Scenario Planning at TfL: Quantifying Uncertainty

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Head of Strategic Analysis
Transport for London

EVERY JOURNEY MATTERS

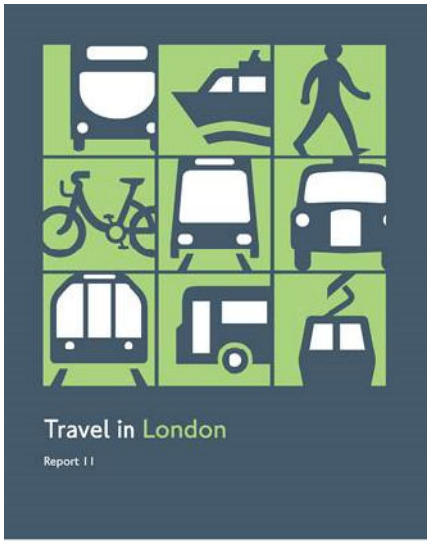
Strategic Analysis

Strategic Analysis – analysing past trends to inform future forecasts

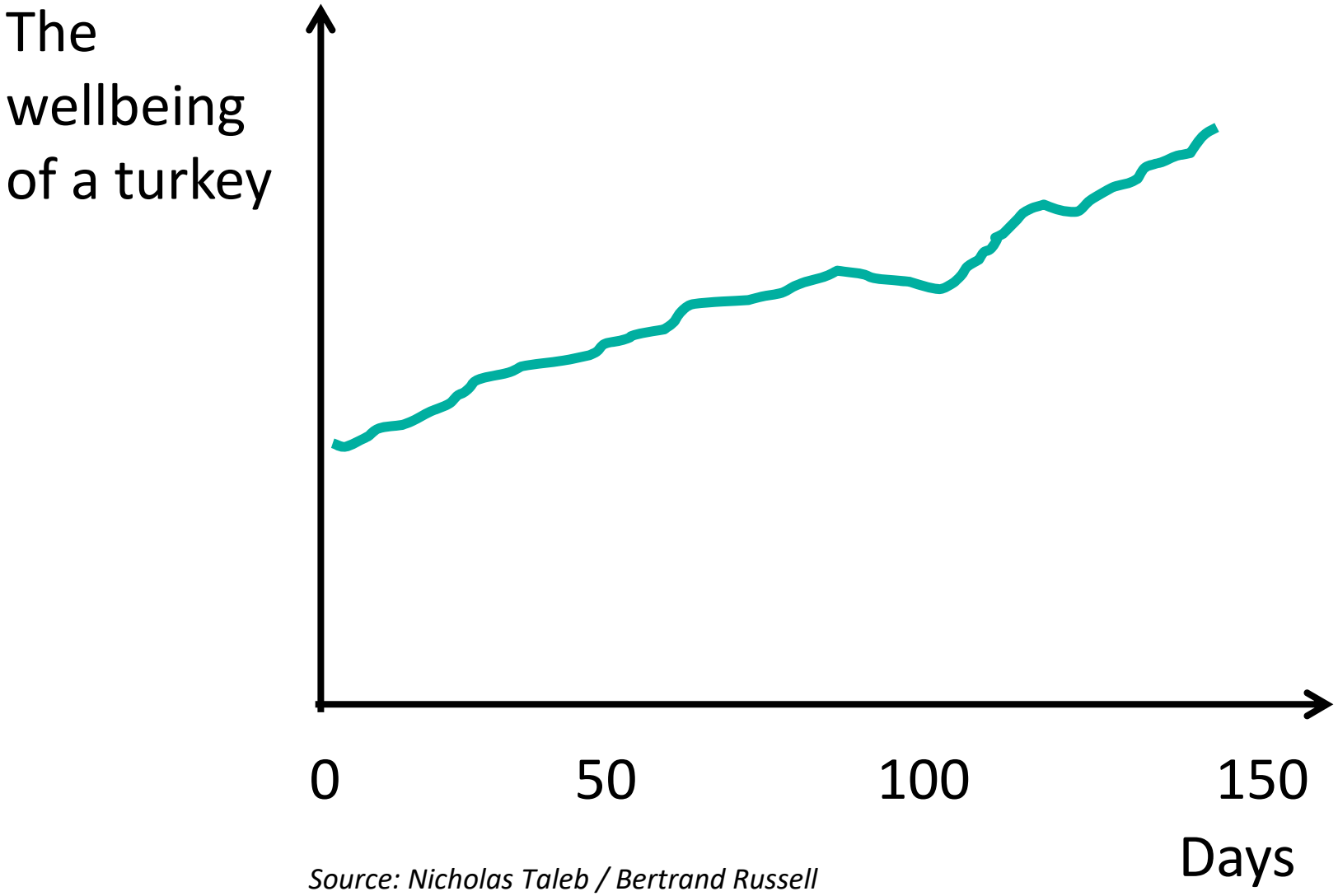
Past trends

Future forecasts

MoTiON



Tomorrow,
another yesterday?



Source: Nicholas Taleb / Bertrand Russell

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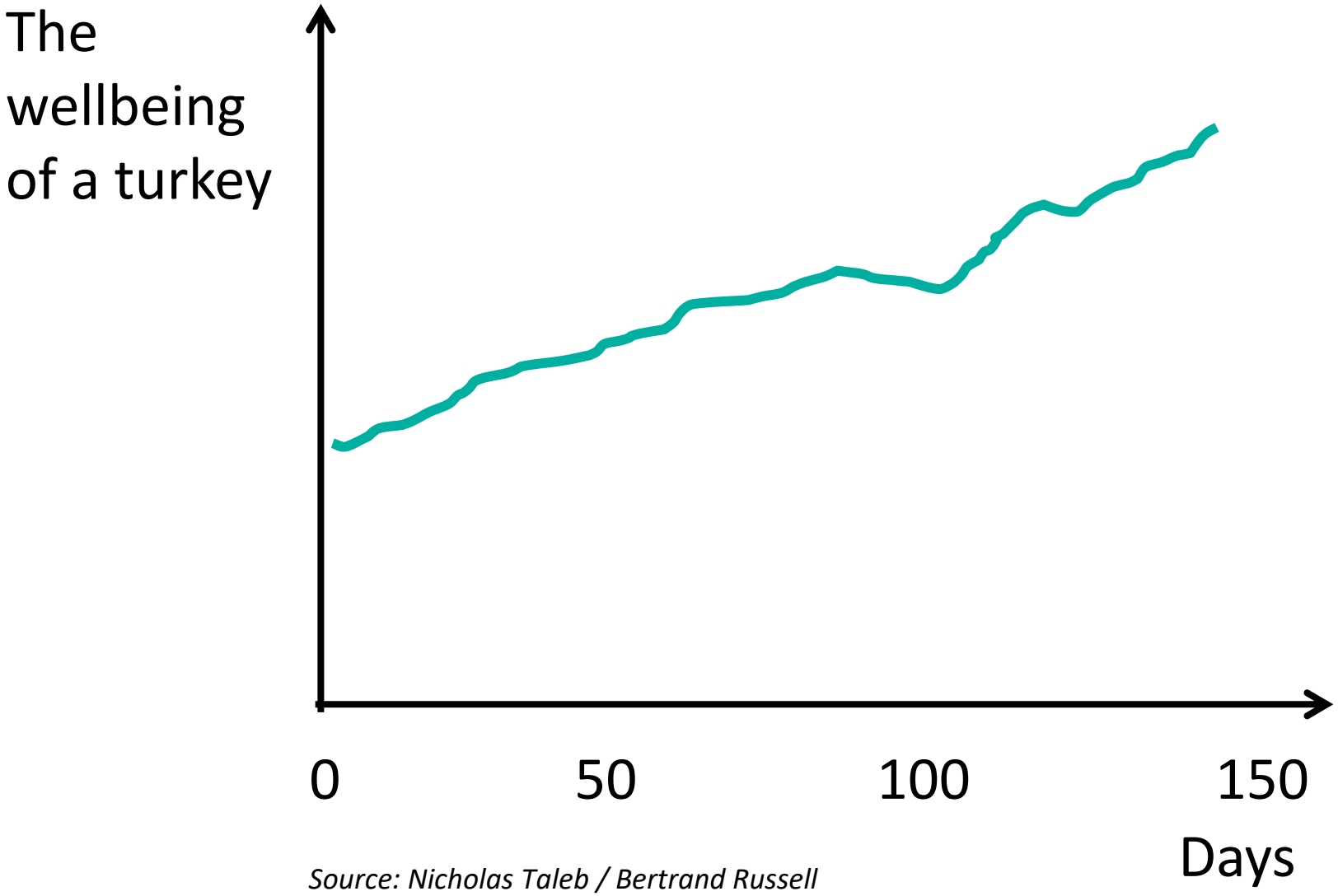

