



Intelligent Assets

Integrating AI, Analytics, Sensors and Robotics to Improve Business Value

AOG 2019

Shawn Fernando, Head of Robotics

15 March 2019



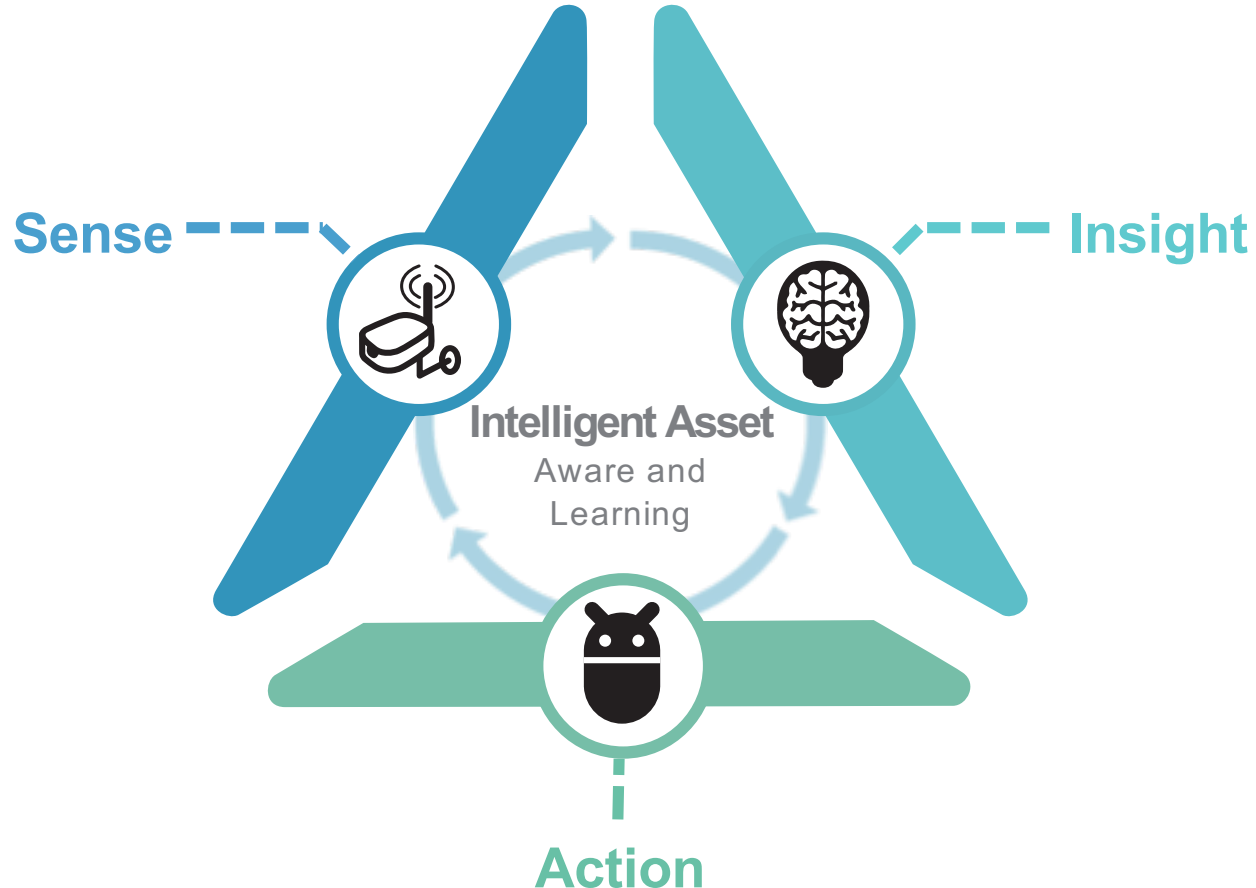
Intelligent Asset

Imagine...

- + Facility info available remotely compared to being there in person
- + Humans only need to enter hazardous zones for complex tasks
- + Ability to focus on decision making and other value adding improvements

