CITIZEN SCIENCE SDG CONFERENCE

Introducing: H2020 WeCount *empowered by Telraam*

Kris Vanherle – POLIS Mobilising Mobility 5/11/2020

Horizon 2020 Framework Programme for Research and Innovation (2014-2020), SwafS-15-2018-2019 Exploring and supporting citizen science, grant agreement No. 872743.

A European project that enables citizens to initiate a policy-making process with fully automated measurement data in the field of mobility and air quality.

- Objective 1: WeCount will advance citizens (and broader scientific) knowledge on traffic counting, transport management and related impacts.
- Objective 2: WeCount will establish a durable ecosystem for citizen science traffic counting and related impacts
- Objective 3: WeCount will lower the technology threshold to reach a more diverse audience and ensure broader citizen inclusivity
- Objective 4: WeCount will demonstrate the diverse potential applications, in five use cases, to tackle five different societal issues related to road traffic
- Objective 5: WeCount will achieve meaningful change in local policy, as a direct result of the evidence collected from the citizen science activities

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Approach:

WeCount proposes an innovative, immersive *citizen science programme* that puts citizens at the hearth of the transport debate and its research agenda. WeCount allows city citizens to *quantify their local road transport*, analyse and interpret and ground-truth the outcomes relative to other societal issues and proactively engage in the local transport debate from their own daily behavioural perspective in order to influence what is necessary to inform and co-create ‘what people want’.

To achieve this goal WeCount combines *existing sensor technologies in a citizen science setting*

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WeCount

- Sensor technology
- Citizen engagement strategy
- Pilot applications – data outputs
- …WeCount/Telraam in your city?

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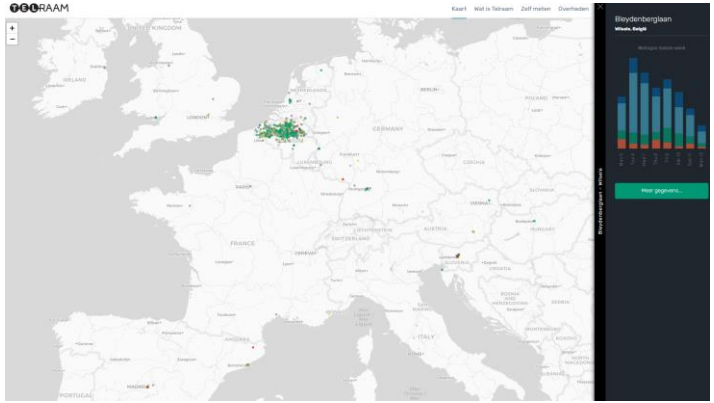
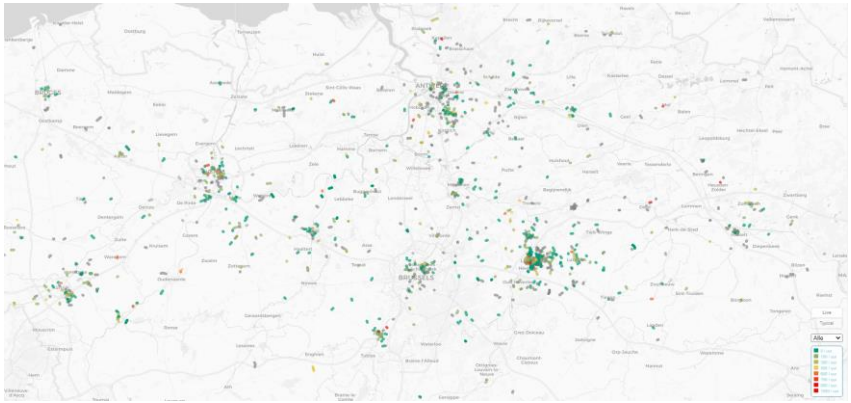
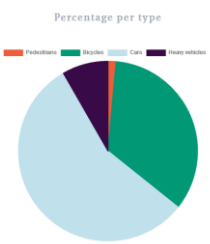
WeCount: sensor

(empowered by Telraam)

- Automated traffic counting sensor: Telraam (www.telraam.net)
- Existing software (Python – background correction
- Existing hardware (Raspberry Pi)
- Data platform
- Open data!

