



AUSTRALIS
ENGINEERING

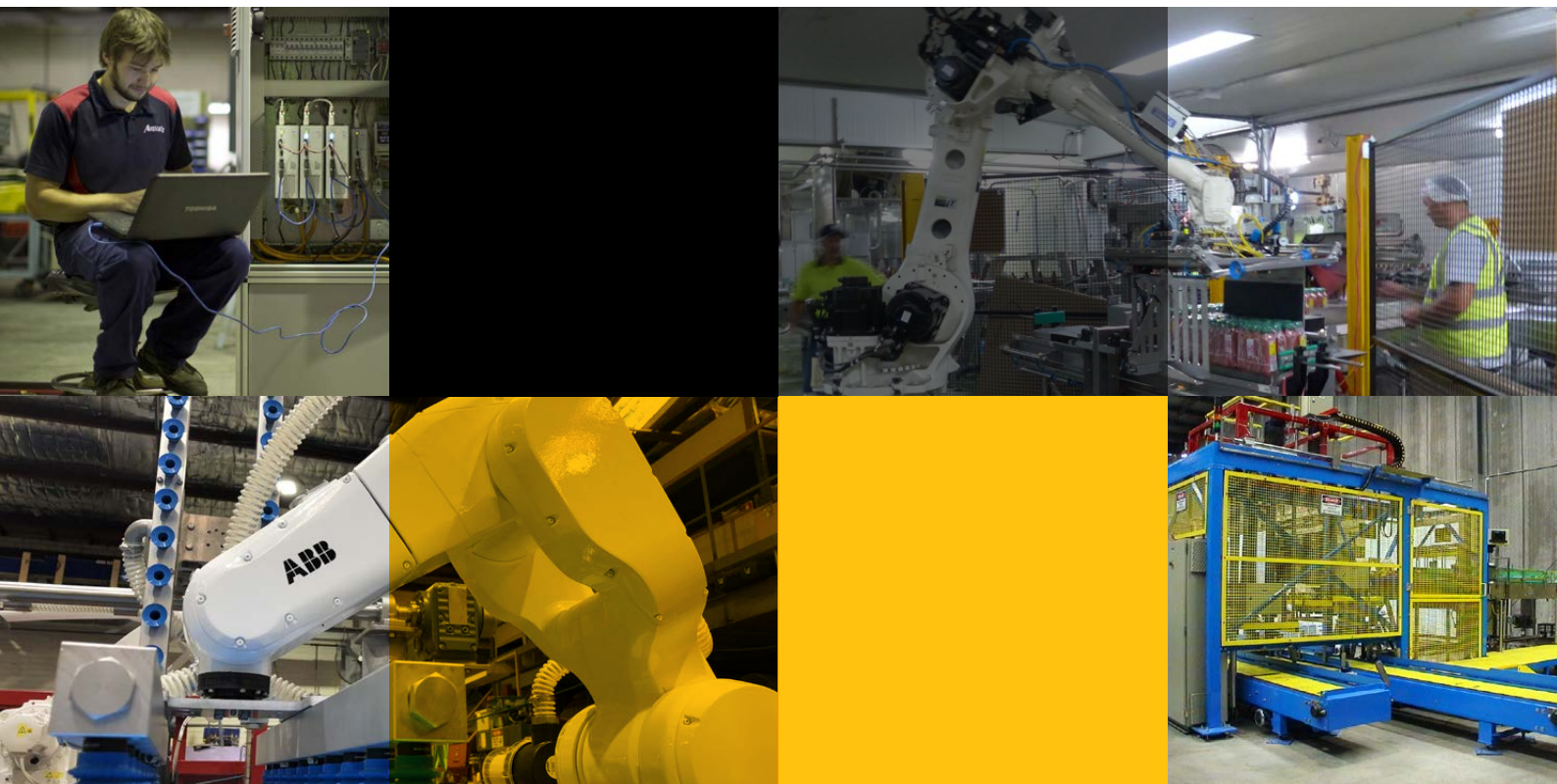
Smart thinking
in motion

Automated materials handling



Automated materials handling

Smart thinking in motion is our guiding ethic and is all about simplifying complex problems. Finding innovative engineering solutions that solve inherently difficult materials handling challenges.



Established in 1983, Australis Engineering are a multi-faceted provider of engineering design, materials handling equipment and industrial automation plus servicing and maintenance. We excel at designing and manufacturing innovative, fully tailored materials handling equipment.

We have a strong engineering design focus and apply mechanical and automation expertise to develop the broad spectrum of equipment required in Australian manufacturing and warehousing. Australis' collective knowledge across a range of industries results in smart thinking and innovation.

Smart thinking is delivered by our in-house engineering and trade experts meaning customers have direct access to the designers and technicians who are delivering your solution - nothing is lost in translation and you do not have to outsource capabilities to multiple providers.

|| We have had similar custom automation systems supplied and Australis stand out as a leader."



AUSTRALIS
ENGINEERING


The smart choice





|| They have the experience, knowledge and ability to engineer and project manage large packaging projects.”


Our customers choose Australis for our expertise in conveying, automation and materials handling.

Smart thinking drives this expertise to deliver innovative engineering designs that solve specific client challenges such as deploying new products, improving productivity, improving safety, increasing efficiency or reducing production costs.

 We offer in-house mechanical engineering, electrical engineering and automation capabilities.

 We design, manufacture, install, commission and service.

 Highly experienced in system integration and turnkey projects, including integration of existing equipment or equipment from other vendors.

 Demonstrated expertise in a wide range of industries including food, beverage, pharmaceuticals, health, packaging, warehousing, industrial, hazardous substances, coins and general manufacturing.

 With vast experience across a diverse range of industry sectors and equipment, we deliver customer solutions that ensure a great return on investment.

 Certified to ISO9001:2015 Quality Management standard since 2007.

Australis firmly believes in the future of the Australian manufacturing industry.

We are proud members of the Australian Packaging and Processing Machinery Association (APPMA), the Advanced Manufacturing Growth Centre (AMGC), the European Hygienic Engineering Design Group (EHEDG), Australian Industry Group (AIG) and we are founding members of the Southern Strength Agile Manufacturing Network (SSAMN) and National Robotics and Automation Group (NRAG).



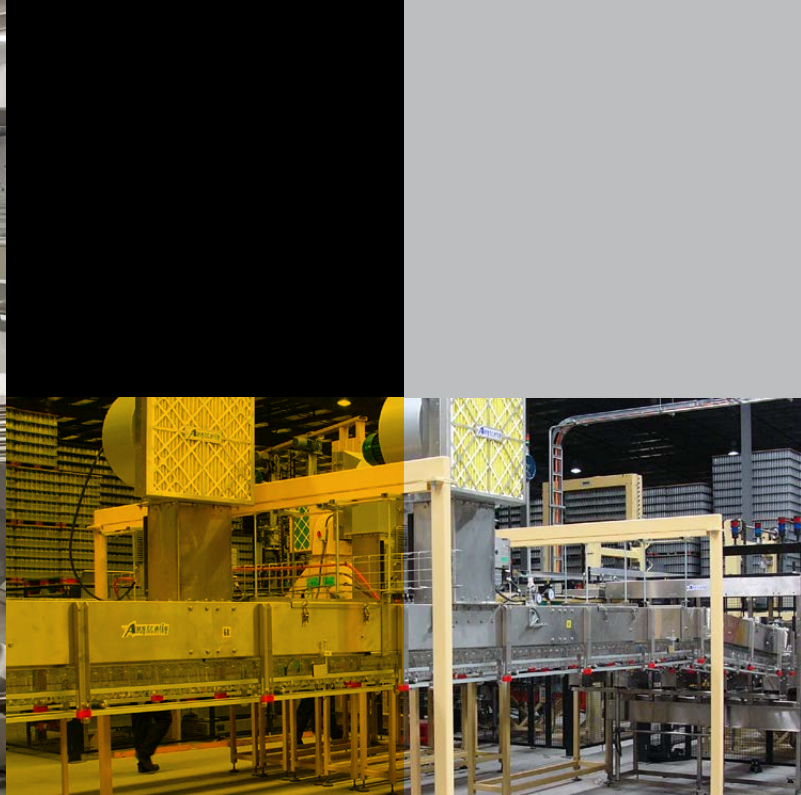


Smart turnkey systems

The Australis team of mechanical and automation engineers and mechanical and electrical technicians give us the ability to provide a complete turnkey service from concept to delivery then onto servicing and support.

Turnkey systems typically include special purpose equipment, conveyors, robotics, sorting and diverting, pallet handling and capital equipment – all integrated through smart software and automation. Our industrial internet of things (IIOT) capabilities allow for increased visibility of equipment performance, uptime, maintenance scheduling and other key performance metrics.

