



EMERGING THEMES FOR VISION ZERO CITIES

A Silicon Highway Analysis



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Executive summary

Fourteen cities across five regions each identified one street-safety problem for which they do not yet have a clear or implemented solution. Their responses converge around four recurring problem types and one shared evidence gap: cities can usually count crashes after they occur, but they cannot yet see the conflicts, speeds and behaviours that lead to them.

Four themes emerged from the 15 forms:

1. **Junctions, crossings and turning conflicts (7).** The most common problem. Pedestrians and cyclists are hurt where movements cross, turn or share a green phase.
2. **Speed and compliance where enforcement runs out (3).** Cities have tried calming, cameras and policing, and say these no longer reach the problem.
3. **The school-gate peak (3).** Cars, deliveries and children meet in a short daily window, with almost no hard data behind it.
4. **Heavy vehicles and trams (2).** Few forms, but the highest stated severity: “high risk of fatal injuries”.

Four findings that cut across the themes:

- **Cities count crashes, not conflicts.** 11 of 15 hold collision data. What they lack is near miss counts, speed by time and place, and the reason people behave as they do.
- **The single levers have been pulled.** What remains are trade-off decisions: safety against junction capacity, public acceptance, political choices, cost and powers the city does not hold.
- **Risk runs in two regimes.** Eight problems peak when streets are busiest (rush hour, school run). Two arise when roads are empty and drivers speed.
- **The framing is street centric.** Safe Streets is selected on 11 forms; post-crash response on one.

Why Silicon Highway is looking at Vision Zero. Silicon Highway supports cities in moving smart-city and AI technologies from pilot projects into everyday operational use. Road safety is one of the areas where this transition matters most, and where it most often stalls. The forms show why: cities are not short of ideas, but they often lack the evidence and decision clarity needed to commit to a specific course of action. That is the gap we help address.

Working with technology partners. Silicon Highway works closely with established technology partners whose solutions respond directly to the problems identified in this report, including the continuous measurement of conflicts, speeds and near misses, rather than relying solely on collision records. Many of these relationships are long-standing, built through Silicon Highway’s distribution business. We involve partners only once a city’s

problem has been clearly defined, ensuring that technology is selected to fit the problem, rather than allowing the available technology to shape the response.

How we help: from problem to options. Our role is to help cities move from a clearly stated road-safety problem to a practical set of evidence-led options.

1. **A free Problem-to-Options call.** We begin with the problem described on the intake form and develop the detail that a one-page submission cannot capture: the precise site, the pattern of risk, the available evidence, the decision to be made and the constraints that may shape the response.
2. **A set of viable options.** We then return with a focused set of options tailored to the city's specific problem, setting out the trade-offs, the evidence required to support a decision and the partners who may need to be involved.

This report identifies the problems cities are trying to solve; the solutions will emerge through follow-up conversations, one city at a time. To book a call, contact Nadeem Ullah at nadeem@siliconhighway.com.

About the exercise

At the Transport Innovation Alliance Leadership Forum organised by the Cities Today Institute on 30 September 2026, Silicon Highway Solutions asked delegates to state one problem on their city's streets for which they have no obvious or implemented solution.

The one-page intake form asked for:

- the problem, in the delegate's own words
- where it happens, who is at risk, and when
- the evidence the city holds, and what is missing
- the Safe System pillar(s) it relates to (safe speeds, safe streets, safe vehicles, safe road users, post-crash)
- the difficult decision the city faces
- what a pilot would need to prove

Participation. The analysis is based on 15 forms submitted by 14 cities. One city submitted two forms covering different problems.

Region	Cities	Forms
UK & Ireland	4	5
Central & Eastern Europe (incl. Baltics)	4	4
Western & Southern Europe	3	3
Nordics	2	2
Caucasus	1	1
Total	14	15

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How the forms were read. Each form was transcribed, checked against the original and coded to one primary theme, plus any secondary themes it also touches. Counts reflect only what delegates wrote; nothing has been inferred about a city beyond its form.

