2017 Q2 EPS Response Time and Dispatch Call Volumes

Presented to the Edmonton Police Commission

July 20, 2017

Purpose

- Respond to EPC's request to provide trend analysis of Priority 1-5 Response Time Performance & Dispatch Call Volumes (2009 - 2017 Q2).

- New for this report:

  - Response Time Performance by patrol division.

  - Response Time Distribution by each priority level.

Priority Levels & Response Time Targets

Priority Code	Definition/Example	Response Time Target (80% of the time)
0	**Officer in Distress / Officer Needs Assistance**	
1	**In Progress Person At Risk** - Response will likely prevent or reduce further harm to a person example: assault with a weapon *in progress*	Dispatch Time + Travel Time **≤ 7 minutes**
2	**In Progress Property At Risk** - Immediate response will likely prevent or reduce the further loss of property example: a neighbour observing an auto theft *in progress*	Dispatch Time + Travel Time **≤ 12 minutes**
3	**Just Occurred** - Immediate response will increase the likelihood of locating a suspect example: mischief that occurred very recently	Dispatch Time + Travel Time **≤ 17 minutes**
4	**The Nature of the Occurrence is Time Sensitive** example: a shoplifter is in-custody with security and is cooperative	Dispatch Time + Travel Time **≤ 40 minutes**
5	**General Service** - The nature of the offence is not time sensitive example: a business finds that they were vandalized the night before (i.e., the absence of *in progress* or *just occurred*)	Dispatch Time + Travel Time **≤ 180 minutes**
6	**The Occurrence is Minor in Nature** (eg.) Bylaw	
9	**Broadcast** - Information only	

What is Included in our Statistics

Dispatch Call Volume

- Priority 1-5
- Pre-empted calls where we do not arrive

Excludes:

- On-view calls (< 30 second response)
- Follow-up calls
- Priority 0 (officer in distress), 6 (bylaw), 9 (general information)

In 2016, Dispatch Call Volume was 163,158.

Response Time Performance

- Priority 1-5
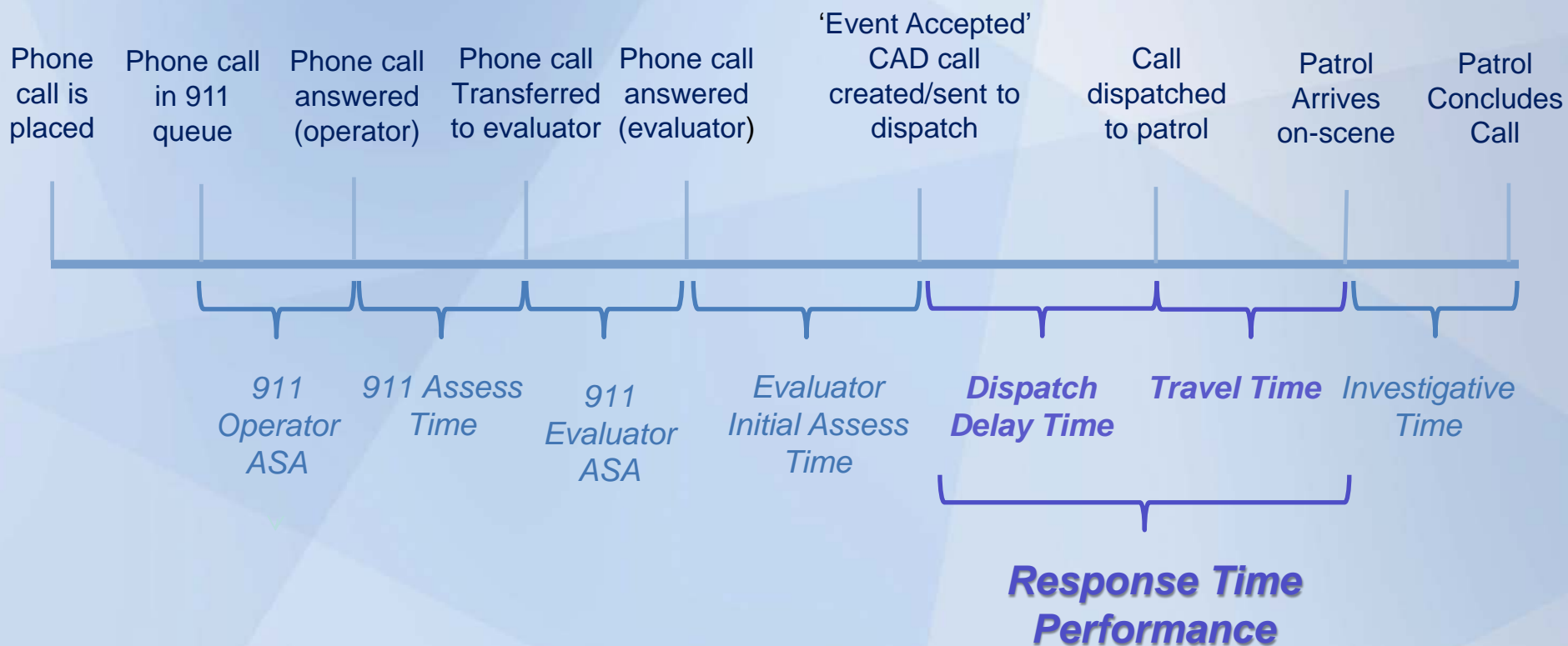
In addition to above criteria, excludes:

- Priority 1 impaired driving
- Pre-empted calls where we do not arrive
- Calls where the final priority level was more urgent than the original level (~2.5% of calls in 2016)

Response Time Performance calculates from a subset of dispatch call volume.

In 2016, this was based on 139,711 records.

Steps to Complete a 9-1-1 Emergency Call

Phone call is placed	Phone call in 911 queue	Phone call answered (operator)	Phone call Transferred to evaluator	Phone call answered (evaluator)	'Event Accepted' CAD call created/sent to dispatch	Call dispatched to patrol	Patrol Arrives on-scene	Patrol Concludes Call

911 Operator ASA — *911 Assess Time* — *911 Evaluator ASA* — *Evaluator Initial Assess Time* — ***Dispatch Delay Time*** — ***Travel Time*** — *Investigative Time*
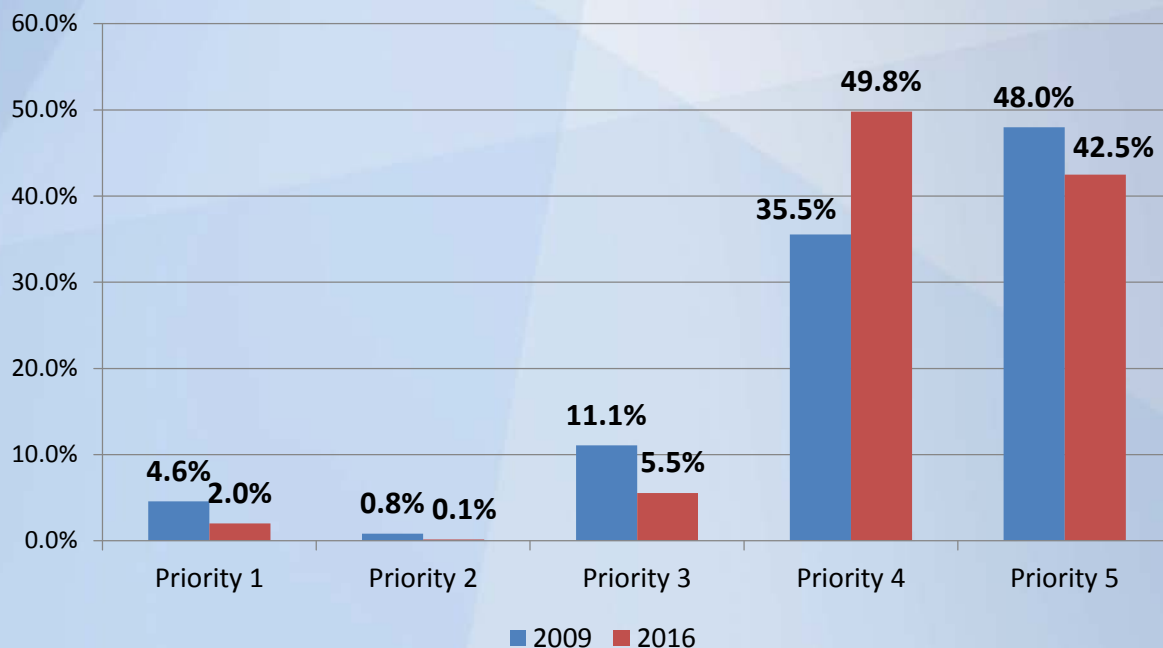
Response Time Performance

Distribution of Priority Levels

- The majority of dispatch call events are of low priority (P4,P5).

- Only 7.6% of calls in 2016 were highly urgent (P1-P3). In 2009, this was 16.5%.

