

“Turning the supertanker”: implementing Asset Management across a multi-national utility

Victor Diez was runner-up in the 2018 IAM Individual Achievement Awards for Asset Management. His is a story about how the initial seeds were sown, a ‘business case’ established, how top management commitment was obtained, and how a group-wide rollout is being achieved - across multiple organisations with different cultures, starting points and environments.

The [ISA](#) Group is a fast-growing multi-national utilities company, based in Medellin, Colombia, with over 40 subsidiaries and partnerships spread across 8 countries in Latin America.

In 2011 there was pressure to seek improvement opportunities and the senior executive team gave Victor Diez the task of investigating “Asset Management” and its potential to better manage the physical asset portfolio. He started by reviewing the current level of ISA’s Asset Management maturity, finding widespread lack of awareness and inconsistency. Two years of extensive research on the subject followed, included visits to and from other organisations in other countries, and gathering a library of reference material and case studies. Victor was also investigating sources of expert support to guide and support ISA on its Asset Management ‘journey’.

The Journey

In 2014 this journey then began, by establishing realistic goals and a customised roadmap to deliver them. This directly linked Asset Management improvements to the corporate ‘ISA 2020’ strategy for growth, performance and sustainability. It created a vision for a new standard for managing the organisation’s assets across Latin America. This was no small ambition, since ISA has many subsidiary companies, operates in different countries and regulatory regimes, and has an energy transmission asset base with over 44,000 km of High Voltage lines, transporting more than 250,000 GWh/year of power to more than 130 million people in 8 countries. ISA also builds about 5,000 km of new lines every year, representing annual investments of over c. US\$3 billion.



An AM Project structure was established, with a small head office team and Victor Diez as the ‘thematic leader’. This was supported through a 3-year contract with long-experienced subject experts, The Woodhouse Partnership ([TWPL](#)). The first priority was then a rolling programme of awareness and engagement in Asset Management across the Group. This recognised that any successful transformation programme needs to progress from *awareness* and *understanding* before it can deliver effective *changes* and *competence*.

From Awareness to Understanding...

The early self-assessment had clearly shown a widespread ‘development’ level on the IAM Asset Management maturity scale¹. Ensuing research about the subject involved all possible information sources, ranging from social media forums, to attendance at Asset Management conferences, site visits, and avid reading. During this period, Victor had encountered a variety of Asset Management experts, such as José Duran, Alan Roe, Tony McGrail, Peter Jay, Gabriel Kirwan, John Woodhouse, Kim McArthur, Maria Branco and David Copestake, who helped him to understand the bigger picture.

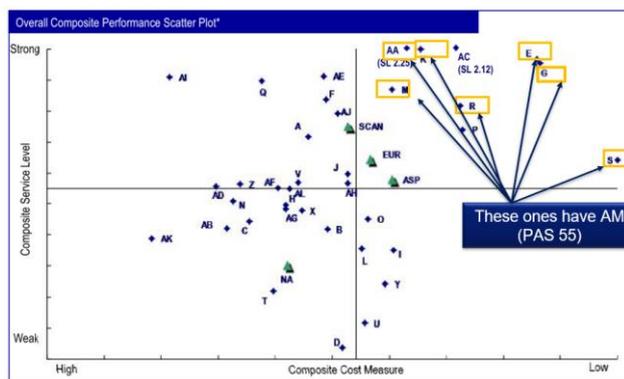


Figure 1. ITOMS 2011 benchmark results

ISA also participates in various benchmarking groups, including the International Transmission Operations and Maintenance Study (ITOMS). This provided further expert contacts, with people from organisations across the globe such as

National Grid (UK), Fingrid (Finland), PowerLink (Australia) and TRANSCO (United Arab Emirates).

Victor observed the correlation between good performance (e.g. high reliability and low cost) with Asset Management maturity - in particular, PAS 55 certification (see Figure 1). Top quartile performing utilities were those with Asset Management systems in place.

Constructing the business case

After participating in many conferences, visiting other organisations and more fully understanding the underlying concepts of Asset Management, in 2013 Víctor led the development of a Business Case for ISA’s energy transmission companies to adopt a PAS 55-based Asset Management system.

Being a cross-disciplinary subject, Asset Management touches most parts of the organisation, so the different manifestations and credibility of potential benefits were rigorously considered (see figure 2). Some people from ISA then established an extensive promotional campaign, linking the Asset Management initiative into the corporate ‘ISA 2020’ strategy.

