

ITS Canada Annual Meeting & Conference  
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# TORONTO'S TRAFFIC OPERATIONS CENTRE – A PRIVATE/PUBLIC PARTNERSHIP

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# HISTORY

- RESCU (Roads Emergency Services Communications Unit) established in 1993
- RESCU software developed by IBI Group for City
- Contracted services from inception with City staff providing contract administration. Dispatch services provided by City staff.
- 6:00 am to 10:00 pm, Mon – Fri; 10:00 am to 2:00 am, Sat/Sun
- 24/7 operation as of 2007
- Dispatch services out-sourced as of Feb 1, 2013
- Yearly operating cost – \$1.5M

# TRAFFIC OPERATIONS CENTRE (T O C)



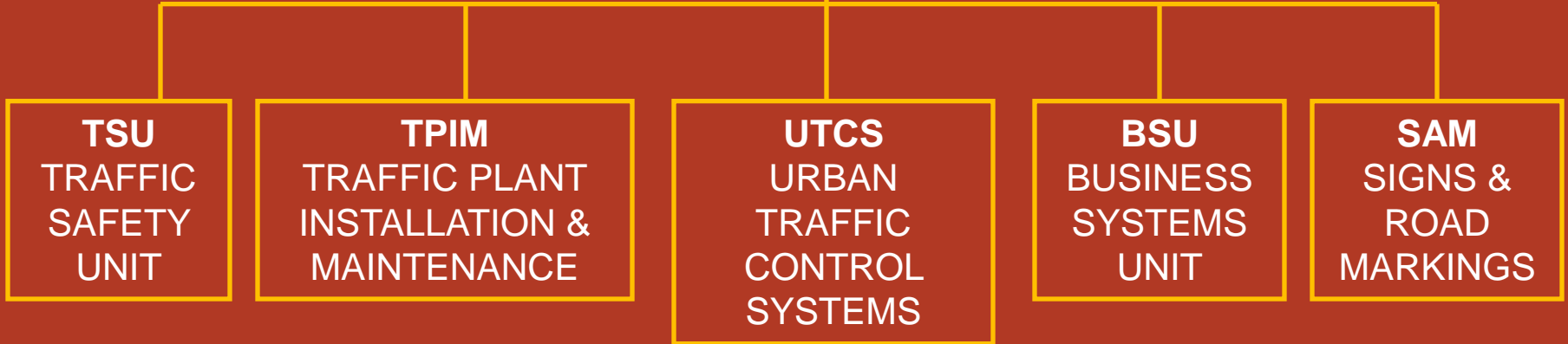
# DIVISIONAL OPERATIONS CENTRE (D O C)



