

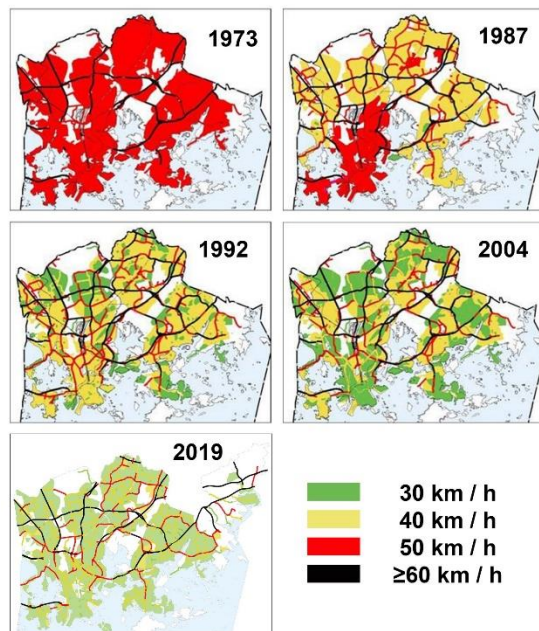
## HELSINKI, FINLAND: SAFETY IMPACTS OF LOWERING THE SPEED LIMITS IN URBAN AREA

### THE PROBLEM

The higher the vehicle speed the higher the crash risk and the more serious the crash in the event of a collision. Even if the car driver survived the crash without serious injuries, the corresponding collision speed can be fatal for a pedestrian or a cyclist in a collision with a motor vehicle. In the 1970s, almost 30 pedestrians were annually killed in road traffic crashes in Helsinki, Finland. In 2019, no pedestrian died in traffic crashes in Helsinki, even though the traffic volume almost doubled from the 1970s. One of the measures to improve traffic safety and pedestrian safety was lowering the speed limits.

### THE SOLUTION

The city of Helsinki has reduced the speed limits on the street network several times during the past decades to improve traffic safety (Figure 1). First, the speed limit of 50 km/h was introduced in 1938. Later in 1973, road-specific speed limits were introduced in Finland. In 1987, the speed limit of 40 km/h was set on suburban streets in Helsinki, and the following year the new speed limit expanded to some areas of the inner city. In 1990, the speed limit of 30 km/h was set for some suburban residential streets, and during the following years the speed limit of 30 km/h was expanded to some other streets. In 2004, the speed limit of 30 km/h was also expanded to some streets of the inner city and residential areas. The next major change to the speed limit system was made in 2019, when large-scale 30 km/h limits took place. The limits were lowered to 30 km/h on almost all streets in residential areas.



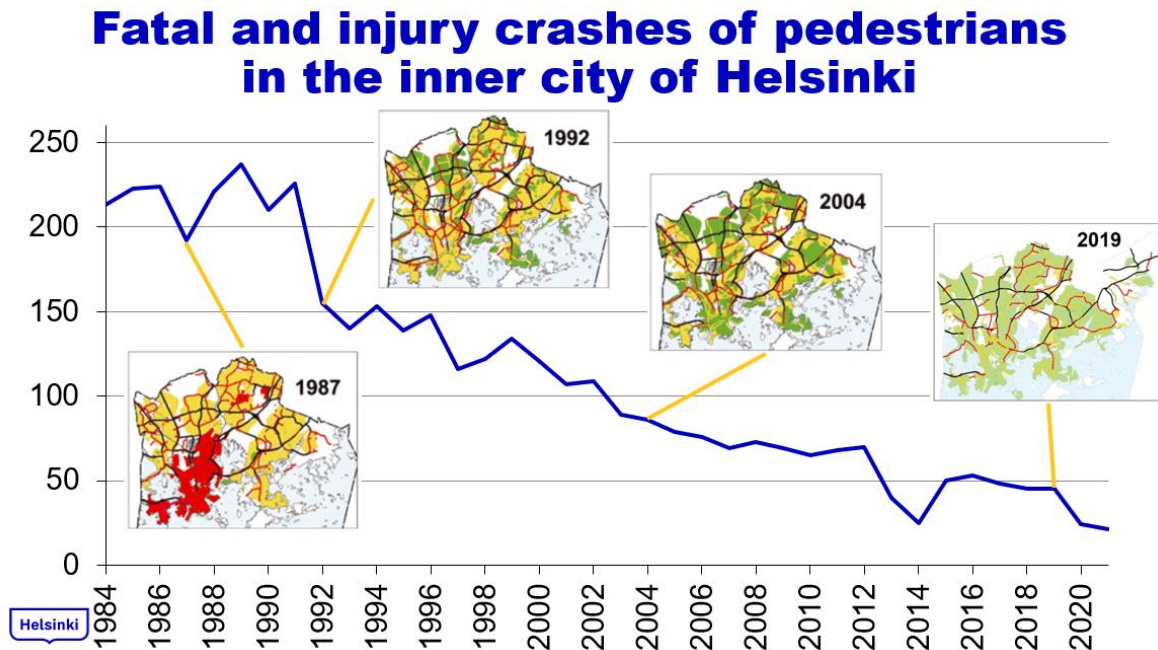
**Figure 1. Speed limit map in Helsinki after changes made in speed limits in different years.**

Lowering the speed limits is not always a sufficient action to lower the speeds to the desired level. Therefore, lowering the speed limits has also been supported by engineering measures to reduce actual driving speed. In addition, cyclists have been physically separated from

motor vehicle traffic on the streets with high traffic flows. Cyclists have also typically been separated from pedestrians into their own lanes.

### THE OUTCOME

The number of road traffic crashes resulting in personal injury have decreased after the changes in speed limits. After the changes made to the speed limits in 2004 the number of injury crashes decreased by 9 % on the streets with lower speed limits compared to streets where limits were not lowered between the periods 1998–2003 and 2005–2009. The number of all injury crashes decreased by 21 %, pedestrian injury crashes by 19 % and injury crashes of motor vehicle occupants by 34 % on the streets where speed limit was reduced from 40 km/h to 30 km/h. On the streets of the inner city, where the limit was reduced to 30 km/h, the number of pedestrian injury crashes decreased by 42 %. Lowering the speed limits has supported the decrease in the number of pedestrian crashes in the inner city of Helsinki during the last decades (Figure 2).



**Figure 2. Fatal and injury crashes of pedestrians in the inner city of Helsinki and the changes to speed limit system in 1984–2021.**

As Figure 2 shows, the number of pedestrian crashes has continued to decrease since the assessment of the 2004 speed limit changes. Although measures to improve traffic safety other than lowering the speed limits and actual driving speed are also needed, lowering the driving speed is one of the most important measures to improve traffic safety in urban areas. It is uttermost important to ensure sufficiently low driving speeds in urban areas where walking and cycling are typically popular.