

Welcome to

The 2018 ASDC National Conference









UK Research and Innovation



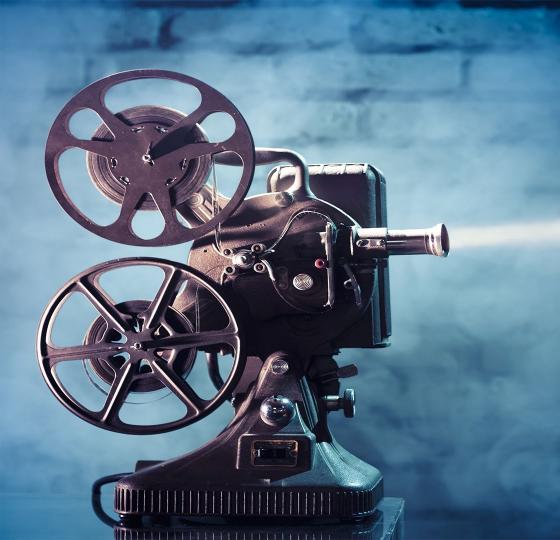
The 2018 National Conference

Museum of Science and Industry,
Manchester

October 10th 2018





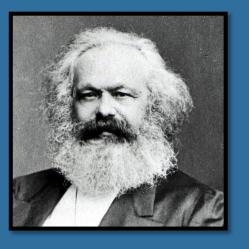




Invictus - 2009

Two Predictions:

- Climate change is real and will result in previously unimagined levels of migration
- As democracy struggles; in an era of 'fake news'
 'data capitalism' could well prove uncontrollable



"If you change the dominant mode of production that underpins a society, the social and political structure will change too."

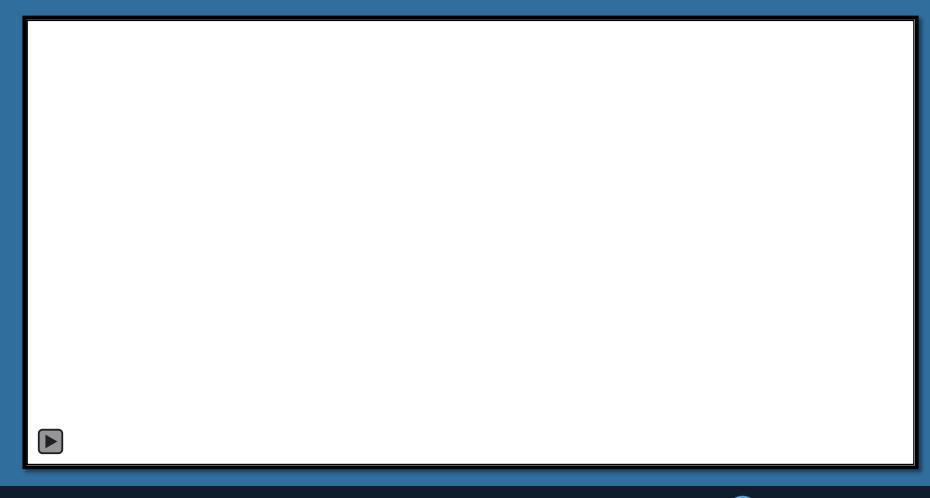
Karl Marx

Digital Internet Connections

- A few tens of millions in 1999
- Over 4 <u>billion</u> by 2020
- This changes everything!

Prediction one:

 Climate change is real and will result in previously unimagined levels of migration



