



Road Safety Policy Implementation for Improving Pedestrian Environment:

Lessons from
France and Sweden

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This Presentation Focuses on...



Pedestrian Safety Strategies

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1. Background
 2. Case Study
 3. Findings
 4. Implications
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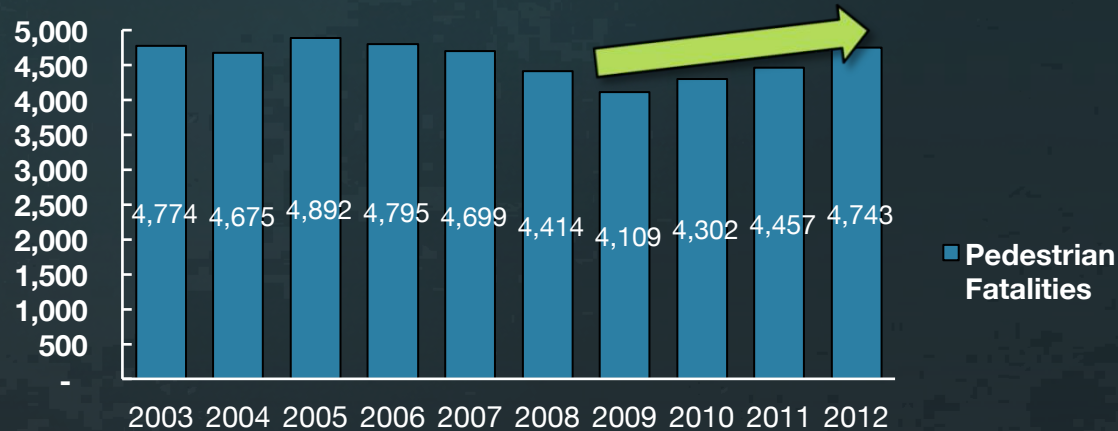
- : Lesson learned from **France** and **Sweden**
- : Policy implementation in the U.S.

Background and Significance

- We are walking more: **60% of people walk for physical activity**, and the share of adults who said they walk for transportation **grew 6%** from 2005 to 2010 (CDC, 2012).
- Success in reducing passenger vehicle occupant deaths by 33% between 2003 and 2012, but total **45,860 people** died from auto-pedestrian crashes.

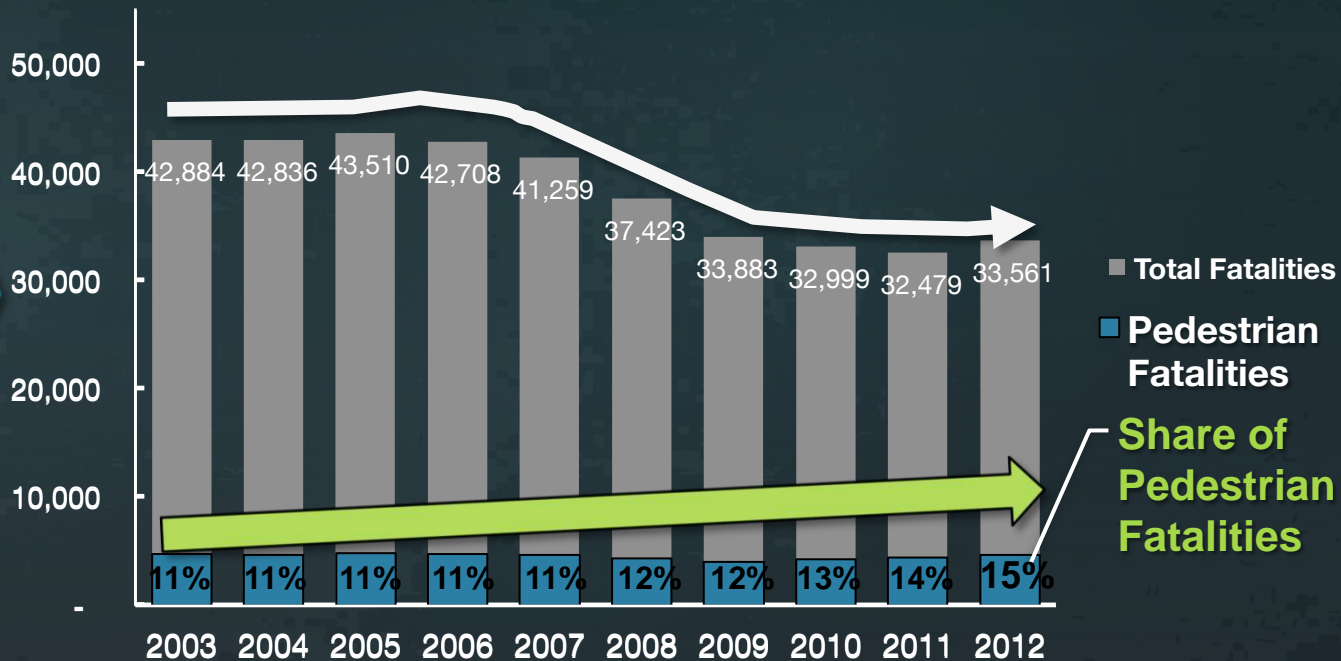
16 times the number of Americans who died in natural disasters over last 10 years.

