City of Austin Intersection Detection

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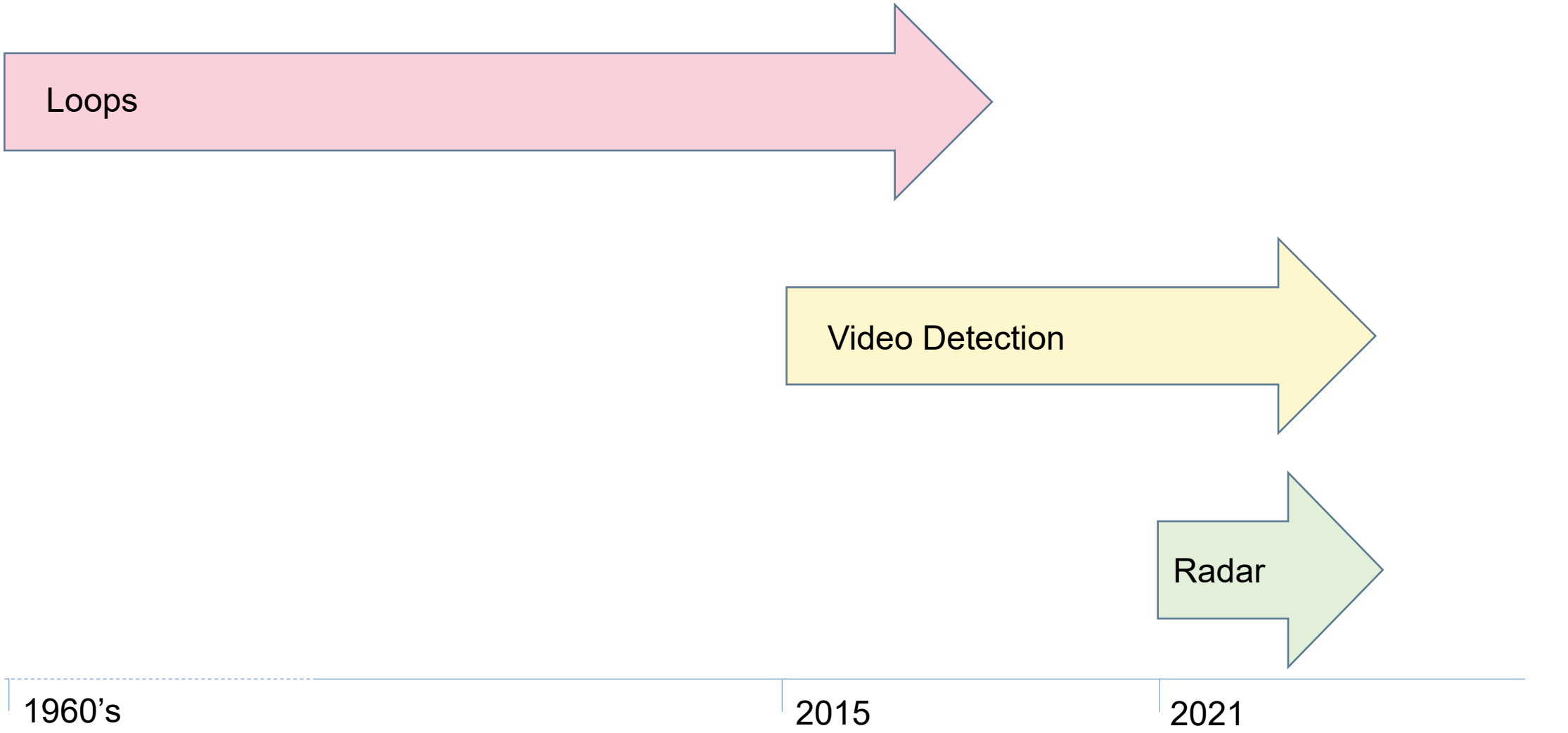
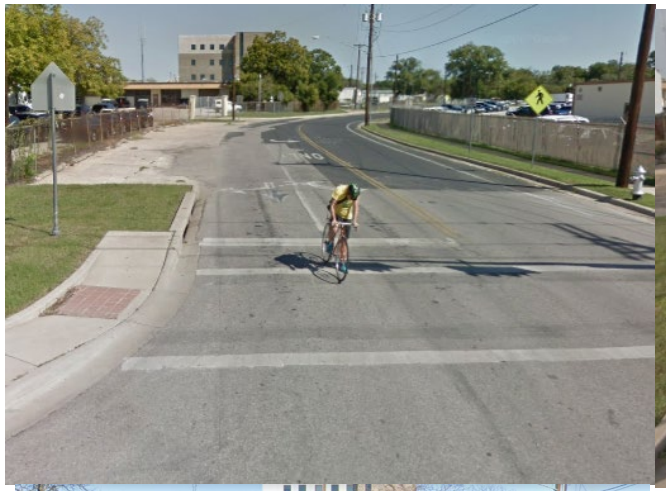
Detection Timeline in the City of Austin



