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Transport statistics as exposure data in road safety analysis

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5th ITF TRANSPORT STATISTICS MEETING, 25-26 April 2018, Paris

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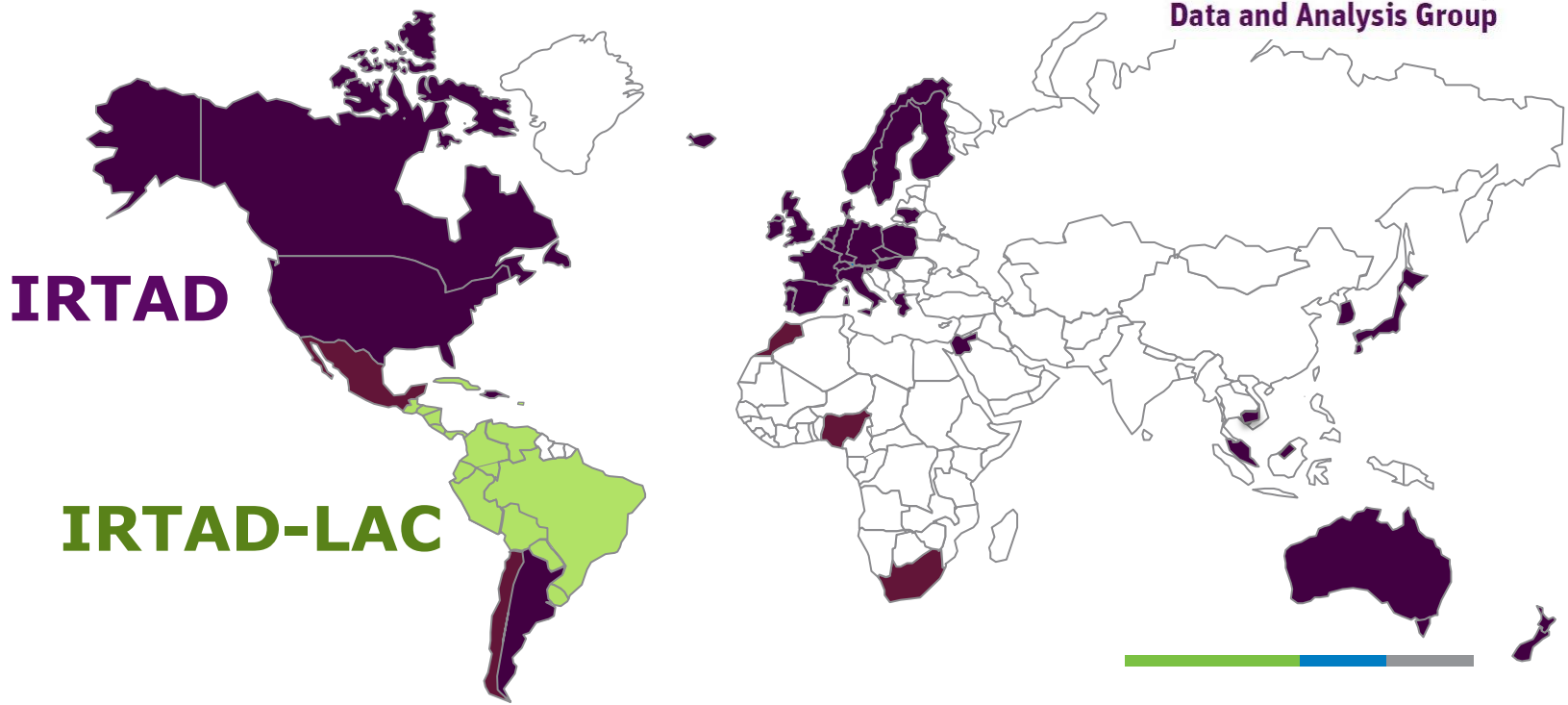

Understanding the differences between road safety performance in UK & NL

	NL / UK
fatalities per unit population	**+36%**

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Understanding the differences between road safety performance in UK & NL

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fatalities per unit population	+36%
fatalities per unit traffic	+39%
pedestrian fatalities per unit distance walked	-55%
cycling fatalities per unit distance cycled	-56%

Sources: ITF IRTAD annual report, ITF Cycling Safety Roundtable, DfT Reported Road Casualties Great-Britain 2016