Intelligent Asset

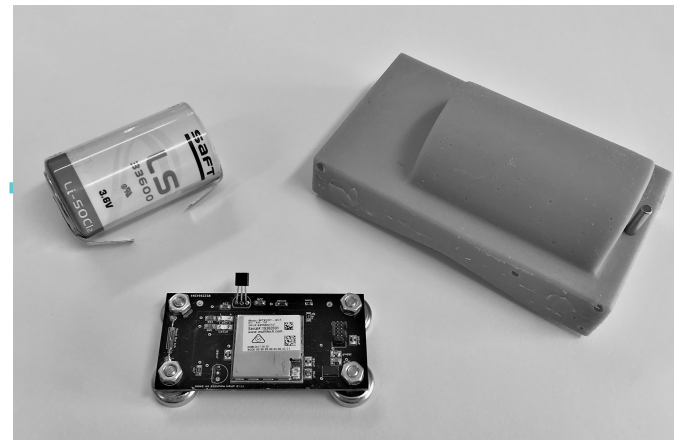
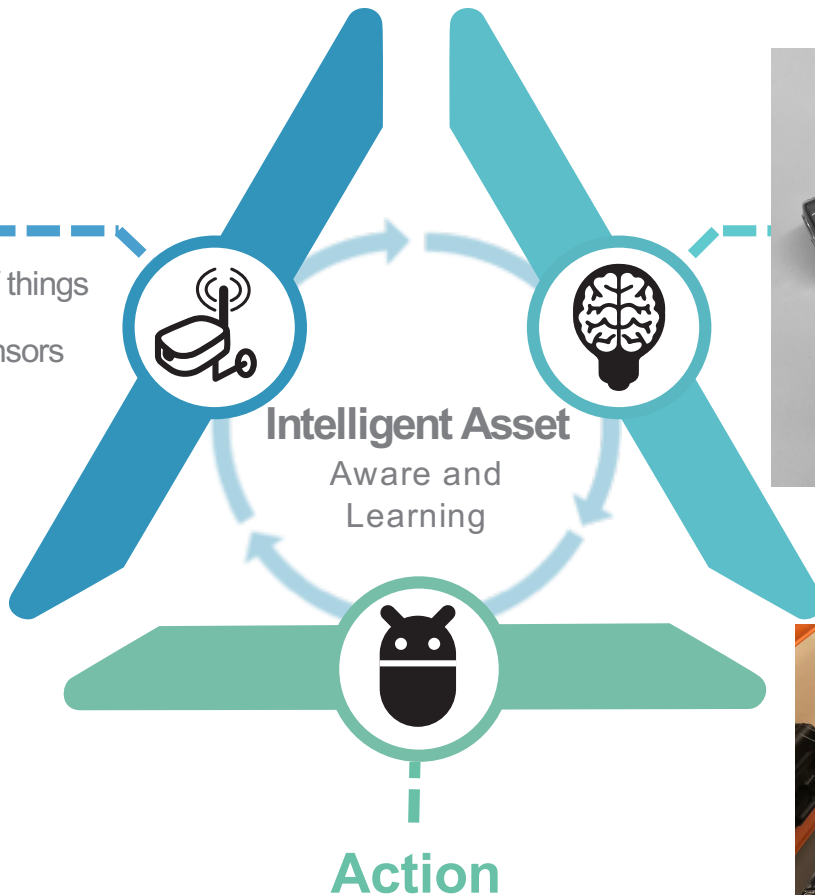
+ Merging of several key technologies to create a learning asset

