KPMG
Applied Intelligence

The meteoric growth of AI

A GLOBAL SNAPSHOT

Between 1998 - 2018, AI papers have grown **> <u>300%</u>**

Source: Artificial Intelligence Index, 2019 annual report

A GLOBAL SNAPSHOT

Global private AI investment was over **$70B** in 2019

Source: Artificial Intelligence Index, 2019 annual report

A GLOBAL SNAPSHOT

The time to train an image classification system on cloud infrastructure reduced from 3 hours to **88 seconds** over 18 months

Source: Artificial Intelligence Index, 2019 annual report

A GLOBAL SNAPSHOT

Global investment in AI start-ups increased from $1.3B in 2010 to **$40.4B** in 2018

Source: Artificial Intelligence Index, 2019 annual report

A GLOBAL SNAPSHOT

AI compute has been doubling every **3.4 months** since 2012

Source: Artificial Intelligence Index, 2019 annual report

A GLOBAL SNAPSHOT

The most dominant topics in over 3600 news articles: ethical use of AI, data privacy, the use of face recognition, algorithm bias and the role of big tech.

A GLOBAL SNAPSHOT

‘Fairness’, ‘Interpretability’ and ‘Explainability’ are identified as the biggest ethical challenges

A GLOBAL SNAPSHOT

AI can contribute to each of the 17 UN Sustainable Development Goals but bottlenecks still need to be overcome

Source: Artificial Intelligence Index, 2019 annual report

AN IRISH SNAPSHOT

Analytics Sector (includes Data, AI, RPA, Robotics etc) worth €16 billion for Irish economy

