

Collaborative Innovation and Problem Solving in Asset Management

Joe Mathew
Chief Executive Officer

Our Members

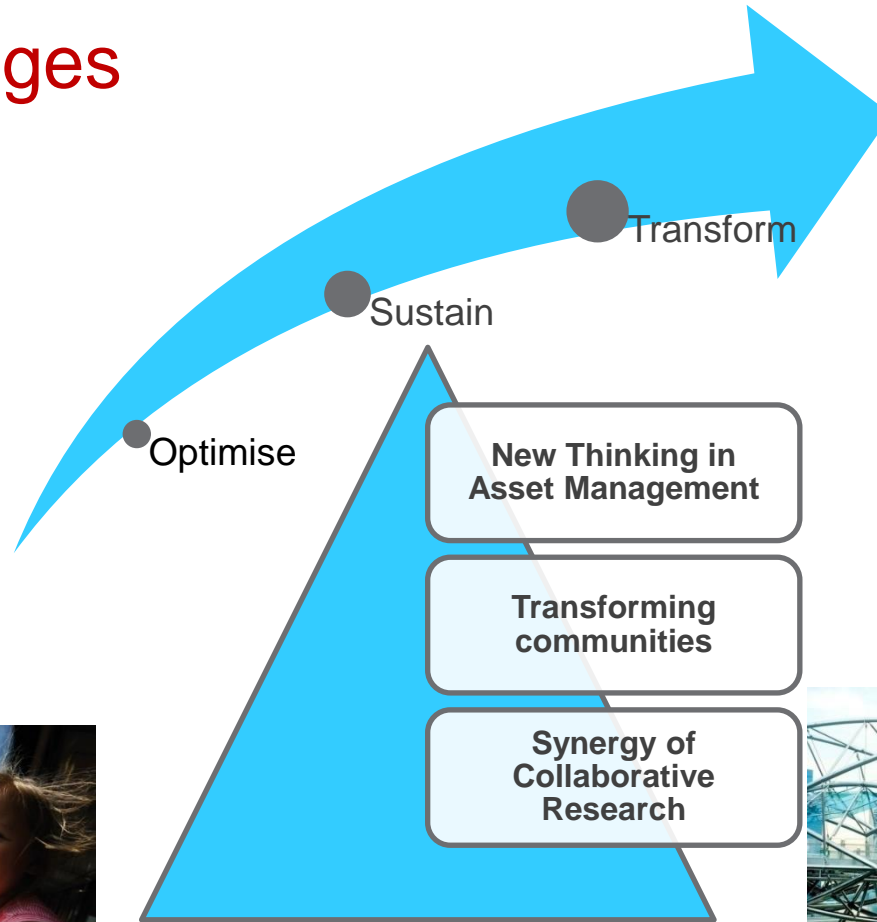


Vision (to be ratified)

The Asset Institute leads, drives,
facilitates, enables and translates
R&D for the optimisation,
sustainment and transformation
of Engineering Assets &
Infrastructure



Key Messages



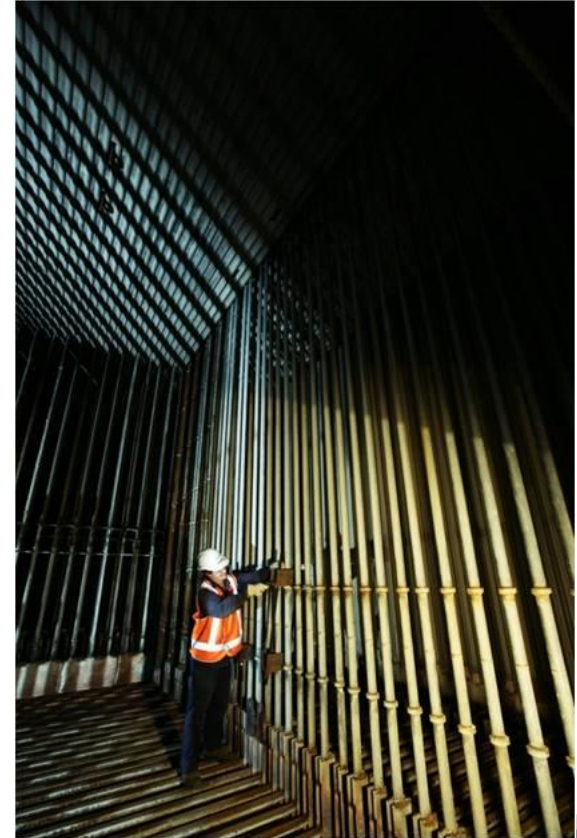
Mission

- To enable stakeholders to
- achieve improved asset performance; availability, reliability, productivity, reduced cost of ownership and extension of asset life
 - enhance community livelihoods and sustainability through the provision of
 - collaborative research services
 - solutions and training through our leading knowledge in EAM



The Institute's Key Capabilities

- Applies integrated multidisciplinary solutions to achieving high return on assets
- Integrates and improves whole of life cycle processes and systems through Interoperability standards and the Open Industrial Interoperability Ecosystem (OIIE)
- Provides predictive modeling, diagnostic, and prognostic tools for asset management decision-support
- Build awareness of, and educate and train practitioners in asset management
- Brokers, enables and manages collaborative research



