DRAFT CONCLUSIONS

What CREATE can contribute to SUMPs

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– on behalf of the consortium

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What is CREATE?

- Three-year H2020 CIVITAS project (completion May 2018)
- Examines how 5 Western European capital cities have dealt with growing car use and congestion, over past 50-60 years – with lessons for growing urban economies (5 Eastern European/EuroMed cities)
- Quantitative analysis of trends in car use and influencing factors
- Qualitative investigation of governance facilitators and constraints
- Investigation of scheme funding, and modelling and appraisal issues
- Future challenges and opportunities for urban mobility
- Production of guidelines

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Key Points

CREATE provides new insights into:

- Measuring congestion and network performance

- Thinking about urban transport policy priorities

- Evolution of transport policy development

- Identifying and addressing future city challenges

- Successful delivery mechanisms

- Improved methods for developing business models and applying techniques for forecasting and appraisal

Congestion and Network Performance

- Assessment of congestion very sensitive to the measurement used (e.g. base reference speed, vehicle vs person based, weightings, etc.)

- Most economically vibrant cities experience road congestion. But with good modal alternatives (which are more competitive at lower speeds), fewer travellers are exposed to delays

- Citizens and businesses are willing to make trade-offs between speed/ congestion and quality of life

- Cities are more disadvantaged by unreliable network performance than by low speeds – which can be addressed

Different Dominant Policy Perspectives

C: CAR-ORIENTED CITY

M: SUSTAINABLE MOBILITY CITY

P: CITY OF PLACES

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SUMP Objectives = 'Policy M'
(Annex 1 17.12.2013)

a) Accessible – meet mobility needs

b) Balances diverse demands

c) Integration of different modes

d) Meets sustainability requirements

e) Optimises efficiency and cost-effectiveness

f) Makes better use of urban space & transport infrastructure

g) **Enhances attractiveness of urban environment, quality of life and public health = 'Stage 3'***

h) Improves safety and security

i) Reduces air & noise pollution, energy & CO_2

j) Contributes to better TEN-T performance

* = Policy P

Associated with Different Policy Measures

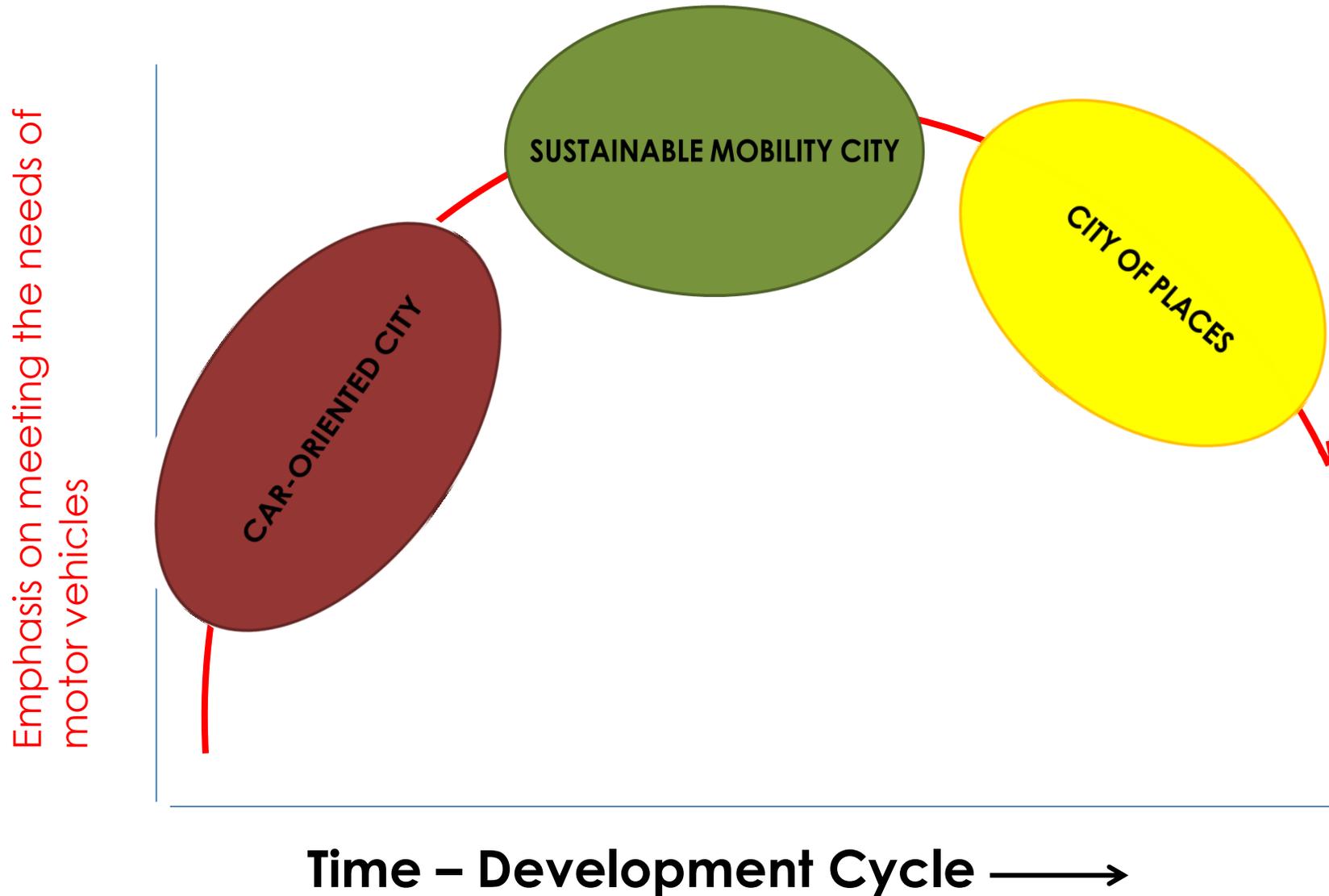**CAR-ORIENTED CITY** = **Road building, car parking, decentralisation**

