Five ways to elevate your delivery of Vision Zero



Introduction

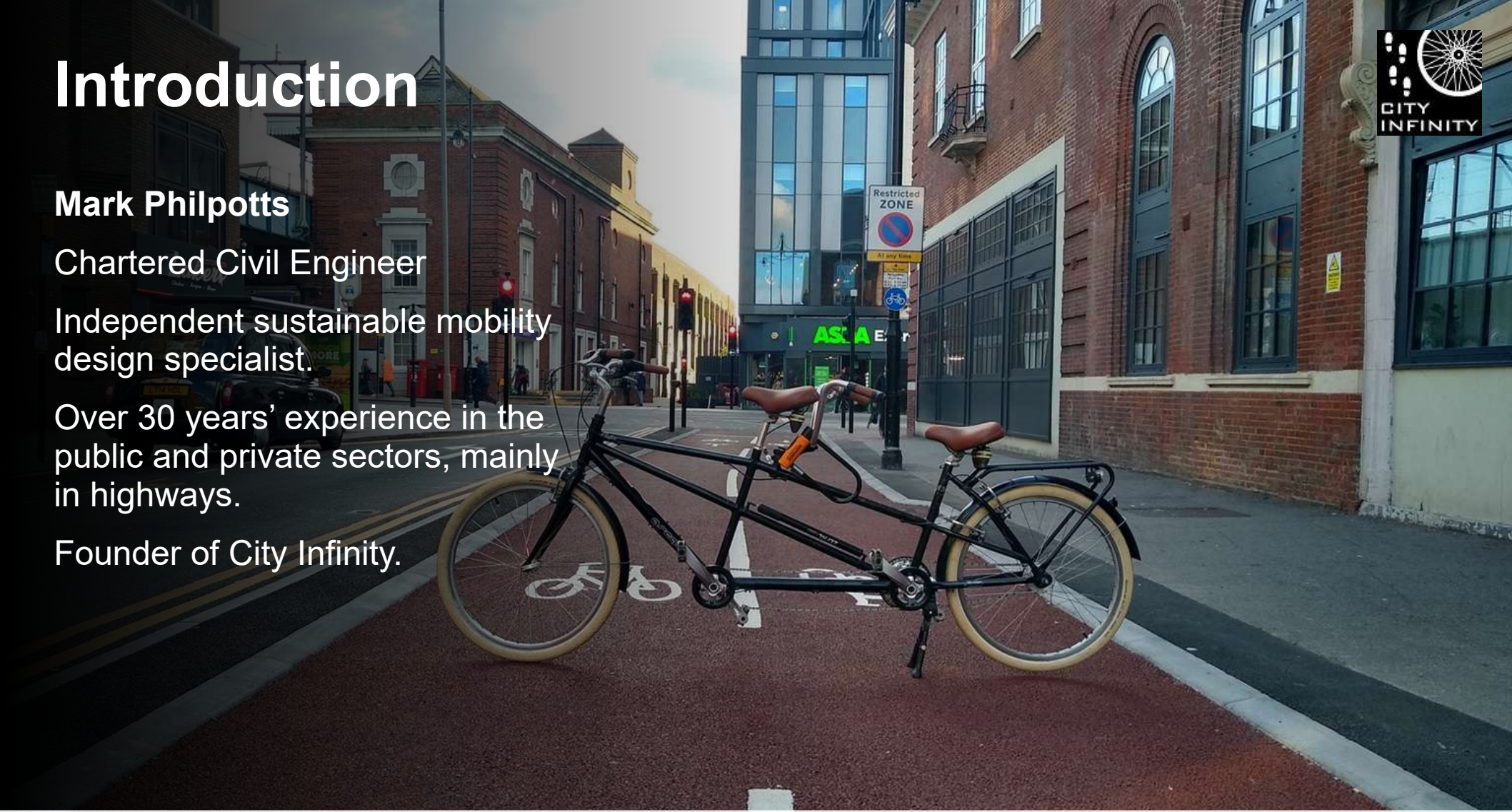
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Introduction

- A personal note:
  - Delivering Vision Zero is not a technical problem.
  - Nobody has all of the answers.
  - My thinking is not 100% resolved and nor should it be!
  - Perhaps the real treasure was the typos we met on the way.
  - We’re all going to feel a little uncomfortable.

Introduction

- Let's also hold the idea of the Safe System approach in mind:
  - If Vision Zero is the goal, the Safe System gets us there.



The Five Safe System Pillars.