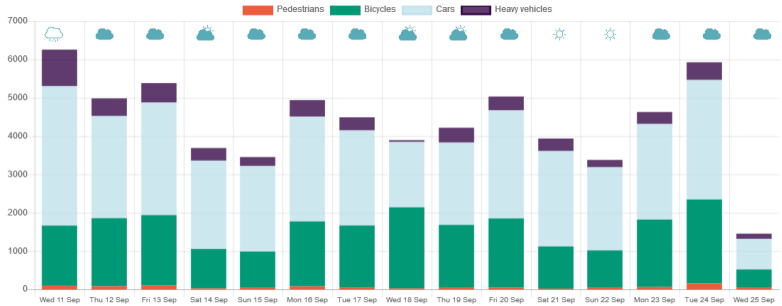

Kaart
Wat is Tellraam
Zelf meten
Overheden
Bleydenberglaan
Meer gegevens...



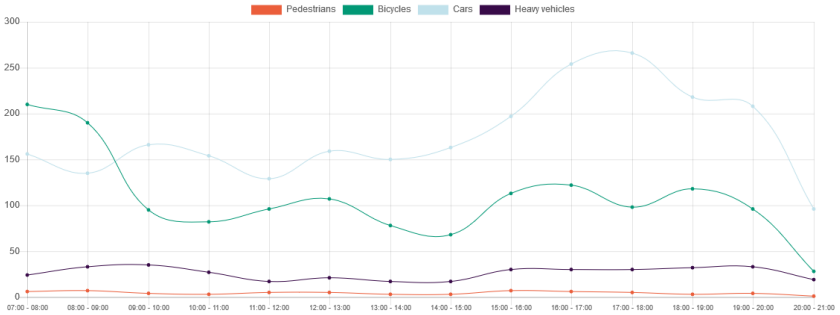

Percentage per type
Pedestrians
Bicycles
Cars
Heavy vehicles

Pedestrians	944	Bicycles	22518
	1.44 %		34.28 %
Cars	36777	Heavy vehicles	5459
	55.98 %		8.31 %

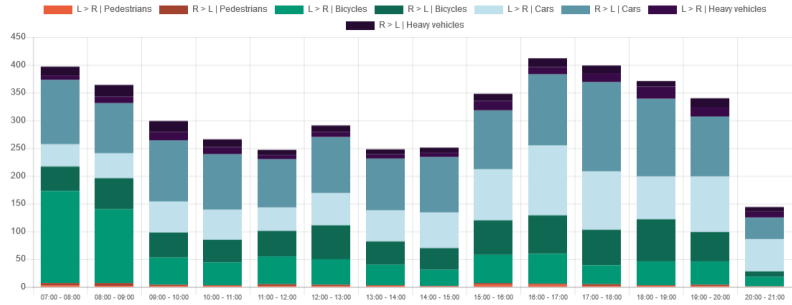
Overview per day



24 hour average



24 hour average per direction



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WeCount: citizen engagement

- 5 phases
  - Scoping and Community Building
  - Co-designing
  - Data Collection
  - Data Analysis and Awareness
  - Reflection and Legacy
- Concept of “Local Champions”
- Triangle: Participants - scientific community – policy makers

WeCount: citizen engagement (…in lockdown ☹)

- Adapted process to move online
- Hybrid process: (limited) F2F + online activities
- New flow:
  - Online recruitment
  - Brief F2F interaction: distribution of sensors
  - Online training session
  - Fixed frequent Q&A
  - …. (?)

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WeCount: 5 pilots

- Leuven: monitor impact of changes to circulation plan
- Dublin: livability & focus on deprived area's
- Cardiff: link with air quality
- Ljubljana: cyclist routes
- Barcelona/Madrid: speeding

Some data stories!

