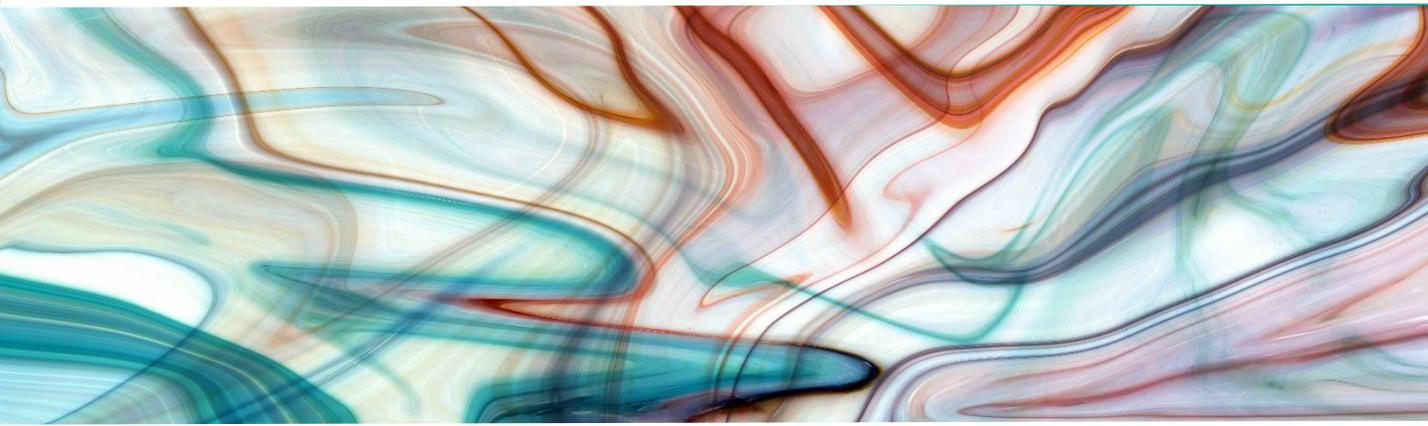




# RESOURCES & ENERGY CAPABILITY STATEMENT



Revision: 6

Released: March 2021



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dedication, innovation, vision, and knowledge are essential in the provision of world class project outcomes.

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**INDEPENDENT & OBJECTIVE ADVICE**

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# THE COMPANY



**HARRADYNAMICS** Pty Ltd was established as an independent provider of leading advisory, technical consulting, project valuation, project study, and project delivery services.

**HARRADYNAMICS** have delivered quality and timely project outcomes nationally and internationally in the mining, mineral processing, chemical, oil and gas, power, road, rail, port, industrial, manufacturing, and infrastructure sectors by diligently pursuing our client's objectives and goals.

**HARRADYNAMICS** also provides highly skilled project administration services personnel, and other technical staff, on temporary placements within our clients project teams.

**HARRADYNAMICS** operates an open, cooperative and solution focussed work environment. Our collaborative and energetic approach is founded upon the skills, experiences and qualities of our staff and their abilities to build a one-team culture.

The company provides independent due diligence, valuation, market analysis, asset transaction, project development, and a comprehensive range of technical and financial advisory services utilising the knowledge and experienced gained by our Principals in the industry over the past 35 years.

**HARRADYNAMICS** provides a full range of Facilities Management services in the assessment, operations, and maintenance of plant and equipment.

**HARRADYNAMICS** staff are professionals, leaders and motivators who understand how to deliver quality outcomes and create value for our clients.

**HARRADYNAMICS** staff also understand the need to get well conceived plans implemented on time and to control budgets.

Constantly changing fundamentals in the industries and sectors **HARRADYNAMICS** operates within requires constantly evolving skills and expertise. We are an industry leader often called upon by our clients to foresee risks and implement sound mitigation strategies for large and complex projects. Our reputation has been built on low risk project outcomes for our clients.

*delivering high integrity and low risk outcomes*

# HARRADYNAMICS SERVICES OVERVIEW

advisory services • strategic advice • due diligence • project & asset financial valuations • independent technical reviews • company & project audits • project design & development • project & construction management • lenders engineer and superintendent • feasibility studies • technology assessments • risk management • design management • estimating and cost control • project scheduling • project controls & systems • tender documentation • contract & commercial evaluations • contract administration • claims determination • facilities management • safety and environmental plans • workplace IR agreements • commissioning services • operations support, maintenance planning, and technical staff placements

**HARRADYNAMICS** provides a range of technical advisory services, transaction and due diligence services, project development and assessment services, and project delivery services covering all phases of a project from concept studies and feasibility studies through to design, procurement, contracts administration, construction management, and plant commissioning.

The company provides a full range of technical and financial advisory services to the mining, mineral, chemicals, oil & gas, power, water, infrastructure, and manufacturing industries in Australia and globally.