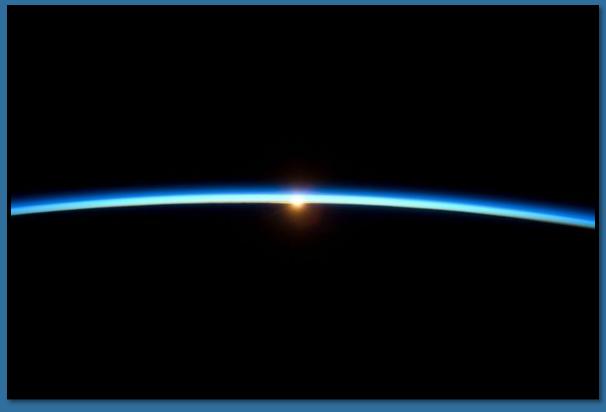




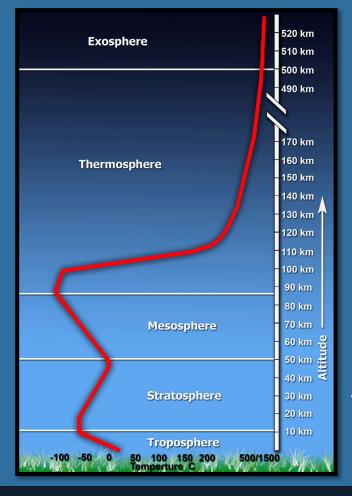








'Earthrise'



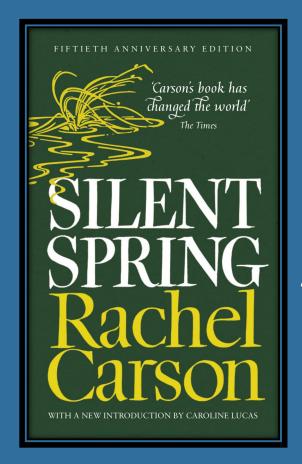
Alerting the World to the likely Impacts of Climate Change is, to the next generation, what the Civil Rights movement was to mine

Remember –

The Earth's habitable atmosphere is only 10km deep!



Opinions can differ but facts must not be allowed to become a generational battleground

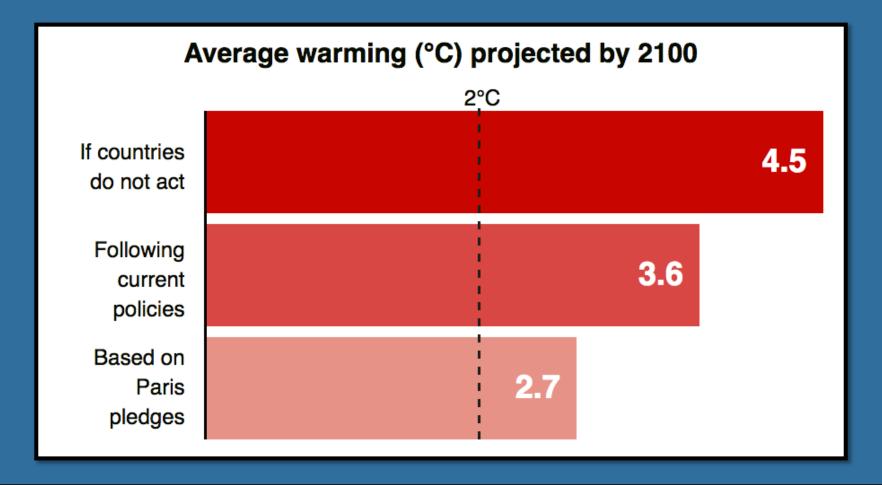


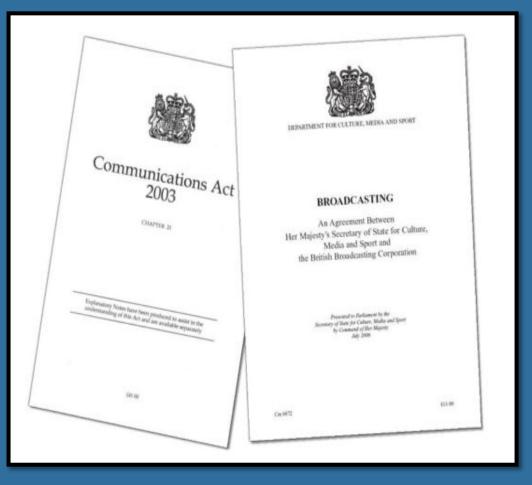


Rachel Carson

"The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction."

September 27th 1962





Established a 'public interest test' in respect of Media Mergers and Takeovers.