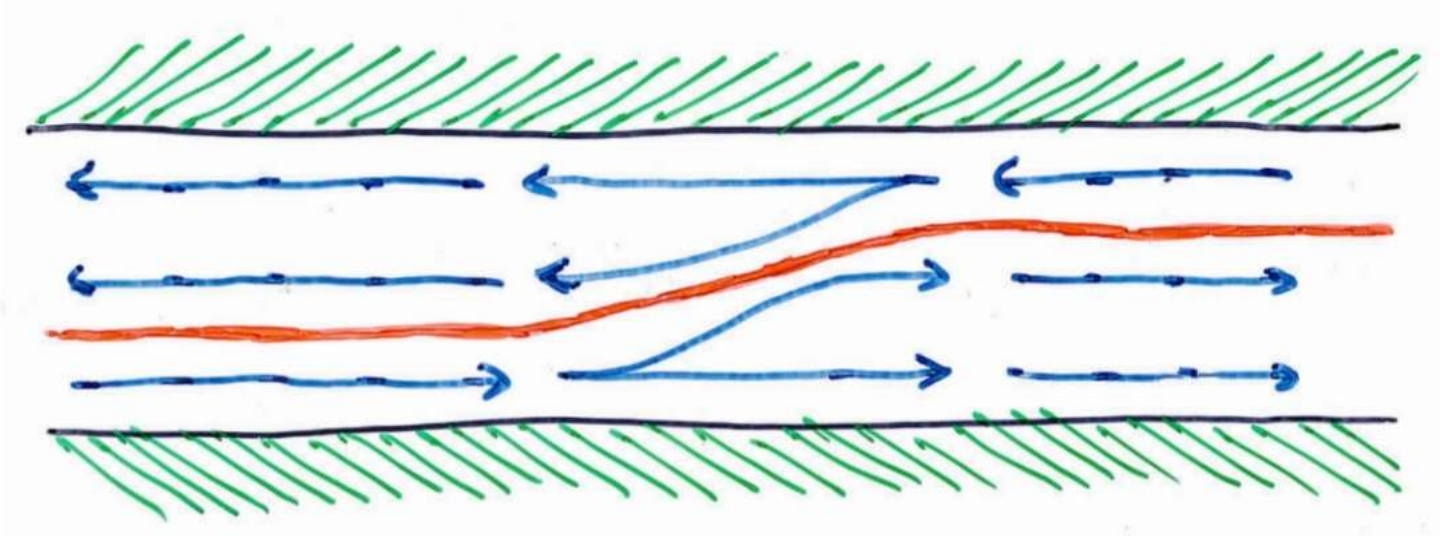
From CIHT – Progressing the UK towards Safe System Implementation, November 2024.

Introduction

- Let’s take a moment to remember where the idea of Vision Zero came from.
- The most famous proponent was Claes Tingvall, the traffic safety at the Swedish Roads Institute:
  - Life is more important than anything else.
  - We [professionals] are responsible for safety.
  - We [professionals] know what to do.
- Adopted in 1997 by the Swedish Parliament after a landmark vote.

Introduction

- The approach was systematic with early work concentrating on head-on collisions on the rural road network.



- This led to the “2+1” design as shown by Tingvall's original sketch.



