Royal HaskoningDHV
Enhancing Society Together

The Impacts of Covid-19 on Travel Patterns in the UK

Initial Phase Research Findings

7 May 2020

Feedback and contributions

We welcome feedback and contributions towards this important research effort. Details can be discussed with our research leader below.

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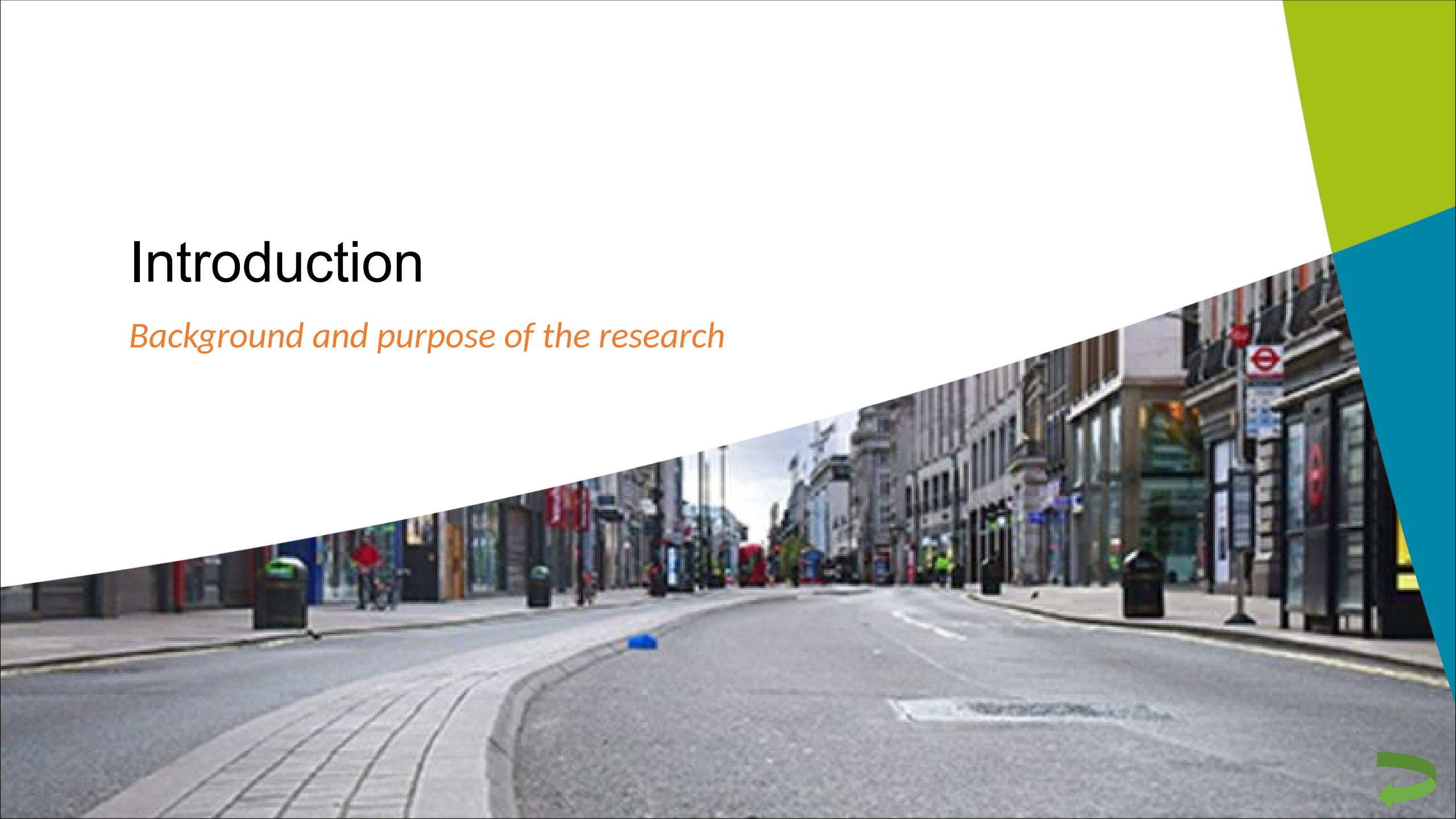
Introduction

Background and purpose of the research



Introduction

Background and purpose of the research

Since the UK went into lockdown on 23 March 2020, travel conditions have changed dramatically across the nation. Royal HaskoningDHV is researching the effects of these changes with some of our key stakeholders, industry colleagues and clients.

Given the unprecedented climate we are now facing, this research is not a one-off exercise but rather an on-going process to monitor and assess the situation. This will give us a clearer understanding of people's evolving responses to the developing conditions. As we progress through later phases of this research, we plan on publishing more papers.

In this initial paper, we present the scale of the impacts across the UK, split by geographical regions to allow a comparison of different variations. This analysis provides some important travel trends about conditions over the first few weeks of the lockdown restrictions, which we are pleased to share with the wider community for the benefit of better understanding the implications of the conditions currently being faced.

We have always been at the forefront of providing deep insights for the greater good. In fact, it is built into our motto: ***'Enhancing Society Together'***. In preparing this research, our aim is to help to guide planners, transport operators and authorities. We welcome feedback and contributions towards this important research effort. Details on how to support this on-going research are set out at the feedback section of this research paper.

Aims of this research:

1. **Gather information and analyse data on travel patterns across the United Kingdom (UK)**
2. **Present an overview of the key recent trends by the main modes of travel in each of the UK regions**
3. **Summarise the views and findings from other key stakeholders, industry colleagues and our clients**
4. **Provide insight on the likely outlook as we leave the lockdown to guide planners, operators and authorities**
5. **Foster discussion among the wider community for the benefit of better understanding the conditions currently being faced**

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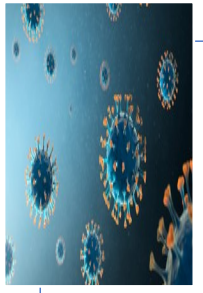
Structure of this research paper

1. Introduction

Provides an overview of the aims and purpose of the research.

2. Observed changes

Summarises the observed trends in travel patterns across the United Kingdom. These are presented by the main modes and in different geographical regions to highlight variations.



3. Life after the Pandemic

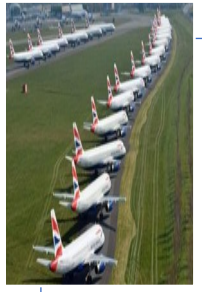
Outlines some other research findings from key stakeholders and how these relate to the current Covid-19 lockdown restrictions.

4. The need for a nationwide survey

Defines proposals for further surveys and analysis in the next phase of the research.

5. Economic changes

Presents a high-level overview of how the economy is forecast to change, with insights into how this may effect the transport sector.



6. Can we reboot 2020?

Sets out the emerging findings and the potential outlook for planners, transport operators and authorities.

Observed changes

Travel patterns across the United Kingdom

Observed changes

Travel patterns across the United Kingdom

There is no doubt that the Covid-19 lockdown restrictions have had significant impacts on traffic and travel patterns across the UK. These include both urban and rural areas. To examine the changes, we sourced data from stakeholders, industry colleagues and clients.

This includes information from Google Analytics, Apple Mobility, Transport Operators and TomTom Satnav. As a progressive consultant involved in smart mobility, we are experienced in using the power of data and digital solutions to analyse trends and identify the underlying causes.

Our analysis has shown extraordinary changes in trips and a glimpse of the new world we will be faced with after we emerge from the lockdown restrictions.

Table 1 opposite summarises the deepest changes as well as the recent modest uptake over the last few weeks. The data has been analysed by separate regions making up Great Britain and Northern Ireland, thereby highlighting differences across various locations in the UK.