Our diverse experience allows our team to incorporate solutions common in one industry into a successful outcome in a different industry with the confidence that the solution will be robust and reliable. These abilities allow Australis to supply turnkey solutions that offer an outstanding return on investment while minimising client risk.



- Concept creation, design realisation, fabrication, automation, installation and commissioning.
- Fully customised systems incorporating bespoke equipment, conveyors, sorting and diverting, palletisers, robotics, pallet handling, packing and packaging, pallet handling and connected through integrated industrial automation and IIOT solutions.
- Australis Engineering's expertise is the result of over 41 years of successful manufacturing and commissioning of complex, automated materials handling systems for manufacturing and warehousing facilities. Our expertise is authenticated by our third-party certification to the **ISO 9001 Quality Management standard**.





Smart conveyors

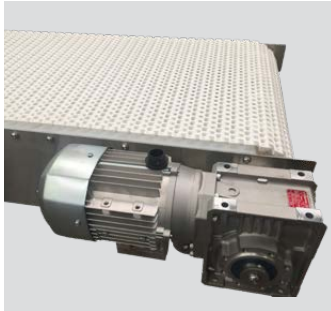
Australis has over 41 years experience of design, fabrication and commissioning all types of conveyors, from one-off conveyors, to entire production systems.

Conveyor design, manufacture and commissioning are core Australis capabilities. Our expertise and knowledge across a variety of industries means we deliver the latest in 'Smart Conveyor' technologies and systems.

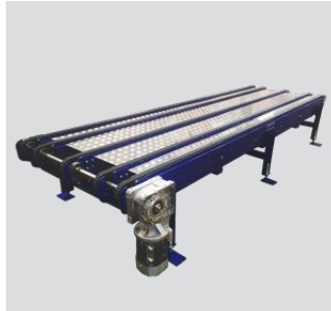
Our conveyors are fabricated to suit any operating environment including wash-down, hygienic and pharmaceutical grades and can be supplied in stainless or mild steel (galvanized or powder coated), anodised aluminium and even plastic.

Our first step is creating a partnership with our clients and getting to know their business and products.

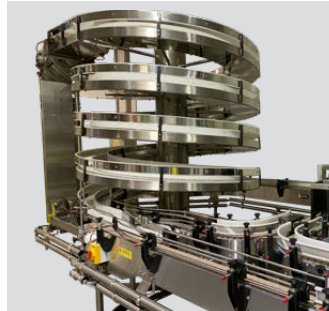
Smart standard and smarter custom designed conveyors



Modular plastic belt conveyors



Chain conveyors



Spiral conveyors



Pallet conveyors



Fabric belt conveyors



Single filers



Laydown conveyors



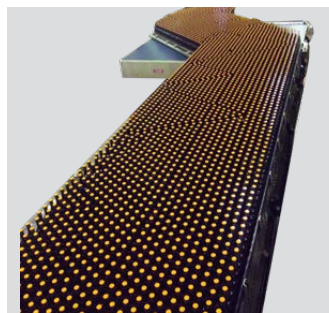
Mass flow conveyors



Slat chain conveyors



Air conveyors



Accumulation systems



Continuous carton elevators



Roller conveyors



Bucket elevators



Storage conveyors



Conveyor guide rails

Our conveyors are used in a wide range of industries

Food

Packaged, fresh and raw produce, meat, small goods, seafood, chocolate, confectionary, pasta and grains.

Beverage

Container handling, bottles, cans, cartons, PET, HDPE, glass, aluminium, steel.



Health and Pharmaceuticals

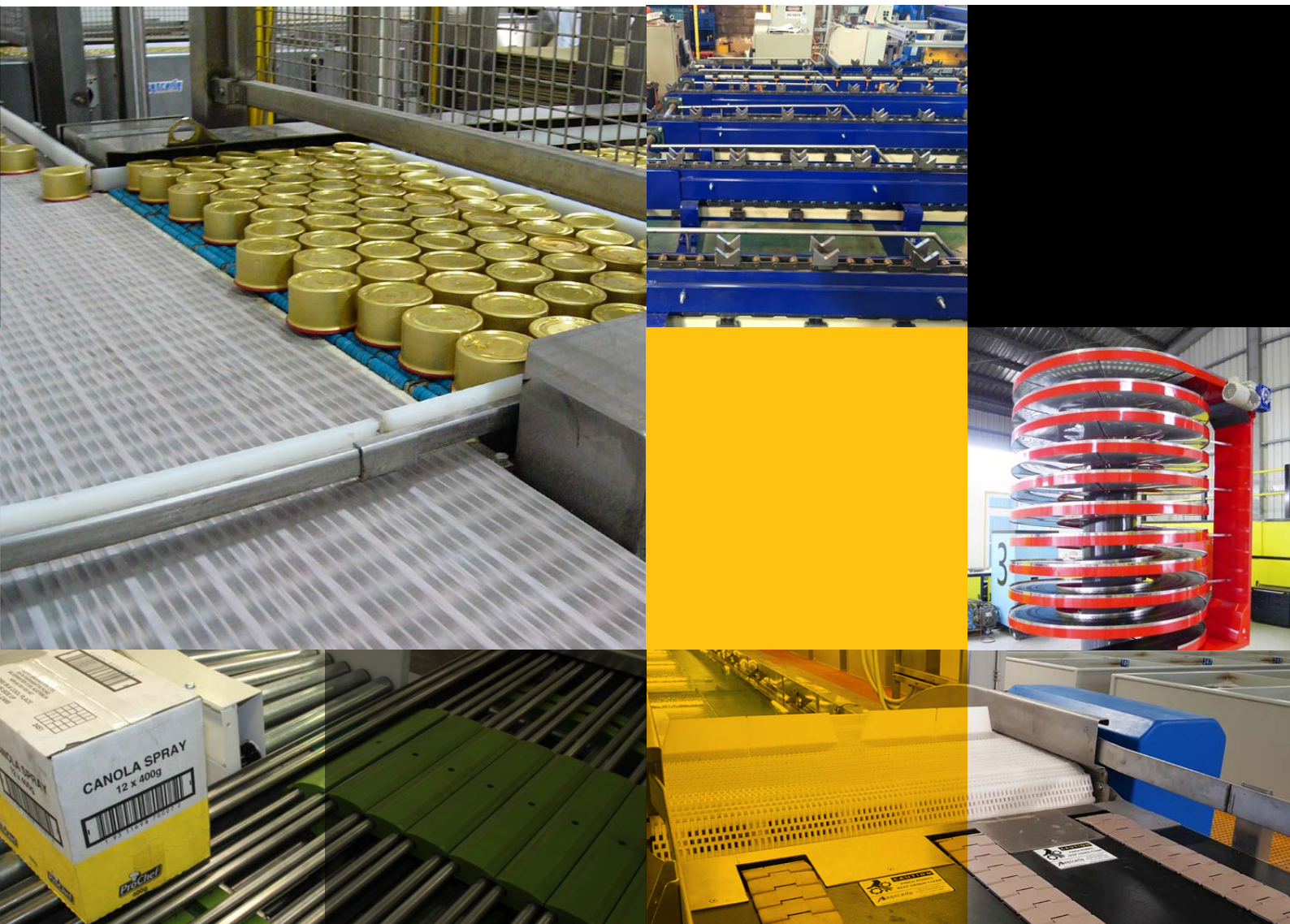
Pills, capsules, vials, blood and plasma, blister packs, electronic devices, surgical packs, nuclear medicine.

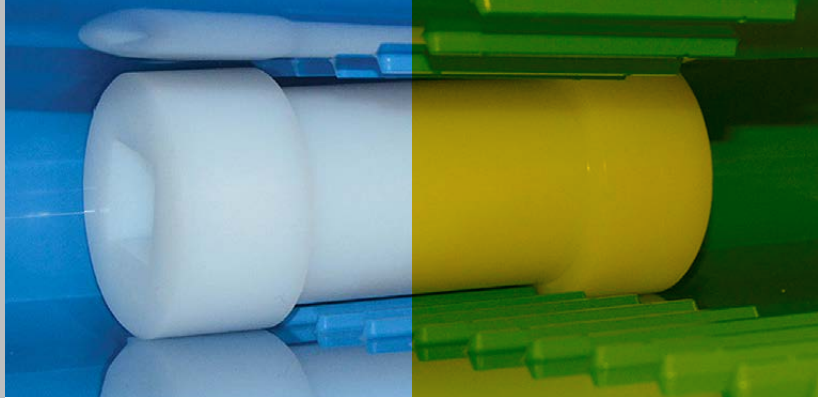
Warehousing and Distribution

Cartons, totes, crates, drums, pallets, satchels, IBC's, bulka-bags, mail and parcels.

