

# Fulfilling the Potential of the Role of Higher Education for The UK Industrial Strategy

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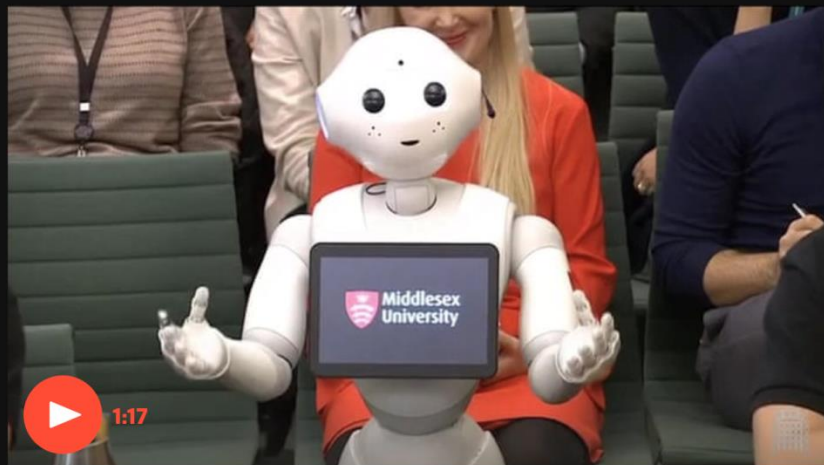
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## Artificial intelligence (AI)

Source: Parliament TV

Tue 16 Oct 2018  
16.41 BST

## Pepper the robot answers MPs' questions - video



Middlesex University's resident robot, Pepper, has become the first robot to appear before a parliamentary select committee. After introducing herself, Pepper answered questions from MPs on Caresses, the artificial intelligence project that is developing culturally aware robots to provide support for

# Outline

- Very brief summary of the UK Industrial Strategy
- Some requirements on Higher Education
- Internationalisation and implications for Vietnam

## Industrial Strategy

Building a Britain fit for the future



# International Industrial Policy

- Industrial policies are common place in developing and developed countries
- Themes focus on:
  - the Knowledge Economy and Sustainability
  - IT Diffusion
  - Skills and Education development

## Viet Nam

- Industrial Development Strategy, Vision Toward 2035
- Strategy for Science and Technology Development for the 2011–2020 Period
- Automobile Industry Development Plan of Vietnam
- Development Plan of Garment and Textiles Industry of Vietnam to 2020, Vision to 2030
- Strategy of Using Clean Technology to 2020
- National Programme on Improving Productivity and Quality of Products of Vietnamese Enterprises to 2020
- Target Programme on Development of Information Technology Industry to 2020, Vision to 2025
- Science and Technology Programme for New Countryside Construction in the period of 2016–2020

# UK Industrial Strategy: Foundations and Policies

Our five foundations align to our vision for a transformed economy



# UK Industrial Strategy: Foundations and Policies

Our five foundations align to our vision for a transformed economy



- Raise total research and development, (R&D) investment to 2.4 per cent of GDP by 2027
- Invest £725m in new Industrial Strategy Challenge Fund programmes to capture the value of innovation

# UK Industrial Strategy: Foundations and Policies

Our five foundations align to our vision for a transformed economy



- Invest in Maths Skills to address shortage in STEM
- New Technical Education Centres
- Institutes of Coding
- Agree Local strategies
- Support Electrical Vehicle Investment and 5G network roll-out

# UK Industrial Strategy: Foundations and Policies

Our five foundations align to our vision for a transformed economy



- Support Electrical Vehicle Investment and 5G network roll-out

- Agree Local strategies



# Grand Challenges



putting the UK at the forefront of the artificial intelligence and data revolution;



maximising the advantages for UK industry from the global shift to clean growth;



being a world leader in shaping the future of mobility; and



harnessing the power of innovation to help meet the needs of an ageing society.

## The AI and data-driven economy

**Artificial intelligence:** technologies with the ability to perform tasks that would otherwise require human intelligence, such as visual perception, speech recognition, and language translation

**Machine learning:** a type of AI that allows computers to learn rapidly from large datasets without being explicitly programmed

**Data-driven economy:** a digitally connected economy that realises significant value from connected, large-scale data that can be rapidly analysed by technology to generate insights and innovation

# AI and the data driven economy

- Specialist funding for innovation in AI .e.g. Health
- AI Council: partners from industry, academia to stimulate AI innovation
- Ethical use of AI: Centre for Data Ethics and Innovation
- New Skills for AI:
  - Investment in STEM teaching (Maths)
- Alan Turing Institute
- 200 PhD places in AI by 2020
- Masters programmes (conversion and CPD) – 200 places



# Globalisation of Industrial Strategy

*“Our Industrial Strategy is designed to place us at the forefront in finding solutions to both UK and global emerging trends and challenges.”*

*“Research and innovation are global endeavours and talented and experienced people in these fields are internationally mobile.”*

- **Research collaboration is supported by our substantial commitment to developing countries: E.g.**
  - UKIERI: India
  - UK-VN-HEP: Vietnam



## Advanced 5G Wireless Technologies for Smart Road-Traffic Control and Transportation Infrastructure Monitoring Systems

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UK-Vietnam Researcher Links Regional Workshop

# Concluding remarks

All countries recognize the need to develop industrial strategies

Universities play a significant role through:


- key skills in STEM and creative subjects around STEM
- New programmes tailored to meet the needs of the industrial strategy
- Research and industry collaboration
- Global relationships through key developmental partnerships such as the UK-VN-HEP
- Localisation of Universities means they are best placed to meet local needs



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Our campuses  
worldwide



London

Malta

Dubai

Mauritius

TEF Silver Teaching Excellence Framework



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# Thank you

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# References

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[https://unctad.org/en/PublicationChapters/wir2018ch4\\_en.pdf](https://unctad.org/en/PublicationChapters/wir2018ch4_en.pdf)

**The UK's Industrial Strategy:**  
<https://www.gov.uk/government/topical-events/the-uks-industrial-strategy>