



Strategic Plan

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1.0 INTRODUCTORY STATEMENT

This Strategic Plan was developed by the CRC for Infrastructure and Engineering Asset Management (CIEAM) Transition Planning Committee and the Australian Institute for Commercialisation, and updated to reflect greater mission clarity following decisions of the pre-incorporation board of the Asset Institute.

This plan has been prepared in order to provide a disciplined approach to the management of the Asset Institute over the next three to five years.

Key Contacts:

The key contacts for the Asset Institute in its pre-incorporation phase are:

Professor Joseph Mathew, Chief Executive Officer, and Doug Dunstan, Business & Commercial Manager/Board Secretary, CIEAM.

2.0 BACKGROUND

History of CIEAM

The CRC for Infrastructure and Engineering Asset Management (CIEAM) established itself as an internationally recognised research leader in its field. In fact, it is CIEAM's research that has helped underpin the development of asset management as an independent field in its own right. CIEAM is world-leading in the field of asset management, proposing new solutions based on a process of continuous improvement and utilising predictive tools, as opposed to the estimative techniques used elsewhere. CIEAM's strength has been in its breadth of capability, holistic approaches and ability to develop analysis engines to facilitate effective and reliable decision making.

Achievements

Over its ten years, CIEAM has developed a whole-of-lifecycle approach to asset management, and the research and development program has been built on these principles.

The CIEAM work program comprised four cohesive and interrelated research programs to create industry-ready tools and methodologies with application from the policy and governance levels to the cutting edge of specific implementation throughout an organisation. A focus on applied solutions was assured through the engagement of asset-operators and asset service and software providers in research programs. This approach promoted joint projects to stimulate the rapid uptake of new technologies and the development of products for world markets.

Throughout its life CIEAM has engaged in an extensive program of industry consultation. A major international workshop held in Brisbane in 2007, involving some 80 representatives from research, industry and government agencies, developed a 'roadmap', known as EAM 2020, as a basis for defining the program ahead across the asset management domain.

As part of its delivery strategy, from the outset CIEAM conducted an ambitious education program, with a significant throughput of PhD and Masters graduates, as well as professional and paraprofessional training and short courses in education and training institutions as well as asset-based organisations. Approximately half of the graduates completing the program have been placed in industry, whereas before CIEAM it would have been difficult to find a postgraduate qualified engineering asset management specialist employed as such, anywhere.

CIEAM has developed, accumulated and maintained a substantial Body of Knowledge (BoK) in engineering asset management. This BoK is manifested in several media, including a 12 volume education and training manual which is available as an online wiki; a confidential CIEAM website loaded with all research project final reports, and postgraduate theses; and several text books published through CIEAM's relationship with its publisher, Springer Verlag.

CIEAM has driven a transformational change in the institutional culture surrounding engineering asset management and delivery, at both the national and international level. Through its own research, and active engagement with researchers and practitioners in Australia and overseas, CIEAM has achieved international recognition as having developed a world-class research and development capability in engineering asset management technology, innovation and application.

At the national level, CIEAM led the establishment of the Australian Asset Management Collaboration Group (AAMCoG), to facilitate collaboration between Australia's peak bodies associated with programs in engineering asset management and to provide a vehicle for disseminating public good research in this area.

Internationally, CIEAM led the establishment and continues to lead the activities of the International Society of Engineering Asset Management (ISEAM) as the only international multidisciplinary professional learned society dedicated to the development of engineering asset management as an integrated and essential body of knowledge. CIEAM initiated the establishment of the annual World Congress for Engineering Asset Management (WCEAM), which is now run under the auspices of ISEAM. WCEAM brings together leading researchers and industry practitioners from around the world to promote the development and application of research and strengthen links between industry, academia and research at a global level. The last meeting was held in Daejeon, Korea in October 2012. The next will be held in Hong Kong in October 2013, followed by South Africa in 2014.

CIEAM expanded its global reach in the field of asset management in 2012 when it opened a joint research centre in conjunction with Neusoft, China's largest IT solutions and service provider. Together with key stakeholders, the CIEAM Neusoft Research and Development Centre (CNRDC) will deliver strategic, whole-of-life solutions to asset owners and managers in China. The fusion of knowledge has the potential to bring to the marketplace a remarkable suite of state-of-the-art innovation which will result in global excellence in the discipline.