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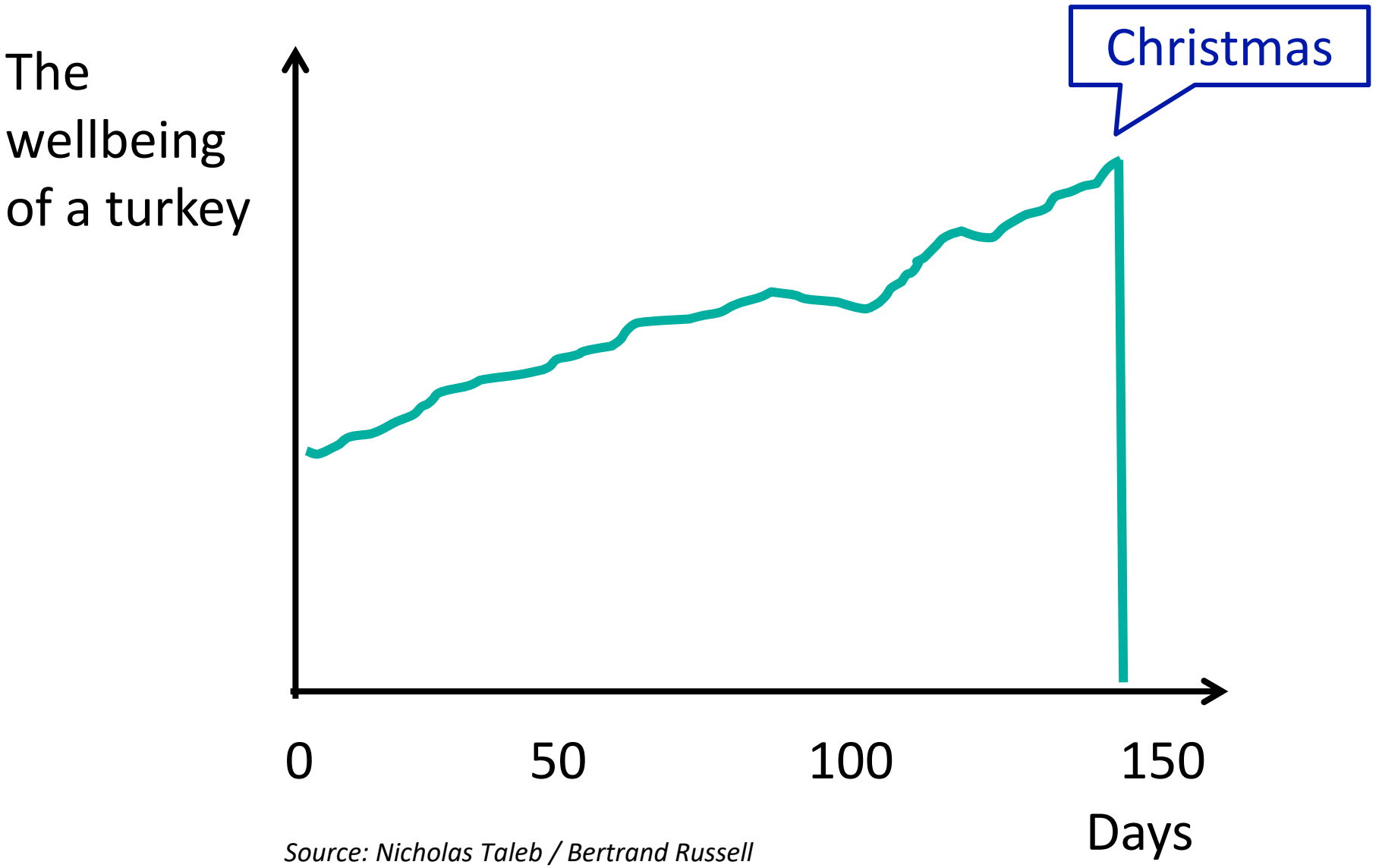
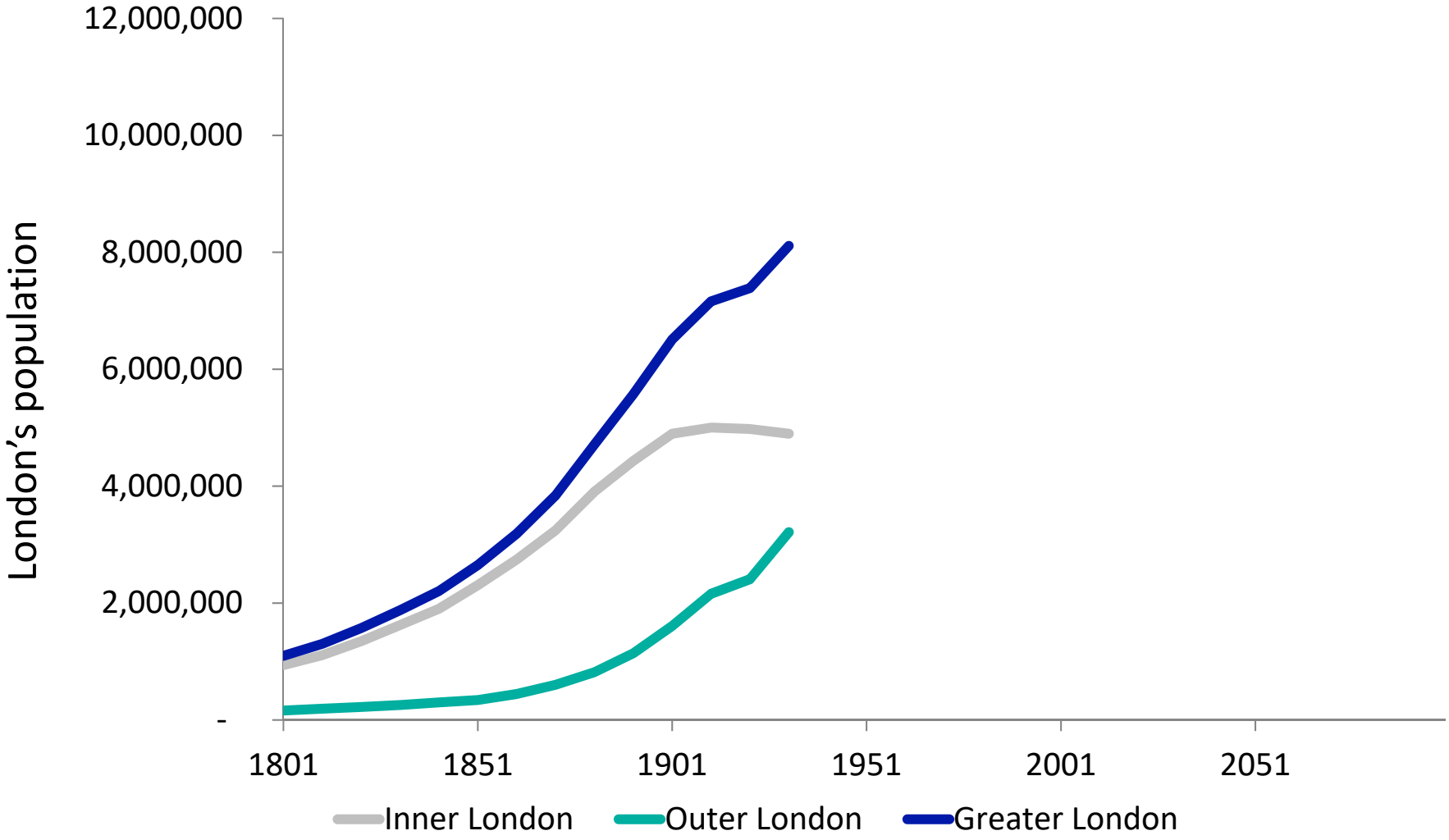