Cycling exposure and risk by country

Country	Distance cycled per year per inhabitant (km)		Cycling fatalities per year per million inhabitant		Cycling fatalities per billion km cycled
Austria	223	(2014)	5.4	(2011-2015)	24
Belgium	279	(2009)	6.5	(2011-2015)	24
Denmark	547	(2013)	5.0	(2011-2015)	9
Finland	267	(2011)	4.2	(2011-2015)	16
France	88	(2008)	2.4	(2011-2015)	28
Germany	439	(2011-2014)	4.8	(2011-2015)	11
Ireland	103	(2012-2014)	1.9	(2011-2015)	18
Italy	89	(2011-2015)	4.5	(2011-2015)	51
Netherlands	891	(2011-2015)	7.4	(2011-2015)	8
Norway	255	(2014)	2.0	(2011-2015)	8
Sweden	199	(2014)	2.3	(2011-2015)	12
Switzerland	262	(2011-2015)	4.1	(2011-2015)	16
United Kingdom	83	(2011-2015)	1.8	(2011-2015)	21
USA	48	(2009)	2.4	(2011-2015)	49

Source: adapted from Castro and Götschi (2018), ITF (2013) and ITF IRTAD database

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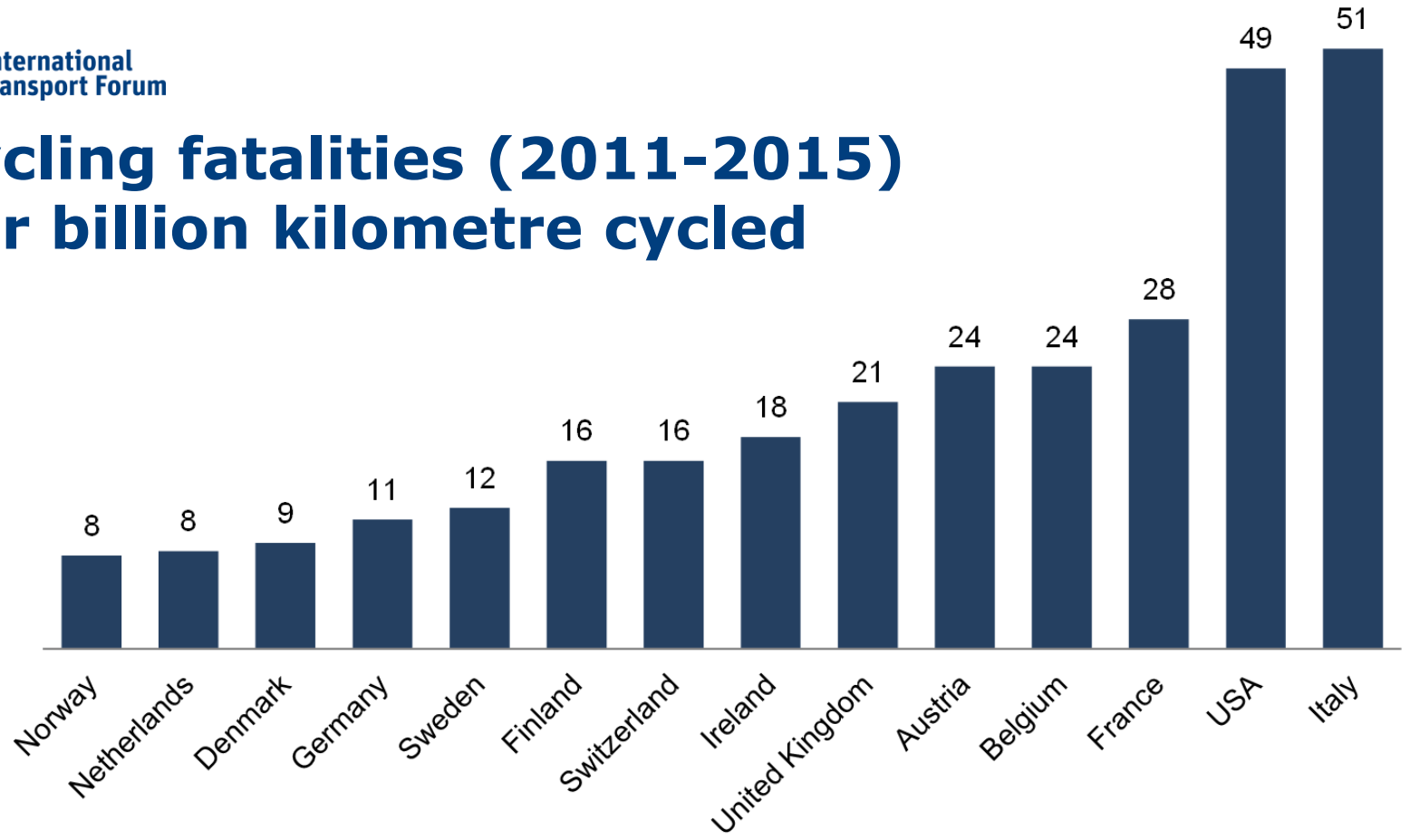
Cycling fatalities (2011-2015) per billion kilometre cycled