- All growth in calls since 2009 have been in low priority (P4,P5).

Percentage of EPS Dispatch Calls by final priority level

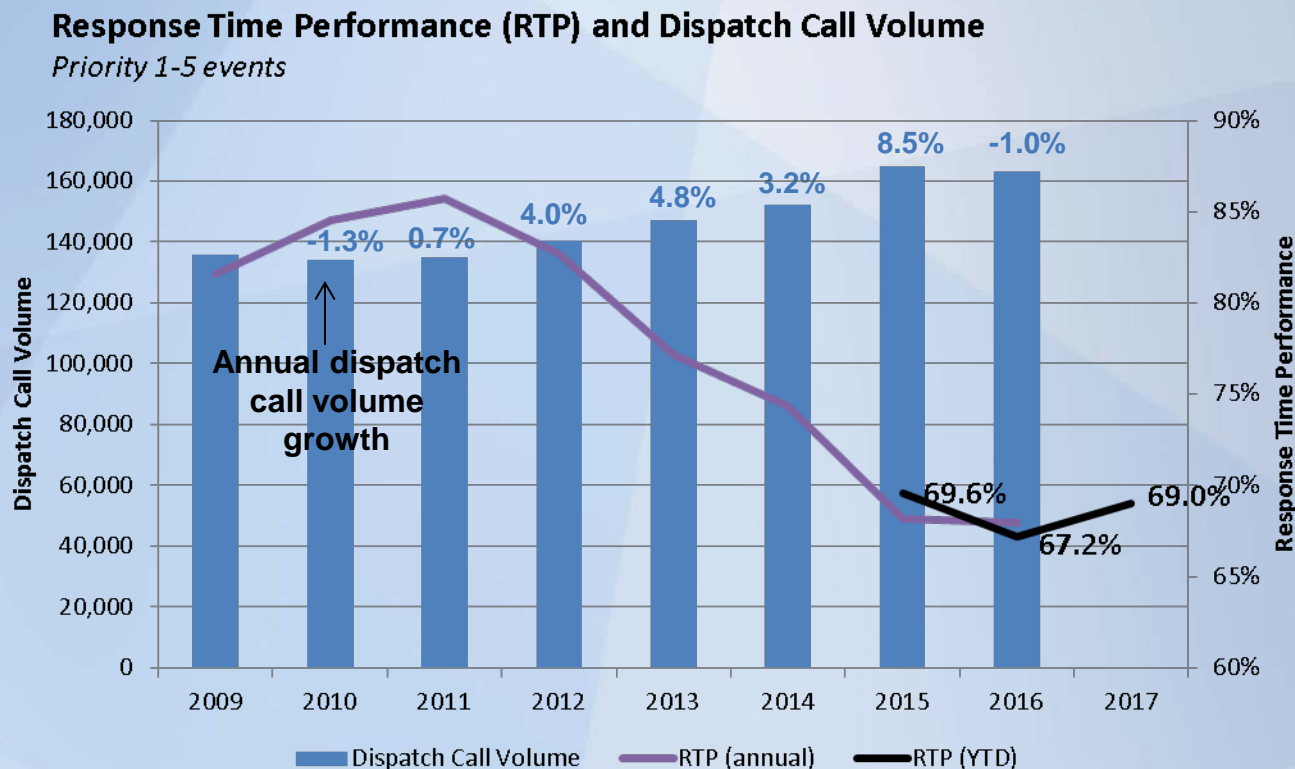| Priority	2009	2016
Priority 1	4.6%	2.0%
Priority 2	0.8%	0.1%
Priority 3	11.1%	5.5%
Priority 4	35.5%	49.8%
Priority 5	48.0%	42.5%

Response Time Drivers

Response time is driven by a number of factors, including:

- **Police strength**
  - Number of resources
  - Resources committed to other calls

- **Geographic size**
  - Distance
  - Urban sprawl

- **Environmental factors**
  - Traffic conditions
  - Construction zones
  - Weather
  - Traffic Congestion, Travel Speeds

- **Dispatch Call Volume**

- **Population growth**

- **Increasing complexity of criminal investigations and judicial requirements**

P1-P5 Response and Dispatch Call Volume

- P1-P5 Dispatch Call Volume decreased **2.4%** from 2016-2017 YTD

- P1-P5 Response Time Performance declines since 2011 until this year.

- 2017 YTD P1-P5 Response Time Performance was **69.0%**, compared to **67.2%** in 2016 YTD.

Response Time Performance (RTP) and Dispatch Call Volume
Priority 1-5 events

Annual dispatch call volume growth

8.5%   -1.0%   4.8%   3.2%   4.0%   0.7%   -1.3%

69.6%   69.0%   67.2%

Legend: Dispatch Call Volume — RTP (annual) — RTP (YTD)

*Response Time Performance: % of events with Dispatch Time + Travel Time ≤ **Priority Target Time***

8

P1 - Response and Dispatch Call Volume

- P1 Dispatch Call Volume decreased **9.6%** from 2016-2017 YTD.

- P1 Response Time Performance **71.7%** 2017 YTD, compared to **70.8%** 2016 YTD.

Response Time Performance (RTP) and Dispatch Call Volume
Priority 1 events

P1 Response Time Performance: % of events with Dispatch Time + Travel Time ≤ 7 min

P2 - Response and Dispatch Call Volume

- P2 Dispatch Call Volume increased **2.0%** from 2016-2017 YTD.

- P2 Response Time Performance **94.6%** 2017 YTD, compared to **94.2%** 2016 YTD.

Response Time Performance (RTP) and Dispatch Call Volume
*Priority 2 events*

Legend: Dispatch Call Volume — Response Time Performance (annual) — Response Time Performance (YTD)

P2 Response Time Performance: % of events with Dispatch Time + Travel Time ≤ 12 min

P3 - Response and Dispatch Call Volume

- P3 Dispatch Call Volume decreased **9.3%** from 2016-2017 YTD.

- P3 Response Time Performance **95.5%** 2017 YTD, compared to **94.2%** 2016 YTD.

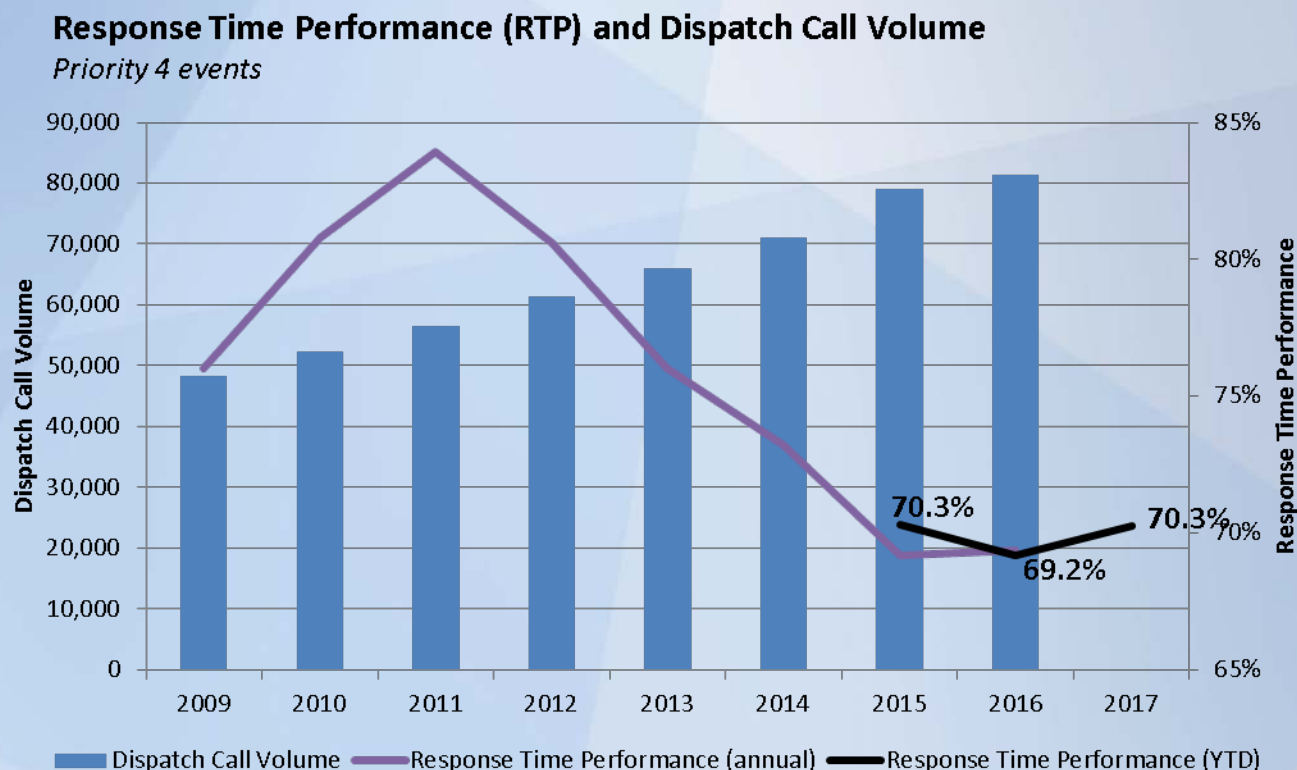### Response Time Performance (RTP) and Dispatch Call Volume
Priority 3 events

