

# Government, Society and the Future of Work *in the Fourth Industrial Revolution*

Digital Skills for Future Work Conference  
Ghent, Belgium, 7 October 2016

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Dept of Science, Technology, Engineering and Public Policy (STEaPP)

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[www.ucl.ac.uk/STEaPP](http://www.ucl.ac.uk/STEaPP)



**What role can industry and government play in helping organisations be more adaptable to future changes?**

**How do countries and regions plan for the '4th industrial revolution'?**



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Two broad roles for Government:

*(1) Supporting/Enabling Technological Development*

*(2) Managing/Shaping the Social Transformation*

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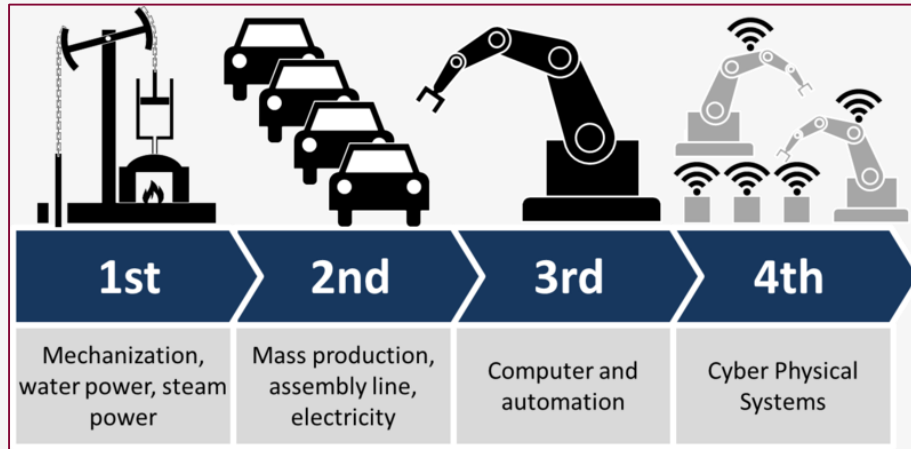
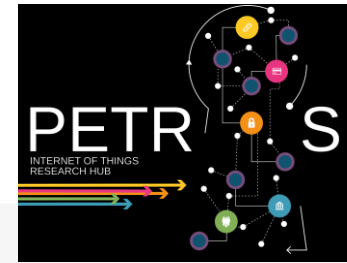
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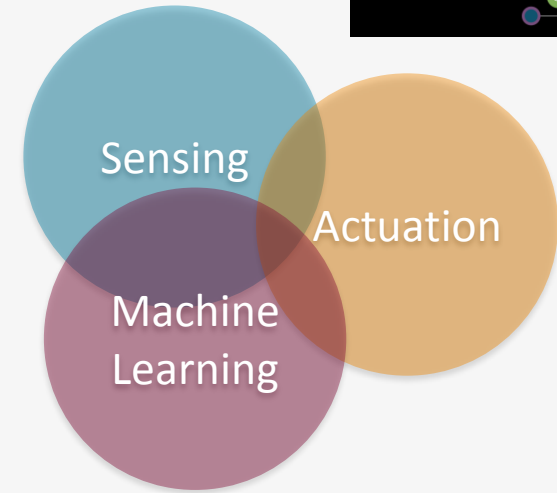
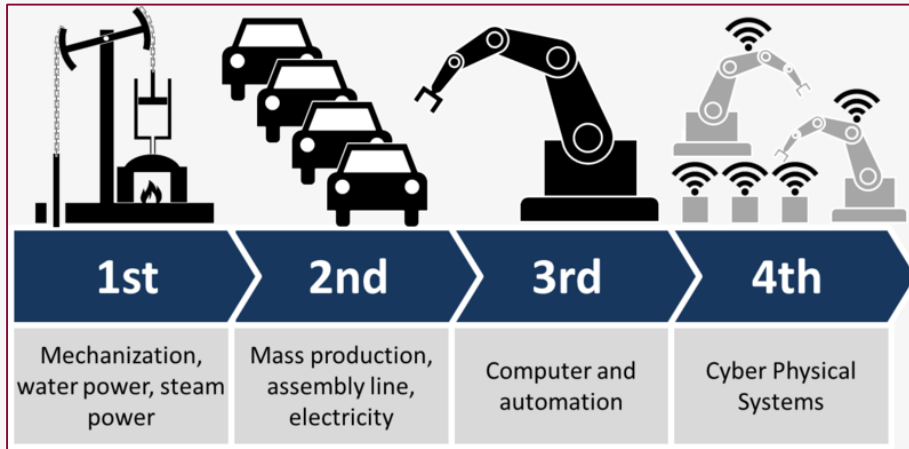
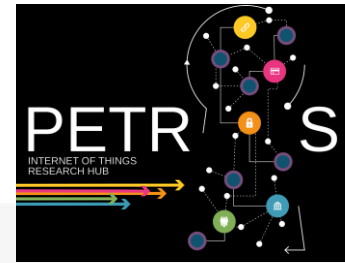
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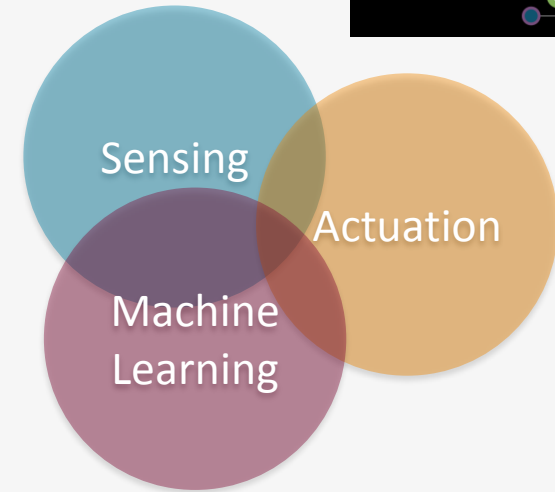
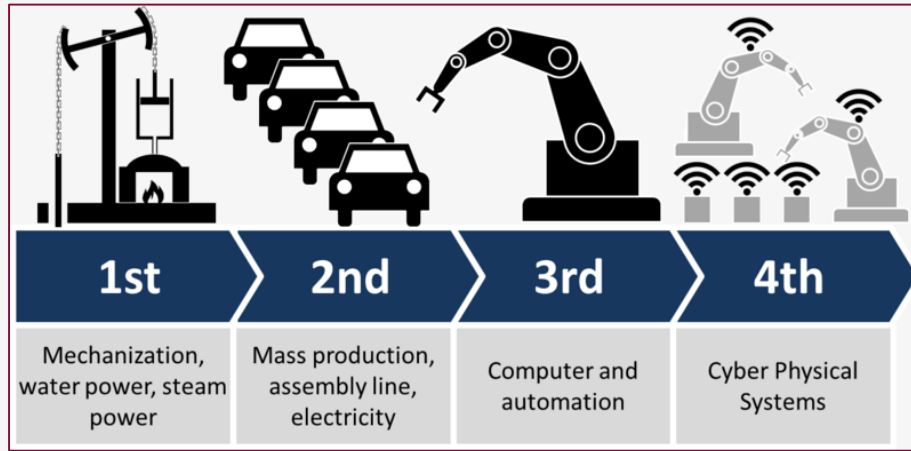
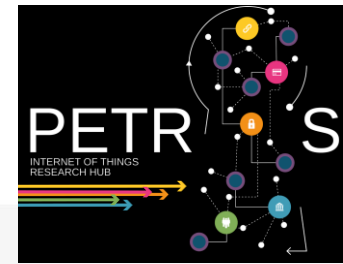
# The Fourth Industrial Revolution



