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Innovation in Transport for Sustainable Cities and Regions



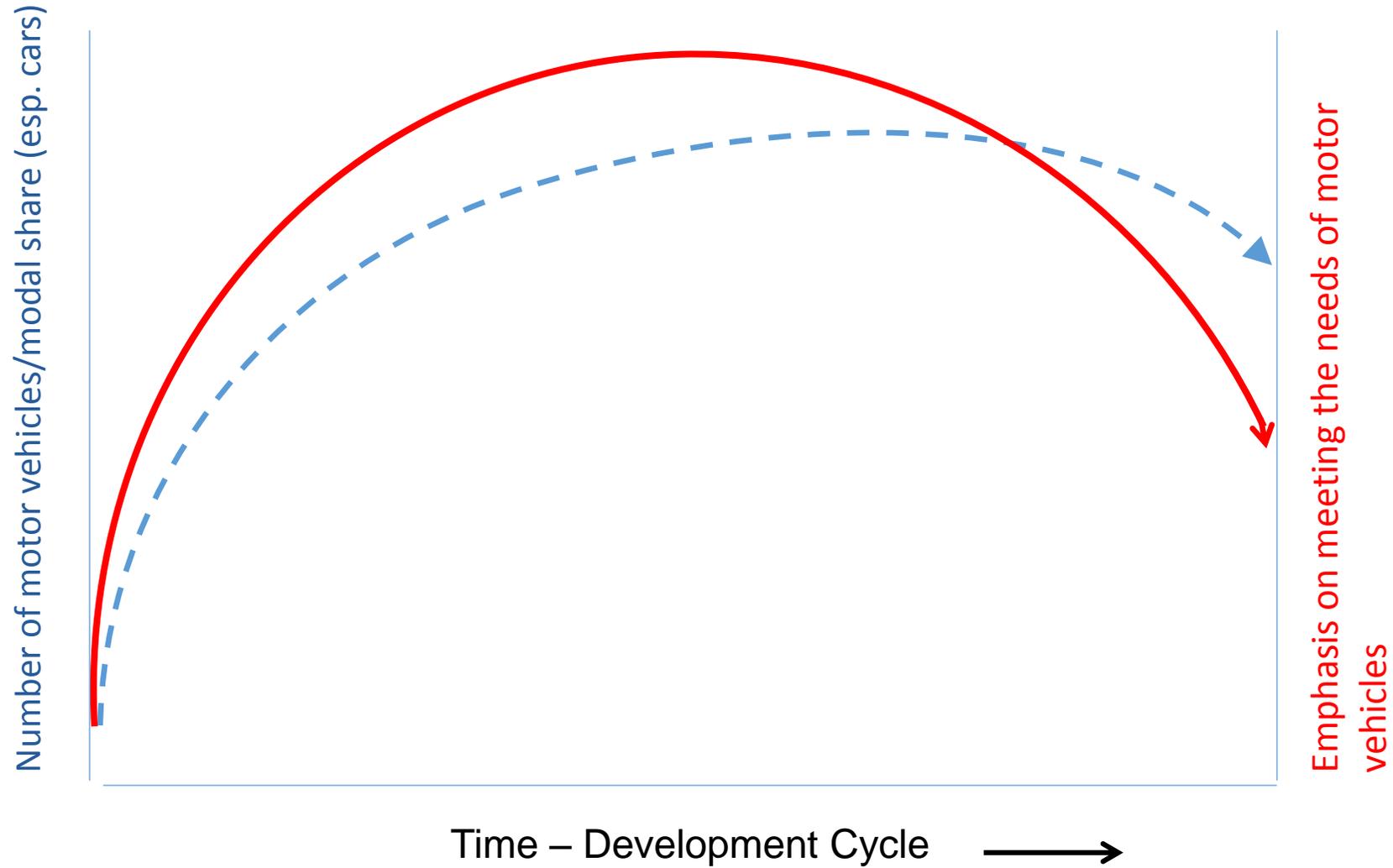
Regulating Access to City Centres: The key to delivering future visions of city life