Exposure data: Austria (2014), Belgium (2009), Denmark (2013), Finland (2011), France (2008), Germany (2011-2014), Ireland (2012-2014), Italy (2011-2015), Netherlands (2011-2015), Norway (2014), Sweden (2014), Switzerland (2011-2015), United Kingdom (2011-2015), USA (2009)

A question endorsed by the ITF IRTAD group

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Subgroup on risk exposure data

How to collect comparable **exposure** data, and especially passenger mobility data by mode?

Most active members

Belgium, Canada, Germany, Finland, France, Greece, Ireland, Korea, Netherlands, UK, USA

Pilot survey responses

Data source / Dataset	Belgium	Finland	France	Germany	Great Britain	Greece	Israel	Korea	Netherlands	Sweden	Total
Mobility											
National Travel Survey	1	1	1	1	1	1	1	1	1	1	10
National Mobility Panel				1					1		2
Traffic											
Traffic Counts Technology	1	1	1	1	1	1	1	1	1	1	10
Traffic Volume Statistics	1	1	1	1	1	1	1	1	1	1	10
Vehicle Inspection Data	1	1	1	1	1	1	1	1	1	1	10
Mileage Survey				1							1
Vehicles											
Vehicle Registration and Insurance Data	1	1	1	1	1	1	1	1	1	1	10
Vehicle Fleet data				1							1
People											
Population and commuters data	1	1	1	1	1	1	1	1	1	1	10
Driving licenses data	1	1	1	1	1	1	1	1	1	1	10
Driving test statistics					1						1
Other											
Crowd sourcing (apps, cellular/bluetooth signals, etc.)	1	1	1	1	1	1	1	1	1	1	10
Road Length									1		1
Total	**8**	**8**	**8**	**11**	**9**	**8**	**8**	**8**	**10**	**8**	**86**

Mobility

- Countries are replacing face-2-face interviews with telephone or web interviews > how many short trips are being lost in the process?
- Belgium: NTS 2017 has information on crashes.
- Germany/Netherlands have two surveys:
  - a classic (cross-sectional) NTS
  - a longitudinal mobility panel

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National Travel Surveys (NTS)

in European countries (2013)

Country	Survey
Austria	Mobilitätserhebung österreichischer Haushalte (MÖH); Mobility Survey of Austrian Households
Belgium	BELDAM NTS Belgian Daily Mobility
Denmark	Transportvaneundersøgelsen (TU); Transport Behaviour Survey
Finland	Henkilöliikennetutkimus (HLT); National Travel Survey
France	Enquête Nationale Transports et Déplacements (ENTD); National Survey Transportations and Travel
Germany	Deutsches Mobilitätspanel (MOP); German Mobility Panel Mobilität in Deutschland (MID); Mobility in Germany
Italy	Osservatorio sui comportamenti di mobilità degli italiani (AUDIMOB) (*Italian mobility behaviours Observatory*)
Latvia	Iedzīvotāju pārvietošanās apsekojums 2003.g.; Passenger mobility survey
Netherlands	Onderzoek Verplaatsingen in Nederland (OViN); Movement Research in the Netherlands
Spain	MOVILIA Mobility Survey
Great Britain	National Travel Survey (NTS)
Israel	National Travel Habits Survey (NTHS)
Norway	Nasjonale Reisevaneundersøkelsen (RVU); National Travel Survey
Sweden	The National Swedish Travel Survey
Switzerland	Mikrozensus Verkehr; Microcencus Traffic

Source: Shanti Wiki

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COST SHANTI

Survey Harmonisation with New Technologies Improvement

Published 2014

Cost Action TU0804

Contact: Jimmy Armoogum, IFSTTAR

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COST SHANTI

- Analysis of different methodology of national travel survey in Europe
- Towards Comparable Passenger Travel Statistics in Europe - Recommendations for Obtaining Comparable Results from National Travel Surveys
- Post-harmonisation of data from National Travel Surveys across Europe
- Data needs + proposition of a questionnaire
- New technology to capture travel behaviour

