

Assessment of compliance with the Code of Practice for Official Statistics

Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report

(produced by the Department of the Environment Northern Ireland)

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The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Authority has two main functions:

- 1. oversight of the Office for National Statistics (ONS) the executive office of the Authority;
- 2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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NATIONAL STATISTICS STATUS

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the *Code of Practice for Official Statistics*. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is a producer's responsibility to maintain compliance with the standards expected of National Statistics, and to improve its statistics on a continuous basis. If a producer becomes concerned about whether its statistics are still meeting the appropriate standards, it should discuss its concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

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1 Summary of findings

Introduction

- 1.1 This is one of a series of reports¹ prepared under the provisions of the Statistics and Registration Service Act 2007². The Act allows an appropriate authority³ to request an assessment of official statistics against the Code of Practice for Official Statistics⁴ in order for them to gain National Statistics status. This report is in response to such a request. The report covers the set of statistics reported in Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report 2015 (Road Safety Strategy Statistical Report)⁵ produced by the Department of the Environment Northern Ireland (DOENI).
- 1.2 This report was prepared by the UK Statistics Authority's Assessment team, and approved by the Regulation Committee on behalf of the Board of the UK Statistics Authority, based on the advice of the Director General for Regulation.

Decision concerning designation as National Statistics

1.3 The Authority judges that the statistics covered by this report do not fully comply with the Code of Practice for Official Statistics in the ways summarised in paragraph 1.8. The Authority judges that the statistics published in Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report 2015 cannot be designated as National Statistics until the Authority has confirmed that appropriate actions have been taken by DOENI to meet the Requirements listed in section 1.8. DOENI is expected to report its completed actions to the Authority by August 2016.

Summary of strengths and weaknesses

- 1.4 DOENI has been fully engaged in the Assessment process and it is clear that its statisticians are well-respected and provide additional statistical support and advice to users, in particular to their Northern Ireland Road Safety Strategy policy colleagues.
- 1.5 The Road Safety Strategy Statistical Report includes a range of statistics that measure progress against the targets and key performance indicators (KPIs) of the Northern Ireland Road Safety Strategy. As such, it is an important source of evidence in understanding government progress toward meeting these targets and indicators. Bound by this remit, the producer, DOENI, focuses the publication on road casualties and reports at a national level only. It also provides limited contextual information on the statistics that it reports. Both these factors mean that the statistical report does not present as broad a range of statistics as some users require. As a result, users are provided with little information to support or explain emerging trends from the statistics and may have to access different sources of information to obtain this broader view.

³ Subsection 12(7) of the Act defines 'appropriate authority' as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician

¹ https://www.statisticsauthority.gov.uk/publications-list/?keyword=&type=assessment-report

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

⁴ https://www.statisticsauthority.gov.uk/monitoring-and-assessment/code-of-practice/

https://www.doeni.gov.uk/publications/northern-ireland-road-safety-strategy-2020-annual-statistical-report-2015

1.6 Some of the KPIs that sit beneath the four key Strategy targets rely on the use of survey data for small sub-groups of the population. This results in high levels of uncertainty around the statistics in some cases. It is the view of the Assessment team that the information and advice to users on uncertainty is lacking and the statistics, as presented currently, may be misleading to users.

Detailed recommendations

1.7 The Assessment team identified some areas where it felt that DOENI should improve the production and presentation of statistics on *Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report.* Those which are essential for DOENI to address in order to strengthen its compliance with the *Code* and to enable designation as National Statistics are listed – as Requirements – in paragraph 1.8, alongside a short summary of the key findings that led to each Requirement being made. Other recommended changes, which the Assessment team considers would improve the statistics and the service provided to users but which are not formally required for their designation as National Statistics, are listed – as Suggestions – in paragraph 1.9.

Requirements for designation as National Statistics

1.8 This section includes those improvements that DOENI is required to make in respect of its statistics on *Northern Ireland Road Safety Strategy to 2020:*Annual Statistical Report in order to fully comply with the Code of Practice for Official Statistics, and to enable designation as National Statistics.

Finding	Requirement		
DOENI could develop a better understanding of users' needs by engaging with a wider range of users. DOENI should:	1	Engage directly with wider user groups outside of the NIRSS fora to build a complete understanding of users' needs for road safety statistics beyond statistical reporting against the Strategy's KPIs (para 3.2).	
The independence of the statistical function in decision making related to the Road Safety Strategy Statistical Report is not clearly		a) Publish information on how senior policy and statistics officials work together but ensure clear independence of the statistical Lead Official. The statistical Lead Official should have sole responsibility for the orderly production, management and dissemination of Northern Ireland road safety statistics	
communicated. DOENI should:		b) within a) above set out the mechanism for issuing the statistics separately from any other policy statement or comment about the figures	
		(para 3.4).	
		In meeting this Requirement, DOENI should	

		carefully consider the Authority's Official statistics, performance measurement and targets guidance to ensure that these statistics are produced to high professional standards.		
DOENI does not publish information on its quality assurance	3	a) Publish an appropriate level of detail to inform users about its quality assurance arrangements for all of the data sources used in Road Safety Strategy Statistical Report		
arrangements and its Statement of Administrative Sources (SoAS) is		b) Update its SoAS to include all of the administrative data sources and link to it from the statistical report		
incomplete. DOENI should:		(para 3.8).		
DOENI provides insufficient	4	a) Provide users with access to information on methods for the complete range of indicators		
information for users about the methods, quality, and comparability of its statistics. DOENI should:		b) Make clear how the statistics are produced to a level of quality that meets users' needs; include a description of their strengths and limitations, and quality assurance procedures		
		c) Clearly set out for users where common standards or definitions have been applied and explain the reasons where there has been any deviation		
		(para 3.14).		
		In meeting this Requirement, DOENI should consider collating the information required above for each statistic in an indicator specification. DOENI should consult with the Authority's Good Practice Team on this matter but it may wish to consider the approach taken by the Health & Social Care Information Centre through its Indicator Portal.		
The information and advice to users about uncertainty in the statistics is	5	Present prominent information about the effect of uncertainty on all estimates and caution users appropriately about focusing on single year estimates		
insufficient and could result in the		(para 3.17).		
misuse of the statistics. DOENI should:		In meeting this Requirement, DOENI should consider the Government Statistical Service's guidance for official statistics producers on Communicating Uncertainty and Change.		
Further narrative, contextual	6	a) Be clear what can be concluded from the statistics and what cannot be concluded		
information, and working links to key		b) Consider the criteria for the presentation of RAG arrows to ensure it is not misleading to		