First time the word 'Citizen' appeared in any UK legislation



Climate Change Act 2008

CHAPTER 27

CONTENTS

PART 1

CARBON TARGET AND BUDGETING

The target for 2050

The target for 2050

2 Amendment of 2050 target or baseline year

3 Consultation on order amending 2050 target or baseline year

Carbon budgeting

4 Carbon budgets

Level of carbon budgets

Amendment of target percentages

7 Consultation on order setting or amending target percentages

8 Setting of carbon budgets for budgetary periods

9 Consultation on carbon budgets

10 Matters to be taken into account in connection with carbon budgets

Limit on use of carbon units

11 Limit on use of carbon units

Indicative annual ranges

12 Duty to provide indicative annual ranges for net UK carbon account

Proposals and policies for meeting carbon budgets

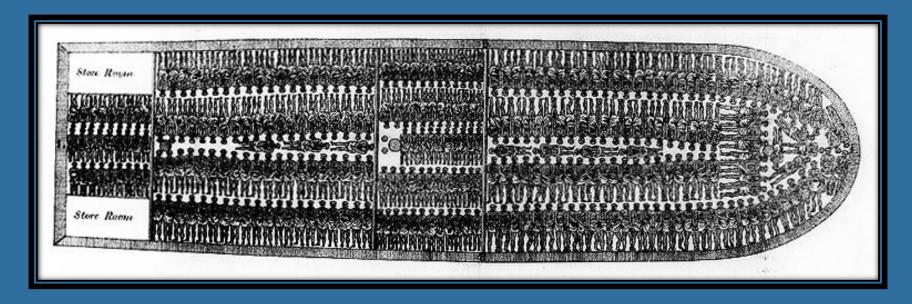
- 13 Duty to prepare proposals and policies for meeting carbon budgets
- 14 Duty to report on proposals and policies for meeting carbon budgets
- 15 Duty to have regard to need for UK domestic action on climate change

Established fixed carbon limits for the next 40 years.

The world's first climate change legislation!

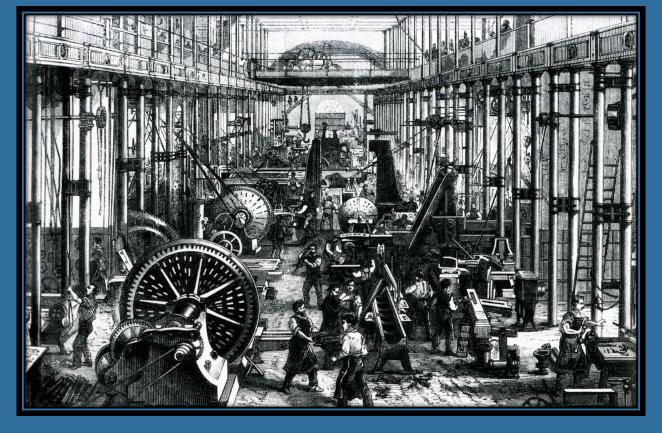


Evidence based Policy making



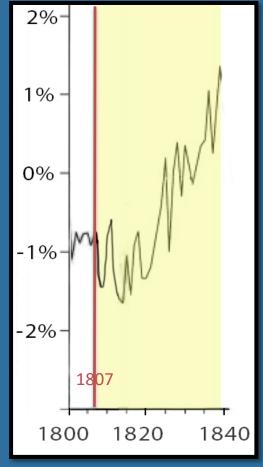
Late 18th Century ~ Estimated 25% UK GDP



