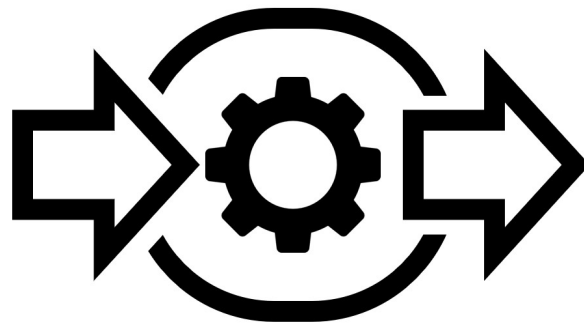NEPIC Digitisation & Cyber Security Event
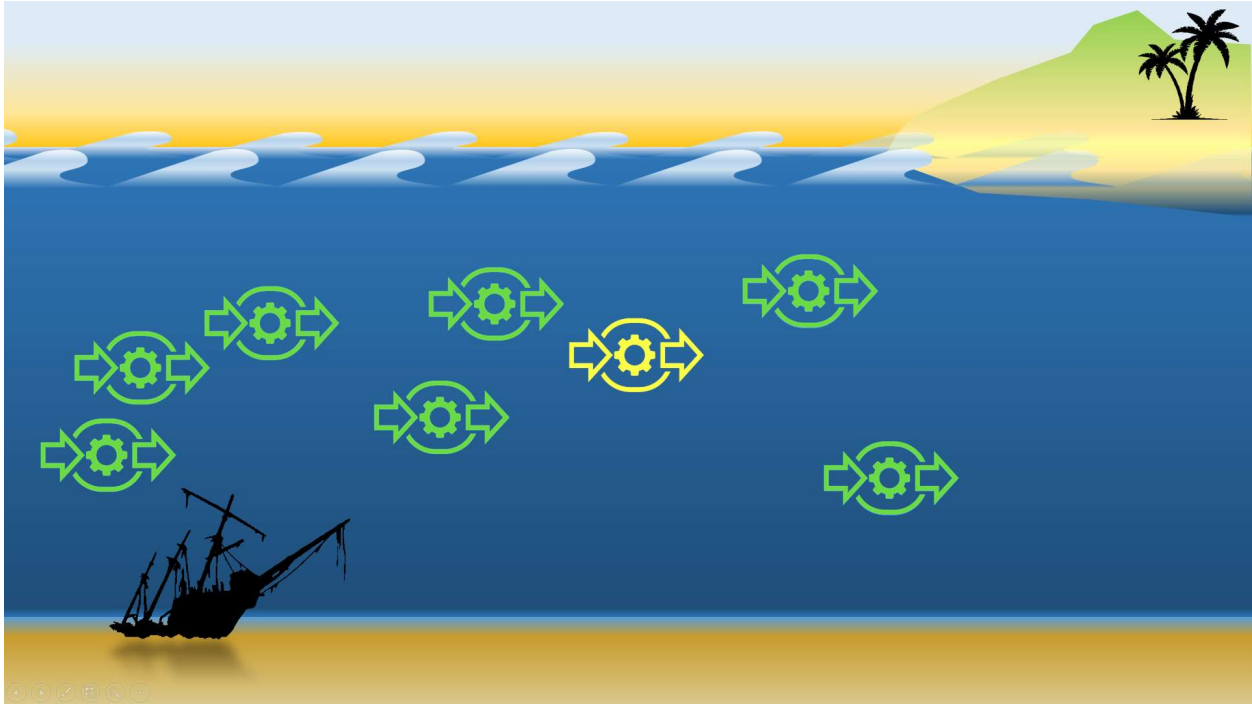