

**Technology Strategy Board**

Driving Innovation

# **Shaping the Way We Will Live**

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**It's hard to predict anything, especially  
the future**

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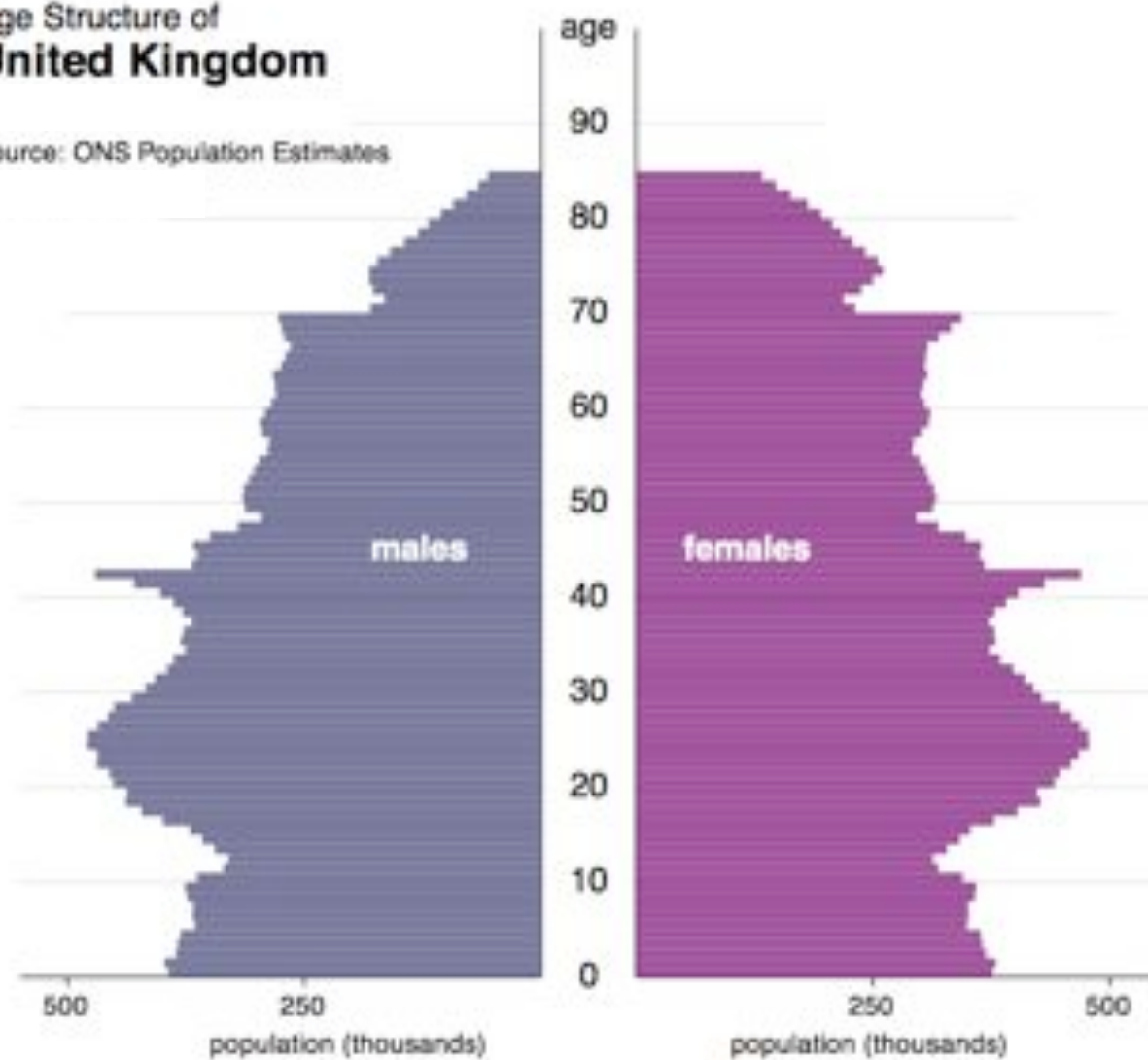
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## The UK Basics

	<b>1989</b>	<b>2009</b>	<b>2029</b>
People (million)	57.1	61.9	70.4
People/area (m <sup>2</sup> )	604	654	745
Houses (million)	24	26	29.6
People/House	2.38	2.38	2.38
Cars (million)	20	34	50
People/Car	2.86	1.82	1.41
GDP (£ billion)	556	1821	?
GDP/Person (£)	9740	29420	?