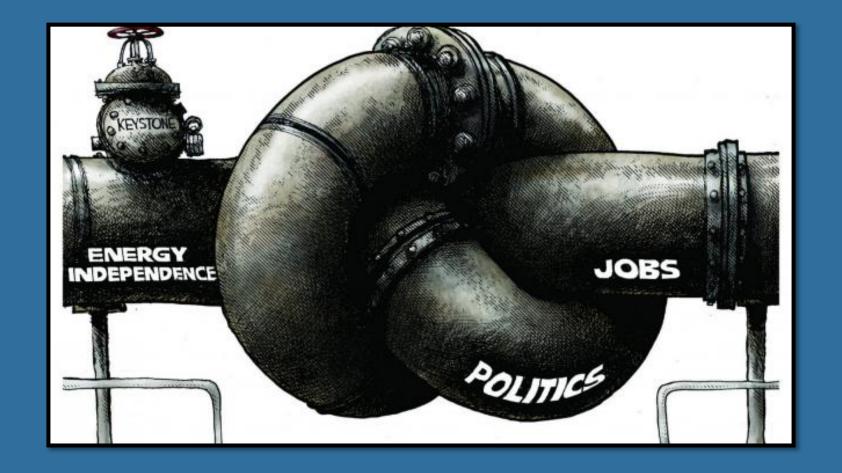


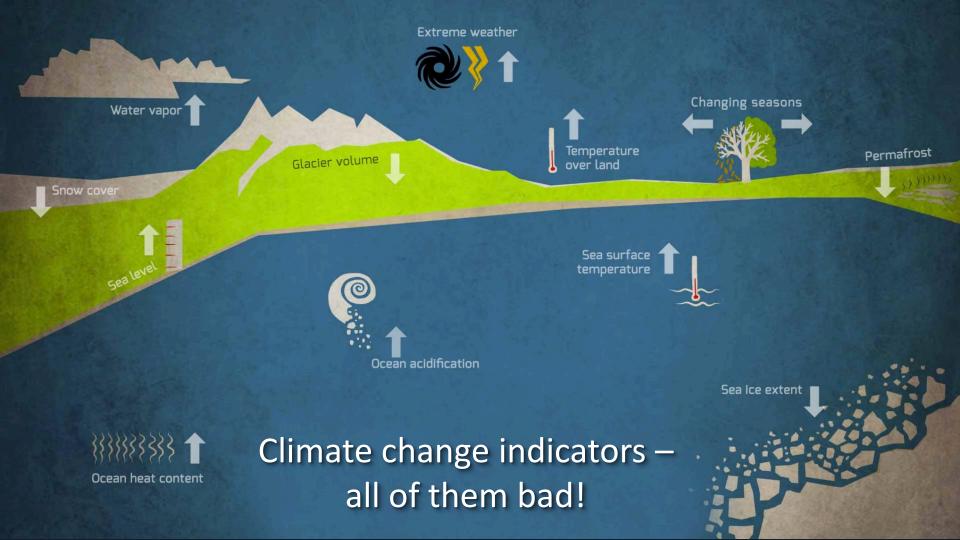
'Abolition' in 1807 kicked off the Industrial Revolution

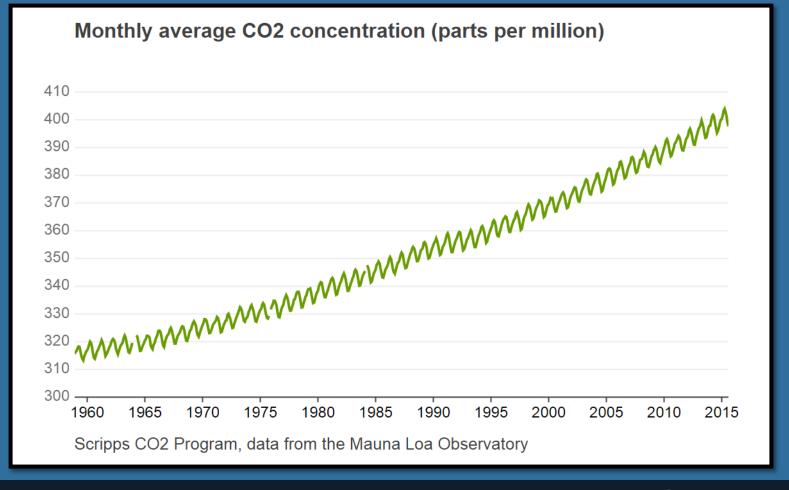




Output growth in England 1800-1840







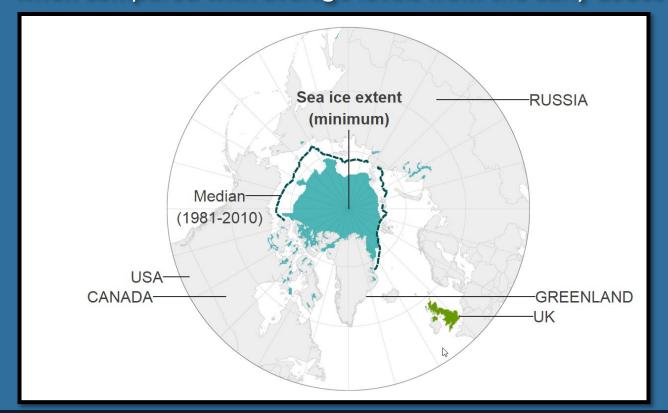


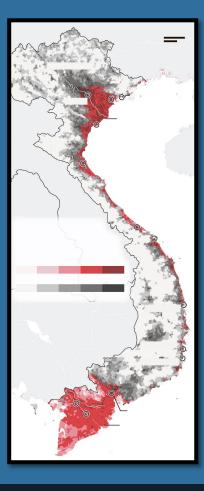
Tom Friedman May 20th 2015

"The most relevant divide in the world will no longer be East – West, Capitalist – Communist.

