

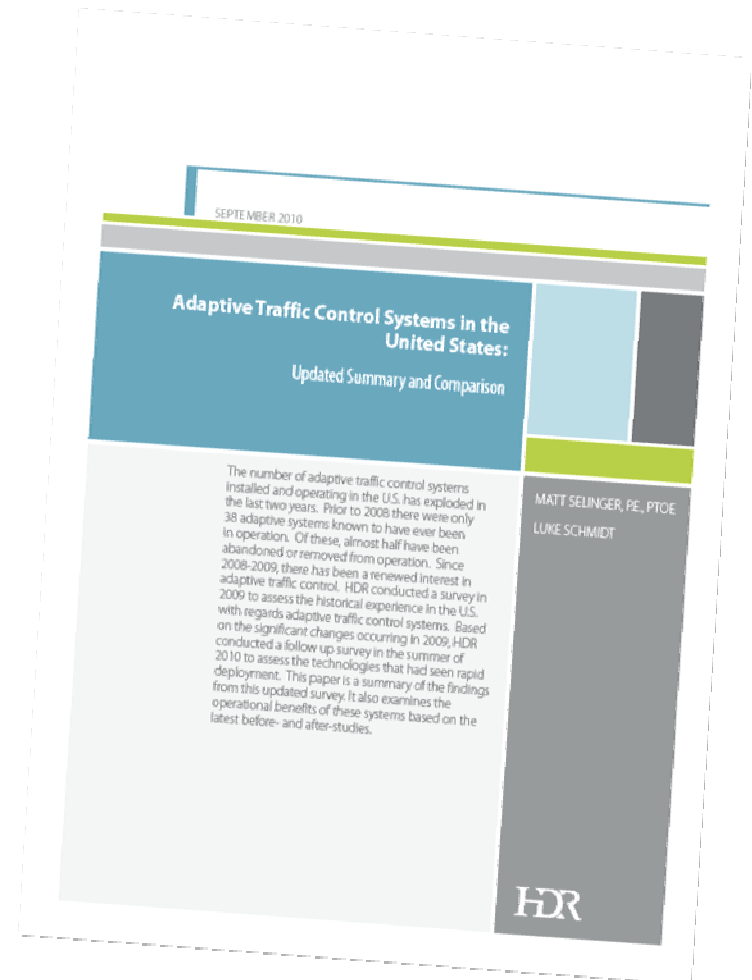
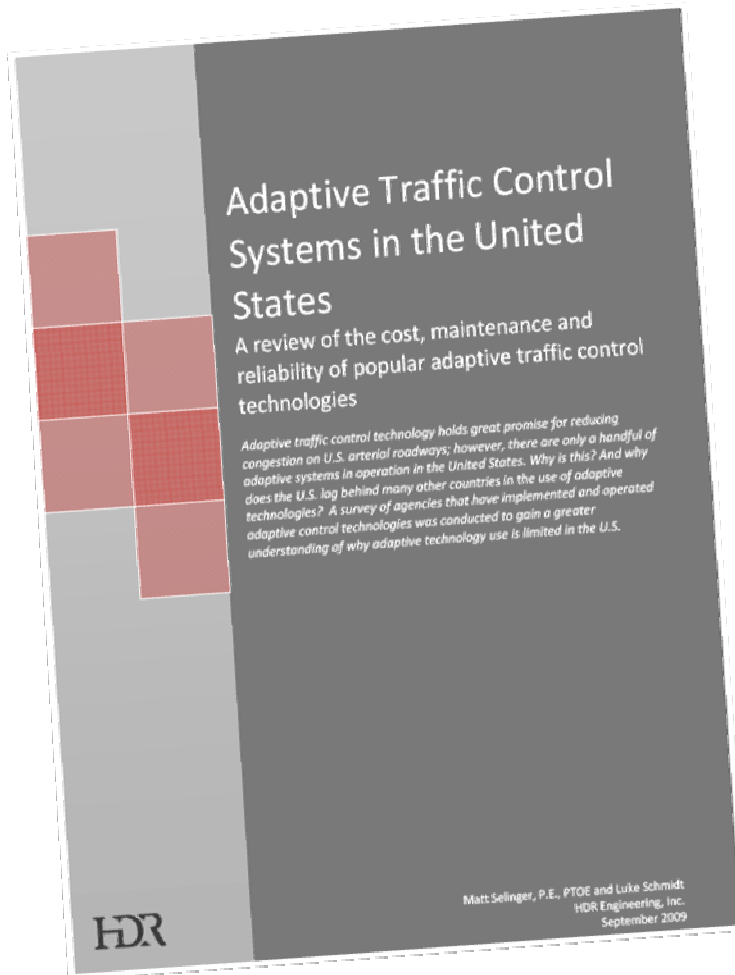
Adaptive Traffic Control U.S. State of the Practice



**ITE Northeastern District Annual Meeting
May 2011**

Matt Selinger, PE, P.T.O.E

Research Papers: www.hdrinc.com/atc



Research Purpose

- Provide useful information for practitioners
- Support decision processes
- Identify needs



