PTV GROUP

the mind of movement

# WELCOME TO
# PTV USER GROUP MEETING INDIA 2017

WELCOME

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WE PLAN
AND OPTIMISE
EVERYTHING
THAT MOVES PEOPLE
AND GOODS
WORLDWIDE.
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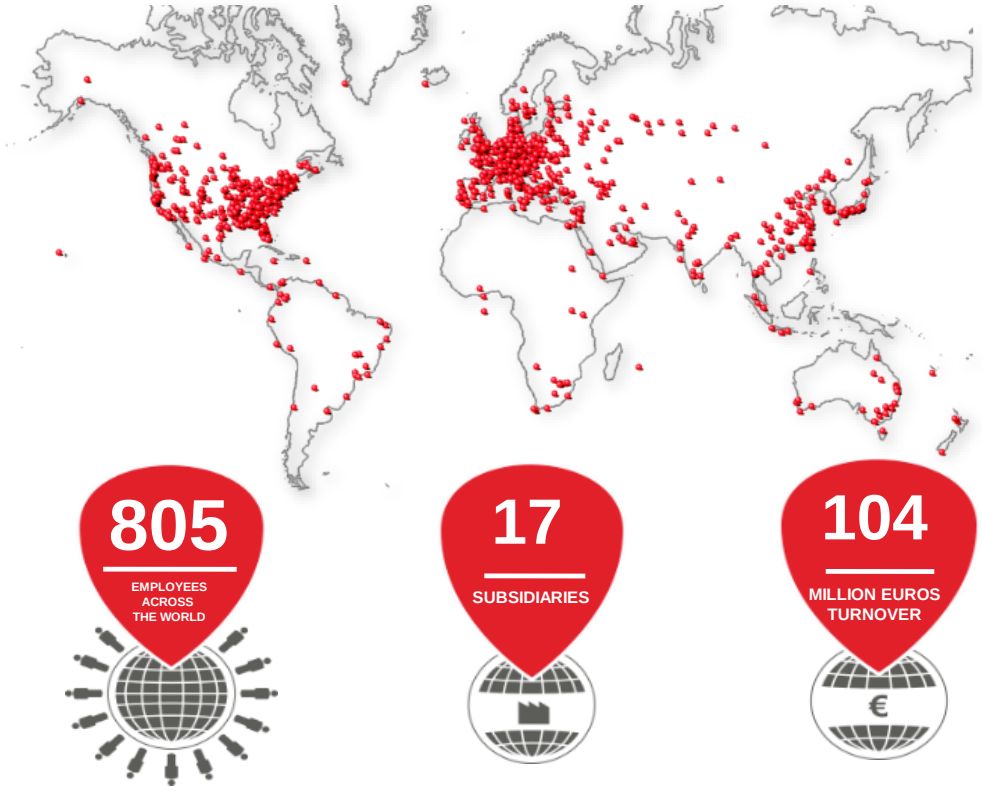
# ABOUT PTV GROUP

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**OVER 5,500 CUSTOMERS LOCATED IN 180 COUNTRIES SERVED FROM 17 SUBSIDIARIES**

