

ECENTRAL TOWER

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Introduction

At Norman Disney & Young (NDY), we bring considerable global experience in identifying opportunities for new possibilities and delivering innovative and reliable technology solutions to meet your business goals and objectives.

Our ICT and Audio Visual Design Consultants carry certifications from the peak Global Audio Visual body, AudioVisual and Inergrated Experience Association (AVIXA) as Certified Technology Specialists 'CTS'. Our people also include members of Standards Australia and AVIXA Standards Committee who use their technical expertise to develop Australian and International IT Standards. This enables our team to continue to be at the forefront of leading thinking on delivering innovative and industry best-practice technology solutions around the globe.

We work effectively with project teams to develop trust and a strong working relationship. Our team is highly experienced at working with our clients' decision-making culture. By initially understanding our clients' baseline levels and productivity, we are able to work with them to establish a strategic roadmap and broader policies around working practices in order to take full advantage of technology innovation.

We are dedicated in providing innovative, ecological and sustainable design solutions in close coordination with our clients' requirements. Our team is nationally coordinated enabling each project to form a cornerstone for the next. Our design philosophy is one of full life cycle, future flexibility and suitability of technology solutions and our track record of delivering cost effectiveness.







Audio Visual Capability Statement Norman Disney & Young, A Tetra Tech Company

What we do

As consulting engineers, our purpose is making spaces work. We listen to the unique requirements of each client, and tailor our services accordingly to every project.

Our collaborative approach to excellence and innovation are core values at NDY. We consistently deliver best practice sustainable solutions to achieve our clients' objectives.

Clients come to NDY because they want quality. We take ownership and provide clear recommendations while consulting with the utmost integrity.

Most of all, clients come to us because we listen. We look forward to better understanding your business and collaborating with you to achieve successful outcomes.

Our markets

- Civic
- Education
- Health
- Industrial
- Mission Critical
- Offices
- Residential & Hotels
- Retail
- Transport

Our services

- Acoustics
- Asset Performance
- Audio Visual
- > BIM (Building Information Modelling)
- Communications
- Controls & Integration
- Electrical
- Fire Engineering
- > Fire Protection

- Hydraulics
- ICT Consultancy
- Interiors
- Mechanical
- > NDYLIGHT (Lighting Design)
- Property Consultancy
- Security
- Sustainability
- Vertical Transportation

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NDY + Glumac + Cosentini partnership will synergize its expertise into innovative strategies and concepts that will bring us closer to a sustainable future.

High Performance Buildings Group

Working together within the Tetra Tech family of companies, we're excited to partner with Glumac & Cosentini, two global leaders in sustainable building design, establishing the High Performance Buildings Group.





Our Audio Visual Capabilities

We have an experienced and skilled technology consulting team focused on meeting the needs of our clients. We provide the guidance and support necessary in selecting the right solutions for your project whilst managing and coordinating projects from inception, through design, deployment, handover and transition into operations.

We start out by initially understanding our clients' baseline levels and productivity, and then work with them to establish a strategic roadmap as well as broader policies around working practices in order to take full advantage of technology innovation.

Our consulting team identifies the opportunities for new possibilities, defines the functionality and capabilities and establishes the technology budget.

The Interior Design Review is of critical importance. This involves a review of the physical space, including size, aspect, sightliness, lighting and finishes to determine where the interior design needs to be optimised to maximise the technology. NDY-led design reviews with all stakeholders will ensure all key design aspects are coordinated and all stakeholders are engaged.

NDY has global experience in delivering innovative and reliable technology solutions across a broad range of market sectors including:

Workplace Education (Tertiary & Higher Education) IOT & Smart Buildings Hospitals & Healthcare Laboratories Retail Hospitality Government Defense Entertainment Museums & Galleries Sporting Stadiums Home Theatre & Surround Sound **Residential & Home** Automation **Civic Spaces** Control Rooms Auditoria Web conferencing & telepresence spaces IPTV & Multimedia streaming Large format video walls Public Address systems Training Facilities Virtual Reality / Augmented Reality

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We manage and coordinate projects from inception, through design, deployment, handover and transition into operations.





