



# APC Storage Technology Warehouse Solutions

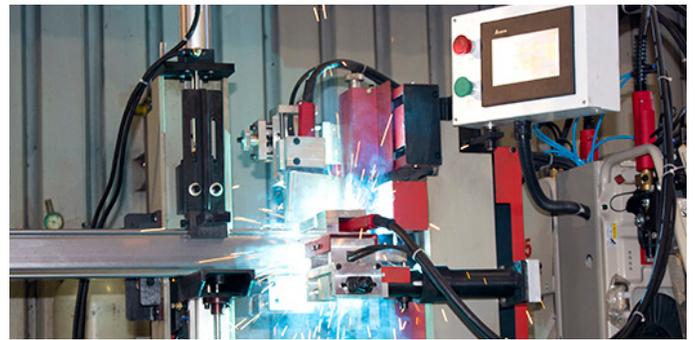
[apcgroup.com.au](http://apcgroup.com.au)

## WHO WE ARE

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APC is a proud Australian company established in 1972 to provide building, construction, warehouse and office solutions to a variety of industries. Today we have our head office and main manufacturing hub in Perth along with offices and warehouses in Melbourne, Sydney, Brisbane and Auckland. Our projects are delivered across the Australian and New Zealand regions, as well as further afield such as The Middle East, Africa, Europe and the Asia Pacific Region.

APC is an engineering company and Australian Storage Equipment Manufacturer for the Supply Chain, Logistics, Defence, Government and Commercial Industries.



## WHAT WE OFFER

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APC offers our clients a complete Design and Engineering Service, ensuring we provide the best 'fit for purpose', flexible, cost-effective and safe designs. Our engineering team is comprised of rack industry experts that have many years of design and engineering experience with qualifications including CPEng and NER. We utilise the latest structural analysis software on each racking system we design with all components being validated through physical testing and further structural analysis to industry standards.

- ▶ Our purpose is to create competitive advantages for our customers by engineering efficient, reliable and cost-effective solutions that can grow and change with their businesses.
- ▶ We have specialised in delivering these high-quality systems for over 50 years, facilitated by our national sales & support network and Perth manufacturing hub.
- ▶ Our comprehensive product solutions & project realisation processes are backed by our high levels of ISO accreditation.
- ▶ Our Model is not as a "commodity supplier" but to value-add by identifying the correct storage medium & layout to the stock profiles; whether it be manual, semi-automated or fully automated racking structures. This is a key feature as a design & engineering manufacturer whereby we co-design with our customers.



### Who Makes up Our Team

- ✓ Dedicated Project and Sales Consultants
- ✓ CPEng and NER Qualified Engineers
- ✓ Experienced Project Managers
- ✓ Qualified Installation Teams
- ✓ Certified Rack Inspectors
- ✓ ISO Accredited Project Delivery

## AUSTRALIAN MADE

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The famous Australian Made, Australian Grown (AMAG) logo is the true mark of Aussie authenticity. This is Australia's most trusted, recognised and widely used country of origin symbol which is underpinned by a third-party accreditation system. This ensures products that carry the logo are certified as 'genuinely Australian'.

APC is proud to be certified with AMAG for our Pallet Racking and Shelving solutions.

APC Storage Technology is a wholly-owned and operated Australian business that offers a complete Design and Engineering service to our clients looking for Pallet Racking or Shelving Solutions for their businesses.

APC pallet racking and shelving components are designed, engineered and manufactured locally here in Australia, by Australians and with Australian steel. This ensures we provide our customers with the most 'fit for purpose', flexible, cost-effective and Australian compliant designs.



APC's racking and shelving solutions are manufactured from high tensile, high yield strength Australian BlueScope Steel.

## WHAT WE'RE DOING TO DRIVE SUSTAINABILITY

At APC, sustainability isn't just something we're working towards. It's already part of how we operate. Through our products, partnerships and everyday practices, we've implemented a range of actions that help reduce waste, support environmental responsibility and encourage local, sustainable sourcing. These steps show our commitment to building smarter, more sustainable warehouse solutions for the future.

### 1. Certified Environmental Management as a Sustainability Driver

APC has implemented a structured Environmental Management System to ensure our operations meet regulatory requirements and align with long-term sustainability goals. Certified to ISO 14001, our system enables us to identify environmental risks, set clear targets, monitor performance and drive ongoing improvement through established processes.

By integrating this framework into day-to-day operations, we're able to reduce waste, improve resource utilisation and minimise environmental impacts across the business. It also supports compliance, strengthens stakeholder confidence and helps our customers meet their own sustainability objectives.



### 2. Australian-Made Materials, Locally Sourced and Low in Carbon Footprint

Our pallet racking systems are manufactured in Perth, Western Australia, using raw materials sourced from local Australian suppliers. This approach reduces the carbon footprint typically associated with international freight and offshore production. Transporting heavy steel components over long distances, especially from Asia or Europe, can generate significant greenhouse gas emissions. Choosing to source and produce locally not only reduces these emissions, but also supports Australian industry, contributing to regional job growth and enhances supply chain resilience.

To demonstrate the emissions savings from local sourcing compared to overseas imports, we used the **EcoTransIT World** emissions calculator to compare two typical delivery scenarios:

#### Imported Scenario (Shanghai to Fremantle)

Shipping 10 tonnes of pallet racking from Shanghai to Fremantle - a journey of approximately 8,237 km - resulted in:

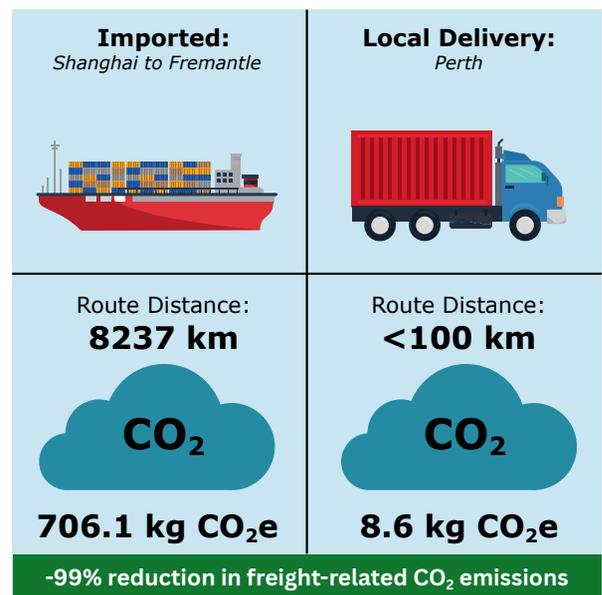
- ▶ Transport activity: 82,370 tonne-kilometres
- ▶ CO<sub>2</sub> intensity: 8.57 g CO<sub>2</sub>e per tonne-kilometre
- ▶ CO<sub>2</sub> emissions: 706.1 kg CO<sub>2</sub>e