**ORGANIC GROWTH > 10% P.A.**

**GLOBAL MARKET LEADER**

**FOUNDED IN 1979**

**WE DELIVER SOFTWARE, DATA AND METHODOLOGIES**

ON 5 CONTINENTS

EUROPE ASIA AUSTRALIA NORTH/ LATIN AMERICA

Fiscal year 15-16


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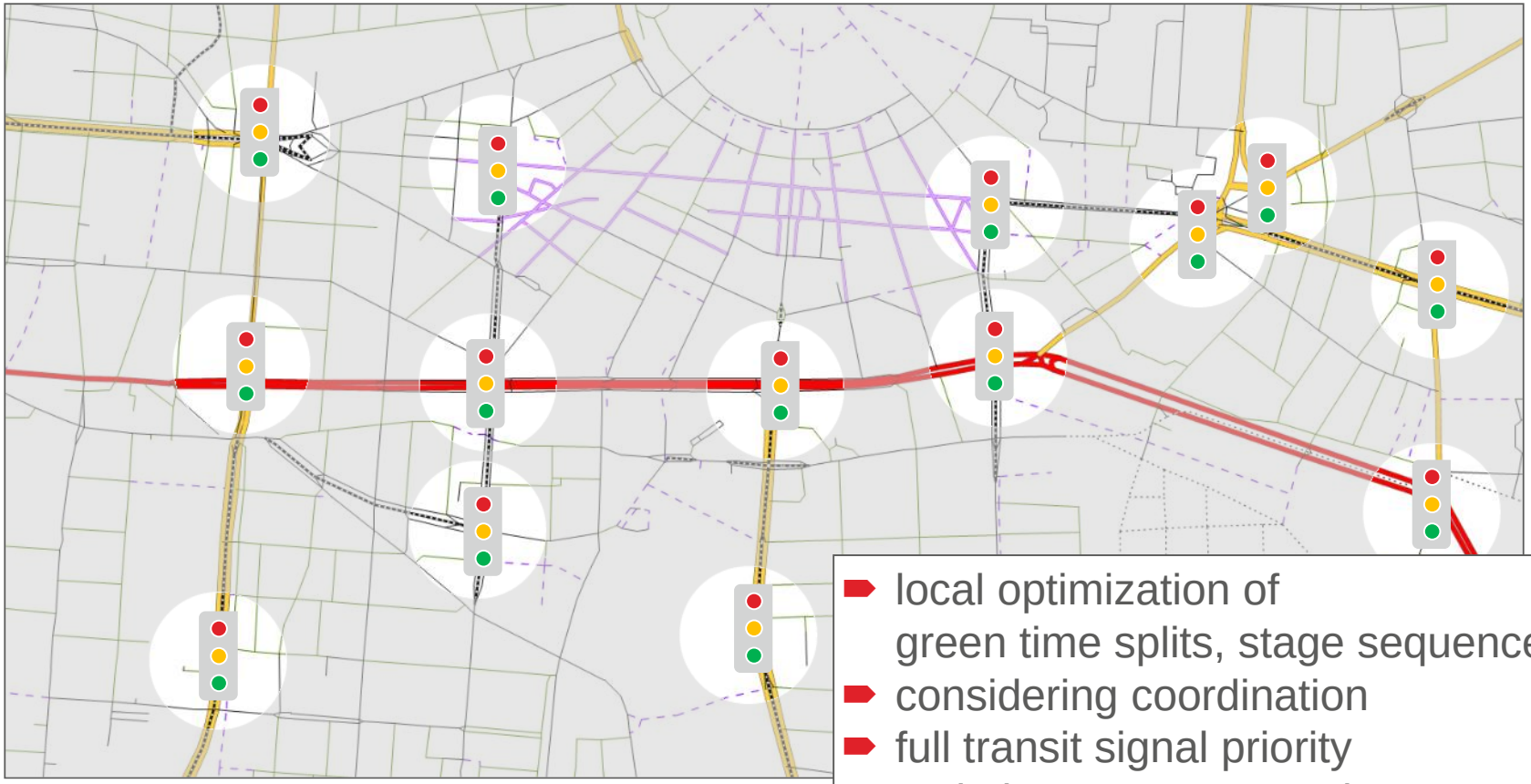
TRAFFIC & PLANNING
PTV VISUM
PTV VISSIM
PTV VISWALK
PTV VISTRO
PTV SAFETY
LOGISTICS & OPERATIONS
PTV MAP&GUIDE
PTV MAP&MARKET
PTV SMARTOUR
PTV NAVIGATOR
PTV XSERVER
REAL-TIME TRAFFIC MANAGEMENT & ITS
PTV OPTIMA
PTV BALANCE
PTV EPICS
WE PLAN AND OPTIMISE
EVERYTHING WORLDWIDE WHICH
MOVES PEOPLE AND GOODS.

# VEHICLE ACTUATED SIGNAL CONTROL
# INTRODUCING PTV BALANCE AND PTV EPICS

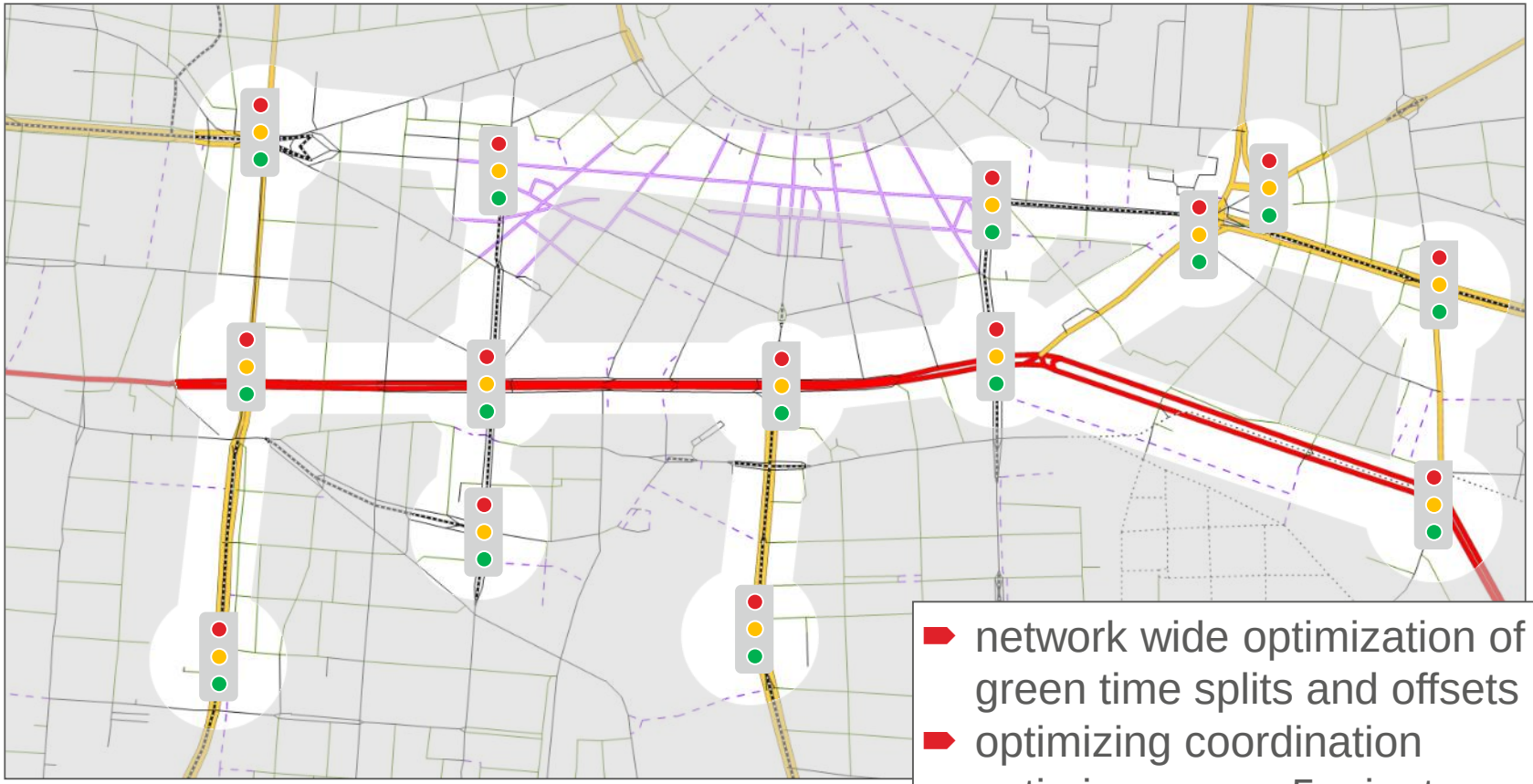
## **E**ntire **P**riority **I**ntersection **C**ontrol **S**ystem - PTV **Epics**



