

HARDCAT

Delivering Asset Certainty



www.hardcat.com

HARDCAT

MINING AND RESOURCES INDUSTRIES



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Hardcat Empowers The Mining Sector To Embrace Technology, Unlock Opportunity And Improve Worker Productivity

The mining and resources sectors are by nature a highly complex industry. Its processes and operations are intensive, risk-prone, and subject to uncontrollable weather conditions.

Unique Mining Challenges

- Large complex equipment
- Hostile and extreme environments
- Mine maintenance is no easy venture



Increased Availability/Productivity

- Complete visibility of equipment inventory for maintenances tasks
- On time job completion due to equipment availability
- Increased security with worker accountability for equipment in their control
- Compliance with regular mandated equipment testing (electrical and rigging tag/test regime)

Reduced Labour Costs and Injuries

- Reduced man hours for workers sourcing equipment for outages
- Overtime reduction due to equipment availability
- Improved scheduling and control of statutory equipment maintenance tasks
- Reduction in theft with the opportunity for charge back to contractors for missing equipment





Hardcat Delivers Value



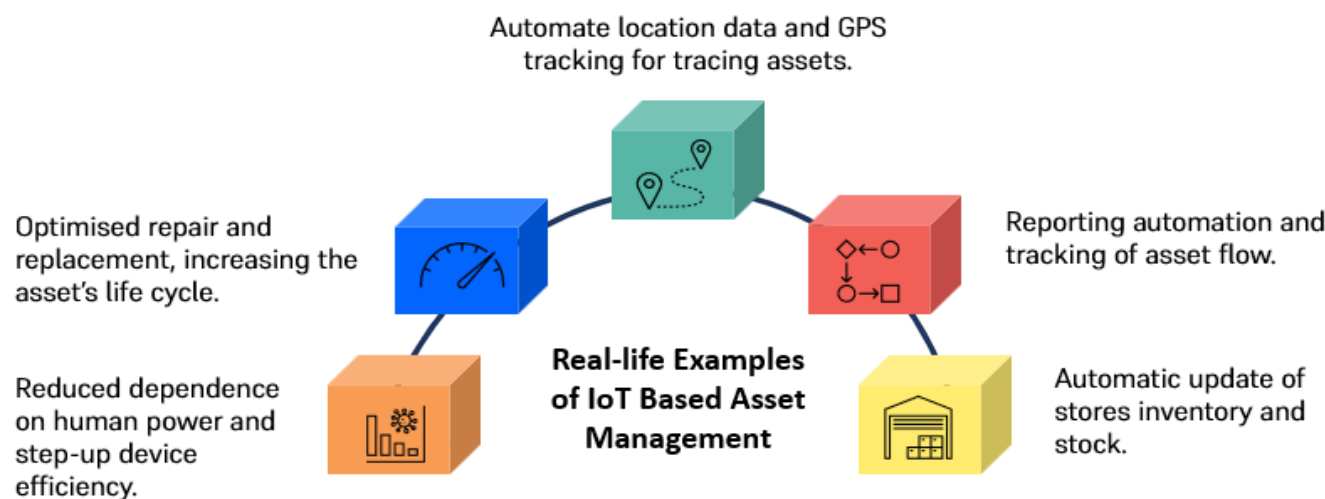
With Hardcat Lebosi deployed in your environment you will know:

- Where critical equipment is located
- What assets and stock are required
- Where inventory and stock are located
- The quantity on-hand of critical inventory
- What equipment is currently in use
- How many of an item is available for use
- When appropriate maintenance was performed after use
- Who supplied assets and equipment
- The details of the manufacturer of these items
- When employees have conducted self-audit of assets under their responsibility and the results of such audits
- Understand the actual value as well as location of your asset base
- What the asset purchasing requirements are and thus be able to budget accurately



