VAE GROUP

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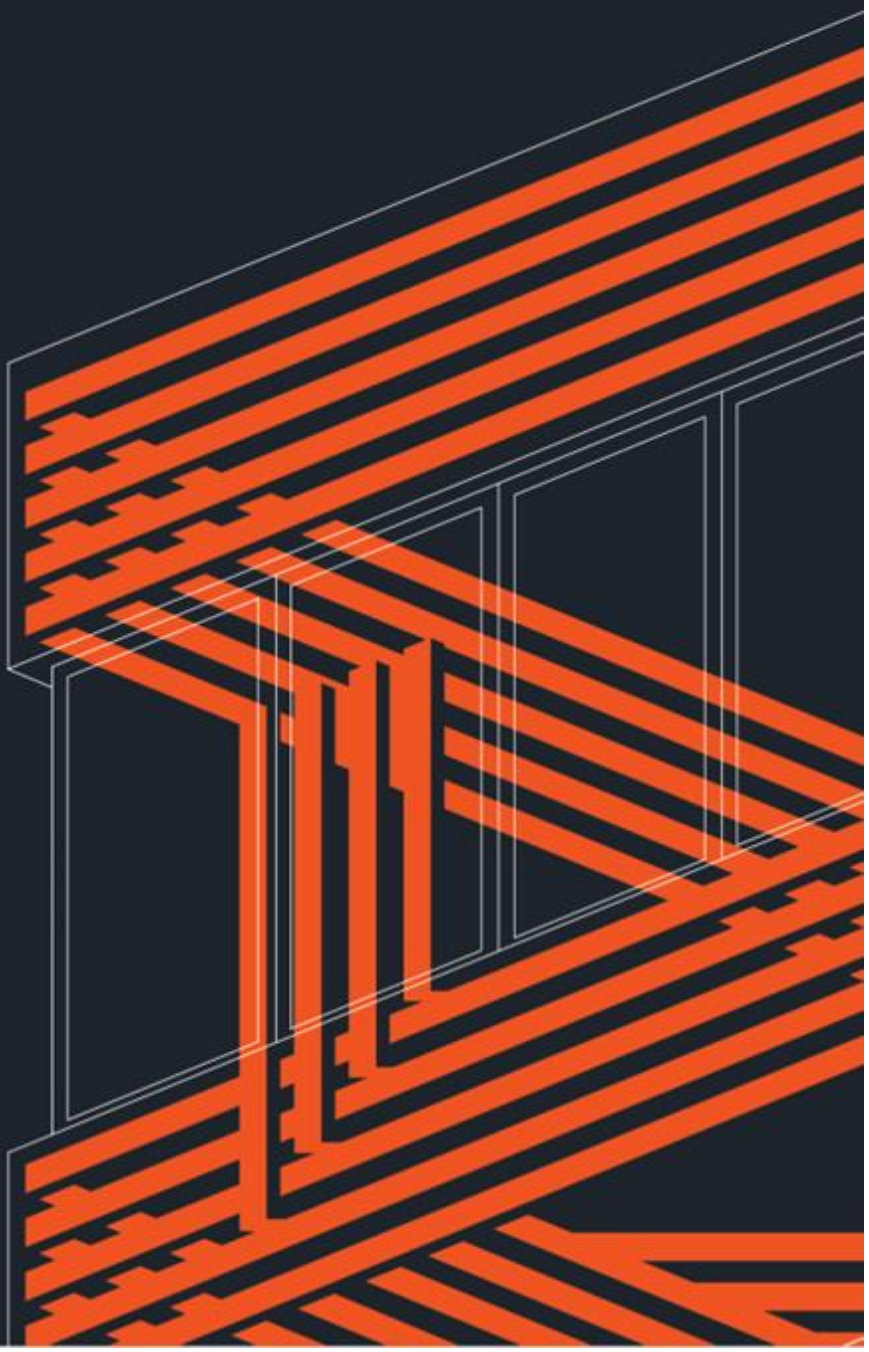

VAE Technology Department

Master Systems Integrator (MSI), Integrated Building Platform (IBP) & Technology Solutions Case Studies

Revision 3

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1. Case Studies

1.1. Our Enterprise System Expertise

As a Master System Integrator (MSI), we work with clients and product partners to develop various size and types of best in class, progressive integration systems, whilst keeping the future in mind.

The following case studies are a representation of some of the projects we have delivered as a technology solutions provider.

1.2. Case Study 1

1.2.1. 80 Ann Street Brisbane

80 Ann Street, recently named by the anchor tenant, Suncorp, as Heritage Lanes, is a 35 level, approximately 60,000 square metre premium office building in Brisbane's CBD with dual frontage to Turbot and Ann Street.

VAE Technology was engaged directly by Mirvac to deliver an Integrated Building Platform to overarch all other building services. VAE has also been engaged by the tenant for the integrated tenancy fit out for Suncorp and ADG with particular attention paid to user experience.