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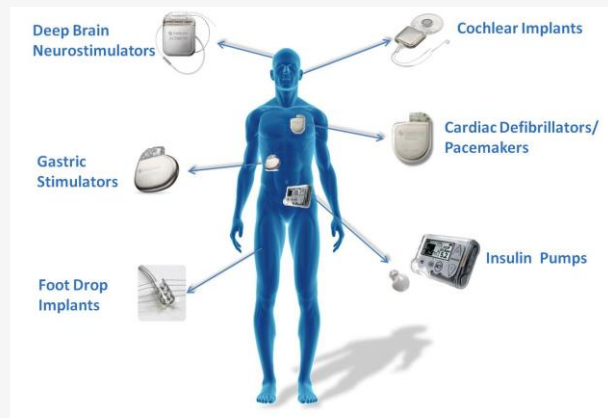
# The Fourth Industrial Revolution



## Critical Infrastructure



## Medical Implants



## Ambient Environments

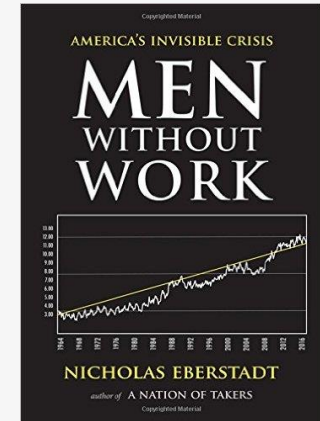




# Defining the Challenge: *Far more than economic...*

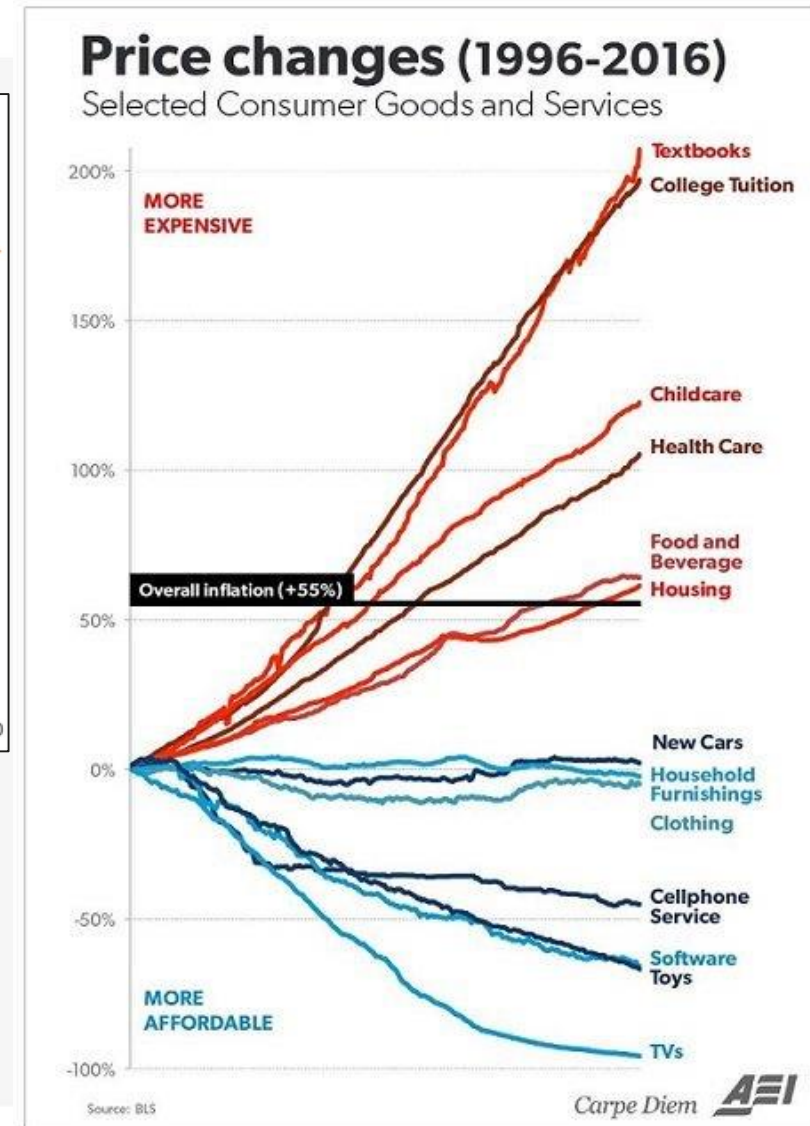