Our Audio Visual Services

We work in partnership with our clients to define the vision, objectives and strategy for their business using Information Technology (IT) to overcome problems, improve business processes and realise operational efficiencies. Our team is dedicated to providing innovative, ecological and sustainable design solutions in close coordination with our clients requirements. Our team is nationally coordinated enabling each project to form a cornerstone for the next.

Technology Strategy

Define the current state and establish the objectives, principles and initiatives taken relating to the use of technology. Outline how the technology will be utilised as part of the overall experience vision and strategy, the pathway to execute the strategy and how the assets will be operated and managed.

Capability Designs & Functional Briefs

Preparation of Capability Designs and Functional Briefs to describe the services to be provided, activities to be performed and alignment with the experience vision and strategy and initiate the next phase for the project.

Technology Options Analysis

Review of existing environment, including liaison with key stakeholders, partners, vendors and service providers. Technology options analysis including identification, analysis, and review of options. Definition of interfaces including operations, finance and IT to align the processes and business goals.

Detailed Design & Documentation

Design planning and management, preparation of policies and standards documents, detailed design and preparation of tender and contract documentation.

Procurement

We apply critical thinking to infrastructure planning allowing the final selection and procurement of technology to happen at a later date to make use of technology advancements over the project life. Risks are identified, analysed and managed throughout tender preparation and execution.

Implementation & Project Management

We oversee your project from initiation, through planning, execution and closing. We manage risks and issues; communicate regularly with stakeholders; manage and support the team; and track and assess the project finances.

Commissioning & Handover

NDY regularly attend site during installation and commissioning and undertake acceptance testing with the Contractor and provide regular updates to all key stakeholders as part of inspection reports. The goal is to drive the highest level of quality and transitioning the systems to full operational status.

Operation & Management

We manage the closing out of your project and the handover of project outputs to the operational areas responsible for ongoing service and support.

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Our Audio Scope of Service

NDY Audio Visual understands that a quality audio visual installation is more than just using the latest technology equipment. Our scope of service for your project can include:

Briefing Concept

- Liaison with key client stakeholders to define objectives, strategic direction and business needs as well as desired outcomes
- Review of existing environment, identifying any issues and risks whilst undertaking gap analysis to develop a road-map for strategic initiatives
- Preparation of budget estimates and procurement options

Schematic Design

- Definition of system concepts and performance requirements to meet the brief including reporting and making recommendations on options
- Facilitate technology demonstrations / site visits
 / loan units / pilot studies to test and verify system concepts
- Provision of plant space and services reticulation space information to the Architect, Structural Engineer and other team members to facilitate coordination

Design Development

- Development of audio visual design drawings coordinated with Interiors / Building Services / Structure
- Development of performance requirements for the physical environment including finishes, acoustics and lighting to make the best use of the technology innovation

Tender Documentation

- Tender documentation in 3D REVIT CAD format coordinated with Architecture / Interiors / Building Services / Structure
- Assistance with the calling of tenders and quotation review and recommendation

Construction Administration

- We manage risks and issues; communicate regularly with stakeholders; manage and support the team; as well as track and assess the project finances
- Review of contractor's workshop drawings and technical data and commissioning test plans
- Regular progress reviews of contractors' works on site and acceptance testing of the complete operation of the audio visual systems
- Assistance with defects rectification and signoff

Project Evaluation

 Measure the success of the project against the original business case to assist in future investment decisions

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It's our people that set us apart; Audio Visual experts who are passionate, innovative and always striving to deliver new possibilities and great experiences for our clients.

Richard Brand

Associate Director



NDY Audio Visual experience

For more than sixty years NDY has provided consulting engineering services on strategic projects throughout Asia, Australia, Canada, Europe, New Zealand and the UK.

These award-winning projects are testament to the quality of our innovation, expertise and personnel. The following examples of our experience are a snapshot of our ability to deliver world's best practice for master planning projects of all sizes.