Courtesy of Delta Electricity

Engineering Asset Management



The process of organising, planning and controlling the acquisition, use, care, refurbishment, and disposal of physical assets



The goal is over their entire life to

optimise service delivery potential
reduce related risks and costs
enhance natural and social capital

The Asset
Institute's
approach to
achieving high
return on assets

Asset Management 4.0



EAM Solution

Governed, integrated
and virtualised
whole of life plans
with effective data
driven systems

Research Themes

Design & Construction
(Prof Robin Drogemuller, QUT)

Organisation & Planning
(Prof Kerry Brown, ECU)

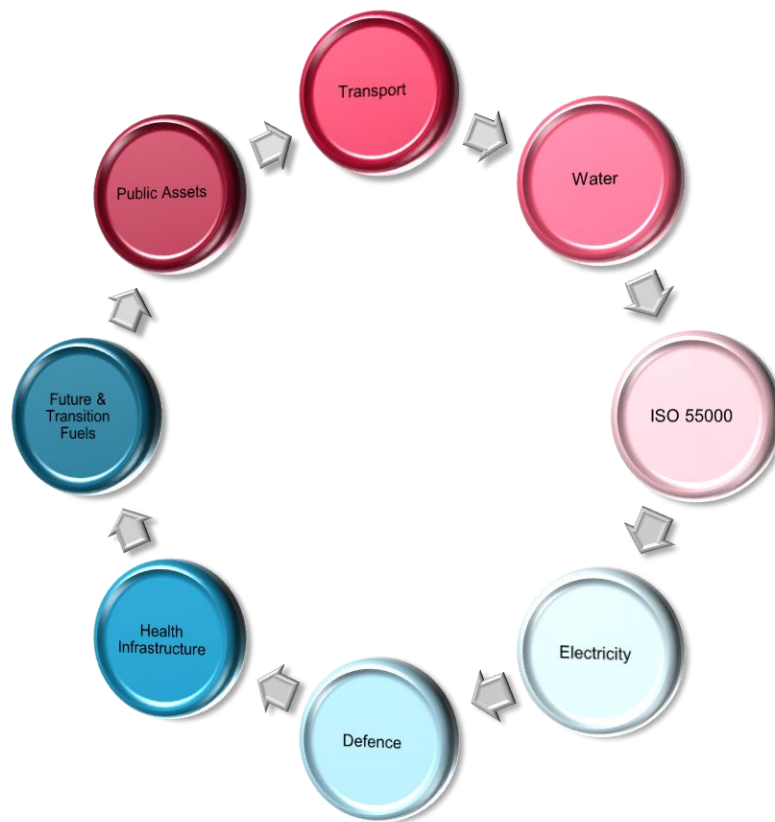
Integration & Interoperability
(Prof Markus Stumptner, UniSA)

Asset Health and Analytics
(Em Prof Lin Ma, QUT)

Sustainability & Resilience
(Prof Ashantha Goonetilleke, QUT)

Learning & Development

Our Special Interest Groups







Private and public asset owner and operators

- New knowledge to solve novel and complex asset and infrastructure problems



Large Donors and Aid Agencies

- Assurance of, and confidence in, maximising the return on asset and infrastructure investments



Research Organisations and Industry Bodies

- Brokered industry-funded research collaborations through established national and international networks

Events

AGM

Annual
Member
Forum

Seminars

Workshops

Selected Projects

- “Information Gateway”
- “Integrated Strategic Asset Management”
- “Operationalising Data Analytics for Decision-Making in an Industrial Health and Safety System”
- “Metro South Hospital and Health Service ISO55001 Gap Assessment”
- “Origin Energy ISO 55001 Gap Analysis”
- “Condition-based maintenance optimisation for Australian sugar industry”
- “Queensland Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) – Strategic Asset Management Plan Framework
- “Sunshine Coast Regional Council Asset Management Maturity Assessment”
- “The use of machine learning to develop preventive maintenance strategy for water assets by integrating a fully distributed optical fibre sensor for real-time non-destructive condition assessment”

Selected Projects (cont'd)

- “Asset Life Cycle Management model for track linear assets”
- “Strategic Asset Management Framework”
- “Infrastructural Asset Renewal Decision Support”
- “Degradation modelling and decision support for rail assets”
- “Condition-Based Maintenance Optimisation for Queensland’s Railways”
- “Renewal Decision Support for Eraring Boiler Waterwalls”
- “Corrosion management of Ash Hoppers in Delta Electricity”
- “Interoperability for Physical Asset Management and the Open Industrial Interoperability Ecosystem (OIIE)”
- “Building Monitoring & Pilot Study on Decision Support in Facilities Management”