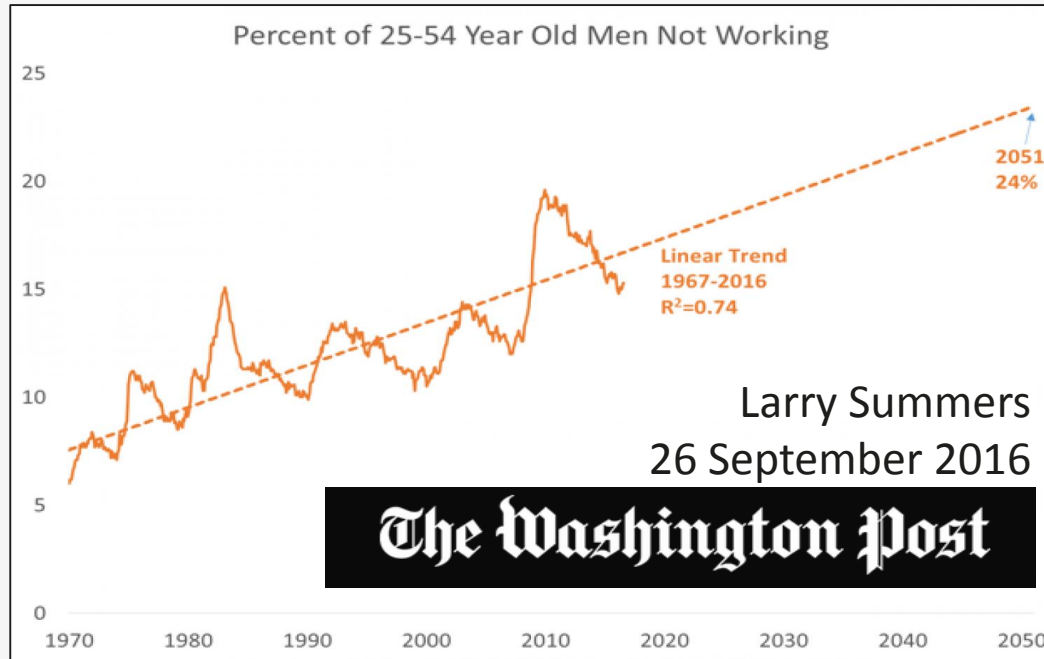


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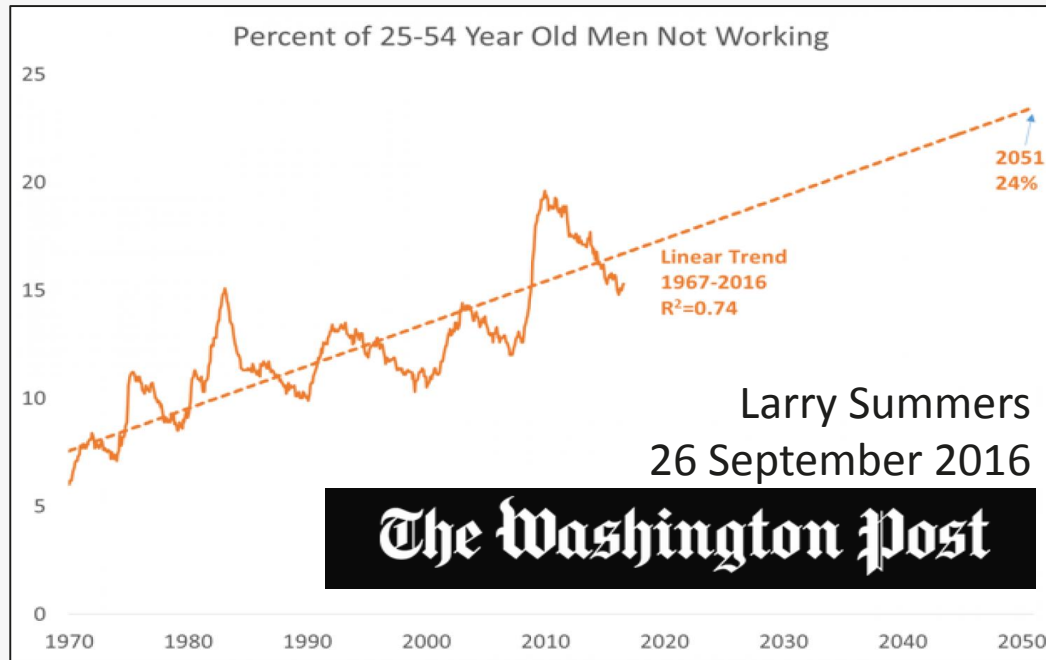


“Job destruction caused by technology is not a futuristic concern. It is something we have been living with for two generations.”