Looking at different modes by different geographical regional areas, Figures 1 to 10 over the next pages show the changes throughout the UK. The travel flows baseline selected was 31 January 2020 with all past volumes compared against that baseline date.

Table 1 – Summary of changes in trips across the UK (2020)

Geographical Regions	Change in Trips (Average of All Modes)	
	6 March vs 29 March	16 April vs 1 May
Scotland	-94%	+12%
Northern Ireland	-87%	+18%
North East and Yorkshire	-82%	+10%
North West	-84%	+5%
Wales	-76%	+11%
Midlands	-81%	+6%
East of England	-73%	+14%
South East	-93%	+17%
London	-89%	+9%
South West	-88%	+2%
All UK (Average)	**-85%**	**+9%**

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Observed changes

Travel patterns across the United Kingdom

Figure 1 – Travel changes in Scotland (2020)

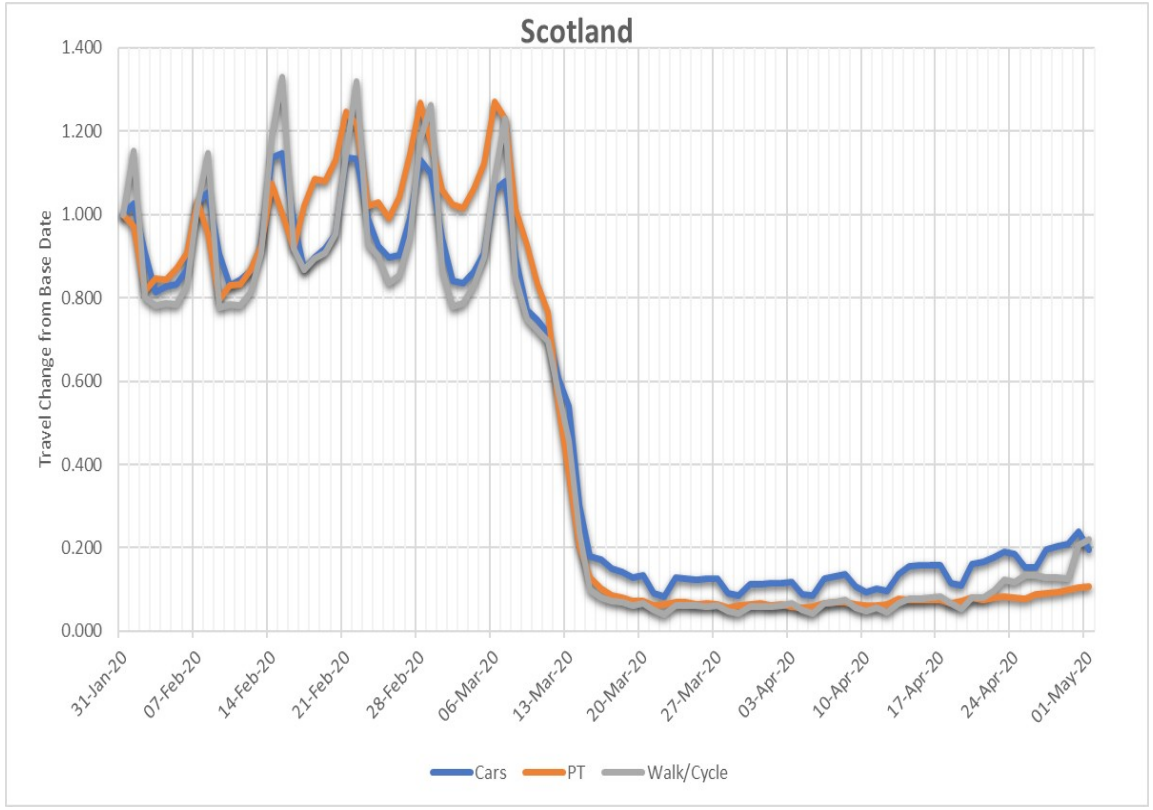
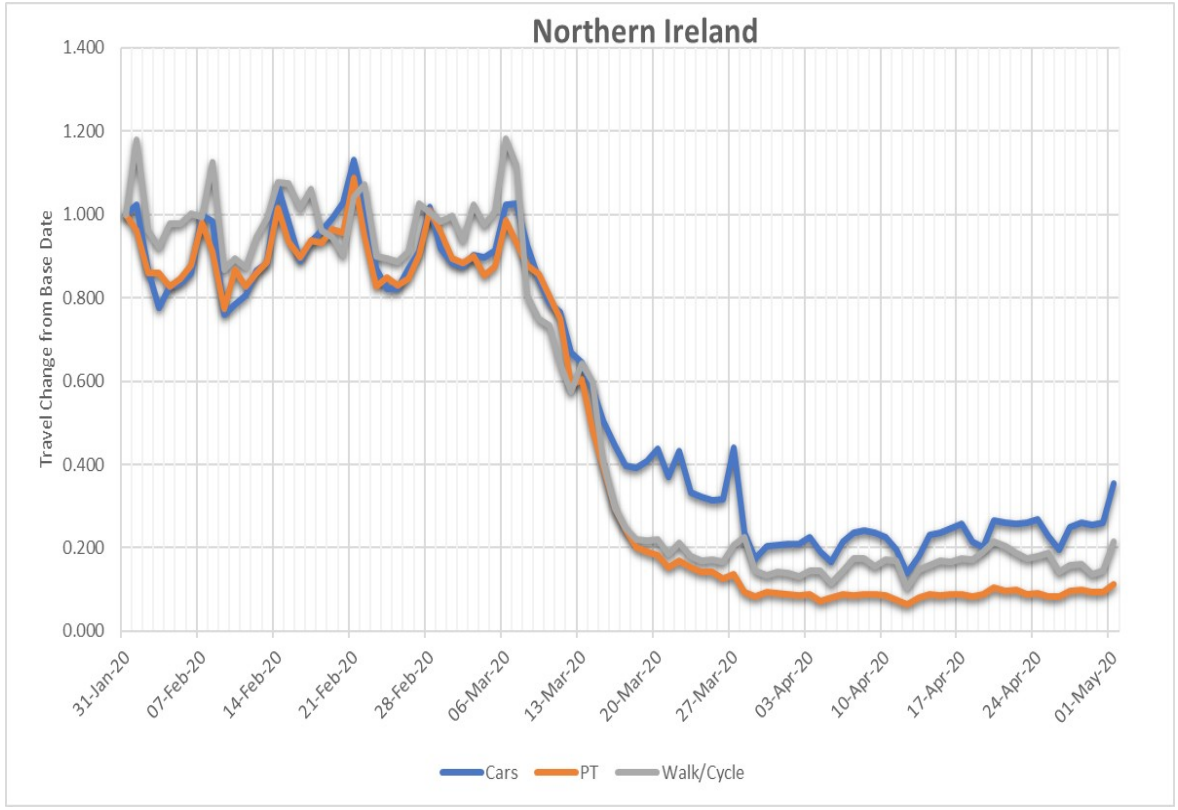


Figure 2 – Travel changes in the Northern Ireland (2020)



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Observed changes

Travel patterns across the United Kingdom

Figure 3 – Travel changes in the North East and Yorkshire (2020)

