

The Foundation for Science and Technology

Future Cities Catapult

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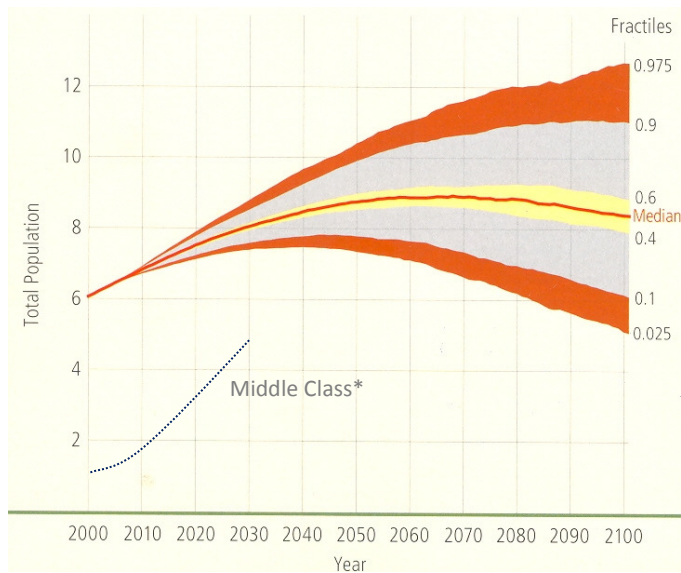
19th June 2013

The Royal Society,

London



Total Population of the World in Billions



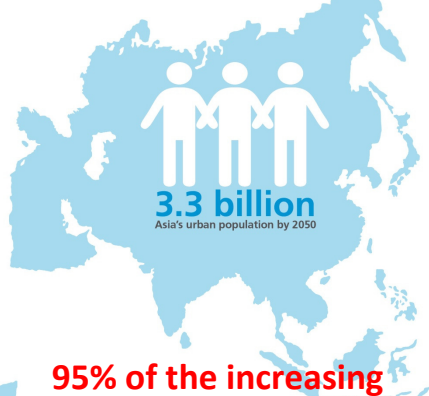
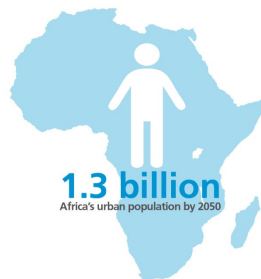
*Middle class here defined as daily per capita spending of between \$10 and \$100 in PPP terms

Source: IIASA



CITIES ARE ON THE FRONTLINE

Nexus of challenge is the city - *cities in developing world face steepest challenge*



95% of the increasing urban population will be in developing countries – mainly in smaller cities

FUTURE
PROOFING
CITIES

THE GLOBAL URBAN CHALLENGE

80%

of the world's population already live in areas with high threat to water security

60%

of the world's ecosystems are already degraded or used unsustainably



95%

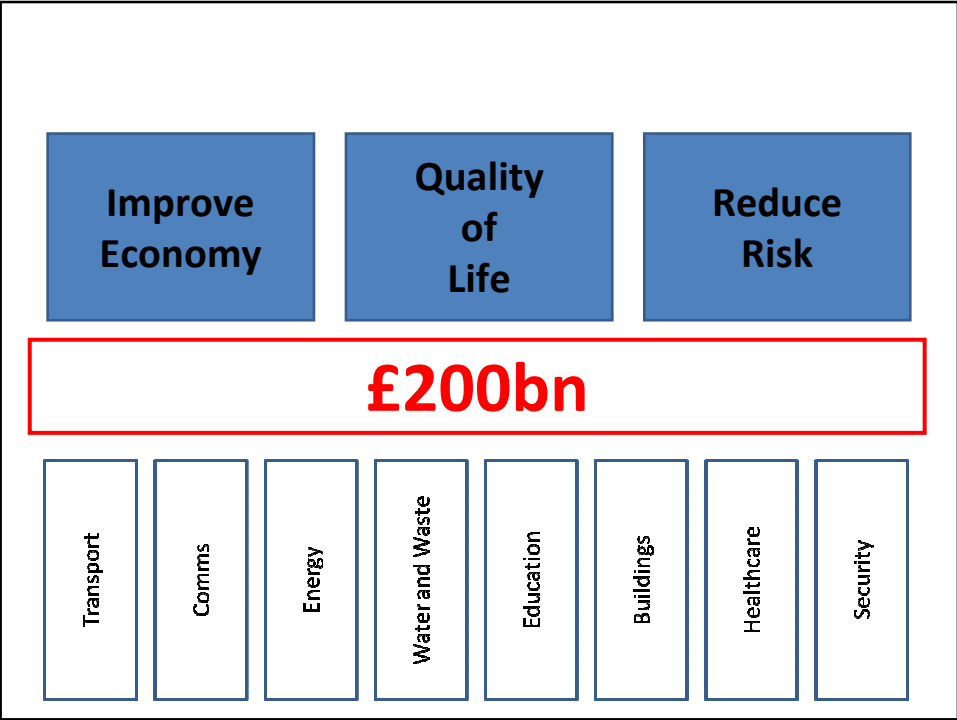
of food production is highly dependent on oil

11%



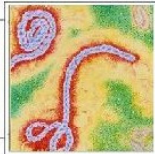



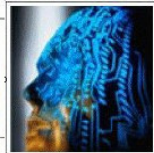

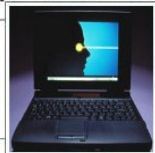
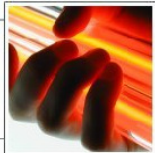
of the world's remaining natural areas could be lost by 2050