A rolling rollout

The implementation plans introduced Asset Management as a required discipline and core competency for all affiliates within the ISA energy transmission group. This approach was built on a communications and networking strategy, along with the targeted introduction of locally-suited tools and methods (such as Life Cycle Costing, Asset Risk Management and SALVO² processes for optimal decision-making). This ensured there was commitment, a sense of ‘home-ownership’ and the necessary resources assigned to the implementation process.

The elements of this approach were also very practical, solving ‘quick win’ technical issues to teach the concepts at the same time as grow their credibility. But they also included vital ‘enablers’ of strategic Asset Management planning (SAMP)

¹ See IAM Maturity Scale & Guide: www.thelAM.org

² See www.SALVOproject.org

processes, risk, prioritisation and decision criteria, cultural and behavioural attributes, and financial measures such as ‘Totex’, to ensure alignment and the sustainability of new practices.

In certain areas of ISA, there were groups already applying some of these elements of Asset Management, and there were people who had developed firm but conflicting ideas about their role, usage and needs. This caused initial misunderstandings and required extra effort in ‘clarifying’ the bigger picture and parts thereof. The implementation process therefore had to identify key people in each part of the organisation, to make sure they understood the bigger picture, so that they would be able to promote the initiative consistently.

resources and to make sure the initiative was embedded into their own 2020 strategy.

The growing pool of people involved included many stakeholders; more than 1,000 people across the ISA family of companies, ranging from the ISA Group President to the field technical workforce in each country.

The programme involved various workstreams supported by TWPL subject matter experts and in-house ‘Theme Leaders’ (designated to become the ISA ‘future experts’ group), for such topics as asset risk management, performance monitoring, life cycle strategy and planning, cost/risk/performance-based decision-making.