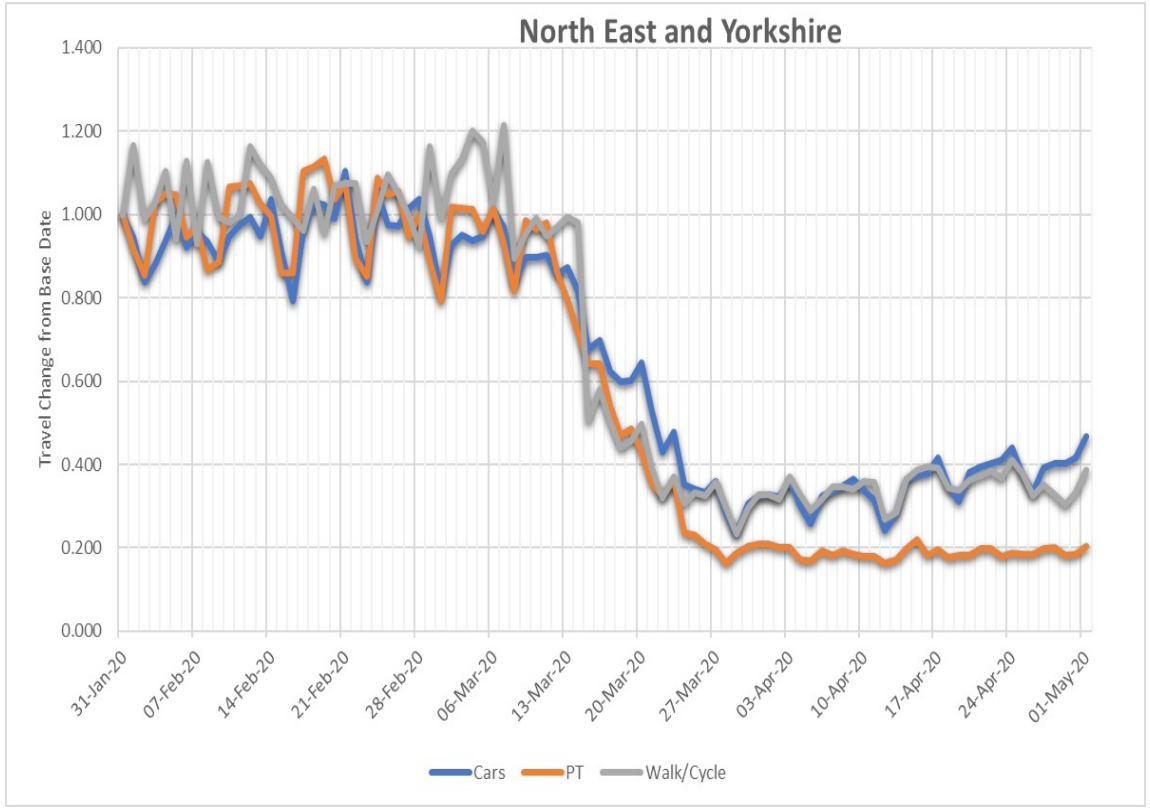
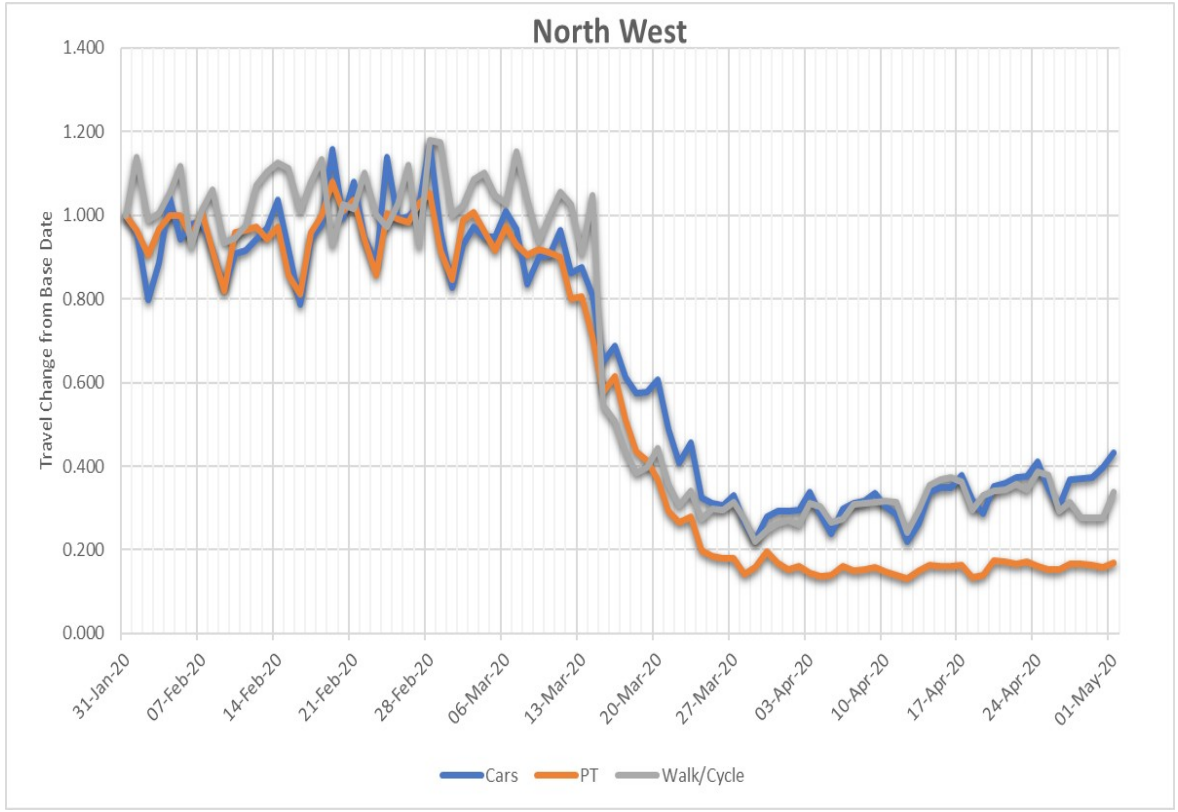


Figure 4 – Travel changes in the North West (2020)



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Observed changes

Travel patterns across the United Kingdom

Figure 5 – Travel changes in Wales (2020)