Source: Analytics Institute of Ireland

AN IRISH SNAPSHOT

211,000 employed in data analytics and related areas

Source: Analytics Institute of Ireland

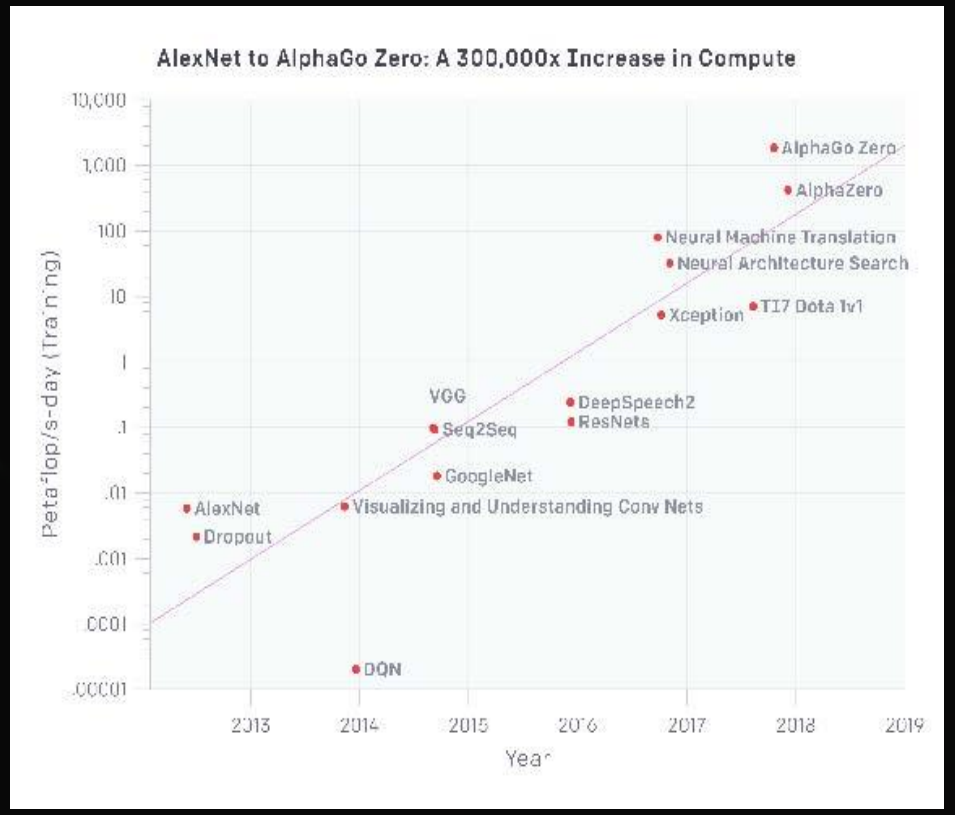
AN IRISH SNAPSHOT

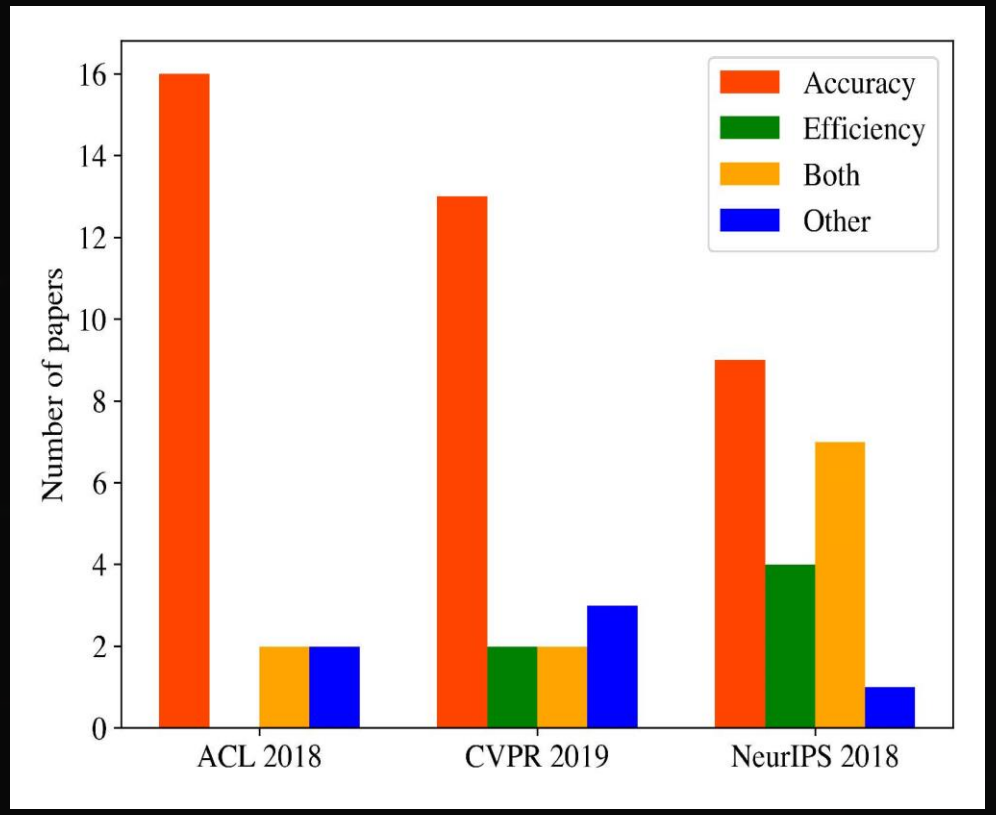
28,000 students now studying in the area of data

Source: Analytics Institute of Ireland

But there are concerns

In pursuit of Accuracy





arXiv:1907.10597v3 [cs.CY] 13 Aug 2019

“Google should not be in the business of war”

- Google workers to Sundar Pichai

“Those creating powerful technology have to ensure what they build is used for good”

