The Governance of Smart Mobility

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Oslo, 20 November 2018

INSPIRING PEOPLE

Transportation Research Part A 115 (2018) 114–125

Contents lists available at ScienceDirect

Transportation Research Part A

journal homepage: www.elsevier.com/locate/tra

The governance of smart mobility

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ARTICLE INFO

Keywords:
Governance
Transition
Public value
Smart technology
Mobility
Externalities

ABSTRACT

There is an active contemporary debate about how emerging technologies such as automated vehicles, peer-to-peer sharing applications and the 'internet of things' will revolutionise individual and collective mobility. Indeed, it is argued that the so-called 'Smart Mobility' transition, in which these technologies combine to transform how the mobility system is organised and operates, has already begun. As with any socio-technical transition there are critical questions to be posed in terms of how the transition is managed, and how both the benefits and any negative externalities of change will be governed.

This paper deploys the notion of ensuring and enhancing public value as a key governance aim for the transition. It sets out modes and methods of governance that could be deployed to steer the transition and, through four thematic cases explores how current mobility governance challenges will change. In particular, changing networks of actors, resources and power, new logics of consumption, and shifts in how mobility is regulated, priced and taxed – will require to be successfully negotiated if public value is to be captured from the transition. This is a critical time for such questions to be raised because technological change is clearly outpacing the capacity of systems and structures of governance to respond to the challenges already apparent. A failure to address both the short and longer-term governance issues risks locking the mobility system into transition paths which exacerbate rather than ameliorate the wider social and environmental problems that have challenged planners throughout the automobility transition.

Making space for new mobility services? The curbside as a critical boundary object

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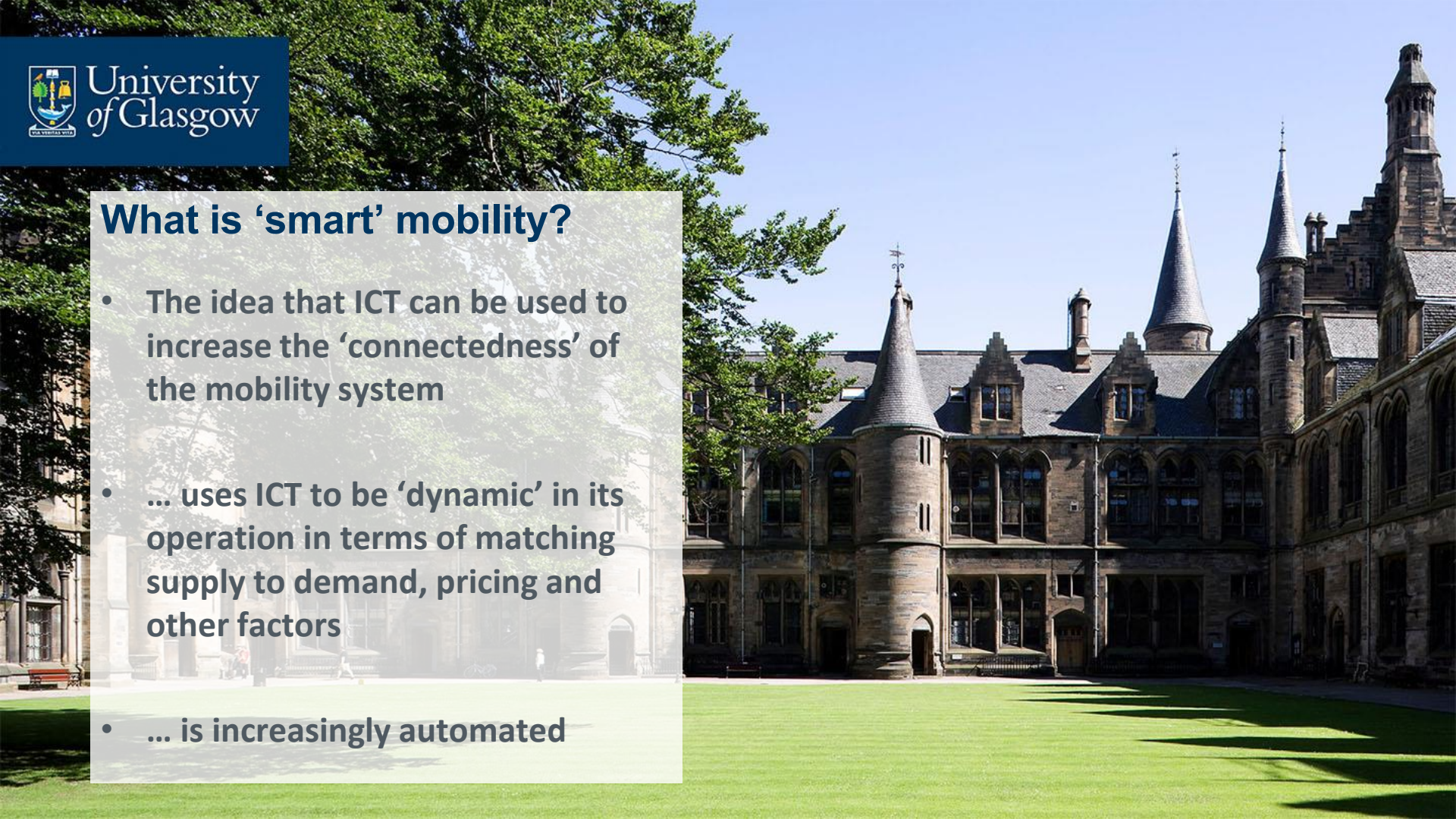
Contested transport futures: The case for Public Transport in the age of autonomous and shared mobility

