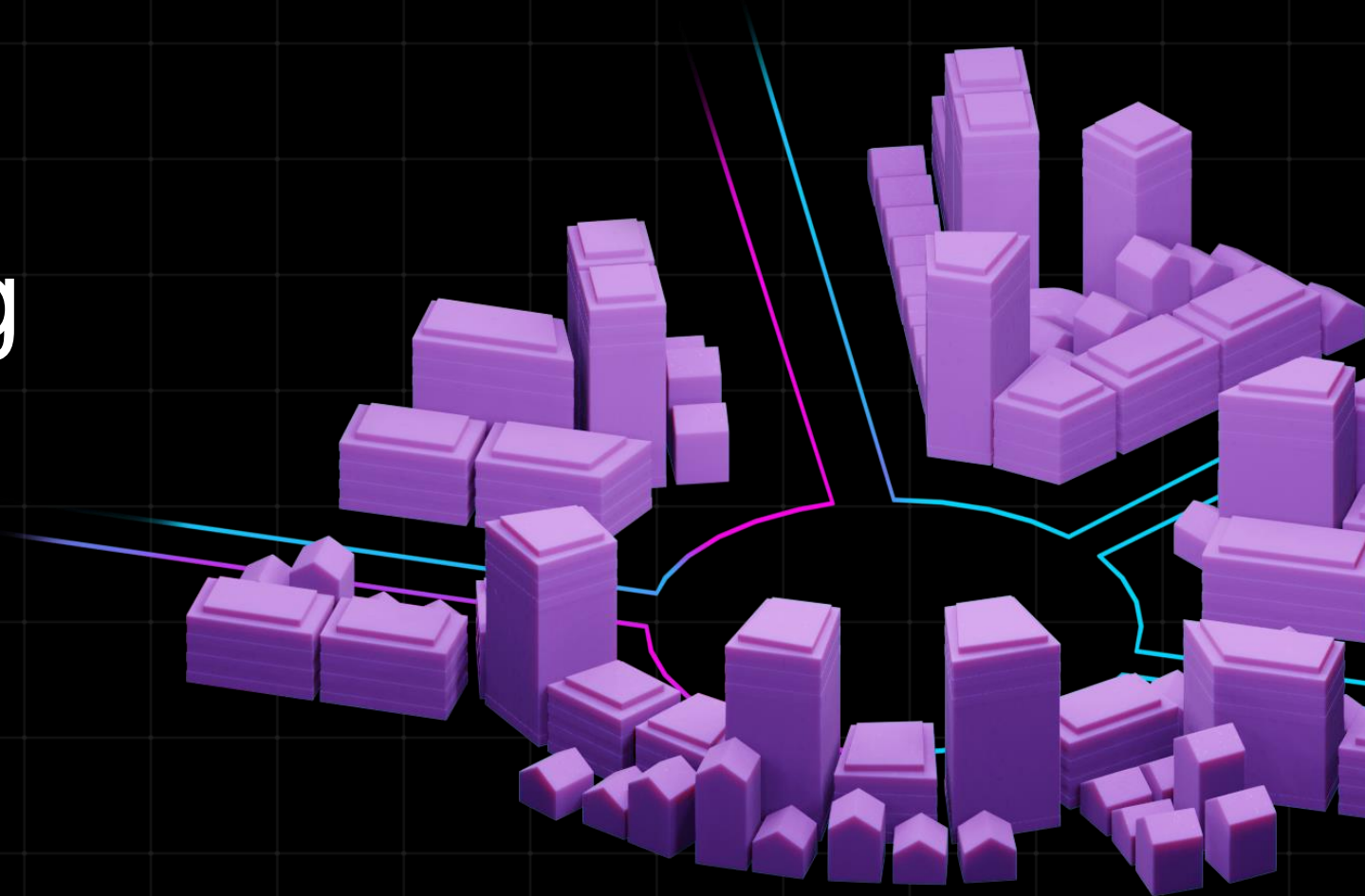# RoadTrace

Connected insights by **AISIN**

How Harsh Braking Predicts Crashes

Joffroy Pirlot
Global Manager RoadTrace by AISIN

Towards **Road Management 4.0** ?

Leveraging data
to assist road operators,
to improve safety & asset management.

Connected vehicles

- Any vehicle able to transmit data

- Most new vehicles since 2015

- **Mandatory for all new cars since 2018**

But is it better than looking at historical KSIs?

Results

Case studies in UK (Cambridgeshire, Kent & South East UK), using **3 months of harsh braking data** to predict collisions:

- Up to **21%** of « RoadTrace » harsh braking **clusters** turned into real collisions **in the following 9 months**

- Using **5 years** of KSI data would have given only **6% conversion rate**

Harsh braking data =

« Fresher » data

Better statistical relevance (much bigger sample)

More precise positioning

How road authorities are using our insights

Case study with Blackpool County Council, as published in the Geospatial Commission report:

- Blackpool has used « RoadTrace » to help **improve road safety around a local school.**

- The data revealed 3 harsh braking hotspots related to a local cut-through route to the school, where vehicles were avoiding traffic lights to save time on their journey.

- The council launched several schemes to improve infrastructure condition and traffic calming at the sites.

Source (PAGE 28) - https://www.gov.uk/government/publications/finding-the-way-forward-location-data-to-enable-connected-and-automated-mobility

How road authorities are using our insights

- Investigating approach using Connected Vehicle data
- Initial « RoadTrace » analysis
- Aim to move towards data-driven, proactive approach to helping the Traffic Scotland service contribute to road safety

How road authorities are using our insights

Harsh braking events
before clustering

KSI data from STATS19

1. Input data based on >80k Harsh Braking events in 3 months
2. Risk score applied to produce clusters of repeated, collective Harsh Braking
3. Correlation to collisions using 4 years of STATS19 data
4. Comparison of Summer and Winter seasons

Key take-aways

Clusters of harsh braking =

- Around **3x more efficient** than KSI clusters to predict future crashes (21% vs. 6%)

- Identify **new collision hotspots** that could not be predicted using 5 years of historical collisions data

- Enable **quicker prediction** of future crashes → Less influenced by infrastructure or traffic changes over time

- **Better accuracy** on precise location of the issue

Question : Are we still going to ignore vehicle data in our decisions?

Joffroy.pirlot@aisin-europe.com

Wesley.bateson@aisin-europe.com

Visit our stand A19 / Website to discuss