Historical Map – Pre 2005



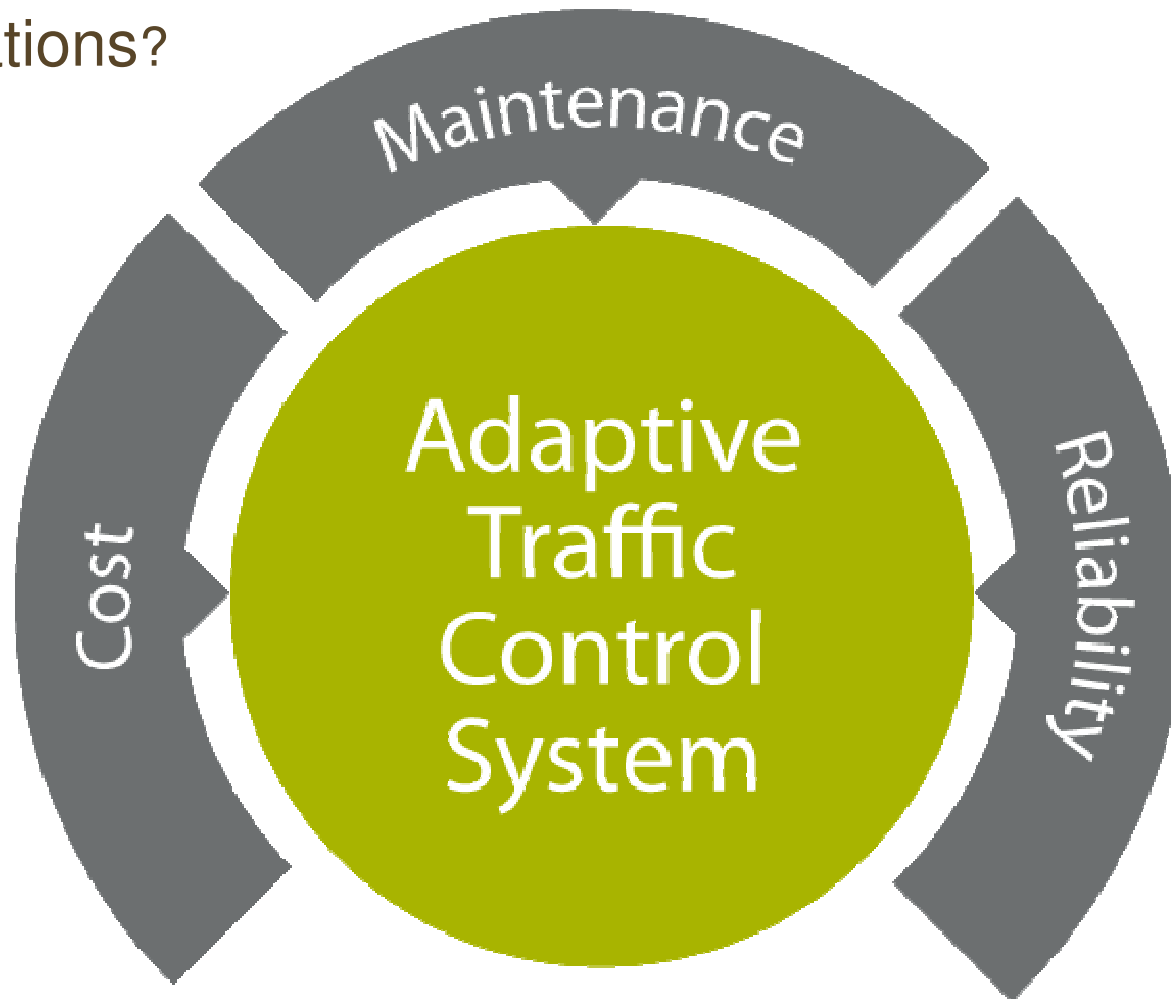
Systems Identified for Survey

2009

- ACS-Lite
 - OPAC
 - RHODES
 - SCOOT
 - SCATS
-
- ∅ LADOT ATSAC
 - ∅ InSync

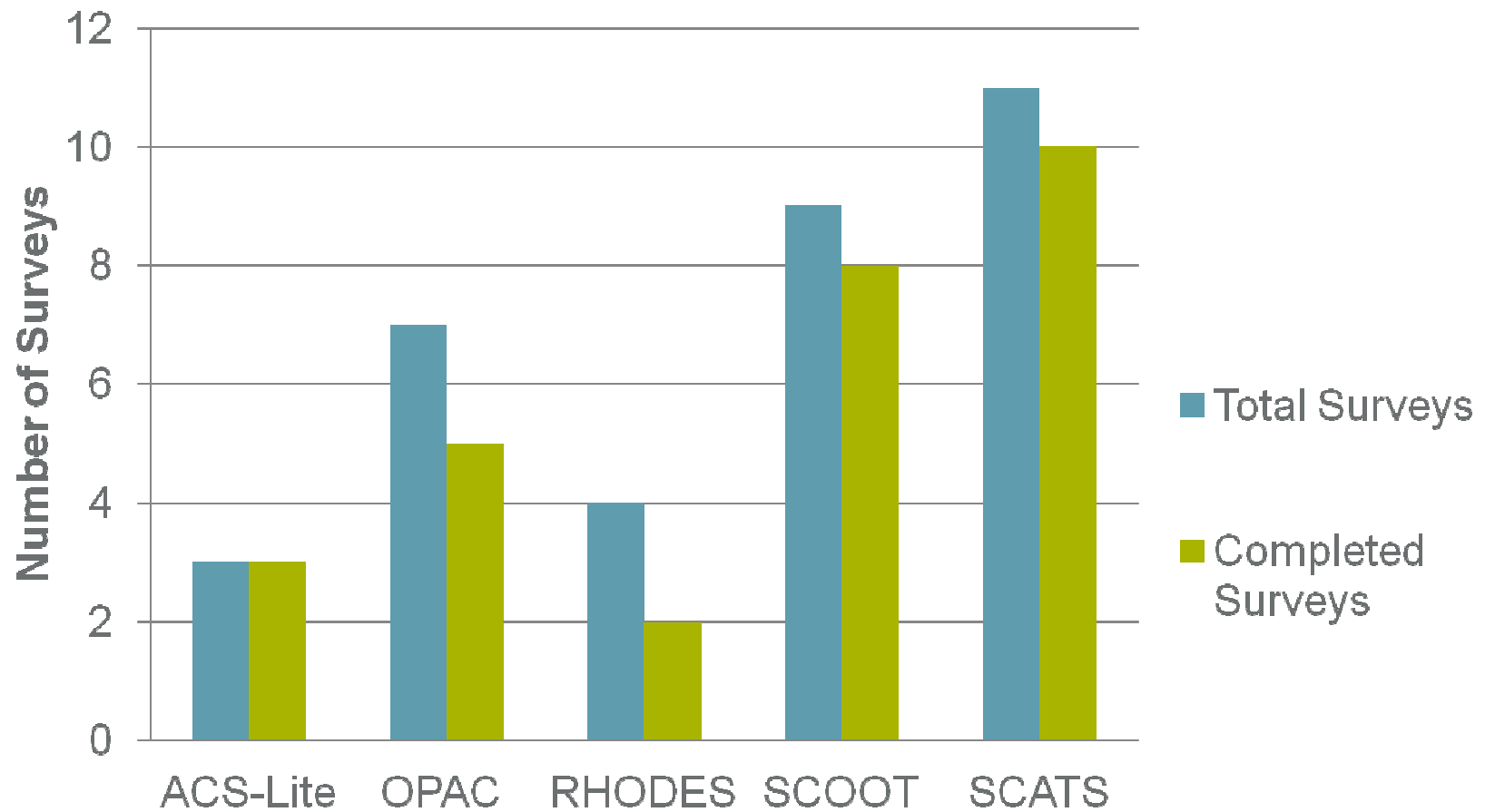
Research Targeted

Operations?