EUROSTAT guidelines on passenger mobility

- Main follow-up from SHANTI
- Grants have been awarded to several countries for post-harmonisation research

Travel survey harmonisation

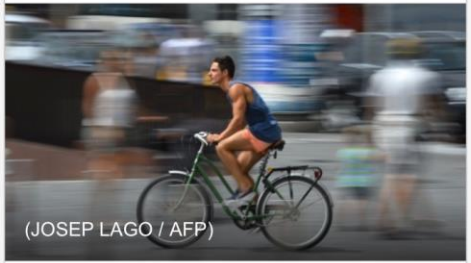
- How about a publication standard for «indicators plus meta-data»?
- Any supranational solutions?

Commuter data (FR)

L'OBS

#Vélo

Aller au travail à vélo, une réalité pour seulement 2% des Français



(JOSEP LAGO / AFP)

Seuls 2% des actifs partent au travail de bon matin à bicyclette, un chiffre bien inférieur à la part de ceux qui utilisent une voiture, sept sur dix, ou les

Aide English

RECHERCHE Insee MENU

Partir de bon matin, à bicyclette...

Frédéric Tallet, division Méthodes et traitements des recensements, Vincent Vallès, pôle Recensement de la population, Insee

En 2015, 2 % des actifs ayant un emploi vont travailler à vélo. Ce mode de transport est bien moins utilisé que l'automobile, largement prédominante, les transports en commun ou la marche, mais il fait jeu égal avec les deux-roues motorisés. Ses adeptes parcourent quelques kilomètres entre leur domicile et leur lieu de travail. Ils résident plutôt dans les villes-centres des grands pôles urbains. Les départements les plus urbanisés sont ainsi ceux où le recours à ce mode de transport est le plus important. L'utilisation du vélo pour aller travailler varie peu en fonction de l'âge, contrairement aux autres modes de déplacement. Les femmes vont moins souvent travailler à bicyclette que les hommes, tandis qu'elles empruntent plus

franceinfo:

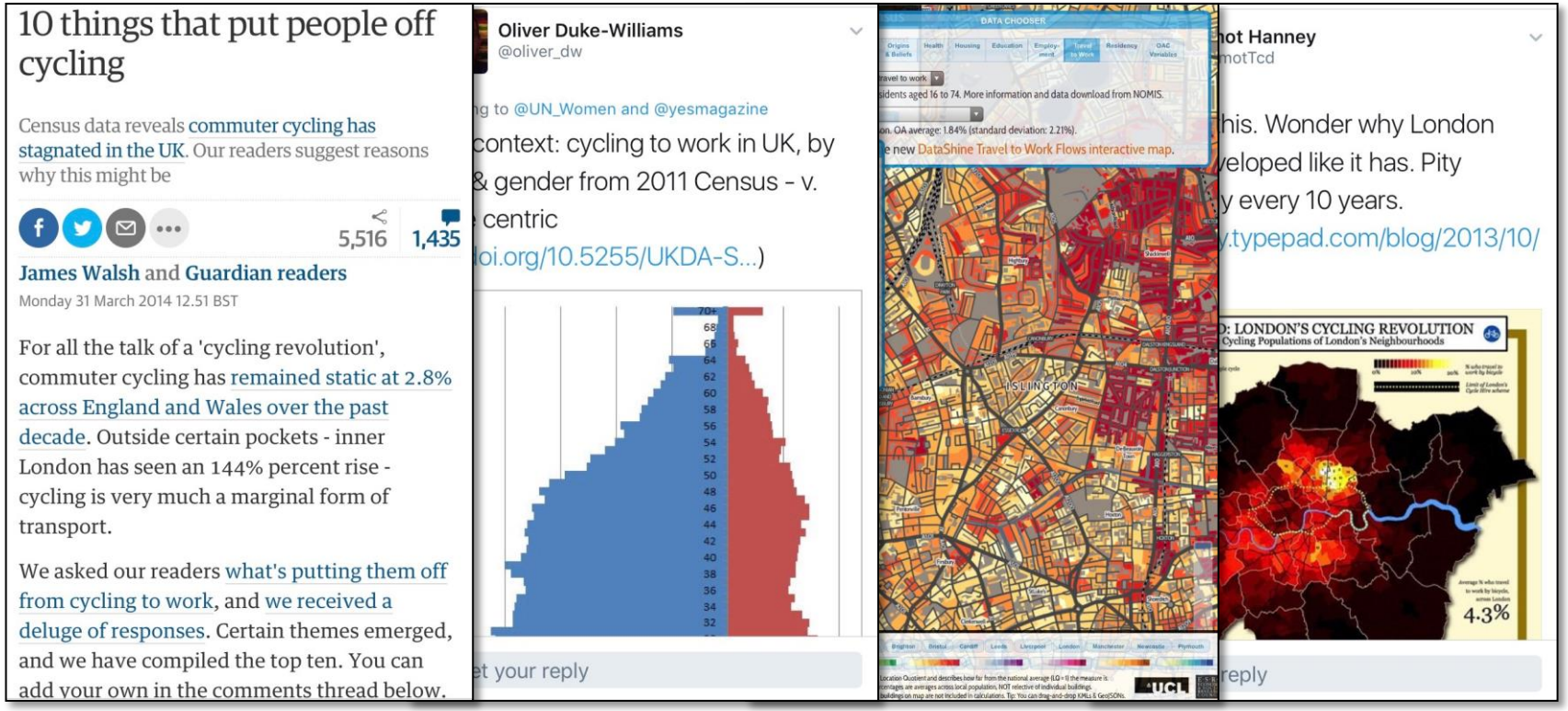
Un cycliste près du Panthéon, le 5 février 2015. (BRUNO LEVESQUE / MAXPPP)