*P3 Response Time Performance: % of events with Dispatch Time + Travel Time ≤ **17 min***
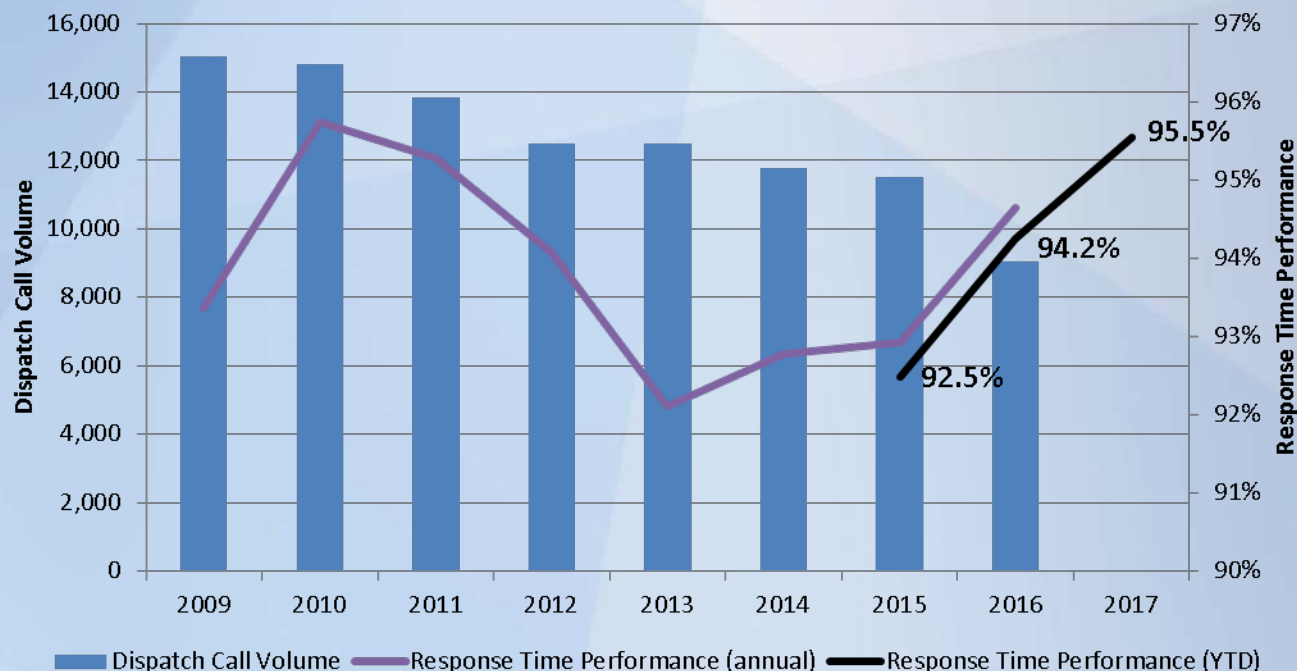
P4 - Response and Dispatch Call Volume

- P4 Dispatch Call Volume decreased **0.4%** from 2016-2017 YTD.

- P4 Response Time Performance **70.3%** 2017 YTD, compared to **69.2%** 2016 YTD.

Response Time Performance (RTP) and Dispatch Call Volume
Priority 4 events

P4 Response Time Performance: % of events with Dispatch Time + Travel Time ≤ 40 min

P5 - Response and Dispatch Call Volume

- P5 Dispatch Call Volume decreased **3.6%** from 2016-2017 YTD.

- P5 Response Time Performance **69.0%** 2017 YTD, compared to **67.2%** 2016 YTD.

Response Time Performance (RTP) and Dispatch Call Volume
Priority 5 events

P5 Response Time Performance: % of events with Dispatch Time + Travel Time ≤ 180 min
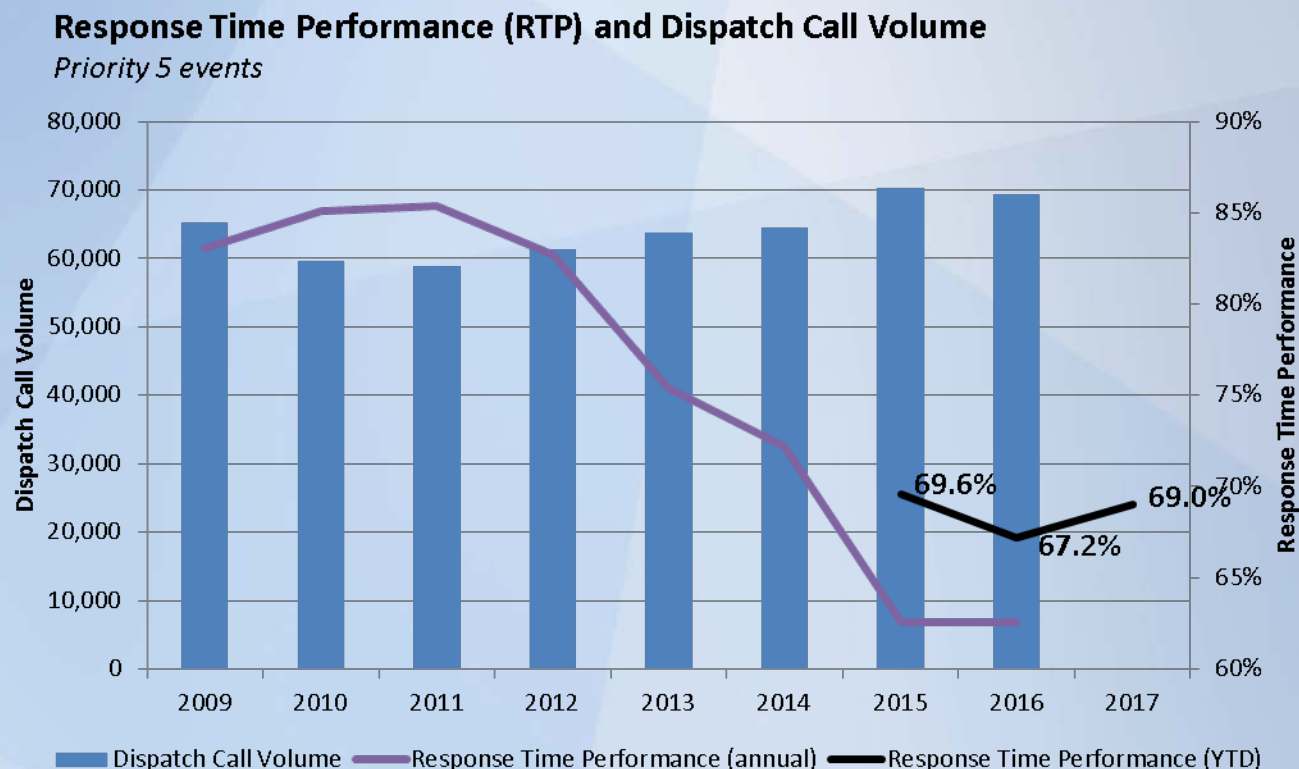
Response Time Distribution