documents is required to aid user's interpretation and understanding of the statistics. DOENI should:		users and provide clear information on the criteria used c) Rectify all broken links in the <i>Road Safety Strategy Statistical Report</i> and ensure users have access to DOENI's published revision policy d) Improve the presentation and commentary to aid user interpretation providing contextual information and pointers to where richer data may be found (para 3.23) In meeting this Requirement, DOENI should work with the Authority's Good Practice Team to enhance the presentation format of the report. We suggest that DOENI considers the Authority's <i>Standards for Statistical Reports</i> ⁶ . While this is not part of the <i>Code</i> , the Authority regards it as advice that will promote both understanding and compliance with the <i>Code</i> .
DOENI should publish the Road Safety Strategy Statistical Report, and the tables that accompany it, in formats that encourage re-use. DOENI should:	7	Make the underlying data in supplementary tables available in a machine-readable format (para 3.24). In meeting this Requirement, DOENI should seek to release an html summary of the key findings from statistical releases to allow easier re-use.

Suggestions for extracting maximum value from the statistics

1.9 This section includes some suggestions for improvement to DOENI's statistics on *Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report* in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

We suggest that DOENI:

1 Consider the Authority's view on pre-release access to the *Road Safety Strategy Statistical Report* when it next reviews its pre-release access list (para 3.25)

⁶ http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html

2 Subject of the assessment

- 2.1 The Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report ⁷ is intended to be the key reference point for parties interested in reviewing achievements against the Northern Ireland Road Safety Strategy to 2020⁸ (NIRSS). The Strategy lays out four road safety targets and a suite of road safety key performance indicators (KPIs). DOENI has lead responsibility to implement a range of actions contained in NIRSS. DOENI policy staff report annually against the four targets and suite of KPIs set out in the Strategy document. The four targets in NIRSS are:
 - a) To reduce the number of people killed in road collisions by at least 60 per cent by 2020
 - b) To reduce the number of people seriously injured in road collisions by at least 45 per cent by 2020
 - c) To reduce the number of children (aged 0 to 15) killed or seriously injured in road collisions by at least 55 per cent by 2020
 - d) To reduce the number of young people (aged 16 to 24) killed or seriously injured in road collisions by at least 55 per cent by 2020
- 2.2 The Road Safety Strategy Statistical Report provides an annual update of progress against all the targets and the majority of the KPIs. The statistics are of interest to the public, media, special interest groups, and academics and provide a resource to those in government responsible for monitoring performance of the NIRSS and linking with other relevant government strategies. DOENI introduced the Road Safety Strategy Statistical Report for the first time in September 2012 (reporting data for the calendar year 2011) following the introduction of the Strategy, published in March 2011.
- 2.3 Up to 2014 DOENI's policy team had produced its own report⁹, published each December, which relied heavily on the statistics within the *Road Safety Strategy Statistical Report* released in September. However, the policy team's annual report went a lot further than the statistical report does. The report elaborated on core target and KPI progress reporting giving users additional contextual information and breakdowns of some of the statistics by age and sex as well as principal causation factor of collisions, taken from the Police Service of Northern Ireland's *Police Recorded Injury Road Traffic Collisions and Casualties Northern Ireland*¹⁰. DOENI did not publish this annual report in 2015. In 2014, DOENI also published research¹¹ into the explanatory factors behind the reduction in fatal collisions from 2009-2012. This research supplemented the statistics in the *Road Safety Strategy Statistical Report* and a link to the research is provided in the publication.
- 2.4 DOENI conducted an extensive consultation exercise during the development of the Strategy involving several government departments, agencies, and road

https://www.doeni.gov.uk/publications/northern-irelands-road-safety-strategy-2020-annual-report-2013

2012

⁷ https://www.doeni.gov.uk/publications/northern-ireland-road-safety-strategy-2020-annual-statistical-report-2015

⁸ https://www.doeni.gov.uk/publications/ni-road-safety-strategy-2020

https://www.psni.police.uk/globalassets/inside-the-psni/our-statistics/road-traffic-collision-statistics/archive/2013_detailed_trends_report_-_annual_bulletin_-_published_25th_june_14.pdf
 https://www.doeni.gov.uk/publications/investigating-reduction-fatal-collisions-northern-ireland-2009-

safety organisations. These included the Driver & Vehicle Agency (DVA); the Police Service of Northern Ireland (PSNI); the Department for Regional Development (DRD); the Department of Education (DE); the Northern Ireland Ambulance Service (NIAS); and the Northern Ireland Fire and Rescue Service (NIFRS). DOENI developed the Strategy targets using a time series of 5 years of PSNI reported road traffic collision and casualty data (2004-2008). DOENI engaged TRL (the former Transport Research Laboratory) to carry out a forecasting and target setting assignment having carried out similar work for GB and Scotland. *NIRSS* originally listed 199 action measures designed to improve road safety in Northern Ireland up to 2020. A further 25 measures have been added since publication.

