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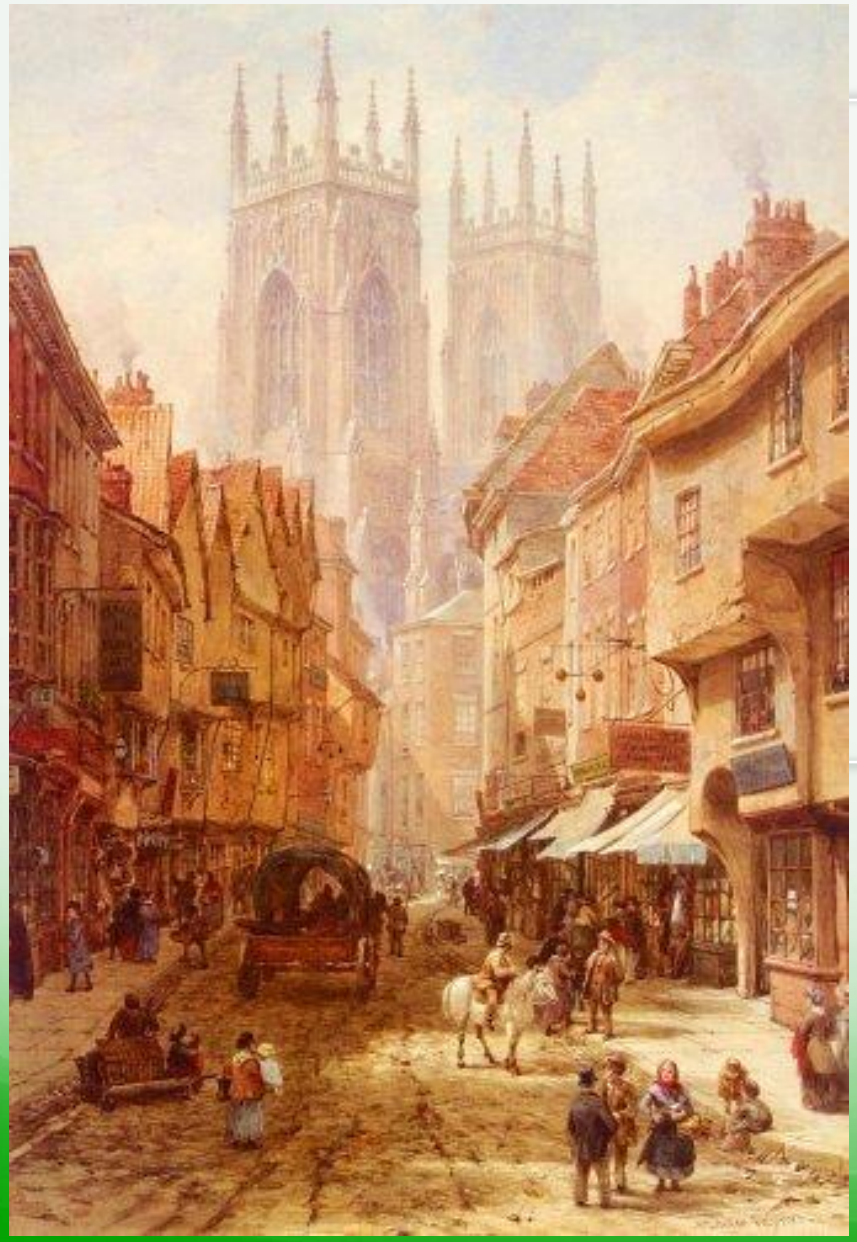
Streets for Life… or Death?

Tim Pharoah
Transport and Planning Consultant

cities for mobility
World Congress 2012
Stuttgart, 1 July – 4 July

2:00 pm
Parallel workshops
3 Safe streets: Opportunities and risks of new techno-logies