#### Transport Scenario (Within Perth)

By comparison, transporting the same 10 tonnes of Australian-made racking locally from our Perth facility involves less than 100 km of travel, and generates:

- ▶ Transport activity: ~1,000 tonne-kilometres
- ▶ CO<sub>2</sub> intensity: 8.57 g CO<sub>2</sub>e per tonne-kilometre \*
- ▶ CO<sub>2</sub> emissions: 8.6 kg CO<sub>2</sub>e

\* same factor for consistency



## WHY THIS MATTERS

By sourcing and manufacturing locally, each typical delivery reduces freight-related emissions by approximately 697.5 kg CO<sub>2</sub>e, representing a reduction of over 99% compared to imported alternatives. This significantly lowers our overall carbon footprint and supports APC’s commitment to more sustainable logistics. These reductions contribute to Australia’s broader Scope 3 GHG emissions targets and help our customers meet their environmental reporting obligations.

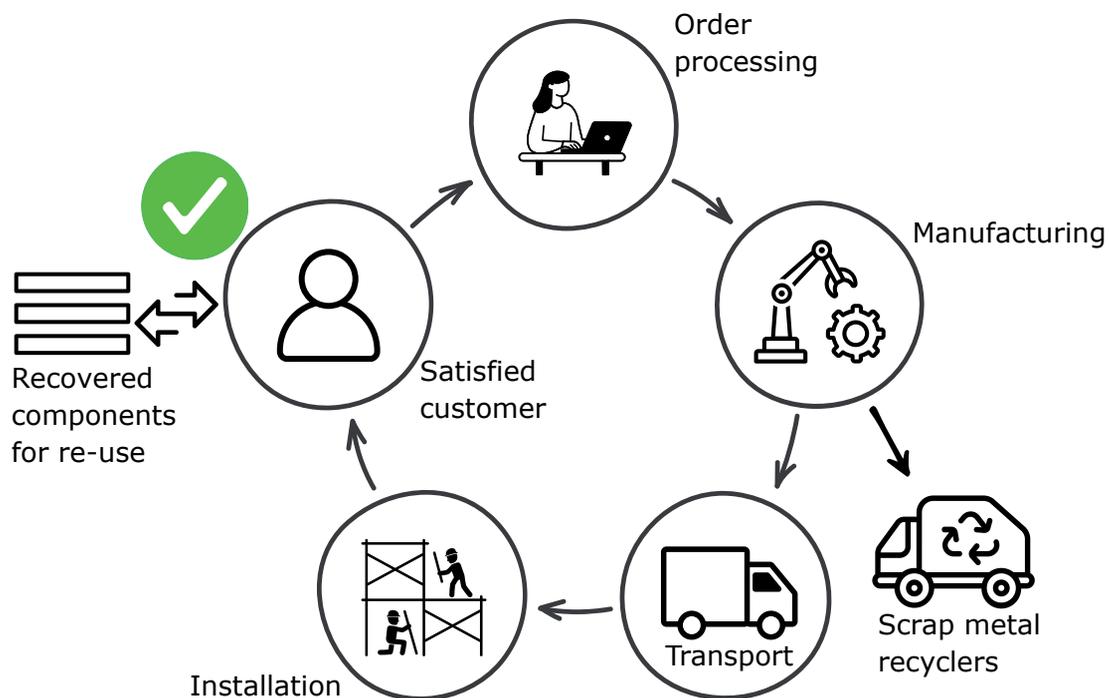
### 3. Driving Circular Economy Outcomes Across Our Operations

Circular economy principles are increasingly shaping how we design, manufacture and manage our warehouse systems. One such practical example is APC’s initiative in collaborating with clients during warehousing upgrades to recover post-upgrade unusable components. These components are inspected for structural integrity and made available for reuse, thereby extending their service life and reducing the demand for newly manufactured steel.

We’ve also enhanced our internal manufacturing practices to capture and recycle steel waste from racking production. Structural offcuts, rejected parts and punch-outs from upright post processing are carefully sorted and sent to authorised scrap metal recyclers. These closed-loop systems ensure materials are handled responsibly and contribute to a more sustainable production model.

Within our own operations, the reuse of wooden pallets plays a key role. Serviceable pallets are inspected, stored and redeployed across jobs and departments, reducing packaging waste, limiting the need for new timber and easing pressure on forestry resources.

Together, these three strategies embody a practical and forward-thinking approach to circularity, supporting a lower-emission, low-waste supply chain while delivering smarter outcomes for warehouse operators and the broader industry.



## UPRIGHT FRAME MATERIAL

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A critical aspect of good rack design is the strength and durability of the upright frame. For this reason APC utilises high strength and high performance material from BlueScope.

With a minimum guaranteed yield strength of 450 MPa and a Zinc coating thickness of 350 grams per square metre, this material is perfectly suited to our upright posts and braces.



## BEAM MATERIAL

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Specifically designed for structural sections, this high strength material has a minimum guaranteed yield strength of 450MPa and is ideal for APC's double crimped box beams.

End connectors are multi-stage processed from BlueScope extra formable steel with a guaranteed yield strength of 400Mpa. These are then robotically welded to the box beam sections to provide a finished product with superior strength and impact resistance.



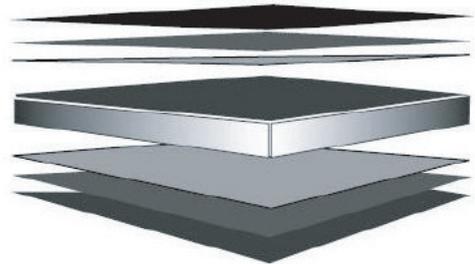
## SHELVING MATERIAL

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COLORBOND® IFS pre-painted steel is specifically designed by BlueScope Steel Limited for use in steel shelving products.