Source: Nicholas Taleb / Bertrand Russell

The past doesn’t always predict the future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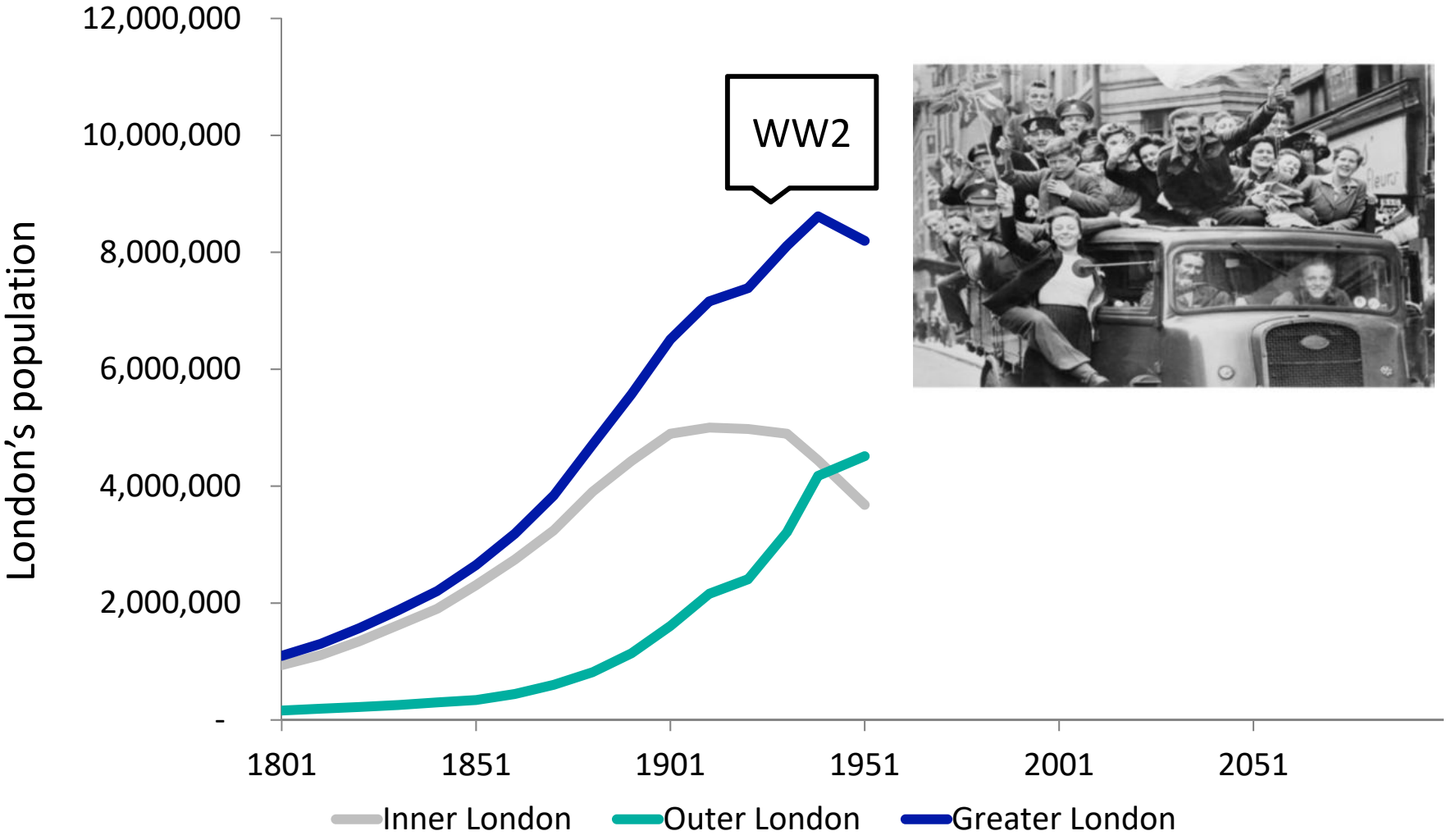
-
London's population
1801
1851
1901
1951
2001
2051
Inner London
Outer London
Greater London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London's population
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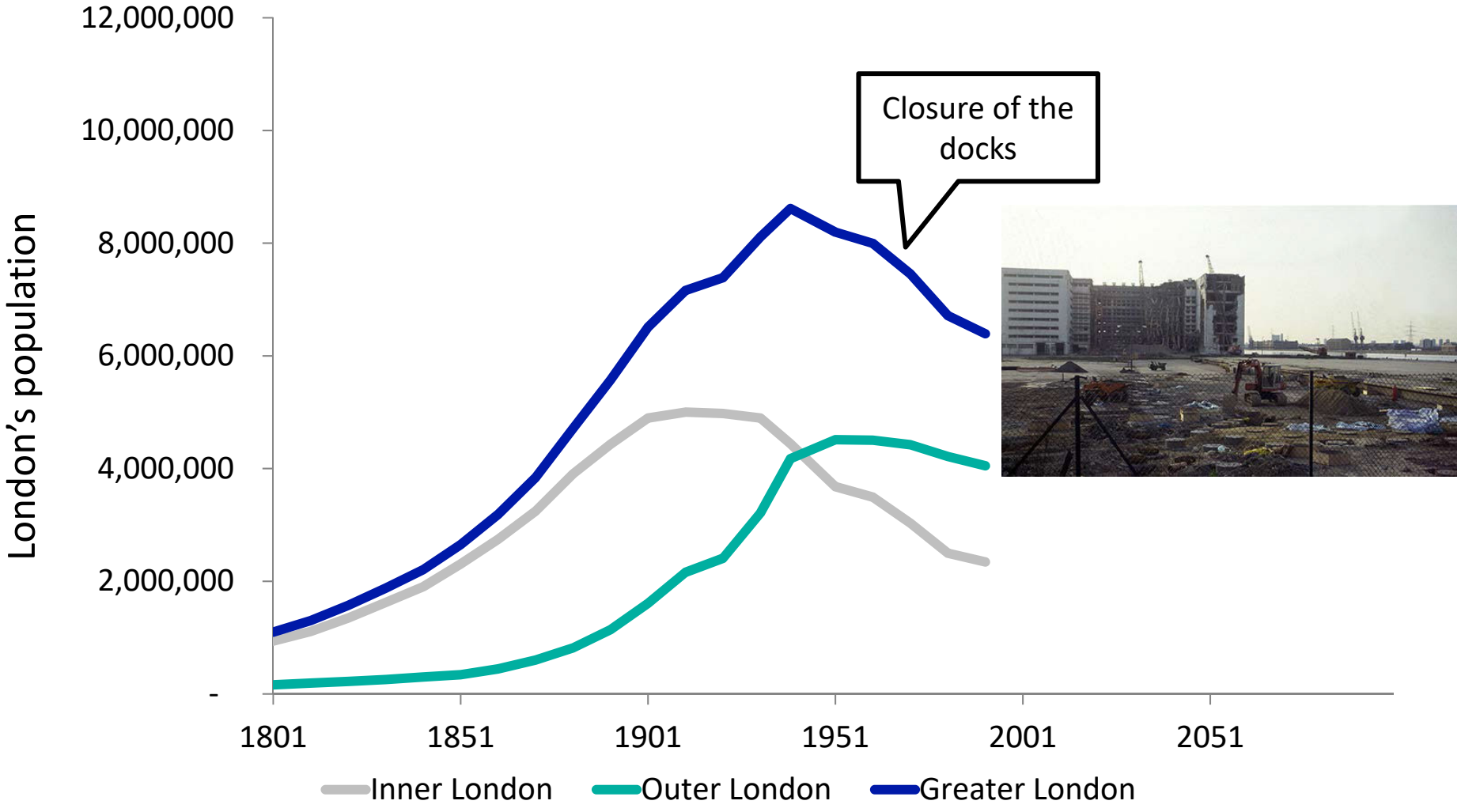
WW2
Inner London
Outer London
Greater London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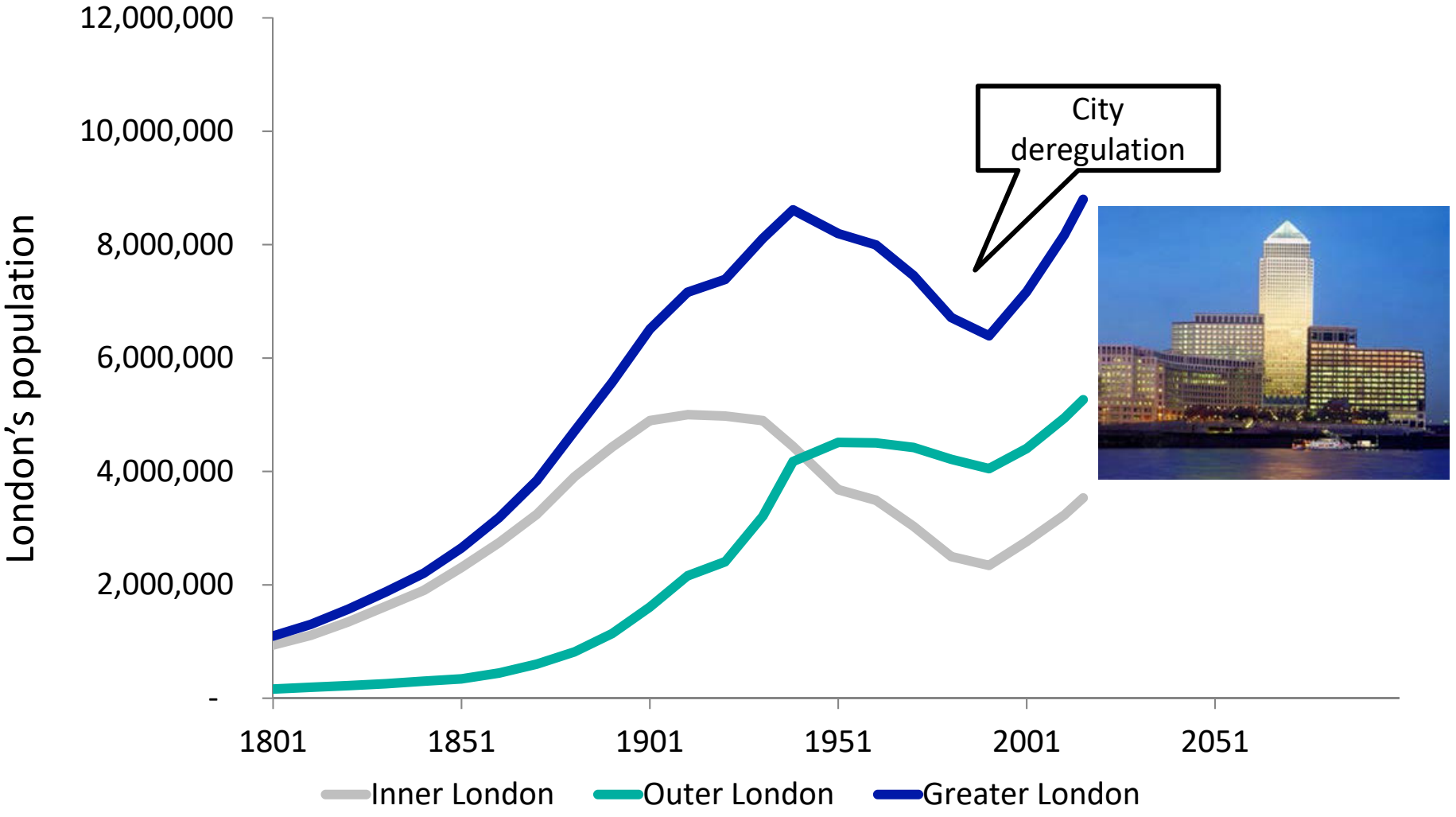