Anonymity. Cities appear as City A to City N, with their region. Delegate names, street names and landmarks have been removed, and distinctive site details generalised. The city with two forms appears as City D (D1 and D2).

How to read the numbers. This is a small, self-selected sample: one problem per delegate, not an official city position. Figures are shown as counts ("7 of 15") and should be read as signals, not statistics.

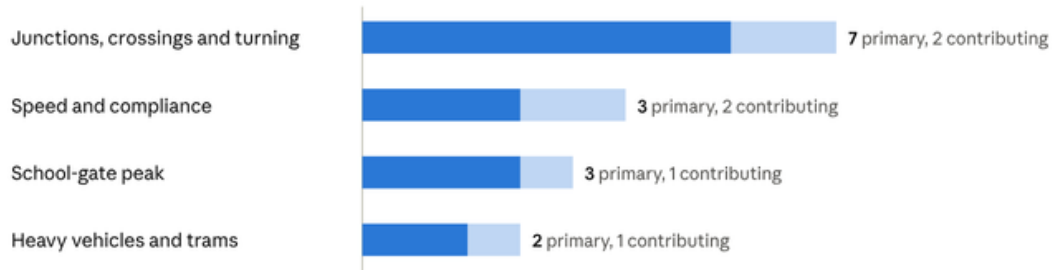
The picture at a glance

Junction and crossing conflicts account for nearly half of the problems identified, and people walking are named as at risk in almost every case.

Junctions and crossings are the most common problem cities named

Forms per theme. Each form has one primary theme (15 in total); some also contribute to a second.

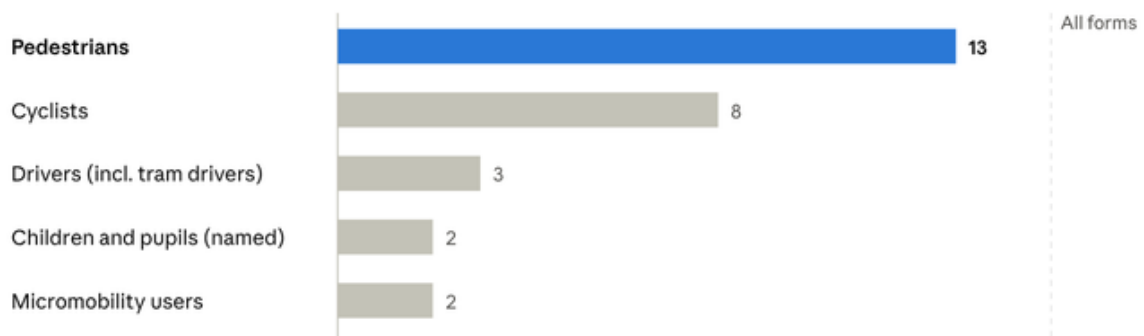
■ Primary theme ■ Contributing theme



Intake forms, Transport Innovation Alliance Leadership Forum, 30 Sep 2026 · 15 forms, 14 cities

Pedestrians are at risk in 13 of 15 problems

Forms naming each group as at risk, of 15. A form can name more than one group.



Intake forms, 'people at risk' field and problem statement · 15 forms

Cyclists are the second group at risk, named on 8 forms. Drivers appear mainly where the problem is speed on empty roads; children are named directly on the two school forms that describe pupils.

Theme 1: Junctions, crossings and turning conflicts

This is the most common theme. Seven of the 15 forms identify a junction or crossing as the primary concern, spanning four of the five regions. Two additional forms raise junction or crossing risk alongside speed or heavy vehicles. People walking are named as at risk in all seven primary cases, and cyclists in five.

What we heard. The seven forms describe four distinct conflict patterns, not one.