Prof Peter Jones
Centre for Transport Studies, UCL

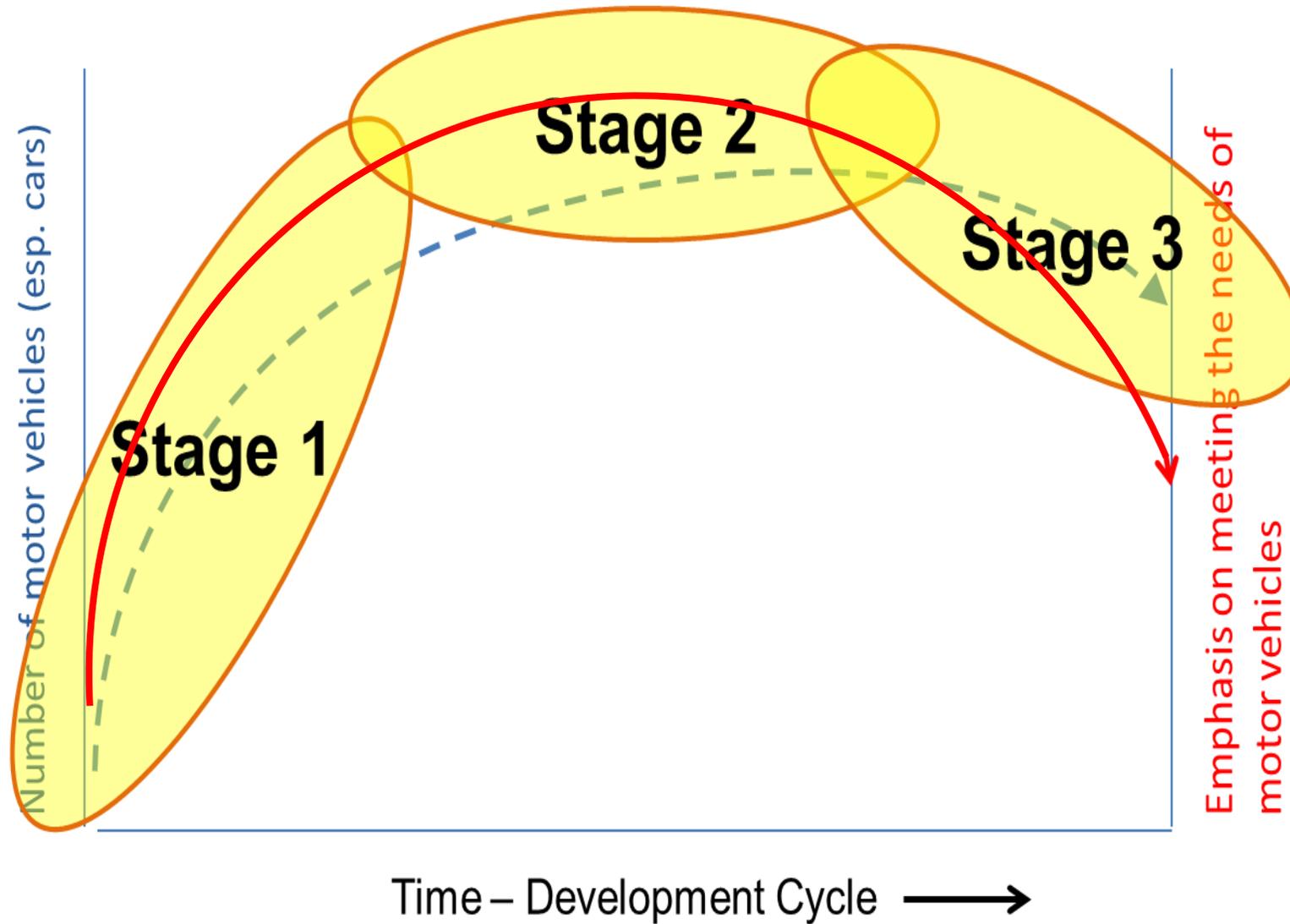
Key Messages

1. Urban policy priorities are changing
 - Associated with an increasing emphasis on vehicle regulations
2. Conventional rationale for access regulations not suited to future conditions -> so need to recalibrate arguments
 - e.g. environmental externalities will reduce sharply with electrified fleet
3. Automated vehicles may challenge this emerging consensus
 - Door-to-door car use may be valued over other urban goals
4. Cities need to face this challenge pro-actively, not re-actively
 - Start now!!

