



Public Transport  
Authority

## Perth Urban Rail Network in 2018

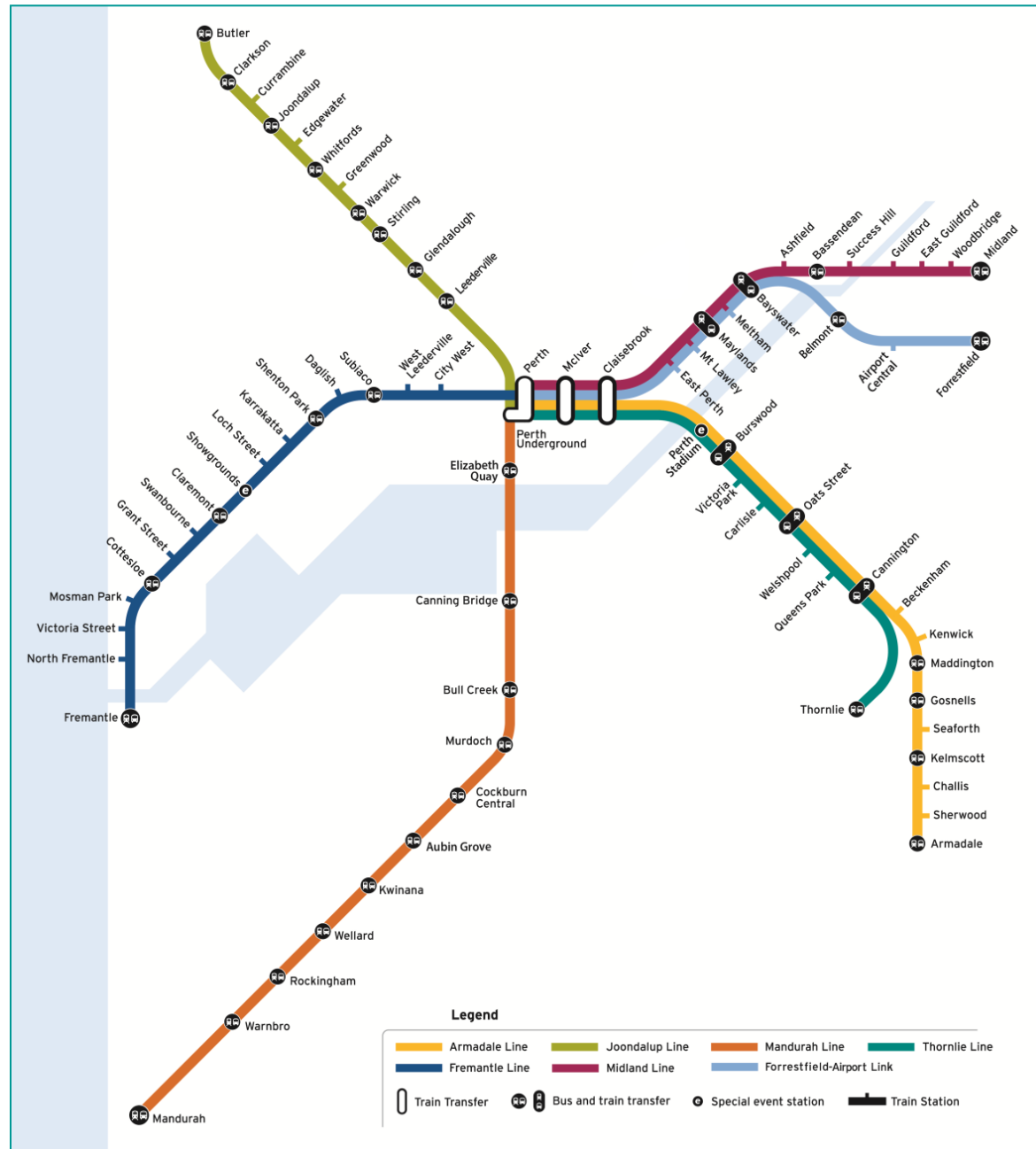


Elwyn Gearon – General Manager Transperth Train Operations

Council of Tramway Museums of Australasia  
Conference Perth September 2018

# The System

- 181 km's of track
- 72 Stations
- 3 Railcar Depots
  - Claisebrook
  - Nowergup
  - Mandurah
- 60 million boarding's per year
  - 240,000 weekday
- 309 cars (48 x 2 & 71 x 3)
- ATP since Electrification (1990)