Mode de transport : le vélo aussi utilisé que les deux-roues motorisés pour aller au travail, selon l'Insee

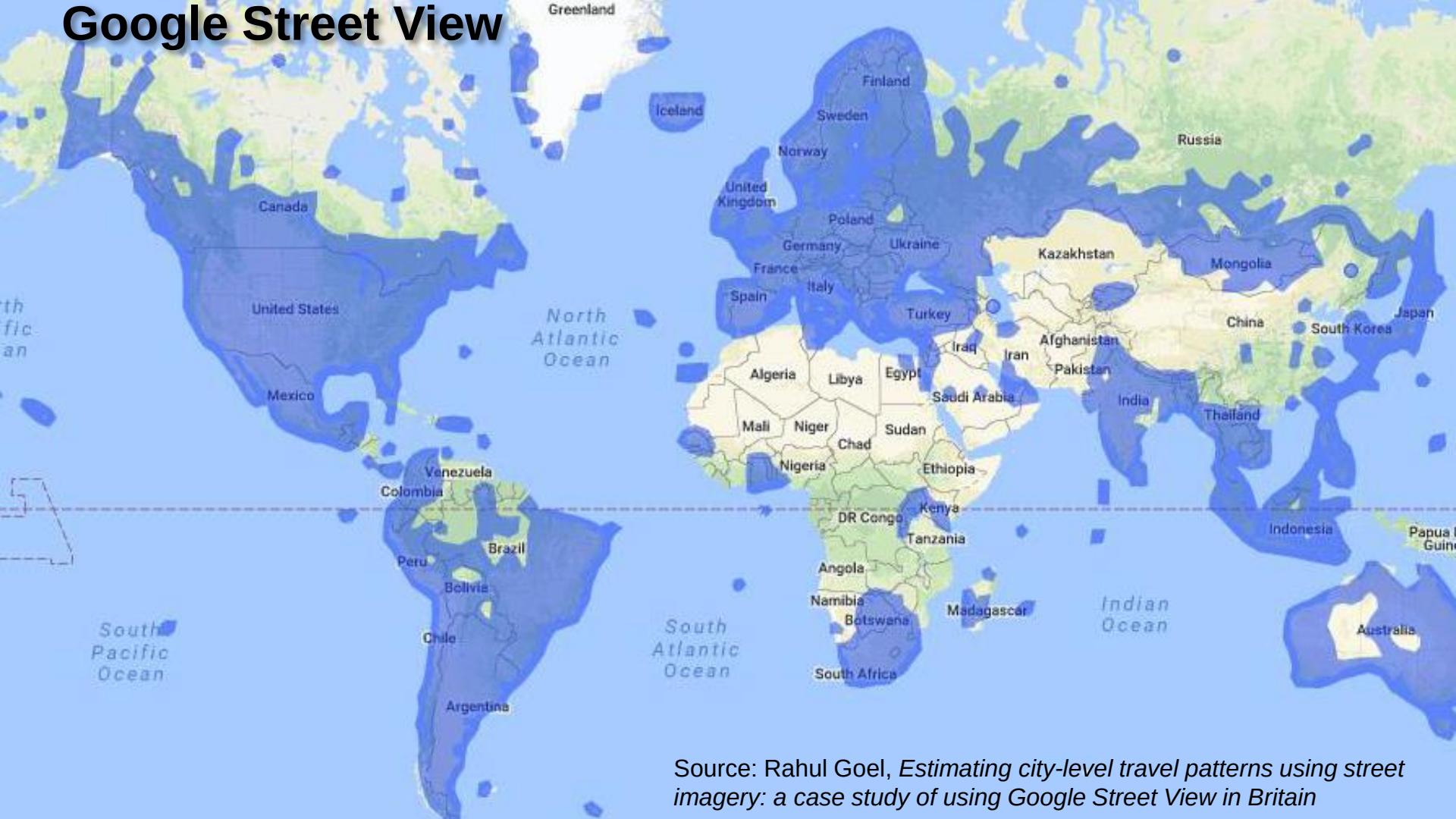
Par **franceinfo**

Mis à jour le 17/01/2017 | 15:31 , publié le 17/01/2017 | 12:29

Commuter data (UK)



Google Street View



Source: Rahul Goel, *Estimating city-level travel patterns using street imagery: a case study of using Google Street View in Britain*

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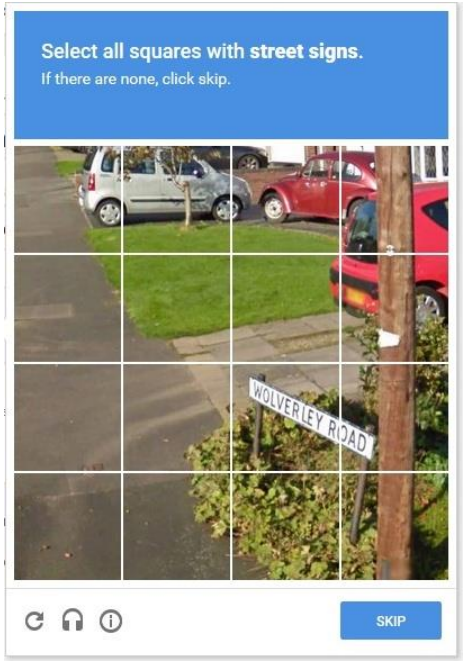