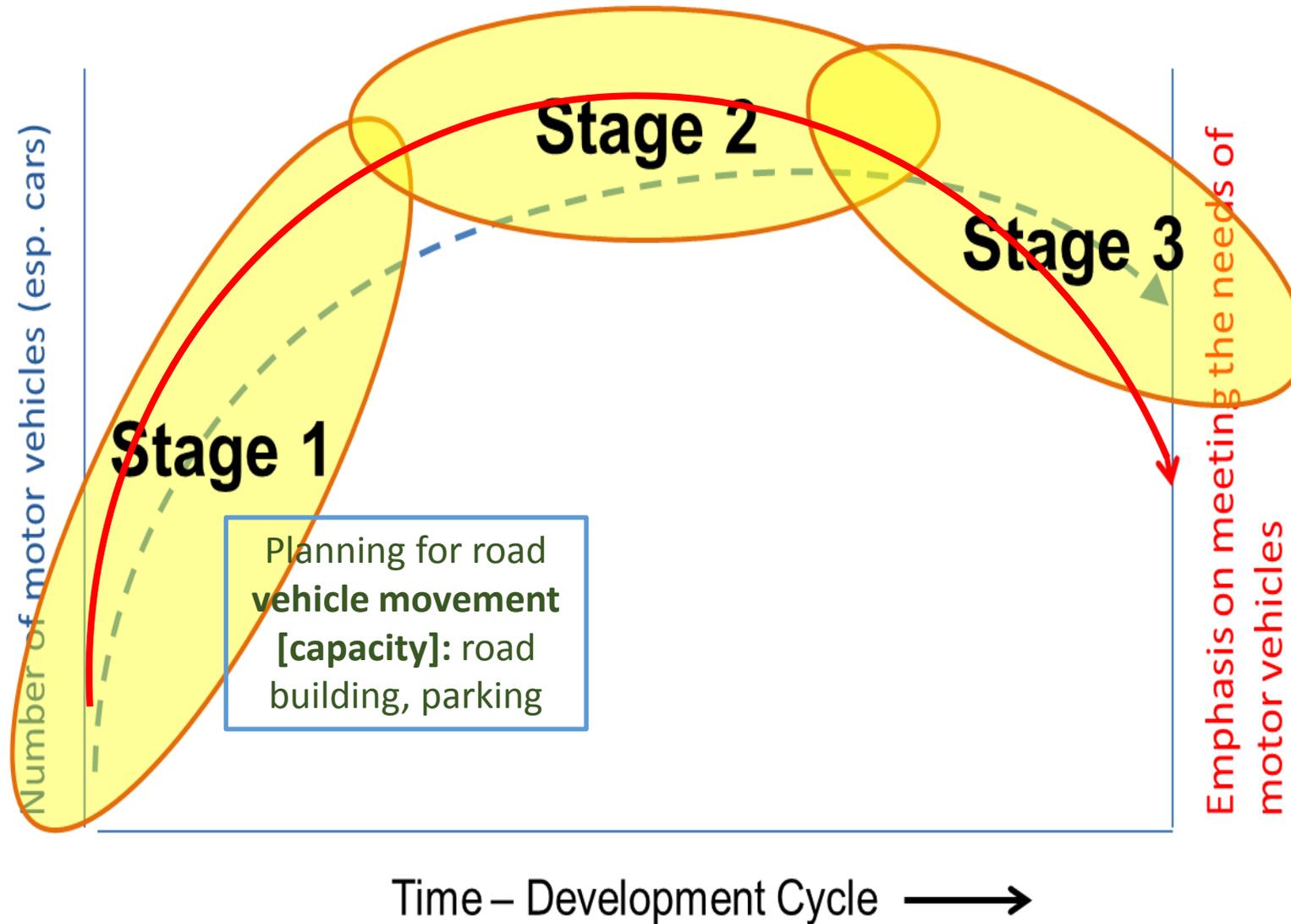
Changing Urban Policy Priorities



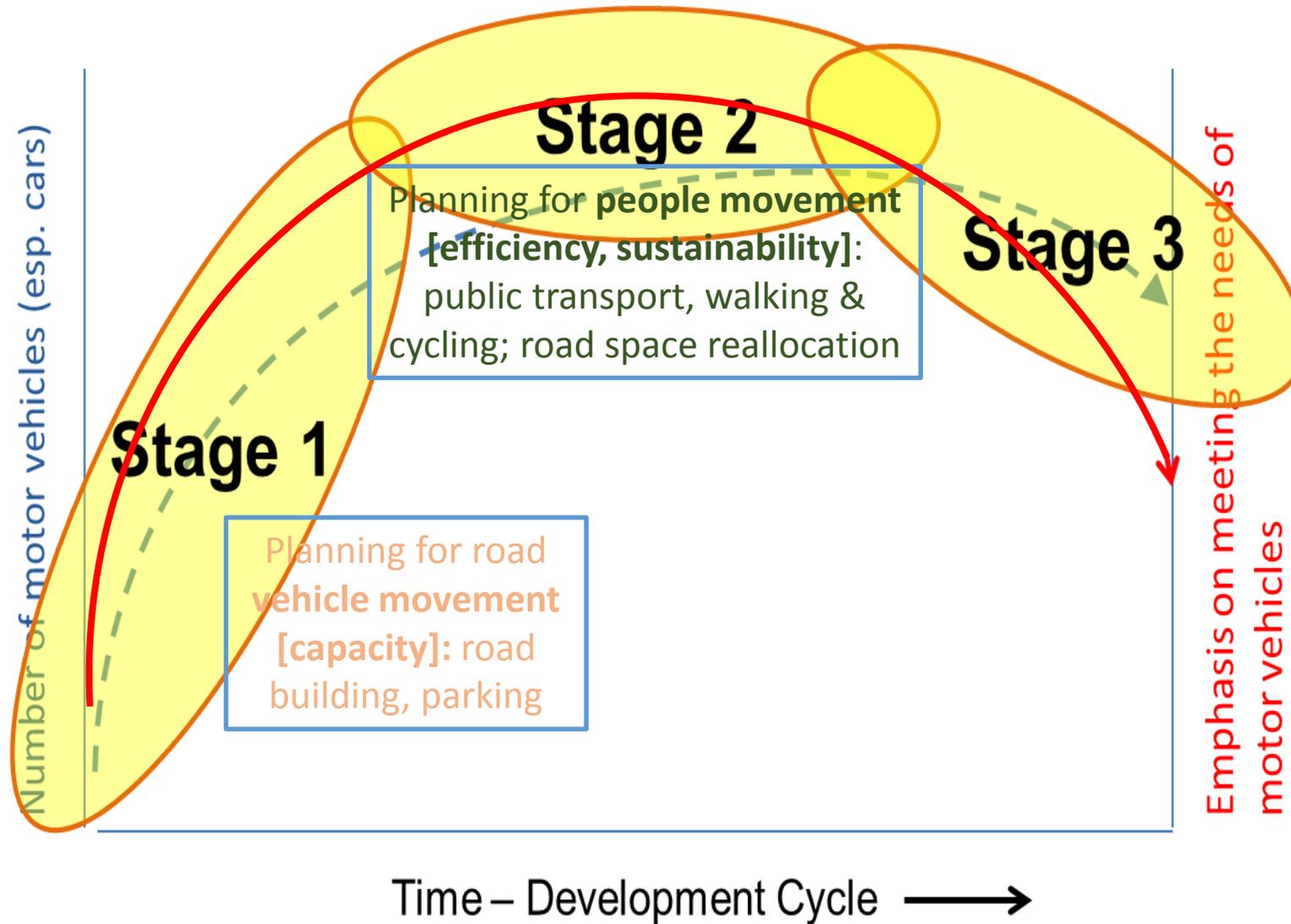
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