





## cardno is a leader and an innovator

Cardno's vision is to be a world leader in the provision of professional services to improve the physical and social environment.

At Cardno, our aim is to provide strategic business solutions, professional advice and diverse services which add long-term value to our clients' projects and the surrounding community.

We form strong partnerships with clients and create opportunities for significant, lasting positive change in both developed and emerging economies.

Since it is important to be where our clients are, we have a strong regional focus which complements our teams in major cities throughout the world.

Whether creating transportation infrastructure to connect people, planning new cities, supporting energy projects, conducting environmental assessment and remediation or providing fiscal advice in emerging markets, our people are driven by a clear set of values, a passion for exceptional client service and an enduring commitment to innovation.

We look forward to shaping the future – together.

# cardno shapes the future for communities around the world

Cardno is a professional infrastructure and environmental services company.

We provide innovative solutions to resolve engineering, environmental, social and economic challenges for a wide variety of complex projects.

The skills and experience of our team allow us to offer a comprehensive range of integrated services across ten global market sectors.



## **Buildings**

Cardno's status as a leader in the fields of structural engineering, mechanical and electrical building services and built-form environmental hazards assessment is based on more than 60 years of excellence. We offer a broad scope of solutions founded on commercial viability, cost-effective delivery, and technological innovation.

- > Health and aged care
- > Educational and government buildings
- > Commercial and retail centres
- > Transport terminals
- > Cultural, recreational/tourist precincts
- > Green buildings ratings
- > Fire services
- > Acoustic and audio-visual
- > Vertical transportation
- > Specialist lighting
- > Technology and communications
- > Facilities management
- > Electrical engineering
- > Mechanical engineering
- > Construction materials testing



## Land

Cardno is a leading provider of planning, environmental, design and construction services for residential, commercial and industrial development. From site assessment to project completion, we offer an extensive range of services based on our commitment to our clients, our stakeholder engagement and the recognition of the possibilities and potential stakeholder benefits which can flow from any development challenge.

- > Suburban greenfield development
- > Brownfield redevelopment
- > Land use planning
- > Resource management
- > Urban design and construction contract administration
- > Development approvals and negotiation
- > Environmental impact assessment
- > Sustainable/low impact design
- > Feasibility assessment
- > Master planning
- > Landscape architecture
- > Land surveying
- > Dredging and reclamation
- > Canal and lake waterways
- > Flooding and drainage
- > Construction materials testing

## Coastal and Ocean

Cardno has extensive capabilities in the assessment, management and protection of the aquatic environment in both salt and freshwater, as well as world-leading expertise in determining the impact of natural processes and built environments in ocean, coastal and estuarine settings. Our specialist knowledge underpins the delivery of infrastructure which fosters economic growth and environmental sustainability.

- > Marine and freshwater ecology
- > Ports and harbours
- > Marinas and breakwaters
- > Metocean and environmental monitoring
- > Dredging and reclamation
- > Coastal and estuary management
- > Simulations (ship, coastal, cyclone and marine)
- > Siltation and morphological studies
- > Metocean design criteria
- > Offshore oil and gas
- > Modelling and modelling software
- > Maritime infrastructure
- > Marine and offshore structures

## Environment

Cardno has an extensive and successful track record in the delivery of environmental solutions for major projects across the world. Working within multi-disciplinary teams, our expert personnel work closely with government, industry, developers, land owners and the community to utilise, conserve and enhance resources so that natural systems are managed and preserved for current and future generations.

- > Green buildings ratings
- > Environmental impact assessment
- > Sustainable/green design
- > Environmental field surveys
- > Environmental monitoring
- > Construction and demolition management
- > Hazardous waste management
- > Legal support services
- > Natural resource management
- > Contaminated land assessment
- > Permitting and project licensing
- > Regulatory compliance
- > Resource economics
- > Siltation and morphological studies
- > Toxicological analysis
- > Vapour intrusion
- > Environmental rehabilitation and remediation
- > Water quality
- > Water-sensitive urban design
- > Climate change
- > Marine and freshwater ecology
- > Terrestrial ecology
- > Metocean and environmental monitoring





### Emerging Markets

Cardno has operated in developing countries for over 40 years to provide and improve the physical, economic and social infrastructure that underpins communities. We work with government agencies and multilateral organisations throughout the world, and employ leading professionals across a range of disciplines to address aspects such as poverty, economic and social disruption, institutional strengthening and the improvement of transport networks.