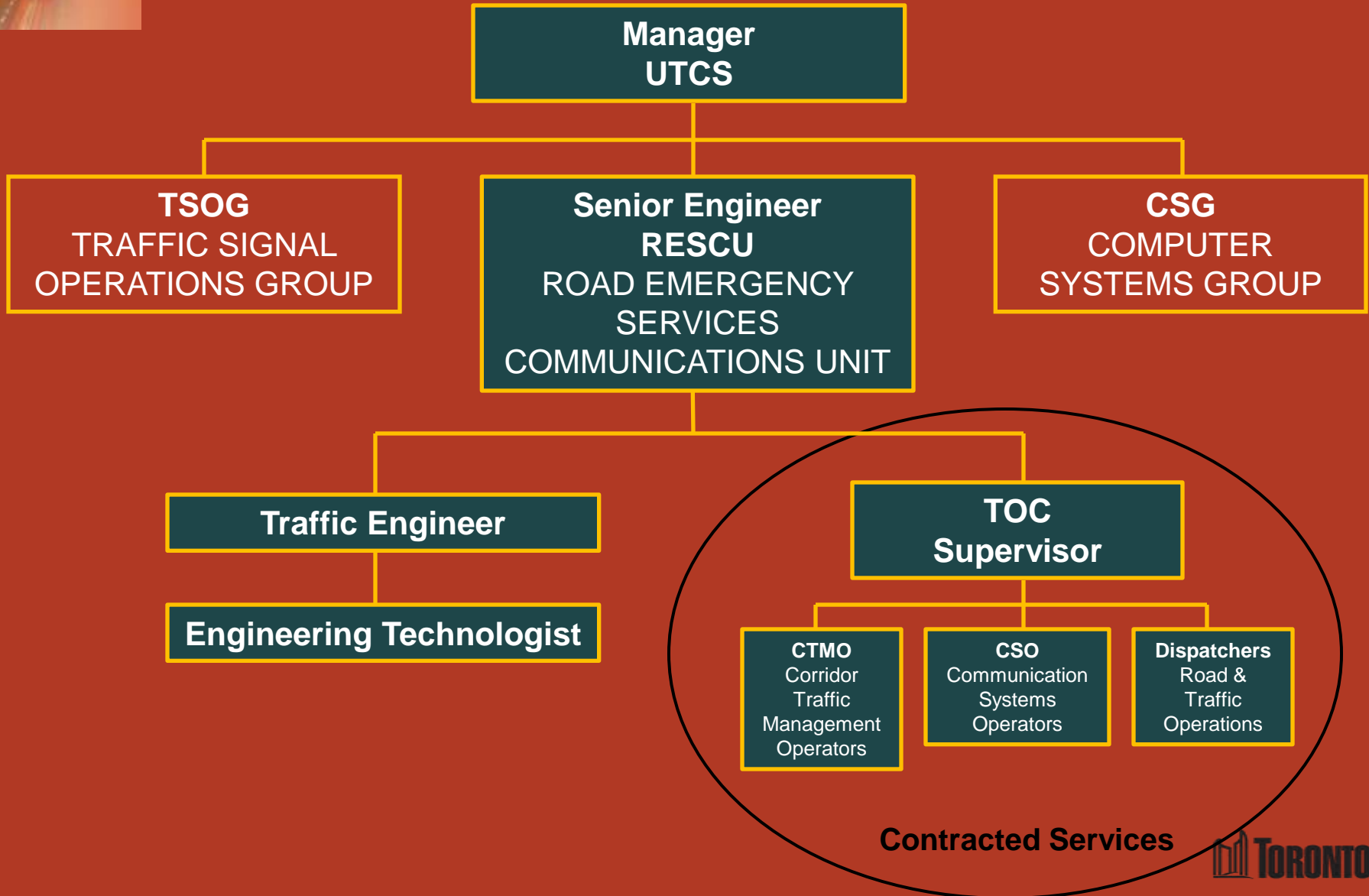


# ORGANISATION CHART – T M C

## TRAFFIC MANAGEMENT CENTRE



# ORGANISATION CHART – U T C S





# INFRASTRUCTURE

- 57 - 27 inch CRT monitors, 3 - 60 inch rear projection monitors, arranged in an arc shape on 5<sup>th</sup> floor
- Video switches, video encoders on 4<sup>th</sup> floor
- Dual monitor workstations with camera control keyboards
- Analog video signals on City's fiber to TOC
- Traffic Cop software blocks selected feeds to external subscribers
- TMMS software for repair/maintenance



# INFRASTRUCTURE

- 76 American Dynamics PTZ dome cameras provide 100% coverage on Gardiner and DVP; 80% coverage on Lakeshore
- 6 intersection cameras
- 6 gantry mounted VMS – 4 on DVP, 2 on Gardiner
- 4 pole mounted variable message signs (PMVMS) on Gardiner, 2 on Lakeshore
- 16 portable variable message signs (PVMS)
- RESCU owned fibre along DVP, Highway 401 (through MTO) from Dufferin to DVP, Gardiner Expressway from DVP to Highway 427





# SERVICES

- Camera locations and images on Internet
- Camera feed to 9 media, emergency services, University of Toronto ITS Testbed
- Center to Center – City video feeds to MTO, MTO video feeds to City.
- Road restrictions on Internet map
- RSS feed for emergency road closures
- Major Incident Report (expressways) – senior management and media
- Flow/occupancy data for incident detection (currently not available)



# SERVICES

- Planning/approval for all full expressway closures – yearly maintenance, Ride for Heart, Triathlon
- Approval for all other expressway closures
- Dispatch – emergency calls from 311 relating to Transportation Services
- First responder for Toronto Transportation Emergency Plan (TTEP)
- Divisional Operations Centre for City-wide emergencies and special events
- Messaging on VMS and PVMS



# PRIVATE SECTOR INVOLVEMENT

- Operations contract awarded through RFP process since inception in 1993.
- Contract administration by RESCU Senior Engineer
- Operations contract awarded to either IBI Group, IBI Group/Fortran Traffic Systems Ltd consortium or Fortran
- Current contract (Mar 2013 – Feb 2015), includes the provision of dispatch services – awarded Fortran (six bids received)
- Contract staff – 14 Operators and 1 Supervisor



# CHALLENGES

- Technological change
- Funding – capital vs. operating
- Service delivery at minimum cost
- Open data
- Obsolete ATMS software
- Staff turnover



# FUTURE DIRECTIONS

2013

- New video wall – RFPs being evaluated
- Renovations to TOC and DOC – furniture, utilities, communication, lighting
- Active traffic management – to extend from 6:00 am - 6:00 pm to 6:00 am – 8:00 pm, Mon – Fri for arterials
- 6 PMVMS on Gardiner/LS Corridor and 1 gantry VMS on SB DVP
- Camera network design



# FUTURE DIRECTIONS

2014

- New ATMS software
- 50 intersection cameras in place for PanAm Games
- Travel time on expressways
- Camera upgrade to IP

2015

- Travel time on selected arterials
- Field cabinet/controller upgrade
- Fiber upgrade/expansion



# QUESTIONS