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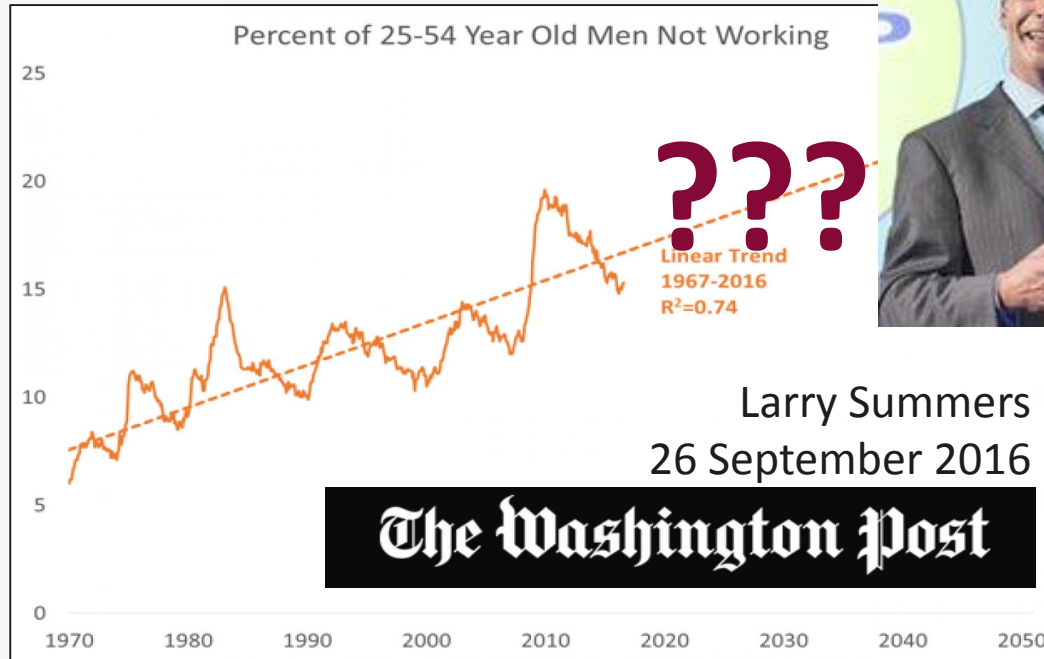
## Men not at work: Lawrence Summers on America's hidden unemployment

Increasing numbers are neither in jobs nor looking for them — but welfare reform alone will not solve the problem



The impact... on economic growth is the least of it. A society where large numbers of adults in the prime of life are without vocation is unlikely to provide opportunity for all its children, to maintain strong communities or have happy, cohesive families. As we are seeing this fall, such a society is prone to embrace toxic populist politics.

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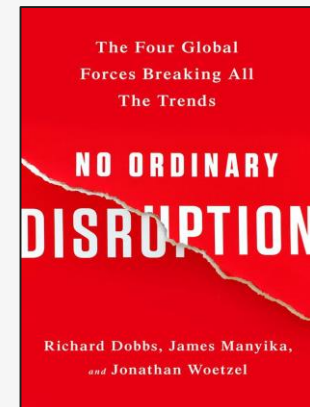
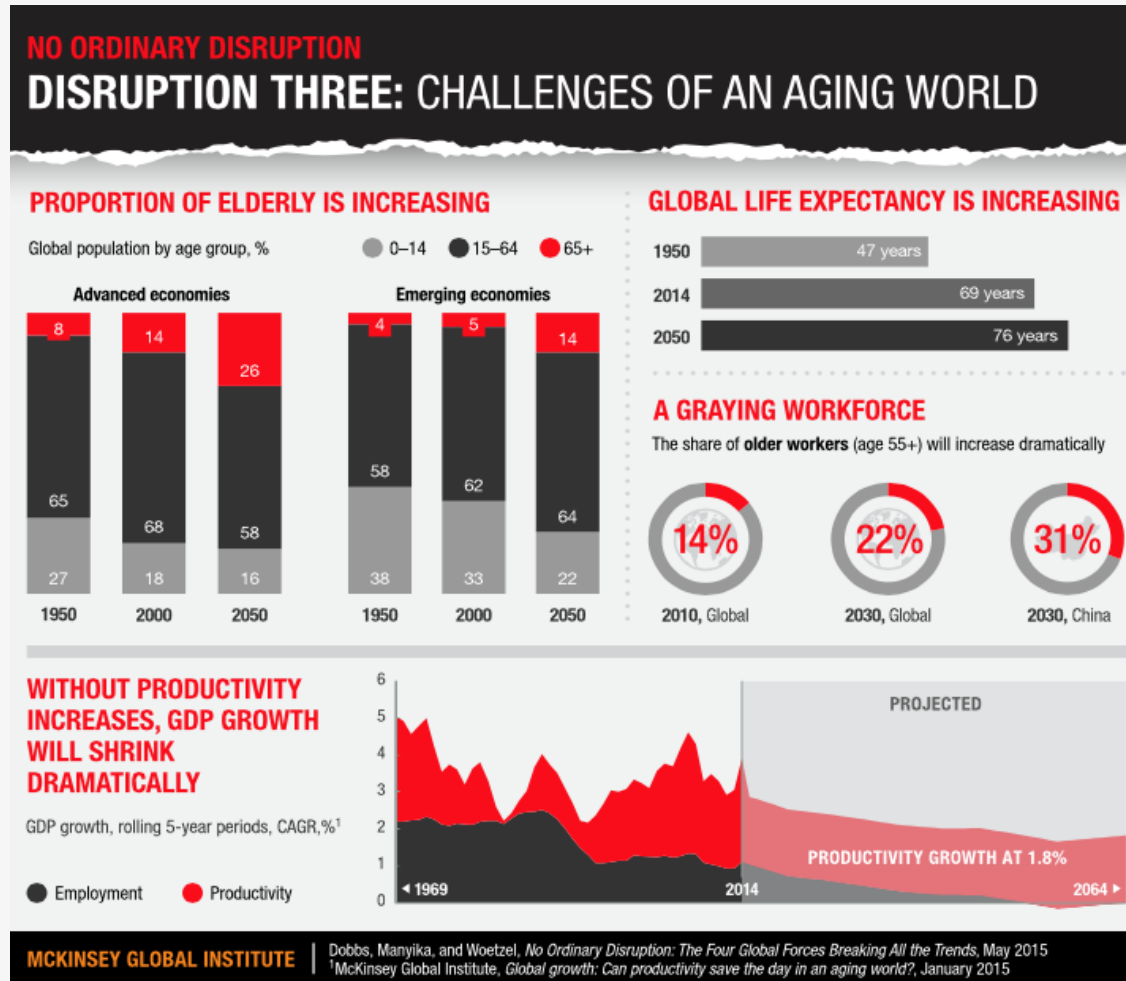