To view a comprehensive outline of our project experience visit our website **www.ndy.com**



BHP Billiton Global Headquarters

Melbourne, VIC

Client: BHP Billiton

Project Manager: Montlaur Project Services

Architect: Geyer

Features and Innovations:

- > Integrated teleconference and video conference meeting rooms
- > High-end immersive telepresence rooms
- > Informal collaborative work areas
- > Video walls and digital signage boards
- > IP Television (IPTV) distribution system
- > Facility-wide asset monitoring and management system
- Integrated meeting room beverage ordering system
- > Control of room lighting, motorised blinds & HVAC

About the project:

NDY provided audio visual services for the new BHP Billiton global headquarters at 171 Collins Street, Melbourne. The BHP Billiton tenancy occupies approximately 15,000 sq m of office space and comprises activity-based work areas, offices, meeting and conference spaces, breakout areas and business lounges.

NDY was actively involved from the outset of the project, collaborating with key BHP Billiton stakeholders to identify possible solutions and make recommendations on options available. NDY then worked closely with the architect and interior designer to integrate the audio visual systems into the built environment.

BHP Billiton's requirements were for a highly integrated technology solution that is robust, reliable and capable of meeting the high availability and reliability demands that would be placed on them. NDY was able to identify innovative solutions that were fully operational on day-one, as well as being safe to use and easily maintained.



Medibank

Melbourne, VIC

Client: Medibank

Project Manager: Montlaur Project Services

Architect: Hassell Design Team

Features and Innovations:

- Collaboration tables
- > Conference rooms
- Video conferencing
- Unified Communications (Microsoft Lync)
- Digital signage displays
- > Interactive way finding

A key factor in the success of ABW work settings, as evident in the Medibank building, is providing staff with a working environment and the technology tools to choose work styles that suit their work activities. The technology solutions selected needed to be simple, intuitive and reliable. In ABW workplaces, it is flexible and mobile, allowing users to stay connected on the go.

About the project:

Engaged by Medibank, NDY provided specialist ICT & audio visual consulting services for their new office building at 720 Bourke Street in Melbourne.

The building comprises 46,500 sq m of commercial A-grade office space in an Activity Based Workplace (ABW) setting. ABW provides a greater flexible arrangement of the open plan workspace where employees are free to choose the area of the workplace that best suits the activities or tasks they need to perform on any given day.

By providing a range of different settings and technologies to support various tasks, activities and modes of work, ABW arrangements have the potential to increase productivity, increase collaboration, communication and knowledge sharing and increase employee well-being and satisfaction.



Victorian Commission for Gambling & Liquor In-Court Technology

Melbourne, VIC

Client: Department of Justice (DOJ)

Project Manager: Coffey

Architect: Cube Company

Features and Innovations:

- > Large LED backlit LCD screens
- Local video source preview monitors at the Commissioners Bench, Bar Table & Clerks Desk
- > Video conference equipment
- Microphones management
- Video & audio recording
- > Wireless heating assistance

NDY was able to follow the standards of the Department of Justice In-Court-Technology (ICT) and at the same time offer design innovations. This included distribution over twisted pair cabling to simplify the cabling requirements and reduce installation time as well as integrating touch control of audio visual systems into local preview monitors to reduce equipment clutter at the benches, which were well received by the Courts Technology Group.

About the project:

NDY was engaged by the DOJ to design and document the In-Court-Technology (ICT) for the Victoria Commission for Gambling & Liquor Regulation in North Richmond. The project works comprised a standalone Hearing Room, Conference and Meeting Rooms.

NDY was engaged by ISPT for the design and deployment of a digital signage solution to complement the refurbishment of the main entrance foyer at iconic Casselden Place. The audio visual systems were designed in accordance with the Smart Court Programme utilising a Star system of coding to indicate the technical capability of the Hearing Room infrastructure.



La Trobe Institute for Molecular Sciences (LIMS)

Melbourne, VIC

Client: La Trobe University

Project Manager: APP



Features and Innovations:



LIMS NDYTV

- Large 90-seat auditorium with video conference and lecture record capabilities
- Biology & Chemistry Laboratories
- Computer Laboratory
- Project Rooms
- Digital signage displays at entrance points and lift lobbies for University information and displaying building utilities usage information
- > Executive Boardroom

NDY worked together with Lyons Architects to integrate audio visual equipment into the building design while at the same time carefully considering the selection of appropriate technologies that did not compromise the learning experience.

