



iBelt
Intelligent Conveying

FENNER
CONVEYORS
A MICHELIN GROUP COMPANY



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OUR VISION FOR INTELLIGENT CONVEYING

At Fenner Conveyors we believe perfection is a pursuit and for over 100 years we have not stopped engineering better ways to provide our customers with excellence.

With millions of metres of belt operating across Australia, conveyor systems are the backbone of the mining and materials handling industry. When a conveyor stops, the impact ripples across the site, across production.

While conveyors have evolved over time with new manufacturing techniques and engineered materials, there hasn't been a revolutionary jump to the next curve. Systems still operate and are monitored the same way they were 30 to 40 years ago.

Living in today's Information age, we believe there is much untapped potential still to be innovated in the conveyor industry.

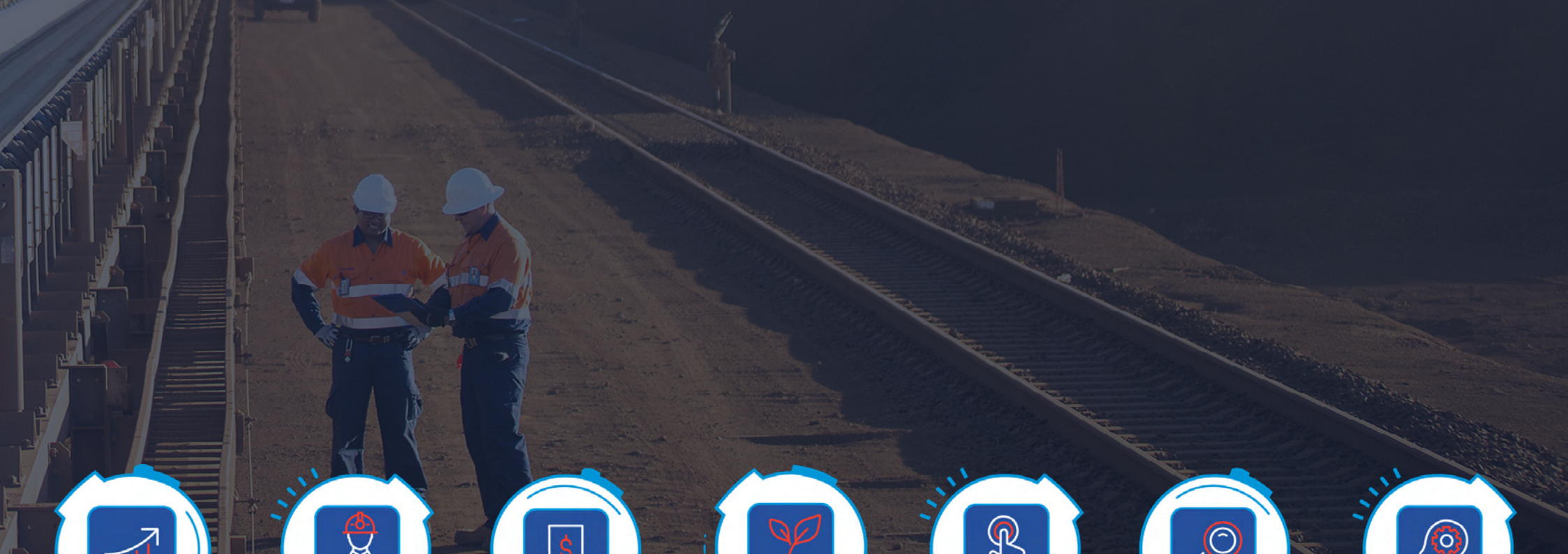
Imagine a world where conveyors are intelligent - making predictions autonomously; finding solutions to issues before they occur; providing streams of actionable data and insights; enabling customers to continually get more, with less, and with ease.

Where the human element is still needed, digitalising field services by developing the tools to capture the right data faster and without waste.

Tomorrow's operation will look completely different as we build on today's results with intelligence. The journey only just begun, as we make conveyors smarter, unlocking their full potential.

This is Intelligent Conveying. This is our Vision. This is iBelt.





Increase conveyor performance

Interrogate, compare and trend data to identify areas of improvement.



Increase site safety

Eliminate technician exposure to typical site hazards and reduce unexpected failure.