Manufacturing

Steel bars, bricks, cement bags, insulation, glass, metal components, PVC fittings, fibre cement, gas cylinders, coins and coin blanks, automotive components, waste and recyclables, batteries, electronics, carbon-fibre, hazardous materials, wood and timber.





Hygenius™ conveyors

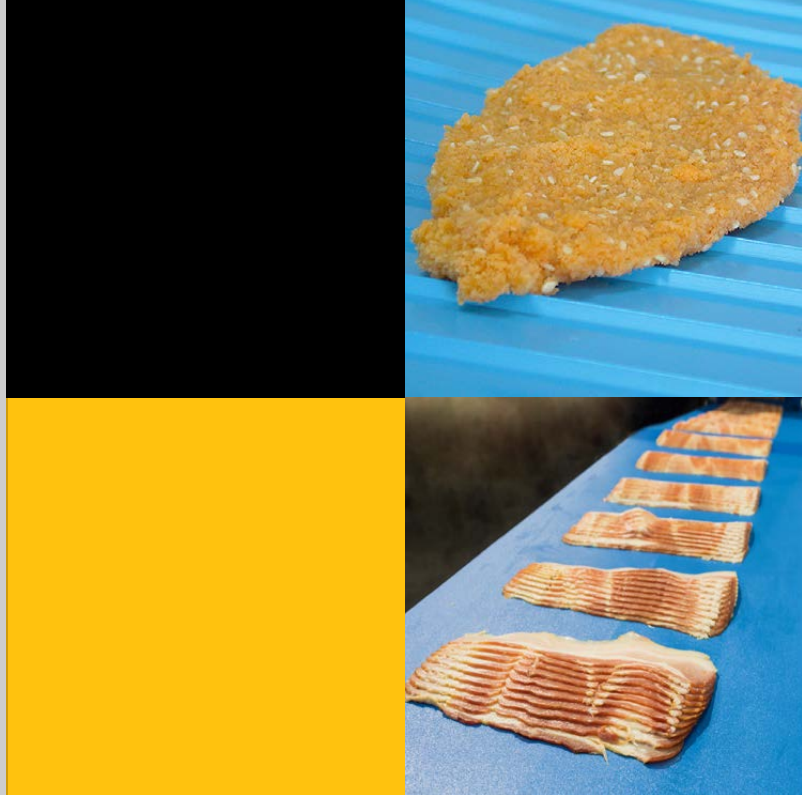
Australis introduces the Hygenius™ Conveyor the truly clean conveyor.

The European Hygienic Engineering Design Group (EHEDG) recognised that clean and healthy products shouldn't just be the result of procedures and processes but should start at the very beginning with the design of the equipment itself.

"you don't have to clean what isn't there" – This simple understanding is the foundation of the Hygenius™ design.

Our design uses Smart Thinking to minimise surfaces, removes hidden and hard to reach crevices that reduces the potential food to accumulate and bacteria to breed. The design utilises EHEDG approved components such as Volta polyurethane belts and hygienic feet. We also eliminate exposed screw threads and incorporate our unique, patent pending, Clean Belt Tensioning and Tracking System.

With safety at the forefront, the Hygenius's open frame design also has fully guarded head and tail areas for operator safety. This is often overlooked in other washdown conveyors.



Key features and options

- Volta SuperDrive and Mini-SuperDrive belts
- Clean belt tensioning and tracking
- Quick belt release for easy belt removal
- Belt lifter for cleaning underneath the belt
- Tool-less removal of the belt running strips for easy cleaning
- Fully guarded head and tail pulleys for safety
- Quick remove belt return rollers
- Full 304 or 316 Stainless Steel option
- Anti-bacterial plastic running strips option
- Stainless steel motors, NSD TufH treated motors and Teflon coated motors options

|| Smart thinking creates a design that reduces the potential for bacterial contamination”



Smart pallet handling

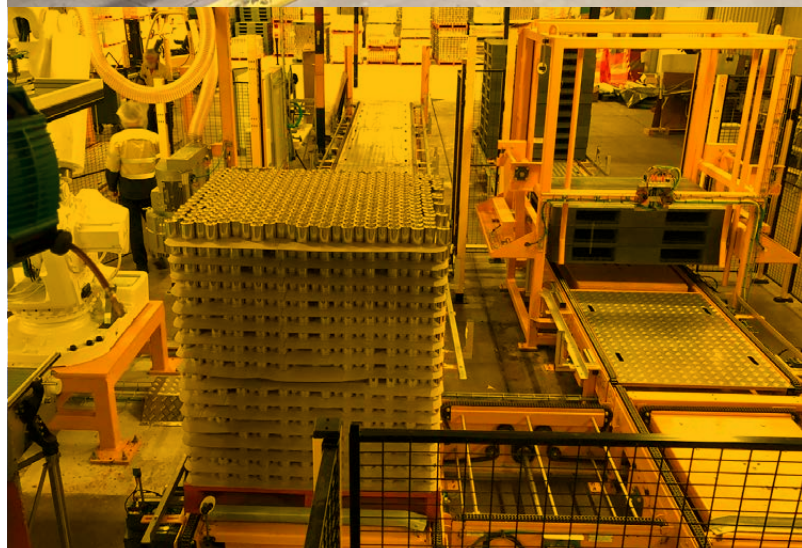
Australis can offer a complete range of standard pallet conveyor modules combined with customised elements to suit pallet handling requirements from truck unloading or loading, to wrapping, storage and buffering.

Our range of conveyors and pallet handling equipment is suited to both high and low volume environments, with proven, pre-engineered designs that minimise project turnaround time. Equipment is available in powder coated or galvanised steel, or full stainless steel for harsher outdoor applications.

Our staged approach to custom development also means risk is minimised at every step.

Pallet handling options

- **Pallet conveyors**
 - dual, triple and quad chain
 - light, medium and heavy duty rollers
 - powered or gravity rollers
- **Destackers/stackers**
- **Magazines**
- **Inverters**
- **Turntables**
- **Pop-up transfers**
- **Transfer pushers**
- **Recycling, repair, dismantling and board removal**
- **Inspection, fully or semi-automatic options**
- **Washers**
- **Elevators**
- **Wrappers**
- **Slip sheet dispensers**
- **Top sheeters**
- **Strapping**
- **Labelling**
- **Double stacker**
- **Depalletising**





Modular Belt Conveyors

Aiming to drive the ubiquity of smart robots, Mech-Mind has developed a full R&D infrastructure and product portfolio including 3D cameras, machine vision algorithms and software, offline deep learning tool and an intelligent robot programming environment.

Mech-Mind's products have been used for applications such as order picking, locating, assembly, industrial inspection and measurement, bin picking and more.

- **High Intelligence:** Enabled by powerful AI algorithms to manage different objects and deal with various complex situations.
- **Stability and Reliability:** Mech-Eye Industrial 3D Camera has been tested continuously for over 10,000 hours. The camera is dust and water proof with IP65 enclosures standards and can operate in harsh environments. It has achieved CE, FCC, VCCI, and RoHS certifications..
- **Easy Integration:** Solutions can be adapted to various mainstream robot brands and support integrating with various systems and the secondary software development.

- **Easy to Deploy and Use:** The plug-and-play to reduce deployment time. The fully visualised, code-free programming interface dramatically reduces the usage difficulty and deployment costs.
- **Wide-range application cases:** Solutions have been successfully deployed in hundreds of leading companies in China, USA, South Korea, Japan, Germany, Spain, Australia and other countries.
- Previous applications cover palletising, depalletising, order picking, machine tending, gluing, locating, assembling, bin picking and detecting.

Mech-Mind's solutions include:

- Mech-Eye Industrial 3D Cameras
- Mech-Vision, graphical machine vision software
- Mech-DL Kit, Offline Training Tools for Deep Learning
- Mech-Viz, Intelligent Robot Programming Environment



AEther smart interconnection

Industrial Internet of Things (IIoT) has resulted in an explosion of data.

Used well, this data results in increased efficiency, increases in production, better quality assurance, increase energy efficiency, decreases in downtime and reduced maintenance costs.

Our AEther service allows for remote connection of machines, both new and old and for the information to be readily available on a central dashboard providing both real time data and historical data. Users can access their personal dashboard, featuring just the information useful to them, from a range of devices including PC, tablet and Smartphone.

Machine Connections can be direct to Sensors, IOLink devices, and/or machine PLCs, while AEther will also connect to SAP, Oracle and a number of other ERP systems.

