



Artificial intelligence, or AI, is intelligence displayed by technology, as opposed to natural intelligence display by humans or animals. AI can be seen in scenarios where machines mimic the cognitive functions associated with living beings, including comprehension, expression, perception, calculation, remembering, organisation, reasoning, imagination, creation and problem solving.

This information sheet provides an introduction to all things Al. As an emerging opportunity, it should be recognised that there is little agreement over what constitutes artificial intelligence technologies and what does not. Differences in definitions, nomenclature and classifications exist to complicate an understanding of the technology, yet there is growing divide of organisations leveraging the significant benefits and opportunities available.

# Types of Al

One way of considering the vast array of different ways of looking at artificial intelligence, is to contemplate how broad the technology is.

Narrow AI is associated with an AI system being very good at completing a specific task or action, whereas General AI is associated with trying to replicate, augment or exceed the cognitive capability of humans.

General AI has widely been reported as consistently being 30 years away. Time will tell when this will be achieved and is outside the scope of this Information Sheet.

Organisations should consider the appropriate level of oversight of AI in their businesses. See Information Sheet: Governance of Artificial Intelligence.

## Machine Learning and Deep Learning

**Machine Learning** refers to the way that computers can make predictions or perform tasks based on example data or experiences. It differs from **Deep Learning** which uses techniques to filter data through self-adjusting networks that

resemble the workings of neurons in the brain. See Information Sheet: Machine Learning.

It is the learning component that makes Al different from historical approaches to building software applications. Al is not explicitly programmed to respond a certain way, it learns to respond that way.

Different models exist for how AI learns. **Supervised Learning** uses example data, where **Unsupervised Learning** uses experiences to learn.

#### **Business Intelligence**

You can't manage what you can't measure is a well-known phrase to business leaders. But obtaining a holistic view of all operational data for an organisation is a formidable exercise.

Business intelligence encapsulates collecting data to form insights or intelligence from that data, as well as driving automated actions on information. See Information Sheet: Business Intelligence.

### **Robotic Process Automation**

Despite fears of massive job losses, robotic process automation, or RPA, offers significant productivity improvements and cost management through the automation of repetitive tasks.

Organisations must continually evolve and innovate in order to remain competitive. RPA offers a way to improve consistency of operations, reduce errors and augment productivity of workers.

#### About us