Reduce total cost of ownership

Utilise iBelt technologies in conjunction with Fenner's products and services.



Reduce environmental impacts

Go paperless and cut back waste generated from double handing or onerous tasks associated with conventional maintenance processes.



Real-time transparency

Avoid off-site processing with automatic report generation and the ability to access data from anywhere, anytime.



Quality inspections

Identify important issues and early signs of failure through pre-configured guided inspections.



Intelligent planning

Enhance maintenance planning with accurate forecasts and precise pinpointing of damage.

One digital ecosystem



AUTONOMOUS MONITORING

iBelt autonomously monitors conveyor systems through edge processing and IOT communications



FIELD MOBILITY

Field data is captured in the DigitalHub mobile app



WEB ACCESS

The DigitalHub portal is accessed by site teams providing:

- Belt forecasts
- Event management
- Insights and visualisation
- Inspection results
- Idler performance
- Component condition



SYSTEM INTEGRATION

APIs integrate with customer systems and wonderware/SCADA, allowing DigitalHub data to be used for other business processes and analysis



SMS/EMAIL ALERTS

Critical issues notified:

- Min belt thickness
- Belt drift
- Belt width
- Roller faults
- Inspection findings

DigitalHub Portal

Turning data into action

Log in anywhere,
anytime

Interactive visuals and
insights

Latest predictions and
data every time



Central, secure
source of truth

SMS and email
notifications for critical
issues

Web access - no
software or servers
required

The DigitalHub Portal provides 24/7 operational transparency with conveyor performance data in real-time. The user-friendly application can be easily accessed from your web browser, providing current and historical data via interactive insights for reliability centered maintenance. DigitalHub evaluates data against thresholds, sending automatic alerts when issues are identified.



DigitalHub Mobile App

Intelligent conveying in the palm of your hand

Accurate and reliable field service data

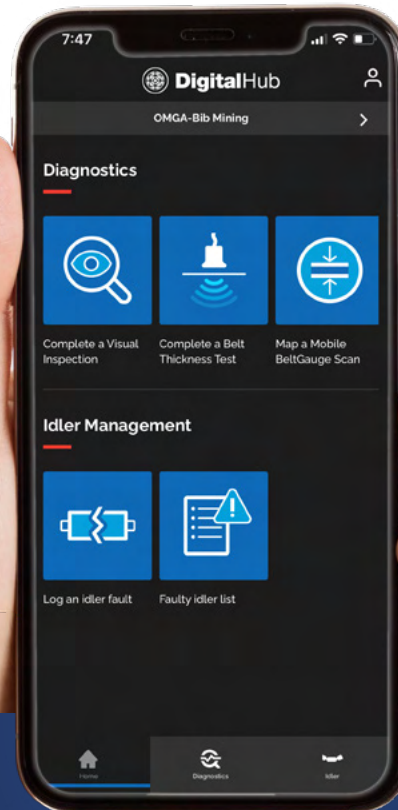
Transparent inspection history including photo records