Total Pedestrian Fatalities in Traffic Crashes, 2003-2012



Total Road Fatalities and Pedestrian Fatalities in USA (2003-2012)

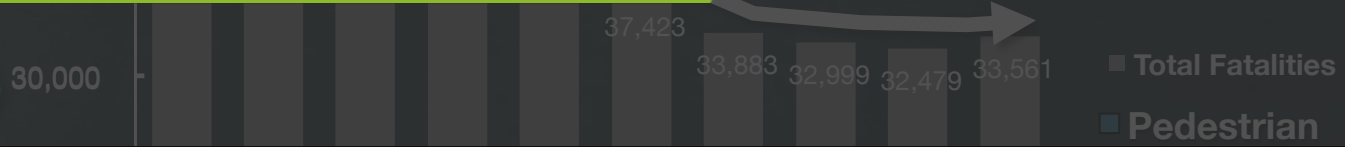
Decreasing number, but increasing share of pedestrian fatalities.



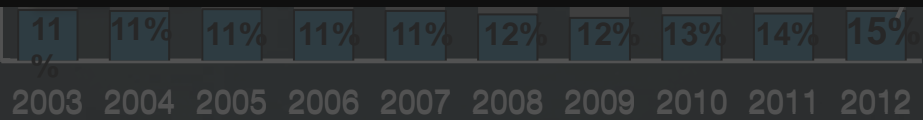
A pedestrian was killed every 2-hours and injured every 7-minutes in traffic crashes.

Any loss of death is unacceptable.

number, but increasing share of pedestrian fatalities



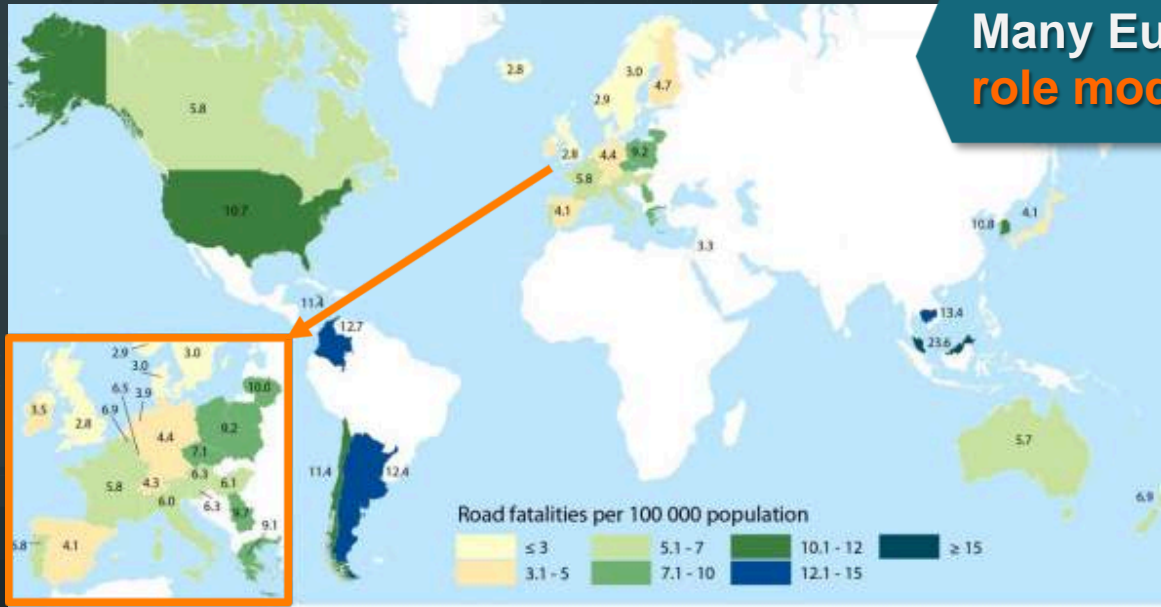
Can we achieve **far less** pedestrian fatalities on roads by implementing road safety program?



