• Webinars 27th April – 1st May inc.

• "A Presentation a Day, Keeps Corrosion at Bay"

• As a result of the COVID19 pandemic we are opening the virtual doors for all MCF / ICorr members and guests to attend our webinars FREE OF CHARGE!

• All you need to do is register!
• Webinars 12.00 – 13.00 Daily

• Event 1: The Six Core Elements of Asset Management. 27 April 2020. Adam Lea-Bischinger | CEng CMgr MEng CMRP Eur Ing of the Institute of Asset Management (IAM)


• Event 4: Marine Alloys, Their Corrosion Behaviour and How to Avoid It. 30 April 2020. Carol Powell | Nickel Institute

• Event 5: Exploring High Pressure CO2 Annular Corrosion in Flexible Pipes. 1 May 2020. Maria-Eleni Mitzithra | Senior Project Leader-Corrosion | TWI Ltd.
Institute of Corrosion partnering with Adam Lea-Bischinger of the Institute of Asset Management (IAM)

27th April 2020
“Asset Management and how it can deliver value to your Organisation”
Overview

- Definitions
- Brief history of IAM and ISO 55000
- Core elements of Asset Management
- Challenges with Asset Management
- First Steps towards an Asset Management framework
About Me

• 15 years working in Maintenance, reliability, Asset Management and Inspection
• Major oil and gas projects – also power, mining and infrastructure
• Worked for EPIC, Operators and supply companies
• Working in Middle East, North America, Europe and Australia
• Masters Degree in Engineering, Materials and Corrosion
• Post graduate training in Inspection, IoT and NDT

• CMRP – Certified Maintenance and Reliability Professional
• Certified Reliability Leader (Association of Asset Management Professionals)
• Certificate & Diploma in Asset Management – Institute of Asset Management
• Chartered Manager (Chartered Management Institute)
• Chartered Engineer CEng – Member of the Energy Institute
• European Engineer EurEng
Definitions

**Asset(s)** single item of a group of physical items (fixed, mobile and linear)

**Organisation** = not just businesses – Governments and non-for-profits

**Value** = not just money – secondary benefits
- Reputation improvements
- Customer satisfaction
- Risk reduction

**Stakeholders** = anyone directly and indirectly involved
- Staff, Contractors, suppliers, governments, NGO’s etc
History of the Institute of Asset Management

• Established in 1994
• A not-for-profit, professional body
• Owned and controlled by our members and committed
• Remain independent from commercial and trade associations
• Over 2,700 members and a network of over 30,000 people globally
• Exist to advance the discipline of asset management, for people and organisations
  • Chapters – Countries
  • Branches – local in each country

Abz Branch established 2018
Chapters and Branches Worldwide

- **Canada**
  - Visit Chapter Microsite
  - 9 Branches

- **Germany**
  - Visit Chapter Microsite
  - 3 Branches

- **Ireland**
  - Visit Chapter Microsite
  - 2 Branches

- **Netherlands**
  - Visit Chapter Microsite
  - 1 Branches

- **United Kingdom**
  - Visit Chapter Microsite
  - 9 Branches

- **USA**
Body of Knowledge and Publications

- IAM have been coordinating the development and publication of detailed guidance notes
- IAM have developed exams and education
  - IAM certificate
  - IAM Diploma
- Working towards their Chartered Status with the Engineering Council
Membership
Profiles of Asset Management Professionals

- Engineering: Mechanical, Chemical, corrosion, maintenance, Systems, Electrical, materials etc
- Finance
- Computer science, Data and analytics
- Legal
- Business Management
- Psychology / Sociology
Asset Management and ISO 55000 History
First three ASTM E53 Asset Management standards published - 2000

BSI proposes PAS 55 as the basis for an ISO Management Systems Standard for Asset Management - Spring 2009


ISO approval of PC 251, Asset Management Systems - Sep. 2010

First Version Release - 2014

2004

PAS 55 published (United Kingdom) - Winter 2009

ASTM E53 decides to engage in the ISO Asset Management standards development process - June 2010

Preliminary Meeting of ISO Asset Management committee in London - Jan. 2011

First Working Draft (WD1) released - 2014

Second Version - 2018
ISO 5500X

- Three main documents
  - ISO 55000
  - ISO 55001
  - ISO 55002
- Overview of terminology
- Requirements
- Application of the standards
- Similar in structure to ISO 9000 series
IAM Conceptual Model

- Developed by the IAM to show the core elements of the ISO 55000 series standard
- Shows 6 main Groups
  - Under each group are multiple subjects
The 39 Subjects

**Strategy & Planning**
- Asset Management Policy
- Demand Analysis
- Strategic Planning
- Asset Management Planning

**Organisation & People**
- Procurement & Supply Chain Management
- Asset Management Leadership
- Organisational Structure
- Organisational Culture
- Competence Management

**Asset Information**
- Asset Information Strategy
- Asset Information Standards
- Asset Information Systems
- Data & Information Management

**Decision Making**
- Capital Investment Decision Making
- Operations & Maintenance Decision Making
- Lifecycle Value Realisation
- Resourcing Strategy
- Shutdown/Outage Strategy

**Lifecycle Delivery**
- Technical Standards
- Asset Creation/Acquisition
- Systems Engineering
- Configuration Management
- Maintenance Delivery
- Reliability Engineering
- Asset Operations
- Resource Management
- Shutdown/Outage Management
- Fault & Incident Response
- Asset Disposal

**Risk & Review**
- Risk Management
- Contingency Planning
- Sustainable Development
- Management of Change
- Asset Health Monitoring
- AM System Monitoring
- Management Review
- Asset Costing & Valuation
- Stakeholder Engagement
Support From Numerous Organisations