About the project:

NDY was engaged by La Trobe University to provide specialist audio visual consulting for the design, documentation and contract administration for a new state-of-the-art scientific research and teaching building for the Institute for Molecular Sciences at La Trobe University Bundoora Campus.

The building comprises six levels with dedicated science teaching spaces, research laboratories and a large 90 seat auditorium. NDY also provided Specialist Lighting, Acoustics & Building Services consulting for the project.

NDY started out by working closely with La Trobe University user groups to understand the ways in which sciences and research studies are provided to students and then developed integrated technology solutions to complement and enhance the teaching and learning experience.



Moot Court, Monash University

Melbourne, VIC

Client: Monash University

Architect: Jackson Clements Burrows Architects



Moot Court

About the project:

The Monash Law Faculty is one of the largest and most dynamic Law Schools in Australia. To further consolidate its global position in law education (Monash University is consistently ranked amongst the top 25 law schools in the world) and better prepare its students for the workforce, Monash University has created a Moot Court to allow students to take part in real-life, simulated court proceedings.

Typically the students are provided with a hypothetical fact scenario which raises various legal issues. Students are then required to research the relevant legal principles and then participate in oral argument inside a high-end court room.

Technology was of paramount importance to the Monash Law Faculty, to demonstrate "next practice", to provide the best learning environment, and to attract the best young law students. Norman Disney & Young (NDY) was engaged to provide specialist Audio Visual Consulting Services for the project.

NDY worked closely with Monash Law Faculty & JCBA Architects to carefully integrate the technology into the room, including video conference systems and capture and recording facilities, while still maintaining the aesthetic of a high-end court room such as the Supreme Court of Australia.

The technology solution designed by NDY is of the highest quality, with students and adjudicators having access to high definition video content at their fingertips, and crystal clear audio is heard from anywhere within the court room.

Video conference facilities support both local and remote participants, with lawyers and real Supreme Court judges able to connect in via video to act as adjudicators. The technology solution is also flexible enough to support Mediation & Arbitration sessions, and also allows the space to be utilised for more conventional lectures and seminar classes.



TAFE NSW - Connected Learning Centres

Regional, NSW

Client: TAFE NSW

Project Manager: APP

Architect: Brewster Hjorth Architects

About the project:

Opening in the heart of regional communities across NSW, Connected Learning Centres (CLCs) represent TAFE NSW's ongoing commitment to regional communities to provide more personalised learning experiences for students, better access to teachers both on and off-site, simulated work environments and directly relevant training for skills shortages of the future.

The first four CLCs that open in 2017 will be located in Quirindi, Coonabarabran, Glen Innes and Tenterfield with eight more to be rolled out across regional NSW in 2018.

NDY worked closely with TAFE NSW and Brewster Hjorth Architects to create new active, adaptive, flexible, multi-purpose and digitally enabled learning environments that enhance TAFE NSW capability to provide high-quality training and learning experiences and support services for all. Flexible learning & teaching spaces are provided with mobile video units with touch-enabled screens, simulation and Virtual Reality (VR) experiences. The facilities provide students with better access to teachers both on and off site, and aid in developing the skill students need for jobs in regional NSW. The CLCs are designed as a resource for the entire community with the interior easily reconfigured to suit a variety of learning and teaching needs.

The CLCs are conveniently located in the heart of regional communities where TAFE NSW does not already have a presence or where outdated facilities can no longer meet the needs of students, employers and local communities. The new digital technologies hubs will help deliver TAFE NSW courses to more people in more areas than ever before.



Curtin University - Hub for Immersive Visualisation and eResearch (HIVE)

Perth, WA

Client: Curtin University

Features and Innovations:

- Lead design of 3D, blended, curved and tiled visualisation systems using specialised and custom equipment
- Design of high bandwidth signal distribution and control systems integrated with client software systems.
- > Integration with facility systems such as IT and lighting
- Design coordination with architectural, electrical and mechanical services
- Project control group and Client liaison to engage key stakeholders
- Construction administration to support Curtin University's programme.