This uses a base substrate of high strength zincalume coated steel with a minimum guaranteed yield strength of 300MPa. An in-line process provides the high quality Colorbond® coating which is the same process used for the high performance products used externally for the building industry.

Specially designed and fully automated processing equipment allows APC to manufacture their Unishelf® components from this highly durable material.



# CERTIFICATIONS

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## ISO Certification

At APC, we hold ourselves to extremely high standards in regard to OH&S, quality and environment. To ensure our systems are operating at the highest levels, we have attained the following certifications:

### ISO 45001:2018 – OHS Management System

APC has adopted national and international best practices in our systematic approach to health and safety management, by focusing on a “proactive” approach rather than “reactive” controls. Our commitment to obtaining certification to both relevant health and safety standards ensures we meet and understand our obligations to our staff and customers alike.

### ISO 9001:2015 – Quality Management System

APC’s QMS focuses on continuous improvement in customer service to our clients, along with the delivery of quality products and services that are benchmarked to the highest industry standards. By following our QMS and lean manufacturing principles and processes, we are able to control quality from design through to project completion.

### ISO 14001:2015 – Environmental Management System

APC’s EMS not only ensures we meet legislative requirements and compliance, but gives us the ability to identify cost savings with greater emphasis on “resource, waste and energy management” minimising our environmental footprint. Customers can be confident that our EMS gives us the structured framework to quantify, monitor and control the impact of our operations on the environment, now and in the future.

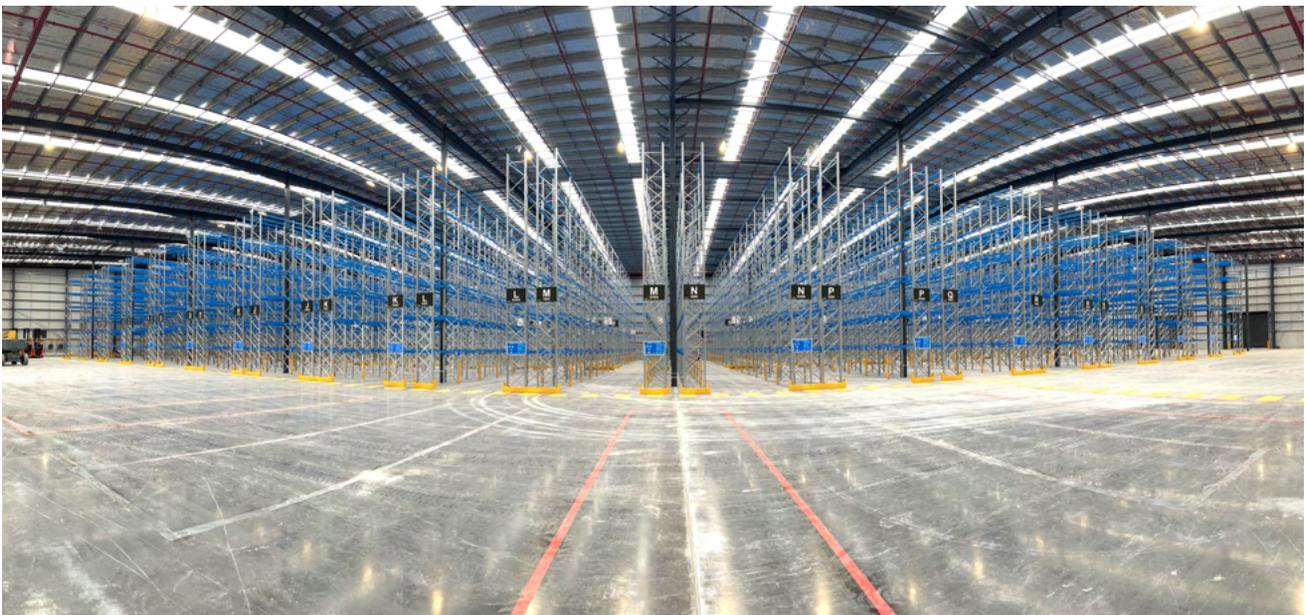
We are committed to engaging with our employees and customers alike to continuously improve our certified management systems throughout our business.



## Standards

A combination of Australian and Global standards and specifications are used by our engineers to design and test our components, connections and systems. These include but are not limited to the following:

- ▶ AS/NZS 4600-2018 Cold Formed Steel Structures
- ▶ AS 4100-2020 Steel Structures
- ▶ AS 4084.1. -2023 & AS 4084.2. -2023 Steel Storage Racking
- ▶ AS/NZS 1170.0-2002 Structural Design Actions
- ▶ FEM 10.2.09 Design of Cantilever Racking - 2017
- ▶ SEMA (Storage Equipment Manufacturers Association) Code of Practice for the Design and Use of Cantilever Racking Systems
- ▶ ANSI MH16.3-2016: Specification For the Design, Testing and Utilisation of Industrial Steel Cantilevered Storage Racks
- ▶ FEM 10.2.07 Design of Drive-In and Drive Through Racking: Design Code - 2012
- ▶ SEMA (Storage Equipment Manufacturers Association) Code of Practice for the Design and Adjustable Pallet Racking
- ▶ ANSI MH16.1-2012: Specification For the Design, Testing and Utilisation of Industrial Steel Storage Racks
- ▶ ASI Industry Guide 2014 - Hand Loaded Shelving
- ▶ SEMA – Code of Practice for the Design of Low Rise Static Steel Shelving
- ▶ SEMA – Shelving Users Guide
- ▶ SEMA/FEM 10.2.06 Design of Static Steel Shelving - 2014



## SELECTIVE PALLET RACKING

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Selective Pallet Racking provides direct access to every pallet. Ideal for storage of stock with a large variation in product lines.

- ▶ An optimal solution for palletised products with a wide variety of SKU's
- ▶ 100% pallet accessibility
- ▶ Various racking configurations can be engineered
- ▶ Accommodates variable pallet heights and sizes
- ▶ Compatible with most material handling equipment
- ▶ Constructed from Australian roll-formed steel
- ▶ Ensures good stock rotation
- ▶ Wide range of accessories available
- ▶ Engineered outdoor applications are also designed by APC



## DOUBLE DEEP PALLET RACKING

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A higher density racking that reduces the number of aisles required and maintains 50 percent pallet accessibility.