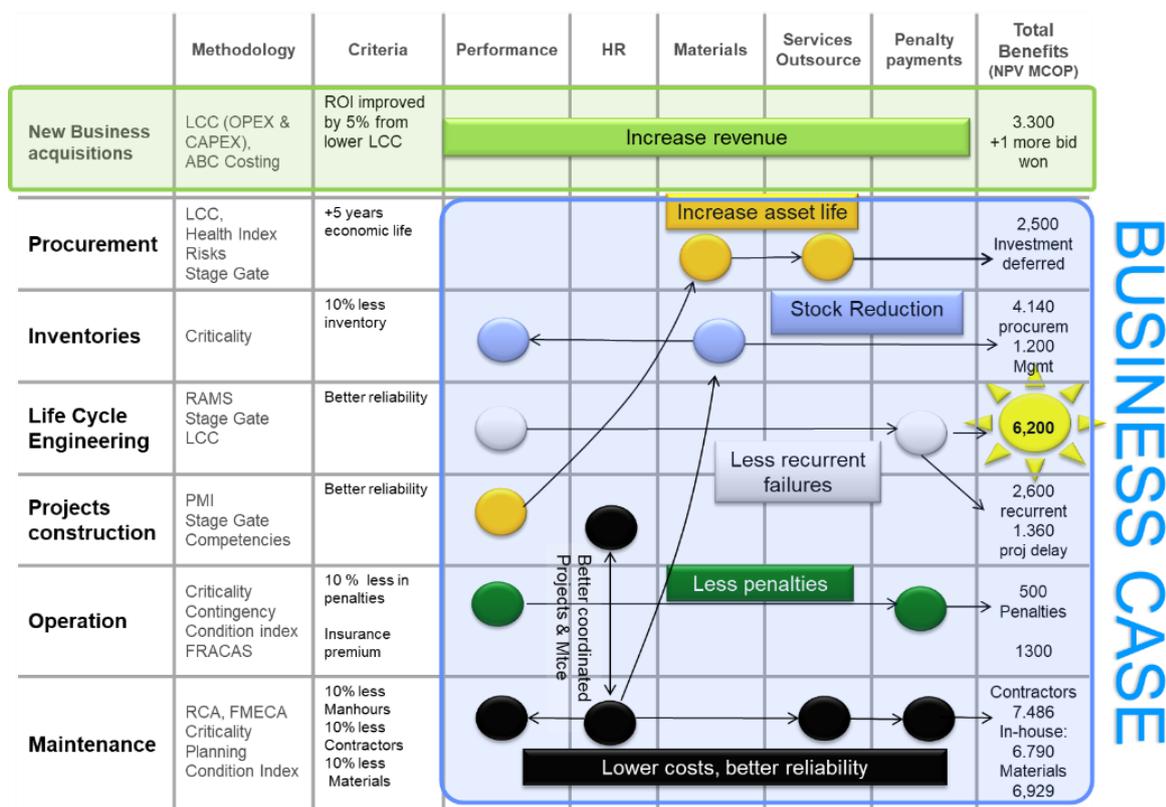


Figure 2 Constructing the business case

The Project also worked at establishing a network of AM ‘leaders’ in order to get the necessary critical mass of support and momentum. In this process, the business case helped each affiliate to focus on concrete deliverables and priorities, and their top management to commit the necessary

The ISA Group now has multiple Asset Management implementation programmes running in the four largest regions of Latin America, representing about 75% of the ISA Group. In addition to providing the education programme, and facilitating the new business processes and decision support tools³, an annual

³ See www.decisionsupporttools.com

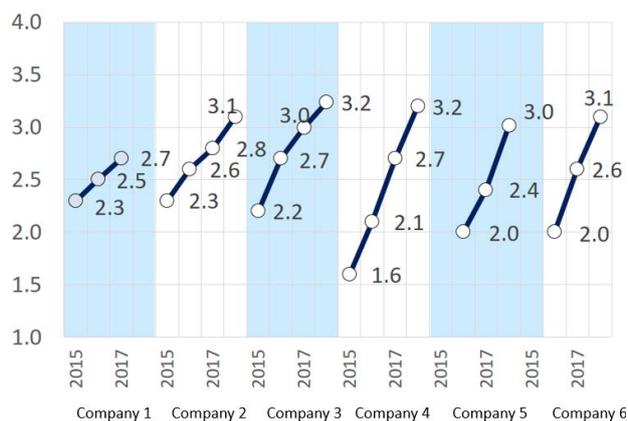


Figure 3. Maturity progress of ISA companies
(IAM Asset Management Maturity scale 0-4)

assessment of maturity progress is performed by TWPL (who are also IAM Endorsed Assessors for PAS 55 and ISO 55001 standards) and central ISA staff (see figure 3). TWPL also trained internal audit staff within the subsidiary companies to enable such monitoring in the future.

Business Benefits

The journey has had, from the start, a strong focus on delivering tangible performance benefits to the Group. The observed impacts range from establishing widespread awareness of value criteria, to obtaining monetized benefits in terms of OPEX, CAPEX and risk reductions, and improved asset and service performance. All financial impacts are validated by the finance department in each subsidiary: over the period 2015-17, these validated benefits represent over **US\$40 million** NPV, with more and more cases showing considerable further benefits for the organisation in the longer term.

The Colombian energy regulator, [CREG](#), has recently stated that compliance with the ISO 55001:2014 standard for Asset Management will become mandatory for the energy distribution sector. And Chile is proposing a guide that similarly includes the requirements of ISO 55001. So ISA's journey and achievements will also put the organisation in the forefront of demonstrating good practice for such stakeholder assurance purposes.

Conclusions

Driven by a belief that good Asset Management would solve many problems and bring improvement opportunities, The ISA's AM Project have challenged existing practices, created new understanding, developed AM leaders and facilitators, and enabled very large and tangible performance benefits for the organisation. Over a 6-year period (4-year in the AM Project), ISA has delivered a successful multi-national rollout of good Asset Management practices across Latin America.

The programme has won the 'hearts and minds' of the organisation, established new ways of working, and has delivered Capex, Opex, revenue, risk reduction and other substantial benefits. Asset management is now integrated and recognised as a discipline and core competency.

Now, as the first group of subsidiaries are reaching their first major milestones of *certifiable* Asset Management maturity, ISA is focussing on how best to consolidate, secure and continually improve their group-wide Asset Management capabilities, with new targets raised to the 'Excellence' level.

For more information:

www.isa.co
www.twpl.com

Julie Fowler, Marketing Communications
The Woodhouse Partnership Ltd
19 Prince Henry House
Kingsclere Business Park, RG20 4SW
United Kingdom
T: + 44 (0) 1635 298800
E: julie.fowler@twpl.com