**HARRADYNAMICS** delivers world class outcomes in a range of industries that include:

- Mining & Mineral Processing
- Chemicals and Petrochemicals
- Manufacturing and Industrial
- Road, Rail, Port, OLC Infrastructure
- Logistics and Supply Chains
- Oil and Gas
- Pipelines and sub-sea cabling
- Power, Water, & Utilities
- Commercial, Civic, and Community Developments
- Urban & Precinct Developments
- Facilities Management

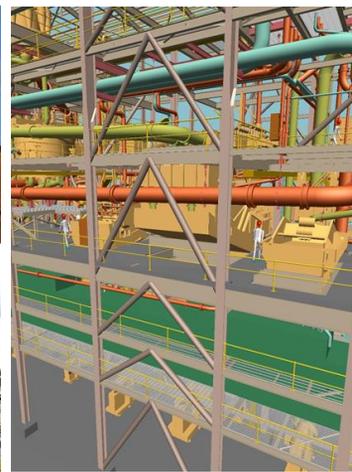
**HARRADYNAMICS** has multi-billion dollar project experience, skills, and systems to provide our clients with low risk and high value outcomes. We have for the past 35 years been providing our technical and advisory services across more than 623 projects globally. That demonstrated and proven expertise is re-invested in all our assignments.

**HARRADYNAMICS** personnel bring more than experiences and skills to our clients and their projects. Our service encompasses:

- a desire to understand our clients business and their project goals and objectives.
- an absolute belief in one type of job! A good job done right the first time.
- a sense of common purpose, cooperation, team spirit and unity with the client and its stakeholders.
- passion for the clients projects and challenges and a resolve that ensures our clients' interests always come first.
- an innovative and flexible problem solving approach that facilitates better outcomes.

*HARRADYNAMICS provides extensive industry knowledge and highly trained personnel for our clients and their projects*

# TECHNICAL ADVISORY SERVICES



For more than three decades **HARRADYNAMICS** staff have provided a range of advisory services that has allowed our clients to accurately value and invest (or divest) in mining and mineral projects globally.

Over the past 20 years Harradynamics principals have been involved in more than 71% of the coal mining and coal supply chain transactions that have occurred in Australia, and a good many that have occurred in Indonesia, Mozambique, Mongolia, South Africa, and New Zealand. Harradynamics also provides a full range of advisory services to the iron ore, bauxite, copper, gold, zinc, moly, nickel, rare earths, mineral sands, hard rock, heavy haul rail, and bulk commodities port businesses.

**HARRADYNAMICS** skills include the provision of strategic advice, industry forecasts, financial valuations, project costings and assessments, technical reviews and due diligence for investors, lenders, administrators, and other stakeholders.

Whilst priorities can change, values are inherently cultural. Harradynamics independence and values always mean our clients interests are paramount in all we do.

**HARRADYNAMICS** has accumulated significant experience in the strategic definition & development of mining, mineral processing, oil & gas, chemical, and infrastructure assets in Australia and overseas. Our skills and experience cover supply chain assets and services assets such as haul roads, railways, overland conveyors, onshore and offshore port facilities, barging and transshipment systems, water supply infrastructure, power generation and supply systems.

Our accumulated skills and experiences ensures our clients receive the benefit of this body of knowledge by quickly establishing likely development scenarios, asset values, risk profiles, investment opportunities, and divestment strategies.

**HARRADYNAMICS's** technical advisory services also include project assessments, project financial models & valuations, concept studies, feasibility studies, bankable feasibility studies, project approvals, stakeholder management, and a full range of implementation services.

*HARRADYNAMICS believes effective project management requires decisive and inspiring leadership*

# PROJECT DEFINITION, DELIVERY & SUPPORT



**HARRADYNAMICS** is known as a “*deliverer of projects*”. Project design, construction, and delivery to time, cost, quality, safety, and environmental constraints is our business. The provision of expert project teams, resources, management systems and corporate capability define what we do.

**HARRADYNAMICS** skills and services have exceeded customers expectations for safety performance, quality control, cost management, schedule management, and client experiences. We place great emphasis on our clients project experience and in long term relationships that are built on mutual trust and respect.

**HARRADYNAMICS** provides a broad range of designs, project management, construction management, and technical services, including:

- Process, mechanical, electrical, civil, structural design.
- Full engineering and design services.
- Project and construction management.
- Equipment specification, tender & procurement services.
- Site management & construction management.
- Field engineering and design certification.
- Safety in design and safety management.
- Quality assurance, quality control, and expediting.
- Contract administration and Owners Engineer services.
- Project controls systems and personnel.
- Industrial relations management and IR agreements.
- Commissioning engineers and management.
- Operations & maintenance support, personnel training.

**HARRADYNAMICS** provides the systems, procedures, and plans to accompany the resources or team provided so that the systems developed for each project comply with governing legislation and any other existing plans, approvals, or consent conditions applicable to the project.

