

spaces of transition

living labs for sustainability

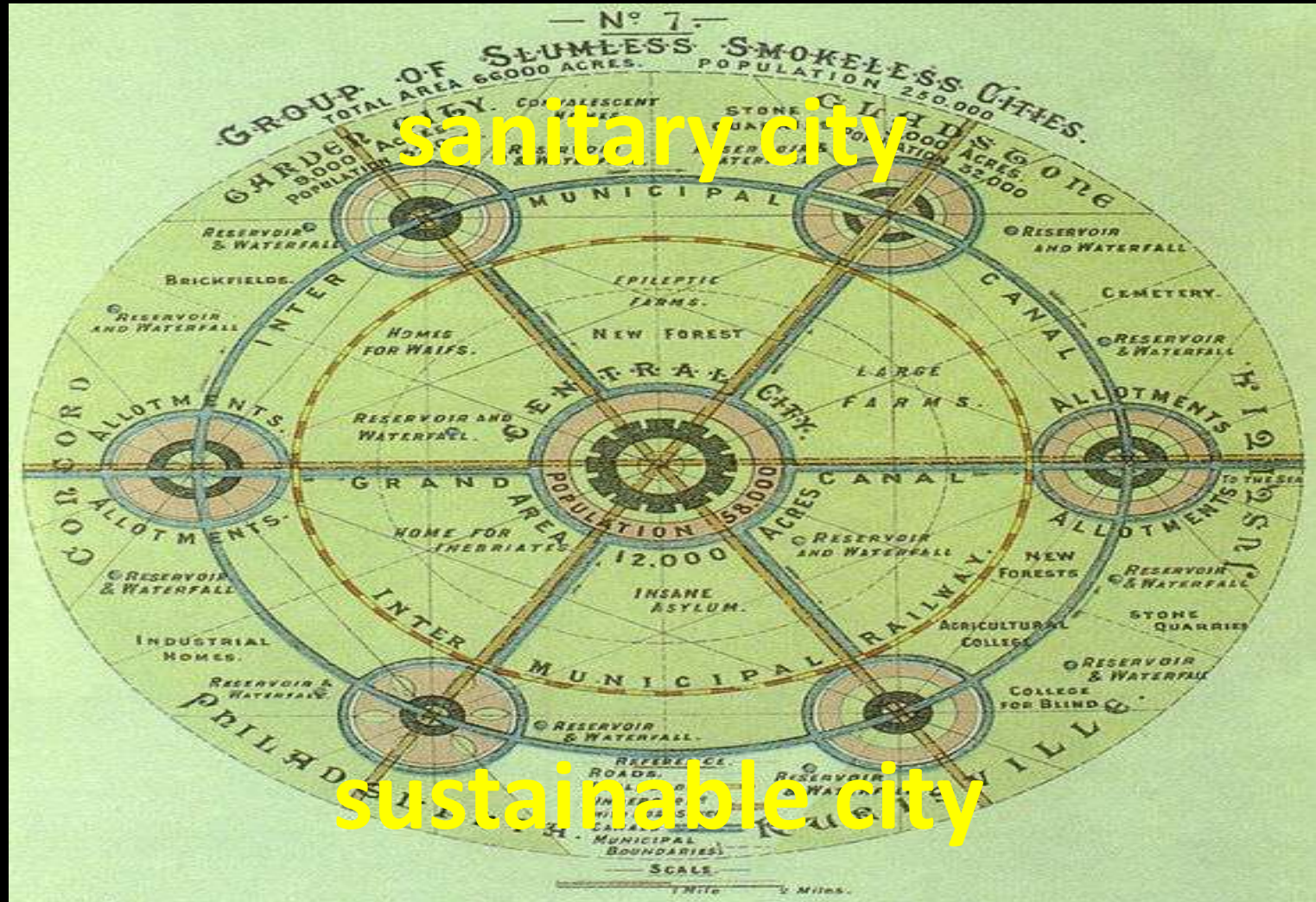
James Evans

sustainability transitions

- what?
- how?
- who?
- ... transition as **experiment**
- ... spaces of transition
- ... **living labs** for sustainability
- ... the **epistemology and politics** of transition



what?



the experimental turn

‘to cultivate **new techniques** of governance’
(Hodson and Marvin 2007, 303)

‘this is a wonderful **time to experiment**’
(Turnpenny and O’Riordan 2007, 104)