SUSTAINABLE MOBILITY CITY = **Public transport, priority lanes, cycle networks**
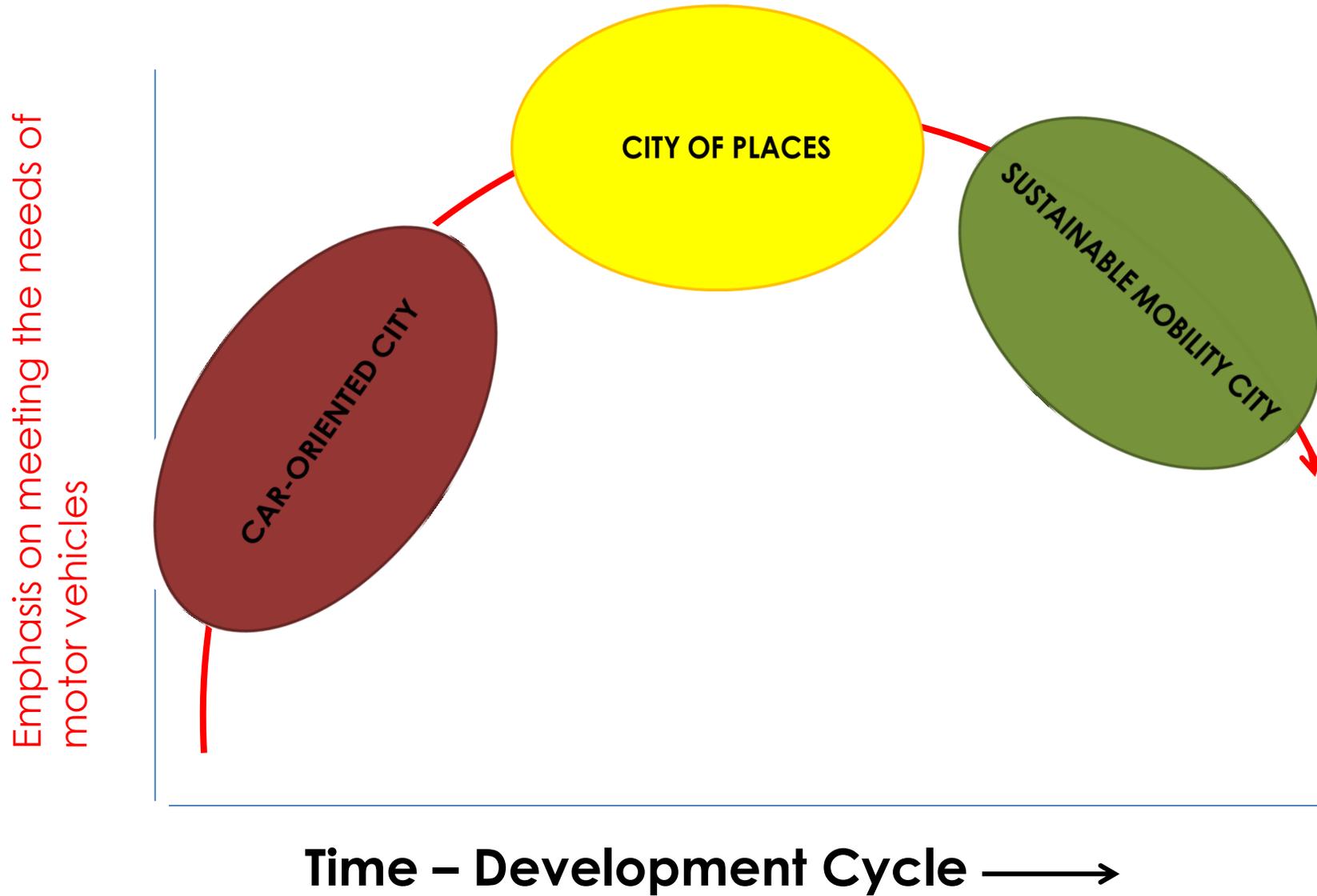
