



**A Premium Geospatial Industry Conference**

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# Plenary 4: Geospatial Knowledge Infrastructure

## Advancing Sustainability through Collaborative Workflow

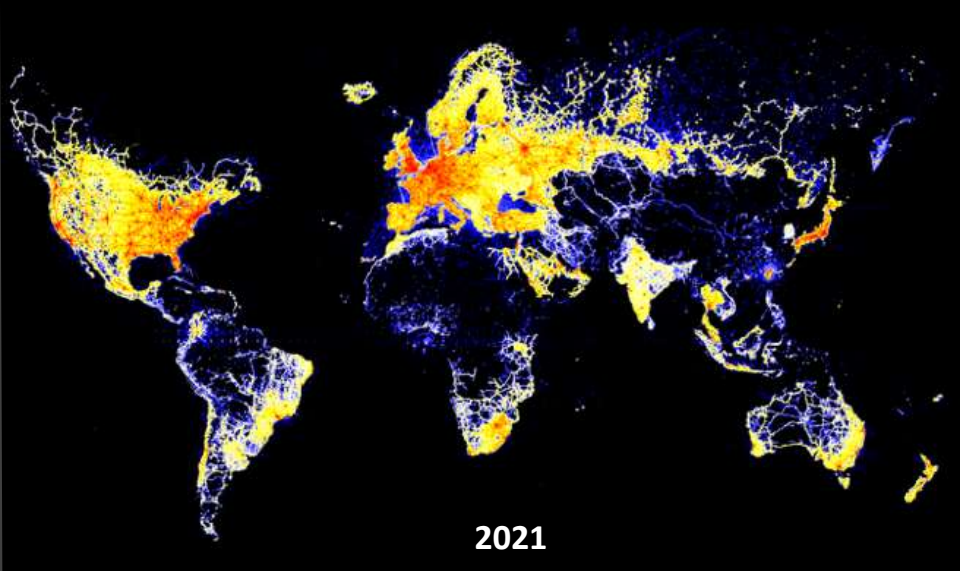
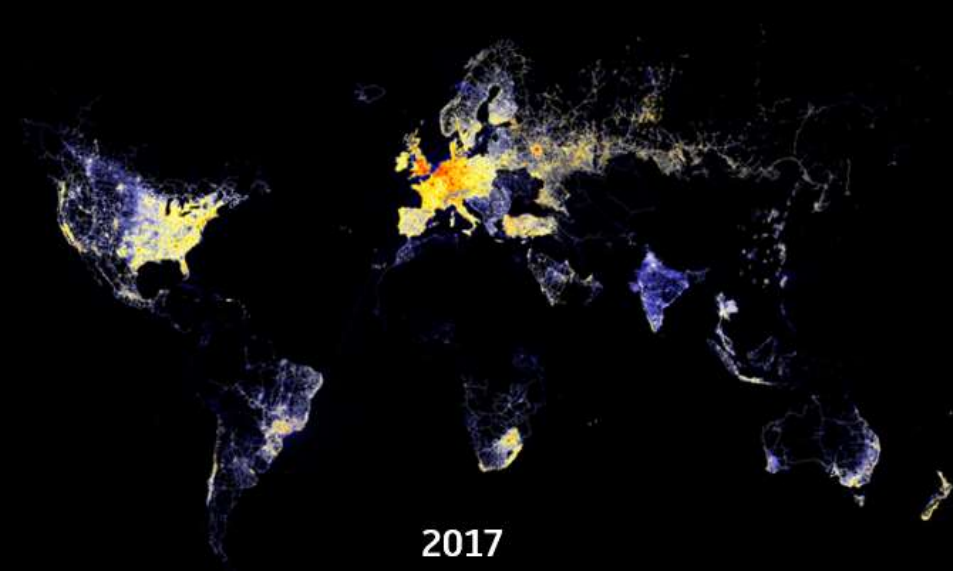
Presenter:

Alain De Taeye  
Member of the Management Board, TomTom

City: Zaandam

Date: May 10<sup>th</sup> 2022

**TOMTOM** 

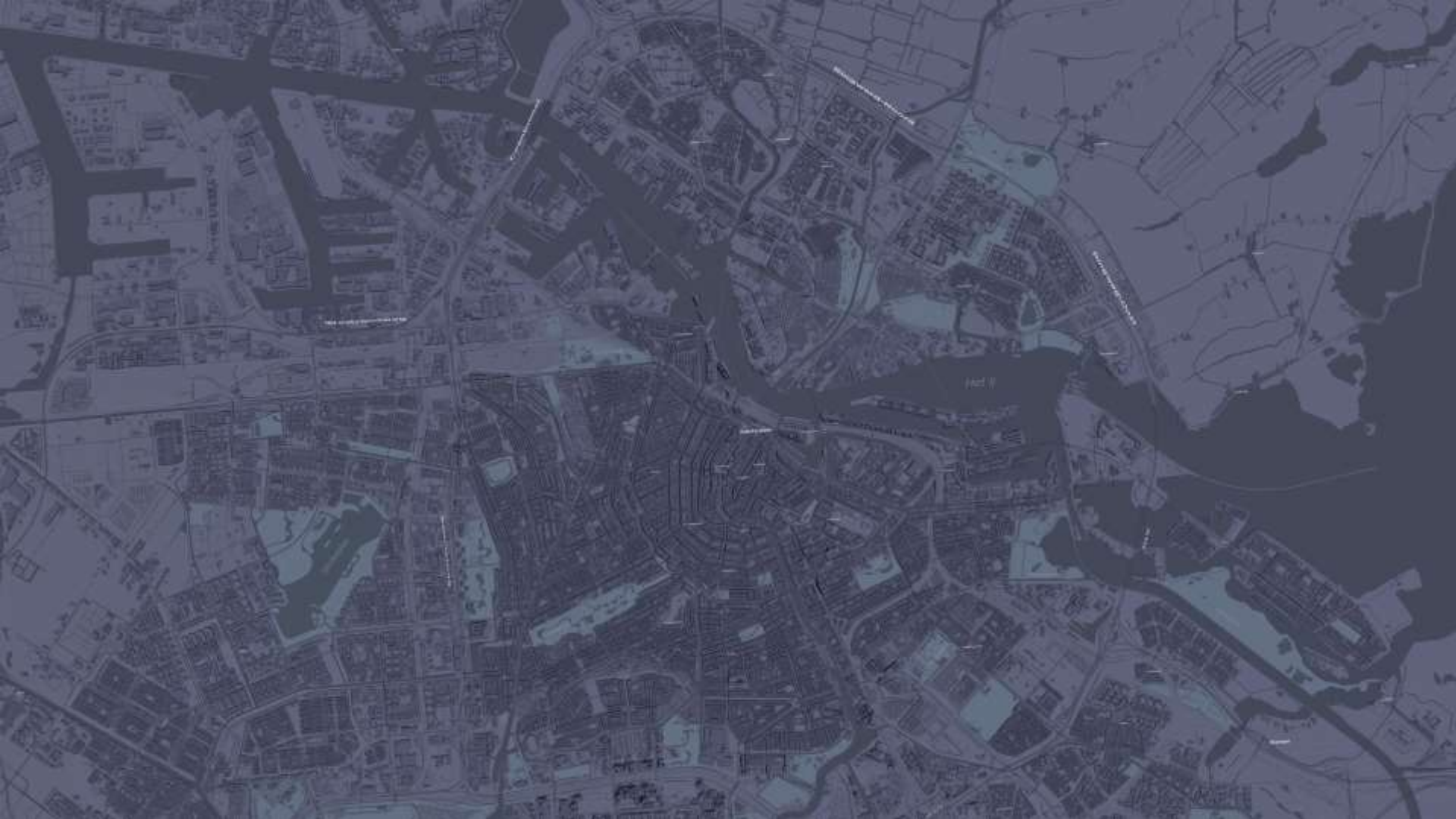


**61 billion GPS  
data points per  
day globally**

Data points come from over **600 Million** connected devices such as:

- In-dash navigation
- Smartphones
- Telematics devices
- Personal Navigation Devices (PNDs)