Producer and Governance

- 2.5 Analytical Services Branch (ASB), a Northern Ireland Statistics and Research Agency (NISRA) branch within DOENI, produces the statistics on performance against the road safety targets and KPIs.
- 2.6 A Strategy Delivery Board has the lead responsibility for monitoring and reporting on progress towards implementing the Strategy. The Strategy Delivery Board is accountable to Northern Ireland's Minister for the Environment. Its membership comprises representatives from road safety partners. The Delivery Board agreed the indicators to be included in the Strategy (based on commissioned research undertaken by TRL) but NISRA statisticians independently decide on data sources, methodologies, and reporting. Prior to implementing these at the outset of the Strategy, or in the event of new indicators being added or modified each year, the Delivery Board is asked for its opinion and sign-off. This provides an opportunity for Delivery Board members to input their policy and operational expertise in the areas covered by the indicators. As the Strategy progresses, it may be the case that some KPIs are not as reliable as previously envisaged or do not report the data in a meaningful way for assisting and improving road safety and may be removed. DOENI informs users of any changes to monitoring through the Road Safety Strategy Statistical Report. In the most recent report two new indicators were introduced, a speed indicator and a novice driver indicator.
- 2.7 A Road Safety Forum made up of people from both within and outside government who, on the basis of experience, position and expertise, can speak with authority about road safety issues and how they might be addressed was set up in 2011. Examples of organisations represented on the Forum include the Association of British Insurers¹², Cycling Touring Club¹³, and the Freight Transport Association¹⁴. This Forum provides an opportunity for the Environment Minister to exchange views with road safety representatives about the Strategy and its implementation by DOENI. A Ministerial Group on Road Safety, which comprises DOENI, DRD and Department of Justice Ministers provides oversight of the implementation process. An overview of how the Delivery Board and Research Forum link to ASB is shown in Figure 1.

14 http://www.fta.co.uk/

¹² https://www.abi.org.uk/

¹³ http://www.ctc.org.uk/

Advice / Oversight Environment Oversight Minister of the Environment Ministerial Group on Road Safety Committee Report Oversight Inform Report Road Safety Strategy Delivery Board Road Safety Forum Engagement Road Chair: Director of DOE RSVRD Chief Executive DVA Safety Governance of Director of Engineering DRD Roads Strategy Service Strategy Head of Road Traffic Policing - PSNI. to 2020 Director of Operations - NIAS DOE Road Safety and Support Board and Assistant Chief Fire Officer - NIFRS Report Progressy Vehicle Regulation Division -Education and Training Inspector - DENI performance Delivery Board Support Team Monitor Report Road Safety Partner Organisations Deliver Action DOE DVA DRD PSNI Road DENI NIFRS DOE RSVRD Measures Traffic

Figure 1: Governance of the Road Safety Strategy to 2020

Source: Northern Ireland's Road Safety Strategy to 2020 Annual Report 2013

Users and uses of the statistics

2.8 Key stakeholders such as DRD use the *Road Safety Strategy Statistical Report* statistics in the evaluation of progress against the Strategy. DRD is responsible for maintaining a safe, efficient and sustainable road network. DRD is tasked with continuously improving the safety of Northern Ireland's roads and ensure that planning, design, construction and maintenance place a high priority on safety. Policy officials within DOENI also use the information in the formulation and evaluation of policy, in the preparation of correspondence, and Ministerial briefing material. Other data users, such as politicians, the media, special interest groups, academics, and members of the public use these statistics to assess the progress of the Strategy and the general state of road safety in Northern Ireland.

Users' views

- 2.9 The Assessment team undertook a user engagement exercise during November 2015. The majority of respondents were representatives from devolved government departments. Users provided their views on the statistics presented in the *Road Safety Strategy Statistical Report 2015*.
- 2.10 Overall, the users who responded seemed satisfied with the publication. Those users who primarily use the statistics for Strategy monitoring purposes felt that the statistics met their requirements. One user reported that the statistics within the Road Safety Strategy Statistical Report 2015 were not specific enough or

- relevant enough to meet their needs. They highlighted that breakdowns of the statistics by types of vehicle would be of significant interest to the commercial vehicle sector. Users raised no issues on data quality and did not have any issue with information on the strengths or limitations of the statistics.
- 2.11 There were varying comments from users on the commentary provided with some stating that they were content with the level of detail, with one user saying that it ensured that they do not misinterpret or misrepresent the statistics. Some users did report however that they would prefer more speculative commentary on trends. One user highlighted the supplementary research report stating that the 'ad hoc reports on issues such as the reasons behind the sudden fall in fatalities in 2010 have been very informative'.
- 2.12 Users described the statistics team as approachable, helpful, and professional, providing responses to requests in a timely manner. Users also mentioned that the team was open to providing other ad hoc requests, where appropriate. DOENI policy staff told the Assessment team that they have received support from the statistics team in understanding the range and availability of data held in DOENI and on how to interpret the statistics. They told us that this has resulted in them being able to better define their statistical requests when gathering evidence for use throughout the policy process.

Data Sources

2.13 In most cases, the sources of data used to compile these statistics are published National Statistics (NS) or Official Statistics (OS), produced by statisticians from NISRA. Information captured through collision reporting by PSNI enables statisticians to produce analysis on the number of killed and seriously injured in road collisions. NISRA's Central Survey Unit (CSU), a social research organisation in Northern Ireland, conducts the Travel Survey for Northern Ireland (TSNI), and validates the data. CSU passes the data to NISRA statisticians working in DRD, who analyse it and produce various statistical reports¹⁵. The sample size in TSNI is relatively small; consequently, the statisticians need to combine three years of data to ensure that they are sufficiently robust. These statistics also draw on population data¹⁶¹⁷ produced by NISRA's Demography and Methodology Branch.