Who are the “Leaders”?

Road Fatalities per 100,000 Population in IRTAD Member Countries (2012)

Many European Countries serve as **role models** for other countries...



Who are the “Leaders”?

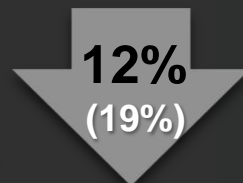
Road Fatalities
in IRTAD M

Annual Pedestrian Fatality and Total Road Fatality Rate (1995-2009)

Top 15 High-income Countries:
(Excluding the US)



US:



Source: WHO, 2013

... Countries serve as
... other countries...
(Sweden, 1997)
Safety (Holland, 1998)

“U.S. may need more effective interventions to improve pedestrian safety outcome...”

Case Study

Objective

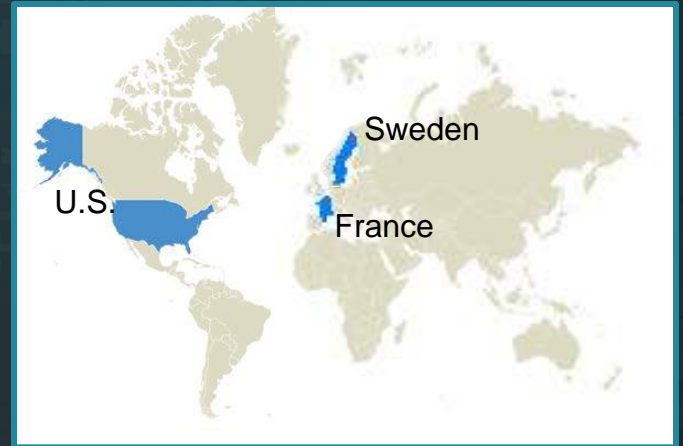
- (1) To examine the road safety strategies of model countries
- (2) To explore potential implementations for the U.S. for improving pedestrian safety.

Methods

- Literature review
- Secondary data

Case Selection

- **France** (2002-2005)
- **Sweden** (1997-2007)





France

(2002-2005)

- (1) Responsibility Share
- (2) Controls and Sanctions
- (3) Campaigns and Educations
- (4) Infrastructure Improvements

Lessons from France

History (from 1990 to 2000)

- Level of road **enforcement was one of the lowest** in Europe.
- **1997**: First fatality-reduction target (reduce 50% of road fatalities by 2002), but no remarkable decline.

Initiative (from 2002)

- The Government started to take road safety seriously
- Strong **political commitment** and charismatic leadership: **made “road safety” an issue**
- 2002-2005 Road Safety Program (no quantitative target)

Lessons from France (2002-2005)

(1) Responsibility Share

- The primary responsibility for road crashes was on “**everyone**”, including road users, policy-makers, and rest of the population.

“At the heart of the commitment to road safety there is a fundamental struggle for a society that is more humane, one with greater solidarity and respect for others. **We share the roads. Road Safety is something we provide for each other.**”

-Excerpt from speech by President Chirac
at launch of World Health Day 2004



Lessons from France (2002-2005)

(2) Controls and Sanctions

- 2001: 31% of total fatal crashes were caused by speeding
- 2003: Strong enforcements on **speeding**
- **Automatic Speeding Enforcement** system (cameras)
- Tougher drink-driving laws and penalty fines



- 1,000 fixed/500 mobile radar units were installed
- In 2005, the rate of **fatal road injuries decreased 65%** compared to 2001

Lessons from France (2002-2005)

(3) Information Campaigns and Education

- Intensive communication with the public along with a new road enforcement to develop a “**safety culture**”
- Life-long traffic safety education (from primary school)



**LA CONDUITE
RÉCLAME 100%
DE NOTRE ATTENTION.**

**UNE SECONDE
D'INATTENTION
PEUT ÊTRE FATALE.**

Au téléphone, votre temps de réaction augmente de 50% en moyenne. La distance d'arrêt de votre véhicule en cas d'urgence est donc beaucoup plus grande et le choc plus violent.