Discussion Draft @ 04_10_2018 – not for general circulation

Iain Docherty [1]*, John Stone [2], Carey Curtis [3], Claus Hedegaard Sørensen [4], Alexander Paulsson [4], Crystal Legacy [2] and Greg Marsden [5]



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What is ‘smart’ mobility?

- The idea that ICT can be used to increase the ‘connectedness’ of the mobility system
- … uses ICT to be ‘dynamic’ in its operation in terms of matching supply to demand, pricing and other factors
- … is increasingly automated

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Key contentions

No amount of smart technology will overcome the need for good policy, planning & governance

We need to plan proactively to try to ensure socially- and environmentally-desirable outcomes from smart mobility and to minimise externalities because a positive outcome is not guaranteed

Key contentions

The (remaining) ‘publicness’ of the mobility system, and elements of the ‘publicness’ or ‘civitas’ of the city, are (potentially) under threat from smart mobility


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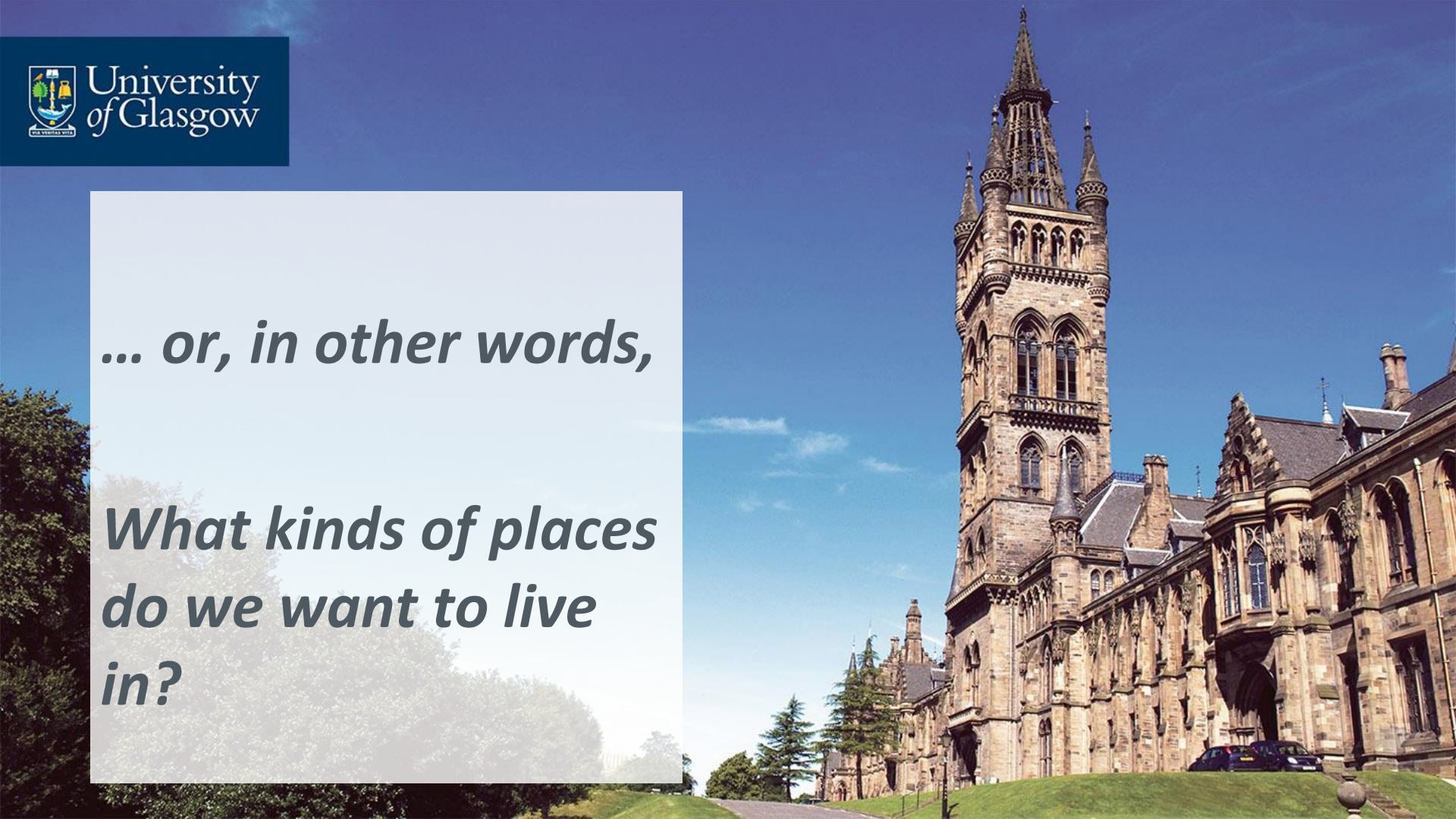
Transport is a derived demand

“transport creates the utilities of place”

White and Senior (1983)