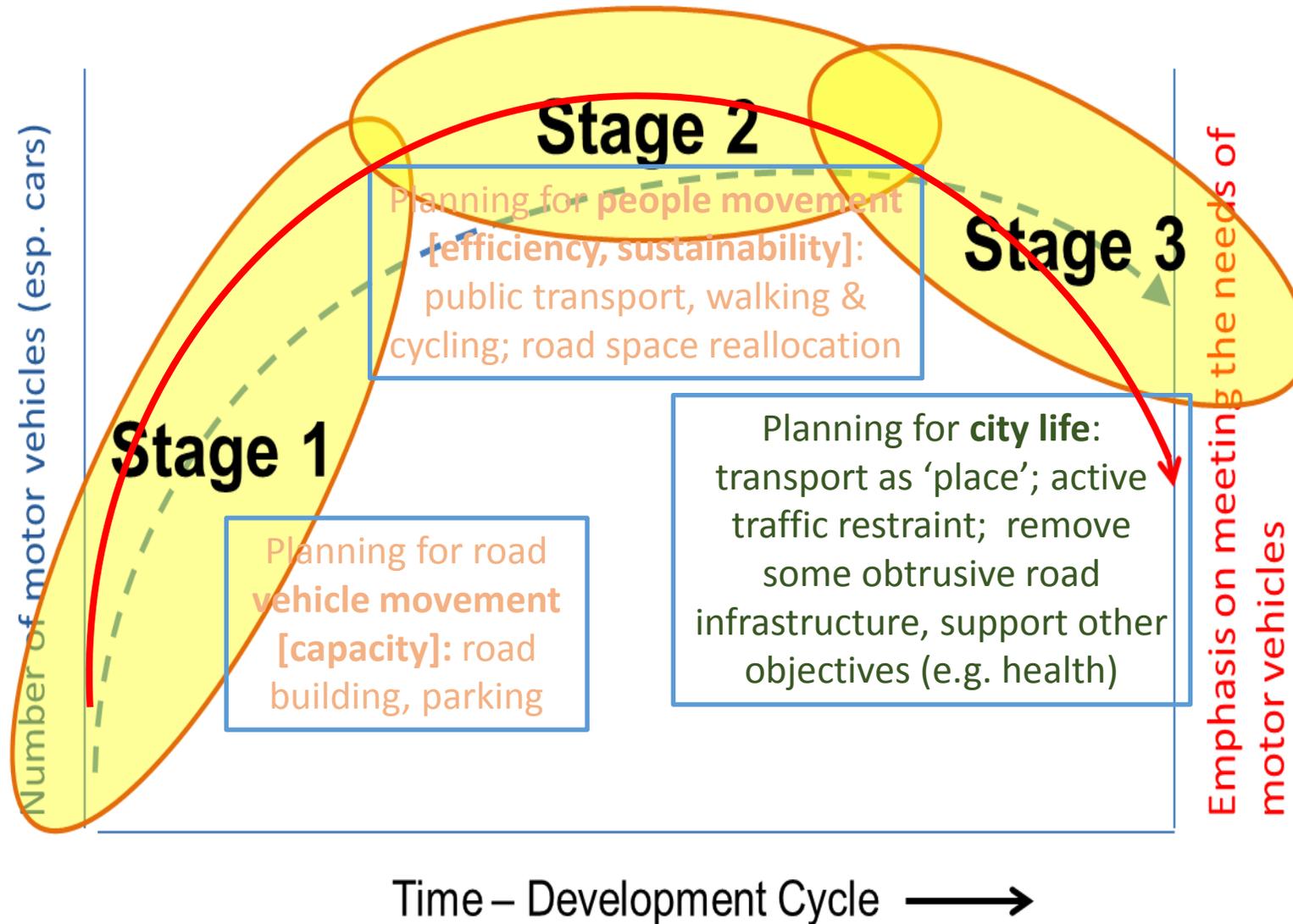
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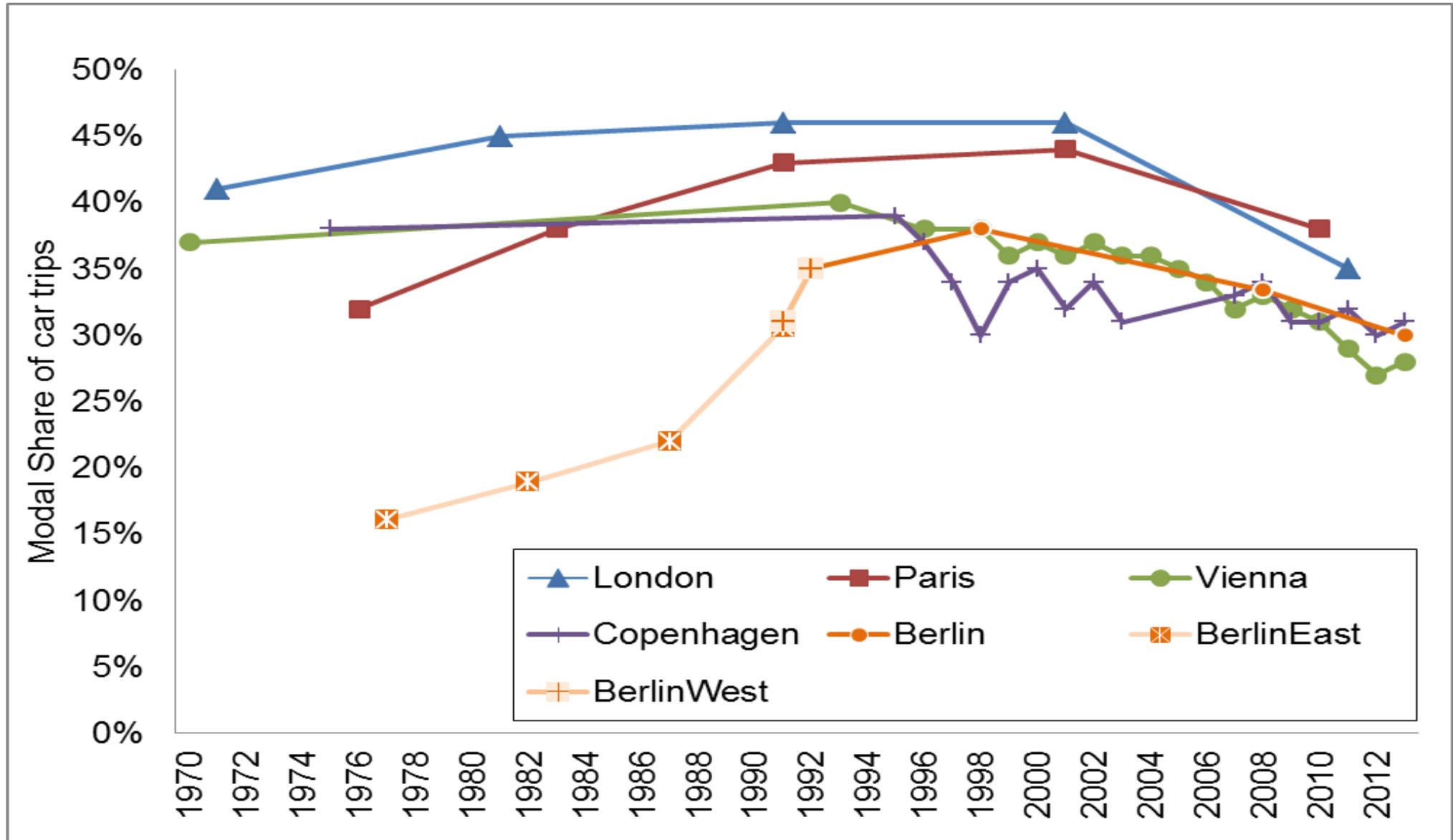
Changing Urban Policy Priorities