- local optimization of
  green time splits, stage sequence
- considering coordination
- full transit signal priority
- optimizes every second

# VEHICLE ACTUATED SIGNAL CONTROL
# INTRODUCING PTV BALANCE AND PTV EPICS

## **Bal**ancing **A**daptive **N**etwork **C**ontrol M**e**thod - PTV **Balance**



- network wide optimization of green time splits and offsets
- optimizing coordination
- optimizes every 5 minutes

# PTV OPTIMA

**THE FUSION** of transport models capable of **PREDICTION WITH THE ONLINE REAL-TIME DATA** will provide **INFORMATION ON EXISTING CONDITIONS** would create a **REAL-TIME PREDICTION PLATFORM**.

**OFFLINE**

**TRANSPORT MODEL**

+

**ONLINE**

**REAL-TIME DATA**

## TRANSPORT MODEL + REAL TIME DATA

**DATA INPUT**

- **DETECTORS**
- **ANPR**
- **FCD**
- **MOBILE PHONE**

**DECISION SUPPORT TOOL – LIVE MODEL**

- **DATA FUSION**
- **MODEL UPDATE**
- **REAL-TIME**
- **ROLLING HORIZON**

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PTV BALANCE
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PTV EPICS
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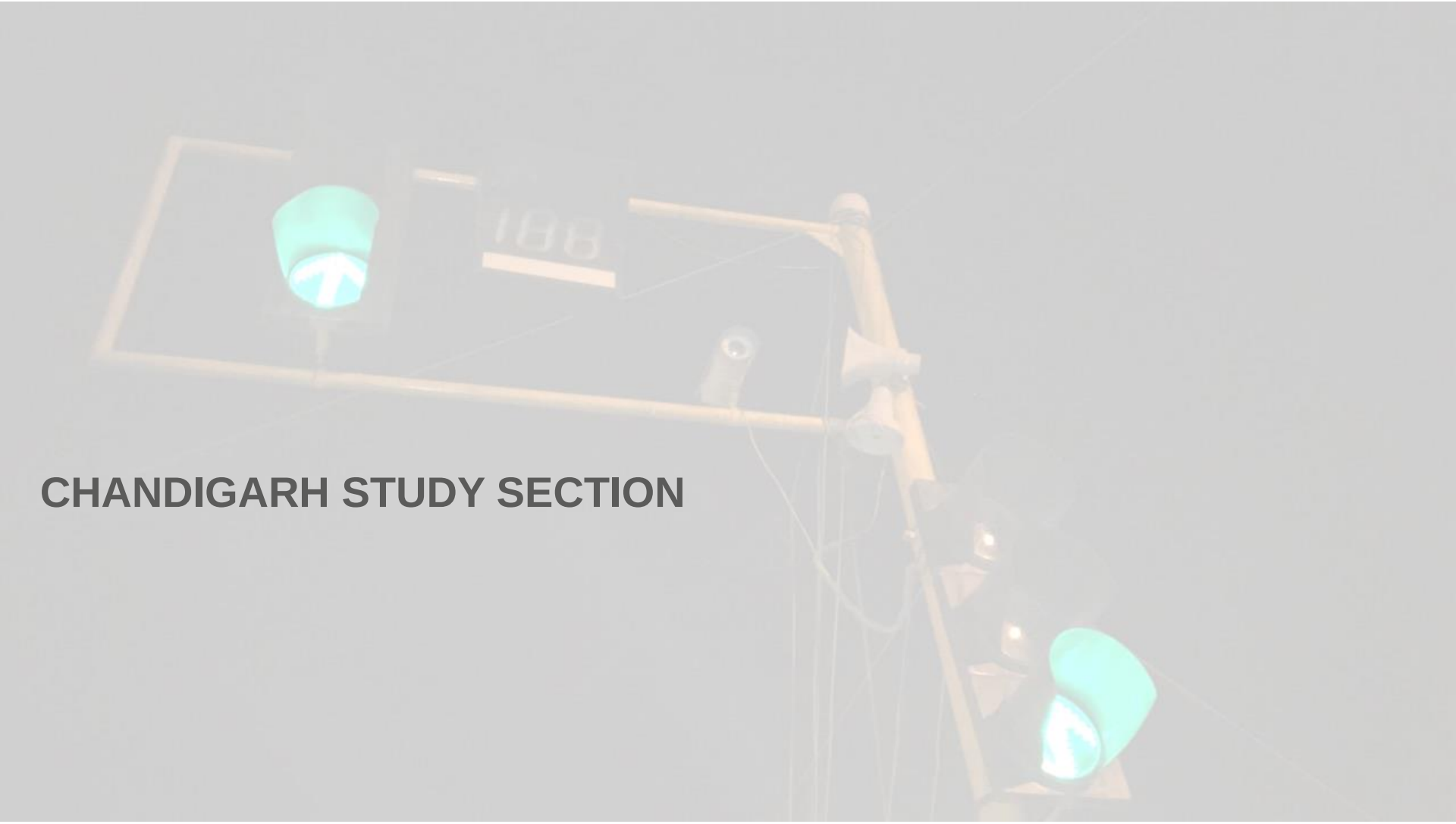
# ACTIVITIES IN INDIA FOR SMART SIGNALLING WITH PTV BALANCE AND PTV EPICS