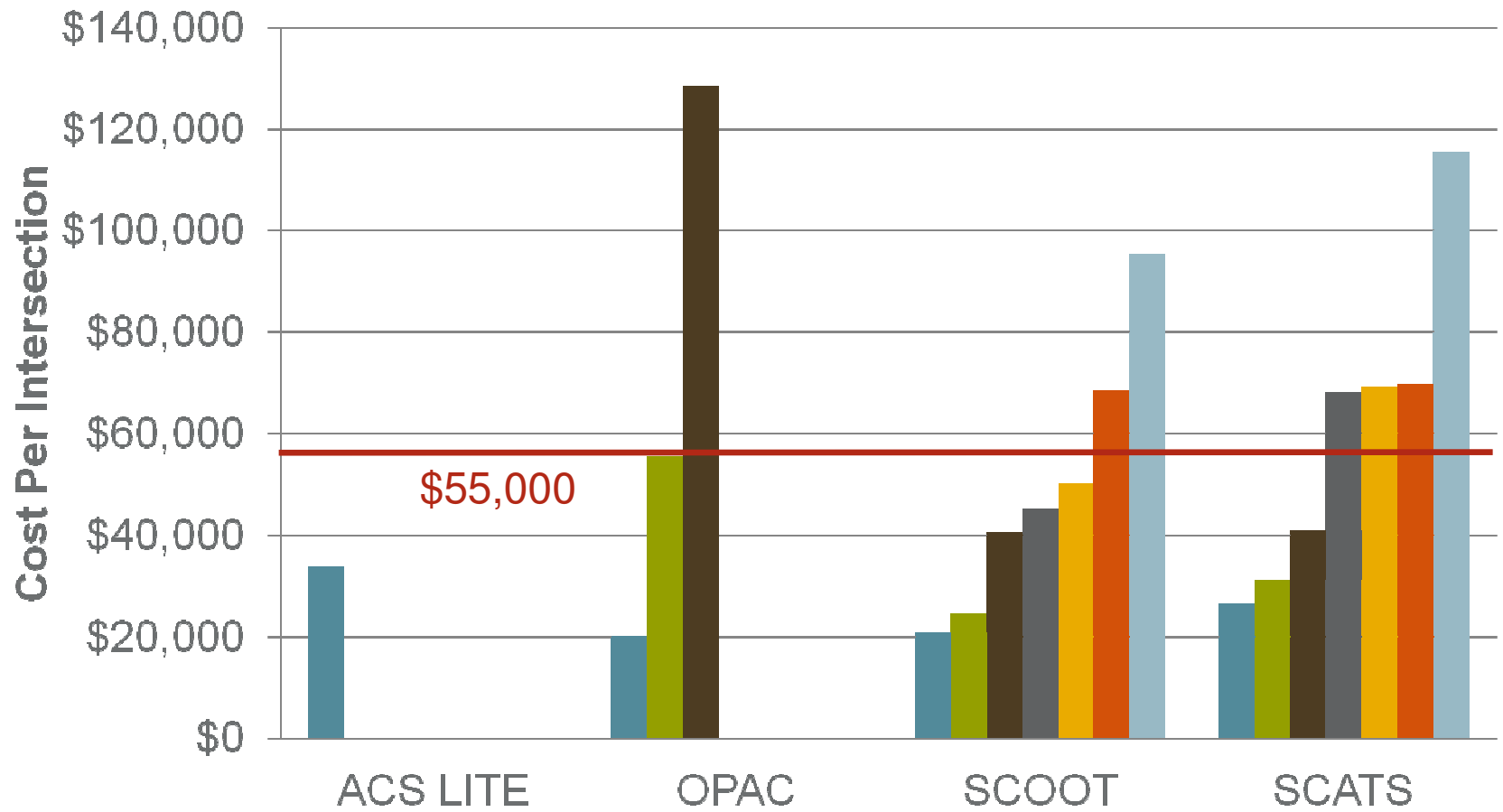
2009 Survey

Survey Completion



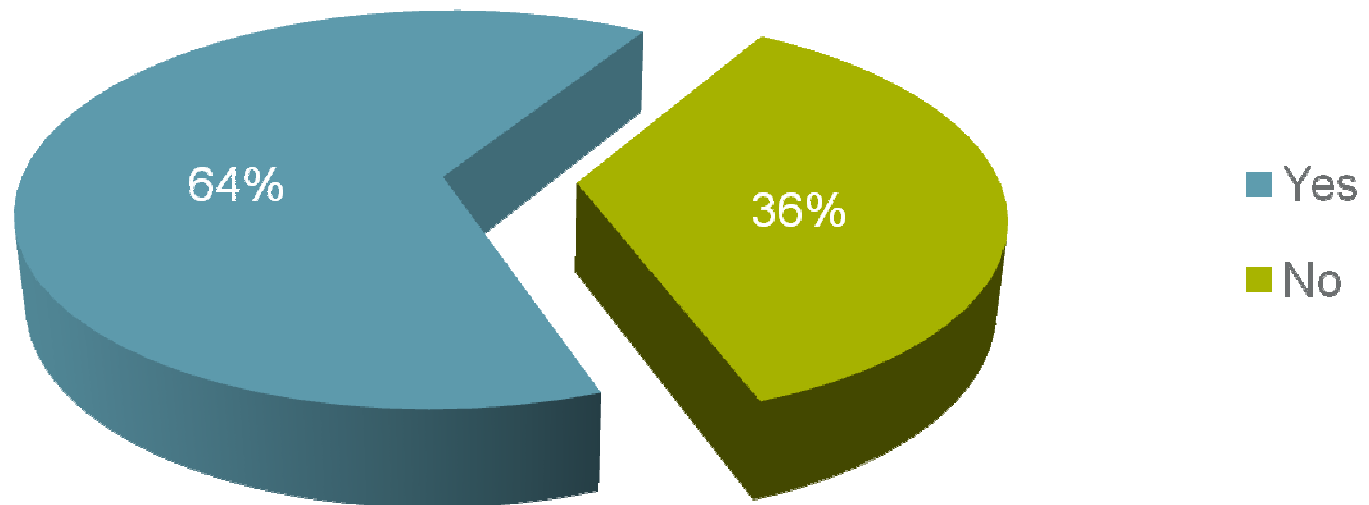
2009 Survey - Cost

Overall System Costs



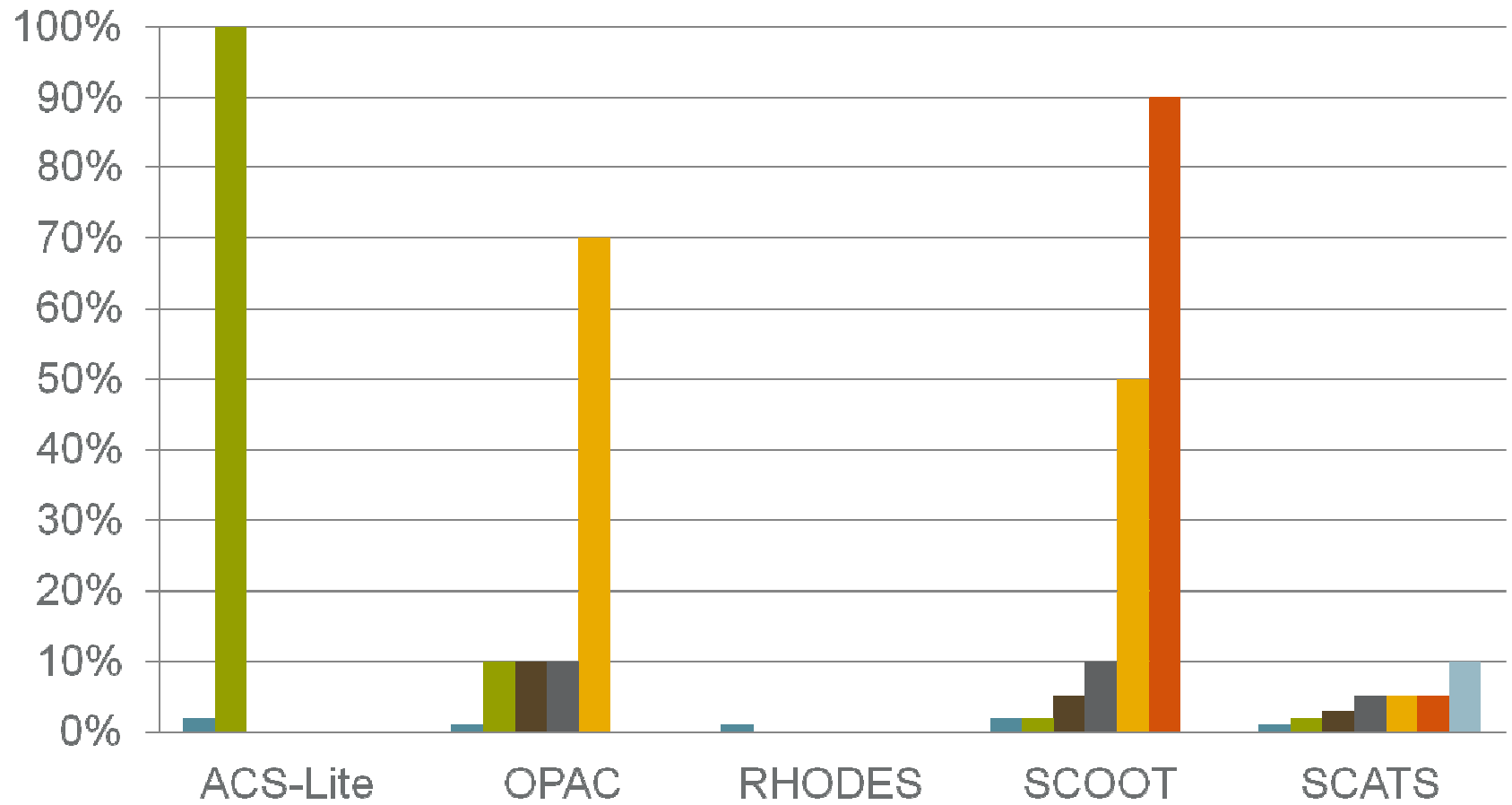
2009 Survey - Maintenance

Did this system take more effort or require more training than expected?

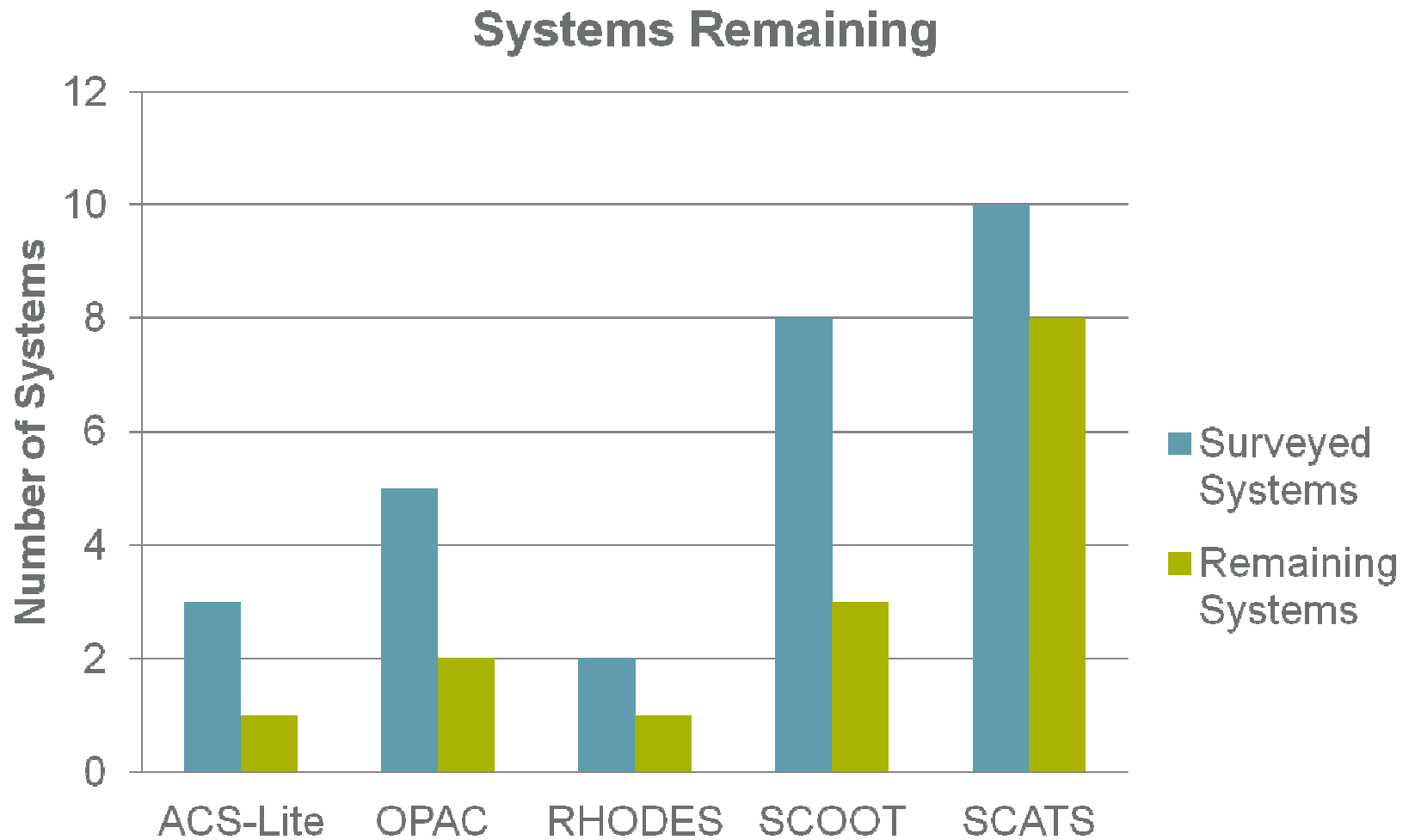


2009 Survey - Reliability

Percent Offline



2009 Survey - System Longevity



Systems Identified for Survey

2009

- ACS-Lite
- OPAC
- RHODES
- SCOOT
- SCATS

∅ LADOT ATSAC

∅ InSync

2010

- ACS-Lite
- LADOT ATSAC
- InSync

∅ Synchro Green

2010 Survey

- LA ATCS & InSync
- ACS-Lite Update
- Operations Comparison
- Systems Comparison