**FUTURE
PROOFING
CITIES**

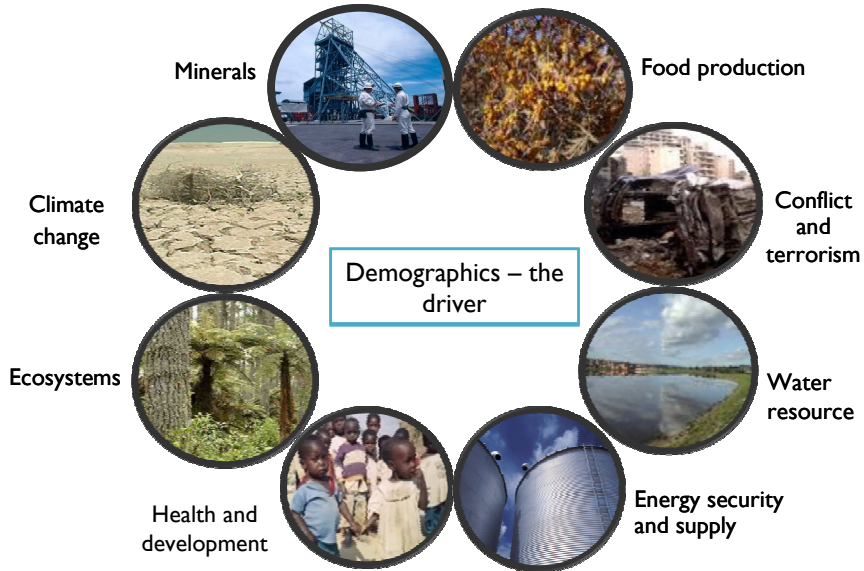




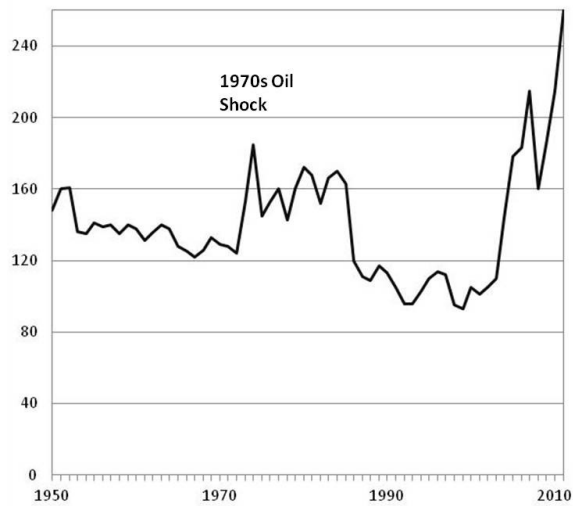
Foresight projects

				
Mental Capital and Wellbeing	Sustainable Energy Management and the Built Environment	Detection and Identification of Infectious Diseases	Intelligent Infrastructure Systems	Tackling Obesities: Future Choices
				
Brain Science, Addiction and Drugs	Cognitive Systems	Flood and Coastal Defence	Exploiting the Electromagnetic Spectrum	Cyber Trust and Crime Prevention

21st Century Challenges



MGI Commodity Price Index (years 1999-2001=100)



Source: McKinsey Global Institute 2011

“Circular Economy”



Source: Ellen MacArthur Foundation





Department for International Development

ATKINS

FUTURE PROOFING CITIES

Risks and opportunities for inclusive urban growth in developing countries

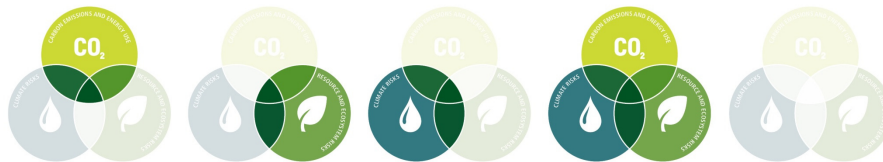


URBAN TYPOLOGY: NO ONE SIZE FITS ALL

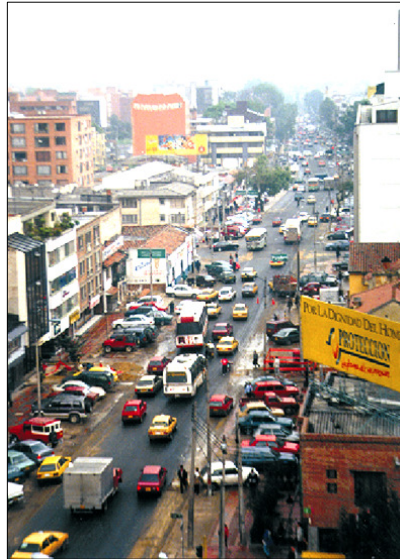
Assessment of 129 cities:

Possible to group cities into 5 types based on most significant risks they face

<p>TYPE 1 Energy intensive, sprawled cities with significant carbon footprints</p>	<p>TYPE 2 Cities with major climate hazards</p>	<p>TYPE 3 Cities with regional support system(s) at risk (water, food, biodiversity)</p>	<p>TYPE 4 Cities with multiple risks: energy, carbon, climate hazards, and regional support systems</p>	<p>TYPE 5 Cities with a low current risk profile</p>



People vs. Cars: Bogota



Source: Courtesy of Enrique Penalosa



Online Electric Vehicle (OLEV)



KAIST introduces environmentally friendly public transportation to Seoul Grand Park in Gwacheon City, South Korea



Source: Dr. Nam Pyo Suh, KAIST

THE CHALLENGE

- Create a global hub, a laboratory in London,
- Assemble: policy influencers and makers, private sector players, academics, financiers
- Create future-proof cities focused on the well-being of the citizens.
- Respond to the challenges of poverty eradication, natural resource depletion, and ecosystem protection in the face of increases in urban populations.
- Collaborate on new financial mechanisms.