Loops in the City of Austin

Strength
- Reliable
- Accuracy not impacted by weather
- Can be used in areas with pedestrians

Weakness
- Dependent on pavement conditions
- Cyclist positioning critical to being detected
- Not easy to reconfigure



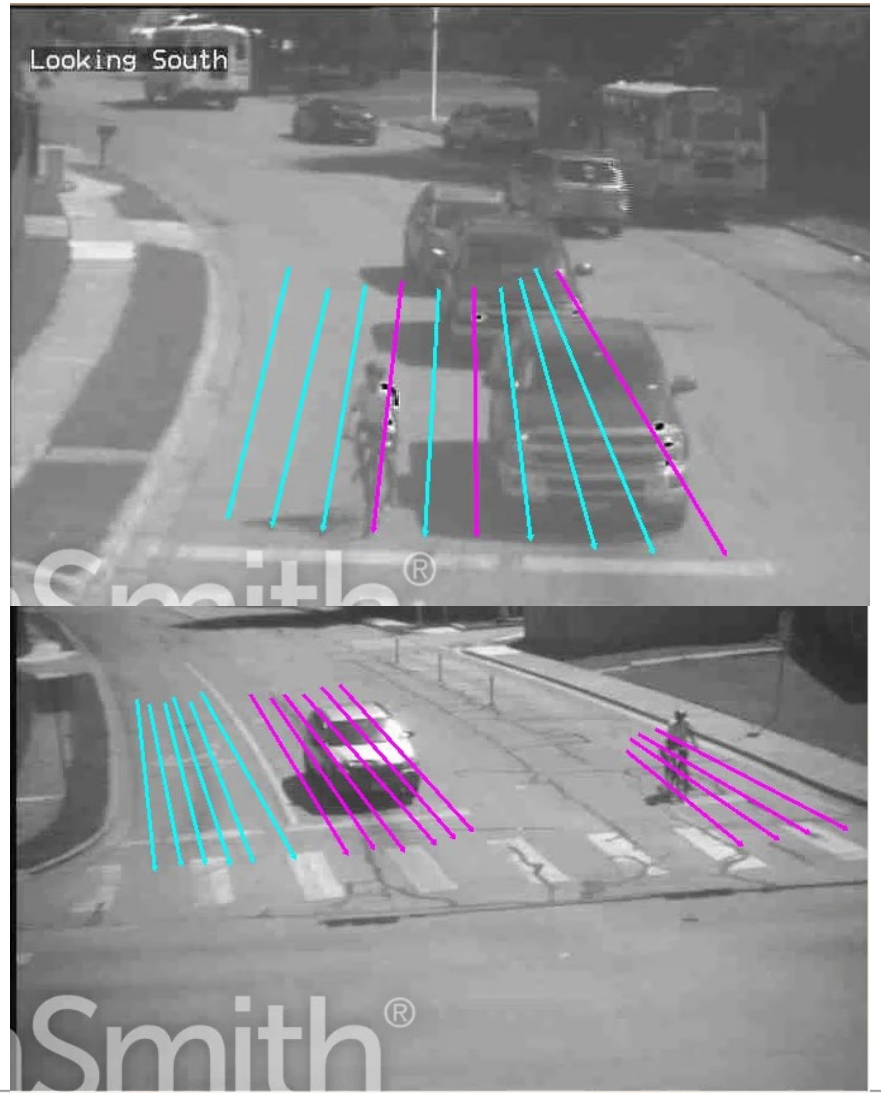
Video Detection in the City of Austin

Strength

- Easily configurable
- Multiple zooms easy to setup
- Inexpensive
- Queuing areas not as specific as for loops.