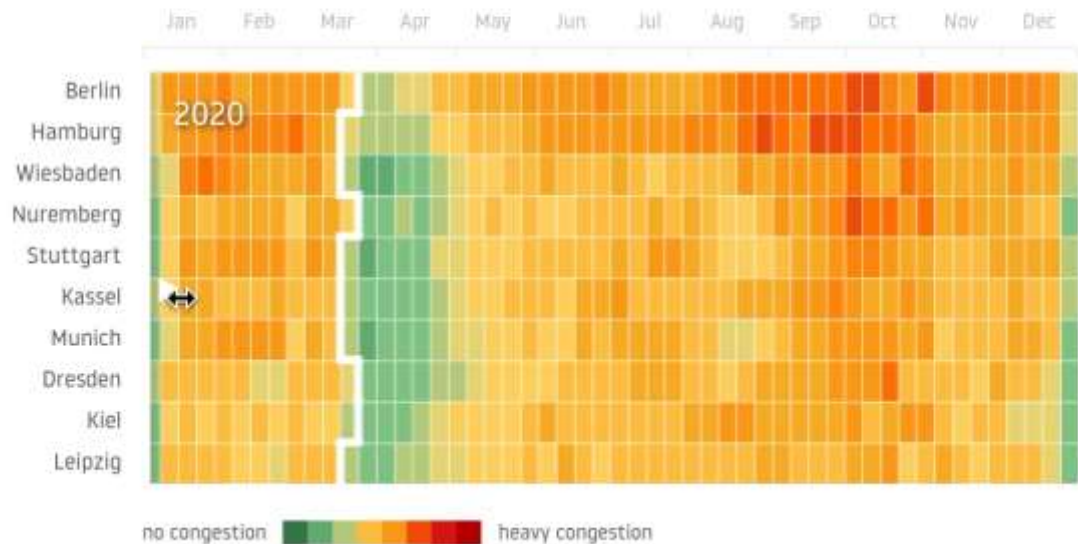




# Big changes in the traffic patters during the first Covid lockdowns

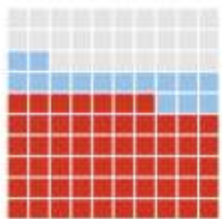
## WEEKLY CONGESTION

Compare weekly congestion levels in corresponding weeks of 2019 and 2020.

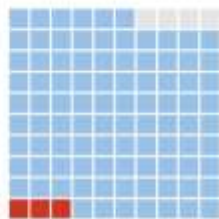


# How did traffic change since Covid pandemic began?

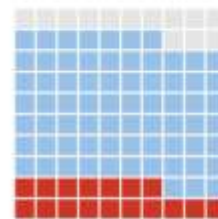
We observed that in 2021 the global congestion level changed and slightly increased in comparison to 2020, but overall, it remained low.



**2019**  
changes from 2018



**2020**  
changes from 2019



**2021**  
changes from 2019



# How did traffic change since Covid pandemic began?

**There was an increase in the number of cities with lower congestion levels. Compared to 2019, the number of most congested cities decreased from 13 to 6 (in 2021).**



# CHANGES IN RUSH HOURS IN SELECTED COUNTRIES



## EXCEEDING 2019 LEVELS

Some countries have exceeded the 2019 levels. In **France**, a change of 2% was visible during both morning and evening rush hours while in **Poland** only evening rush hour exceeded 2019 levels.

## LOWER MORNING RUSH HOURS, HIGHER BETWEEN PEAKS

In the **Netherlands** and **Germany** we observed a decrease in congestion during morning rush hours, however traffic during mid-day exceeded 2019 levels.

## LOWER PEAK CONGESTION, SAME BETWEEN PEAKS

In the **United Kingdom** and the **United States of America** we saw a different trend where the congestion during morning and evening rush hours decreased, but the traffic during mid-day and night remained similar to 2019 levels.



# Top 10 cities with highest congestion level in 2021

RANK BY FILTER	WORLD RANK ▼	CITY	TIME LOST PER YEAR	CONGESTION LEVEL 2021 ▼	CHANGE FROM 2019 ▼	CHANGE FROM 2020 ▼
1	1	<b>Istanbul</b> 🇹🇷 Turkey	142 hours	<b>62%</b>	↑ 7%p	↑ 13%p
2	2	<b>Moscow region (oblast)</b> 🇷🇺 Russia	140 hours	<b>61%</b>	↑ 2%p	↑ 7%p
3	3	<b>Kyiv</b> 🇺🇦 Ukraine	128 hours	<b>56%</b>	↑ 3%p	↑ 5%p
4	4	<b>Bogota</b> 🇨🇴 Colombia	126 hours	<b>55%</b>	↓ 13%p	↑ 2%p
5	5	<b>Mumbai</b> 🇮🇳 India	121 hours	<b>53%</b>	↓ 12%p	0%p
6	6	<b>Odessa</b> 🇺🇦 Ukraine	117 hours	<b>51%</b>	↑ 4%p	↑ 7%p
7	7	<b>Saint Petersburg</b> 🇷🇺 Russia	115 hours	<b>50%</b>	↑ 1%p	↑ 6%p
8	8	<b>Bucharest</b> 🇷🇴 Romania	115 hours	<b>50%</b>	↓ 2%p	↑ 8%p
9	9	<b>Novosibirsk</b> 🇷🇺 Russia	110 hours	<b>48%</b>	↑ 3%p	↑ 3%p
10	10	<b>Bengaluru</b> 🇮🇳 India	110 hours	<b>48%</b>	↓ 23%p	↓ 3%p