1. History and background
2. Streets today
3. Technology – a way forward?



Social and commercial functions shared with movement

Paved footways but activity occupies whole space

York, Louise Rayner, mid 19th century

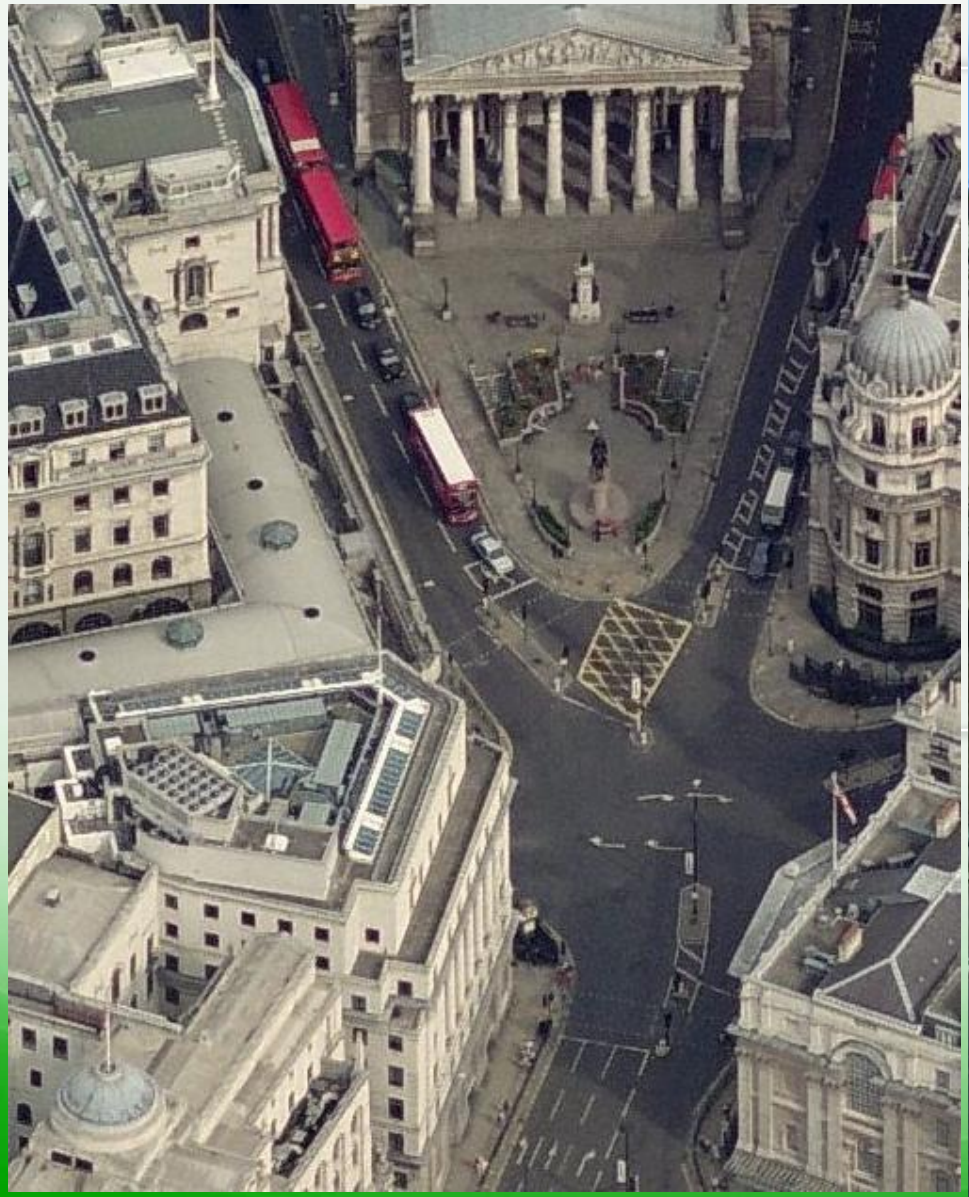
1910s