## WHO KEEPS CITY'S RHYTHM FLOWING?



# CHANDIGARH STUDY SECTION

# NETWORK LEVEL SUMMARY PEAK HOUR TRAFFIC BEFORE & AFTER

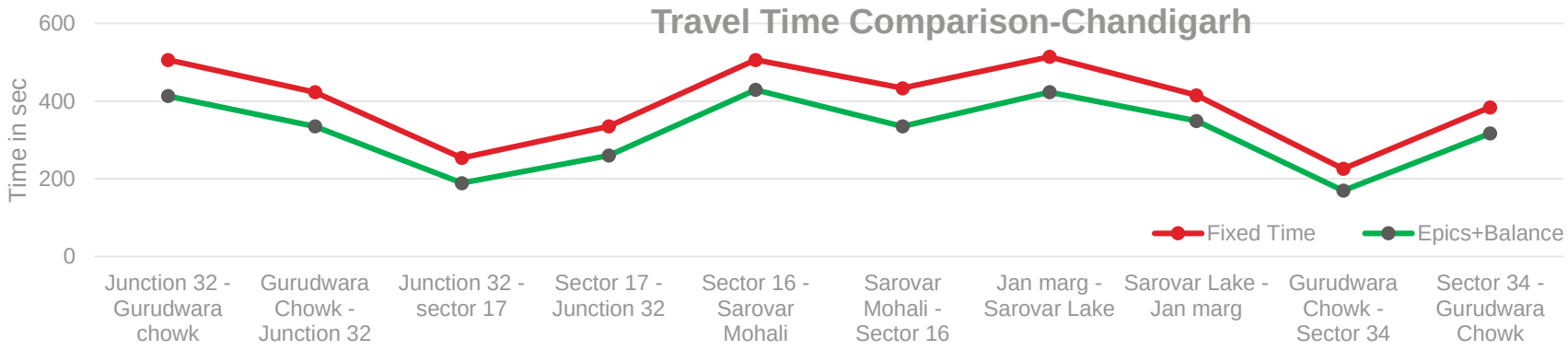
- Traffic increase by 6% in Network level.

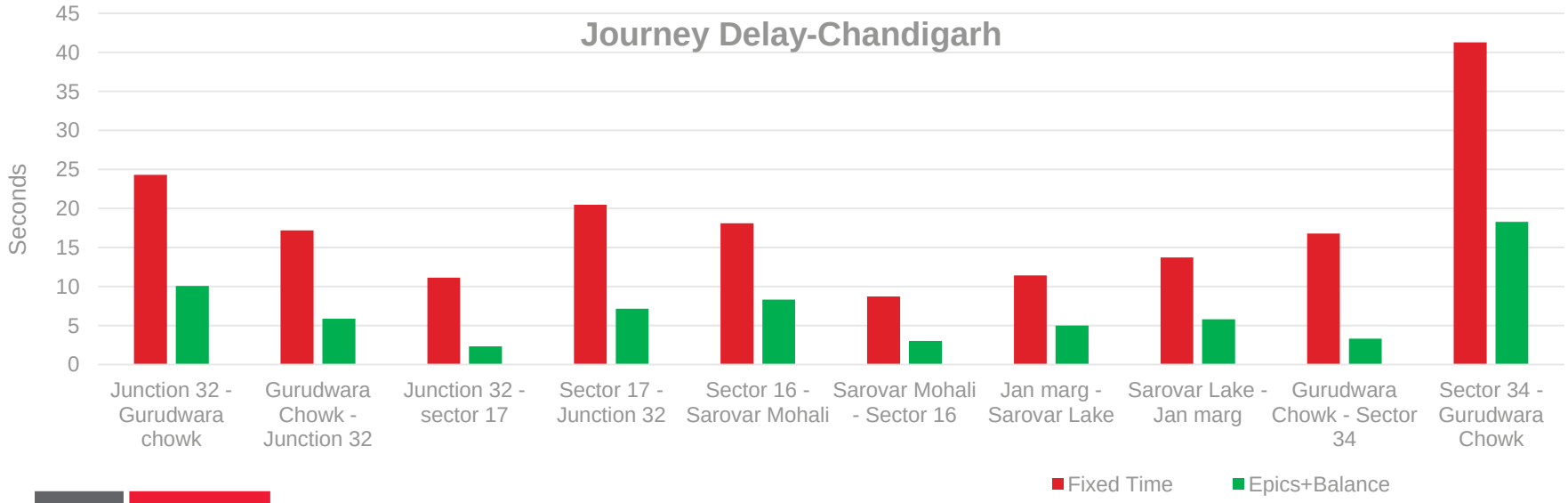
| Total Network Volume- Before | Total Network Volume- After | Increase in Traffic (%) |
|---|---|---|
| 2,06,720 | 2,19,731 | 6.3% |

| Duration | Network Peak Volume - Before | Network Peak Volume - After | Network Peak Hour | Increase in Traffic |
|---|---|---|---|---|
| Morning | 18788 | 22173 | 9.15-10.15 | 18.0% |
| Afternoon | 18021 | 18682 | 13.45-14.45 | 3.6% |
| Evening | 19143 | 20885 | 17.15-18.15 | 9.1% |