Log idler performance and faults by part number

Paperless inspection process

Guided inspections increase reporting accuracy

Log health and corrective maintenance for belt components



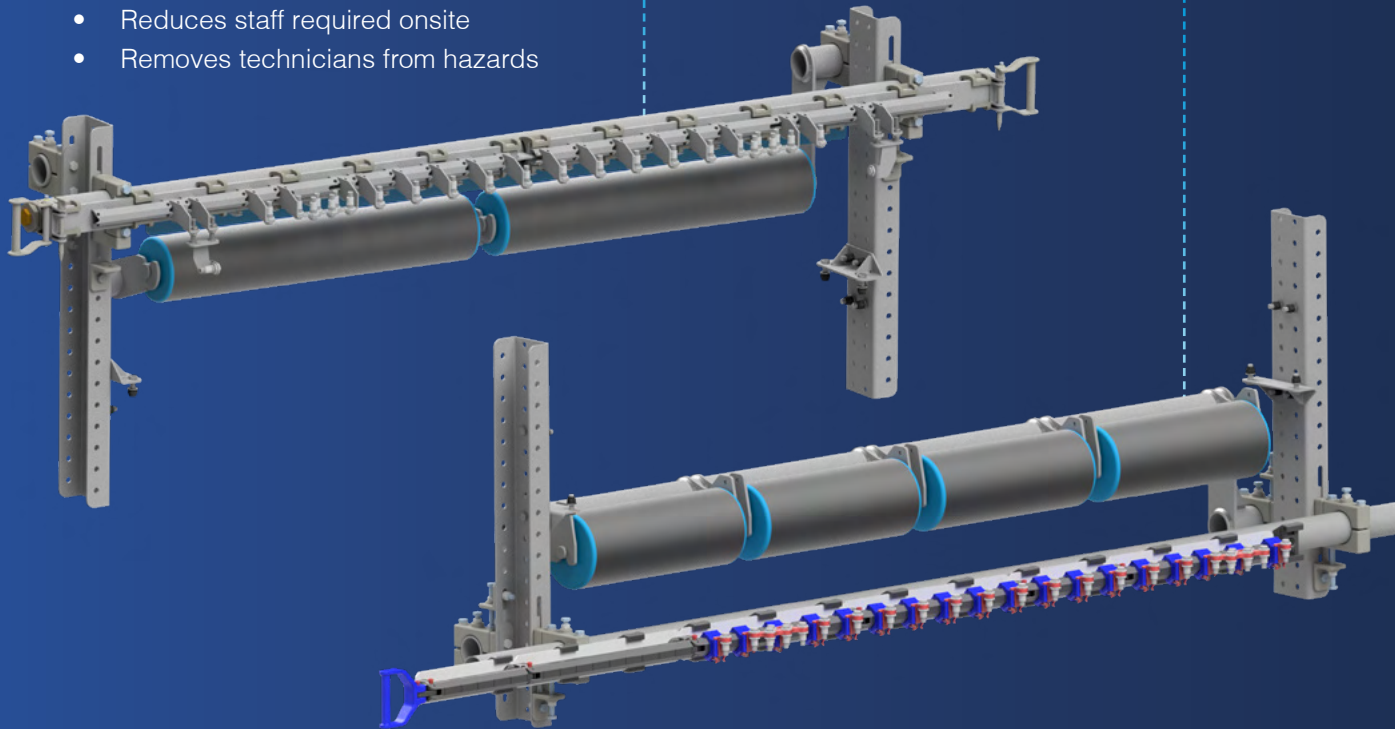
The DigitalHub Mobile App allows technicians to capture field data on-the-go via their smartphone or tablet. Data recorded is sent directly to the DigitalHub Portal, enabling issues to be addressed before they cause major damage. DigitalHub assists site efficiency by guiding technicians to capture relevant data.



FIXED BELTGAUGE

KEY FEATURES

- 24/7 autonomous scanning
- Reduces staff required onsite
- Removes technicians from hazards



MOBILE BELTGAUGE

KEY FEATURES

- Periodic scanning service
- Lightweight design made from 3D printed plastic composites
- Easy installation and adjustment

TECHNICAL DATA

- Compatible with ply, solid woven, steel cord
- Belt widths up to 3200mm
- Suitable for all belt speeds
- 0.1mm measurement accuracy
- Readings while belt is in operation
- Profiles and predictions completed every revolution
- Data transmittal to DigitalHub via built 4G LTE modem (or site networks where coverage is unavailable)

BeltGauge | *Keeping an eye on the life of your belt*

Available as a fixed or mobile solution, BeltGauge continuously scans belt thickness with highly precise sensors, identifying atypical wear events and providing remaining life predictions. Data reported into the DigitalHub allows issues to be identified early and belt life to be maximised.

Geared towards sites that operate 24/7, BeltGauge offers an enhanced level of belt change-out forecasting, scanning cover thickness over the full-length of the belt, while running. This allows results to be obtained without stopping production.

With a lightweight design, mobile BeltGauge can be setup almost anywhere along a conveyor and can be installed and adjusted with ease. The design enables multiple conveyors to be scanned in a single shift, delivering an enhanced level of insight into conveyor performance across a site.