Summers on  
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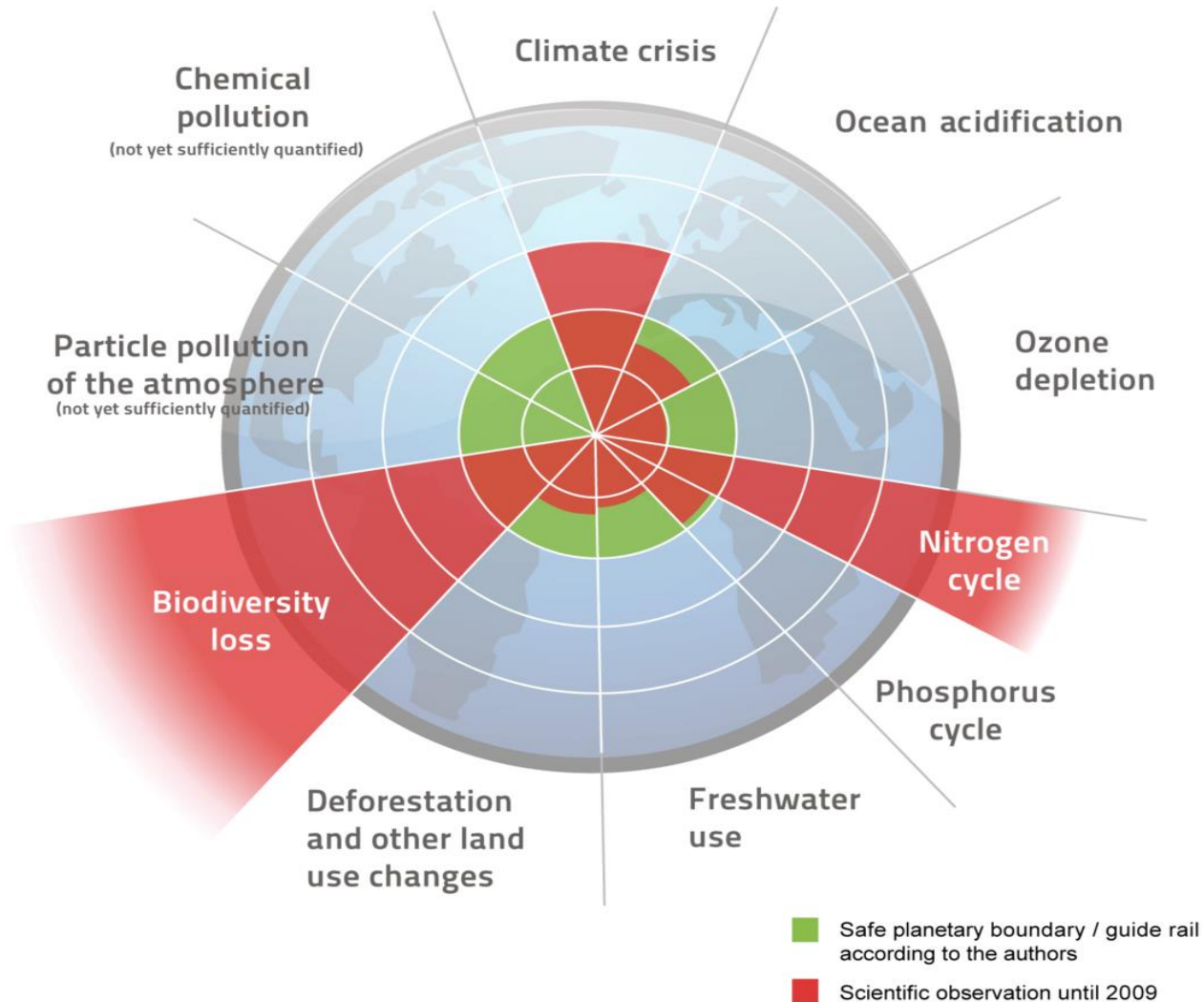




