Organisational culture, the shared values and beliefs held by management and employees in the organisation, is a powerful mechanism – it defines ‘the way we do things around here’. An organisation needs a strong innovation culture for successful innovation and technology adoption. So, how would an organisation determine if it has the strong innovation culture required to engage successfully in disruptive innovation?

**Disruptive innovation in mining**

Mining personnel have become extremely skilled at incremental, small-step innovations to improve productivity and lower costs despite the constraints of capital-intensive operations. However, the industry is facing numerous challenges, including declining grades, water shortages, the need to reduce energy consumption, the need for a social licence to operate as well as the usual market variations.

To respond effectively to these challenges, mining companies have recognised the need to adopt radically different technologies and engage in disruptive innovation. Disruptive innovation involves developing and implementing new technologies. This requires entirely new equipment, skills and workflows and involves ‘unknown unknowns’ which make disruptive innovation high risk. An important element to maximise the chances of meeting these challenges is the organisational culture.

**iCAT – an instrument for assessing the strength of an organisation’s innovation culture**

Our team at the Queensland University of Technology (QUT), in collaboration with the Cooperative Research Centre for Optimising Resource Extraction (CRC ORE), developed the Innovation Culture Assessment Tool (iCAT), a diagnostic instrument inspired by the work of MIT researchers Rao and Weintraub (2013) and drawing on leading-edge research on culture, innovation and change. We then calibrated iCAT specifically for the mining sector using data from interviews with and surveys of mining industry personnel.

iCAT is available for mining organisations to diagnose the degree to which an innovation culture is present and assess their strengths and areas for development to better prepare for the adoption of disruptive innovation.
How iCAT works

Our research identified nine building blocks consisting of six innovation culture factors and three innovation culture enablers (Figure 1) that together make up an innovation culture in mining.

iCAT delivers an easy-to-administer scorecard that allows firms in the mining sector to self-assess their innovation culture strengths and aspects for further development against the nine building blocks. It takes approximately 20 minutes to complete.

iCAT consists of 63 statements, describing concrete and measurable behaviours that relate to the building blocks of an innovation culture in mining and a measure of innovation performance based on five innovation indicators: innovative technology, innovative enterprise, client focus, individual innovation behaviour and team innovation behaviour.

The assessment results include a scorecard showing the relative strengths and opportunities for growth for each of the building blocks of innovation culture. iCAT can also be used to compare innovation culture strength between workgroups or organisational units; for example, between operational sites and head office. iCAT can also enable comparison of the strength of an organisation’s innovation culture against the industry benchmark.

Mining organisations can use iCAT in conjunction with the Organisational Process Model for Technology Adoption in Mining (OPM-4-TAM; described in a separate flyer and a video) for a customised action plan for strengthening their innovation culture and enabling more successful technology adoption.

Want to try iCAT in your organisation?

To learn more about iCAT and how to use it, visit us at the QUT website:

Or contact the project leader:
Assoc. Prof. Anna Wiewiora
Email: a.wiewiora@qut.edu.au
Phone: +61 7 3138 1242