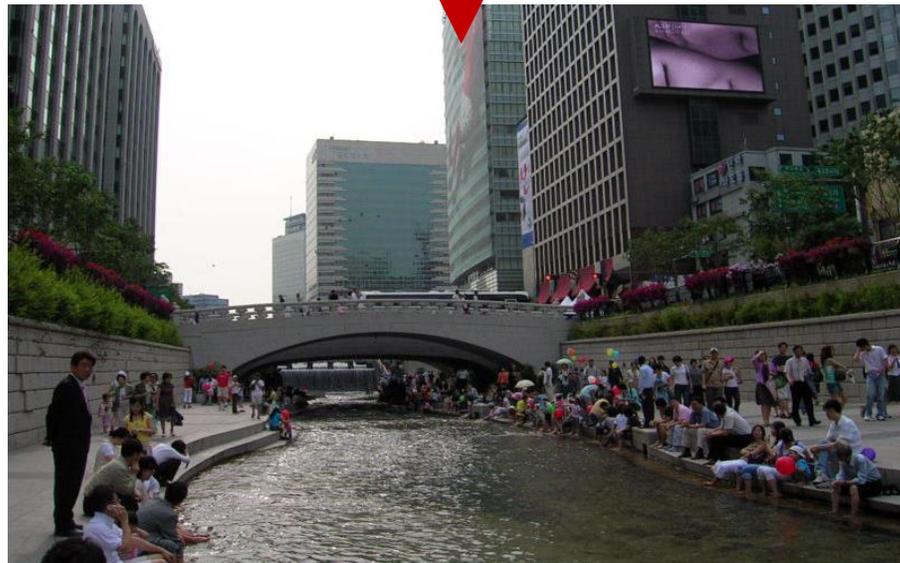
Changing Urban Policy Priorities



Behavioural response: Car Driver Modal Shares over Time



Change in Priorities: Stage 1 -> Stage 3



Changing Policy Landscape

- Lower priority being given to urban car-based mobility – with policies actively discouraging car use
- Growing recognition of streets as important ‘places’ – requiring facilities for place-based activity and quality public realm
- Both affecting decisions about how scarce urban space should be prioritised (e.g. City of London; pocket parks and road closures)

BUT: access restriction policies need to adapt.....

Current Access Regulations -1

- Can be introduced through selective application of:
 - Physical restrictions
 - Regulations
 - Pricing
- Recent report* finds three reasons for introducing access restrictions:
 - Improve air quality
 - Limit congestion
 - Fund transport schemes