# Electrification to Today

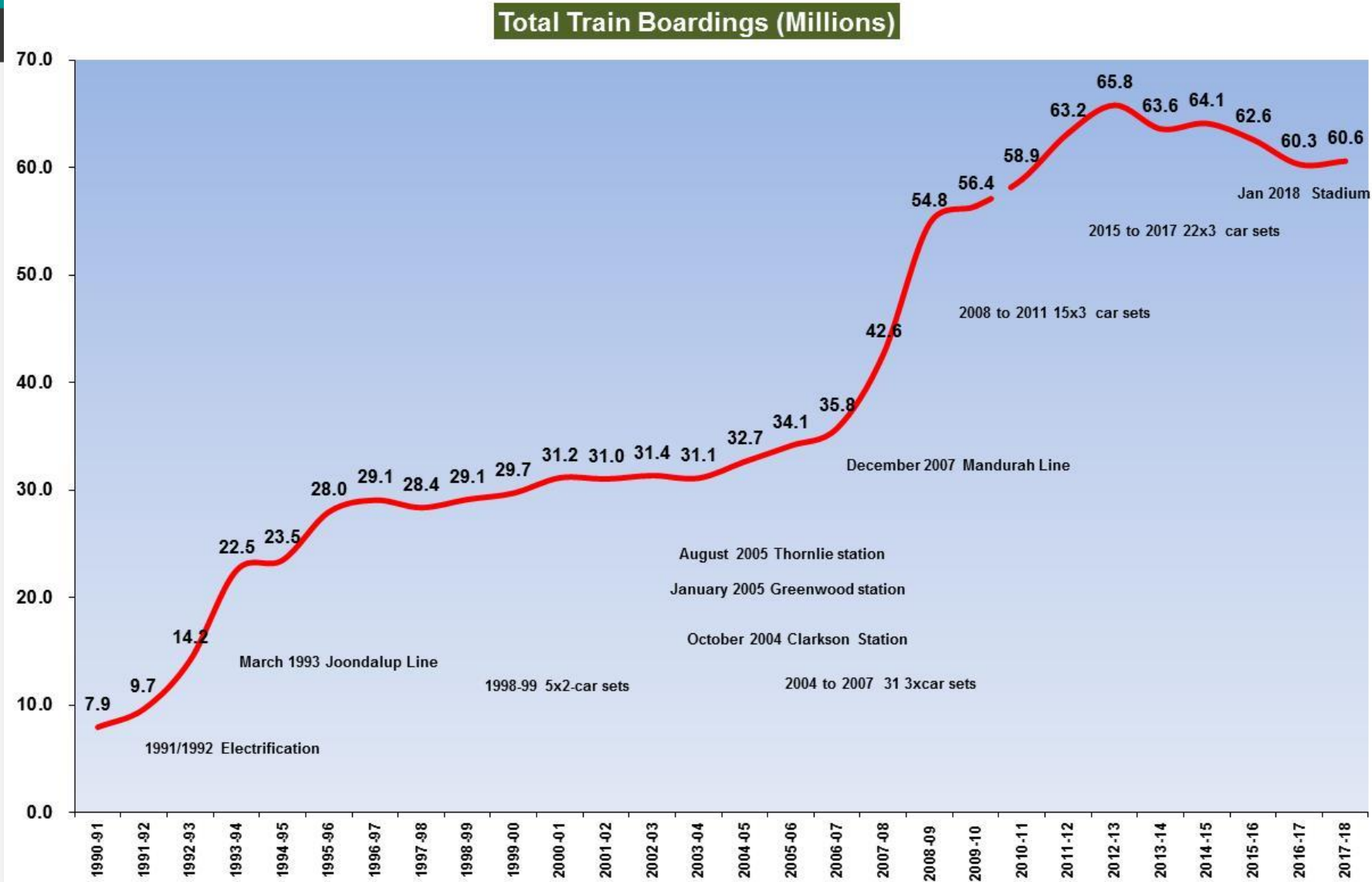
	Electrification (1991)	Today (2018)
Track Kilometres	64	181
Railcar Fleet (Cars)	42	309
Depots	1	3
Patronage (millions)	8	60

**3 times the size of network but 8 times the patronage!**

**Mandurah Line the Big Change with METRONET on the way**

**Urban railway now extremely important to Perth**

# Patronage



# Latest Changes

- Perth City Link (2013)
  - Underground Bus Station
  - Sinking Fremantle Line West of Perth
  - Underpass linking Perth Underground and Perth Station
- Butler Extension (2014)
- Aubin Grove Station (2017)
- Perth Stadium Station (2018)





# PCL Site – July 2011





# PCL Site – July 2014





## PCL Site – Today





# Butler Extension (2014)

- 7.5 km extension of Joondalup Line
- New Terminating Station
  - Butler
- Nowergup Depot Between Mains
  - Previously single line connection to Clarkson







Perth  
Perth  
Perth

Butler Station

isperth





# Aubin Grove Station (2017)

- First new Station on Mandurah Line
- Between Cockburn and Kwinana (4 km from Cockburn)
- Constructed on running railway
  - Similar to Greenwood
- 2,500 boarding's currently





Mins Pattern Cars

Platform 1

Platform not in use

Fare evaders.  
Be prepared to  
pay what you owe.