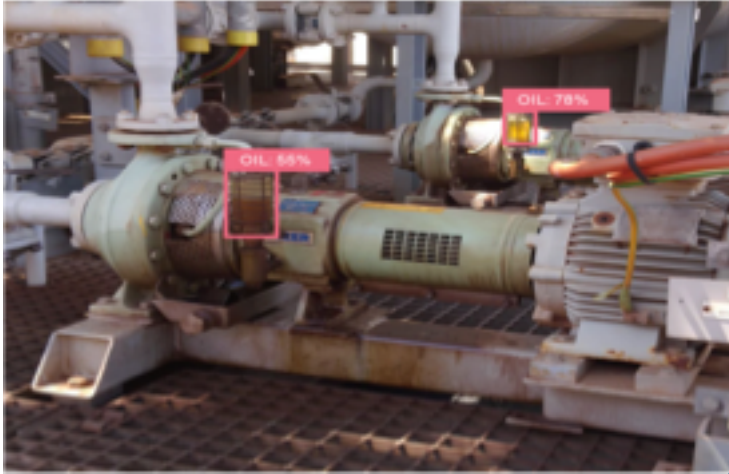




Sense

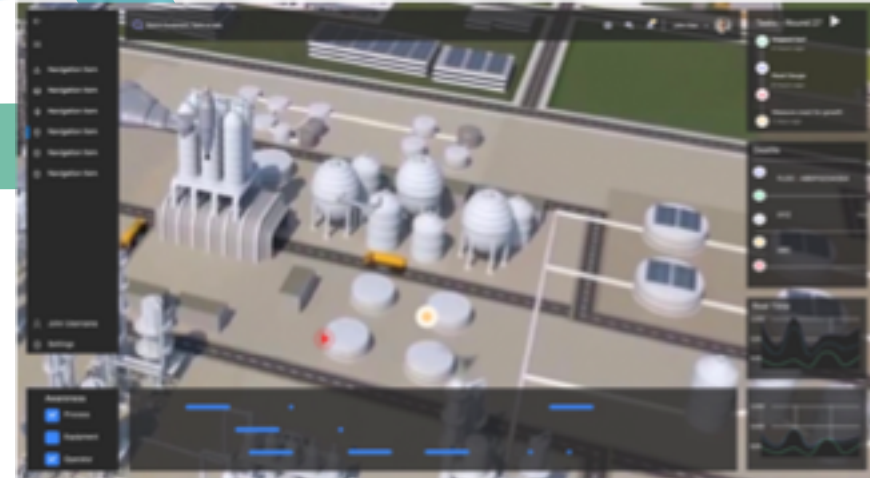
- Internet of things
- Networks
- Smart Sensors

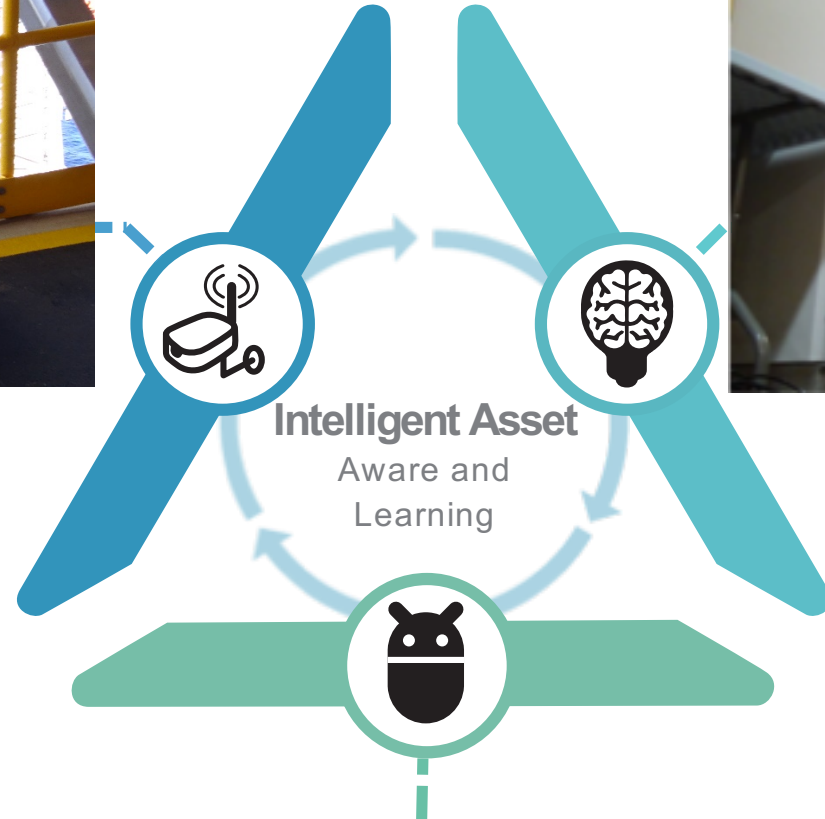




Insight

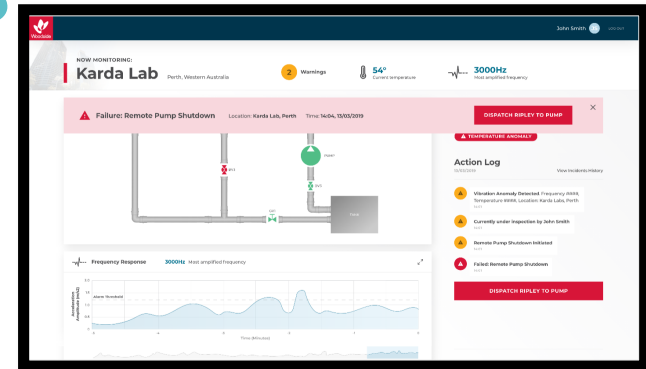
- Advanced Analytics
- Decision Support
- Digital Twin
- Augmented and Virtual Reality





Action

- Automation and Robotics
- Learning Control Systems
- System Integration and automation of workflows