Comparable statistics

2.14 PSNI publishes a report titled *Police Recorded Injury Road Traffic Collisions* and Casualties Northern Ireland: Key Statistics¹⁸ between March and May each year. These are National Statistics assessed and reported in Assessment Report 214¹⁹. The statistical report provides statistics for the previous calendar year, including statistics on collisions and casualties based on road user types, sex, age, location of incident and causation factors. PSNI presents information showing progress against the targets set out in NIRSS. The Department for

¹⁵ https://www.drdni.gov.uk/articles/travel-survey-northern-ireland

http://www.nisra.gov.uk/demography/default.asp17.htm

¹⁷ http://www.nisra.gov.uk/demography/default.asp125.htm

¹⁸ https://www.psni.police.uk/inside-psni/Statistics/road-traffic-collision-statistics/

¹⁹ https://www.statisticsauthority.gov.uk/publication/crime-road-traffic-collisions-and-the-security-situation-in-northern-ireland/

Transport (DfT) publishes *Reported Road Casualties GB*²⁰ for Great Britain. Transport Scotland publishes annual Reported Road Casualties²¹ in Scotland. The Welsh Government publishes annual road safety statistics²² for Wales. The Road Safety Authority in the Republic of Ireland (ROI) publishes road safety statistics²³ for the ROI. Northern Ireland's Road Safety Partnership (NIRSP) publishes statistics relating to the activity of the Partnership on an annual basis²⁴ that complement those in the *Road Safety Strategy Statistical Report*. It reports on, for example, detections by NIRSP for speeding; detections by NIRSP for red light running; numbers of people who have completed the speed awareness course; collision statistics at safety camera sites; and the number of times NIRSP vans were deployed at safety camera sites. In 2014, NIRSP also published the results of a public attitudes survey about the use of safety cameras²⁵.

International context to road safety data

2.15 In August 2015, the United Nations (UN) approved the inclusion of road safety targets in the final text of its Sustainable Development Goals²⁶. The UN has created a Road Safety collaboration committed to the implementation of the recommendations of the World Health Organisation report on road traffic injury prevention²⁷. The European Commission collects Road Safety statistics through the European Road Safety Observatory²⁸. Members of the European Parliament (MEPs) have been calling for a target to reduce serious injuries resulting from road accidents for some time. The Northern Ireland data are consistent with national or European standards where these exist. The Organisation for Economic Co-operation and Development's (OECD) International Traffic Safety Data and Analysis Group published a *Road Safety Annual Report*²⁹, which includes safety data from its extensive database on the road safety performance of 32 countries including the UK.

Openness of the underlying data

2.16 Sir Tim Berners-Lee first proposed a Five Star rating system for linked open data in 2010³⁰. Subsequently in June 2012, the UK Government published its Open Data White Paper: Unleashing the Potential³¹, and began promoting to

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/463045/rrcgb2014-01.pdf

http://www.transport.gov.scot/statistics/j397988-000.htm

²² http://gov.wales/docs/statistics/2015/150909-road-safety-2014-en.pdf

http://www.rsa.ie/en/RSA/Road-Safety/Our-Research/

²⁴ https://www.nidirect.gov.uk/articles/ni-road-safety-partnership

²⁵ https://www.nidirect.gov.uk/publications/northern-ireland-road-safety-partnership-public-attitude-survey-2014-results-report

²⁶ http://www.fiafoundation.org/blog/2015/august/road-safety-sdg-targets-approved-at-un-negotiations

http://www.who.int/roadsafety/en/

²⁸ http://ec.europa.eu/transport/road_safety/specialist/index_en.htm

http://www.itf-oecd.org/road-safety-annual-report-2015

³⁰ The scheme is summarised as one star Available on the web (in any format) with an open licence; two star Available as structured data (e.g. Excel instead of an image scan of a table); three star Available in an open non-proprietary format (e.g. CSV or XML); four star All the above plus Uniform Resource Locators (URLs) so that people can 'point' to them directly, rather than just to an area on a website; and five star All the above, plus a link from the data to other people's data to provide context.

³¹ http://data.gov.uk/sites/default/files/Open_data_White_Paper.pdf

UK government departments the release of operational data in electronic open formats and equate to at least a three star rating in the Five star scheme. The Northern Ireland Executive set out its strategy for open data³² which mandates that data published on the NI open data portal will, as a minimum, conform to a three star level in the Five star scheme. NISRA publishes the *Road Safety Strategy Statistical Report* in pdf format, with supplementary tables published in Excel format. This equates to a two star level under the Five Star Scheme.

Costs of collection

2.17 Data providers already collect the majority of the data used to compile these statistics for other purposes. DOENI regards the additional burden placed upon data providers in the collection of information for these statistics as negligible. For the speeding indicator, a data supplier provides annual reports from permanent traffic counters that are estimated to cost the supplier £400. DOENI estimates that the collection, validation, and production of this report costs approximately £6,300 per annum.

³² https://www.dfpni.gov.uk/publications/open-data-strategy-northern-ireland-2015-2018

3 Assessment findings

User engagement

- 3.1 DOENI uses the Road Safety Forum and the Strategy Delivery Board to engage with the key users of these statistics. Through these groups, DOENI has contact with stakeholders within government as well as local authorities, parent groups, and organisations such as The Royal Society for the Prevention of Accidents (RoSPA)³³, Sustrans³⁴, and Brake³⁵. These groups are policy-led however, and while DOENI statisticians sit on or report into them, they engage with key users within this policy context. DOENI carried out a customer satisfaction survey³⁶ in June 2015, which targeted users on its publication mailing list as well as users who have submitted ad hoc information requests to DOENI. Direct engagement relating specifically to statistical concerns was limited to this survey.
- 3.2 DOENI's policy-focussed engagement with interest groups is insufficient to gather the views of a wider range of users such as academics and consultants. Wider engagement focussed on the *Road Safety Strategy Statistical Report* and its uses would allow DOENI to better understand user needs for statistics on road safety more generally outside of the confines of Strategy targets. For example through the Assessment user consultation, users identified how the provision of breakdowns by type of vehicle and cause of accident would be beneficial. As part of the designation as National Statistics, DOENI should engage directly with users outside of the NIRSS fora to build a complete understanding of users' needs for road safety statistics beyond statistical reporting against the Strategy's KPIs³⁷ (Requirement 1).