CITY OF PLACES = **Public realm, street activities, traffic restraint**
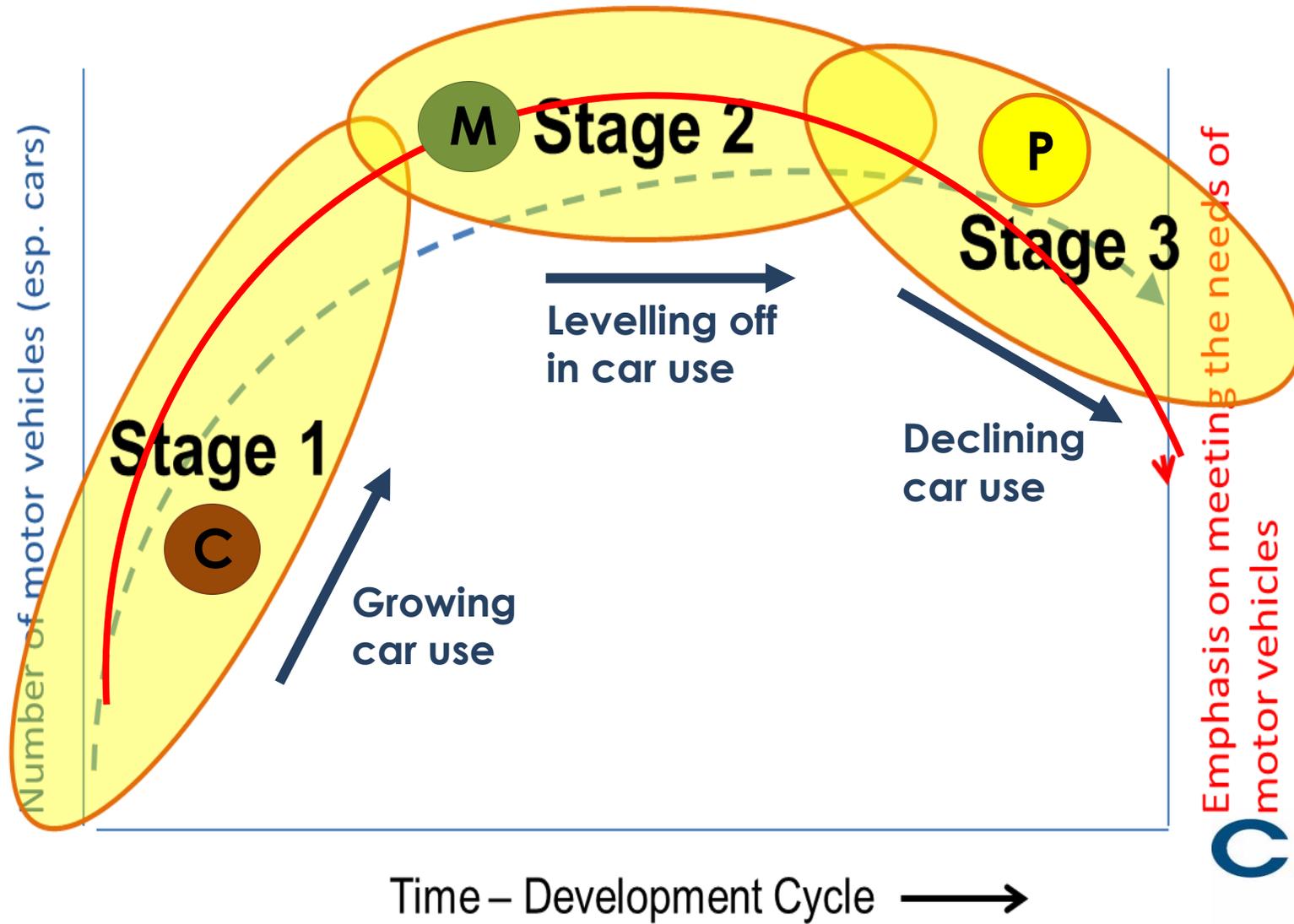
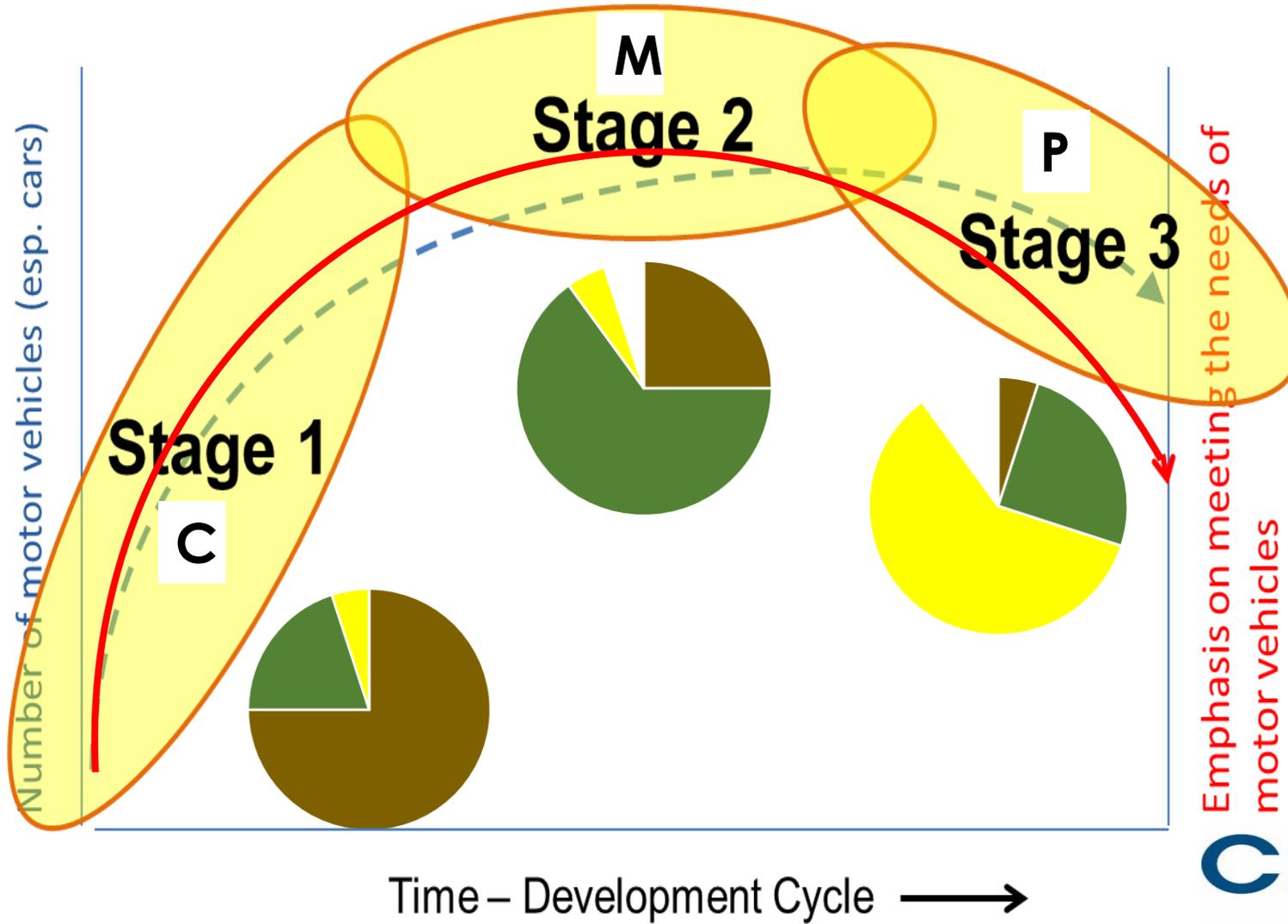# Typical Sequence of Policy Perspectives