Future direction

CIEAM established a Transition Planning Committee to determine the most appropriate form for CIEAM activities to take after wind-up in June 2013. After due consideration stakeholders agreed that a new body would be established to continue the work of CIEAM as the international thought leader in asset management. The Committee recognised the invaluable contribution to public good already being generated by CIEAM in promoting efficiency and sustainability in asset management. The natural evolution of CIEAM was to adopt a charitable form, consolidating the somewhat ad-hoc nature of CIEAM's work into a cohesive mission for the public good.

The translation from CIEAM to the Asset Institute is scheduled for July 2013. The Asset Institute will be self-funded outside the CRC funding system and will leverage from the CIEAM intellectual property and innovation delivered since 2003. Whilst its focus is making the knowledge it has acquired available to the public, it anticipates that its operational funding needs will be met from membership fees and related commercial activity.

The Asset Institute

The Asset Institute has been established as a public charity to continue the work commenced by CIEAM. Its structure is one of an incorporated company limited by guarantee established for the charitable purpose of making a positive difference to community livelihoods by improving the sustainability and increasing the usefulness of human created assets and infrastructure. The research and innovation pioneered by CIEAM will be further developed and disseminated to the public in ongoing collaborative projects, so that Australians and others across the world can benefit from safer, more efficient, more effective, more environmentally conscious and sustainable asset management.

Financial support for the Institute is derived from member contributions and seed capital from CIEAM.

3.0 ORGANISATIONAL VISION, MISSION AND VALUES

The Asset Institute stakeholders, including former CIEAM participants, industry, research organisations, government, and persons recognised as having a degree of responsibility to the public were consulted to develop the Institute's Vision, Mission and Value statements. They are:

3.1 Vision

"The Asset Institute will be a leading International Research Institute providing transformational Infrastructure and Engineering Asset Management Solutions."

3.2 Mission and primary purpose

"To provide collaborative research services, solutions and training, utilising our world-leading knowledge in whole-of-life engineering asset management for public benefit. By applying our expertise, tools and technologies, the public will benefit from increased sustainability of infrastructure through improved asset performance, availability, reliability, reduced cost of ownership and extension of asset life. These outcomes will benefit the Australian public generally and enhance community livelihoods and sustainability internationally."

3.3 Values

The corporate values that will govern the Asset Institute's development and growth include the following:

- *The Institute will promote a learning and nurturing culture amongst its stakeholders and staff.*
- *The Institute will promote the public benefit in all that it does, including through any related commercialisation and contract research/consulting required to resource its public benefiting activities.*
- *The Institute will operate in accordance with the highest standards in all its relationships with its stakeholders and the community.*
- *The Institute will promote an environment that will encourage innovation amongst its stakeholders and diligence amongst staff.*

The stakeholder groups are aligned in the vision, mission and values for the Asset Institute.

The stakeholder groups are as follows:

Private and public asset owners, designers, constructors, service providers and operators seeking new knowledge to solve novel and complex asset and infrastructure problems.

Research organisations and industry bodies seeking brokered industry-funded research collaborations through established national and international networks.

Governments, development partners and aid agencies seeking assurance of, and confidence in, maximising the return on asset and infrastructure investments.

4.0 STRATEGIC GOALS

In consultation with the representative group of stakeholders, three (3) high level strategic goals have been identified for the Asset Institute. They are:

4.1 Goal No.1

That the Institute is an enduring Institute that will *“Develop the Asset Institute into a sustainable world class institute that serves the public good, in part by providing asset owners, operators and service providers (charitable, government or private) with new knowledge to solve novel and complex asset and infrastructure problems.”*

4.2 Goal No.2

That the Institute possesses influence and leadership *“In partnership with other charities, government, industry and research organisations, influence and lead Infrastructure and Engineering Asset Management Practice.”*

4.3 Goal No.3

That the Institute will *“Ensure the Asset Institute’s solutions exceed stakeholder requirements by contributing added value through enhanced community and environmental outcomes”.*

5.0 OPERATIONAL OBJECTIVES

In consultation with the representative group of stakeholders, specific operational objectives of the Institute relating to the financial and growth strategies have been identified as:

5.1 Financial Perspective

The Financial Perspective is that *“The Asset Institute will be a sustainable entity within five years in achieving its goals and objectives”.*

5.2 Internal Perspective

The Internal Perspective is that the Institute should be an exemplar to industry in its internal processes and capabilities, that *“The Asset Institute’s internal perspective should develop an exemplar operational culture that encourages collaboration, responsiveness, efficiency and the delivery of world class solutions”.*