- MSI design
- Technical review of subsystems compliance with MSI Scope of works
- FAT, SAT testing and point to point verification of sub system read/write operation
- Coordination of integration with 23 Sub System contractors, including HVAC
- Integration of approximately 150,000 points into a single platform based on Tridium Niagara 4
- Development of graphics to monitor and control all services from a single web-based system
- Tenant portal for after-hours requests
- Ongoing Building tuning
- Design, supply and implementation of a redundant server cluster
- Management of site wide ICN package.

Client: Mirvac

Consultant: ARUP

1.3. Case Study 2

1.3.1. QQT

Quay Quarter Tower (QQT) was redeveloped of the back of Australia's first high rise development, which transformed the existing building into new start of the art design. The redevelopment commenced in 2018 completed in 2022 and resulted in a 88,000+ NLA building which comprises of 2,000 sqm floor plates.

QQT overlooks the Sydney harbor and surrounding circular quay precinct.

VAE was engaged to connect 30 base building subsystems into a single platform based on Tridium Niagara 4.

The QQT project involved:

- Integration of (now) 30 different unique subsystems and 10 separate tenant HVAC systems
- Creation of an on-prem active directory used for SSO into all on-prem subsystems expanded to engage an external Azure AD mediator to allow off-prem SSO to cloud repositories and tenant ADs
- Develop of 5 separated and unique centralised graphical user interfaces for the AMPC teams
- Development of separated and unique centralised graphical user interfaces for all tenants on site (10), including retailers, with full control of their own integrated systems including blinds, lighting, and HVAC
- Allowance of 3x different methods of data acquisition through SQL, MQTT, and Haystack
- Development of interactive precinct awareness for CCTV tracking of faults including recorded footage and interactive standard operating procedures

Client: AMP Capital

Consultant: ARUP

1.4. Case Study 3

1.4.1. Moreton Bay Regional Council

Moreton Bay Regional Council (MBRC) is the third largest local government area in Australia with a size of 2,037 sq. km. Established in 2008, it replaces three established local government areas; the City of Redcliffe, the Shires of Pine Rivers and Caboolture.

VAE was engaged in late 2015 to connect 20 buildings into a single platform based on Tridium Niagara 4.

The MBRC project involved:

- Integration of 5 different HVAC control systems
- Integration of 2 different Industrial control systems
- Integration of a Room Booking system
- Integration of over 850 pieces of equipment spread geographically across the Moreton Bay Region
- Co-ordination with council IT department to deploy platform within the council data centre, using existing network infrastructure
- Run several UX workshops with council staff to develop a customized user interface for managing all assets connected into the platform
- Semantic modelling of all data and connectivity into the on-site analytics (SkySpark) system
- Development of over 35 analytic rules within SkySpark, tailored to assist council asset management KPIs

Client: Moreton Bay Regional Council

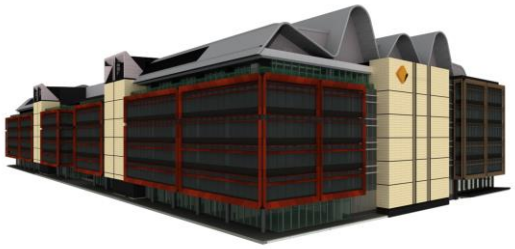
Consultant: IBMS

1.5. Case Study 4

1.5.1. Australian Technology Park (Buildings 1, 2, 3 and Precinct)

The redevelopment of South Eveleigh (ATP) precinct commenced in January 2016 and will include the delivery of three new buildings for commercial, retail, and community purposes, as well as landscaping and public domain improvements to ensure that South Eveleigh connects to the wider precinct and local community.

VAE was engaged by Mirvac to deliver an Integrated Building Platform to overarch all other building services within the prescient of buildings. This was an independent contract to the BMS, making it an Australian first project of its nature not only technically but contractually.



The ATP Building 1 project involved:

- Coordination of integration with 10 trade service contractors, including HVAC
- Integration of approximately 130,000 points into a single platform based on Tridium Niagara 4
- Custom development of a streaming video driver for CCTV
- Development of graphics to monitor and control all services from a single web-based system
- Design, supply and implementation of a redundant server cluster
- Semantic modelling of all data and connectivity into the off-site analytics (SkySpark) system
- Tenant portal for after-hours requests

Based on VAE's performance through Building 1 we were additionally awarded Buildings 2, 3 and Precinct for similar engagement.

Client: Mirvac
Consultant: ARUP

1.6. Case Study 5

1.6.1. Macquarie Park (Building C)

Development of the multi-building complex located at the centre of Macquarie Park's commercial precinct started in 2017. Building C is a 35,000 sqm, nine level, 5 Star Green Star rated office tower due for completion in Q4 2019.

VAE has been engaged directly by John Holland Group to deliver the Master Systems Integration (MSI), Control Systems Integration (CSI) and Network Systems Integration (NSI) scopes of this project.