Structure of transport sector should reflect wider socio-economic needs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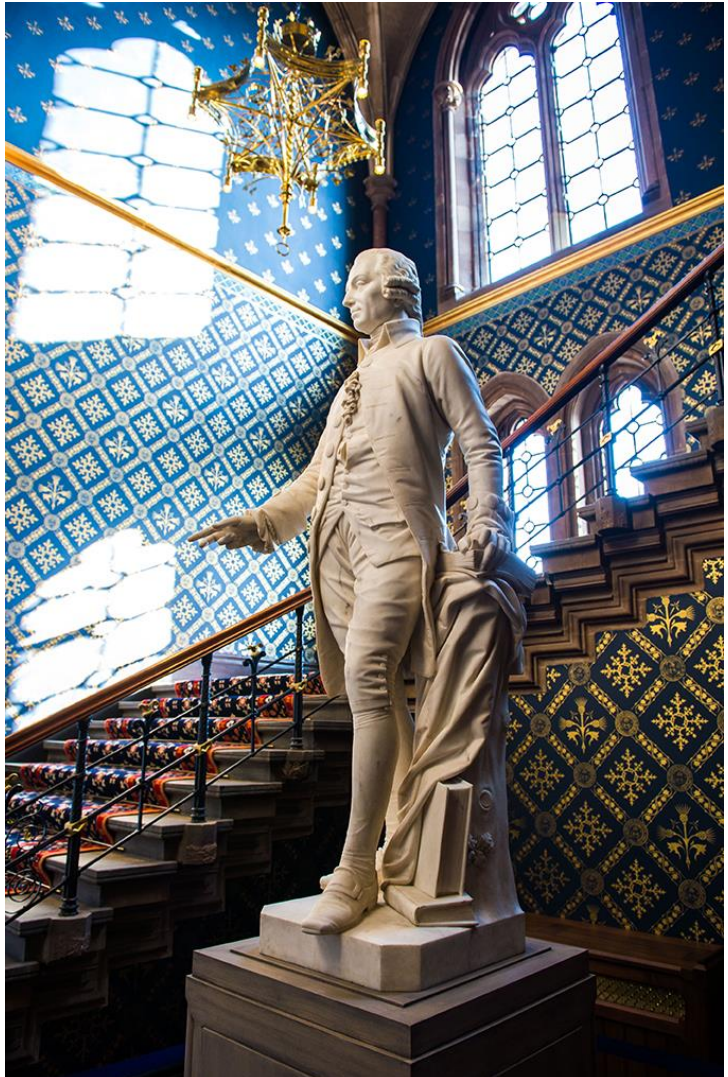
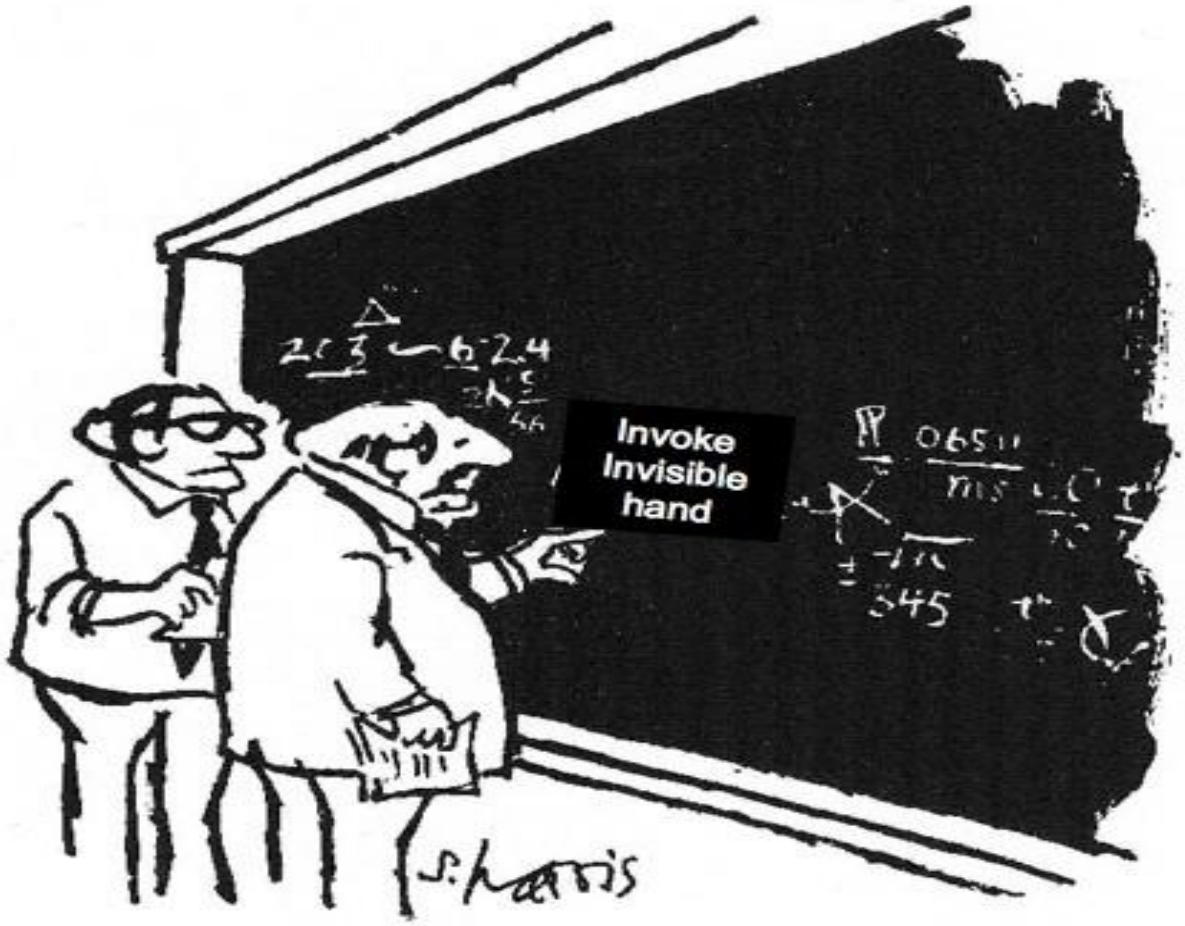
… or, in other words,
What kinds of places do we want to live in?