2010 Survey

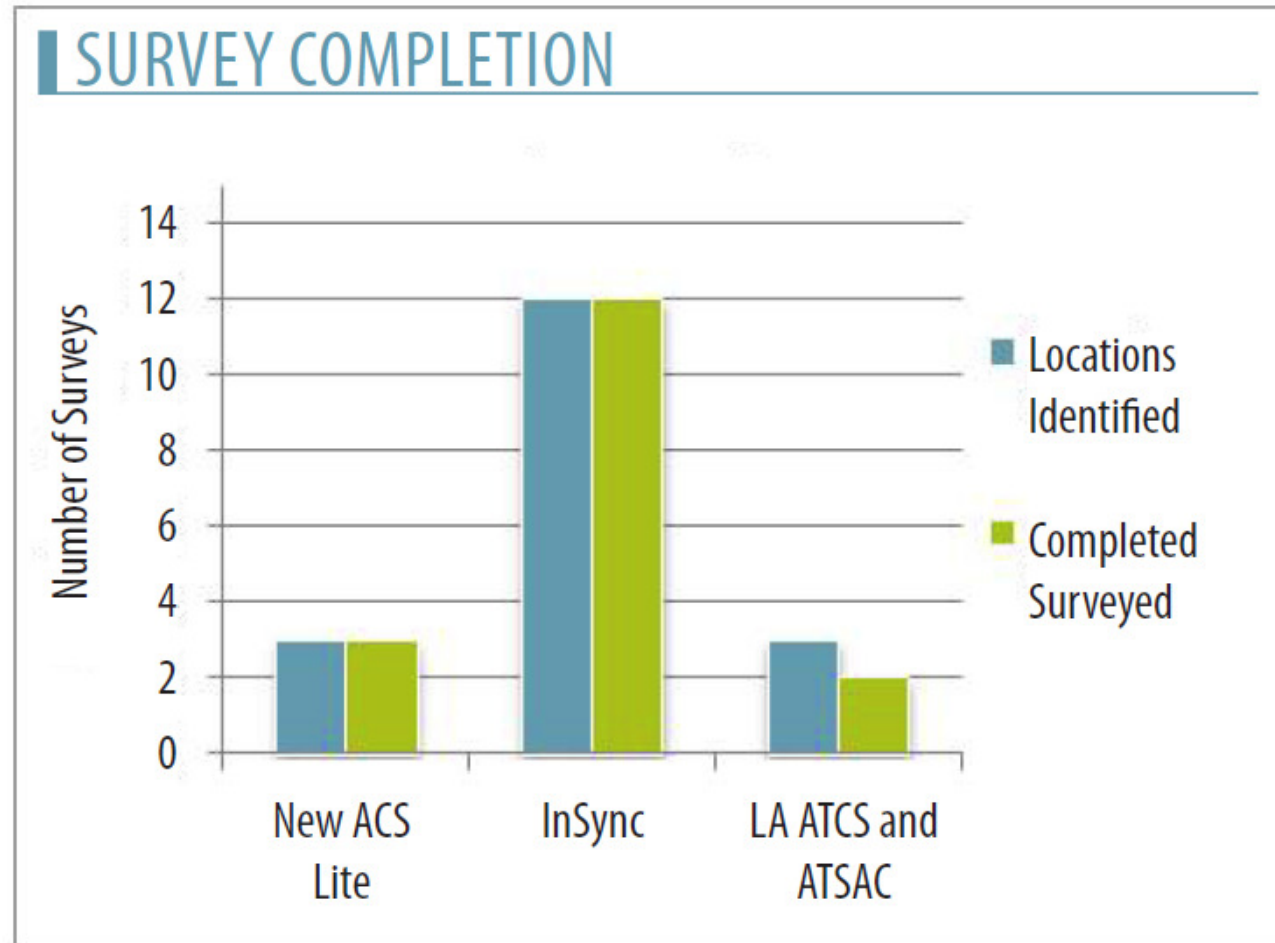


Figure 1: Survey responses were received from 17 of the 18 participants – a 94 percent completion rate.