City	Region	Conflict pattern	What the delegate described	When
A	UK & Ireland	Turning across	Pedestrians and cyclists hit by vehicles turning into side roads	All times, worst when congested
L	Western & Southern Europe	Turning across	Major crossing with turning cars and heavy traffic	Rush hours
H	Central & Eastern Europe	Injury hotspot	Pedestrian injuries concentrated at a busy downtown intersection and its surroundings	Daytime, heavy traffic
J	Central & Eastern Europe	Injury hotspot	Pedestrians injured by cars at a busy intersection on the main road	Daytime, 07:00 to 19:00

D2	UK & Ireland	Injury hotspot	Large junctions, difficult pedestrian crossings, cyclists not clearing the junction	All times
E	Nordics	Crossing exposure	Pedestrians in a "danger zone" on a zebra crossing over four traffic lanes	24/7
B	UK & Ireland	Signal compliance	Cyclists running red lights next to a busy metro station, near misses with pedestrians crossing on green	Weekday rush hours

Where the evidence stands. These cities know *where* the problem is. All seven hold collision data, four hold observation or video, three hold speed data. What they lack is *why* and *how often*: the driver's perspective (A), the motivation behind red-light running (B), when conflicts occur and how many near misses there are (D2), and the circumstances of each crash (J).

The difficult decisions. Every form in this theme describes a trade-off rather than a missing tool:

- **Safety against capacity.** City H wants to "decrease the number and severity of accidents without significantly reducing intersection throughput capacity."
- **Which lever to pull.** City A asks: "Amend design or close side roads? Educate drivers? Enable car technology to help?", and names public acceptability as the test.
- **Technology against cost.** City D2 frames its decision as a balance between the two.

- **Behaviour.** City B asks: "What measures can stop or reduce this behaviour?"
- **Politics.** City E already holds the evidence ("We have evidence already"), including sensor data. Its open question is a political decision about the crossing itself.

Why it stays unsolved. Several movements compete for the same space and the same green time. Any change shifts cost to another group of road users. City H puts it most plainly: the solution is missing "because of conflicting interests of road users."

Theme 2: Speed and compliance where enforcement runs out

Three forms identify speeding as the primary problem, with two further submissions naming it as a contributing factor. Across all five, the issue is not simply knowing which roads are fast; it is that conventional controls, including traffic calming, cameras and policing, no longer reach the problem effectively.

What we heard.

City	Region	What the delegate described	When
G	Central & Eastern Europe	Speeding on residential streets, especially those without footways; "traffic calming measures doesn't work"	Night and low-traffic periods
K	Western & Southern Europe	Car-to-car and single-vehicle crashes on a main street, linked to drivers ignoring the limit	Especially at night
N	Caucasus	Speeding and poor compliance on a major urban road, worst near crossings, intersections and a school	All day, especially peaks
C (<i>contributing</i>)	UK & Ireland	Many traffic offences are decriminalised, leaving no route to	School drop-off and pick-up

		enforce a school street	
E (<i>contributing</i>)	Nordics	Vehicle speeds across four lanes put a zebra crossing at risk	24/7

The limits of enforcement. Delegates were direct about what has stopped working:

- "Police is powerless" (City G).
- "Speed cameras cannot be the only option or solution" (City K).
- No enforcement route because offences have been decriminalised (City C).

The outcomes they want rule out the obvious answers. City G wants to "slow the network without installing dozens of speed bumps". City K wants to "list occurrences and create categories to make solutions replicable", so that a fix proven on one street can be reused on others.

Where the evidence stands. Evidence is uneven. City G holds four types of evidence but cannot tell whether the speeding comes from residents or from through traffic. City K states no evidence and wants analysis of crash severity on wide, straight main streets. City N holds collision data but lacks "detailed speed by location and time."

Why it stays unsolved. The powers to enforce often sit with national police or national government, not with the city. Physical calming at the scale of a whole network is costly and unpopular. Two of the three primary cases also happen at night, when there are fewest people about to observe the problem.

Theme 3: The school-gate peak

Three forms identify the school journey as the primary problem, and a fourth places a school on a speeding corridor. Each describes a concentrated daily pattern: children, cars and service vehicles sharing limited space during a short peak period, with conflicts that are experienced regularly but rarely captured in formal data.

