



# Airmaster Automation //

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Energy Efficient IoT Solutions

# About Airmaster Automation //

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Airmaster Automation is an independent, open protocol provider offering turnkey IoT and cloud-based building network solutions. We deploy these solutions in building management systems across a wide range of property types.

Airmaster is Australia's first authorised Tridium Systems Integrator & Developer. Tridium is the most commonly used vendor-independent BMS in the world, and enables entire buildings to constantly improve operation, efficiency and innovation by consolidating multiple systems into a single platform.

Airmaster Automation solutions are delivered Australia-wide. Our expert local teams are backed up by a national support team of product and engineering specialists.

# Our Services & Solutions

With the right automation solution, efficiency is just the **beginning //**



The Airmaster solution combines flexibility, technology and industry leading serviceability with each system delivered without any restrictions, limitations or hooks.

This results in a cost effective, energy efficient and environmentally friendly automation solution helping our customers meet sustainability objectives, Green Star and NABERS rating targets.

## Customised Solutions

Our in-house software development team gives us an ability to design according to existing infrastructure, giving rise to very few limitations.

## IOT & Integration Services

We work closely with our client's IT departments and building applications to deliver interoperability. Power, Gas and Water metering solutions are integrated into the BMS and data delivery to cloud based services.

## Technology Upgrades

We are specialists in migrating old legacy or proprietary BMS to new open platforms, providing the client flexibility whilst ensuring their building is future proof for IoT services.

## BMS Maintenance & Service

Our solutions are supported by a 24 hour service support team, with both planned maintenance and cloud based analytics services provided.

## Retrofits

Airmaster Automation are specialists in BMS retrofit projects and work closely with Facilities Manager's to ensure minimal business disruption and ensures tenant comfort.

## Energy Efficiency

By continually working with sustainability departments and consultants, Airmaster Automation delivers solutions and optimisation strategies that improve building performance with a fast payback and ROI.

# Our Partners & Technology Integrations

Our factory-trained Controls and Automation team are able to redefine what is possible when integrating disparate technologies in buildings. These technologies enable entire buildings to constantly improve operation, efficiency and innovation by consolidating multiple systems into a single platform.

Airmaster has partnered with the world's industry-leading BMS Integrators and Technologies to offer our customers a comprehensive range of solutions that are fully customisable with an energy efficient approach.



# TRIDIUM

**"Tridium's Niagara Framework** is a truly open environment that harnesses the power of the Internet of Things in ways never before imagined or possible"



Tridium's Niagara Framework has fundamentally changed the way devices and systems connect to people – and the ways people can control and optimise those machines.

With nearly half a million instances worldwide, Niagara is quickly becoming the operating system of the Internet of Things. Niagara enables you to connect and control devices, while normalising, visualising and analysing data from nearly anywhere or anything.

From buildings and data centres to manufacturing systems and smart cities, the Niagara Framework improves strategic decision-making, allowing for optimised performance and cost reductions that can help businesses be more competitive and more profitable.



Plant Performance Monitoring

Plant Diagnostics and Reporting

Plant Optimisation

HVAC Control

Lighting Control

Energy Monitoring & Control

Plant Measurement and Verification

Plant Control and Automation

Plant Continuous Commissioning and Tuning

Critical Power & Cooling

Electrical Distribution

Renewable Energies



Airmaster is the exclusive Australian distributor of the award-winning PlantPRO Plant Room Optimisation Solution. Design and developed in Australia, PlantPRO provides control of the chiller plant system in a way that delivers efficiencies beyond that of the individual components.

Using feedback from its on-board real time analytics, diagnostics, measurement and verification systems, PlantPRO has the ability to continually readjust the chiller plant for optimal performance.

PlantPRO was named Product of the Year at the 2015 AIRAH Awards, and was awarded Energy Savings Solution Product of the Year at the 2017 Control Trends Awards.

Airmaster Automation are a Schneider Electric trained and certified EcoXpert, ensuring best in-class technologies, all-in-one solutions and services, integrated lighting control and power metering solutions. As an EcoXpert, Airmaster can deliver a professional analysis of your building's energy situation and offer tested, validated, and documented solutions that meet your needs and investment capabilities.



## Myer Chadstone, Melbourne //

Located in the south-east of Melbourne, Chadstone – The Fashion Capital – is Australia's largest shopping centre and a world-renowned fashion and entertainment destination for local and international visitors. Chadstone is home to 550 stores, including major retail department store Myer, which occupies a three-level tenancy within the centre.