- Interconnected machines allowing for more efficient control philosophies and data acquisition.
- A user customisable dashboard for key reports, metrics and performance data.
- Real time monitoring, alerts and historical data and reports.

AEther standard modules



BASE



PRODUCT
TRACE



PROCESS
TRACE



MACHINE DATA
ACQUISITION



MATERIAL
MANAGER



TOOL
MANAGEMENT



MAINTENANCE



KNOWLEDGE
DATABASE



ORDER
MANAGEMENT



PROCESS
CONTROL

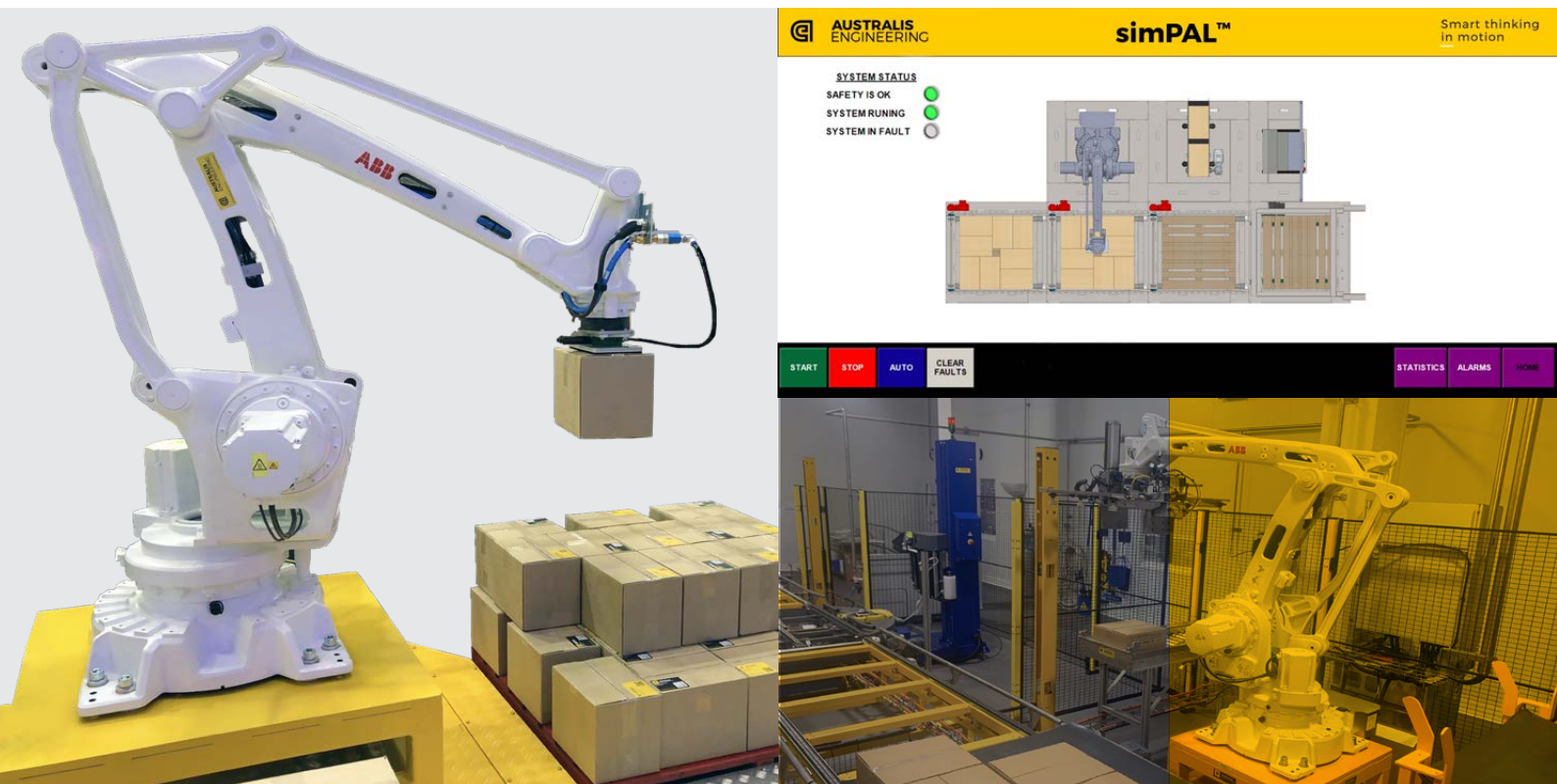


CONFIGURATION



MANUAL
WORKSTATION

The genius of simPAL®



simPAL® is a collaboration of smart software and smart hardware to allow for highly flexible palletising solution.

Due to its modular nature, installation is expedited, reducing downtime and cost. A typical simPAL system can be brought to site, bolted down and connected quickly and easily. Each simPAL Tile includes integrated wiring with quick interconnecting plugs and is self-contained with its own field IO module/s networked to the simPAL Controller for connection of sensors, pneumatics and motor controls. Integrated safety panels connect directly to the Tiles and include normal fence panels as well as access gates, which are safety interlocked.

simPAL software provides long term future proofing benefits. Without needing complex programming, a user can easily generate new pallet patterns, enter new products and save new recipes. simPAL features an Automatic Pallet Generator to create optimised patterns or when multiple patterns are available, allows the user to choose their preferred option.

Launched in 2022, **simPAL-3D** incorporates a Mech-Mind 3D Vision system with artificial intelligence to create a mixed product palletising and depalletising system.

Support is key to the Australis service. All simPAL systems have online provisioning for remote service and support.

|| **simPAL-3D** is a robotic palletiser with 3D Vision and Artificial Intelligence”

A Modular Robotic Palletising System

- simPAL-3D - optional 3D Vision and AI
- simPAL Mini - cobot palletiser option
- 10 function Tiles, each pre-wired to interconnecting modules
- Easy to use touchscreen software features an Automatic Pallet Generator
- IIOT connected
- Multiple standard grippers available to suit many product types
- Robot capacities from 110kg to 450kg
- Designed to ship inside a standard shipping container

Tailored solutions

simPAL uses 10 core function Tiles that are used to create a tailored palletising solution.

- **simPAL Controller**
- **Robot and gripper**
- **Product Infeed Conveyor**
- **Pallet Conveyor**
- **Pallet 90 degree transfer**
- **Pallet turntable**
- **Pallet layer/slip sheet magazine**
- **Pallet Magazine and destacker**
- **Pallet floor positioning jig**
- **Blank tile**

simPAL® examples

simPAL Tiles can be combined in many different configurations. As production needs change, the same system can be reconfigured and extended by adding additional simPAL Tiles.



Single Pallet simPAL
replaces hand stacking



Dual Pallet simPAL
flexibility for multiple products or continuous palletising



Single Pallet simPAL with integrated pallet handling
Integrated with pallet conveyors, stacker and slip sheets