Impartiality and integrity

3.3 The Authority's *Official statistics, performance measurement and targets*³⁸ guidance underlines the importance of senior statisticians working with senior officials responsible for policy to embed statistical thinking in the development and evaluation of performance measures. The Strategy and reporting against its targets necessitates close working relationships between statistics and policy teams. The Strategy Delivery Board signs off the Strategy targets and KPIs, and provides operational or policy advice that may be relevant to how they are monitored. It also has final signoff for the statistical planning and development of these statistics based on proposals put forward by the statisticians. The principal statistician however signs off the statistics themselves and is not bound by any Delivery Board recommendations with regard to their development. DOENI does not clearly communicate this relationship and the independence of the statistical function to users.

³³ http://www.rospa.com/

http://www.sustrans.org.uk/

³⁵ http://www.brake.org.uk/

³⁶ https://www.doeni.gov.uk/sites/default/files/publications/doe/road-safety-customer-satisfaction-survey-2015.pdf

³⁷ In relation to Principle 1, Practice 1 of the Code of Practice

https://www.statisticsauthority.gov.uk/publication/official-statistics-performance-measurement-and-targets/

- 3.4 During the course of this Assessment, DOENI made the Assessment team aware of its decision to discontinue the publication of the NIRSS annual report. Given the discontinuation of this report, DOENI policy officials suggested to the statistics team that commentary previously included in their annual report might be incorporated into the *Road Safety Strategy Statistical Report*. This could include statements such as "At a strategic level, these data demonstrate that road safety interventions by statutory partners and stakeholders continue to be effective in supporting the driving down of road casualties to unprecedentedly low levels". DOENI statisticians acknowledged the Assessment team's concerns over the risk to impartiality and objectivity and reassured us that they were confident that they would be able to resolve this issue. The Authority welcomes the approach taken by the DOENI statisticians regarding this matter. As part of the designation as National Statistics, DOENI should:
 - a) publish information on how senior policy and statistics officials work together but ensure clear independence of the statistical Lead Official. The statistical Lead Official should have sole responsibility for the orderly production, management and dissemination of Northern Ireland road safety statistics
 - b) within a) above set out the mechanism for issuing the statistics separately from any other policy statement or comment about the figures³⁹

(Requirement 2).

In meeting this Requirement, DOENI should carefully consider the Authority's Official statistics, performance measurement and targets guidance to ensure that it produces these statistics to high professional standards.

Methods and quality

Quality of the underlying data

- 3.5 In February 2015, the Authority published a regulatory standard⁴⁰ that confirms the quality assurance (QA) arrangements that are required for statistics compiled using administrative data to comply with the *Code of Practice*. The *Administrative Data Quality Assurance Toolkit*⁴¹ is the mechanism that the Authority is using to determine compliance in relation to four areas of practice:
 - operational context and administrative data collection
 - communication with data supply partners
 - QA principles, standards and checks by data suppliers
 - Producers' QA investigations and document
- 3.6 The QA Toolkit sets out that the judgment by statistical producers about the suitability of the administrative data for use in producing official statistics should be pragmatic and proportionate. It should be made in the light of an evaluation of the likelihood of quality issues arising in the data that may affect the quality

³⁹ In relation to Principle 2 Practice 2, Principle 3 Practice 1, Principle 3 Practice 2 and Principle 3 Practice 3 of the *Code of Practice*

⁴⁰ http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/index.html

⁴¹ http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/quality-assurance-toolkit.pdf

- of the statistics. It should also reflect the nature of the public interest served by the statistics. Statistical producers should determine the types of assurance and documentation required to inform users about the quality assurance arrangements for administrative data.
- 3.7 DOENI carries out a number of quality checks on the data supplied, which it documents in an internal handbook. On receiving the data, DOENI undertakes validation checks, assessing trends and cross-referencing with external sources to identify any inconsistencies in the data, discussing any discrepancies with its data suppliers. It was clear that DOENI has strong links with colleagues in PSNI, for example, and works effectively together to investigate and resolve any data issues. The Assessment team was satisfied with the data checks undertaken by DOENI but no information about these quality assurance arrangements is available to users of the statistics.
- 3.8 DOENI publishes a Statement of Administrative Sources (SoAS) on its website. The SoAS however does not include some of the data sources used for the production of the Road Safety Strategy Statistical Report and there is no link to the SoAS from the statistical report. As part of the designation as National Statistics, DOENI should:
 - a) Publish an appropriate level of detail to inform users about its quality assurance arrangements for all of the data sources used in Road Safety Strategy Statistical Report
 - b) Update its SoAS to include all of the administrative data sources and link to it from the statistical report⁴²

(Requirement 3).