## Age Structure of United Kingdom

Source: ONS Population Estimates

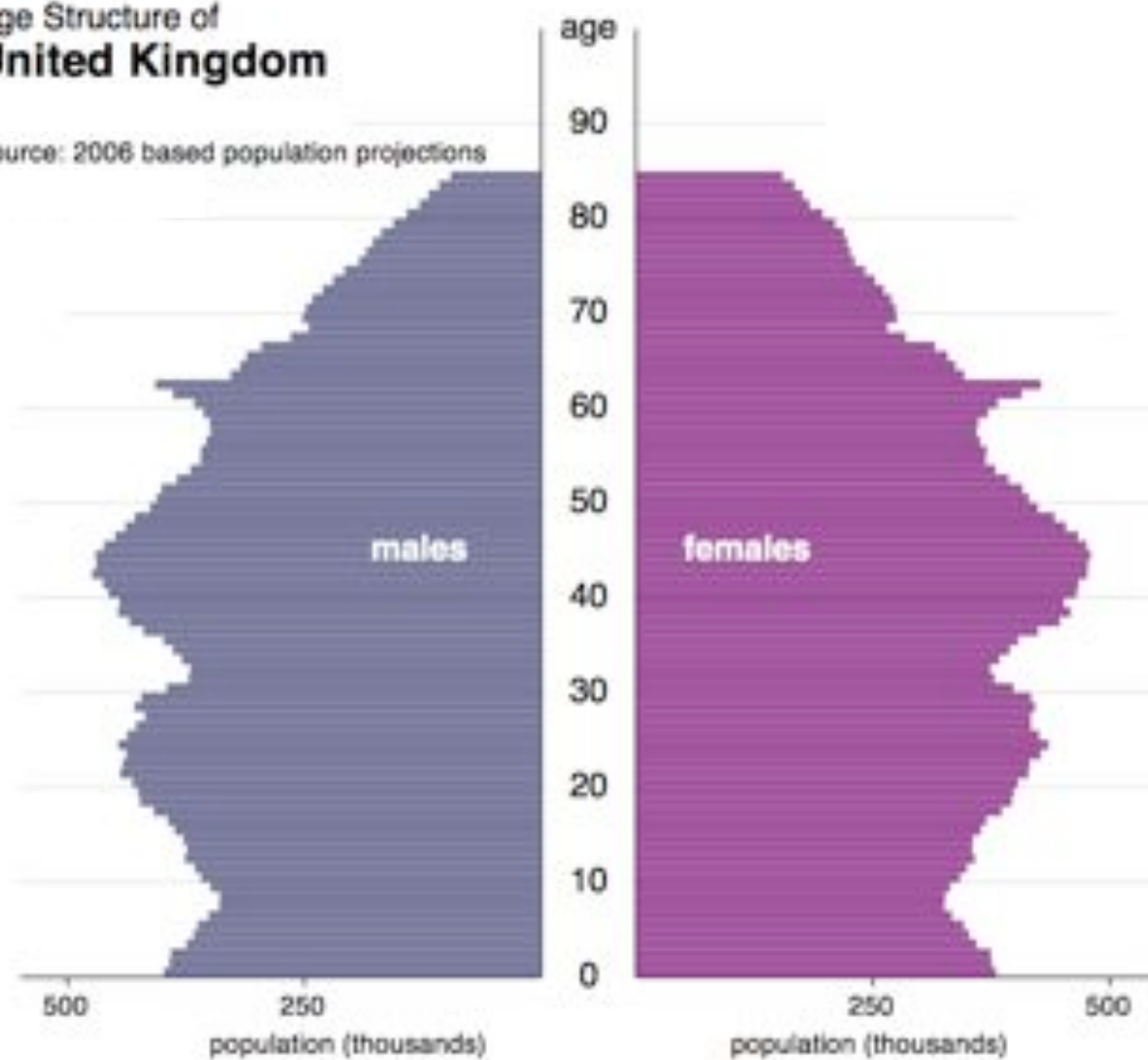


**1989**

Total Population:  
**57.1 million**  
includes 85 and over

## Age Structure of United Kingdom

Source: 2006 based population projections

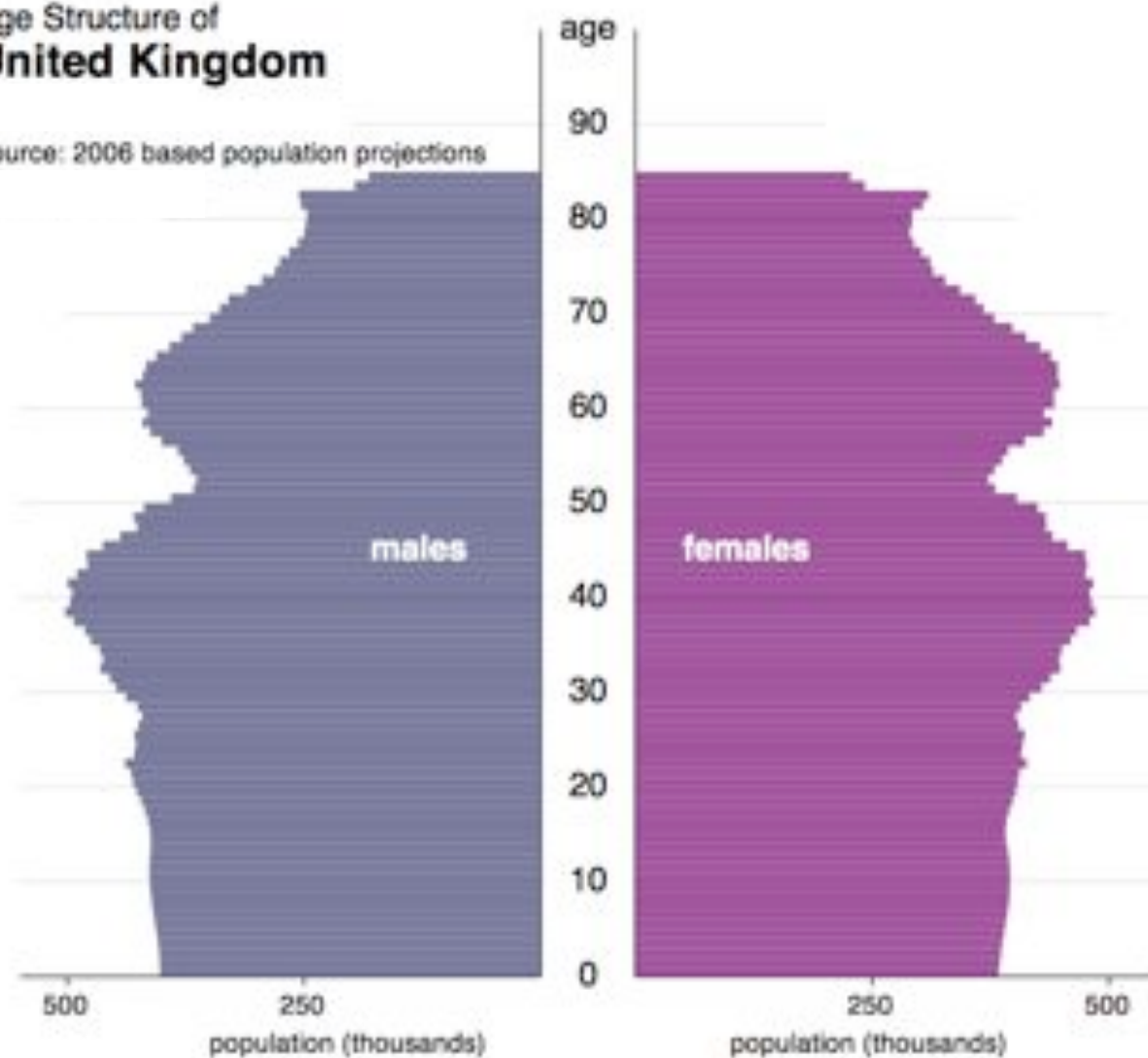


**2009**

Total Population:  
**61.9 million**  
includes 85 and over

## Age Structure of United Kingdom

Source: 2006 based population projections



**2029**

Total Population:  
**70.4 million**  
includes 85 and over

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## Our lives will change

- There will be more of us – and more of us will be older
- We will need food and water to live
- We will need to be looked after more
- We will need housing to live in
- We will need to work to pay for things
- We will need things to buy
- We will need to travel to work – and will want to travel
- And we are running out of natural resources

