ivolve

REAL-TIME MACHINE INTELLIGENCE

# KNOW SOONER

## ACT NOW

# Knowledge is power. Timing is everything. iVolve delivers both.

iVolve is an industrial strength technology company delivering real-time machine intelligence, enabling you to make smarter decisions to increase productivity, reduce costs and minimise risk immediately.

iVolve's solution combines specialised software modules running on our Nexis hardware platform installed on your equipment linking to on-board functionality and data. **Nexis** creates a wireless mesh link across site ensuring all data is available in real-time.

The solution architecture is designed to allow individual modules to be deployed specific to your needs and allows for seamless additional functionality when needs and scale change.

There are over 3,000 Nexis units deployed around the world in demanding industries such as mining, minerals processing, construction, bulk handling and ports. These industries face common pressures to do more with less and to gain the most out of their mobile fleet, every shift.

## NEED FOR SPEED

Real-time information facilitates quick decision making as a business driver of value for industrial technology. Downtime is a natural enemy of productivity, especially if unscheduled. Real-time machine data via alerts and automated dashboards gives the operator and supervisor time to make quality decisions. Seamless shift changes, where no manual administrative tasks are required, allow the pace and momentum of each site to continue.

## PLAYS NICELY WITH OTHERS

iVolve has been uniquely designed to be OEM agnostic, giving you the freedom to choose the machine you want to do the job on your site. Our customers have the security of knowing that we work with the biggest names in heavy equipment to provide a seamless, integrated implementation site-wide. Taking this one step further, you then have the ability to operate the iVolve solution independently or interface directly to your existing back-end corporate systems.

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## TAKE CONTROL

iVolve understands the pressure onsite, and knows it is impossible to be in two places at once and that not everything goes to plan.

Take control and stop flying blind with iControl, a map based visualisation tool. iControl delivers data from all enabled assets across a site to your device of choice. This provides you with real-time results so you can make informed decisions and act immediately. iVolve ensures you have the tools you need so you don't have to wait until the end of shift, the next day, or next week.

## SIMPLE

The iVolve solution has been deployed in a number of languages, at both ends of temperature extremes, in the harshest environments around the world. From installation through to post event diagnostics, the iVolve solution has focused on a simple user experience. The clean yet powerful user interface at both an operator and supervisor level, has made implementation quick and adoption easy. This focus on simplicity carries through to the system maintenance ensuring low cost of ownership.

## KEEP AN EYE ON COSTS

The costs and risks associated with fuel, tyres, operators, fleet maintenance and water are the largest costs on industrial sites. With dump truck tyres tipping the $50,000 mark, early detection of issues can dramatically reduce costs and downtime. Know now so that you can predict the future and act before it costs you more.

## THOSE WHO KNOW, WIN

Confidence comes from data you can trust. iVolve delivers you data direct from your equipment, presented in a way that works for you to aid your understanding of where there are opportunities for improvement. iVolve's tried and tested approach, packaged in an easily learned format, can improve trust in the facts behind big decisions. iVolve presents your data, your way.

# SOLUTION MATRIX

| PRODUCTION | ASSET (PLANT) | MAINTENANCE | SAFETY |
|---|---|---|---|
| Monitor and record each step of the haul truck load cycle: loading, travel loaded, dumping, travel empty, stopped, queued | Remotely monitor and control site equipment | Interface to onboard vehicle management systems for real time equipment health data | Enhanced situational awareness for operators of light and heavy vehicles |

## DECISIONS ENABLED

| PRODUCTION | ASSET (PLANT) | MAINTENANCE | SAFETY |
|---|---|---|---|
| • Focus on vehicle by vehicle basis ie engine idle time<br>• Monitor each operator's performance<br>• Instant request for improved performance from crew/specific members<br>• Identify weak links or danger signs | • Start / stop lighting / plant / pump automatically or remotely<br>• Maintenance<br>• Monitor fuel and engine condition<br>• Log engine hours<br>• Detect door and boom state<br>• Schedule maintenance<br>• Locate assets quickly | • Respond to temperature and pressure events before critical<br>• Monitor fuel<br>• Change due to road conditions<br>• Identify possible poor driving behaviour<br>• Track the movement of fuel and water | • Alerts vehicle operator to other vehicles<br>• Provides auditable data for incident investigation<br>• Full second by second play back<br>• Give instructions for change of location to avoid collisions |

## RESULTS

| PRODUCTION | ASSET (PLANT) | MAINTENANCE | SAFETY |
|---|---|---|---|
| • Reach and exceed production targets every shift<br>• Increase load accuracy every truck, every shift: no more under or overloads<br>• Identify training needs | • Saves labour<br>• Saves time<br>• Save fuel and energy costs<br>• Increase productivity | • Extends tyre life<br>• Avoids rapid tyre deflations and blowouts minimising downtime<br>• Minimise down time due to maintenance<br>• Increase productivity of service vehicles | • Reduced downtime due to incidents<br>• Reduce Risk exposure |

## NEXIS HARDWARE

The on-board Nexis hardware is the brains of the iVolve solution running our intelligent software modules and incorporating advanced wireless networking capabilities. The Nexis platform is a heavily ruggedized, industrial processing module with a variety of peripheral interfaces (including Ethernet, RS232, RS485, CAN and Digital I/O), an integrated GPS receiver and wireless mesh networking capabilities.

Nexis supports both traditional Wi-Fi networks and mobile mesh networking in the 2.4GHz and 5GHz bands. The meshing capability enables vehicles to operate with full functionality for long periods of time completely independent of any network infrastructure.

## iCONTROL

iControl is a visual map-based tool presenting a complete overview of the state of the fleet and plant equipment.

All enabled assets can be instantly located on site from wherever you are, be it the site office, down in the pit, or back at corporate headquarters.

iControl provides a simple and intuitive interface with the ability to drill down to detailed data including speed, fuel level, SMU, tonnage, material type, current operator, current events and more.

In addition to these real-time aspects, iControl can also be used to analyse and report on historical fleet movements and events, as well as provide a configuration interface for the iVolve solution.

## iREPORT

iVolve's reporting tool runs on PCs, laptops and tablets. iReport provides an interface for both real-time and historical data relating to production, maintenance and safety presented in varying formats:

• Run historical summary reports to understand how your operation is performing;

• View real-time data on live dashboards for in-shift decision making and monitoring; or

• Run an in depth, ad-hoc analysis with the Data Analyser tool to support trend analysis or investigation of incidents etc.

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