- > Governance and public sector reform
- > Private sector and enterprise development
- > Financial sector development
- > Social impact assessment
- > Economic growth/wealth creation
- > Law and justice
- > HIV/AIDS
- > Health care
- > Education
- > Physical infrastructure design and project management
- > Utility management and regulation
- > Post-conflict management
- > Reconstruction and rehabilitation
- > Agriculture and rural development
- > Trade
- > Public private partnerships
- > Environment and natural resource management

### Management Services

Cardno is recognised as a leader in the provision of management services and advice to a range of government and other organisations. Our experienced professionals work with our clients to review, evaluate and implement systems, procedures and policies to help manage and safeguard assets and achieve strong returns on investment.

- > Financial and economic feasibility studies
- > Capital improvement program development
- > Feasibility assessment
- > Strategic planning
- > Asset and facilities management
- > Due diligence and asset auditing
- > GIS and mapping
- > Program management
- > Value engineering
- > Defence and security
- > Total security management
- > Project management
- > Risk management
- > Metadata management
- > Quality Assessment and inspection
- > Regulatory compliance
- > Failure investigation
- > Infrastructure privatisation

### Energy and Resources

Cardno works with a range of clients in the Americas, Australia and Africa to deliver resource and infrastructure projects in the energy and resources sector. Our clients, which include the largest mining houses in the world, benefit from our extensive expertise and experience in the provision of high level services and a full range of cost-effective, sustainable solutions.

- > Oil and gas, drilling and production
- > Hazardous waste management
- > Renewable resources evaluation
- > Facilities planning and design
- > Rehabilitation and remediation
- > Process, refinery and power structures and planning
- > Material handling structures
- > Marine and offshore structures
- > Conveyance and transportation
- > Hydropower
- > Geotechnical engineering
- > Geotechnical materials testing
- > Mapping and survey
- > Regulatory compliance
- > Environmental surveys
- > Environmental monitoring
- > Electrical engineering
- > Mining engineering
- > Exploration



## Transportation

Cardno has world-leading expertise in the assessment, planning, design and management of transport infrastructure projects. Our experience is founded on strong transport planning and engineering capability at both local and international level, with projects ranging from detailed analysis and reporting to the delivery of major physical infrastructure.

- > Transport terminals
- > Facility planning and design
- > Geotechnical engineering
- > Construction materials testing
- > Road safety audits
- > Road and bridge design
- > Traffic and transportation planning and modelling
- > Rail
- > Maritime infrastructure
- > Airports
- > Construction engineering services
- > Subsurface utility engineering

## Water

Cardno is highly recognised for its comprehensive skills in all aspects of water engineering and water cycle management in both the built and natural environment. Whether it is a detailed water supply analysis, a major flooding or water quantity investigation, a water rights assessment, or any other water-related engineering, scientific or management issue, Cardno can provide the expertise needed to address client requirements.

- > Drought management
- > Fire services
- > Master planning
- > Water and wastewater treatment planning and design
- > Dams and reservoirs
- > Water and sewerage distribution
- > Strategic planning
- > Capital works scheduling
- > Water cycle management
- > Demand management
- > Modelling and modelling software
- > Environmental services
- > Flood and waterway studies
- > Water quality
- > Water-sensitive urban design
- > Flooding and drainage
- > Siltation and morphological studies
- > Stormwater planning, design and compliance
- > Water resources
- > Water rights
- > Groundwater evaluation and monitoring

## Defence

Cardno has significant experience in supporting defence-related projects globally, particularly through our environmental, infrastructure and facilities management skills. Our expertise is valued by government agencies and contractors to support the development, upgrade and improvement of defence infrastructure and training facilities. Our specialists provide comprehensive services through a project's life cycle to help clients effectively address environmental and operational issues at installations and training facilities. From strategic business consulting and environmental planning to facility assessment and design, Cardno team members are poised to responsibly meet our clients' needs.

- > Facilities planning and design
- > Rehabilitation and remediation
- > Marine and offshore structures
- > Transportation
- > Geotechnical engineering
- > Mapping and survey
- > Permitting and licensing
- > Regulatory compliance
- > Environmental surveys
- > Environmental monitoring
- > Electrical engineering



We provide tailored, innovative solutions and strategic professional advice which add value to your organisation. We think long term, providing sustainable and economically viable infrastructure and management solutions to a broad range of clients.