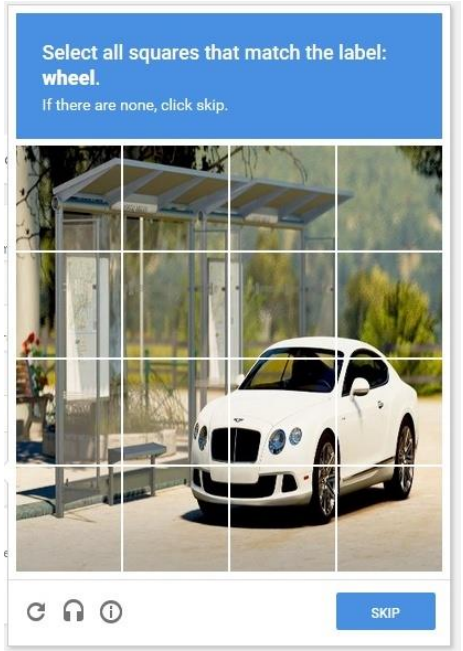
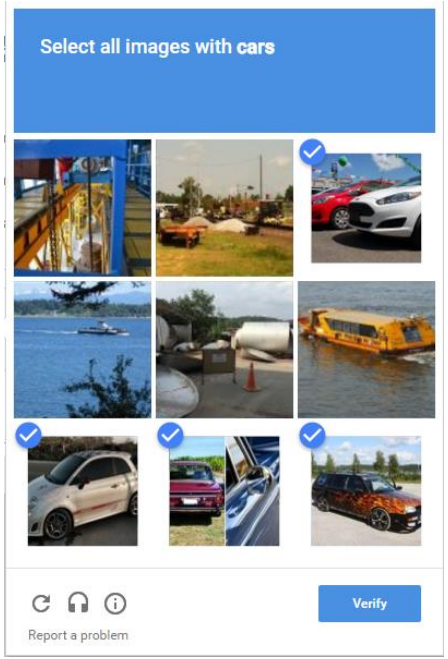
I’m not a robot







29-30 January 2018

ITF Roundtable on Cycling Safety

33

Experts

16

Countries

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Indicators and targets

Monitoring performance and setting objectives

Measuring what matters to the end user

Comparing performance across countries, areas, user groups, seasons, etc.

