[Bicycle] Bells and Whistles to Improve Your Audits and Research

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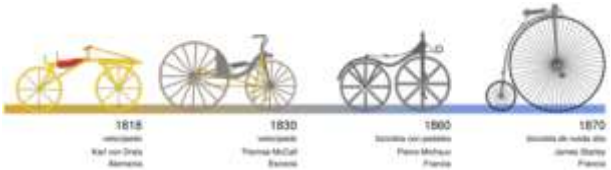
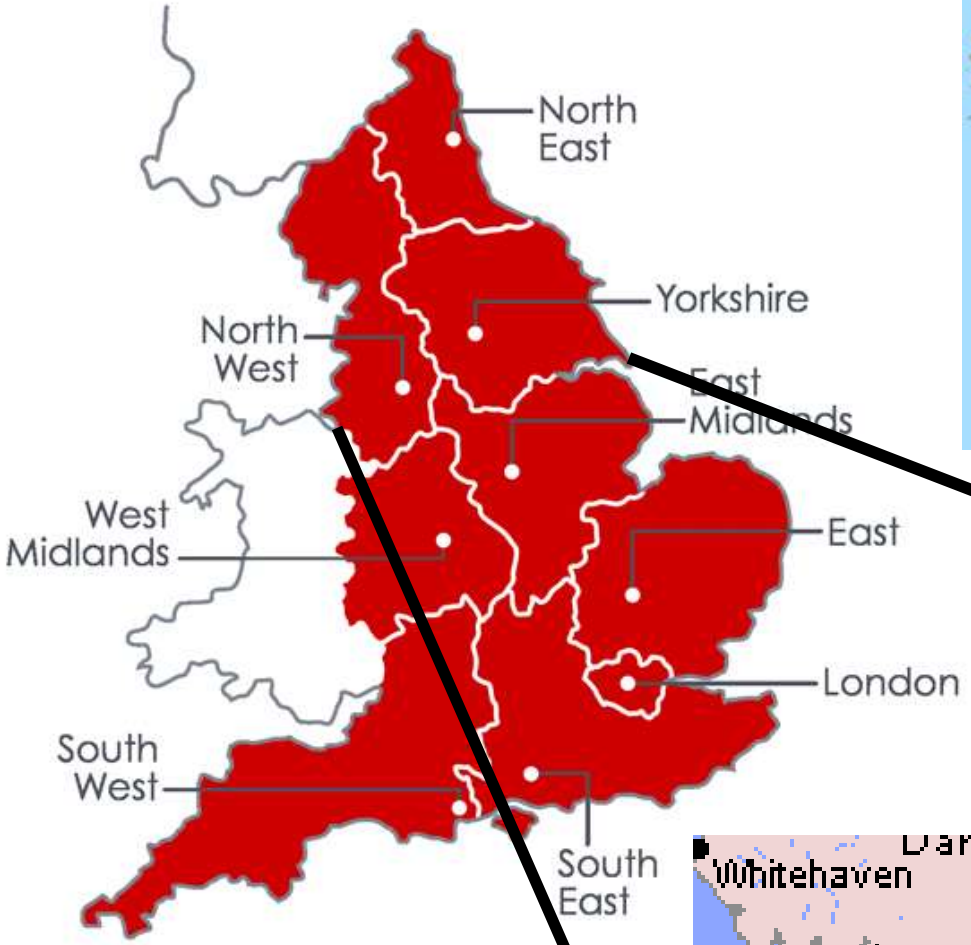
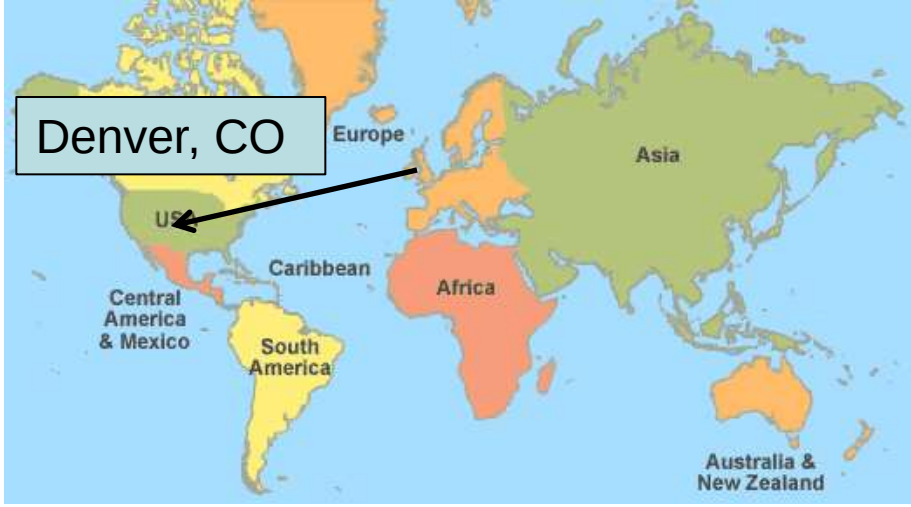
- Lessons Learnt