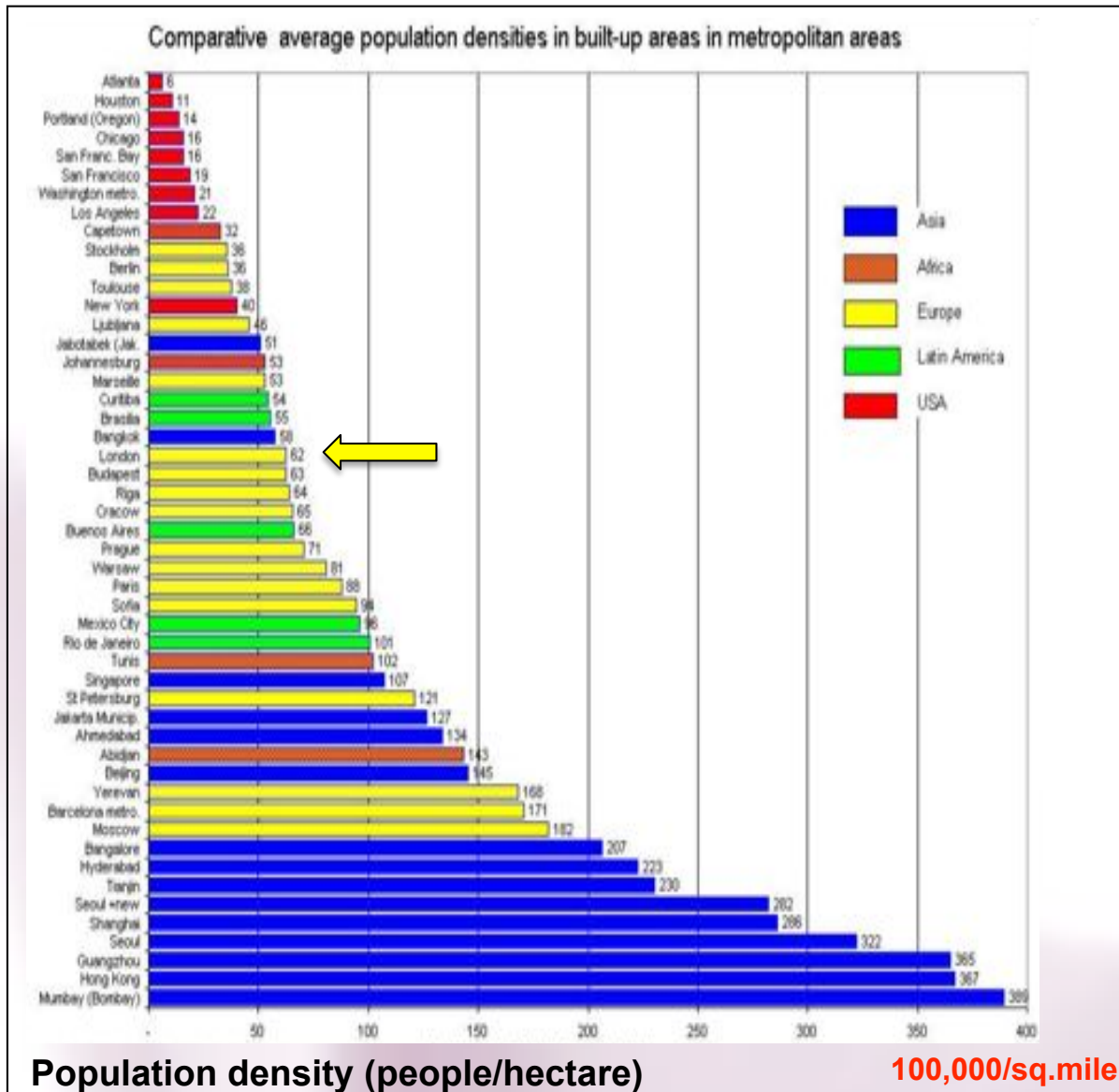


## We seem to love cities!

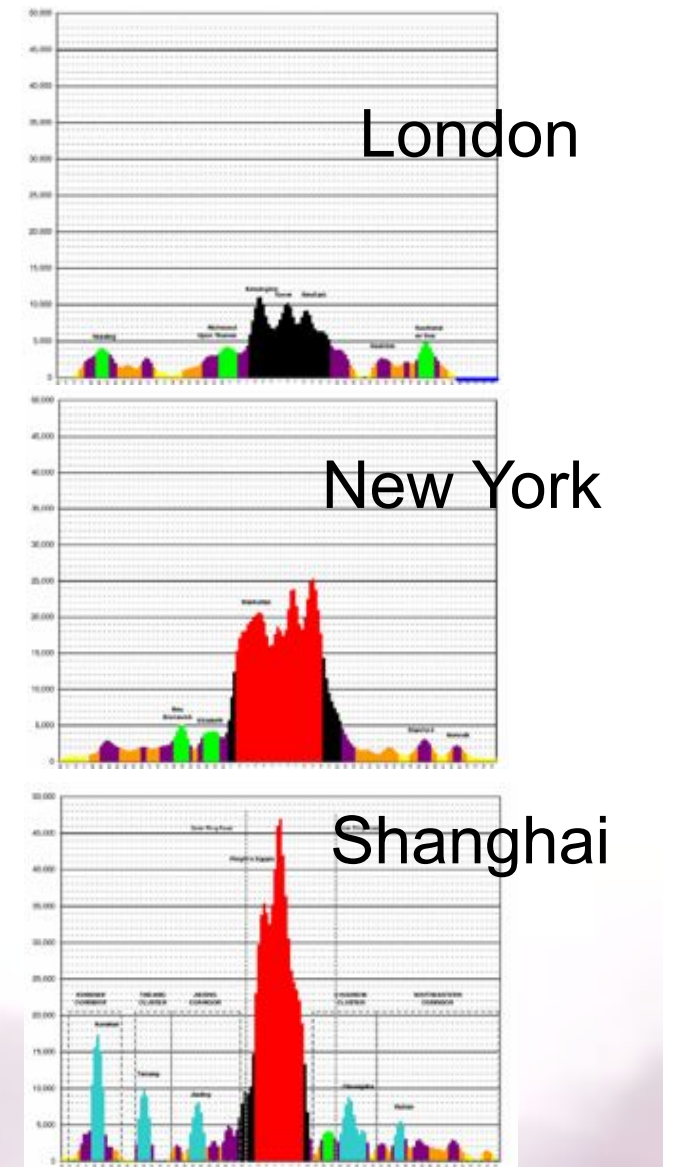
- 80% of UK's population live in cities
  - 15% in London
- 42% of all large private companies have employment within London
  - 75% of large financial companies
  - 19% of large manufacturing companies
- 1,200,000 people commute to work in London every day
- 57% of UK's HIV population live in London

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Source: Alain Bertaud (2002)



Source: Mats Andersson, World Bank (2005)

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## The London Basics

	<b>1989</b>	<b>2009</b>	<b>2029</b>
People (million)	6.5	7.7	8.8
Extras (million)	0.41	0.47	0.50
Houses (million)	2.72	3.30	4.00
Jobs (million)	4.1	4.6	5.5
Financial	22%	30%	38%
Public Services	11%	11%	10%
Manufacturing	9%	6%	5%
Tourism	15%	20%	20%

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## Are we changing the way we work?



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## Will we change the way we travel?



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## Looking forward

- Over the next 20 years, many of our current challenges will evolve into serious problems
- We will need better healthcare
- We will need more sustainable housing
- We will need a more efficient transport system
- We need to question the way we work
- We will need better infrastructure for all of these to work for everyone