# Defining the Challenge: *Far more than economic...*

## Planetary Boundaries

after Johan Rockström, Stockholm Resilience Centre et al. 2009



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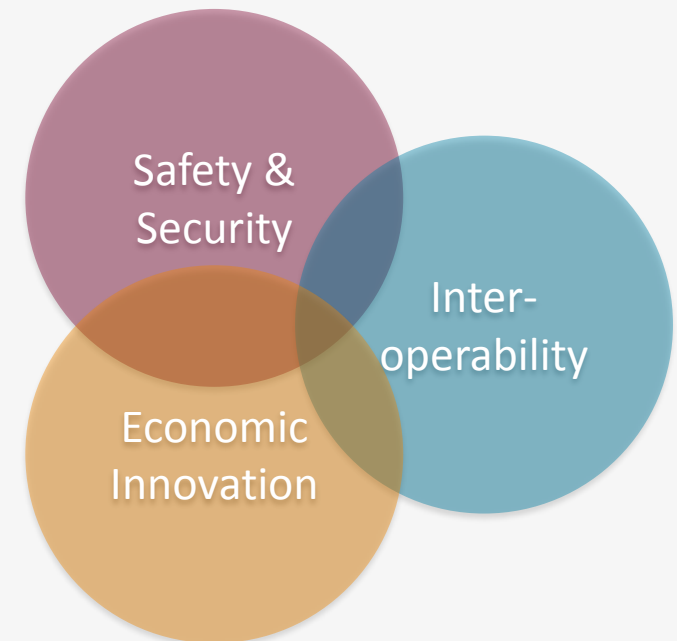
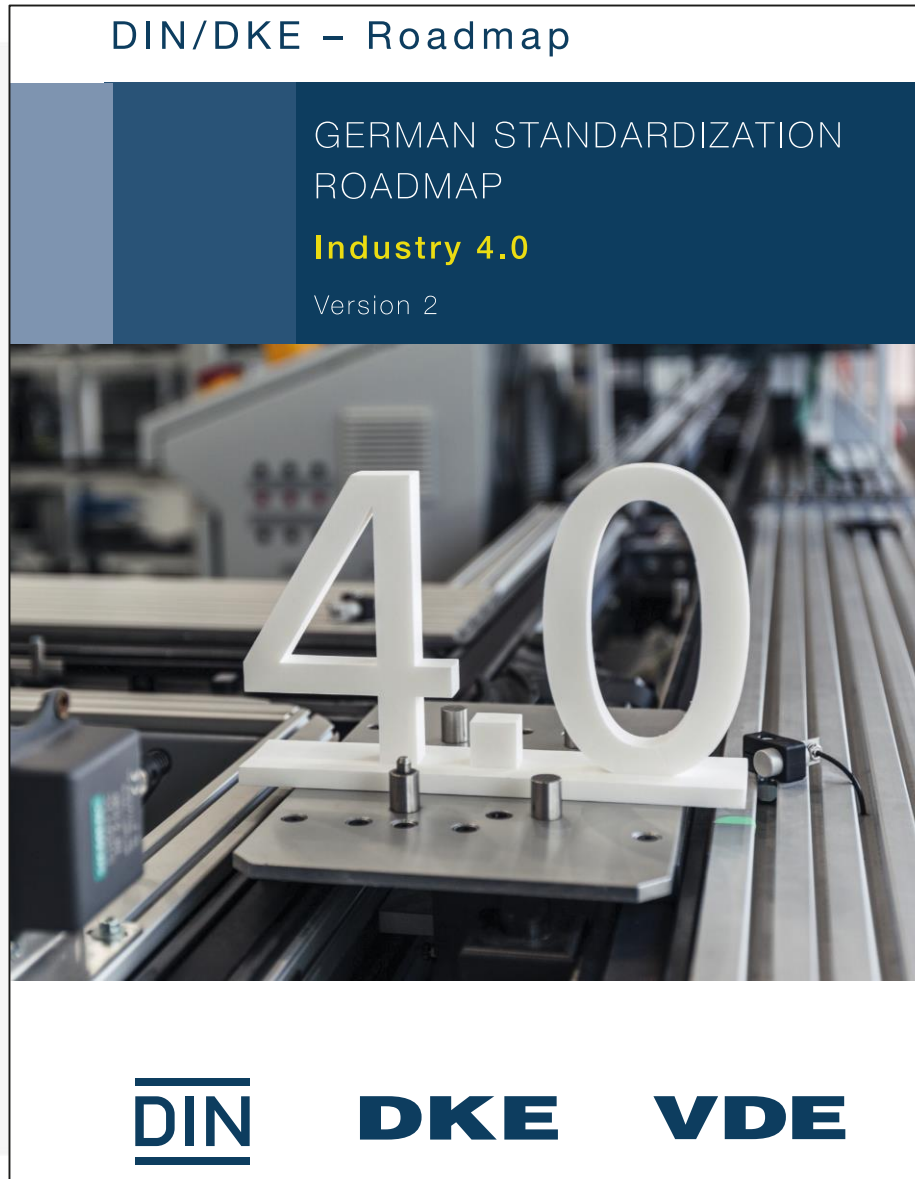
Or is it also about learning to leverage new (and existing) technologies to be more adaptable

(resilient) to all the changes —

**social**, **environmental** and **technological**

— that are coming our way?