### The Challenge //

Like all retailers, energy is among Myer's highest business costs and the energy consumed to maintain comfortable indoor conditions within its large retail tenancies remains a major focus.

### The Solution //

Having enjoyed a long and successful association with Myer, Airmaster Australia has embarked on several energy efficiency projects at Myer stores around Australia including upgrades to building management systems (BMS) and mechanical services HVAC equipment.

In 2017, Myer Chadstone was selected by Airmaster as the site for a Pilot Program to measure and verify the energy efficiency benefits of variable speed

drives (VSDs) installed to the store's existing air handling plant. Having recently undergone an upgrade of its BMS, it was determined that this location would provide the most accurate collection of high level input (HLI) energy data to measure and verify the pilot program.

### The Results //

In the twelve month period of evaluation (June 2017 – June 2018), following the installation of the VSDs to the existing AHUs at Myer Chadstone, energy savings of 71%, or 487,712kWh/annum were recorded.

## Brisbane Club Tower, Brisbane //

Completed in 1988, the commercial office tower at 241 Adelaide Street in Brisbane – commonly known as the Brisbane Club Tower – features 20 levels of contemporary B Grade commercial office space as well as foyers on the ground and first levels, retail tenancies and basement car parking over four levels.

### The Challenge //

Over its 30 year life, the building has seen several Building Management Systems (BMS) implemented.

To ensure the ongoing satisfaction and comfort of occupants and visitors, a decision was made by the leaseholder, Australian Unity, to upgrade the BMS to the latest, non-proprietary Tridium Niagara 4 platform.

### The Solution //

With decades of experience in the retrofit of controls systems and strategies in existing buildings, Airmaster's Queensland automation team worked seamlessly with the support of the Airmaster projects team to deliver the solution while the building remained fully operational. The Tridium Niagara 4 platform is a proven, reliable solution with

open protocol standards, no lock-in licensing or software agreements, and allowed for BACnet and Modbus protocols to be integrated into all facets of the platform, throughout the building.

### The Results //

Since the completion of the BMS upgrade, the 30-year old Brisbane Club Tower now operates using 20% less energy month-to-month compared to previous years.

Additionally, the building's management team are now in control of a stable and reliable BMS that offers greater flexibility. The project offers a Return on Investment (ROI) of less than four years.

## Innovation Place, Sydney //

PlantPRO uses the latest "smart" technology available to provide optimised control, trending, diagnostics, and reporting for Central Air Conditioning Plant. PlantPRO provides significantly greater control flexibility as well as the tools to operate and maintain the plant in the best possible optimised condition; and delivers measurable energy savings.

### The Challenge //

Innovation Place is a 23-storey A-grade commercial office building located in North Sydney. It has been designed to a five-star base building Australian Building Greenhouse Rating and as such has a strong focus on energy efficiency and sustainability.

PlantPRO was installed at this site to both optimise the operation of the central plant and to provide advanced measurement and reporting capabilities to the building.

### The Solution //

Control strategies included active lift optimisation through a combination of chilled water and

condenser water reset, which was further enhanced with variable speed primary pumping control. In addition to this, optimised chiller sequencing was employed to ensure the best fit chiller was always sequenced for the given building load.

### The Results //

Plant energy consumption compared to normalised baseline data has improved significantly since PlantPro was fully tuned in September 2013, with an improvement of 10.9% over baseline readings.

## 100 Queen Street, Melbourne //

100 Queen Street is an iconic commercial office building in the heart of Melbourne's commercial and financial district. As one of the flagship corporate bases of ANZ, 100 Queen Street comprises 37 floors and was constructed in 1993 to complement the restoration of the heritage-listed former Melbourne Stock Exchange and ES&A Bank buildings.

### The Challenge //

The HVAC systems at 100 Queen Street employ four chillers with a total capacity of 5,090kW as well as corresponding water pumps totalling over 200kW. The cooling tower fans have a total of 29kW. Airmaster have been conducting HVAC service and maintenance at 100 Queen Street on behalf of JLL, ANZ's Integrated Facilities Management partner since 2006.

