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Cleaning Up Asset Risk: Advancing Asset Management Maturity in the Waste Industry

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ABSTRACT

Effective asset management is essential to support and enable the waste industry's transition towards a safe and sustainable circular economy future. The reality of waste management involves maintaining assets across a large number of physical sites that are geographically and technologically disparate. These sites are often relatively small scale, undertaking specialised activities and operating on thin margins. Historically, this has seen the waste industry lag behind other sectors in its asset management maturity.

Cleanaway has engaged in a program of work to introduce a risk-based, process safety led approach to fixed asset management in the waste industry. The presentation will briefly cover the approach taken to define the eight Safety Critical Elements (SCEs) – Structural Integrity, Process Containment, Ignition Control, Detection Systems, Protection Systems, Shutdown Systems, Emergency Response, and Life Saving Equipment – as they relate to waste management assets. This will include discussion on the development and refinement of the associated SCE Assurance Groups and preventative maintenance routines.

Once both the strategy was established and the technology solution was built, rollout at the operating site level commenced. Insights from the two-year implementation and embedment campaign will be shared. While digital and engineering solutions are essential enablers, building maintenance management capability and maturity within a diverse, people-complex organisation represents a significant adaptive challenge. The rollout approach leverages Cleanaway's Branch Led Operating Model to engage and equip sites with the tools to own the step change themselves, while a centralised fixed asset maintenance Community of Practice facilitates standardisation, learning, and support.

The approach provides a practical, transferable model for advancing fixed asset maintenance management maturity across the broader waste industry.

KEY WORDS

Waste Industry, Maintenance, Brownfields, Fixed Asset, Safety Critical, Circular Economy, Asset Management Maturity, Process Safety

BIOGRAPHY

Thea, a Chemical Engineering graduate from the University of Queensland, commenced her career in Process Engineering at the Caltex Lytton Refinery in 2012. Over six years, she contributed to various roles, including capital projects, helping to deliver a first of its kind \$43M gasoline upgrading unit. Transitioning to the waste industry in 2018, she joined Cleanaway, initially in waste lube oil re-refining and now as the Fixed Plant Services Manager, tasked with driving a step-change in fixed plant maintenance. As an avid problem solver, Thea can be found most weekends obsessing over a bouldering problem at a local climbing crag.

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