# RESULT COMPARISON - CHANDIGARH

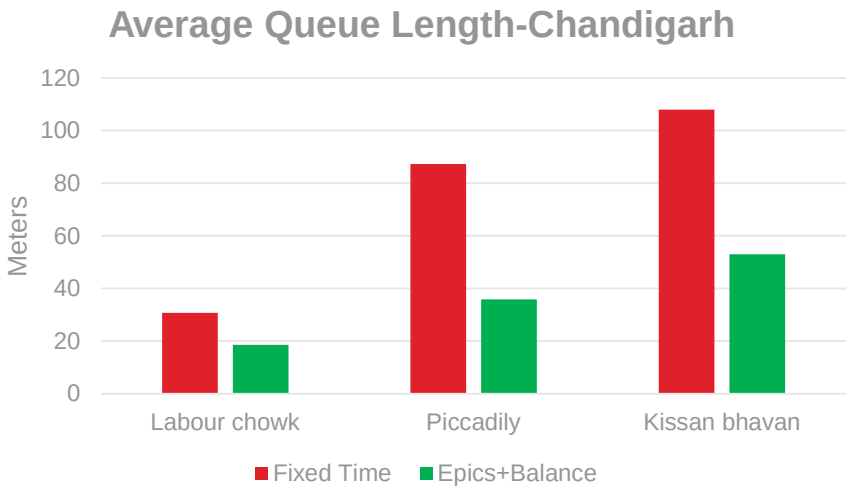
- Travel Time from all the observed journey routes are decreased by 20% compared to Fixed Time Controller.

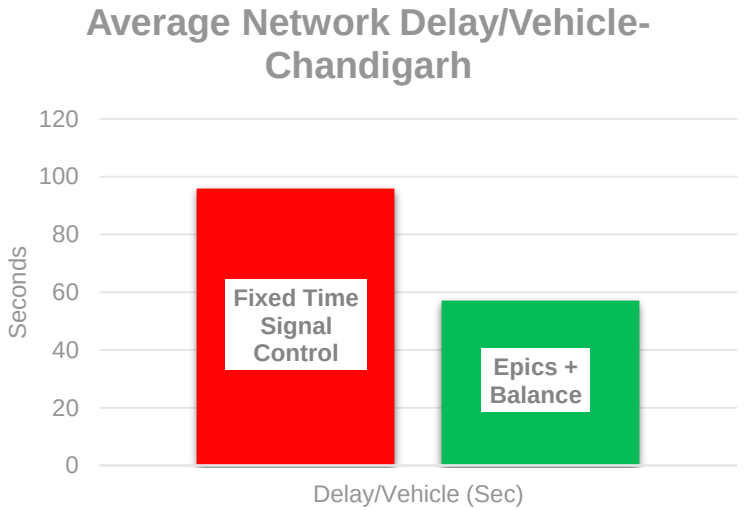


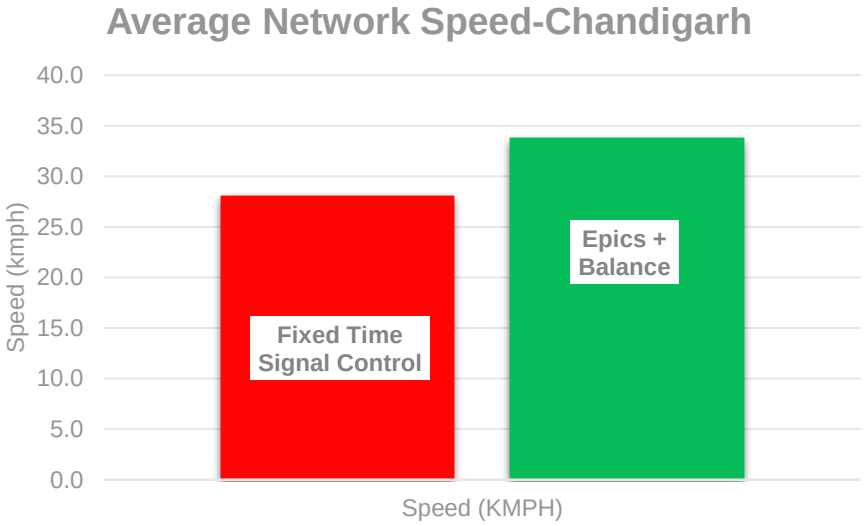
# RESULT COMPARISON -CHANDIGARH

- An average queue length is decreased by 50% compared to fixed time signal.
- From 96 seconds to 57 sec average network delay is observed from balance model.



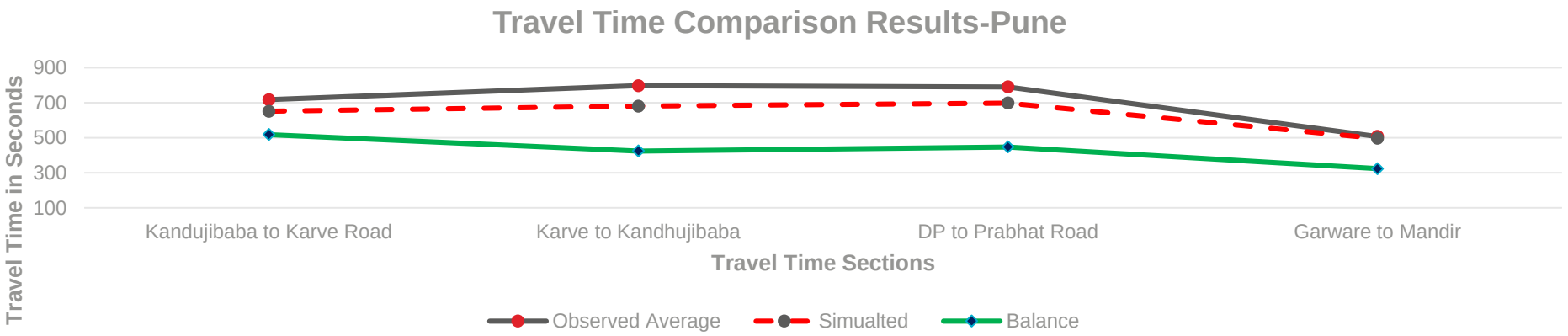

- Overall network speed has been increased from 28 kmph to 34 kmph. Improvement of 20%.