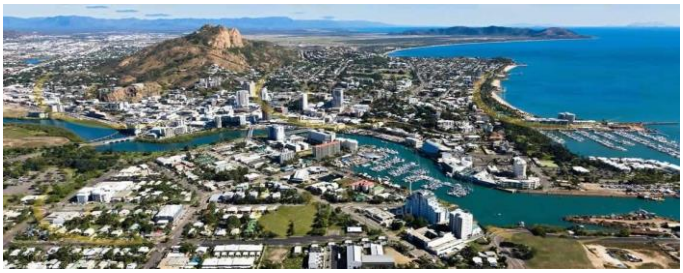
The Macquarie Park Building C project will involve:

- Coordination of integration with 21 trade service contractors, including HVAC
- Integration of approximately 80,000 points into a single platform based on Tridium Niagara 4
- Custom development of a driver for Legrand cloud-based Emergency lighting system
- Custom integration of various REST API services
- Conformance to a strict data logging policy
- Custom development of a distributed data flow architecture based on MQTT protocol
- Design, supply and implementation of a redundant server cluster
- Semantic modelling of all data to allow connectivity to a future systems

Client: John Holland Group
Consultant: Meld Strategies

1.7. Case Study 6

1.7.1. Townsville City Council



- Consulted to council IT staff to develop BEMS (Building Energy Management System) Layer 2 network dedicated for building services connectivity and data sharing.
- Hybrid cloud/on-premises network architecture to facilitate data collection and web platform access.
- Configuration and management of cloud server (via Amazon Web Services) with dedicated tunnel into council network.
- Configuration and management of Niagara 4 supervisor with building services connectivity for:
    - 7 BACnet networks
    - 11 Niagara (Tridium) networks
    - 4 Proprietary integrations
    - 1 SNMP network
- Standardised HTML 5 BMS Graphics developed across portfolio of buildings.
- Data collection and Dashboard Visualisation using Bitpool.
- Custom software development for Bills Manager.
    - Import bills from cbill export
    - Allow manual entry of paper bills
    - Aggregation and analytics of bills across 500+ accounts
- Custom report development.
    - Using bills data
    - Using BEMS data
    - PDF generation
    - Email scheduling
- Haystack compliance, tagging points via Niagara 4.

Client: Townsville City Council
Consultant: VAE

1.8. Case Study 7

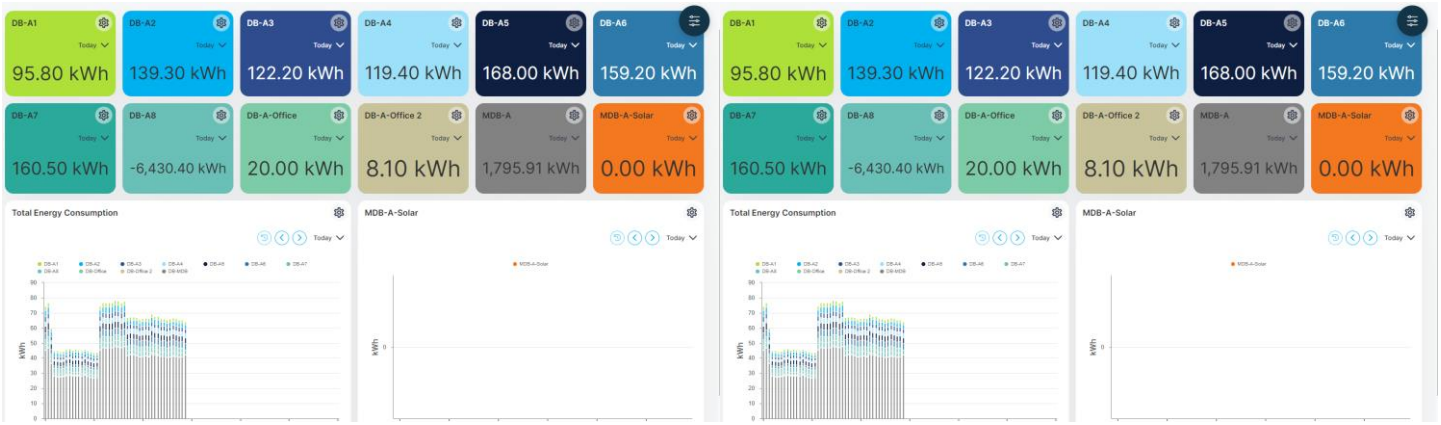
1.8.1. Remote Energy Monitoring Solution

VAE Technology with our product partner Bitpool have provided various forms of energy monitoring systems, in particular, a remote energy monitoring solution for industrial buildings & portfolios.

Through installation of remote energy monitoring stations in buildings these have enabled our various clients to seamlessly view the consumption of their buildings within their portfolios in real time.

Below are some key points which encompass details from the delivery of these projects:

- Coordination of the integration of multiple sites and associated buildings
- Installation of Bitpool remote monitoring panels to suit each site & their remote energy metering requirements
- Validation of local energy metering consumption to ingested points
- Provide a cloud-based remote energy monitoring platform with the use of Bitpool cloud
- Web based graphical visualisation and reporting across sites & portfolios



Based on VAE's performance through the delivery of these projects ongoing panels have continued to be installed through our client's portfolio of buildings.

Clients: LOGOS Property, Frasers Property Australia & Goodman Group