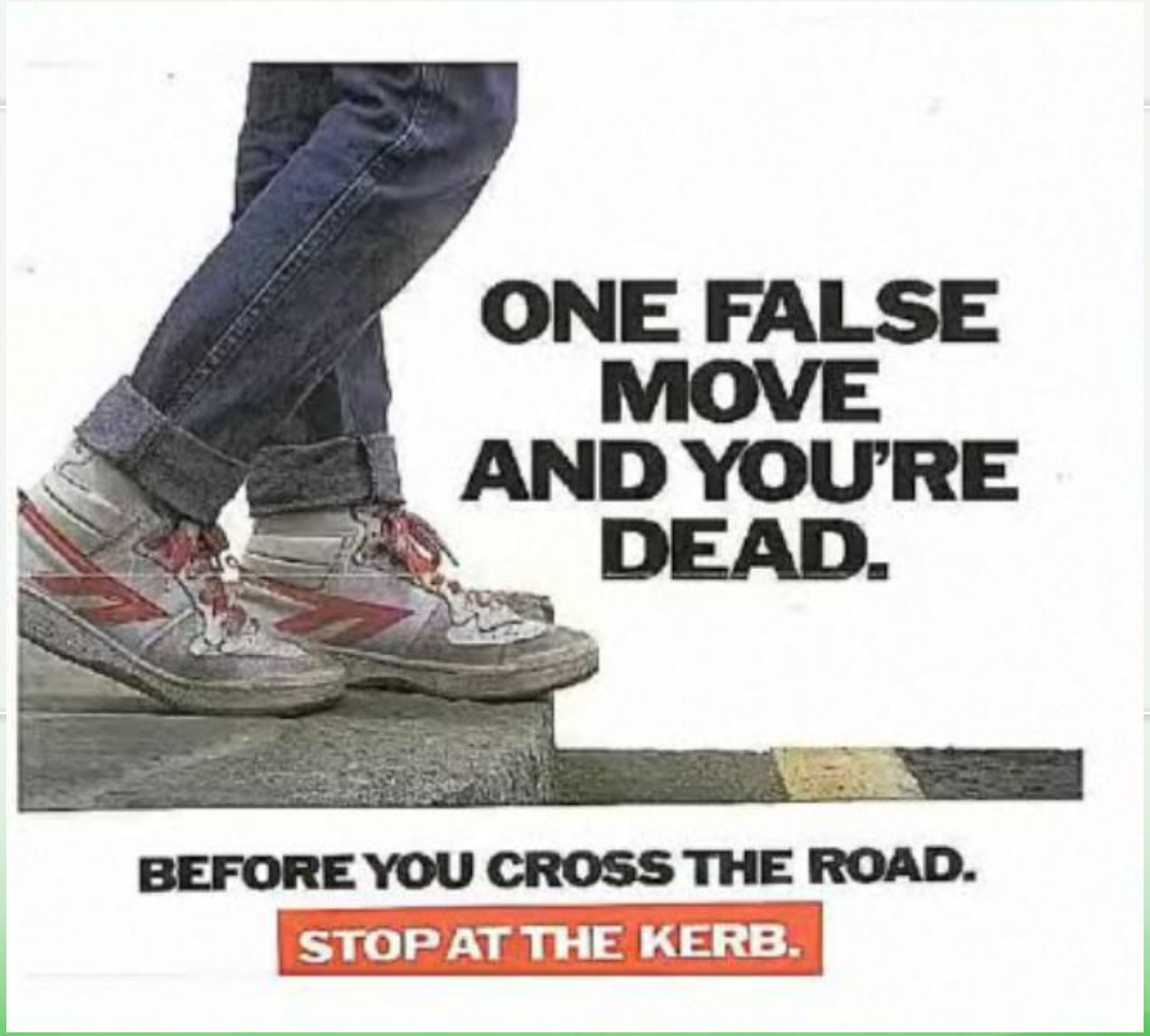
Courtesy Sky High traffic surveys

Bank of England – 1890s

1930s

The same place today

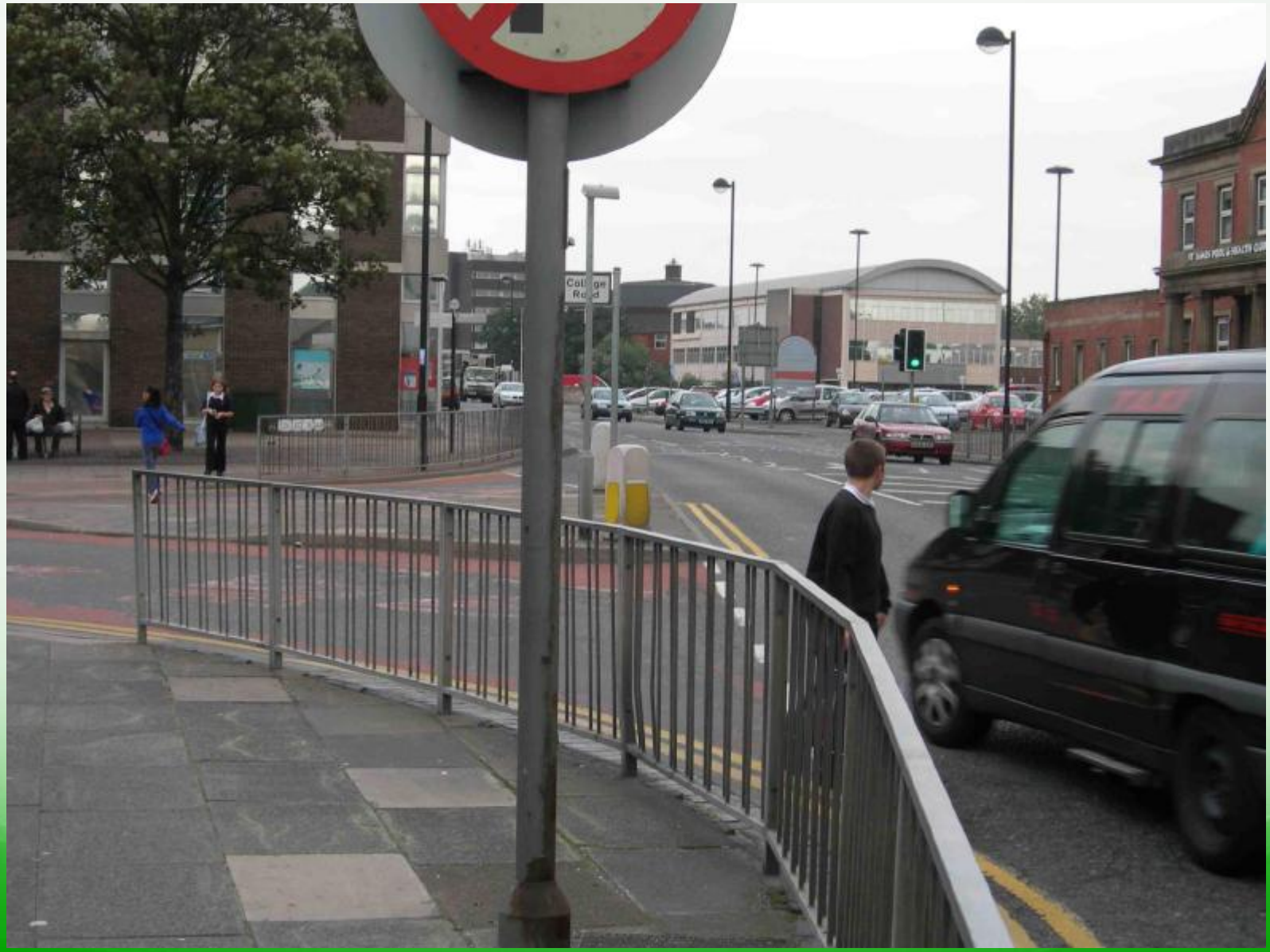




Design response:

separate pedestrians from vehicles (Buchanan, 1963)


BUS
AND



Cameras, lights, action!

