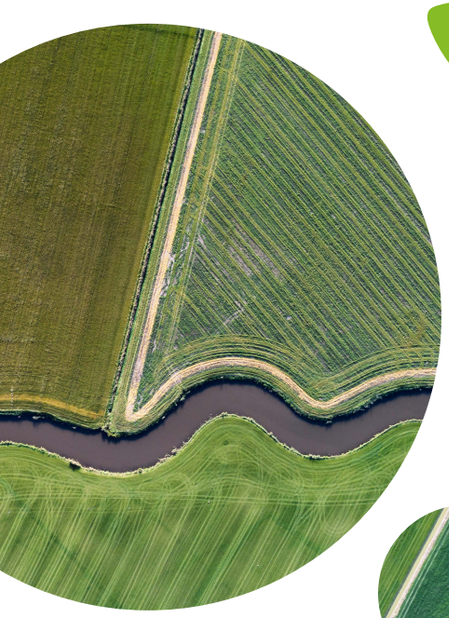
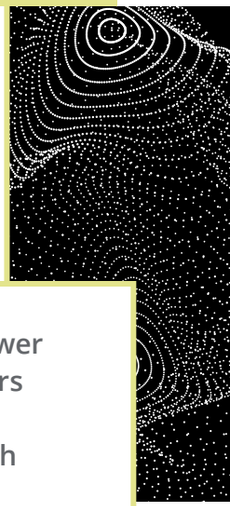
Deloitte.

10 ways AI can drive climate action

1 Monitor the world using **real-time data**



Farmers are turning to AI to provide real-time updates on the conditions of their crops, allowing for more accurate yield predictions and better monitoring of pests and bacteria.



AI is being used to monitor power grids, allowing energy providers to dynamically accommodate renewable energy sources such as wind and solar.[1]

2 Combat

AI is used to combat illegal deforestation and is being relied on to help shape legislation and policy to combat climate change.[2]

pollution

We can use AI to forecast air pollution, allowing for a greater understanding of pollution patterns and the impacts they have on communities.

Nudge alerts on mobile devices inform users to turn off lights, appliances, and other household items to minimise their individual carbon footprints.

4 Elevate **renewable energy**

AI research is being harnessed to discover energy sources at a scale and pace much greater than humans can do by themselves.

AI is being used to accelerate materials science, optimising energy storage means and alternative fuels for wider use.[4]

3 Measure and minimise **emissions**

AI allows businesses to monitor their supply chain emissions, allowing for informed decisions to decrease Scope 2 and Scope 3 emissions.[3]

AI allows for businesses to connect insights across multiple areas of a business, allowing them to holistically track and monitor emissions.

FACT **Choosing a new pathway could grow Australia's economy by $680 billion and increase GDP by 2.6% in 2070 – adding over 250,000 jobs to the Australian economy by 2070.** Read more

5 Improve **waste** management

AI is being used by cities to optimise their garbage collection routes and sorting operations, minimising their carbon footprints.

AI cuts through the complexity of manufacturing and supply chain management, allowing businesses to reduce wastage.

AI optimises recycling and waste sorting for energy-intensive materials, which can help minimise and avoid unnecessary emissions associated with mining these materials.

FACT **30% of employed Australians and more than 30% of national income sits in industries exposed to climate disruption and unplanned economic transition.** Read more

6 Enhance **scenario planning**

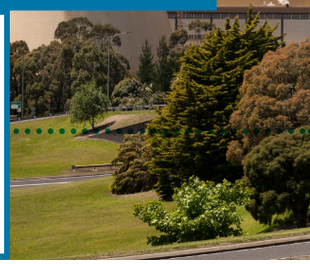
AI removes the manual workload from scenario planning, bringing together large amounts of data sets to create insights to inform better and faster decisions.

When you combine AI with scenario-based strategic thinking it empowers decision-makers to interpret market trends, anticipate changing market dynamics, build future-proof strategies and react to constantly changing climate needs.[5]

