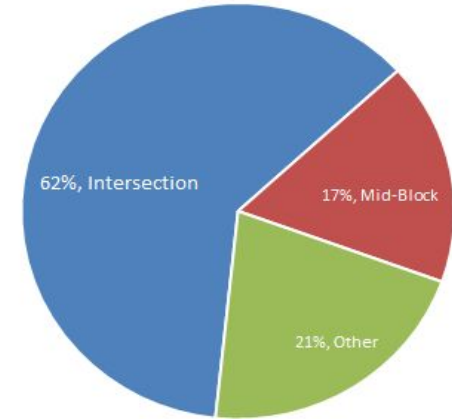# CrossSafe

Smart technology for safer intersections

The Problem

- Senior **pedestrians** are vulnerable at **intersections**
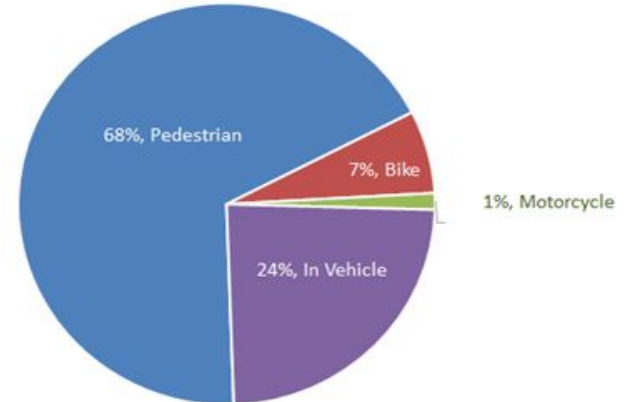

Photo: Adrienne Johnson/Human Streets

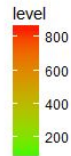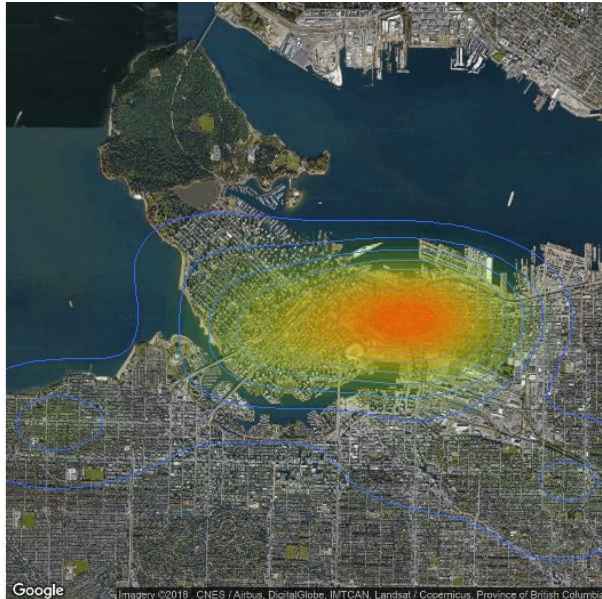Location Types of Fatal Traffic Accidents Involving Senior

62%, Intersection
17%, Mid-Block
21%, Other

Traffic Accidents involving Senior Fatality - Travel Mode

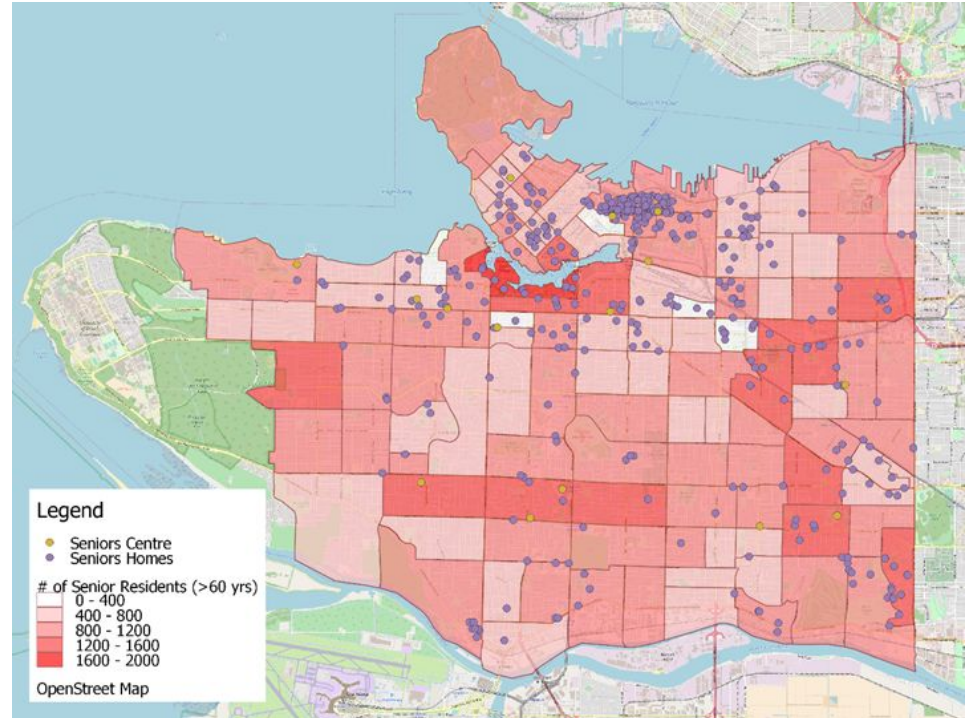68%, Pedestrian
7%, Bike
1%, Motorcycle
24%, In Vehicle

Where and why?

