Engerati Editorial Article

Engerati finds that value-based decision making enables better prediction, optimisation and management of utility asset plans.

Copperleaf Article 1

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Jonathan Spencer Jones is a physicist with a stint as a research astronomer and has made his career as a writer/editor specialising in science and technology. In this new millennium his focus has been on the energy sector at a B2B level, following the emergence and development of smart metering and smart grids across the world and the move to a more sustainable global energy system. He is a Content Analyst on Engerati's editorial team.

Introduction

Are you considering replacing or refurbishing a transformer or other key asset or contemplating your next investment cycle?

Can you answer questions such as 'are you directing your available funding and resources to the things that deliver the most value to your business?' or 'do you understand the risk profile associated with your energy asset portfolio?'
Have you heard of ISO 55000 - and if so, how familiar are you with its contents?

All of these questions are closely related. And for utilities, like other asset-intensive industries with their costly, long-term assets, often spread out over large geographical areas, they should merit further consideration.

"Every asset is there to do a job and thus has a value, whether it's financial or non-financial, tangible or intangible," says Stefan Sadnicki, Managing Director, Europe, at decision analytics software provider Copperleaf Technologies. "The question is what is that value to your organisation?"

Value-based decision making

ISO 55000 is the international standard setting out best practices in **asset management** to guide organisations across the world.

Many investment planning decisions are based on a project list that is run down until the budget runs out, or because "Jim in maintenance says it's time to replace the item," comments Sadnicki.
On the other hand, value-based decision making (VDM), a key recommendation of ISO 55000, aims to bring some rigour to the decision-making process.

"Copperleaf's value-based approach seeks to ensure that organisations make consistent decisions on which assets to invest in based on the value those assets will bring to the organisation," explains Sadnicki.

"That value may be different for different organisations and it may vary as the assets age or their use cases change, but by using a value-based approach the investment portfolio can be optimised and managed over time."

The value framework

The heart of the approach is the Copperleaf Value Framework, which encapsulates all the elements of value that are important to the business and objectives of the organisation.

These can include financial benefits, risk factors, service level definitions or improvements in key performance indicators.

“What’s important is that these elements are all aligned to a common scale so that comparisons can be made across different assets and projects,” says Sadnicki.

And that’s the challenge – and where companies such as Copperleaf come in, with its experience working with both utilities and customers across other industries, which has been encapsulated in a library of models to monetise risk and other value elements in its C55 solution.

“ISO 55000 can be a challenge to implement as it describes what to do but not how to do it. A good starting point is to develop some initial value frameworks to test out and that builds an understanding of how the process works and the benefits it can bring the organisation.”

Benefits of value-based decisions

A consistent investment evaluation process and greater transparency of the investment portfolio is a key benefit of a value-based approach, which Sadnicki says has been implemented by “many thought-leading energy companies” in regions including North America, Europe and Australia.

When Australian utility United Energy and Multinet Gas selected Copperleaf’s C55 solution, Mark Clarke, GM Networks – Electricity, commented in a statement: “We were challenged to deliver the greatest possible value to our organisation, stakeholders and customers, taking into consideration the many constraints presented to capital portfolio managers in the utilities’ industry.”

John Stavrakas, Vice President of Gas Asset Management for National Grid in the US, expressed a similar view: “We recognised the need for a cross-company solution that would provide us with a centralised view of our entire portfolio of investments.”

To put a monetary value on these benefits, Sadnicki mentions experiences with customers in the planning stage identifying ‘negative value investments’ adding no value to the

organisation – and which therefore shouldn't be done - amounting to as much as 2-5% of the total capital plan.

He also points to a study commissioned by the University of Southampton, which found that the optimisation of investment portfolios delivered 7-20% greater value than prioritisation methods.

Asset management decision making advances

As a discipline asset management cannot be static and solutions need to keep abreast of new technologies and other changes in the market.

"Asset management capabilities are changing very rapidly with emerging technologies," Sadnicki comments. "Utilities have more and more data and we are always looking for ways to use that data to support the investment planning process."

Key inputs come from the company's annual Asset Investment Planning & Management (AIPM) Summit, which brings together customers and partners from around the globe to share knowledge, explore trend and exchange best practices on AIPM and ISO 55000. "This is an opportunity to glean from discussions to ensure that the solutions continue to evolve in line with the customer and industry requirements."

He also notes a trend of utility investment plans becoming more focussed on customer outcomes.

"Previously it was a case of 'I want to replace x km of cable', i.e. being output driven. But now the focus is more on 'what services can I provide to customers and at what cost', i.e. optimising that balance of cost, risk and performance."