5.3 The External Perspective

The External Perspective for exceeding external expectations held by customers, stakeholders and partners is that *“The Asset Institute will attract and retain a minimum of 20 stakeholders committed to its public benefiting purposes, which include 12 industry members and peak bodies”.*

5.4 Learning and Growth Perspective

The Learning and Growth Perspective is that the Institute build and maintain a vibrant and high-performing team, that *“The Asset Institute will develop world class research and information dissemination capability in asset management through collaboration with world leading researchers”.*

6.0 BUSINESS AND OPERATIONAL GOALS

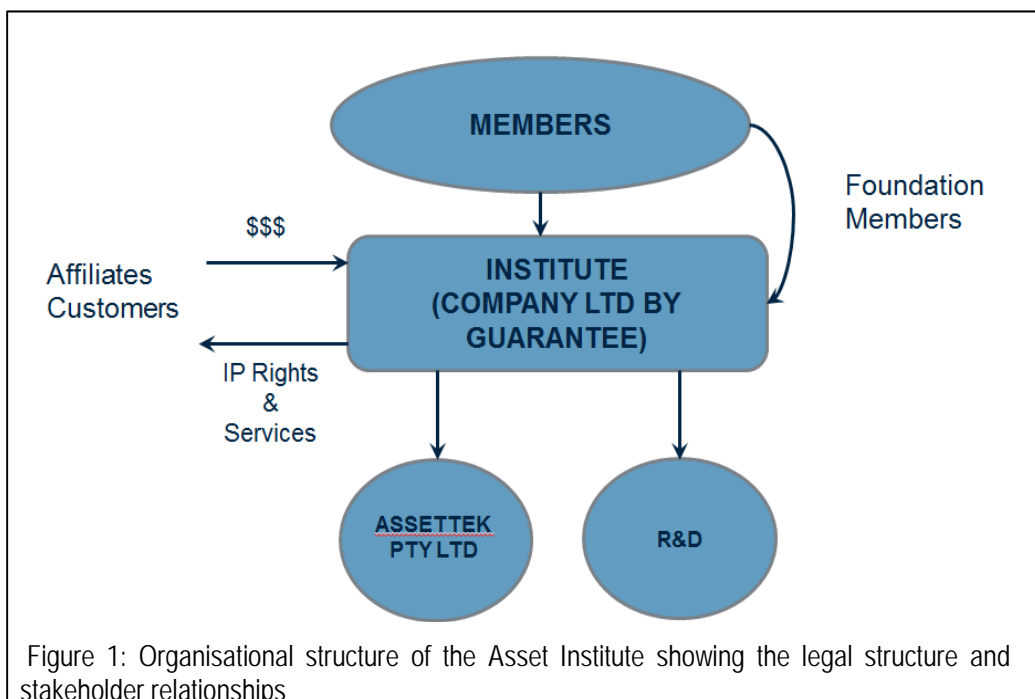
Consultations with the representative group of stakeholders relating to the business and operational aspects of the Institute have identified the goals for the Asset Institute as to:

- **Align** the Asset Institute with its public benefiting role, stakeholders' values and its customer expectations.
- **Implement** world class business practices and performance, to serve as an exemplar to the charity sector, government and industry.
- **Generate** recurring income from members' contributions, brokerage services and commercialisation of some of its intellectual property.
- **Increase** the value of its intellectual property pool, the commercialised assets from the intellectual property pool, and any other business assets.
- **Secure** the income and value of the Institute to become self-sustainable in five years.

7.0 ORGANISATION STRUCTURE IN START-UP PHASE

The Institute model is based on a public unlisted not-for-profit company limited by guarantee that is a charity. It will seek registration as a charity and endorsement for charitable tax benefits as a charity contributing to community livelihoods by improving the sustainability and increasing the usefulness of human created assets and infrastructure. The Asset Institute's company governance is consistent with registered charitable organisations in Australia and is organised to comply with the (anticipated) governance standards imposed by the Australian Charities and Not-for-profits Commission (ACNC).

The Institute will have an industry focused, skills-based Board who understand and are committed to its charitable purposes. The Board will comprise a mix of independent and representative members to support a lean and agile Executive Team. The Institute will separate its commercial work from research, development, and commercialisation activities into a wholly owned private company, Assettek Pty Ltd (ACN 122 425 665). Figure 1 provides a functional overview of the Institute model.



The Asset Institute has transitioned from a CRC structure (having greater resources) to a leaner entity typical of new start-up organisations. Recognising this, the key functions required to operate and grow the Institute in the initial phase are shown in Table 1.