Quick Bio

- Transportation Planner in the UK for 4 years – Focus on cycling and sustainable transportation.
- Moved to SDG Denver
- A cyclist!
- A firm believer


North East
Yorkshire
North West
East Midlands
West Midlands
East
London
South West
South East


Denver, CO
Europe
Asia
US
Caribbean
Africa
Central America & Mexico
South America
Australia & New Zealand


Darlington
Middlesbrough
Whitehaven
Scarborough
Lancaster
Harrogate
Bridlington
York
Bradford
Leeds
Kingston upon Hull
Preston
Bolton
Manchester
Grimsby
Rotherham
Lincoln
Chester
Sheffield

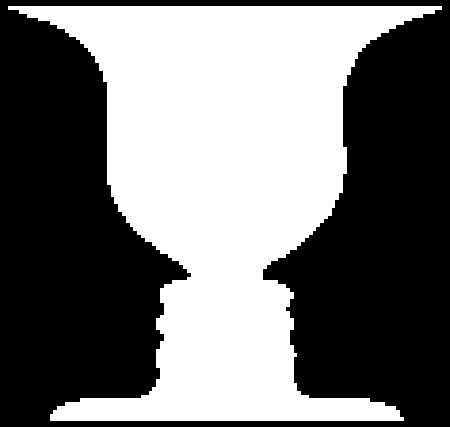
What are cycle audits?

- A logical and systematic assessment of any network for cycling
- Assesses a networks capability and attractiveness for cycling
- Rates each road to a cyclist competency level, e.g. The skill level required to safely use the road
- The results are used to identify key barriers and gaps to cycling
- Feeds into a thorough report and strategy, prioritising key interventions