- ▶ Guide rails assist pallet operation
- ▶ Ability to store multiple pallets quantities of each product line
- ▶ Suitable for FMCG stock management
- ▶ Adjustable beams to cater for varying pallet heights
- ▶ Various racking configurations can be engineered
- ▶ Requires specific material handling equipment



## RADIOSHUTTLE™ RACKING

Radioshuttle™ racking is a storage system that combines extremely high storage density with improved pallet and pick face access. Operated by a remote controlled satellite.

- ▶ Various racking configurations can be engineered - depths of 42 pallets have been achieved
- ▶ Can store up to 100% more pallets in the same space
- ▶ Solutions available for full or semi-automated warehouses
- ▶ High-density storage
- ▶ Controlled through remote satellite
- ▶ Suitable for FIFO and FILO stock management
- ▶ Enhances operator productivity
- ▶ Suitable to operate in temperatures from -30 to +40 degrees Celsius
- ▶ Eliminates need for operator to enter rack



## DRIVE-IN RACKING

Drive-In Racking is a manual high-density warehouse storage solution.

- ▶ Various racking configurations can be engineered
- ▶ Forklift access inside the racking
- ▶ Pallets are placed on structural rails
- ▶ Suitable to operate in temperatures from -30 to 40 degrees Celsius
- ▶ Suitable for FILO stock management
- ▶ Flare entry rails assist in operator access into racking
- ▶ Up to 70 per cent more storage within the same floor space



## CARTON LIVE STORAGE

Gravity-flow picking storage system for hand-loaded cartons that increases picking speeds and accuracy while reducing floor space consumed.

- ▶ Roller or inclined wheel track system
- ▶ Increases order picking performance
- ▶ Operates on a FIFO or FILO system
- ▶ Reduced congestion as pickers and re-stockers work on separate aisles
- ▶ Various load capacities are configurable
- ▶ Can be integrated into pick to light systems
- ▶ Entry and full-length guides available to separate SKU's
- ▶ Can be integrated into automated solutions



## PALLET LIVE STORAGE

A gravity-flow, high-density storage system that uses specialised wheels or rollers to convey and accumulate pallets within a storage module.

- ▶ Gravity-flow applications usually for higher volume products
- ▶ Predominantly used in manufacturing environments with large volumes of the same SKU.
- ▶ Operates on a FIFO system
- ▶ Reduced congestion as pickers and re-stockers work on separate aisles
- ▶ Various load capacities are configurable
- ▶ Can be used to stage orders for shipment
- ▶ Next pallet automatically presents itself to the pick face



## NARROW AISLE RACKING

Effective racking system for increasing storage by reducing aisle widths, optimising floor space and warehouse height, while still providing direct access to stored products.

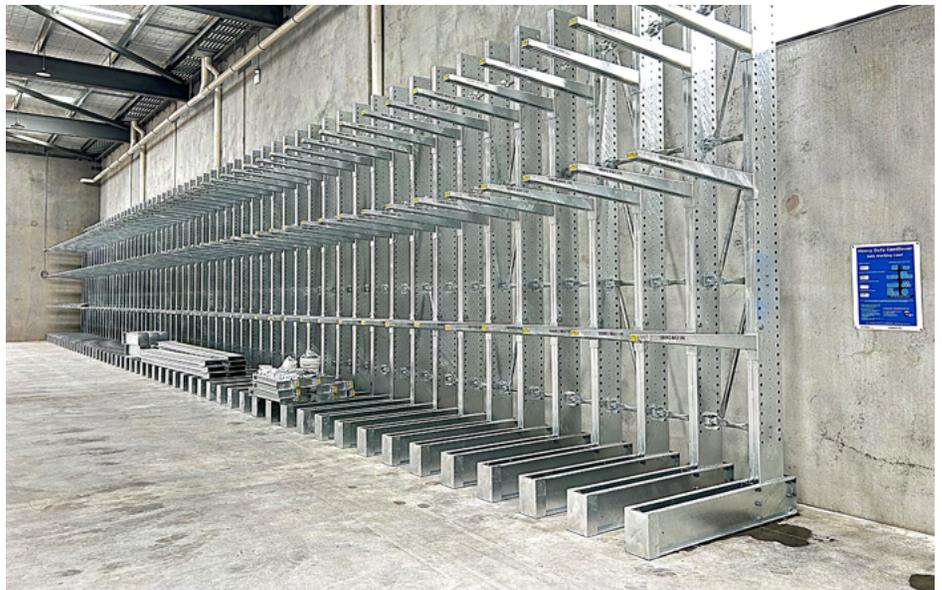
- ▶ Increased storage density due to floor and warehouse height optimisation
- ▶ 100% pallet accessibility
- ▶ Specialised equipment is required
- ▶ Higher tolerance floor load may be required
- ▶ Various racking configurations can be engineered
- ▶ A perfect system if space is limited
- ▶ Can be configured for pallet storage, carton picking and bulky goods
- ▶ Wire-guided and rail-guided options
- ▶ Adjustable beam height for varying stock heights



## CANTILEVER RACKING

Cantilever Racking is designed for the storage of long or irregular loads.

- ▶ Ideal for long, irregular loads such as steel, timber and piping
- ▶ End-stop pins keep loads secure
- ▶ Adjustable arms allow for varying clearance requirements
- ▶ Powder-coated and hot-dipped galvanised finishes available
- ▶ Various racking configurations can be engineered
- ▶ Commonly used in narrow-aisle configurations



## CABLE RACKING

Purpose-built to store cable drums allowing for quick and simple access to the product. It is an easy-to-use system that caters to different sized drums.