....but it can vary (e.g. historic city)......

Resulting in a 'Transport Policy Development Process'

# …but comprising a varying mix of all perspectives

Causes of declining car modal share: **Micro**

- Changing demographics: younger people own and use cars less
- Changing employment structures: 'new' jobs prefer to locate in higher density urban areas
- Changing opportunities: more attractive alternatives in cities (e.g. Uber)

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Causes of declining car modal share: Macro

Evolution of car and public transport levels
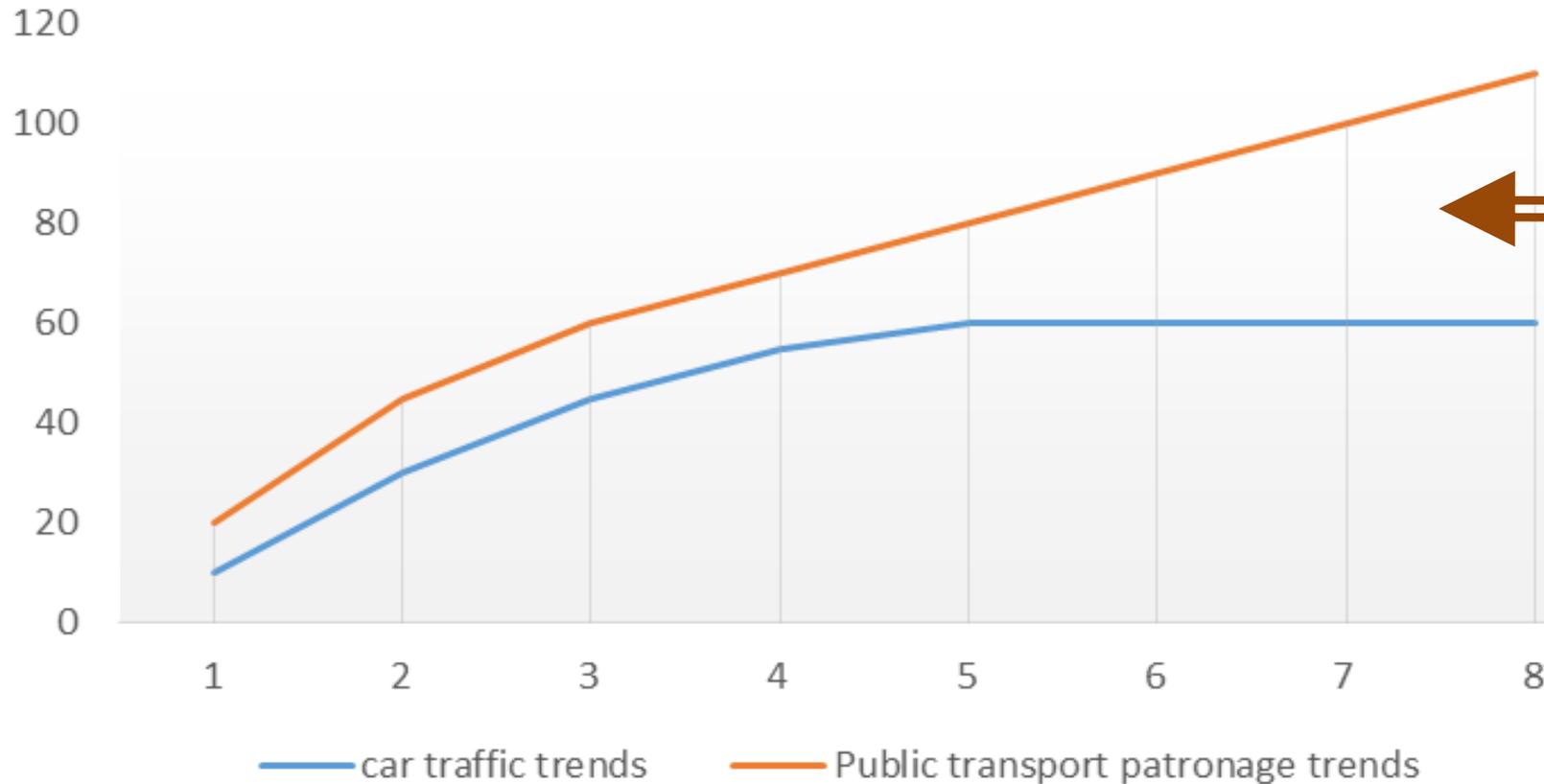
At some point road network reaches capacity and further growth is taken up by public transport