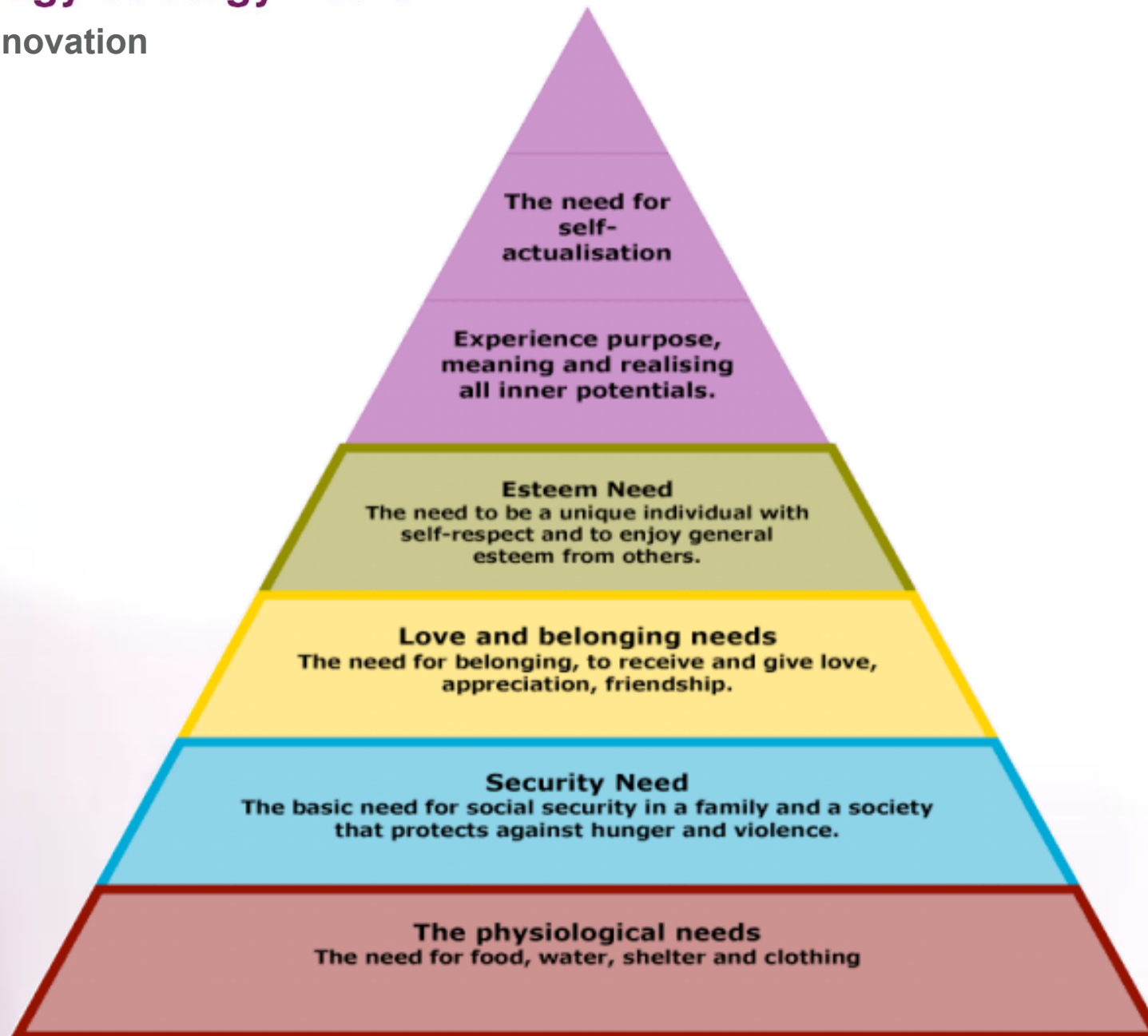
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**The best way to predict the future  
is to invent it**

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## What is an Innovation Platform?

- A co-ordinated approach to stimulating innovation.
- It starts with a major policy and societal challenge..
- ..builds an understanding of how Government plans to use regulation, procurement and other measures to address this challenge,
- engages business and the research community to identify appropriate responses and development needs..
- ..and then supports programmes that deliver innovative solutions to the challenge

## Assisted Living

- The aim of this Innovation Platform is to support the development of significant advances in the technology needed to enable people who suffer from chronic long term conditions to live independently.
- Given the predicted increase in the numbers of people living with such conditions, current care models are unsustainable, and major changes will be needed.
- The platform will also consider the requirements of well being, and address the societal challenges raised by health conditions that require a preventative approach.



## Low Impact Buildings

- The aim of this Innovation Platform is to support the construction industry to meet the challenge of providing sustainable housing and workspaces.
- The UK Government has set a number of challenging targets for improving sustainability – starting with the overarching goal of a 80% reduction in carbon emissions in the UK by 2050.
- The platform will assist business to harness the growing market for environmentally sustainable buildings, initially for new-build, as driven by changes to building regulations, the Code for Sustainable Homes and Scottish targets for zero carbon buildings.