www.sportzjun.com
Wave Runner


New Olympic Sport – Flying Cycle Dive

SUBJECTIVITY



RESORT TO RATIONALISM AND OBJECTIVITY INSTEAD OF PETTY EMOTIONS AND SUBJECTIVE FEELINGS

Dwight Schrute

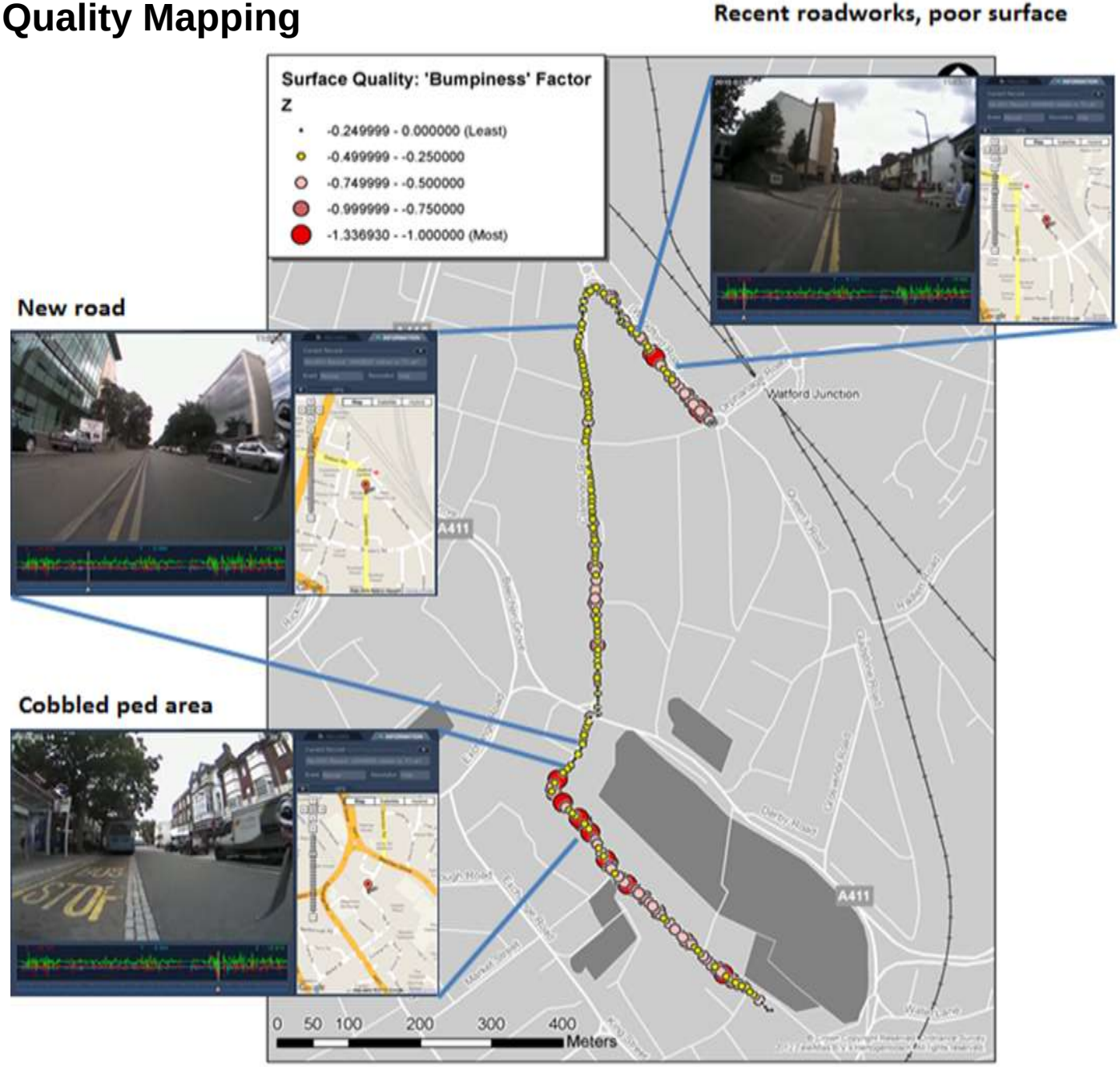
Our Bicycle Planning Toolbox

Stage 1 – Initial GPS Network Audit

Cycle Audits with GPS camera

- The camera (video GPS) recently included in all audits and is proving to be highly popular
- GPS camera technology provides for further analysis and evidence base
- The camera records the entire process and:
  - GPS co-ordinates which can be shown alongside the video using Google Maps.
  - Shows the vibrations the camera is undertaking, important for surface quality
  - Speed – Allows you to recognise the amount of time it might take to get from one place to the other
  - Altitude – Very important aspect for cyclists, and designing cycling infrastructure

Surface Quality Mapping



Behavior Monitoring

Behavior Monitoring

Our Bicycle Planning Toolbox

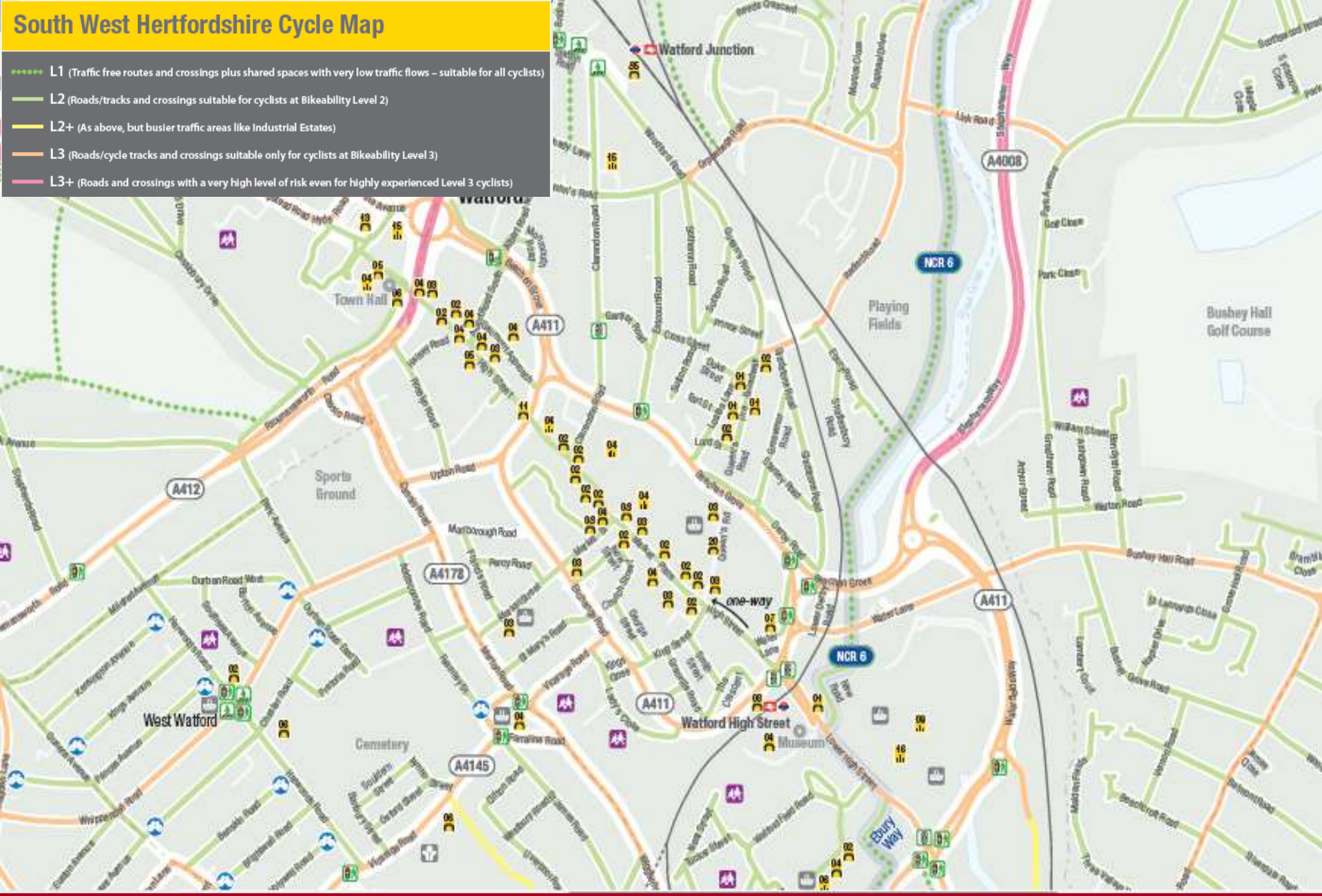
Stage 1 – Initial GPS Network Audit
Stage 2 – Competency Rating