Téléphoner en conduisant multiplie par 5 les risques d'accident.

**SÉCURITÉ ROUTIÈRE
TOUS RESPONSABLES**

Ministère de l'Intérieur
Direction Générale de la Sécurité Routière



**Téléphoner au volant,
c'est être ailleurs que sur la route.**

Téléphoner en conduisant multiplie par 5 les risques d'accident.

**SÉCURITÉ ROUTIÈRE
TOUS RESPONSABLES**

Ministère de l'Intérieur
Direction Générale de la Sécurité Routière

“...so much television and radio aired new plans and interviews for the Automatic Speeding Enforcement system...”

“It immediately **reduced road fatalities by 21%** and **pedestrian fatalities by 27.7% within a year.**”

Lessons from France (2002-2005)

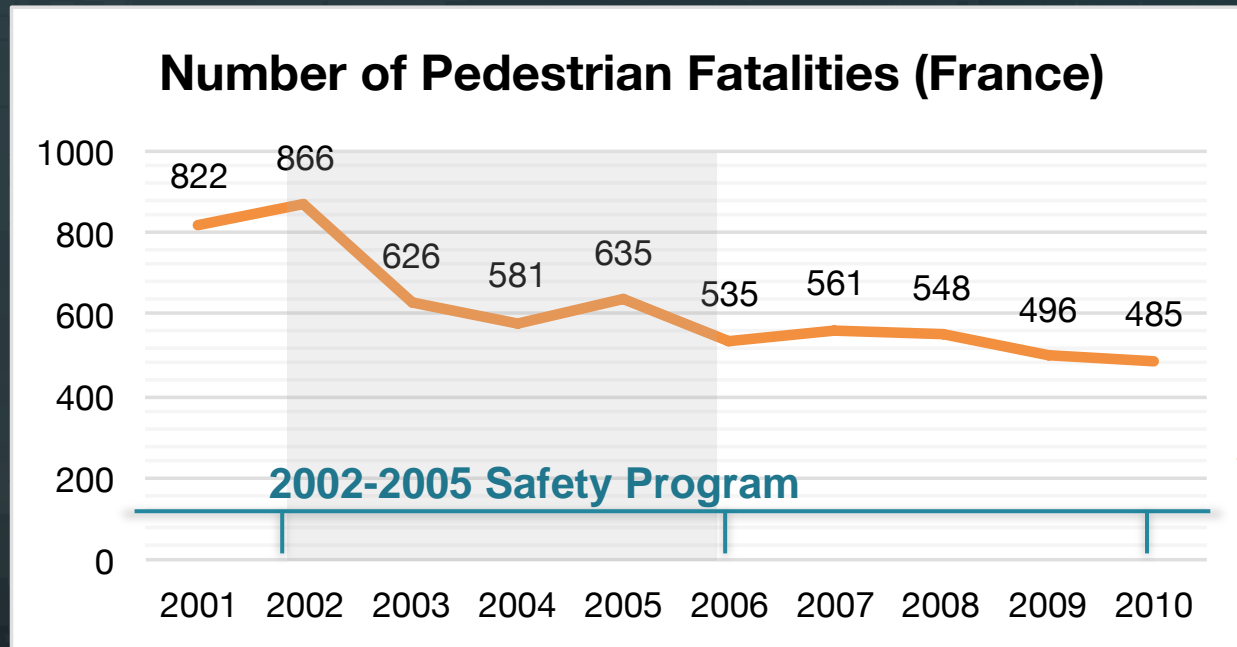
(4) Infrastructure Improvements

- Less attention on improving road infrastructures during 2002-2005 period




Lessons from France (2002-2005)

Results



37.4% of pedestrian deaths reduced during 2002-2005 France Road Safety Program.



Sweden (1997-2007)

- (1) Responsibility Share
- (2) Controls and Sanctions
- (3) Campaigns and Educations
- (4) Infrastructure Improvements

Lessons from Sweden

History (from 1970s to 2000)

- Since 1967, road safety has been a priority
- Since the late 1970s, Sweden's rate of traffic fatalities per km traveled has been the lowest among OECD countries
- Political debates were on **“how many fatalities are acceptable”**

Initiative (from 1997)

- Swedish Road Administration developed **“Vision Zero”** concept
- **“What must be done to eliminate the risk of road injuries and deaths?”**
- 1997-2007 Vision Zero: a new set of principles for designing and managing road systems

Lessons from Sweden (1997-2007)

(1) Responsibility Share

- Do not blame the user, main responsibility is on “**system designers** (road managers, politicians, police, and other players including transport carriers and health services)”

1. The **system designers are always ultimately responsible** for the design, operations and use of the road transport system and are thereby responsible for the level of safety within the entire system;
2. **Road users are responsible for following the rules** for using the road transport system set by the system designers; and
3. If road users fail to obey these rules due to a lack of knowledge or if injuries do occur, **the system designers are required to take the necessary further steps** to counteract people being killed and seriously injured.