# Roles of Government: Standards & Regulation



# Roles of Government: Infrastructure

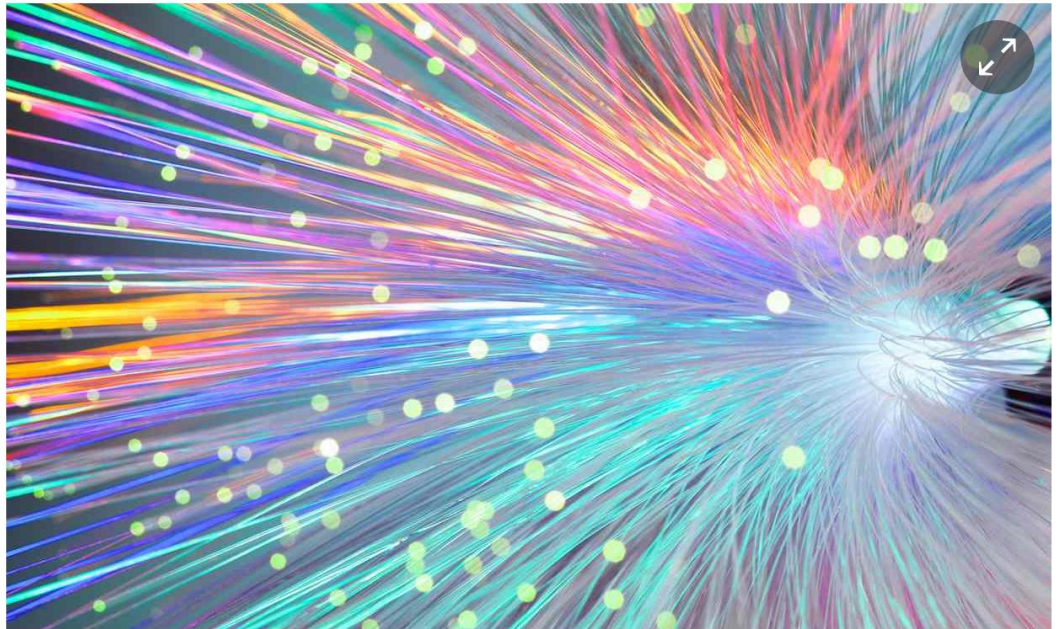
**theguardian**

**Reuters**

Thursday 1 September  
2016 21.13 BST

## EU: Europe needs to invest \$800bn in digital infrastructure to catch up with US

Commissioner responsible for the issue said Europe must develop networks and next-generation high-speed 5G wireless applications quickly



# Roles of Government: Early Adoption



## Disclosing public data through the Seoul Open Data Plaza



# Roles of Government: Experimentation and Education

## ***Roles of Government***

Standards & Regulation

Infrastructure

*Enable Experimentation*

Early Adoption

*Educational Development*

# Roles of Government

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Standards & Regulation

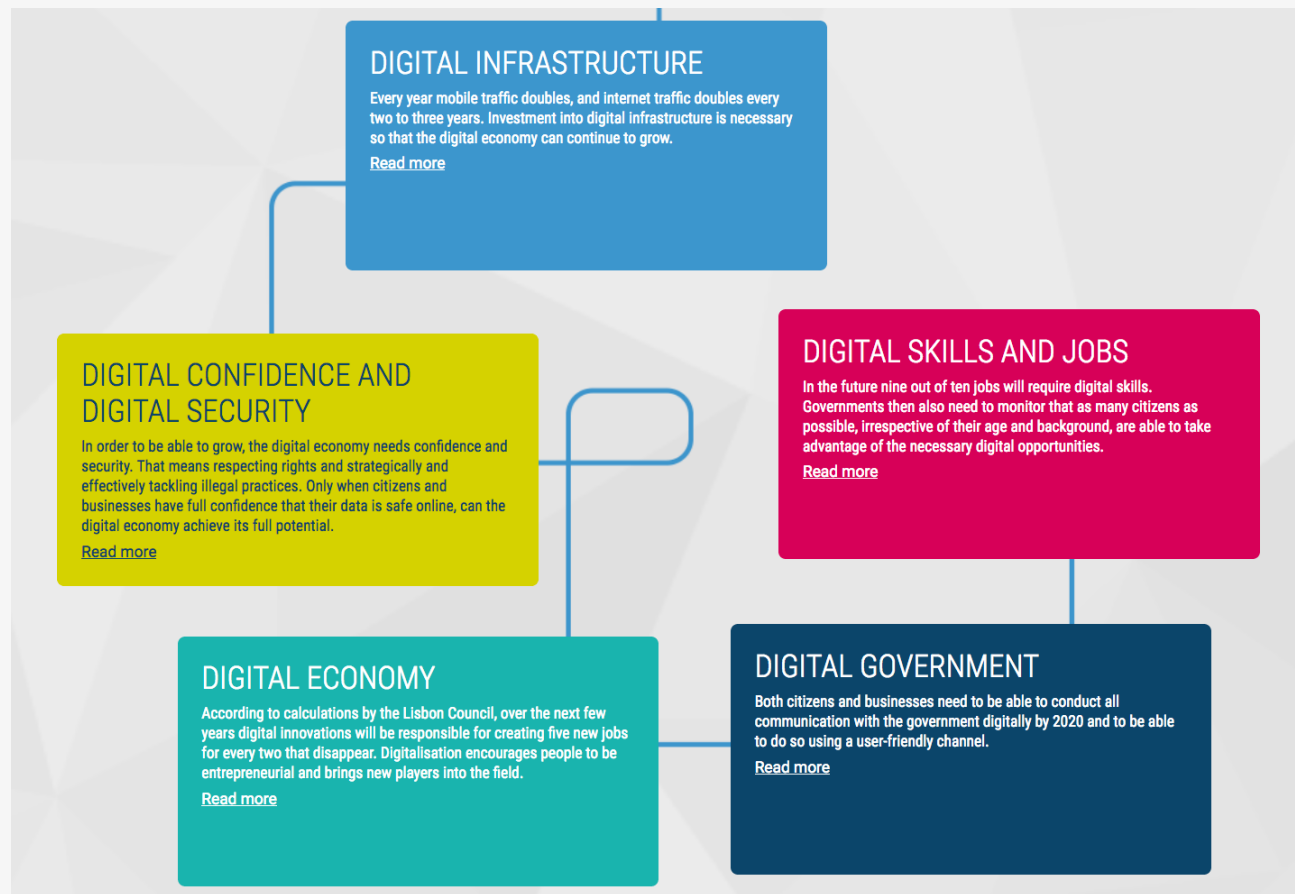
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**DIGITAL**  
Belgium





