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Systematic Safety in the real world

Few examples from The Netherlands

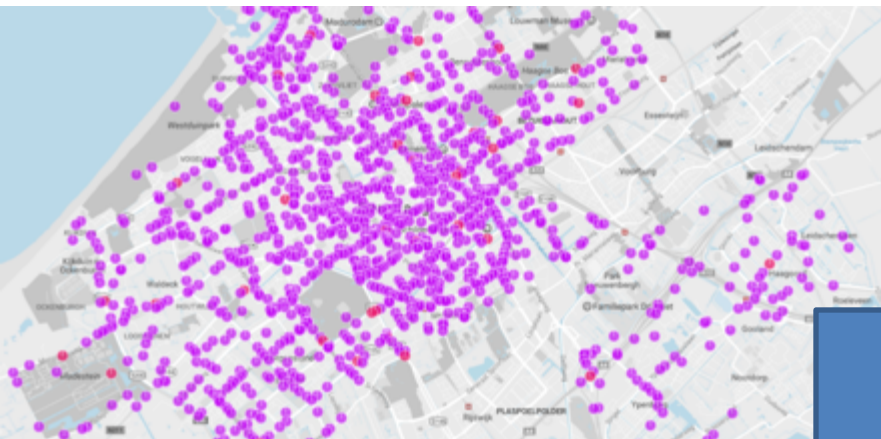
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From tackling high risk **locations** to tackling weaker spots in **traffic system**