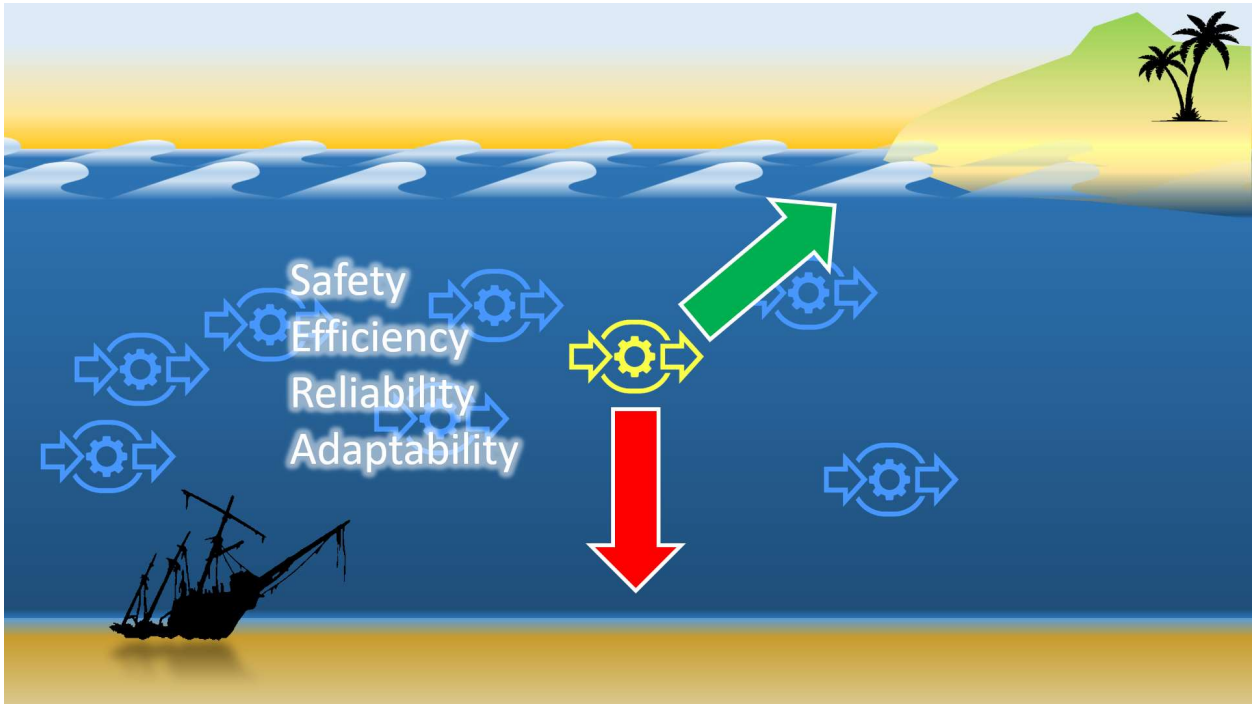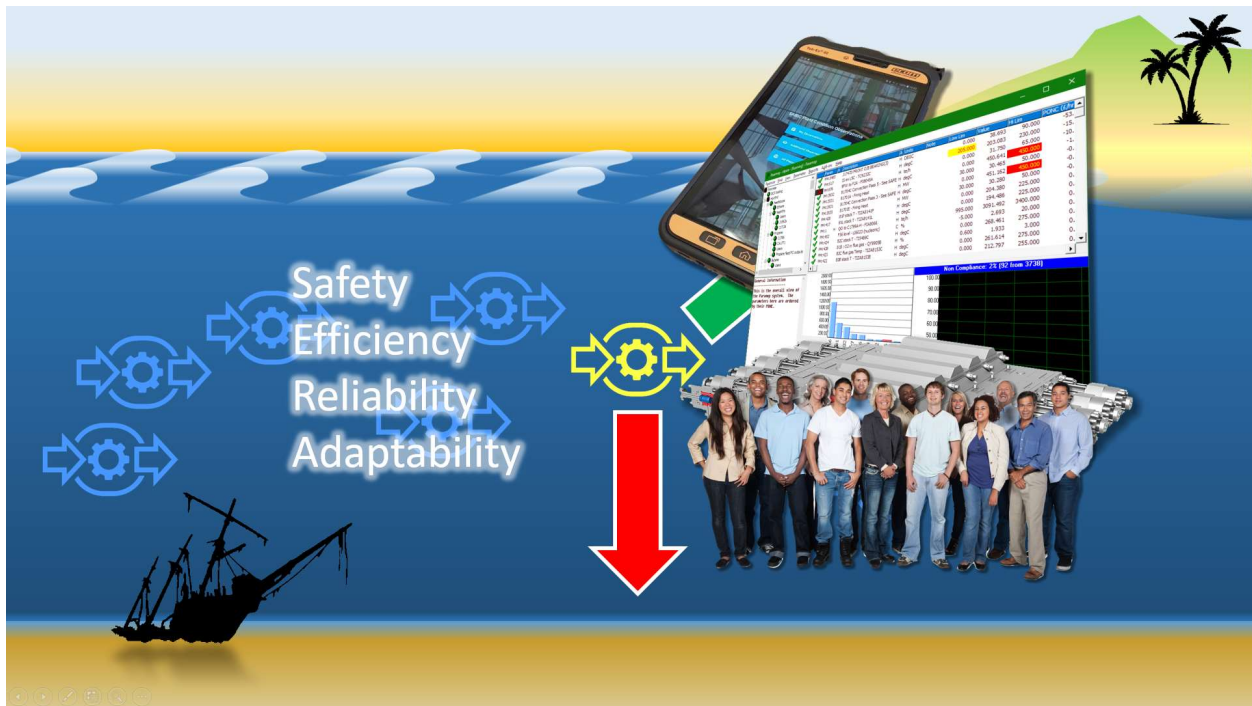
WELCOME