Distribution of Response Times

P1 Response Time Performance Distribution
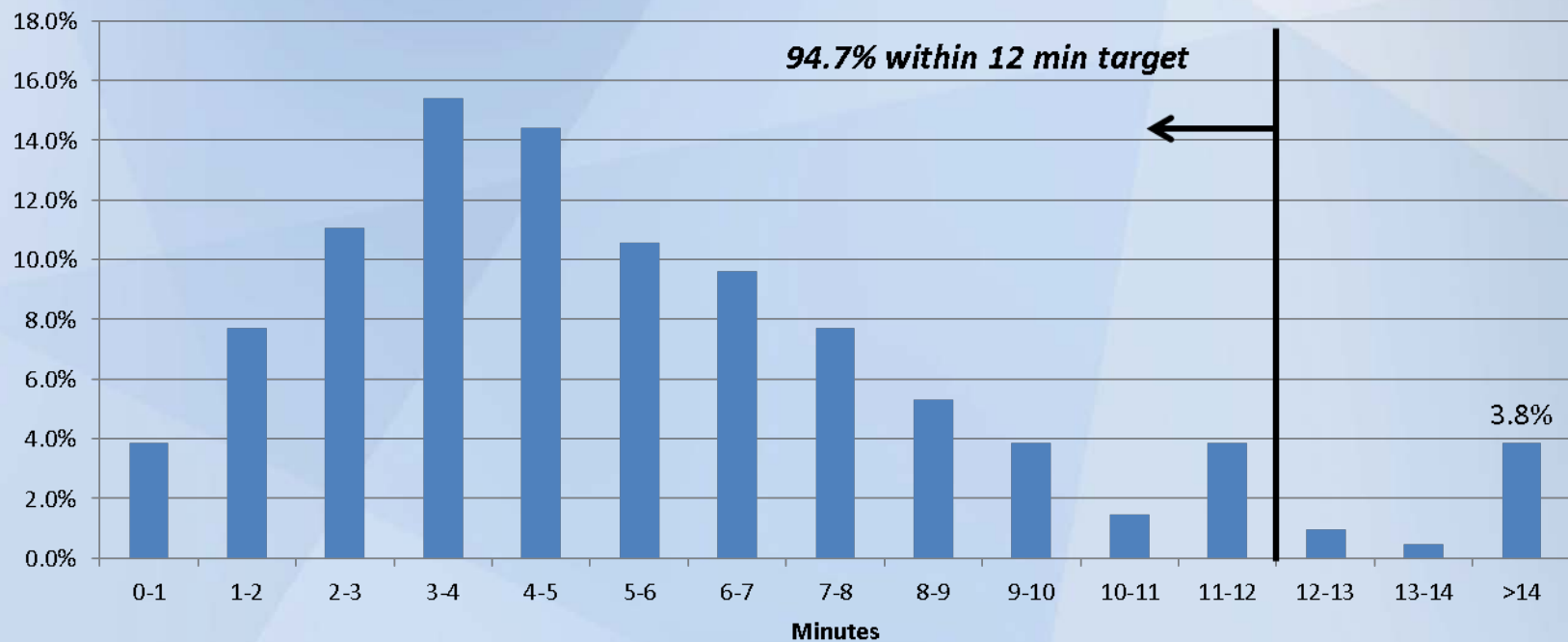*% of calls responded to in set times, 2016 calls*

71.0% within 7 min target

2x target

3.9%

Minutes
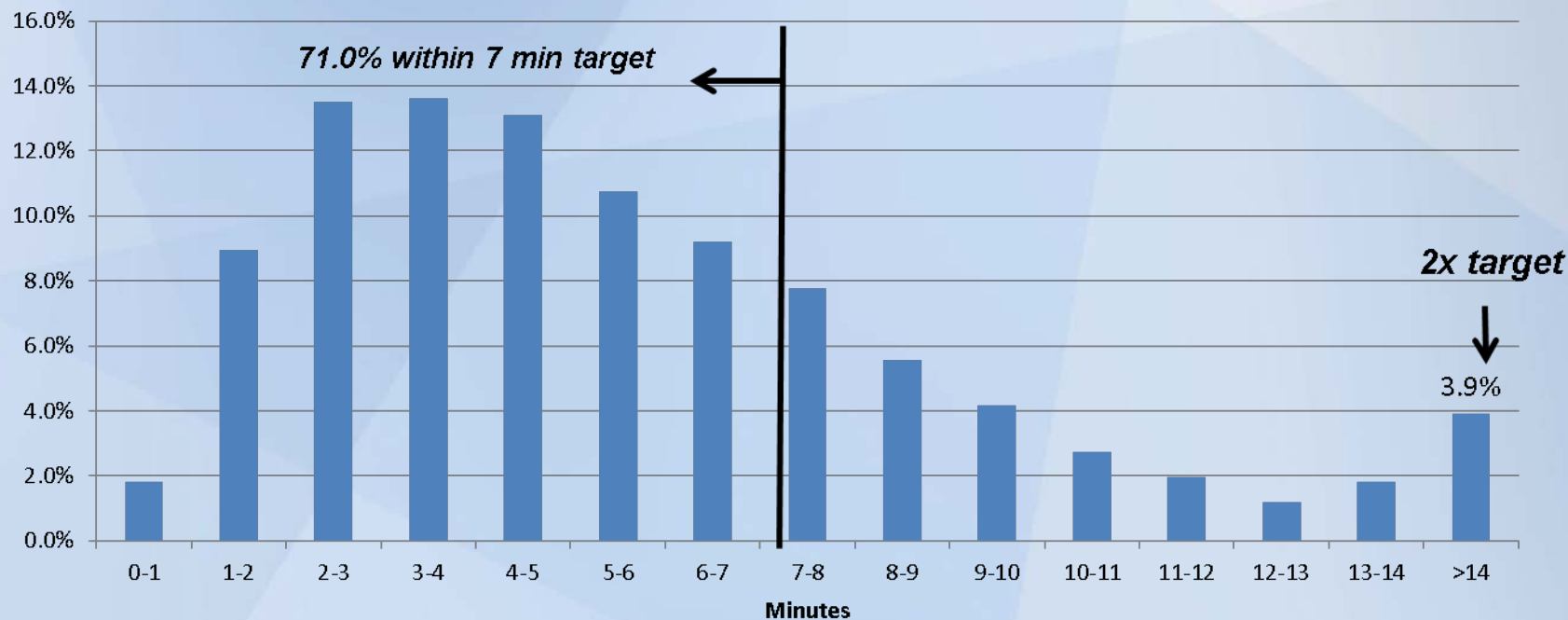
Distribution of Response Times

P2 Response Time Performance Distribution

% of calls responded to in set times, 2016 calls

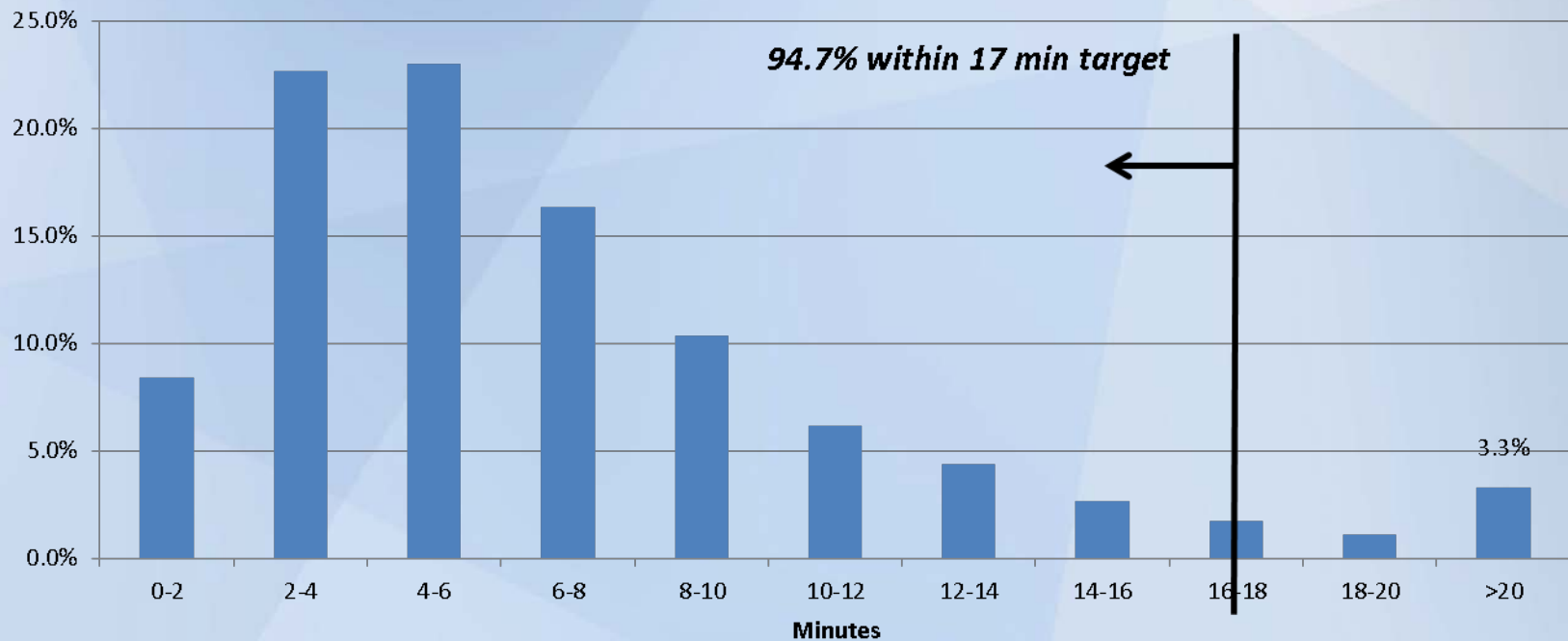**94.7% within 12 min target**

3.8%

Minutes: 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, 13-14, >14

Distribution of Response Times

P3 Response Time Performance Distribution
% of calls responded to in set times, 2016 calls