E65 Malmövägen, Skåne County

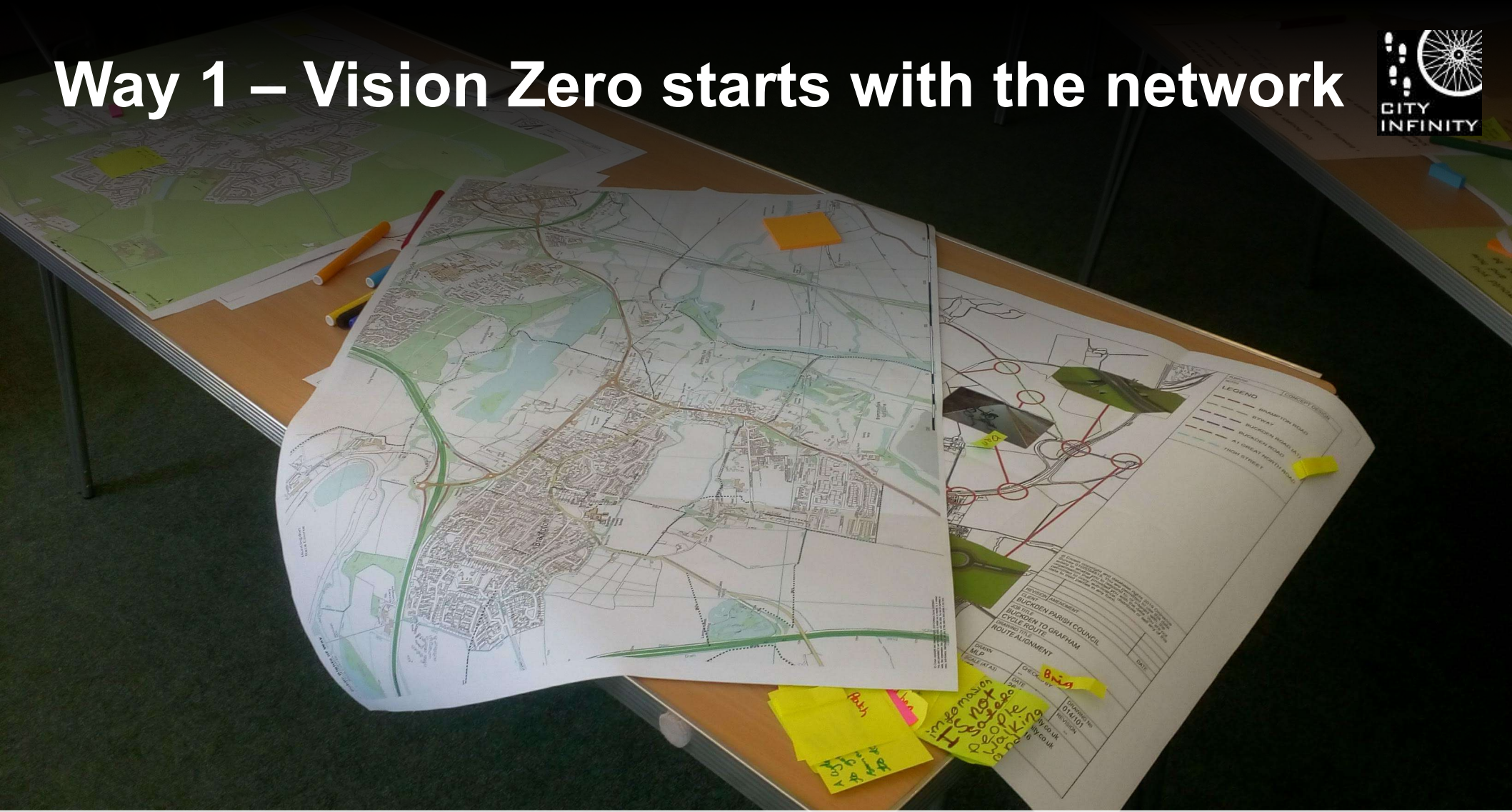
Introduction

- It was quite motor-centric in the early years, but it evolved:
  - **Ethics** – people should not have to die in traffic collisions
  - **Responsibility** – system designers must realise that people make mistakes,
  - **Solutions** – combinations work better than single solutions.
- In technical terms, this is very clear.
- It’s literally our job as professionals.

The five ways



Way 1 – Vision Zero starts with the network

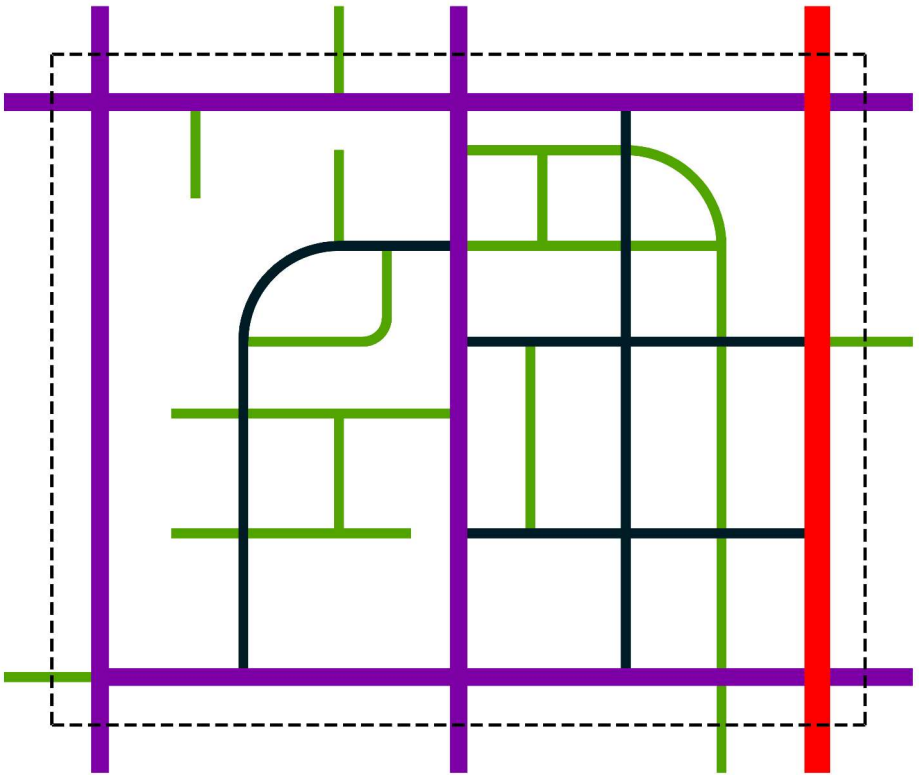


Way 1 – Vision Zero starts with the network

- Vision Zero is a **systematic** approach to road safety.
- The highway network is a **system**.
- We need to understand how it works now, but crucially, we have to decide how it should work in the future, **and for who**.
- We need to be working with a plan in mind.
- With a plan, we can deliver over time:

Way 1 – Vision Zero starts with the network

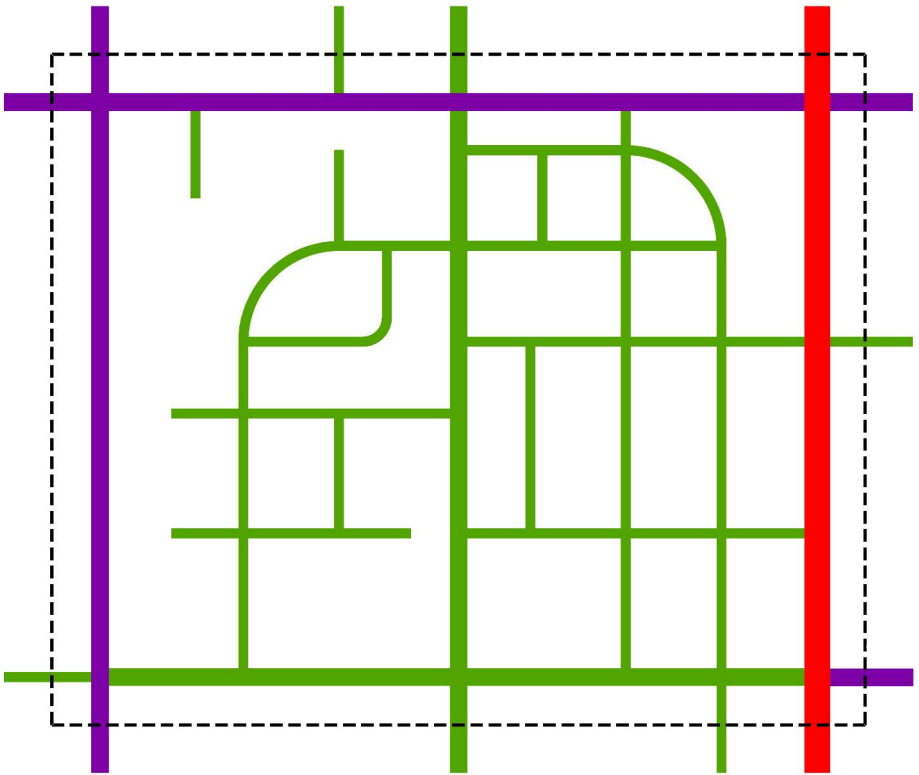




Here's part of a city road network classified as it **functionally operates today** in and around a local neighbourhood.

Way 1 – Vision Zero starts with the network

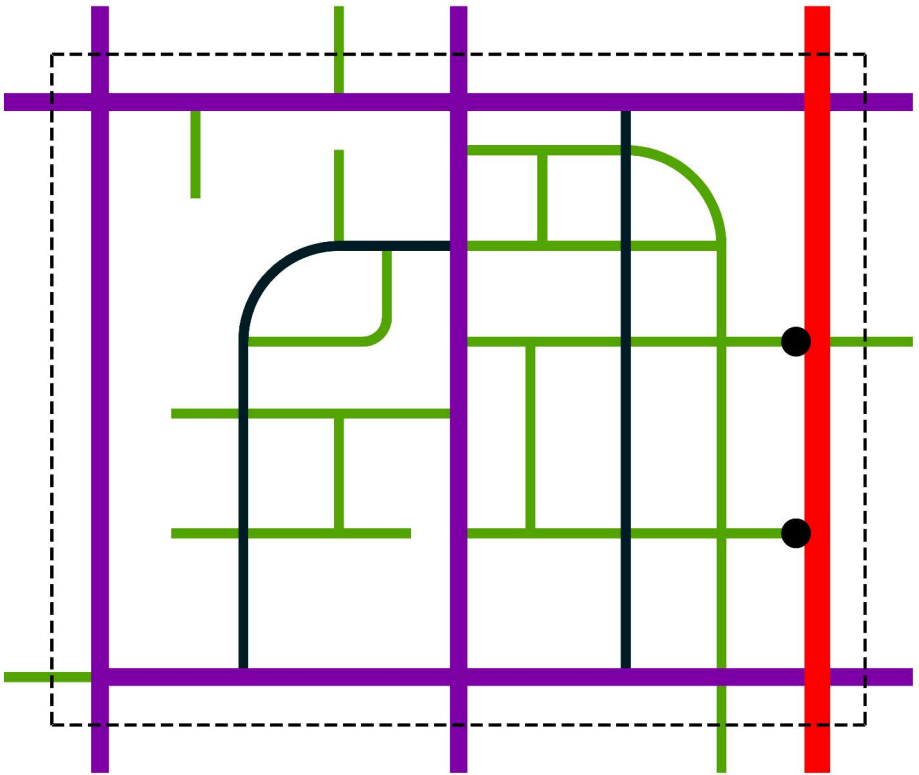




Here's the same area classified as the local authority would like to see it **in the future**. They have decided to be bold.