London's population
1801
1851
1901
1951
2001
2051
Closure of the docks
Inner London
Outer London
Greater London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London's population
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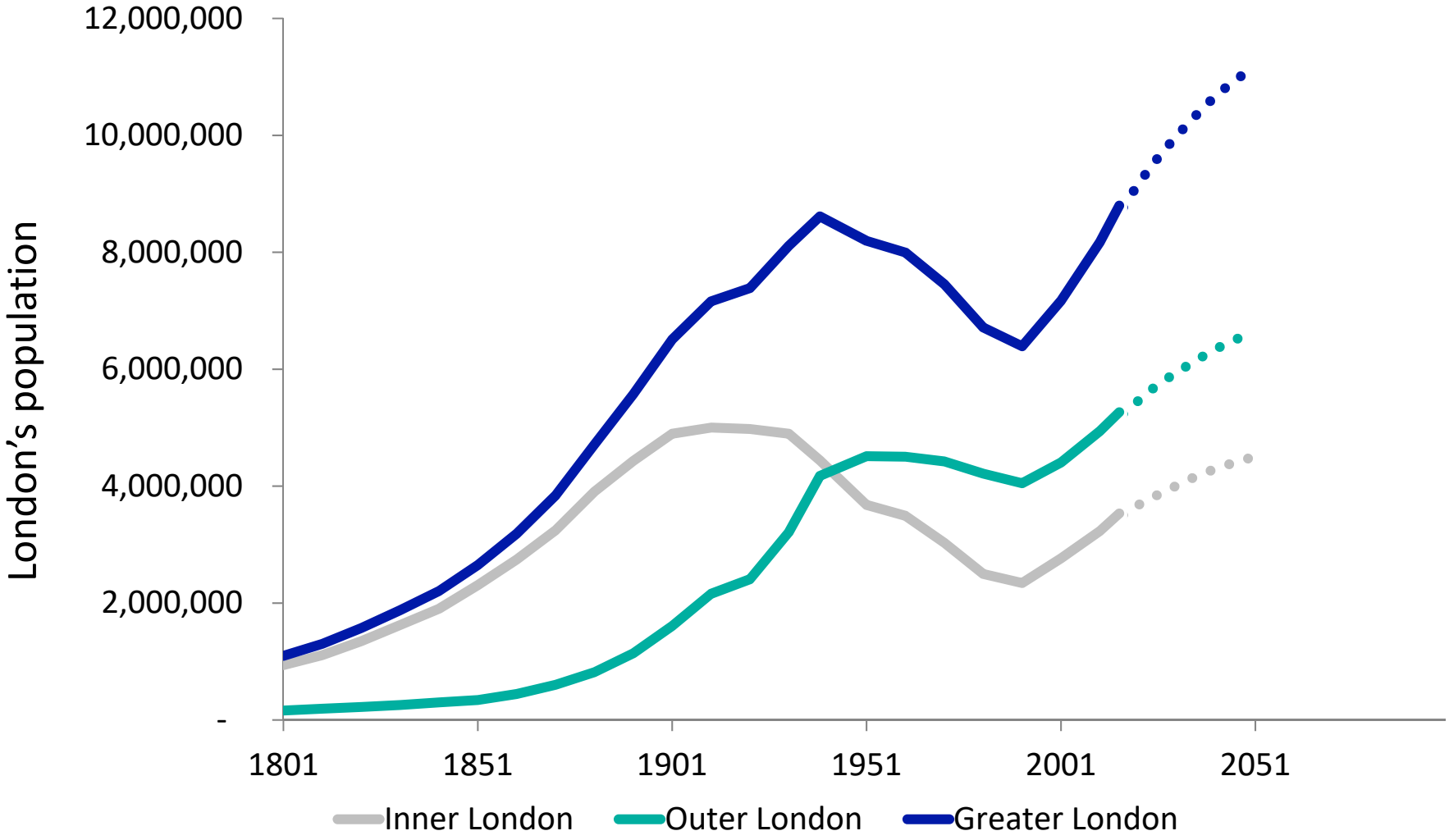
1901
1951
2001
2051
City deregulation
Inner London
Outer London
Greater London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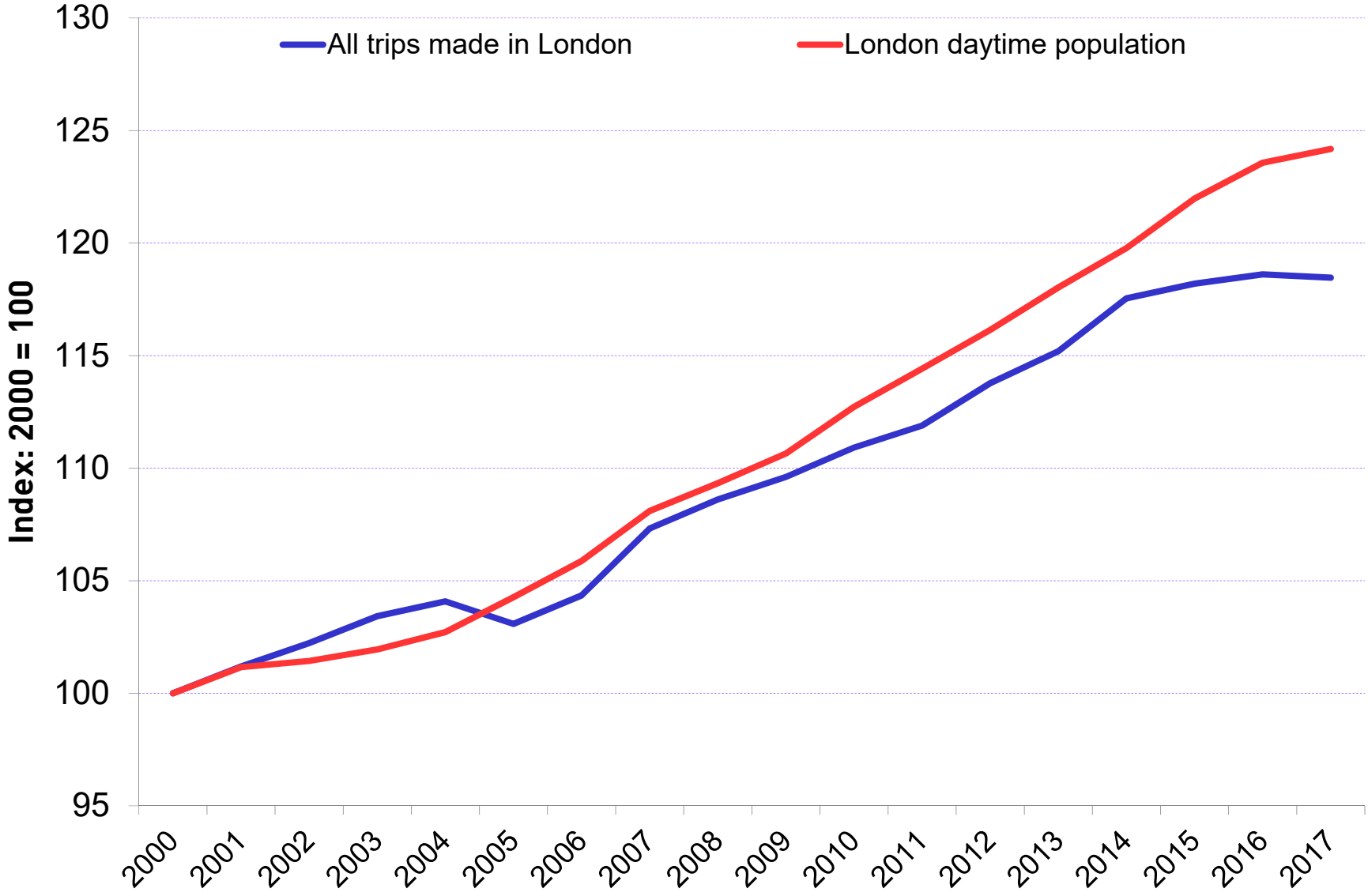
London's population
1801
1851
1901
1951
2001
2051
Inner London
Outer London
Greater London