Fusing it all together

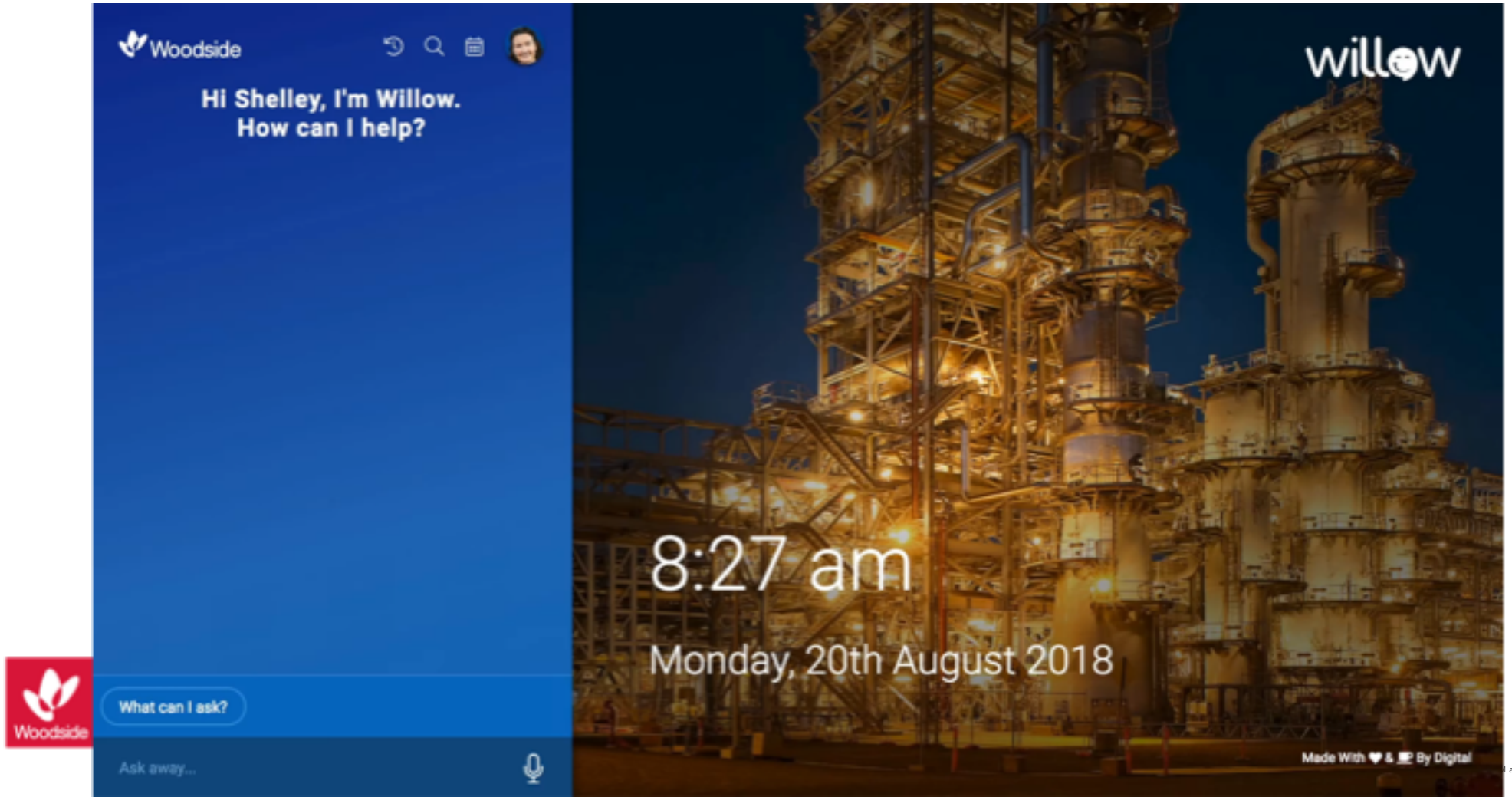


Lessons from Sensor Development

- + Low cost – market disruption
- + Rapid prototyping
- + Issues with scaling fast
- + Practical deployment on site
- + Communication infrastructure
- + Collaboration with certification body



The AI Journey – Watson and Willow



Robotics on Site

Robotics on Offshore Assets

North Rankin
Complex

**Woodside
Robotics**

Offshore Trial



Lessons from Robotic Deployment

- + Practical deployment on site
- + Communication infrastructure
- + Engagement with operations
- + UI and UX considerations
- + Collaboration with partners



Thank You



Woodside Energy Ltd
11 Mount Street

Perth, WA 6000

GPO Box D188
Perth, WA 6840 Australia

T: +61 8 9348 4000
F: +61 8 9214 2777

E: companyinfo@woodside.com.au

woodside.com.au