6:01 am

Platform 2

Platform not in use

Fare evaders.  
Be prepared to  
pay what you owe.

6:01 am



# Perth Stadium Station (2018)

- Biggest Station Outside Perth
  - 3 large platforms - 6 platform faces
  - 4 platforms service to Perth
  - 2 platform faces service from Perth
  - No escalators only stairs and lifts
- Large Stowage Behind Perth Stadium Station
  - 124 cars at Perth Stadium Station
  - 24 cars at Victoria Park Siding
- Massive Service
  - **35,000 of 60,000 or 60%**
  - 25 trains in one hour towards Perth post event
  - 16 trains per hour ex Perth to Optus Stadium
- Bigger Scale of Operation
  - Domain Stadium 12,000 train users
  - Optus Stadium up to 35,000 train users





# Optus Stadium

(Site June 2013)





# Optus Stadium

(Today)











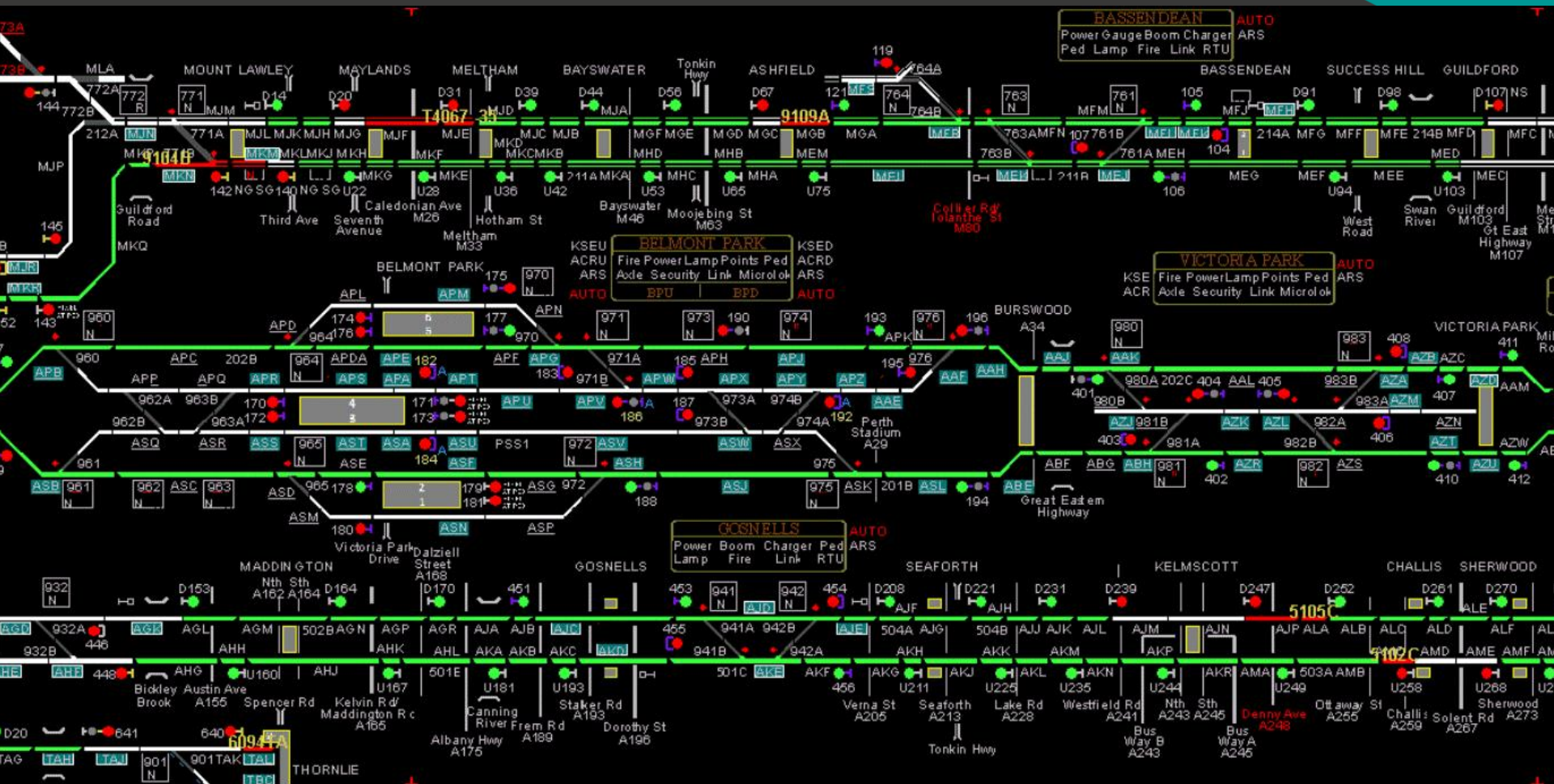


# Technology

- Train Control System
  - Phoenix Train Control with Vizirail Overlay
  - Real Time Information for Transperth App/web site etc.
- Signalling System
  - Conventional 3 Aspect with Axle Counters replacing track circuits
- Radio Upgrade
  - Going digital (LTE) by 2020
  - Platform to carry Automatic Train Control (ATC)
- CCTV
  - 2,500 fixed cameras across network
  - 1,400 cameras on railcars
  - Central Monitoring Room (CMR)
- Smartrider
  - Smart ticketing system
  - Credit Card use by 2020

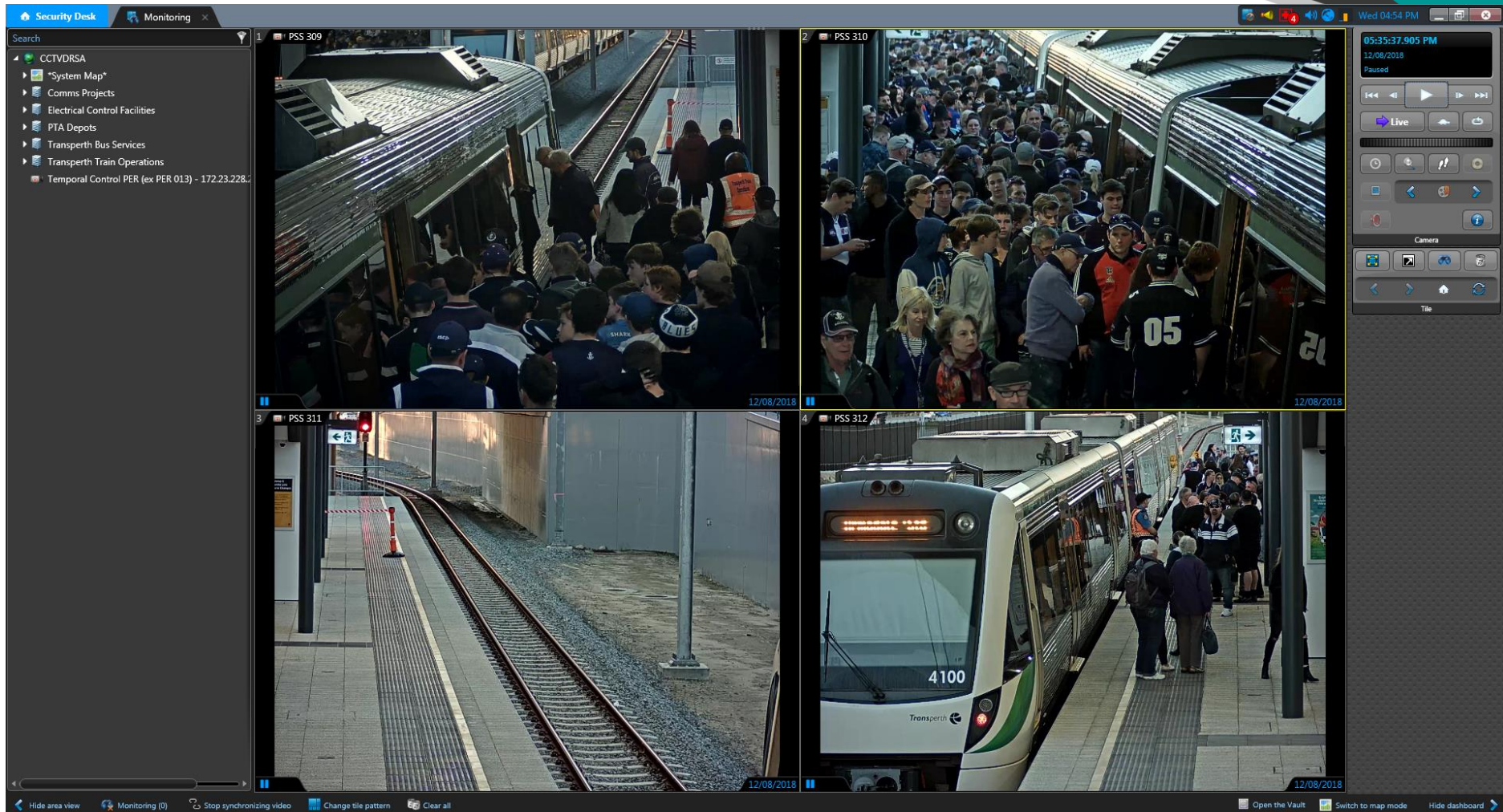


# Remote Live Access To Train Control





# CCTV





# Any Questions?