For more than 35 years **HARRADYNAMICS** staff have provided leadership in the business of project definition, design & delivery. We have successfully managed multi-billion dollar projects in a variety of industries throughout Australia and globally. This whilst maintaining the highest standards in safety management, environmental compliance management, and community expectations.

**HARRADYNAMICS** provides a comprehensive range of Facilities Management services across HVAC, process facilities, power generation, water treatment, waste management, as well as general plant, equipment, and facilities. Our services, systems, and expertise always reduce maintenance and operations costs for our clients.

# OUR BUSINESS RELATIONSHIPS



**HARRADYNAMICS's** clients have included the major mining houses, global manufacturers and minerals processors, the worlds largest trading companies, liquidators & administrators, and numerous project developers, lenders & financiers, JV partners, and investors.

**HARRADYNAMICS** has delivered some of Australia's largest and most complex projects on time and on budget when others have failed to understand, plan, and manage outcomes to client expectations.

**HARRADYNAMICS's** technical advisory services are independent of all other parties which ensures our clients receive the full benefit of sound and well considered analysis, planning, and strategic advice.

**HARRADYNAMICS's** clients have relied on our project definition, development, design, and delivery expertise to reduce costs, shorten timeframes, and to provide certainty where outcomes are vitally important to their business.

We utilise valuation, due diligence, transaction, and project management systems and tools that enable small teams to successfully manage large and complex projects, or to value assets. This allows our clients to spend their time running their businesses and not be distracted by day-to-day project activities.

**HARRADYNAMICS** is committed to building strong relationships with our clients and to the successful delivery of project outcomes that exceed our clients expectations.

*we don't simply "get the job done" – we aim to innovate, enhance, lead and excel in everything we do*

# EXPERIENCE SUMMARY

The following project listing provides a sample of the types of projects recently completed by HARRADYNAMICS

• **HARRADYNAMICS** has several assignments currently underway for clients that are reviewing their mining investments and/or the value of those investments to prospective purchasers and their financiers.

• **HARRADYNAMICS** project and construction managed the \$1.2bn 'greenfields' coal mine and production facilities at Mount Arthur North in NSW.

• **HARRADYNAMICS** continues to provide asset valuation, due diligence, and range of advisory services to mine owners, JV partners, investors, lenders, and administrators to the mining industry worldwide.

• **HARRADYNAMICS** designed the expansion of the 8Mtpa Wilpinjong CHPP facility to cater for a 16Mtpa ROM capacity.

• **HARRADYNAMICS** has managed the exploration field sampling and testing programs for several coal, iron ore, moly, copper, and gold resource developments in Mongolia and Mozambique.

• **HARRADYNAMICS** has provided IPO support for more than 27 Chinese coal projects listed on the Hong Kong Stock Exchange since 2009.

• **HARRADYNAMICS** has completed a number of studies and designs for a 25mtpa open cut coal mine in China for Anglo American. Those designs included rail infrastructure and downstream coal-to-liquids processing facilities.

• **HARRADYNAMICS** continues to develop base metal, precious metal, iron ore, and coal projects for joint venture partners in Africa, Indonesia, Russia, Australia, China, Mozambique, Columbia, and Mongolia.

• **HARRADYNAMICS** has recently completed the Dighipara underground coal mine feasibility study for BCMCL in Bangladesh.

• **HARRADYNAMICS** is currently undertaking feasibility studies and due diligence assessments for copper, gold, coal, iron ore, zinc and molybdenum projects in Mongolia, throughout SE Asia, and across Africa. Our scope of works typically includes processing plants, power & water supply, mining services and facilities, road, rail, and port infrastructure.

• **HARRADYNAMICS** has provided a range of infrastructure design and study services to RTCM (now ICVL) and Vale for their Mozambique coal projects.

• **HARRADYNAMICS** is currently providing Lenders Engineer technical and advisory services to banks who are providing US\$2.7bn in funding to the Indonesian mining industry and for a range of projects in copper, gold, coal, and power generation.

• **HARRADYNAMICS** has completed prefeasibility & feasibility studies for the Bharinto & Trubaindo Expansion Projects in Kalimantan, Indonesia. This work included the design & costing of a 49km long haul road as well as cable belt conveyors that travel in excess of 51km.

• **HARRADYNAMICS** is providing technical advisory services and concept & feasibility studies to KPC, Arutmin, Berau Coal and Adaro Coal on a range of mine expansion options.

• **HARRADYNAMICS** provided project control systems, tools & services to Glencore in the development of copper & gold projects in the Philippines. Technical support has also been provided in the development of the Kazzinc Pb/Cu/Zn project in Kazakhstan.

• **HARRADYNAMICS** is currently providing a range of Lenders Engineer (Banks Engineer) and expert witness services for major mining and infrastructure projects including overland conveyors, ports, stockpiling and coal blending facilities, and CHPP facilities.

*our clients are our partners*

# CONTACT



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