About the project:

Through a Government grant to refurbish the existing John Curtin gallery in this leading-edge University, NDY were engaged to design, develop and deliver a state of the art data and image visualisation facility.

In coordination with multiple stakeholders including representatives from iVEC at the University of Western Australia and world leading 3D technology specialists, the designed facility incorporates multiple unique display system types. Each system is intended to provide individual viewing capabilities utilising custom and specialised equipment.

The multiple display types incorporated dome, tiled, wedge, curved and blended images. Within these systems, behind the scenes technologies are designed to allow remote collaboration, wireless display capabilities and general purpose presentations. User tracking via the use of optics furthers enhances the data visualisation experience.



Emporium

Melbourne, VIC

Client: Vicinity Centres

Architect: Buchan Group

Emporium NDYTV

Features and Innovations:

NDY was appointed to undertake the ICT, Audio Visual and Electronic Security Design for the 42,000 sq m retail centre across 7 levels, with 31,000 sq m of commercial floor space. The design included:

- Integrated Communications Network (ICN) to support all building enterprise systems
- > Voice over IP telephony system
- IP based megapixel CCTV system
- Electronic Access Control System
- Loading Dock Management System
- > Security Management System
- > Two-way radio system
- > IP Television distribution system (IPTV)
- > Large outdoor semi-transparent curved LED video wall
- > Digital public address & emergency warning system

About the project:

Built on the site of the old Myer store in Lonsdale Street, the new Emporium Melbourne invites customers to step behind its iconic facade and into a unique retail experience that merges 21st century design with state of the art technology. Emporium Melbourne is a world-class retail environment that fuses fashion, culture, food and art. This premium retail destination houses 225 retail stores including international flagship brands, luxury stores, Australian designers and a premium cafe court spread across the building's 48,000 square metres.

On such a large and long term development some of the key challenges that NDY and the project team faced revolved around the evolution of the retail breakup within the building envelope. Initially, zones were set up with specific allowances for types of tenants, load profiles and physical provisions.





Transurban Headquarters

Melbourne, VIC

Client: Transurban

Architect: Hassell

About the project:

As one of the world's largest toll-road operators, from designing and building new roads, everything Transurban does works to get people where they want to go, as quickly and safely as possible. But Transurban is also a Technology Company – researching and developing innovative transport and road safety technology that makes travel easier for everyone. As an industry leader, Transurban set high standards for performance on social and environmental issues, and they have invested significantly in their people, providing a landmark new workplace at Collins Square in Melbourne.

As Transurban's Technology Consultant for Built Environments, Norman Disney & Young worked with our client to identify opportunities for new possibilities and create great workplace experiences. Technology is everywhere in Transurban's new home, often integrated into the urban environment or completely hidden from view, busy working away behind the scenes to provide a frictionless experience for their team.

Meeting spaces automatically detect people as they enter a room and connect them wirelessly to audio visual technology. Sensors monitor and manage meeting spaces and desk availability. Staff mobile devices provide controlled access throughout the building's secure zones including car parks, lifts and end-of-trip facilities. All workplace tools and access to utilities and services is never more than a touch away using the Transurban workplace mobile phone App.

The real Instagram moment occurs at the Guest Welcome Area, featuring two huge panoramic floor-to-ceiling high definition video walls nestled within a gritty urban environment of light wells and hanging gardens. Real-time data collected from Transurban's assets is carefully blended with beautiful digital art. The highlight of the new workplace, Transurban's innovation and industry leadership is never more obvious than in this sophisticated technological feature point.



Monash University Woodside Building for Technology & Design

Melbourne, VIC

Client: Monash University

Architect: Grimshaw

About the project:

Monash University's Woodside Building for Technology and Design is a landmark that establishes new standards in physical educational environments, with student centered learning through a blended strategy where technology is used to enable active learning. Via a partnership with Woodside Energy, the building brings together the faculties of Engineering and Information Technology, students, researchers, academics and staff, fostering applied academic integration and helping educate students whilst engaging in the development of new and innovative approaches to sustainable energy technology.