- Microsoft workers to Satya Nadella

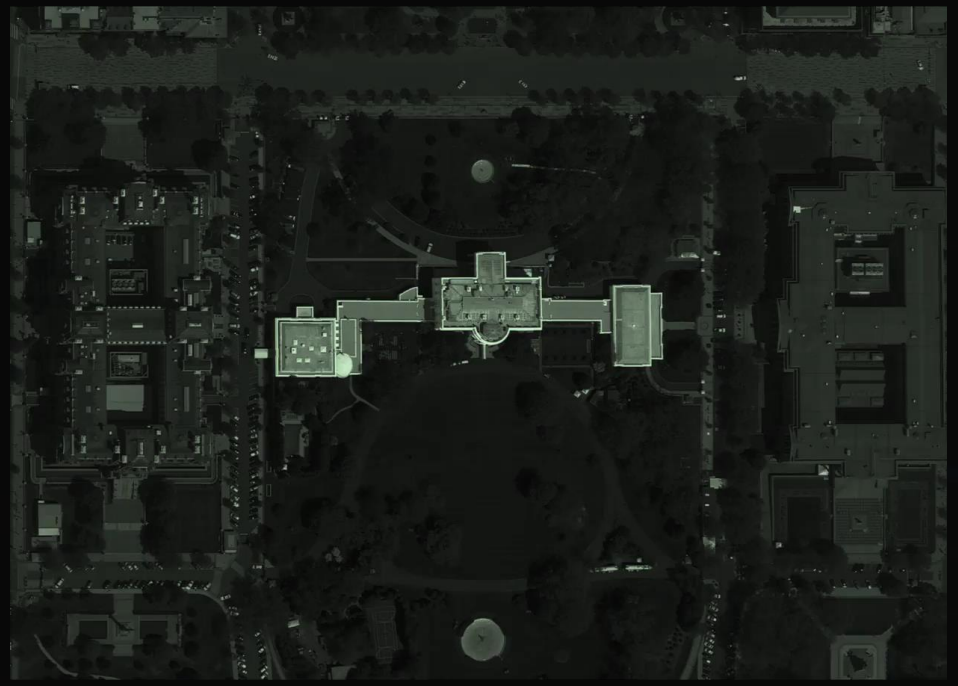
“We cannot cede responsibility for the use of the technology we create”

- Salesforce workers to Marc Benioff

“We refuse to contribute to tools that violate human rights”

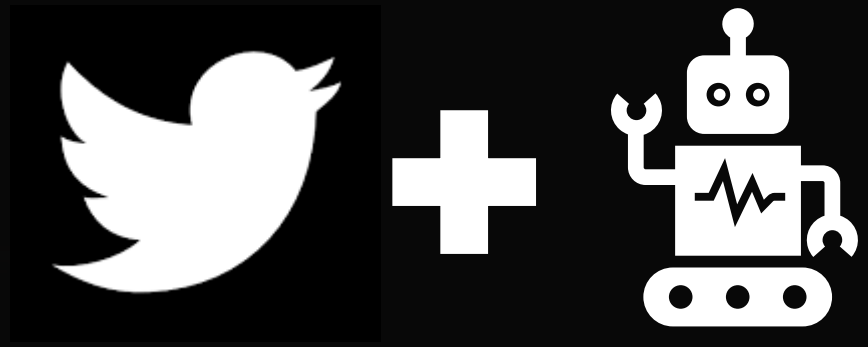
- Amazon workers to Jeff Bezos

DATA

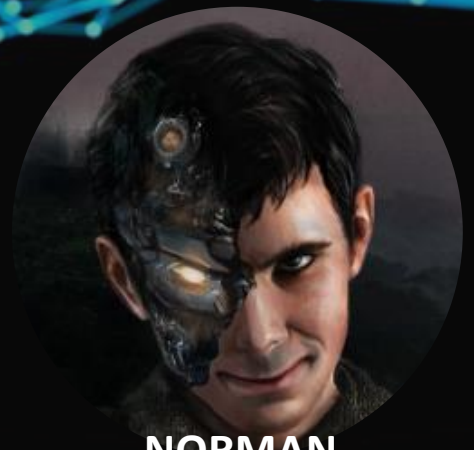


NY Times: Mobile phones @ White House

AI



Guardian reported that bots were to blame for a quarter of posts perpetuating climate change denial on Twitter in 2017.