Table 1: Functional requirements and responsibility allocation

FUNCTIONAL REQUIREMENTS	RESPONSIBLE TEAM
<ul style="list-style-type: none"> • company oversight, development and growth strategies 	Board and executive
<ul style="list-style-type: none"> • cultivation and developing relationships with stakeholder groups and individuals 	Board and executive
<ul style="list-style-type: none"> • communications on behalf of the Institute 	Executive Director and Board Chair
<ul style="list-style-type: none"> • delivery of core capabilities, e.g. R&D project development, brokerage and management 	Executive
<ul style="list-style-type: none"> • management of the operational, governance financial, tax and compliance aspects of the institute, and all resources, including contracts, soft and hard assets and its people 	Board and executive
<ul style="list-style-type: none"> • future planning, including marketing and business development 	Board and executive

In the start-up phase (2013 – 2018), the (foreshadowed) Board and Executive Team will comprise the skills necessary to grow membership, engage industrial partners and operate a transparent organisation which attracts investment from each of the key stakeholders. These skills include industrial research, commercial, financial, corporate and marketing expertise in the field of engineering and infrastructure asset management. The initial organisational structure is shown in Figure 2 below.

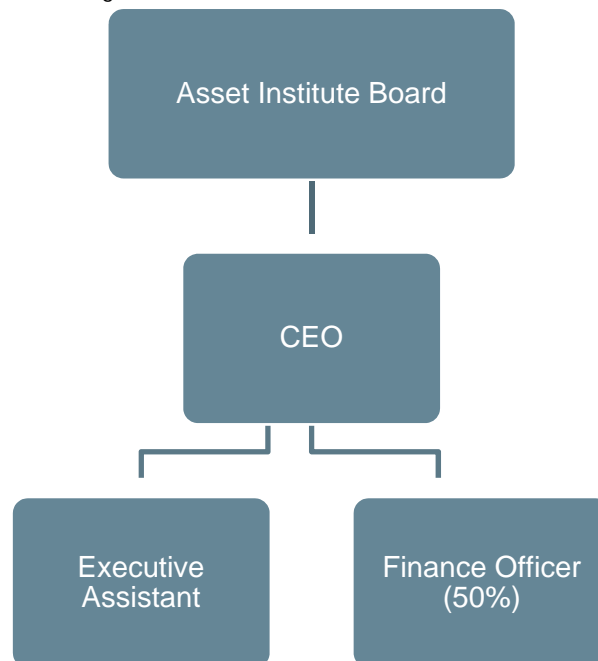


Figure 2: The Asset Institute Limited Organisation Chart in start-up Phase (2013 – 2014)

8.0 SWOT ANALYSIS

In consultation with the representative group of stakeholders, a SWOT analysis was undertaken identifying the strategic balance sheet of the new Institute to help it develop a preferred future operating model. The current

strengths and weaknesses of the Asset Institute were those identified in Table 2, with opportunities and threats shown in Table 3.

Table 2: Initial strengths and weaknesses identified for the Institute

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Build upon CIEAM's existing capability and achievements, i.e., main outputs to be a continuation/enhancement of CIEAM's work program. • A collaboration of international asset management research providers. • Initial CIEAM IP can evolve into a range of products and services. • Ability to delineate the not-for-profit activities from the commercial activities. • Offers a tax exempt status. • Is not seen to be competitive in nature with other industry bodies related to asset management. • Allows resources to be allocated between not-for-profit and commercial activities depending on the market demand for services. • IP ownership arrangements allows for members to exploit background IP for commercialisation purposes. • Located in a major centre of excellence. 	<ul style="list-style-type: none"> • Requires separate functional staff for not-for-profit activities and commercial activities. • Requires establishment and maintenance of two governance functions for each entity. • Reliant on significant ongoing member contributions to remain sustainable. • CIEAM historically has not had strong commercialisation expertise. • Lack of awareness of the Institute amongst prospective members. • Overdependence on a few key staff.

9.0 STRATEGIC RISKS

In consultation with the representative group of stakeholders, the strategic risks for the Asset Institute taking over from CIEAM were identified as shown in Table 4. The associated risks have in part, been managed within the Risk Management System incorporating probability (risk category) and likely consequences using the Risk Management Standard AS/NZS ISO 31000:2009.