Lessons from Sweden (1997-2007)

(2) Controls and Sanctions

- Vehicle speed should not exceed the level of violence that human body can tolerate
- Scientifically established **speed limits** to “embrace driver’s errors”
- Separate vehicles from pedestrians with **barriers** on speeds exceeding 30km/h (19mile/h) roads
- Speed limit on pure residential streets was 7 km/h (human walking speed)
- Low BAC limit: 0.2 g/l (still the lowest in Europe)



Lessons from Sweden (1997-2007)

(3) Information Campaigns and Education

- Less attention on media campaigns and education efforts to improve road user's behavior (compare to France)

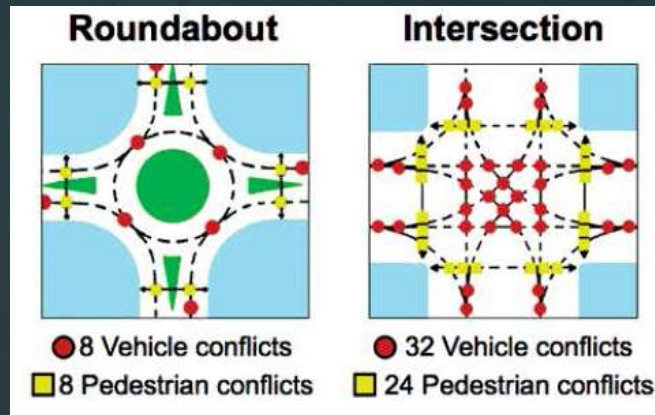
Educational measures focus on improving human behavior BUT Vision Zero focused more on improving **“traffic system design”**



Lessons from Sweden (1997-2007)

(4) Infrastructure Improvements (Urban)

- Built environment that ensure “low injury risk of pedestrians”
- Roundabouts (Traffic-calming)

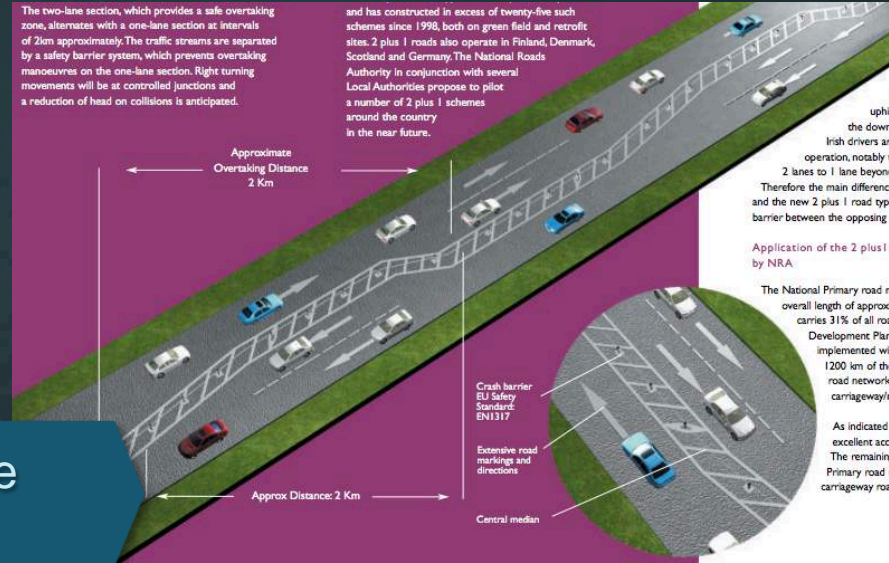


Reduce right-angle conflicts at corners
= **Less severe collisions**

Lessons from Sweden (1997-2007)

(4) Infrastructure Improvements (Rural)