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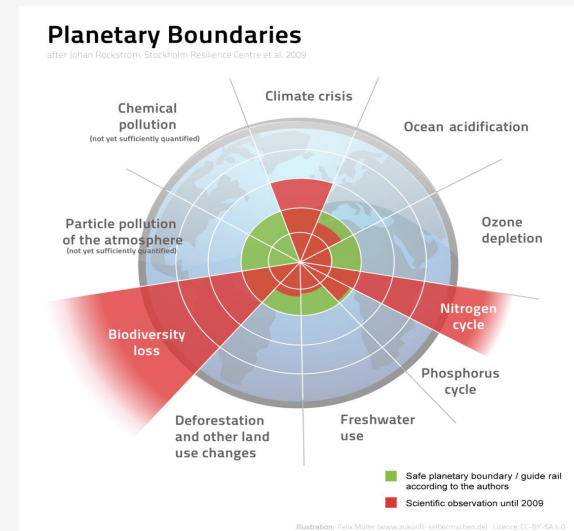
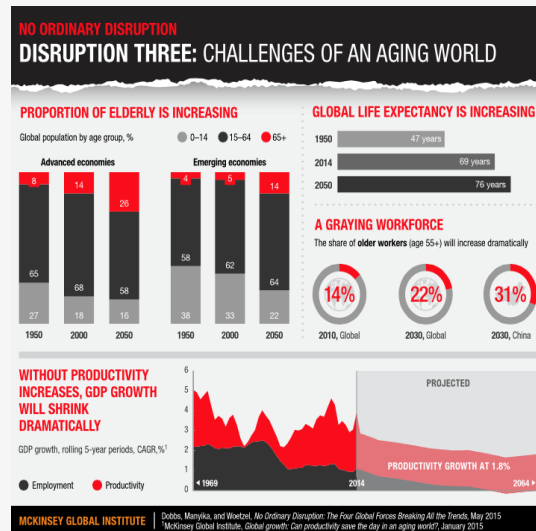
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    - ...and what type(s) of societies we want to have?**



**Not just about government!!!**

***We're all responsible...***



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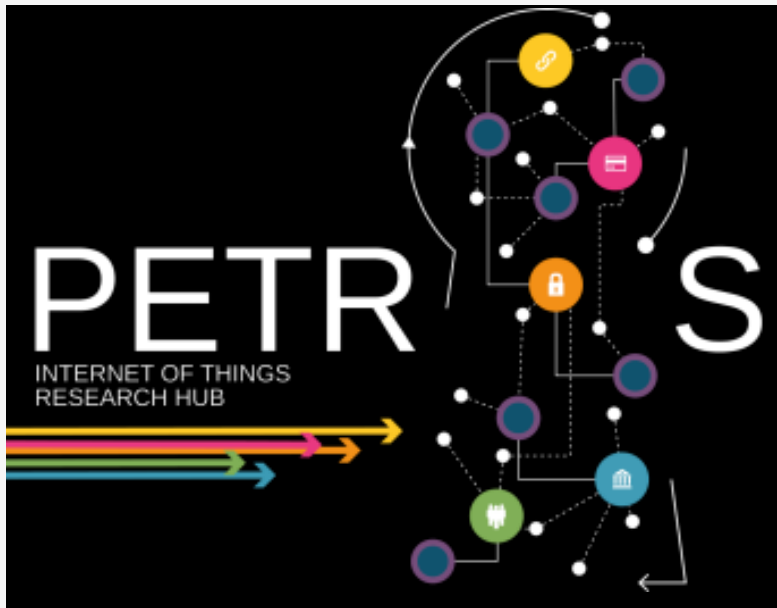
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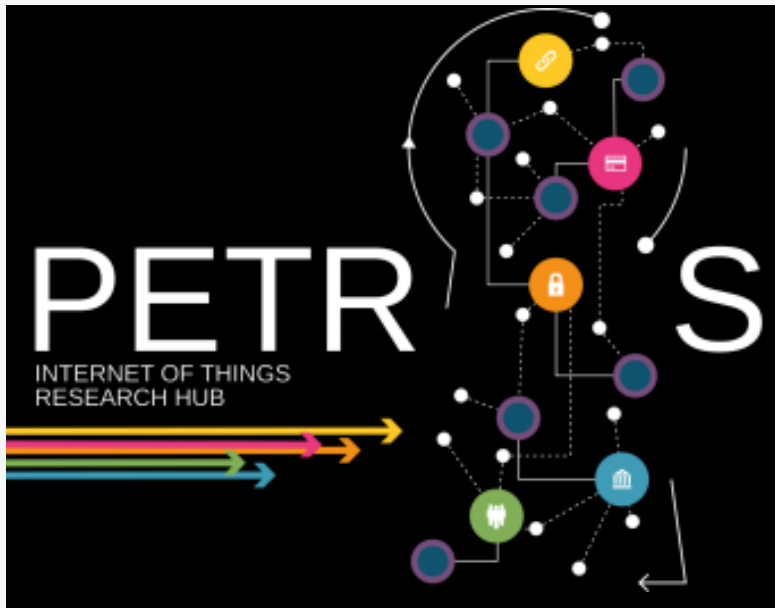
*We're all responsible...*



Transdisciplinary Networks

# Not just about government!!!

## *We're all responsible...*



Transdisciplinary Networks

### Transdisciplinary Education

DEPARTMENT OF SCIENCE, TECHNOLOGY,  
ENGINEERING AND PUBLIC POLICY

**UCL**

**Master's in Public  
Administration (MPA)**

Science, Engineering and Public Policy MPA  
Urban Innovation and Policy MPA  
Energy, Technology and Climate Policy MPA  
Development, Technology and Innovation Policy MPA

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# Thank you

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