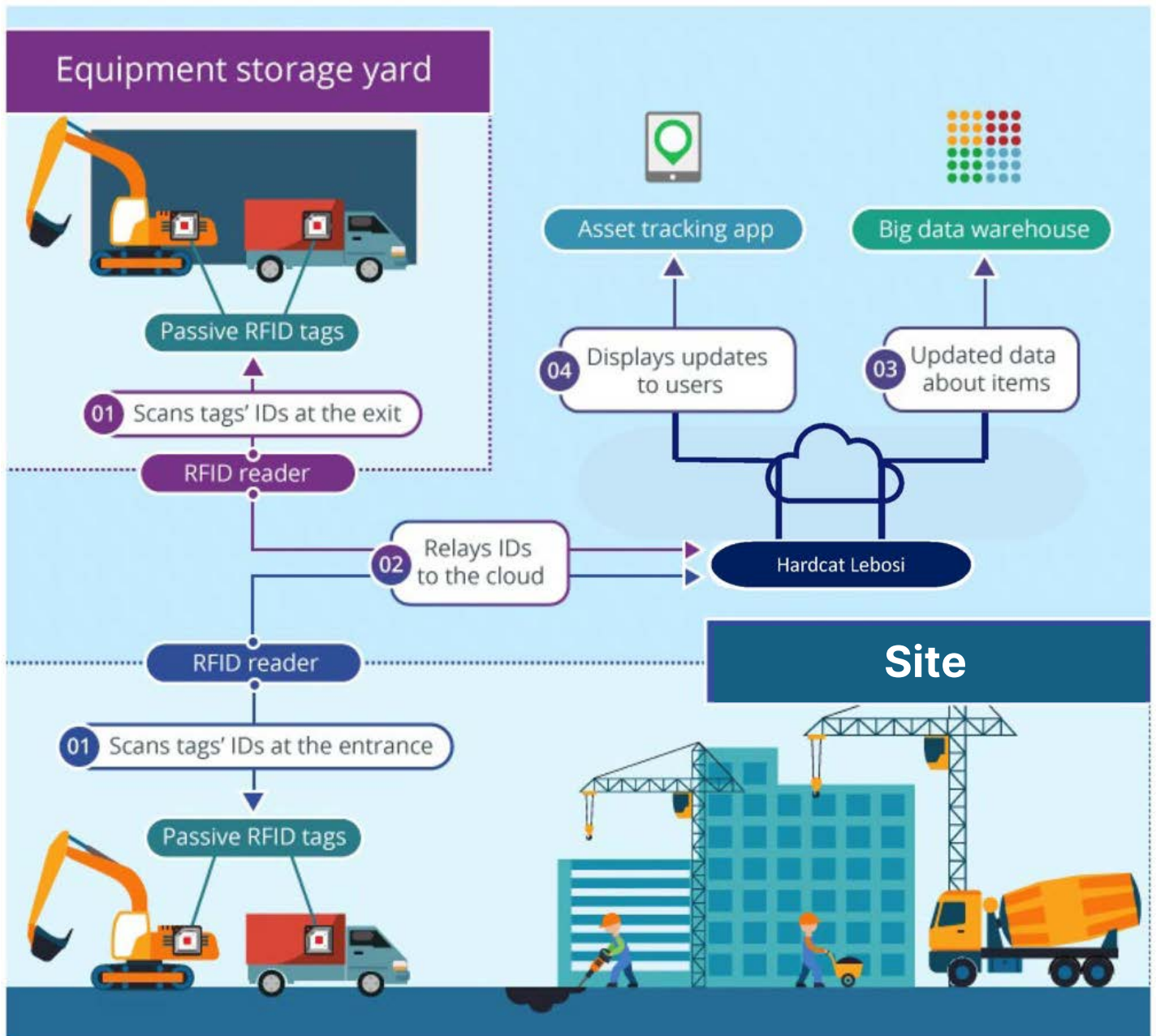


Examples of IoT Based Asset Management





Examples of IoT Based Asset Management



BHP Billiton Nickel West Case Study

The Organisation

BHP Billiton Nickel West is a fully integrated, world-class nickel producer with a commitment to Zero Harm and sustainable development. It is the world's third largest producer of nickel-in-concentrate.