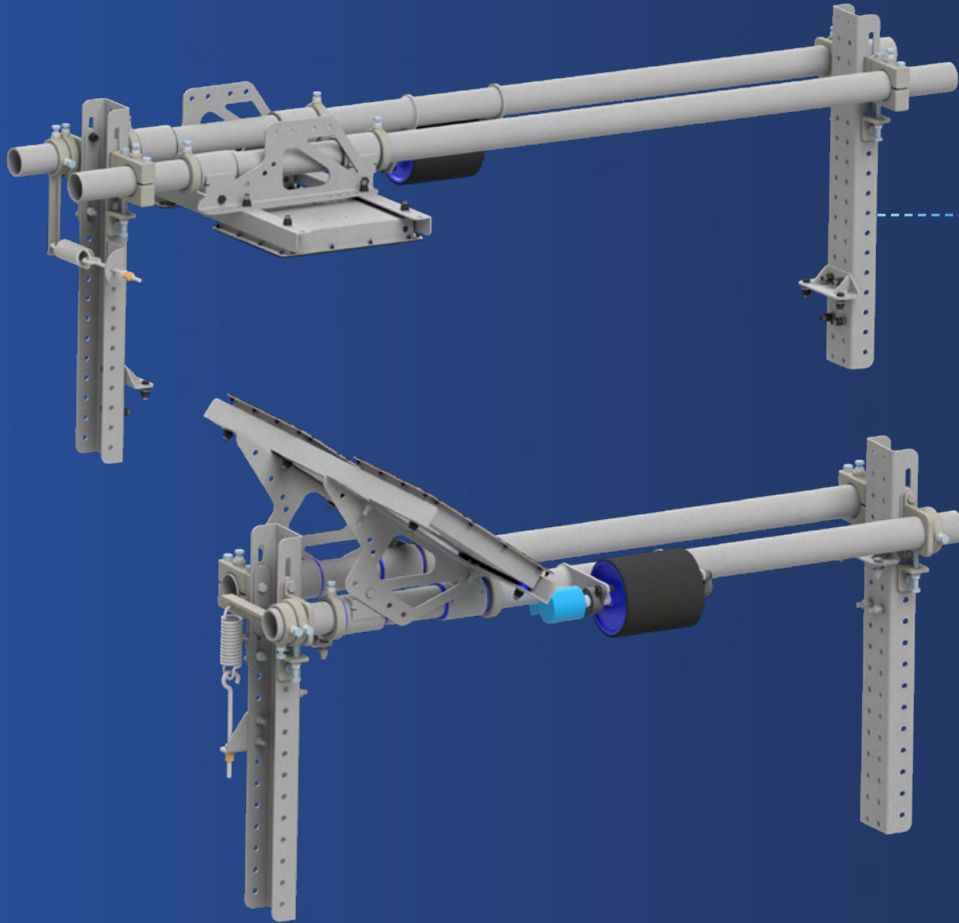
BeltGauge

Full length and width thickness profiling

Auto-cleaning to improve accuracy and maintainability

Flexible engineered design including quick installation

Autonomous data transmittal to the DigitalHub portal



KEY FEATURES

- Effectively track location and performance of belt features across multiple belts and sites
- Reduces shutdown planning and overall downtime
- Improves belt life transparency across sites
- Battery free - suitable for underground (non-hazardous) zones
- Set up can be customised to site requirements