*Study on urban vehicle access regulations. Final report to the EU, April 2017

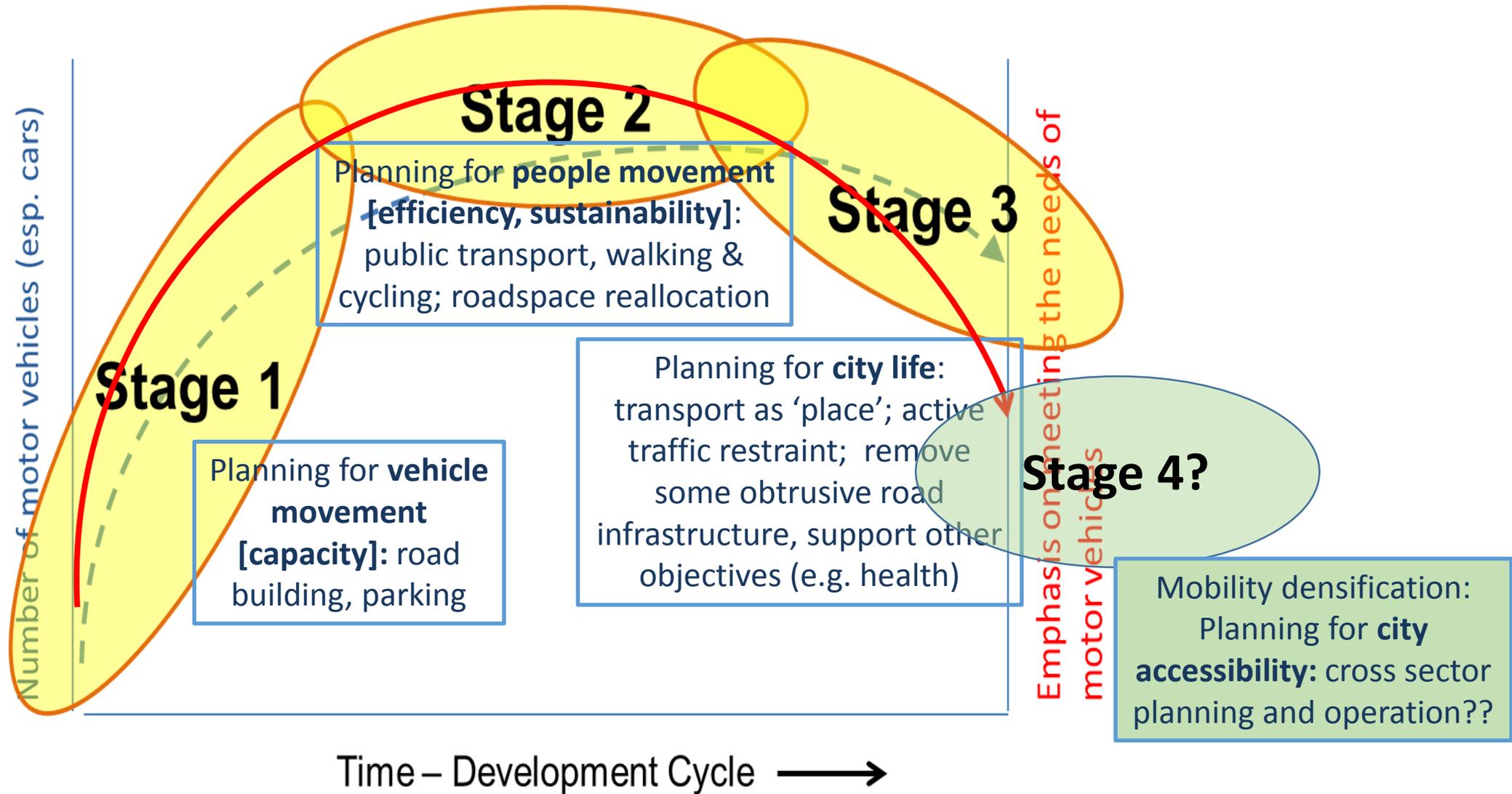
Current Access Regulations - 2

- But, rationale will need to change:
 - Air quality will improve over time, due to clean technologies and fleet electrification
 - Congestion becomes less of a political priority in central areas, and is seen as being partly self-regulating
 - Funding justification has mixed public support – and will be overtaken by wider concerns about how to replace fuel duty as a taxation stream
- So, future justification increasingly likely to be based on:
 - Optimal allocation of scarce street space in central areas – greater emphasis on ‘Place’ over ‘Movement’

