



We Move You



OUR PEOPLE

GROWTH

- Auckland x 50 Staff
- Tauranga x 20 Staff
- Whangarei x 4 Staff
- Electrical
- ITS
- Civil
- Traffic Management

NEW TECHNOLOGY



TRANSIT LANE ENFORCEMENT

- In conjunction with Auckland Transport BT team
- World First Enforcement for Transit Lanes
- 23 units installed and currently enforcing. 24 units about to go live. Another 50 units in the pipeline
- Waka Kotahi Christchurch Northern Corridor x 6
- Exhibited at TRAFFEX UK with interest for trials with TfL

NEW TECHNOLOGY

DISTRACTED DRIVER



DISTRACTED DRIVERS

- Distracted Driver Trials
- Increasing worldwide interest.
- Same Tech as Transit Lane Camera and Analytics
- High Speed Trials RAMP Signals
- Seat Belt Enforcement



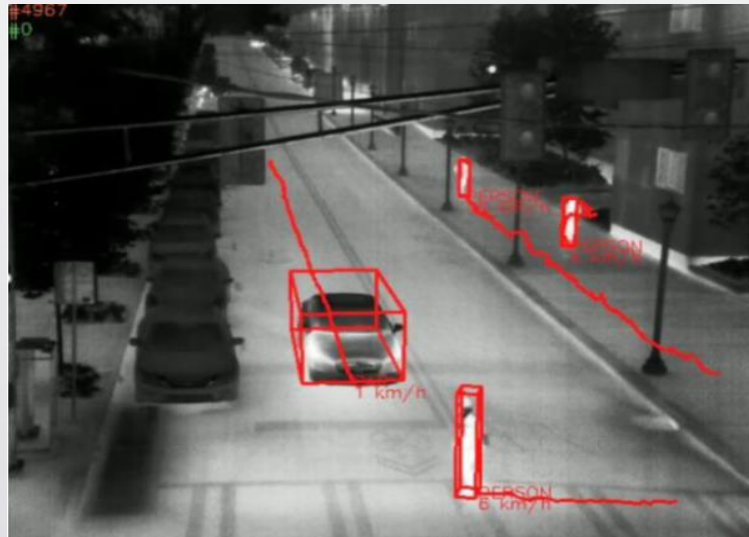
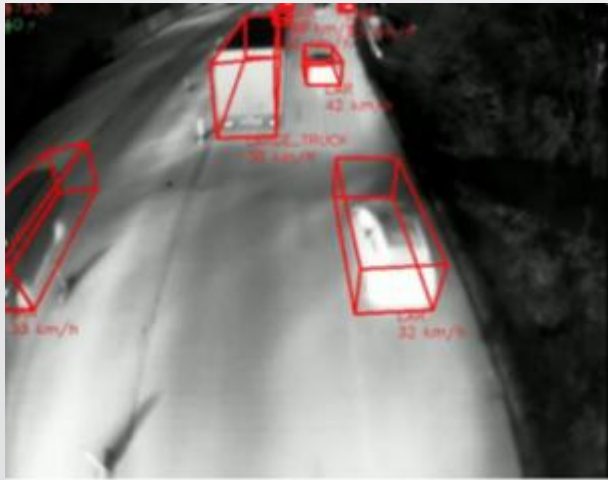
Alternative Detection Technology

Alternative Detection Technology

- Auckland Transport Trials-RADAR
- Busy CBD 4 Way Intersection
- Detection downstream of Intersection
- Assist SCATS Optimisation
- Tom Zotov AT BT CCTV Manager



