

# Wisconsin Department of Transportation

## DMV Southwest Scheduling Improvement Summary



### Project Summary

While most Division of Motor Vehicles' (DMV) customers visit a five-day service center, a majority of service centers are two-day locations with a Monday/Wednesday or a Tuesday/Thursday schedule. In the Southwest Region, there were issues with staffing and scheduling at several two-day locations. In one work unit, two of the busiest locations shared a schedule while two of the least busy locations shared the other. Regional management proposed balancing the schedules.

To confirm management's proposal, the DMV applied Lean Six Sigma concepts. By comparing a study group to a control group and plotting historical data on a control chart the DMV found that additional data supported the proposed change.

In the five weeks since the change was implemented there has been a 26.18 percent reduction in variation, 21.09 percent reduction in travel cost and 2.91 percent reduction in customers affected by holiday closures.

### Improvements

- Reduced variation by 26.18 percent
- Travel costs reduced by 21.09 percent
- 2.91 percent fewer customers affected by holiday closures

### MAPSS Core Goal Area

- Accountability
- Service

### Statewide Goal Area

- Customer satisfaction
- Cost of government

### Issue

The Division of Motor Vehicles (DMV) serves over two million customers in DMV service centers each year. While 90 percent of these customers visit a five-day location, a majority of the service centers are two-day locations with Monday/Wednesday or Tuesday/Thursday schedules. In the Southwest Region, management found long-term issues with staffing positions and short-term issues with scheduling employees at these two-day locations. While reviewing annual customer demand trends, management attributed these challenges to the fact that in one work unit the two busiest locations (Monroe and Platteville) were both on a Monday/Wednesday schedule while the two least busy (Dodgeville and Darlington) were on a Tuesday/Thursday schedule. With this knowledge, management derived the simple solution of switching a busier location's (Monroe) schedule with that of a less busy (Darlington) location.

### Improvement Methodology

The DMV applied Lean Six Sigma concepts to confirm the recommendation. First, DMV needed to ensure that the variation in demand was due to location and not schedule. Since the five-day locations offer all the available two-day options, the variation between Monday/Wednesday totals and Tuesday/Thursday totals at the five-day office served as a control group to compare against the same schedule at the two-day locations. At five-day locations, the variation between Monday/Wednesday and Tuesday/Thursday demand was 3.3 percent while the variation at two-day locations was over 40 percent, suggesting that location is a stronger indicator of demand than schedule. To evaluate the expected outcomes, 21 months of customer data was plotted on a control chart, which estimated that switching the historical data to the proposed schedule would have reduced the number of days outside of the control limits by 15.87 percent. The results of using Lean Six Sigma concepts support the recommendation.

### Results

Once the proposal was accepted, the changes took effect beginning in 2016 with the following results.

Reduced variation: Based on five weeks of the new schedule, there was a 26.18 percent reduction in the number of days outside of the control limits, which was 10.31 percentage points better than expected.

Cost of government: Reducing variation and balancing demand not only improved customer service it also reduced the need to have staff travel from other locations. As a result, there was a 21.09 percent reduction in average monthly travel expenditures charged to these locations.

Customer satisfaction: Wisconsin has nine statutory holidays and five are variable, three are fixed on Monday and one is fixed on Thursday. By switching one of the busier locations from a Monday/Wednesday schedule to a Tuesday/Thursday schedule the location is exposed to fewer holidays and 2.91 percent fewer customers are affected by closures.