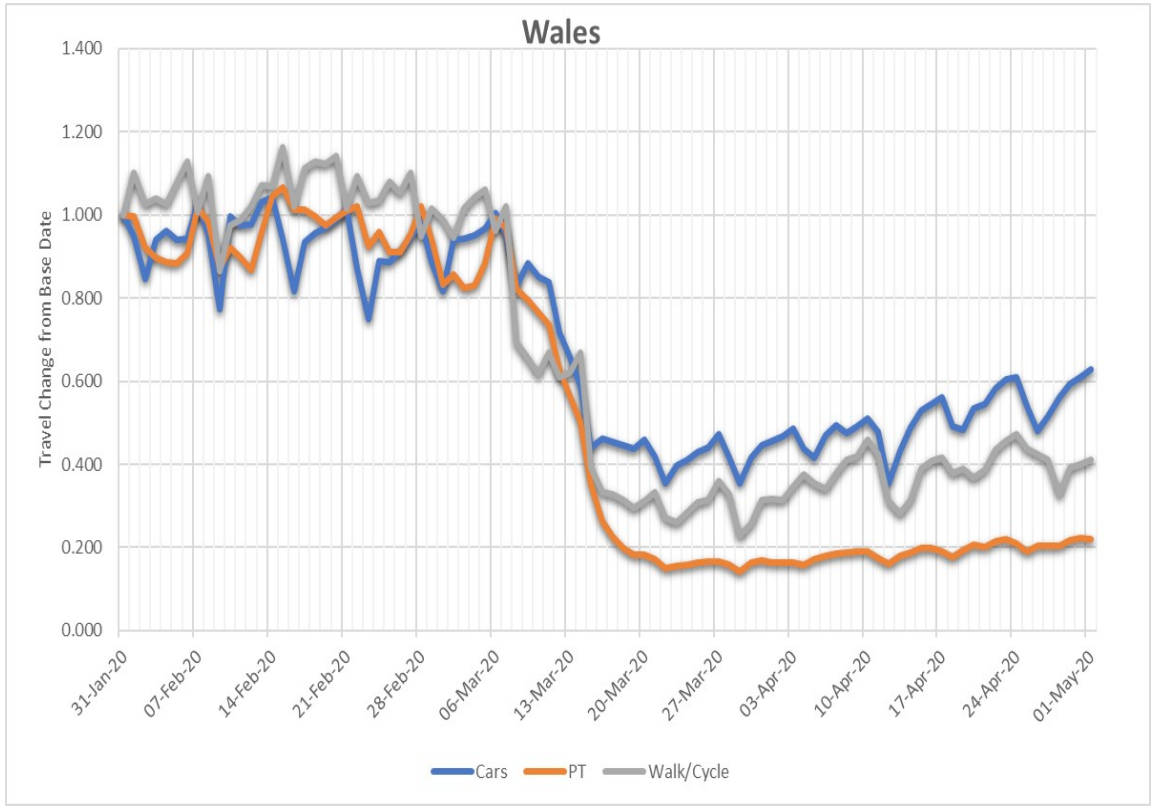
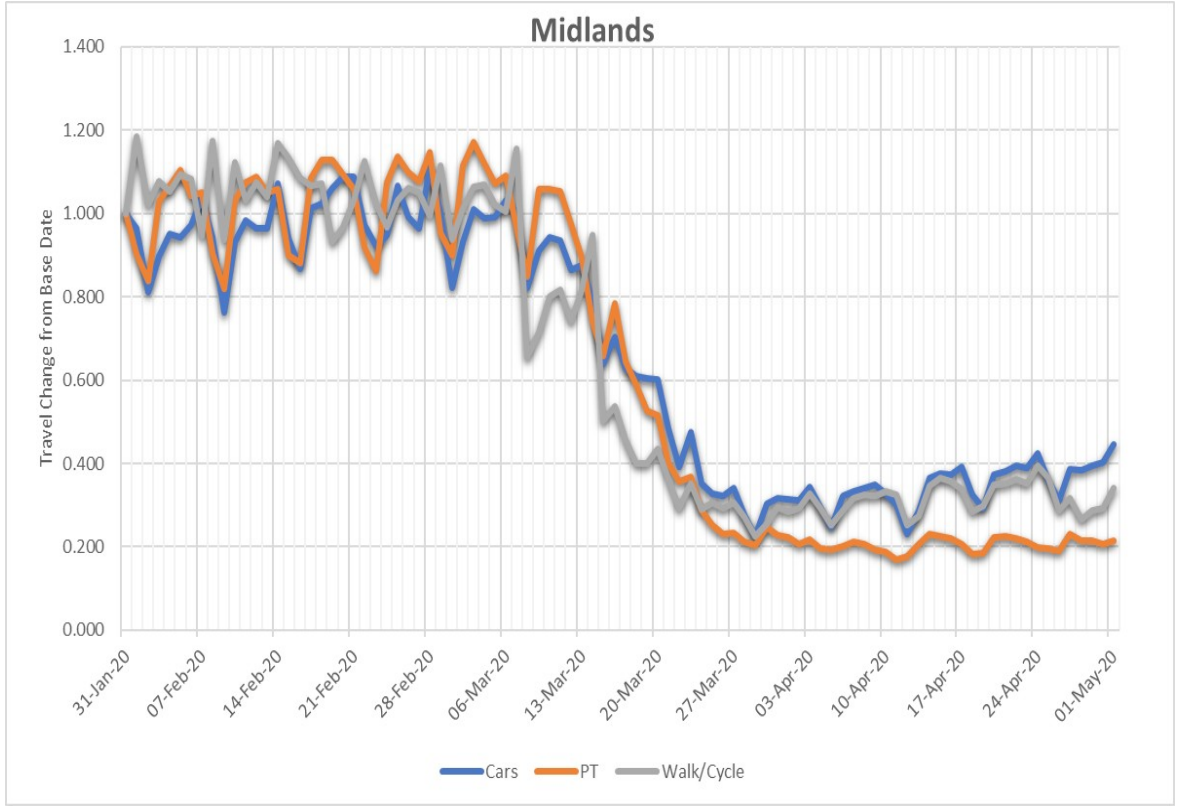


Figure 6 – Travel changes in the Midlands (2020)



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Observed changes

Travel patterns across the United Kingdom

Figure 7 – Travel changes in the East of England (2020)

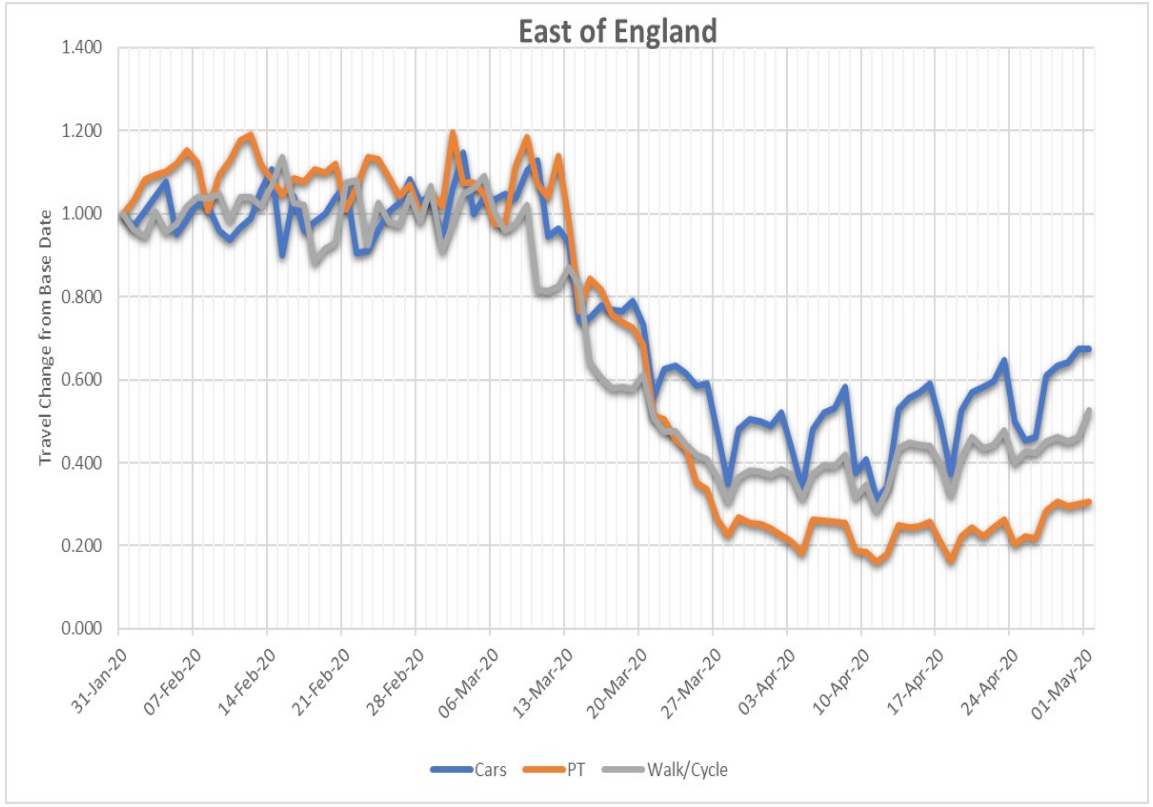
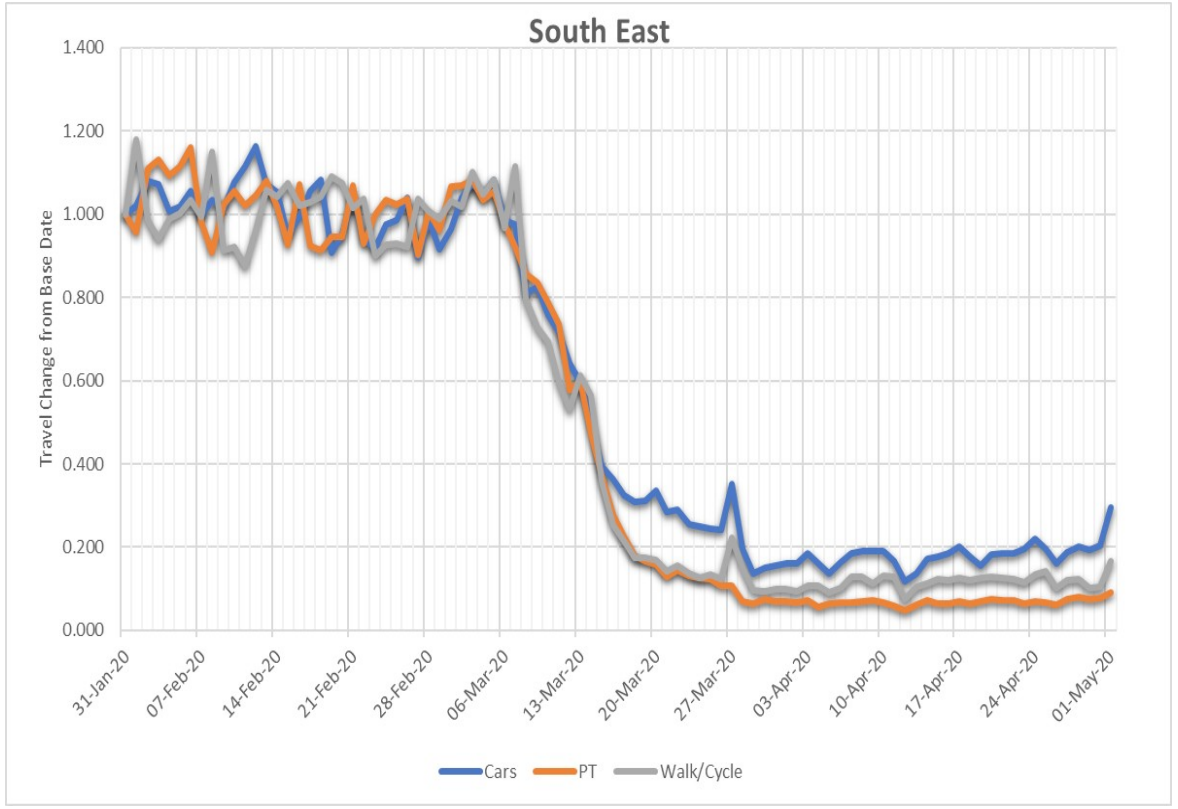