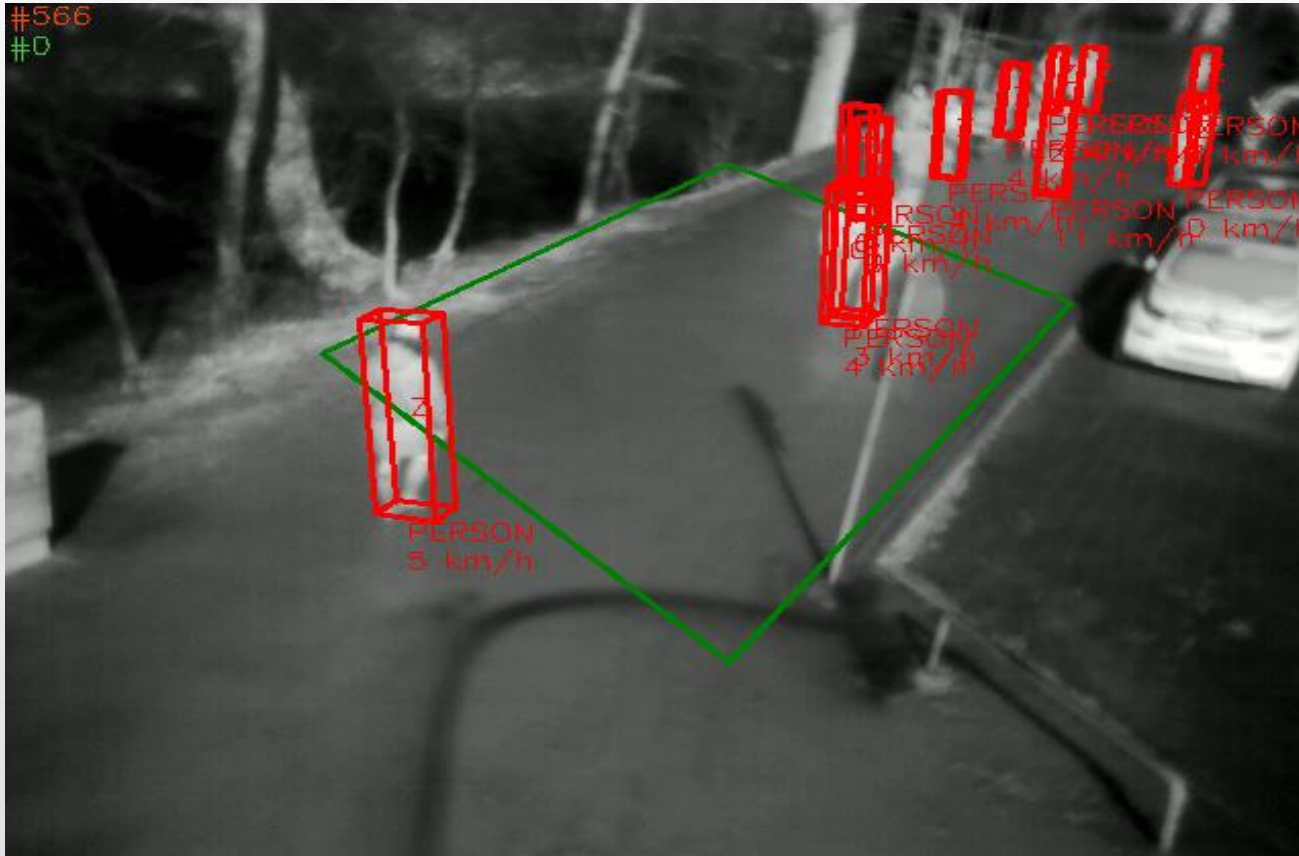
FLIR THERMICAM AI



Alternative Detection Technology

- Auckland Transport Trials
- FLIR AI – Deep Learning
- Real Time Trajectory data – Position, Speed and heading of each object
- Enhanced Stop line Detection, Occupancy and Classification
- Vulnerable Road User

FLIR THERMICAM AI



PEDESTRIAN DETECTION AND TRACKING

- FLIR AI – Deep Learning
- Pedestrian Tracking and Detection
- Pedestrian Occupancy Levels
- Auckland Transport Trials

FLIR TRAFICAM AI



- High Definition CCTV Camera
- DNN Engine - Deep Neural Network
- Occluded objects tracked using intelligent tracking algorithm
- Real Time Trajectory data – Position, Speed and heading of each object
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Alternative Detection Technology

Industry Desire to move away from Loops ?

- Loop cutting - Safety of Workers in the road space
- Traffic disruption
- Environmental disruption
- QUESTIONS TO THE INDUSTRY
- What is the acceptable level of performance for alternative technologies to satisfy or enhance SCATS operation and efficiencies ?

