Artificial Intelligence, Data Capitalism, and the Tech Giants



the **GOOD**

the BAD

AND the UGLY?

Professor Birgitte Andersen
CEO & Co-founder
b.andersen@biginnovationcentre.com
Twitter: BirgitteBIC



A BRAVE NEW WORLD

The transformative technology of our times is digitalisation, with data the 'new oil' Rate of Economic Activity Unknown future 1985-2020: Software 1890-1940: Artificial intelligence New media Electrical 1830-1890: Robotics Internet engineering Steam Virtual reality Big Data Chemistry Steel 1760-1830: Blockchain & DLT Railway Early mechanisation 1940-1985: Stone Age Water power Mass Bronze Age production Iron Age Petrochemicals 2020-2040: Oil Health & life sciences BIG

Sustainability

Low carbon

INNOVATION

Artificial Intelligence (AI) has the potential to double the GDP growth rates of 12 developed economies by 2035. Accenture (on 12 counties): UK, Japan, Finland, Sweden, the Netherlands, Germany and Austria





THE GOOD

What is AI? Machine Learning Multi-agent systems Autonomous systems **Universe of Al** Decision making Automated reasoning Natural language understanding Semantic web

Al and you



Narrow / task

Sphere

Sphere

Sphere



Software



Sphere



General – (Sci Fi)











Intelligent agents directly to consumers and clients (e.g. Chatbot)

Internet of Things (e.g. connected homes)

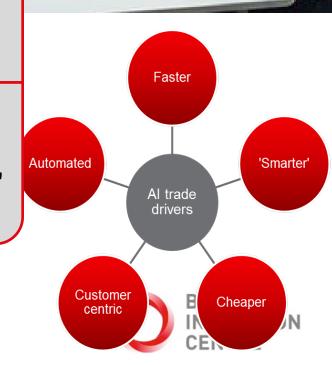


Al Commerce

Data and information exchanges (both private and public)

Blockchain (e.g. peer to peer 'smart' contracts)