As a 'Living Laboratory' and designed on Passive House metrics, the building takes advantage of numerous connected devices, allowing the technology to smart schedule formal and informal learning spaces, automatically detect presence and enable the use of equipment based on individual preferences whilst overseeing power, lighting and cooling to these spaces to improve operational performance. Visual access to plant and equipment rooms enables students and researchers to see into the building and how it functions as a learning tool and platform for innovation.

The 19,000 sq m building is spread across five floors and more than 30 learning and teaching spaces including large flat floor areas, laboratories, informal learning and an interactive tiered collaboration space accommodating 360 people. A four story glazed atrium with an open tiered amphitheatre connects all levels. Teaching spaces feature glazing, embracing daylight and activating the entire building and surrounding precinct whilst incorporating the latest in large format, ultra-high definition LED display screen technology to provide exceptional picture quality consistently and without the need to darken rooms or draw blinds. The building is inspired by the future, with its diverse interior promoting pedagogical and technological innovation, and achieving an environmental performance that establishes a new benchmark for Australian education facilities.



Australian Unity Head Office

Melbourne, VIC

Client: Australian Unity

Architect: Bates Smart

About the project:

NDY Digital were engaged by Australian Unity to provide specialist Workplace Technology Consulting Services for their new head office at 271 Spring Street, Melbourne. The new office space accommodates over 1,000 staff across 12,500 sq m and provides a connection between its people and the community whilst integrating the heritage elements of the iconic Elms Family Hotel into the overall building design.

The hub-style workplace focuses on wellness and enabling an agile, mobile and flexible workforce. The design encourages movement between smaller spaces into larger social areas including a café, retail zone, training and event areas. A unique feature is the two floor tiered Amphitheatre that also acts as a village square with its large LED video boards, concealed line-array loudspeakers for crystal clear audio anywhere and an edge-blended projection mapping "Art Wall".

A suite of Microsoft Skype for Business enabled meeting and conferencing spaces allow staff to move effortlessly throughout the building whilst remaining connected to the technology tools they need. Staff and guests quickly and simply connect to the audio visual technology, share their screen wirelessly and collaborate with video and voice in online meetings. Meeting spaces are managed in the cloud allowing staff to reserve rooms online or adhoc at the meeting room's scheduling panel.

To provide Australian Unity with flexibility to manage the audio visual technology remotely, as well as providing a robust and reliable infrastructure for complex spaces to simply and easily adapt to changing technology requirements, an AV distribution over IP Network solution was deployed.



University Of Melbourne -Western Edge Biosciences

Parkville, VIC

Client: University of Melbourne

Architect: Hassell

About the project:

The University of Melbourne's innovative Life Sciences Complex offers Australia's most sophisticated STEMM teaching laboratories and facilities, strengthening the global status of the university's biomedical precinct. Staff and students from three faculties – Science; Veterinary and Agricultural Sciences; and Medicine, Dentistry and Health Sciences – are using the state-of-the-art facility, enabling a cross-disciplinary approach to teaching and learning.

Norman Disney & Young (NDY) provided specialist Audio Visual consulting services on the project and worked closely with the university, Hassell Studio and Kane Constructions to design and integrate a range of innovative technology solutions that ignite cross-discipline collaboration and increase research objectives.

The building includes object-based learning facilities, classrooms for small groups and problem-based and informal learning and study spaces. A building highlight, there are three large practical teaching laboratories. These 'Super Labs' (including PC2) eliminate the need for separation walls and corridors and the pooling and consolidation of key equipment, but present challenges with noise control and environmental distractions. NDY designed controllable speech reinforcement systems so that multiple classes can operate simultaneously without noise pollution from other rooms. A major benefit is good speech intelligibility between educator and students and the maintenance of lines-of-sight, encouraging superior supervision and a more intimate connection between parties.



Mazda Headquarters

Mulgrave, VIC

Client: Mazda Australia

Architect: Cox Architect

About the project:

Having enjoying unprecedented growth in Australia over the last 15 years, Mazda Australia has set the foundations for the future by opening a stunning new National headquarters in Melbourne.

Architecturally designed, the new purpose-built five Star Green Star credentialed head office located at 211 Wellington Road, Mulgrave, will house Mazda Australia's National and Victorian headquarters, and includes an auditorium, a state-of-the-art training centre and a showroom gallery displaying the history of Mazda in Australia.