30 mg/ml





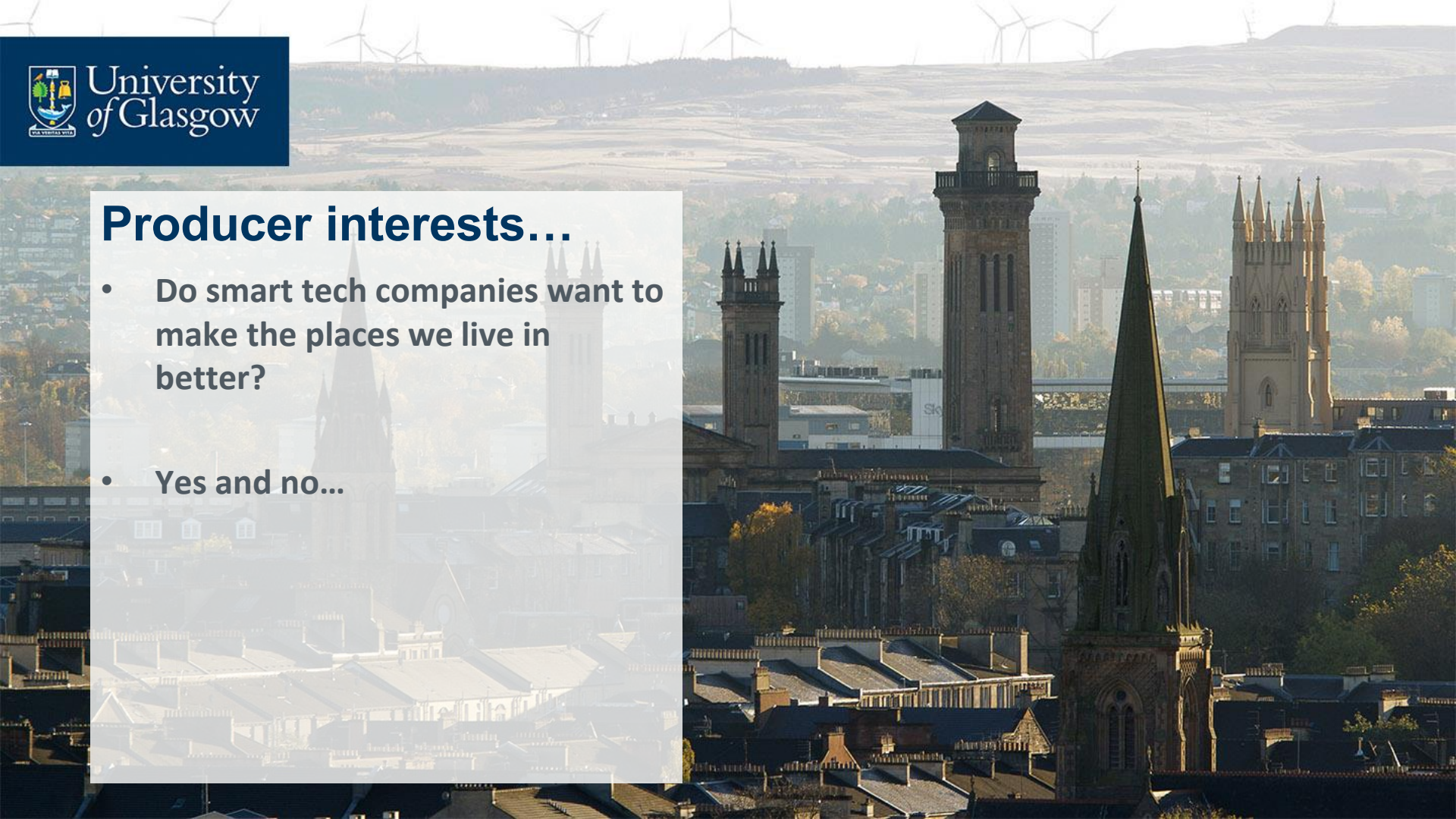
"I think you should be more explicit here in step two."