Figure 8 – Travel changes in the South East (2020)



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Observed changes

Travel patterns across the United Kingdom

Figure 9 – Travel changes in London (2020)

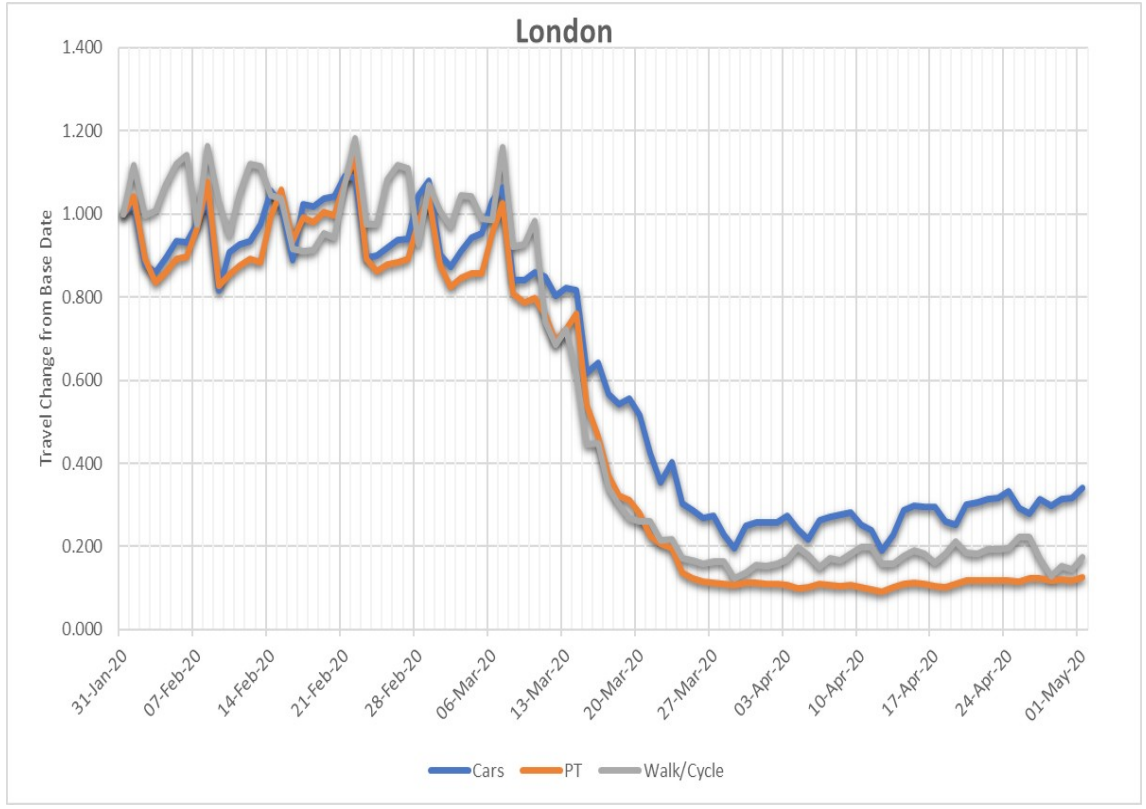
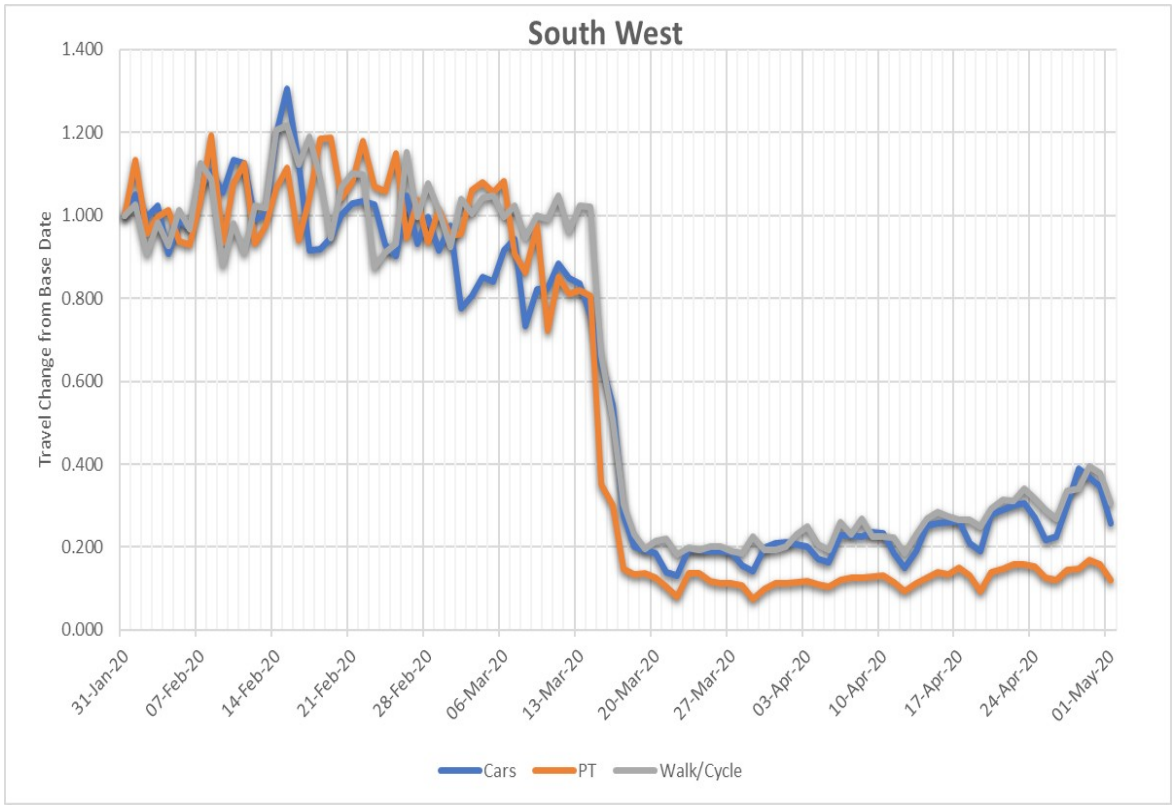