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We all work for businesses or organisations that have inputs and outputs (suppliers / vendors / service contractors, customers etc.) and that do work.

Our businesses and organisations don't live alone in the world... we exist alongside others, including competitors, and we need to figure out how to survive and thrive.

Some of the things that help us improve (aim for the beach) are: Safety, Efficiency, Reliability and Adaptability.
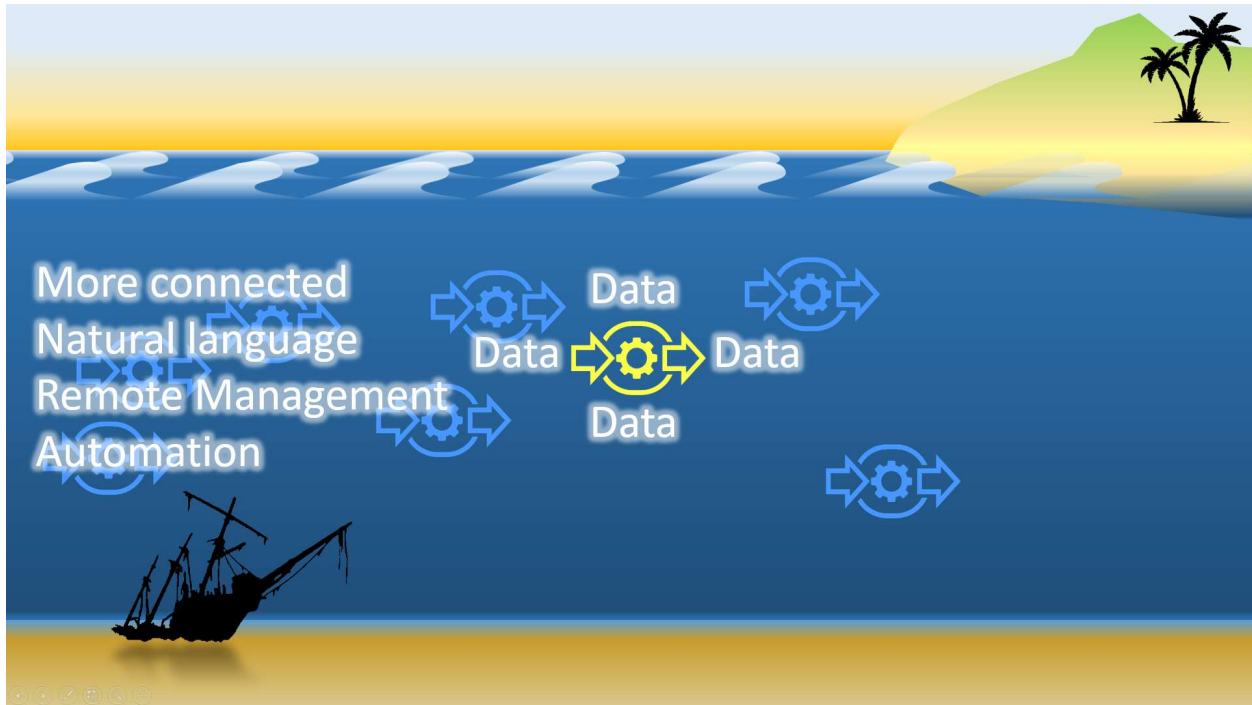
Examples of systems:

Safety: Mobile devices that help automate a lot of scheduling of observations (safety walks), and capture the data from them, rather than relying on manual note taking and spreadsheets.
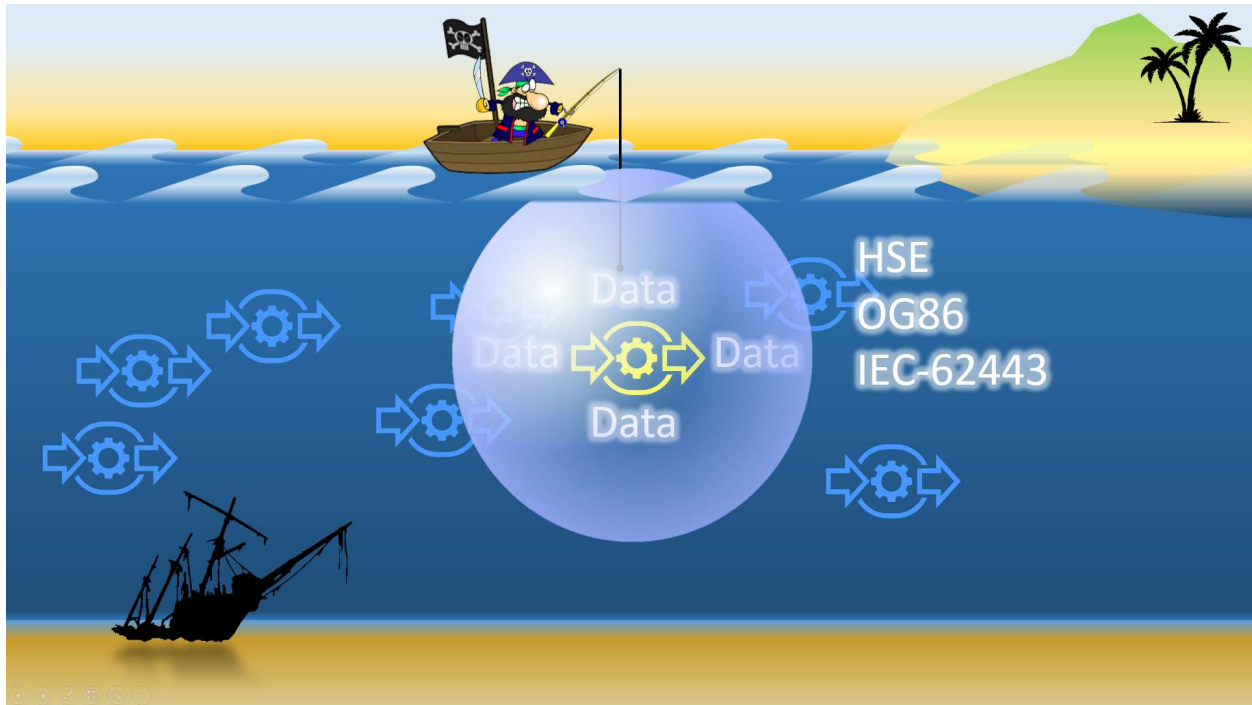
Efficiency: Views of assets with real-time performance data, against limits, to identify those things which are operating outside of their efficiency envelope.

Reliability: Predictive analytics – we cover our plants in sensors, but not all areas can be covered. We have examples of combining data from sensors with inference rules to identify degradation of performance. This helps us to perform maintenance in advance of presumed failure.