It will be the 'World of Order' versus the 'World of Disorder' as environmental, sectarian and economic pressures pulverize weak and failed states."

An area of sea ice roughly **10 times the size** of the UK has been lost when compared with average levels from the early 1980s

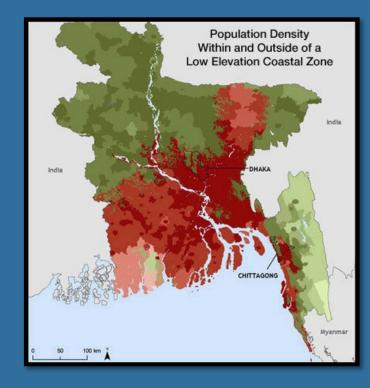




Rising Sea Levels?

The most densely populated areas of Vietnam are also among the most vulnerable to the potential effects of rising waters, this is even more true of China and Bangladesh.

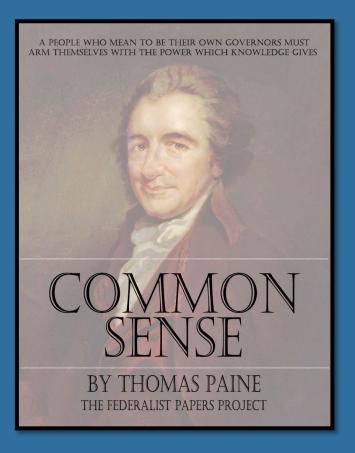
2.6% of world's population - about 177 million people - live in areas vulnerable to chronic flooding.



Three forms of 'climate' change



Economic Employment Environmental



"If there must be trouble, let it be in my day, that my children may have peace"

> Thomas Paine 'Common Sense' - 1779

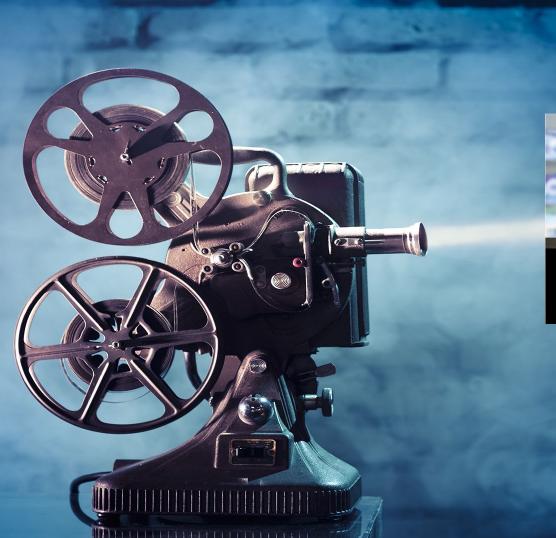








24 hours in Beijing 2015





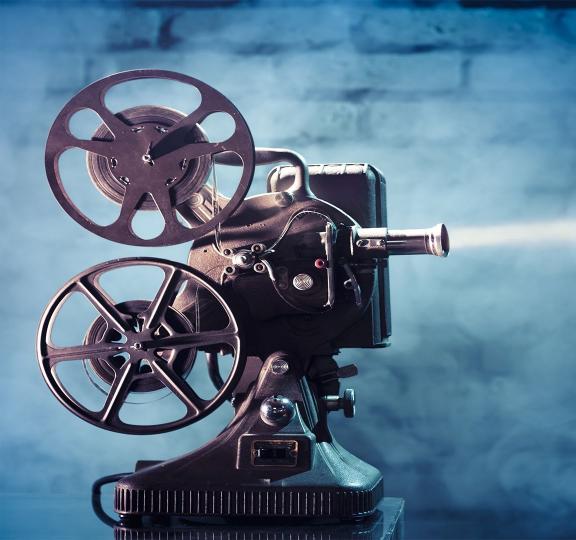
NEWSROOM.