What we heard.

City	Region	What the delegate described	When
D1	UK & Ireland	Delivery vehicles operating during school drop-off and pick-up, among pupils, pedestrians and cyclists	08:30 to 09:15
M	Western & Southern Europe	A school zone where children walk and cycle while others are driven to the gate	Mornings, autumn to spring
C	UK & Ireland	Rolling out school streets when many traffic offences cannot be enforced	Drop-off and pick-up
N <i>(contributing)</i>	Caucasus	A school on a major road with poor speed compliance	Peak periods

Where the evidence stands. This theme has the thinnest evidence. None of the three primary forms holds collision data. They rely on observation, video and complaints. What

they ask for is the baseline itself: "actual data on number, frequency and form of conflicts" (City D1), and near misses and speeds (City M).

The difficult decisions.

- **Removing cars.** City M's decision is "getting cars away from the school zone."
- **Making the rules stick.** City C has the policy (school streets) but not the enforcement behind it.
- **Sharing the kerb.** City D1 must balance supplier deliveries against safe school arrival and asks first for "evidence-based data."

A system problem, not a single fix. All four forms ticked two to four Safe System pillars without naming a primary. Delegates also name the widest set of partners: schools, suppliers, police and the council.

Why it stays unsolved. The harm delegates describe is daily conflict rather than recorded crashes, so it barely shows in collision records. Without a recorded baseline, it is hard to justify an access change, or to show afterwards that it worked.

Theme 4: Heavy vehicles and trams

This is the smallest theme, with two primary forms and delivery vehicles appearing in a third, but it carries the highest stated severity. Where a tram or heavy vehicle comes into conflict with someone walking or cycling, the difference in mass leaves little margin for error; one delegate described a “high risk of fatal injuries”.

What we heard.

City	Region	What the delegate described	When
I	Central & Eastern Europe	Collisions between pedestrians and trams	Any time
F	Nordics	Trucks turning right across cyclists travelling straight ahead	Daytime, clear weather
D1 (<i>contributing</i>)	UK & Ireland	Delivery vehicles among pupils at school arrival and departure	08:30 to 09:15

What stands out.

- **Clear conditions, not poor ones.** City F's conflicts happen in daylight and clear weather. Visibility conditions alone do not explain them; the missing evidence is "how drivers were concentrating" when turning.
- **Where responsibility sits.** City I notes that tram drivers are in most cases not responsible. It's difficult decision is how to make pedestrians more aware around tram tracks.

- **Two ends of one decision.** City F frames its choice between making trucks safer and rebuilding streets so that turns are safer.

The vehicle pillar comes into view. This is the only theme in which every form selects Safe Vehicles. Elsewhere, that pillar is almost absent.

Why it stays unsolved. The vehicles, fleets and operators sit outside the highway authority's direct control: tram operators, haulage companies and suppliers. Tram routes are also fixed. Any change needs partners the city does not manage, which is why City F names trucking companies as the partner it needs.

Cross-cutting findings

Although the four themes describe different street contexts, the forms point to four underlying patterns. These cross-cutting findings are important because they explain why the problems have persisted despite measures already being tried.

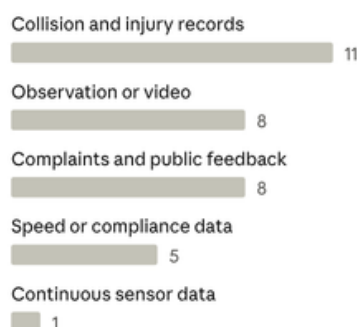
1. Cities count crashes, not conflicts

Cities hold the evidence that records harm after it happens. They lack the evidence that would show it coming. Eleven of 15 forms hold collision data, but only one holds continuous sensor data. When asked what is missing, delegates name behaviour and root cause most often, followed by near misses and conflict counts.