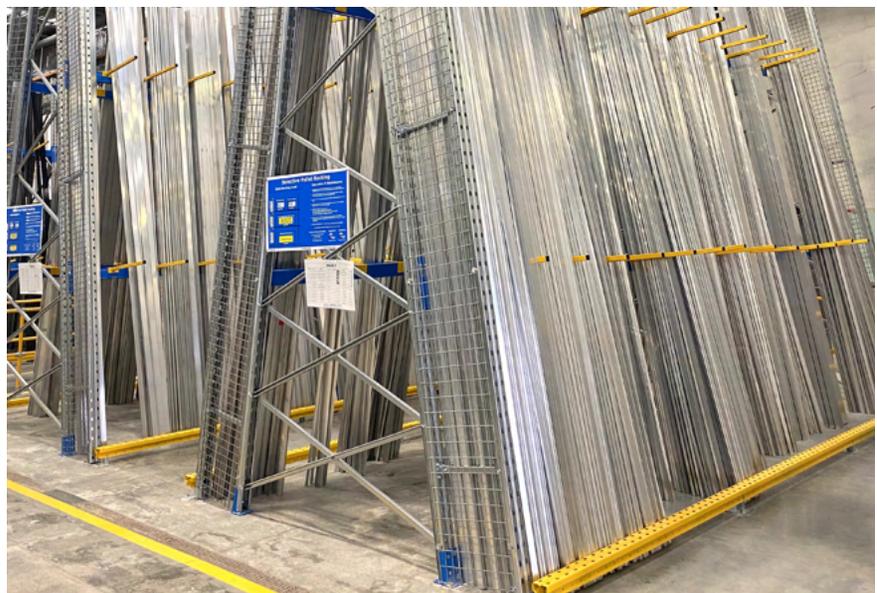
- ▶ Unique safety hook that locks the cable drum in position and prevents accidental dislodgement
- ▶ Various load capacities available
- ▶ Adjustable storage levels
- ▶ 100% coil accessibility
- ▶ Engineered for manual and mechanical de-coiling operations



## VERTICAL STORAGE RACKING

Designed for the vertical storage of products such as piping, timber and extrusions.

- ▶ Easy visual stock control and access to product
- ▶ Stops smaller sections of the product being lost at the back of the unit
- ▶ Typically involves a SKU location divider
- ▶ Fully engineered to accommodate the real horizontal loads



## UNI-SHELF® - STEEL SHELVING

APC Uni-Shelf® is a simple yet versatile storage system that can be easily added to or reconfigured, making it ideal for any growing business.

- ▶ Ideal for small parts picking
- ▶ Shelves can be adjusted in 25mm increments for varying product heights
- ▶ Various shelf load capacities available
- ▶ Can be integrated into multi-tiered structures and zone picking systems
- ▶ Range of accessories to increase storage efficiency and functionality
- ▶ Made from Australian Colorbond® BlueScope Steel
- ▶ Can be converted into mobile shelving (APC AisleSaver®)
- ▶ Compliant with the ASI Industry Guide for Hand Loaded Steel Shelving, Design & Installation and relevant Australian Standards



## UNI-SPAN® - LONGSPAN SHELVING

APC Uni-Span® is a strong and durable storage solution, suited to the storage of large, moderate weight, hand-loaded applications.

- ▶ Ideal for general storage applications
- ▶ Clear display and access to stored items
- ▶ Can be integrated into multi-tiered structures and zone picking systems
- ▶ Shelves can be adjusted in 50mm increments for varying product heights
- ▶ Various shelf load capacities available
- ▶ Shelf inserts are available in particle board, melamine, mesh and galvanised sheet steel
- ▶ Compliant with the ASI Industry Guide for Hand Loaded Steel Shelving, Design & Installation and relevant Australian Standards



## T-SPAN® - STEEL SHELVING

T-Span® shelving is an exceptionally strong and versatile system. With adjustable height shelves and the option to add on extra bays, it is ideal for all your storage needs.

- ▶ Heavy Duty 'T' section uprights
- ▶ 4 shelf levels per shelving unit as standard
- ▶ Shelf heights easily adjustable at 50mm increments
- ▶ Includes shelf position indicators on uprights
- ▶ Sleek, modern, modular design
- ▶ Add-on bays and additional shelf levels also available to purchase separately
- ▶ Up to 400kg shelf capacity uniformly distributed load (UDL)
- ▶ Quality powder coated finish in contemporary, neutral two-tone colours
- ▶ 10-year product warranty - conditions apply



## AISLESAVER® - MOBILE SHELVING

The Aislesaver® range is a mobile shelving solution especially designed to meet all high density storage and filing needs. It is available in hand operated, mechanically assisted and motorised options.

- ▶ Easy to operate and move - compliant with OH&S Standards
- ▶ Maximise storage & filing capacity in limited space
- ▶ Ease of access to all stored items
- ▶ 3 movement options: Ezi-Slide hand operated, Ezi-Drive mechanically assisted and TouchDrive™ motorised.
- ▶ Aluminium track options for low and medium weight requirements.
- ▶ Steel track option for high weight capacity requirements.
- ▶ Australian Made
- ▶ 10 Year Warranty - conditions apply



## RACKING SUPPORTED MEZZANINE

The ultimate system in utilising vertical space, creating multi-tiered levels.

- ▶ Increases usable floor space and storage volume
- ▶ Engineered to meet your exact needs, supported by APC Selective Pallet Racking
- ▶ A free-standing system, so the system can be relocated if needed
- ▶ Compatible with Uni-Shelf® and Uni-Span® Shelving
- ▶ Flooring offered in steel grating or structural timber
- ▶ Fully engineered by APC to meet Australian Standards and Building Code of Australia requirements



## STRUCTURAL MEZZANINE

Fabricated with hot & cold rolled steel sections, these heavy-duty multi-tiered structures are designed and engineered for static and dynamic loads.

- ▶ Optimises building height by creating multi-tiered levels
- ▶ Offers wider spans compared to Racking Supported structures
- ▶ Can be used for additional office space or to increase shelving and rack storage
- ▶ Easily integrated with a range of products such as chutes, conveyors and automated systems
- ▶ Suits various applications including designs required in seismic environments
- ▶ Fully designed and engineered by APC to meet Australian Standards and Building Code of Australia requirements
- ▶ Utilises vertical space above fixed machinery