To determine the category, regard was given to the probability of the event occurring and if it were to occur, the impact it would have to the sustainability of the Institute, that is, ranging from insignificant to extreme. The combination of the probability and the impact of the event or situation informs the broad category of deemed risk, *i.e.* high to low. In recognising the risks, due consideration has been given to a contracting economic climate over the past several years.

Table 3: Initial opportunities and threats identified for the Institute

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Asset management is poised for rapid growth with the release of the ISO 55000 standards series in 2014. • International collaboration offers great synergies and potential. • Existing CRC partners can be engaged without the need for identifying and establishing new partnerships. • Allows research programs to be brokered with universities on behalf of the public asset owners and industry partners. • The model is structured to receive large donor funding that would be available under an effective value proposition. • Scope to diversify outputs into various industry sectors. • Leverage off commercial initiatives that have already been seeded in CIEAM. 	<ul style="list-style-type: none"> • The ability to source and secure large donor funding. • Member organisations could cancel their membership if they do not receive value from the relationship. • Lack of market acceptance of commercial products such as decision support systems, monitoring tools, predictive models. • Economic slowdown is impacting on enrolment of members. • Asset management's growth could attract major competition. • Foreign currency fluctuations which may impact on membership subscriptions.

10.0 CAPABILITIES

The Asset Institute will offer unique capabilities not found currently in Australia. With significant stakeholder consultation, the identified core capabilities are that the Institute:

- Brokers and manages collaborative research to solve asset management and sustainability problems;
- Develops and applies multidisciplinary capabilities to deliver asset management innovative solutions into diverse industry sectors;
- Integrates and improves asset maintenance and management processes and personnel to advance an overall delivery system for asset management and maintenance;
- Integrates sustainable engineering processes with Life Cycle Management including inventory, scheduling, finance, environmental and other elements of the total corporate management system;
- Works with industry, professional associations, governments, development partners and research organisations to build awareness of, and to educate and train practitioners in asset management that address challenges of efficiency, resilience & sustainability; and
- Provides predictive modelling, diagnostic and prognostic tools for asset management decision-support.

11.0 WORK PLAN AND THEMES

A broad Work Plan has been identified through a consultative process in the past year. While significant flexibility is factored into the Institute's core areas or 'themes' to meet specific needs as they arise, they also are expected

to play to the strengths that have positioned CIEAM as a world leader in solving asset management and sustainability problems. The core themes on initial offer are those listed below.

- Design and Construction
- Organisation and Planning
- Integration and Interoperability
- Asset Health and Analytics
- Recovery and Continuity
- Sustainability and Resilience
- Learning and Development

12.0 CONCLUSION

The Asset Institute Strategic Plan was largely developed through an extensive consultative process with the various stakeholders of CIEAM and the Institute moving forward. It is forward looking and is designed to inform the framework for the associated Operational Plan.

TABLE 4: STRATEGIC RISKS TO THE ASSET INSTITUTE

IDENTIFIED RISKS	Risk Category (HIGH, SIGNIFICANT, MEDIUM, LOW)	CONSEQUENCE LIKELIHOOD /	IMPROVEMENT INITIATIVE / TREATMENT STRATEGY	STRATEGIC OWNER / STAKEHOLDER
Failure to win Industry Support	High	Loss of membership engagement and project activity	Get key stakeholders on board, e.g. Asset Management Council (AMC)	Executive Team and various advisory board / committee members
Members / Membership	High	Business Viability	Create opportunities for Asset Institute Future Agenda Value Proposition Mitigation Strategy Engage communication / PR Person / Relationship Management Expertise Major Donor / Philanthropic Contributions Creation of overseas 'nodes' Adoption of Asset Institute by a university	Executive Team
IP Assignment	High	Loss of membership engagement	Securing Licensing arrangement with existing IP Owners Meeting and aligning expectations with Asset Institute	Executive Team
Economic Climate	Medium	Reduced income from membership subscriptions and project revenues	Develop detailed Terms of Engagement for each large client and stakeholder groups	Voters
Loss of identity through rebranding	Medium	Loss of brand equity with clients, stakeholders, staff	Develop detailed Asset Institute branding strategy Engage stakeholders, clients and staff Deploy communications plan Deploy advertising plan	Executive Team
Political environment	Med-Low	Reduced income from large sponsorship and projects	Engage senior LNP political figures Use AIG and other peak bodies Use clients to lobby Conduct boardroom dinners, visits etc.	Executive Team

Reference: AS/NZS ISO 31000:2009 – Risk management - Principles and Guidelines