94.7% within 17 min target

3.3%

(Chart: bar graph with y-axis from 0.0% to 25.0% in 5.0% increments, x-axis labeled "Minutes" with categories: 0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, >20)

Distribution of Response Times

P4 Response Time Performance Distribution
% of calls responded to in set times, 2016 calls

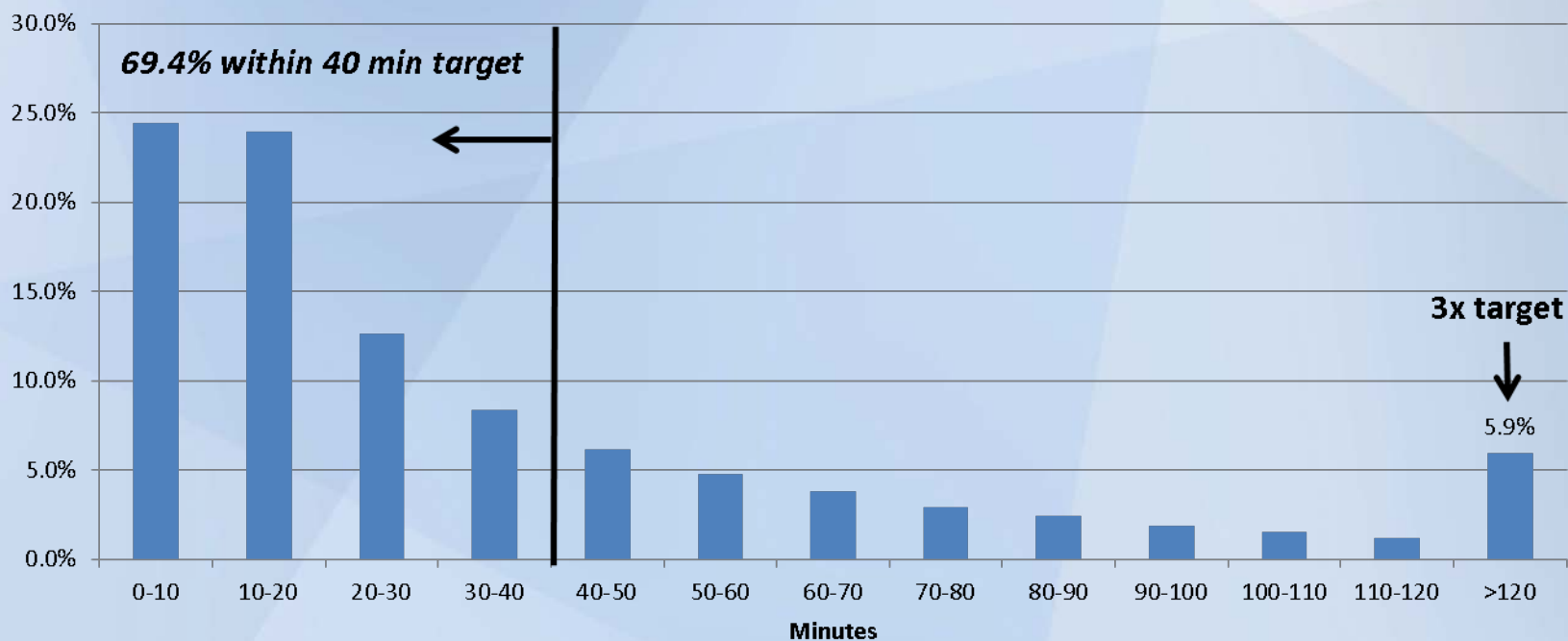**69.4% within 40 min target**

3x target

5.9%

Minutes: 0-10, 10-20, 20-30, 30-40, 40-50, 50-60, 60-70, 70-80, 80-90, 90-100, 100-110, 110-120, >120

Distribution of Response Times

P5 Response Time Performance Distribution
% of calls responded to in set times, 2016 calls