There are signs of change...


All trips made in London
London daytime population
Index: 2000 = 100
130
125
120
115
110
105
100
95
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

PUT IT TO THE PEOPLE
WE DEMAND A PEOPLE'S VOTE
PUT IT TO THE PEOPLE
IF BREXIT
BE SAME REMAIN
LET DEMOCRACY
DONT LET OUR GO
ILL BE LOVIN EU
IKEA HAS BETTER CABINETS
If we go it alone we're...
HOSTILE
POOR
UNGOVERNABLE

THE
BORING
COMPANY

A ‘perfect storm’

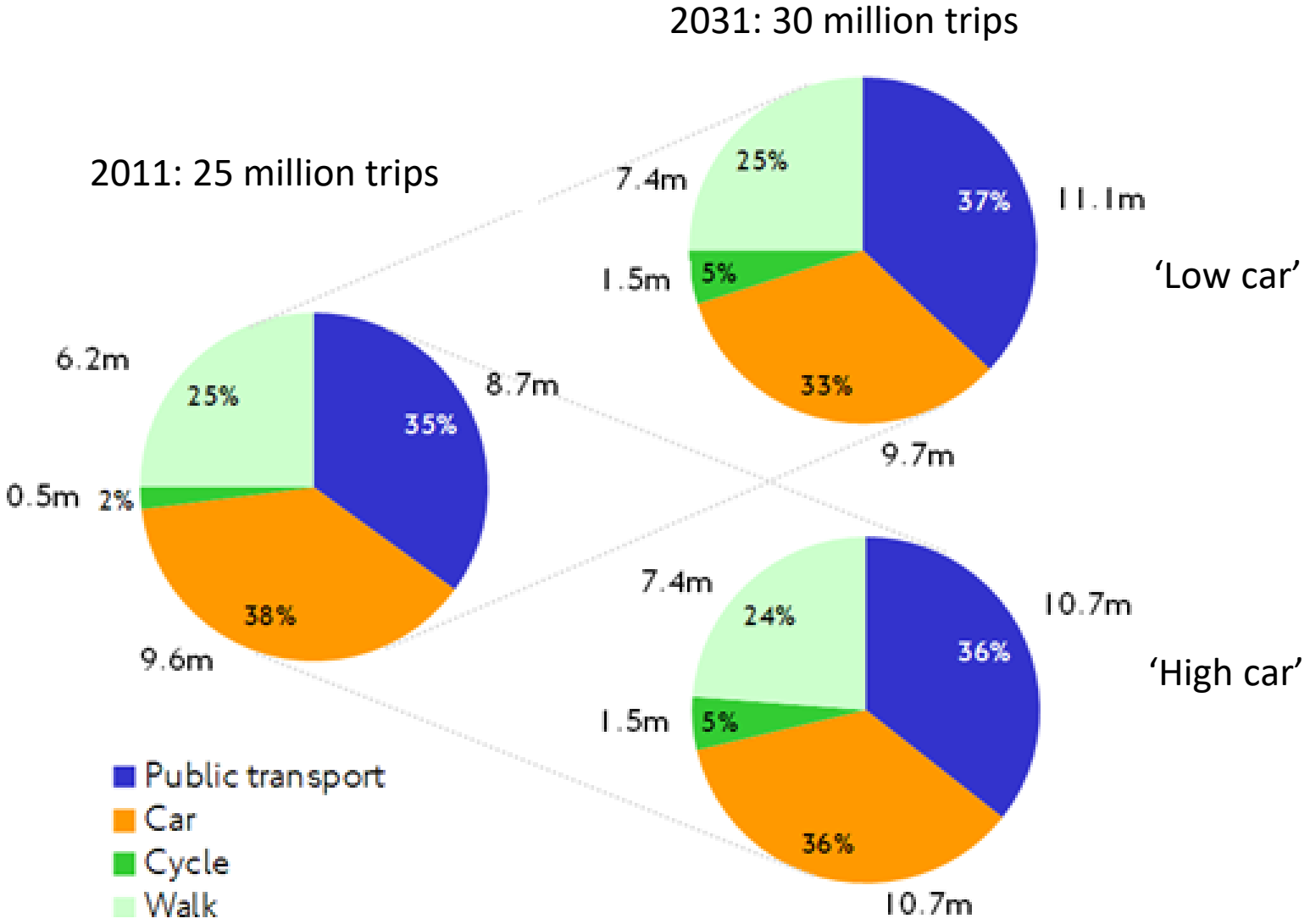