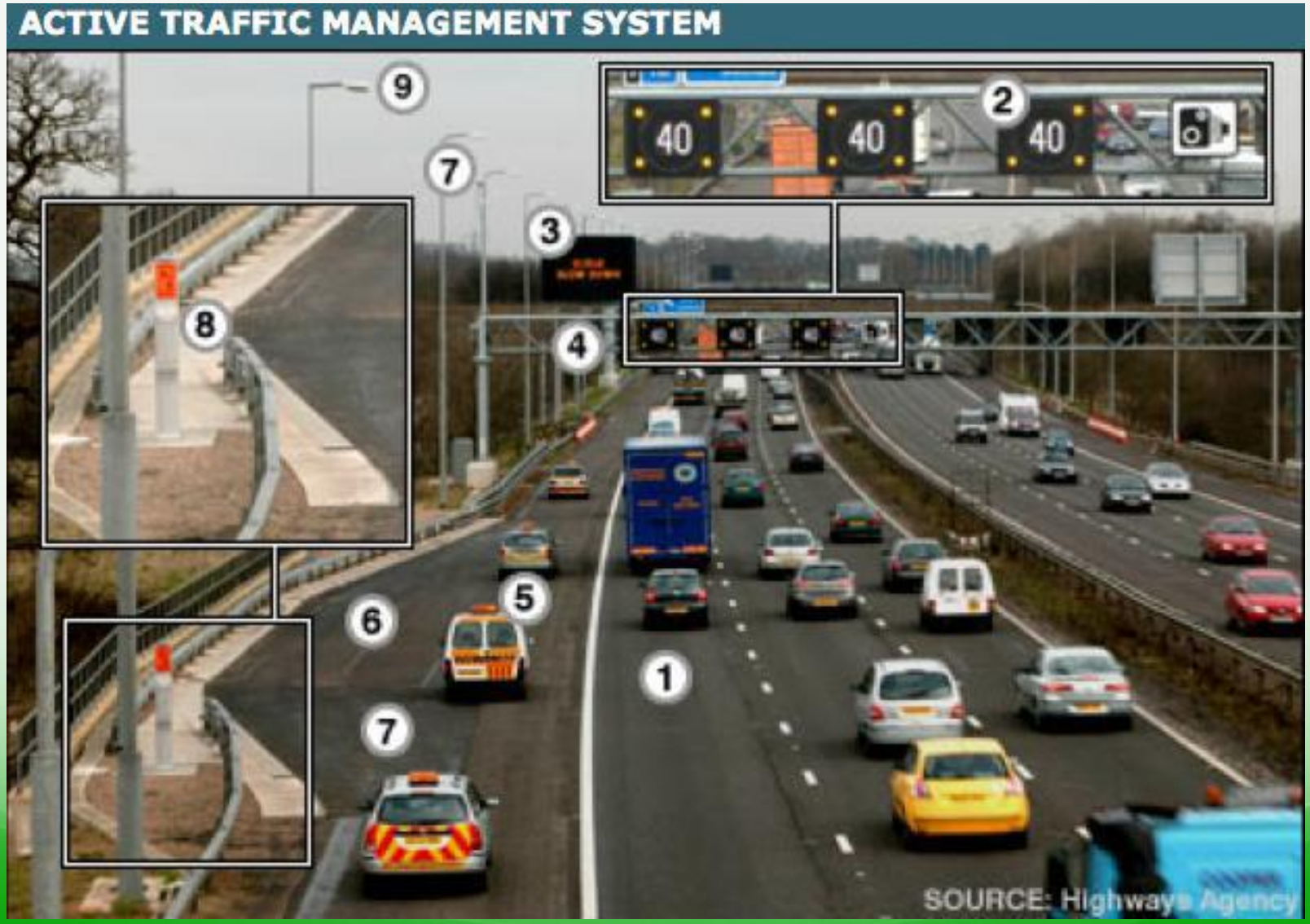
Road safety…
or street safety?

Definitely not a “street”!

Technology for ROAD safety

guided vehicles, headway control, road trains, weather compensation, variable speed limits enforcement cameras/devices for insurance, tax offences, tailgating, illegal overtaking; black box recorder….etc.

Management technology – capacity or safety?



Kuala Lumpur traffic management

Beijing –
17 lanes
to cross!

Technology for STREET safety:

- Speed limiters (GPS activated)
- Average speed cameras
- Enforcement cameras
- Traffic calming
- Driverless cars