NORMAN

World's first psychopath AI.

Norman sees

“A man is electrocuted and catches to death”

Standard AI see

“A group of birds sitting on top of a tree branch”

Bridging the trust gap

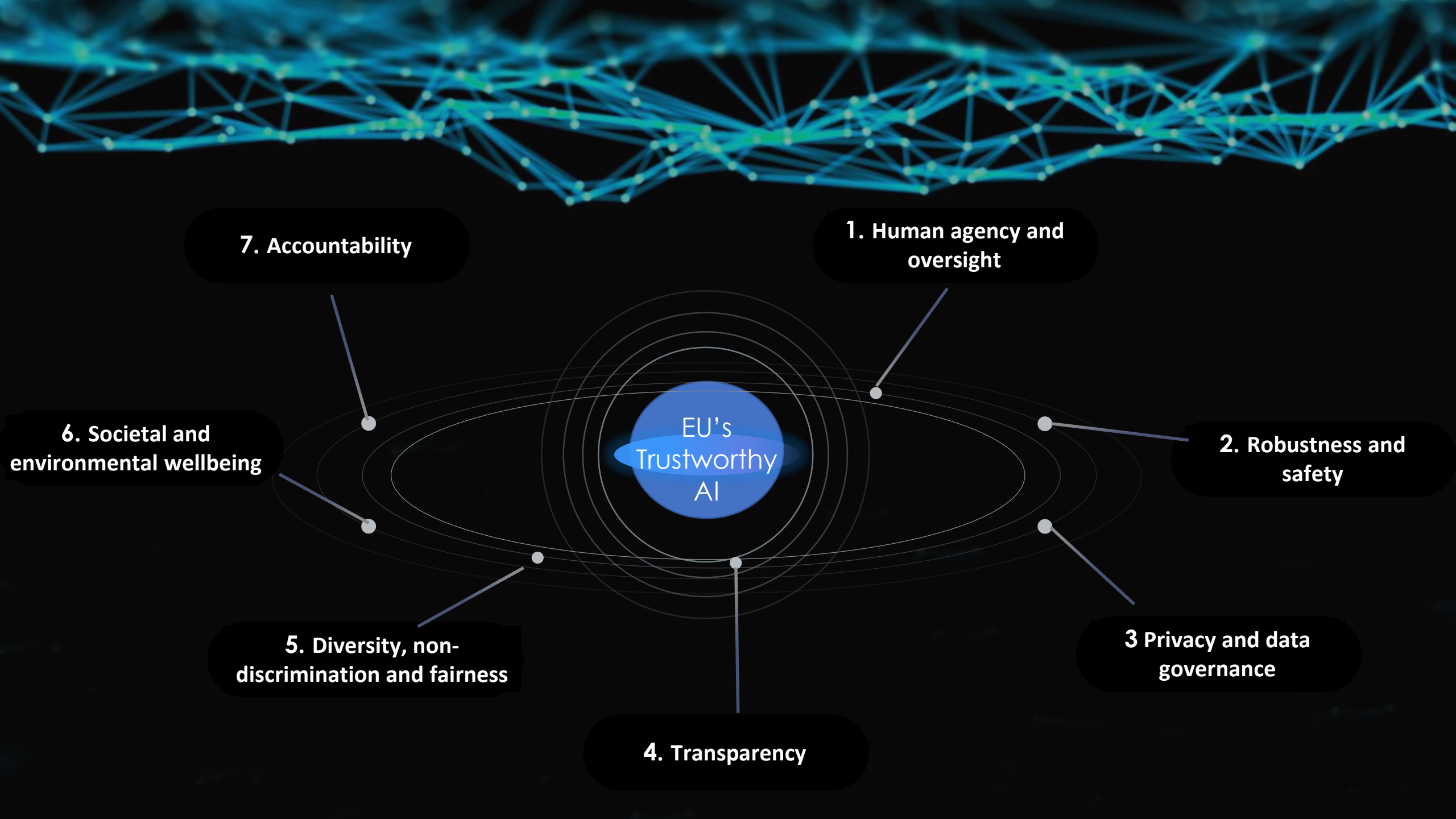
The Trust Equation

Forrester Research: 45% of business leaders said that trusting AI systems was challenging or very challenging

KPMG Research: 70% of business leaders don’t know how to govern AI

The era of self regulation is over. Time to have a sheriff in town.