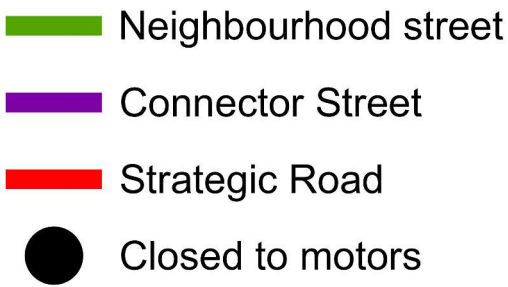
Way 1 – Vision Zero starts with the network

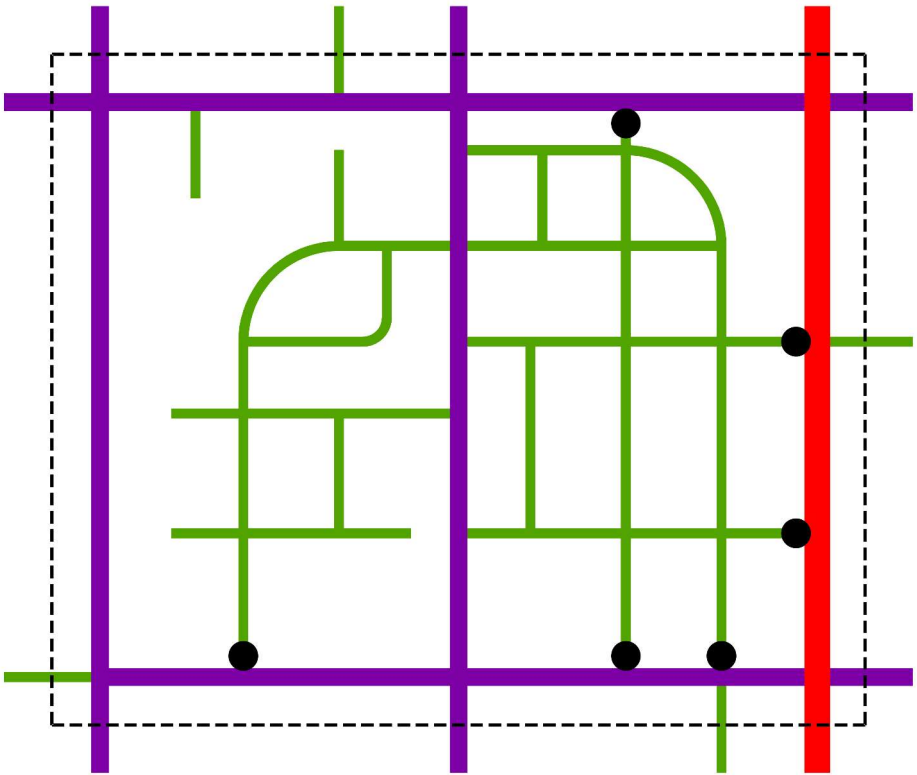




A first stage might unravel neighbourhood streets from the strategic road, removing some high risk junctions.

Way 1 – Vision Zero starts with the network

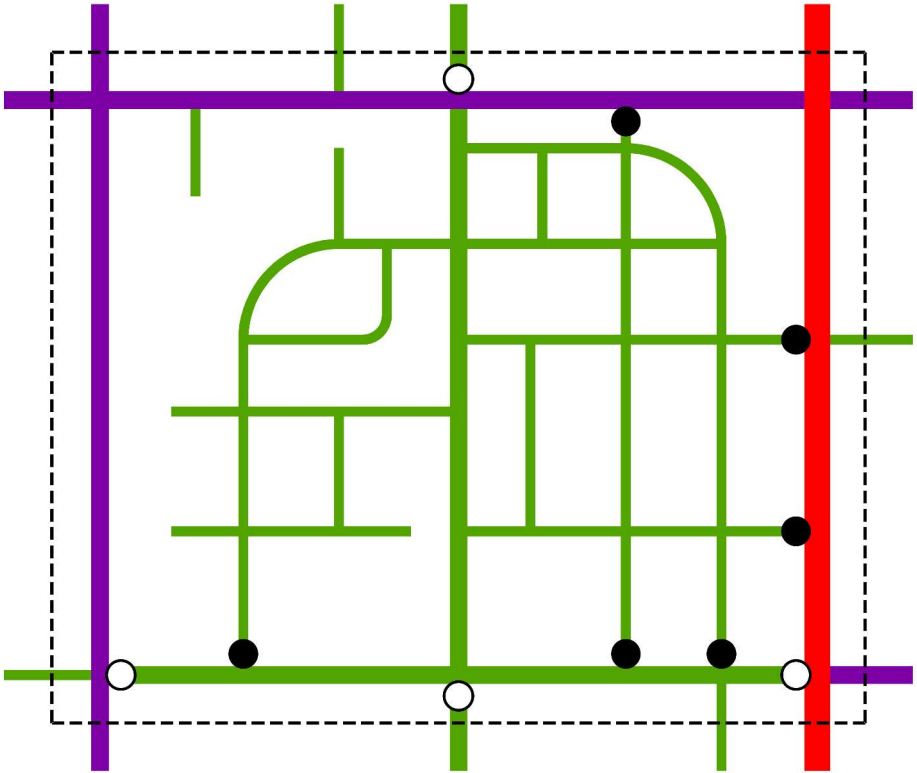




The next stage delivers two low traffic neighbourhoods which should help **demonstrate** local benefits.

Way 1 – Vision Zero starts with the network





The final stage uses bus gates to deliver a large low traffic neighbourhood which joins the areas north and south. Maybe “low traffic network” is a useful term here?