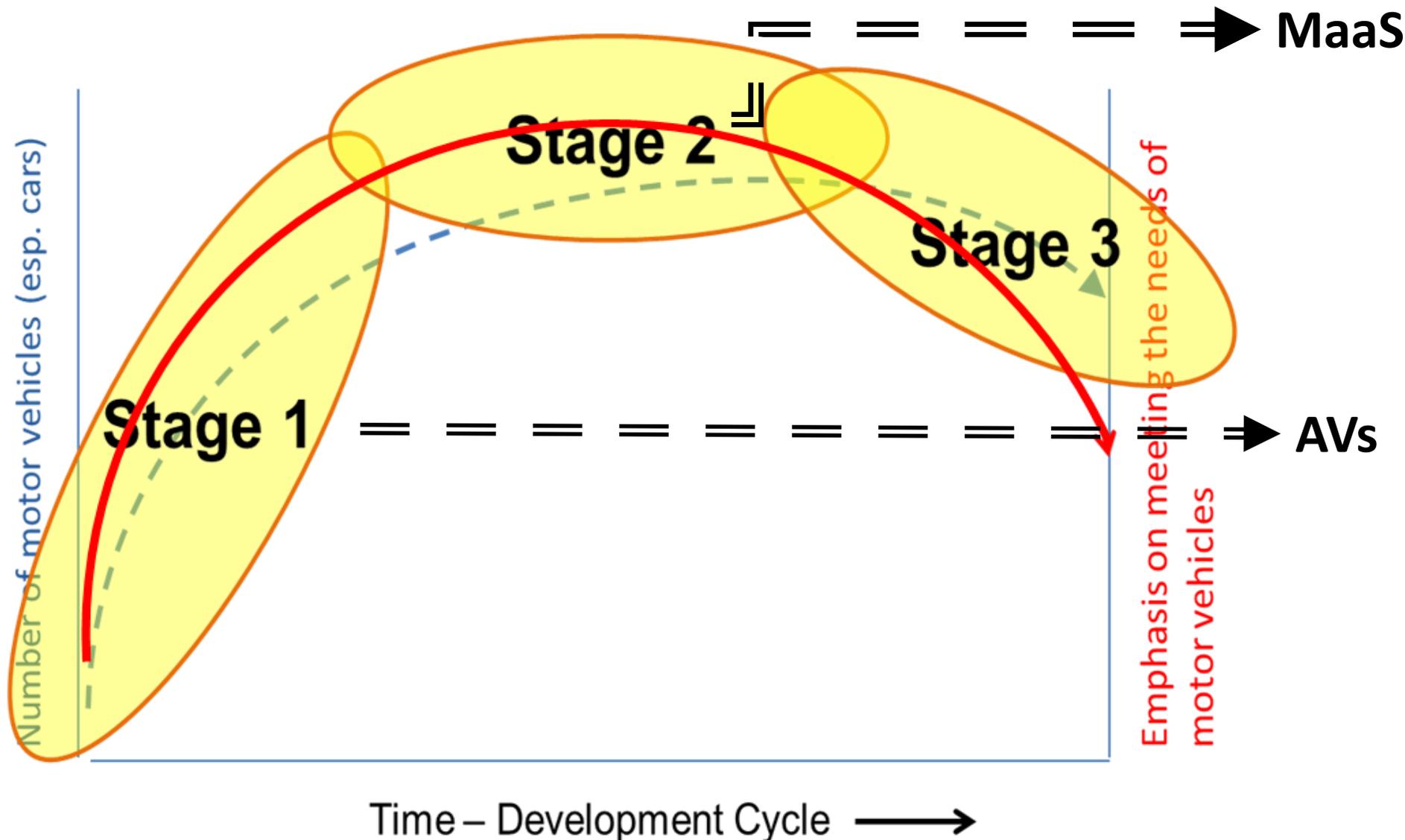
The Future of Cities

- Three factors are moving cities beyond 'Stage 3':
 - Continued congestion and over-crowding
 - Cross-sector responsibilities of elected mayors
 - 'Big data' and 'Smart city' initiatives
- Towards an emerging urban policy landscape that includes:
 - Recognition of interactions between transport and all sectors
 - Administrative structures enabling some cross-sector planning
 - Supported by new ways of thinking

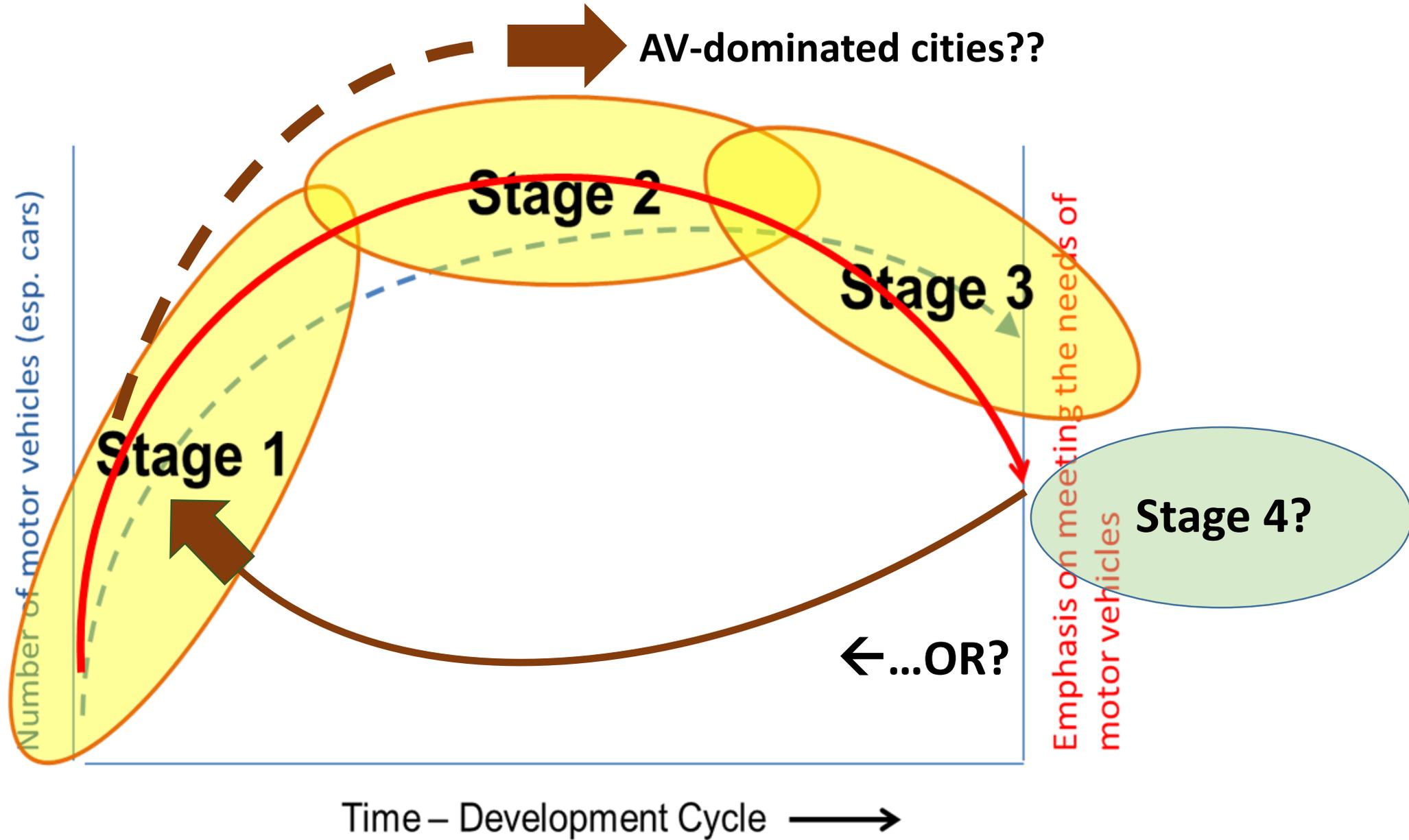
BUT: is this Progression Likely?