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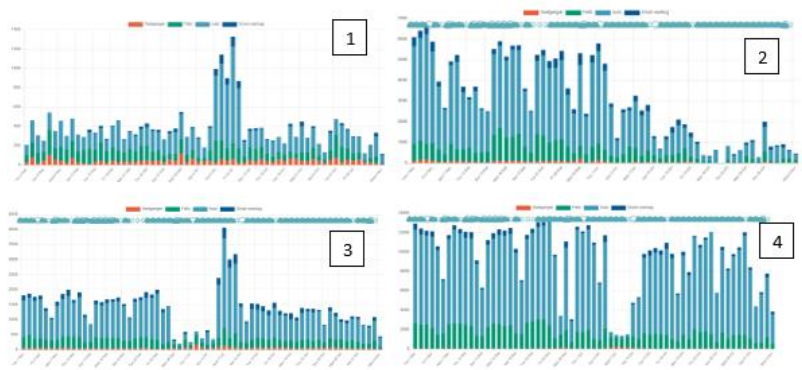
SCOOP!: first analysis of monitoring impact of intervention in Leuven in WeCount, with Telraam



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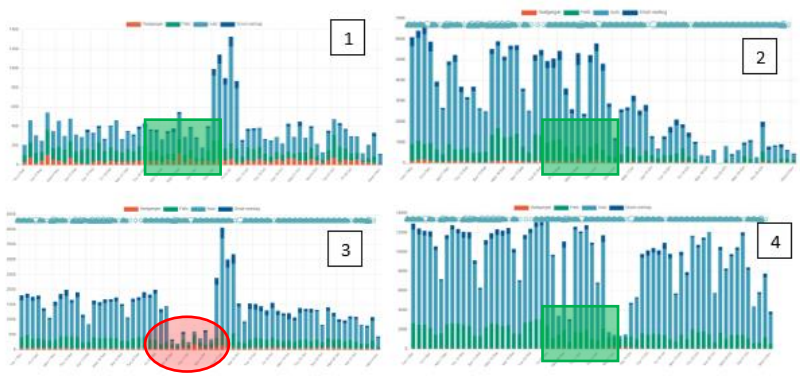
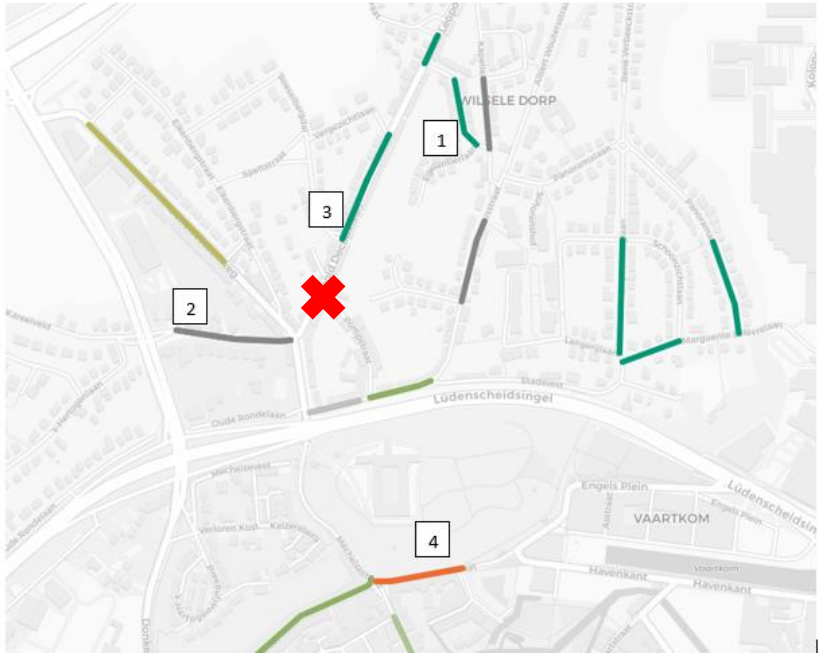


Impact of road close (first week of October): limited spill-over effects on other streets