Norman Disney & Young was engaged to provide specialist Audio Visual Consulting Services & IT Project Management. NDY delivered a suite of video collaboration spaces allowing Mazda staff to connect via room systems, computer or mobile devices. The 350 person Auditorium, complete with double-height projection and a control room, provides flexibility of use for large training seminars and other large-scale events including the launch of the all-new Mazda CX9 in Australia in 2016.

Mazda has enjoyed a long tradition of success in Australia and the double-height atrium space at the front of the building celebrates this history. Some of Mazda's finest motor vechicles ever released here in Australia are on display. Large format 4K displays broadcast the history of Mazda to visitors, and interactive kiosks and mobile tablets allow for customers to create a fully customised preview of their next Mazda car.



Monash BrainPark

Monash University, Clayton Campus, VIC

Client: Monash University

Architect: Splinter Society Architects

About the project:

Monash BrainPark is a world first research facility using new, ground-breaking approaches in the treatment of addictive and compulsive behaviours. Also called the David W. Turner Research Clinic, the facility is an initiative of the Monash Institute of Cognitive and Clinical Neurosciences and Monash Biomedical Imaging.

A radical departure from traditional research labs, BrainPark's programs integrate lifestyle and technology-based interventions; including therapeutic Virtual Reality, physical exercise, meditation, non-invasive brain stimulation, and cognitive training.

NDY collaborated with Monash University to develop, design and roll-out technology solutions that are crucial to delivering these innovative new research programs.

The showcase of BrainPark is a Virtual Reality (VR) Complex. The use of VR overcomes traditional roadblocks in the diagnosis and treatment of addiction and compulsive disorders by allowing patients to experience and challenge their triggers in a safe space.

NDY also developed and designed the Immersive Spin Room, a simulation space where patients are observed riding exercise bikes. It is a highly immersive visual and aural experience made possible through the use a life-size, panoramic video wall created using edge-blending projection, and 3D surround sound system.



Melbourne Central Tower

Melbourne, VIC

Client: GPT

Architect: Cox Architecture

About the project:

With its striking impact on the city skyline and convenient location, the 51 floor Melbourne Central Tower has long been one of Melbourne's prominent commercial buildings.

As part of the transformation of the ground floor lobby into "a place where people and technology blend in a streamlined extension of the workplace", GPT engaged NDY to provide specialist Audio Visual Technology Consulting Services.

The new lobby offers a flexible work hub with business facilities including a tiered Amphitheatre with an impressive 300 inch high definition video screen. The Amphitheatre can be enjoyed as a large light-filled space for people to meet and exchange business ideas or simply enjoy a coffee from one of the many premium retail offerings nearby. It can also be reserved for private events with presentation capabilities and a sophisticated public address system that includes highly controlled column array loudspeakers carefully integrated into the interior design to provide outstanding audio quality, whilst remaining unobtrusive.

By far the defining element of the tower lobby and the focal point for both tenants and visitors, is the latest in large format LED screen technology. The panoramic motion art wall spans 23m wide and 4m high, with over 2,000 LED tiles and is the largest indoor screen in the Southern Hemisphere. The curated artworks are meditative, immersive and ever changing, exploring Melbourne's culture and wellbeing and putting this building and the city of Melbourne on the world stage.



New Bendigo Hospital

Bendigo, VIC

Client: Lendlease

Architect: Silver Thomas Hanley & Bates Smart

About the project:

Norman Disney & Young was appointed by the Victorian Government as part of the successful Exemplar Health consortium to design, build and operate the new \$630m Bendigo Hospital. The outcome is a multi-award winning world class regional hospital development. The consortium comprised Capella Capital as sponsor and Lendlease was responsible for construction with architects Silver Thomas Hanley and Bates Smart. Lendlease also provided equity along with Siemens. Spotless are the facilities managers.