Current Projects

- FEnEx CRC Project: “An Open Specification for Analytics Interoperability: Accelerating Digital Transformation in the Energy Industry”, Don Sands, Synengco, Markus Stumptner, Karamjit Kaur & Matt Selway, UniSA, Alan Johnston, Assetricity, Jonathan Love, QUT.
- FEnEx CRC Project: “Developing a Digital Competencies Framework for the Upstream Oil & Gas Industry”, Rob Perrons, Kevin Desouza & Rio Rodrigues, QUT, Kerry Brown, Hadrian Djajadikerta & Ferry Jie, ECU.
- ARC Linkage LP190101240 “Condition-Based Maintenance Optimisation for Queensland’s Railways”, Michael Cholette, QUT, Venkat Reddy, QR, et al.
- ARC Research Hub for Resilient and Intelligent Infrastructure Systems in Urban, Resources and Energy Sectors (RIIS), Nasser Khalili, UniNSW, Abbas Rajabifard, UniMelb, Michael Cholette and Tommy Chan, QUT.
- “Asset Data Interoperability”, Queensland Transport and Main Roads, Don Sands, Synengco, Alan Johnston, Assetricity, Markus Stumptner, Karamjit Kaur & Matt Selway, UniSA (contract negotiations phase)

Strategic Relationships

- International Society for Engineering Asset Management (<https://iseam.org/>)
- World Congress on Engineering Asset Management (<http://wceam.com/>)
- MIMOSA (<https://www.mimosa.org/>)
- Smart Satellite CRC (<https://smartsatcrc.com/>)
- Future Energy Exports CRC (<https://www.fenex.org.au/>)
- ARC Industry Transformation Research Hub for Resilient and Intelligent Infrastructure Systems (RIIS) in Urban, Resources and Energy Sectors (<https://riis.org.au/>)

Professional Contributions

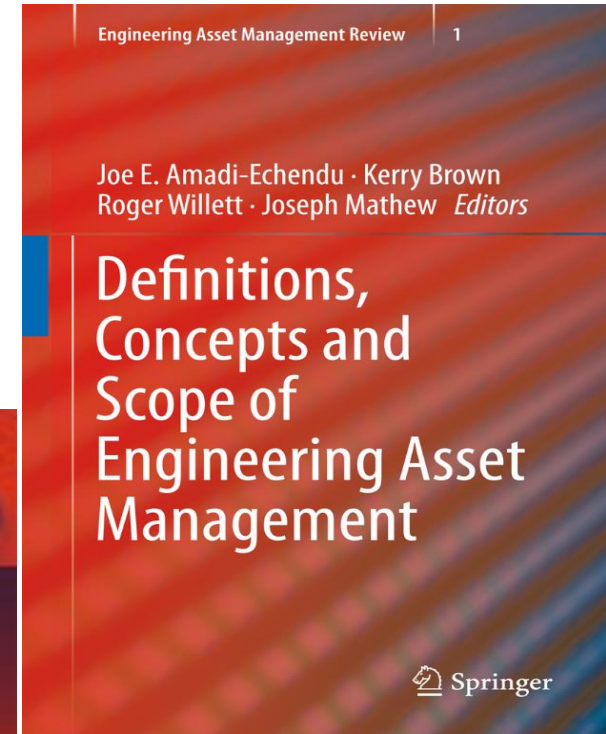
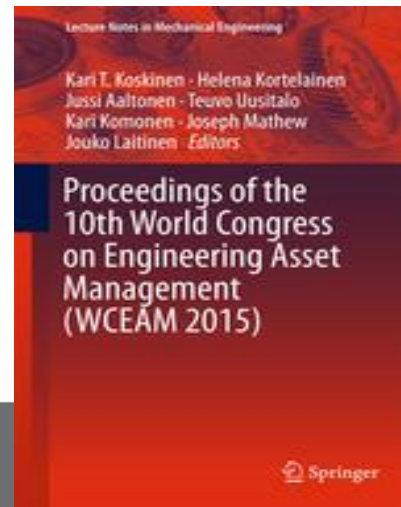
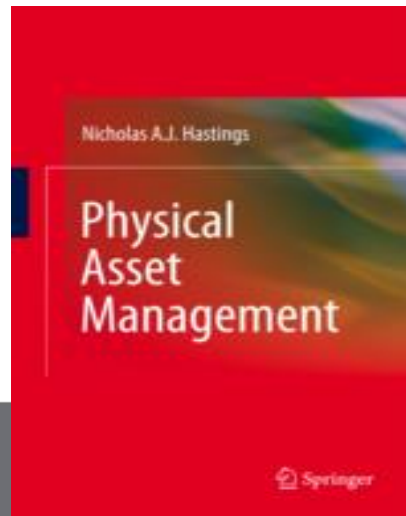


International Standards

- ISO 55000 Asset Management
- MIMOSA standards; OSA-CBM, OIIE, and CCOM
- ISO Technical Standards:
 - TC 108/ SC 5: Condition Monitoring and Diagnostics of Machine Systems
 - TC 184/SC 5 Interoperability, integration, and architectures for enterprise systems and automation applications



- Physical Asset Management
- Proceedings of the WCEAM's
- EAM Reviews leading to IJEAM
- Integrated Engineering Asset Management Handbook (to come)



Q&A

Enquiries at email: enquiries@assetinstitute.com