AI in UK

ARTIFICIAL INTELLIGENCE INDUSTRY LANDSCAPE OVERVIEW Q3 / 2018

TECHNOLOGIES, COMPANIES, INVESTORS, TRENDS



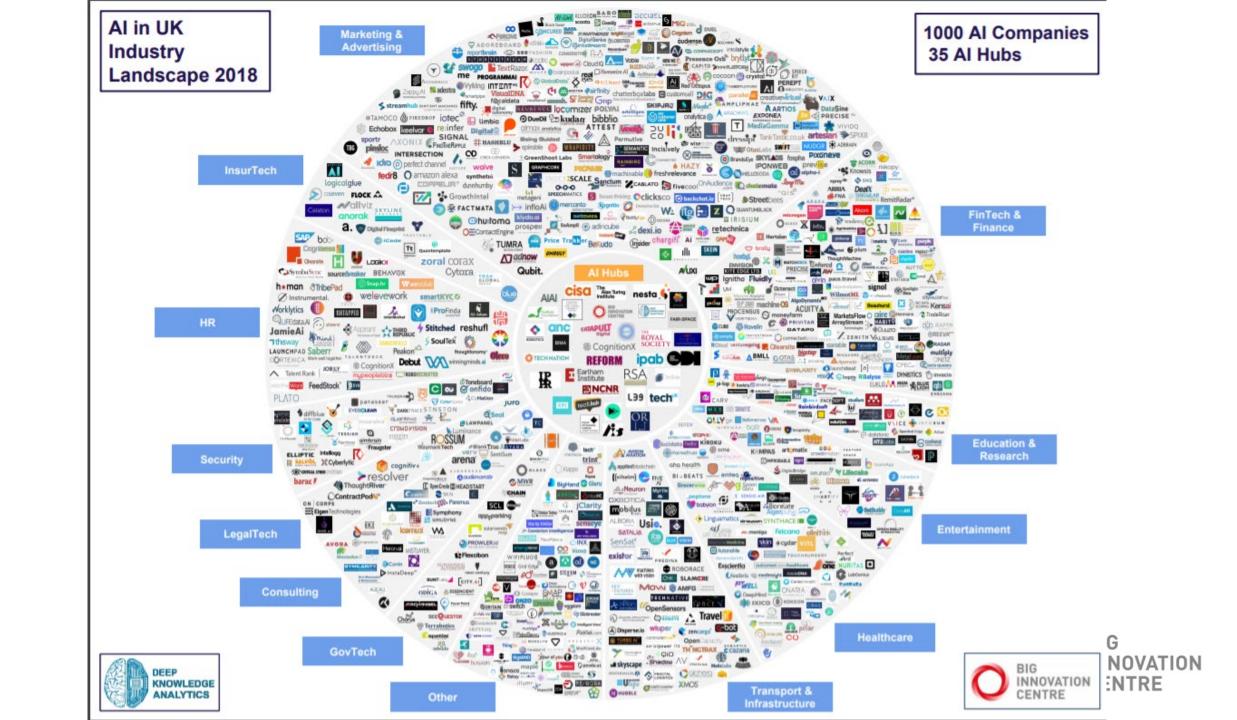








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Education

Al in UK

INVESTORS

Q3 2018



FinTech



InsurTech



INNOVATION CENTRE

Consulting & Outsourcing





Healthcare



Machine Learning



Computer Vision



Al in UK Technology Landscape 2018

Recommendation systems



Chatbots & Al assistants



Robotic



IoT



Other



1000 AI Companies

Predictive Analytics



Search Engines and Language Processing



NOVATION

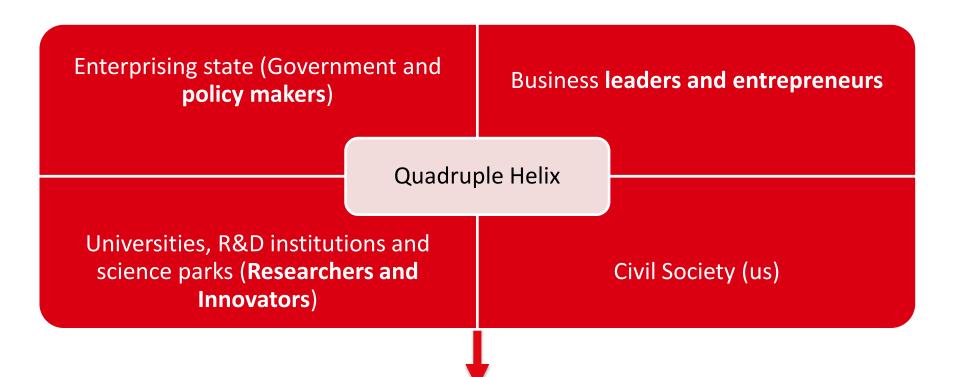
Intelligent Data Analysis



UK is well placed to become a global hub for Artificial intelligence and Blockchain

Commands:

- all the required resources
- industrial and governmental will
- but needs to marshal the <u>collective resources</u> to achieve this exciting opportunity.

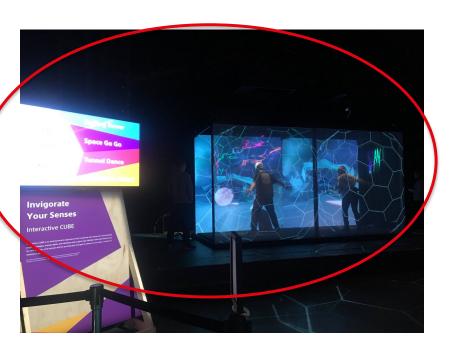








ALL PARTY PARLIAMENTARY GROUP ON ARTIFICIAL INTELLIGENCE (APPG AI) WWW.APPG-AI.ORG













Deloitte.

C'M'S'

Law.Tax

BARCLAYS



KPMG







All Party Parliamentary Group on **Artificial Intelligence**





















ALL PARTY PARLIAMENTARY GROUP ON BLOCKCHAIN WWW.APPG-BLOCKCHAIN.ORG











THE BAD

Data Capitalism

FROM EVIDENCE SESSION ON "ETHICS AND LEGAL IN AI: DATA CAPITALISM" (26 OF JUNE 2017 EVIDENCE MEETING IN HOUSE OF LORDS)

- The value added of BIG DATA to the economy from 2012 to 2015 is £216 billion
- £520 million has been spent by government in BIG DATA infrastructure since 2011
- There are over 20,000 datasets published on data.gov.uk
- 90% of all data available on the Internet was created less than two years ago
- The NHS could save £16 to £66 billion if they employed data analytics better

Personal data – public data – business data How do we unlock the data value?



INTERNET GROOMING

ACCEPT ALL COOKIES



Right to be forgotten...