# Intelligent Transport Systems & Services

- The aim of this Innovation Platform is to support businesses in implementing effective solutions to enable people and goods to be transported more efficiently, timely, intelligently, reliably and cost effectively
- This includes traffic related issues such as traffic network management, congestion, user travel information, safety, crime and infrastructure and vehicle connectivity.
- We work with others to enable education and awareness of the environmental and climate change impact of personal travel, and demonstrating how simple solutions can be effective in the world of personal travel.



## Network Security

- The aim of this Innovation Platform is to support businesses in implementing effective solutions to enable full participation in the digital society
- Electronic networks are critical to modern life and so the security and resilience of the infrastructure is key to maintaining availability of these networks.
- The platform is concerned with the confidentiality, integrity and availability of a network communications infrastructure, the information being transmitted across that network, the systems that use it to communicate and the usability of all these systems.



## Who are the Technology Strategy Board?

- We are a national body set up to invest in business innovation
- We work across business, universities and government
  - ..and anyone else who can help
- We come from business (and the public sector)
  - 86 people with over 650 years of business experience
- We are responsible for investing £1bn over the next 3 years

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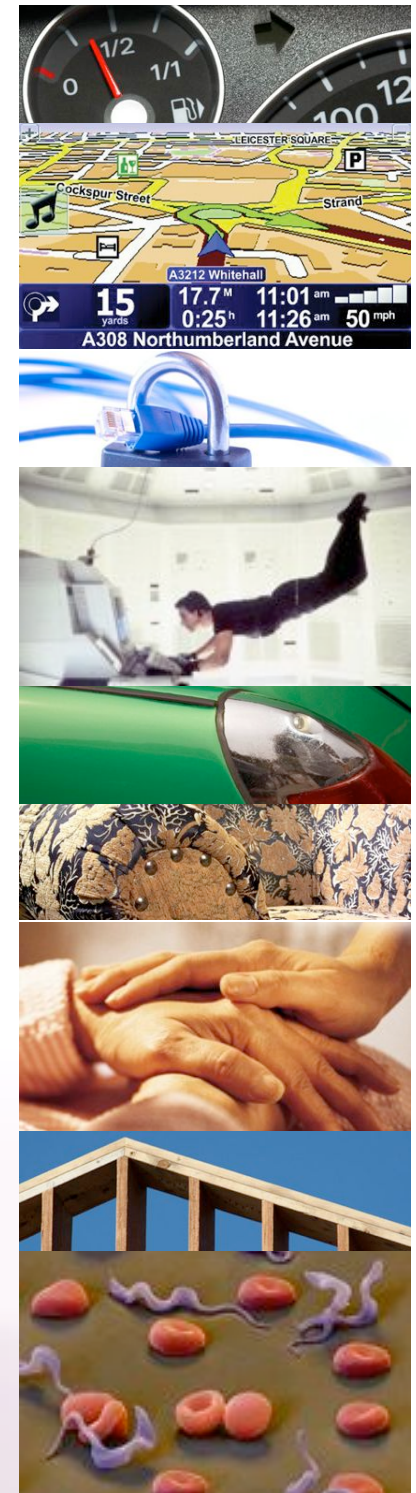
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## What we do

- We build capability in the underpinning areas that enable a sure and effective response to market needs
- We aim to help companies understand the needs of the markets and support the most innovative and competitive responses
- We work with Government as they address societal challenges to give business the future market definition they need to be competitive
- We build networks within communities with similar skills or goals, where knowledge about needs and capabilities can be exchanged

## Other Innovation Platforms

- Also underway
  - Low Carbon Vehicles
  - Detection and Identification of Infectious Agents
- And in development
  - Sustainable Agri-Food Supply Chain
  - Digital Economy
  - ‘Water’
  - Stratified Medicine
  - Technology Enabled Learning
  - ‘Waste’
  - Sustainable Aviation
  - .....?



## We have a choice

- Over the next 20 years, the way we live will involve to make life more difficult
- The challenges we will face are complex and inter-related
- Putting off addressing them will only make them more difficult
- Tackling the individual issues in a piecemeal fashion will probably make solving the bigger problem harder than it needs to be
- Are we doing the right things?

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