BACKGROUND QUALITY REPORT
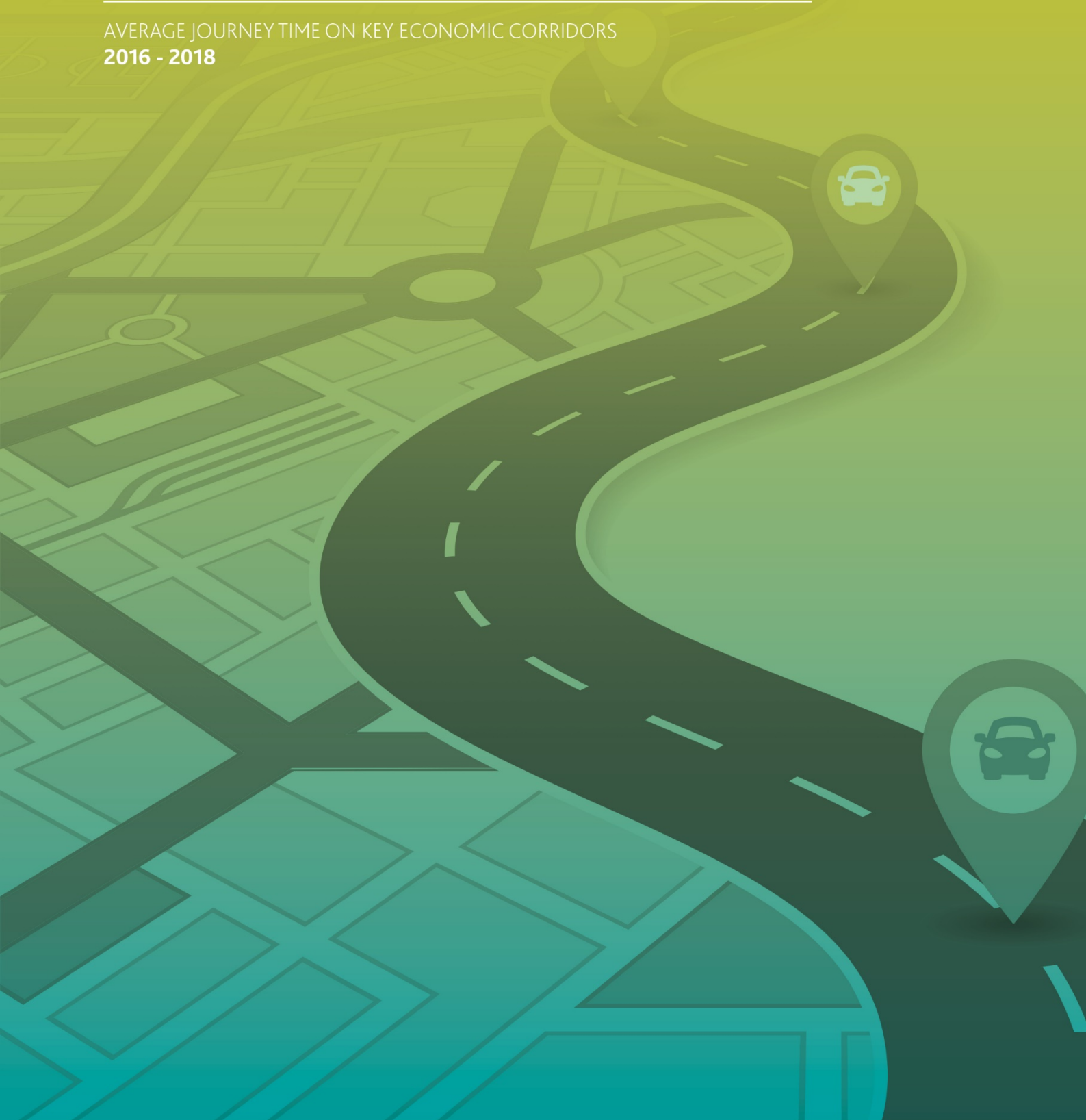
AVERAGE JOURNEY TIME ON KEY ECONOMIC CORRIDORS

2016 - 2018

Dimension	Assessment by the author
Introduction	Context for the quality report.
	Analysis, Statistics and Research Branch (ASRB), a Northern Ireland Statistics and Research Agency (NISRA) branch within the Department for Infrastructure (DfI), is responsible for the production and publication of the 'Average Journey Time on Key Economic Corridors' statistical report.
	The first report was published in September 2019 and provides an estimate of the average time it takes for a car to travel the inter-urban sections of all five Key Economic Corridors (KECs) in both directions during the morning peak period (07:00 to 09:30). The information is also split into the journey times for each of the five KECs. The inter-urban sections of the five KECs, used in the estimation of the average journey time, can be viewed on the map. These KECs are often referred to as Key Transport Corridors (KTCs). Data are currently available for 2016-2018.
	The statistical report is published on the DfI website.
	The report includes meaningful commentary supported by tables, a map, a chart and infographics; it also contains information about the background, methodology applied and the quality of the data. A detailed Methodology report is also available.
Relevance	The degree to which the statistical product meets user needs in both coverage and content.
	The statistical report was published following a data development project initiated when a need for data to measure the indicator 'Average journey time on key economic corridors' was identified and added to the draft Programme for Government (PfG) data development agenda. The Draft Programme for Government Framework 2016-2021 was used as the basis for an Outcomes Delivery Plan (ODP) 2018/19. This ODP, published in June 2018, set out the programme of work the Northern

	Ireland Civil Service (NICS) was to take forward during 2018-19 to contribute to the objective of 'Improving wellbeing for all – by tackling disadvantage and driving economic growth'. It contains 12 strategic outcomes supported by 49 indicators, including the 'Average journey time on key economic corridors'. This indicator contributes to reporting against Outcome 11, 'We connect people and opportunities through our Infrastructure'. The [Outcomes Delivery Plan 2018/19 End-Year Report](#) provides an assessment of progress on the actions contained in the ODP 2018/19. The NICS Board has agreed that the ODP 2018/19 should be extended for a further period pending the return of Ministers to the Northern Ireland Departments. The statistical report includes meaningful commentary supported by tables, a map, a chart and infographics to ensure clarity and insight for all users. In line with ASRB's [Statistics User Engagement Strategy](#), statisticians will ensure that the statistical report remains relevant through user engagement meetings with key stakeholders. As it is a new report, a customer satisfaction survey, which includes a question on whether the report meets their needs, will be issued to users to seek their feedback.