Cardno's key projects include:

#### **Oil Depots Project**

Australia

Cardno is managing and implementing the demolition and associated activities at 44 oil depots throughout Australia. The work will include scoping, planning, bid requests and overall management and execution to demolish onsite features, as well as waste removal, environmental activities and oversight of subcontractors. Working for a major global company, Cardno was awarded the contract based on technical qualifications, experience and safety performance.

#### **Retrospective Asbestos Exposure Assessment**

United States

Cardno conducted retrospective exposure assessment to estimate the client's liability for mesothelioma claims. We divided claimants into similar exposure groups and compared potential exposure from each group's work with the client's encapsulated products to their work with friable asbestos insulation. Our work was cited in the landmark US Bankruptcy Court decision that found legal responsibility for causing mesothelioma was minimal, saving the client from multiple high cost claims.

#### **Maputo Partial Urbanization Plan**

Maputo, Mozambique

Cardno is providing consulting services to a plan that will improve the livability and economic competitiveness of one of Africa's most attractive cities. Cardno is outlining an integrated infrastructure master plan to include transport, water, drainage, power, housing, and commercial space.

#### **Oilfield Equipment Inventory Management Program**

Deepwater Region of the Gulf of Mexico

A major oil and gas producer adopted Cardno's inventory management system as the system of record for its completion equipment for the deepwater region of the Gulf of Mexico. Data can be imported into the client's existing SAP system while delivering a higher degree of accuracy. It tracks not only equipment location, but status, shelf life, drawings and notes, manufacturer data and inspection schedule. The client can make informed decisions on equipment maintenance and replacement.

#### **Green Infrastructure Design/Engineering and Construction Oversight**

Illinois, United States

Cardno is transforming a former industrial riverfront in Sterling, Illinois, into a mixed-use development that includes restored natural areas and open spaces. The project is creating a green space amenity that will establish a new gateway into the community, attract visitors to the waterfront, and encourage economic redevelopment along the Rock River.

#### **CBD and South East Light Rail**

Sydney, Australia

Cardno was the survey consultant on the CBD and South East Light Rail project. Our role included control surveys, cadastral boundaries, topographic surveys using static and mobile laser scanning. Cardno also conducted traditional surveying work, underground services modelling, façade surveys, 3D modelling and services clash detection. The rail connects Circular Quay to Sydney's Central Railway Station, Moore Park, Randwick Racecourse, the University of New South Wales, Prince of Wales Hospital and out to the suburb of Kingsford.

#### **Australia-Asia Program to Combat Trafficking in Persons (AAPTIP)**

South-East Asia

Cardno was awarded a five-year contract for the Australia-Asia Program to Combat Trafficking in Persons (AAPTIP), the Australian Government's flagship trafficking in persons program in Asia. Cardno also managed two predecessor programs to AAPTIP from August 2003 – March 2013. AAPTIP will be implemented in seven countries – Cambodia, Indonesia, Laos, Myanmar, Philippines, Thailand and Vietnam. The aim is to reduce the incentives and opportunities for trafficking of persons in the region.

#### **Ichthys LNG Plant Nearshore Environmental Monitoring**

Northern Territory, Australia

Cardno was commissioned by INPEX to provide nearshore marine environmental monitoring services for the large-scale Ichthys Gas Field Development Project in the Northern Territory, Australia. To support the infrastructure at Blaydin Point, dredging works are being carried out to seat and protect the Gas Export Pipeline and provide a safe access channel for shipping. Cardno's scope includes 12 work packages relating to the assessment of potential environmental effects as result of dredging and spoil disposal activities.

#### **Grand Cote Minerals Sands Project**

Senegal

Cardno delivered the detailed electrical, instrumentation and controls system designs for the project. A significant feature is the electrical and instrumentation design and construction of the world's largest mobile/travelling single-stream sand mining dredge.



Cardno is a professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world.

Cardno's team includes leading professionals who plan, design, manage and deliver sustainable projects and community programs.

Cardno is an international company listed on the Australian Securities Exchange (ASX: CDD).

we look forward to working with you