Economic uncertainty

Travel behaviour change

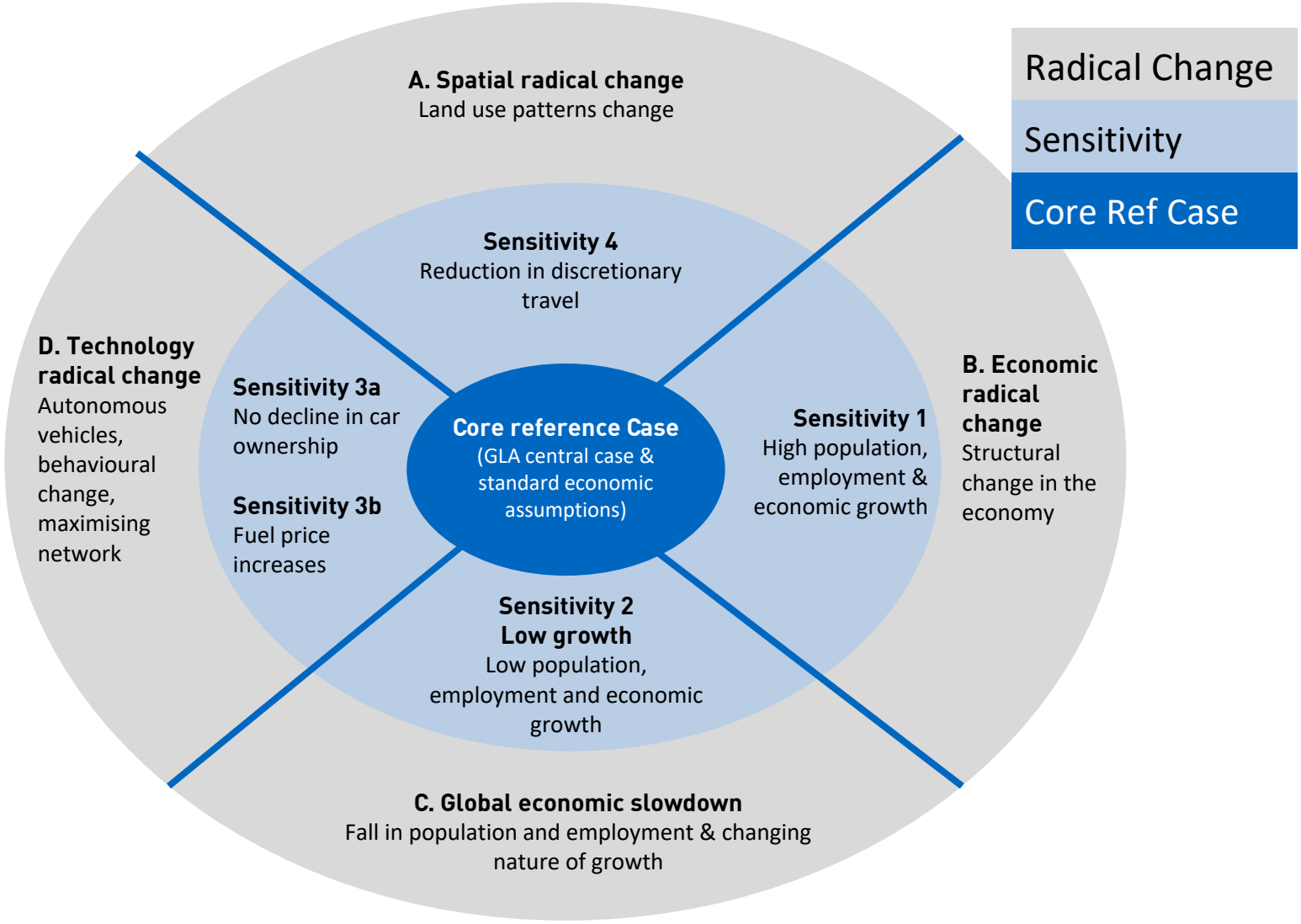
New business models

In the past, we have used sensitivity tests

‘High car’ and ‘low car’ scenarios



The ‘wheel of uncertainty’

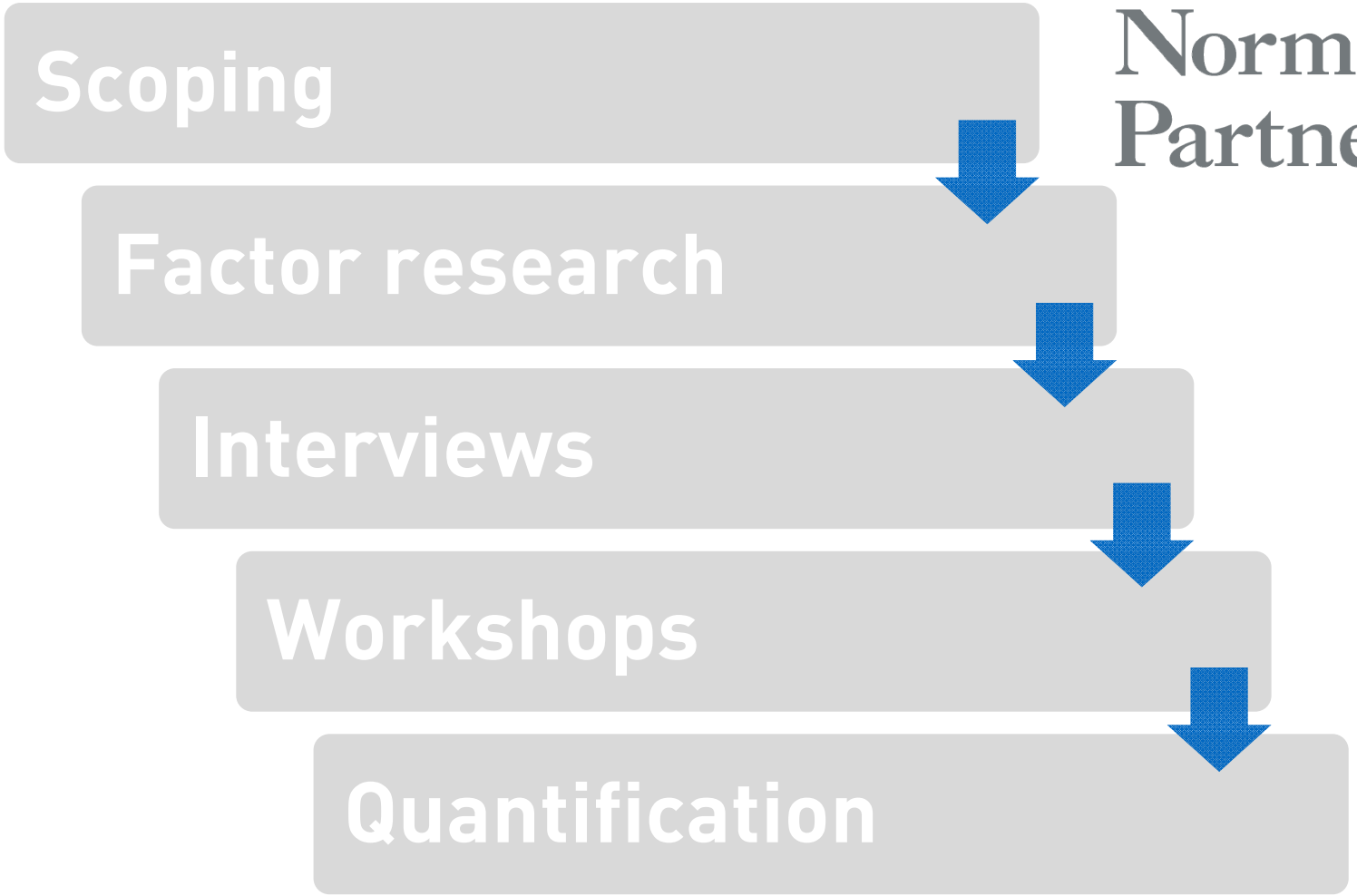


A Scenario Planning approach takes into account multiple intersecting uncertainties

Aim:

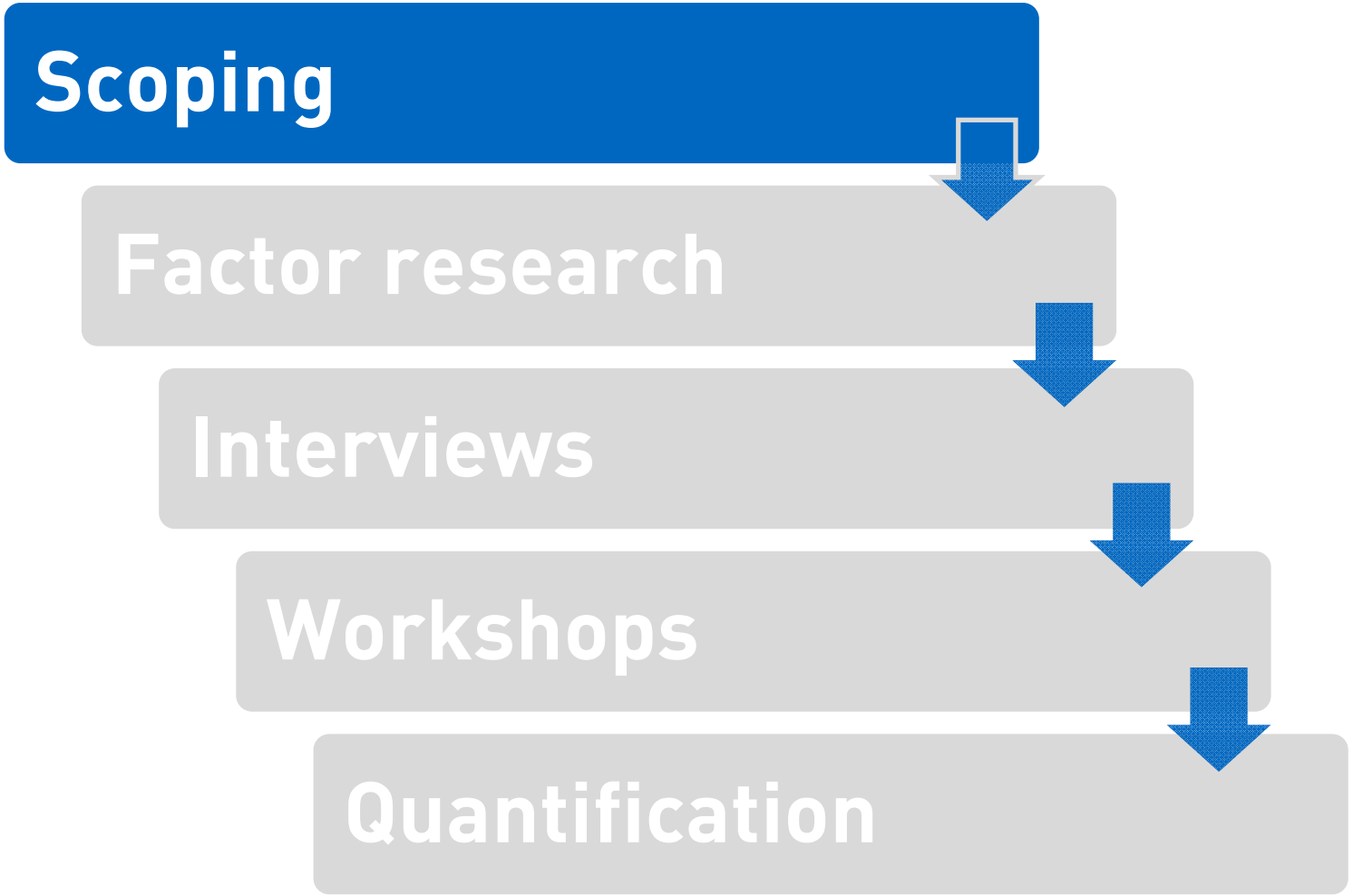
Challenge our assumptions about the future and help us to embrace uncertainty in our plans