‘experimentation represents the **practical dimension of adaptation**; it is what happens in practice when policymakers, researchers, businesses and communities are charged with finding new paths’
(Evans 2011, 223)

experimentation and transition

Driver

Process

Practice

Goal

Climate
Change

Adaptation /
Transition

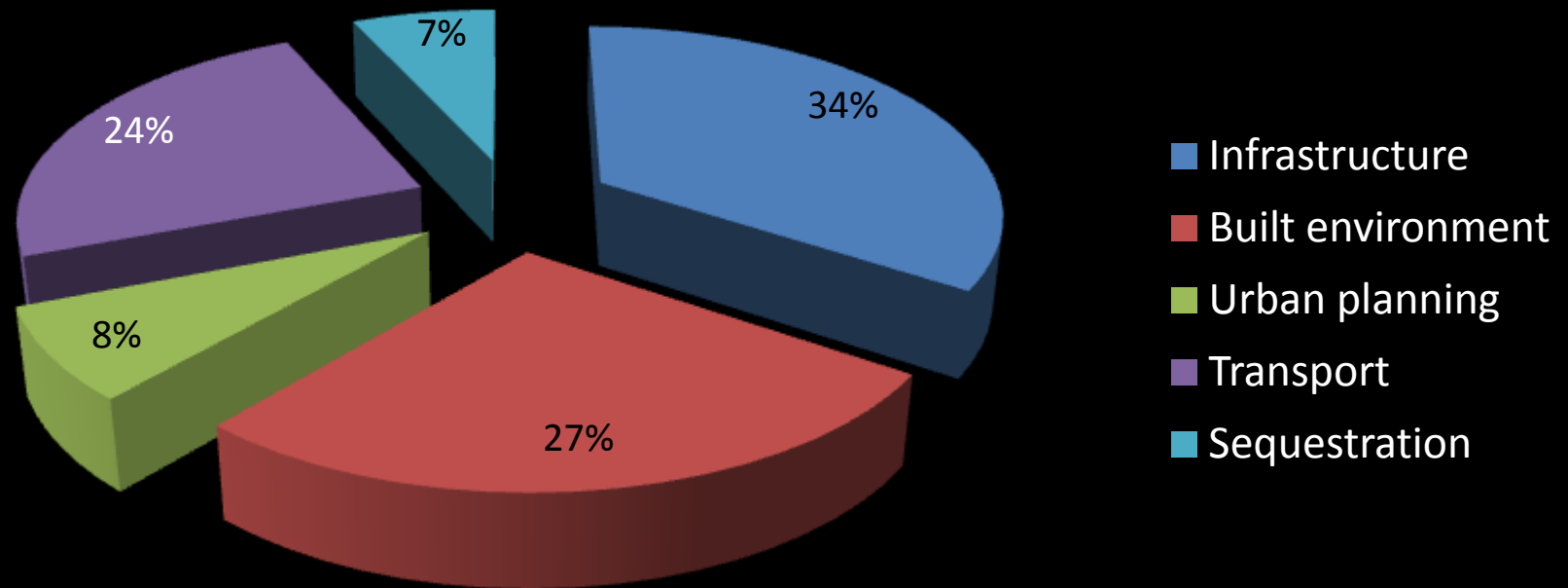
Experimentation

Resilience /
Sustainability

On the one side, new knowledge enters into new arrangements, and on the other, new arrangements are fed back to produce new knowledge.'

- Gross 2010, 79

urban climate change experiments



spaces of transition

- very **clear geographies** (bounded spaces, relational networks) and lexicon of scale (eco-suburb, village, region etc.)
- assumption that eco-development can overcome any constraints
- and yet, where is the geography?
- **differential capacities of places** to mediate their transition
 - ‘places are differentially positioned in terms of their ability to inform transitions’
 - Hodson and Marvin 2010, 522

living laboratories

‘the laboratory is perceived as a novel form of **innovation** where scientific research increasingly erases the received institutional boundaries between science and society’

- Gross 2010, 169)

- **bounded** spaces (control)
- **formalised** learning processes (causal attribution)
- **partnerships** (resources)
- **intensive** data collection (learning)

- (1) the laboratory is established and experiments conducted, which
- (2) generate data and results that
- (3) are fed into policy development
- (4) Repeat

low carbon laboratories

- extension of knowledge production (mode II science / knowledge society)
- highly visible
- evidence base for making rapid changes to urban development policies
- particularly related to infrastructure design and management, and the associated material urban environment