- IMAA (The Institute of Asset Management)
- IPWEA (Institute of Public Works Engineering Australasia)
- ASSET MANAGEMENT COUNCIL
- PEMAC (Professional Energy Management Association of Canada)
- SMRP (Society for Maintenance & Reliability Professionals)
- SAAMA (Southern African Asset Management Association)
- SPRINT ROBOTICS
- Association of Asset Management Professionals
- IRM (Institute of Risk Management)
- GSMM (Gulf Society for Maintenance & Reliability)
- CBM CONNECT
- JAAM (Japan Association of Asset Management)
- ORCA HUB (Offshore Robotics for Certification of Assets Remote Safety and Integrity)
- EFNMS
Asset Management Throughout the Asset Lifecycle
Asset Management During Construction
3D Models

- 3D CAD models for construction
- Building Information Management (BIM) in construction industry
- Used for project progress
- Future Digital Twin
- Supplier management
- Information / documentation management
- Operations familiarisation
Operations and Maintenance

- Mobile tablet computing
- Wireless condition monitoring sensors
- Hands-free heads up display
- The connected worker
Decommissioning
Asset Management – Decision Making

- Robust AM allows for monitoring of value and costs
- Supports decision making over the asset life cycle
- Helps with strategic planning
  - Managing risks
  - Liabilities
  - Costs
  - Rewards
Repurposing
Asset Management in Oil and Gas

- We have / undertake many of the 39 elements
  - Inspection
  - Maintenance
  - Risk reviews / SCE / PS
  - Data and information
  - Decision making
  - Capital investments
  - Shutdowns and Turnarounds
  - Training / skills management

- But not necessarily coordinated and coherent
Key Challenges with Asset Management

- It’s a relatively new subject
- Common Understanding
- Communication
- Co-ordination
- Forever changing
- Different perceptions of value
- External stakeholder values change
- Who owns the assets / who operates the assets
How Asset Management Currently Looks
Silos

- Teams working in isolation
- Not always coordinated across departments
- Competing for smaller budgets
- Short term thinking – not long term planning
- Outsourcing key elements
- Old / legacy digital / software systems
- Incomplete / incorrect data
- Misalignment between leadership and operations
- Not learning from past mistakes
- Focused on costs not value
- External factors not being considered
What Asset Management Can Look Like
Corrosion Prevention through Good Design / Team-Working
• Clear planning and aligned targets
• Embracing new technology
• Accurate data to make informed decisions
• Engaged skilled workforce
• Prepared for external challenges
• Continuity planning and resilience
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<th>Delivered Benefits</th>
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<td><strong>Long term planning</strong></td>
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<td><strong>More engaged and motivated workforce</strong></td>
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<td><strong>Stakeholders identified and value better understood</strong></td>
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<td><strong>Cost reductions</strong></td>
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<td><strong>Improved asset availability</strong></td>
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<td><strong>Improved contingency and risk management</strong></td>
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<td><strong>Better use of data to support organisational objectives</strong></td>
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<td><strong>Learning and development plans for personnel</strong></td>
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Where to start?

- Maintenance review and spares optimisation
- We know our SCE’s and PS
- We do RBI
- We have a corrosion management strategy
- I’ve defined the corrosion loops
- My drawings are correct
Asset Management is a Cultural Change

That’s why it’s so difficult

It’s about working across departments

Who’s going to coordinate all this?

Need to bringing together Technical, Financial, Organisational & leadership
Asset Management Starts with Leadership

Set
- The tone
- The vision
- The mission
- The strategy

Commit to AM as a competitive advantage

Not a program – it’s a new business model / way of working
Your Organisation Already has Many of the Parts
## Action Plan

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<tr>
<th>Get</th>
<th>Get leadership / management engages / support</th>
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<tr>
<td>Develop</td>
<td>Develop / form a team with knowledge / understanding around AM principles – internal or external</td>
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<td>Map out</td>
<td>Map out the parts you have and what you need</td>
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<td>Business Case</td>
<td>Develop business plan for each project – cost, time and deliverables</td>
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<td>Produce</td>
<td>Develop a set of KPI to monitor and measure improvements</td>
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<td>Companies with ISO 55001 Accreditation</td>
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<td><strong>Southampton Airport</strong></td>
<td><strong>Ports &amp; Airports</strong></td>
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<td><strong>London Underground</strong></td>
<td><strong>Transport</strong></td>
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<td><strong>National Grid Gas Distribution</strong></td>
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<td><strong>Wales &amp; West Gas Networks</strong></td>
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<td><strong>Oil &amp; Gas</strong></td>
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<td><strong>Easternwell</strong></td>
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<td><strong>Wallis Drilling</strong></td>
<td><strong>Oil &amp; Gas</strong></td>
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Material to Support Your Learning & Development

- Free online content
  - Reliability web
  - IAM anatomy
- GFMAM material
- AMC Australia
- The University of Aberdeen
### Summary

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<th>AM is sector / industry agnostic</th>
<th>Stakeholders and values vary</th>
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<td>ISO 5500X series provides an overview and outline of the key elements to include</td>
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<td>ISO 5500x will not tell you how to do Asset Management</td>
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<td>Asset Management is not a software system – it’s an overarching management system</td>
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<td>Your Organisation will already do many elements, but need to join them together = more value</td>
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<td>AM is a business improvement process – ongoing – not one time effort</td>
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THANK YOU FOR ATTENDING

This Webinar was brought to you by MCF working in partnership with ICorr and IAM.