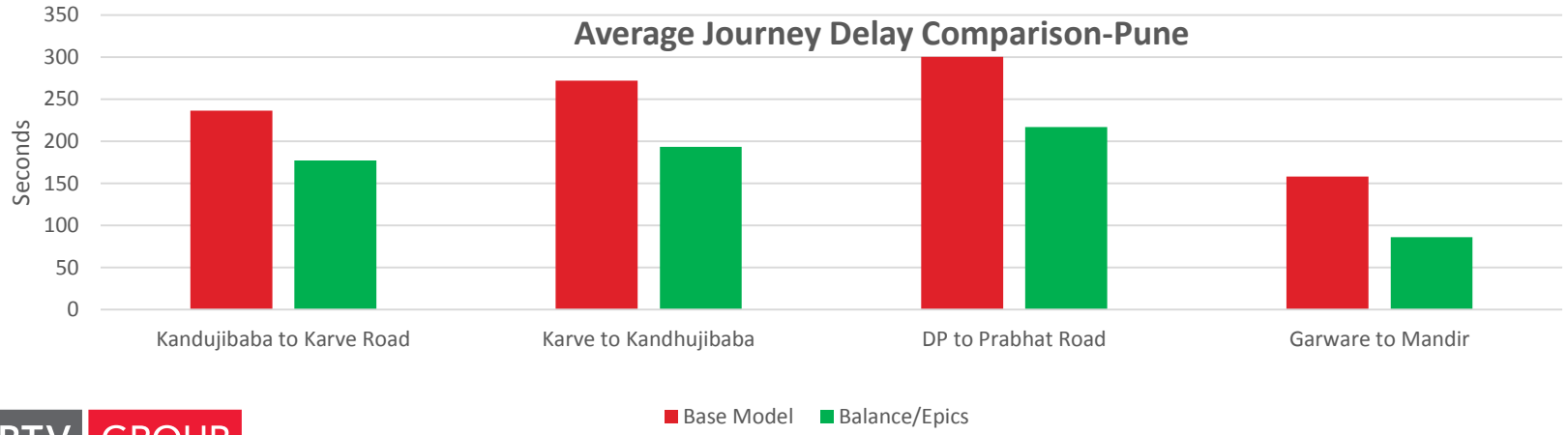
# PUNE – STUDY AREA

# RESULT COMPARISON -PUNE

- Travel Time from all the observed journey routes are decreased by 32% compared to Fixed Time Controller.

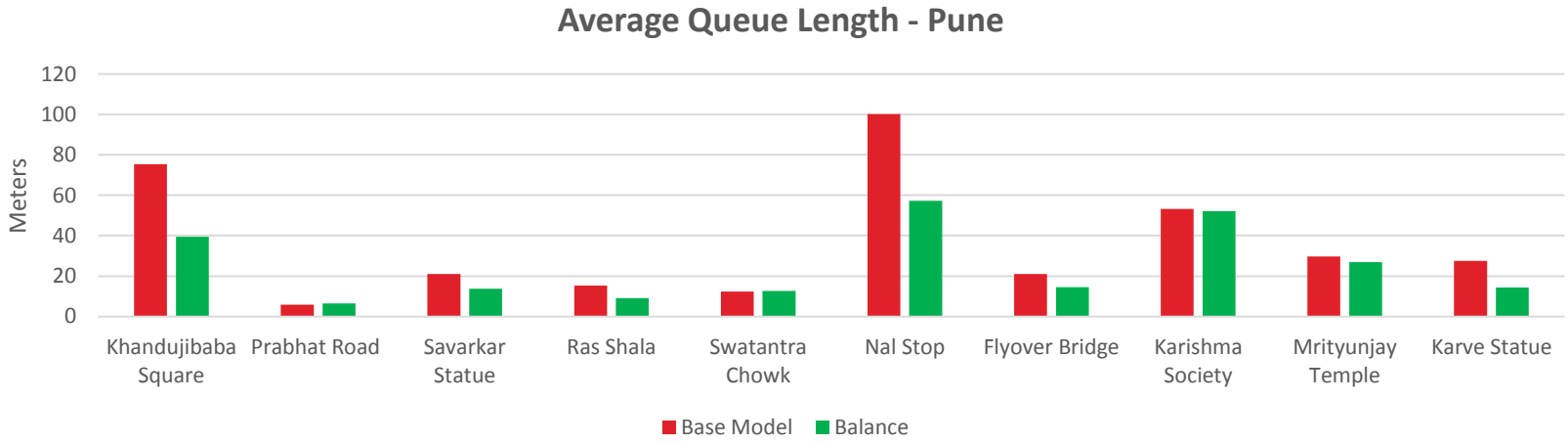


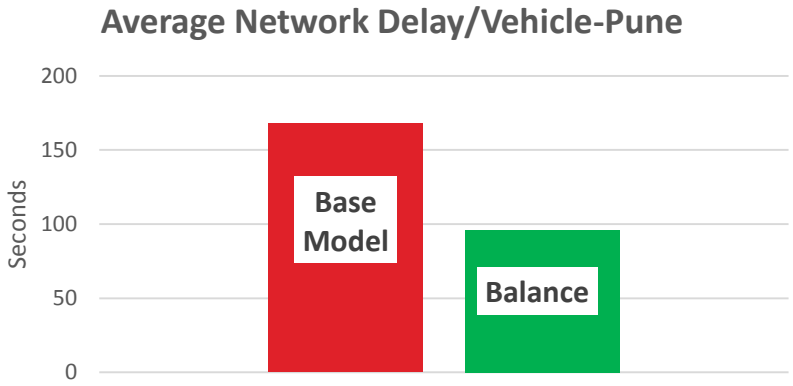

- The average journey delay is 32% decreased.