Scenario planning approach



Normann Partners

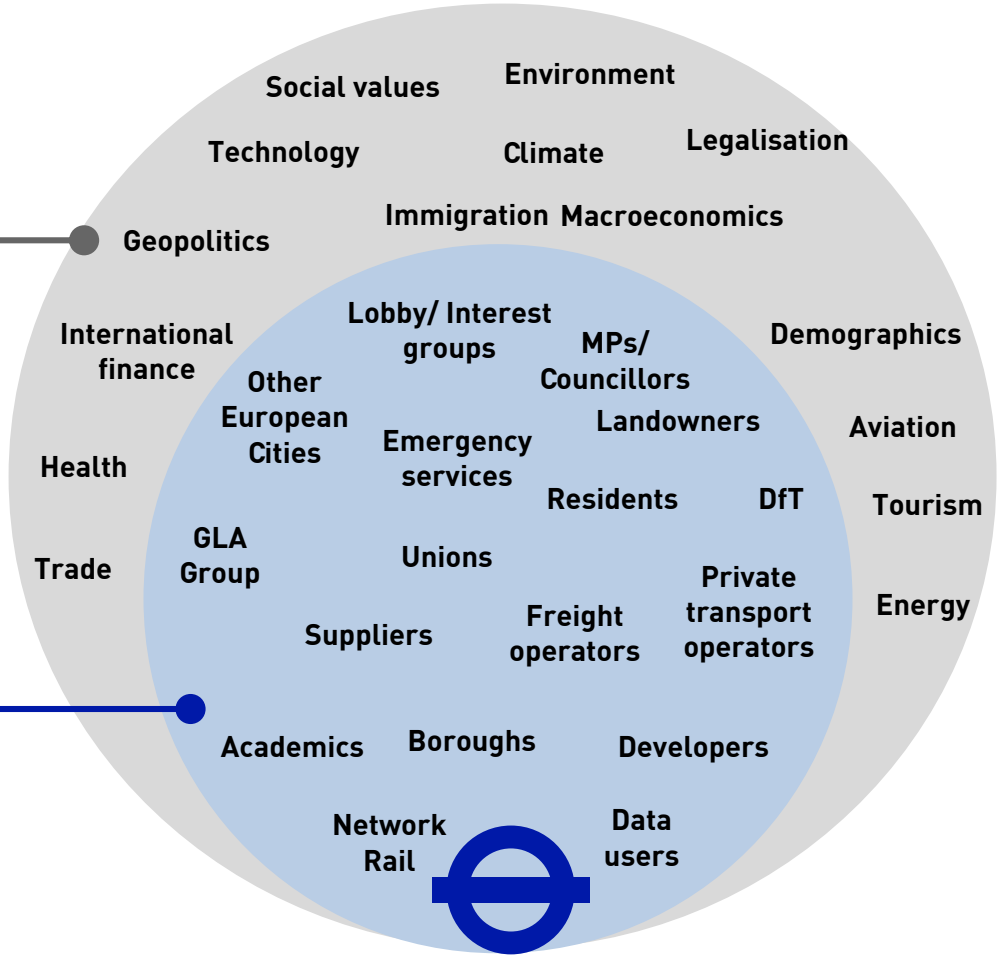
Scenario planning approach



TfL's wider context

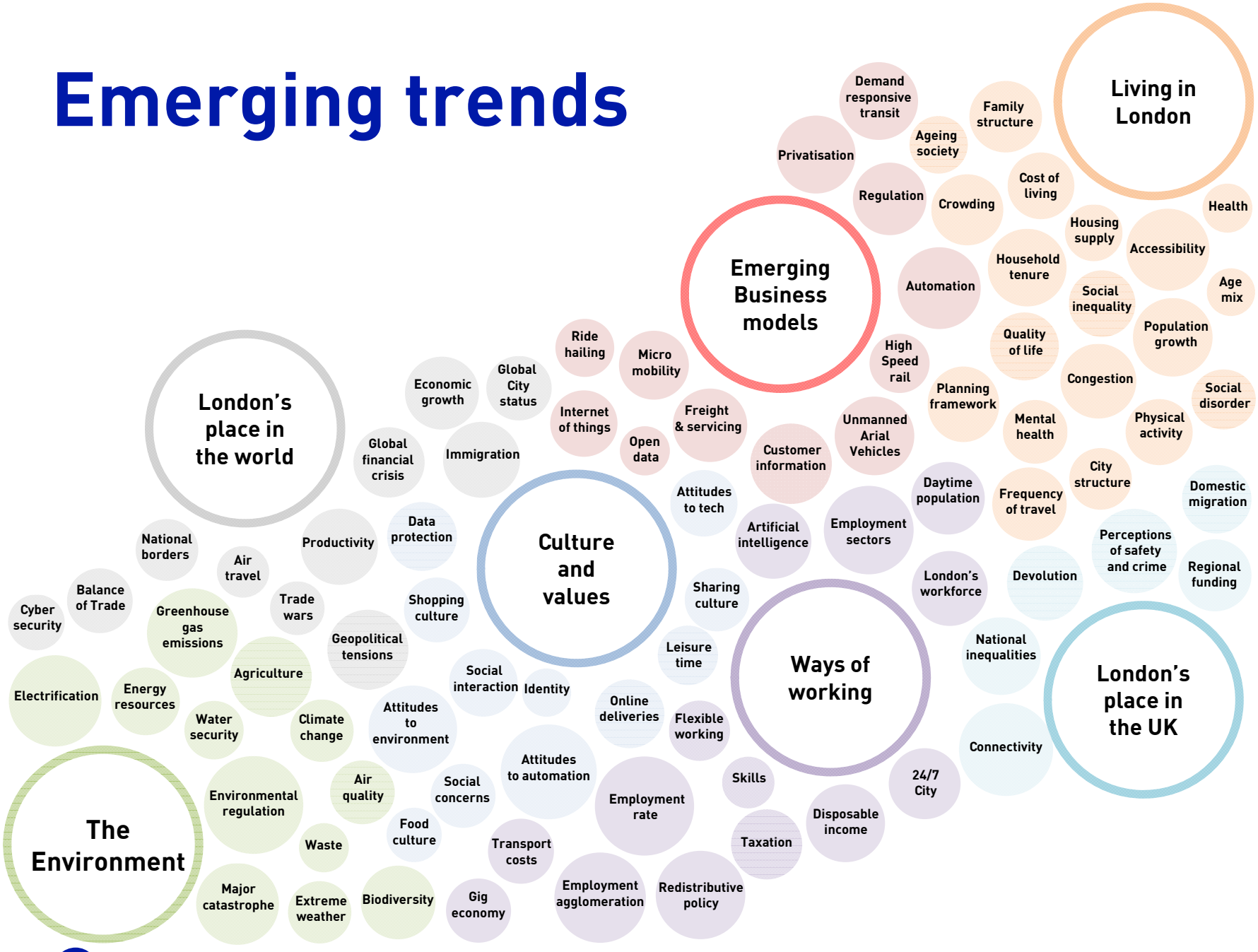
Contextual Environment

Transactional Environment



Scenario planning approach

Emerging trends



Scenario planning approach

Interviewing decision makers

Interviewing decision makers

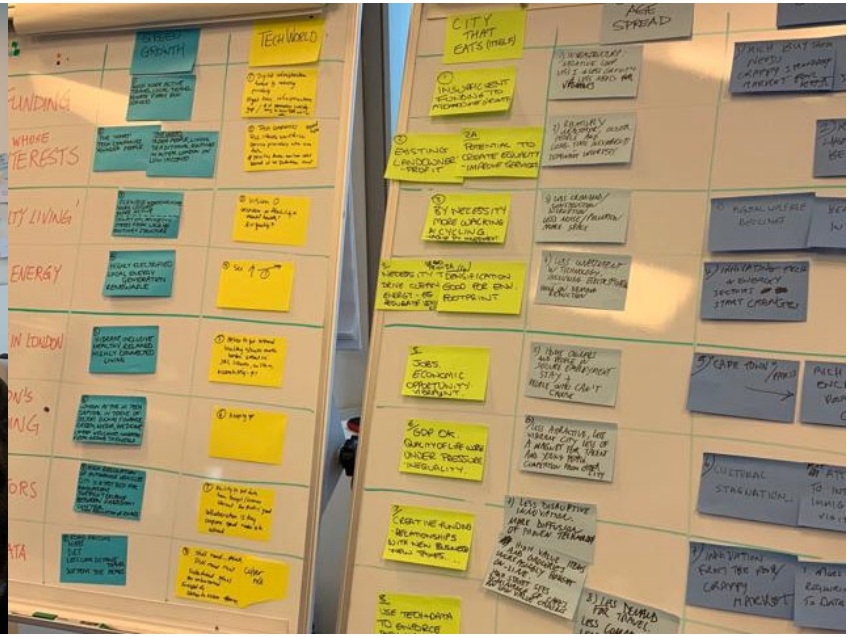
'Automation increases the utility of the city for its citizens because it's not so congested anymore. There's more space for business to be done and it's also a more pleasant space to be in'

'While public transport authorities have been somewhat stuck in their thinking, private operators have begun to fill in the gaps'

Scenario Planning approach

Workshops

Scenarios for the Future of Travel in London
Overnight reflections
What did we miss?
What crucial element did not feature in any of the stories we heard?
Any other reflections?


TECH WORLD
CITY THAT EATS ITSELF
ENERGY

Scenario Planning approach

New modelling approaches

Outcome:

3 stories about the future of travel in London

3 Stories about the future

Innovating London:

The story of London re-inventing itself as a young, urban innovator, where technology changes how people live and work, but leaves some behind

Rebalancing London:

The story of a more equal but ageing society with lower economic growth, that focuses on self-sufficiency and liveability as world power moves East

Accelerating London:

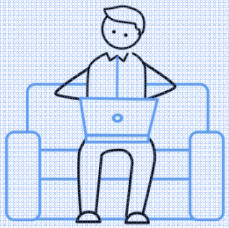
The story of an ever-growing, expanding London which acts as the beating heart of the world financial system, but struggles to deliver high quality of life for all