Road Competency Rating

- A very new method of auditing a network
- Rates every road to Bikeability level (3 levels)
  - Level 1 – Off Road (limited skills needed)
  - Level 2 – Quiet roads (intermediate on-road skills needed)
  - Level 3 – Main roads with traffic (High on-road skills needed and integration with traffic)
  - Level 4 – Legal to ride on but not advised for any skill level
- Results in a very visual audit, which can easily highlight which areas are in need of infrastructure improvements.
- www.Bikeability.org.uk

South West Hertfordshire Cycle Map

- L1 (Traffic free routes and crossings plus shared spaces with very low traffic flows – suitable for all cyclists)
- L2 (Roads/tracks and crossings suitable for cyclists at Bikeability Level 2)
- L2+ (As above, but busier traffic areas like Industrial Estates)
- L3 (Roads/cycle tracks and crossings suitable only for cyclists at Bikeability Level 3)
- L3+ (Roads and crossings with a very high level of risk even for highly experienced Level 3 cyclists)



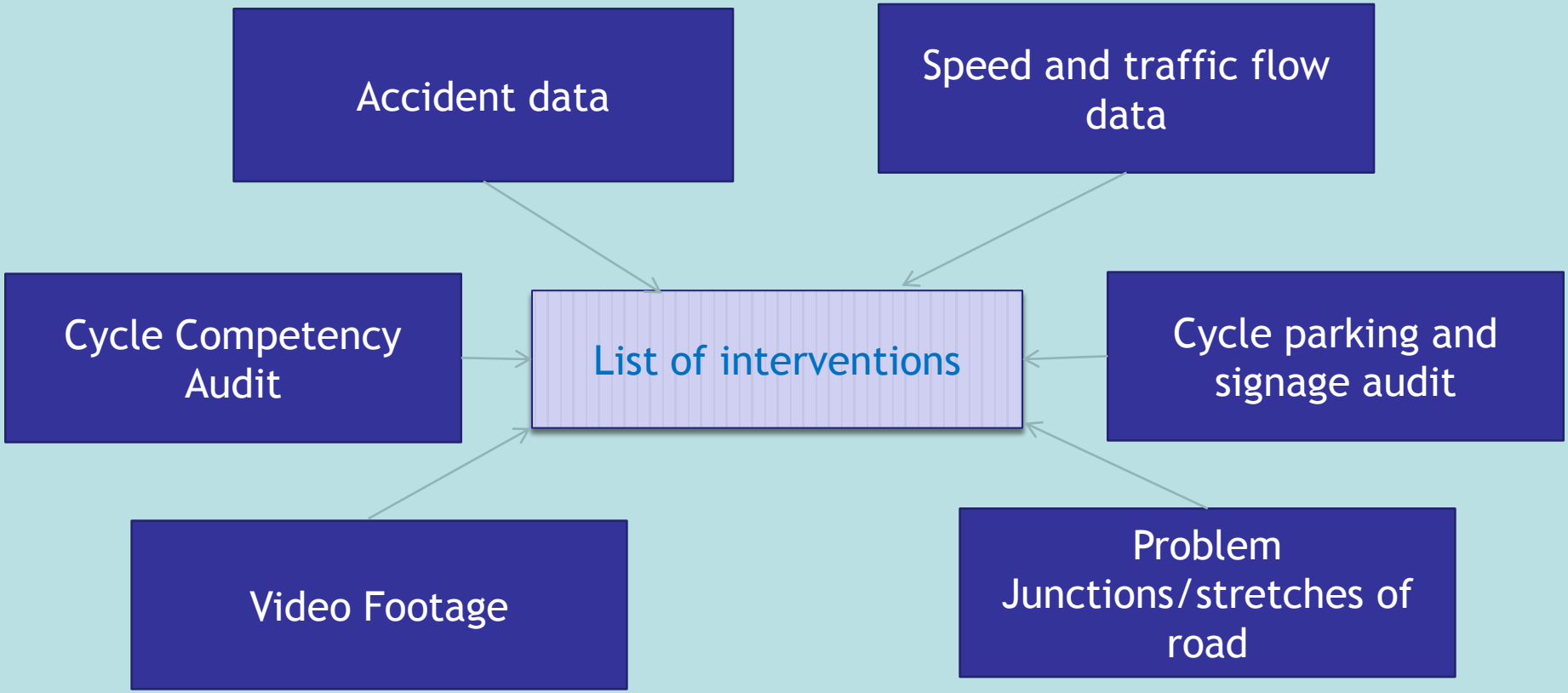
Our Bicycle Planning Toolbox

Stage 1 – Initial GPS Network Audit

Stage 2 – Competency Rating

Stage 3 – Consultation and Data Analysis

CONSULTATION



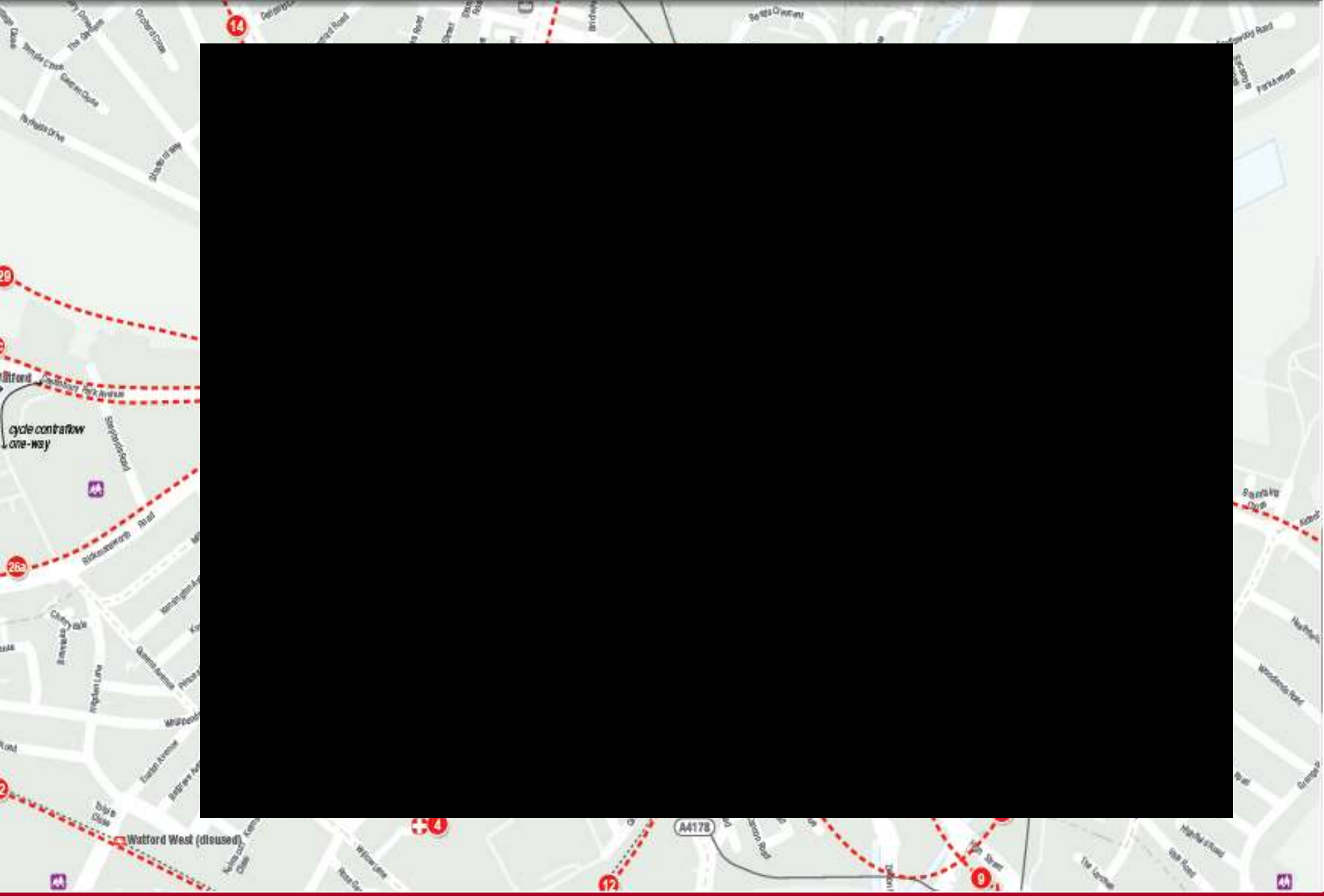
Our Bicycle Planning Toolbox