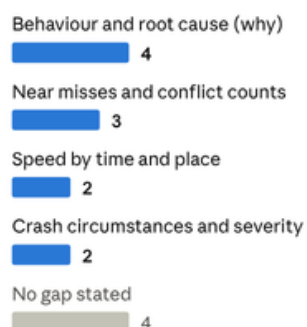
Cities record harm after it happens, not the conflicts that lead to it

Number of forms, of 15. A form can tick several evidence types and name several gaps.

What cities hold



What they say is missing



Intake forms, 'evidence available' and 'evidence missing' fields · 15 forms

The result: most cities can say *where* people are hurt, but not *how often* they nearly are, or *why*.

2. The single levers have been pulled

No delegate asked for a tool they had not heard of. They described decisions that involve trade-offs between objectives, budgets, powers or partners.

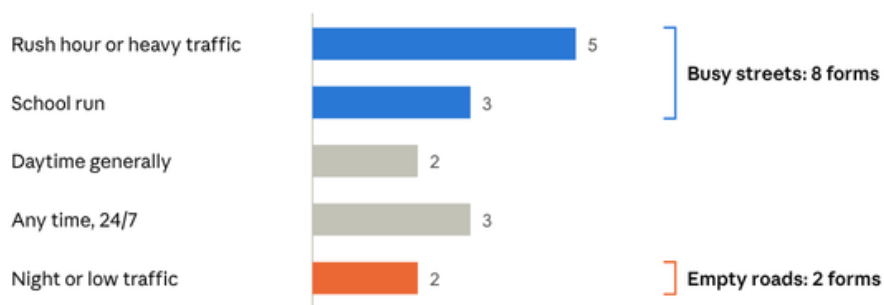
Type of decision	Cities	In their words
Enforcement the city cannot rely on	G, K, C	"Police is powerless"; "speed cameras cannot be the only option"
Changing behaviour	B, I	"What measures can stop or reduce this behaviour?"
Partners outside city control	F, D1	Trucking companies; delivery suppliers
Safety against capacity	H	"...without significantly reducing intersection throughput capacity"
Public acceptability	A	"Public acceptability"
A political choice	E	A political decision about the crossing
Technology against cost	D2	"Balance between technology and cost"
Removing cars from a space	M	"Getting cars away from the school zone"
Not stated	J, L, N	

3. Risk runs in two regimes

Most problems peak when streets are busiest. Eight forms describe rush-hour, heavy-traffic or school-run conflicts, where many movements compete for little space. A separate, smaller group describes the opposite: empty roads at night, where drivers speed.

Most problems peak when streets are busiest; a few when roads are empty

When the problem occurs, as stated on each form (15 forms)



Intake forms, 'when / operating condition' field · 15 forms

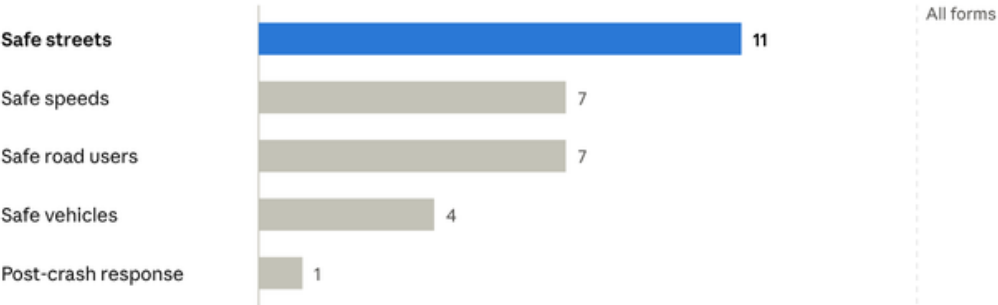
These are different problems. They need different evidence, and a measure that suits one may do nothing for the other.

4. The framing is street-centric

Delegates see their problems mainly through street design. Safe Streets is selected on 11 of 15 forms. Safe Vehicles appears on 4, and post-crash response on only one. This may reflect who attended (transport and highway teams), but it also suggests that vehicle, fleet and emergency-response partners are rarely part of the conversation.

