

# MORE TECHNOLOGY – MORE RISK!

The White Paper by the World Economic Forum, 'Readiness for the Future of Production Report 2018', released earlier this year gives interesting insight into how prepared countries in the world are for the 'Fourth Industrial Revolution'. The assessment is made up of two main components: Structure of Production, or a country's current baseline of production, and Drivers of Production, or the key enablers that position a country to capitalise on the Fourth Industrial Revolution to transform production systems. (To see a copy of the report, click [here](#)).



## *The fourth industrial revolution will bring new challenges*

Risks of the new era have also been identified. One of these is that the widespread adoption of the emerging technologies into high-stakes production environments could have adverse impacts if there are system failures, such as artificial intelligence making costly production related errors in judgement.

One of these errors in judgement could be equipment operating with hidden failure. When hidden failure occurs, equipment continues to operate normally but the failure has not been detected by humans or by the operating system. An example of hidden failure could be a fire alarm; it may have failed, but we wouldn't know about the failure until we have a fire and the alarm doesn't work. The failure of safety protection devices may also go unnoticed for long intervals and are often forgotten in a plant.

As we install more automatic condition monitoring and sensor devices, we will rely on them more and more to help us prevent or predict failure. How will we know if these devices are actually operating correctly? The challenge will be to detect the failures when everything seems to be running normally. For example, how can you be sure that the reading that you are getting from a

temperature gauge is in fact accurate? How can you be sure that the vibration sensor giving an expected zero reading is in fact working?

While the implementation of the technology will greatly assist in the improvement of machine reliability, the maintenance focus will have to shift from one of routine checking and inspection to troubleshooting and problem solving. The White Paper emphasises these skills as critical ones for the future.

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