Mainly occurred around
Hastings and Main

Fatal Accident Heat Map

Senior Population and Senior Home Distributions

They need more time!

Pedestrian Signal Design Speed: ~1.0 m/s

Mean walking speed for senior:
   0.9 m/s in men and 0.8 m/s in women

Faster gait speed is associated with an increase in risk ratio for outdoor falls

Crossing the road in time: Inequalities in older people's walking speeds

Elizabeth A. Webb [a] ✉, Steven Bell [b], Rebecca E. Lacey [a], Jessica G. Abell [a, c]

EDITOR'S CHOICE

Most older pedestrians are unable to cross the road in time: a cross-sectional study 🆓

Laura Asher, Maria Aresu, Emanuela Falaschetti, Jennifer Mindell

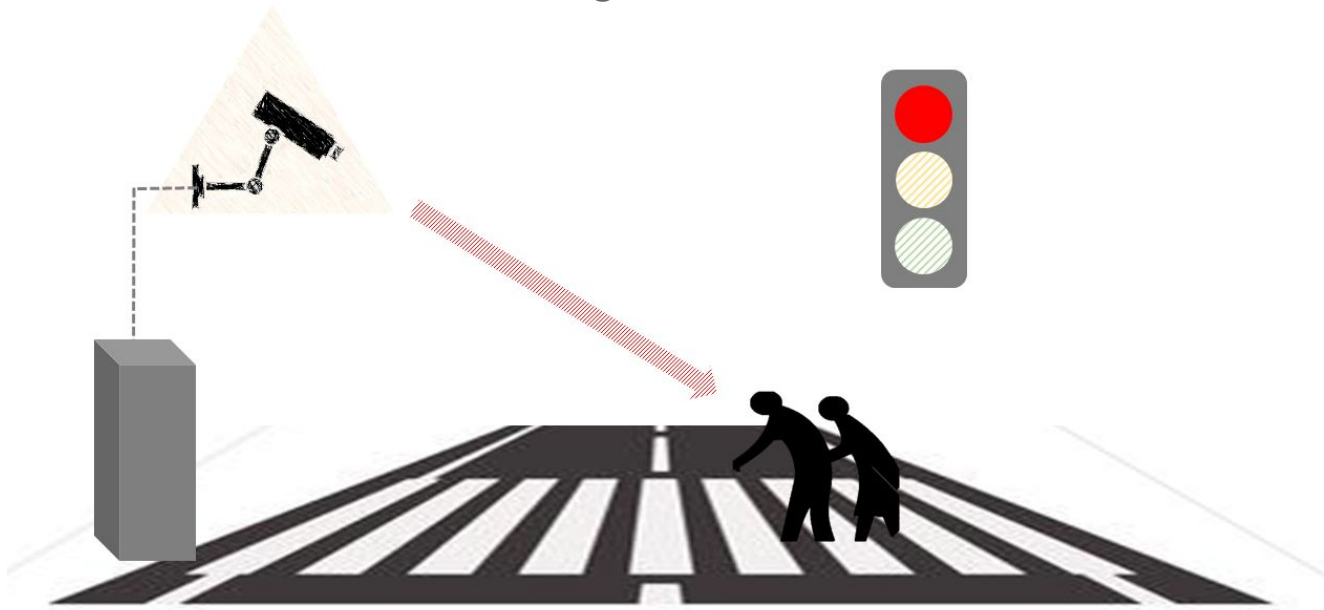## The Non-linear Relationship between Gait Speed and Falls: The MOBILIZE Boston Study

Lien Quach, M.P.H, M.S.,[1] Andrew M. Galica, B.S.,[1] Richard N. Jones, Ph.D.,[1,2,3] Elizabeth Procter-Gray, Ph.D., M.P.H.,[4] Brad Manor, Ph.D.,[2,3] Marian T. Hannan, D.Sc., M.P.H.,[1,2,3] and Lewis A. Lipsitz, M.D.[1,2,3]

What we propose...

Refer to demo on repo.

What we propose...

Extend pedestrian walking time when pedestrians with walking impairment are detected on crosswalk in TensorFlow algorithm.

Benefits

- Discreet and unintrusive
- No learning curve for users
- No registration or card required
- Accessible to anyone needing extra time
- Technology exists and has space for future improvements

Thank you!

Questions?