Producer interests…

- Crucial to think about what smart proponents *really* want
- Smart mobility is being sold on grounds of ’efficiency’ and ‘choice’… this is, to put it politely, naïve

Producer interests…

- New actors want/need *more*, not less mobility
- Oligopolistic/monopolistic power
- Extract high rents (that's what dominant actors do)
- Control… over your time and choices



Producer interests…

- Do smart tech companies want to make the places we live in better?

- Yes and no…

Disruptive innovation

- New entrants to mobility marketplace are enormously powerful

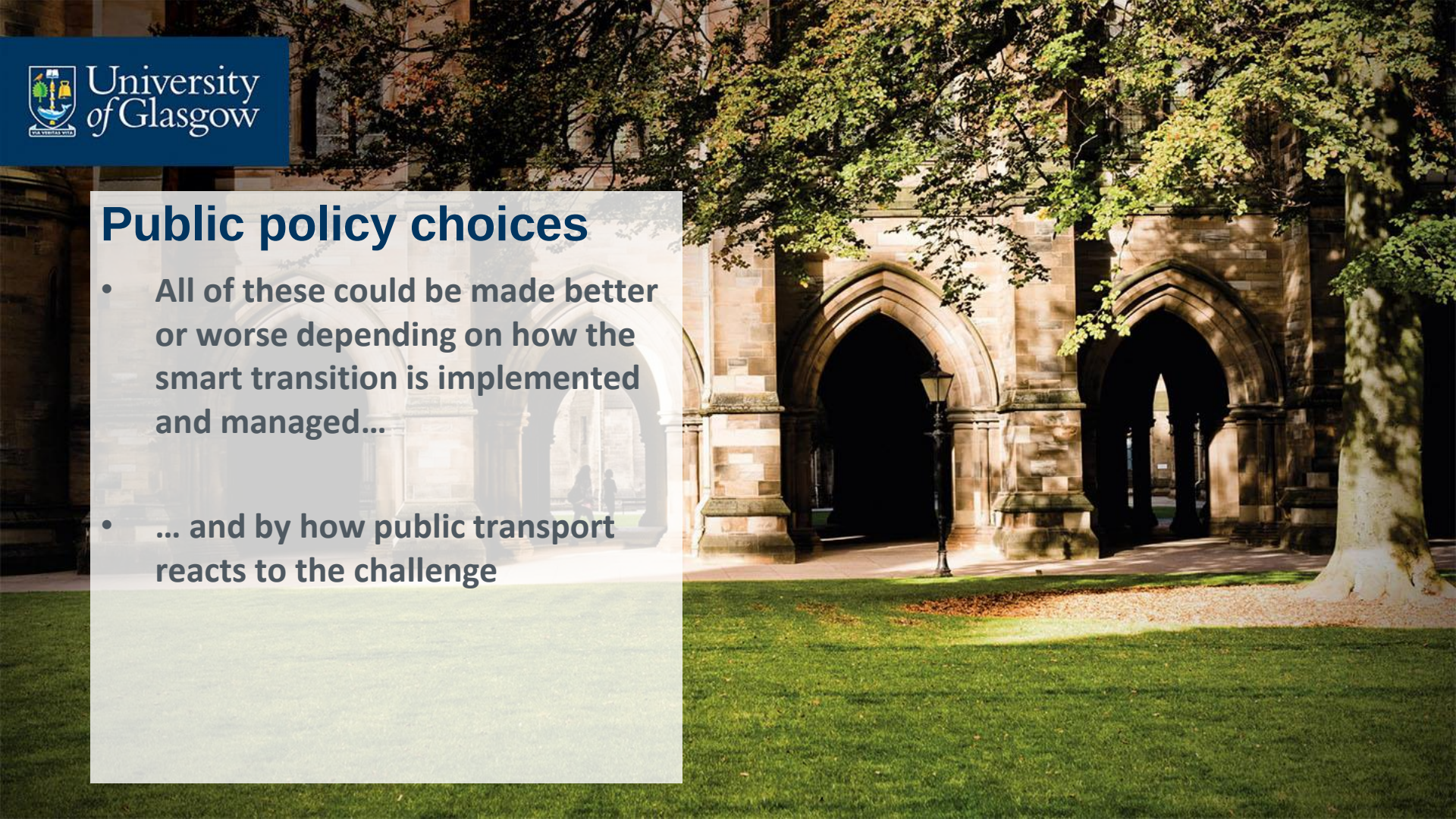
- They will determine what the transport system looks like in 20 years' time if we don't act quickly