Methods and quality of the statistics

- 3.9 In 2015, DOENI published, alongside the Road Safety Strategy Statistical Report, two papers that outline the methodology used for two new indicators; Developing a Novice Driver Indicator 2015⁴³ and Developing a Speed Indicator 2015⁴⁴. These papers provide a high-level overview of the methods used and are in an easy to read form. The papers did lack detail however, for example, when describing the process of matching PSNI collision data with DVA data when developing the novice driver indicator. The paper reports that 'On completion of various validations and quality checks with DVA, ASB were satisfied that the match was the optimum that could be achieved'. DOENI gave no details of the validations or quality checks, nor any indication of match success.
- 3.10 DOENI does not provide any information about methods, or links to information, for the other indicators reported on in the Road Safety Strategy Statistical Report. TRL originally developed the majority of these indicators and DOENI told the Assessment team that links to TRL's research and information on

⁴³ https://www.doeni.gov.uk/sites/default/files/publications/doe/ni-road-safety-strategy-to-2020developing-novice-driver-indicator.pdf

44 https://www.doeni.gov.uk/sites/default/files/publications/doe/ni-road-safety-strategy-to-2020-

developing-speed-indicator.pdf

⁴² In relation to Protocol 3 Practice 5 of the *Code of Practice*

- methods for indicators were available from its old website, but that these were lost in the transition to its new website.
- 3.11 In the User Guidance section of the *Road Safety Strategy Statistical Report*, DOENI documents the different data sources and explains, in a user-friendly manner, the strengths and limitations of each source detailing sampling errors for sources from survey data where they exist. In cases where the reported sampling errors are large or where the source producer has not produced sampling errors, DOENI has not provide any statement about why it considers these sources sufficient to ensure that the published statistics are produced to a level of quality to meet users' need.
- 3.12 DOENI calculates new statistics by combining data from different sources and thus there may be strengths and limitations pertaining to the derived statistics beyond those relating to the source data alone. DOENI does not provide information to users on the strengths and limitations for the statistics contained within the publication that it has derived from these data sources.
- 3.13 DOENI provides users with a comprehensive list of road safety statistics elsewhere in the UK, ROI and Europe. When considering the individual indicators within the *Road Safety Strategy Statistical Report* however it is not clear to users where DOENI has adopted national or international standards or definitions and the reasons for those decisions. As part of the Assessment user consultation, one user raised an issue with the definition and reporting of road traffic fatalities. DOENI told us that the definition of fatalities used was consistent with the police definition and comparable across the UK but not necessarily Europe. DOENI may avoid similar issues if it provided information on comparable standards to users.
- 3.14 It is the view of the Assessment team that DOENI should improve information to users about methods, quality and comparability. As part of the designation as National Statistics, DOENI should:
 - a) Provide users with access to information on methods for the complete range of indicators
 - b) Make clear how the statistics are produced to a level of quality that meets users' needs including a description of their strengths and limitations
 - c) Clearly set out for users where common standards or definitions have been applied and explain the reasons where there has been any deviation⁴⁵

(Requirement 4).

In meeting this Requirement, DOENI should consider collating the information required above for each statistic in an indicator specification. DOENI should consult with the Government Statistical Service's Good Practice Team on this matter but it may wish to consider the approach taken by the Health & Social Care Information Centre through its Indicator Portal⁴⁶.

⁴⁵ In relation to Principle 4 Practice 1, Principle 4 Practice 2, Principle 4 Practice 6, and Principle 8 Practice 1 of the *Code of Practice*

⁴⁶ https://indicators.ic.nhs.uk/webview/

Information and guidance on uncertainty

3.15 Some of the statistics published in the *Road Safety Strategy Statistical Report* are derived from both administrative and survey data, for example the 'Rate of killed or seriously injured (KSI) motorcyclists per 100 million motorcycle kilometres' which draws primarily on administrative data from PSNI on motorcycle KSIs and survey data from the TSNI on average miles travelled per person by motorcycle. Based on 95 per cent confidence range as published in *TSNI*, DOENI has provided users with sampling errors for its derived rates as shown in Figure 2. DOENI advises caution in the 'Progress on Strategy Targets' commentary particularly when interpreting single year data, rather than smoothed trend, based on uncertainty issues.

Figure 2

Rates of motorcyclist KSIs based on 95% confidence intervals of 100 million motorcycle kilometres

	-		+
Year	sampling	Published	sampling
	error	Rate	error
2004	332.38	192.99	135.97
2005	302.92	185.66	133.85
2006	297.82	168.77	117.74
2007	539.77	269.88	179.92
2008	964.14	438.25	283.57
2009	762.44	381.22	254.15
2010	590.32	295.16	196.77
2011	616.60	284.58	184.98
2012	1136.02	426.01	262.16
2013	1715.34	571.78	343.07
2014	1091.84	297.77	172.40
2004-2008 Baseline ^[r]	503.44	263.93	178.84

Source: Road Safety Strategy Statistical Report 2015 - Tables

- 3.16 DOENI provides a summary table of KPIs at the beginning of the *Road Safety Strategy Statistical Report*. Within this summary table, DOENI reports the rate of motorcycle KSIs by single year with no comments about uncertainty. The Authority considers that the approach to alerting users to data quality issues only within the detail of the report, and the level of the advice to users on uncertainty, with particular reference to the example set out above, is insufficient to indicate the level of uncertainty in the statistics.
- 3.17 The Assessment team identified that DOENI adopts inconsistent approaches to reporting survey data in the *Road Safety Strategy Statistical Report*. As described above, DOENI details sampling errors for the 'average miles travelled per person per year per mode' taken from TSNI and includes the sampling error for the derived rates in the detailed tables. In contrast, DOENI does not give sampling errors for the 'number of motor vehicle kilometres travelled' taken from the DRD's *Annual Road Traffic Estimates: Vehicle*

Kilometres Travelled in Northern Ireland, 2008 – 2013 or for the associated derived rates provided in the Road Safety Strategy Statistical Report. DOENI told the Assessment team that DRD states in its report that it has not been possible to quantify the uncertainty around the estimates and that therefore it cannot provide this information to users. As part of the designation as National Statistics, DOENI should present prominent information about the effect of uncertainty on all estimates and caution users appropriately about focusing on single year estimates⁴⁷ (Requirement 5). In meeting this Requirement, DOENI should consider the Government Statistical Service's guidance for official statistics producers on Communicating Uncertainty and Change⁴⁸.