The New Bendigo Hospital provides an outstanding new regional hospital with expanded capacity including an integrated cancer centre and new psychiatric inpatient facility. The new hospital equips Bendigo Health to provide for the future health needs and increasing demands of a growing population in Bendigo and in the Loddon-Mallee region. It has also assisted Bendigo Health in creating a skilled workforce for the future provision of high-quality patient care through investment in facilities, education and training. The project has delivered:

- A new acute hospital on the Barnard Street site with 372 acute inpatient beds, 72 same day beds, 80 psychiatric inpatient beds and 11 operating theatres
- A new integrated regional cancer centre with 26 chemotherapy places (included in the 80 acute same day beds listed above), 4 radiotherapy bunkers expandable to 6 should this be required in the future, and 30 consulting rooms
- A satellite dialysis facility with 16 places (included in the 80 acute same day beds listed above)
- Diagnostic, outpatient, staff, education, administration, public and back of house spaces in the new hospital to complement the above
- Continued use of the retained facilities on the Lucan Street site for administration and education purposes, with the potential to use the balance of the facilities for commercial purposes
- Investment in ICT to facilitate effective care delivery and efficient work practices to provide the essential tools to support 21st century learning and research including electronic medical records, and to provide a platform for future development.



Australian Federal Police (AFP) Forensics Laboratory

Canberra, ACT

Client: RPSPM

Project Manager: Point Project Management

About the project:

NDY were engaged in 2012 to provide a multi-discipline services design for the Australian Federal Police (AFP) new Forensic Data Facility (FDC) in Majura. The purpose of this new facility is to enhance the investigative capabilities of the AFP and support national security and law enforcement agencies not only on a national level but also overseas.

The state-of-the-art building encompasses the very latest advances in science and technology, which ensure the AFP maintains its status as a world leader in forensic operations, forensic science policy, research, training and capability development.

The new facility enables a collaborative forensic model where all science disciplines are able to come together, ensuring a more responsive and high-quality outcome.

The design of the facility incorporates varying forensic facilities including both ISO 6 and ISO 7 laboratories, ballistic and chemical analysis laboratories, hazardous (explosive) materials laboratories, a laminar flow ballistic range, acoustically isolated audio visual laboratories, as well as significant vaulted storage areas for the archiving of both historical fire arms and ammunition.

To support these forensic facilities, the building also includes hazardous materials storage containment areas, central and dedicated reverse osmosis water systems, laboratory gas distribution systems, oil free compressed air systems, heavy metal water reclaim systems, commercial trade waste and black water treatment facilities.

NDY's design also incorporates a number of energy reclaim systems as well as energy monitoring systems to ensure that the whole of life cost and environmental impact of the facility is minimised.

Government Experience

NDY have worked extensively on many sensitive projects for local, state and federal government agencies.

These projects include providing audio visual and information technology solutions for secure operating centres, control rooms, telepresence facilities, mission critical, meeting rooms, training rooms and secure video conferencing rooms with extreme security and reliability requirements that directly affect vital agencies and their capability to fulfil their role in national order and security.

AFP Project Wattle, Sydney: NDY provided Audio Visual Consulting Services as well as Building Engineering Consulting Services to the facility which comprises an Operations Centre with mission critical reliability and a suite of secure and non-secure meeting spaces.

AFP National Security Upgrade: NDY provided Audio Visual Consulting Services as well as Building Engineering Consulting Services across 9 sites and 6 states in Australia.

ACT Government Headquarters: The new Government Headquarters is spread over 20,000 sq m of office space and includes a large 150-person presentation space, Telepresence Room and multiple video conferencing spaces.

50 Lonsdale Street, Melbourne (various)

Department of Premier & Cabinet (DPC), 35 Collins St, Melbourne, VIC

Australian Tax Office (ATO), Tower 3, Collins Square, Melbourne, VIC Australia Post, 180 Lonsdale Street, Melbourne, VIC

Australian Tax Office (ATO), Box Hill

Australian Tax Office (ATO), Dandenong

Department of Education, Employment and Workplace Relations (DEEWR), 12 Mort St, Canberra, ACT

Australian Government Solicitors (AGS), 4 National Circuit, Canberra, ACT

AUSTRAC, 4 National Circuit, Canberra, ACT

AUSAID, 255 London Circuit, Canberra, ACT

Department of Home Affairs – 2 Constitution Avenue Canberra



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