Mixed use street

Quiet residential street

Average speed cameras

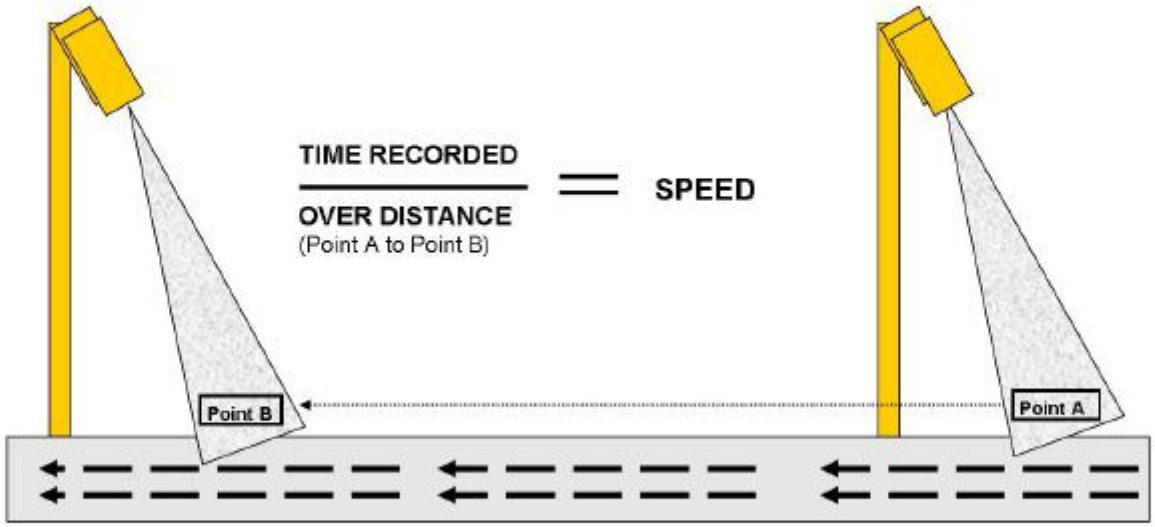


DIAGRAM SHOWING HOW AVERAGE SPEED CAMERAS WORK

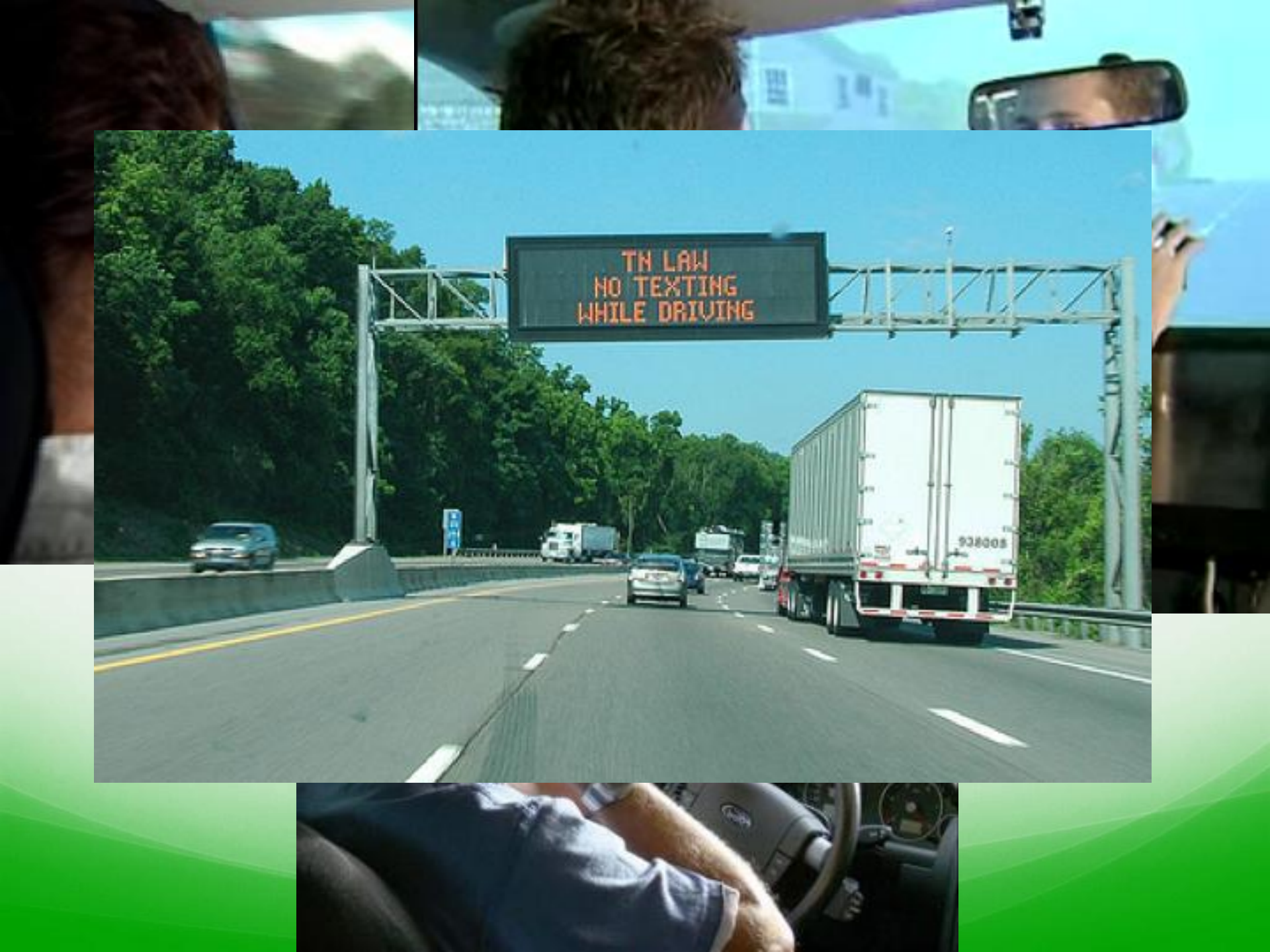
Google's Driverless car

Auto-limiter
stops car from speeding

Traffic calming: design technology

Some technology creates danger

(Unintended consequences)


TN LAW
NO TEXTING
WHILE DRIVING

Social technology?