Commentary and accessibility

- 3.18 The Road Safety Strategy Statistical Report contains a summary table of the Strategy targets, followed by a lengthy table of performance against all KPIs with graphs and brief commentary in the 'Progress on Strategy Targets' section. There are currently 26 KPIs reported on in the summary table.
- 3.19 The commentary provided on the individual targets and KPIs provides an overview of the most recent statistics against the previous year and baseline in most cases. While some users fed back through the Assessment user consultation that the commentary met their needs, others indicated that more explanation about plausible reasons to explain the trends shown would add value. As mentioned in paragraph 2.16, the UN has approved road safety targets in its Sustainable Development Goals (SDGs). DOENI told the Assessment team that including details on this would improve contextual information for users and that it would seek to do so in its 2016 publication. The Authority would welcome this addition.
- 3.20 The Authority's Official statistics, performance measurement and targets guidance highlights the need for statistical producers to provide narrative commentary that explains the implications of the contextual information. The limited commentary of the Road Safety Strategy Statistical Report does not fully encompass this need. The decision by DOENI policy staff to cease the publication of its annual report has left the Road Safety Strategy Statistical Report without a link to a range of contextual information that would help to make sense of the statistics. The Authority's guidance also highlights the importance of presenting progress within the context of a time series that extends back beyond the period that the target has been in operation. The Road Safety Strategy Statistical Report reports most KPIs from 2004, but some from later periods, depending on data availability. This time series therefore does cover the period prior to the implementation of the 2020 Strategy.
- 3.21 The Assessment team considers that DOENI could enhance the presentation of its statistics. The wealth of information in the summary table of the 26 KPIs may be better accessed by users if grouped into similar measures, for example grouping together the novice drivers indicators. The statisticians take the view that the summary tables provide users with an 'at a glance view' of progress

https://gss.civilservice.gov.uk/statistics/presentation-and-dissemination/communicating-uncertainty-change/

⁴⁷ In relation Principle 4 Practice 2 of the *Code of Practice*

against KPIs with percentage change from the previous year and the baseline with Red/Amber/Green (RAG) arrows showing movement. However, DOENI does not have any threshold criteria for the presentation of these RAG arrows. The reporting of minor change, and particularly changes which were not statistically significant, may be misleading to users.

Figure 3 – Summary Table of Key Performance Indicators

Key Performance Indicator	2004-2008 Baseline	2012	2013	2014	Perce char	ent Year ntage (%) ige from seline ²	Percei chan	ent Year ntage (%) ge from ar (2013) ²
Rate of road deaths per 100 million vehicle kilometres [r]	0.6	0.2	0.3	0.4	Ψ	-39%	1	39%
Rate of road deaths per million population	72.0	26.3	31.2	42.9	•	-40%	1	38%
Rate of pedestrian KSIs per 100 million kilometres walked [r]	51.6	43.7	36.6	32.5	•	-37%	Ψ.	-11%
Rate of pedal cyclist KSIs per 100 million kilometres cycled [r]	60.7	69.4	60.1	74.8	1	23%	1	24%
Rate of motorcyclist KSIs per 100 million motorcycle kilometres [r]	263.9	426.0	571.8	297.8	1	13%	•	-48%
Rate of car users KSIs per 100 million kilometres (cars & vans) [r]	4.7	2.7	2.4	2.6	•	-46%	1	5%
Rate of fatal and serious collisions per 100 million vehicle kilometres [r]	5.0	3.7	3.4	3.3	•	-34%	•	-3%
Number of people aged over 70 killed or seriously injured in road collisions per 100,000 population aged over 70	50.2	38.3	45.5	42.4	•	-16%	•	-7%
Number of people killed in collisions on rural roads	92.2	35	36	55	•	-40%	1	53%
Number of children (0-15) killed in collisions on rural roads	5.2	3	2	2	•	-	→	-
Number of people killed where at least one person involved was over the legal blood alcohol limit	27.8	10	14	22	•	-21%	1	57%
Number of car occupants killed who were not wearing a seatbelt	24.6	7	11	8	•	-67%	•	-27%
Number of pedestrians killed or seriously injured per 100,000	28.4	28.8	21.5	12.5	•	-56%	•	-42%
population in 10 per cent most deprived areas (Collisions) ¹ Number of pedestrians killed or seriously injured per 100,000 population in 10 per cent least deprived areas (Collisions) ¹	4.5	6.0	4.8	4.8	4	-	•	-
Number of child pedestrians killed or seriously injured per 100,000 population in 10 per cent most deprived areas (Collisions) ¹ [r]	34.5	39.2	36.5	15.4	•	-55%	•	-58%
Number of child pedestrians killed or seriously injured per 100,000 population in 10 per cent least deprived areas (Collisions) 1 [r]	6.7	9.6	3.3	6.6	Ψ	-	•	-
Number of KSIs resulting from collisions involving drivers under the age of 25	424.8	242.0	215.0	259.0	Ψ	-39%	1	20%
Number of KSI casualties resulting from collisions involving a novice driver (0-6 months post test) (3 year rolling average)	80.9	57.2	44.5	41.0	Ψ	-49%	•	-8%
Number of KSI casualties resulting from collisions involving a novice driver (7-12 months post test) (3 year rolling average)	44.7	35.2	34.8	24.3	Ψ	-46%	•	-30%
Number of KSI casualties resulting from collisions involving a novice driver (13-18 months post test) (3 year rolling average)	40.7	36.4	29.1	28.9	•	-29%	•	-1%
Number of KSI casualties resulting from collisions involving a novice driver (19-24 months post test) (3 year rolling average)	34.1	34.0	27.5	31.4	•	-8%	^	14%
Number of KSI casualties resulting from collisions involving a novice driver (0-24 months post test) (3 year rolling average)	200.4	162.8	135.9	125.7	Ψ	-37%	•	-8%
Proportion of vehicles exceeding the speed limit on built-up 30/40 mph roads (11pm - 7am (free running))	64%	66%	65%	64%	Ψ	0%	•	-2%
Proportion of vehicles exceeding the speed limit on dual carriageways (11pm - 7am (free running))	39%	45%	39%	39%	•	-2%	•	-1%
Proportion of vehicles exceeding the speed limit on motorways (11pm - 7am (free running))	20%	18%	19%	19%	•	-4%	^	1%
Proportion of vehicles exceeding the speed limit on single carriageways >40 mph (11pm - 7am (free running))	21%	23%	20%	21%	Ψ	-2%	1	4%