Disruptive innovation

- Meanwhile, whole notion of ‘public’ transport under pressure
- What’s a bus for? It’s just an oversized, inflexible Uber!
- Young people less concerned with e.g. surge pricing (!)

Public policy choices

- The (macro) public policy problems might not look that different in future
- Congestion
- Social exclusion
- Inaccessibility



Public policy choices

- All of these could be made better or worse depending on how the smart transition is implemented and managed…
- … and by how public transport reacts to the challenge

Public policy choices

- Heightened competition with urban public transport, particularly buses; and rail for long distance

- Increased intensity of motorised traffic (congestion = demand concentrated in time and space)

Public policy choices

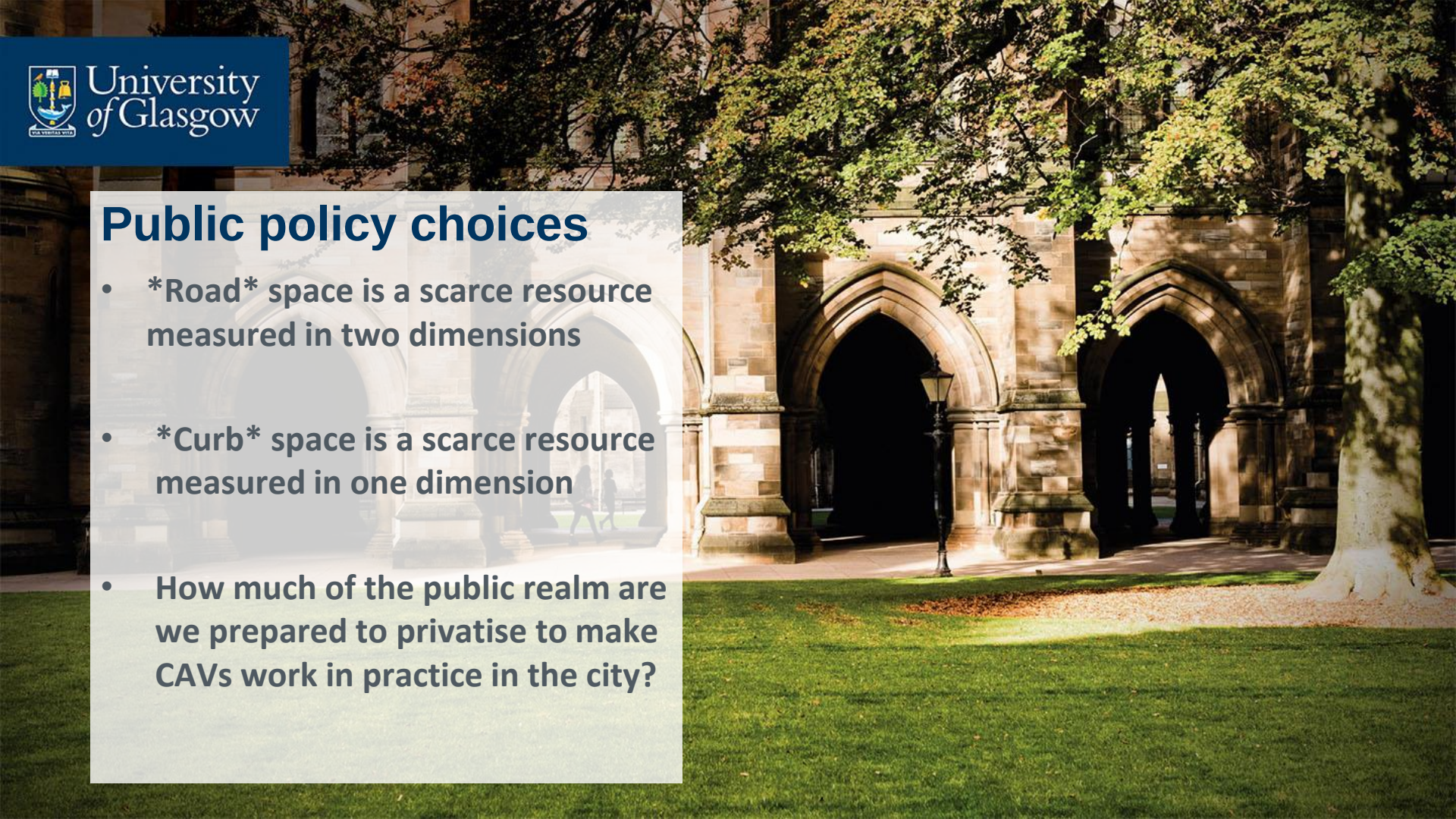
- Attractiveness of travel by motorised means which would result on decreased use of healthy modes (see Alermi et al. (2018) for early evidence from San Francisco)

- Encouragement of long-distance commuting and urban sprawl

Change in Fleet	Scenario	Car Kms (Millions)	% of Baseline
0% self driving cars	Baseline	1.04	
100% shared self-driverless fleet	With ride sharing and high capacity public transport	1.13	109%
	Vehicle but not ride sharing no high capacity public transport	2.11	203%
50% private car use for motorised trips	With ride sharing and high capacity public trasport	1.35	136%
	Vehicle but not ride sharing no high capacity public transport	2.04	197%

Public policy choices

- Justifying infrastructure investment might get more difficult if we are highly uncertain about the future



Public policy choices

- *Road* space is a scarce resource measured in two dimensions
- *Curb* space is a scarce resource measured in one dimension
- How much of the public realm are we prepared to privatise to make CAVs work in practice in the city?

Pragmatism

- There is usually more than one reasonable answer to the ‘how to organise the sector?’ question
- The future role of public transport in the mobility mix will be different in different places

Identifying public value?

- Congestion reduction?
- Land use/land value effects?
- Social Inclusion?
- Placemaking?
- ‘Solidarity’/wellbeing?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Thank you
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