



Chemeca2026
Innovate. Integrate. Impact.

28 – 30 September 2026
Melbourne, Australia



*Chemeca 2026 and Hazards Australasia
28 – 30 September, Melbourne, Australia*

Secrets of the Gatekeeper: Navigating Asymmetric Risk in an Age of AI

Grant Wellwood

Wellwood Associates

grant@wellwood.associates

ABSTRACT

While maintaining the status quo is rarely a winning strategy, adopting every innovation on offer is a recipe for commercial disaster. In heavy industry, innovation risk is inherently asymmetric; the "Gatekeeper" is the one tasked with holding the line. Often referred to by the nickname "Dr. No," the author reflects on a career spent maintaining the delicate balance between "keeping up" and "going under."

This candid presentation pulls back the curtain on the hidden heuristics used to filter high-stakes ideas. We explore the dimensions of assessment that proponents often overlook, from the "Tuesday at 2:00 AM" maintenance reality to the systemic "Domino Effect" on the flowsheet. These are the moments where a proponent's linear model meets the "spherical" reality of a working asset.

Crucially, this paper argues that the Gatekeeper is a future-proof role in the face of Artificial Intelligence (AI). While AI excels at interpolation, predicting outcomes based on historical patterns, the Gatekeeper operates in the realm of extrapolation. Industrial innovation often involves "first-of-a-kind" scenarios where no precedents exist. Assessing these requires superior decision making that takes in tacit knowledge, "gut feeling" born of lived experience, and the ability to imagine failure modes that data has not yet captured. Furthermore, the Gatekeeper provides what AI never can: Personal Accountability and decision traceability. Attendees will learn why the Gatekeeper's "No" is a sophisticated strategic tool rather than a roadblock. Because in a false positive (System 2) world, the most expensive innovation is the one that almost worked, and the accountable Gatekeeper is the only one standing between a breakthrough and a blowout.

KEY WORDS

Innovation Gatekeeping, System 2 Errors, Risk Extrapolation, AI vs. Human Accountability, Mineral Processing

BIOGRAPHY

Dr Wellwood (aka "Dr No") has spent over 40 years gatekeeping mineral processing and food related innovations. While proponents and shareholders sometimes viewed gatekeeping a roadblock, he wore the title as a badge of stewardship for the asset. His career has focused on the rigorous management of asymmetric risk and the prevention of the catastrophic "System 2" errors that often follow unvetted innovation. Now in his legacy phase, Dr. Wellwood advocates for the human element of gatekeeping,

risk extrapolation and accountability, that remains a vital, future-proof alternative to AI-driven decision-making, especially in the face of AI generated innovation.

CONFERENCE PROGRAM

Please indicate which conference program your abstract relates to:

Hazards Australasia

Chemeca

Applicable Program Theme: Leadership, Education, and Innovation Strategy