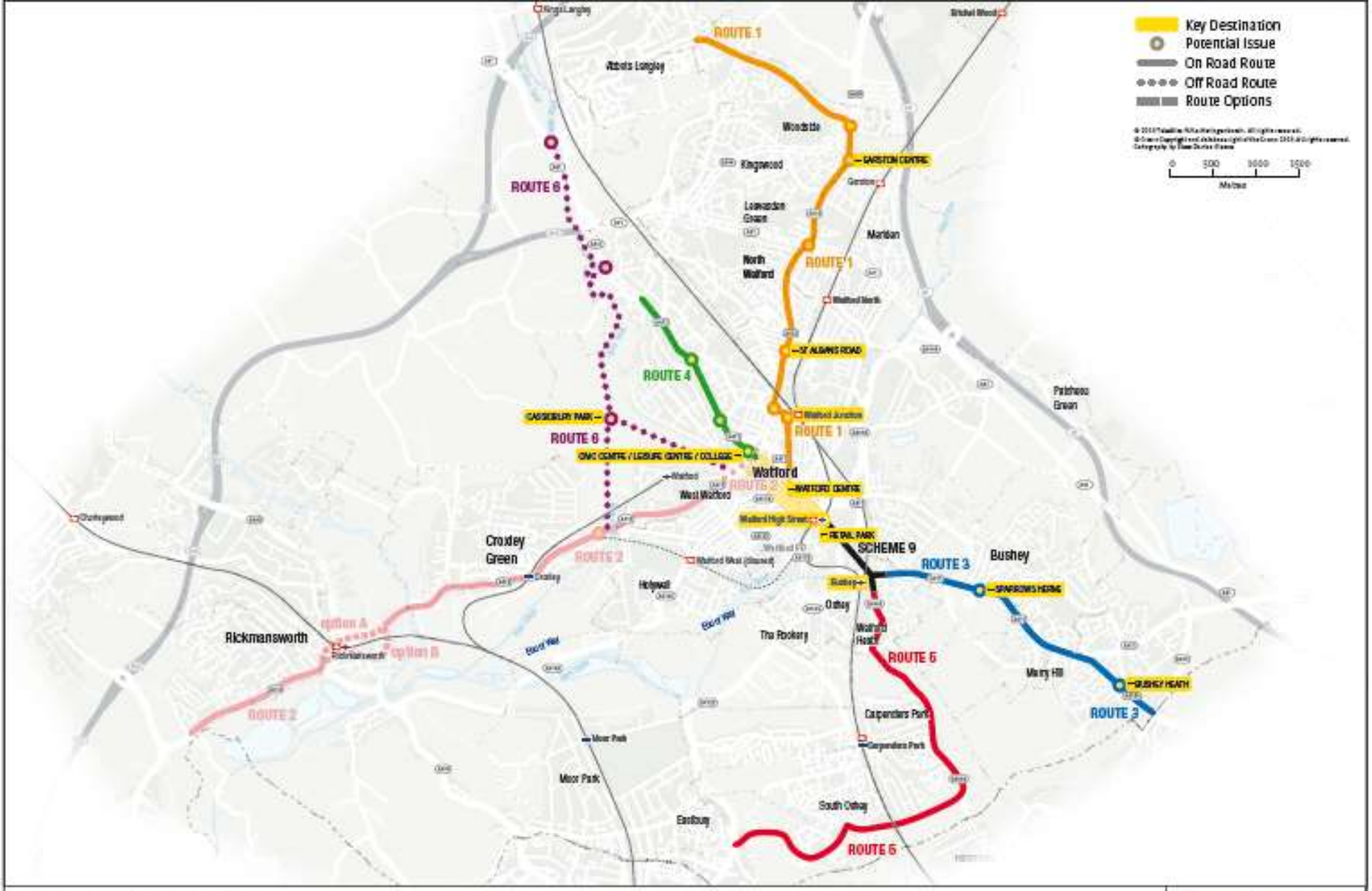
Stage 1 – Initial GPS Network Audit

Stage 2 – Competency Rating

Stage 3 – Consultation and Data Analysis

Stage 4 – Scheme and Network Development


cycle contraflow
one-way
Watford West (disused)
A4178



South West Hertfordshire Cycle Study
Figure 1: Overview of Routes and Potential Issues

steer davies gleave

Our Bicycle Planning Toolbox

Stage 1 – Initial GPS Network Audit

Stage 2 – Competency Rating

Stage 3 – Consultation and Data Analysis

Stage 4 – Scheme and Network Development

Stage 5 – Prioritization and Implementation Plan

Prioritization Frameworks

- What scheme will make the most positive impact?
- What scheme will provide value for money?
- What scheme meets a current need?
- What scheme has strong political will?
- What scheme has strong public will?
- How long will it take to implement?
- What are the sorts of measures we want to measure the priority of schemes?

Prioritization Frameworks

CAN SOUND BORING….

BUT…..

THE QUEEN

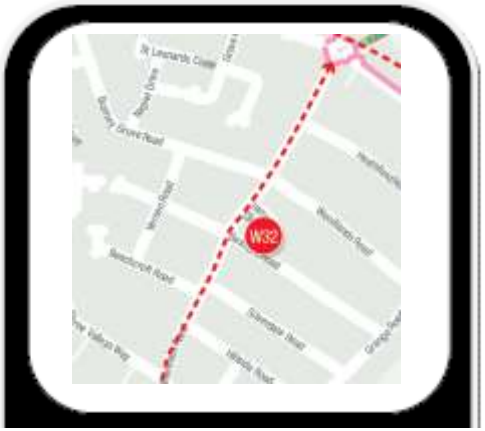
Queen Elizabeth II took to the throne in 1952, when her father, recently back in the public eye thanks to Oscar winning film 'The King's Speech', suffered serious ill-health. She has endured many turbulent times for the Royal Family during