Figure 10 – Travel changes the South West (2020)



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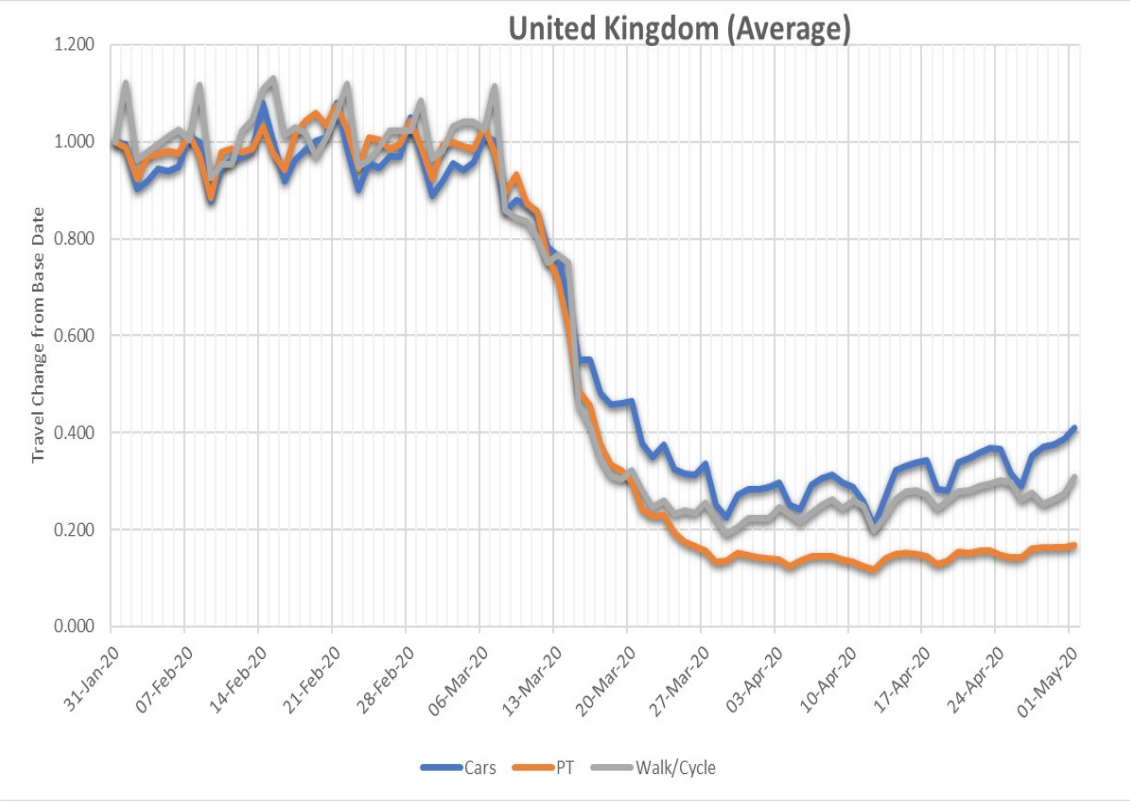
Observed changes

Travel patterns across the United Kingdom

Figure 11 – Travel changes averaged across the whole UK (2020)



In the early weeks of the lockdown the number of trips by all modes has decreased by unrecognisable levels. At the deepest point during the Covid-19 crisis, on average public transport (either bus and/or rail) has dropped by circa 87% from normal usage closely followed by walk/cycle falling by 83% and car trips decreasing by 81%.

Measured against the lowest levels, from 16 April 2020 to 1 May 2020 there has been a noticeable increase in car trips by around 19% followed by walk/cycle at 9% and public transport trips at 5%. This is likely due to some people being somewhat fatigued by the lockdown and starting to venture out after the suggested 14 days isolation period.

Some geographical areas have seen slightly lower reductions in trips, with public transport suffering the worst changes across the board. This is not entirely surprising given the fact that public transport involves travelling in shared spaces, and people will seek to isolate themselves as much as possible.

This latter point also helps to explain the faster return in car trips compared to other modes. The data analysis hints at an emerging phenomenon known as ***'transport distancing'***, whereby some travellers would rather be in their own personal car than risk infection or transmission of Covid-19 by using public transport.

The data also suggests flows in more rural areas have not dropped as much as denser urban parts of the UK.

Life after the Pandemic

Information suggesting there will be structural changes

Life after the Pandemic

Information suggesting there will be structural changes

Those who think life will return fully to pre-Covid-19 conditions after the lockdown restrictions are lifted are likely to be sorely mistaken.

Our research suggests there will be structural changes in peoples' attitudes and practises for some time to come, and pre-Covid-19 travel patterns may take some months or even years to bounce back.

This is shared by a number of our clients and industry colleagues. For example, Royal Dutch Shell CEO Ben van Beurden on 29 April 2020 announced their business analysis which predicts there will be significant changes in peoples' travel practises for some time, and also believes pre-Covid-19 travel patterns may take some years to return. He argued this would be because of the economic flexibility businesses will have post crisis and the attitudes of people towards level of risk.

This belief seems to be supported by other industry experts including comments made by Mark Dickens, fleet director, Groupe Renault UK, at the Smart Mobility Conference Webinar on 30 April 2020 who said he is seeing a spike in interest for private car sales in the £1k to £2k price bracket. He expressed concern that these older vehicles would have major impacts on air quality emissions as they were not built to current engine standards.

Initial customer surveys carried out by Auto Trader involved online census conducted between 14 to 17 April 2020 on the classified's website, consisting of three separate surveys targeting different consumer demographics (a total of over 3,000 responses).

Nearly half of UK public transport users who responded to the survey (48%) said they would be less likely to use public transport once lockdown restrictions have been lifted. Moreover, over half (56%) of UK driving license holders surveyed (sample = 1,059) who currently do not own a vehicle said Covid-19 has made them consider purchasing a car.

The survey results further reinforce the concept of ***'transport distancing'***. This seems to be even more of a concern for younger consumers, with 66% of 18 to 24-year-olds claiming they would be less likely to use public transport.