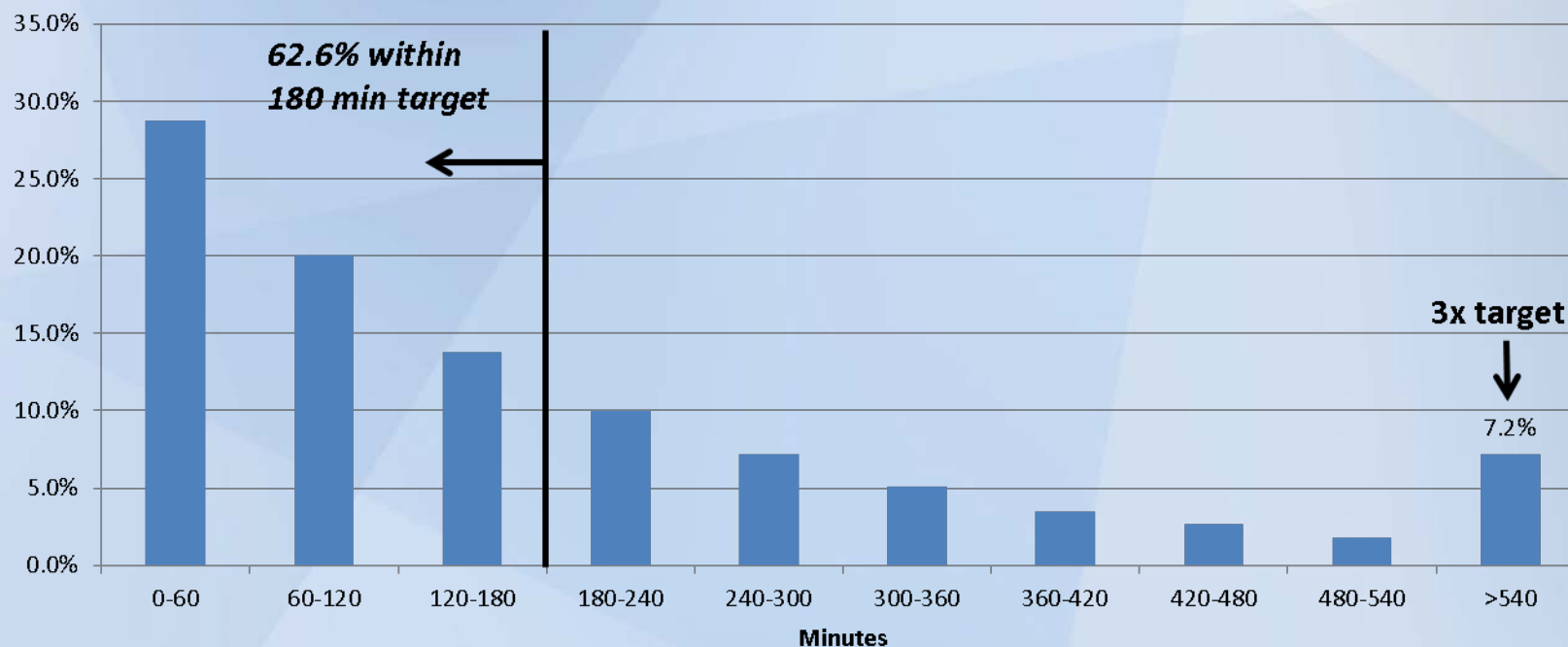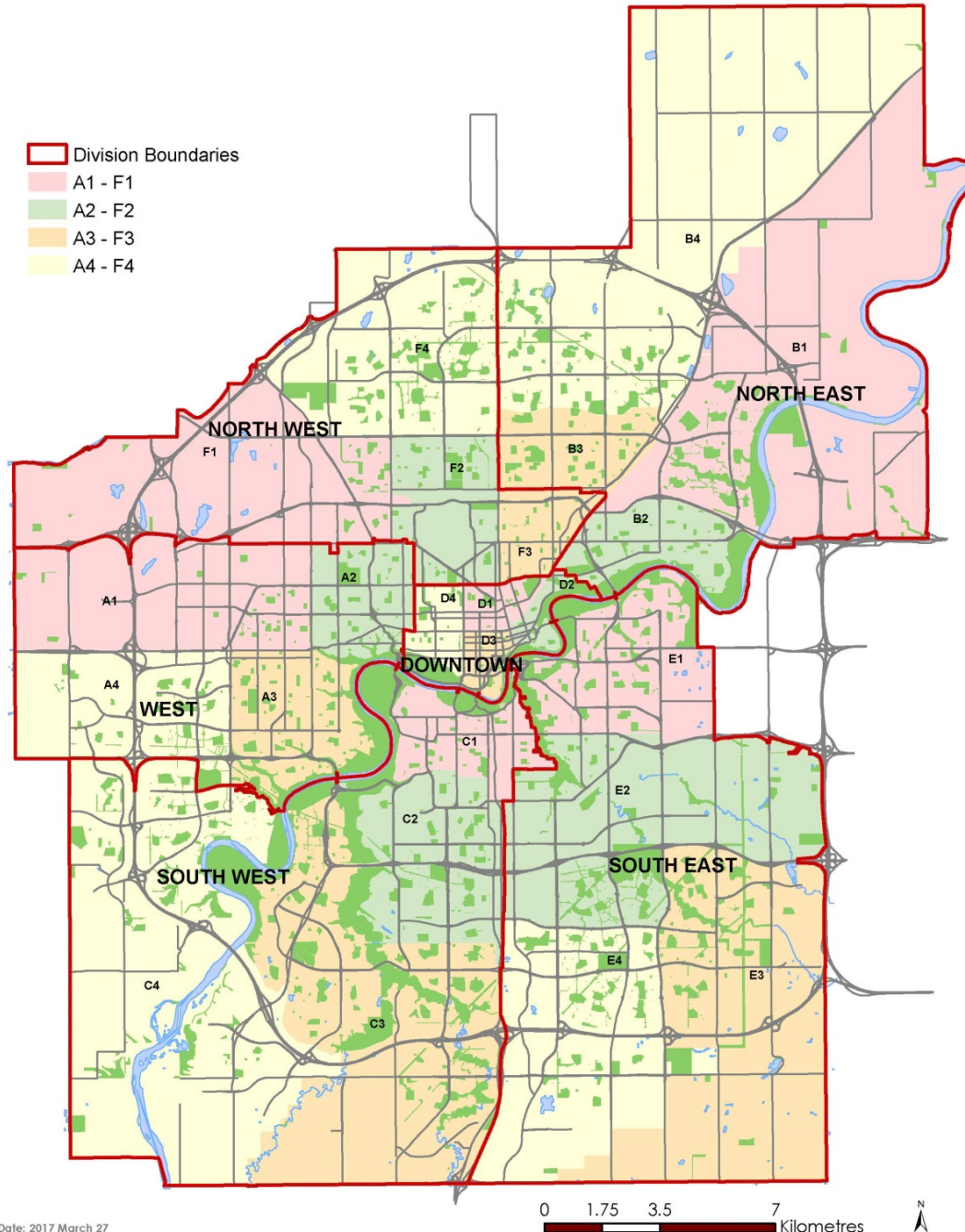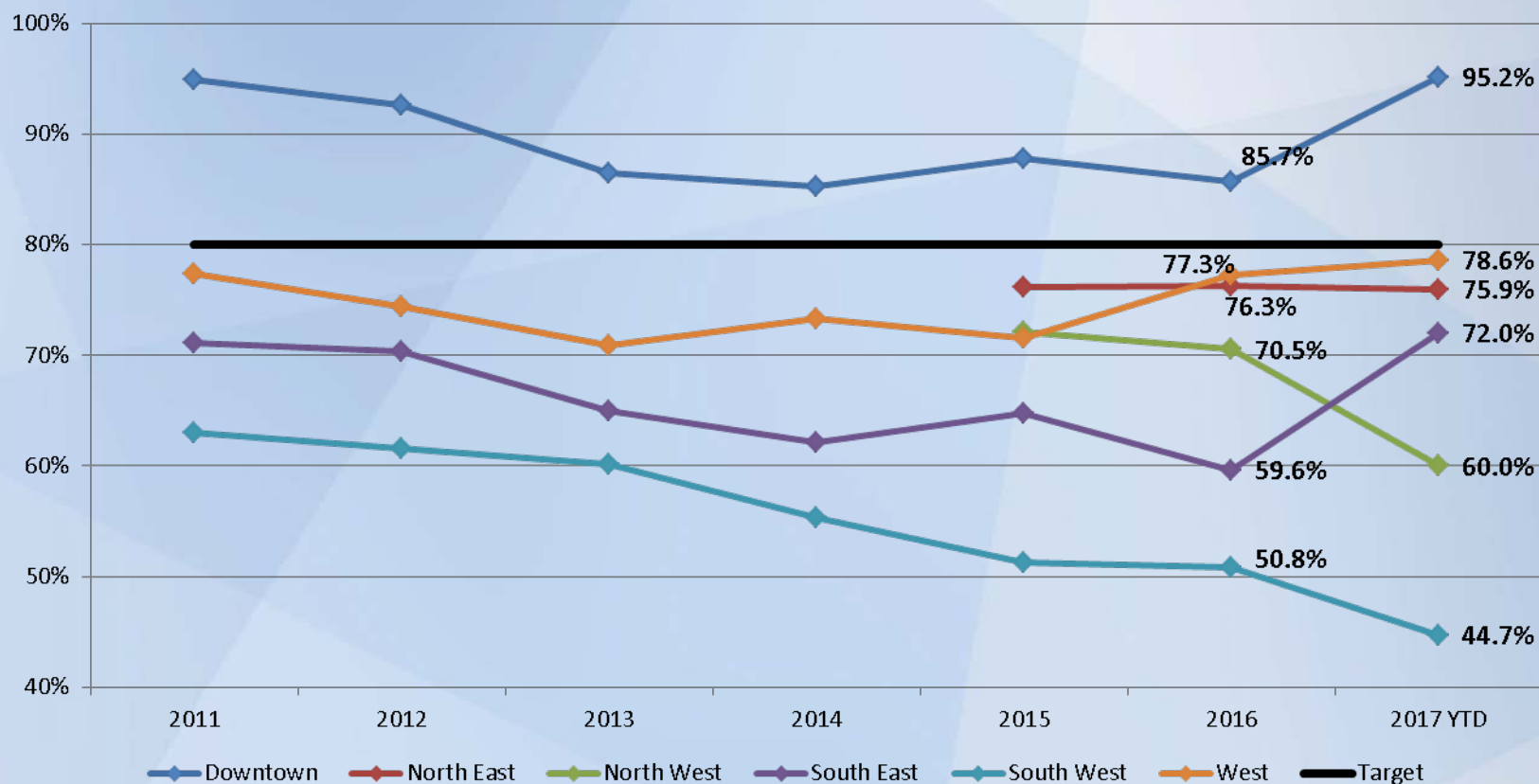**62.6% within 180 min target**

3x target

7.2%

Minutes

City of Edmonton - EPS Six Divisions

Division Boundaries
A1 - F1
A2 - F2
A3 - F3
A4 - F4

NORTH EAST
NORTH WEST
DOWNTOWN
WEST
SOUTH WEST
SOUTH EAST

B4
B1
F4
F1
F2
B3
B2
F3
A2
D4 D1 D2
A1
D3
E1
A4
A3
C1
C2
E2
C4
C3
E4
E3

Date: 2017 March 27

0   1.75   3.5   7
Kilometres

Response Time – Divisions

Response Time – Divisions

P2 Response Time Performance
% responses within 12 minutes, by patrol division

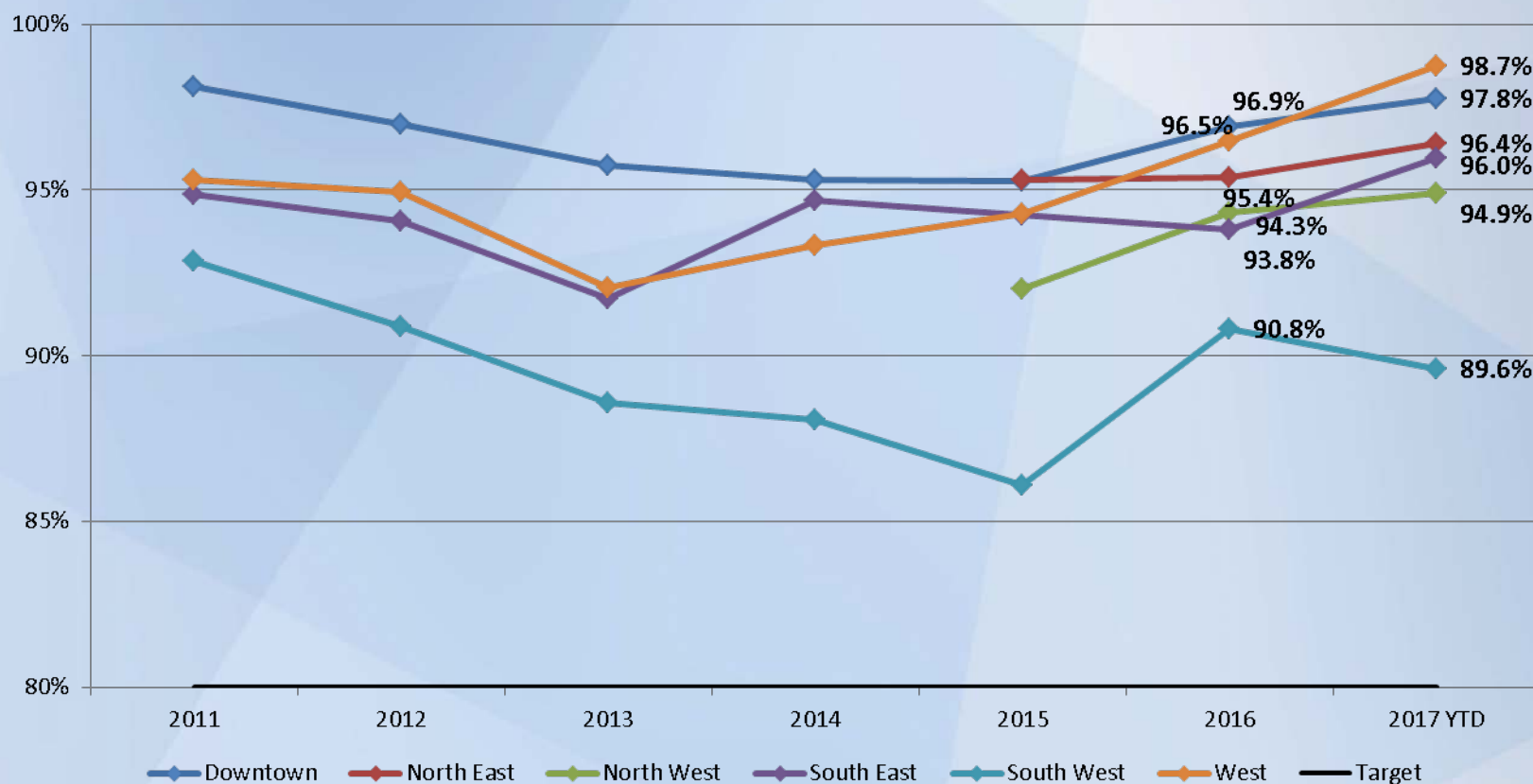Legend: Downtown, North East, North West, South East, South West, West, Target