her reign and her Golden Jubilee celebrations in 2002 were a national event. Plans are already in place for her Diamond Jubilee next year. She first met her husband aged just 13, and the pair began to exchange letters, eventually marrying over 60 years ago.

VIP	10
Age	84
Style Icon	6
Celebrity Press	16
Big Day Rating	74

Bicycle intervention top trumps…..

Intervention 1

Intervention 2



	Intervention 1 Value	Intervention 1 Pts.	Intervention 2 Value	Intervention 2 Pts.	Intervention 3 Value	Intervention 3 Pts.
Total Accidents per Square KM	3	1	24	5	0	0
"Bumpiness" of route	10	3	2	1	5	2
Proximity to railway/bus station (M)	20	10	100	3	505	1
Distance to nearest school (M)	500	5	900	1	30	10
Potential Land Ownership issues	Yes	-10	No	5	No	5
Links to Potential Funding Sources	Yes	15	No	-5	Yes	15
TOTAL		**24**		**10**		**33**

Strategy Development

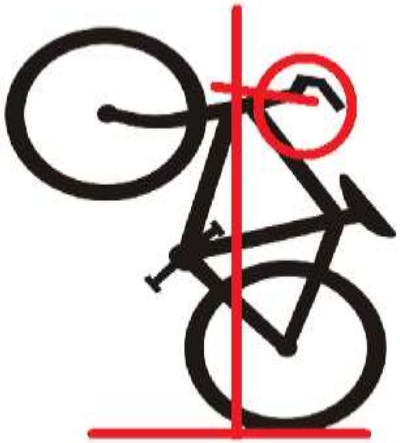
- Utilises full cycle audit
  - Competency road grading (to Bikeability level)
  - Roadhawk video library
  - Cycle parking and signage audit
  - Problem junctions
  - Accident Data
- Network development and long list of schemes
- Pro-forma production and prioritisation of schemes
- Detailed design of selected interventions
- Full cycling strategy with short and long term interventions