Admittedly, the above survey is likely to be biased towards car purchasers due to the nature of participants attracted to Auto Trader, but it does nonetheless give a snapshot of the potential risk to the future of public transport agencies and operators who are already under financial pressure due to falling fare revenues.

Furthermore, transport distancing has the potential to increase congestion while also increasing air pollution if those buying vehicles do not opt for electric vehicles (EVs).

Life after the Pandemic

Research suggesting there will be structural changes

Another poll carried out by SYSTRA (BBC News, 26 April 2020) showed public transport users in UK cities could fall by as much as 20% than normal after the end of the Covid-19 lockdown.

In particular, London commuters using buses and underground lines could be as much as 40% lower, and rail use could also drop by up to 27%. The results from the 1,500 sample survey capture people's current attitudes about returning to work, but the survey also pointed to some changes being carried forward into the long term which could lead to more people driving.

This is further bad news for the government and public transport operators, but the survey offers a glimmer of good news for tele-working enthusiasts; it suggests that of those expecting to reduce their use of buses and trains, 24% said they plan to work from home more as respondents said they wanted to save on commuting times and costs as well as striking a better work-life balance.

There will also be a major boost for video-conferencing – as many as 67% of people in the survey said they believe virtual meetings will replace some or all business trips or meetings.

Key findings

There will be structural changes in peoples' attitudes and practises for some time to come, and pre-Covid-19 travel patterns may take some months or even years to bounce back.

This is because of the economic flexibility businesses will have post crisis and the attitudes of people towards their own level of risk.

The automobile industry is seeing a spike in interest for used private car sales at the lower price bracket. These older vehicles would have major impacts on air quality emissions as they were not built to current engine standards.

The above findings reinforce the concept of *'transport distancing'*, which has the potential to increase congestion.

This will have serious implications for the government and public transport operators, who have already seen significant falls in passenger revenues, which is expected to continue for some time.

There are some areas of good news including tele-working and active transport like walking and cycling. A sizable proportion of previously regular commuters expect to reduce their travel and plan to work from home more often to save on commuting times and costs as well as striking a better work-life balance.

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The need for a nationwide survey

Proposed further data collection in the next phase of research

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Clearly the above anecdotal user surveys have issues with sample representation and potential bias in the data, although they do provide an initial view.

What is required is a nationwide survey to capture a broad consensus which ideally also measures views of travellers by separate regions of the UK, showing differences across the areas.

This will also help with examining future travel conditions for forward planning and demand forecasting.

Our intention in the next phase of this on-going research is to undertake an online travel survey which will help to explore some of the identified issues.

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Economic change

How the economy is forecast to change and effect the transport sector

Economic change

How the economy is forecast to change and effect the transport sector

There is a long-standing correlation between the strength of the economy and travel demand.

Bloomberg Economics has recently presented a summary on revisions in forecasts of global growth recovery after the Covid-19 crisis. These are shown in Figure 12 opposite.

Normally, such large revisions, let alone successive ones in a short period of time, would be highly unusual – and especially so for a current year. But not so in a world where there is uncertainty on the extent of the fall and the speed/scale of the subsequent recovery.

Unfortunately, the same is likely to be true for travel demand forecasts, which will undoubtedly go through a period of successive revisions and adjustments making it difficult for planners, operators and authorities to work with.

For example, the UK government has developed a £28bn roads programme which is predicated on a modest 1% annual growth in traffic demand levels. Clearly, this was prepared using previous forecasts, which now raises issues for the government's roads programme.

Figure 12 – Previous and forecast changes in global GDP

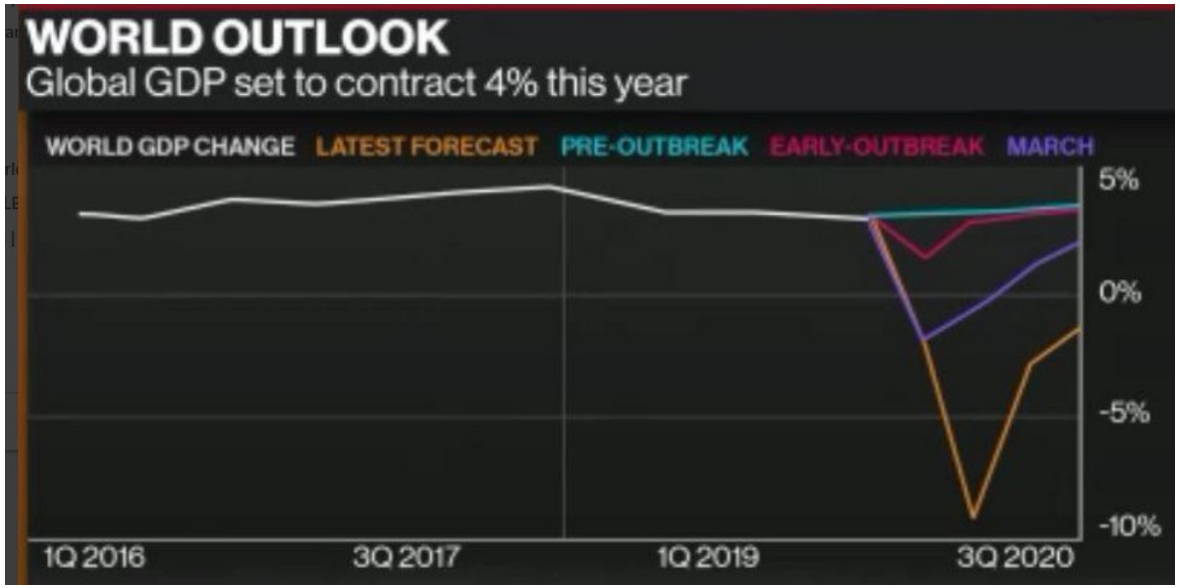

Chart courtesy of Bloomberg Economics

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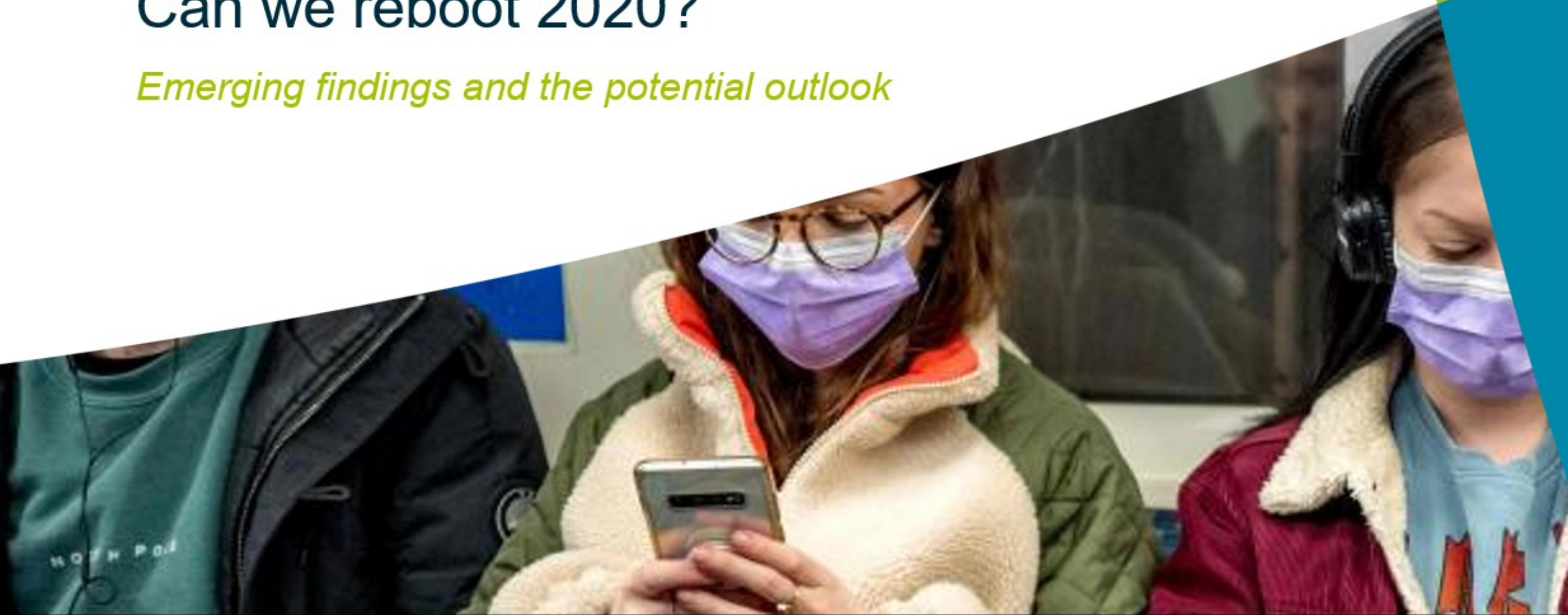
Can we reboot 2020?