Performance metrics should control for the underlying volume of pedal cycle traffic

Aim to reduce by 50% the number of fatalities per unit distance cycled

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Diversity of bikes

Request data on trips and crashes from bike-share operators

Disaggregation of shared bikes and electric bikes from classic bikes is desirable, when traffic/mobility data is collected

Photo: http://www.automobile-entreprise.com/Velib-entre-dans-une-nouvelle-ere,6405

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Safer City Streets

the global traffic safety network for liveable cities

ROAD SAFETY GRANT PROGRAMME

FIA FOUNDATION

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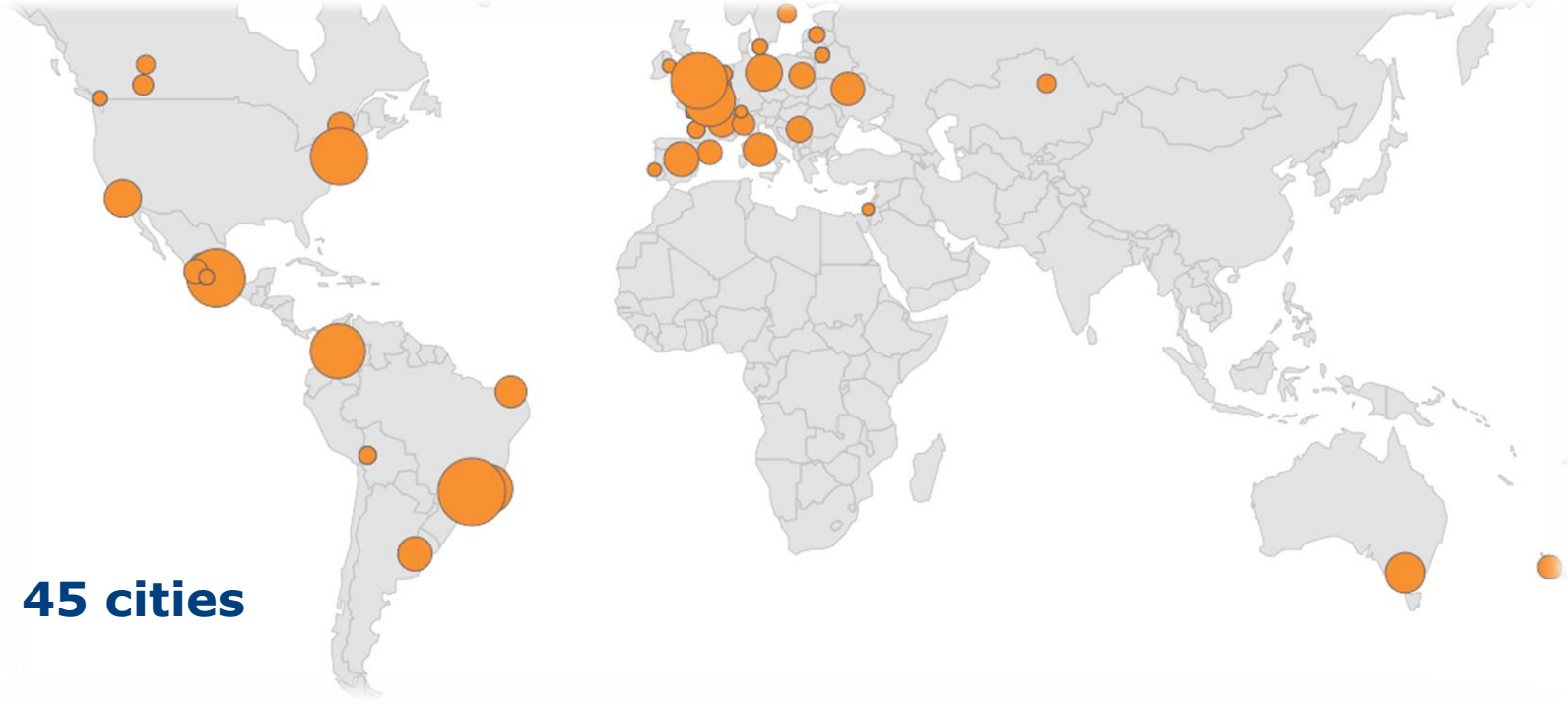