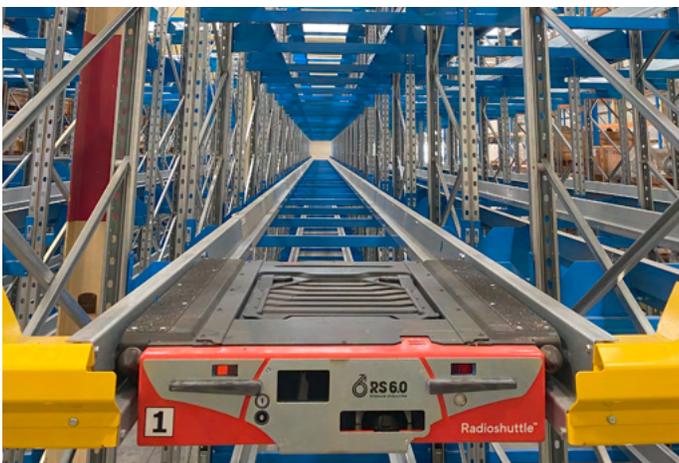
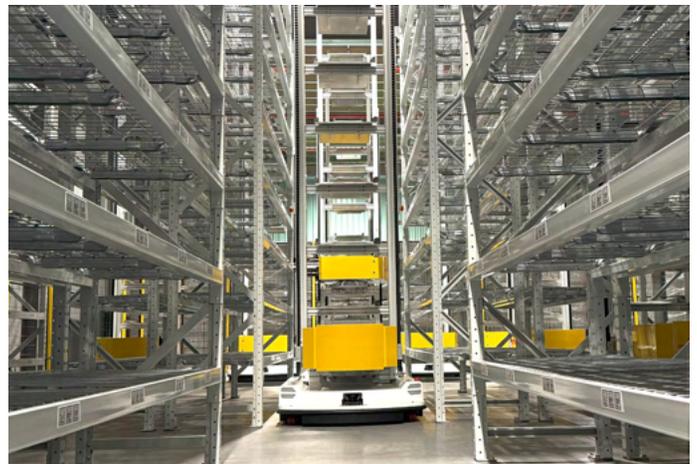


## APC AUTOMATION SOLUTIONS

APC is a leading designer, engineer and supplier in the warehouse automation industry. To ensure we provide our customers with the most scalable, safe and compliant automation solutions, precision engineering is used throughout the design and engineering process to meet the required tolerances.

APC has engineered and delivered a wide range of automated solutions, including:

- ▶ ASRS
- ▶ Mini-Load
- ▶ Radioshuttle™ Racking
- ▶ Conveyor Systems
- ▶ Robotics
- ▶ Mobile Racking
- ▶ Mobile Shelving
- ▶ Carousel & Vertical Lift Modules



## APC RACKING PROTECTION

Keep your warehouse safe with the correct rack protection. See below for a small selection of what is available.



### BodyGuard®

Design that absorb impacts through the guard rather than the upright.



### Angle Guard

Designed to deflect frontal impact whilst minimising loading obstruction.



### Corner Guard

A compact design that protects the upright corners.



### End Frame Barrier

A welded barrier designed to protect aisle ends.



### Pedestrian Railing

A system of traffic management to protect pedestrians, goods and buildings.



### Floor Channels

Elevates racking posts off the warehouse floor to reduce damage from MHE and assist pallet placement.

## APC RACK INSPECTION SERVICES

APC'S Rack Inspection Service has been designed in accordance with the recommended safety guidelines from the Australian standard for Steel Storage Racking (AS4084:2023). The inspection covers all types of static warehouse storage including pallet racking, shelving, cantilever racking and mezzanines.

### Benefits of an APC Rack Inspection:

- ▶ Comprehensive professional inspection
- ▶ Certified and experienced inspectors
- ▶ Inspection and remedial work programmed to suit operations
- ▶ Detailed inspection report
- ▶ Prevention of damage to people or goods
- ▶ Extends the life span of your storage equipment
- ▶ Early risk discovery minimises future repair costs
- ▶ Reduces risk of injury to warehouse staff



## PERSONAL LOCKERS

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APC's Personal Lockers offer a compact and secure personal storage solution. Available in steel, plastic & laminate options.

- ▶ Available in Steel, HPDE, ABS and MR board materials
- ▶ Heavy Duty locker options for busy and high traffic environments
- ▶ Locking options: Key, Padlatch, Combination, Digital, RFID & Coin operated
- ▶ Optional power, USB & wireless outlets internally located – ideal for laptop/tablet/phone lockers
- ▶ Optional Colour customisations available
- ▶ Warranty options range from 5 to 20 years, depending on the product
- ▶ Large size range available (including customisation to your requirements)



## OFFICE STORAGE SOLUTIONS

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APC provides tailored storage systems for libraries, schools, universities, healthcare facilities & corporate offices. The product range includes:

- ▶ Office shelving
- ▶ Mobile shelving units
- ▶ Mobile pedestals
- ▶ Filing cabinets
- ▶ Workstation cabinets
- ▶ Chairs
- ▶ Mobile whiteboards
- ▶ Tambour door cabinets



## WAREHOUSE ACCESSORIES

APC offers a wide range of accessory products to enhance convenience, safety and product performance of your storage solution. See below for a small selection of what is available, for more details get in contact with our sales team.



### High-Density Cabinet

Adaptable high-density storage, ideal for storing tools and small parts.



### Work Benches

Designed and built for durability, simplicity and flexibility for future customisation.



### Work Benches - Customised

Engineered to meet the unique demands of your workspace, offering tailored functionality, durability, and ergonomic design.



### Parts Trays

A simple solution to organise small parts and accessories, designed with a rear lip to allow for clear visual stock control.



### Rack Labelling

Labelling systems that allow the tracking and identification of each pallet location within a warehouse.



### Pallet Cages

With various designs available, APC's cages offer a space-saving and cost efficient warehouse storage system.



### Gates

APC's range of gates provides efficient yet safe access to all users especially during loading and unloading of goods.



### Mesh Decks

Mesh Decking is integrated into the pallet racking for split case inventory, non-uniform pallet sizes as well as fire code requirements in buildings.



### Vertical Lift Modules (VLM)

VLMs are designed to save space, maximise sorting accuracy and productivity, while automatically filling orders and managing inventories.

## PROJECT DETAILS

**Application:** Mine sites (eg: iron ore, gold, nickel, oil & gas)  
**Locations:** Australia, Africa (Ghana, Senegal, Côte d'Ivoire)

### BRIEF

APC Storage Technology is widely regarded as the industry leader in racking and storage solutions for mining, oil, and gas operations. This is thanks to its engineering expertise, compliance focus, and ability to deliver robust systems for demanding environments. APC has demonstrated proven leadership in project execution as well as supplying heavy duty solutions that are tailored for remote and hazardous environments, where durability and compliance are critical. These products are also designed for extreme outdoor cyclone zones.