Way 1 – Vision Zero starts with the network

- In redesigning the network we are looking influence:
  - Our user hierarchy and behaviour, such as:
    - Longer distance traffic using roads **designed** and **managed** for it.
    - Local streets become local access for traffic and where the **place function** is high.
  - How we set speed limits.
  - Where we invest with more costly interventions such as traffic signals and crossings.
  - How roads and streets are maintained.

Way 1 – Vision Zero starts with the network

- With a redesigned network, we are working towards rationalisation which helps us to move from reacting to collisions to anticipating them:
  - Removing junctions between local streets and strategic roads.
  - Using traffic signals sparingly, but where they are needed most.
  - Simplification of layouts.
- Essentially a planned response to Vision Zero.
- Example, Utrecht's ring road:



Sint-Jospehlaan, Utrecht



Sint-Jospehlaan, Utrecht


90 Royaards van Den Hamkade
Utrecht
Google Street View
Nov 2020
See latest date
Heveck
CITY INFINITY
Marnixlaan, Utrecht
Jun 2026
Jun 2023
Mar 2022
Nov 2020
Jun 2015



Marnixlaan, Utrecht

Way 2 – Injecting some honesty



Way 2 – Injecting some honesty

- The fundamental question for politicians, planners and designers:

"Is Vision Zero warm words in a policy document or do we actually mean to deliver it?"

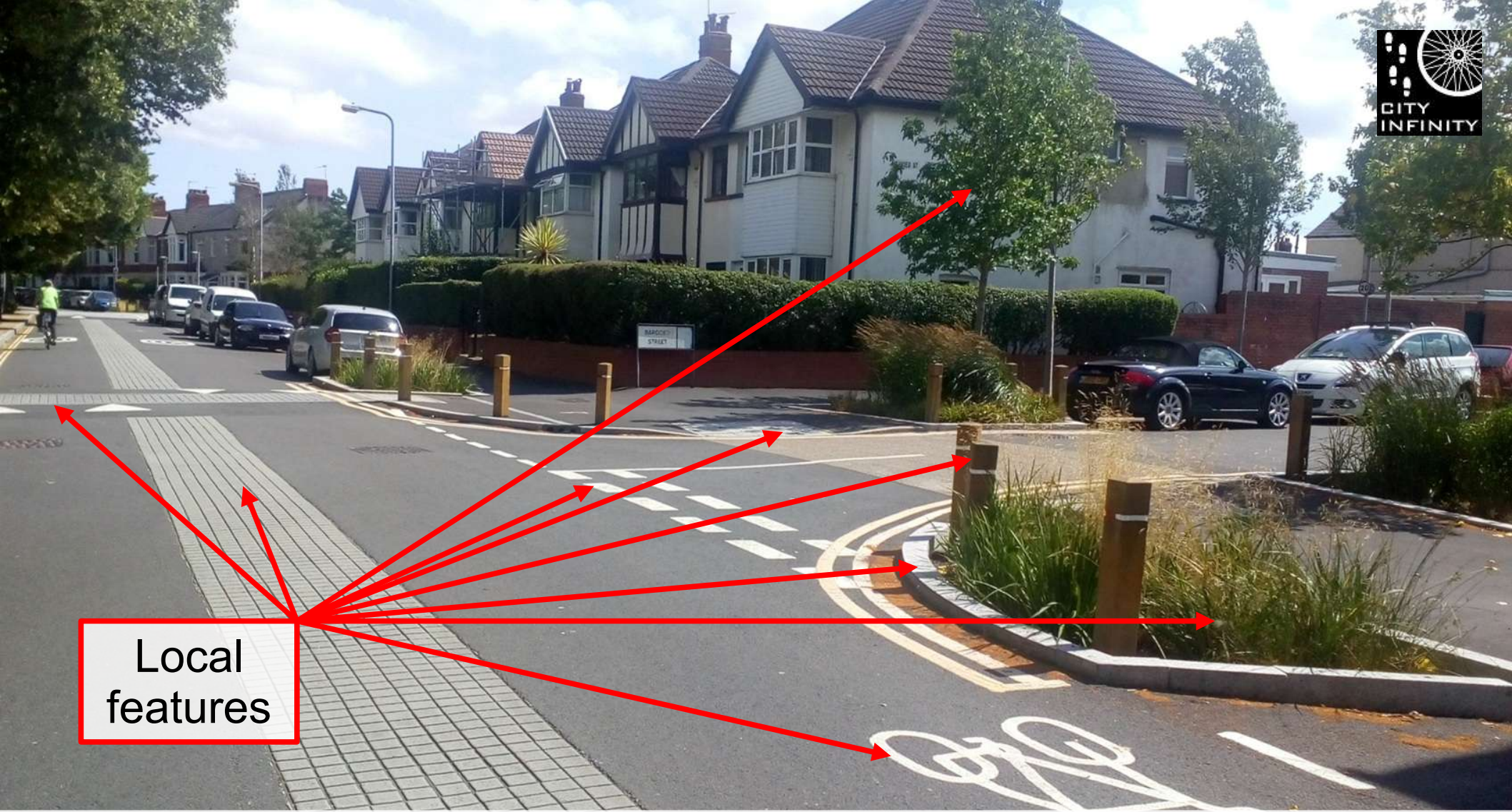
- Everyone involved has to **really** agree that we're delivering it.
- Otherwise, what's your **optimum** number of dead and injured people on the roads and streets?