Safe Streets dominates; post-crash response is almost absent

Forms selecting each Safe System pillar, as primary or other. One form selected none.



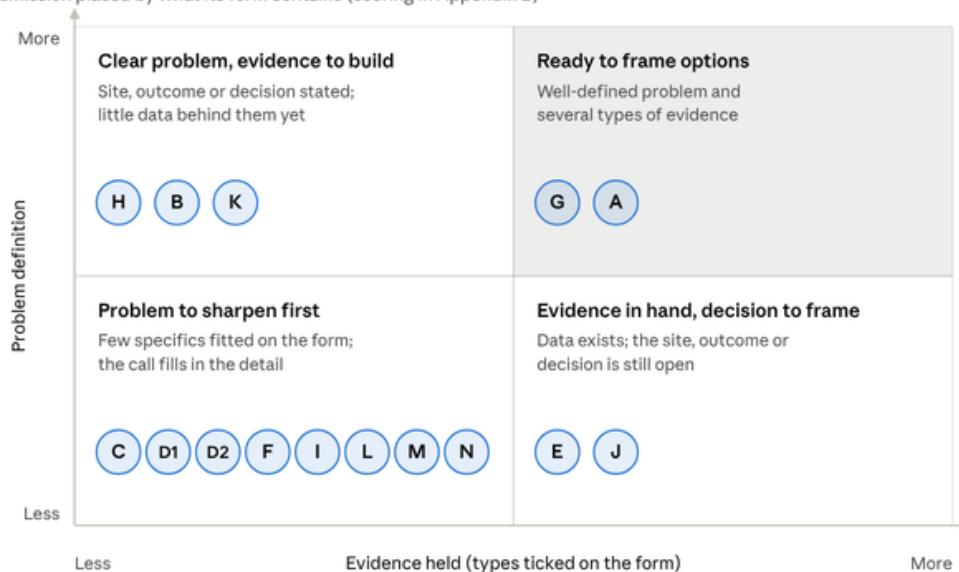
Intake forms, Safe System pillars ticked · 15 forms

Where each city starts

Cities are starting from different positions. Five problems are already relatively well defined, while eight would benefit from further clarification before options are developed. This is not a ranking; it reflects only the information captured on a one-page form.

Five problems are already well defined; eight need sharpening first

Each submission placed by what its form contains (scoring in Appendix B)



Readiness map · 15 submissions, scored from form content only

The map shows where a follow-up conversation would begin. For cities top-right, the focus is weighing trade-offs. For cities bottom-left, the first job is pinning down the site, the pattern and the decision.

Open questions the follow-up will explore. These are the questions the forms raise but cannot answer. They are not recommendations.

- **Junctions and crossings.** Which movement causes the harm, and how often does it happen short of a crash? How much capacity loss is acceptable, and to whom?
- **Speed and compliance.** Is the speeding local or through traffic, and at what hours? Which enforcement powers sit with the city, and which do not?
- **School-gate peak.** How many conflicts occur in the drop-off window, and of what kind? Who is responsible for enforcing a school street?

- **Heavy vehicles and trams.** What are drivers and people on foot doing in the seconds before a conflict? Which operators would share data or act?
- **All themes.** What would a city need to see to be confident that a change has worked?

Next step: a free Problem-to-Options call

The call begins with the problem submitted on the form; no further preparation is required. Its purpose is to turn the initial problem statement into a clearer understanding of the site, risk pattern, available evidence and decision context.

What the call covers. The discussion develops the detail that a one-page form cannot capture:

1. **The site.** The exact location or corridor, including where the problem begins, ends and changes in character.
2. **The pattern.** Who is involved, when the risk is greatest and how frequently conflicts or unsafe behaviours occur.
3. **The evidence.** The data already available, the evidence gaps that remain and what would be needed to support a confident decision.
4. **The decision.** The trade-offs the city needs to resolve, including safety, capacity, cost, public acceptance and partner responsibilities.
5. **The constraints.** Practical limits around budget, powers, delivery partners, governance and timing.