### SOLUTION

APC deploys its combination storage systems approach to this important sector of the Australian economy. Mining operations deal with large, heavy and often hazardous parts, plus critical spares that can halt production if unavailable. This highlights the critical importance of the correct storage medium being applied underpinned by sound product slotting mechanisms and ensures the following:

#### **Reduced Travel Time & Faster Picking**

High-demand items (e.g., drill bits, safety gear) are placed near dispatch zones, minimising picker travel and improving response times for urgent maintenance needs.

#### **Improved Space Utilisation**

Mining warehouses often face space constraints at remote sites. Slotting maximizes cube utilisation, allowing more inventory without expanding the footprint.

#### **Enhanced Safety & Ergonomics**

Heavy components are slotted at floor level to reduce lifting injuries, while hazardous materials are placed in designated zones to comply with safety regulations.

#### **Lower Operational Costs**

Travel time can account for up to 50% of picking labor. Optimised slotting reduces this, cutting labour costs and improving throughput.

#### **Better Inventory Accuracy & Reduced Downtime**

Logical grouping of SKUs prevents mispicks and ensures critical spares are always accessible, reducing equipment downtime - a major cost driver in mining.

Another strong feature of APC's turn-key service is its project management which is underpinned by our ISO accreditations where we manage & execute the multiple disciplines of design, engineering, fabrication and on-site construction. Our accreditation to AS/NZ 4801:2001 and ISO 45001:2018 Occupational Health & Safety Management Systems also ensures we implement the strongest levels of OHS on all sites that we operate on.



Storage Cabinets Incorporated into Racking



Multi-Tiered Structures



Cyclone Rated Outdoor Racking

## PROJECT DETAILS

**Client: National Electronics Retailer**

### BRIEF

Unprecedented sales increases saw our client - a national electronics retailer - outgrowing their existing facility. They needed a custom-built distribution centre that could accommodate aggressive expansion while maximising product turnover, picking efficiency and storage capacity.

### SOLUTION

APC utilised its Product Realisation & Planning process (part of our ISO9001:2008 accredited quality management system) to develop a complex multi-level solution.

A critical challenge was coordinating installation to avoid clashing with other builders and trades on site. APC developed a special build sequence to keep the project on schedule with minimum disruption.

Through extensive consultation, APC analysed our client's operational data, including SKU profiles, invoices per month, lines picked per bay, inbound container activity and cartons dispatched per month.

This data-driven approach created a solution tailored to their specific operational requirements, while building in capacity for future growth.

Installation began with racking inside the mezzanine area, followed by the structural mezzanine itself. Narrow aisle pallet racking was installed while top hats and purlins were added to the structural floor.

Finally, grating, shelving, conveyor systems, carton live storage and racking protection completed the installation.

The entire solution was designed to meet the Building Code of Australia and relevant Australian Standards, complete with APC's engineering certificates of compliance.

The new distribution centre provided our client with a sophisticated, integrated storage system that dramatically improved operational efficiency and storage capacity. The multi-level design maximised available space, while the combination of picking modules, powered conveyors and bulk storage streamlined warehouse operations.



## PROJECT DETAILS

**Client: National Food & Beverage Company**

### BRIEF

Our client is the third-largest Food & Beverage company globally. The production facility feeds directly into their warehouse for storage before distribution. Half of their existing warehouse was taken up by Selective Pallet Racking, with the other half being used as block stacks of pallets 2-3 high.

They were eager to explore options to use the best practice and the latest technology to maximise their storage capacity of the existing warehouse. This would remove their need for off site storage, increase warehouse efficiency and reduce the risk of damage to the product from double and triple stacking on the floor.

In investigating their options the APC Storage Technology Radioshuttle™ was highlighted as having

been an effective solution for their NZ facilities and as a great option for the Brisbane warehouse.

### SOLUTION

With a target to maximize the pallet storage capacity in the available footprint, APC set to work with our local team on the ground and the design and engineering team to optimise the layout by carefully measuring the existing site and locating the finished layout in the optimum location of the warehouse. The team also analysed the data on product lines and forklift travel times through the process from leaving production to dispatch to ensure that the storage volumes and pick faces were maximised.

The solution proposed by APC was for 12 sections of 7 lanes by 32 pallets deep and 6 pallets high of Radioshuttle Racking with a total capacity of just over 16,000 pallet locations using 8 Radioshuttles. The rack was designed to a depth of 32 Pallets to provide maximum density for best use of the footprint and taking into account the goods inwards from production and outbound to dispatch and 6 pallets high to best utilise the available height in the warehouse. Installation of the racking system required a large amount of coordination. As this was an existing warehouse, the install needed to be completed in a prompt timeline with a progressive hand over so there would be minimum disruption to normal operations which were further complicated by the COVID-19 global pandemic.

APC was able to work closely with the clients team to set up an efficient and safe installation while keeping all staff on site protected.

The Radioshuttle is renowned for being the most reliable and robust product in its category, with unmatched longevity. Some APC clients have been successfully operating their Radioshuttles for 25+ years in harsh sub-zero temperature freezers (as low as -30 deg C), amongst other storage environments.



## PROJECT DETAILS

**Client: National Tech Equipment Retailer**

### BRIEF

A leading Australian tech equipment retailer required high-density racking infrastructure for their new Sydney Distribution Centre (DC). The facility needed specialised racking to support both automated pallet and tote storage systems within a 25.5 metre high building, as well as provide capacity for future storage growth.

### SOLUTION

APC engineered, supplied and installed specialised racking infrastructure for two automated storage and retrieval systems (ASRS):

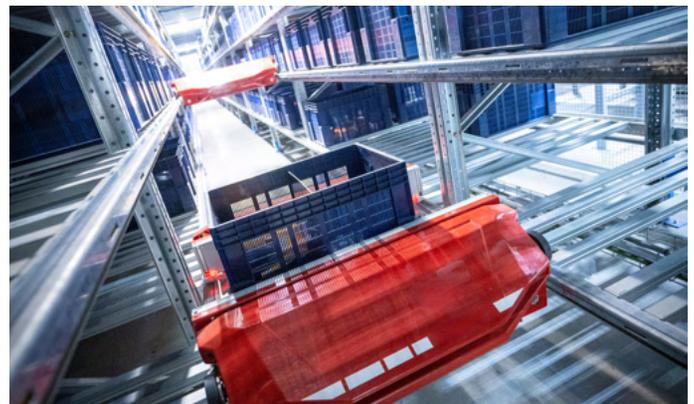
**ASRS Pallet Racking** - APC designed high-density racking for 20,000 pallet locations with 7-deep storage capacity, significantly exceeding conventional 1 or 2-deep configurations.