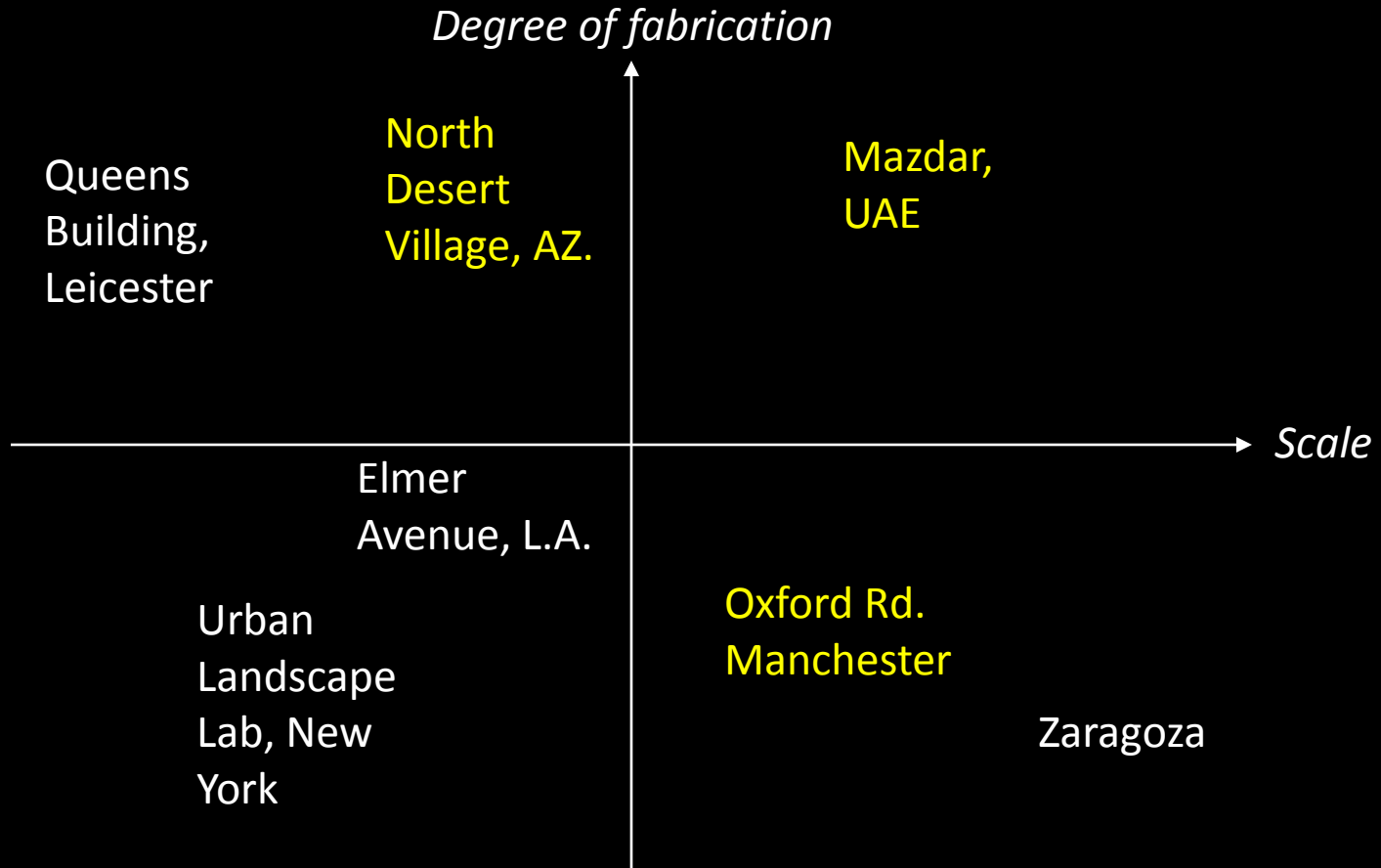
masdar, UAE



north desert village, AZ.