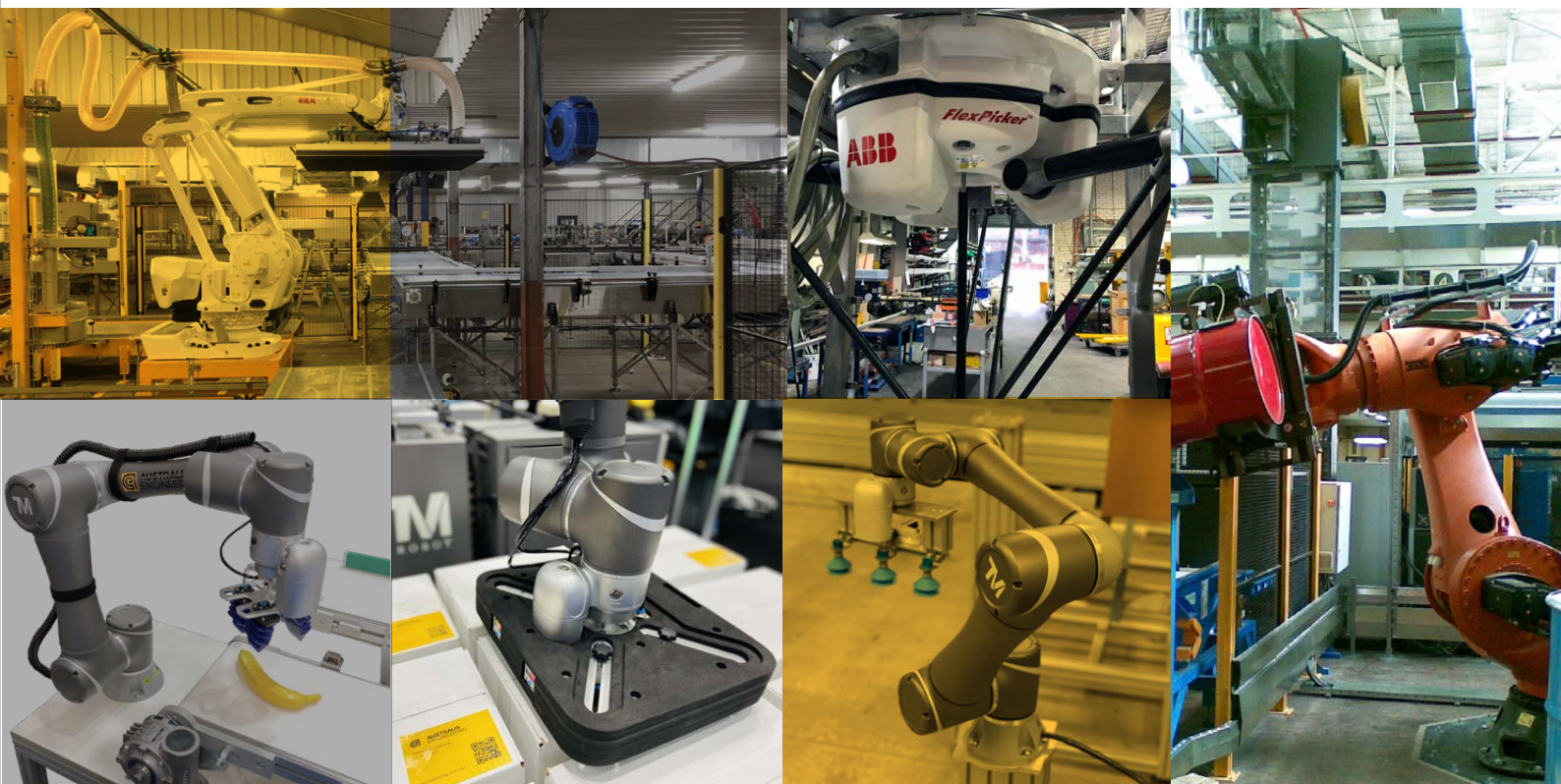
Smart robotics

With the global explosion in industrial and collaborative robotic systems, it is more critical than ever to ensure your robotic system provider is not just a simple supplier but a smart turnkey integrator. There is much more to a robotic system than just the robotic arm; Australis specialises in the design and implementation of custom designed robotic solutions including gripper and end of arm tooling design and fabrication, design and integration of infeed and outfeed systems, integration of vision and tracking systems, plus development of customised software to meet the demands of industry across multiple sectors.

Australis Engineering is an ABB Robotics integrator partner and integrator and Australian distributor for Techman Robot collaborative robots. Australis are also experienced integrators of Kuka and Yaskawa-Motoman robots; this combined experience allows us to supply a wide range of solutions to suit many and varied robotics applications.

Australis Robotic Solutions include:

- Assembly systems
- Pick and Place systems
- Multi-robot co-operative systems
- High speed packing
- Robot tracks and mobile robot solutions
- Collaborative robot systems
- Palletising and Depalletising
- Decanting Systems
- Machine Tending
- Packaging systems
- Integrated QA and Vision Inspection
- Robot and AGV interfacing



Robot grippers and end-of-arm tooling

Key to a successful robot project is much more than just the 'off-the-shelf' robot – turning the robot into a smart system is all about the additional items attached to and surrounding the robot. With our background in mechanical design, we place a strong emphasis on getting these elements right.

Our grippers include:

- Multi-stage mechanical and vacuum grippers
- Multi-product grippers
- Grippers for collaborative applications
- Full layer grippers for palletising and depalletising
- Bespoke designs for unusual parts
- Grippers for extra heavy or extra large payloads (we have gripped and moved 800kg items for example)
- Servo driven grippers for precision and speed
- Magnetic grippers
- Vacuum pad or vacuum cup grippers with multiple zones
- Integrated vision for product detection
- Quick-release tool changers (fully automatic or semi-automatic)

Authorized
value
provider



Certified ABB Value partner

Australis is a certified ABB value provider for robotics.

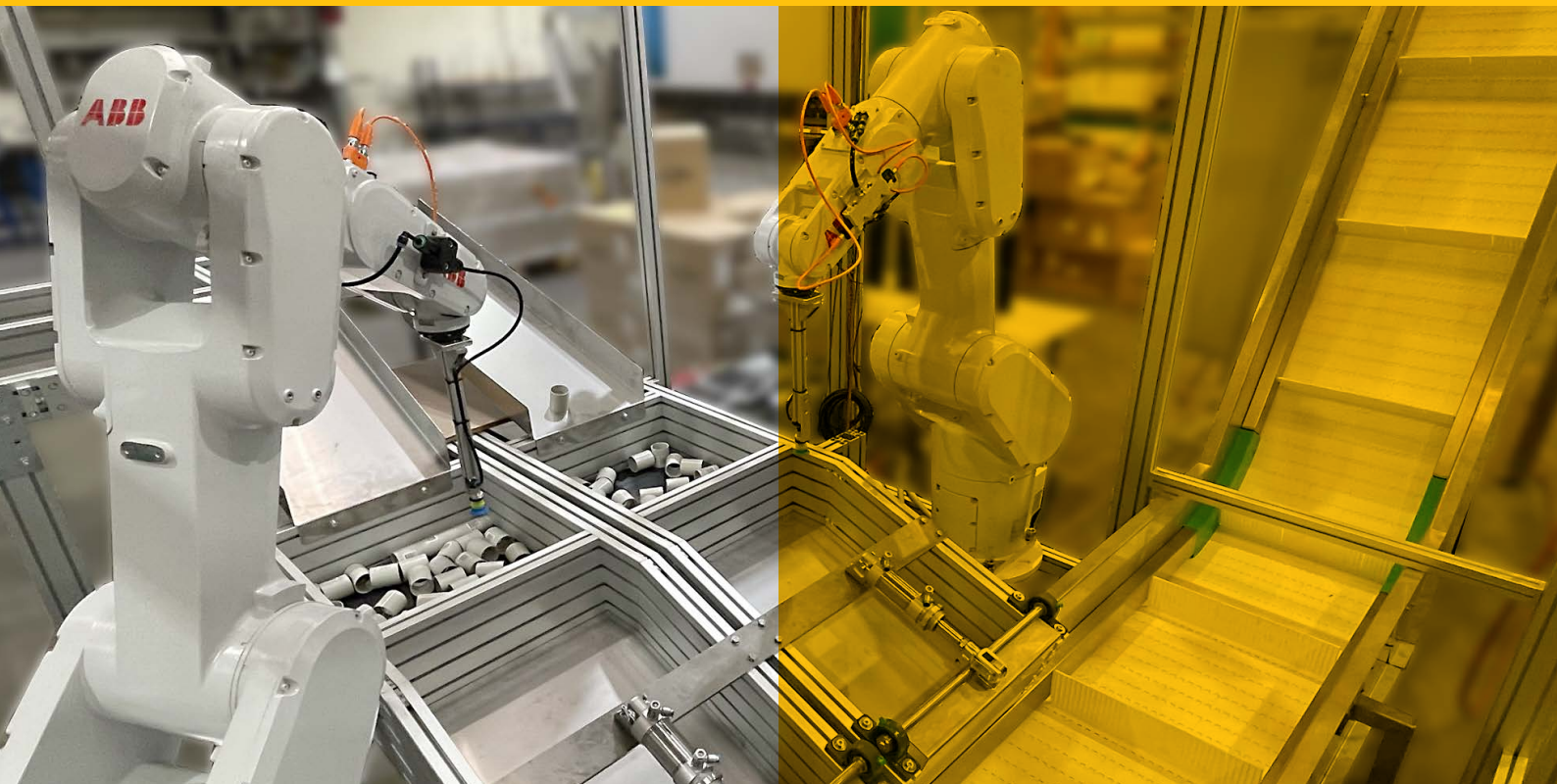


TM Robot Australian distributor

Australis is the official Australian distributor of Techman Robot collaborative robots.

Other robot brands

We also offer KUKA, Fanuc, Motoman and Omron robots to suit a wide range of different applications.



Smart industrial automation

Australis Engineering's industrial automation expertise draws from our many years of providing mechanical solutions and expands on this experience by adding the most advanced automation systems available in the world today.

Combining this expertise with our robotic and IIOT offerings, Australis can provide a complete automation solution across a range of industrial applications.

|| Great engineering and automation capabilities and the guys are very good to work with."



We offer smart automation solutions including discrete parts handling, pick and place, 2D and 3D vision integrated robotics, palletising and depalletising, sorting, collation and accumulation and customised solutions.