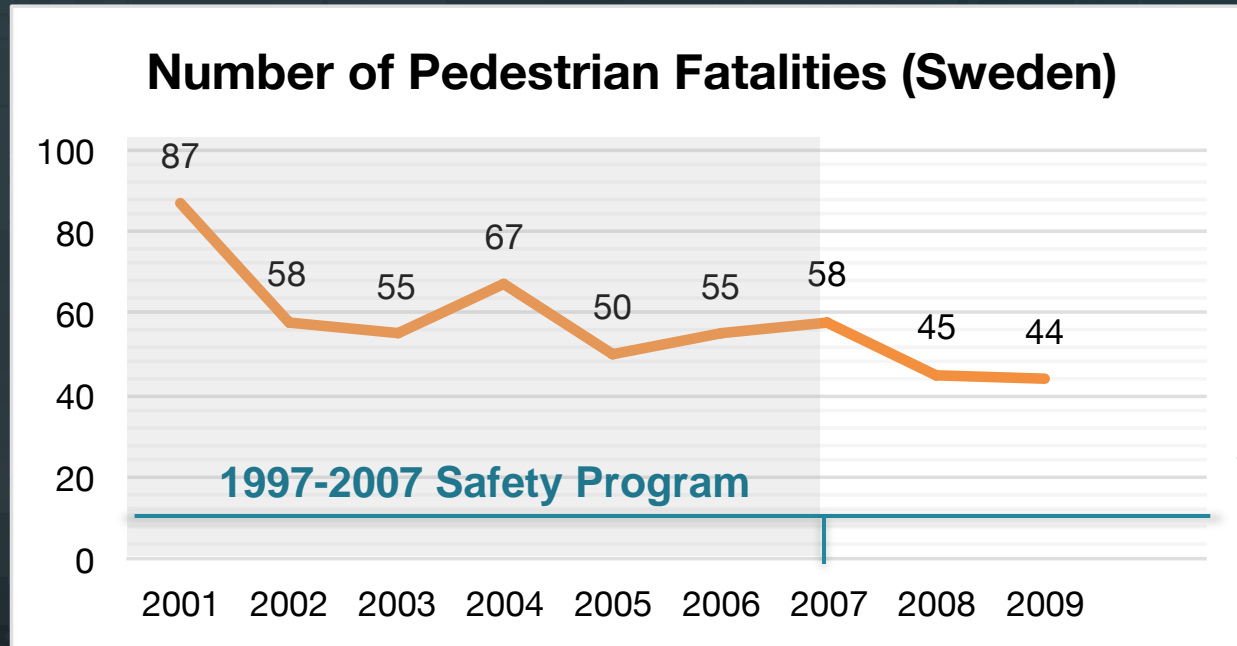
- “2+1” lanes with “median barriers”
: 3-lane road with the passing lane alternating on each side



Less drivers speed up to pass a slower vehicle
=Lower risk of severe collisions

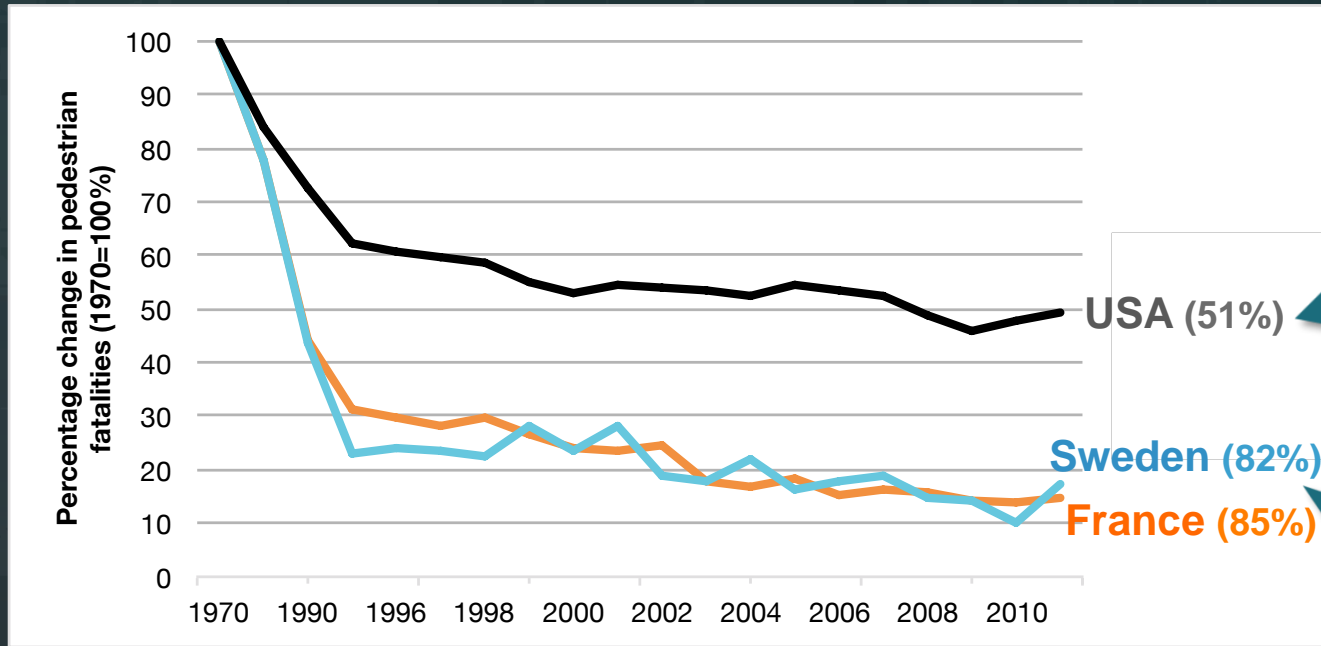
Lessons from Sweden (1997-2007)