Each scenario has distinct implications for travel in London

Travel Implications

Innovating London

Existing public and private transport is challenged by new modes



Technology reduces need to travel for some

Local hubs provide potential for active travel

People make more off-peak trips

More ‘public transport’ is privately run.

Travel Implications

Less crowding and congestion

Shorter trips in local area

Rebalancing London

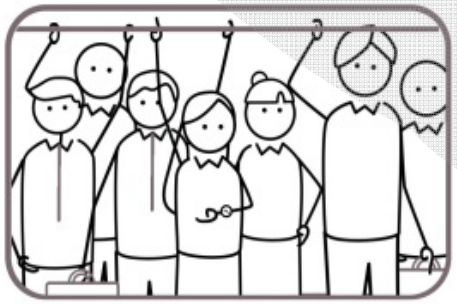
walking and cycling more attractive

Increased accessibility needs

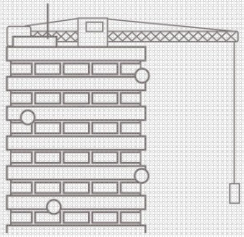
Travel Implications

Accelerating London

More travel than we are planning for

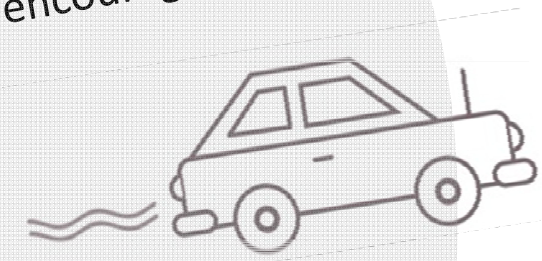


High pressure on radial links into central London



High density living increases potential for public transport

Housing built in areas of poor accessibility encourages car use



The environment is less pleasant to walk and cycle in

Our plans must be robust to a range of different futures

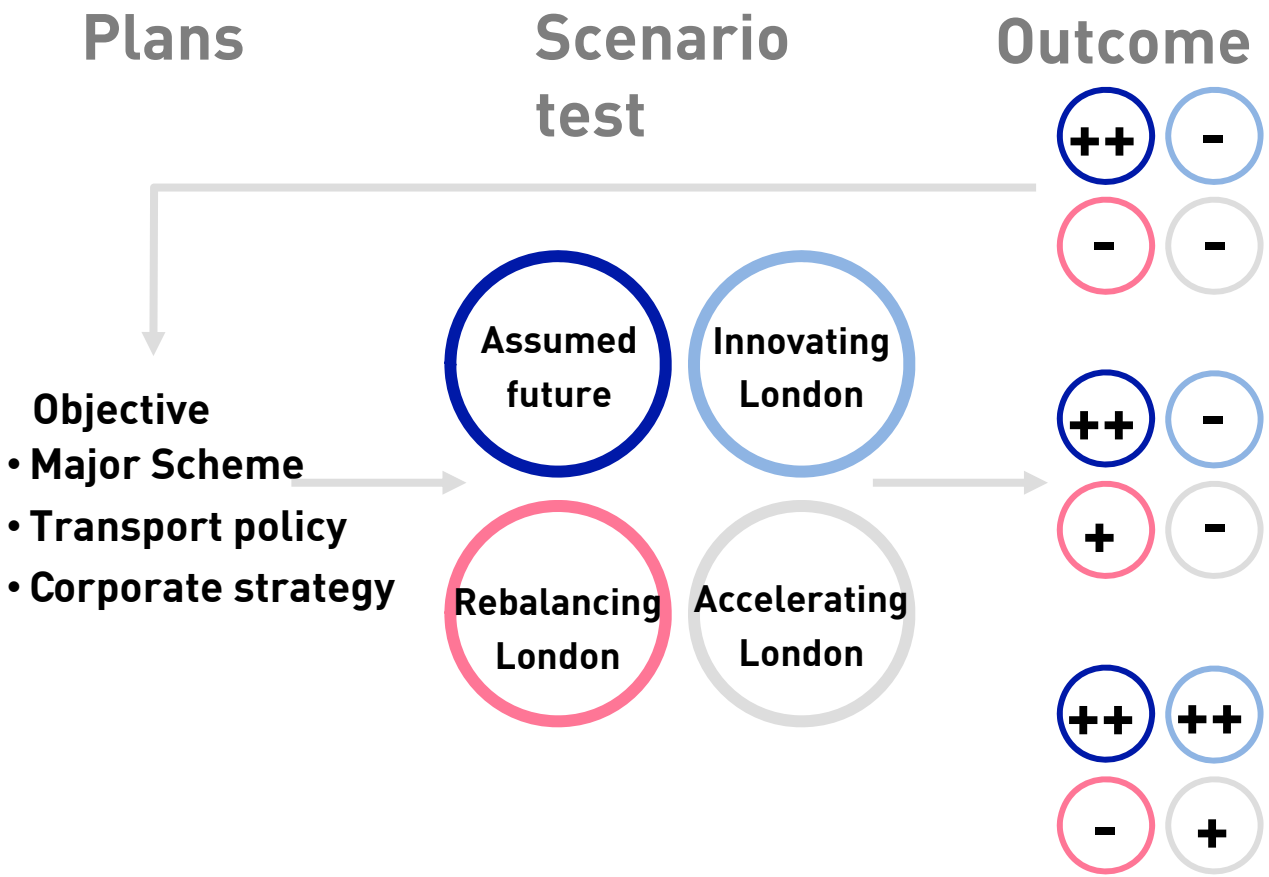
Using the scenarios

Major infrastructure projects

Corporate strategy

Mayor's Transport Strategy policies

Using the scenarios



a. Reconsider

This scheme only meets our objective in our assumed future. Look at other options that meet our objectives in an uncertain future.

b. Adjust

This policy doesn't meet our objective in some of our scenarios. Change the policy to make it work in more scenarios.

c. Proceed

This strategy meets our objective in the majority of scenarios. Proceed but keep scenarios in mind in strategy development.

Contact

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