The Issues

A major WHS/OH&S risk was identified at the Kalgoorlie Nickel Smelter with the issuing, returns and maintenance of respirators for their mining staff.

They were unable to identify the actual cost of the maintenance on this equipment and therefore unable to charge this back to the appropriate cost centre.



- No definitive record of who was issued which respirator(s)
- The possibility of incorrect or faulty respirator units being issued to workers
- Critical respirator maintenance being overlooked or incorrectly completed

The Solution

Hardcat solutions addressed all of BHP Billiton Nickel West WHS/OH&S issues, provided maximum speed and accuracy when issuing, returning and maintaining these respirators within a storeroom environment.

Following an extensive evaluation process, Hardcat was selected as the preferred solution.

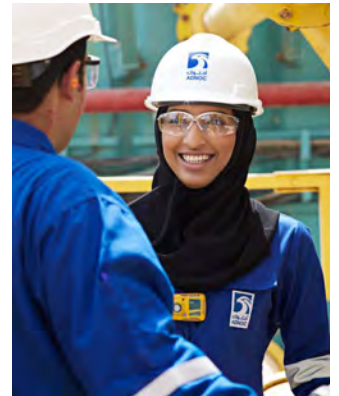


ADNOC (GASCO) Case Study

The Organisation

The Abu Dhabi National Oil Company (ADNOC) formerly GASCO is a diversified and integrated group of energy companies. ADNOC's activities include exploration and production of crude oil and natural gas.

The company uses Hardcat solutions to track the usage of over 6000 tool assets in 319 categories by 287 staff in the centralised tool room of its Habshan 5 Plant in the UAE. The tools range from small hand tools to chain hoists and large scale maintenance equipment.



The Issues

- No formal asset register software
- No asset tags or markings
- No automated identification of employee whom the asset is issued
- No automated way of tracing which employee ID is issued what item
- No product categorization
- No issue and return history against each item
- No system for inventory or maintenance audit
- No standard list for location and people
- Spread sheet asset register has no security
- No system transaction history available
- Who did what?



The Solution

Implemented the Hardcat tool management solution, which created the following results:

- Reduced time to perform workshop audits by 80%
- Reduce time to perform issue and returns by 90%
- Reduce time to produce tool usage reporting by 80%
- Ability to report on complete audit trail of individual tools and equipment
- Monitor consumable stock and spare parts, usage and store levels





RFID

Improve productivity/cost savings, equipment visibility and speed of auditing.

Many leading organisations are taking advantage of RFID’s capability to deliver benefits such as real time asset tracking, instant bulk auditing and comprehensive governance and compliance over the full life-cycle of individual assets.

Adopting RFID technology saves organisations labour time and money via self-service stores, while also providing comprehensive visibility on asset utilisation.

RFID and CCTV

RFID triggering CCTV images is an important deterrent in areas without physical security. Fixed RFID readers installed at prominent entry and exit points (unmanned or manned locations) will automatically detect assets and workers moving in and out of these doorways and choke-points.



RFID Worker Audit

Worker audits ensure that personnel are kept safe and accounted for. It can be as simple as allowing only identified staff into certain locations.

RFID and Fixed Readers

Fixed readers for doorways and choke-points. Hardcat’s Sentinel software allows for automatic registering of both assets as well as workers.





ASSET TAGS AND HARDWARE

"As well as enterprise software we supply everything you need"

A mix of RFID tags and barcode labels can be used to tag assets, depending on the equipment surface and material suited to its environment and conditions. Equipment tags can be made to withstand harsh environments and conditions.



