



# DATA & INFORMATION SOLUTIONS

We design solutions and implement cutting-edge technology to reveal the best opportunities for growth.

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# Data & Information

## How you can benefit from it

The amount of operational and workforce data generated by mining businesses grows by the day, but few companies know how to harness it to improve operations and profit from the information.

Our sophisticated solutions open the door to a whole new world of possibilities, fuelling faster and better forecasting and planning, with the end result of smarter performance and better decision making.



Better insights into your workforce and fleet



Increased operational efficiency



Business process automation



Data-driven product innovation



Improve profits from smart decision-making



Improved safety intelligence



Improve your workforce  
and fleet understanding  
to reach new heights in  
**revenue growth,  
machine protection,  
and productivity.**

# We create intelligent technology solutions for **better insights** and **informed decision making** to achieve your business goals.

				
FEATURES & FUNCTIONS	DIGITAL CHECKLIST	PAYLOAD MANAGEMENT	VEHICLE MONITORING	MACHINE DATA GATEWAY
Pre-start checklist (w/lockout) and in-cab display	✓	✓	✓	
Operator ID/access and service due	✓		✓	
GSM/LTE & Wi-Fi	✓		✓	✓
API - via SQL database, email reporting and data export (.csv)	✓	✓	✓	✓
Cloud based historian (ONLY)	✓		✓	
Cloud based, onsite historian (database) and customer owned server				✓
Payload too high/low, payload weight and payload placement		✓		✓
Utilisation, key on/off, excess idle, impact and seatbelt monitoring, engine and vehicle overspeed, geo-zoned speed threshold, engine oil pressure and temperature, coolant level, and travel distance			✓	✓
Cycle time, low/high idle and machine moving			✓	✓
Maintenance process <sup>1</sup>				✓
Production process <sup>2</sup>				✓

<sup>1</sup> Including; gear selection, harsh braking low hydraulic oil level tray up/down bucket up/down water tank level low fuel low park brake on/off, remote, teleremote and auto-mation on/off, travel time, site/production area, trip start time, trip end time, trip geolocation (if GPS is available), trip distance, maximum engine speed, average trip, engine speed alert (with timestamp), count of engine speed, alerts average trip, ground speed alert (with timestamp), and count of ground speed alerts  
<sup>2</sup> Including; check engine status (with timestamp), cycle start time, cycle-id, total cycle time, total cycle distance, dump point, ID draw point ID bucket weight (if sensor fitted) estimated bucket weight, CAN BUS J1939. CAN-BUS open and OEM i.e. CAT. Machine specific customisation and customer-specific customisation



# Digital Checklist

## Delivers machine and operator data from multiple sites; all under one platform, anytime, anywhere

Better address the complexities of operational risk management with a Digital Checklist for your fleet. This is a cloud-based system has been designed to be compliant across the globe, enabling organisations to source a common operator data under the one platform

The innovative solution provides relevant, customisable information to management at every level of the operation. The system can be applied on a diverse range of vehicles, regardless of the size, make or model.

Designed to target customers direct needs with customized reports sent daily. This is done through provisional data, enabling customers to drive sustainable operational change, lower costs and increase productivity.



### Operator Access

Only licensed operators will be able to use the machine via card reader or keypad



### Pre-start Checklist

Records number of loads per truck and loader, Eliminates paper checklists and data input requirements, reduces administration time



### Schedule

Alerts around servicing which can be programmed around machine hours or a time-based schedule



### Connectivity

Cellular/Mobile or Wi-Fi network communications



### Reporting

Daily summary reporting provides an overview of all violations and events



### Ignition Hours

Daily summary reporting provides an overview of all Ignition Hours



# Payload Management

## Maximise productivity by achieving optimum payloads

Increase efficiency and productivity of your earthmoving fleet by implementing a Payload Management system.

The data is transmitted between the truck and loader – allowing the loader operator to see the truck's weight so they can fill the optimal load. Strut pressures from the truck send both 'weight' and 'weight distribution' to the loader – resulting in even and accurate payload.

- ✓ **Display**  
All payload weights are displayed and stored and Optional single or dual external displays
- ✓ **Data**  
Records number of loads per truck and loader, reports average loads per truck, Records average bucket weight per loader, shows total dirt moved by truck and loader
- ✓ **Easy install**  
Off-the-shelf kits allow fast set up, Universal components suit all truck make and models
- ✓ **Distribution**  
Empower the loader operators to achieve better load distribution whilst loading
- ✓ **Information**  
Logging of the entire truck fleet payload and .CSV data downloaded from loader/excavator





# Vehicle Monitoring

## Reduce unplanned maintenance costs and improve operator safety

RCT's vehicle fleet management systems are designed to optimize operations, reducing the unplanned maintenance costs and improving operator safety for mining companies.

The innovative solution provides relevant, customized information to management at every level of the operation. The system can be installed on a diverse range of vehicles, regardless of make or model.

It delivers machine and operator data from multiple light and heavy vehicles across a fleet. It empowers management with information about machine and operator activity, resulting in improving light vehicle operations.



### Impact monitoring

Captures vehicle impact events across three configurable thresholds: low, medium, and high



### Seat belt monitoring

Alerts and reports when the seat belt is not worn



### Ground speed zoning

Used in conjunction with a Speed Limiter to limit the maximum speeds through Geofenced areas/zones



### Service scheduler

Alerts around servicing which can be programmed around machine hours or a time-based schedule



### Critical output

Voltage-free contacts available to interface with machine and accessories activated by critical events



### Engine monitoring

Alerts the operators and captures engine-related events: oil pressure, temperature, coolant level and over-speed violation



### Summary reporting

Empower the loader operators to achieve better load distribution whilst loading



### Automated reports

Summary reports, with drill down for more detailed information around specific events



### Connectivity

Cellular/Mobile or Wi-Fi network communications



### Export data

Export data in various formats, including CSV, PDF, PNG or SVG web graphic



### Battery Voltage

Reports on battery voltage and provides low battery warnings for operator



### Operator access

Only licenced operators will be able to use the machine via card reader or keypad



# Machine Data Gateway

## Unique, state-of-the-art device that unlocks, gathers and collates data to a singular cloud-base

Machine Data Gateway is a tool to provide total freedom to access unlimited raw data. Any industry worldwide can significantly optimise their operations as the Machine Data Gateway (MDG) will unify access to all forms of raw data being produced by their fleet. Once stored, operations can analyse data by uploading to its own business analytics software for actionable insights and explore opportunities across all aspects of the machine operation.

The MDG creates its own meshed network, meaning it is ideal for applications where network communications between machines and cloud services are fragmented, ensuring vital information is not missed. It is also equally suited to applications with more permanent network infrastructure to safeguard the retainment of important information for business analytic.

Machine OEM's can ultimately decide what data customers are provided, whereas the MDG unlocks and provides full unrestricted access to all data available. No matter what brand of machine fleet or third-party system your operation has, data is delivered in a consolidated format, facilitating a big picture view of how your operation is running to forecast and pinpoint bottlenecks.



### Cloud

Collate data from multiple sources to a single location



### Network

Self-owned meshed network, means vital information is never missed



### Insights

Leverage insights to explore opportunities across all aspects of the machine operations



### Freedom

Unlock full unrestricted OEM data



### Alerts

Alerts convey information related to the state of your machine



### Agnostics

Works with any brand of machine fleet or third-party system





RCT create intelligent  
technology solutions for  
**greater insights** and  
**informed decision-making**





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