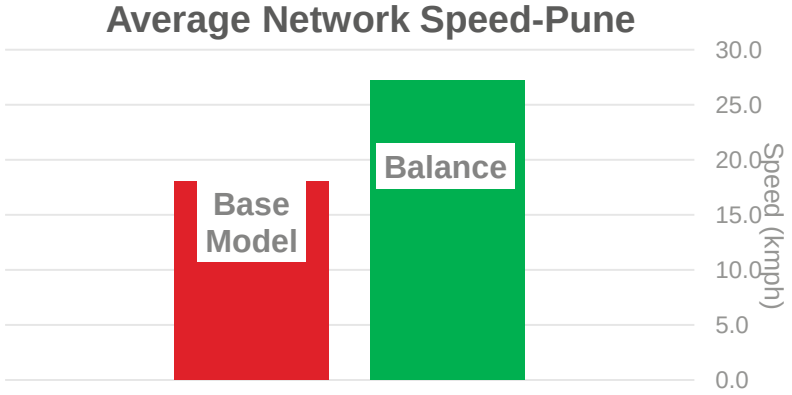


# RESULT COMPARISON –PUNE

- An average queue length is decreased by 24% compared to base model.



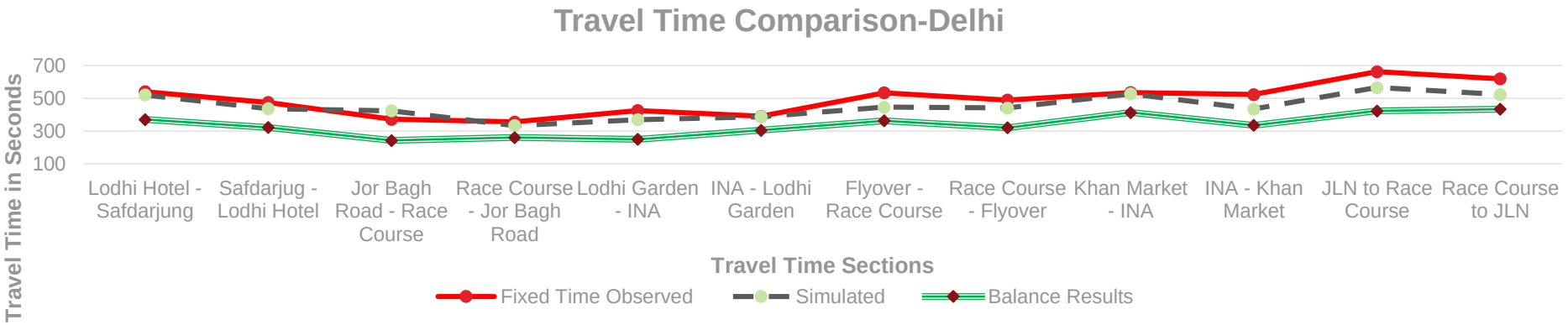



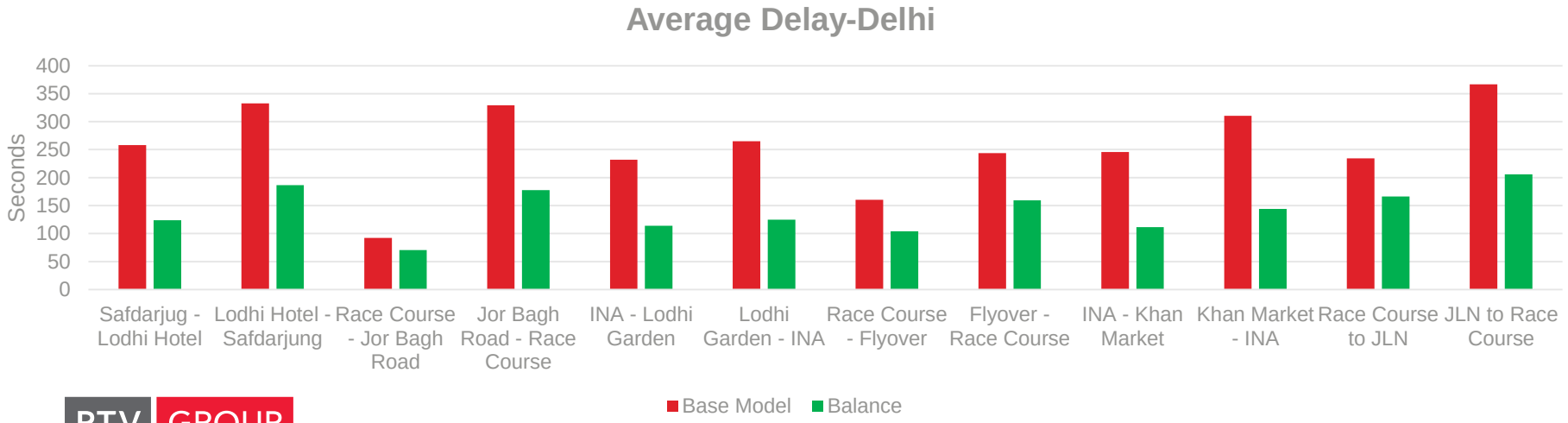
# DELHI - STUDY SECTION

# RESULT COMPARISON –DELHI

- Travel Time from all the observed journey routes are decreased by 26% compared to Fixed Time Controller.