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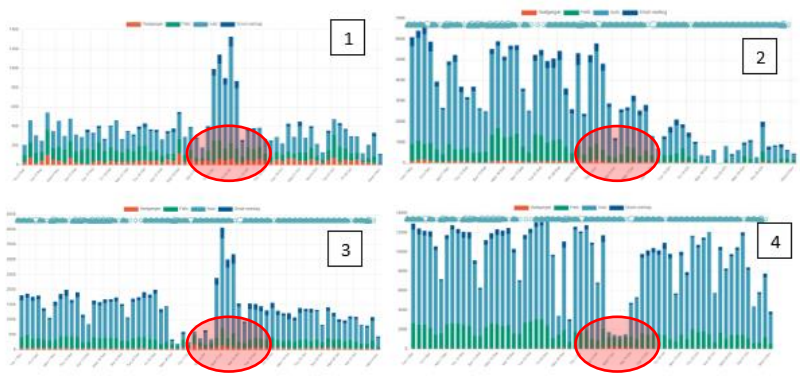
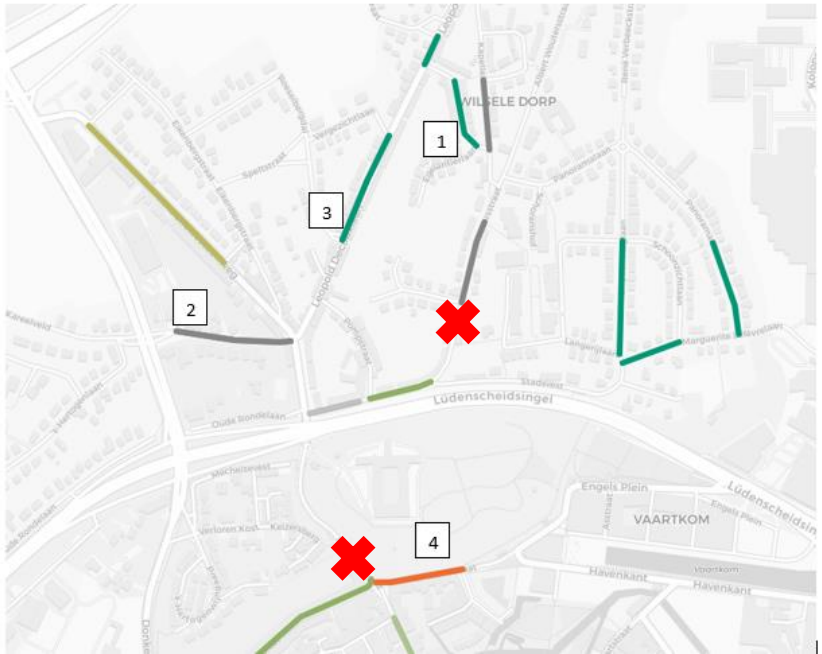
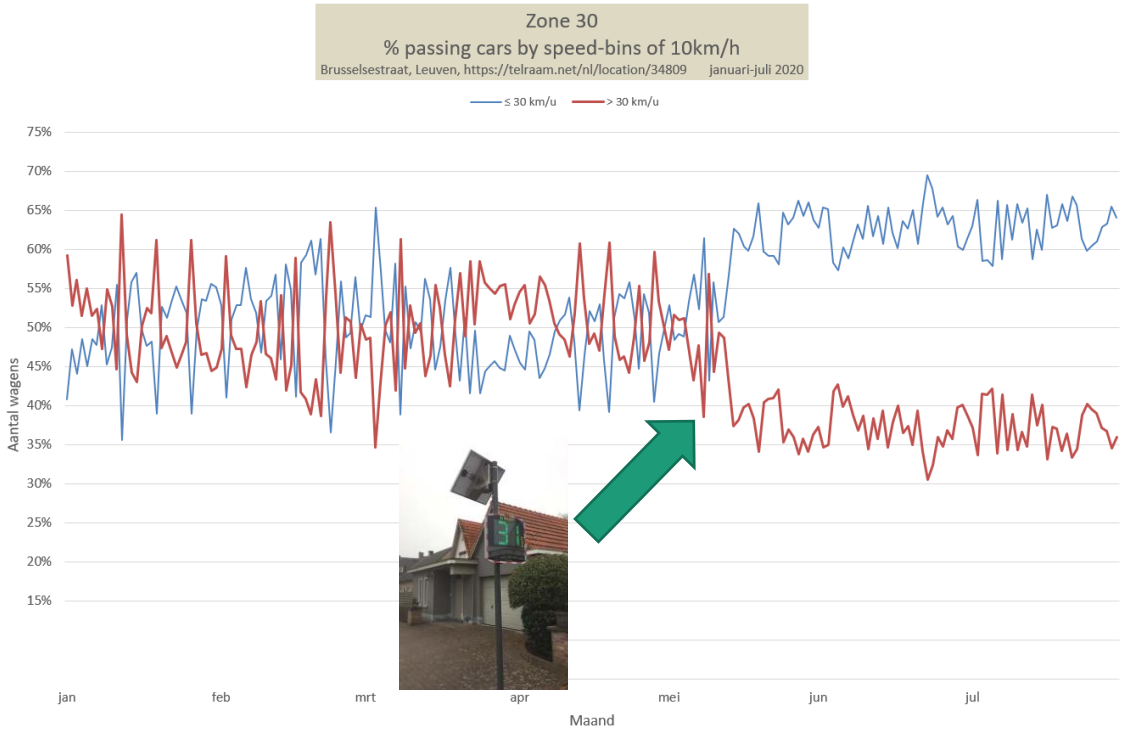


