



ICT, Technology, Skills – Investing in the Fieldonomics of Mining Automation and Innovation

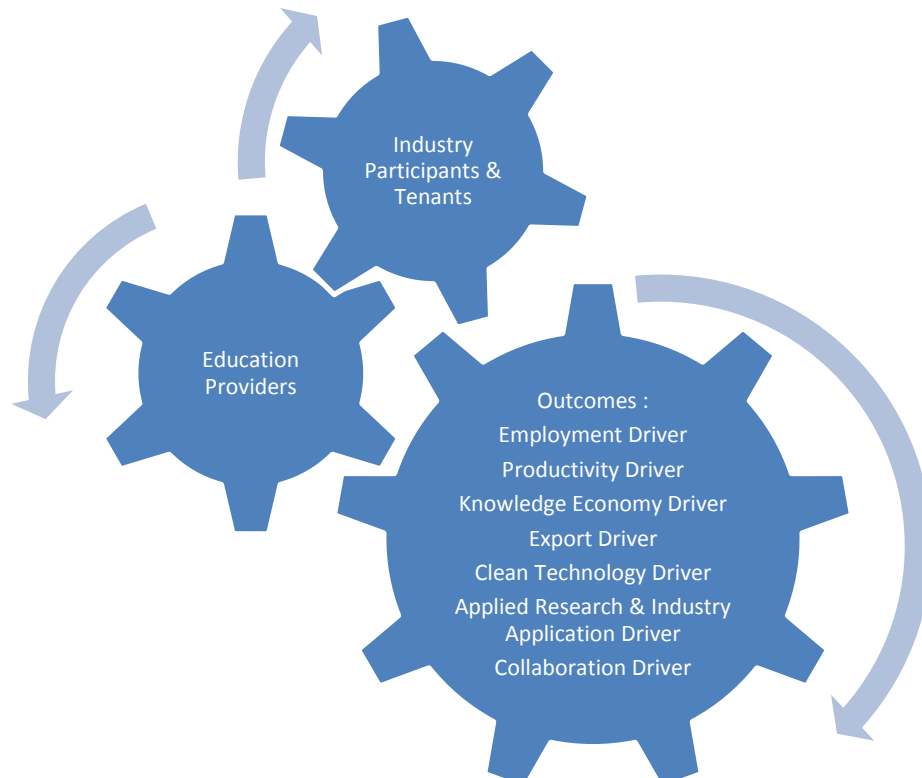
By way of introduction the Business/Higher Education Round Table (B-HERT), CSC and Curtin University of Technology hosted a round table on **the Changing Face of Mine Operations and Management** in April 2011 in Perth. A position paper resulted from the discussions with a view to holding a 2nd round table in order to further progress initiatives (B-HERT Position Paper #15 attached).

Both B-HERT and CSC believe an integrated approach from tertiary education providers and industry is the best way to address the critical drivers for change and the execution of these change initiatives. Discussions have been held between B-HERT, CSC and Central Qld University regarding a 2nd mining round table.

B-HERT, CSC and CQU are hosting a one-day round table **on 21 February 2012** (CQU, Mackay campus) focusing on five key themes:

1. Crossing the skills gap utilising tertiary and career-cycle learning pathways.
2. Future proofing skills and training requirements through initiatives such as the SMART Centre.
3. Mapping the IT ↔ OT conversion and its possible implications for business models.
4. Implications of automation on sustainability, local community and indigenous participation/development.
5. Measuring impact re applied innovation, industry application and cross-sector collaboration.

Investing in the Fieldonomics of Mining Automation and Innovation



Qld is a state heavily invested in the mining sector. CQU is actively pursuing a strategy of engagement that enhances graduate utility and industry engagement. One of the university's exciting developments is the Sustainable Mining and Robotic Technologies Centre (SMART). Please find attached an overview document of the SMART Centre.