Legend: car traffic trends — Public transport patronage trends

Is this evolution inevitable?

- Not all economically advanced cities pass through this 3-stage process

- Many newer North American cities are still almost entirely car-based

- And car use is much more dominant in suburban and rural areas

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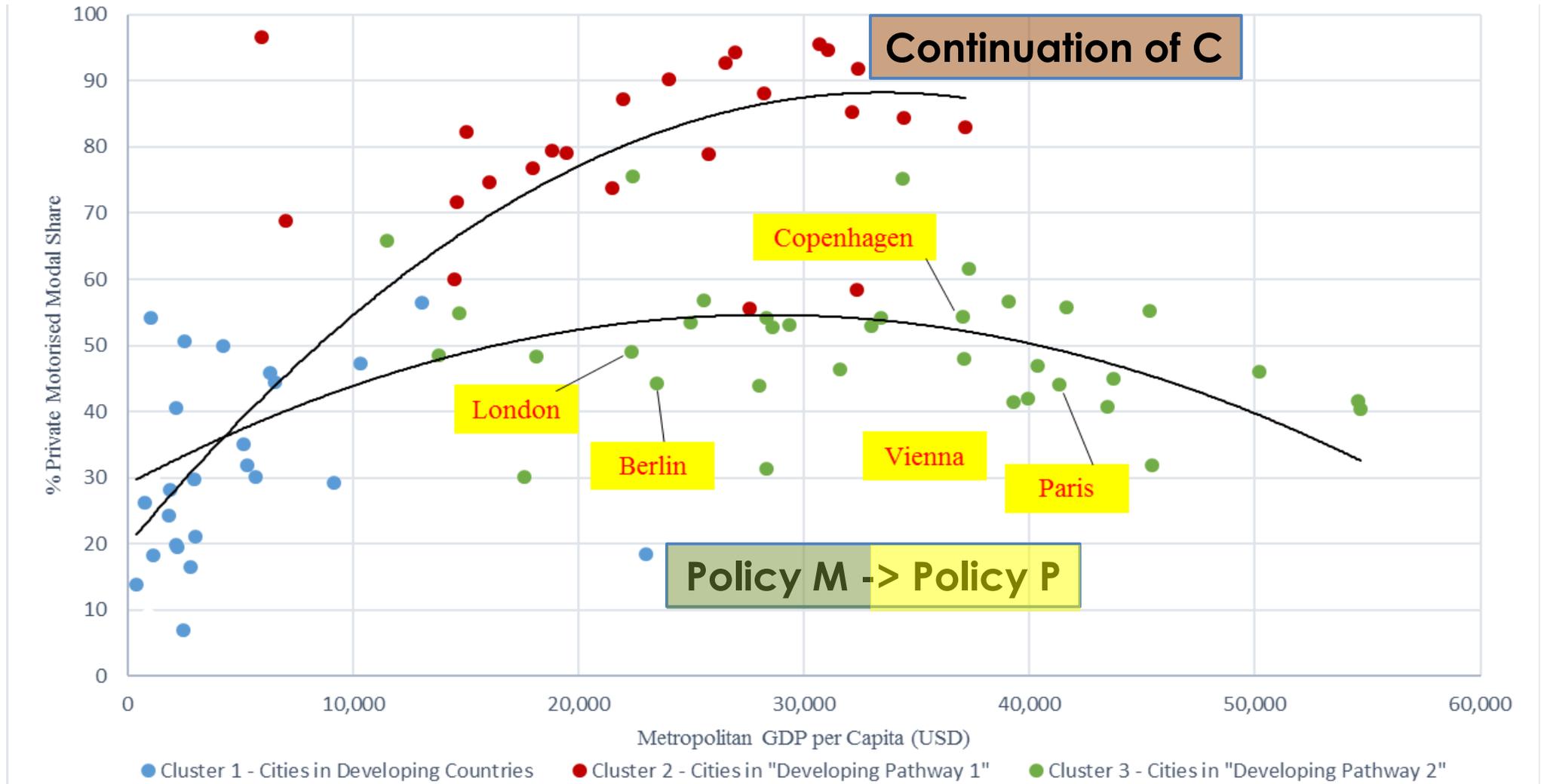
Source: analysis by Roger Teoh, MSc Dissertation Imperial/UCL 2016