Adaptability: No business adapts on its own – it takes the people within the organisation to adapt, but they need data and information on which to base their business decisions.
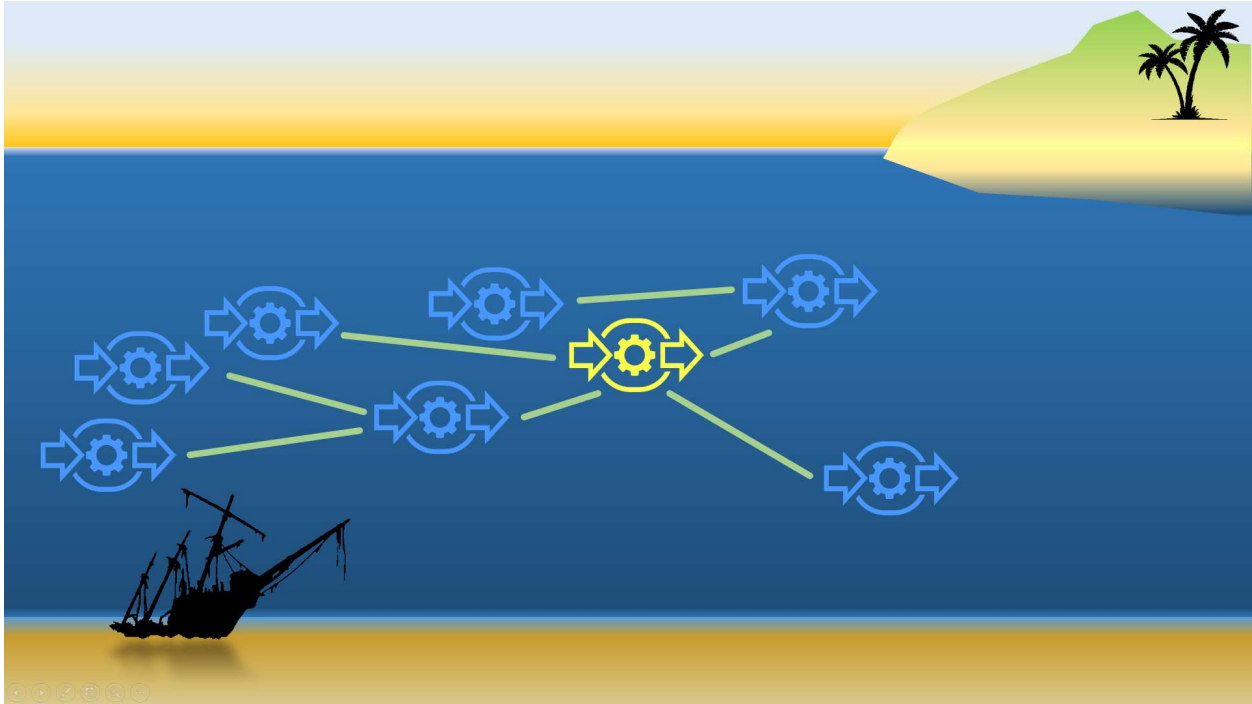
Key message is that this is all about the data. Data is the life-blood of your organisation. Our graduates are expecting to walk into a world that is more connected than ever before (Supplier → you → Customer / supply chain interconnected). They're expecting natural language queries to give them answers. They're expecting to be able to access all of this data from anywhere in the world, at any time. They're expecting automation of tasks to become the norm. However – in reality, all of this exciting automation comes with risks…

Not only is your data valuable to you, it's valuable to others who can use it to extort money from you (e.g. ransomware), or simply damage your business so you don't survive.

As with functional safety, where we use layers of protection to reduce risk, so we build layers of protection around our data. We use defence-in-depth approaches, with different techniques (Anti-virus, Patching, Firewall, SEIM, etc.) to give a broad spectrum of protection.

A great source of information for this, and an explanation of what is now expected for our industry, is available through the HSE in terms of their OG86. This is based on the IEC standard IEC-62443, which details the countermeasures we should all be taking to protect our assets (data and systems) from cyber-attack.

Finally, don't forget to network with other businesses to see how they're handling both digitalisation and cyber security.