Labeled data points: 100.0% (2016), 97.2%, 97.4%, 94.3%, 92.1%, 84.6%, 100.0% (2017 YTD), 93.3%, 92.9%, 91.7%, 87.5%
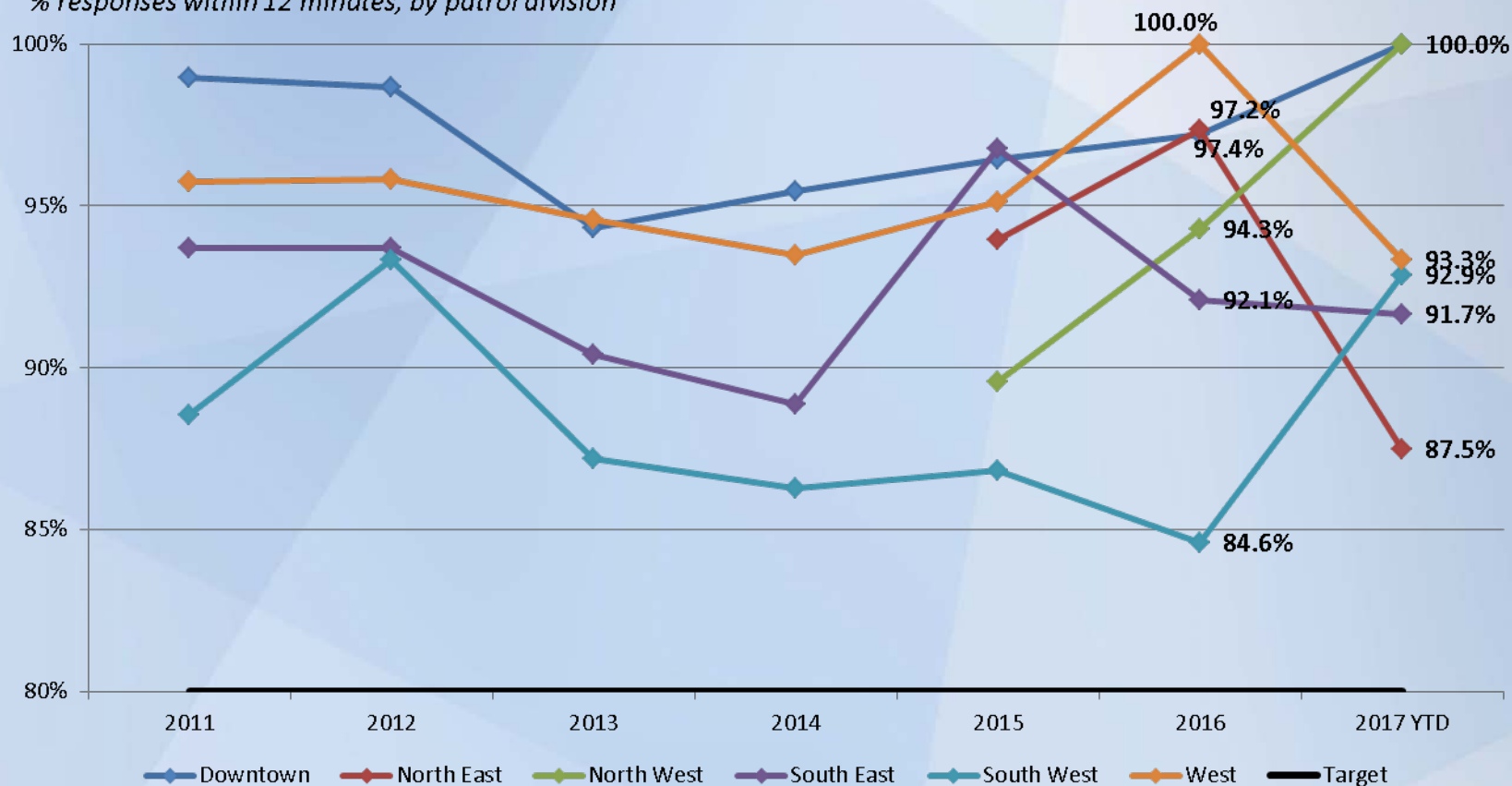
Response Time – Divisions

P3 Response Time Performance
% responses within 17 minutes, by patrol division

Legend: Downtown, North East, North West, South East, South West, West, Target

Labeled data points (2017 YTD and select years): 98.7%, 97.8%, 96.9%, 96.5%, 96.4%, 96.0%, 95.4%, 94.9%, 94.3%, 93.8%, 90.8%, 89.6%

Response Time – Divisions

P4 Response Time Performance
% responses within 40 minutes, by patrol division

Legend: Downtown, North East, North West, South East, South West, West, Target

Labeled values: 78.5%, 74.5%, 73.7%, 73.5%, 71.2%, 70.6%, 70.4%, 67.8%, 66.8%, 64.9%, 62.3%, 62.6%
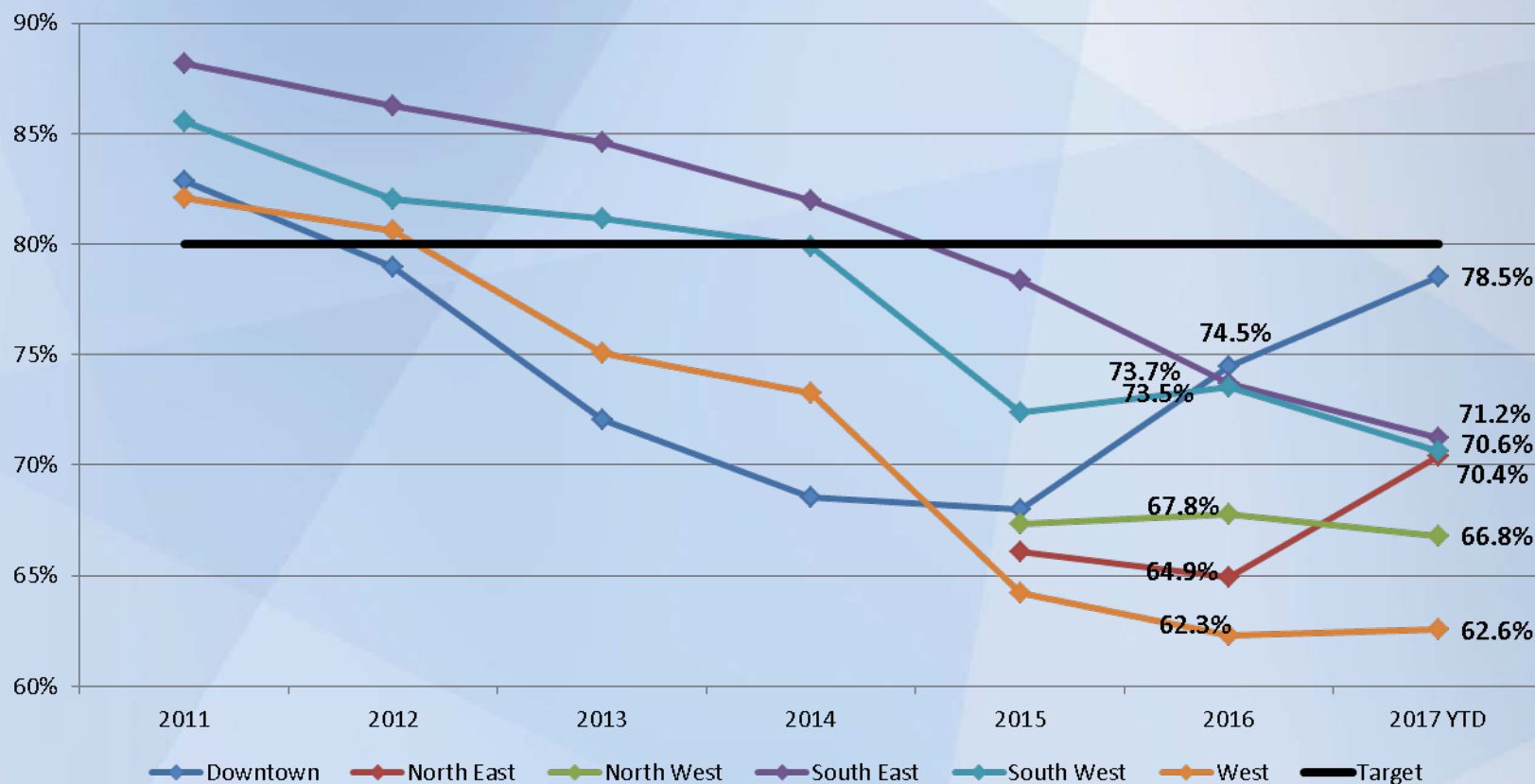
Response Time – Divisions