Results



33.3% of pedestrian deaths reduced during 1997-2007 Sweden Vision Zero Program.

Percentage Change in Pedestrian Fatalities since 1970 (1970=100%)



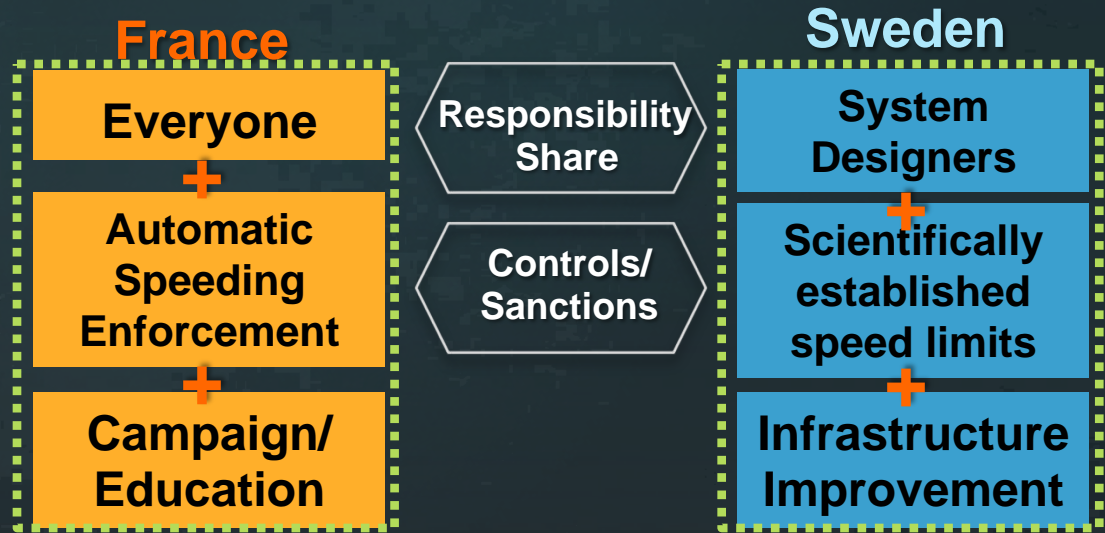
Focused on
vehicle and
infrastructure
improvements

Focused on
improving
safety culture

Summary of Findings

- New allocation of experts' **political responsibilities** and raising **safety awareness** among the public.
- Great emphasis on **modifying drivers' behavior** by strong road enforcements combined with public education and road design.

It's not a "stand-alone" strategy



Next Steps...

- New safety interventions in the U.S. should involve **raising road safety awareness** among all parties (cultural transformation).
- **Modify drivers' behavior** to eradicate pedestrian fatalities and severe injuries.
- **Integrate safety strategies** and work with a **broad base of decision-makers** (knowledge-based plan).
- Foster **commitment at the highest levels** of Government.



No more “Car-centric-victim-blaming” Culture

Good News...

Safety-Conscious Planning Efforts

Adopted **Vision Zero** in
New York and **San Francisco** in 2014 and
Portland and **Seattle** in 2015



Questions?



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Thank You!