2010 Survey - Cost

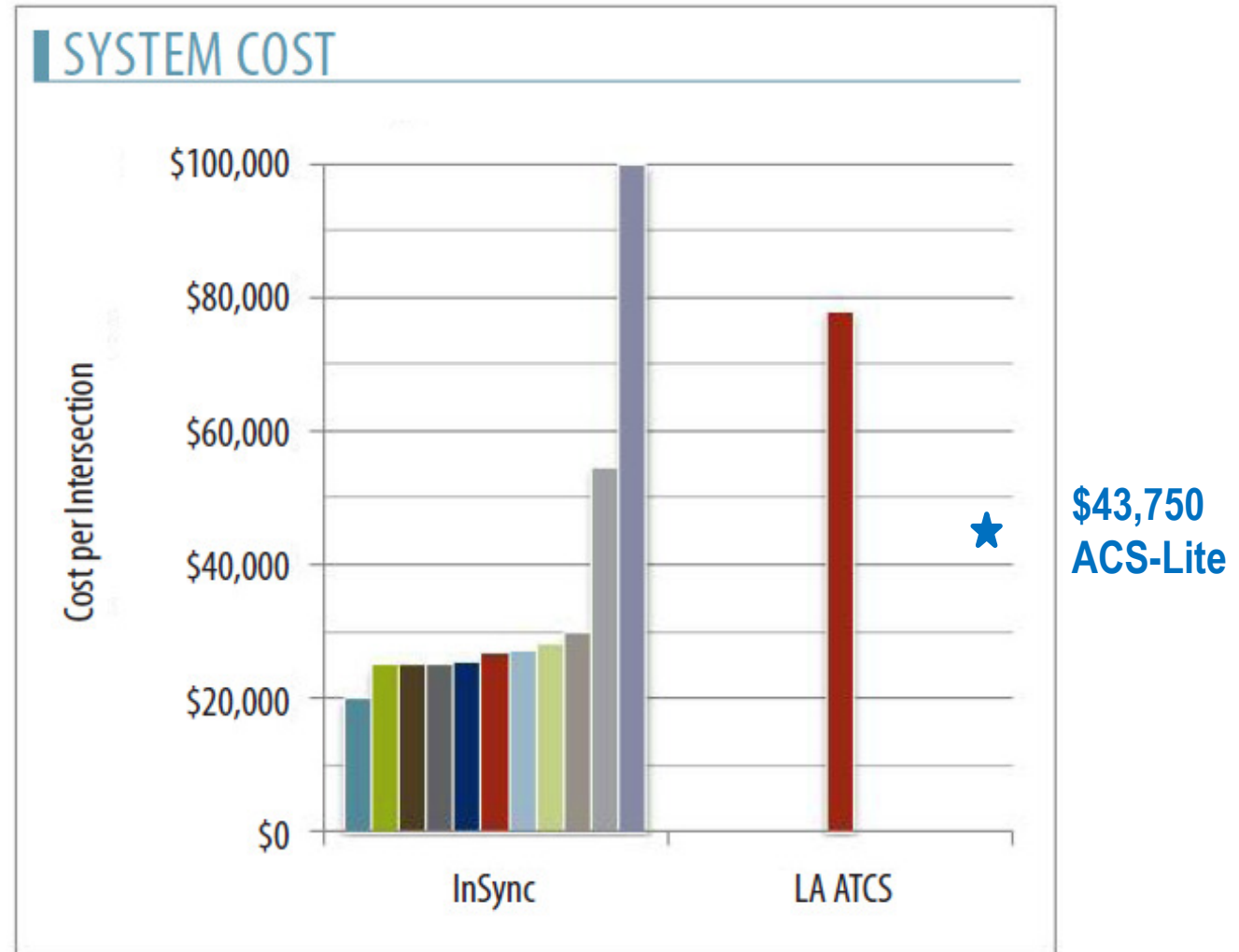
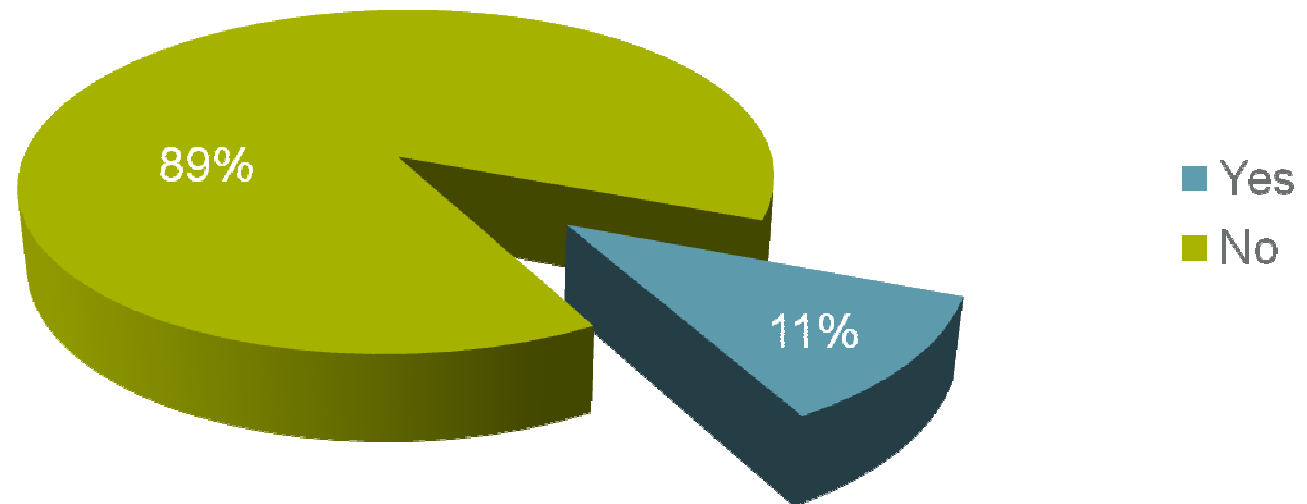


Figure 3: InSync averaged a cost per intersection of \$28,700, excluding the \$100,000 outlier.

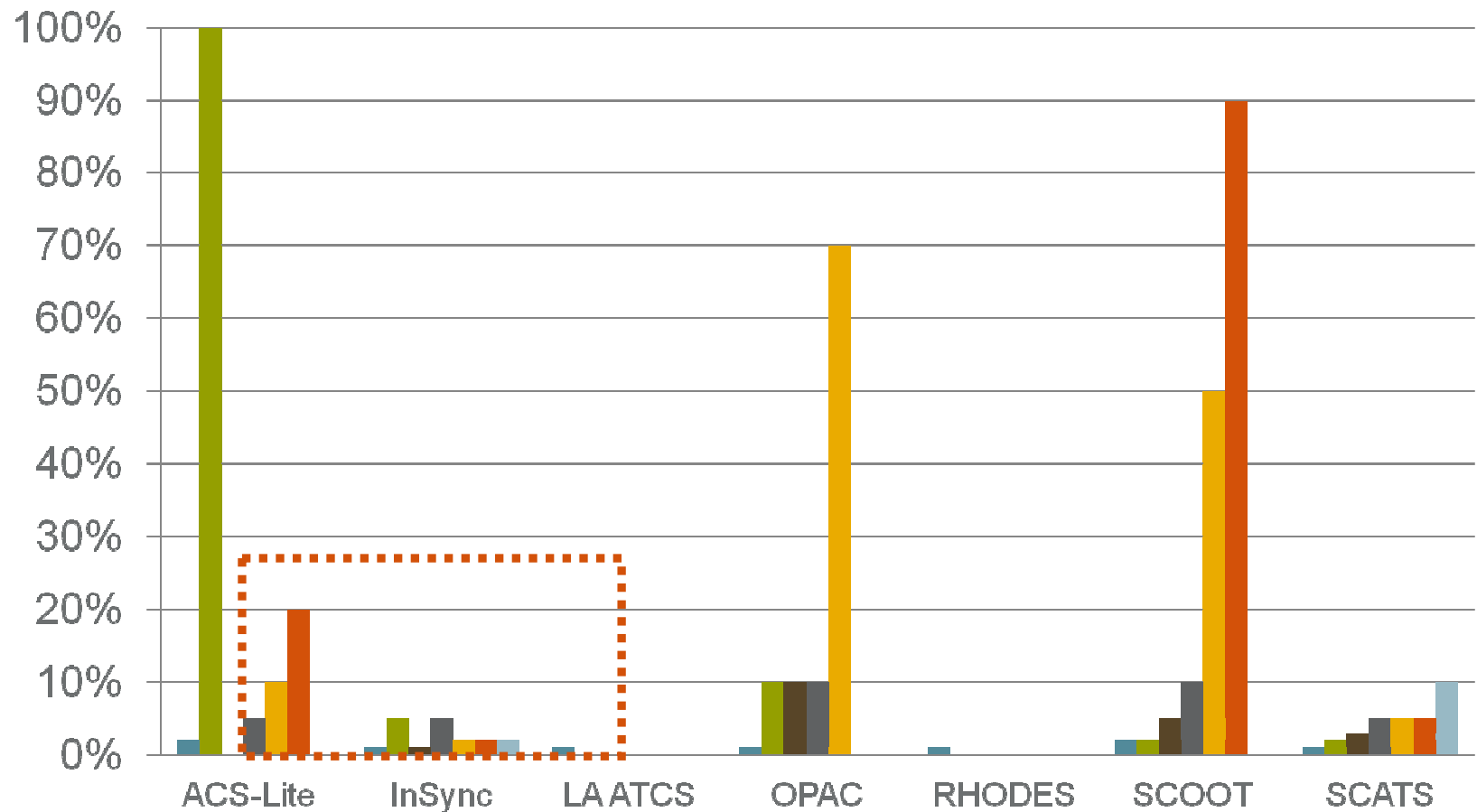
2010 Survey - Maintenance

Did this system take more effort or require more training than expected?