(Obligatory Star Trek reference)
“We will add your technological distinctiveness to our own, you will be assimilated”


7. Accountability
1. Human agency and oversight
6. Societal and environmental wellbeing
EU's Trustworthy AI
2. Robustness and safety
5. Diversity, non-discrimination and fairness
3 Privacy and data governance
4. Transparency

Resilience

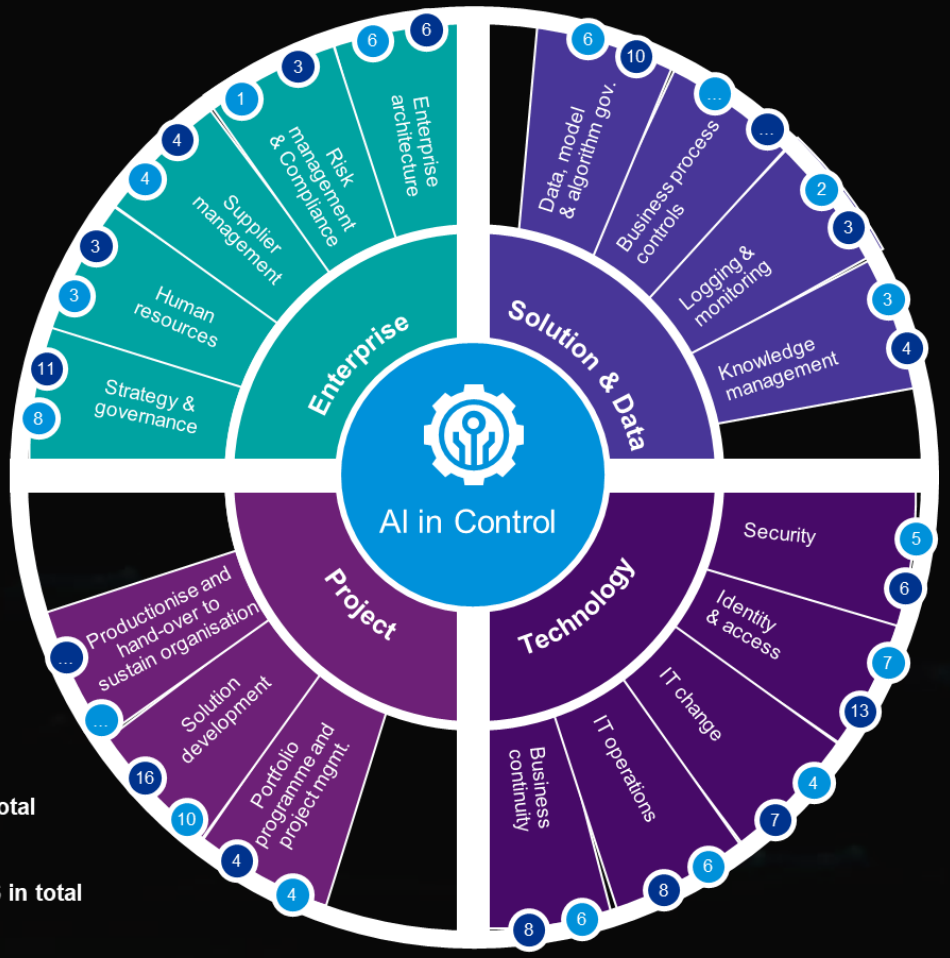
Integrity

Fairness

Explainability

# of risks identified, **75 in total**

# of controls identified, **106 in total**



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