Whose data is it anyway?

raw data, behavioral data, data base analytics

CREATIVE DATA COMMONS

DATA SHARING and your social contract

A Data Charter on how data can used:

Access to private data drives entrepreneurship, innovation and increased welfare

- Shift from policies around controlling the data itself to governing the uses of data
- Adopt an 'opt-in unless you opt-out' approach to personal and business data disclosure
- Introduce 'fair use' of personal and business data
- A 'social contract' (benefits in exchange for sharing data, as with patents)





DATA CAPITALISM'S ETHICAL CHALLENGE

What are the key ethical implications in AI and Blockchain?

Automated Decision-Making

Inequality

Security threats

Data Ethics

Algorithmic Biases

Accountability

Technological Unemployment

Monopolisation

Inclusivity

Cybersecurity

Long-term extinction





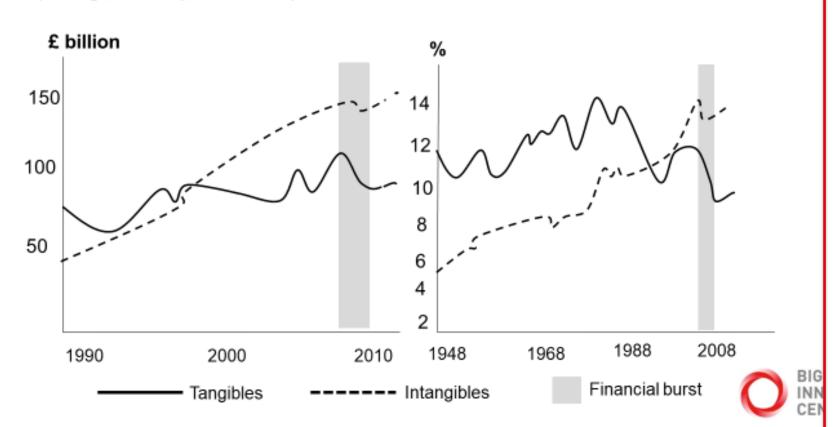
THE UGLY

This Town Ain't Big Enough for the Both of Us

Trends in intangible investment and contribution

Investment in UK intangibles (computerized information, R&D, patents, IP, know-how, capability, networks) is exceeding tangibles (buildings, machinery, raw-materials)

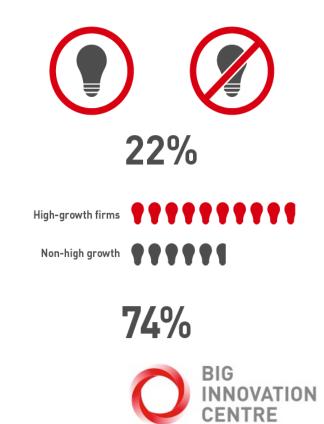
Intangible contributions to the economy today are exceeding tangible assets (US example)



Think different about

 intangibles in Al and Blockchain

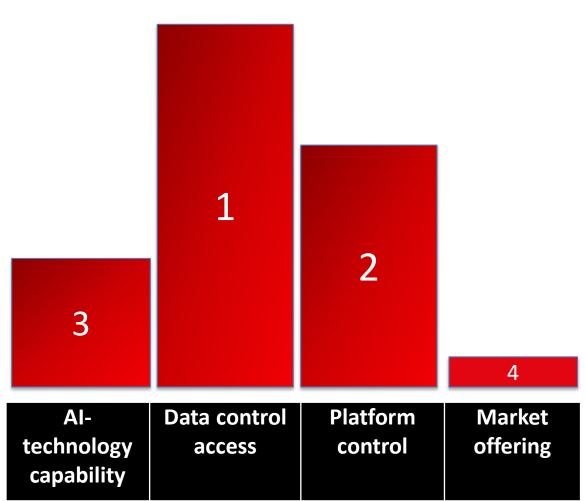
Innovative firms are high growth firms



The winner takes all...

BIG is good but even BIGGER is better

SOURCES OF CORPORATE COMPETITIVENESS



MONOPOLISATION of TECH GIANTS

Think different about:

- Purpose
- Market regulation



The GOOD, the GOOD, and the GOOD!

1) INCLUSIVITY:

Make <u>public services lead users</u> of AI applications

- STIMULATE MARKETS & WELFARE FOR ALL

2) DATA ACCESS IN THE CREATIVE COMMONS:

Open personal data and business data, in addition to public data

- THE NEW OIL

3) **STOP MONOPOLISATION:**

Back intangible assets with finance

- STIMULATE INNOVATION AND ENTREPRENEURSHIP IN AI



