

### **ULI Digital City and Urban Tech Conference**

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#### DIGITAL PLACES

## 21st Century challenges

### PRODUCTIVITY & GROWTH



#### RESILIENCE



#### COMMUNITY VITALITY



### PUBLIC FINANCES





- RESIDENCE
- FOOD
- ARTS & ENTERTAINMENT
- COLLEGE & UNIVERSITY
- NIGHTLIFE SPOT
- GREAT OUTDOORS
- SHOP & SERVICE
- PROFESSIONAL & OTHER
- TRAVEL & TRANSPORT



# A shifting world

## From corporations to networks

Rank	2002	2007	2012	2017
1	Microsoft	Petrochina	Apple Inc.	Apple Inc.
	\$260bn	\$720bn	\$500bn	\$870bn
2	General Electric	Exxon Mobil	Exxon Mobil	Alphabet Inc.
	\$260bn	\$510bn	\$390bn	\$730bn
3	Exxon Mobil	General Electric	PetroChina	Microsoft
	\$240bn	\$370bn	\$260bn	\$660bn
4	Wal-Mart	China Mobile	BHP Billiton	Amazon.com
	\$230bn	\$350bn	\$250bn	\$560bn
5	Pfizer	ICBC	ICBC	Facebook
	\$200bn	\$340bn	\$240bn	\$510bn
6	Citigroup	Microsoft	China Mobile	Tencent
	\$180bn	\$330bn	\$230bn	\$490bn
7	Johnson & Johnson	Gazprom	Wal-Mart	Berkshire Hathaway
	\$170bn	\$330bn	\$230bn	\$490bn
8	Royal Dutch Shell	Royal Dutch Shell	Samsung Electronics	Alibaba Group
	\$150bn	\$270bn	\$230bn	\$440bn
9	BP	AT&T	Microsoft	Johnson & Johnson
	\$140bn	\$250bn	\$220bn	\$380bn
10	IBM	Sinopec	Royal Dutch Shell	JPMorgan Chase
	\$140bn	\$250bn	\$220bn	\$370bn

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10 most valuable companies globally by market capitalisation, 2002 - 2017

Not a tech company

Tech company that sells things

Tech company that monetises transactions in global online networks

# A shifting world

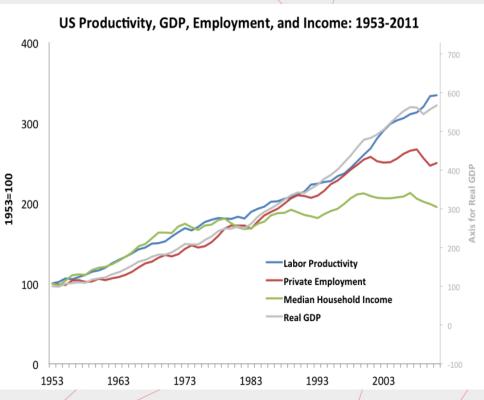
### From labour to assets



From "Paychecks, Paydays, and the Online Platform Economy" by the JPMorgan Chase Institute, an analysis of the current accounts of 260,000 individuals who provide goods or services through 30 platform businesses such as Uber and Airbnb https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-volatility-2-report.pdf

At both a macro- and micro-level, evidence shows that "platform" business models and other technologies are distributing an increasing share of global wealth to a smaller number of asset owners, and a decreasing share to the larger number of labour providers.

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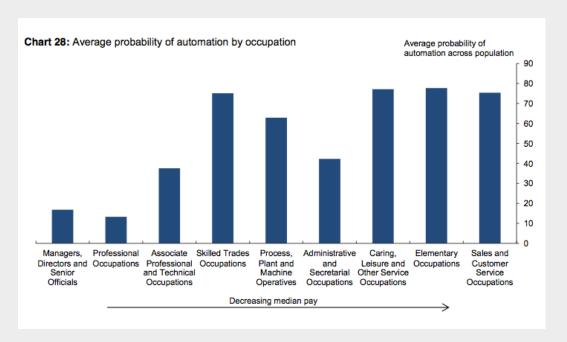
Between 1953 and the early 1980s, as US GDP rose, so did median household income. From the early 1980s onwards – i.e. from the time "personal computers" first spread into homes and businesses, to the present age of the internet economy – whilst GDP continued to rise, median household income did not.