Weakness

- Accuracy can be impacted by:
  - Weather
  - Lighting
  - Placement of camera



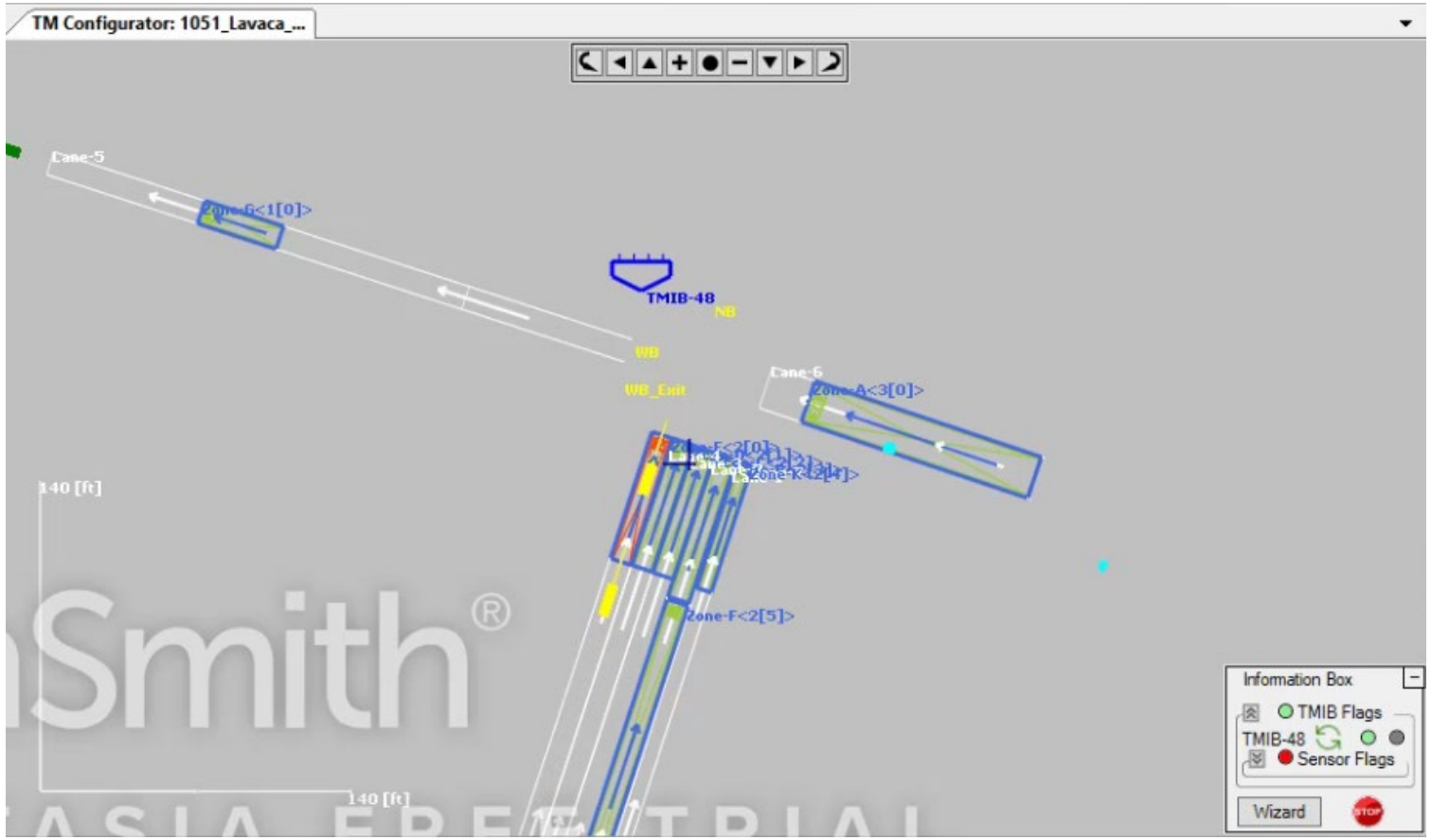
Radar Detection in the City of Austin

Strength

- Multiple zones can be setup by approach
- Queuing areas not as specific as for loops.
- Accuracy not impacted by:
  - Weather
  - Lighting

Weakness