MC3300 RFID
Series Barcode
Scanners



RFD 8500 RFID 1/2D
Scanner



Laser Etched 2D
Barcode



Barcode on metal
surface



Fixed Readers





Hardcat Savings

The below are indicative cost savings based on average wages; time taken for manual process verses time taken in the Hardcat Lebosi solution against such transactions.

Activity	Location savings per year	Number of Locations	Total Savings per year
Audit time reduced	\$3,750	400	\$1,500,000
Transfer equipment between locations	\$1,000	400	\$400,000
Reduced training time	\$1,000	400	\$400,000
Reduced IT support costs	\$500	400	\$200,000
Reduced current annual maintenance	\$500	400	\$200,000
Reduced purchasing	\$500	400	\$200,000
Staff movement between locations	\$1,000	400	\$400,000
Personnel leaving the organisation	\$1,000	400	\$400,000
Reduced time looking for assets	\$5,000	400	\$2,000,000
Issue and return loaned equipment	\$11,250	400	\$4,500,000
TOTAL SAVINGS	\$25,500		\$10,200,000





Hardcat Check List

Platform for:

- 100% web
- Cloud or on premise

Mobility for:

- iOS and Android
- Data Capture
- Audit
- Search
- Managing Maintenance Jobs
- Ad Hoc Problem Creation
- Issue and Return of Assets

Modules for:

- Asset Management
- Issue and Return
- Preventative Maintenance
- Stock and Inventory Control
- Property and Evidence

Functionality for:

- Hierarchical Structures
- Parent Child Association
- Manage Personnel Qualifications
- Manage Certifications and Training
- Chain of Custody Audit Trail
- Domain Control
- Managing Roles and Responsibilities
- Roles and Access Controls
- Reports, Searches and Dashboards
- Reactive Maintenance
- Compliance and Workflow
- Supports Barcoding and RFID
- Import and Export
- Consolidated view of all Sites
- Utility API Integration





Hardcat Solution Are Trusted By The Mining And Resource Sector

- ADGAS
- ADNOC Habshaan Plant
- Advantage Petroleum T/S Shell
- Alcoa of Australia
- BHP Billiton Iron Ore
- BHP Billiton Nickel West
- BHP Billiton Kalgoorlie Nickel Smelter
- BHP Billiton Uranium SA
- CITIC Pacific Mining Management
- Derfell Pty Ltd T/A Shell
- Fuelink Pty Ltd T/A Shell
- INPEX Browse
- INTECSEA
- Laing O'Rourke Australia
- Minara Resources
- Monadelphous PNG
- National Petroleum Investment
- Newmont Suriname
- Ok Tedi Mining
- Pilbara Iron Company
- Pilbara Manganese
- Qatar Petroleum
- QMRS Rio Tinto Cape Lambert
- Queensland Mines Rescue Service
- Rio Tinto Marandoo
- Rio Tinto Rail Network Maintenance
- Rio Tinto Resource Development
- Santos (SAMPANG)
- Shell Direct (Sungold)
- Shell Egypt N.V.
- Syria Shell Petroleum
- Tullow Ghana Limited
- VivoEnergy
- Woodside Energy
- Yem Technology
- Zinifex Century Mine



HARDCAT

Delivering Asset Certainty

Hardcat solutions have been chosen by more than 2,000 of the world's most prestigious corporate and government bodies in 121 countries around the world.

Join our list of satisfied clients who have already performed your due diligence for you. No one else has our credentials or credibility when it comes to asset management solutions.

Hardcat HQ

253 Park Street
South Melbourne
Victoria 3205
Australia

p: +61 3 9695 5400

sales@hardcat.com

Hardcat Africa

Building 2 Country
Club Estate 21
Woodlands Drive
Woodmead
Johannesburg 2191
RSA

p: +27 11 258 8887

sales@hardcat.com

Hardcat UK/EU

Woking One Unit 6
Albion House High
Street Woking
Surrey GU21 6BG
UK

P: +44 1483 485 870

sales@hardcat.com

Visit our website for more details www.hardcat.com