2010 Survey - Reliability

Percent Offline



2010 Adaptive Survey – Before & After Studies

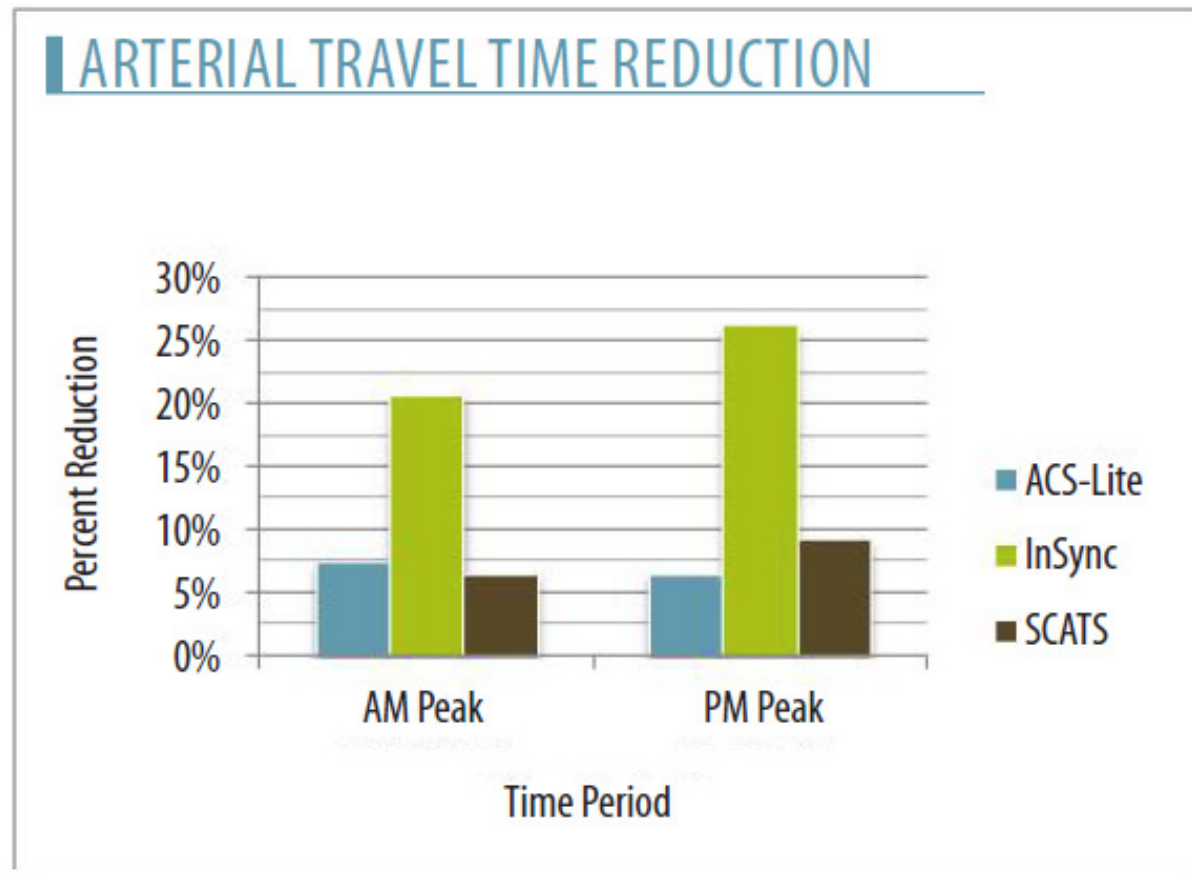
- ACS-Lite (4)
- LADOT ATCS (1)
- SCOOT (2)
- InSync (4)
- SCATS (4)

2010 Adaptive Survey – Before & After Studies

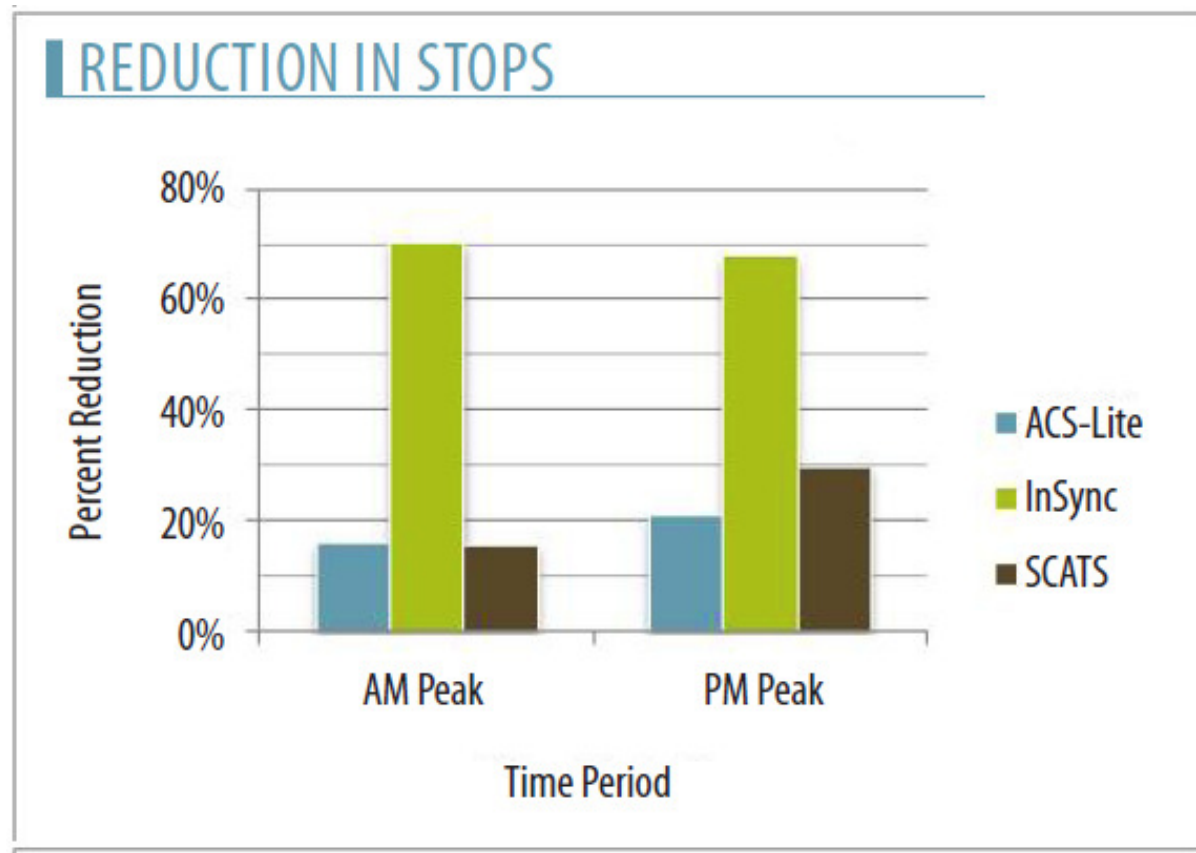
- Travel time reduction
- Reduction in Stops
- Reduction in Delay