Notes:

Source: DOENI Road Safety Strategy Statistical Report 2015

¹Users should note that the deprivation marker is based on where the collision occurred rather than where the casualty lived.

²Percentage changes have been calculated using unrounded data. Where a '-' appears in a column relating to percentages the calculated percentage has been removed. This is due to the percentage being calculated where the denominator is less than or equal to ten. The percentage in these instances may skew the interpretation of the results and as such the user may wish to acknowledge the small numbers rather than view the percentage.

Where a rate has been calculated from base data greater than ten, the percentages have been reported regardless of the value of the rate.

^[I] Users should note that figures have been revised. See User Guidance.

- 3.22 DOENI does not state clearly within the body of the report whether change reported is statistically significant although it told us that it is ASB policy not to include comment if this is not the case. The Assessment team takes the view that the DOENI statisticians need to be explicit about whether change reported is statistically significant or not.
- 3.23 Within DOENI's *Road Safety Strategy Statistical Report* many of the links to webpages or documents hosted on its own website are broken. This includes links to the Strategy document, related research briefings, and key documents such as its revisions policy. As part of the designation as National Statistics, DOENI should:
 - a) Be clear what can be concluded from the statistics and what cannot be concluded
 - b) Consider the criteria for the presentation of RAG arrows to ensure it is not misleading to users and provide clear information on the criteria used
 - c) Restore all broken links in the *Road Safety Strategy Statistical Report* and ensure users have access to DOENI's published revision policy
 - d) Improve the presentation and commentary to aid user interpretation providing contextual information and pointers to where richer data may be found⁴⁹

(Requirement 6).

In meeting this Requirement, DOENI should work with the Government Statistical Service's Good Practice Team to enhance the presentation format of the report. We suggest that DOENI considers the Authority's *Standards for Statistical Reports*⁵⁰. While this is not part of the *Code*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*.

3.24 DOENI publishes the Road Safety Strategy Statistical Report in pdf format, with supplementary tables published in Excel format. This equates to a level of 2 stars under the Five Star Scheme. DOENI might greatly increase the reach by publishing a summary of the principal statistics in html and making the accompanying data tables available in csv or other machine readable format. DOENI told the Assessment team that it is planning to provide the data tables in csv format for the 2016 release. The Authority welcomes this development and would encourage DOENI to ensure that files are machine readable so that apps or online tools can discover and reliably parse the data. DOENI does not currently link from the data to its documentation about any known issues with the quality of the data. Doing so would enable users who wish to reuse the data to make informed judgements about appropriate use. As part of the designation as National Statistics, DOENI should make the underlying data in supplementary tables available in a machine-readable format⁵¹ (Requirement 7). In meeting this Requirement, DOENI should seek to release an html summary of the key findings from statistical releases to allow easier re-use.

⁴⁹ In relation to Principle 2 Practice 6 and Principle 8 Practice 2 of the *Code of Practice*

http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html

⁵¹ In relation to Principle 8 Practice 6 of the *Code of Practice*

DOENI publishes its pre-release access list⁵² on its website. DOENI reviews 3.25 and updates its pre-release list with each statistical publication and last updated it in September 2014 listing 11 people, 9 within DOENI and 2 from PSNI. However, given that DOENI sources the statistics directly from pre-published sources such as the PSNI Road Traffic Casualty Statistics, the Assessment team is concerned about whether pre-release access of these statistics properly balances equal access to the statistics with a need for 24 hours privileged access. The Authority's view is that the existence of pre-release access can undermine public confidence both in the statistical evidence and in the policies to which official statistics relate. Equality of access is a fundamental principle of statistical good practice, both in the UK and internationally. All the parties to public debate should as far as possible have the same information at the same time, and only the absolute minimum number of people should see official statistics in their final form before they are published. We suggest that DOENI consider the Authority's view on pre-release access to the Road Safety Strategy Statistical Report when it next reviews its pre-release access list.

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⁵² https://www.doeni.gov.uk/publications/doe-statistical-pre-release-access-list

Annex 1: Summary of assessment process

- A1.1 This assessment was conducted from October 2015 to March 2016.
- A1.2 The Assessment team Iain Russell and Marie McGhee agreed the scope of and timetable for this assessment with representatives of the DOENI in October 2015. The Written Evidence for Assessment was provided in December 2015. The Assessment team subsequently met DOENI during January 2016 to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

- A1.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A1.4 The Assessment team received 9 responses from the user consultation. The respondents were grouped as follows:

Devolved government	5
Consultant/Individual	2
Trade Association	1
Other	1

Key documents/links provided

- Written Evidence for Assessment documents completed by DOENI organisational evidence and output evidence
- Northern Ireland Road Safety Strategy to 2020: Annual Statistical Report 2015