Prediction two:

As democracy struggles; in an era of 'fake news'
 'data capitalism' could well prove uncontrollable

"Impartial and accurate broadcast news based on a compact of trust between the broadcaster and the audience is an essential part of the foundations of the British democratic system."

Phil Harding VLV Winter Bulletin 2017





NEWSROOM.



"We need to address the challenges that already exist and pre-empt the ones we do not know about"

"Fake news is an art form, slickly produced by anyone who wants to profit from our confusion"

"We need to create the basis of a Geneva Convention for the web"

Baroness Lane Fox House of Lords September 7th 2017 "There is an awkward tension in having a technology that is able to help us to confront our societal needs... and a corporate culture that aggressively balks at sharing it's long term societal responsibilities."

Baroness Kidron House of Lords September 7th 2017



"A core principal in political advertising is transparency - the potential for abuse is vast."

"We are in the midst of a worldwide, internet-based assault on democracy"

"In the 21st-century social media information war, faith in democracy is the first casualty".

Siva Vaidhyanathan New York Times September 8th 2017



Select Committee on Artificial Intelligence

Report of Session 2017-19

AI in the UK: ready, willing and able?

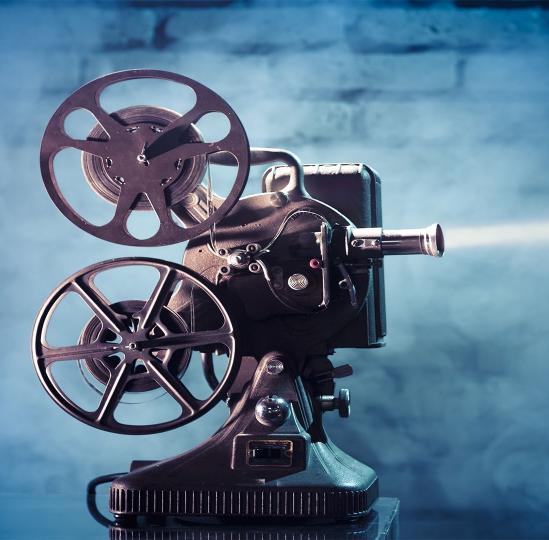
Ordered to be printed 13 March 2018 and published 16 April 2018

Published by the Authority of the House of Lords

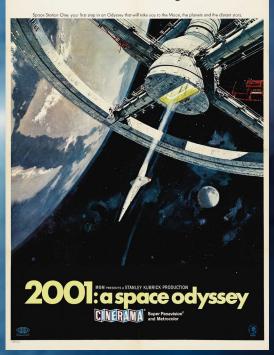
HL Paper 100



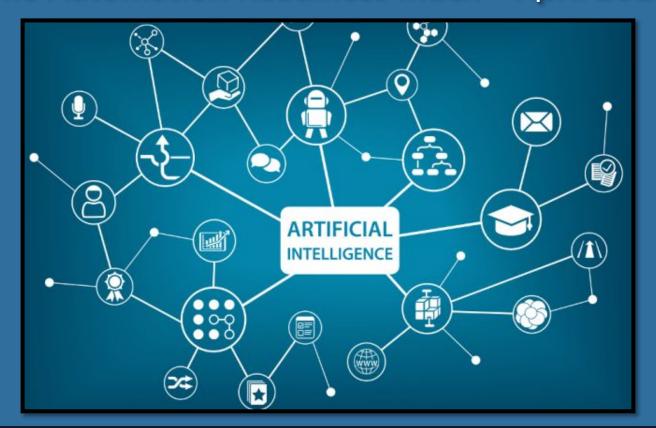
"Washing machines are robots, but they're not intelligent!"



An epic drama of adventure and exploration



The Automation Readiness Index – April 2018



WHO IS READY FOR THE COMING WAVE OF AUTOMATION?