Accuracy and Reliability	**The proximity between an estimate and the unknown true value.**
	The data source is the Police Service of Northern Ireland's (PSNI) Automatic Number Plate Recognition (ANPR) system. ANPR cameras are positioned at various locations across Northern Ireland and provide good coverage along the five KTCs. ANPR works by scanning vehicle registrations as they pass individual cameras; the observed vehicle registration is recorded along with the date and time it passes the camera and stored in a secure database. The key purpose of the ANPR system is to promote the security and safety of everyone in the community. A journey time application was developed to process the high volume of ANPR data; this calculates the average journey time of cars between ANPR cameras (links) on all five KTCs. Several sanitised dip samples were examined to ensure the journey time application was processing the ANPR data in line with the agreed specification. The journey time estimates are therefore based on observed data and any exclusions from the dataset are based on criteria agreed with stakeholders. The results were quality assured using various data sources, including GPS data and Moving Observer Survey data, and notable changes over time were investigated. This included analysing

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	PSNI road traffic collisions data, extracts from the Trafficwatch NI roadworks database and historical weather information.
	The methodology and baseline results have been agreed by the PfG Technical Assessment Panel (TAP); this panel has deemed that the results are fit for purpose as a population indicator in the draft PfG. The estimated average journey times are based on a high volume of observations and are rounded to the nearest minute.
	As data were not always available for the time period desired for this project, a Process Map for Data Selection has been produced which outlines how this issue has been consistently and transparently addressed.
	The most appropriate ANPR cameras located along the inter-urban sections of the KTCs have been used as the start and end points of the KTCs. As per National Policing Guidelines the locations of ANPR cameras are not made publicly available. Further information on ANPR is available on the PSNI website.
	If, for any reason, a correction or revision is required to the published results then ASRB will follow the Revisions and Errors Policy available on the DfI website.
Timeliness and Punctuality	Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.
	The statistical report provides an estimate of the average journey time on KECs for the period 2016 to 2018. It was published for the first time in September 2019, almost 9 months after the end of the 2018 calendar year. Now that the data have been developed, it is anticipated that journey time estimates for 2019 will be published in Spring/Summer 2020, reducing the gap between the publication date and the reference period.
	The report was published on the planned publication date of 25th September 2019 as announced on GOV.UK and in DfI's Statistical Releases Calendar.
Accessibility and Clarity	Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of

	supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.
	The statistical report is available to download free of charge in PDF format on the DfI website. The statistical tables are also available to download in MS Excel format and ODS (Open Document Spreadsheet) format from the webpage. If requested, ASRB can provide hard copies or other suitable media. The statistical report is also accessible through the UK Official and National Statistics Publication Hub. User information and supporting commentary on the key findings are included in the report to help users to understand and make the best possible use of the data. In addition, where necessary, explanatory footnotes are included in the tables. ASRB worked with DfI's Graphic Design Unit to enhance presentation of the information in the statistical report and to ensure the needs of those with visual impairments were considered. The report contains contact details of the responsible statistician who can be contacted for further information.
Coherence and Comparability	Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.
	'Average journey time on key economic corridors' was added to the draft PfG data development agenda as data did not exist to measure this indicator. The statistical report is therefore currently the only source of official statistics available on journey times on the five KTCs since 2016. Historically there is some information available from the Moving Observer Survey. The 'moving observer' method requires a car or light van to travel along the route at the average speed of the traffic whilst an observer records the time taken beside the pre- identified simultaneous wayside markers. The latest (unpublished) results available from the Moving Observer Survey are for 2014. This method has not been used since then to inform PfG and the ANPR system was considered to be the most appropriate source to meet the data development project

	requirements. The use of the ANPR system is considered to be an innovative way to capture the required information and this approach harnesses technological advances since the Moving Observer Survey was carried out on behalf of the Department for Regional Development in 2003. Using existing data, rather than undertaking a new data collection, is also more efficient. The methodology and criteria used for the 2016-2018 reference period are consistent and allow for robust comparisons overtime; this was a key requirement for the results to be used as a population indicator in the draft PfG. Although the precise dates used for calculating the results may vary across KTCs and from year to year, all results are based on neutral months as defined within Transport Analysis Guidance.
Trade-offs between Output Quality Components	**Trade-offs are the extent to which different aspects of quality are balanced against each other.**
	None.
Assessment of User Needs and Perceptions	**The processes for finding out about users and uses, and their views on the statistical products.**
	The user need for this statistical product was identified in the draft PfG data development agenda. In line with the ASRB User Engagement Strategy, statisticians will continue to liaise with stakeholders around the future development and content of this statistical report. There is an ongoing ASRB customer satisfaction survey which includes a question on whether ASRB publications (including the average journey time report) meet customers' needs. The link to the survey is issued every time users are notified that a report has been published or an ad-hoc query is answered. Results are collated on a quarterly basis. The data presented in the statistical report enable the progress of the draft PfG indicator 'Average journey time on key economic corridors' to be monitored. Following publication and approval by the PfG TAP, The Executive Office update the interactive outcomes viewer and highlight if there has been any change in the average journey time since the estimate recorded for the baseline year (2016). Although the primary need for this statistical product arose through the draft PfG, other users, e.g. Transport Modellers, and uses are likely to be identified following dissemination of the first release.
	The effectiveness, efficiency and economy of the statistical output.

Performance, Cost and Respondent Burden	Following the development of the journey time application, at a cost of approximately £20k, the only costs incurred are those relating to staff time spent on the project. There is minimum burden on the data owners (PSNI) as ASRB staff access the application, run the results, aggregate the findings, quality assure the results and publish the statistical output.
Confidentiality, Transparency and Security	**The procedures and policy used to ensure sound confidentiality, security and transparent practices.**
	The ANPR dataset can only be accessed by attendance at a designated PSNI office. The nature of the ANPR data means that access is restricted and has only been available to a small number of security cleared statistical staff in DfI. This means that validation is carried out at an aggregated level. Several sanitised dip samples were examined to ensure the journey time application was processing the ANPR data in line with the agreed specification. The aggregate data are held on a secure server or within DfI's secure record management system (HPRM) with access restricted to those involved in the publication of the statistics. The access to the ANPR dataset is managed through a Service Level Agreement between the PSNI and ASRB. ASRB's Data Governance and Confidentiality Statement is available on the [DfI website]().

FURTHER INFORMATION

For further information relating to the quality around the estimation of the draft PfG indicator 'Average journey time on key economic corridors', please contact ASRB@nisra.gov.uk.

Last updated: September 2019.