The Strategy: Collaboration between METS and mining firm

Before the development of DrillScan commenced, Southern Innovation already had a commercial relationship with BHP to apply X-ray transmission technology to conveyer belts. During these processes the potential opportunity was identified to translate the technology to exploration drilling.

What are the characteristics of the collaboration?

- The development has followed a customer-led process designed to resolve a customer-identified problem
- While the overall project responsibility falls on Southern Innovation, BHP provides operational and financial support
- The close collaboration facilitates almost real-time feedback from the customer during the development process and ensures that the product is fit-for purpose
- The development approach is based on the identification of risks throughout the development of the product and how to address these risks
- Commitment of a mining company signals to the METS company that there is demand for the product
- Buy-in from a mining house facilitates extensive prototyping in real environments and eventually establishes successful test cases

The Innovation

Southern Innovation provides solutions for fast and accurate minerals analysis based on the proprietary signal processing algorithm SITORO®. An ongoing commercial relationship with BHP has resulted in a collaboration to develop the new technology DrillScan – a rig-mounted X-ray transmission system for analysing drilled material in real-time. The strong and deep collaboration between Southern Innovation and BHP is an exemplar for a successful partnership between a METS and a mining company to promote innovation and create value for the industry.

“The Strategy: Collaboration between METS and mining firm

Because of our expertise and because we have built a very good commercial relationship based on trust with BHP, we find ourselves in a very unusual position where product development is happening in a very deep collaboration with the ultimate customer for that product. That allows the product to be specifically designed for an application that the customer has already satisfied themselves has very strong value in use.”

David Scouller, Managing Director
Southern Innovation

“We have taken a very risk-based approach to the product development process. At each phase, we say: ‘What is the biggest technical risk of failure in this process?’ When we get to a point where that risk is addressed, we demonstrate to the customer that the risk has been addressed – that is typically done by either a live demonstration or simulation. We then have a stage-gate as to whether the client decides to proceed or not. Those stage-gates are not always determined by time, but defined by risk and the point at which you are satisfied that the risk has been appropriately addressed.”

David Scouller, Managing Director
Southern Innovation
What are the challenges to ensure a successful collaboration?

Mining houses need to have an open and innovative culture and need to be willing to enter a collaboration based on trust and open communication.

Mining houses need to commit to providing sufficient funds to invest in product development.

Agreements need to be negotiated to specify IP ownership: This may mean that a METS company needs to be willing to share key technology with their partner in order to build trust in the utility of the technology while a mining house needs to be willing to invest into the development without claiming IP ownership.

A METS company needs to be responsive to their mining partner to ensure an agile product development process.

METS companies need to sustain contact and exchange with all relevant business units within a mining company in order to ensure buy-in from key decision makers across different departments.

METS firms need to be prepared to not only interact with key decision makers, but also with staff in the field who will be using the technology in order to counteract potential resistance early on.

What is needed for a successful collaboration?

Trust and expertise:
The mining house needs to trust that the METS company is capable to find a workable solution to a problem.

Transparency:
Willingness to collaborate and not to work in isolation in order to make the development process transparent and to accomplish a sense of shared ownership.

Open communication:
METS companies need to be willing to not only share successes but also challenges to openly discuss and decide about future directions.

“We start with the customer and develop the solution and then inform the market. Other product development processes tend to identify areas of perceived problems, develop a perceived solution and then go to industry associations or influencers to evaluate their claim that they have developed a solution for a problem they believe exists; and then they go to a customer. So the process that we have undertaken is a very different process. It is a process that allows you to develop a product without the typical uncertainty about suitability for purpose. Once you have done that, stepping out from your initial customer is easier because you have your very first case study to engage with other potential customers.”

David Scoullar, Managing Director Southern Innovation

Supported by the Queensland Government in association with Mining3 and QUT

https://research.qut.edu.au/cmbi/