.....On-going Developments of Stages 1 and 2.....



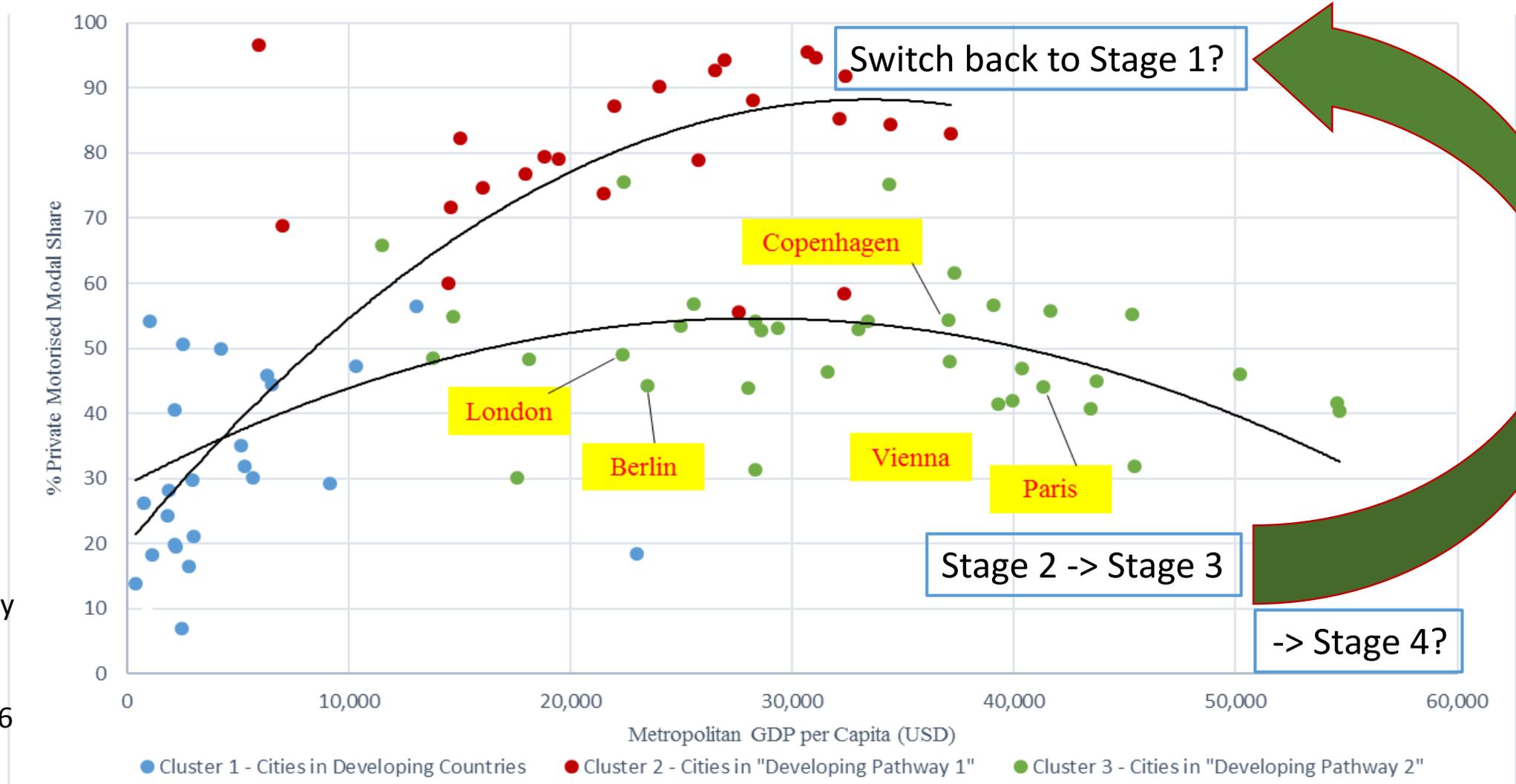
Potential impact of AVs – Reversion to ‘Stage 1’?



A car-oriented urban future?

- AVs are much more likely to increase rather than decrease car use in cities
- A 'best case' scenario is that AVs are used in 'shared mobility' mode, but this may not gain consumer support
- A 'worst case' scenario is that AVs are used in 'single occupant' mode, leading to increased modal shares and empty running mileage
- Attitudes could revert back to 'Stage 1' thinking, with public/political prioritisation of mobility convenience over liveability and public realm
 - An emergence of pressures for car-oriented city planning?

Alternative city trajectories.....



Source: analysis by Roger Teoh, MSc Dissertation Imperial/UCL 2016

UITP data 1995

What can cities do?

Start public and policy debates now.....

- AVs will have:
 - Advantages: wider population access, 'productive' travel time, cheaper travel
 - Disadvantages: disengagement with urban environment, growing obesity
- Key is to agree on wider city vision, and how AVs, MaaS, etc can help constructively to deliver that vision
- Given the nature of transport, optimal decisions taken by millions of consumers do not necessarily equate to the best collective outcome for citizens
- Access regulations will need to be adapted to this new landscape

Thank you!

peter.jones@ucl.ac.uk