Way 2 – Injecting some honesty

- A front-line designer can only change local **features** within their project's red line.
- Network **factors** are the responsibility of strategic planners with decisions made by councillors (within a system of delegation).
- Let's look at a quick example – making crossing a side street safer, easier and more accessible:



Taff Embankment, Cardiff


Local features


?0
Network Factors

Way 2 – Injecting some honesty

- To enable a front-line designer to deploy the full range design solutions as possible, network-level decisions need to be taken.
  - The right decisions need to be made at the right level.
  - Recognition that standard approaches are not neutral.
  - Realise that we can and must challenge standard approaches.
- It's a matter of responsibility and accountability.

Way 2 – Injecting some honesty

- Political level
  - The decision to embrace Vision Zero, and means it.
  - Recognising that politics is not neutral.
- Strategic planning level
  - Develop a strategic response to delivery.
  - Supporting the front-line designers.
- Design level
  - Apply the tools of Vision Zero.
  - Record and challenge if being asked to make political or strategic decisions.

Way 3 – The complexity of trade-offs



Way 3 – The complexity of trade-offs

- “Balancing the needs of all road users”.
  - A really common political device that avoids making bold decisions.
  - Maybe partly driven or enabled by modelling; or at least trying to keep motor traffic capacity neutral?
- Is this actually tacit policy?
- **Incompatible** with Vision Zero.

Way 3 – The complexity of trade-offs

- It leaves us with the status quo:
  - Through-traffic prioritised (by design or omission).
  - Hard to cross main roads and side road junctions.
  - Basic accessibility mitigations are missing.
  - Car parking prioritised.
  - Footway space under pressure.
  - A lack of provision for safe cycling.
- Example – let's compare who can safely use two similar (network level) streets:



Green Lanes, London



Middenweg, Amsterdam

Way 3 – The complexity of trade-offs

- Let’s reframe our thinking.

Way 3 – The complexity of trade-offs

- **Balancing**
  - Ensuring a state of equality where everyone has the opportunity to use the road or street, with context-specific mitigations to protect the most vulnerable users.
- **Needs**
  - Ensuring the fundamental basics of safety and accessibility are in place to support the most vulnerable users.
- **Users**
  - Must include the most vulnerable users being present.

Way 3 – The complexity of trade-offs

- Because we are so often left working within a broken system, it's the most vulnerable who end up making the greatest trade-offs or compromises.
- We end up chasing people from the streets!

Way 3 – The complexity of trade-offs

- Example: Floating bus stops:
  - These are an **inevitable** design element if we are to protect people cycling from traffic from the Vision Zero perspective.
  - Problematic and frightening for some bus users (access friction).
  - We also want to increase mobility and choice.
  - Lots of media/ political noise and heat about dangerous cyclists (aka people).
  - In a system where basic accessibility is failing, a change to the only piece of easily accessible transport can be the last straw for some people.



City of London



Hackney, London



Stratford, London

Way 3 – The complexity of trade-offs

- Vision Zero isn't just about preventing future death and serious injury in a static system.
- It's doing so in a way that increases:
  - Accessibility.
  - Mobility.
  - Choice.
- It's bringing people back to the streets once more, because they **feel** safe and **are** safe.

Way 3 – The complexity of trade-offs

- There are **structural issues** in how we prioritise people using our streets.
- Which starts at the **network level** which is ultimately rooted in a set of **political beliefs** rather than rational network appraisal.
- There is a need to recognise this in our work which is is, again, a **question of ethics**.

Way 4 – Embracing failure



Way 4 – Embracing failure

- Does the UK experiment enough?
  - We did as a response to the Pandemic, and quickly!
  - Some are still trying with low traffic neighbourhoods.
  - We did over a decade ago to support cycling in London.



Kings Road, Brighton



Shepherdess Walk, London



Bradford Street, Birmingham


TRL, 2013

Way 4 – Embracing failure

- **Actual** experimentation is hard work:
  - Staff resources.
  - Maintenance resources.
  - Political capital.
  - Fear of failure.
  - Fear of liability.
  - Reputational risk.
  - Lack on budget for monitoring and for any changes.

Way 4 – Embracing failure

- What we never seem to hear is:

“Actually, we’re not sure how this will turn out.”

Way 4 – Embracing failure

- Or perhaps better:

“We want to try something.

It might not work, but we are prepared for that.”

Way 4 – Embracing failure

- But we **are** constantly experimenting with ideas and layouts:
  - We build things that look experimental.
  - We assume guidance is correct.
  - Do we back things with our own research?
  - Do we write down our approach properly?