The racking was engineered to precise tolerances required for automated crane operations, with heavy-duty structural components to accommodate dynamic loading conditions.

**ASRS Tote Racking** - APC also supplied racking infrastructure for 24,000 tote storage locations serviced by automated shuttle systems. The racking was designed with precise beam spacing and tight tolerances to ensure smooth shuttle operation across all storage levels.

All racking systems were designed and certified to Australian Standards, with comprehensive structural engineering for floor loading, seismic conditions and automated equipment integration.

APC worked closely with the automation integrator to ensure perfect alignment between racking infrastructure and handling equipment.



## PROJECT DETAILS

### BRIEF

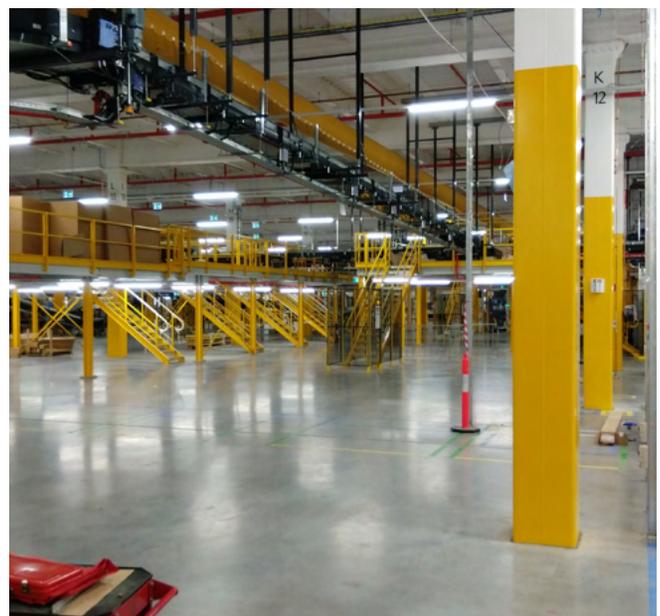
This project was for a global ecommerce brand. The site is located near the Western Sydney Aerotropolis, and the 200,000 square metre facility is the largest fulfilment centre built in Australia. It has the ability to operate 24/7 and is expected to create more than 2000 jobs, thus contributing to local workforce development and provide skilled employment in areas like robotics, logistics and supply chain.

The centre incorporates the latest robotics systems designed, manufactured and installed by APC's Integration Partner, the first time they were deployed in the southern hemisphere.

### SOLUTION

APC was selected to engineer and design over 35 different structural steel platforms and associated access systems to integrate with intricate conveyer and robotics equipment. The following elements provide a snapshot of the project:

- Detailed Engineered Structural Steel Platforms and Access Systems
- Over 600 tonne of steel, 6000m<sup>2</sup> of grating and engineered flooring
- Steel member selection had to consider special fire requirements
- Supporting sophisticated and efficient conveyor sortation systems solutions
- Structures ranging in height from 3m to 16m
- All components comply with relevant BCA and Australian Standards, including specific requirements for stairs, step-overs, vertical ladders and caged ladders
- APC supplied its unique guardrail design that provides flexibility for conveyer install/penetrations as well as allow for mesh screening to be fitted in robot cell areas
- Various portal open steel structures were also supplied
- Additional special chute structures were installed by APC
- APC was integral to the planning & co-ordination of the installation of 20m high Spiral Conveyors
- Bespoke paint selection was adopted



## PROJECT DETAILS

**Client: Automotive Wholesale Distributor**

### BRIEF

Our client - a state-wide automotive wholesaler - had outgrown their existing facility and needed to build a new facility for their parts business. The new purpose-built facility was planned to be three times the size of the previous operation, and would be equipped with the latest material handling technology, including advanced automation.

### SOLUTION

APC was selected to design, engineer, manufacture and install Structural Steel Platforms (Goods to Person), a 3-Tier Racking Mezzanine Structure including two 10m high goods lifts, as well as a vast pallet storage & accessory laden rack structure (this alone houses over 22,000 locations).

All structures were meticulously engineered for design & compliance requirements and detailed to integrate into the many automation & building elements. Project management was a key factor to the success of the project involving daily liaison with automation, building and principal project management teams.

#### ***A few fun facts:***

- Total weight of steel used: 470,000 kgs
- Total load carry capacity of Racks: 8,642,060 kgs
- Number of installers: In total, there were 113 different people working on-site involved with the installation of APC structures
- Number of design personnel involved: 4 engineers, 2 R&D technicians and 3 drafters
- Total quantity of bolts used: 65,000
- Some of the racking frames can support the weight of 17 mid-sized family cars



## PROJECT DETAILS

### BRIEF

Three of the oldest, most reputable NSW museums collaborated to share facilities to store, protect and display the items under their possession.

Hundreds of thousands of items needed to be stored and displayed on each of the buildings' three floors, sized at over 3000 square metres.

Items covered zoological and biological specimens, and man-made artifacts from ancient and contemporary history. A lot of these items were very fragile and expensive.

### SOLUTION

APC's solution was designed to not just store items, but to help preserve and protect them too. Installation was carried out on all three floors simultaneously. A combination of APC Aislesaver, Uni-Span Long Span Shelving, Pallet Racking, Cantilever Racking, and Coolroom Shelving were incorporated as part of the full storage solution, which required thousands of customised drawers and trays; and hundreds of lineal meters of mobile and fixed shelving.

APC was successful with the roll-out of this massive, once-in-a-lifetime project. All three museums, the architects and builders were satisfied the vision was realised. The project remained within budget constraints and clear communication was maintained at all times between the relevant stakeholders. The Australian public now have a great facility where they can view the wonderful, rare collection of artifacts.





Storage Technology

**Do you need help planning  
a project?  
Contact us today!**

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