



There's been claims in the media recently about the Pilbara being the new Silicon Valley. I suspect Google, Apple, Tesla and numerous other high-tech corporations headquartered in Silicon Valley would have something to say about those claims. Much more importantly however, I question why the Pilbara would *want* to be the new Silicon Valley when its uniqueness affords an opportunity to become something much more authentic yet equally game-changing.

Yes, weekly incomes are high in Silicon Valley but money doesn't stretch very far when you live in one of the world's most expensive locations. To curb these living costs residents are living further and further away from their workplace and this trend is simultaneously increasing local traffic congestion. As a result, Silicon Valley now has the highest US proportion of 'super commuters' - workers that commute more than 90 minutes between home and office, each way and every day. It's no wonder Silicon Valley is leading the autonomous vehicle race, they're solving a problem they experience every day by developing solutions that are transferable to the rest of the world. In fact, that's one of the reasons Silicon Valley originally evolved, to solve the problems faced by some of its largest residents, NASA and the US Military.

There's not a lot of traffic congestion in the Pilbara, but there is a lot of in-field workers. Some believe our in-field workers will soon be replaced by robots, but that's simply not true. In fact, the McKinsey Global Institute

recently concluded that office-based and other indoor jobs are more likely to be automated first whilst the demand for in-field workers will continue to grow until at least 2030. Not reduce. Not stabilise. Continue to grow.

In short, the speed at which work can be automated depends on the stability of two key factors – the work tasks that must be performed and the environment within which they must be performed. Work tasks that are dynamic (involving ad hoc, impromptu, improvised or creative effort) are far more difficult to automate. At the same time, simple, repetitive work tasks are equally difficult to automate if they must be performed in dynamic environments. For example, automating a train requires input about the scenarios the train might encounter whilst travelling along fixed tracks whereas automating a vehicle is more challenging because it requires input about many more scenarios across millions of roads. Now imagine how many scenarios an in-field worker might encounter across infinite terrains and work environments. My rough estimate is that it exceeds one centillion (that's a one followed by 303 zeros). Identifying all these scenarios and gathering the deep data required to replicate them in AI will take a lot more time and a lot more smarts.

Therein lies the Pilbara's unique and immediate potential. Our in-field workers regularly (if not largely) perform highly dynamic tasks in some of the world's most dynamic and sometimes unpredictable, work environments. Their jobs will most

likely be the last to be automated so in the meantime, we can solve the safety and efficiency problems they experience every day by developing solutions that are transferable to the rest of the world. If we do this well, we could help in-field workers become so safe and efficient that automating their jobs becomes less attractive, perhaps even unattractive. Imagine that.

Whilst this idea may sound like a futuristic tale for technologists, it was actually started in 2011 by a small group of in-field workers at RePipe, a Pilbara-based plumbing and civil contracting business owned by my family. After years of local design, development and testing, we launched the world's first (and still only) technology that supports in-field workers to safely and efficiently perform dynamic tasks in dynamic work environments. The technology is called rerisk® and today it is the Winner of the 2019 Future of Mining Safety Award with international patents pending on more than 100 claims of invention. The technology is a success because we sought to solve a problem we experienced every day so we understood the problem better than anyone else in the world, including Silicon Valley.

Of course, real confidence isn't about believing you're better than others. Real confidence is about being so aware of your own uniqueness that it never occurs to you to compare yourself to others. The Pilbara is completely unique. Its brightest future will be because of its uniqueness.