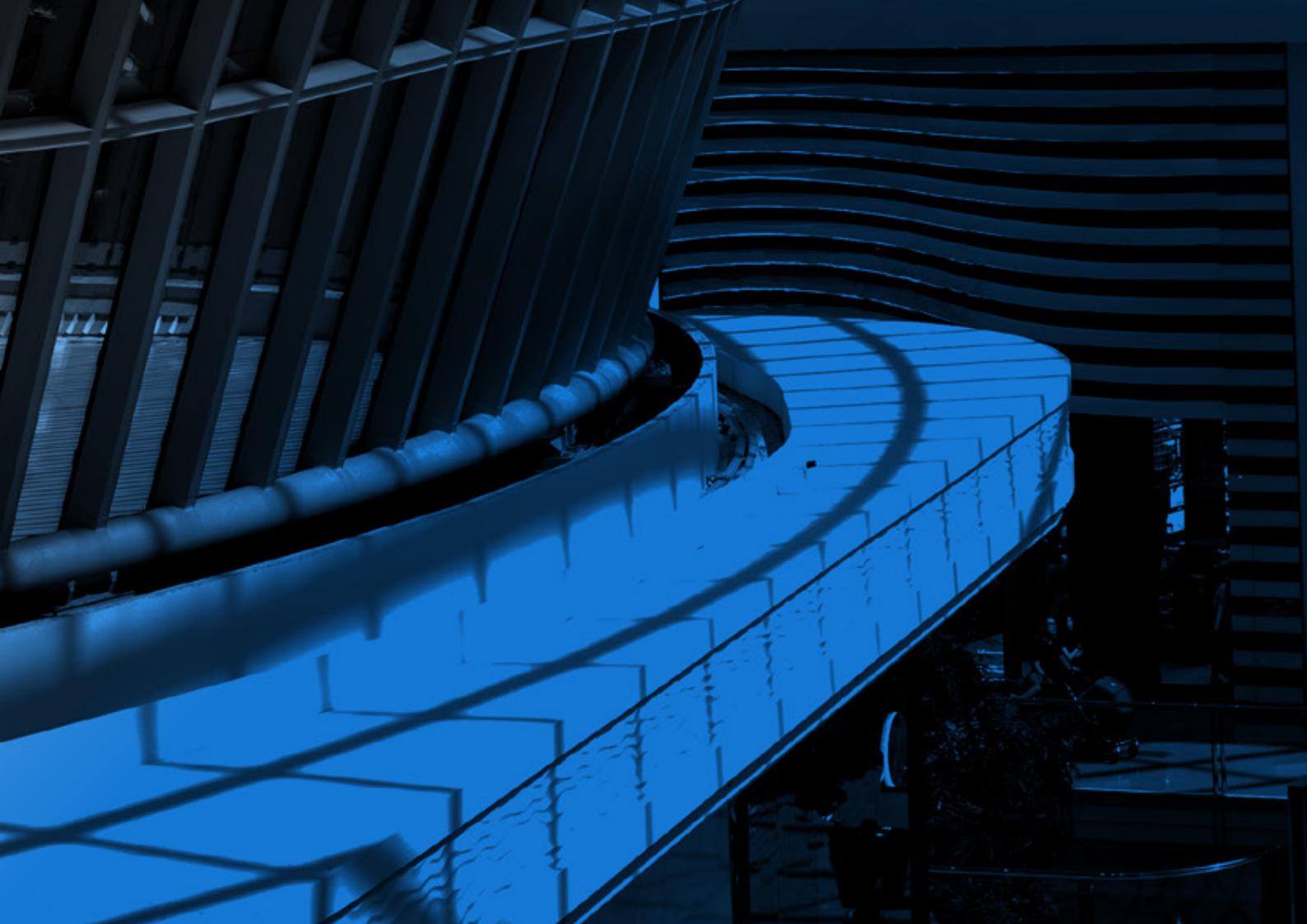
Continued identification of energy reduction initiatives resulted in the recommendation of plant room optimisation solution PlantPRO to complement further efficiencies through planned chiller replacement works.

### The Solution //

In December 2014, PlantPRO was installed and commissioned at 100 Queen Street, taking over control of the existing four chillers and associated pumps. Energy consumption was then monitored and compared to baseline energy consumption based on the previous year.

### The Results //

Since PlantPRO integration in December 2014, an average monthly saving of 29.7%\* was achieved in 2015 (when compared to 2014). The installation of the two new chillers has further increased efficiency to date in 2016.



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