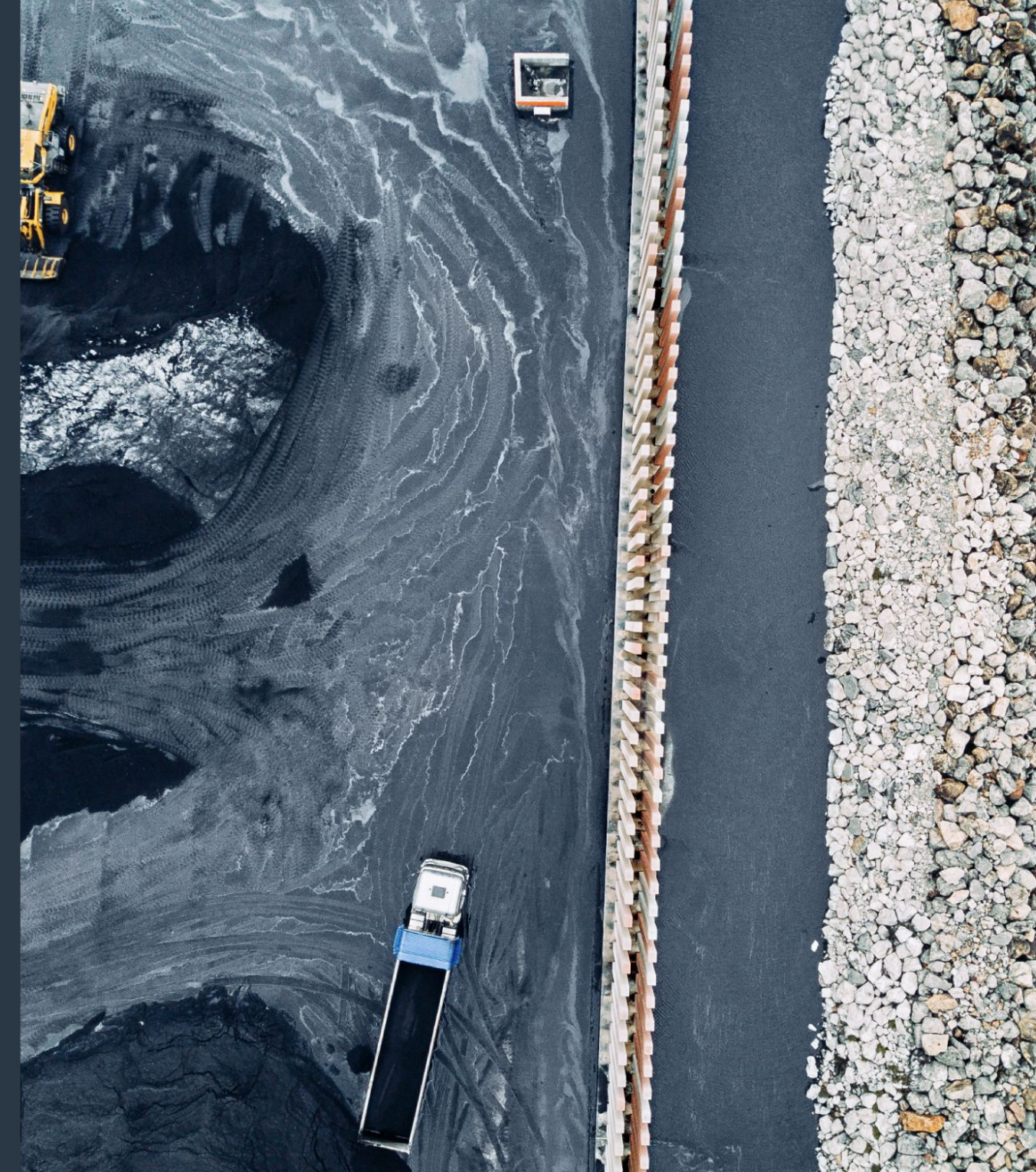
Data analytics collect and analyse vast amounts of data, enabling informed real-time decision making, while predictive maintenance significantly reduces business critical equipment downtime.

Implementing digital technologies, such as Data, IoT+, AI and Automation can have a range of impacts for Mining & Resources companies.

Top 6 benefits include:

5 Increased resource utilisation: Automation will improve the accuracy of drilling, blasting, loading and haulage operations, reducing waste and increasing resource utilisation.

6 Improved environmental impact: Automation and AI provide greater control over mining operations, reducing emissions, dust, noise and other environmental impacts.

Automation improves the accuracy of drilling, provides many time, cost and waste reduction benefits, while also improving your environmental impact.

The Future

The Mining & Resources sector in Australia continues to face increasing pressure to ensure workforce safety, operate efficiently, sustainably, and with reduced carbon footprint, while also addressing concerns about job losses and community impacts. **The three big takeaways include:**

1 Implement OHS digital solutions, such as Data, IoT+, AI and Automation, to ensure workforce safety and avoid life threatening incidents.

2 Encourage innovation and entrepreneurship within the industry to spur the development of industry leading products, technologies and services.

3 Ensure job diversification for your employees. Upskill your team in new areas that propel team skill sets, create new opportunities and advance company efficiency.

In conclusion, the future for Mining & Resources companies that adopt Data, IoT+, AI and Automation is bright, with significant opportunities for improved safety, efficiency, sustainability, and market leading competitiveness.

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Ready to see how you can lead your workforce to a safer future?

Let's talk about innovation and see what's possible.

Working with our team of experts, we will help you identify real world safety issues in your business that will be solved with innovative technology solutions.

We are ready to empower you to lead you and your company to a safer future.

All it takes is a click or a call.

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"Our vision is to help drive you and your company to significant and continued future success through our shared passion for innovative technology solutions".

Aaron Maher, *CEO*

Adrian Crouch*, CTO*

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