Emerging findings and the potential outlook



Can we reboot 2020?

Emerging findings and the potential outlook

The analysis in this research confirms that the global Covid-19 pandemic will have far reaching consequences that last after the current restrictions have been lifted.

Our analysis has shown extraordinary changes in trip movements and a glimpse of the new world we will be faced with after we emerge from the lockdown restrictions.

However, it does not necessarily follow that after the lockdown restrictions are lifted then travel patterns will return to pre-Covid-19 conditions. We are seeing data which suggests there will be a significant lag effect on travel patterns which has significant implications for a wide range of factors including vehicle ownership, trip volumes, distribution patterns and future forecasting/modelling.

Public transport operators will need to convince passengers that they will be safe from future waves of the virus. In addition, transport planners will need to think hard about how travel patterns may change permanently after the lockdown.

In particular, the survey results suggest that traffic levels could change dramatically overall, which raises issues for the government's roads and public transport plans which are predicated on previous demand forecasts.

On the plus side, there could be a boom in active travel like walking and cycling from a population that has a heightened interest in more healthy travel alternatives.

This raises another opportunity; for example, cycle campaigners have long sought for cars to be excluded from major parts of cities on a permanent basis - which happened recently in Milan, Italy.

And in fact, the government has recently streamlined procedures on issuing urban road closures and provide temporary cycle lanes and wider footpaths for social distancing as well as to allow councils to exclude cars and create space for walking and cycling more easily on a permanent basis.

Bold steps and decisions will be needed by authorities and operators to grasp the opportunities available. It will be interesting to see which agencies respond and how.

Clearly, the future is not about simply carrying on as usual. We will all have to plan smarter and we humbly submit this research to help our clients, industry colleagues and the wider community to better understand the new world we are all now living!

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With its headquarters in Amersfoort, The Netherlands, Royal HaskoningDHV is an independent, international project management, engineering and consultancy service provider. Ranking globally in the top 10 of independently owned, nonlisted companies and top 40 overall, the Company's 6,000 staff provide services across the world from more than 100 offices in over 35 countries.

Our connections

Innovation is a collaborative process, which is why Royal HaskoningDHV works in association with clients, project partners, universities, government agencies, NGOs and many other organisations to develop and introduce new ways of living and working to enhance society together, now and in the future.

Memberships

Royal HaskoningDHV is a member of the recognised engineering and environmental bodies in those countries where it has a permanent office base.

All Royal HaskoningDHV consultants, architects and engineers are members of their individual branch organisations in their various countries.

Integrity

Royal HaskoningDHV is the first and only engineering consultancy with ETHIC Intelligence anti-corruption certificate since 2010.

ETHIC Intelligence

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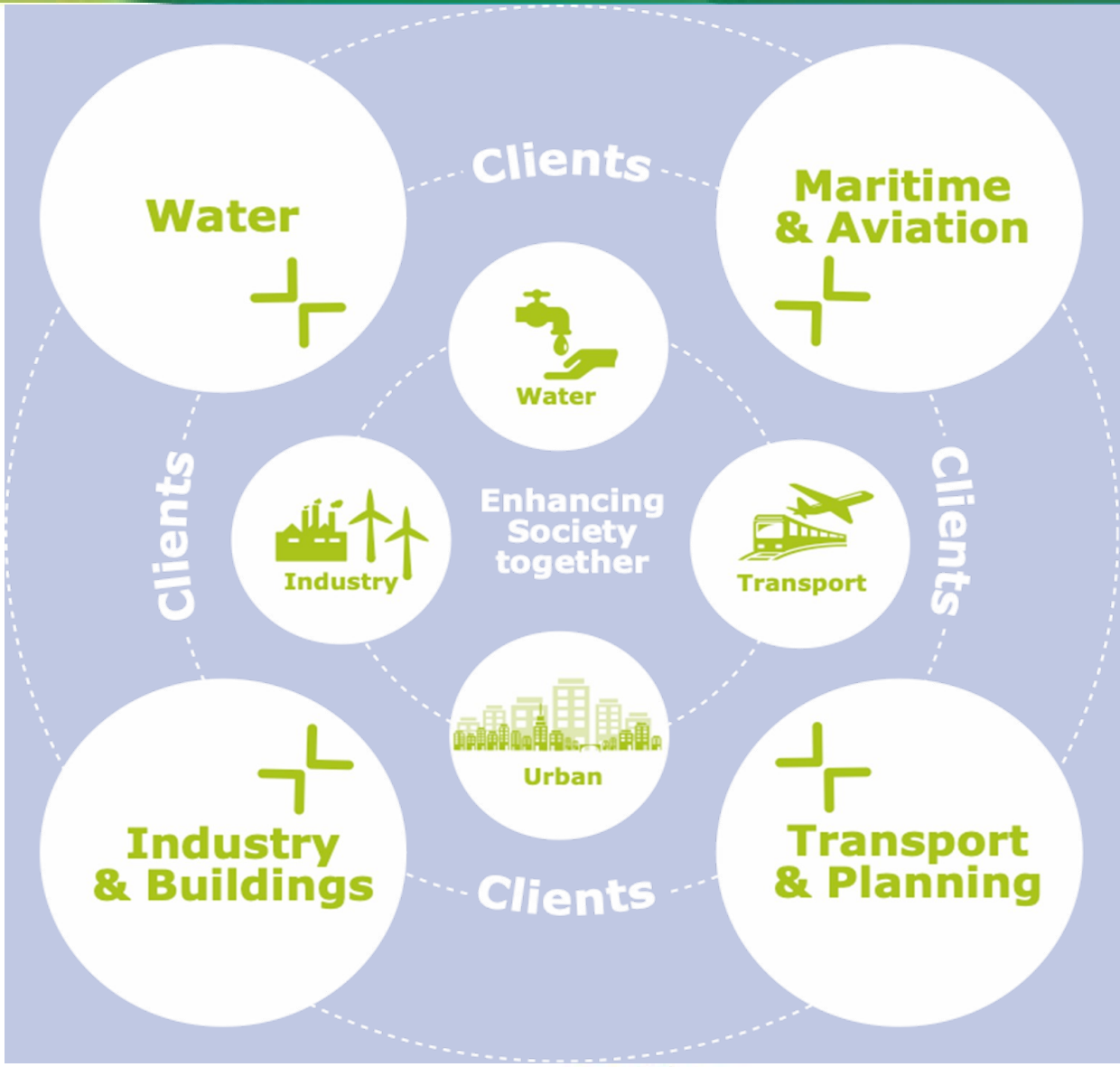

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