There is an opportunity cost to not **Investing in the Fieldonomics of Mining Automation and Innovation**. Growth momentum must be leveraged through integrated change initiatives. Change initiatives must address:

- The availability of skilled manpower to realize the mining opportunities in the Bowen and Galilee basins in QLD.
- The role that ICT will have on the future of the mining and associated sectors in general.
- Robotics and Automation as key drivers of future productivity in mining.



Innovation is a key driver of productivity and economic growth. The mining industry continues to be one of the key contributors to Australia's comparatively strong economic performance. ICT plays its part.

This topic is of great importance to Australia and its place in the Asia Pacific region in terms of productivity improvement, innovation capacity and knowledge economy aspirations. In practical terms, we need to continually improve the sustainable management of our resources sector ie. digitally-aware infrastructure, advanced technology extraction, interconnected and intelligent systems and technologies, and up-to-date workforce capabilities.

So we've got to focus on operational improvements, we've got to focus on innovation and, most importantly, we've got to focus on individual productivity. Tom Albanese, CEO, Rio Tinto - AFR Aug 6-7, 2011 pg. 16

We believe a commitment to ICT innovation, productivity improvements and links with higher education institutions are prima facie examples of what is and can be achieved in the mining/resources sector.

We wish to focus on the knowledge, operational skills and attributes, those entering and working in the profession will need in the future.

Proposed Agenda: There are a number of issues to be explored

It will be a day of facilitated discussion and flexible in structure in order to generate participation and significant discussion. This round table will provide the opportunity to share good practice, constructive insights and operations perspectives.

B-HERT, CSC and CQU view the following as key drivers in the conversation:

- Integrating multi-disciplinary pathways and recognition of prior work-place learning
- Removing barriers to up-skilling
- Facilitation of cluster and regional development re industry and economic multiplier effects
- Alignment of mining ecosystem¹ with the value chain lifecycle (ie. applied research through to product/process implementation and commercial realization)
- Knowledge diffusion across complementary disciplines and industry sectors

This is a unique opportunity to bring together the leaders in mining/mining services, business, resource engineering/ICT education, senior industry representatives, and research organisations for the purpose of enhancing the outcomes for all stakeholders.



CHRISTOPHER GOLDSWORTHY

Asst Executive Director

Business/Higher Education Round Table

¹ Miners, services/product providers, research organisations, industry associations, consultants, HE/VET providers

Venue – Central Queensland University (Mackay campus)

09.30 Register

09.45 **Welcome** – Christopher Goldsworthy, Assistant Executive Director, Business/Higher Education Round Table

Vision – Facilitating change

10.00 **ICT** Perspective

Bob Hayward, Chief Technology & Innovation Officer, CSC Australia / CSC Asia

Dr Jeremy Davies, Director, NR Centre of Excellence, CSC

10.20 **Mining Industry** Perspective

Ben Willey, Technical Manager – Mine Engineering, Australian Mining, Thiess P/L

10.35 **Higher Education/VET** Perspective

- Profiling SMART, Prof Pierre Viljoen, Pro-Vice Chancellor (Community & Engagement) CQU
- Interlinking ICT - Prof Mark Looi, Dean School of ICT, Faculty of Arts, Business, Informatics & Education, CQU
- Mining Programmes - Associate Degree Coordinator, Brendan Donnelly, CQU

11.00 **Indigenous/CSR** Perspective

Narelle Pearse CEO, Mackay Whitsunday Regional Economic Development Corp

Deborah Rae, Business Development Coordinator, Regional Social Development Centre, Mackay

11.20 Morning Tea

Strategic Matrix (degree of priority < > level of impact) – option identification/areas for reform/recommendations for stakeholder alignment

11.40 Open Floor - identification of topics for consideration

12.00 Breakout discussion groups on identified topics

12.20 Lunch

13.00 Breakout groups report back – continuing discussions on issues identified

13.20 Plenary session to identify potential next steps

13.30 Close