Impact of other road close & changes to circulation (2nd week of October): significant spill-over effects on other streets

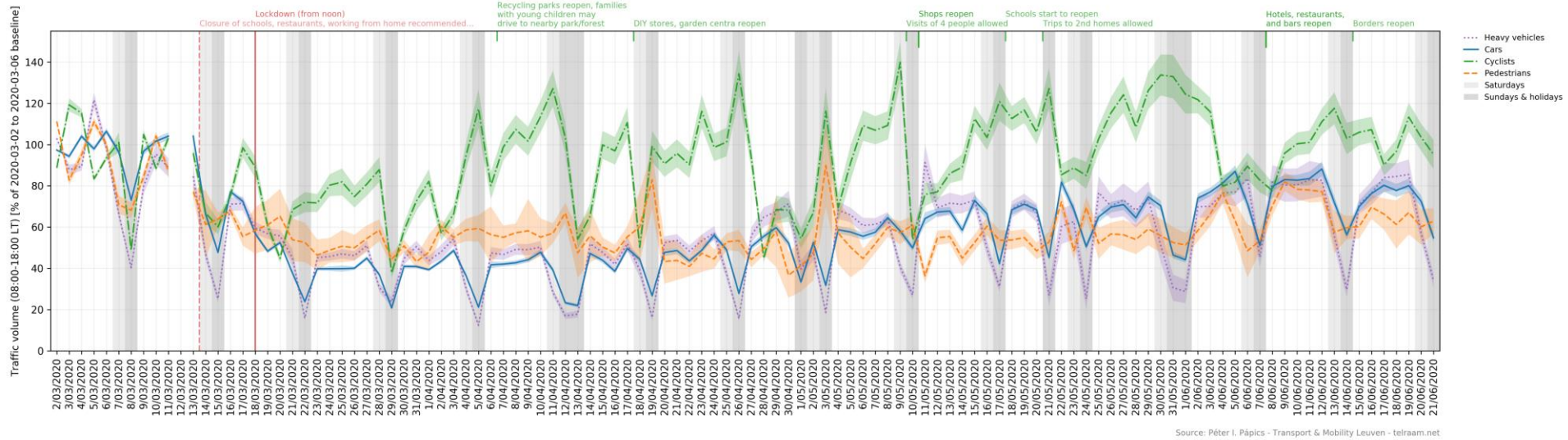


Preliminary analysis!

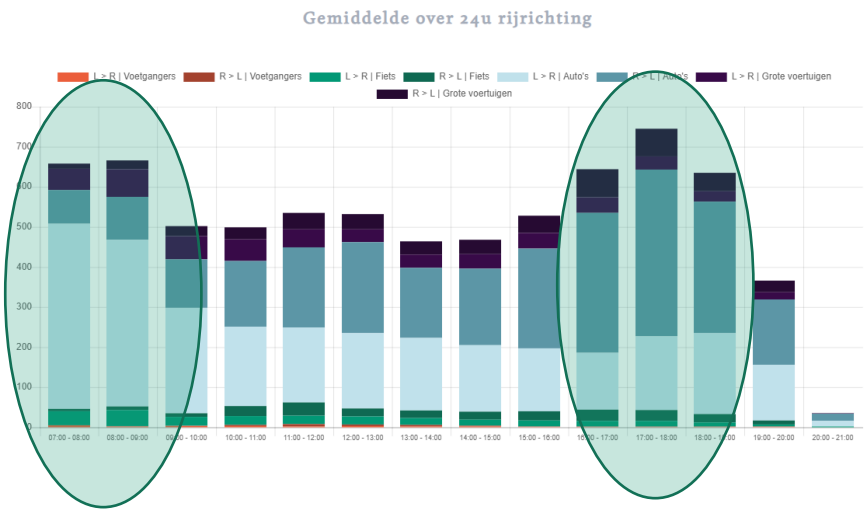
TELRAAM data stories: *Impact of installation of speed indicator*