Our automation capabilities allows us to tie in new and existing systems into a single, integrated platform. We are trained in the following brands and more:

- Allen-Bradley, Omron, Siemens, IFM Efector and Beckhoff PLC and industrial automation platforms
- Experienced in industrial communications networks such as Ethernet IP, AS-i, TCP/ IP, Profinet, Profibus and EtherCAT

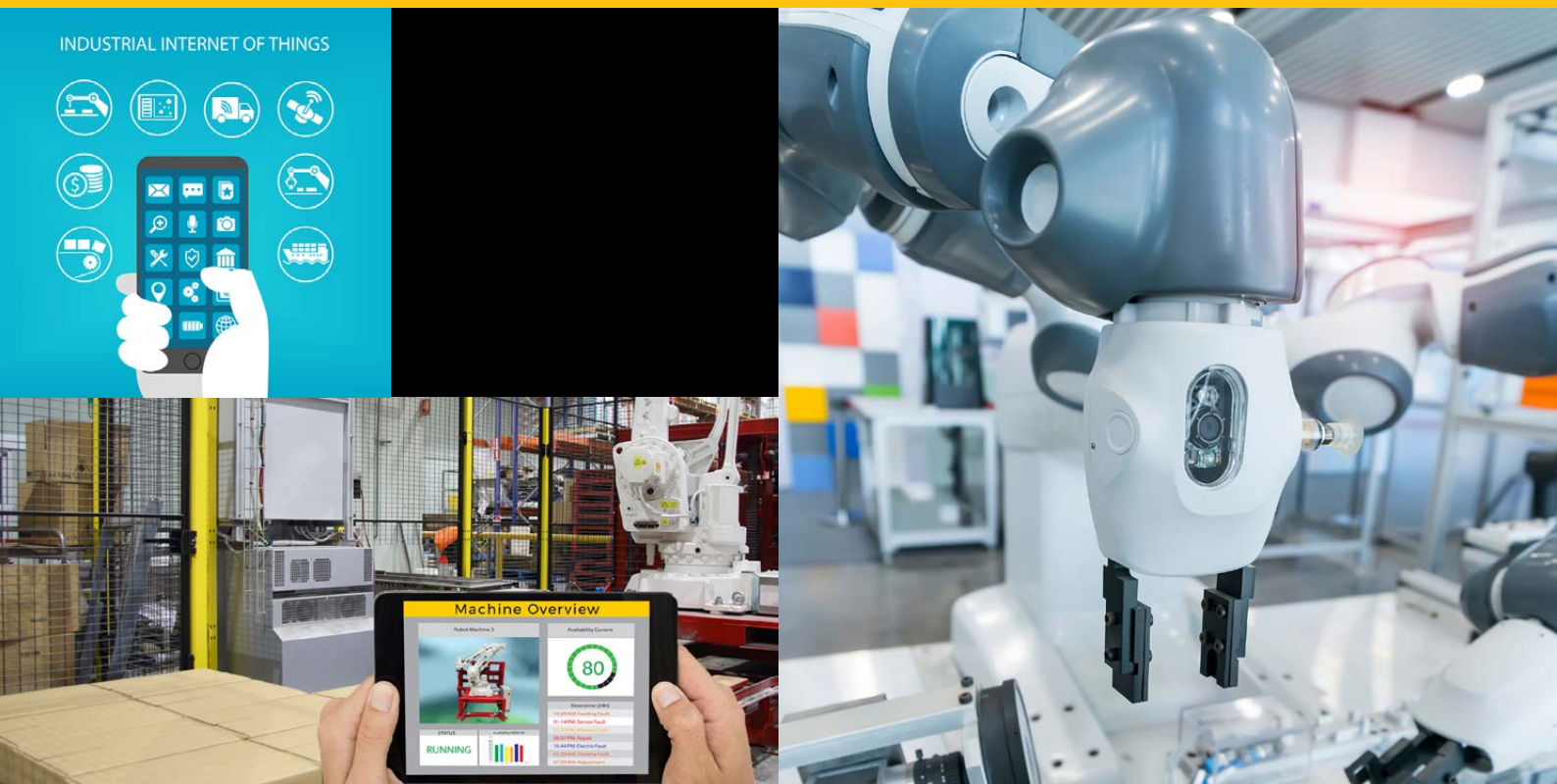
SCADA and MES software system applications allow for the monitoring and recording of machine and system performance.

This provides our customers with the intelligence to fully optimise their systems and minimise the risk of downtime and stoppages.

- IFM LineRecorder and SmartObserver software for real time monitoring and information capture for reporting and preventative maintenance
- SAP and other ERP integration

Customer's don't need to engage multiple suppliers. Coupled with our mechanical capabilities, we offer in-house electrical design and development services including:

- System schematics
- Panel design and build
- Centralised and distributed IO and control systems technologies



AEther smart interconnection

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Machine Connections can be direct to Sensors, IOLink devices, and/or machine PLCs, while AEther will also connect to SAP, Oracle and a number of other ERP systems.

- Interconnected machines allowing for more efficient control philosophies and data acquisition.
- A user customisable dashboard for key reports, metrics and performance data.
- Real time monitoring, alerts and historical data and reports.

AEther standard modules



BASE



PRODUCT TRACE



PROCESS TRACE



MACHINE DATA ACQUISITION



MATERIAL MANAGER



TOOL MANAGEMENT



MAINTENANCE



KNOWLEDGE DATABASE



ORDER MANAGEMENT



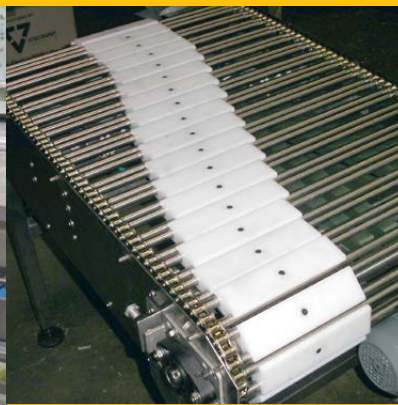
PROCESS CONTROL



CONFIGURATION



MANUAL WORKSTATION



Smart sorting and diverting

The key to any reliable system is keeping the product under control at all times. This is the key design criterion for all Australis diverters or sorting systems.

Our Technologies

- active and passive lane diverters,
- zero touch diverting,
- right angle and pop-up transfers,
- gating and chute systems, as well as sorting of products based on physical characteristics such as size, colour or weight.

Our Options

- Active scanning including 1D and 2D barcodes reading
- 3D vision systems for bin picking
- 3D laser scanning
- colour or shape detection and/or weight measurements

Scan data can be recorded against a product barcode or identifier within a database for use in production records, or even for integration to an ERP system such as SAP or Oracle. Desktop, mobile phone and tablet reports can be easily generated for up-to-the-minute status of your production anywhere in the world.

Diverting systems:

- One in, multiple out, including platen carrier, active roller belt and pusher styles
- Right angle transfers including pop-up, turntable or pusher styles
- Gating and chute systems
- High speed options available

Sorting systems:

- Multi-product identification
- Size and weight
- Colour
- Product rejection
- Production distribution

