

Assessing Performance

Access, Algorithms and Oakland A's



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Definition

Performance Measurement:

A system for judging how well an employee, a company, an economy, [a managed lane] etc. is doing.

Cambridge Business English Dictionary



Washington State
Department of Transportation

Date, time and initials of last
edit

Applying the Definition

- Exceeding all your performance metrics **should** mean that your project is wildly successful, but it doesn't in some cases.
 - Do we have right performance metrics?
 - Are we just not selling them well?
 - Are we over-promising?



Oakland A's

The statistics [performance metrics] were not merely inadequate; they lied. And the lies they told led the people who ran Major League Baseball teams to misjudge their players, and mismanage their games.

-- Michael Lewis,
Moneyball



Reflection #1

- When we are meeting performance metrics, the operator celebrates and ignores problems.

Opening Access of 167

- 2008 –
 - Converted existing HOV → HOT
 - Limited access
- 2008 – 2013
 - Meeting performance metrics
 - Customers complained about access.
- 2014 – Access change
 - Open access



Results

- Drivers are happier
- Not meeting our performance measure
 - Speeds have decreased due to friction between the HOT and GP lanes
- Now what?
- Is our performance measure a good one?

What if my metric is misleading?

- 45 mph, 90% of the time during peak hours

1) **Question:** Why must we comply with federal standards regarding the performance of 45 mph 90% of peak time? Why are you forcing people (2+ carpools) out of the HOV lane to meet a federal requirement?

Answer: The 45 miles per hour requirement is a federal requirement, and the Washington State Legislative direction which authorized express toll lanes on I-405, RCW 47.56.880, also requires that the express toll lanes operate at 45 miles per hour 90 percent of the time. Both federal and state law require WSDOT to report annually on compliance with this standard. The 45 mph requirement is based on the fact that the most efficient speed to maximize vehicle throughput in a lane is between 45 and 50 mph. If the facility does not perform to that standard, federal law requires it be brought into compliance within 180 days or the state could face “program sanctions” amounting to a loss in federal funding.

How to Calculate it?


- Peak hour or hours?
- Peak direction only?
- Entire managed lane?
- Data source?
- Frequency?
- Construction impacts?
- Impacting incidents?
- Seasonal impacts?

Reflection #2

- When we are not meeting performance metrics, the operator scrambles around to meet them, makes changes, meets them, and then is confused when not everybody is celebrating.

I-405 Opening

- Legislature authorizes the facility under two conditions:
 - Must operate in the black by the end of year 2
 - Must operate at 45 mph, 90% of the time

EXPRESS TOLL LANES 

NE 128th St	\$1.25
NE 85th St	\$1.50
NE 6th St	\$1.75

HOV 3+ FREE W/FLEX PASS

Results

- Exceeding revenue projections by 300%
- Speeds good, then slipped, then good
- But people complain about speeds in certain locations and want more access.

Policy Impacts

- If we increase the access locations on I-405...
 - Drivers are happier
 - Project fails
- This performance metric is driving policy

Conclusion

- We need to constantly be evaluating our performance against our metrics, but we need to be evaluating our metrics as well.

Challenge

If you challenge conventional wisdom you will find ways to do things much better than they are currently done.

-- Michael Lewis, Moneyball



For more information

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