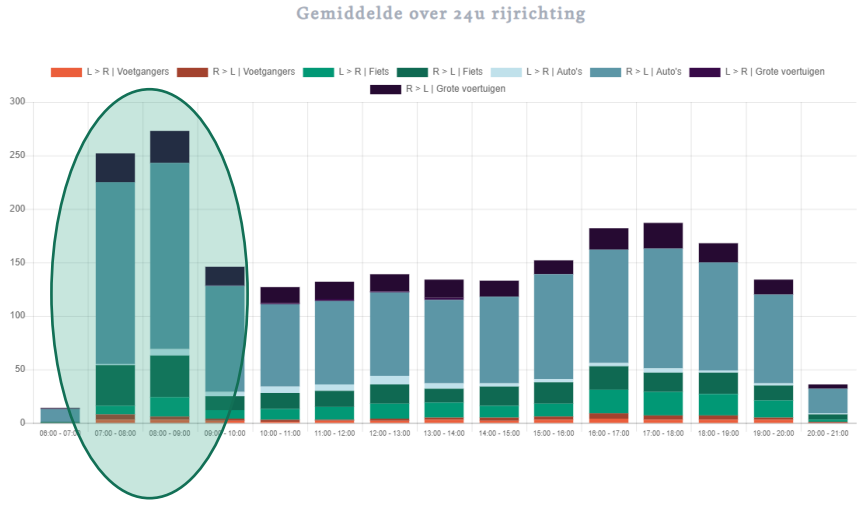


TELRAAM data stories: Covid tracker!