Ergonomics: designing equipment (streets) that fit the human body, its movements and its cognitive abilities.

Shared Space – design aims:

- Pedestrian freedom
- Freedom from casualties
- Attractive urban spaces
- Uncluttered streets

How does shared space technology work?

- People are responsible for their actions
- Instructions (signs) are less important
- Low speeds, so people can interact (<30kph)
- Design as urban space, not as highway

Shared Space – design:

- No priority or demarcation signs
- Single surface (soft separation)
- Surface material sympathetic to place
- Pedestrian-only areas for vulnerable users

Danger = Safety

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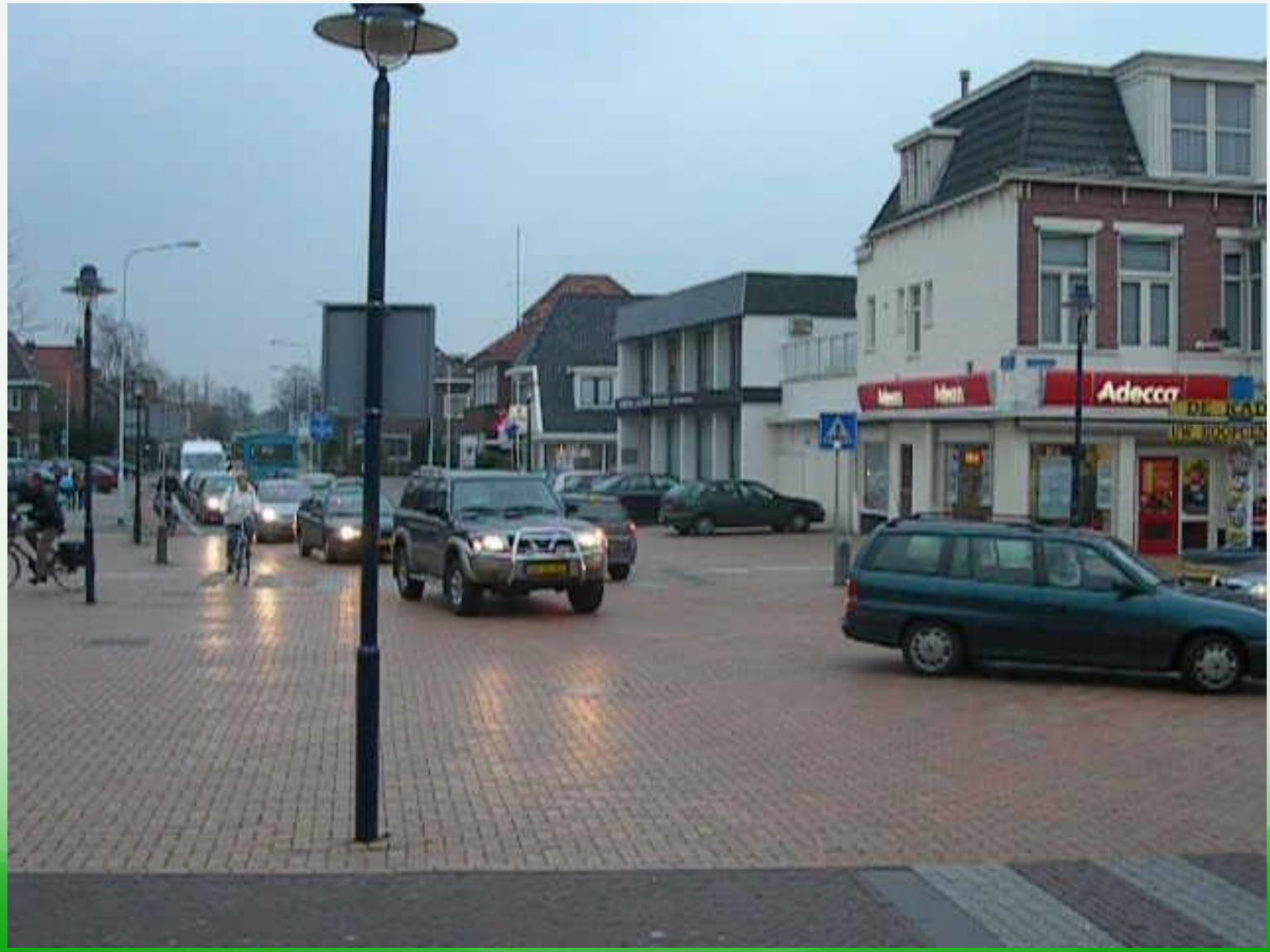
Before

After

Haren, NL

Drachten shared space, Netherlands



Shared Space examples – mixed use streets

Pedestrian priority – busy street

Chambery, France, 30,000 vpd

Photos:

Michel Deronzier

"Signs? We don't need them"