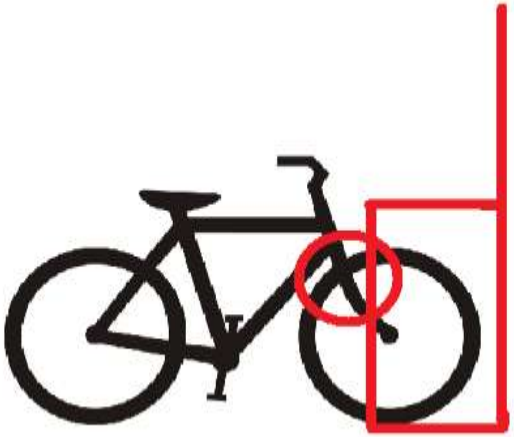
Some key guidelines and lessons learnt from UK

- Cycle Parking
- Signage
- Permeability
- Quality

Why the ‘U’?

- Simple
- Safe
- Cheap





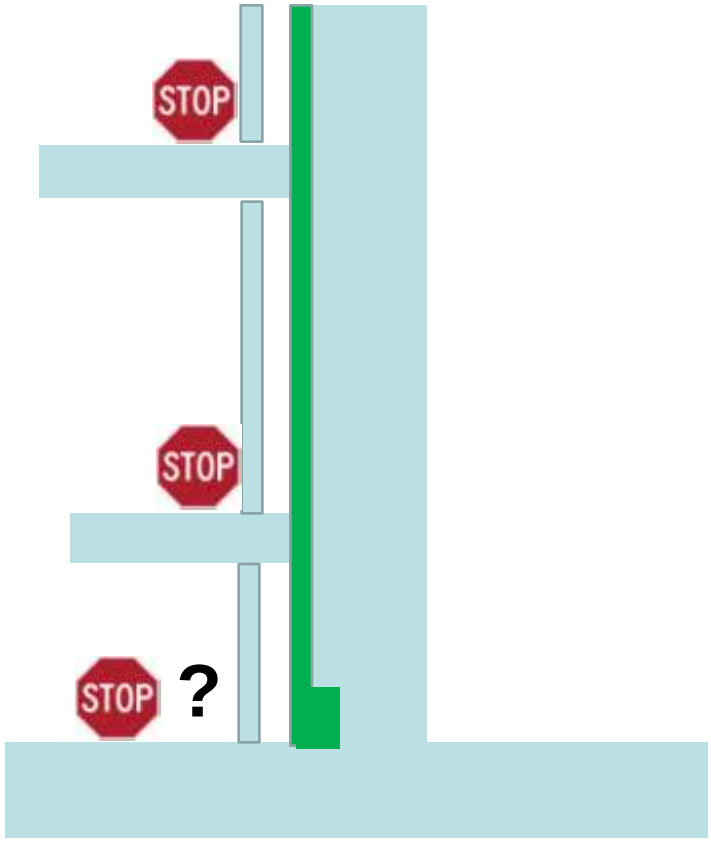
Signage in Urban areas

- Should show the time it takes to get somewhere, not the distance.
- Non-cyclists would have no idea how long it would take to cycle 10km, and would generally suggest it takes a lot longer than it actually does.
- Showing time on a sign instead of distance can also act as a perfect advertisement, especially on congested roads.
- Does anyone care that this is bike route 34.5?

Permeability

- Off road routes are very difficult to retrofit over a whole network, and come with their fair share of safety and engineering problems
- Complete off-road networks only exist in new towns or places where the infrastructure has grown with the city (e.g. Amsterdam or Copenhagen)
- The road network is complete, therefore it is logical to utilise this for cyclists
- The knee-jerk reaction to this, is that roads are unsafe for cyclists, because roads have vehicles on them. However, a number of principles keep cyclists safe on the road
  - Keep cyclists visible to drivers at all times
  - Train cyclists how to cycle with traffic and communicate with drivers
  - Train drivers how to watch out for and respect cyclists
  - Allocate road space that is dedicated to cyclists, this provides space for the cyclist, advertises to drivers that cyclists use this road and makes them more visible.

Off road/On road



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result
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THE AIM

FIND AND PRIORITSE THE IMPROVEMENTS THAT POSITIVELY IMPACT CYCLING ON THE NETWORK

=

BETTER CYCLING CONDITIONS

=

MORE PEOPLE CYCLING

MORE PEOPLE CYCLING

=

HEALTHIER PEOPLE

&

MORE PRODUCTIVE PEOPLE AND A MORE LIVEABLE COMMUNITY

Thank You
Any Questions
or comments?

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