- Accuracy may be impacted by the placement of the radar
- May be challenging to configure
- Cost



Other Detection in the City of Austin

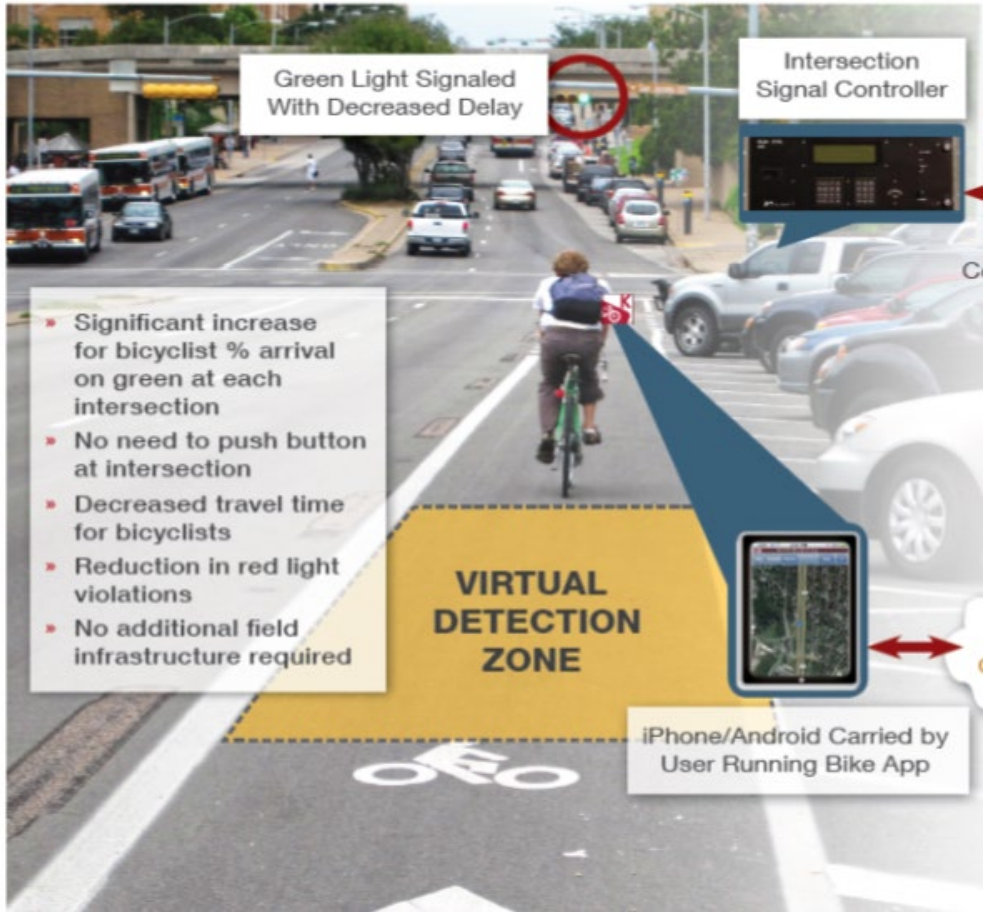
Smart Phone (Pilot Project in 2014)

<u>Strength</u>

- Detection zones easily configurable
- Rapid deployment through out the City
- Can be used by all modes.