UITP data 1995

Core conditions for Stage C -> M/P 'evolution'?

- There are core requirements:
  - A minimum land use density and activity concentration: to support attractive PT
  - An 'equilibrium' between average door-to-door speeds by car and PT or walk/cycle
  - Strict limits on car use

  ….adapting cities during the **C**-Stage to accommodate more cars makes any transition to **M/P** more difficult!!!

Measures of Success

C: Car-based	M: SUM-based	P: Place-based
• Average network speeds • Day-to-day variability • Vehicle congestion • Car parking availability • Road traffic accidents • Noise • Air pollution	• PT frequency and reliability • Access to bus stops & stations • Safety and security • Seamless travel • PT modal split • Walking/cycling modal shares • Door-to-door travel times by mode	• Time use in transport modes • Intensity of street activities • Time spent in local area • Value of high quality public space • Health of the population • Social interaction • Social equity and inclusion • Community severance

Factors Contributing to Success

5 Ms:

- **M**ood   – public and political acceptability
- **M**otivation   – triggers for change (e.g. deterioration)
- **M**echanisms   – enforcement, administration, delivery
- **M**easures   – PT investment, reallocate road-space
- **M**oney   – Business cases, funding mechanisms

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Policy P: Modelling for vision-led planning

- **C** and **M** policies largely based on model forecasts of future travel demand ('Predict & Provide'):
  - How much road capacity is needed?
  - What level of rail capacity do we need to provide?
  - Here uncertainty is 'a problem'
- Policy **P** starts with a city vision that embraces mobility and the public realm – the role of modelling (Vision & Validate) is to:
  - Identify policy packages that will deliver desired outcomes
  - Use uncertainty to 'stress test' packages to make them as robust as possible under different futures

  …turning the modelling process 'on its head'

Policy P: Appraisal for vision-led planning - 1

- **P** policies are designed to meet broader outcomes
  -> so need to add new benefit types to the appraisal
- **C** and **M** policies use the 'do-minimum situation' as the baseline
- **P** policies use the 'vision' as the baseline:
  -> This is already partly done in some cases (e.g. 20mph zones, LEZs)
  -> This may place greater emphasis on cost-effectiveness rather than cost-benefit appraisal

…turning the appraisal process 'on its head'

Policy P: Appraisal for vision-led planning - 2

EXAMPLE: heavy traffic on inner ring road, causing severe severance and air and noise pollution

'Traditional approach': Justify any measures to alter the current situation; for example, lower speed limit and surface level crossings: are the extra vehicle delays outweighed by reduced severance, noise levels, etc?

'Vision-led approach': start with reduced speed limit and surface level crossings as 'meeting the standard'. If traffic conditions deteriorate and need to be mitigated, then (i) reassign traffic or, (ii) for example, build a cut-and-cover road and justify this through time savings, etc. compared to conditions if standard adopted

The Future City

- Three factors are moving cities beyond Policy **P**:
  - ➤ 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 – and of travel as a 'derived demand'
  - ➤ Administrative structures enabling some cross-sector planning
  - ➤ Supported by new policy perspectives and ways of thinking

The Future City

- C = Car-based city
- M = Sustainable-mobility city
- P = City as places
- **I = Integrated city** [travel as a 'derived demand']

Some early signs:
- – MaaS
- – Accessibility planning

New analytical methods:
- – Socio-technical systems
- – Activity-based modelling

I: INTEGRATED CITY

Thank you !

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http://www.create-mobility.eu