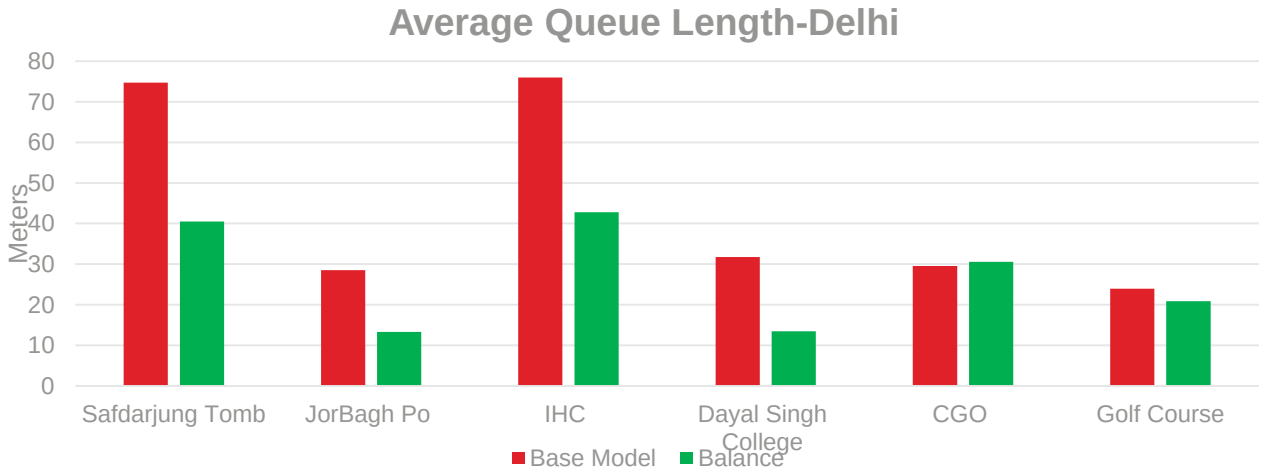


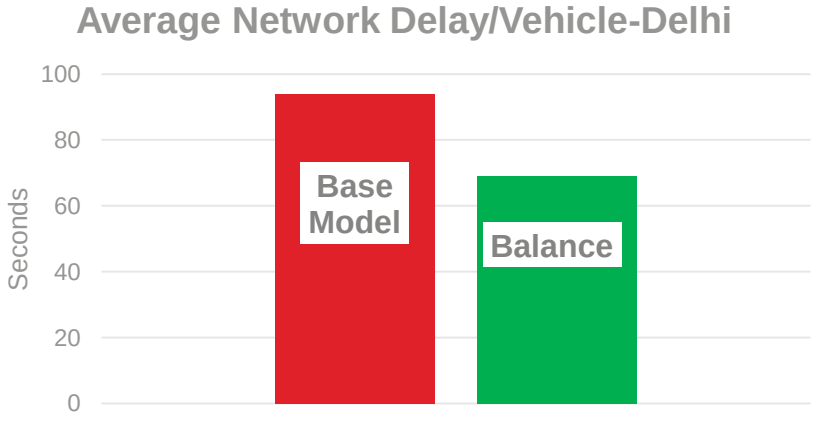

- The average journey is 45% decreased.

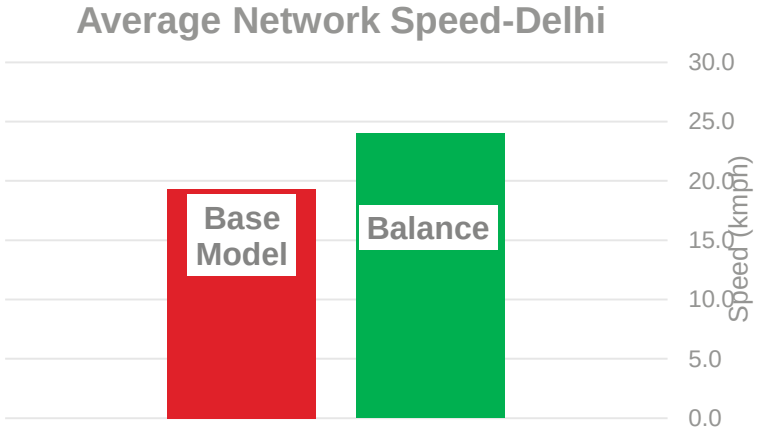


# RESULT COMPARISON – AVERAGE QUEUE LENGTH-DELHI

- An average queue length is decreased by 37% compared to base model.



# RESULT COMPARISON – FIXED TIME VS BALANCE / EPICS

| Parameters | Delhi | Pune | Chandigarh |
|---|---|---|---|
| Travel Time (Sec) | ▼ 26% | ▼ 32% | ▼ 20% |
| Queue Length (Meters) | ▼ 37% | ▼ 24% | ▼ 50% |
| Journey Delay (Seconds) | ▼ 45% | ▼ 32% | ▼ 39% |
| Average Network Speed (Kmph) | ▲ 27% | ▲ 51% | ▲ 20% |
| Average Network Delay (Seconds) | ▼ 30% | ▼ 43% | ▼ 41% |

# PTV SOFTWARE
# SMART TRAFFIC SOLUTIONS FOR SMART CITIES