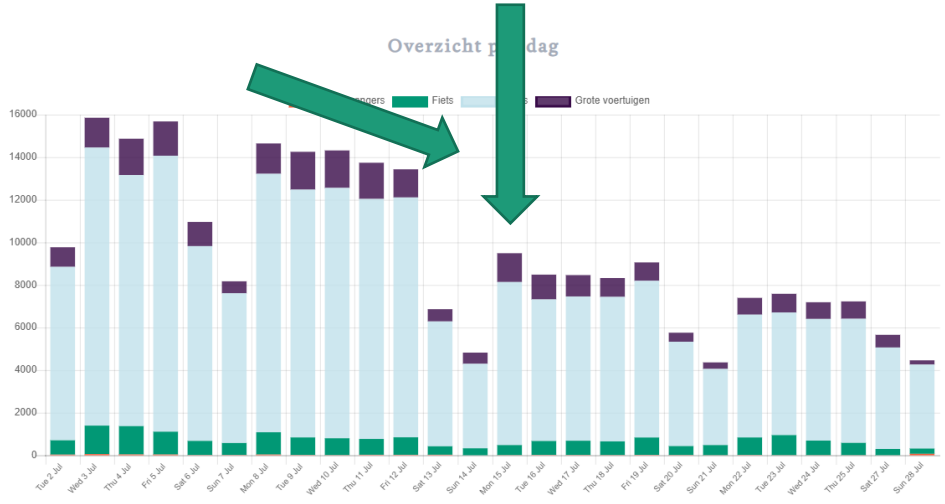


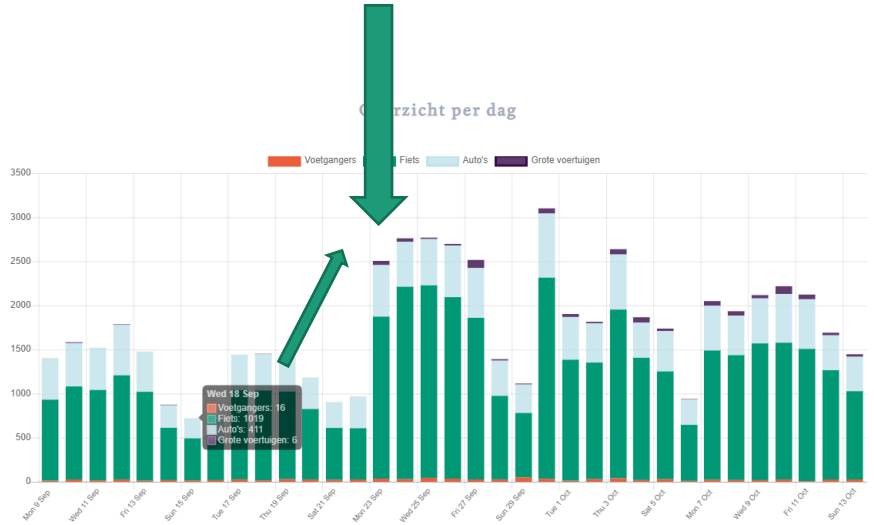
TELRAAM data stories: *rat running*



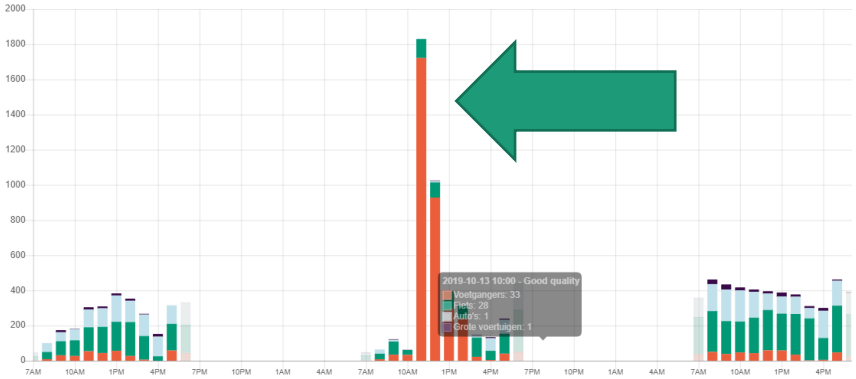


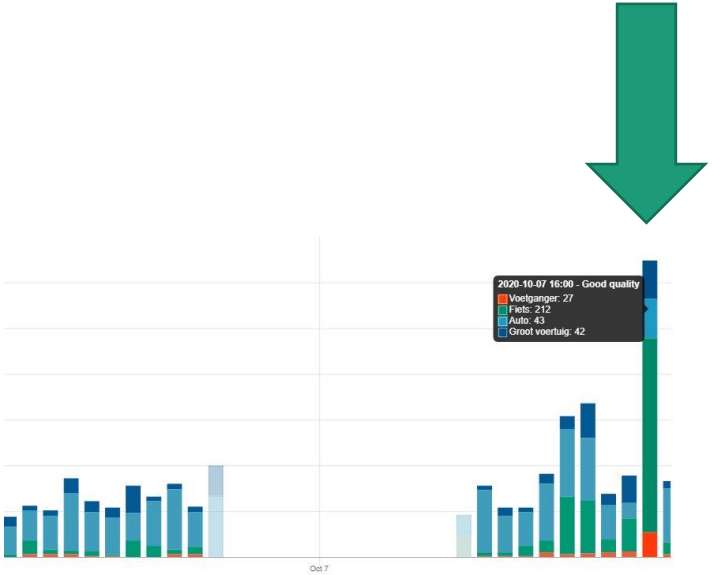
TELRAAM data stories: *road works*





TELRAAM data stories: *special events (the yearly marathon or a bicycle race…)*





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WeCount objective is to produce self-sustaining citizen science communities/networks, using the open Telraam & WeCount developed tools.

So, can I setup my own citizen science WeCount/Telraam network?

Yes!..... but…

- Need for guidance & support of participating citizens (technology is technology…)
- Need to help with data interpretation, make sense of the data citizens are gathering
- Need for a wider engagement strategy. Participating citizens aren't just "free data collectors"; they want to be properly involved!

Sounds good? Follow these examples! https://telraam.net/en/self-measure

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WECOUNT

WWW.WE-COUNT.NET
WWW.TELRAAM.NET

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TRANSPORT & MOBILITY LEUVEN

IDEAS FOR CHANGE

UWE Bristol University of the West of England

UCD DUBLIN

Univerza v Ljubljani

MOBIEL21 ZET MENSEN IN BEWEGING