Special purpose equipment

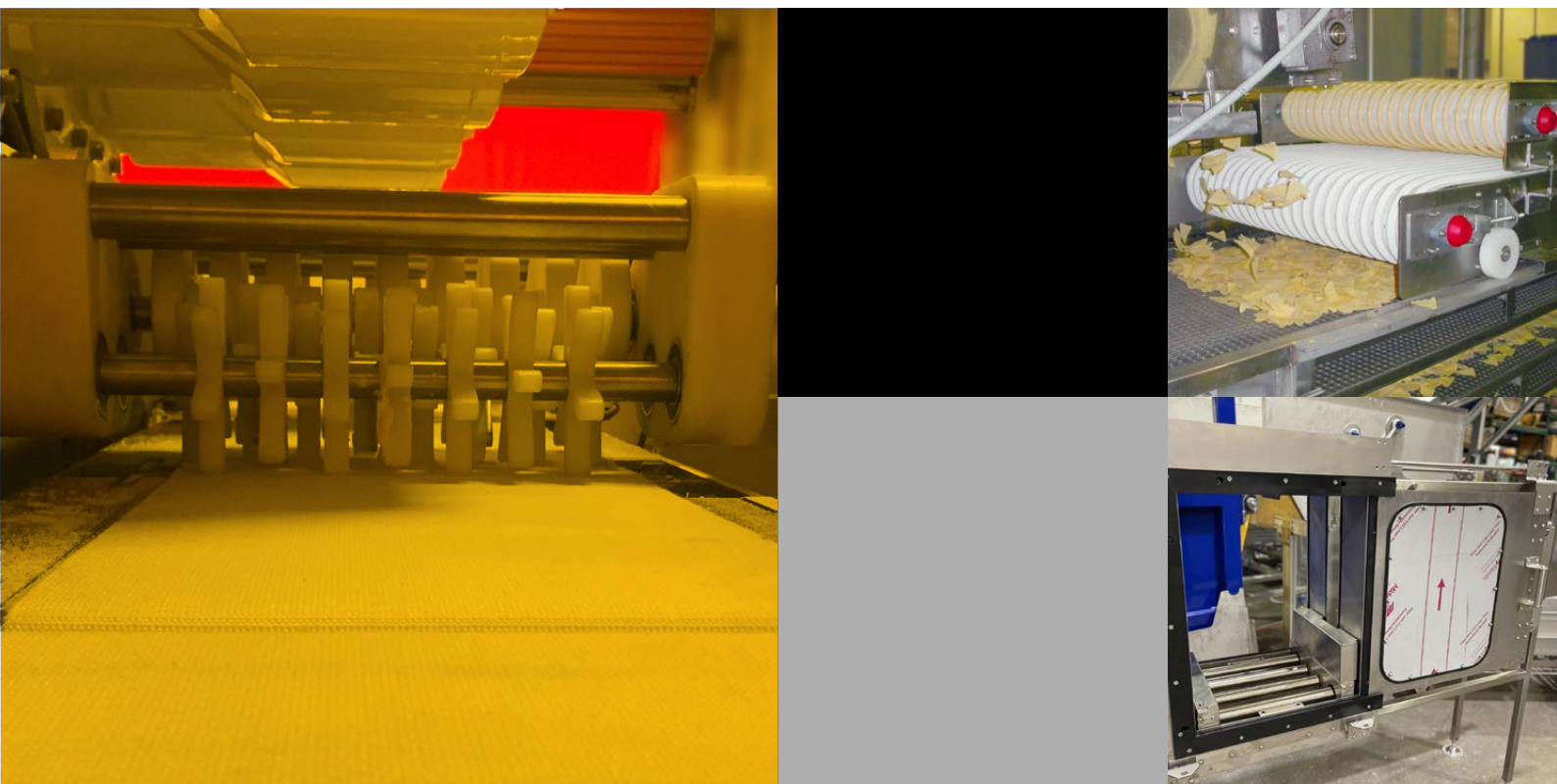


Special purpose equipment is a hallmark of Australis Engineering.

With a strong history in R&D we are adept at design consultancy and proof of concept including 3D design and animation. With client collaboration our team can then take these concepts through production design into fabrication, testing, installation and to final commissioning. Our approach begins by creating a partnership with our clients and getting to know their business and products. Tapping into this knowledge is key to a successful outcome.

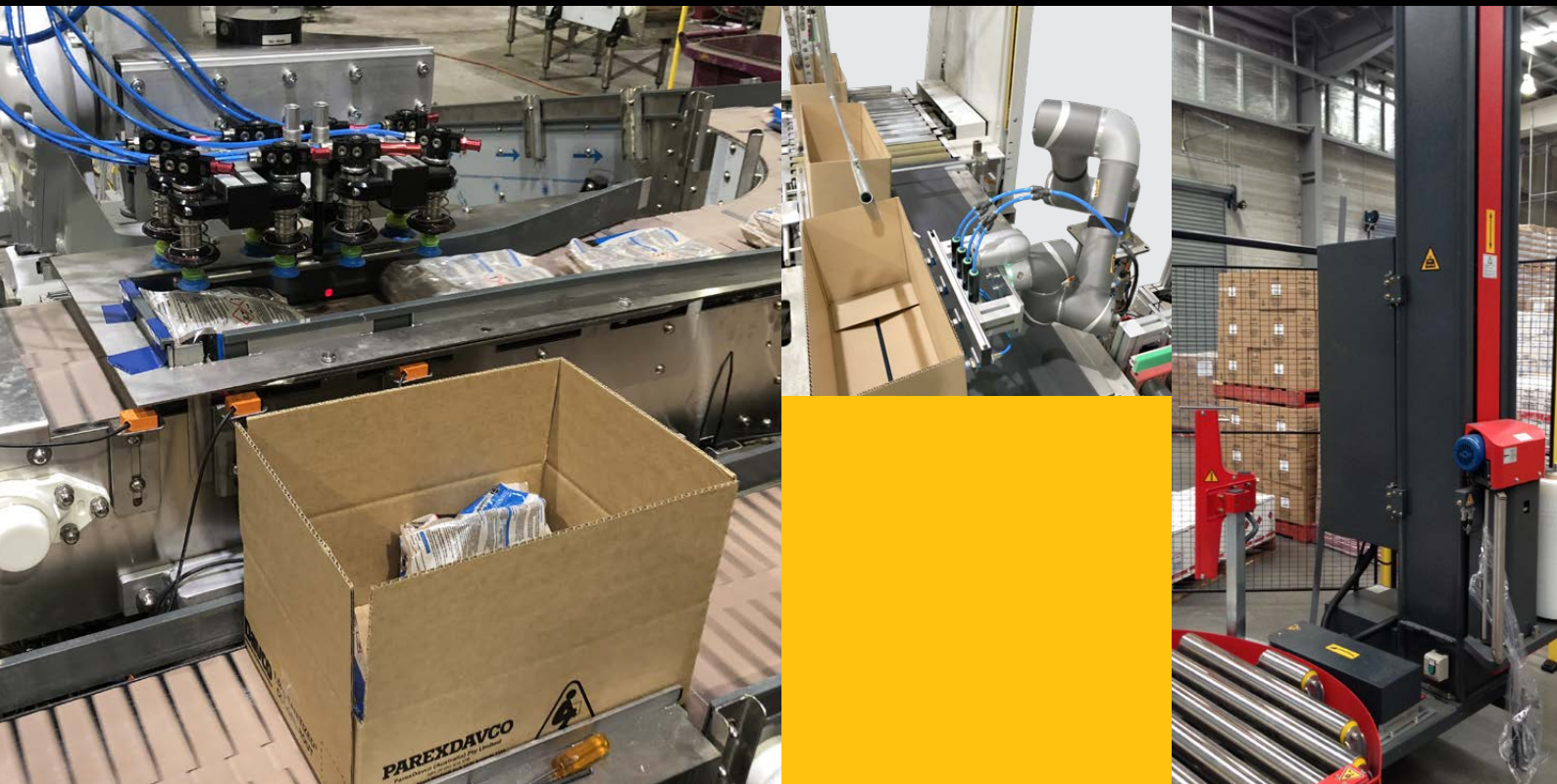
This knowledge forms the keystone of our design and combined with our industry experience, is used to craft equipment solutions that utilise cutting edge technology, automation and IIOT controls.

Our staged approach to custom development also means risk is minimised at every step. This reduces investment and ensures optimum results.



- Robotic and hard automated solutions
- Parts handling, separation and orientating
- QA, inspection and vision
- Cutting, gluing and pressing
- Pick and place
- Bin picking
- Accumulation and in-process, buffer storage
- Single filing and laning
- High speed counting
- Product rejection
- Product stops, transfers and diverts
- Bulk product handling (non-mining applications)
- Elevating and lowerating
- Handling soft, pliable, sticky or other difficult products
- Machine tending
- Roll-on/ Roll-off and truck loading
- Hazardous and explosive environments
- Clean and hygienic environments
- Pharmaceutical grade environments