Chorlton Road, Manchester



Northwall Road, London



Kingsway, Stretford



Wood Street, Cardiff



The Plain, Oxford

Way 4 – Embracing failure

- What happens afterwards?
  - We’re terrible at monitoring things carefully.
  - Nobody hurt and no complaints is **not** monitoring.
  - We’re bad at admitting mistakes.
  - We’re even worse at putting them right.



Way 4 – Embracing failure

- However, if Vision Zero is about combining solutions:
  - Structured experimentation of ideas is valid.
  - Testing established practice stops us repeating mistakes.
  - A willingness to admit mistakes and explain them is healthy.
  - We need to stop other people making our mistakes!

Way 5 – Delivering better places



Way 5 – Delivering better places

- A real call to action to stop doing things badly and in isolation.
- Thinking about how our networks **should** operate is vital, we will fail if we don't.
- If we have thought it through then delivering incrementally is fine if it is done in pursuit of a plan.
- However, our plan must have two key foundations for delivering better places, **if** we are **serious** about Vision Zero:



A470 Trefforest

Way 5 – Delivering better places

- Safe Speeds is a Vision Zero pillar.
- Where people have to mix more with traffic, 20mph is proven to:
  - Reduce the impacts of collisions on the human body for people inside and outside of vehicles.
  - Help prevent collisions in the first place.
- 20mph helps foster **safe road users**.

Way 5 – Delivering better places

- 20mph enables designers to go to town:
  - Narrower traffic lanes.
  - Tighter geometry.
  - Reinforcing the behaviour we wish to see.
- This helps to create **safe roads**.

Way 5 – Delivering better places

Table 1. Safe System survivable impact speeds for different crash scenarios[24,25]

Type of road/road section	Safe System survivable impact speed	
Roads/road sections with possible crashes between cars and vulnerable road users including 2- and 3-wheelers	Max. 30 kph	(20 mph)
Roads/road sections with intersections with possible side-on crashes between cars	Max. 50 kph	(30 mph)
Roads/road sections with possible frontal (head-on) crashes between cars	Max. 70 kph	(40 mph)
Roads/road sections with no likelihood of side-on or frontal crashes between cars and limited access (usually motorways)	Max. 100 kph*	(60 mph)

* In many countries, motorways still have higher speed limits of up to 120 kph or even 130 kph. But setting speed limits on motorways should be about balancing three core priorities: safety, mobility, and the environment. Introducing lower speed limits on motorways cuts both fuel consumption and pollutant emissions. Thus, speed limits over 100 kph should generally be avoided.

Guide for Safe Speeds, World Bank et al 2024



Whitney Road, Waltham Forest

Way 5 – Delivering better places

- Vision Zero is **undeliverable** without Low Traffic Neighbourhoods.
- They help to:
  - Reduce collision risk at priority junctions.
  - Provide safer connections to the main cycle network.
  - Manage motor traffic on main roads where we are most likely to have specific traffic controls – such as signals.
- This helps to create **safe roads**.

Way 5 – Delivering better places

- Low Traffic Neighbourhoods enable:
  - Manage traffic volume at the network-level, including changes to reduce volumes.
  - Create opportunities to unravel the motoring and cycling networks.
  - Delivery of pedestrian-friendly priority junctions both within LTNs and on LTN boundaries.
  - Target investment on the main road network:
    - Corridor improvement.
    - Maintenance.

Way 5 – Delivering better places

- 20mph limits and LTNs have attracted the culture wars and sometimes push back from the public.
- As professionals are being **serious** about Vision Zero:
  - We must make the case.
  - We must carefully and robustly explain why our designs will be compromised without these key foundations.
  - We must explain how the most vulnerable are impacted.

Key takeaways

Key takeaways

- I think these are all **heavily** interlinked and I hope you do to.
  - Way 1 – Decide who your future network is for.
  - Way 2 – Honesty breeds responsibility and accountability.
  - Way 3 – Managed failure should be embraced.
  - Way 4 – Trade-offs are a question of ethics.
  - Way 5 – 20mph and LTNs are the foundations of better places.
- Let's round off with a look at Vision Zero in action, but perhaps a lesser known example.

Final word – Hoboken, New Jersey

- A US city isn't an obvious Vision Zero pioneer, but Hoboken is an interesting (small, 60,000 residents) case study.
  - 2014 to 2018, 4,451 crashed, 10 serious injuries, 3 fatalities.
  - 40% of KSI with pedestrians and cyclists.
  - Achieve zero traffic related deaths or injuries by 2030.
  - Become a city of safe and comfortable streets.
  - Make equitable and context sensitive investments.
  - As of January 2026, no road deaths since January 2017.
  - Funding and data remains challenging (e.g. near misses, low data pool open to year on year fluctuation.

Final word – Hoboken, New Jersey

- Interventions such as:
  - Early focus on street redesign near schools, parks and community centres.
  - City-wide 20mph speed limit.
  - Focus on junctions for pedestrians and cyclists.
  - Junction build-outs to slow turning drivers, reduce crossing distance and to improve visibility (aka “daylighting”)
  - Camera enforcement.
  - Public realm enhancement.



Park Avenue and 9th Street, Hoboken (image Hoboken City Council)


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