TECHNICAL DATA

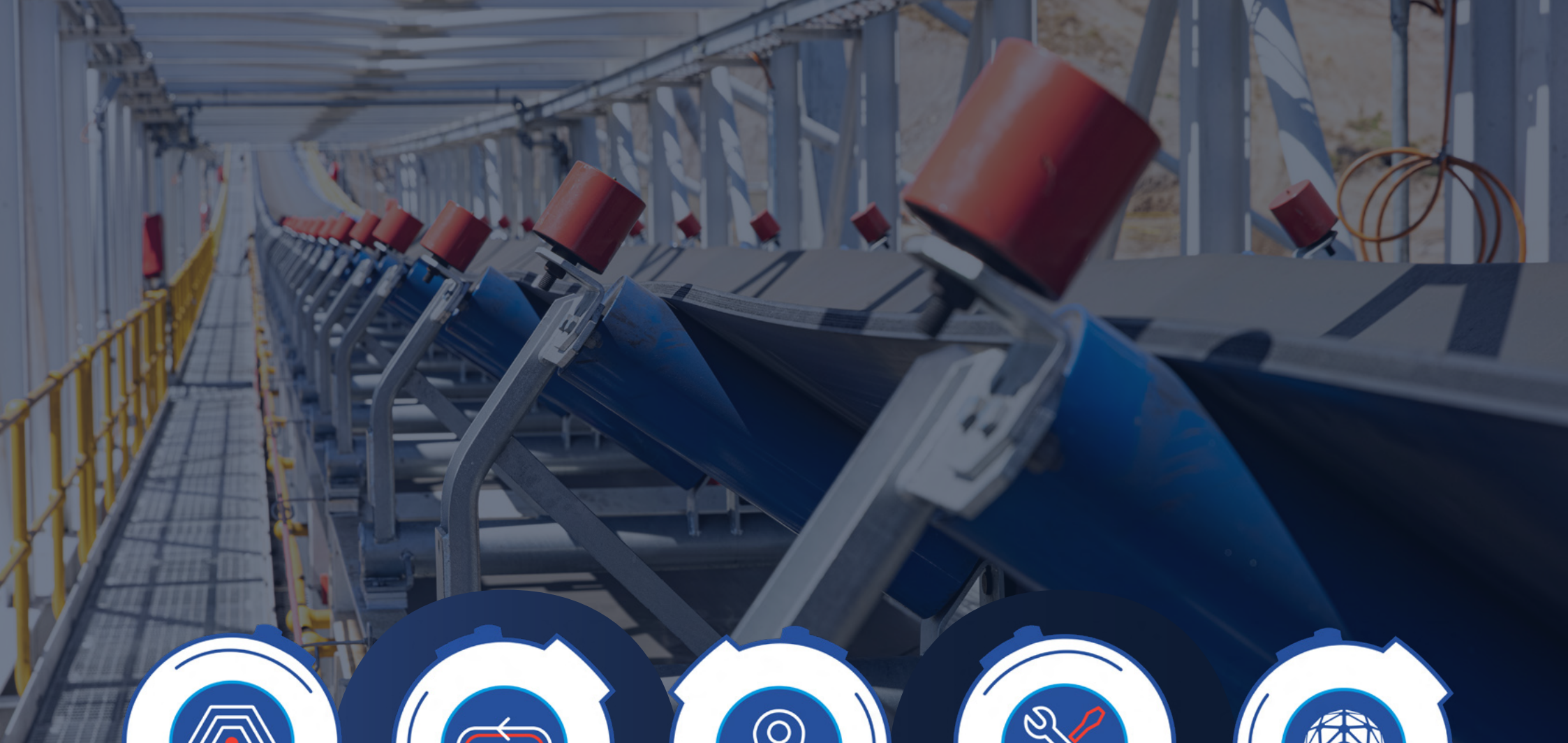
- Conforms to standards:
Safety UL 60950-01, UL 2043, IEC 60950-1, EN 60950-1
RF/EMI/EMC FCC Part 15, RSS 210, EN 302 208, ICES-003 Class B, EN 301 489-1/3
SAR/MPE FCC 47CFR2:OET Bulletin 65; EN 50364
Other ROHS, WEEE
- Belt speeds up to 6.5m/sec
- Compatible with all belt widths (up to and including 3200mm)
- Compatible with all belt types (solid woven, ply, steel cord)
- Data transmittal to DigitalHub via built-in 4G LTE modem (or site networks where coverage is unavailable)

BeltTag | *Mapping and stopping your belt with precision*

A cutting edge solution using microchip technology embedded into the conveyor belt during manufacture, install or repair. RFID tags track the number of revolutions during belt life, allowing sites to accurately forecast belt change-outs.

BeltTag assists inspection processes by accurately identifying the location of belt damage. This is particularly useful in longer centered belts which can be challenging to pinpoint the damage. If belt damage is identified, BeltTag is used to stop the belt at a precise location for maintenance and repair.





BeltTag

Map belt features
and measure life in
revolutions

Accurately identify
location of system
issues or belt damage

Stop belt at precise
locations for inspection
and repair

Autonomous data
transmittal to the
DigitalHub portal

OUR PROMISE

Your customised and comprehensive solution



Locally
engineered and
manufactured
in Australia



Backed by Fenner
Conveyors
warranty and
reputation



Access to our highly
qualified team of
diagnostic specialists
and conveyor experts



Reliable after-sales
support from our
national network of
service centres

*Thinking Globally.
Acting Locally.*

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