Smart packing and packaging



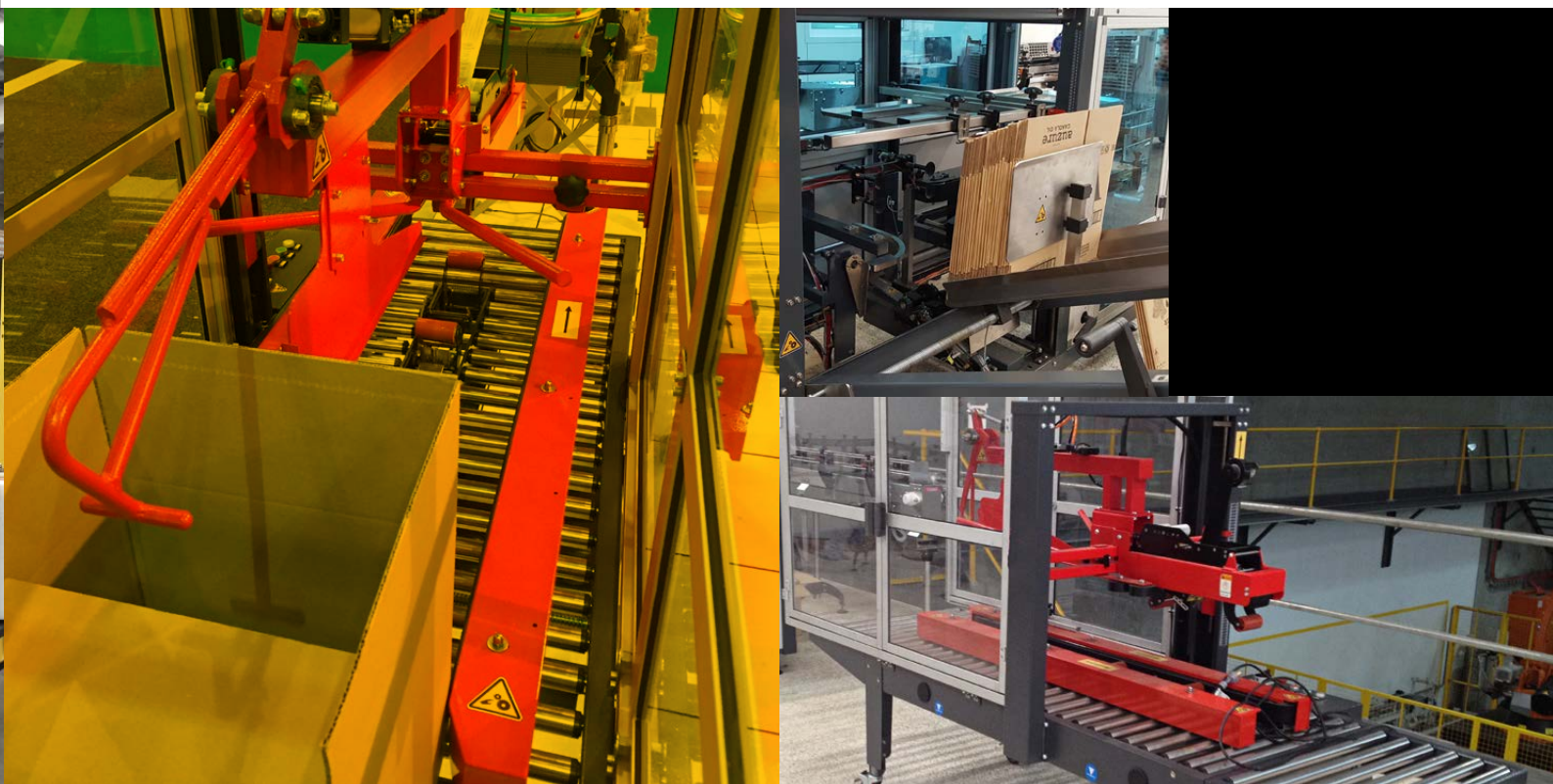
Australis packaging systems are designed to 'grow as you grow'. We specialise in helping client's maintain flexibility while expanding

Our packaging systems are available in a variety of ranges from semi or fully automated solutions, to stand alone machines for erecting, sealing, and/or wrapping.

Australis also represent, integrate and service a number of high quality European and American brands and combined with our own automation solutions, these products provide a complete packaging system.

Packaging

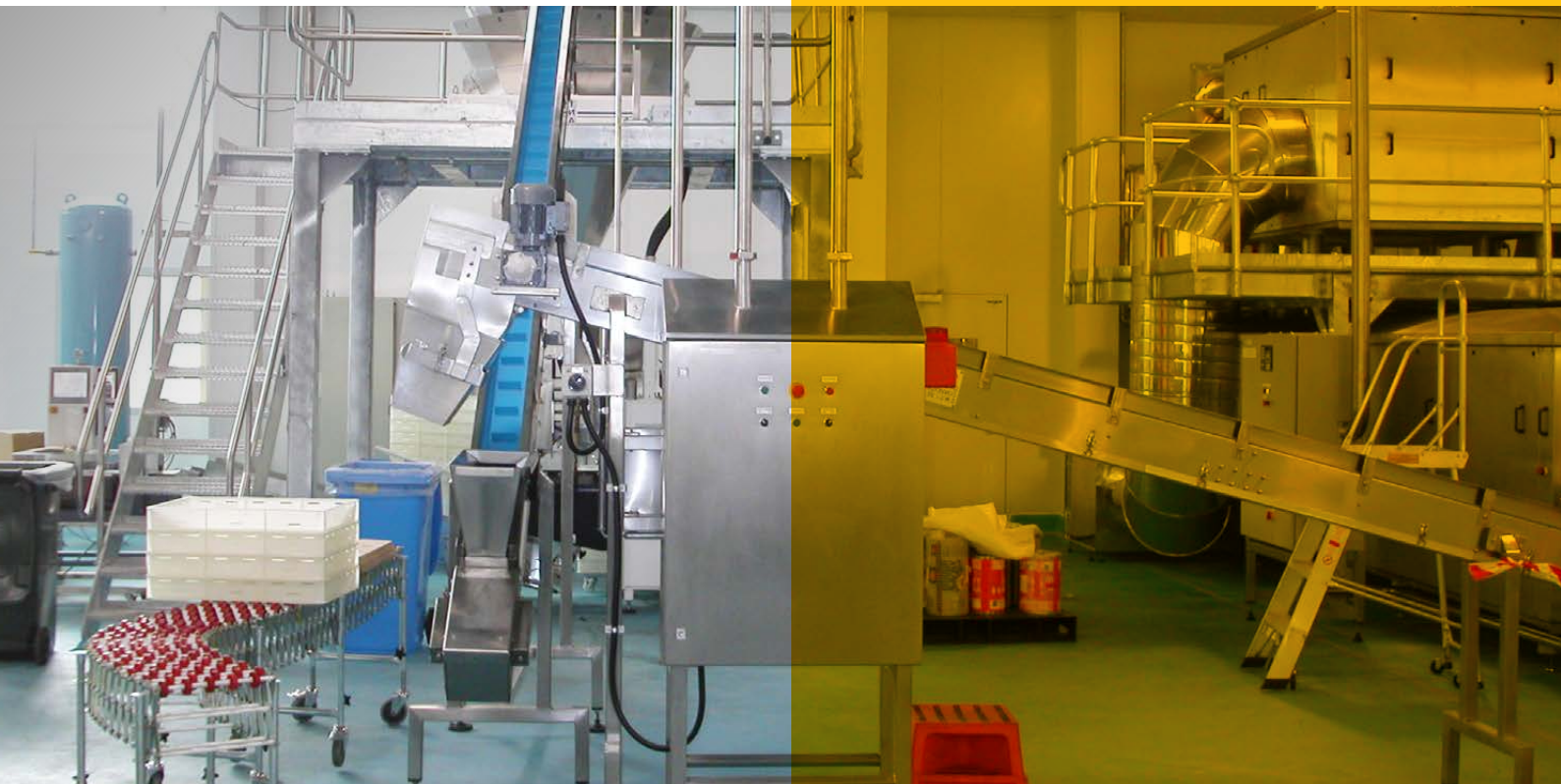
- Robotic pick and place
- Linear pick and place
- Collaborative robotics
- Wrap-around
- Case-over-product (COP)
- Insertion style
- Product infeed and collating systems



Packaging and End-of-line

- Carton erectors
- Carton sealing (tape or hot melt glue)
- Shrink wrapping
- Stretch wrapper
- Strapping/ banding
- Bag in box
- Carton filling
- Packing stations (semi-automatic and automatic)

“Excellent support and robust and cost effective solutions for our materials handling problems.”



Smart thinking in motion



AUSTRALIS
GROUP

Australis Engineering is the founding company within the Australis Group.

With facilities in Sydney and Brisbane, the Australis Group of businesses is Australian owned and are experts in Conveyors, Production and Packaging Equipment, Robotics, Automation and Pallet Handling Equipment.

precision
STAINLESS SYSTEMS

ADVANCE
CONVEYORS

PROFILUM

CONVEYORS
PALLET HANDLING
PALLETISING
DEPALLETISING
SINGLE FILERS
INDUSTRIAL AUTOMATION
ROBOTICS
LINE CONTROL
BUCKET ELEVATORS
SPIRAL CONVEYORS
PALLET WRAPPERS
CARTON FORMERS
CARTON SEALERS
TRAY FORMERS
ENROBERS
TEMPERING MACHINES
COOLING TUNNELS
MELTING TANKS
CUSTOM EQUIPMENT
DESIGN CONSULTANCY
TURNKEY SYSTEMS
DEVELOPMENT & PROTOTYPING
SERVICING & MAINTENANCE



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AUSTRALIS
ENGINEERING

The smart choice

Contact us today to
discuss your next project

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