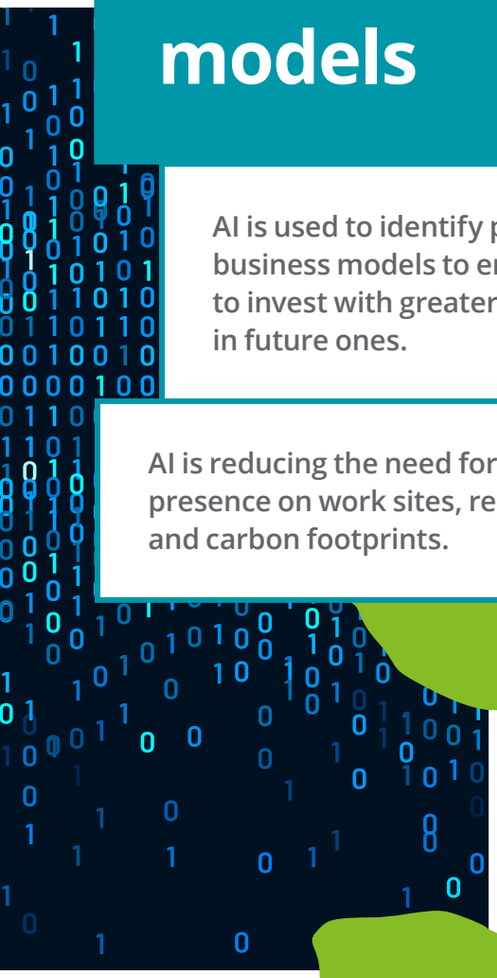
FACT **Without rapid and significant climate action, over the next 10 years the loss to Australia's economy could reach $150 billion.** Read more

7 **Build resilience** and protect vulnerable **communities**

AI can pinpoint environmentally vulnerable locations and communities to target infrastructure improvements where they are most needed.[6]



8 Enable **innovative business models**



AI is used to identify patterns in past business models to enable businesses to invest with greater confidence in future ones.

AI is reducing the need for physical presence on work sites, reducing travel and carbon footprints.

9 Boost **conservation** and **biodiversity**

AI is protecting endangered and vulnerable species by detecting, identifying, and counting their presence in the wild to better understand their behaviour to inform decision-making.[7]

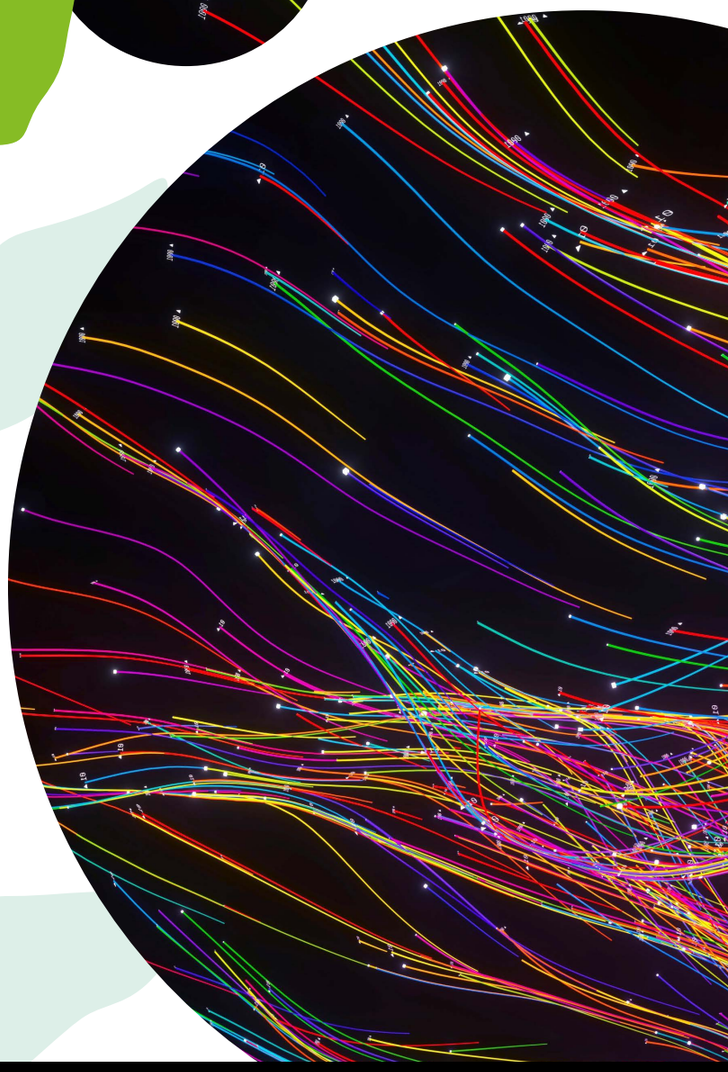
AI is significantly reducing the amount of manual human labour required to collect and process critical conservation data, allowing for faster and cheaper insights for researchers.

Strengthen resilience to **extreme weather** and **disasters**

AI is using satellite imagery to assess areas impacted by disaster, allowing response workers to optimise the distribution and allocation of personnel and resources.[8]

AI can predict disasters before they occur, allowing humans to better prepare populations for forthcoming events and assess their disaster readiness levels.

AI can predict the impact of disasters on assets and determine which would be more resilient based on their locations and compositions.[9]



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