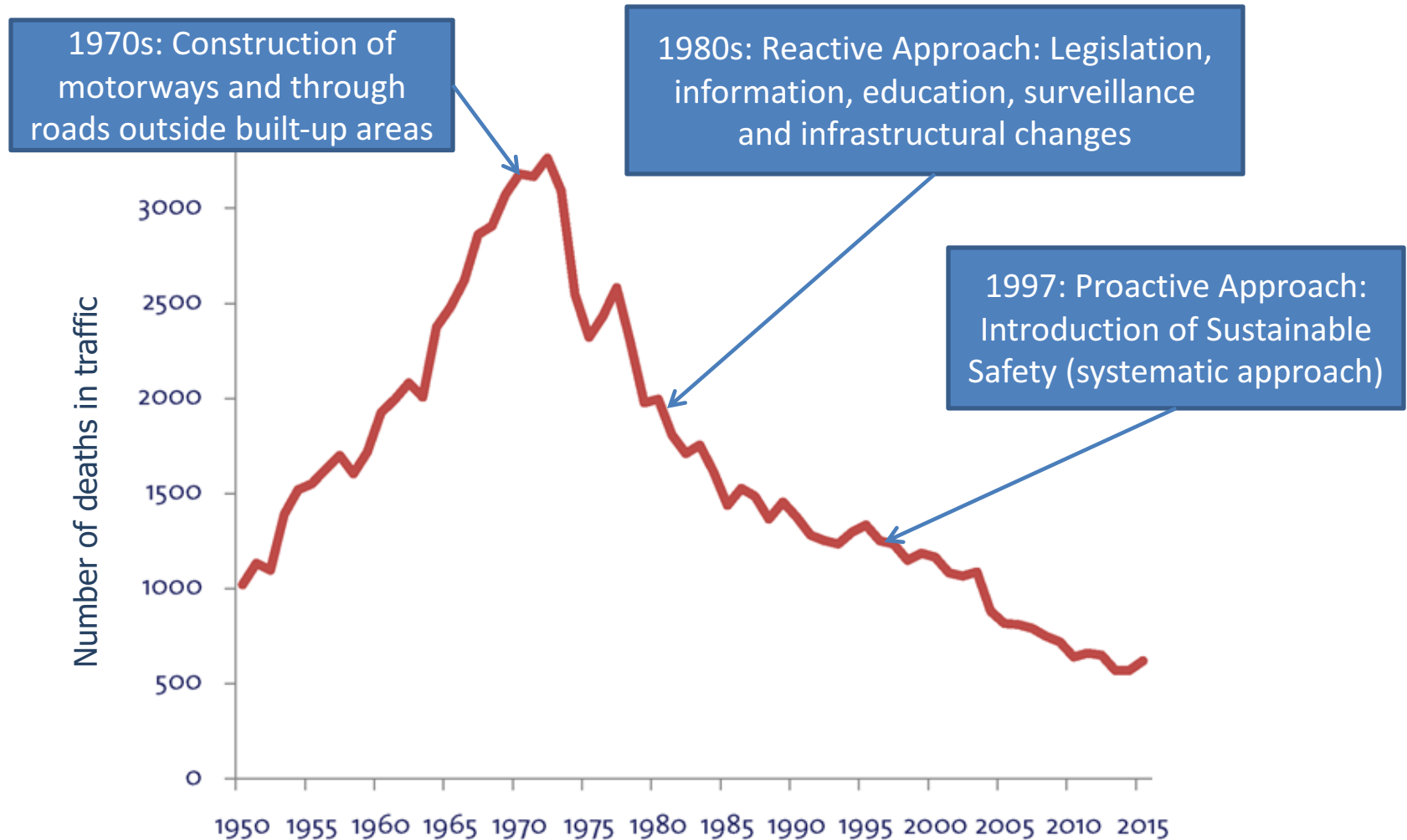


Black spots (5 or more injuries/deaths in 5 yrs) in The Hague, 2011-2015



All crash sites in The Hague, 2011-2015

Safety approaches in The Netherlands



Sustainable Safety in the real world

- 30 km/h zones (19 mph) in residential and commercial zones (urban area)
- 60 km/h zones (38 mph) in rural areas
- (Continuing) Separation of mass and speed on arterial and collector roads: separated bike paths
- Safe intersections and crosswalks

Implementation of 30 km/h zone

Hardenberg, The Netherlands



Centerline (dashed)

Before implementation 30 km/u zone

Implementation of 30 km/h zone

Hardenberg, The Netherlands



Raised intersection

No centerline!

After implementation 30 km/u zone

Implementation of 30 km/h zone

Hardenberg, The Netherlands



Wide road width (parking)

Before implementation 30 km/u zone

Implementation of 30 km/h zone

Hardenberg, The Netherlands



After implementation 30 km/u zone

Implementation of 60 km/h zone

Rural Zone in Ommen, The Netherlands



Before implementation 60 km/u zone:
a 80 km/h road

Implementation of 60 km/h zone

Rural Zone in Ommen, The Netherlands



Rural Road after implementation
60 km/u zone (2010)

Implementation of 60 km/h zone

Rural Zone in Ommen, The Netherlands



Rural Road after implementation
60 km/h zone (2016)

Implementation of 60 km/h zone

Rural Zone in Ommen, The Netherlands



Intersection after implementation
60 km/u zone

Implementation of 60 km/h zone

Rural Zone in Ommen, The Netherlands



Alternative for speed hump:
narrow the road. Only one car
a time

After implementation 60 km/u zone

30 km/h zones: How was it financed?

- National program implementation 30 km/h zones (50% subsidized)
- Political will: invest in safety and livability
- Combined with other programs:
 - Road maintenance
 - Neighborhood improvement
 - Upgrading storm water sewers (climate change)
- Started in 1997, by 2010 most residential areas had been treated



Road crossing: islands

Groningen, The Netherlands



Downtown

Road crossing: islands

Groningen, The Netherlands



Office area

Road crossing: islands

Groningen, The Netherlands



Commercial zone

Road crossing: islands

Amsterdam, The Netherlands



Downtown, near Central Station

Road crossing: islands

Rotterdam, The Netherlands



Downtown, near Central Station

Investments in Transportation

Investments / City	Utrecht *	Groningen	The Hague *
Implementation of projects Transit	€12.14	€5.80	€27.45
Implementation of projects Motor Vehicles	€22.27	€1.50	€11.96
Implementation of projects Bicycle and Traffic Safety	€25.13	€8.06	€32.45
Total costs	€59.55	€9.03	€107.79

In Euro's a year (2017), per capita

**Utrecht and The Hague are investing a lot in projects to improve accessibility to city center and work areas (office zones)*