EXTRA LOW VOLTAGE

OrangeTek @

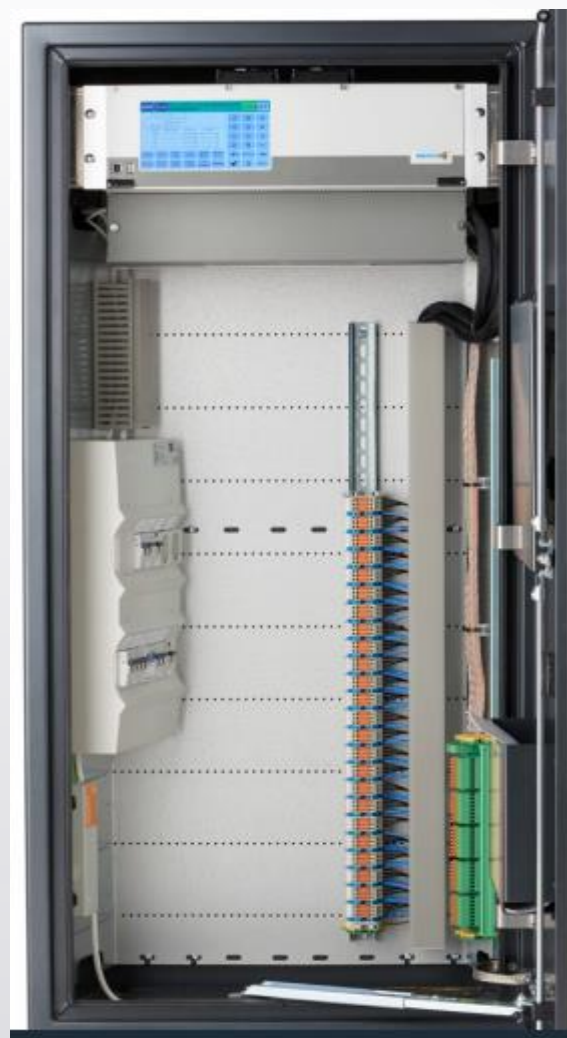


- Over 15 Years of supply to Australia and NZ Signals Industry especially NSW, Victoria, Perth, ACT, Auckland and Christchurch
- 3 x ELV Sites installed in Auckland and 11 x being installed in Tauranga
- Lab tested at University of Sydney
- Compatibility Tested to TfNSW Traffic Signal Spec TSI-SP-045 Appendix C with Auckland Transport
- Tested on all ELV Controllers both Field and Factory
- No failures and no Ghost Lamp faults



NEW CONTROLLER

SWARCO ITC-3



- Next Generation controller widely installed worldwide in over 50 countries
- SCATS Compatibility Certification
- SCATS, SCOOT, NTCIP, Omnia, MOVA, UTOPIA, STREAMS
- LHOVRA – Movement based - not stage based
- Touchscreen Control or Web Interface as standard
- Detector Graphical interface - LIVE
- Multi voltages 230v, 110v, 42v

THE ITC-3 FAMILY

BUILT FOR THE FUTURE



ITC-3 MINI
For 6 SG and 16 Det
For 12 SG and 0 Det



ITC-3
For 24 SG and 40 Det
ITC-3
For 48 SG and 80 Det
ITC-3
For 72 SG and 120 Det
ITC-3
For 96 SG and 160 Det

19 Inch rack / 1-4 intersections

SWARCO ITC3



PERSONALITY CREATION

- Control of up to 4 intersections with single controller
- Personality conversion software ITC-PC for both VC6 or VC5
- Personality creation via graphical interface

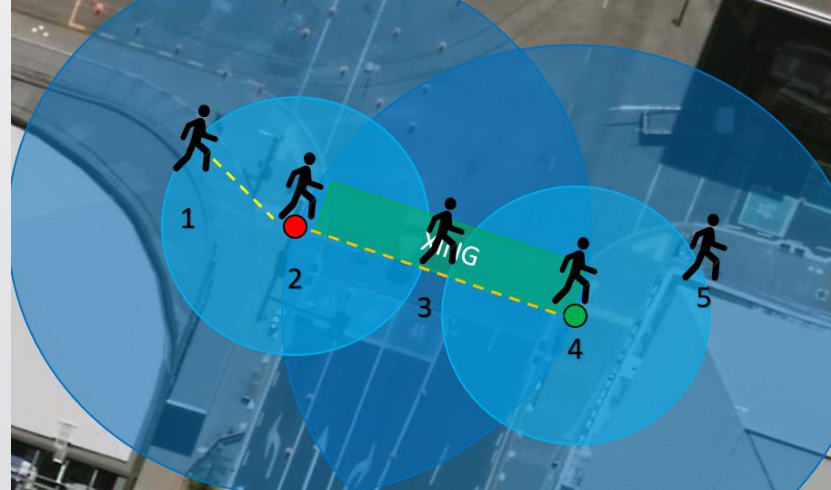
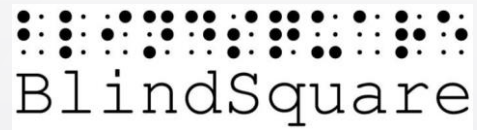
SWARCO ITC3



REMOTE DETECTION

- TIC 800D
- 8 Channel Detector Module
- RS485 Communications network
- Up to 1.2km away
- Daisey chain configuration
- Remote interrogation from your desk
- Tuning, Resets, Changing of Sensitivity

OTHER TECH INVESTMENT



PEDESTRIAN SAFETY DEVICES

- Pedestrian Light Bar – Auckland CBD
- SERNIS Indicating STUDs – Over 30 sites for ped crossings and Redoubt Road Dynamic Lane +600 units installed Nov 20
- RURU – Visually impaired Assistance technology utilising the Blindsquare App to operate and interact with safety devices

WIRELESS INDICATING STUD



WIRELESS INDICATING STUD

- Designed and manufactured to Waka Kotahi M29 Spec and Illumination levels
- Independent Photometric lab tested by Hella in NZ
- Synchronised RF control
- No cutting – No Cable
- Considerable Saving in Labour and Traffic Disruption
- Test Sites on Pedestrian Crossings in Auckland

THE FUTURE



- Smarter and Greener
- V2X - Netherlands has 2M cars connected to 1200 intersections
- Do we need Target Boards
- Termination locations - ELV
- Aluminium poles
- Alternative tech – what's good enough for SCATS



We Move You

THANK YOU