What you get. Following the call, Silicon Highway will provide a focused set of options tailored to the specific problem, setting out the relevant trade-offs, evidence requirements and potential partner involvement. There is no obligation beyond the call.

To book. Contact Nadeem Ullah at nadeem@siliconhighway.com and reference the problem submitted at the event.

Appendix A: Anonymised register of submissions

This appendix lists all 15 submissions, grouped by region. The primary theme is shown first, with contributing themes shown in brackets where relevant.

City	Region	Theme	Problem as stated (anonymised)	People at risk	When	Evidence held
A	UK & Ireland	Junctions	Pedestrians and cyclists hit by vehicles turning into side roads	Pedestrians, cyclists	All times, worst when congested	Collision, speed, complaints, observation
B	UK & Ireland	Junctions	Cyclists running red lights next to a metro station; near misses with pedestrians	Pedestrians	Weekday rush hours	Collision, observation
C	UK & Ireland	School (speed)	School streets being rolled out where many offences cannot be enforced	Pedestrians	Drop-off and pick-up	Speed, observation
D1	UK & Ireland	School (heavy vehicles)	Delivery vehicles operating during school drop-off and pick-up	Pupils, pedestrians, cyclists	08:30 to 09:15	Observation, complaints
D2	UK & Ireland	Junctions	Large junctions, difficult crossings, cyclists not clearing the junction	Pedestrians, cyclists, micromobility	All times	Collision, complaints

E	Nordics	Junctions (speed)	Zebra crossing over four traffic lanes leaves pedestrians exposed	Pedestrians	24/7	Collision, speed, complaints, observation, sensor
F	Nordics	Heavy vehicles (junctions)	Right-turning trucks in conflict with cyclists going straight ahead	Cyclists	Daytime, clear weather	Collision, public feedback
G	Central & Eastern Europe	Speed	Speeding on streets without footways; traffic calming seen as ineffective	Pedestrians, drivers	Night, low traffic	Collision, speed, complaints, observation
H	Central & Eastern Europe	Junctions	Pedestrian injury hotspot at a busy downtown intersection	Pedestrians	Daytime, heavy traffic	Collision
I	Central & Eastern Europe	Heavy vehicles	Collisions between pedestrians and trams	Pedestrians, tram drivers	Any time	Collision, complaints
J	Central & Eastern Europe	Junctions	Pedestrians injured at a busy main-road intersection	Pedestrians, cyclists	Daytime, 07:00 to 19:00	Collision, speed, observation

K	Western & Southern Europe	Speed	Car-to-car and single-vehicle crashes on a main street	Drivers	Especially at night	None stated
L	Western & Southern Europe	Junctions	Major crossing with turning cars and heavy traffic	Pedestrians, cyclists, micromobility	Rush hours	Collision
M	Western & Southern Europe	School	Children walking and cycling while others are driven to the school gate	Pedestrians, cyclists, children	Mornings, autumn to spring	Complaints, observation
N	Caucasus	Speed (junctions, school)	Speeding and poor compliance on a major urban road near crossings and a school	Pedestrians, cyclists	All day, especially peaks	Collision

Appendix B: How the forms were coded

This appendix explains how the submissions were categorised for the analysis.

- **Themes.** Each form was assigned one primary theme from the problem as stated. A contributing theme was added where the form also clearly describes a second problem type.
- **People at risk, timing, evidence.** Taken from the form's fields as written and grouped into common categories. Nothing was added that the form does not state.
- **Safe System pillars.** All ticked pillars were counted. Where a delegate ticked several without marking one as primary, all were counted equally.
- **Readiness map.** *Evidence held* = the number of evidence types ticked (collision, speed, complaints, observation, sensor; 0 to 5). *Problem definition* = one point each for a specific site, a stated outcome and a stated difficult decision (0 to 3). The thresholds are 3 or more for evidence and 2 or more for definition. The map reflects what fitted on a one-page form, not the full picture in each city.