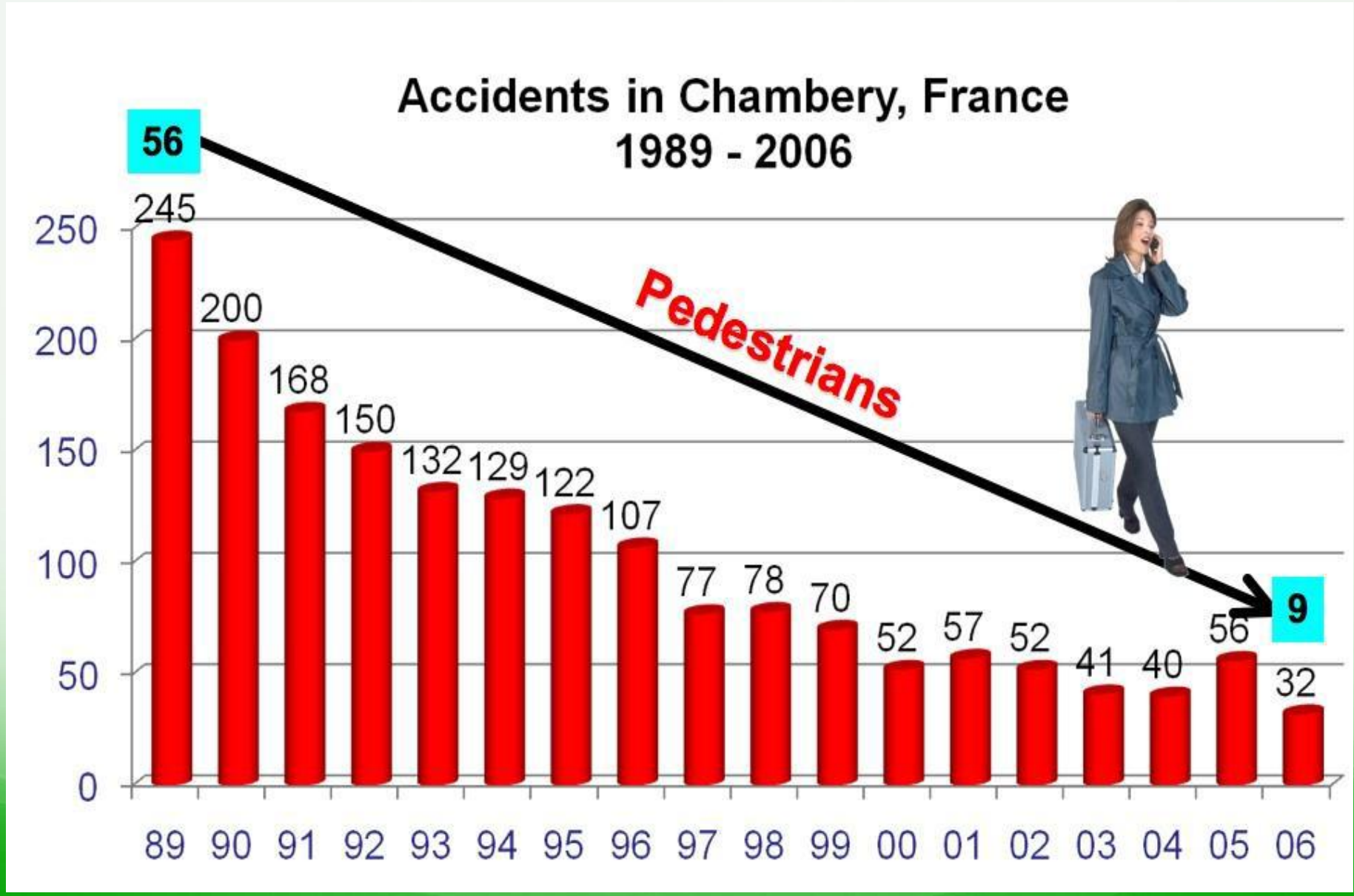
"If you treat people like idiots, they drive like idiots"

Signs and lines create conflict… "get out the way, this is my space"…. "I have the right of way here"…

The late

Hans Mondermann

Photo: Michel Deronzier



	Road casualty rate per 1,000 people		
	1993	2003	Reduction %
Chambery	2.8	0.8	71%
Other French towns of same size	4.05	2.4	41%

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Exhibition Road, London

Exhibition Road, London – world's biggest shared space?

HOW IT WORKS: EXHIBITION ROAD – BRITAIN'S LONGEST 'CLUTTER-FREE' STREET

AREA: Exhibition Road, Kensington, London.

- Half mile stretch (820m) from South Kensington Station to Hyde Park.
- All 'street clutter' removed.
- No traditional pavements or kerbs.
- Traffic signs, safety barriers, kerb markings removed.
- Traffic expected to reduce by 30 per cent.

Cost: £29.2million

- The 20mph speed limit signs will be posted at the top and bottom of the road, and intermittently on lampposts in between.

- Surface comprises a chequered pattern created from a jigsaw of a million bricks of pink and black Chinese granite weighing 10,000 tonnes. Each granite 'brick' is a 6-inch cube weighing 10kg. Pink granite sourced in Fujian province, black 'bricks' from Fuding province in China.