- **45 cities**

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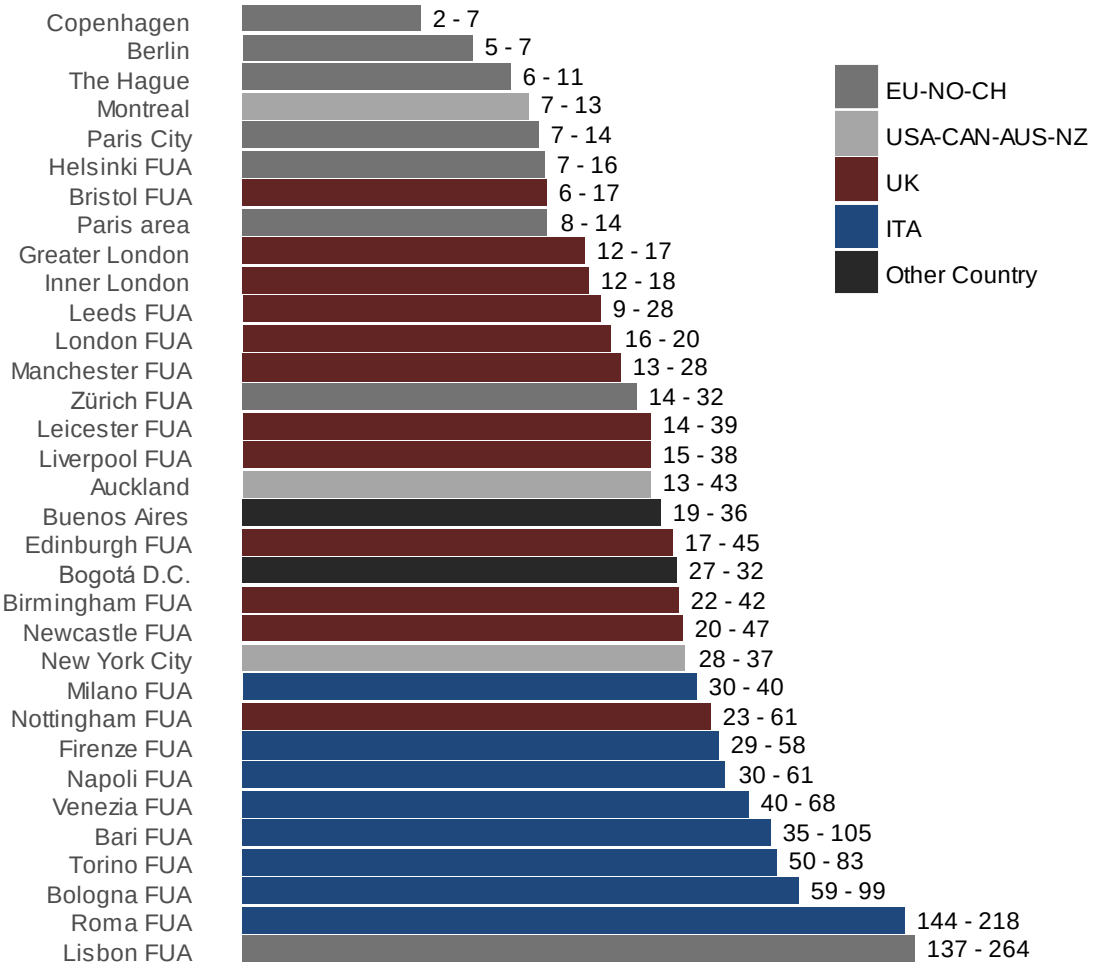
Cyclist fatalities per bn km cycled

80% confidence intervals reflecting natural fluctuations in casualty numbers

Benchmark is limited to areas with more than 5 fatalities in 5 years.

2011-2015 average
ITF Safer City Streets database



Key recommendations

- Consider the recommendations from SHANTI/Eurostat
- Join forces across local and national authorities to reduce costs and make results comparable
- Join forces across disciplines: public health (physical activity) + mobility planning + road safety
- Survey 365/7
- Avoid the omission of walking and cycling
- On-street counts: choice of locations shall be randomised

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Thank you

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Abbreviations

- **NTS National Travel Survey**
- **NMP National Mobility Panel**
- **CAPI Computer-assisted personal interviewing**
- **CATI Computer-assisted telephones interviewing**
- **CAWI Computer Aided Web Interviewing**