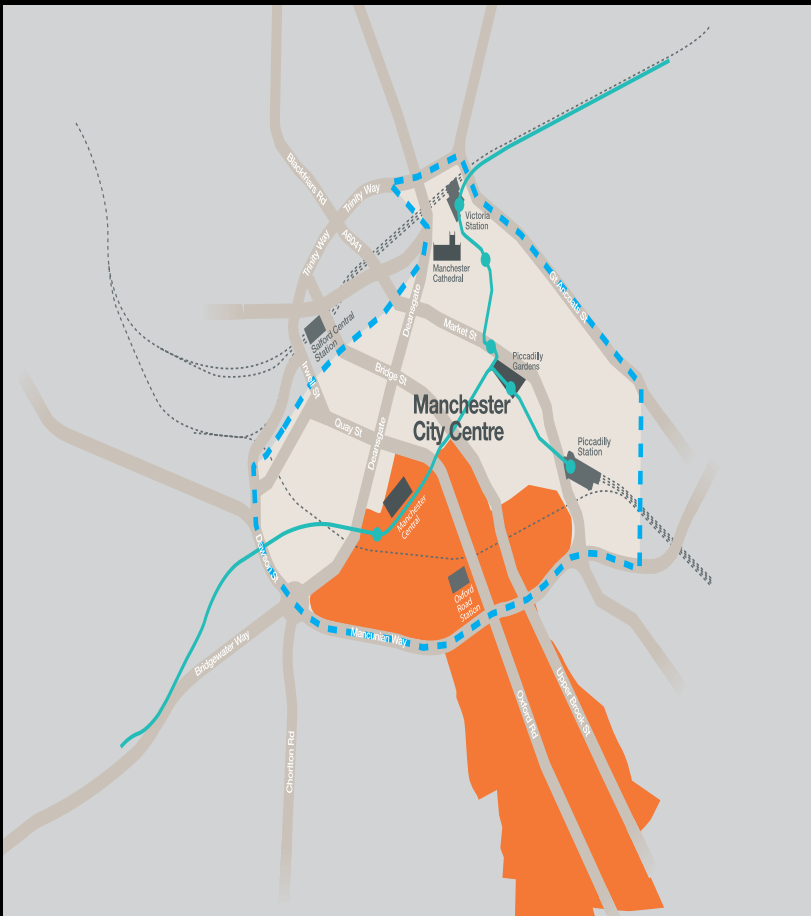
low carbon living labs



oxford road corridor, UK



establishing the LCL



- ‘in an increasingly urbanised world, cities and city-regions are sites of **cutting edge experiments** and provide a test bed for innovations that grow out of academic endeavour across the ‘hard’ sciences as well as the social sciences’ (UoM)
- ‘physical global **exemplar of knowledge based growth**’ (CM)
- ‘we have tight governance, physical proximity of the universities to the city core, and people like myself who can connect. So add all of that together and you are starting to get a **laboratory concept** emerging’ (PF)

the 'academic phase'



- 'it's got everything we need to look at climate change and the urban heat island effect because it's got very little green infrastructure, it's got lots of traffic, it's got lots of people, it's got lots of pollution, it's a **perfect little testbed**' (CC)
- 'we are going to be digging the road up to get the funding for the bus corridor and we thought, "wouldn't it be great if we could put equipment in to **monitor**, and have **all this data** available for research purposes?' (CM)
- 'we need **peer reviewed science**. You can't just decide that something would be quite nice and write a planning policy around it' (CC)

pragmatics of experimenting



- 'it's a **living laboratory** to see how effective trees and grass are at preventing runoff and flash flooding' (i-Trees PI)
- '**governance**? I don't think I've ever really thought of that **as an experiment**' (CM)
- 'there's a lot of **risk** involved....an awful lot of money has gone down the drain trying to set up **pilot schemes that weren't that successful**. It's the price you pay for chasing an innovative approach....Is Corridor Manchester going to save the world? Not sure' (CC)

establishing LCLs

- experimental infrastructure
- installation of **equipment**
- new types of information
- **legal** and **proprietary** issues
- non-fragile institutions
(Evans and Karvonen 2011, Pahl-Wostl 2007)



the epistemology of experiments

- measurement, recording, visualisation, and detailed reporting are used to **materialize the empirical** (Marres 2009, 127).
- knowledge production drives ontology (Davies, 2010)
- importance of **truth spots** in global technology race (Gieryn 2006)
- problems of **scaling** and travelling policy



the politics of experiments

- power of experiments to transform reality through **framing new futures** (Callon et al. 2009, Davies 2010)
 - part of **imaginative infrastructure** (Kohler 2002, 214)
 - empowers places
- but...
- **technocratic appropriation** of governance
 - who gets to experiment?
 - spatial **unevenness** of labourisation
 - Privileges certain knowledges



jp.evans@manchester.ac.uk