- *Concurrence*

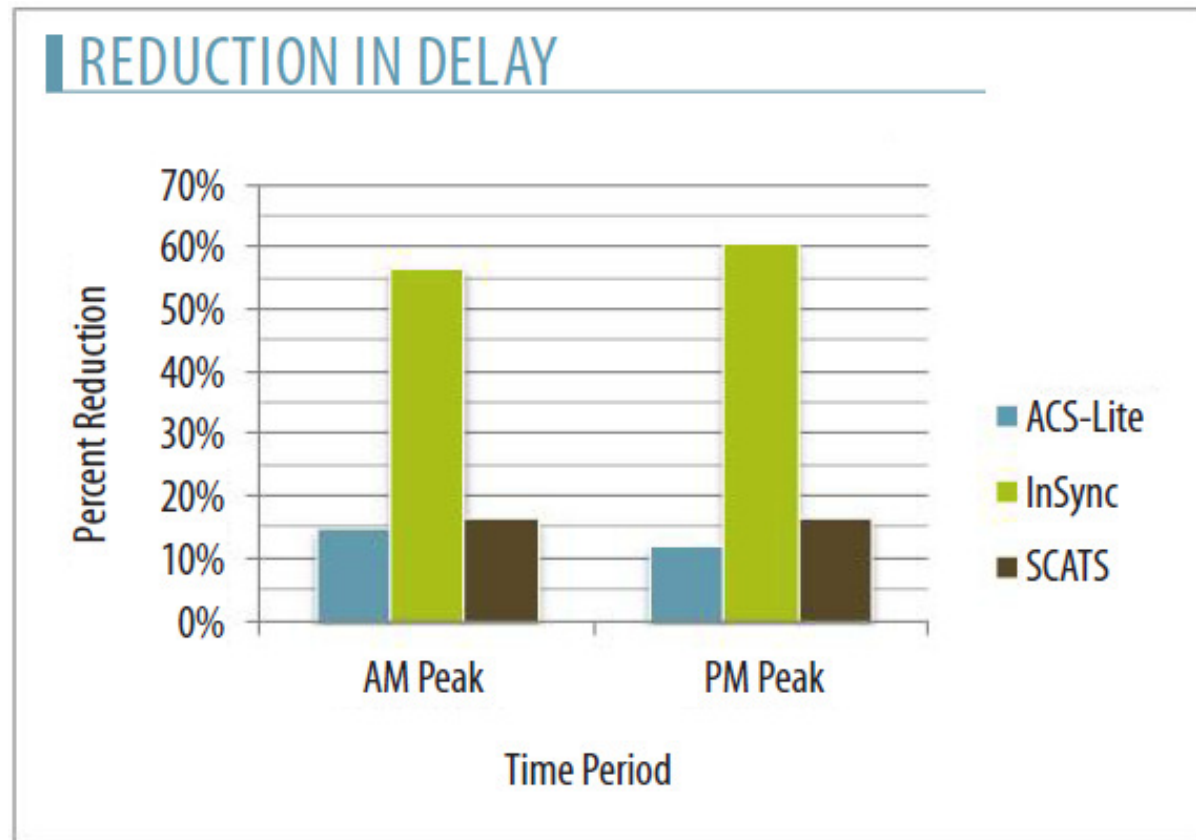
Operational Comparison



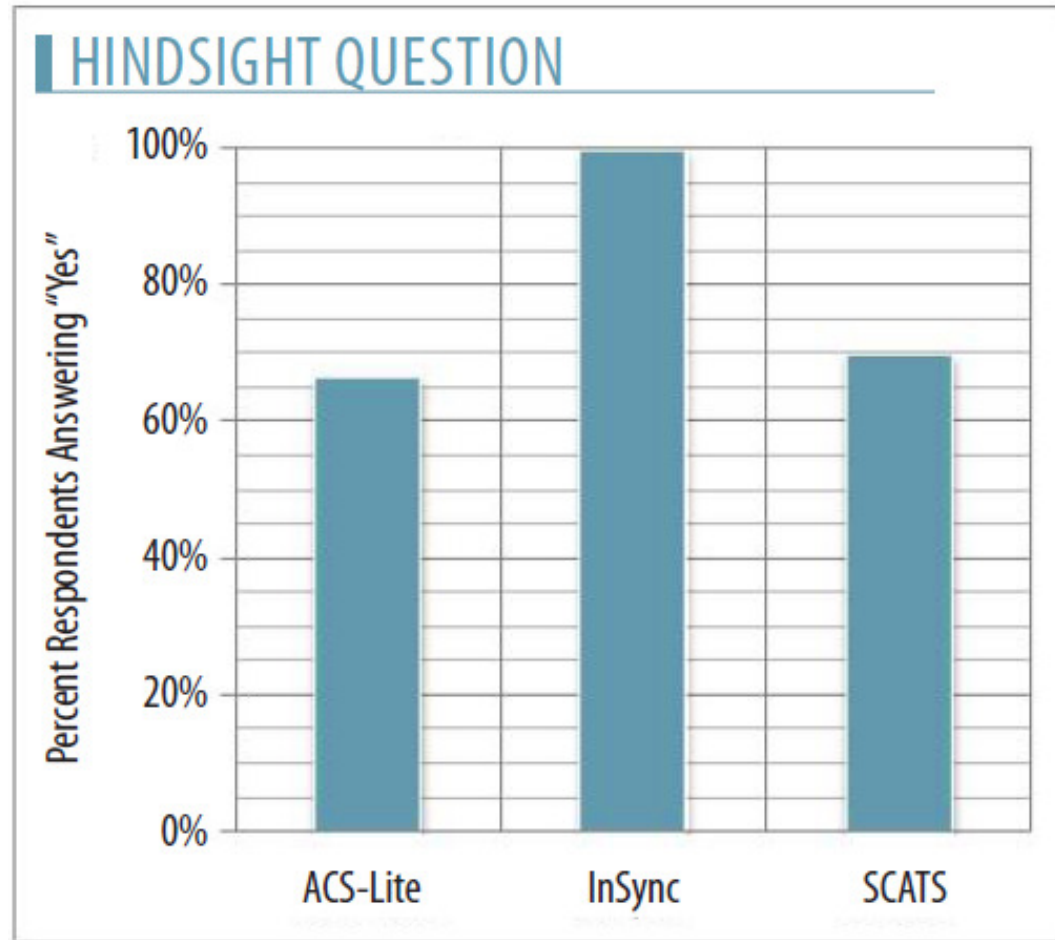
Operational Comparison



Operational Comparison



If you could do it again...



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