P5 Response Time Performance
% responses within 180 minutes, by patrol division

Labeled data points: 81.2%, 78.1%, 72.1%, 64.6%, 62.3%, 62.3%, 60.6%, 58.8%, 57.8%, 54.1%, 51.8%, 49.1%

Legend: Downtown, North East, North West, South East, South West, West, Target
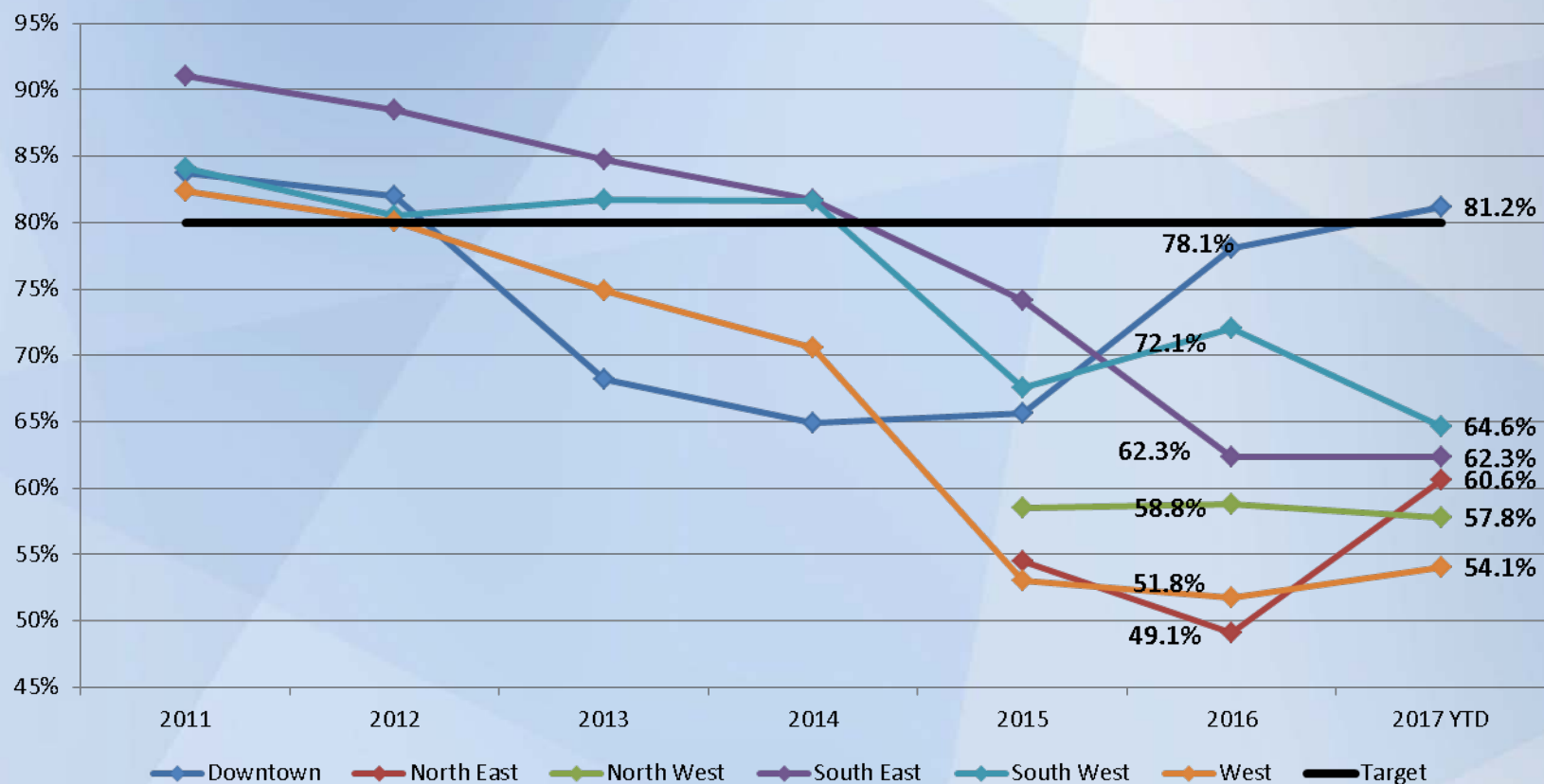
Response Time Summary – Divisions

Response Time Performance against target, 2017 YTD

	P1	P2	P3	P4	P5
Downtown	Green	Green	Green	Yellow	Green
North East	Yellow	Green	Green	Yellow	Red
North West	Red	Green	Green	Red	Red
South East	Yellow	Green	Green	Yellow	Red
South West	Red	Green	Green	Yellow	Red
West	Yellow	Green	Green	Red	Red

Green: ≥ 80%
Yellow: ≥ 70%
Red: < 70%

EPS Action Items

Communication Strategy to Patrol:

- **Patrol focus on district policing and geographic deployment.**

- **Reduce self-dispatching.** Response times can be affected when members self-dispatch and become out of position. Better to get clearance and direction from the watch commander.

- **Driver Safety.** Service Vehicle Collisions are up. Patrol members need to know its okay to slow down in order to get to calls safely.

- **Time tracking.** The importance of accurately tracking time and booking off on calls is being stressed to members.

- Org review of on-hold P5 calls.

- Enhancements at Old Scona station (SW) and Ottewell station (SE) will reduce patrol clustering at the divisional stations.

EPS commitments following City Auditor recommendations on patrol staffing:

- MPP methodology to be assessed/revised in Q1 2018. 4-year review cycles after.

- MPP model will be run in Q1 2018, and annually afterward.

Summary City-wide Stats

EPS Response Time Performance and Dispatch		2009	2010	2011	2012	2013	2014	2015	2016	2016 Q2 YTD	2017 Q2 YTD
Priority 1	Performance	75.3%	80.6%	79.1%	77.0%	71.2%	71.3%	71.4%	70.9%	71.1%	71.7%
	# Calls	6,238	6,315	4,977	4,634	4,718	4,238	3,754	3,291	1,617	1,461
Priority 2	Performance	93.6%	95.1%	94.8%	96.2%	92.9%	92.9%	93.2%	94.7%	94.2%	94.6%
	# Calls	1,143	1,003	802	631	525	459	311	241	101	103
Priority 3	Performance	93.4%	95.7%	95.3%	94.1%	92.1%	92.8%	92.9%	94.6%	94.3%	95.5%
	# Calls	15,039	14,798	13,843	12,472	12,494	11,782	11,490	9,049	4,819	4,372
Priority 4	Performance	76.0%	80.8%	83.9%	80.6%	76.0%	73.2%	69.2%	69.4%	69.2%	70.3%
	# Calls	48,261	52,355	56,489	61,436	65,949	71,130	78,978	81,270	40,854	40,693
Priority 5	Performance	83.1%	85.1%	85.4%	82.7%	75.4%	72.2%	62.6%	62.6%	60.7%	63.8%
	# Calls	65,172	59,665	58,939	61,344	63,629	64,393	70,347	69,317	34,527	33,297
Total # Dispatched Calls		135,853	134,136	135,050	140,517	147,315	152,002	164,880	163,168	81,918	79,926

Source: Cognos R15-091, generated July 7, 2017

QUESTIONS ?