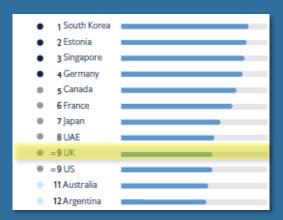
The Automation Readiness Index compares countries on their preparedness for the age of intelligent automation.

The study finds that little government policy is in place today that specifically addresses the challenges of AI and robotics-based automation.

Key findings:

- The challenges and opportunities of intelligent automation require a robust policy response informed by multi-stakeholder engagement but, so far, both are lacking.
- <u>Few</u> countries have begun to address the impact of automation through <u>educational policy</u>.
- Lifelong learning is becoming a rich area of experimentation.
- In most countries, vocational training is <u>not</u> up to the challenges posed by intelligent automation.

Education Policies:



If countries need a long-term strategy to deal with the challenges of automation education must be at the centre of it.

Three Nations to watch:

- Malaysia
- China
- Vietnam

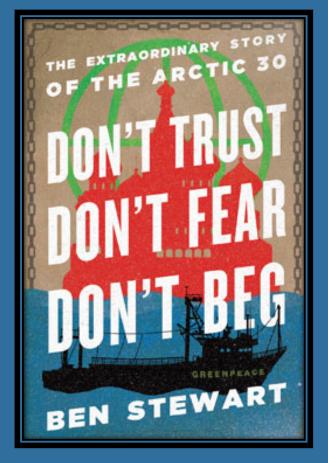
All five of the top-scoring countries in the education category are there partly on the strength of their efforts to reform teacher training and assessment and to update school curricula.

"No one's got to grips with the required strategic planning for educational change in this context and there is a dire need for it."

Rose Luckin
Professor of Learner-Centred Design —
University College London

What Next?

- Many jobs will be enhanced by Technology, many will disappear and many new, as yet unknown jobs, will be created.
- Educational Reform is an urgent necessity.
- Retraining will become a lifelong necessity.



"Dear future generations:
Please accept our apologies.
We were rolling drunk on petroleum."

Kurt Vonnegut

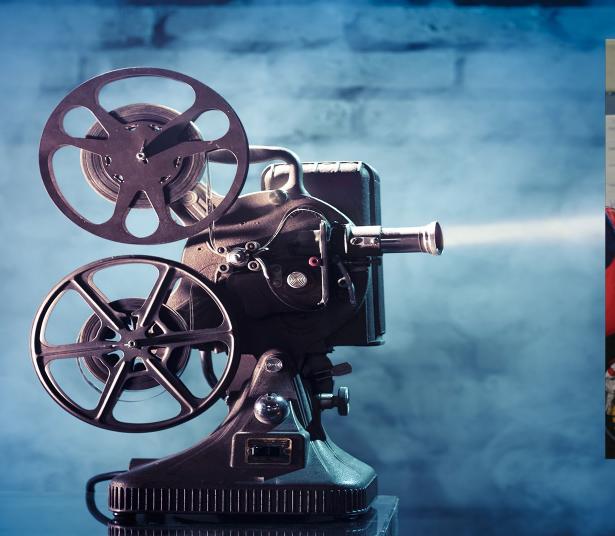


'Arctic 30'









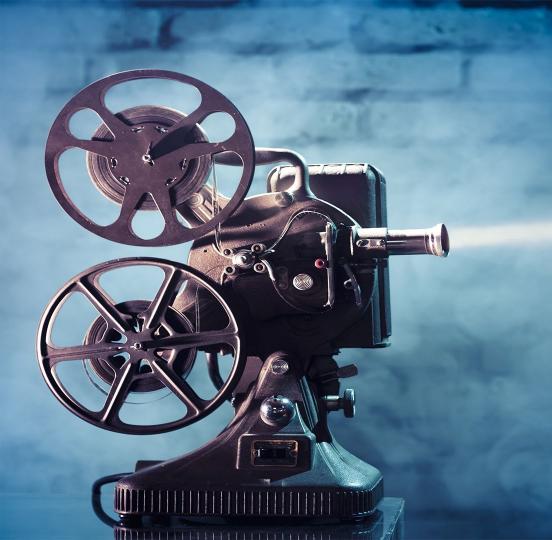






Tom Friedman May 2014

"How we make the transition to a stabilized and still prosperous relationship with the Earth and each other is surely the story of our time?"





2016