From "The Second Machine Age", by Andrew McAfee and Erik Brynjolfsson of MIT, summarised in https://www.foreignaffairs.com/articles/united-states/2014-06-04/new-world-order

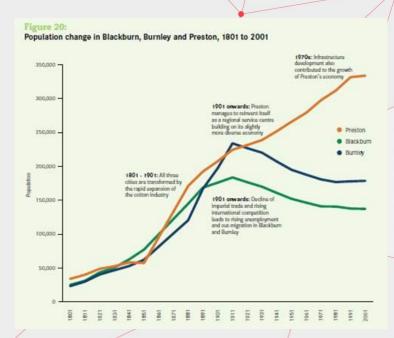
# **Human-scale thinking**

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City economies will be on the front-line of transforming employment in the digital revolution



https://www.theguardian.com/business/2015/nov/12/robots-threaten-low-paid-jobs-says-bank-of-england-chief-economist



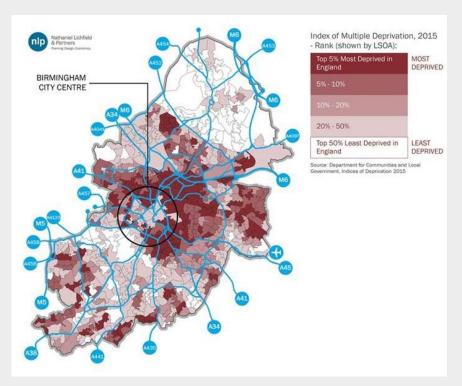
http://www.centreforcities.org/wp-content/uploads/2014/08/12-07-11-Cities-Outlook-1901.pdf

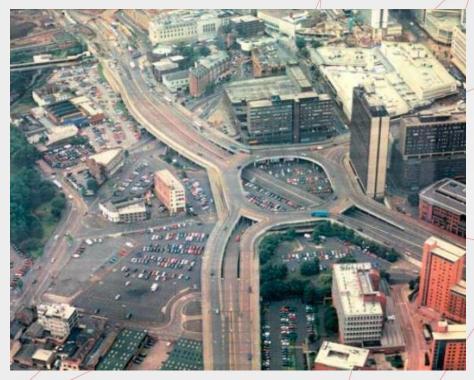
Over the next 2 decades, 15 million jobs in the UK are likely to be replaced by technologies such as machine learning and self-driving vehicles. Whilst new jobs will eventually replace them, this is the same level of disruption that caused multi-decade recessions in the cities that did not successfully manage the transition in the last Century from manufacturing to service economies.

# Neighbourhood-scale

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Local socio-economic qualities and human lives are shaped by place, behaviour and infrastructure technology



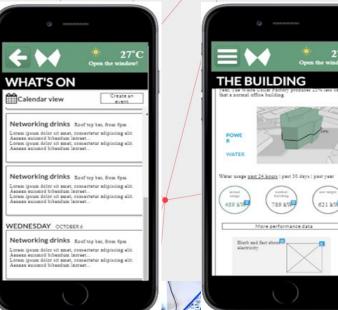


Every major city in the UK has a ring of persistently, multiply-deprived areas just outside the city centre, where the concentration of transport infrastructure in and out of the centre is highest. These infrastructures connect city economies nationally; but disconnect communities locally because they are simply unpleasant, scary and unsafe.

#### DIGITAL PLACES

# Adaptive environments

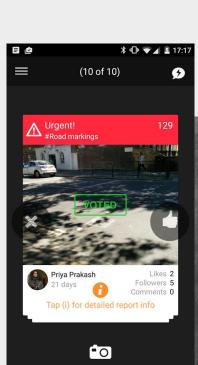




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#### DIGITAL PLACES

### Massive / small\* innovation

#### OUTCOME-BASED PROCUREMENT









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#### CROSS-SECTOR COLLABORATION







SMART NEIGHBOURHOODS

### INNOVATION COMMUNITIES

## **FUTURE SHIFT**

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From digital tools to digital augmentation





From "Mind-Reading Tech Reconstructs Videos From Brain Images", Popular Science https://www.popsci.com/science/article/2011-09/mind-reading-tech-reconstructs-videos-brain-images