<u>Weakness</u>

- Questionable scalability
- Equity concerns
- Significant battery drain



Other Detection in the City of Austin

Currux Computer Vision

Strength

- Computer Vision Object detection.
- Classify, bike, pedestrians, cars, trucks, etc.
- Safety Analytics: red light running, speeding, near miss detection,, wrong way driving, etc.

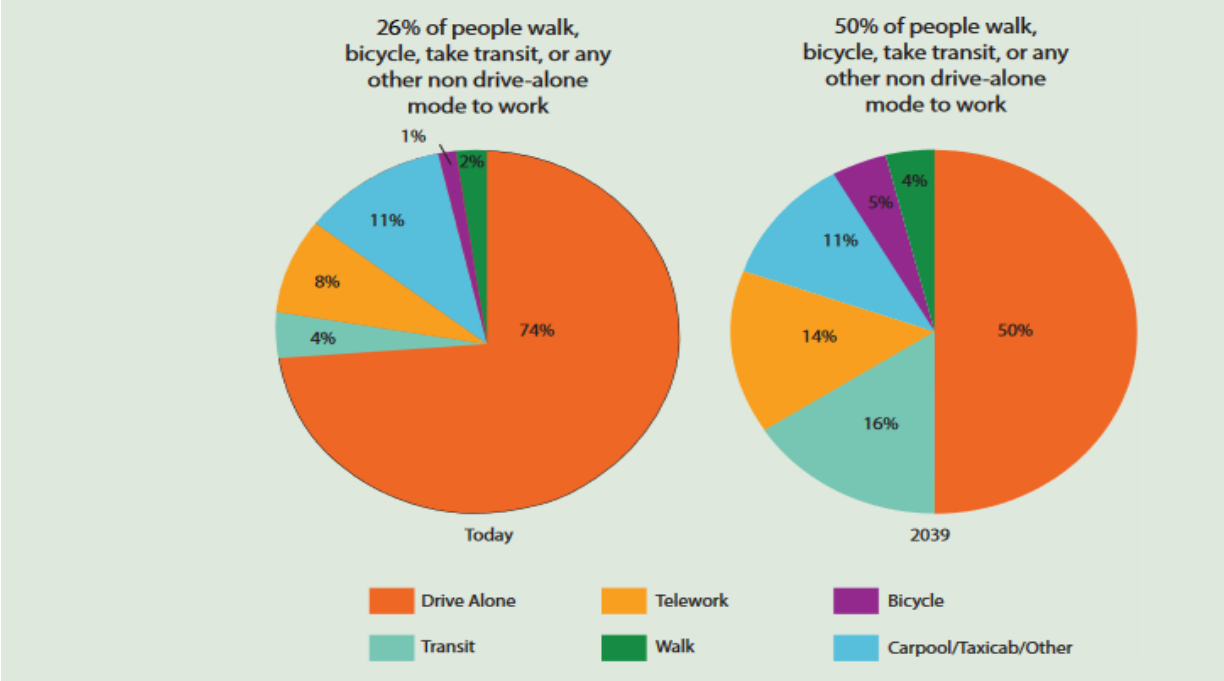
Weakness

- New Product. Still testing

City of Austin Next Steps:

- Identify a list of traffic signals with known bicycle detection issues.
- Prioritize repairs and upgrades.
- Maximize available funding for detection repairs/upgrades:
  - STPMM grant
  - 2018 and 2020 Bond
  - Operating budget

Goals: AMSP



109 Bicycle facility maintenance	Ensure that bicycle facilities are maintained including keeping pavement, physical barriers, markings, signage, signal detection in good condition and free of debris and other impediments. Implement consistent maintenance routines, especially for high-usage bicycle routes.
144 Priority Network signals	Develop guidance for and evaluate mode-specific signals, signal timing, signal phasing, and detection along the Priority Networks.

- Questions?