AIM: To make cars and people co-exist harmoniously – without the need for hectoring signs and nannying protective steel barriers.

- Pedestrian areas distinguished from vehicle areas by black iron drainage channel covers and raised and ribbed 'corduroy-effect' tactile strips. Helps warn blind and partially sighted people underfoot.
- Tall, sleek street lighting masts have been designed to complement the grand buildings of Exhibition Road.
- The design of the thoroughfare is such that car-parking bays, cycle racks, trees and bench seats will also help separate pedestrians from two-way traffic, without forming a permanent barrier.
- Continuously flat surface improves access for people using wheelchairs, push chairs and motorised buggies.

Simple but effective technology!

"Playing out", Bristol, UK

- Design technology?
- Equipment technology?
- Social technology?

Discuss

Shared Space – suitable places:

- Balanced vehicle and pedestrian movement
- Pedestrians desire to cross
- High proportion of local drivers
- No priority or demarcation signs
- Priority from the side default (preferably)


Heathrow


Heathrow
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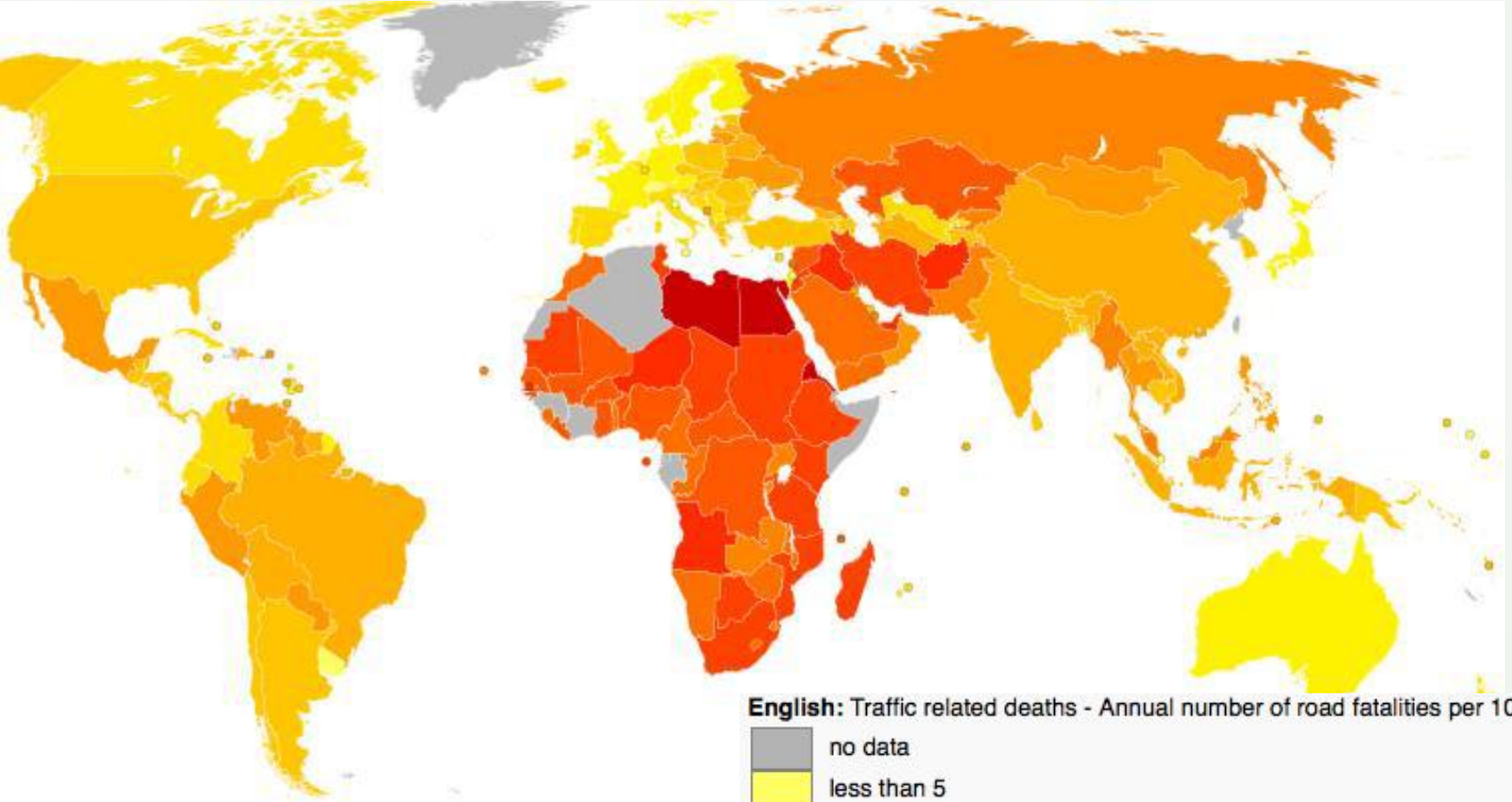

English: Traffic related deaths - Annual number of road fatalities per 100,000 inhabitants.

- no data
- less than 5
- 5-8.5
- 8.5-12
- 12-15.5
- 15.5-19
- 19-22.5
- 22.5-26
- 26-29.5
- 29.5-33
- 33-36.5
- 36.5-40
- more than 40